Application

17072 - 2022 Roadway Expansion

17515 - b. TH 65 Interchanges in Blaine to serve CSAH 12 (109th Avenue) and 105th Avenues

Regional Solicitation - Roadways Including Multimodal Elements

Status:	Submitted
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Primary Contact

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What Grant Programs are you most interested in?	Regional Solicitation - Roadways Including Multimodal Elements

Organization Information

Name:	ANOKA COUNTY

Jurisdictional Agency (if different):	
Organization Type:	County Government
Organization Website:	
Address:	1440 BUNKER LAKE BLVD

*	ANDOVER	Minnesota	55304
	City	State/Province	Postal Code/Zip

County:	Anoka
Phone:*	763-324-3100 Ext.
Fax:	763-324-3020
PeopleSoft Vendor Number	0000003633A15

Project Information

Project Name	TH 65 Interchanges to serve CSAH 12 (109th Avenue) and 105th Avenues in Blaine
Primary County where the Project is Located	Anoka
Cities or Townships where the Project is Located:	Blaine
Jurisdictional Agency (If Different than the Applicant):	Anoka County

Brief Project Description (Include location, road name/functional class, type of improvement, etc.)

Trunk Highway (TH) 65 is a principal arterial located in the Twin Cities metropolitan area in Anoka County. As the only continuous north/south corridor of its size and capacity in Anoka County, TH 65 is a vital link for traffic traveling between the Twin Cities urban core and northern suburban and exurban communities. At the project location, TH 65 is currently a four-lane divided highway with the following characteristics:

-Classified as a principal arterial with a primary function of providing mobility, while also providing access to adjacent land uses

-Posted speed limit is 55 miles per hour (mph)

-Signalized intersection with 109thth and 105th Aves NE with no restricted turn movements

-Serves approximately 50,000 vehicles per day and is forecasted to serve 60,000 vehicles per day in 2045

The proposed project includes grade separated crossings at 105th Avenue and CSAH 12 and conversion of TH 65 to a limited access facility. The improvements would reduce congestion and improve pedestrian and bicycle access across TH 65, a major barrier for residents. The need for the project was identified as part of the Metropolitan Council?s Principal Arterial Conversion Study.

A Planning and Environmental Linkages (PEL) study resulted in the development of four alternatives for this section of TH 65. The National Environmental Policy Act (NEPA) review phase of the project began in early 2022 and will select a preferred alternative from the four proposed alternatives. Given analysis of alternatives for the

NEPA process, it is likely Alternative 1A will be selected as the preferred alternative due to the similar benefits it provides at a lower cost compared to other alternatives. Alternative 1A was used in the development of Anoka County?s Regional Solicitation application given its likelihood of selection as the preferred alternative. Features of Alternative 1A include:

-Bridges carrying TH 65 traffic above grade at 105th and 109th Avenues allowing local traffic, cyclists, and pedestrians to cross TH 65 more comfortably and without traffic signal delay.

-Frontage roads on both sides of TH 65 with separated pedestrian and bicycle facilities allowing for more direct north-south travel in the corridor for local traffic.

(Limit 2,800 characters; approximately 400 words)

TRANSPORTATION IMPROVEMENT PROGRAM (TIP) DESCRIPTION - will be used in TIP if the project is selected for funding. See MnDOT's TIP description guidance.

MN 65 at 109th Ave and 105th Ave in Blaine - Grade Separation, Improve Frontage Road Configurations

Include both the CSAH/MSAS/TH references and their corresponding street names in the TIP Description (see Resources link on Regional Solicitation webpage for examples).

Project Length (Miles)

1.4

to the nearest one-tenth of a mile

Project Funding

Are you applying for competitive funds from another source(s) to implement this project?

Yes

If yes, please identify the source(s)

MnDOT 2021 Transportation Economic Development Program

Federal Amount

$1,000,000.00

Match Amount

$31,963,662.00

Minimum of 20% of project total

Project Total

$32,963,662.00

For transit projects, the total cost for the application is total cost minus fare revenues.

Match Percentage

96.97%

Minimum of 20%
Compute the match percentage by dividing the match amount by the project total

Source of Match Funds	MnDOT 2021 Transportation Economic Development Program

A minimum of 20% of the total project cost must come from non-federal sources; additional match funds over the 20% minimum can come from other federal sources

Preferred Program Year

Select one:	2026, 2027

Select 2024 or 2025 for TDM and Unique projects only. For all other applications, select 2026 or 2027.

Additional Program Years:	2025

Select all years that are feasible if funding in an earlier year becomes available.

Project Information-Roadways

County, City, or Lead Agency	Anoka County
Functional Class of Road	Principal Arterial
Road System	TH

TH, CSAH, MSAS, CO. RD., TWP. RD., CITY STREET

Road/Route No.	65

i.e., 53 for CSAH 53

Name of Road	Central Ave NE

Example; 1st ST., MAIN AVE

Zip Code where Majority of Work is Being Performed	55449
(Approximate) Begin Construction Date	01/01/2026
(Approximate) End Construction Date	01/01/2028

TERMINI:(Termini listed must be within 0.3 miles of any work)

From: **(Intersection or Address)**	103rd Ave NE and TH 65
To: **(Intersection or Address)**	113th Ave NE and TH 65

DO NOT INCLUDE LEGAL DESCRIPTION

Or At

Miles of Sidewalk (nearest 0.1 miles)	0.6
Miles of Trail (nearest 0.1 miles)	1.2
Miles of Trail on the Regional Bicycle Transportation Network (nearest 0.1 miles)	1.2
Primary Types of Work	Bridge, Grade Separation, Conversion to Limited Access Facility, Bike Path, Sidewalks

Examples: GRADE, AGG BASE, BIT BASE, BIT SURF, SIDEWALK, CURB AND GUTTER,STORM SEWER, SIGNALS, LIGHTING, GUARDRAIL, BIKE PATH, PED RAMPS, BRIDGE, PARK AND RIDE, ETC.

BRIDGE/CULVERT PROJECTS (IF APPLICABLE)

Old Bridge/Culvert No.:	N/A
New Bridge/Culvert No.:	TBD
Structure is Over/Under (Bridge or culvert name):	N/A

Requirements - All Projects

All Projects

1.The project must be consistent with the goals and policies in these adopted regional plans: Thrive MSP 2040 (2014), the 2040 Transportation Policy Plan (2018), the 2040 Regional Parks Policy Plan (2018), and the 2040 Water Resources Policy Plan (2015).

Check the box to indicate that the project meets this requirement. Yes

2.The project must be consistent with the 2040 Transportation Policy Plan. Reference the 2040 Transportation Plan goals, objectives, and strategies that relate to the project.

Briefly list the goals, objectives, strategies, and associated pages:

Several 2040 TPP Goals, Objectives, and Strategies relate to this project:

Safety and Security

'The regional transportation system is safe and secure for all users' (page 2.20), Objective A.

a.B1 (page 2.20): Regional transportation partners will incorporate safety and security considerations for all modes and users throughout the processes of planning, funding, construction, operation.

b.B3 (page 2.21): Regional transportation partners should monitor and routinely analyze safety and security data by mode and severity to identify priorities and progress.

c.B6 (page 2.23): Regional transportation partners will use best practices to provide and improve facilities for safe walking and bicycling, since pedestrians and bicyclists are the most vulnerable users of the transportation system.

Access to Destinations

'People and businesses prosper by using a reliable, affordable, and efficient multimodal transportation system that connects them to destinations throughout the region and beyond' (page 2.24), Objective A.

a.C7 (page 2.30): Regional transportation partners will manage and optimize the performance of the

principal arterial system as measured by person throughput.

b.C8 (page 2.31): Regional transportation partners will prioritize all regional highway capital investments based on a project's expected

contributions to achieving the outcomes, goals, and objectives identified in Thrive MSP 2040 and the Transportation Policy Plan.

c.C16 (page 2.36): Regional transportation partners should fund projects that provide for bicycle and pedestrian travel across or around physical barriers

and/or improve continuity between jurisdictions.

Competitive Economy

'The regional transportation system supports the economic competitiveness, vitality, and prosperity of the region and state' (page 2.38), Objective C.

a.D4 (page 2.40): The Council, MnDOT, and local governments will invest in a transportation system that provides travel conditions that compete well with peer metropolitan areas.

Healthy Environment

'The regional transportation system advances equity and contributes to communities' livability and sustainability while protecting the natural, cultural,

and developed environments' (page 2.42), Objective A and Objective C.

a.E2 (page 2.43): The Council and MnDOT will consider reductions in transportation-related emissions of air pollutants and greenhouse gases

when prioritizing transportation investments.

Limit 2,800 characters, approximately 400 words

3.The project or the transportation problem/need that the project addresses must be in a local planning or programming document. Reference the name of the appropriate comprehensive plan, regional/statewide plan, capital improvement program, corridor study document [studies on trunk highway must be approved by the Minnesota Department of Transportation and the Metropolitan Council], or other official plan or program of the applicant agency [includes Safe Routes to School Plans] that the project is included in and/or a transportation problem/need that the project addresses.

List the applicable documents and pages: Unique projects are exempt from this qualifying requirement because of their innovative nature.

The project need and grade separation solutions are identified in the Principal Arterial Intersection Conversion Study completed in 2017. The TH 65 corridor through the project area is summarized on page 24. This study and the proposed plan to grade separate multiple intersections along the corridor

are shown in the Draft Blaine Comprehensive Plan on page 177.

Limit 2,800 characters, approximately 400 words

4.The project must exclude costs for studies, preliminary engineering, design, or construction engineering. Right-of-way costs are only eligible as part of transit stations/stops, transit terminals, park-and-ride facilities, or pool-and-ride lots. Noise barriers, drainage projects, fences, landscaping, etc., are not eligible for funding as a standalone project, but can be included as part of the larger submitted project, which is otherwise eligible. Unique project costs are limited to those that are federally eligible.

Check the box to indicate that the project meets this requirement. Yes

5.Applicant is a public agency (e.g., county, city, tribal government, transit provider, etc.) or non-profit organization (TDM and Unique Projects applicants only). Applicants that are not State Aid cities or counties in the seven-county metro area with populations over 5,000 must contact the MnDOT Metro State Aid Office prior to submitting their application to determine if a public agency sponsor is required.

Check the box to indicate that the project meets this requirement. Yes

6.Applicants must not submit an application for the same project elements in more than one funding application category.

Check the box to indicate that the project meets this requirement. Yes

7.The requested funding amount must be more than or equal to the minimum award and less than or equal to the maximum award. The cost of preparing a project for funding authorization can be substantial. For that reason, minimum federal amounts apply. Other federal funds may be combined with the requested funds for projects exceeding the maximum award, but the source(s) must be identified in the application. Funding amounts by application category are listed below in Table 1. For unique projects, the minimum award is $500,000 and the maximum award is the total amount available each funding cycle (approximately $4,000,000 for the 2022 funding cycle).
Strategic Capacity (Roadway Expansion): *$1,000,000 to $10,000,000*
Roadway Reconstruction/Modernization: *$1,000,000 to $7,000,000*
Traffic Management Technologies (Roadway System Management): *$500,000 to $3,500,000*
Spot Mobility and Safety: *$1,000,000 to $3,500,000*
Bridges Rehabilitation/Replacement: *$1,000,000 to $7,000,000*

Check the box to indicate that the project meets this requirement. Yes

8.The project must comply with the Americans with Disabilities Act (ADA).

Check the box to indicate that the project meets this requirement. Yes

9.In order for a selected project to be included in the Transportation Improvement Program (TIP) and approved by USDOT, the public agency sponsor must either have a current Americans with Disabilities Act (ADA) self-evaluation or transition plan that covers the public right of way/transportation, as required under Title II of the ADA. The plan must be completed by the local agency before the Regional Solicitation application deadline. For the 2022 Regional Solicitation funding cycle, this requirement may include that the plan is updated within the past five years.

The applicant is a public agency that employs 50 or more people and has a completed ADA transition plan that covers the public right of way/transportation. Yes

(TDM and Unique Project Applicants Only) The applicant is not a public agency subject to the self-evaluation requirements in Title II of the ADA.

Date plan completed: 04/02/2018

Link to plan: http://anokacountyada.com/wp-content/uploads/2018/05/ACHD-Transition-Plan2018.pdf

The applicant is a public agency that employs fewer than 50 people and has a completed ADA self-evaluation that covers the public right of way/transportation.

Date self-evaluation completed:

Link to plan:

Upload plan or self-evaluation if there is no link

Upload as PDF

10.The project must be accessible and open to the general public.

Check the box to indicate that the project meets this requirement. Yes

11.The owner/operator of the facility must operate and maintain the project year-round for the useful life of the improvement, per FHWA direction established 8/27/2008 and updated 6/27/2017. Unique projects are exempt from this qualifying requirement.

Check the box to indicate that the project meets this requirement. Yes

12.The project must represent a permanent improvement with independent utility. The term independent utility means the project provides benefits described in the application by itself and does not depend on any construction elements of the project being funded from other sources outside the regional solicitation, excluding the required non-federal match. Projects that include traffic management or transit operating funds as part of a construction project are exempt from this policy.

Check the box to indicate that the project meets this requirement. Yes

13.The project must not be a temporary construction project. A temporary construction project is defined as work that must be replaced within five years and is ineligible for funding. The project must also not be staged construction where the project will be replaced as part of future stages. Staged construction is eligible for funding as long as future stages build on, rather than replace, previous work.

Check the box to indicate that the project meets this requirement. Yes

14.The project applicant must send written notification regarding the proposed project to all affected state and local units of government prior to submitting the application.

Check the box to indicate that the project meets this requirement. Yes

Roadways Including Multimodal Elements

1.All roadway and bridge projects must be identified as a principal arterial (non-freeway facilities only) or A-minor arterial as shown on the latest TAB approved roadway functional classification map.

Check the box to indicate that the project meets this requirement. Yes

Roadway Strategic Capacity and Reconstruction/Modernization and Spot Mobility projects only:

2.The project must be designed to meet 10-ton load limit standards.

Check the box to indicate that the project meets this requirement. Yes

Bridge Rehabilitation/Replacement and Strategic Capacity projects only:

3.Projects requiring a grade-separated crossing of a principal arterial freeway must be limited to the federal share of those project costs identified as local (non-MnDOT) cost responsibility using MnDOTs Cost Participation for Cooperative Construction Projects and Maintenance Responsibilities manual. In the case of a federally funded trunk highway project, the policy guidelines should be read as if the funded trunk highway route is under local jurisdiction.

Check the box to indicate that the project meets this requirement. Yes

4.The bridge must carry vehicular traffic. Bridges can carry traffic from multiple modes. However, bridges that are exclusively for bicycle or pedestrian traffic must apply under one of the Bicycle and Pedestrian Facilities application categories. Rail-only bridges are ineligible for funding.

Check the box to indicate that the project meets this requirement. Yes

Bridge Rehabilitation/Replacement projects only:

5.The length of the bridge clear span must exceed 20 feet.

Check the box to indicate that the project meets this requirement.

6. The bridge must have a National Bridge Inventory Rating of 6 or less for rehabilitation projects and 4 or less for replacement projects.

Check the box to indicate that the project meets this requirement.

Roadway Expansion, Reconstruction/Modernization, and Bridge Rehabilitation/Replacement projects only:

7. All roadway projects that involve the construction of a new/expanded interchange or new interchange ramps must have approval by the Metropolitan Council/MnDOT Interchange Planning Review Committee prior to application submittal. Please contact Michael Corbett at MnDOT (Michael.J.Corbett@state.mn.us or 651-234-7793) to determine whether your project needs to go through this process as described in Appendix F of the 2040 Transportation Policy Plan.

Check the box to indicate that the project meets this requirement. Yes

Requirements - Roadways Including Multimodal Elements

Specific Roadway Elements

CONSTRUCTION PROJECT ELEMENTS/COST ESTIMATES	Cost
Mobilization (approx. 5% of total cost)	$1,465,700.00
Removals (approx. 5% of total cost)	$1,172,500.00
Roadway (grading, borrow, etc.)	$2,376,679.00
Roadway (aggregates and paving)	$2,872,919.00
Subgrade Correction (muck)	$0.00
Storm Sewer	$5,276,160.00
Ponds	$586,240.00
Concrete Items (curb & gutter, sidewalks, median barriers)	$1,521,337.00
Traffic Control	$0.00
Striping	$615,580.00
Signing	$263,820.00
Lighting	$250,000.00
Turf - Erosion & Landscaping	$1,172,500.00
Bridge	$11,757,380.00
Retaining Walls	$9,193,588.00
Noise Wall (not calculated in cost effectiveness measure)	$1,440,000.00
Traffic Signals	$0.00
Wetland Mitigation	$0.00
Other Natural and Cultural Resource Protection	$0.00
RR Crossing	$0.00
Roadway Contingencies	$0.00
Other Roadway Elements	$1,850,000.00
Totals	**$41,814,403.00**

Specific Bicycle and Pedestrian Elements

CONSTRUCTION PROJECT ELEMENTS/COST ESTIMATES	Cost
Path/Trail Construction	$107,627.00
Sidewalk Construction	$0.00
On-Street Bicycle Facility Construction	$0.00
Right-of-Way	$0.00
Pedestrian Curb Ramps (ADA)	$41,632.00

Crossing Aids (e.g., Audible Pedestrian Signals, HAWK)	$0.00
Pedestrian-scale Lighting	$0.00
Streetscaping	$0.00
Wayfinding	$0.00
Bicycle and Pedestrian Contingencies	$0.00
Other Bicycle and Pedestrian Elements	$0.00
Totals	**$149,259.00**

Specific Transit and TDM Elements

CONSTRUCTION PROJECT ELEMENTS/COST ESTIMATES	Cost
Fixed Guideway Elements	$0.00
Stations, Stops, and Terminals	$0.00
Support Facilities	$0.00
Transit Systems (e.g. communications, signals, controls, fare collection, etc.)	$0.00
Vehicles	$0.00
Contingencies	$0.00
Right-of-Way	$0.00
Other Transit and TDM Elements	$0.00
Totals	**$0.00**

Transit Operating Costs

Number of Platform hours	0
Cost Per Platform hour (full loaded Cost)	$0.00
Subtotal	$0.00
Other Costs - Administration, Overhead,etc.	$0.00

Totals

Total Cost	$41,963,662.00
Construction Cost Total	$41,963,662.00
Transit Operating Cost Total	$0.00

Congestion within Project Area:

The measure will analyze the level of congestion within the project area. Council staff will provide travel speed data on the "Level of Congestion" map. The analysis will compare the peak hour travel speed within the project area to fee-flow conditions.

Free-Flow Travel Speed:	55
Peak Hour Travel Speed:	38
Percentage Decrease in Travel Speed in Peak Hour compared to Free-Flow:	30.91%
Upload Level of Congestion map:	1649950959251_LevelOfCongestion.pdf

Congestion on adjacent Parallel Routes:

Adjacent Parallel Corridor	University Ave NE

Adjacent Parallel Corridor Start and End Points:

Start Point:	Territorial Rd NE
End Point:	113th Ave NE
Free-Flow Travel Speed:	41

The Free-Flow Travel Speed is black number.

Peak Hour Travel Speed:	29

The Peak Hour Travel Speed is red number.

Percentage Decrease in Travel Speed in Peak Hour Compared to Free-Flow:	29.27%
Upload Level of Congestion Map:	1649950959251_LevelOfCongestion.pdf

Principal Arterial Intersection Conversion Study:

Proposed interchange or at-grade project that reduces delay at a High Priority Intersection:	Yes

(80 Points)

Proposed at-grade project that reduces delay at a Medium Priority Intersection:

(60 Points)

Proposed at-grade project that reduces delay at a Low Priority Intersection:

(50 Points)

Proposed interchange project that reduces delay at a Medium Priority Intersection:

(40 Points)

Proposed interchange project that reduces delay at a Low Priority Intersection:

(0 Points)

Not listed as a priority in the study:

(0 Points)

Measure B: Project Location Relative to Jobs, Manufacturing, and Education

Existing Employment within 1 Mile:	5382
Existing Manufacturing/Distribution-Related Employment within 1 Mile:	1307
Existing Post-Secondary Students within 1 Mile:	0
Upload Map	1649951029320_RegionalEconomy.pdf

Please upload attachment in PDF form.

Measure C: Current Heavy Commercial Traffic

RESPONSE: Select one for your project, based on the updated 2021 Regional Truck Corridor Study:

Along Tier 1:	
Miles:	0
(to the nearest 0.1 miles)	
Along Tier 2:	Yes
Miles:	1.4
(to the nearest 0.1 miles)	
Along Tier 3:	
Miles:	0
(to the nearest 0.1 miles)	
The project provides a direct and immediate connection (i.e., intersects) with either a Tier 1, Tier 2, or Tier 3 corridor:	
None of the tiers:	

Measure A: Current Daily Person Throughput

Location	TH 65 at 109th Ave NE
Current AADT Volume	51000
Existing Transit Routes on the Project	N/A

For New Roadways only, list transit routes that will likely be diverted to the new proposed roadway (if applicable).

Upload Transit Connections Map	1649951124386_TransitConnections.pdf

Please upload attachment in PDF form.

Response: Current Daily Person Throughput

Average Annual Daily Transit Ridership	0
Current Daily Person Throughput	66300.0

Measure B: 2040 Forecast ADT

Use Metropolitan Council model to determine forecast (2040) ADT volume	Yes
If checked, METC Staff will provide Forecast (2040) ADT volume	
OR	
Identify the approved county or city travel demand model to determine forecast (2040) ADT volume	
Forecast (2040) ADT volume	

Measure A: Engagement

i.Describe any Black, Indigenous, and People of Color populations, low-income populations, disabled populations, youth, or older adults within a ½ mile of the proposed project. Describe how these populations relate to regional context. Location of affordable housing will be addressed in Measure C.
ii.Describe how Black, Indigenous, and People of Color populations, low-income populations, persons with disabilities, youth, older adults, and residents in affordable housing were engaged, whether through community planning efforts, project needs identification, or during the project development process.
iii.Describe the progression of engagement activities in this project. A full response should answer these questions:

Census tracts within ½ mile of the project area (the analysis area) have 26% BIPOC residents, similar to the 27% BIPOC residents in the seven-county region (region). However, Blaine's total BIPOC population nearly doubled since 2010, now numbering over 18,2000 people. The analysis area has a slightly smaller proportion of low income and older residents, more young residents, and a similar proportion of residents with a disability as compared to the region.

Response:

The Planning and Environmental Linkages study (PEL) that determined the proposed improvements included extensive engagement. The project team interviewed residents representing the demographics of the corridor, held a public open house and online surveys, pop-up events, Local Official Briefings, and engaged a Public Advisory Committee to vet over 60 alternatives along the total 7-mile PEL corridor from 81st Avenue to Bunker Lake Boulevard, including the alternatives proposed at 105th and 109th Avenues. Outreach efforts were conducted at Centerview Elementary Curriculum Night, Mary Ann Young Senior Center, the Blaine Caribou Coffee, and local festivals.

A pop-up event was held at Blaine International Village (BIV) as the PEL identified this community as an Environmental Justice (EJ) population that could be disproportionally impacted by the project. Canvassing in BIV ahead of the pop-up event with a Spanish interpreter allowed the project team to discuss the project with 85 households. At the pop-up event, 125 BIV residents met with project staff to discuss the project. BIV residents feel TH 65 is a barrier to businesses and opportunities on the other side of the highway. Residents plan extra time in their trip or take longer routes to avoid TH 65. They feel TH 65 is dangerous to cross on bike or foot, especially for the young and elderly. The project

team received positive feedback on the proposed improvements from residents, especially on an unsignalized underpass at 105th Avenue. Residents expressed concern about the right-of-way impacts of the project. The project design was subsequently revised to minimize property impacts in BIV. This revision is reflected in the anticipated preferred alternative (1A). The BIV pop-up event was organized in coordination with new ownership of the BIV property and the project team anticipates additional engagement events held with BIV residents during the NEPA phase.

Anoka County also launched a project website and held a virtual open house during March and April of 2022. As of April 8, 2022, over 300 people have visited the site to view the project and offer feedback. The open house was advertised via social media, the city and county web sites, and flyers posted at Anoka County Government Center. Refer to the attached Engagement Summary

(Limit 2,800 characters; approximately 400 words):

Measure B: Equity Population Benefits and Impacts

Describe the projects benefits to Black, Indigenous, and People of Color populations, low-income populations, children, people with disabilities, youth, and older adults. Benefits could relate to:
This is not an exhaustive list. A full response will support the benefits claimed, identify benefits specific to Equity populations residing or engaged in activities near the project area, identify benefits addressing a transportation issue affecting Equity populations specifically identified through engagement, and substantiate benefits with data.
Acknowledge and describe any negative project impacts to Black, Indigenous, and People of Color populations, low-income populations, children, people with disabilities, youth, and older adults. Describe measures to mitigate these impacts. Unidentified or unmitigated negative impacts may result in a reduction in points.
Below is a list of potential negative impacts. This is not an exhaustive list.

The proposed project will provide multiple benefits to disadvantaged population groups along the corridor. The project will substantially improve the performance of TH 65 and will improve the speed and reliability of access to jobs and essential services in the area. TH 65 has been identified in previous plans and studies as a barrier to pedestrian and bicycle traffic due to the high traffic volumes and speeds as well as long signal wait times. The proposed project will enable much more comfortable and safer east-west crossing access for pedestrians at the 105th and 109th Avenue intersections. The project will also improve public health by reducing emissions from the passenger and commercial vehicles currently forced to stop at the signalized intersections at 105th and 109th Avenues.

Response:

The replacement of the signalized intersection at 105th and 109th Avenues with grade separation will increase vehicle speeds on both TH 65 and the cross streets. The potential safety impacts to population groups will be mitigated by the improved crossing conditions of grade separated interchanges at 105th and 109th Avenues for all modes. Conversion of TH 65 to a limited access freeway could also increase noise pollution in the area. Residents will have the option to vote on an inclusion of a noise wall during the NEPA phase of the project. Additionally, the community adjacent to the 105th Avenue intersection expressed concerns about cut-through traffic in their neighborhood. Drivers already drive fast on local streets to access business and neighborhoods on the west side of TH 65. The inclusion of a frontage road in the design of TH 65 may mitigate this and further development of the project design through the NEPA process will aim to address this issue.

The current project will impact parcels in Environmental Justice (EJ) communities, including

parts of BIV, but no residential parcels will be impacted. Previous PEL-level project design concepts impacted residential parcels in EJ communities but have since been revised to avoid these impacts. Please see the Level 3 Evaluation Matrix attachment for more details on right-of-way impacts of the alternatives under consideration, including the anticipated preferred alternative, 1A.

(Limit 2,800 characters; approximately 400 words):

Measure C: Affordable Housing Access

Describe any affordable housing developmentsexisting, under construction, or plannedwithin ½ mile of the proposed project. The applicant should note the number of existing subsidized units, which will be provided on the Socio-Economic Conditions map. Applicants can also describe other types of affordable housing (e.g., naturally-occurring affordable housing, manufactured housing) and under construction or planned affordable housing that is within a half mile of the project. If applicable, the applicant can provide self-generated PDF maps to support these additions. Applicants are encouraged to provide a self-generated PDF map describing how a project connects affordable housing residents to destinations (e.g., childcare, grocery stores, schools, places of worship).

Describe the projects benefits to current and future affordable housing residents within ½ mile of the project. Benefits must relate to affordable housing residents. Examples may include:

This is not an exhaustive list. Since residents of affordable housing are more likely not to own a private vehicle, higher points will be provided to roadway projects that include other multimodal access improvements. A full response will support the benefits claimed, identify benefits specific to residents of affordable housing, identify benefits addressing a transportation issue affecting residents of affordable housing specifically identified through engagement, and substantiate benefits with data.

Response:

Ten publicly subsidized rental housing units exist with ½ mile of the project area. Additionally, Blaine International Village (BIV), a manufactured housing park, is located in the southwest quadrant of the 105th Avenue and TH 65 intersection. The project addresses access issues for this community by providing a grade separated underpass at 105th Avenue. This will improve access to the destinations and retail on the east side of TH 65 for residents living in BIV and will eliminate the significantly long signal wait times all users currently experience when traveling east-west at the 105th Avenue intersection. Additionally, the 105th Avenue underpass will include a separated path for pedestrians and bicyclists which will provide a more comfortable and safer route across TH 65 than currently exists for those users. The project includes new frontage roads on the west and east sides of TH 65 which allow local drivers to move north and south in the project area without having to rely on TH 65. These frontage roads will also have a separated shared-use path for cyclists and pedestrians on the west side of TH 65 and a sidewalk on the east side. The attached Level 3 Evaluation Matrix demonstrates that in the likely preferred alternative (1A), walking and cycling time from Blaine International Village to Target (a representative origin-destination pair) is improved by about 20 percent.

(Limit 2,800 characters; approximately 400 words):

Measure D: BONUS POINTS

Project is located in an Area of Concentrated Poverty:	
Projects census tracts are above the regional average for population in poverty or population of color (Regional Environmental Justice Area):	
Project located in a census tract that is below the regional average for population in poverty or populations of color (Regional Environmental Justice Area):	Yes
Upload the Socio-Economic Conditions map used for this measure.	1648573475890_SocioEconomicConditions.pdf

Measure A: Infrastructure Age

Year of Original Roadway Construction or Most Recent Reconstruction	Segment Length	Calculation	Calculation 2
1960.0	1.38	2704.8	878.182
1924.0	1.38	2655.12	862.052
1964.0	0.1	196.4	63.766
1984.0	0.22	436.48	141.714
	3	**5993**	**1946**

Average Construction Year

Weighted Year	1945.714

Total Segment Length (Miles)

Total Segment Length	3.08

Measure A: Congestion Reduction/Air Quality

Total Peak Hour Delay Per Vehicle Without The Project (Seconds/ Vehicle)	Total Peak Hour Delay Per Vehicle With The Project (Seconds/ Vehicle)	Total Peak Hour Delay Per Vehicle Reduced by Project (Seconds/ Vehicle)	Volume without the Project (Vehicles per hour)	Volume with the Project (Vehicles Per Hour):	Total Peak Hour Delay Reduced by the Project:	Total Peak Hour Delay Reduced by the Project:	EXPLANATION of methodology used to calculate railroad crossing delay, if applicable.	Synchro or HCM Reports
218.1	99.9	118.2	11168	18067	1320057.6	2135519.4	N/A	1649951615996_TH65_SYNCHRO_Combined.pdf
						2135519		

Vehicle Delay Reduced

Total Peak Hour Delay Reduced	1320057.6
Total Peak Hour Delay Reduced	2135519.4

Measure B:Roadway projects that do not include new roadway segments or railroad grade-separation elements

Total (CO, NOX, and VOC) Peak Hour Emissions without the Project (Kilograms):	Total (CO, NOX, and VOC) Peak Hour Emissions with the Project (Kilograms):	Total (CO, NOX, and VOC) Peak Hour Emissions Reduced by the Project (Kilograms):
82.57	31.43	51.14
83	**31**	**51**

Total

Total Emissions Reduced:	51.14
Upload Synchro Report	1649951451738_TH65_SYNCHRO_Combined.pdf

Please upload attachment in PDF form. (Save Form, then click 'Edit' in top right to upload file.)

Measure B: Roadway projects that are constructing new roadway segments, but do not include railroad grade-separation elements (for Roadway Expansion applications only):

Total (CO, NOX, and VOC) Peak Hour Emissions without the Project (Kilograms):	Total (CO, NOX, and VOC) Peak Hour Emissions with the Project (Kilograms):	Total (CO, NOX, and VOC) Peak Hour Emissions Reduced by the Project (Kilograms):
0	**0**	**0**

Total Parallel Roadway

Emissions Reduced on Parallel Roadways	0
Upload Synchro Report	

Please upload attachment in PDF form. (Save Form, then click 'Edit' in top right to upload file.)

New Roadway Portion:

Cruise speed in miles per hour with the project:	0
Vehicle miles traveled with the project:	0
Total delay in hours with the project:	0
Total stops in vehicles per hour with the project:	0

Fuel consumption in gallons:	0
Total (CO, NOX, and VOC) Peak Hour Emissions Reduced or Produced on New Roadway (Kilograms):	0
EXPLANATION of methodology and assumptions used:(Limit 1,400 characters; approximately 200 words)	
Total (CO, NOX, and VOC) Peak Hour Emissions Reduced by the Project (Kilograms):	0.0

Measure B:Roadway projects that include railroad grade-separation elements

Cruise speed in miles per hour without the project:	0
Vehicle miles traveled without the project:	0
Total delay in hours without the project:	0
Total stops in vehicles per hour without the project:	0
Cruise speed in miles per hour with the project:	0
Vehicle miles traveled with the project:	0
Total delay in hours with the project:	0
Total stops in vehicles per hour with the project:	0
Fuel consumption in gallons (F1)	0
Fuel consumption in gallons (F2)	0
Fuel consumption in gallons (F3)	0
Total (CO, NOX, and VOC) Peak Hour Emissions Reduced by the Project (Kilograms):	0
EXPLANATION of methodology and assumptions used:(Limit 1,400 characters; approximately 200 words)	

Measure A: Benefit of Crash Reduction

Crash Modification Factor Used:	-For conversion to limited-access facility, CMF of 0.56 was used in correlation with ?Absence of Access Points? (CMF ID 3097) from Clearinghouse. -For conversion to grade separated interchange at 105th and 109th Avenues, CMF of 0.43 was used in correlation with ?Convert At-Grade Intersection into Grade-Separated Interchange? (CMF 460) for injury-related crashes, and CMF of 0.64 was used in correlation with ?Convert At-Grade Intersection into Grade-Separated Interchange? (CMF 461) for PDO-related crashes -For tear drop roundabout at 109th Avenue, additional CMF of 0.76 was applied in correlation with ?Convert Signalized Intersection to Modern Roundabout? (CMF ID 4192)

(Limit 700 Characters; approximately 100 words)

Rationale for Crash Modification Selected:	Crash modifications selected were based countermeasures that best matched the description and application of proposed design changes from TH 65 Alt 1A.

(Limit 1400 Characters; approximately 200 words)

Project Benefit ($) from B/C Ratio:	$33,584,209.00
Total Fatal (K) Crashes:	0
Total Serious Injury (A) Crashes:	0
Total Non-Motorized Fatal and Serious Injury Crashes:	0
Total Crashes:	272
Total Fatal (K) Crashes Reduced by Project:	0
Total Serious Injury (A) Crashes Reduced by Project:	0
Total Non-Motorized Fatal and Serious Injury Crashes Reduced by Project:	0
Total Crashes Reduced by Project:	98
Worksheet Attachment	1649951916748_TH65_BCworksheets.pdf

Please upload attachment in PDF form.

Roadway projects that include railroad grade-separation elements:

Current AADT volume:	0
Average daily trains:	0
Crash Risk Exposure eliminated:	0

Measure A: Pedestrian Safety

Determine if these measures do not apply to your project. *Does the project match either of the following descriptions?*
If either of the items are checked yes, then ***score for entire pedestrian safety measure is zero****. Applicant does not need to respond to the sub-measures and can proceed to the next section.*

Project is primarily a freeway (or transitioning to a freeway) and does not provide safe and comfortable pedestrian facilities and crossings.	No
Existing location lacks any pedestrian facilities (e.g., sidewalks, marked crossings, wide shoulders in rural contexts) and project does not add pedestrian elements (e.g., reconstruction of a roadway without sidewalks, that doesnt also add pedestrian crossings and sidewalk or sidepath on one or both sides).	No

SUB-MEASURE 1: Project-Based Pedestrian Safety Enhancements and Risk Elements
To receive maximum points in this category, pedestrian safety countermeasures selected for implementation in projects should be, to the greatest extent feasible, consistent with the countermeasure recommendations in the Regional Pedestrian Safety Action Plan and state and national best practices. Links to resources are provided on the Regional Solicitation Resources web page.
Please answer the following two questions with as much detail as possible based on the known attributes of the proposed design. If any aspect referenced in this section is not yet determined, describe the range of options being considered, to the greatest extent available. If there are project elements that may increase pedestrian risk, describe how these risks are being mitigated.
1. Describe how this project will address the safety needs of people crossing the street at signalized intersections, unsignalized intersections, midblock locations, and roundabouts.
Treatments and countermeasures should be well-matched to the roadways context (e.g., appropriate for the speed, volume, crossing distance, and other location attributes). Refer to the Regional Solicitation Resources web page for guidance links.

Response:

The project converts the roadway into a limited access freeway and converts existing signalized at-grade crossings of TH 65 to underpasses below new bridges carrying TH 65 at its intersection with 109th and 105th Avenues. This limits pedestrian and bicyclist interactions with drivers to new frontage roads associated the limited access TH 65 roadway. A 10-foot separated shared-use path will run alongside the new bowtie (dual roundabout) intersections carrying vehicle traffic under TH 65 at both 105th and 109th Avenues. Due to its nature as a limited access facility, bikes and peds will no longer be able to cross TH 65 midblock as they currently do, reducing safety hazards for all users.

In order to address cyclist and pedestrian safety at roundabouts in the proposed design the separated bicycle and pedestrian facility crosses frontage roads and 109th and 105th Avenues at a 90 degree angle. In future design work, safety interventions such as tighter turning radii, traffic control such as a yield or full signal at vehicle right turns, and high visibility crossings will be considered.

(Limit 2,800 characters; approximately 400 words)

Is the distance in between signalized intersections increasing (e.g., removing a signal)?

Select one: Yes

If yes, describe what measures are being used to fill the gap between protected crossing opportunities for pedestrians (e.g., adding High-Intensity Activated Crosswalk beacons to help motorists yield and help pedestrians find a suitable gap for crossing, turning signal into a roundabout to slow motorist speed, etc.).

Response:

The proposed project removes signalized intersections with TH 65 at 105th and 109th Avenues and converts these crossings to roundabout underpasses with design speeds of 20 mph. While the proposed project technically increases the distance between signalized intersections on TH 65, the current signalized condition is uncomfortable and inconvenient for cyclists and pedestrians. The proposed project improves the crossings at 105th and 109th Avenues for cyclists and pedestrians crossing TH 65 by removing signals and providing grade-separated access across TH 65 for cyclists and pedestrians.

(Limit 1,400 characters; approximately 200 words)

Will your design increase the crossing distance or crossing time across any leg of an intersection? (e.g., by adding turn or through lanes, widening lanes, using a multi-phase crossing, prohibiting crossing on any leg of an intersection, pedestrian bridge requiring length detour, etc.). This does not include any increases to crossing distances solely due to the addition of bike lanes (i.e., no other through or turn lanes being added or widened).

Select one: Yes

If yes,
How many intersections will likely be affected?

Response: 2

Describe what measures are being used to reduce exposure and delay for pedestrians (e.g., median crossing islands, curb bulb-outs, etc.)

Response:

While crossing distance will increase by 160 feet at 105th Avenue and by 290 feet at 109th Avenue due to the addition of TH 65 frontage roads and ramp terminals, crossing time will decrease due to the conversion of TH 65 to an above-grade facility at these locations, as pedestrians and cyclists will no longer contend with long signal times (over four minutes) that currently exist to allow at-grade TH 65 to operate in a fashion that minimizes vehicle delay for northbound and southbound vehicle traffic. In the proposed design, pedestrians and cyclists will cross underneath TH 65 on a separated facility. The facility will provide non-motorized users refuge between the northbound and southbound frontage roads as well as between east and westbound vehicle lanes on 105th and 109th Avenues.

(Limit 1,400 characters; approximately 200 words)

If grade separated pedestrian crossings are being added and increasing crossing time, describe any features that are included that will reduce the detour required of pedestrians and make the separated crossing a more appealing option (e.g., shallow tunnel that doesnt require much elevation change instead of pedestrian bridge with numerous switchbacks).

Response:

Pedestrian and cyclist crossings will be grade-separated from TH 65

(Limit 1,400 characters; approximately 200 words)

If mid-block crossings are restricted or blocked, explain why this is necessary and how pedestrian crossing needs and safety are supported in other ways (e.g., nearest protected or enhanced crossing opportunity).

Response:

The conversion of TH 65 to a limited access freeway with above- grade bridges at 109th and 105th Avenues requires restriction of mid-block crossings of TH 65 as pedestrian and cyclist presence is illegal on such facilities. While pedestrians and cyclists can currently cross TH 65 mid-block, it is an unsafe option as the roadway carries similar traffic volumes to the parallel segment of I-35W in Anoka County and has a speed limit of 55 mph. To provide improved mobility across TH 65 enhanced pedestrian and cyclist facilities (as described in previous sections) will be provided at 105th and 109th Avenues. The distance between crossings in the proposed design will not increase as compared to the existing facility.

(Limit 1,400 characters; approximately 200 words)

2. Describe how motorist speed will be managed in the project design, both for through traffic and turning movements. *Describe any project-related factors that may affect speed directly or indirectly, even if speed is not the intended outcome (e.g., wider lanes and turning radii to facilitate freight movements, adding turn lanes to alleviate peak hour congestion, etc.). Note any strategies or treatments being considered that are intended to help motorists drive slower (e.g., visual narrowing, narrow lanes, truck aprons to mitigate wide turning radii, etc.) or protect pedestrians if increasing motorist speed (e.g., buffers or other separation from moving vehicles, crossing treatments appropriate for higher speed roadways, etc.).*

Response:

Pedestrians and cyclists currently interact with vehicles traveling at posted speeds of 55 mph at the current at-grade signalized intersections of TH 65 and 109th and 105th Avenues. In the proposed design, these users would interact with vehicles traveling at a design speed of 30 mph on TH 65 frontage roads. Cyclists and pedestrians will also interact with vehicles in grade-separated roundabouts, which are designed for vehicle operating speeds of 20 mph, a significant improvement from the high vehicle speeds at the existing at-grade intersections. While the current stage of design does not identify additional strategies to manage vehicle speeds on frontage roads or through roundabouts, future stages of design refinement will consider addition of traffic control such at roundabouts such as yield or full signalization to manage vehicle speeds as well as crosswalk treatments to notify drivers of possible pedestrian and cyclist presence.

(Limit 2,800 characters; approximately 400 words)

If known, what are the existing and proposed design, operation, and posted speeds? Is this an increase or decrease from existing conditions?

Response:

Given the conversion of TH 65 to a limited-access, non-signalized facility, vehicle speeds will increase on mainline TH 65. However, the proposed project separates active transportation users from TH 65 traffic meaning cyclists and pedestrians will only interact with vehicles on new TH 65 frontage roads and grade-separated roundabout crossings at 105th and 109th Avenues. The design speeds for the new TH 65 frontage roads are 30 mph and 20 mph for roundabouts. As these facilities roads do not currently exist, there is no comparison to existing speed limits but they will be lower than current vehicle speeds cyclists and pedestrians contend with on mainline TH 65.

(Limit 1,400 characters; approximately 200 words)

SUB-MEASURE 2: Existing Location-Based Pedestrian Safety Risk Factors

These factors are based on based on trends and patterns observed in pedestrian crash analysis done for the Regional Pedestrian Safety Action Plan. Check off how many of the following factors are present. Applicants receive more points if more risk factors are present.

Existing road configuration is a One-way, 3+ through lanes or	
Existing road configuration is a Two-way, 4+ through lanes	Yes
Existing road has a design speed, posted speed limit, or speed study/data showing 85th percentile travel speeds in excess of 30 MPH or more	Yes
Existing road has AADT of greater than 15,000 vehicles per day	Yes
List the AADT	51000

SUB-MEASURE 3: Existing Location-Based Pedestrian Safety Exposure Factors

These factors are based on based on trends and patterns observed in pedestrian crash analysis done for the Regional Pedestrian Safety Action Plan. Check off how many of the following existing location exposure factors are present. Applicants receive more points if more risk factors are present.

Existing road has transit running on or across it with 1+ transit stops in the project area (If flag-stop route with no fixed stops, then 1+ locations in the project area where roadside stops are allowed. Do not count portions of transit routes with no stops, such as non-stop freeway sections of express or limited-stop routes. If service was temporarily reduced for the pandemic but is expected to return to 2019 levels, consider 2019 service for this item.)	
Existing road has high-frequency transit running on or across it and 1+ high-frequency stops in the project area (high-frequency defined as service at least every 15 minutes from 6am to 7pm weekdays and 9am to 6pm Saturdays. If service frequency was temporarily reduced for the pandemic but is expected to return to 2019 levels, consider 2019 frequency for this item.)	
Existing road is within 500 of 1+ shopping, dining, or entertainment destinations (e.g., grocery store, restaurant)	Yes
If checked, please describe:	The section of TH 65 between 113th and 103rd Avenues, including the 109th and 105th Avenue intersections travels through a busy commercial area. The roadway is within 500 feet of important community commercial destinations such as Target, Menards, and Kohls and surrounding restaurants and smaller retailers. Existing road is within

(Limit 1,400 characters; approximately 200 words)

Existing road is within 500 of other known pedestrian generators (e.g., school, civic/community center, senior housing, multifamily housing, regulatorily-designated affordable housing)	
If checked, please describe:	

(Limit 1,400 characters; approximately 200 words)

Measure A: Multimodal Elements and Existing Connections

Response:

The TH 65 Project adds several bicycle and pedestrian features to the section of TH 65 between 103rd Ave and 113th Ave. Frontage roads will be added along the east and west sides of TH 65 in with adjacent separated bicycle and pedestrian facilities. There is currently no continuous north-south bicycle or pedestrian network in this area. Cyclists and pedestrians either need to travel along TH 65 or along local surface roads, which are indirect and have discontinuous sidewalks and no bicycle facilities. The proposed project will allow cyclists and pedestrians to move north-south in the project area on continuous, separated facilities. TH 65 is designated as a Tier 2 alignment in the Regional Bicycle Transportation Network.

Additionally, the Project improvements at 105th Avenues and 109th Avenues will have associated bicycle and pedestrian facilities for users crossing TH 65, classified as an expressway Regional Bicycle Barrier. The project design proposes above grade bridges carrying TH 65 vehicle traffic at both intersections, allowing cyclists and pedestrians to cross TH 65 under the bridges. Currently, cyclists and pedestrians contend with long signal times (more than four minutes) and proximity to fast moving vehicle traffic when crossing TH 65 at these at-grade intersections.

Express bus route 865 previously operated on this segment of TH 65 and used the Paul Parkway Park & Ride north of the Project area - this route is not currently operating. The conversion of TH 65 to a limited access facility, as proposed by this project, has the potential to improve transit operating times by more than five minutes or more during the morning southbound peak travel times (see Attachment_Levl3EvaluationMatrix). This improvement will benefit transit users in this

corridor should the route 865 service return or additional transit service be added to the corridor in the future.

The Anoka County Highway System ADA Transition plan identifies ADA non-compliance issues at Ulysses Street NE and CSAH 12 and Baltimore Street NE and CSAH 12. These issues will be addressed through the proposed project.

(Limit 2,800 characters; approximately 400 words)

Transit Projects Not Requiring Construction

If the applicant is completing a transit application that is operations only, check the box and do not complete the remainder of the form. These projects will receive full points for the Risk Assessment.
Park-and-Ride and other transit construction projects require completion of the Risk Assessment below.

Check Here if Your Transit Project Does Not Require Construction

Measure A: Risk Assessment - Construction Projects

1.Public Involvement (20 Percent of Points)

Projects that have been through a public process with residents and other interested public entities are more likely than others to be successful. The project applicant must indicate that events and/or targeted outreach (e.g., surveys and other web-based input) were held to help identify the transportation problem, how the potential solution was selected instead of other options, and the public involvement completed to date on the project. The focus of this section is on the opportunity for public input as opposed to the quality of input. NOTE: A written response is required and failure to respond will result in zero points.

Multiple types of targeted outreach efforts (such as meetings or online/mail outreach) specific to this project with the general public and partner agencies have been used to help identify the project need.

Yes

100%

At least one meeting specific to this project with the general public has been used to help identify the project need.

50%

At least online/mail outreach effort specific to this project with the general public has been used to help identify the project need.

50%

No meeting or outreach specific to this project was conducted, but the project was identified through meetings and/or outreach related to a larger planning effort.

25%

No outreach has led to the selection of this project.

0%

Describe the type(s) of outreach selected for this project (i.e., online or in-person meetings, surveys, demonstration projects), the method(s) used to announce outreach opportunities, and how many people participated. Include any public website links to outreach opportunities.

Guided by NEPA and Title VI regulations, Anoka County recently hosted an online engagement opportunity (Virtual Open House) for the Highway 65 Interchange Improvement Project from March 24 ? April 8, 2022. The website and open house were advertised through press releases, social media, and targeted posting of notices within or near the project area. The virtual open house included ?live chat? sessions with the project team on 3/30/22, 3/31/22, and 4/1/22. Residents were invited to visit the event website, www.anokastpprojects.com (see attached TH65_EngagementSummary document), to ask questions and offer feedback to the project team. While on the website, residents were also invited to fill out a project survey, which collected demographic info including Race, Age, and Income-level. As of April 8th, over 300 people had visited the site to view the project and offer feedback.

Response:

Also, the Planning and Environmental Linkages study (PEL) used to determine the proposed improvements at this location included an extensive engagement process. The project team conducted multiple interviews with local residents with the goal of reaching multiple target population groups representing the demographics of the corridor, held a public open house and online surveys, pop-up events, held Local Official Briefings and has engaged a Public Advisory Committee to vet over 60 alternatives along the total 7-mile PEL corridor from 81st Avenue to Bunker Lake Boulevard, including the alternatives proposed at 105th and 109th Avenues. Locations and events where study outreach efforts were conducted included tabling at Centerview Elementary Curriculum Night, a booth at Blaine World Fest, pop up events at Mary Ann Young Senior Center and the Blaine Caribou Coffee, and an information booth at the Blaine Festival.

Finally, a pop-up event was also held at Blaine International Village (BIV) as the PEL study identified this community as an Environmental Justice (EJ) population that could potentially be disproportionally impacted by the proposed project. The project team identified BIV as a critical community to reach during the alternatives analysis process to provide feedback and concerns on project design options. Canvassing in BIV ahead of the pop-up event with a Spanish interpreter allowed the project team to introduce and discuss the project with about 85 households. At the pop-up event, 125 BIV residents were able to meet with project staff to discuss the project. A Spanish interpreter was provided at the event as well.

(Limit 2,800 characters; approximately 400 words)

2.Layout (25 Percent of Points)

Layout includes proposed geometrics and existing and proposed right-of-way boundaries. A basic layout should include a base map (north arrow; scale; legend; city and/or county limits; existing ROW, labeled; existing signals;* and bridge numbers*) and design data (proposed alignments; bike and/or roadway lane widths; shoulder width;* proposed signals;* and proposed ROW). An aerial photograph with a line showing the projects termini does not suffice and will be awarded zero points. *If applicable*

Layout approved by the applicant and all impacted jurisdictions (i.e., cities/counties/MnDOT. If a MnDOT trunk highway is impacted, approval by MnDOT must have occurred to receive full points. A PDF of the layout must be attached along with letters from each jurisdiction to receive points.

100%

A layout does not apply (signal replacement/signal timing, stand-alone streetscaping, minor intersection improvements). Applicants that are not certain whether a layout is required should contact Colleen Brown at MnDOT Metro State Aid colleen.brown@state.mn.us.

100%

For projects where MnDOT trunk highways are impacted and a MnDOT Staff Approved layout is required. Layout approved by the applicant and all impacted local jurisdictions (i.e., cities/counties), and layout review and approval by MnDOT is pending. A PDF of the layout must be attached along with letters from each jurisdiction to receive points.

75%

Layout completed but not approved by all jurisdictions. A PDF of the layout must be attached to receive points.

50%

Layout has been started but is not complete. A PDF of the layout must be attached to receive points. Yes

25%

Layout has not been started

0%

Attach Layout 1649954291623_TH65_105th109th_Layout.pdf

Please upload attachment in PDF form.

Additional Attachments

Please upload attachment in PDF form.

3.Review of Section 106 Historic Resources (15 Percent of Points)

No known historic properties eligible for or listed in the National Register of Historic Places are located in the project area, and project is not located on an identified historic bridge Yes

100%

There are historical/archeological properties present but determination of no historic properties affected is anticipated.

100%

Historic/archeological property impacted; determination of no adverse effect anticipated

80%

Historic/archeological property impacted; determination of adverse effect anticipated

40%

Unsure if there are any historic/archaeological properties in the project area.

0%

Project is located on an identified historic bridge

4.Right-of-Way (25 Percent of Points)

Right-of-way, permanent or temporary easements, and MnDOT agreement/limited-use permit either not required or all have been acquired

100%

Right-of-way, permanent or temporary easements, and/or MnDOT agreement/limited-use permit required - plat, legal descriptions, or official map complete

50%

Right-of-way, permanent or temporary easements, and/or MnDOT agreement/limited-use permit required - parcels identified Yes

25%

Right-of-way, permanent or temporary easements, and/or MnDOT agreement/limited-use permit required - parcels not all identified

0%

5.Railroad Involvement (15 Percent of Points)

No railroad involvement on project or railroad Right-of-Way agreement is executed (include signature page, if applicable)	Yes
100%	
Signature Page	
Please upload attachment in PDF form.	
Railroad Right-of-Way Agreement required; negotiations have begun	
50%	
Railroad Right-of-Way Agreement required; negotiations have not begun.	
0%	

Measure A: Cost Effectiveness

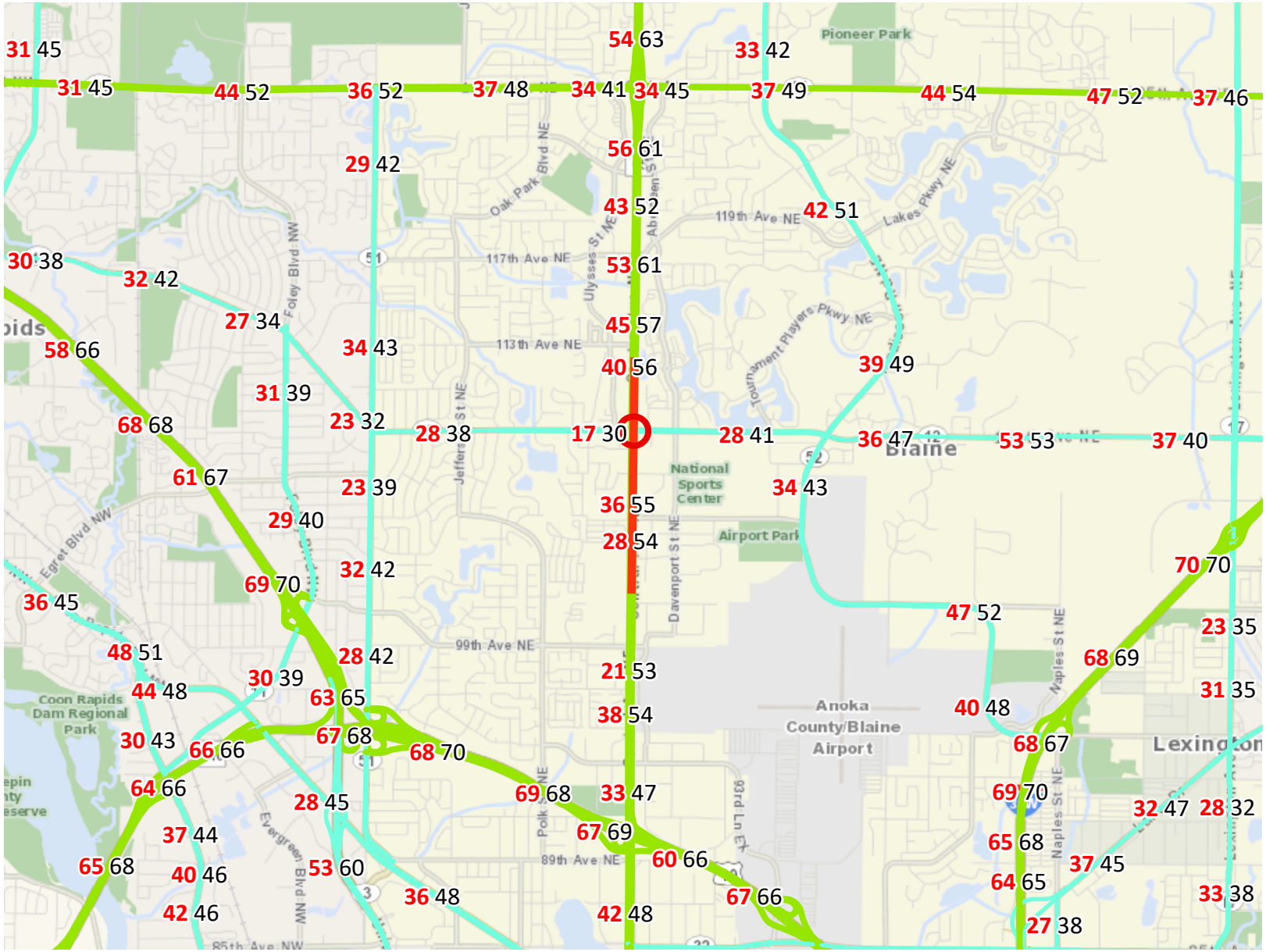
Total Project Cost (entered in Project Cost Form):	$41,963,662.00
Enter Amount of the Noise Walls:	$1,440,000.00
Total Project Cost subtract the amount of the noise walls:	$40,523,662.00
Enter amount of any outside, competitive funding:	$4,600,000.00
Attach documentation of award:	1648823881952_Blaine draft award letter.pdf
Points Awarded in Previous Criteria	
Cost Effectiveness	$0.00

Other Attachments

File Name	Description	File Size
Attachment_Level3EvaluationMatrix.pdf	TH 65 Level 3 Evaluation Matrix showing all Alternatives	135 KB
b. TH 65 at 12 Interchange Resolution #2022-40.pdf	Anoka County Resolution in support of TH 65 Regional Solicitation Application	394 KB
Blaine Letter of Support for TH 65 Interchanges 2022 STP.pdf	TH 65 City of Blaine Letter of Support	405 KB
RS MnDOT Letter Anoka Co TH 65 interchanges at 105th and 109th Ave.pdf	TH 65 MnDOT Letter of Support	224 KB
TH65 _EngagementSummary.pdf	TH 65 Engagement Summary	658 KB
TH65Interchanges_ExistingConditionsPhotos.pdf	Photos of TH 65 existing conditions at 109th Ave NE	413 KB
TH_65_PEL_Final_Report_ADA-15469884-v1.PDF	TH 65 Planning and Environmental Linkages Study	7.6 MB
TH_65_RegionalSolicitation_OnePageSummary.pdf	TH 65 One Page Summary	205 KB

Level of Congestion

Strategic Capacity Project: TH 65 at CSAH 12 (109th Avenue) and 105th Avenue Interchange | Map ID: 1647366148080



Project Points — Principal Arterials — Principal Arterials Planned

Project — A Minor Arterials — A Minor Arterials Planned

0 0.5 1 2 3 4 Miles

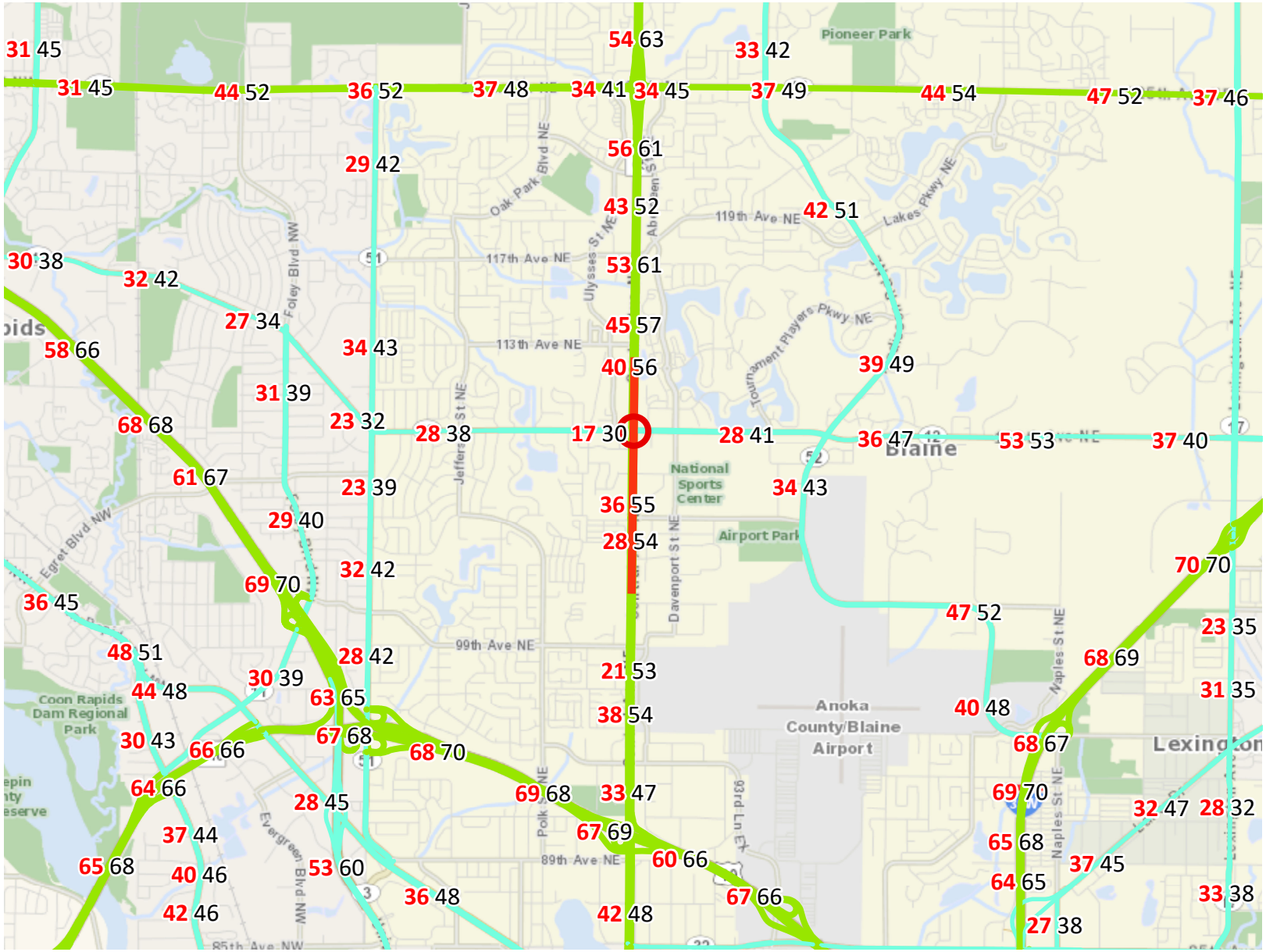
Created: 3/15/2022
LandscapeRSA1

For complete disclaimer of accuracy, please visit
https://giswebsite.metc.state.mn.us/gissite/notice.aspx

METROPOLITAN COUNCIL

Level of Congestion

Strategic Capacity Project: TH 65 at CSAH 12 (109th Avenue) and 105th Avenue Interchange | Map ID: 1647366148080



Project Points — Principal Arterials — Principal Arterials Planned

Project — A Minor Arterials — A Minor Arterials Planned

0 0.5 1 2 3 4 Miles

Created: 3/15/2022
LandscapeRSA1

For complete disclaimer of accuracy, please visit
https://giswebsite.metc.state.mn.us/gissite/notice.aspx

METROPOLITAN COUNCIL

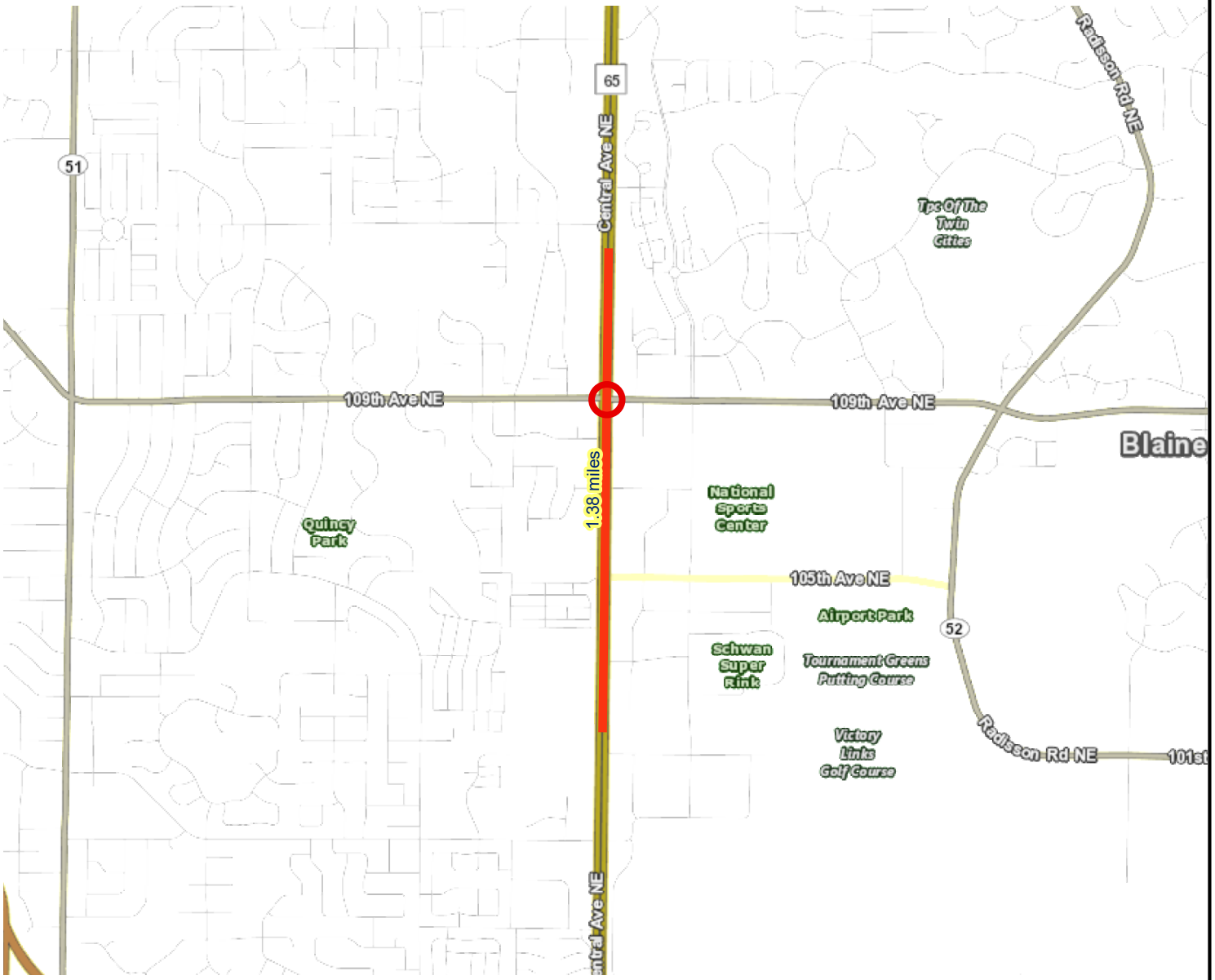
Regional Economy

Strategic Capacity Project: TH 65 at CSAH 12 (109th Avenue) and 105th Avenue Interchange | Map ID: 16473661480

Results

WITHIN ONE MI of project:
Postsecondary Students: 0

Totals by City:
Blaine
Population: 15344
Employment: 5382
Mfg and Dist Employment: 1307



Project Points
Project
Manfacturing/Distribution Centers
Job Concentration Centers

0 0.275 0.55 1.1 1.65 2.2 Miles

Created: 3/15/2022
LandscapeRSA5

For complete disclaimer of accuracy, please visit
http://giswebsite.metc.state.mn.us/gissitenew/notice.aspx

METROPOLITAN COUNCIL

Transit Connections

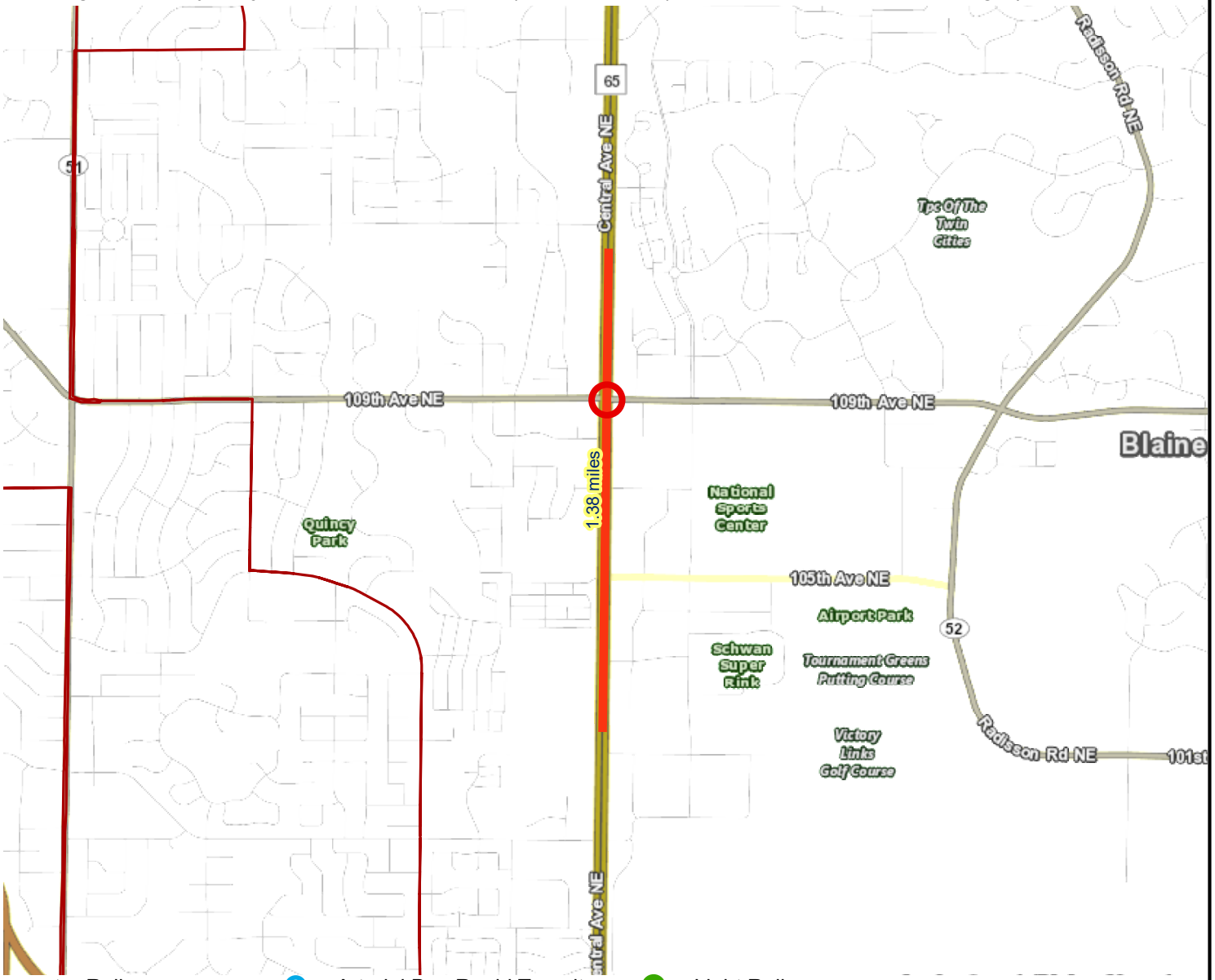
Strategic Capacity Project: TH 65 at CSAH 12 (109th Avenue) and 105th Avenue Interchange | Map ID: 1647366148

Results

Transit with a Direct Connection to project:
-- NONE --

**indicates Planned Alignments*

Transit Market areas: 3



Project Points
Project
Project Area
Arterial Bus Rapid Transit
Commuter Rail
Dedicated Bus Rapid Transit
Highway Bus Rapid Transit
Light Rail
Arterial Bus Rapid Transit
Commuter Rail
Dedicated Bus Rapid Transit
Highway Bus Rapid Transit
Light Rail
Transit Routes

0 0.275 0.55 1.1 1.65 2.2 Miles

Created: 3/15/2022
LandscapeRSA3

METROPOLITAN COUNCIL

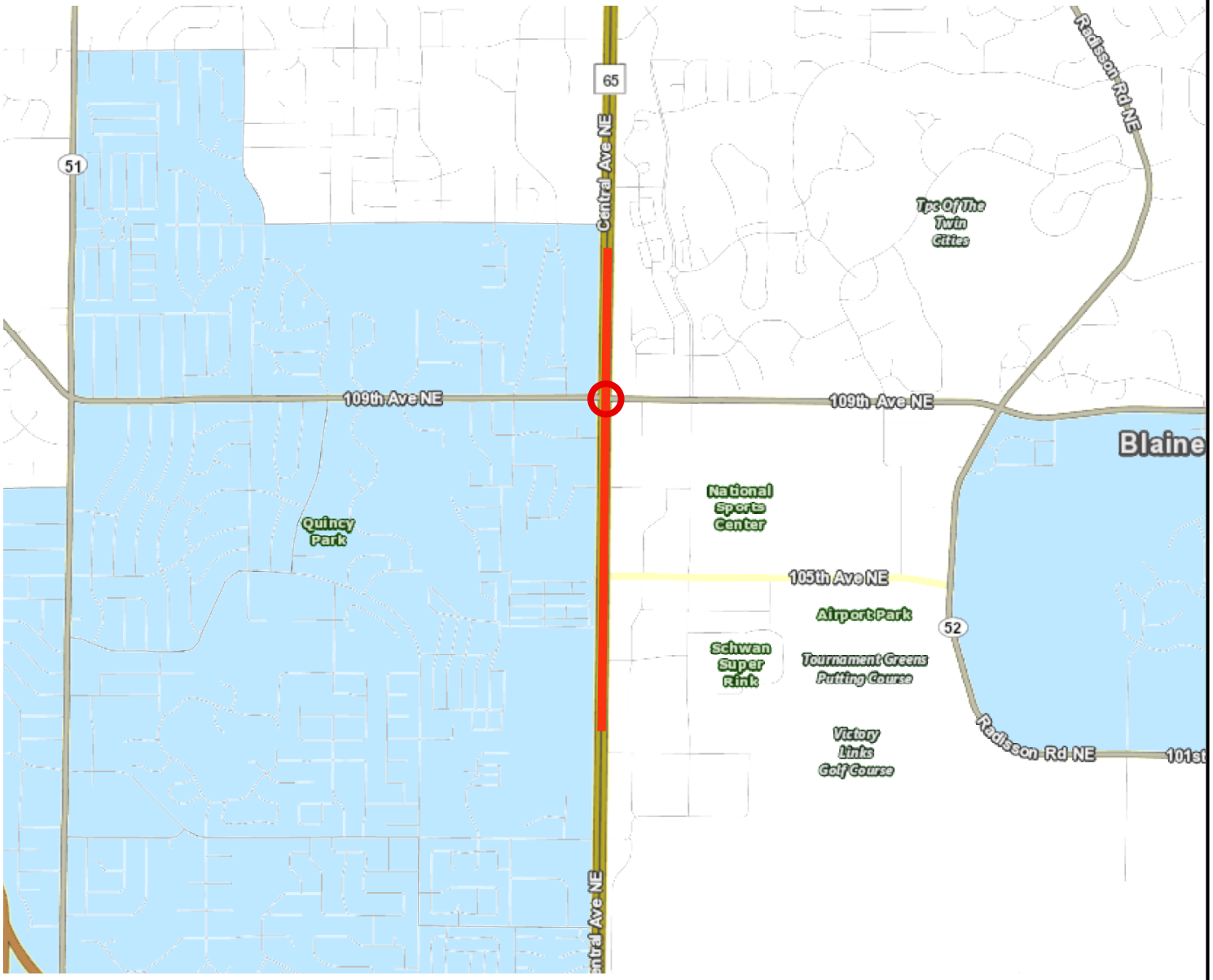
Socio-Economic Conditions

Strategic Capacity Project: TH 65 at CSAH 12 (109th Avenue) and 105th Avenue Interchange | Map ID: 1647366148080

Results

Total of publicly subsidized rental housing units in census tracts within 1/2 mile: 10

Project located in census tracts that are BELOW the regional average for population in poverty or population of color.



Points
Lines
Area of Concentrated Poverty
Regional Environmental Justice Area

0 0.275 0.55 1.1 1.65 2.2 Miles

Created: 3/15/2022
LandscapeRSA2

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Delay was calculated using the attached SYNCHRO reports in the following way:

Total Peak Hour Delay per vehicle and Vehicles Per Hour **without project** was calculated using the 105th Ave and 109th Ave No Build SYNCHRO reports. Total Peak Hour Delay and Vehicles Per Hour for each intersection was added together to get total values for each metric without the project:

Total Peak Hour Delay per Vehicle without project = 71.2 +146.9 = 218.1 sec per vehicle

Vehicles per Hour without project = 5096 + 6072 = 11,168 VPH

Total Peak Hour Delay per vehicle and Vehicles Per Hour **with the project** was calculated using the 105th Ave, 105th Roundabout, 109th Ave, and 109th Roundabout SYNCHRO reports. For the roundabouts, Delay per Vehicle and Vehicles per Hour was added for both the northbound and southbound frontage roads.

105th Roundabout: 5.7 sec/veh + 19.3 sec/veh = 25 sec/ veh

109th Roundabout: 12.7 sec/veh + 11.9 sec/veh = 24.6 sec/veh

105th Ave: 11.6 sec/veh

109th Ave: 38.7 sec/veh

Total Delay = 25 + 24.6 + 11.6 + 38.7 = 99.9

Similarly, Total Peak Hour volume **with the project** was summed for 105th and 109th Avenues and the northbound and southbound legs of the 109th and 105th roundabouts.

105th roundabout: 382 + 6+ 123 +311 + 0 + 589 + 247 +308 = 1,966 VPH

109th roundabout: 642 + 0 + 874 + 1061 + 0 + 581 + 869 + 1074 = 5,101 VPH

105th Ave: 3,240 VPH

109th Ave: 7,760 VPH

Total VPH = 1,966 + 5,101 + 3,240 + 7,760 = 18067

Emissions were calculated using the attached SYNCHRO reports in the following way:

The 105th and 109th Ave intersection emissions from the No Build SYNCHRO reports were added together to compute total emissions **without the project:**

109th and 105th emissions: 2170 g + 47726 g + 5749 g + 885 g + 23313 g + 2728 g = 82.57 Kg

The emissions of the 105th and 109th Ave roundabouts from the Alt 1A SYNCHRO reports were added together to calculate emissions **with the project.**

109th and 105th roundabout emissions: 290 g + 7744 g + 868 g + 702 g + 19747 g + 2080 g = 31.43 kg

8: 109th Ave & TH65 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.2	0.1	0.1	0.1	0.1	0.2	123.5	123.9	123.1	0.1	0.2	0.2
Total Del/Veh (s)	187.4	104.8	28.0	630.0	245.7	89.1	212.7	146.3	28.3	120.7	31.8	7.0
Fuel Used (gal)	4.0	6.9	2.0	17.9	10.9	4.0	6.5	57.3	3.0	3.8	15.7	0.7
Fuel Eff. (mpg)	15.6	20.8	30.3	5.6	12.1	21.6	8.8	10.0	14.3	18.8	28.0	34.9
HC Emissions (g)	19	51	17	88	80	34	52	474	40	47	250	15
CO Emissions (g)	516	1212	421	2310	1963	818	1260	10917	923	927	5057	268
NOx Emissions (g)	50	137	49	143	178	84	108	1090	98	110	680	40
Vehicles Exited	174	408	164	270	407	274	204	2015	151	222	1327	80
Hourly Exit Rate	174	408	164	270	407	274	204	2015	151	222	1327	80
Input Volume	180	394	166	339	404	265	214	2285	166	217	1359	83
% of Volume	97	103	99	80	101	103	95	88	91	102	98	97

8: 109th Ave & TH65 Performance by movement

Movement	All
Denied Del/Veh (s)	54.0
Total Del/Veh (s)	146.9
Fuel Used (gal)	132.5
Fuel Eff. (mpg)	13.5
HC Emissions (g)	1166
CO Emissions (g)	26590
NOx Emissions (g)	2767
Vehicles Exited	5696
Hourly Exit Rate	5696
Input Volume	6072
% of Volume	94

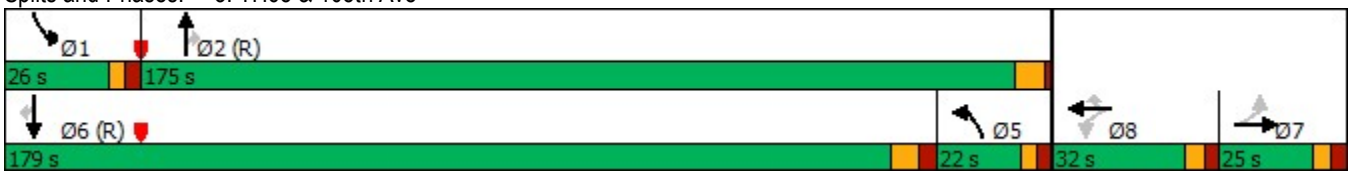
Total Network Performance

Denied Del/Veh (s)	54.0
Total Del/Veh (s)	150.2
Fuel Used (gal)	198.8
Fuel Eff. (mpg)	18.6
HC Emissions (g)	2170
CO Emissions (g)	47726
NOx Emissions (g)	5749
Vehicles Exited	5689
Hourly Exit Rate	5689
Input Volume	12143
% of Volume	47

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	29	19	293	17	139	17	2565	99	176	1673	11
Future Volume (vph)	29	19	293	17	139	17	2565	99	176	1673	11
Turn Type	Perm	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		7		8		5	2		1	6	
Permitted Phases	7		8		8			2			6
Detector Phase	7	7	8	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	1.0	1.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	8.0	8.0	24.5	24.5	24.5	11.0	25.0	25.0	11.0	27.0	27.0
Total Split (s)	25.0	25.0	32.0	32.0	32.0	22.0	175.0	175.0	26.0	179.0	179.0
Total Split (%)	9.7%	9.7%	12.4%	12.4%	12.4%	8.5%	67.8%	67.8%	10.1%	69.4%	69.4%
Yellow Time (s)	3.5	3.5	4.0	4.0	4.0	3.0	5.5	5.5	3.0	5.5	5.5
All-Red Time (s)	3.5	3.5	2.5	2.5	2.5	3.0	1.5	1.5	3.0	3.5	3.5
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		7.0	6.5	6.5	6.5	6.0	7.0	7.0	6.0	9.0	9.0
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)		15.3	25.5	25.5	25.5	13.9	172.5	172.5	18.2	177.1	177.1
Actuated g/C Ratio		0.06	0.10	0.10	0.10	0.05	0.67	0.67	0.07	0.69	0.69
v/c Ratio		0.76	1.96	1.85	0.51	0.19	1.14	0.10	0.77	0.73	0.01
Control Delay		157.8	519.3	472.5	18.4	119.7	108.2	5.9	138.3	28.8	0.0
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		157.8	519.3	472.5	18.4	119.7	108.2	5.9	138.3	28.8	0.0
LOS		F	F	F	B	F	F	A	F	C	A
Approach Delay		157.8		348.2			104.5			39.0	
Approach LOS		F		F			F			D	

Intersection Summary	
Cycle Length: 258	
Actuated Cycle Length: 258	
Offset: 142.5 (55%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.96	
Intersection Signal Delay: 102.7	Intersection LOS: F
Intersection Capacity Utilization 103.5%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 3: TH65 & 105th Ave



Intersection	
Intersection Delay, s/veh	12.7
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	2	2	0	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	879	1040	0	329
Demand Flow Rate, veh/h	896	1061	0	345
Vehicles Circulating, veh/h	642	0	874	1061
Vehicles Exiting, veh/h	764	874	664	0
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	16.9	8.5	0.0	14.6
Approach LOS	C	A	-	B

Lane	Left	Right	Left	Right	Left	Right
Designated Moves	LT	TR	LT	TR	LT	R
Assumed Moves	LT	TR	LT	TR	LT	R
RT Channelized						
Lane Util	0.470	0.530	0.470	0.530	0.719	0.281
Critical Headway, s	4.293	4.113	4.293	4.113	4.293	4.113
Entry Flow, veh/h	421	475	499	562	248	97
Cap Entry Lane, veh/h	698	721	1130	1130	510	538
Entry HV Adj Factor	0.981	0.980	0.979	0.981	0.954	0.948
Flow Entry, veh/h	413	466	489	551	237	92
Cap Entry, veh/h	685	707	1107	1108	486	510
V/C Ratio	0.603	0.659	0.442	0.497	0.486	0.180
Control Delay, s/veh	15.9	17.7	8.0	8.9	16.6	9.5
LOS	C	C	A	A	C	A
95th %tile Queue, veh	4	5	2	3	3	1

Intersection	
Intersection Delay, s/veh	11.9
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	2	2	2	0
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	852	1144	740	0
Demand Flow Rate, veh/h	869	1179	770	0
Vehicles Circulating, veh/h	0	581	869	1074
Vehicles Exiting, veh/h	1074	1058	0	352
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	7.2	10.3	19.8	0.0
Approach LOS	A	B	C	-

Lane	Left	Right	Left	Right	Bypass	Left	Right
Designated Moves	LT	TR	LT	TR	R	LT	R
Assumed Moves	LT	TR	LT	TR	R	LT	R
RT Channelized					Free		
Lane Util	0.470	0.530	0.470	0.530		0.499	0.501
Critical Headway, s	4.293	4.113	4.293	4.113		4.293	4.113
Entry Flow, veh/h	408	461	397	448	334	384	386
Cap Entry Lane, veh/h	1130	1130	731	752	1957	589	615
Entry HV Adj Factor	0.981	0.979	0.971	0.971	0.971	0.961	0.961
Flow Entry, veh/h	400	451	386	435	324	369	371
Cap Entry, veh/h	1109	1107	710	730	1900	566	591
V/C Ratio	0.361	0.408	0.543	0.595	0.171	0.652	0.628
Control Delay, s/veh	6.9	7.5	13.7	14.9	0.0	20.8	18.9
LOS	A	A	B	B	A	C	C
95th %tile Queue, veh	2	2	3	4	1	5	4

3: TH65 & 105th Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.2	0.1	0.1	0.2	0.1	134.9	127.4	129.8	0.1	0.2	0.1
Total Del/Veh (s)	110.1	116.1	70.7	160.7	139.8	74.3	144.2	91.7	12.9	109.0	22.0	1.2
Fuel Used (gal)	0.5	0.3	0.2	6.0	0.3	1.9	0.4	54.0	1.7	2.7	15.2	0.1
Fuel Eff. (mpg)	19.3	18.8	22.5	15.3	15.6	22.1	8.7	10.4	13.3	17.1	28.7	38.8
HC Emissions (g)	5	1	1	27	1	16	1	225	12	17	129	0
CO Emissions (g)	114	40	26	802	38	407	53	6932	373	498	3123	7
NOx Emissions (g)	13	3	2	74	3	42	3	658	33	46	397	1
Vehicles Exited	29	20	13	298	14	138	14	2362	93	179	1693	11
Hourly Exit Rate	29	20	13	298	14	138	14	2362	93	179	1693	11
Input Volume	29	19	13	296	17	140	17	2588	100	178	1688	11
% of Volume	99	104	98	101	81	98	81	91	93	101	100	98

3: TH65 & 105th Ave Performance by movement

Movement	All
Denied Del/Veh (s)	67.2
Total Del/Veh (s)	71.2
Fuel Used (gal)	83.2
Fuel Eff. (mpg)	14.8
HC Emissions (g)	435
CO Emissions (g)	12413
NOx Emissions (g)	1276
Vehicles Exited	4864
Hourly Exit Rate	4864
Input Volume	5096
% of Volume	95

Total Network Performance

Denied Del/Veh (s)	67.2
Total Del/Veh (s)	75.2
Fuel Used (gal)	129.1
Fuel Eff. (mpg)	19.6
HC Emissions (g)	885
CO Emissions (g)	23313
NOx Emissions (g)	2728
Vehicles Exited	4856
Hourly Exit Rate	4856
Input Volume	10192
% of Volume	48

3: 105th Ave & TH65 SB Frontage Rd Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.2	0.2	0.2	0.2	0.1	0.1
Total Del/Veh (s)	4.2	3.5	1.8	2.5	2.7	2.8	3.7	4.4	3.2	2.8
Fuel Used (gal)	0.4	0.1	0.6	0.1	0.0	0.6	0.3	0.3	0.0	2.5
Fuel Eff. (mpg)	35.5	36.4	20.3	19.5	33.5	34.1	34.7	34.9	34.6	30.4
HC Emissions (g)	3	0	5	6	0	5	4	4	0	27
CO Emissions (g)	64	12	143	111	6	140	97	81	5	659
NOx Emissions (g)	8	1	20	16	1	17	13	11	1	88
Vehicles Exited	56	14	244	46	7	119	59	47	7	599
Hourly Exit Rate	56	14	244	46	7	119	59	47	7	599
Input Volume	52	15	249	40	6	118	62	46	7	596
% of Volume	107	92	98	114	117	101	96	102	100	101

6: TH65 NB Ramps / Frontage Rd & 105th Ave Performance by movement

Movement	EBL	EBT	WBT	WBR	NBL	NBT	NBR	All
Denied Del/Veh (s)	0.0	0.0	0.4	0.4	0.5	0.5	0.4	0.4
Total Del/Veh (s)	1.9	2.3	10.6	9.7	11.4	12.5	11.1	9.7
Fuel Used (gal)	0.1	0.4	1.8	1.2	0.1	2.4	0.5	6.5
Fuel Eff. (mpg)	20.1	21.9	35.1	35.1	34.3	33.4	33.1	33.2
HC Emissions (g)	0	5	21	15	1	35	7	85
CO Emissions (g)	17	119	454	326	26	789	165	1895
NOx Emissions (g)	2	17	59	42	3	92	19	235
Vehicles Exited	39	197	272	182	15	483	89	1277
Hourly Exit Rate	39	197	272	182	15	483	89	1277
Input Volume	39	194	269	183	17	487	96	1285
% of Volume	99	102	101	100	87	99	93	99

Total Network Performance

Denied Del/Veh (s)	0.4
Total Del/Veh (s)	11.6
Fuel Used (gal)	20.8
Fuel Eff. (mpg)	28.3
HC Emissions (g)	290
CO Emissions (g)	7744
NOx Emissions (g)	868
Vehicles Exited	1354
Hourly Exit Rate	1354
Input Volume	3240
% of Volume	42

Intersection	
Intersection Delay, s/veh	5.7
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	71	299	129	119
Demand Flow Rate, veh/h	72	305	131	124
Vehicles Circulating, veh/h	382	6	123	311
Vehicles Exiting, veh/h	53	248	331	0
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	5.7	5.8	4.9	6.1
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	TR	LT	LR	LTR
Assumed Moves	TR	LT	LR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	72	305	131	124
Cap Entry Lane, veh/h	771	1123	999	828
Entry HV Adj Factor	0.985	0.981	0.985	0.957
Flow Entry, veh/h	71	299	129	119
Cap Entry, veh/h	759	1102	984	792
V/C Ratio	0.093	0.272	0.131	0.150
Control Delay, s/veh	5.7	5.8	4.9	6.1
LOS	A	A	A	A
95th %tile Queue, veh	0	1	0	1

Intersection	
Intersection Delay, s/veh	19.3
Intersection LOS	C

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	0
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	242	472	626	0
Demand Flow Rate, veh/h	247	486	651	0
Vehicles Circulating, veh/h	0	589	247	308
Vehicles Exiting, veh/h	308	309	0	767
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	5.3	27.2	18.8	0.0
Approach LOS	A	D	C	-

Lane	Left	Left	Left
Designated Moves	LT	TR	LTR
Assumed Moves	LT	TR	LTR
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	247	486	651
Cap Entry Lane, veh/h	1130	627	883
Entry HV Adj Factor	0.980	0.970	0.961
Flow Entry, veh/h	242	472	626
Cap Entry, veh/h	1107	608	848
V/C Ratio	0.219	0.775	0.738
Control Delay, s/veh	5.3	27.2	18.8
LOS	A	D	C
95th %tile Queue, veh	1	7	7

3: 109th Ave & TH65 SB Ramps Performance by movement

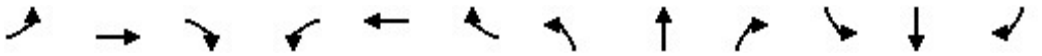
Movement	EBT	EBR	WBL	WBT	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.2	0.2	0.0	0.0	0.2	0.3	0.1	0.1
Total Del/Veh (s)	16.5	4.5	4.5	4.2	99.0	109.0	4.6	18.0
Fuel Used (gal)	3.8	1.5	1.5	2.2	2.4	0.1	0.4	11.8
Fuel Eff. (mpg)	31.5	33.4	15.1	18.3	14.3	13.4	34.6	23.6
HC Emissions (g)	35	16	15	35	29	0	7	137
CO Emissions (g)	939	404	454	823	744	13	147	3525
NOx Emissions (g)	104	49	70	123	68	1	19	435
Vehicles Exited	584	239	377	615	216	8	89	2128
Hourly Exit Rate	584	239	377	615	216	8	89	2128
Input Volume	596	246	370	639	220	8	88	2167
% of Volume	98	97	102	96	98	100	101	98

6: TH65 NB Ramps / Frontage Rd & 109th Ave Performance by movement

Movement	EBL	EBT	WBT	WBR	NBL	NBT	NBR	All
Denied Del/Veh (s)	0.0	0.0	0.4	2.4	161.1	155.2	160.1	43.7
Total Del/Veh (s)	4.2	4.4	25.8	6.3	290.4	294.1	37.6	52.8
Fuel Used (gal)	0.7	2.3	5.5	2.1	6.5	4.4	5.9	27.3
Fuel Eff. (mpg)	15.6	17.8	28.6	29.0	3.9	3.9	7.3	13.0
HC Emissions (g)	5	32	59	28	38	28	51	240
CO Emissions (g)	176	786	1550	737	917	644	1238	6048
NOx Emissions (g)	26	118	172	86	61	43	115	623
Vehicles Exited	176	630	798	311	182	123	313	2533
Hourly Exit Rate	176	630	798	311	182	123	313	2533
Input Volume	185	638	786	311	211	143	355	2628
% of Volume	95	99	102	100	86	86	88	96

Total Network Performance

Denied Del/Veh (s)	38.7
Total Del/Veh (s)	60.2
Fuel Used (gal)	62.5
Fuel Eff. (mpg)	19.3
HC Emissions (g)	702
CO Emissions (g)	19747
NOx Emissions (g)	2080
Vehicles Exited	2884
Hourly Exit Rate	2884
Input Volume	7760
% of Volume	37



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	178	391	164	336	401	263	212	2265	165	215	1347	82
Future Volume (vph)	178	391	164	336	401	263	212	2265	165	215	1347	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	3400	3505	1568	3367	3471	1553	3335	3438	1538
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3539	1583	3400	3505	1568	3367	3471	1553	3335	3438	1538
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			131			101			103			103
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1960			1744			1540			1768	
Travel Time (s)		44.5			39.6			35.0			40.2	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	2%	3%	3%	3%	4%	4%	4%	5%	5%	5%
Adj. Flow (vph)	187	412	173	354	422	277	223	2384	174	226	1418	86
Shared Lane Traffic (%)												
Lane Group Flow (vph)	187	412	173	354	422	277	223	2384	174	226	1418	86
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	1.0	1.0	1.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	8.0	9.0	9.0	32.0	32.0	32.0	11.0	25.0	25.0	11.0	25.0	25.0
Total Split (s)	31.0	40.0	40.0	26.0	35.0	35.0	21.0	158.0	158.0	26.0	163.0	163.0
Total Split (%)	12.4%	16.0%	16.0%	10.4%	14.0%	14.0%	8.4%	63.2%	63.2%	10.4%	65.2%	65.2%
Maximum Green (s)	24.5	33.0	33.0	19.5	28.0	28.0	15.0	151.0	151.0	20.0	156.0	156.0
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5	4.5	3.0	5.5	5.5	3.0	5.5	5.5
All-Red Time (s)	3.5	2.5	2.5	3.5	2.5	2.5	3.0	1.5	1.5	3.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	7.0	7.0	6.5	7.0	7.0	6.0	7.0	7.0	6.0	7.0	7.0
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	0		0	0
Act Effct Green (s)	24.5	33.0	33.0	19.5	28.0	28.0	15.0	151.0	151.0	20.0	156.0	156.0
Actuated g/C Ratio	0.10	0.13	0.13	0.08	0.11	0.11	0.06	0.60	0.60	0.08	0.62	0.62
v/c Ratio	1.08	0.88	0.54	1.34	1.08	1.05	1.10	1.14	0.18	0.85	0.66	0.09
Control Delay	188.2	126.3	33.0	250.3	164.9	129.2	192.3	112.9	9.0	139.2	32.0	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	188.2	126.3	33.0	250.3	164.9	129.2	192.3	112.9	9.0	139.2	32.0	1.4
LOS	F	F	C	F	F	F	F	F	A	F	C	A
Approach Delay		120.4			184.2			112.8			44.5	
Approach LOS		F			F			F			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 250			
Actuated Cycle Length: 250			
Natural Cycle: 150			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 1.34			
Intersection Signal Delay: 106.9		Intersection LOS: F	
Intersection Capacity Utilization 111.8%		ICU Level of Service H	
Analysis Period (min) 15			

Splits and Phases: 8: 109th Ave & TH65

Delay was calculated using the attached SYNCHRO reports in the following way:

Total Peak Hour Delay per vehicle and Vehicles Per Hour **without project** was calculated using the 105th Ave and 109th Ave No Build SYNCHRO reports. Total Peak Hour Delay and Vehicles Per Hour for each intersection was added together to get total values for each metric without the project:

Total Peak Hour Delay per Vehicle without project = 71.2 +146.9 = 218.1 sec per vehicle

Vehicles per Hour without project = 5096 + 6072 = 11,168 VPH

Total Peak Hour Delay per vehicle and Vehicles Per Hour **with the project** was calculated using the 105th Ave, 105th Roundabout, 109th Ave, and 109th Roundabout SYNCHRO reports. For the roundabouts, Delay per Vehicle and Vehicles per Hour was added for both the northbound and southbound frontage roads.

105th Roundabout: 5.7 sec/veh + 19.3 sec/veh = 25 sec/ veh

109th Roundabout: 12.7 sec/veh + 11.9 sec/veh = 24.6 sec/veh

105th Ave: 11.6 sec/veh

109th Ave: 38.7 sec/veh

Total Delay = 25 + 24.6 + 11.6 + 38.7 = 99.9

Similarly, Total Peak Hour volume **with the project** was summed for 105th and 109th Avenues and the northbound and southbound legs of the 109th and 105th roundabouts.

105th roundabout: 382 + 6+ 123 +311 + 0 + 589 + 247 +308 = 1,966 VPH

109th roundabout: 642 + 0 + 874 + 1061 + 0 + 581 + 869 + 1074 = 5,101 VPH

105th Ave: 3,240 VPH

109th Ave: 7,760 VPH

Total VPH = 1,966 + 5,101 + 3,240 + 7,760 = 18067

Emissions were calculated using the attached SYNCHRO reports in the following way:

The 105th and 109th Ave intersection emissions from the No Build SYNCHRO reports were added together to compute total emissions **without the project:**

109th and 105th emissions: 2170 g + 47726 g + 5749 g + 885 g + 23313 g + 2728 g = 82.57 Kg

The emissions of the 105th and 109th Ave roundabouts from the Alt 1A SYNCHRO reports were added together to calculate emissions **with the project.**

109th and 105th roundabout emissions: 290 g + 7744 g + 868 g + 702 g + 19747 g + 2080 g = 31.43 kg

8: 109th Ave & TH65 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.2	0.1	0.1	0.1	0.1	0.2	123.5	123.9	123.1	0.1	0.2	0.2
Total Del/Veh (s)	187.4	104.8	28.0	630.0	245.7	89.1	212.7	146.3	28.3	120.7	31.8	7.0
Fuel Used (gal)	4.0	6.9	2.0	17.9	10.9	4.0	6.5	57.3	3.0	3.8	15.7	0.7
Fuel Eff. (mpg)	15.6	20.8	30.3	5.6	12.1	21.6	8.8	10.0	14.3	18.8	28.0	34.9
HC Emissions (g)	19	51	17	88	80	34	52	474	40	47	250	15
CO Emissions (g)	516	1212	421	2310	1963	818	1260	10917	923	927	5057	268
NOx Emissions (g)	50	137	49	143	178	84	108	1090	98	110	680	40
Vehicles Exited	174	408	164	270	407	274	204	2015	151	222	1327	80
Hourly Exit Rate	174	408	164	270	407	274	204	2015	151	222	1327	80
Input Volume	180	394	166	339	404	265	214	2285	166	217	1359	83
% of Volume	97	103	99	80	101	103	95	88	91	102	98	97

8: 109th Ave & TH65 Performance by movement

Movement	All
Denied Del/Veh (s)	54.0
Total Del/Veh (s)	146.9
Fuel Used (gal)	132.5
Fuel Eff. (mpg)	13.5
HC Emissions (g)	1166
CO Emissions (g)	26590
NOx Emissions (g)	2767
Vehicles Exited	5696
Hourly Exit Rate	5696
Input Volume	6072
% of Volume	94

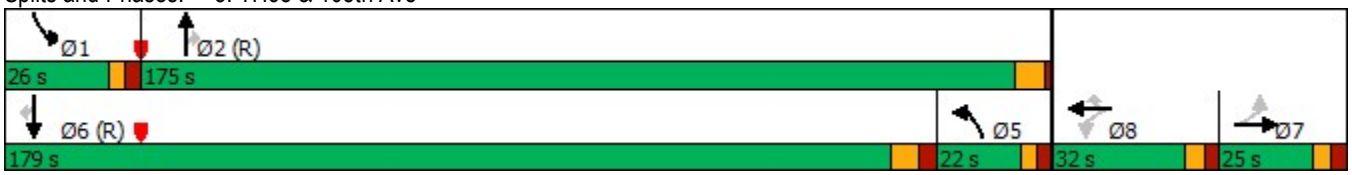
Total Network Performance

Denied Del/Veh (s)	54.0
Total Del/Veh (s)	150.2
Fuel Used (gal)	198.8
Fuel Eff. (mpg)	18.6
HC Emissions (g)	2170
CO Emissions (g)	47726
NOx Emissions (g)	5749
Vehicles Exited	5689
Hourly Exit Rate	5689
Input Volume	12143
% of Volume	47

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	29	19	293	17	139	17	2565	99	176	1673	11
Future Volume (vph)	29	19	293	17	139	17	2565	99	176	1673	11
Turn Type	Perm	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases		7		8		5	2		1	6	
Permitted Phases	7		8		8			2			6
Detector Phase	7	7	8	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	1.0	1.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	8.0	8.0	24.5	24.5	24.5	11.0	25.0	25.0	11.0	27.0	27.0
Total Split (s)	25.0	25.0	32.0	32.0	32.0	22.0	175.0	175.0	26.0	179.0	179.0
Total Split (%)	9.7%	9.7%	12.4%	12.4%	12.4%	8.5%	67.8%	67.8%	10.1%	69.4%	69.4%
Yellow Time (s)	3.5	3.5	4.0	4.0	4.0	3.0	5.5	5.5	3.0	5.5	5.5
All-Red Time (s)	3.5	3.5	2.5	2.5	2.5	3.0	1.5	1.5	3.0	3.5	3.5
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		7.0	6.5	6.5	6.5	6.0	7.0	7.0	6.0	9.0	9.0
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)		15.3	25.5	25.5	25.5	13.9	172.5	172.5	18.2	177.1	177.1
Actuated g/C Ratio		0.06	0.10	0.10	0.10	0.05	0.67	0.67	0.07	0.69	0.69
v/c Ratio		0.76	1.96	1.85	0.51	0.19	1.14	0.10	0.77	0.73	0.01
Control Delay		157.8	519.3	472.5	18.4	119.7	108.2	5.9	138.3	28.8	0.0
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		157.8	519.3	472.5	18.4	119.7	108.2	5.9	138.3	28.8	0.0
LOS		F	F	F	B	F	F	A	F	C	A
Approach Delay		157.8		348.2			104.5			39.0	
Approach LOS		F		F			F			D	

Intersection Summary	
Cycle Length: 258	
Actuated Cycle Length: 258	
Offset: 142.5 (55%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.96	
Intersection Signal Delay: 102.7	Intersection LOS: F
Intersection Capacity Utilization 103.5%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 3: TH65 & 105th Ave



Intersection	
Intersection Delay, s/veh	12.7
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	2	2	0	2
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	879	1040	0	329
Demand Flow Rate, veh/h	896	1061	0	345
Vehicles Circulating, veh/h	642	0	874	1061
Vehicles Exiting, veh/h	764	874	664	0
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	16.9	8.5	0.0	14.6
Approach LOS	C	A	-	B

Lane	Left	Right	Left	Right	Left	Right
Designated Moves	LT	TR	LT	TR	LT	R
Assumed Moves	LT	TR	LT	TR	LT	R
RT Channelized						
Lane Util	0.470	0.530	0.470	0.530	0.719	0.281
Critical Headway, s	4.293	4.113	4.293	4.113	4.293	4.113
Entry Flow, veh/h	421	475	499	562	248	97
Cap Entry Lane, veh/h	698	721	1130	1130	510	538
Entry HV Adj Factor	0.981	0.980	0.979	0.981	0.954	0.948
Flow Entry, veh/h	413	466	489	551	237	92
Cap Entry, veh/h	685	707	1107	1108	486	510
V/C Ratio	0.603	0.659	0.442	0.497	0.486	0.180
Control Delay, s/veh	15.9	17.7	8.0	8.9	16.6	9.5
LOS	C	C	A	A	C	A
95th %tile Queue, veh	4	5	2	3	3	1

Intersection	
Intersection Delay, s/veh	11.9
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	2	2	2	0
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	852	1144	740	0
Demand Flow Rate, veh/h	869	1179	770	0
Vehicles Circulating, veh/h	0	581	869	1074
Vehicles Exiting, veh/h	1074	1058	0	352
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	7.2	10.3	19.8	0.0
Approach LOS	A	B	C	-

Lane	Left	Right	Left	Right	Bypass	Left	Right
Designated Moves	LT	TR	LT	TR	R	LT	R
Assumed Moves	LT	TR	LT	TR	R	LT	R
RT Channelized					Free		
Lane Util	0.470	0.530	0.470	0.530		0.499	0.501
Critical Headway, s	4.293	4.113	4.293	4.113		4.293	4.113
Entry Flow, veh/h	408	461	397	448	334	384	386
Cap Entry Lane, veh/h	1130	1130	731	752	1957	589	615
Entry HV Adj Factor	0.981	0.979	0.971	0.971	0.971	0.961	0.961
Flow Entry, veh/h	400	451	386	435	324	369	371
Cap Entry, veh/h	1109	1107	710	730	1900	566	591
V/C Ratio	0.361	0.408	0.543	0.595	0.171	0.652	0.628
Control Delay, s/veh	6.9	7.5	13.7	14.9	0.0	20.8	18.9
LOS	A	A	B	B	A	C	C
95th %tile Queue, veh	2	2	3	4	1	5	4

3: TH65 & 105th Ave Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.2	0.1	0.1	0.2	0.1	134.9	127.4	129.8	0.1	0.2	0.1
Total Del/Veh (s)	110.1	116.1	70.7	160.7	139.8	74.3	144.2	91.7	12.9	109.0	22.0	1.2
Fuel Used (gal)	0.5	0.3	0.2	6.0	0.3	1.9	0.4	54.0	1.7	2.7	15.2	0.1
Fuel Eff. (mpg)	19.3	18.8	22.5	15.3	15.6	22.1	8.7	10.4	13.3	17.1	28.7	38.8
HC Emissions (g)	5	1	1	27	1	16	1	225	12	17	129	0
CO Emissions (g)	114	40	26	802	38	407	53	6932	373	498	3123	7
NOx Emissions (g)	13	3	2	74	3	42	3	658	33	46	397	1
Vehicles Exited	29	20	13	298	14	138	14	2362	93	179	1693	11
Hourly Exit Rate	29	20	13	298	14	138	14	2362	93	179	1693	11
Input Volume	29	19	13	296	17	140	17	2588	100	178	1688	11
% of Volume	99	104	98	101	81	98	81	91	93	101	100	98

3: TH65 & 105th Ave Performance by movement

Movement	All
Denied Del/Veh (s)	67.2
Total Del/Veh (s)	71.2
Fuel Used (gal)	83.2
Fuel Eff. (mpg)	14.8
HC Emissions (g)	435
CO Emissions (g)	12413
NOx Emissions (g)	1276
Vehicles Exited	4864
Hourly Exit Rate	4864
Input Volume	5096
% of Volume	95

Total Network Performance

Denied Del/Veh (s)	67.2
Total Del/Veh (s)	75.2
Fuel Used (gal)	129.1
Fuel Eff. (mpg)	19.6
HC Emissions (g)	885
CO Emissions (g)	23313
NOx Emissions (g)	2728
Vehicles Exited	4856
Hourly Exit Rate	4856
Input Volume	10192
% of Volume	48

3: 105th Ave & TH65 SB Frontage Rd Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.2	0.2	0.2	0.2	0.1	0.1
Total Del/Veh (s)	4.2	3.5	1.8	2.5	2.7	2.8	3.7	4.4	3.2	2.8
Fuel Used (gal)	0.4	0.1	0.6	0.1	0.0	0.6	0.3	0.3	0.0	2.5
Fuel Eff. (mpg)	35.5	36.4	20.3	19.5	33.5	34.1	34.7	34.9	34.6	30.4
HC Emissions (g)	3	0	5	6	0	5	4	4	0	27
CO Emissions (g)	64	12	143	111	6	140	97	81	5	659
NOx Emissions (g)	8	1	20	16	1	17	13	11	1	88
Vehicles Exited	56	14	244	46	7	119	59	47	7	599
Hourly Exit Rate	56	14	244	46	7	119	59	47	7	599
Input Volume	52	15	249	40	6	118	62	46	7	596
% of Volume	107	92	98	114	117	101	96	102	100	101

6: TH65 NB Ramps / Frontage Rd & 105th Ave Performance by movement

Movement	EBL	EBT	WBT	WBR	NBL	NBT	NBR	All
Denied Del/Veh (s)	0.0	0.0	0.4	0.4	0.5	0.5	0.4	0.4
Total Del/Veh (s)	1.9	2.3	10.6	9.7	11.4	12.5	11.1	9.7
Fuel Used (gal)	0.1	0.4	1.8	1.2	0.1	2.4	0.5	6.5
Fuel Eff. (mpg)	20.1	21.9	35.1	35.1	34.3	33.4	33.1	33.2
HC Emissions (g)	0	5	21	15	1	35	7	85
CO Emissions (g)	17	119	454	326	26	789	165	1895
NOx Emissions (g)	2	17	59	42	3	92	19	235
Vehicles Exited	39	197	272	182	15	483	89	1277
Hourly Exit Rate	39	197	272	182	15	483	89	1277
Input Volume	39	194	269	183	17	487	96	1285
% of Volume	99	102	101	100	87	99	93	99

Total Network Performance

Denied Del/Veh (s)	0.4
Total Del/Veh (s)	11.6
Fuel Used (gal)	20.8
Fuel Eff. (mpg)	28.3
HC Emissions (g)	290
CO Emissions (g)	7744
NOx Emissions (g)	868
Vehicles Exited	1354
Hourly Exit Rate	1354
Input Volume	3240
% of Volume	42

Intersection	
Intersection Delay, s/veh	5.7
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	71	299	129	119
Demand Flow Rate, veh/h	72	305	131	124
Vehicles Circulating, veh/h	382	6	123	311
Vehicles Exiting, veh/h	53	248	331	0
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	5.7	5.8	4.9	6.1
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	TR	LT	LR	LTR
Assumed Moves	TR	LT	LR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	72	305	131	124
Cap Entry Lane, veh/h	771	1123	999	828
Entry HV Adj Factor	0.985	0.981	0.985	0.957
Flow Entry, veh/h	71	299	129	119
Cap Entry, veh/h	759	1102	984	792
V/C Ratio	0.093	0.272	0.131	0.150
Control Delay, s/veh	5.7	5.8	4.9	6.1
LOS	A	A	A	A
95th %tile Queue, veh	0	1	0	1

Intersection	
Intersection Delay, s/veh	19.3
Intersection LOS	C

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	0
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	242	472	626	0
Demand Flow Rate, veh/h	247	486	651	0
Vehicles Circulating, veh/h	0	589	247	308
Vehicles Exiting, veh/h	308	309	0	767
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	5.3	27.2	18.8	0.0
Approach LOS	A	D	C	-

Lane	Left	Left	Left
Designated Moves	LT	TR	LTR
Assumed Moves	LT	TR	LTR
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	247	486	651
Cap Entry Lane, veh/h	1130	627	883
Entry HV Adj Factor	0.980	0.970	0.961
Flow Entry, veh/h	242	472	626
Cap Entry, veh/h	1107	608	848
V/C Ratio	0.219	0.775	0.738
Control Delay, s/veh	5.3	27.2	18.8
LOS	A	D	C
95th %tile Queue, veh	1	7	7

3: 109th Ave & TH65 SB Ramps Performance by movement

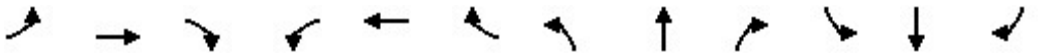
Movement	EBT	EBR	WBL	WBT	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.2	0.2	0.0	0.0	0.2	0.3	0.1	0.1
Total Del/Veh (s)	16.5	4.5	4.5	4.2	99.0	109.0	4.6	18.0
Fuel Used (gal)	3.8	1.5	1.5	2.2	2.4	0.1	0.4	11.8
Fuel Eff. (mpg)	31.5	33.4	15.1	18.3	14.3	13.4	34.6	23.6
HC Emissions (g)	35	16	15	35	29	0	7	137
CO Emissions (g)	939	404	454	823	744	13	147	3525
NOx Emissions (g)	104	49	70	123	68	1	19	435
Vehicles Exited	584	239	377	615	216	8	89	2128
Hourly Exit Rate	584	239	377	615	216	8	89	2128
Input Volume	596	246	370	639	220	8	88	2167
% of Volume	98	97	102	96	98	100	101	98

6: TH65 NB Ramps / Frontage Rd & 109th Ave Performance by movement

Movement	EBL	EBT	WBT	WBR	NBL	NBT	NBR	All
Denied Del/Veh (s)	0.0	0.0	0.4	2.4	161.1	155.2	160.1	43.7
Total Del/Veh (s)	4.2	4.4	25.8	6.3	290.4	294.1	37.6	52.8
Fuel Used (gal)	0.7	2.3	5.5	2.1	6.5	4.4	5.9	27.3
Fuel Eff. (mpg)	15.6	17.8	28.6	29.0	3.9	3.9	7.3	13.0
HC Emissions (g)	5	32	59	28	38	28	51	240
CO Emissions (g)	176	786	1550	737	917	644	1238	6048
NOx Emissions (g)	26	118	172	86	61	43	115	623
Vehicles Exited	176	630	798	311	182	123	313	2533
Hourly Exit Rate	176	630	798	311	182	123	313	2533
Input Volume	185	638	786	311	211	143	355	2628
% of Volume	95	99	102	100	86	86	88	96

Total Network Performance

Denied Del/Veh (s)	38.7
Total Del/Veh (s)	60.2
Fuel Used (gal)	62.5
Fuel Eff. (mpg)	19.3
HC Emissions (g)	702
CO Emissions (g)	19747
NOx Emissions (g)	2080
Vehicles Exited	2884
Hourly Exit Rate	2884
Input Volume	7760
% of Volume	37



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	178	391	164	336	401	263	212	2265	165	215	1347	82
Future Volume (vph)	178	391	164	336	401	263	212	2265	165	215	1347	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	3400	3505	1568	3367	3471	1553	3335	3438	1538
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3539	1583	3400	3505	1568	3367	3471	1553	3335	3438	1538
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			131			101			103			103
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1960			1744			1540			1768	
Travel Time (s)		44.5			39.6			35.0			40.2	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	2%	3%	3%	3%	4%	4%	4%	5%	5%	5%
Adj. Flow (vph)	187	412	173	354	422	277	223	2384	174	226	1418	86
Shared Lane Traffic (%)												
Lane Group Flow (vph)	187	412	173	354	422	277	223	2384	174	226	1418	86
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		24			24			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	1.0	1.0	1.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	8.0	9.0	9.0	32.0	32.0	32.0	11.0	25.0	25.0	11.0	25.0	25.0
Total Split (s)	31.0	40.0	40.0	26.0	35.0	35.0	21.0	158.0	158.0	26.0	163.0	163.0
Total Split (%)	12.4%	16.0%	16.0%	10.4%	14.0%	14.0%	8.4%	63.2%	63.2%	10.4%	65.2%	65.2%
Maximum Green (s)	24.5	33.0	33.0	19.5	28.0	28.0	15.0	151.0	151.0	20.0	156.0	156.0
Yellow Time (s)	3.0	4.5	4.5	3.0	4.5	4.5	3.0	5.5	5.5	3.0	5.5	5.5
All-Red Time (s)	3.5	2.5	2.5	3.5	2.5	2.5	3.0	1.5	1.5	3.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	7.0	7.0	6.5	7.0	7.0	6.0	7.0	7.0	6.0	7.0	7.0
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0		0	0		0	0
Act Effct Green (s)	24.5	33.0	33.0	19.5	28.0	28.0	15.0	151.0	151.0	20.0	156.0	156.0
Actuated g/C Ratio	0.10	0.13	0.13	0.08	0.11	0.11	0.06	0.60	0.60	0.08	0.62	0.62
v/c Ratio	1.08	0.88	0.54	1.34	1.08	1.05	1.10	1.14	0.18	0.85	0.66	0.09
Control Delay	188.2	126.3	33.0	250.3	164.9	129.2	192.3	112.9	9.0	139.2	32.0	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	188.2	126.3	33.0	250.3	164.9	129.2	192.3	112.9	9.0	139.2	32.0	1.4
LOS	F	F	C	F	F	F	F	F	A	F	C	A
Approach Delay		120.4			184.2			112.8			44.5	
Approach LOS		F			F			F			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 250			
Actuated Cycle Length: 250			
Natural Cycle: 150			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 1.34			
Intersection Signal Delay: 106.9		Intersection LOS: F	
Intersection Capacity Utilization 111.8%		ICU Level of Service H	
Analysis Period (min) 15			

Splits and Phases: 8: 109th Ave & TH65

Traffic Safety Benefit-Cost Calculation

Highway Safety Improvement Program (HSIP) Reactive Project

DEPARTMENT OF TRANSPORTATION

A. Roadway Description

Route	TH 65	**District**	Metro	**County**	Anoka
Begin RP	103rd Ave	**End RP**	113th Ave	**Miles**	1.400
Location	105th Ave and 109th intersections within TH 65 in Blaine, MN				

B. Project Description

Proposed Work	Alt 1A: Conversion of 105th Ave/TH65 to grade separated teardrop interchange		
Project Cost*	$21,116,909	**Installation Year**	2025
Project Service Life	20 years	**Traffic Growth Factor**	3.5%

** exclude Right of Way from Project Cost*

C. Crash Modification Factor

0.43	**Fatal (K) Crashes**	**Reference**	CMF ID 460 (K,A,B,C), 461 (PDO)
0.43	**Serious Injury (A) Crashes**		
0.43	**Moderate Injury (B) Crashes**	**Crash Type**	All
0.43	**Possible Injury (C) Crashes**		
0.64	**Property Damage Only Crashes**		www.CMFclearinghouse.org

D. Crash Modification Factor (optional second CMF)

0.76	**Fatal (K) Crashes**	**Reference**	CMF ID 4192 (K,A,B,C,PDO)
0.76	**Serious Injury (A) Crashes**		
0.76	**Moderate Injury (B) Crashes**	**Crash Type**	All
0.76	**Possible Injury (C) Crashes**		
0.76	**Property Damage Only Crashes**		www.CMFclearinghouse.org

E. Crash Data

Begin Date	1/1/2018	**End Date**	12/31/2020	3 years
Data Source	MnDOT			

Crash Severity	**All**	**All**
K crashes	0	
A crashes	0	
B crashes	4	
C crashes	7	
PDO crashes	42	

F. Benefit-Cost Calculation

$10,190,405	**Benefit (present value)**	**B/C Ratio = 0.49**
$21,116,909	**Cost**	

Proposed project expected to reduce 8 crashes annually, 0 of which involving fatality or serious injury.

F. Analysis Assumptions

Crash Severity	Crash Cost
K crashes	$13,300,000
A crashes	$750,000
B crashes	$230,000
C crashes	$120,000
PDO crashes	$13,000

Link: mndot.gov/planning/program/appendix_a.html

Real Discount Rate:	1.0%	Default
Traffic Growth Rate:	3.5%	**Revised**
Project Service Life:	20 years	**Revised**

G. Annual Benefit

Crash Severity	Crash Reduction	Annual Reduction	Annual Benefit
K crashes	0.00	0.00	$0
A crashes	0.00	0.00	$0
B crashes	2.28	0.76	$174,800
C crashes	3.99	1.33	$159,600
PDO crashes	15.12	5.04	$65,520
			$399,920

H. Amortized Benefit

Year	Crash Benefits	Present Value
2025	$399,920	$399,920
2026	$413,917	$409,819
2027	$428,404	$419,963
2028	$443,398	$430,358
2029	$458,917	$441,011
2030	$474,980	$451,927
2031	$491,604	$463,113
2032	$508,810	$474,576
2033	$526,618	$486,323
2034	$545,050	$498,361
2035	$564,127	$510,697
2036	$583,871	$523,338
2037	$604,307	$536,291
2038	$625,457	$549,566
2039	$647,348	$563,169
2040	$670,006	$577,109
2041	$693,456	$591,394
2042	$717,727	$606,032
2043	$742,847	$621,033
2044	$768,847	$636,405
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0

Total = $10,190,405

NOTE:
This calculation relies on the real discount rate, which accounts for inflation. No further discounting is necessary.

Traffic Safety Benefit-Cost Calculation

Highway Safety Improvement Program (HSIP) Reactive Project

DEPARTMENT OF TRANSPORTATION

A. Roadway Description

Route	TH 65	**District**	Metro	**County**	Anoka
Begin RP	103rd Ave	**End RP**	113th Ave	**Miles**	1.400
Location	105th Ave and 109th intersections within TH 65 in Blaine, MN				

B. Project Description

Proposed Work	Alt 1A: Conversion of 109th Ave/TH65 to grade separated teardrop interchange		
Project Cost*	$32,508,086	**Installation Year**	2025
Project Service Life	20 years	**Traffic Growth Factor**	0.5%

** exclude Right of Way from Project Cost*

C. Crash Modification Factor

0.43	**Fatal (K) Crashes**	**Reference**	CMF ID 460 (K,A,B,C), 461 (PDO)
0.43	**Serious Injury (A) Crashes**		
0.43	**Moderate Injury (B) Crashes**	**Crash Type**	All
0.43	**Possible Injury (C) Crashes**		
0.64	**Property Damage Only Crashes**		www.CMFclearinghouse.org

D. Crash Modification Factor (optional second CMF)

0.76	**Fatal (K) Crashes**	**Reference**	CMF ID 4192 (K,A,B,C,PDO)
0.76	**Serious Injury (A) Crashes**		
0.76	**Moderate Injury (B) Crashes**	**Crash Type**	All
0.76	**Possible Injury (C) Crashes**		
0.76	**Property Damage Only Crashes**		www.CMFclearinghouse.org

E. Crash Data

Begin Date	1/1/2018	**End Date**	12/31/2020	3 years
Data Source	MnDOT			

Crash Severity	**All**	**All**
K crashes	0	
A crashes	0	
B crashes	2	
C crashes	13	
PDO crashes	68	

F. Benefit-Cost Calculation

$9,350,225	**Benefit (present value)**	**B/C Ratio = 0.29**
$32,508,086	**Cost**	

Proposed project expected to reduce 12 crashes annually, 0 of which involving fatality or serious injury.

F. Analysis Assumptions

Crash Severity	Crash Cost
K crashes	$13,300,000
A crashes	$750,000
B crashes	$230,000
C crashes	$120,000
PDO crashes	$13,000

Link: mndot.gov/planning/program/appendix_a.html

Real Discount Rate:	1.0%	Default
Traffic Growth Rate:	0.5%	**Revised**
Project Service Life:	20 years	**Revised**

G. Annual Benefit

Crash Severity	Crash Reduction	Annual Reduction	Annual Benefit
K crashes	0.00	0.00	$0
A crashes	0.00	0.00	$0
B crashes	1.14	0.38	$87,400
C crashes	7.41	2.47	$296,400
PDO crashes	24.48	8.16	$106,080
			$489,880

H. Amortized Benefit

Year	Crash Benefits	Present Value
2025	$489,880	$489,880
2026	$492,329	$487,455
2027	$494,791	$485,042
2028	$497,265	$482,641
2029	$499,751	$480,251
2030	$502,250	$477,874
2031	$504,761	$475,508
2032	$507,285	$473,154
2033	$509,822	$470,812
2034	$512,371	$468,481
2035	$514,933	$466,162
2036	$517,507	$463,854
2037	$520,095	$461,558
2038	$522,695	$459,273
2039	$525,309	$456,999
2040	$527,935	$454,737
2041	$530,575	$452,486
2042	$533,228	$450,246
2043	$535,894	$448,017
2044	$538,573	$445,799
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0

Total = $9,350,225

NOTE:
This calculation relies on the real discount rate, which accounts for inflation. No further discounting is necessary.

Traffic Safety Benefit-Cost Calculation

Highway Safety Improvement Program (HSIP) Reactive Project

DEPARTMENT OF TRANSPORTATION

A. Roadway Description

Route	TH 65	**District**	Metro	**County**	Anoka
Begin RP	103rd Ave	**End RP**	113th Ave	**Miles**	1.400
Location	105th Ave and 109th intersections within TH 65 in Blaine, MN				

B. Project Description

Proposed Work	Alt 1A: Conversion of TH 65 to a limited-access facility through use of West Frontage Road		
Project Cost*	$11,817,471	**Installation Year**	2025
Project Service Life	20 years	**Traffic Growth Factor**	2.1%

** exclude Right of Way from Project Cost*

C. Crash Modification Factor

0.56	**Fatal (K) Crashes**	**Reference**	CMF ID 3097 (K,A,B,C,PDO)
0.56	**Serious Injury (A) Crashes**		
0.56	**Moderate Injury (B) Crashes**	**Crash Type**	All
0.56	**Possible Injury (C) Crashes**		
0.56	**Property Damage Only Crashes**		www.CMFclearinghouse.org

D. Crash Modification Factor (optional second CMF)

	Fatal (K) Crashes	**Reference**	
	Serious Injury (A) Crashes		
	Moderate Injury (B) Crashes	**Crash Type**	
	Possible Injury (C) Crashes		
	Property Damage Only Crashes		www.CMFclearinghouse.org

E. Crash Data

Begin Date	1/1/2018	**End Date**	12/31/2020	3 years
Data Source	MnDOT			

Crash Severity	All	< optional 2nd CMF >
K crashes	0	
A crashes	0	
B crashes	5	
C crashes	18	
PDO crashes	77	

F. Benefit-Cost Calculation

$14,043,579	**Benefit (present value)**	**B/C Ratio = 1.19**
$11,817,471	**Cost**	

Proposed project expected to reduce 15 crashes annually, 0 of which involving fatality or serious injury.

F. Analysis Assumptions

Crash Severity	Crash Cost
K crashes	$13,300,000
A crashes	$750,000
B crashes	$230,000
C crashes	$120,000
PDO crashes	$13,000

Link: mndot.gov/planning/program/appendix_a.html

Real Discount Rate:	1.0%	Default
Traffic Growth Rate:	2.1%	**Revised**
Project Service Life:	20 years	**Revised**

G. Annual Benefit

Crash Severity	Crash Reduction	Annual Reduction	Annual Benefit
K crashes	0.00	0.00	$0
A crashes	0.00	0.00	$0
B crashes	2.20	0.73	$168,667
C crashes	7.92	2.64	$316,800
PDO crashes	33.88	11.29	$146,813
			$632,280

H. Amortized Benefit

Year	Crash Benefits	Present Value
2025	$632,280	$632,280
2026	$645,558	$639,166
2027	$659,115	$646,127
2028	$672,956	$653,164
2029	$687,088	$660,278
2030	$701,517	$667,469
2031	$716,249	$674,739
2032	$731,290	$682,087
2033	$746,647	$689,516
2034	$762,327	$697,026
2035	$778,336	$704,617
2036	$794,681	$712,291
2037	$811,369	$720,049
2038	$828,408	$727,891
2039	$845,804	$735,818
2040	$863,566	$743,832
2041	$881,701	$751,933
2042	$900,217	$760,123
2043	$919,121	$768,401
2044	$938,423	$776,770
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0
0	$0	$0

Total = $14,043,579

NOTE:
This calculation relies on the real discount rate, which accounts for inflation. No further discounting is necessary.

LEGEND

- EXISTING RIGHT OF WAY
- CONSTRUCTION LIMITS
- ROADWAY GEOMETRY
- PEDESTRIAN/BICYCLE FACILITIES

99th Ave NE

104th Way NE

500
SCALE IN FEET

T.H. 65

BEGIN PROJECT

T.H. 65

MATCHLINE
SEE BELOW

99th Lane NE

101st Ave NE

103rd Ave NE

105th Ave NE

107th Ave NE

℄ PROP TH 65 SB

℄ PROP TH 65 NB

72'

12' LANE | 12' LANE | 10.9' SHLD. | 10.9' SHLD. | 12' LANE | 12' LANE

0.02 | 0.02 | 0.02 | 0.02

PROPOSED FUTURE URBAN TYPICAL SECTION

INTERCHANGE FUTURE CONDITION

113th Ave NE

117th Ave NE

Paul Parkway NE

T.H. 65

END PROJECT

T.H. 65

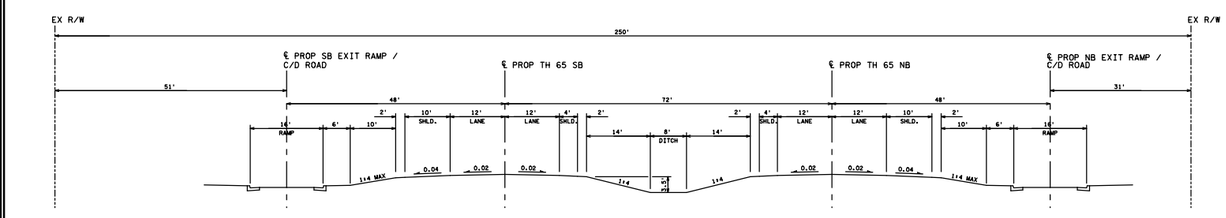
MATCHLINE
SEE ABOVE

109th Ave NE

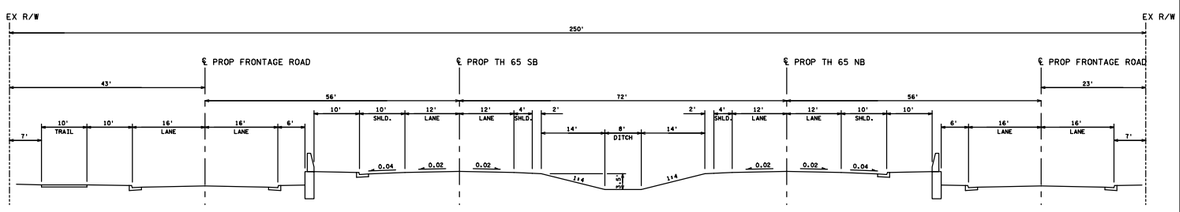
114th Ave NE

Cloud Drive NE

21st Ave NE



PROPOSED TYPICAL SECTION - 250' NORTH OF 103RD AVE



PROPOSED TYPICAL SECTION - 500' SOUTH OF 107TH AVE

REGIONAL SOLICITATION - LAYOUT

TH 65 ACCESS IMPROVEMENTS - SECTION 2

City of Blaine

ANOKA COUNTY

DEPARTMENT OF TRANSPORTATION

FIGURE 1
ALTERNATIVE 1A

DEPARTMENT OF TRANSPORTATION

395 John Ireland Blvd.
St. Paul, MN 55155

December 8, 2021

Jon Haukaas, Director of Public Works
City of Blaine
10801 Town Square Drive
Blaine, Minnesota 55449

RE: **2021 Transportation Economic Development (TED) Program Funding Award**

Congratulations, the Trunk Highway 65 Phase I Access Improvements, Western Frontage Road Project has been selected to receive funding through Minnesota Department of Transportation's Transportation Economic Development program.

The project has been approved to receive up to a maximum of $4,600,000 for Trunk Highway fund eligible expenses, subject to the MnDOT cost participation policy. This award is conditional as follows:

1. The project must be let by the end of calendar year 2024 unless otherwise approved by the MnDOT District Project Manager.
2. The TED contribution towards the cost of the project is capped. The applicant accepts responsibility for the balance of funding necessary to deliver the project.
3. As stated in the 2019 TED Solicitation Notice, this award will provide funding up to 70% of the total transportation infrastructure cost or the maximum allowable share as determined by MnDOT's cost participation.
4. The TED funding is a MnDOT contribution towards the project.
5. MnDOT will not consider requests for additional funding for the Western Frontage Road phase of this project under future competitive grant programs. If the city applies for TED funding for future phases of the Highway 65 corridor, you will need to demonstrate additional economic benefits. We will not consider economic benefits claimed in this application in future TED requests.
6. The offer of funding under this program does not waive any of the required project approvals. Should all necessary approvals not be obtained, MnDOT will withdraw this grant.
7. This offer of financial assistance is contingent upon the completion of a cooperative construction agreement for the project.
8. The applicant agrees to work with MnDOT district officials to create and regularly update a schedule of project development activities in MnDOT's Project Management System including plan approvals and cooperative construction agreement.
9. The project must be developed under the direction of licensed engineer in the State of Minnesota.

10. In order to help determine the effectiveness of the TED program, the applicant agrees to provide an annual report on the economic benefits that have materialized and the increase in tax base and property development for a period of 5 years post completion.

All program grantees will need to continue to work with MnDOT to ensure a successful project delivery. Please work with Melissa Barnes, North Area Manager for the Metro District Office. Please also keep TED Program Manager Ken Buckeye informed of the project's progress.

We look forward to assisting you throughout the project development process. If you have any questions, please contact Ken Buckeye at (651) 366-3737 or at kenneth.buckeye@state.mn.us.

Finally, let me extend my congratulations to you and your staff for developing an approach to address your community transportation needs and economic development opportunities.

Sincerely,

Margaret Anderson Kelliher
Commissioner

CC: Mike Barnes, MnDOT Metro District
Jennifer Wiltgen, MnDOT Metro District
Melissa Barnes, MnDOT Metro District
Molly McCartney, MnDOT Metro District
Jon Solberg, MnDOT Metro District
Robin Sylvester, MnDOT Office of Financial Management
Ed Idzorek, MnDOT Office of Transportation System Management
Brian Gage, MnDOT Office of Transportation System Management
Philip Schaffner, MnDOT Office of Transportation System Management
Malaki Ruranika, MnDOT Office of Project Management and Technical Support
Jeremy LaCroix, Minnesota Department of Employment and Economic Development
Steve Peterson, Metropolitan Council

The Honorable Jerry Newton, State Senator
The Honorable Erin Koegel, State Representative
The Honorable Nolan West, State Representative

TH 65 Project Level 3 Alternatives Evaluation

DRAFT

Criteria	Performance Measure			No Build Section 2	Alternative 1 Section 2	Alternative 2 Section 2	Alternative 3 Section 2	Alternative 1a Section 2
				4-Lane Arterial Expressway	4-Lane Freeway (DDI at 109th)	Hybrid Freeway	Hybrid Freeway with Interchange at 109th	4-Lane Freeway (Teardrp Interchange at 109th and underpass at 105th)
VEHICLE SAFETY								
Ability to address identified unsafe physical or operational conditions.	Safety performance using SSAM3: Conflict points (% Change from No-Build)		Rear-end	8224	*4589* *(-44%)*	6047 (-26%)	5945 (-28%)	*4793* *(-42%)*
			Lane changing	1009	*892* *(-12%)*	1155 (14%)	1262 (25%)	*742* *(-26%)*
			Crossing	599	*333* *(-44%)*	101 (-83%)	1403 (134%)	*157* *(-74%)*
			Total	9831	*5814* *(-41%)*	7302 (-26%)	8610 (-12%)	*5692* *(-42%)*
TRAFFIC OPERATIONS (VEHICLES, TRANSIT, FREIGHT)								
Ability to improve vehicle travel time along the corridor	Travel Time in mins (Difference from No-Build)	2025	AM	12	4 (-8)	4 (-8)	4 (-8)	4 (-8)
			PM	6	4 (-2)	4 (-2)	4 (-2)	4 (-2)
		2045	AM	15	4 (-11)	4 (-11)	4 (-11)	4 (-11)
			PM	7	4 (-3)	4 (-3)	4 (-3)	4 (-3)
Ability to Improve travel time crossing the corridor for select origins and destinations.			Origin-Destination	Able St/ 109th Ave to Target	Buchanan St/ 99th Ave to Menards	Baltimore St/ Club W Pkwy to Walmart		
			Distance (mi)	1.7	1.5	1.2	1.7	1.6	1.4	2.2	2.1	1.4	2.2	2.1	1.2	1.7	1.6	1.4
	Travel Time in mins (Difference from No-Build)	2025	AM	7	6	5	3 (-4)	3 (-3)	6 (2)	5 (-2)	5 (-1)	6 (1)	5 (-2)	5 (-1)	6 (2)	4 (-3)	3 (-3)	7 (2)
			PM	9	11	4	4 (-5)	3 (-7)	6 (2)	5 (-4)	5 (-6)	6 (2)	5 (-4)	5 (-6)	6 (2)	5 (-5)	3 (-7)	6 (2)
		2045	AM	11	11	5	3 (-8)	4 (-8)	3 (-1)	4 (-7)	5 (-7)	3 (-1)	5 (-6)	5 (-7)	3 (-2)	4 (-7)	4 (-7)	4 (-1)
			PM	10	10	4	4 (-5)	4 (-5)	4 (0)	4 (-5)	6 (-4)	3 (-1)	5 (-5)	6 (-4)	3 (-2)	5 (-5)	5 (-5)	4 (-1)
Does the improvement maintain current express route transit service on TH 65 (117th Ave and 93rd Ave)?	Travel Time in mins (Difference from No-Build)	2025	AM (SB)	9	4 (-5)	4 (-5)	4 (-5)	4 (-5)
			PM (NB)	5	4 (-1)	4 (-1)	4 (-1)	4 (-1)
		2045	AM (SB)	12	4 (-8)	4 (-8)	4 (-8)	4 (-8)
			PM (NB)	9	4 (-5)	4 (-5)	4 (-5)	4 (-5)

TH 65 Project Level 3 Alternatives Evaluation

DRAFT

Criteria	Performance Measure			No Build Section 2 4-Lane Arterial Expressway	Alternative 1 Section 2 4-Lane Freeway (DDI at 109th)	Alternative 2 Section 2 Hybrid Freeway	Alternative 3 Section 2 Hybrid Freeway with Interchange at 109th	Alternative 1a Section 2 4-Lane Freeway (Teardrp Interchange at 109th and underpass at 105th)
How does the improvement impact freight movements for select destinations?	Travel time in mins at representative origins and destinations (Difference from No-Build)		Origin - Destination	93rd to 109th East of TH 65	93rd to 109th East of TH 65	93rd to 109th East of TH 65	93rd to 109th East of TH 65	93rd to 109th East of TH 65
		2025	AM	3	3 (0)	3 (0)	3 (0)	3 (0)
			PM	4	3 (-1)	3 (0)	3 (0)	3 (0)
		2045	AM	4	3 (-1)	3 (-1)	3 (0)	3 (0)
			PM	8	3 (-4)	3 (-4)	3 (-4)	4 (-4)
Ability to improve throughput along the corridor	Throughput in vehicles per hour (Difference from No-Build)	2025	AM (SB)	1645	1987 (342)	1990 (345)	1985 (340)	1985 (340)
			PM (NB)	1632	1844 (212)	1802 (170)	1804 (172)	1843 (211)
		2045	AM (SB)	1564	2485 (921)	2486 (922)	2486 (922)	2485 (921)
			PM (NB)	1480	2118 (638)	1793 (313)	1790 (310)	2101 (621)
BIKEABILITY/WALKABILITY								
How does mobility improve?	East-west travel time (mins) and distance (mi) at representative origins and destinations.		Origin-Destination	Ulysses St / 104th Ln - Target / Baltimore St/ Club W Pkwy to Walmart	Ulysses St / 104th Ln - Target / Baltimore St/ Club W Pkwy to Walmart	Ulysses St / 104th Ln - Target / Baltimore St/ Club W Pkwy to Walmart	Ulysses St / 104th Ln - Target / Baltimore St/ Club W Pkwy to Walmart	Ulysses St / 104th Ln - Target / Baltimore St/ Club W Pkwy to Walmart
			Distance (mi)	0.7 / 1.1	0.6 / 0.8	0.5 / 0.8	0.6 / 0.8	0.6 / 0.8
			Walking Time (min)	18 / 28	14 / 23	14 / 21	16 / 23	14 / 23
			Bicycling Time (min)	5 / 7	4 / 7	3 / 5	4 / 6	4 / 7
Ability to move safely and comfortably north-south along corridor.	Distance to next crossing (mi)			> 1/2 Except 105th - 109th	> 1/2 Except 105th - 109th,	All 1/2 or less	All 1/2 or less	Except 105th - 109th, > 1/2
	Segment Level of Service (Oregon Multi-modal Level of Service - MMLOS)[1, 2, 3, 4]		Walking	F from 97th to 109th on west side, otherwise B-C.	B or B-C	B or C everywhere except E NB and SB 109th-117th.	C or B-C everywhere	B or B-C everwhere
			Bicycling	E-F from 97th to 109th on west side, otherwise B-D.	B or B-C everywhere, except C-D NB and SB on Ulysses from 109th to 117th	A, AB, B, or B-C everywhere	B or B-C	B, B-C, or C everywhere except C-D on NB and SB Ulysses St NE between 109th and 117th

TH 65 Project Level 3 Alternatives Evaluation

DRAFT

Criteria	Performance Measure		No Build Section 2 4-Lane Arterial Expressway	Alternative 1 Section 2 4-Lane Freeway (DDI at 109th)	Alternative 2 Section 2 Hybrid Freeway	Alternative 3 Section 2 Hybrid Freeway with Interchange at 109th	Alternative 1a Section 2 4-Lane Freeway (Teardrp Interchange at 109th and underpass at 105th)
COMMUNITY							
Minimize impacts to existing landowners and businesses.	Amount of properties that may be impacted based on conceptual layout footprint.	Number Impacted	No impacts	96	105	113	93
		Number full acquisitions		5 business parcels 1 residence	1 business parcel 1 residence	2 business parcels 1 residential parcels	2 business parcels 1 residence
		Number Relocations		11 businesses, 1 residence	7 businesses 1 residence	8 businesses 1 residences	7 businesses 1 residence
		Acres Impacted		30.3	28.7	32.2	27.7
Support of local and regional planning efforts.	Visibility and accessibility of existing and planned retail/commercial property consistent with City Land Use Plans.			Retaining walls at on/off ramps Reduction of access at 105th to right-in/right-out Addition of frontage road system on west side between 99th and 109th	Retaining walls at on/off ramps A few minor access removals and reductions in access to right-in/right-out Robust frontage road system on both sides of TH 65	Retaining walls at on/off ramps A few minor access removals and reductions in access to right-in/right-out Robust frontage road system on both sides of TH 65	Retaining walls at on/off ramps Reduction of access at 105th to right-in/right-out Addition of frontage road system on west side between 99th and 109th
Minimize impacts on Environmental Justice (EJ) communities.	Amount of potential impacts on identified EJ properties based on conceptual layout footprint.	Number Impacted		38	30	35	36
		Acres Impacted		16.8	6.5	8	14.6
		EJ Concerns		Total Take of VFW Post 6316, No residential properties affected	No Residential Properties Affected	No ResidentaiL Properties Affectied	No residential properties affected

TH 65 Project Level 3 Alternatives Evaluation

DRAFT

Criteria	Performance Measure		No Build Section 2 4-Lane Arterial Expressway	Alternative 1 Section 2 4-Lane Freeway (DDI at 109th)	Alternative 2 Section 2 Hybrid Freeway	Alternative 3 Section 2 Hybrid Freeway with Interchange at 109th	Alternative 1a Section 2 4-Lane Freeway (Teardrp Interchange at 109th and underpass at 105th)
ENVIRONMENTAL RESOURCES							
Minimize wetland impacts.	Amount of wetlands (Level 1 delineation) that may be impacted based on conceptual layout footprint.	Number	No impacts	36	30	31	37
		Acres		14.1	16.7	17.6	13.8
Minimize floodplain impacts	Amount of floodplains that may be impacted based on footprint.	Number		5, 100-yr 1, 500-yr	5, 100-yr 1, 500-yr	5, 100-yr 1, 500-yr	5, 100-yr 1, 500-yr
		Acres		2.0, 100-yr 0.8, 500-yr	1.9, 100-yr 0.8, 500-yr	2.0, 100-yr 0.8, 500-yr	2.0, 100-yr 0.8, 500-yr
Minimize 4(f) impacts	Amount of parks that may be impacted based on conceptual layout footprint.	Number		None	None	None	None
		Acres		None	None	None	None
Avoid disturbing or acquiring hazardous material sites.	Risk related to release sites of elevated concern, as identified by MnDOT in ENM.			Partial acquisition near 115th Dump and Hoff Demo Dump; may encounter residual waste	Partial acquisistion near 115th Dump and Hoff Demo Dump; may encounter residual waste.	Partial acquisition near 115th Dump and Hoff Demo Dump, may encounter residual waste.	Partial acquisition near 115th Dump and Hoff Demo Dump; may encounter residual waste
Impervious Surface	Increase in Impervious Surfaces in Acres (% Increase from No-Build)			+26.7 (52%)	+31.2 (61%)	+33.7 (66%)	+24 (47%)
Additional Considerations							
Opinion of Costs	Cost Range -15% to +50% ($2021 - millions)		No Impacts	$93.7 to $165.4	$119.9 to $211.6	$131.8 to $232.6	$94.8 to $167.3
Return on Investment	Performance/Costs			2.1	1.4	1.2	2
Constructability	Low/medium/high assessment of construction impacts on traveling public.			High	Medium	Medium	High

[1] No-build alternative includes several sidewalk gaps and no existing bicycling facilities, which are not accounted for in MMLOS.

[2] Several segments within each section assume bicyclists and pedestrians will continue to use existing frontage road system. See graphics for location of proposed trails and frontage road system.

[3] Walking scores of E are due to high traffic volumes and more than one traffic lane in a particular segment

[4] Bicycling scores of C-D arise where segments were analyzed using Oregon's On-Street MMLOS bicycle methodology. Other segments were analyzed using Oregon's Separated Bikeway or Buffered Bike Lane methodology.

BOARD OF COUNTY COMMISSIONERS

Anoka County, Minnesota

DATE: March 22, 2022 **RESOLUTION #2022-40**

OFFERED BY COMMISSIONER: Look

AUTHORIZING SUBMITTAL OF A FEDERAL FUNDING APPLICATION FOR THE TH 65 AT CSAH 12 INTERCHANGE IMPROVEMENT PROJECT

WHEREAS, the existing at-grade intersection of TH 65 (a Principal Arterial) and CSAH 12 (109th Avenue) (an "A" Minor Arterial Expander) experiences a high level of traffic congestion, safety concerns, and mobility issues; and,

WHEREAS, Anoka County and the City of Blaine propose to construct a grade-separated interchange at TH 65 and CSAH 12; and,

WHEREAS, this improvement project is consistent with the goals and objectives of the TH 65 Planning and Environmental Linkages (PEL) Study completed in 2021 through a partnership with the Minnesota Department of Transportation (MnDOT), Federal Highway Administration (FHWA), Anoka County, City of Blaine, City of Ham Lake, City of Spring Lake Park, and Metropolitan Council; and,

WHEREAS, the Anoka County Highway Department is proposing to submit an application to the Transportation Advisory Board through the Metropolitan Council's 2022 Regional Solicitation program to receive federal transportation funds to construct an interchange serving TH 65 at CSAH 12 in the city of Blaine; and,

WHEREAS, Anoka County has the necessary capabilities to adequately fund its local cost share for this public improvement project:

NOW, THEREFORE, BE IT RESOLVED that Anoka County, by and through its Board of Commissioners, hereby authorizes the Anoka County Highway Department to submit an application to the Transportation Advisory Board through the Metropolitan Council's 2022 Regional Solicitation program in the Roadway Expansion category, to receive federal transportation funds to construct an interchange and associated improvements serving TH 65 at CSAH 12 in the city of Blaine.

STATE OF MINNESOTA)
COUNTY OF ANOKA) ss

I, Dee Guthman, Deputy County Administrator, Anoka County, Minnesota, hereby certify that I have compared the foregoing copy of the resolution of the county board of said county with the original record thereof on file in the Administration Office, Anoka County, Minnesota, as stated in the minutes of the proceedings of said board at a meeting duly held on March 22, 2022, and that the same is a true and correct copy of said original record and of the whole thereof, and that said resolution was duly passed by said board at said meeting.

Witness my hand and seal this 22nd day of March 2022.

DEE GUTHMAN
DEPUTY COUNTY ADMINISTRATOR

	YES	NO
DISTRICT #1 – LOOK	X	
DISTRICT #2 – BRAASTAD	X	
DISTRICT #3 – WEST		Absent
DISTRICT #4 – MEISNER	X	
DISTRICT #5 – GAMACHE	X	
DISTRICT #6 – REINERT	X	
DISTRICT #7 – SCHULTE	X	

City of Blaine
10801 Town Square Drive NE
Blaine MN 55449-8100
City Hall 763-784-6700 | **BlaineMN**.gov

April 1, 2022

Joe MacPherson
County Engineer
Anoka County Highway Department
1440 Bunker Lake Blvd. NW
Andover, MN 55304

RE: Letter of Support for TH 65 Intersection Improvements in Blaine

The City of Blaine would like to express its strong support for the Trunk Highway 65 Intersection Improvement Project within the City of Blaine that implements the plans and vision developed through the recently completed TH65 Planning and Environmental Linkages Study (TH 65 PEL). This study examined a range of cost-effective roadway alternatives to address capacity, access, mobility and safety issues between Bunker Lake Blvd. (CSAH 116) in Ham Lake and CSAH 10/Mounds View Blvd. in Spring Lake Park.

MnDOT Trunk Highway (TH) 65 in Blaine is a 4-lane divided principal arterial with approximately 40,000-60,000 vehicles per day in an area that is primarily residential/retail. Previous studies in the area have identified safety and operational deficiencies along TH 65 and proposals have been made to convert TH 65 to a controlled-access freeway system. The February 2017 Principal Arterial Intersection Conversion Study showed four at-grade intersections as high needs along the corridor.

The proposed project addresses the concerns identified above and is consistent with long-term plans for the corridor referenced above. The project will construct improved access points on Minnesota Trunk Highway 65 at CSAH 12 (109th Ave NE), 105th Avenue NE, and east and west side frontage road improvements. It provides new connectivity within the city and region and provides alternatives for pedestrians and bicyclists.

The purpose of the TH 65 corridor improvement project is to improve motorized traffic flow along and across TH 65 by decreasing average travel times and reducing delays, reduce crash frequencies along the corridor, and create an environment where pedestrians and bicyclists are safe and are able to conveniently access destinations across and along the TH 65 corridor safely. The improved mobility will benefit commuters, freight haulers, emergency responders, and local traffic to access both sides of the corridor. Creating these conditions will better connect residents and businesses on opposite sides of the

corridor, resulting in a more cohesive community.

To address the traffic and safety issues in this area, The City of Blaine supports Anoka County seeking funding for this construction project. To date, the city and county have made significant progress in moving this project forward towards construction. Completion will require support from State, Federal, County, and City agencies to deliver this project. The city is eager to continue the momentum by working with partners to secure the necessary funding and deliver the improvements.

If you have any questions or require additional information, please reach out to Jon Haukaas, Director of Public at 763-785-6167 or jhaukaas@blainemn.gov

Sincerely,

Tim Sanders, Mayor
City of Blaine, MN

MnDOT Metro District
1500 West County Road B-2
Roseville, MN 55113

April 12, 2022

Jack Forslund
Transportation Planner
Anoka County

Re: MnDOT Letter for Anoka County's Metropolitan Council/Transportation Advisory Board 2020 Regional Solicitation Funding Request for improvements on TH 65 at 109-105th Avenues

Jack,

This letter documents MnDOT Metro District's recognition for Anoka County to pursue funding for the Metropolitan Council/Transportation Advisory Board's (TAB) 2022 Regional Solicitation for an interchange improvement on TH 65 at 109-105th Avenues.

As proposed, this project impacts MnDOT right-of-way on TH 65. As the agency with jurisdiction over TH 65, MnDOT will allow Anoka County to seek improvements proposed in the applications. If funded, details of any future maintenance agreement will need to be determined during project development to define how the improvements will be maintained for the projects' useful life.

There is no funding from MnDOT currently planned or programmed for this project. If funding is awarded, continue to work with MnDOT Area staff to coordinate development and to review needs and opportunities for cooperation.

If you have questions or require additional information at this time, please reach out to Melissa Barnes, North Area Manager, at melissa.barnes@state.mn.us.

Sincerely,

Michael Barnes Digitally signed by Michael Barnes
Date: 2022.04.12 09:39:04 -05'00'

Michael Barnes, PE Metro District Engineer

CC: Melissa Barnes, Metro Area Manager; Molly McCartney, Metro Program Director; Dan Erickson, Metro State Aid Engineer

Anoka County
MINNESOTA

Solicitation for Transportation Funding

Website Summary

Highway 65 Interchanges to serve 105th and 109th Avenues

A Unique Approach

Anoka County created an interactive website to share nine future projects that will be submitted for federal funding through the Metropolitan Council.

This mobile-friendly website provides transparency into the funding process and allows the community to explore and comment on future transportation and mobility improvements through an interactive map.

The website was launched on March 28, 2022 and will remain live past the application deadline. When the Met Council announces its awards this fall, the website will be updated and promoted to all those who participated.

The Anoka STP website tells a story about transportation funding and showcases each of the nine projects in a color-coded, interactive map. Explore the map by clicking on the image!

Promotions & Outreach

The projects will benefit residents, businesses, commuters, and visitors across the county. The interactive website was promoted via the following communication channels beginning March 28, 2022:

- **Website mentions** on Anoka County and Coon Rapids, Lino Lakes, Blaine, and Fridey websites.
- **Social Media posts** including NextDoor & Anoka County Twitter.
- **Email announcement** in Anoka County's Weekly Construction email.
- **Electronic announcements** at the Anoka County Health & Human Services and Job Training centers.

Public Feedback

The website included various opportunities for visitors to share their thoughts and provide comments:

A virtual live chat was available during select times from March 30-April 1. Visitors were able to chat with county staff in real-time. Live chat timeframes were included in site promotions.

Open-ended and demographic survey questions were embedded into each of the nine project pages. *See page 2.*

A general comment form could be accessed at any time on the site.

A contact email and phone number was also provide.

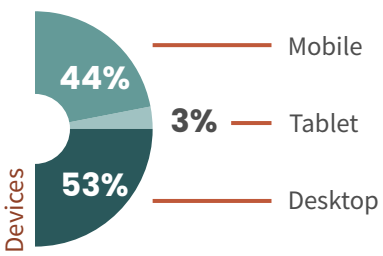
Website Performance: March 28 - April 8, 2022

312
Total Visitors

224
Total Visits*

* includes multiple visits by the same user

1m 11s
Average Visit Length



ACQUISITION

Referral sources: ▲ Facebook ▲ Twitter ▲ AnokaCounty.us

ACTIONS

File Downloads: ▲ 34

Anoka County
MINNESOTA

Solicitation for Transportation Funding

Survey Example

What are your thoughts?

How do you feel about this future project?

- [ ] Strongly opposed
- [ ] Opposed
- [ ] Neutral
- [ ] In favor
- [ ] Strongly in favor

We want to know what you think about this project. Does it align with your vision for our community?

Share your thoughts.

Our goal is to get input from a wide range of individuals and understand the needs and preferences of our community. In order to understand who is participating in this survey, we are collecting demographic information to identify who we're hearing from.

The next four questions are optional.

What is your zip code?

What is your age?

- [ ] Under 18
- [ ] 18-24
- [ ] 25-34
- [ ] 35-44
- [ ] 45-54
- [ ] 55-64
- [ ] 65-74
- [ ] 75+
- [ ] Prefer not to answer

Which of these describes your personal income?

- [ ] Under $10,000
- [ ] $10,000 - $24,999
- [ ] $25,000 - $49,999
- [ ] $50,000 - $74,999
- [ ] $75,000 - $99,999
- [ ] $100,00 - $149,999
- [ ] $150,000+
- [ ] Prefer not to answer

Please describe your race/ethnicity.

- [ ] American Indian or Alaska Native
- [ ] Asian
- [ ] Black or African American
- [ ] Hispanic or Latino
- [ ] Native Hawaiian or Pacific Islander
- [ ] White
- [ ] Other

Submit

TH 65 Interchanges to serve CSAH 12 (109th Avenue) and 105th Avenues in Blaine – Existing Conditions

Figure 1. Vehicle queuing at 109th Ave at TH 65

Figure 2. Traffic queuing on TH 65 approaching 109th Ave

TH 65 Planning and Environmental Linkages (PEL) Study

Final PEL Study Report

June 2021

DEPARTMENT OF TRANSPORTATION

Table of Contents

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Acronym / Terms List

Term	Definition	Term	Definition
AA	Alternatives Analysis	PEL	Planning and Environmental Linkages
CSAH	County State Aid Highway	PMT	Project Management Team
DDI	Diverging Diamond Interchange	SHPO	State Historic Preservation Office
DOI	United States Department of the Interior	SPUI	Single Point Urban Interchange
EJ	Environmental Justice	TAC	Technical Advisory Committee
EO	Executive Order	TDM	Travel Demand Management
EPA	United States Environmental Protection Agency	TH	Trunk Highway (e.g. TH 65)
FHWA	Federal Highway Administration	TPP	Transportation Policy Plan
FTA	Federal Transit Administration	TSMO	Transportation Systems Management Options
GIS	Geographic Information Systems	US	United States Highway (e.g. US 10)
HPDP	Highway Project Development Process	USACE	United States Army Corps of Engineers
LOS	Level of Service	USFWS	United States Fish and Wildlife Service
MMLOS	Multi-modal Level of Service		
MnDOT	Minnesota Department of Transportation		
MnDNR	Minnesota Department of Natural Resources		
Mph	Miles per hour		
MPCA	Minnesota Pollution Control Agency		
NEPA	National Environmental Policy Act		
NHPA	National Historic Preservation Act		
NPS	National Park Service		
NRHP	National Register of Historic Places		
NWI	National Wetlands Inventory		
OSA	Office of the State Archaeologist		
PAC	Public Advisory Committee		

Agency Authority and Support

The Federal Highway Administration (FHWA) has developed the Planning and Environmental Linkages (PEL) approach to accelerate project delivery by linking the planning process with the National Environmental Policy Act (NEPA). FHWA has been involved throughout the Trunk Highway (TH) 65 PEL Study process and provided concurrence at multiple stages throughout the process. The Minnesota Department of Transportation (MnDOT) is the local agency that led the study process. This report is to be used in future NEPA analyses within the study area unless new information is introduced by the project sponsor or FHWA. This study has been prepared in accordance with 23 U.S.C. 168 (Integration of planning and environmental review) and other FHWA policy on PEL process.

Local Agency Support

The following local agencies have been involved throughout the study process and have long supported improvements in the area. After participating in the three levels of screening evaluation through TAC meetings, and providing a robust public information and community comment period, these agencies found the PEL process to be a valuable tool in the alternatives decision-making process resulting in a flexible corridor vision. They support the recommendation of the eight section-wide alternatives that were determined to move forward to NEPA.

When individual projects move into future environmental review processes, they are committed to providing continued support and participation. See Appendix C: Letters of Support for letters.

- Anoka County
- City of Blaine
- City of Ham Lake
- City of Spring Lake Park
- Metropolitan Council

Acknowledgements

The following staff were involved in the development of the TH 65 PEL:

Project Management Team

MnDOT

- Melissa Barnes – Project Manager
- Sheila Kauppi
- Kent Barnard

Local Partners

- Jon Haukaas, City of Blaine
- Joe MacPherson, Anoka County
- Dan Buchholtz, Spring Lake Park
- Tom Collins, Ham Lake

FHWA

Kris Riesenberg

Technical Advisory Committee

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- Melissa Barnes – Project Manager
- Jennifer Wiltgen – Deputy Project Manager
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- Jim Hendricksen
- Tod Sherman
- Shaker Rabban
- Josh Fleck
- Douglas Carter
- Tim Donovan
- Deb Moynihan
- Mackenzie Turner Bargen
- Jason Junge
- Lisa Elliott
- Brigid Gombold
- Kevin Schwartz
- Ashley Roup
- Gwen Mei
- Jamal Love

FHWA

- Philip Forst
- James McCarthy
- Andrew Emanuele

Local Partners

- Jack Forslund, Anoka County
- Joe MacPherson, Anoka County
- Jane Rose, Anoka County
- Jon Haukaas, City of Blaine
- Ben Hayle, City of Blaine
- Erik Thorvig, City of Blaine
- Tom Collins, City of Ham Lake
- Denise Webster, City of Ham Lake
- Dan Buchholtz, City of Spring Lake Park
- Terry Randall, City of Spring Lake Park

Consultant Team

Consultant team members participated in the PMT, TAC, PAC, and public meetings as appropriate.

- Brandi Popenhagen, Consultant Project Manager
- Jason Longsdorf, PEL Advisor
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- Richard Storm, Safety and Traffic Lead
- Smith Myung, Traffic Forecasting
- Scott Reed, Environmental, Existing Conditions
- Caroline Miller, Environmental, Alternatives Analysis, PEL Study Report
- Smith Siromaskul, Concept Lead
- Bobby Oare, Concept Design
- Nic Hentges, Concept Design and Estimates
- Natalie Sager, Traffic, Existing Conditions, Alternatives Analysis
- Shaun Bready, Traffic

Executive Summary

This report documents the Minnesota Department of Transportation's (MnDOT) analysis and recommendations of a Planning and Environmental Linkages (PEL) Study conducted to identify transportation improvements along Trunk Highway (TH) 65 in Anoka County, Minnesota. The project includes about 7 miles of TH 65 from 81st Ave (just south of County State Aid Highway [CSAH] 10) in Spring Lake Park through Blaine, to Bunker Lake Blvd in Ham Lake. TH 65 is a vital link for traffic traveling between the Twin Cities urban core and northern suburban and exurban communities. TH 65 is the only continuous north/south corridor of its functional class and capacity in Anoka County.

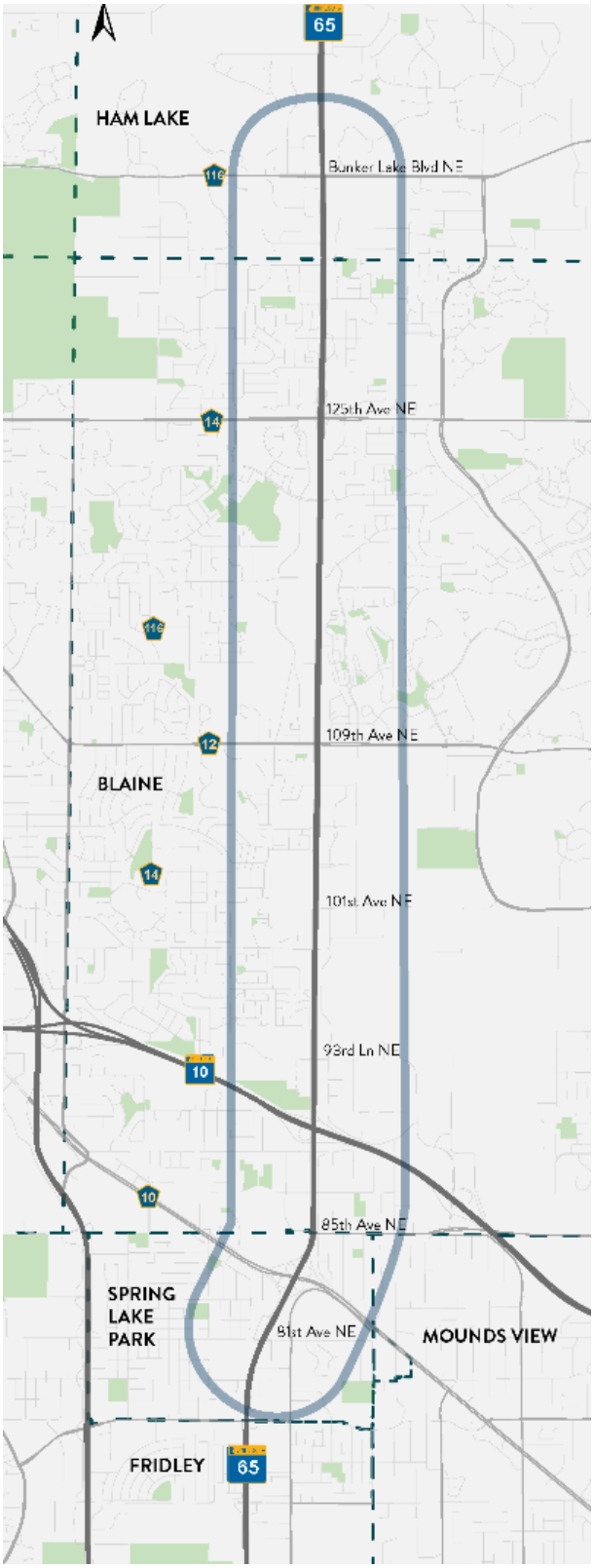
Planning and Environmental Linkages

Planning and Environmental Linkages (PEL) is a study process that is typically used to identify transportation issues and environmental concerns. It can be applied to make planning decisions and for planning analysis. These decisions and analyses, for example, can be used to identify and prioritize future projects, develop the purpose and need for a project, determine project size or length, and/or develop and refine a range of alternatives. PEL studies should be able to link planning to environmental issues and result in useful information that can be carried forward into the National Environmental Policy Act (NEPA) process (in accordance with 23 U.S.C. 168). The adoption and use of a PEL study in the NEPA process is subject to a determination by the Federal Highway Administration (FHWA).

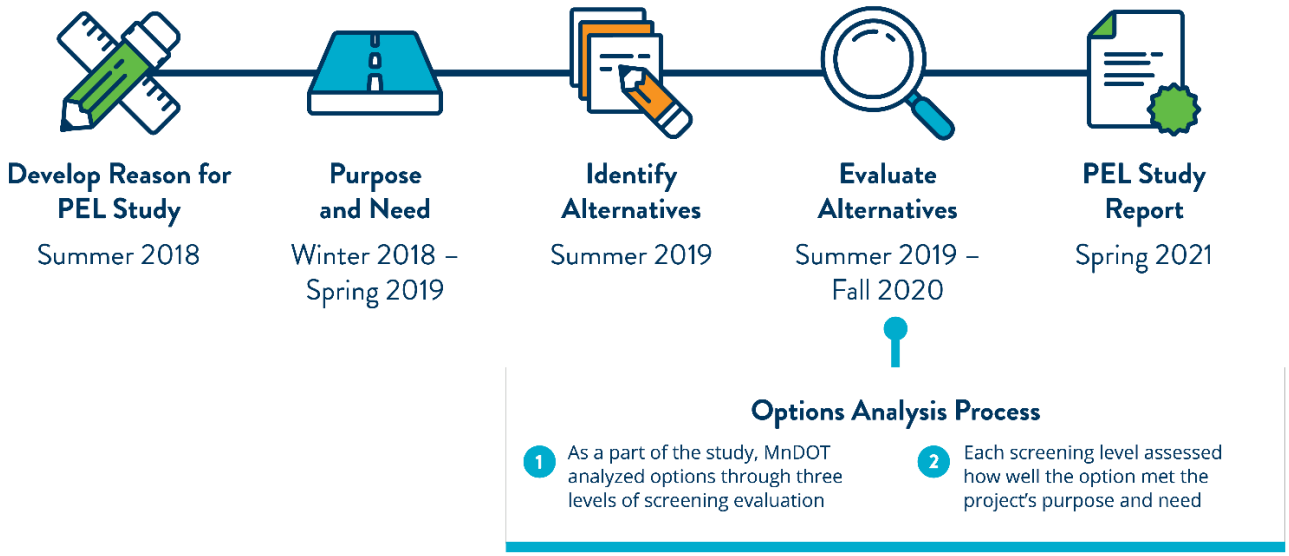
PEL Process

MnDOT, local agency stakeholders, and the Federal Highway Administration (FHWA) worked together through a Technical Advisory Committee (TAC) and a Public

TH 65 Study Area



Advisory Committee (PAC) to develop a vision for the TH 65 corridor. The study began in summer 2018 and concludes with the publication of this report.



Purpose and Need

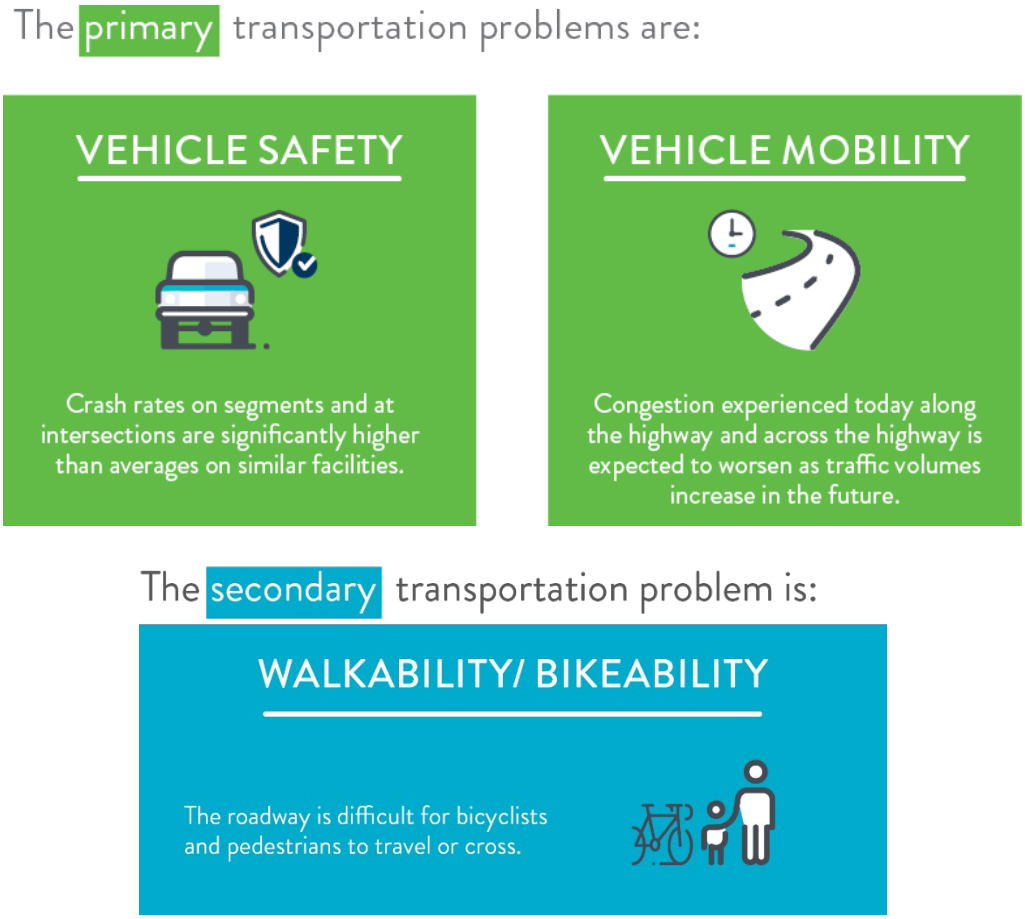
The purpose of the TH 65 corridor improvement project is to improve motorized traffic flow along and across TH 65 by decreasing average travel times and reducing delays, reduce crash frequencies along the corridor, and create an environment where pedestrians and bicyclists are safer and are able to conveniently access destinations across and along the TH 65 corridor safely.

Creating these conditions will better connect residents and businesses on opposite sides of the corridor, resulting in a more cohesive community (Appendix F: Purpose and Need and Evaluation Criteria Memo).

The project's purpose was developed to address the following needs, which were identified as a part of the existing conditions analysis (Appendix E: Existing Conditions Review and Future Traffic Operations Memo) and purpose and need

development process, consistent with MnDOT's Highway Project Development Process (HPDP)[1]. The primary needs are the main transportation problem(s) to be solved that led to initiation of the project. Secondary needs describe other transportation problems or opportunities for improvements within the project study area that may be able to be addressed, if feasible, at the same time that the primary needs are addressed:

- Primary need: Vehicle safety
- Primary need: Vehicle mobility
- Secondary need: Bikeability/walkability



1 MnDOT Highway Project Development Process, https://www.dot.state.mn.us/planning/hpdp/

Goals

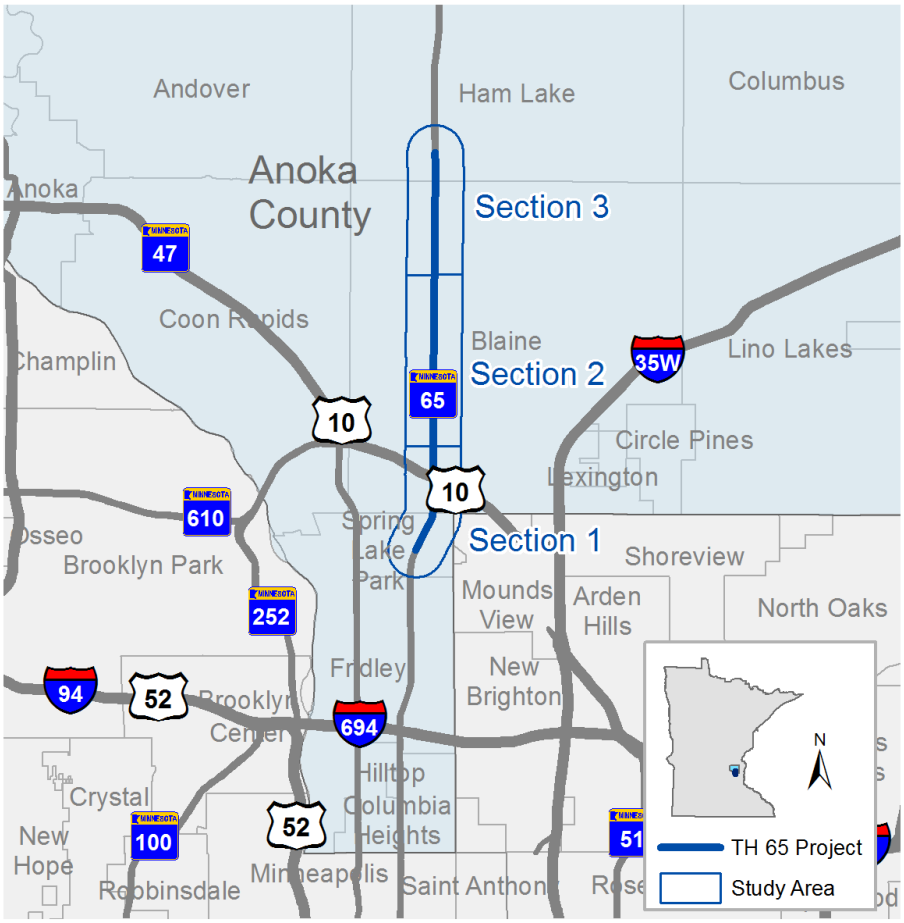
Goals are not considered the transportation needs of the project, however, they provide context that can influence project development and design decisions. A statement of identified goals can provide an additional set of criteria for comparative evaluation of alternatives. The following goals were established for the project:

- Minimizing impacts to socio-economic and environmental resources
- Viability of development/redevelopment potential

Additional Considerations

Additional considerations describe other desirable project elements that were not central to the purpose and need, but were important considerations to the selection of alternative. As transportation improvements are considered for the TH 65 corridor, they should also avoid adversely impacting transit mobility and meet the fiscal limitations for transportation improvements in the region (project is implementable).

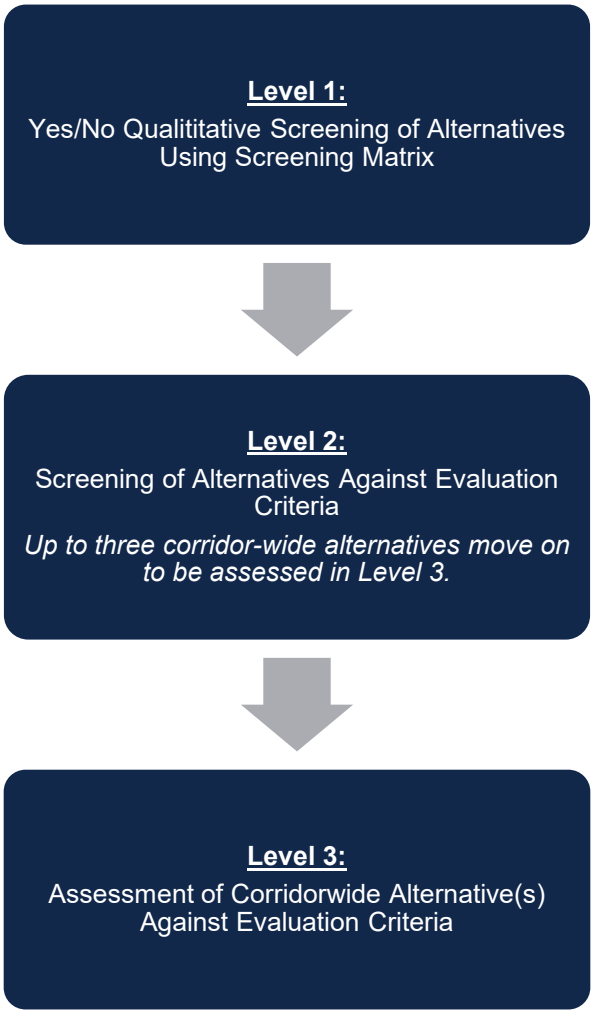
Project Location and Study Area Sections



Alternatives Analysis

The purpose and need shaped the development of the evaluation criteria used in each level of evaluation screening. The alternatives analysis process included the development of alternatives and three screening levels of evaluation using criteria based on the project's Purpose and Need. The study area was divided into three geographic sections to better develop and evaluate different alternatives based on the context throughout the corridor. Each section-wide alternative has the ability to be interchanged with another to achieve the corridor vision. See Section 3 for a description of the alternatives analysis process or Appendix G: Alternatives Analysis Memo for the full memo.

Evaluation Process Overview



The purpose of the Level 1 screening was to eliminate alternatives that clearly did not meet the project's Purpose and Need. Criteria in the Level 2 screening compared how well each option met the Purpose and Need, additional considerations and goals of the project. The alternatives were compared against the no-build alternative and each other, by section. The performance measures were a mix of qualitative and quantitative assessments, based on the criteria and the data available at this stage of development. Three corridor-wide alternatives in Level 3 were screened with refined evaluation criteria as well as updated Level 2 screening results based on design refinements.

A total of 42 section-wide, spot location, and Transportation System Management and Operations (TSMO) alternatives[2] were evaluated in Level 1. A total of 23 section-wide and spot location alternatives were evaluated in Level 2. A total of three corridor-wide alternatives (9 section-wide alternatives) were evaluated in Level 3. During Level 3, all passed the screening except one section-wide alternative, leaving 8 viable section-wide alternatives recommended in this report (see Table ES-1 below for the Level 3 Screening Results). Additionally, TSMO alternatives were not evaluated in the Levels 2 and 3 screenings and will be carried forward for consideration during future NEPA review.

2 Transportation Systems Management and Operations are technology or design solutions that can be added to a corridor to better manage the flow of traffic and address safety issues. Examples include transit signal priority, variable speed signs, and intelligent transportation systems (ITS).

Table ES-1 – Level 3 Screening Results

Section or TSMO	No-build Alternative	Corridor-wide Alternative 1	Corridor-wide Alternative 2	Corridor-wide Alternative 3
Section 1	Carried Forward	US 10 Alt 1 (Diamond at CSAH 10): Carried Forward	US 10 Alt 2 (Signalized Rotary at CSAH 10): Carried Forward	US 10 Alt 2 (Diamond at CSAH 10): Carried Forward
Section 2	Carried Forward	Freeway Alt 3: Carried Forward	Hybrid Freeway: Carried Forward	Hybrid Freeway (Interchange at 109)3: Carried Forward
Section 3	Carried Forward	Freeway Alt: Carried Forward	Superstreet: Carried Forward	Hybrid Freeway: Not Recommended
TSMO	N/A	Carried Forward	Carried Forward	Carried Forward

Considered but Dismissed

As discussed in the previous section, a total of 42 alternatives were evaluated in the Level 1 screening and 23 in Level 2. Some were outright "eliminated," meaning that they would not be considered in future study. Others were categorized as "not recommended," meaning they were removed from consideration because similar improvements in other alternatives have demonstrated superior performance. They can be reconsidered in future studies if new information or analysis indicates it would better meet the Purpose and Need. Appendix G: Alternatives Analysis Memoprovides detail regarding these alternatives removed from consideration during Levels 1 and 2.

Agency and Public Involvement

The TH 65 PEL Study included public involvement throughout the process as well as ongoing agency coordination. Details on Agency and Public involvement can be found in Section 4 of the report. A mix of standing committees and coordination at key project milestones kept stakeholders and the public informed of the process and provided opportunities to weigh in and shape the study. Multiple committees including a Local Officials Group and a Technical Advisory Committee provided direct coordination on the project at both the staff level and elected official level. Federal, state, and local resource agencies were also engaged during the study process.

The Public Advisory Committee (PAC) included a group of 23 residents, business owners, and elected officials within the study area, representative of the cross section of stakeholders identified. Meetings were scheduled in tandem with key decision points in the project such as developing the Purpose and Need, developing alternatives, and evaluation of

3 The Hybrid Freeway (Interchange at 109th Ave) was added between Levels 2 and 3 as a variation on the Hybrid Freeway Alternative, but including an interchange at 109th Ave.

alternatives. The general public was also engaged during these key decision points with a variety of methods including in-person and virtual opportunities.

Study Recommendations

Based on the results of the alternatives analysis process, 8 section-wide build alternatives will be carried forward into the future NEPA process for the TH 65 corridor. This discussion can be found in Section 5 of the report and documentation in Appendix A: Public Engagement and Agency Coordination. These alternatives meet the 23 U.S.C. 168 criteria for NEPA. They also generated support from the TAC and PAC, and support from the public based on comments received throughout the process (see Local Agency Support and letters in Appendix C: Letters of Support). Although these alternatives were presented as corridor-wide alternatives in the Level 3 screening, their ability to be mixed and matched by section allows for flexibility in the future NEPA process. Any combination of these section-wide alternatives will result in meeting the Purpose and Need, which was why study recommendations are made at the section level in this report and not corridor-wide.

Section 1 Alternatives – 81st Ave to North of 93rd Ave

Three Section 1 alternatives have been carried forward for future consideration in NEPA:

- US 10 Alternative 1 (Diamond at CSAH 10)
- US 10 Alternative 2 (Signalized Rotary at CSAH 10)
- US 10 Alternative 2 (Diamond at CSAH 10)

These Section 1 Alternatives are similar in their removal of the existing cloverleaf at US 10, right-in/right-out access restrictions at 85th and 89th, and bicycle and pedestrian crossings at 87th Ave and 93rd Ave. The differences between the alternatives are the designs of the US 10 and CSAH 10 interchanges.

Section 2 Alternatives – North of 93rd Ave to 117th Ave

Three Section 2 Alternatives have been carried forward for future consideration in NEPA:

- Freeway Alternative 3
- Hybrid Freeway
- Hybrid Freeway Sub-Alternative (Interchange at 109th Ave)

The main difference in design between the alternatives is that Freeway Alternative 3 would be a six-lane limited access facility with interchanges, while the hybrid freeway alternatives would include a series of slip ramps from frontage roads and grade separated median U-turns that would provide more access points. The Hybrid Freeway Sub-Alternative would also include an interchange at 109th that the Hybrid Freeway Alternative does not include.

Section 3 Alternatives – 117th Ave to Bunker Lake Blvd

Two Section 3 alternatives have been carried forward for future consideration in NEPA:

- Freeway Alternative
- Superstreet

Both alternatives would be limited-access facilities to Bunker Lake Blvd. The Freeway Alternative would include an interchange at Bunker Lake Blvd, while the Superstreet Alternative would include a Reduced Conflict U-turn, thereby transitioning from a freeway to a superstreet approaching the intersection.

Corridor-wide Recommendations

Traffic Operations and Safety

All alternatives improved the morning and afternoon peak travel time along and crossing the corridor, and vehicle throughput along the corridor when compared to the no-build alternative. Notable differences include reducing existing travel times along the seven-mile corridor from over 40 minutes down to around 12 minutes during both morning and afternoon rush hours. As traffic grows, the 2045 no-build travel times increase to 50 minutes, while the alternatives maintained approximately 12 minutes. Just as critical was crossing travel times, which were measured between key origins and destinations throughout the corridor. In several areas where it can take ten minutes to cross, the alternatives reduced crossing times to three or four minutes. Safety performance also improved with all alternatives, with 70 to 80 percent reduction in conflict points[4] when compared to the no-build alternative.

Transportation Systems Management and Operations (TSMO)

Transit Signal Priority, Variable Speed Signs, and Intelligent Transportation Systems were carried forward from Level 1 and should be considered during future NEPA review. These alternatives could be applied throughout all sections of the corridor as an add-on to any of the alternatives.

Bicycle and Pedestrian

Bicycle and pedestrian improvements vary slightly between alternatives, however, all alternatives include improved north/south travel on both sides of the highway. The alternatives include a mix of new 10-ft trail and low volume frontage road access for contiguous travel from 81st Ave to Bunker Lake Blvd. Crossing times of TH 65 are also improved in all alternatives and will also be more comfortable for users with several new facilities included as a part of the designs.

4 A conflict point is an area where vehicles, bicycles, and/or pedestrians may interact. Examples are intersections and driveways. Reducing conflict points improves safety.

Transit Recommendations

The Level 3 evaluation of transit focused on how the alternatives maintained current express route transit service on TH 65, which currently operates only in Section 2. All alternatives improved travel time along the corridor, with similar results as vehicular travel time.

Freight Recommendations

The Level 3 evaluation of freight evaluated heavy commercial vehicle travel time between representative origin and destinations along the corridor. Overall, all the alternatives in Sections 1 and 2 showed improvement over the no-build. Section 3 alternatives maintained the same travel time when compared with the no-build during the PM peak, but improved during the AM peak.

Affected Environment and Environmental Consequences

Environmental resources were considered during screening Levels 2 and 3 of the alternatives analysis. Initial analysis about the existing conditions of the corridor informed the evaluation criteria for which resource categories could be potentially impacted and which resource impacts could vary between alternatives. Both quantitative and qualitative criteria were used to evaluate impacts to environmental resources. Environmental Justice, water resources, and property impacts were the major environmental resource differentiators between alternatives. Other environmental resources not evaluated in the PEL will need to be addressed during future NEPA review.

Implementation Plan

The PEL process is intended to provide a framework for the long-term implementation of recommended improvements as funding becomes available and to be used as a resource for future NEPA documentation. It is anticipated that the funding for all the recommended corridor improvements will not be available at one time. Potential separate projects to implement the study recommendations were identified in coordination with MnDOT and the Technical Advisory Committee.

The implementation plan breaks out potential separate projects within the three geographical sections of roadway. While the timing of funding is unknown, each separate project implementation timeline has the potential to affect other areas of the corridor due to removal of bottlenecks and changes in driver expectations. While a project could be implemented independently, in some locations it will be critical to evaluate and complete the NEPA decision making document for the overall section since the preferred alternative may dictate the outcome of another project within the section.

Corridor Risks

Multiple corridor risks have been identified in the PEL as a roadmap for future NEPA review. The following areas have been identified: Drainage, noise, right-of-way, public concerns, driver expectations and safety, maintenance, downstream effects, Environmental Justice, parks – 4(f) and 6(f), and other environmental resources.

Supporting Documentation Appendices

The following memos and documentation were developed as a part of the PEL study process and are referenced throughout this report.

- Appendix A: Public Engagement and Agency Coordination
- Appendix B: PEL Questionnaire
- Appendix C: Letters of Support
- Appendix D: Concurrence Documentation
- Appendix E: Existing Conditions Review and Future Traffic Operations Memo
- Appendix F: Purpose and Need and Evaluation Criteria Memo
- Appendix G: Alternatives Analysis Memo

Next Steps

The PEL documentation provides reference framework for future implementation of projects as identified in the implementation plan. When a project is chosen for implementation, project proposers will need to complete environmental review in accordance with NEPA, which requires additional design advancement, social, economic and environmental impact analysis, and public involvement.

The following study report summarizes the PEL process and study for TH 65.

1. Study Area

Trunk Highway (TH) 65 is a principal arterial located within the Twin Cities metropolitan area in Anoka County (Figure 1 1). The study area includes about 7 miles of TH 65 from 81st Ave NE (just south of County State Aid Highway [CSAH] 10) in Spring Lake Park through Blaine, to Bunker Lake Blvd in Ham Lake (see Figure 1-1 and Figure 1-2). The study area was divided into three sections for purposes of the analysis. These section breakpoints were determined after technical analysis of traffic, likelihood of independent utility, and after consultation with the Technical Advisory Committee. The alternatives can be interchanged by section to assemble the corridor vision, leaving flexibility for future environmental review. Below are the following section designations:

- Section 1: 81st Ave to North of 93rd Ln
- Section 2: North of 93rd Ln to 117th Ave
- Section 3: North of 117th Ave to Bunker Lake Blvd

Figure 1-1 – TH 65 Study Area location in Anoka County, Minnesota

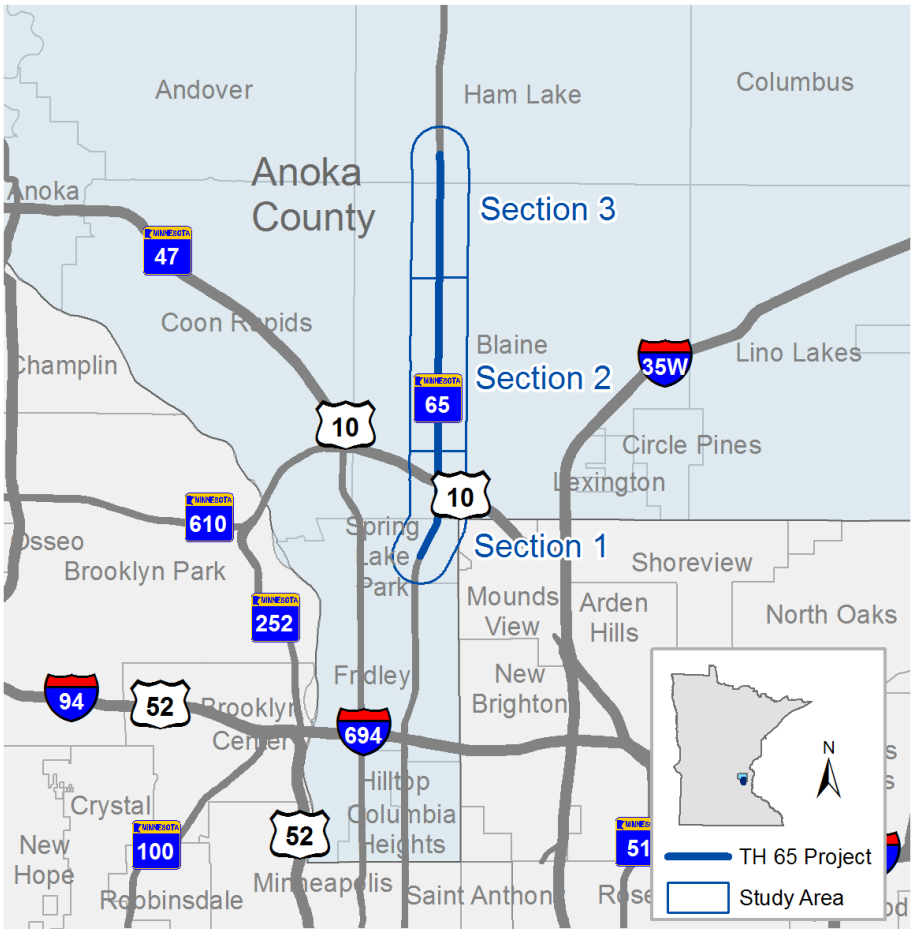
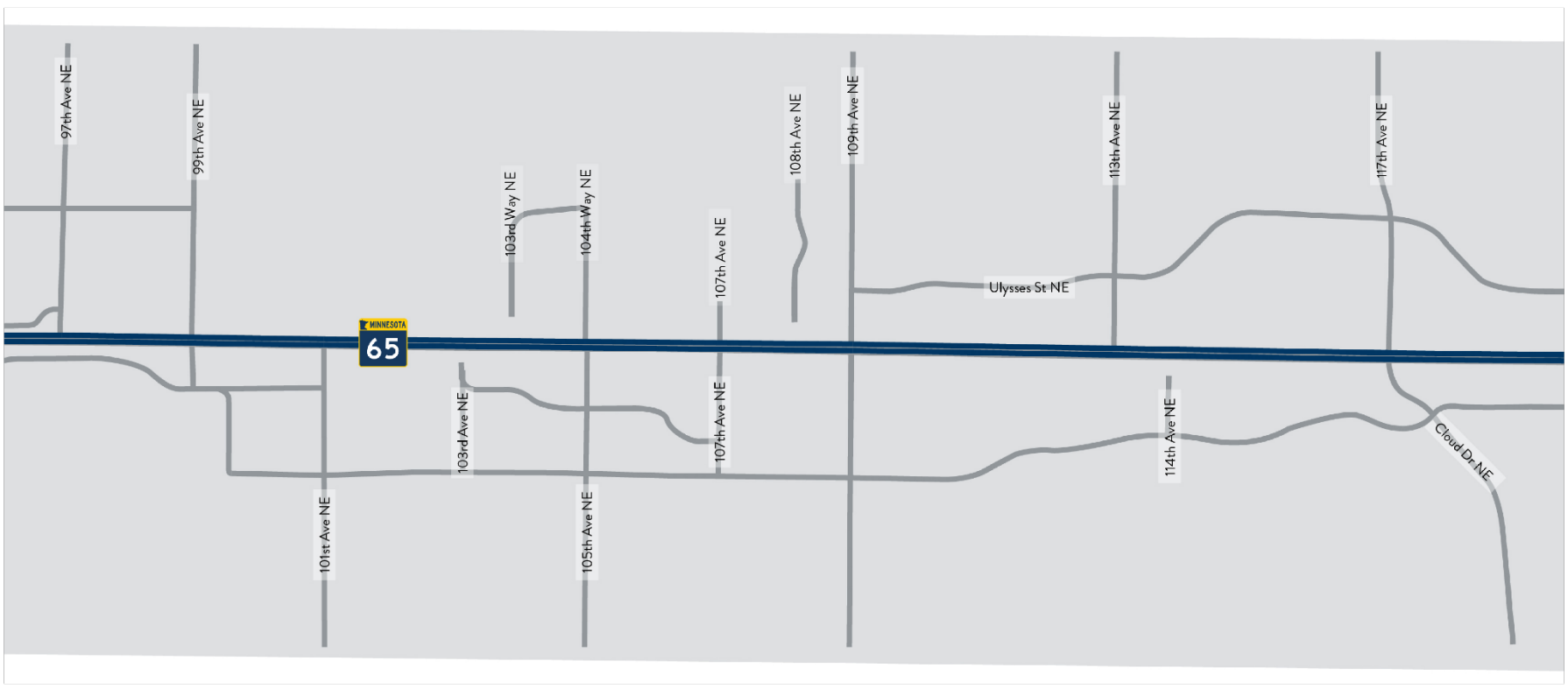


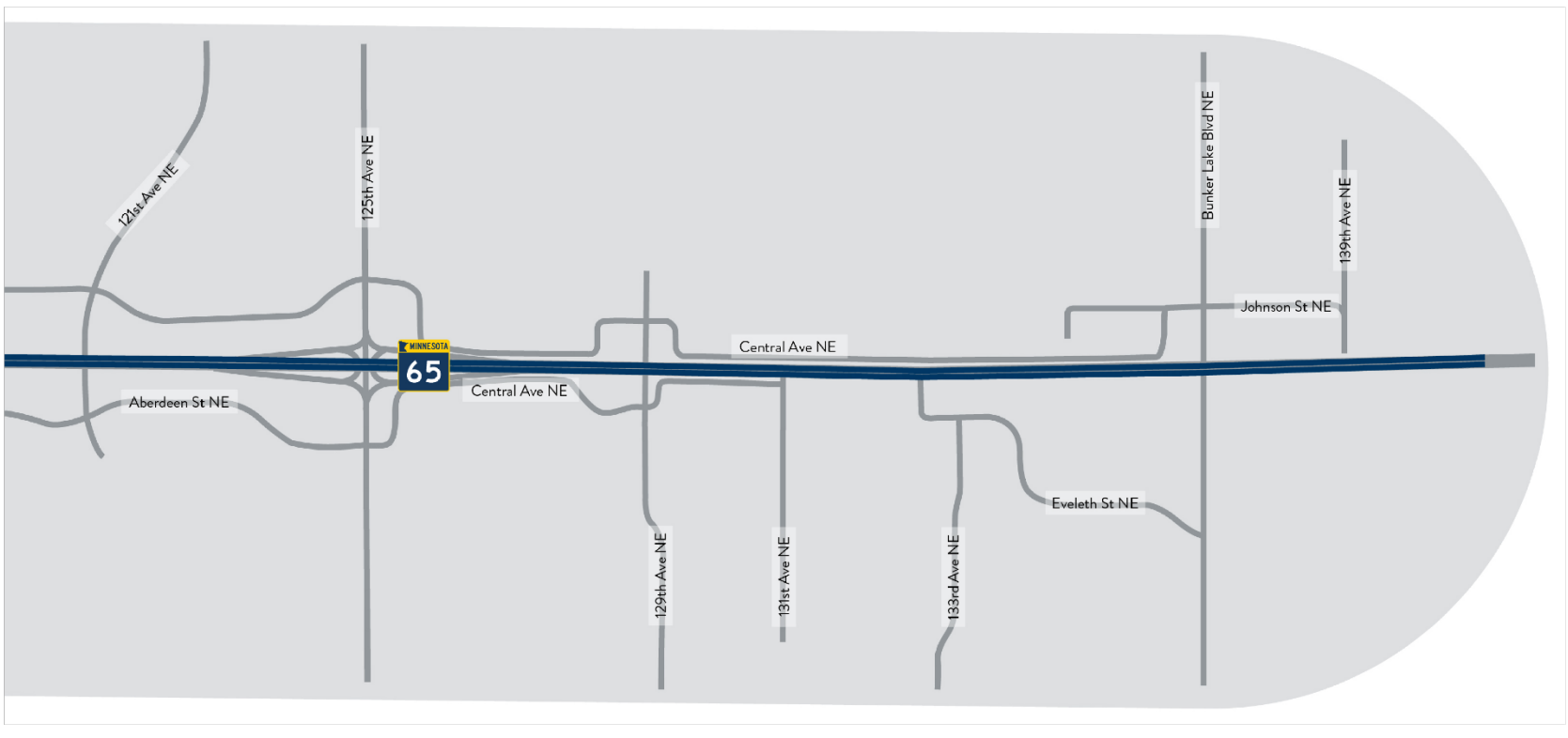
Figure 1-2 – TH 65 Study Area

Section 1

Section 2



Section 3



1.1 PEL Process

National Environmental Policy Act (NEPA) process principles were followed for this PEL study including preparation of a project Purpose and Need, evaluation of alternatives, and coordination with local, state, and federal agencies. The following are the key points that required Federal Highway Administration (FHWA) concurrence:

- Determining the reason for the PEL study – 9/28/2018
- Purpose and Need and evaluation criteria – 5/10/2019
- Alternatives Analysis – 12/22/2020
- Final PEL study – This Report publication serves as the concurrence date

The project Purpose and Need was developed in accordance with MnDOT's Highway Project Development Process (HPDP) guidance.[5] The Alternatives Analysis process used technical analysis and public input to support the development and evaluation of a range of reasonable alternatives. Three levels of screening evaluation were used to evaluate and carry forward alternatives that best met the Purpose and Need. Reasonable alternatives include those that are practical or reasonable from a technical or economic standpoint and using common sense. The results of the Alternatives Analysis support carrying forward multiple alternatives for each section of the corridor into future NEPA review.

5 Highway Project Development Process, https://www.dot.state.mn.us/planning/hpdp/

2. Purpose and Need

The Purpose and Need (see Appendix F: Purpose and Need and Evaluation Criteria Memo)for the TH 65 study was developed for the project based upon a detailed existing and future conditions analysis and FHWA concurred on it on May 10, 2019. Minor non-substantive edits have been made to the Purpose and Need below that improve readability of the section based upon subsequent agency review and comment.

2.1 Background

TH 65 is a vital link for traffic traveling between the Twin Cities urban core and northern suburban and exurban communities. TH 65 is the only continuous north/south corridor of its size and capacity in Anoka County. Within the study area, TH 65 is currently a four-to six-lane divided highway with the following characteristics:

- Classified as a principal arterial with a primary function of providing mobility, while also providing access to adjacent land uses
- Six-lane divide roadway from CSAH 10 to just north of 93rd Ave; four-lane divided roadway north of 93rd Ave and south of CSAH 10
- Auxiliary southbound lane present between approximately TH 10 and 95th Ave
- Posted speed limit is 55 miles per hour (mph) from 81st Ave to 109th Ave; speed limit rises to 60 mph north of 109th Ave
- Signalized intersections are present at approximately ½-mile intervals in the southern half of the corridor; there is a short freeway section in the northern half between 117th Ave and 131st Ave (a distance of approximately one and ¾ miles). No movements are restricted at the signalized intersections.
- There are three interchanges; a full cloverleaf interchange at CSAH 10, a partial cloverleaf at TH 10, and a Single Point Urban Interchange (SPUI) at Main Street (Also known as 125th St).
- Serves approximately 40,000 to 60,000 vehicles per day[6]
- Provides access to TH 65 commercial/retail corridor spanning Fridley, Spring Lake Park, Blaine and East Bethel.

This section of TH 65 handles similar traffic volumes as does the parallel section of Interstate 35W, yet does not have the fully controlled access (i.e., access only provided at interchanges) that allows for a freer flow of traffic.

6 2017-2018, MnDOT Traffic Mapping Application, https://www.dot.state.mn.us/traffic/data/tma.html

TH 65 has experienced substantial growth in local and regional travel demand within the project limits, creating traffic levels that exceed current roadway capacity. At this time, only preservation and safety improvements are identified for this section of TH 65 in the 2040 Transportation Policy Plan (TPP). These improvements include resurfacing TH 65 from County Rd 10 to 217th Ave (2024-2029).

While the proposed safety projects would provide limited improvements to intersection operations, primarily by reducing conflicts between through traffic and left turn queues, they would not address the broader transportation issues along TH 65. Additional improvements beyond those identified in the TPP would be necessary to address deficiencies in the study area.

2.2 Need

Many of the issues in the TH 65 corridor arise from the two roles the corridor serves. As noted previously, the corridor is a principal arterial intended to provide mobility to commuters and other traffic traveling through the corridor. However, the presence of residential and commercial development adjacent to the corridor creates a notable need for traffic, both motorized and non-motorized to use and/or cross TH 65 to access these types of developments. Specifically, traffic must use the at-grade intersections to cross the corridor. Signal timing prioritizes the north-south movements causing delays for vehicles, bicycles, and pedestrians crossing at these intersections which discourage motorized traffic from crossing the corridor in many instances. The width of the intersections, volume and speed of traffic, and inconsistent bicycle and pedestrian crossing infrastructure results in many bicyclists and pedestrians avoiding crossing TH 65 out of concern for their safety. Therefore, the TH 65 corridor in its current configuration has a significant negative effect on the mobility and cohesiveness of the surrounding community.

The primary needs for improving the TH 65 corridor are related to vehicle safety and vehicle mobility both for TH 65 through traffic and cross street traffic. Secondary needs include bikeability and walkability along and across the corridor, as there is a notable amount of commercial and residential land use in the corridor. In addition, transit mobility must be considered as there is an express commuter route (Metro Transit Route 865) connecting Blaine and downtown Minneapolis. The following sections present these needs qualitatively; the quantitative analysis supporting the needs of the TH 65 corridor can be found in Appendix E: Existing Conditions Review and Future Traffic Operations Memo.

2.2.1 Primary Needs

The project's purpose was developed to address the following needs, which were identified as a part of the existing conditions analysis and purpose and need development process, consistent with MnDOT's Highway Project Development Process (HPDP). The primary needs are the main transportation problem(s) to be solved that led to initiation of the project.

Vehicle Safety

There are several intersections and segments with crash rates above the critical crash rate[7], including the TH 65 intersections with 81st Ave, 85th Ave, and 109th Ave. Of even greater concern are the number of intersections and segments with injury or fatality-related crashes above the critical crash rate. Two segments of TH 65, between 81st Ave and CSAH 10 and between 99th Ave and 105th Ave, have injury/fatality crashes above the critical rate. Three intersections along TH 65 have injury/fatality crashes above the critical rate, including 89th Avenue, 93rd Lane NE, and Bunker Lake Blvd.

Vehicle Mobility

Current traffic, including freight, experiences notable delays along TH 65, especially during the evening rush hour. Five signalized intersections in the study area have long enough delays that the intersection is considered to operate poorly (more than 55 seconds of delay per vehicle). These include TH 65 at: 81st Ave, Clover Leaf Pkwy, 99th Ave, 109th Ave, Cloud Drive, and Bunker Lake Blvd. Average travel speeds in the peak directions during peak hours range from 22 to 25 mph and fall around or below a target speed of approximately 20 to 22 mph[8], indicating excessive delay. Forecasted traffic operations in 2045 indicate that all 12 signalized intersections on the TH 65 corridor will operate poorly and average travel speeds will be further reduced.

Also of concern are the delays and queue lengths on the side streets connecting to TH 65, and some of the traffic movements from TH 65 to the side streets. Every intersection along the TH 65 corridor has at least one movement that operates poorly, many having delays of 100 seconds or more. Forecasted traffic operations in 2045 indicate that delays on side streets will further worsen. Currently, delays on side streets result in motorists revising their trips to avoid crossing the TH 65 corridor entirely. Public input collected via in-depth phone interviews and open-ended online written surveys indicates that TH 65 is enough of a barrier that many residents do not shop in their neighborhood retail stores on the other side of the highway. Some employees chose to work in other communities rather than the businesses on the other side of TH 65. This condition is expected to worsen by 2045.

In addition, for some residents in the corridor, TH 65 is the only option for local trips because of the incomplete frontage road system. For example, residents on the west side of TH 65 between 97th Avenue and 109th Avenue must either use TH 65 or must drive through the residential streets to the west for local trips. This situation likely exacerbates the operational issues at the intersections along TH 65 in this area; especially the 99th Avenue intersection, which provides the most direct connection to TH 65 from these western neighborhoods.

2.2.2 Secondary Needs

Secondary needs describe other transportation problems or opportunities for improvements within the project study area that may be able to be addressed, if feasible, at the same time that the primary needs are addressed.

7 The critical crash rate is a statistically significant rate indicating that an intersection or roadway segment has crashes frequently enough that there is a safety problem that may need to be addressed.

8 The target speed of 20 to 22 miles per hour was determined using Highway Capacity Manual (HCM) Exhibit 18-1. Base free flow speeds for the corridor were determined to range from 50 to 55 miles per hour (from HCM Equation 18-3) and a threshold of LOS D or better was used.

Walkability and Bikeability

The TH 65 corridor was assessed for pedestrian mobility and safety using a method developed by the Oregon Department of Transportation. This method considered various elements in the TH 65 corridor (e.g. lane configurations and width, presence and size of pedestrian refuges, signal types and timing, among others) both at intersections and along the roadway. The analysis determined the likely safety and comfort of bicyclists and pedestrians traveling across or along
TH 65. Nearly every intersection received a failing rating for pedestrian and bicycle travel. Bicycle travel along the corridor was near failing for the northbound and southbound directions.

Pedestrian and bicycle traffic is more sensitive than motorized traffic to signal delays (i.e. how long walkers and bikers need to wait for a signal, and how long the signal lasts), and the width of the intersection. There are currently no pedestrian or bike routes along TH 65, and pedestrians and bicyclists have to wait for a notable amount of time when crossing the corridor due to long signal cycle lengths. In addition to these concerns, pedestrians and bicyclists have to avoid high volumes of vehicles making right turns. Wider corners at intersections allow vehicles to make turns at higher speeds, which contributes to the potentially unsafe conditions for pedestrians and bicyclists.

MnDOT's pedestrian risk assessment tool was also used to assess risk at intersections on the corridor. With this methodology, risk is assessed based on factors such as: presence of bus stops, presence of medians on the major road, presence of on-street parking, number of through lanes on the major road, speed limit, proximity to school(s), presence of left turn lanes on the major road, and approach volumes. Overall, 11 intersections were considered to have high pedestrian risk and five were considered to have medium pedestrian risk.

Within a five year study period (2013-2017), 14 pedestrian or bicyclist related crashes occurred in the project review area, two of which resulted in severe injuries. A review of the pedestrian and bicyclist environment along TH 65 revealed the lack of comfortable facilities cohesively along TH 65; this may be a contributing factor for pedestrian and bicyclist crashes. Nine of the 14 crashes occurred at signalized intersections, two were mid-block crossings, and three were along TH 65. The majority of crashes occurred on dry road surfaces with clear weather conditions.

2.3 Purpose

Given the information presented in the previous sections, the purpose of the TH 65 corridor improvement project is to improve motorized traffic flow along and across TH 65 by decreasing average travel times and reducing delays, reducing crash frequencies along the corridor, and creating an environment where pedestrians and bicyclists are safer and are able to conveniently access destinations across and along the TH 65 corridor safely. Creating these conditions will better connect residents and businesses on opposite sides of the corridor, resulting in a more cohesive community.

As transportation improvements are considered for the TH 65 corridor, they should also avoid adversely impacting transit mobility and meet the fiscal limitations for transportation improvements in the region.

2.4 Additional Considerations

Additional considerations describe other desirable project elements that were not central to the purpose and need, but were important considerations to the selection of alternatives. As transportation improvements are considered for the TH 65 corridor, they should also avoid adversely impacting transit mobility and meet the fiscal limitations for transportation improvements in the region (project is implementable).

2.4.1 Transit Mobility

Currently, Metro Transit Route 865, an express route between Blaine and downtown Minneapolis, uses the TH 65 corridor between 117th Avenue and TH 10. Three local routes use a segment of TH 65, starting at 89th Avenue and heading south out of the corridor study limits. These routes are able to function effectively along the TH 65 corridor by using the shoulders when congestion exists. Potential improvements to the TH 65 corridor should maintain transit mobility for these routes, and should not impede access to the Metro Transit Park and Ride at the north end of Route 865 (located at the intersection of Ulysses Avenue and Paul Parkway just west of TH 65).

2.4.2 Implementable

The cost of transportation improvements is always a consideration; capital budgets are constrained and must address many needs across the system. Previous studies have suggested that a freeway with access only at interchanges may be the best technical solution for mobility along and across the TH 65 corridor. However, transportation solutions for the corridor must fit within fiscal constraints; therefore, a fully access-controlled solution may not be viable.

2.5 Goals

Goals are not considered the transportation needs of the project, however, they provide context that can influence project development and design decisions. A statement of identified goals can provide an additional set of criteria for comparative evaluation of alternatives. Minimizing impacts to socio-economic and environmental resources will be considered as a project goal.

2.5.1 Environmental Concerns

The TH 65 corridor has certain social, economic, and environmental resources and/or concerns that will be considered. These include:

- The presence of parks and known historical resources within 1000 feet of the TH 65 alignment
- The presence of low income and minority populations
- Areas of wetlands, floodplains, and drainage ways
- A number of sites with known or potential soil and groundwater contamination; many of which are located adjacent to intersections along the corridor

Evaluation of potential improvements to the TH 65 corridor will consider potential effects on these resources.

2.5.2 Development/Redevelopment Potential

The TH 65 corridor is fairly well developed. However, there are several properties that are underutilized for various reasons (e.g. presence of contamination, economics, access). Evaluation of potential improvements to the TH 65 corridor will consider the viability of development and redevelopment options along the corridor, impact on development or redevelopment potential, and potential to enhance development or redevelopment options.

3. Alternatives Analysis

The alternatives analysis process included the development of alternatives and three screening levels of evaluation using criteria based on the project's Purpose and Need. FHWA concurred on the Alternatives Analysis Memo (see Appendix D: Concurrence Documentation)on December 22, 2020. The remaining alternatives after the final (Level 3) screening represent those alternatives that best met the project's Purpose and Need. The study area was divided into three sections to better develop and evaluate different alternatives based on the context throughout the corridor. Each section-wide alternative has the ability to be interchanged with another to achieve the corridor vision. For example, a freeway type of alternative could be included in Sections 1 and 3, and a hybrid freeway type alternative in Section 2 and still be a viable corridor-wide alternative.

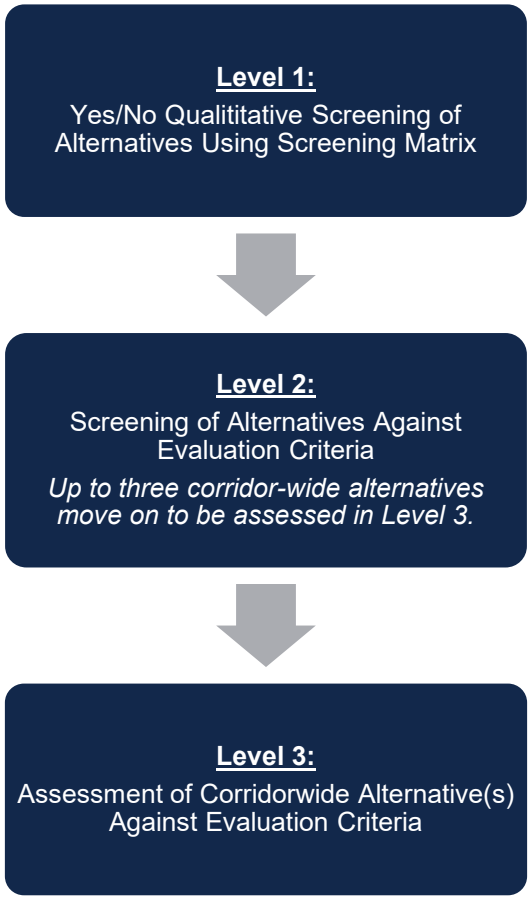
A total of 42 section-wide, spot location, and Transportation System Management and Operations (TSMO) alternatives were evaluated in Level 1. A total of 23 section-wide and spot location alternatives were evaluated in Level 2. A total of three corridor-wide alternatives (9 section-wide alternatives) were evaluated in Level 3. During Level 3, all passed the screening except one section-wide alternative, leaving 8 viable alternatives documented in this report. Additionally, TSMO alternatives were not evaluated in the Levels 2 and 3 screenings and will be carried forward for consideration during future NEPA review. See Appendix G: Alternatives Analysis Memofor additional analysis and documentation.

3.1 Evaluation Criteria and Results[9]

Evaluation criteria were developed based on the project's purpose and need. Additional considerations and known environmental issues are identified in the Purpose and Need and Evaluation Criteria Memo(see Appendix F: Purpose and Need and Evaluation Criteria Memo). The three-step screening process is summarized in Figure 3-1 and further explained in the following sections.

9 The Evaluation Criteria section has been updated since the Purpose and Need and Evaluation Memo was approved by FHWA in 2019 to clarify terminology (e.g. use of term "Alternatives" to exclusively describe conceptual designs and "Sections" to describe geographic sections of the corridor) and other minor terminology and tense corrections. Additionally, the Evaluation Criteria for Levels 2 and 3 has been revised based on input from federal agency comments, MnDOT staff, and the Technical Advisory Committee, including FHWA.

Figure 3-1 – Evaluation Process Overview



3.1.1 Section-level Designations

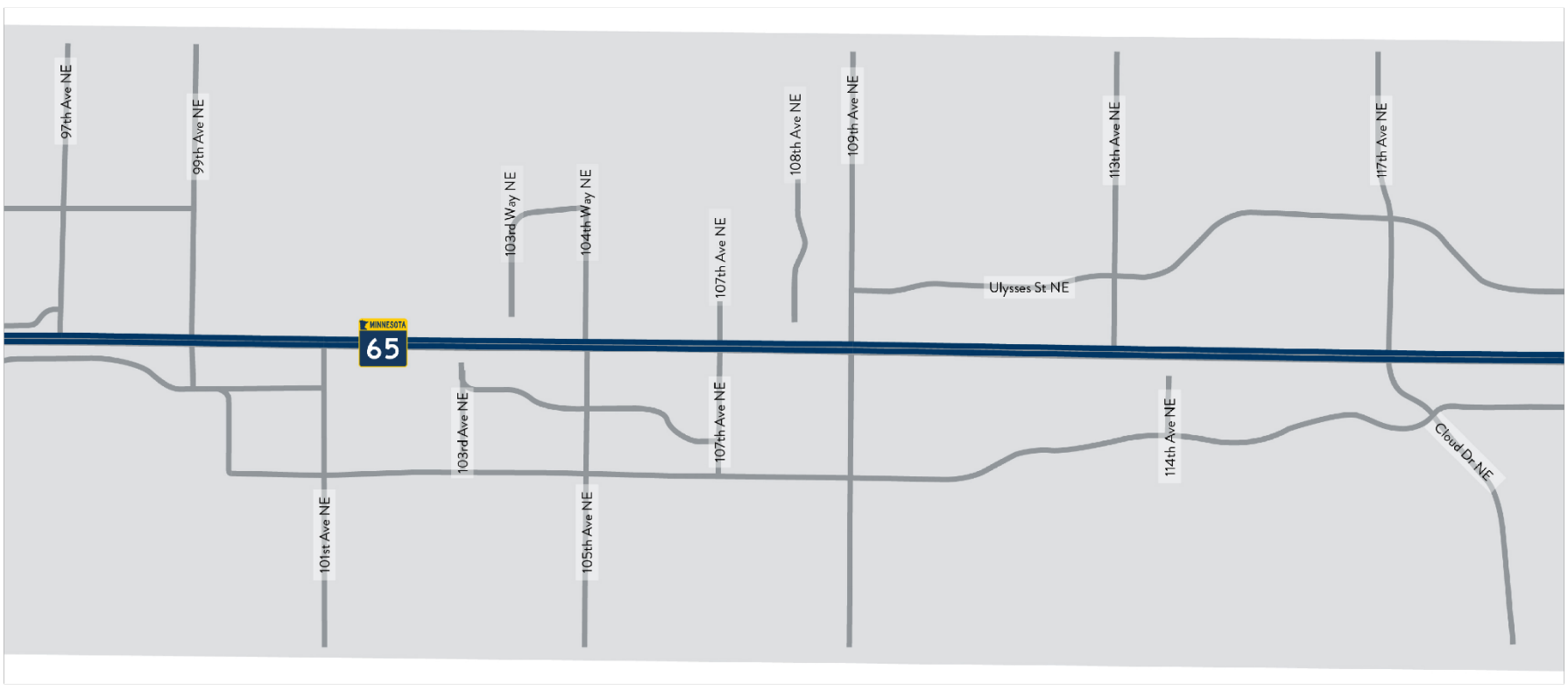
The study area was divided into three sections for purposes of the analysis. The alternatives can be interchanged between sections to assemble the corridor vision, leaving flexibility for the future NEPA process. Below are the following section designations:

- Section 1: 81st Ave to North of 93rd Ln
- Section 2: North of 93rd Ln to 117th Ave
- Section 3: North of 117th Ave to Bunker Lake Blvd

Figure 3-2 – TH 65 Study Area

Section 1

Section 2



Section 3

3.1.2 Alternatives Evaluated

The following figures below (Figures 3-3 through Figure 3-6)summarize the alternatives considered during the process, the evaluation result, and how alternatives were combined or "re-packaged" between evaluation levels. Alternatives that were combined were limited to Section 1, between Levels 2 and 3, and were the result of the development of spot location alternatives only addressing a specific part of the section.

3.1.3 Level 1 Screening Criteria

The purpose of the Level 1 screening was to eliminate alternatives that clearly did not meet the project's Purpose and Need. Alternatives were evaluated in Level 1 by three geographic sections. The following "yes" or "no" questions were included as a part of the Level 1 screening:

Safety

Does the alternative have the potential to reduce the number and severity of crashes along the corridor?

Congestion

Does the alternative have the potential to improve travel time along the corridor?

Does the alternative have the potential to improve travel time crossing the corridor?

Pedestrian/Bicycle

Does the alternative have the potential to improve comfort and safety for pedestrians and bicyclists?

Implementable

Is the alternative practical?

Figure 3-3 – Section 1, Alternatives Analysis Evaluation Process and Results

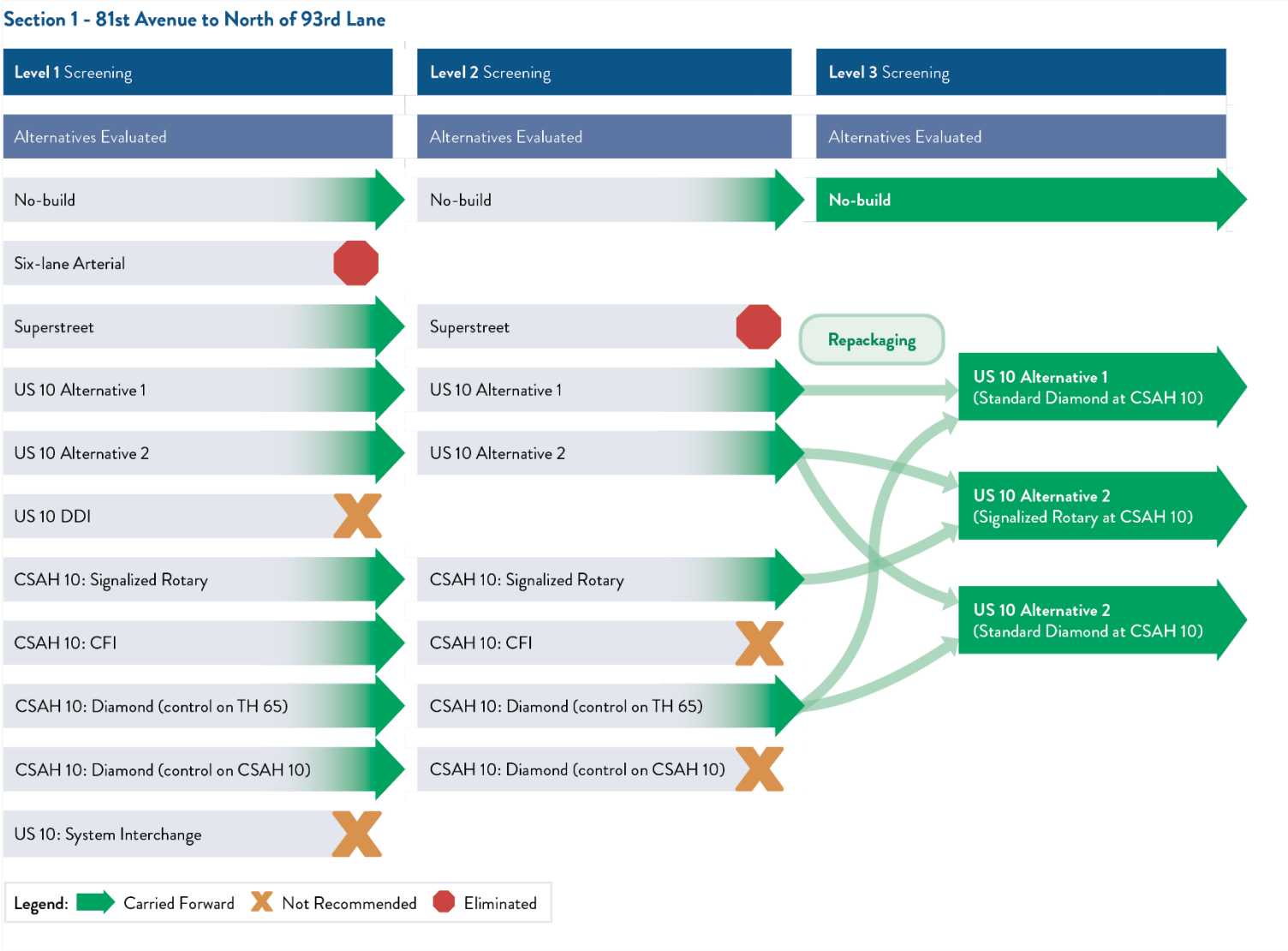
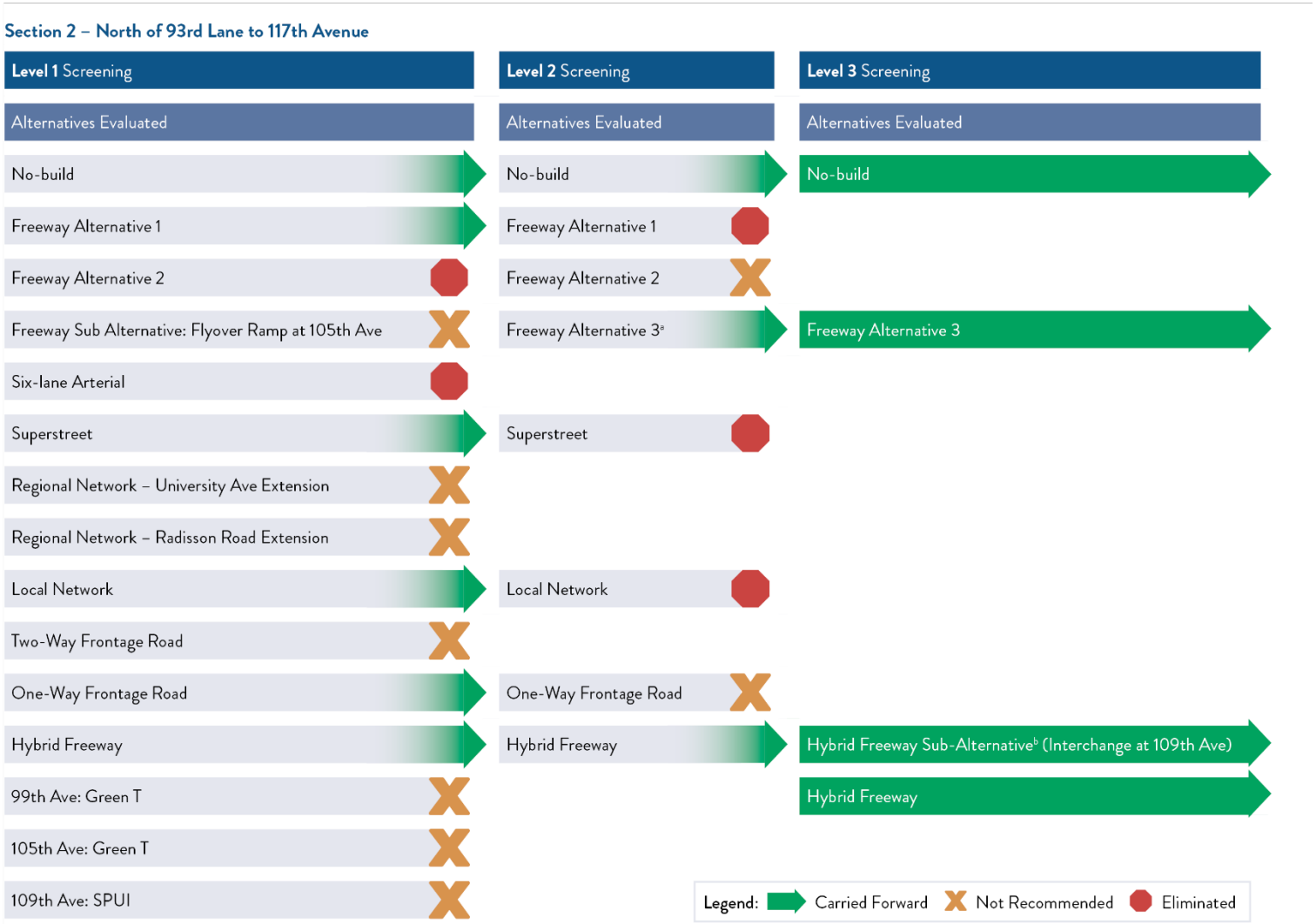


Figure 3-4 – Section 2, Alternatives Analysis Evaluation Process and Results



a. Freeway Alternative 3 was added during the Level 2 screening as another freeway alternative that could better connect the west side of the corridor with the frontage road system.
b. The Hybrid Freeway (Interchange at 109th Ave) was added between Levels 2 and 3 as a variation on the Hybrid Freeway Alternative, but including an interchange at 109th Ave.

Figure 3-5 – Section 3, Alternatives Analysis Evaluation Process and Results

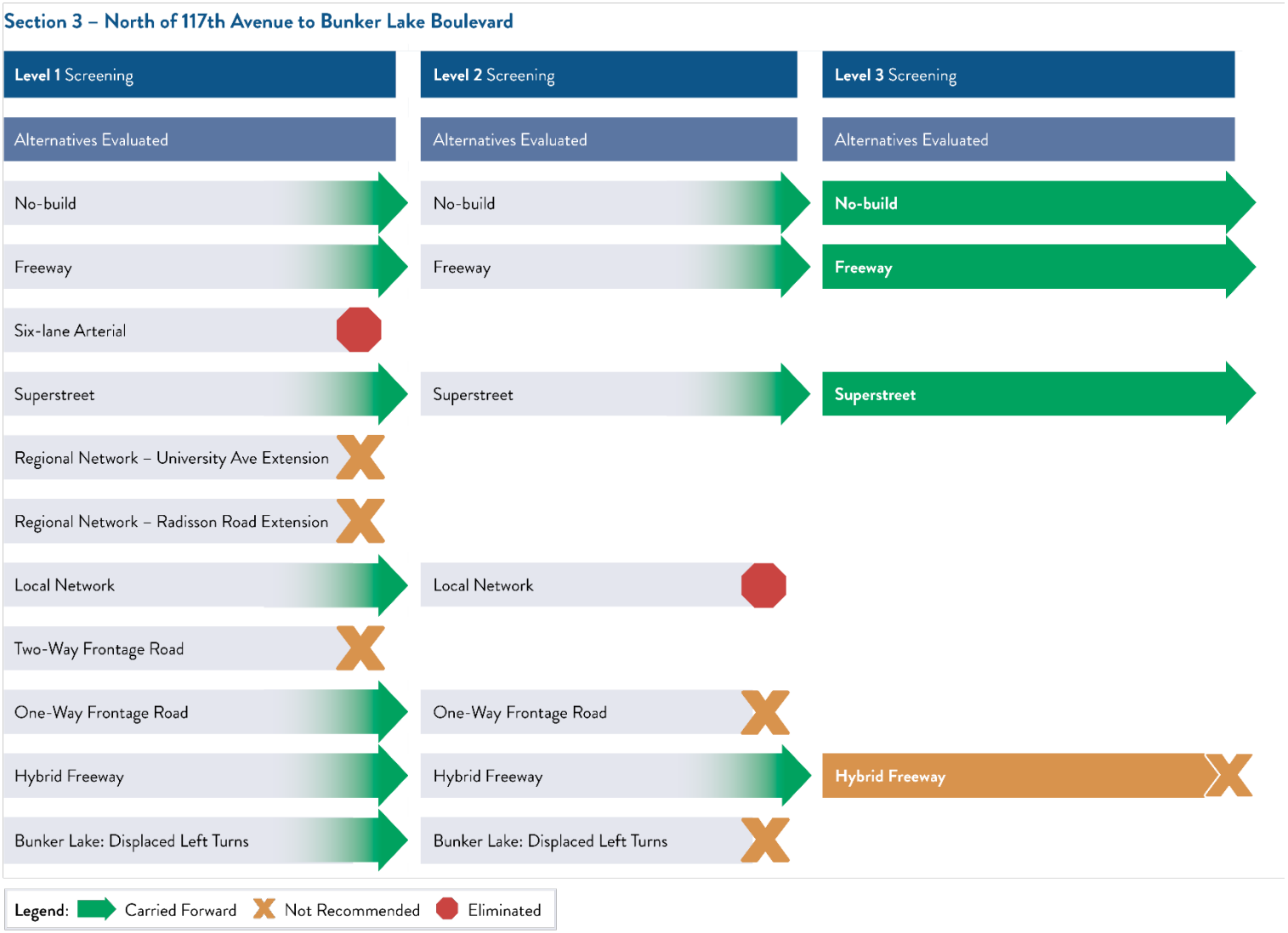
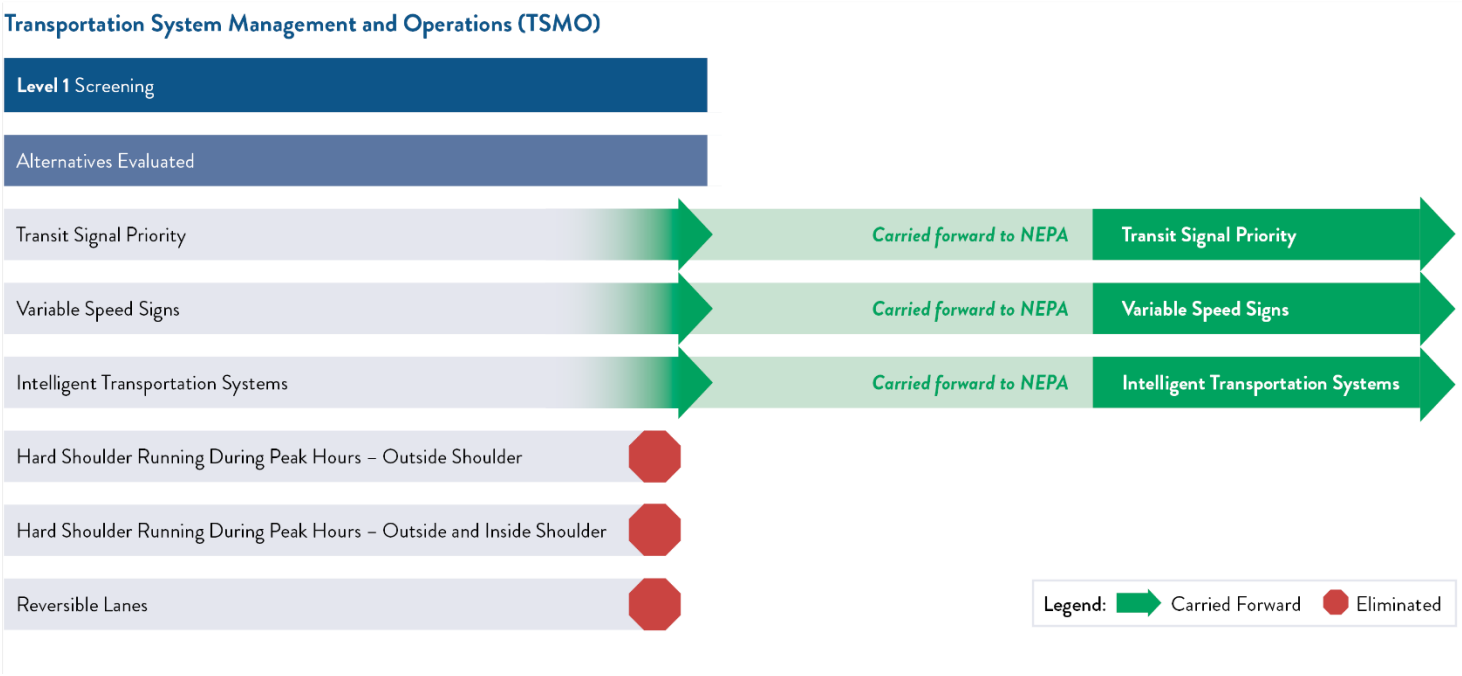


Figure 3-6 – TSMO, Alternatives Analysis Evaluation Process and Results



Level 1 Summary Categories

An alternative that had a "no" response to any of the questions was either eliminated from consideration or not recommended to move forward to Level 2. The screening matrix summarized each alternative into the following categories:

- Carried Forward: The alternative will be evaluated further in Level 2 as a stand-alone alternative.
- Elements Carried Forward: This alternative is removed from consideration, but specifically identified elements are carried forward into Level 2 for incorporation into other alternatives.
- Not Recommended: This alternative is removed from consideration. No elements unique to the alternative are carried forward because similar improvements in other alternatives have demonstrated superior performance. It can be reconsidered in future studies if new information or analysis indicates it would better meet the Purpose and Need.
- Eliminated: The alternative does not help address the Purpose and Need and should not be reconsidered in any future analysis (including Level 2) or in NEPA.

3.1.4 Level 1 Screening Results

The Level 1 screening evaluation resulted in the elimination of 7 alternatives, and not recommending 12 alternatives (see Table 3-1). The project team in coordination with the Technical Advisory Committee (TAC) completed the Level 1 evaluation.

Table 3-1 – Level 1 Screening Results (Totals)

Section or TSMO	Alternatives / Elements Carried Forward	Alternatives Not Recommended	Alternatives Eliminated	Total Alternatives Evaluated
Section 1	8	2	1	11
Section 2	7	7	1	15
Section 3	7	3	1	11
TSMO	3	0	3	6
Total	24	12	6	42

Note: Each section total includes the no-build alternative carried forward

The TAC met on August 7, 2019 and agreed that the following alternatives be eliminated or not recommended. These alternatives were eliminated or not recommended for various reasons related to not meeting the Purpose and Need (See Table 3-2 for the list of alternatives evaluated in Level 1). The categories where the alternatives did not meet the

Purpose and Need include the following: safety, implementable, bikeability/walkability, and congestion. For a more detailed discussion about alternatives considered and rationale for the Level 1 results, reference Appendix G: Alternatives Analysis Memo.

Table 3-2 – Level 1 Alternatives Considered and Screening Results

Section or TSMO	Alternatives Carried Forward	Alternatives Not Recommended	Alternatives Eliminated
Section 1	No-build, Superstreet, US 10 Alternative 1, US 10 Alternative 2, CSAH 10: Signalized Rotary, CSAH 10: CFI, CSAH 10: Diamond (Control on TH 65), CSAH 10: Diamond (Control on CSAH 10)	US 10 DDI, US 10: System Interchange	Six-lane Arterial
Section 2	No-build, Freeway Alternative 1, Freeway Alternative 2, Superstreet, Local Network, One-Way Frontage Road, Hybrid Freeway,	Freeway Sub Alt: Flyover at 105th Ave, Regional Network: University Ave Extension, Regional Network: Radisson Rd Extension, Two-way Frontage Rd, 99th Ave: Green T, 105th Ave: Green T, 109th Ave: SPUI	Six-lane Arterial
Section 3	No-build, Freeway, Superstreet, Local Network, One-way Frontage Road, Hybrid Freeway,	Regional Network: University Ave Extension, Regional Network: Radisson Rd Extension, Two-way Frontage Rd	Six-lane Arterial

Section or TSMO	Alternatives Carried Forward	Alternatives Not Recommended	Alternatives Eliminated
	Bunker Lake: Displaced Left Turns		
TSMO	Transit Signal Priority, Variable Speed Signs, Intelligent Transportation Systems	None	Hard Shoulder (outside, during peak hours), Hard Shoulder (outside and inside, during peak hours), Reversible Lanes

3.1.5 Level 2 Screening

Criteria in Level 2 screening compared how well each option met the Purpose and Need, additional considerations and goals of the project. The alternatives were compared against the no-build alternative and each other, by section. The performance measures were a mix of qualitative and quantitative assessments, based on the criteria and the data available at this stage of development. All alternatives were considered interchangeable by section (except for no-build). Table 3-3 summarizes evaluation criteria used for Level 2 Screening. TSMO alternatives were not evaluated and carried forward. Reference Figure 3-3 for alternatives considered in Level 2.

Table 3-3 – Level 2 Screening Criteria

Category and Criteria	Performance Measure
Category: Vehicle Safety	Vehicle Safety Performance Measure
Ability to address identified unsafe physical or operational conditions	Crash modification factors (CMF) and Highway Safety Manual (HSM)

Category: Traffic Operations	Traffic Operations Performance Measure
Intersection capacity	Overall intersection v/c (Volume to Capacity Ratio)
Quality of the driver experience	Corridor travel speeds resulting in LOS D or better based on Highway Capacity Manual (HCM) methodology (HCM Exhibit 18-1, arterial alternatives only). Use a base free flow speed (BFFS) of 55 mph north of 93rd Lane NE, and 50 mph south of 93rd Lane NE.
Quality of traffic operations	Overall intersection LOS

Category: Bikeability/Walkability	Bikeability/Walkability Performance Measure
Ability to move safely east-west across the corridor	Crossing Level of Service (Oregon Multi-modal Level of Service - MMLOS)
Ability to move safely north-south along corridor	Distance to next crossing and Section Level of Service (Oregon Multi-modal Level of Service - MMLOS).

Category: Community	Community Performance Measure
Minimize impacts to existing landowners and businesses	Number of properties and acres of properties that may be impacted based on alternative footprint.
Support of local and regional planning efforts	Visibility and accessibility of existing and planned retail/commercial property consistent with City Land Use Plans.
Minimize impacts on Environmental Justice (EJ) communities	Number of properties and acres of potential impacts on identified EJ properties based on alternative footprint.

Category: Environmental Resources	Environmental Resources Performance Measure
Minimize wetland impacts	Number of wetlands and acres of wetlands that may be impacted based on alternative footprint.
Minimize floodplain impacts	Number of floodplains and acres of floodplains that may be impacted based on alternative footprint.
Minimize 4(f) impacts	Number of parks and acres of parks that may be impacted based on alternative footprint.
Avoid disturbing or acquiring hazardous material sites.	Number of known sites within 100 feet of alternative footprint.

Category: Implementable	Implementable Performance Measure
Construction costs	Assessment of probable construction and right-of-way costs (low, moderate, high, very high). This will be based on the number of high cost elements like total right of way impacted, number of bridges, major grading changes, etc.
Constructability	Assessment of construction impacts on traveling public (low, moderate, high, very high).
Transit	Assessment of adverse impacts to existing or proposed transit routes or facilities.

Level 2 Summary Categories

An alternative that did not best meet the Purpose and Need while also considering the "Additional Considerations" and "Goals" of environmental, fiscal, and implementable evaluation criteria was either eliminated from consideration or not recommended to move forward to Level 3. Alternatives were evaluated by section.

- Carried Forward: The alternative will be evaluated further in Level 3 as a stand-alone alternative.
- Elements Carried Forward: This alternative is removed from consideration, but specifically identified elements are carried forward into Level 3 for incorporation into other alternatives.

- Not Recommended: This alternative is removed from consideration. No elements unique to the alternative are carried forward because similar improvements in other alternatives have demonstrated superior performance. It can be reconsidered in future studies if new information or analysis indicates it would better meet the Purpose and Need.
- Eliminated: The alternative does not help address the Purpose and Need and should not be reconsidered in any future analysis (including Level 3) or in NEPA.

3.1.6 Level 2 Screening Results

The TAC met multiple times to deliberate over the Level 2 Alternatives, additional analysis needed, and which alternatives should move forward into Level 3 screening. The TAC met on September 17, 2019, October 2, 2019, and November 6, 2019. During the meeting on November 6, 2019, the TAC held a workshop where the attendees assembled two to three corridor-wide alternatives for consideration in small groups by using the Level 2 evaluation matrix and graphics, and then reported out to the rest of the TAC. The exercise of assembling a corridor-wide alternative helped the group determine which Level 2 section-wide alternatives best met the project's Purpose and Need and therefore which alternatives should be carried forward to Level 3. The TAC supported the three corridor-wide alternatives recommended for the Level 3 screening. The recommendations by the TAC were presented to the Public Advisory Committee (PAC) on December 19, 2019 for consideration and the PAC supported the recommendations. Additionally, design concepts were presented to the public through online engagement content and pop-up meetings during Fall 2019, which supported grade separated median U-turns, but negatively perceived displaced left turns and at-grade median U-turns. See Section 4.3.3 for more of the engagement themes from this phase.

Table 3-4 – Level 2 Screening Results (Totals)

Section or TSMO	Alternatives / Elements Carried Forward	Alternatives Not Recommended	Alternatives Eliminated	Total Alternatives Evaluated
Section 1	5	2	1	8
Section 2	3	2	3	8
Section 3	4	2	1	7
TSMO	3	0	0	Not evaluated
Total	15	6	5	23

Note: Each section total includes the no-build alternative carried forward

The following alternatives were eliminated or not recommended for various reasons related to not best meeting the Purpose and Need (see Table 3-5). The categories where the alternatives *did not best meet* the Purpose and Need include the following: traffic, bikeability/walkability, and community. For a more detailed discussion about alternatives considered and rationale for the Level 2 results, referenceAppendix G: Alternatives Analysis Memo.

Table 3-5 – Level 2 Alternatives Considered and Screening Results

Section or TSMO	Alternatives Carried Forward	Alternatives Not Recommended	Alternatives Eliminated
Section 1	No-build, US 10 Alt 1, US 10 Alt 2, CSAH 10: Signalized Rotary, CSAH 10: Diamond (Control on TH 65)	CSAH 10: CFI, CSAH 10: Standard Diamond (Control on CSAH 10)	Superstreet
Section 2	No-build, Freeway Alt 3,10 Hybrid Freeway	Freeway Alt 2, One-Way Frontage Rd	Freeway Alt 1, Superstreet, Local Network
Section 3	No-build, Freeway, Superstreet Hybrid Freeway	One-Way Frontage Rd, Bunker Lake: Displaced Left Turns	Local Network
TSMO	Transit Signal Priority, Variable Speed Signs, Intelligent Transportation Systems	None	None

3.1.7 Level 3 Screening

Three corridor-wide alternatives were measured against criteria to illustrate how well each corridor-wide alternative met the Purpose and Need and goals of the project. The performance measures are a mix of qualitative and quantitative assessments, based on the criteria and the data available at this stage of the development. Alternatives in Level 3 were screened with refined evaluation criteria as well as updated Level 2 screening results based on design refinements. A total of three corridor-wide alternatives were evaluated, assembled with a total of 9 section alternatives. In Section 1, spot location alternatives and section alternatives were combined to evaluate three Section 1 alternatives. Input on the Level 3 evaluation criteria was provided by MnDOT technical staff, local and federal agencies and the TAC. For example,

10 Freeway Alternative 3 was added during the Level 2 screening as another freeway alternative that could better connect the west side of the corridor with the frontage road system.

measuring impervious surfaces was added as a part of the Level 3 evaluation criteria as well as more detailed cost estimate comparing corridor performance against value.

In Level 3, the alternatives developed were corridor-wide, however, there remains flexibility to implement different alternatives by section. Transportation System Management & Operations (TSMO)/Corridor Management alternatives were not evaluated in Level 3 and are to be considered during the NEPA process. Categories evaluated included: vehicle safety, traffic operations, bikeability/walkability, community, environmental, and additional considerations. Table 3-6 summarizes evaluation criteria used for Level 3 Screening.

Level 3 Summary Categories

An alternative that did not best meet the Purpose and Need was either eliminated from consideration or not recommended to move into the NEPA process. Alternatives were evaluated by section.

- Carried Forward: The alternative will be considered in future NEPA process.
- Elements Carried Forward: This alternative is removed from consideration, but specifically identified elements are carried forward into future NEPA process for incorporation into other alternatives.
- Not Recommended: This alternative is removed from consideration. No elements unique to the alternative are carried forward because similar improvements in other alternatives have demonstrated superior performance. It can be reconsidered in future studies if new information or analysis indicates it would better meet the Purpose and Need.

3.1.8 Level 3 Screening Results

The following evaluation charts reflect how each alternative performed against the evaluation criteria during Level 3 (see Figures 3-7 through Figure 3-9).

Table 3-6 – Level 3 Screening Criteria

Category and Criteria	Performance Measure
Category: Vehicle Safety	Vehicle Safety Performance Measure
Ability to address identified unsafe physical or operational conditions	Corridor wide safety performance using SSAM3: Conflict points (% change from No-Build).

Category: Vehicle Safety	Vehicle Safety Performance Measure
Ability to address identified unsafe physical or operational conditions	Corridor wide safety performance using SSAM3: Conflict points (% change from No-Build).

Category: Traffic Operations	Traffic Operations Performance Measure
Ability to improve vehicle travel time along the corridor	Corridor travel time in mins.
Improve travel time crossing the corridor	East-west travel time across TH 65 at representative origins and destinations.
Does the improvement maintain current transit service?	Travel time in mins.
How does the improvement impact freight movements?[11]	Travel time in mins at representative origins and destinations.
Ability to improve throughput along the corridor.	Throughput in vehicles per hour.

Category: Bikeability/Walkability	Bikeability/Walkability Performance Measure
Ability to move safely east-west across the corridor[11]	East-west travel time (mins) and distance at representative origins and destinations.
Ability to move safely north-south along corridor	Distance to next crossing and Section Level of Service (Oregon Multi-modal Level of Service - MMLOS)

Category: Community	Community Performance Measure
Minimize impacts to existing landowners and businesses	Number of properties and acres of properties that may be impacted based on alternative footprint.
Support of local and regional planning efforts	Visibility and accessibility of existing and planned retail/commercial property consistent with City Land Use Plans.
Minimize impacts on Environmental Justice (EJ) communities	Number and acres of potential impact on identified EJ properties based on alternative footprint, and qualitative EJ concerns.

Category: Environmental Resources	Environmental Resources Performance Measure
Minimize wetland impacts	Number of wetlands and acres of wetlands that may be impacted based on alternative footprint.
Minimize floodplain impacts	Number of floodplains and acres of floodplains that may be impacted based on alternative footprint.

11 Criteria performance measure revised from original Purpose and Need Memo in response to input from TAC.

Category: Environmental Resources	Environmental Resources Performance Measure
Minimize 4(f) impacts	Number of parks and acres of parks that may be impacted based on alternative footprint.
Avoid disturbing or acquiring hazardous material sites[12]	Risk related to release sites of elevated concern, as identified by MnDOT in Environmental Notification Memo.
Impervious surface[11]	Increase in impervious surfaces in acres and % over No-Build.

Category: Implementable	Implementable Performance Measure
Costs	Opinion of probable construction and right-of-way cost range.
Performance vs. Value[13]	Performance vs. Value. Alternatives were scored quantitatively on the evaluation criteria for performance and divided by total project cost.[14]
Constructability	Assessment of construction impacts on traveling public (low, moderate, high, very high).

Figure 3-7 – Section 1 Detailed Evaluation

Evaluation summary

✓ Addresses the question well ● Addresses the question okay – Addresses the question poorly

Criteria	US 10 Alternative 1 (Standard Diamond at CSAH 10)	US 10 Alternative 2 (Signalized Rotary at CSAH 10)	US 10 Alternative 2 (Standard Diamond at CSAH 10)
Is vehicle safety improved?	✓	✓	✓
Are vehicles able travel along and across Highway 65 in less time?	✓	✓	✓
Is safety and comfort for people walking and bicycling improved?	✓	✓	✓
Level of impacts to existing landowners and businesses	●	●	●
Cost to build	✓	✓	✓
Do the benefits outweigh the costs?	✓	✓	✓
Level of travel impacts during construction	–	–	–

12 Criteria added in response to EPA comments received.

13 Criteria performance measure revised from original Purpose and Need Memo in response to input from TAC.

14 See Appendix G: Alternatives Analysis Memo (Appendix E of memo) for detailed methodology and results.

Source: Adapted from the Level 3 Evaluation Matrix from the Alternatives Analysis Memo

Figure 3-8 – Section 2 Detailed Evaluation

Evaluation Summary

✓ Addresses the question well ● Addresses the question okay – Addresses the question poorly

Criteria	Freeway Alternative 3	Hybrid Freeway	Hybrid Freeway Sub-Alternative (Interchange at 109th Ave)
Is vehicle safety improved?	✓	✓	✓
Are vehicles able travel along and across Highway 65 in less time?	✓	✓	✓
Is safety and comfort for people walking and bicycling improved?	✓	✓	✓
Level of impacts to existing landowners and businesses	–	✓	●
Level of impact to wetlands	●	✓	✓
Cost to build	●	●	–
Do the benefits outweigh the costs?	●	●	–
Level of travel impacts during construction	–	●	●

Source: Adapted from the Level 3 Evaluation Matrix from the Alternatives Analysis Memo

Figure 3-9 – Section 3 Detailed Evaluation

Evaluation Summary

✓ Addresses the question well ● Addresses the question okay – Addresses the question poorly

Criteria	Freeway Alternative	Superstreet (RCUT at Bunker Lake Blvd)	Hybrid Freeway
Is vehicle safety improved?	✓	✓	✓
Are vehicles able travel along and across Highway 65 in less time?	✓	●	✓
Is safety and comfort for people walking and bicycling improved?	✓	✓	✓
Level of impacts to existing landowners and businesses	✓	✓	✓
Cost to build	●	✓	–
Do the benefits outweigh the costs?	●	✓	–
Level of travel impacts during construction	–	✓	●

Source: Adapted from the Level 3 Evaluation Matrix from the Alternatives Analysis Memo

The table below includes the screening results from Level 3 (Figure 3-7). The hybrid freeway alternative in Section 3 was not recommended in Level 3 due to the additional considerations of relatively higher opinion of construction costs and low cost versus performance result. All other alternatives from Level 3 and the TSMO alternatives will be carried forward into the NEPA process. The Technical Advisory Committee (TAC) met multiple times to discuss the Level 3 evaluation criteria and alternatives. The TAC met to discuss the Level 3 screening on January 8, 2020, February 5, 2020, April 1, 2020, and May 20, 2020. At the meeting on June 3, 2020, the group supported the recommendation to "not recommend" the hybrid freeway alternative in Section 3 (part of Corridor-wide Alternative 3). The Public Advisory Committee met on August 5, 2020 to review the Level 3 Alternatives. The group supported the alternatives and provided feedback on how to present the alternatives to the public.

The results of the Level 3 analysis indicated that while section-wide and spot location alternatives were assembled into corridor-wide alternatives, a specific combination did not greatly improve the results of one over another. Instead, a section of the corridor could be interchanged with any combination of alternatives to achieve the corridor-wide vision, with different trade-offs. Therefore, removal of the hybrid freeway alternative from consideration will not ultimately affect future NEPA review because they can be considered at a section-wide level.

The project team implemented multiple engagement and communications methods to engage the public on the alternatives analysis results, including online engagement content and virtual meeting. A majority of the comments from the community expressed positive opinions about the alternatives, most noting their preference for one over another, or offering suggestions on design refinements. Only a handful of comments expressed negative views towards all of the alternatives. See Section 4.3.4 for additional information on engagement during this phase.

Table 3-7 – Level 3 Screening Results

Section or TSMO	No-build Alternative	Corridor-wide Alternative 1	Corridor-wide Alternative 2	Corridor-wide Alternative 3
Section 1	Carried Forward	US 10 Alt 1 (Diamond at CSAH 10): Carried Forward	US 10 Alt 2 (Signalized Rotary at CSAH 10): Carried Forward	US 10 Alt 2 (Diamond at CSAH 10): Carried Forward
Section 2	Carried Forward	Freeway Alt 3: Carried Forward	Hybrid Freeway: Carried Forward	Hybrid Freeway (Interchange at 109th)[15]: Carried Forward
Section 3	Carried Forward	Freeway Alt: Carried Forward	Superstreet: Carried Forward	Hybrid Freeway: Not Recommended
TSMO	N/A	Carried Forward	Carried Forward	Carried Forward

15 The Hybrid Freeway (Interchange at 109th Ave) was added between Levels 2 and 3 as a variation on the Hybrid Freeway Alternative, but including an interchange at 109th Ave.

4. Agency and Public Involvement

The TH 65 PEL Study included public involvement throughout the process as well as regular agency coordination. A mix of standing committees and coordination at key project milestones kept stakeholders and the public informed of the process and provided opportunities to weigh in and shape the study. The following paragraphs describe the stakeholders engaged, process, and major themes from each phase of engagement.

4.1 Local Agency Coordination

A Technical Advisory Committee provided direct coordination on the project at the staff level.

4.1.1 Technical Advisory Committee

The Technical Advisory Committee (TAC) included a core group of MnDOT staff representing functional expertise areas, local and state agency representatives. The project team relied on the TAC throughout the process to provide input on the technical analysis, findings, design alternatives, and deliverables. The TAC helped shape the purpose and need, evaluation criteria, alternatives, and alternatives screening. They also provided feedback on engagement strategies and content for the public and elected officials, in addition to supporting public facing meetings. The following agencies were invited to participate on the TAC:

- MnDOT
- FHWA
- Metropolitan Council
- Anoka County
- City of Blaine
- City of Ham Lake
- City of Spring Lake Park

The TAC met regularly throughout the study process for a total of 17 meetings (Table 4-1).

Table 4-1 – TAC Meetings

Meetings	2018	2019	2020
Meeting Date	September 28 November 7	January 2 February 14 April 3 June 5 July 17 August 7 September 17 October 2 November 6 December 4	January 8 February 5 April 1 May 20 June 3 July 8 October 19

4.1.1.1 *Local Agency Support*

The following local agencies have been involved throughout the study process and have long supported improvements in the area. After participating in the three levels of screening evaluation through TAC meetings, and providing a robust public information and community comment period, these agencies found the PEL process to be a valuable tool in the alternatives decision-making process resulting in a flexible corridor vision. They support the recommendation of the eight section-wide alternatives that were determined to move forward to NEPA.

When individual projects move into future environmental review processes, they are committed to providing continued support and participation. See Appendix C: Letters of Support for letters.

- Anoka County
- City of Blaine
- City of Ham Lake
- City of Spring Lake Park
- Metropolitan Council

4.1.2 Resource Agency Coordination

Federal, state, and local resource agencies were engaged during the study process. MnDOT requested agency comment on the purpose and need and introduced the project through notification letters that were sent between December 2019 and January 2020. Comments from resource agencies were addressed and shaped the development of the Alternatives Analysis memo. Comments were received from the Federal Aviation Administration (FAA) and the Environmental Protection Agency (EPA). Comments from the FAA provided details on the Runway Protection Zone at the Blaine-Anoka County Airport near the project area. Comments from the EPA led to changes in the Level 3 evaluation criteria (adding in impervious surface as a criteria) as noted in the previous chapter.

MnDOT requested resource agency comment on the Alternative Analysis memo in September 2020. From the comments received on the Alternatives Analysis, the EPA acknowledged that their previous comments had been addressed and also noted their role in independent review and comment on future NEPA documents developed for the corridor based on the results of this PEL study. The Office of the State Archaeologist recommended a literature review and archaeological assessment. A summary of resource agency coordination is included in Appendix A: Public Engagement and Agency Coordination. The following resource agencies were engaged as a part of the study (Table 4-2).

Table 4-2 – Resource Agency Coordination

Agency Type	Federal	Tribes	State	Local
Agency	Environmental Protection Agency United States Army Corps of Engineers United States Fish and Wildlife Service Federal Aviation Administration Federal Railroad Administration Federal Transit Administration United States Department of Agriculture National Park Service	Fort Peck and Assiniboine and Sioux Tribes Leech Lake Band of Ojibwe Mille Lacs Band of Ojibwe Santee Sioux Nation Shakopee Mdewakanton Sioux Community Turtle Mountain Band of Chippewa Upper Sioux Community	MN State Historic Preservation Office MN Office of the State Archaeologist MN Pollution Control Agency MN Department of Natural Resources MN Department of Health MN Department of Agriculture MN Department of Commerce MN Board of Water and Soil Resources	Metropolitan Council Anoka County City of Blaine City of Ham Lake City of Spring Lake Park Coon Creek Watershed District Rice Creek Watershed District

4.2 Public Involvement

4.2.1 Goals

Public and stakeholder engagement was a critical component to the study and focused on the following goals:

- Provide engagement opportunities for stakeholders and the public that will allow the project team to determine the purpose and need for the project
- Develop of objective evaluation criteria
- Broadly define and vet alternatives

4.2.2 Stakeholder Identification

The following stakeholders were identified at the outset of the project and the project team shaped specific engagement methods to reach these groups (Table 4-3).

Table 4-3 – Stakeholder Identification

Stakeholder Groups	Individuals, Agencies & Organizations
Partner agencies	Spring Lake Park, Blaine, Ham Lake Anoka County Metropolitan Council Metro Transit Federal Highway Administration
Elected officials	City councilmembers County commissioners State legislators
Business community	In-depth interviews: Walmart, QC Dance National Sport Center Metro North Chamber of Commerce Twin Cities North Chamber of Commerce
Advocates	TH 65 North Corridor Coalition
General public	Underserved communities Residents/neighborhood groups Commuters Visitors to the area
Other stakeholder groups	Schools Public and private utilities Metropolitan Airports Commission Seniors Mobile home park

4.2.3 Local Officials Briefings

During key decision points throughout the project, the project team met with local agency officials prior to sharing information with the public. Input from the group was discussed at TAC meetings and used by the project team. The local officials briefings occurred on:

- March 12, 2019
- July 31, 2019
- December 19, 2019
- August 5, 2020

4.2.4 Public Advisory Committee

The Public Advisory Committee (PAC) included a group of 23 residents, business owners, and elected officials within the study area, representative of the cross section of stakeholders identified. Meetings were scheduled in tandem with key decision points in the project such as developing the Purpose and Need, developing alternatives, and evaluation of alternatives. Input from the group was discussed at TAC meetings and used by the project team. The PAC met five times on the following dates:

- March 12, 2019
- April 30, 2019
- July 31, 2019
- December 19, 2019
- August 5, 2020

4.3 Engagement Activities and Themes Summary

The following section describes the major engagement activities throughout the project and themes documented from public engagement.

4.3.1 Existing Conditions Engagement

At the beginning of the study, the project team was focused on identifying and connecting with stakeholders, understanding corridor problems and learning how people wanted to move around in their community. In fall 2018, the project team conducted an ethnographic analysis of the community by engaging 23 people with an open-ended online survey and conducting in-depth one-on-one interviews with seven people. The respondents represented broad range of

ages, occupations, income brackets and neighborhoods including: Blaine, St. Paul, East Bethel, Ham Lake, Coon Rapids, Lino Lakes and Cambridge.

Short-term issues identified

- The infrastructure along TH 65 in Blaine, as configured today, is ill equipped to handle the clash of commuters and residents (e.g. regional trips vs. local trips).
- The most problematic pocket is between 105th and 109th, in those points where commuter traffic moving N/S is forced to intersect with local traffic headed E/W, causing sizeable delays.
- The situation is further exacerbated by traffic lights that fail to adapt to the volumes of traffic and redundant feeder routes along the intersections.
- Nearly every respondent highlighted the desire to reconfigure TH 65 as a freeway through a series of bridges and thoughtfully placed exits.

Big picture issues identified

- Residents welcome economic expansion in and around Blaine, but are uneasy about their future quality of life.
- The city's initiatives to embrace commercial and residential developers without undertaking simultaneous efforts to address infrastructure, connectivity, and place-making, threatens to turn Blaine into another generic urban outskirt.
- The situation calls for a comprehensive master plan that will ensure sustainable growth over the next 2-3 decades.

The initial input from the in-depth interviews and surveys helped with the development of a community profile and identification of engagement methods for reaching key stakeholder groups.

4.3.2 Purpose and Need and Evaluation Criteria Engagement

The project team held an open house on March 18, 2019 at the National Sports Center seeking input from the public on the identified project needs, evaluation criteria, and existing conditions findings. A total of 98 people attended the meeting and provided input to project staff verbally and through comment forms. A workshop inviting the business community was held on the same day in the morning with 12 attendees. A companion online open house was launched on the project website throughout March 2019, which included the same information as the in-person event. A total of 664 users visited the site and spent an average of four minutes on the site. Input was provided through an online comment form and online survey (200 respondents). The following themes synthesized feedback during this phase of engagement:

- The majority of respondents want alternatives to address all problem areas

- Vehicle congestion and vehicle safety are the problem areas with the most support
- Least support that walking/biking is a problem
- Nearly 50% of the additional comments (in the survey) were about the need to turn Hwy 65 into a freeway (i.e. we need bridges, exit ramps, frontage roads)
- Several respondents commented that MnDOT should act now to fix the problems
- For evaluation criteria, most support for vehicle safety and vehicle congestion criteria

The input received from this phase of engagement helped the project team confirm that they had identified the appropriate project needs and evaluation criteria to analyze design alternatives. The input also helped shape the next phase of the project in developing alternatives that would best meet the project purpose and need.

Mobile Home Park Engagement

After completing an analysis to identify Environmental Justice communities along the corridor, the Mobile Home park at 103rd Way was a top priority for follow up engagement. The project team reached out to the Blaine International Village near 103rd Way at least six times and left flyers to hand out to residents, letting them know about the study. Efforts to schedule a small group focus discussion or a one-on-one discussion with residents was unsuccessful. See Section 6.3 for a more robust discussion on the Environmental Justice analysis completed for the study.

4.3.3 Alternatives Development Engagement

While the project team was developing design alternatives, they hosted a series of pop-up events and online engagement in September and October 2019. The focus was to introduce some of the newer intersection concepts being explored for the TH 65 corridor to the community and inform them about the potential benefits. The project team discussed the alternatives with participants and collected verbal and written comments. The four pop-up events were hosted at the following venues:

- Caribou Coffee, 10400 Baltimore St, Blaine, MN
- Mary Ann Young Senior Center, 9150 Central Ave NE, Blaine, MN
- Blaine World Fest, Blaine City Hall, 10801 Town Square Dr, Blaine, MN
- Centerview Elementary, 10365 Davenport St NE, Blaine, MN

The project team received feedback through conversations and from comment cards, reaching approximately 100 people. A companion online survey was also sent out to the public looking for similar feedback on intersection designs. A total of approximately 275 people responded to the survey. The major takeaways from this engagement phase were:

- Most preferred the Median U-Turns (Grade Separated) option

- Many had a negative perception of displaced left turns
- The at-grade Median U-Turns had negative feedback based on how the ones north of the project area operate
- General negative perception of a bowtie concept. It would only work in certain intersections within the project area

The input from the public at this stage helped the project team with the screening of alternatives and refinement of intersection designs.

4.3.4 Alternatives Analysis Results Engagement

The project team implemented multiple engagement and communications methods to engage the public on the alternatives analysis results; all these engagement events occurred after March 2020. Due to MnDOT policies related to COVID-19, no in-person events were planned and instead the project team used virtual engagement methods to reach the community. A live virtual meeting was held for the public on September 29, 2020, which focused on walking attendees through the interactive website content. Approximately 119 people attended the meeting. Self-directed virtual engagement content on the Alternatives Analysis was posted from August 27, 2020 through October 9, 2020. The web content included interactive maps and videos showing the alternatives, highlighting differences in benefits and impacts and soliciting feedback on designs. The content also included plain language contextual information about the history of the project, description of a Planning and Environmental Linkages Study, and what to expect after the study is complete. The Alternatives Analysis memo was also posted to the project website from August 27, 2020 through October 9, 2020.

A total of 1,902 people visited the website and stayed on the site for an average of 13 minutes and 21 seconds. There were a total of 2,319 sessions, meaning that users returned multiple times to the website. The top visitor locations were from the following cities: Blaine, Minneapolis, St. Paul, Coon Rapids, and Shoreview.

The input received from the community focused on the following themes:

- **All three corridor-wide build alternatives were positively received**. A majority of the comments from the community expressed positive opinions about the alternatives, most noting their preference for one over another, or offering suggestions on design refinements. Only a handful of comments expressed negative views towards all of the alternatives.
- **Traffic flow is the most important problem to fix.** Commenters were most concerned with improving vehicular traffic flow along Highway 65 and minimizing the number of traffic signals along the roadway. Other comments focused on prioritizing improvements to bicycles and pedestrian facilities, minimizing traffic impacts to adjacent neighborhoods, right of way impacts, and business impacts.

- **Mixed reactions to median u-turns.** Several general comments and section-based comments noted concern about how complicated it would be to navigate the corridor with median u-turn configurations in the Hybrid Freeway Alternatives (regardless of grade separation). Others noted they were concerned about safety with making u-turns on a high speed roadway (for at-grade solutions). Commenters that had noted their use of median u-turns in other cities were more favorable to them than those who did not express familiarity with the design type. A few commenters noted that grade separated median u-turns would allow for more crossings for people walking and bicycling with fewer conflict points that would feel more comfortable.

Detailed comments on individual section alternatives are summarized in Section 8.4. Comments received during this phase and a Q & A responding to questions received at the online meetings are included in Appendix A: Public Engagement and Agency Coordination. The input gathered during this phase confirmed the results of the remaining Level 3 alternatives documented in this study and will be considered in future NEPA review for individual projects.

4.4 Communications

During the study process, the project team used several types of communications methods to reach a broad set of stakeholders. The following communications methods were used:

- MnDOT Project website
- MnDOT GovDelivery email updates
- MnDOT social media posts
- Individual stakeholder emails
- Targeted social media ads to promote events and surveys
- One-pager handouts/flyers
- Postcard mailers

In addition to these formal methods, the project team also relied upon City and County TAC members and elected officials to help spread the word with their constituents through newsletters and online social media channels.

5. Study Recommendations

Based on the results of the alternatives analysis process, 8 section-wide build alternatives will be carried forward into the future NEPA process for the TH 65 corridor. These alternatives generated support from the TAC and PAC, and support from the public based on comments received throughout the process as noted in the previous two sections. Although these alternatives were presented as corridor-wide alternatives in the Level 3 screening, their ability to be mixed and matched by section allows for flexibility in the future NEPA process. Any combination of these section-wide alternatives will result in meeting the Purpose and Need, which was why study recommendations are made at the section level in this report and not corridor-wide.

5.1 Section 1 Alternatives – 81st Ave to North of 93rd Ave

Three Section 1 alternatives have been carried forward. These Section 1 Alternatives are similar in their removal of the existing cloverleaf at US 10, right-in/right-out access restrictions at 85th and 89th, and bicycle and pedestrian crossings at 87th Ave and 93rd Ave. The differences between the alternatives are the designs of the US 10 and CSAH 10 interchanges.

5.1.1 US 10 Alternative 1 (Standard Diamond at CSAH 10)

The CSAH 10 Interchange would include a standard diamond with signals on TH 65 (See Figure 5-1). Access changes at TH 10 include the use of a grade separated U-turn for northbound TH 65 to westbound US 10 and westbound US 10 to southbound TH 65 traffic, restriction of most left turns between CSAH 10 to 93rd Ave, and a bridge over 87th Ave. The bridges over 87th Ave and 93rd Ave would provide separated pedestrian and bicycle crossings. A separated trail would be provided along both sides of TH 65, with an exception between 85th Ave and 89th Ave, where parallel local roads exist.

5.1.2 US 10 Alternative 2 (Signalized Rotary at CSAH 10)

This alternative is similar to US 10 Alternative 1, except in this alternative, the loop ramp is removed and replaced with displaced left turn lanes for southbound 65 to eastbound 10 traffic (see Figure 5-2). Additionally, the existing cloverleaf interchange at CSAH 10 would be converted to a signalized rotary configuration (four two-phase signals with one-way roads). Access changes at US 10 include the use of a grade separated U-turn for northbound TH 65 to westbound TH 10 and westbound TH 10 to southbound TH 65 traffic, restriction of most left turns between CSAH 10 to 93rd Ave, and a bridge over 87th Ave. The bridges over 87th Ave and 93rd Ave would provide an opportunity to improve at-grade pedestrian and bicycle crossings. A separated trail would be provided along both sides of TH 65, with an exception between 85th Ave and 89th Ave, where parallel local roads exist.

5.1.3 US 10 Alternative 2 (Standard Diamond at CSAH 10)

This alternative is similar to US 10 Alternative 1, except in this alternative, the loop ramp is removed and replaced with displaced left turn lanes for southbound 65 to eastbound US 10 traffic (see Figure 5-3). Additionally, the existing cloverleaf interchange at CSAH 10 would be converted to a standard diamond with control on TH 65. Access changes at US 10 would include the use of a grade separated U-turn for northbound TH 65 to westbound TH 10 and westbound TH

10 to southbound TH 65, restriction of most left turns between CSAH 10 to 93rd Ave, and a bridge over 87th Ave. The bridges over 87th Ave and 93rd Ave would provide an opportunity to improve at-grade pedestrian and bicycle crossings. A separated trail would be provided along both sides of TH 65, with an exception between 85th Ave and 89th Ave, where parallel roads exist.

Figure 5-1 – US 10 Alternative 1 (Standard Diamond at CSAH 10)

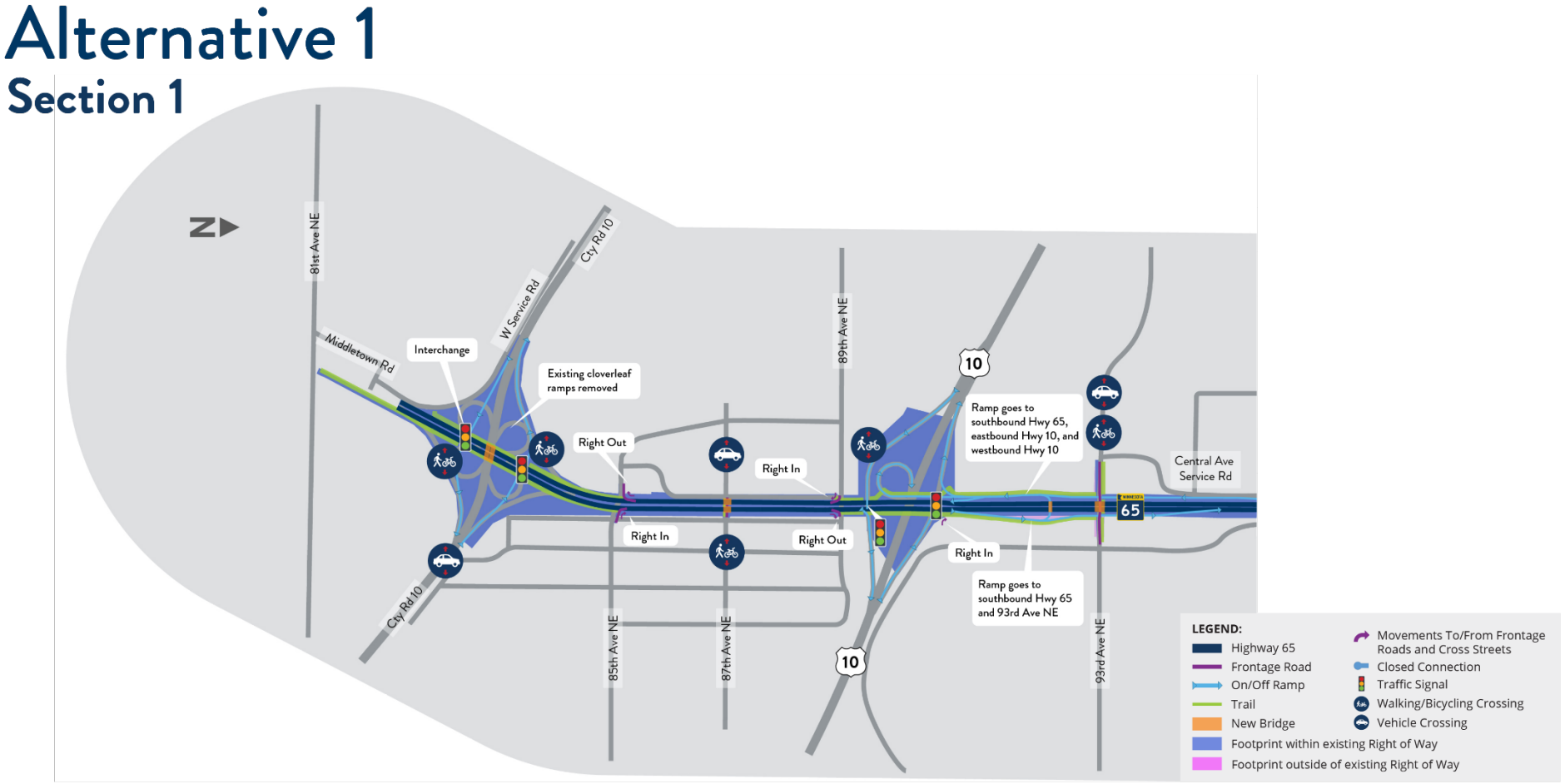


Figure 5-2 – US 10 Alternative 2 (Signalized Rotary at CSAH 10)

Alternative 2
Section 1

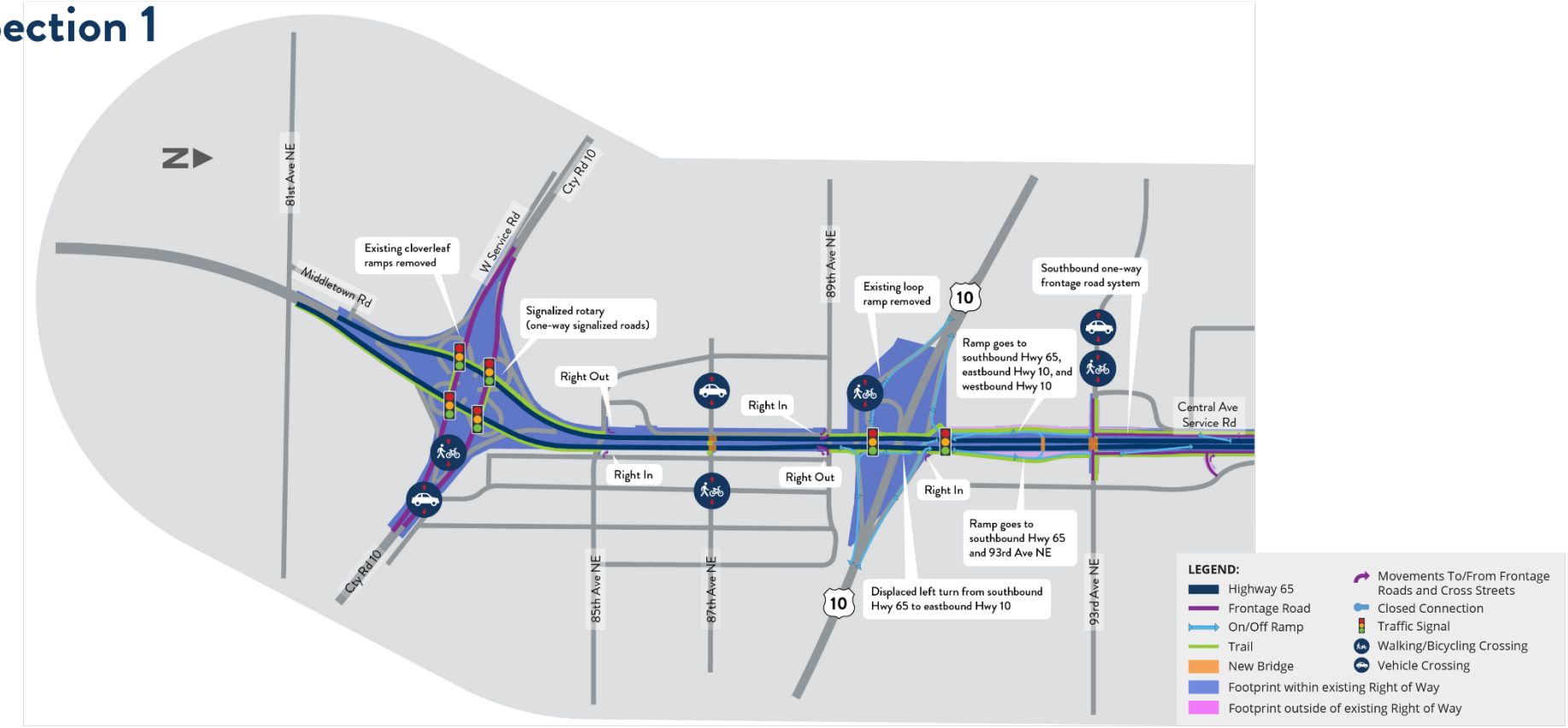
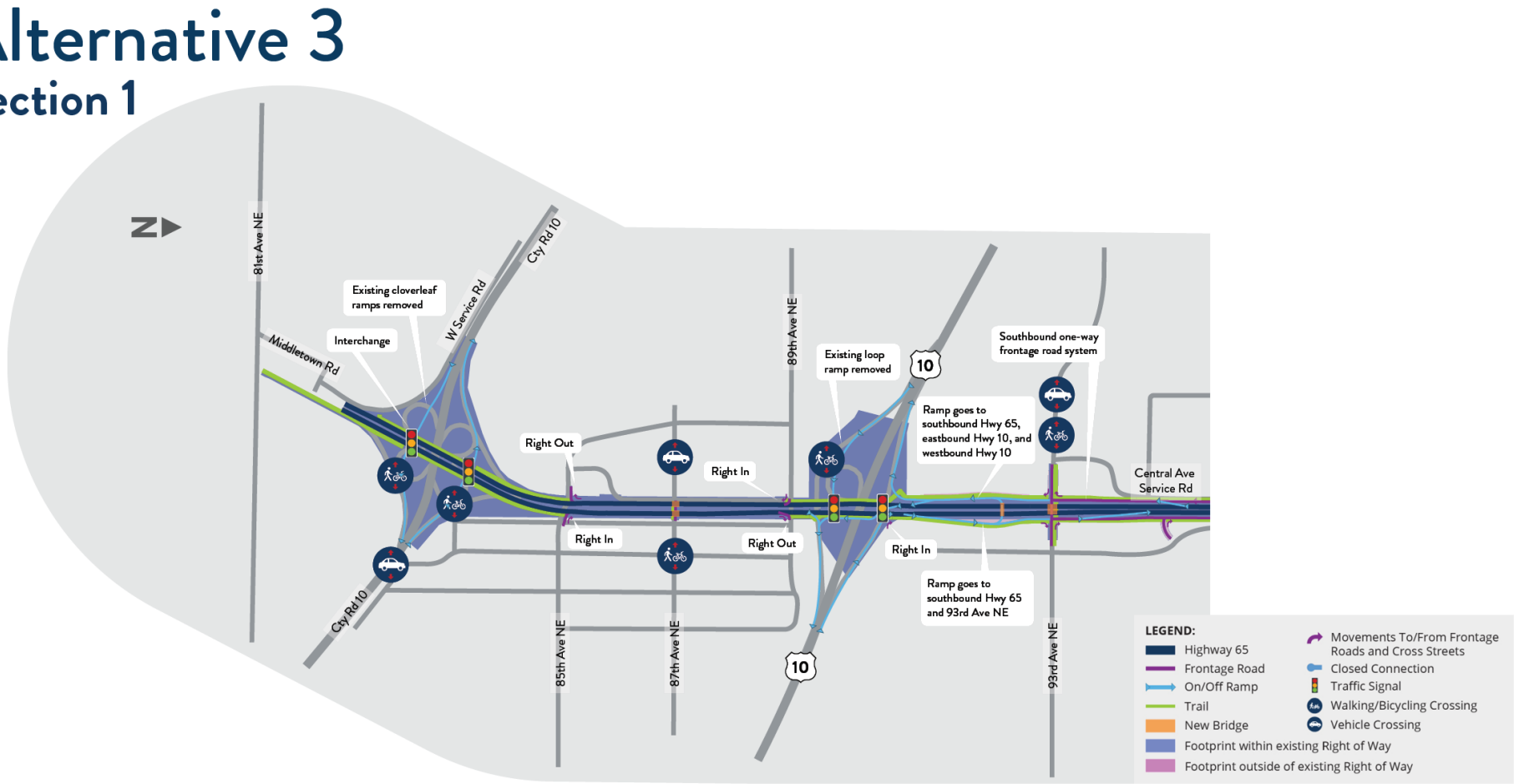


Figure 5-3 – US 10 Alternative 2 (Standard Diamond at CSAH 10)



5.2 Section 2 Alternatives – North of 93rd Ave to 117th Ave

Three Section 2 Alternatives have been carried forward. The main difference in design between the alternatives is that Freeway Alternative 3 would be a six-lane limited access facility with interchanges, while the hybrid freeway alternatives would include a series of slip ramps from frontage roads and grade separated median U-turns that would provide more access points. The Hybrid Freeway Sub-Alternative would also include an interchange at 109th that the Hybrid Freeway Alternative does not include.

5.2.1 Freeway Alternative 3

In this alternative, the roadway would be converted to a six-lane, limited access facility (see Figure 5-4). A two-way frontage road, with a separated trail, would connect 99th Ave to 109th Ave on the west side of TH 65 with ramp access to SB TH 65 between 99th Ave and 105th Ave. NB TH 65 ramps would be provided at 99th Ave that includes a roundabout which allows for circulation to and from the frontage road system. Interchanges are also included at 109th Ave (assumed a diverging diamond interchange), and 117th Ave (assumed a tight diamond interchange). Access would be limited to right-in-right-out at 105th Ave via the ramp from northbound TH 65 to 109th Ave. A pedestrian/bicycle tunnel would be provided to allow crossings under TH 65 at 105th Ave. The new bridges at 99th Ave, 109th Ave, and 117th Ave and a tunnel at 105th Ave would provide separated trails to cross TH 65.

5.2.2 Hybrid Freeway (refined from Level 2)

This alternative converts TH 65 to a six-lane limited access facility from 93rd Ave to 117th Ave (see Figure 5-5). A contiguous one-way frontage road system with parallel separated trail would connect to TH 65 on either side with several right-in right-out intersections, grade-separated U-turns, and slip ramps. A roundabout under a bridge near 101st Ave would provide crossing and U-turn opportunities with a two-way western frontage road between 101st Ave and 103rd Way. Access at 105th Ave and 109th Ave would be reduced to right-in/right-out configurations. Separated trail crossings under TH 65 would be provided at 97th Ave, 101st Ave, 107th Ave, 109th Ave, 113th Ave and 117th Ave.

5.2.3 Hybrid Freeway Sub-Alternative (Interchange at 109th Ave)

This alternative converts TH 65 to a six-lane arterial with limited access from 93rd Ave to 117th Ave (see Figure 5-6). A contiguous one-way frontage road system with trail would connect to TH 65 on either side with several right-in right-out intersections, grade-separated U-turns, and slip ramps. A roundabout under a bridge near 101st Ave would provide crossing and U-turn opportunities. Access at 105th Ave would be reduced to a right-in/right-out configuration and 109th Ave would be converted to a DDI interchange configuration. Separated trail crossings would be provided under TH 65 at 97th Ave, 101st Ave, 107th Ave, 109th Ave, 113th Ave, and 117th Ave.

Figure 5-4 – Freeway Alternative 3

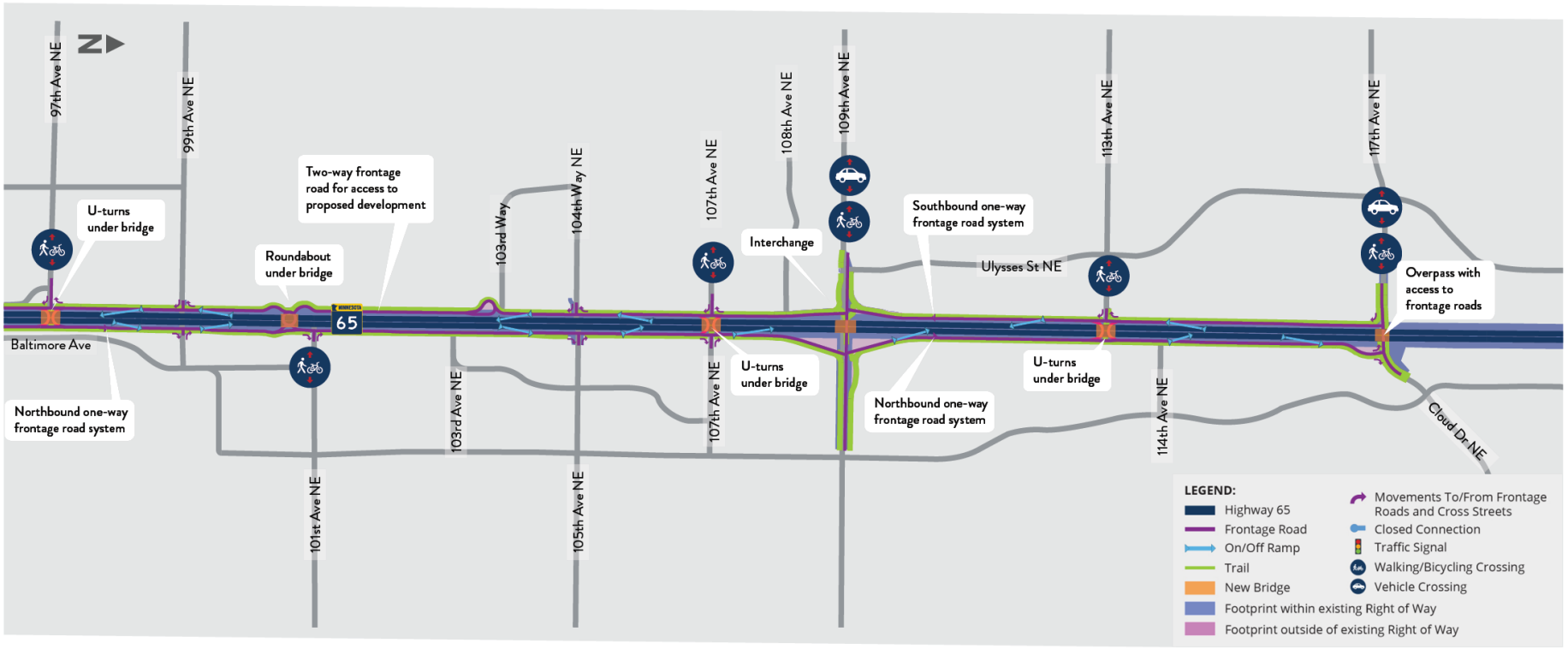
Alternative 1
Section 2

Figure 5-5 – Hybrid Freeway

Alternative 2
Section 2

Figure 5-6 – Hybrid Freeway Sub-Alternative (Interchange at 109th Ave)

Alternative 3
Section 2



5.3 Section 3 Alternatives – 117th Ave to Bunker Lake Blvd

Two Section 3 alternatives have been carried forward. Both alternatives would be limited-access facilities to Bunker Lake Blvd. The Freeway Alternative would include an interchange at Bunker Lake Blvd, while the Superstreet Alternative would include a Reduced Conflict U-turn, thereby transitioning from a freeway to a superstreet approaching the intersection.

5.3.1 Freeway Alternative

The roadway would be converted to a six-lane, limited access facility with a tight diamond interchange at Bunker Lake Blvd and would maintain the existing interchange at 125th Ave (see Figure 5-7). A new frontage road with a parallel trail would be added between 131st Ave and 133rd Ave on the east side of TH 65 to fill a gap in the existing frontage road system and provide a contiguous network. A pedestrian tunnel would be provided to allow crossings under TH 65 at 133rd Ave NE. The new bridge at Bunker Lake Blvd would provide separated trail to cross TH 65.

5.3.2 Superstreet (RCUT at Bunker Lake Blvd)

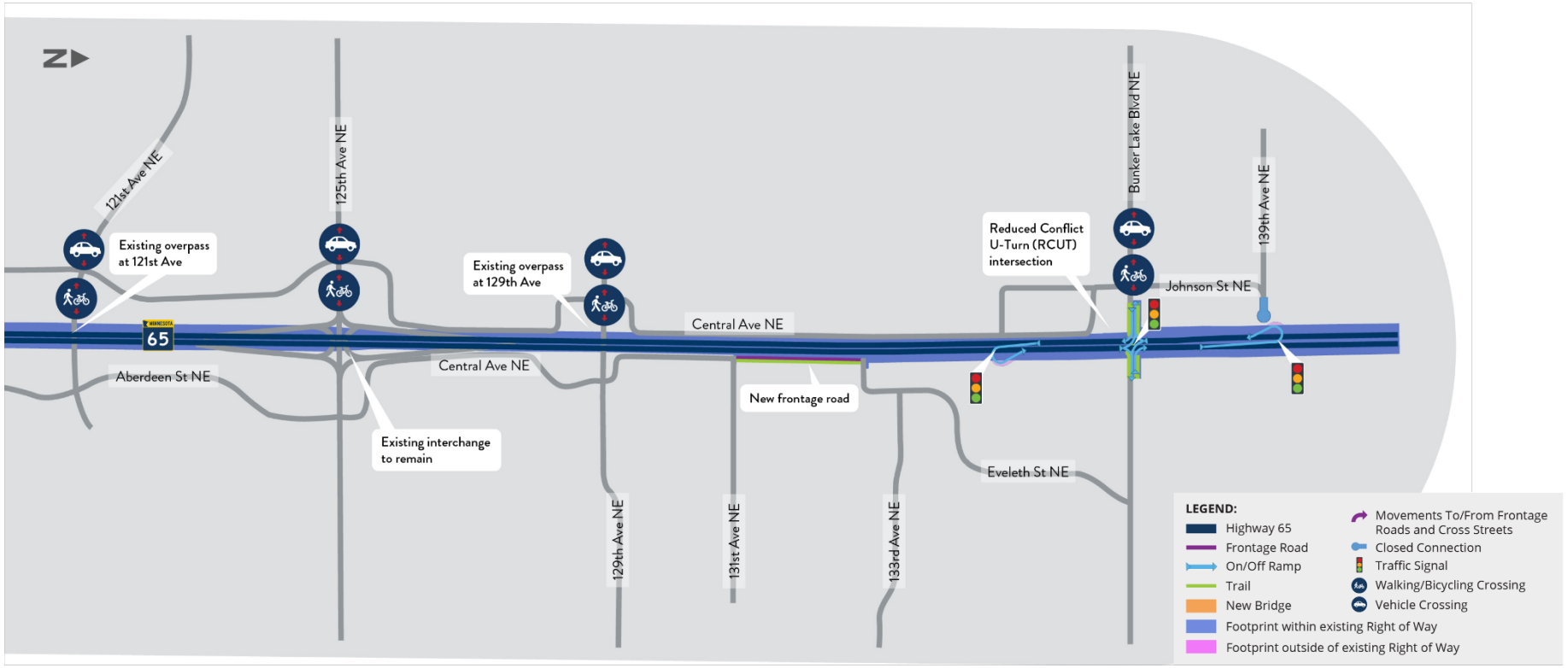
This alternative converts TH 65 to a six-lane limited access facility from 117th Ave to Bunker Lake Blvd and maintains the existing in place interchange at 125th Ave (see Figure 5-8). The intersection at Bunker Lake Blvd would be converted to a reduced conflict U-turn (RCUT) intersection configuration. A new frontage road with a separate parallel trail would be added between 131st Ave and 133rd Ave on the east side of TH 65 to fill a gap in the existing frontage road system and provide a contiguous network. An at-grade trail crossing would be provided at the RCUT. Pedestrians and bicyclists travelling along TH 65 would use the existing local road system.

Figure 5-7 – Freeway Alternative

Alternative 1
Section 3

Figure 5-8 – Superstreet (RCUT at Bunker Lake Blvd)

Alternative 2
Section 3



5.4 Corridor-wide Recommendations

The following section summarizes the transportation-related screening results from the Level 3 Alternatives Analysis and provides recommendations for what to consider in future NEPA analyses. For more detailed information on the topics below, referenceAppendix G: Alternatives Analysis Memo (and the Level 3 Evaluation Matrix located in the memo's appendix).

5.4.1 Traffic Operations and Safety

All alternatives improved the morning and afternoon peak travel time along and crossing the corridor, and vehicle throughput along the corridor when compared to the no-build alternative. Notable differences include reducing existing travel times along the seven-mile corridor from over 40 minutes down to around 12 minutes during both morning and afternoon rush hours. As traffic grows, the 2045 no-build travel times increase to 50 minutes, while the alternatives maintained approximately 12 minutes. For all three build alternatives in 2045, there is improved mobility at the southern terminus of the project as it transitions out of the study area. At the northern terminus, all build alternatives in 2045 have improved mobility over the no-build; however, drivers are likely to experience backups at the northernmost signal at the transition (either Bunker Lake Blvd or Andover Blvd depending upon the alternative).

Just as critical were crossing travel times, which were measured between key origins and destinations throughout the corridor. In several areas where it can take ten minutes to cross, the alternatives reduced crossing times to three or four minutes. Safety performance also improved with all alternatives, with 70 to 80 percent reduction in conflict points when compared to the no-build alternative.

5.4.2 Transportation Systems Management and Operations (TSMO)

The following TSMO alternatives were carried forward from Level 1 and should be considered during future NEPA review. These alternatives could be applied throughout all sections of the corridor as an add-on to any of the alternatives.

Transit Signal Priority

Transit Signal Priority includes equipping traffic signals with the ability to detect and prioritize transit movements in the corridor.

Variable Speed Signs

Variable speed signs could have an adjusted posted speed limit depending upon traffic conditions, weather, or other roadway conditions.

Intelligent Transportation Systems (ITS)

Examples of ITS include real-time information boards displaying travel time and delay information, adaptive traffic signal control, and dynamic speed display signs.

5.4.3 Bicycle and Pedestrian Recommendations

North/South Mobility

Bicycle and pedestrian improvements vary slightly between alternatives, however, all alternatives include improved north/south mobility on both sides of the highway. The alternatives include a mix of new 10-ft trail and low volume frontage road connections for contiguous travel from 81st Ave to Bunker Lake Blvd, which contributed to the improved connectivity. The Level 3 evaluation showed improved Multi-modal Level of Service results for all alternatives corridor-wide with scores in the A-C range except south of 125th Ave on west side of TH 65 on Ulysses, which scored a C-D. Adding separated multi-modal facilities to existing frontage roads could further improve mobility and comfort for users.

Crossing TH 65

Crossings of TH 65 are also improved in all alternatives. In Section 1, new vehicle bridges at 87th Ave and 93rd Ave would include bike/ped facilities, making it more comfortable and quicker to cross the highway. In the Level 3 evaluation, travel time crossing TH 65 utilizing the 87th Ave bridge would be 6 minutes faster on foot and 3 minutes faster on bicycle compared with the no-build. The variations in intersection/interchange design at US 10 and CSAH 10 should be further evaluated in the NEPA process for bikeability and walkability to improve user comfort and safety in crossing TH 65.

In Section 2, the Freeway Alternative would include new grade-separated crossings at 99th Ave, 105th Ave, 109th Ave, and 117th Ave. In the same section, the hybrid freeway alternatives would include new grade-separated crossings at 97th Ave, 101st Ave, 107th Ave and 109th Ave, 113th Ave, and 117th Ave (most at grade-separated median U-turn locations). These grade separated crossings would make it more comfortable and quicker to cross the highway. Travel times improved when compared to the no-build for most of the hybrid freeway alternatives, however travel times remained the same for the Freeway Alternative.

In Section 3, both alternatives would include a new bike/ped only crossing at 133rd Ave and crossing at Bunker Lake Blvd (grade separated in the Freeway Alternative and at-grade in the Superstreet Alternative). For both alternatives, travel time crossing at Bunker Lake Blvd remained the same when compared to the no-build alternative. Future NEPA analysis should consider bicyclist and pedestrian safety and comfort for both grade-separated and at-grade crossings of TH 65.

5.4.4 Transit Recommendations

The Level 3 evaluation of transit focused on how the alternatives maintained current express route transit service on TH 65, which currently operates only in Section 2. All alternatives improved travel time along the corridor, with similar results as vehicular travel time. Future NEPA study and analysis should consider how the proposed alternatives would affect local bus service and the park and ride facility at 117th Ave. During the Level 2 evaluation, US 10 Alternative 1 and US 10 Alternative 2 include removed left turns at 85th Ave and 89th Ave which would affect existing local bus route service (Routes 25, 59, 825).

5.4.5 Freight Recommendations

The Level 3 evaluation of freight evaluated heavy commercial vehicle travel time between representative origin and destinations along the corridor. Overall, all the alternatives in Sections 1 and 2 showed improvement over the no-build.

Section 3 alternatives maintained the same travel time when compared with the no-build during the PM peak, but improved during the AM peak. Future NEPA analyses should consider freight movements and freight related businesses along the corridor.

5.5 Construction Related Recommendations

The Level 3 evaluation developed high-level cost ranges (-15% to +50% cost range estimate) to compare relative costs of implementation between alternatives (See Table 5-1). The methodology for developing these can be found in Appendix G: Alternatives Analysis Memo(Cost Estimate appendix). The higher opinion of costs were correlated with right-of-way acquisition costs for alternatives that would require additional space beyond the existing right-of-way and new infrastructure such as frontage roads and bridges. Freeway alternatives and freeway elements, such as interchanges require additional space. The Hybrid Freeway alternatives had fewer right-of-way costs but more infrastructure such as bridges, walls and lane-miles to construct.

Table 5-1 – Construction Related Recommendations

Section/Alternative	Opinion of Costs ($2020-millions)
Section 1	Cost range
US 10 Alt 1 (Diamond at CSAH 10)	$66 to $116
US 10 Alt 2 (Rotary at CSAH 10)	$62 to $110
US 10 Alt 2 (Diamond at CSAH 10)	$66 to $117

Section/Alternative	Opinion of Costs ($2020-millions)
Section 2	Cost range
Freeway Alt 3	$124 to $219
Hybrid Freeway	$120 to $212
Hybrid Freeway Sub-Alt (Interchange at 109th)	$147 to $260

Section/Alternative	Opinion of Costs ($2020-millions)
Section 3	Cost range
Freeway Alt	$32 to $57
Superstreet (RCUT at Bunker Lake Blvd)	$18 to $31

Other construction related recommendations include evaluating the performance versus costs and impact of construction on the traveling public. The Section 1 alternatives had a beneficial rating, but high construction impacts to the traveling public. The Section 2 alternatives had a mediocre score, with the Hybrid Freeway Sub-Alt (Interchange at 109th Ave) receiving a poor rating due to the additional infrastructure footprint at 109th Ave. The Freeway Alternative 3 had high construction impacts to the travelling public. The Section 3 alternatives of Freeway and Superstreet had a mediocre and beneficial score, respectively. The Freeway Alternative also had high construction impacts to the traveling public, while the Superstreet had low impacts.

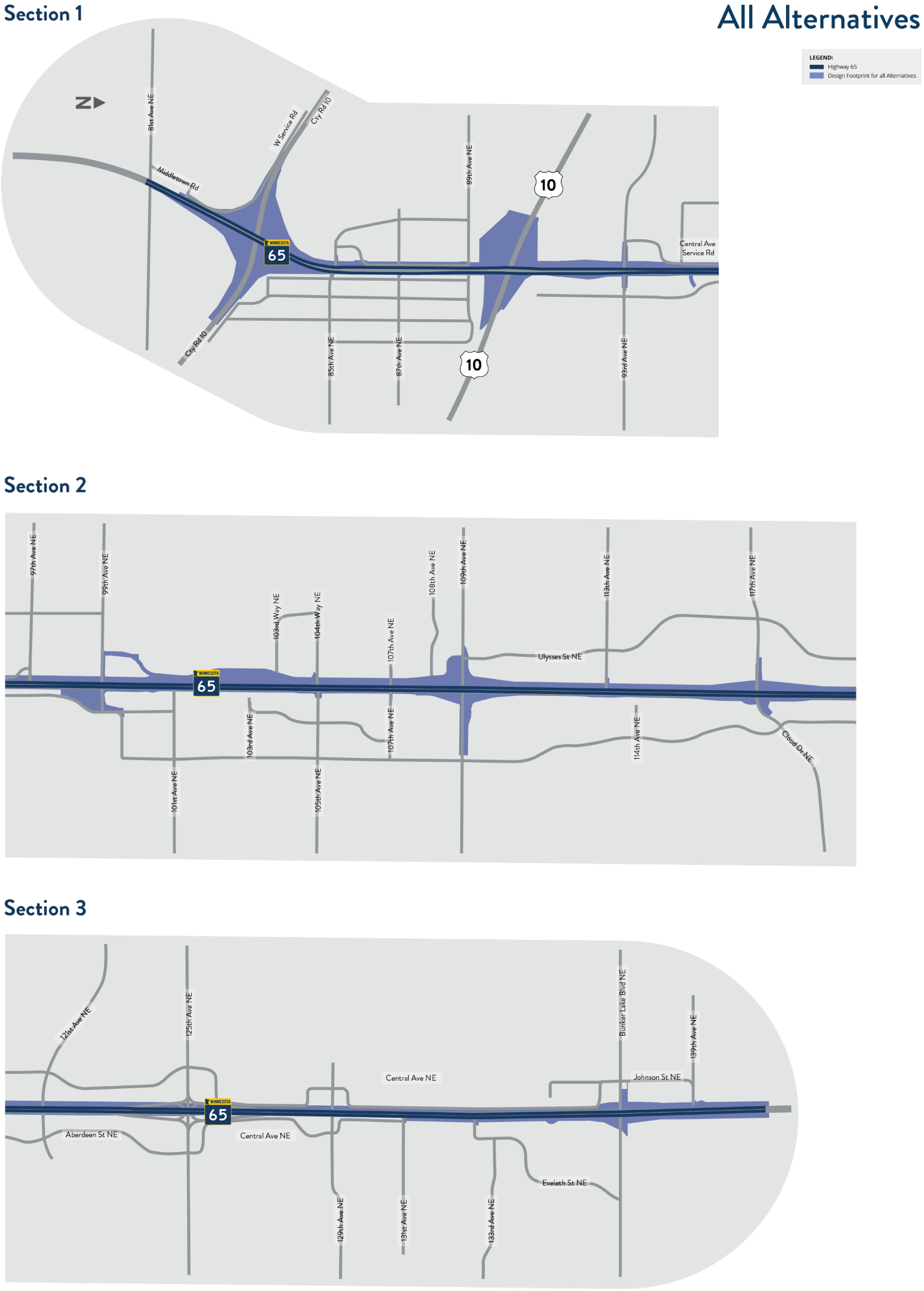
The performance evaluation rated and compared project attributes (evaluation criteria) such as how well each alternative met the purpose and need, minimized environmental impacts, its constructability and implementability. It did not consider the long-term maintenance or life-cycle costs between alternatives since life-cycle cost values for various alternative components (i.e. bridges, lane-miles, retaining walls) were not available. This should be evaluated in the next phase of project development (environmental analysis and preliminary design) when the alternative designs are advanced beyond a planning level. MnDOT's Benefit-Costs Analysis (BCA) for Transportation Projects[16] methodology could be applied which considers routine maintenance, major rehabilitation and life-cycle costs in defining the Project's overall costs. The BCA and life-cycle costs could be important information in selecting a recommended alternative for implementation.

16 Benefit-Cost Analysis for Transportation Projects, Benefit-Cost Analysis - MnDOT (state.mn.us)

6. Affected Environment and Environmental Consequences

Based on the findings of the existing conditions report that future improvements have the potential to impact certain environmental resources and that impacts could vary between alternatives, several environmental topic areas were selected as a part of the Alternatives Analysis evaluation criteria. For more detail on the following sections, reference Appendix E: Existing Conditions Review and Future Traffic Operations Memoand Appendix G: Alternatives Analysis Memo.

Figure 6-1 – Design Footprint for All Alternatives



6.1 Property Impacts

Major infrastructure projects often require right-of-way acquisitions to accommodate design features, such as interchanges and ramps. These impacts can affect both businesses and residential properties, potentially harming the economic vitality and community cohesion of the corridor. Right-of-way acquisitions are often drivers of implementation costs, which is the case with TH 65.

6.1.1 Findings

Levels 2 and 3 of the Alternatives Analysis evaluation considered property impacts by documenting the number and acres of potential property impacts, including potential relocations. The approach taken considered a worst-case scenario for impacts, however, further design of the corridor could result in fewer impacts. The Freeway Alternative 3 in Section 2 has the highest documented impact of 26 acres, including 3-5 potential residential relocations and 16-17 business relocations. The Hybrid Freeway Sub-Alternative (Interchange at 109th Ave) has the second highest documented impacts with 7.6 acres, including 12-13 business relocations. Future NEPA analyses should seek to avoid residential relocations where possible. The relocations in Section 2 also correlate with potential Environmental Justice populations.

6.2 Local and Regional Planning Compatibility

Both existing land use and future land use were reviewed to understand the effects or potential effects land use has on transportation in the project review area. Existing land use along TH 65 is primarily commercial and industrial with some institutional and office. Further away from the TH 65 alignment, the project review area is primarily made up of residential and parks and recreation uses. There are few future planned land use changes along the TH 65 corridor in the review area. Primarily, these changes are for further development of commercial areas. These changes are most prevalent at the south end of the corridor, south of CSAH 10 in Spring Lake Park, on the west side of the corridor between 99th Ave and 105th Ave, and at the north end of the corridor, starting at 133rd Ave in Ham Lake.

6.2.1 Evaluation Results

Levels 2 and 3 of the Alternatives Analysis evaluation considered compatibility to local and regional plans by qualitatively documenting access and visibility to existing and planned retail/commercial property. The proposed alternatives with the addition of a frontage road system on both sides of the highway will improve access. Proposed retaining walls near on/off ramps may reduce visibility to some businesses. Future NEPA analyses will need to consider the balance of access and visibility across the roadway in existing and future planned land use.

6.3 Environmental Justice

All projects involving a federal action (funding, permit, or land) must comply with Executive Order (EO) 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, signed by President Clinton on February 11, 1994. Executive Order 12898 directs the Federal departments and agencies take the appropriate steps to identify and address any “disproportionately high and adverse" human health or environmental effects of Federal programs, policies, and activities on minority and low-income populations.

The analyses presented in this section were prepared in compliance with EO 12898; the US Department of Transportation's (USDOT) Order to Address Environmental Justice in Minority Populations and Low-Income Populations [USDOT Order 5610.2(a), May 2, 2012]; and Minnesota Department of Transportation's Highway Project Development Process (HPDP).

According to the HPDP, any program, policy, activity, or project funded or approved by the Federal Highway Administration (FHWA), the Federal Transit Administration (FTA), or other U.S. DOT component and not covered by the Programmatic Categorical Exclusion Approval Agreement between the Federal Highway Administration and the Minnesota Department of Transportation requires an Environmental Justice (EJ) analysis. The purpose of EJ is to:

- Avoid, minimize or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low-income populations
- Ensure the full and fair participation by all potentially affected communities in the transportation decision-making process
- Prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations

The existing conditions analysis revealed that although the project review area does not exceed EJ thresholds, there are several block groups that may warrant further research and exploration to ensure they are not subject to EJ protections. Three of the block groups exhibit a high share of minority populations, while another block group exhibits a high share of low-income populations.[17]

6.3.1 Evaluation Results

Levels 2 and 3 of the Alternatives Analysis evaluation considered impacts to environmental justice communities by documenting the number and acreage of potential properties impacted. The Freeway Alternative 3 in Section 2 would result in three unavoidable residential parcel acquisitions and two mobile home relocations of potential EJ populations near 103rd Ave. Future NEPA analyses should include field verification beyond desktop census demographic analysis to confirm the presence of EJ populations around 103rd Ave and elsewhere in the corridor. Engagement efforts early in the process to connect with Blaine International Village residents were unsuccessful and should be pursued again in any future studies of the corridor (see Section 4.3.1).

6.4 Water Resources

A review of publicly available data, which identified wetlands, stream crossings, floodplains, and wells within the project review area, was completed. One large pond (Laddie Lake), approximately 52 acres in area, was identified in the project review area. The perimeter of the pond is surrounded by approximately 16 acres of Freshwater Emergent Wetland.

17 See Section 4.6.11 of Appendix E: Existing Conditions Review and Future Traffic Operations Memo.

Laddie Lake, and the associated wetlands, are located near the south end of the corridor, adjacent to TH 10 and TH 65. In addition, there are several smaller wetlands that are present in the project review area, based on National Wetland Inventory data. Wetland delineations should be completed as specific improvement projects are identified and developed in the future.

TH 65 crosses four streams in the project review area. Existing culverts at these locations may need to be extended depending on the final design of the project. Existing 100 and 500-year floodplains in the project review area are largely associated with these stream crossing areas.

6.4.1 Evaluation Results

Levels 2 and 3 of the Alternatives Analysis evaluation considered impacts to wetlands and floodplains by documenting the number and acreage of impacts. The Freeway Alternative 3 in Section 2 documented the wetland impact acreage at 3 acres, with 11 wetlands impacted. All other alternatives had less than or equal to 0.5 acres of impact. Floodplain impacts were only found in Section 2, with all three alternatives in that section impacting 1.1 to 1.2 acres of floodplain. Future NEPA analyses will need to reevaluate wetland and floodplain impacts based on refined design.

6.5 Park Resources - 4(f) and 6(f)

Locations of parks within the review area pose a risk of 4(f) or 6(f) impacts if any of the alternatives would require right-of-way acquisition (temporary or permanent) on any of these properties. There are 24 parks and one golf course located within the project review area. Parks located less than 1,000 feet from the TH 65 centerline have a higher risk of being impacted with permanent or construction right-of-way needs. Six parks are located less than 1,000 feet from the TH 65 alignment. The name, location, and distance to the TH 65 alignment of these parks are listed below.

- Aquatore Park – northwest quadrant of TH 65 and TH 10 (less than 100 feet)
- Suzanna Park – southwest quadrant of TH 65 and 109th Ave (275 feet)
- The Green Park – southeast of TH 65 and 114th Ave (675 feet)
- Pine Grove Gardens Park – northeast of TH 65 and 114th Ave (225 feet)
- Ostmans Park – west of TH 65 and 131st Ave (875 feet)
- Carrara West Park – northeast of TH 65 and 131st Ave (575 feet)

Aquatore Park is the only park in the study area identified as a Minnesota park subject to permanent land use requirements. Converting part of all of the site to a non-recreation use requires prior approval by the state commissioner of natural resources. This program is administered by the Minnesota Department of Natural Resources (MnDNR). Aquatore Park is not a federally funded Land and Water Conservation Fund (LWCF) site and therefore would not require coordination with the National Park Service.

6.5.1 Evaluation Results

Levels 2 and 3 of the Alternatives Analysis evaluation considered impacts to park resources by documenting the number and acreage of potential park impacts. Of the recommended alternatives, all three Section 1 alternatives document an impact of 0.2 acres to Aquatore Park. Future NEPA analyses will need to re-evaluate parks impacts based on refined design.

6.6 Contaminated Materials

The presence of contaminated properties within the project review area can pose issues relating to worker exposure, special handling and disposal requirements, and potential liability for cleanup. Encountering unknown contamination during construction can also lead to significant delays if not adequately addressed during the planning phase.

A search for federal, state, and local environmental listings was conducted for the corridor. The U.S. Environmental Protection Agency (USEPA) EnviroMapper, a tool for accessing USEPA environmental data, did not indicate any National Priorities List (NPL) or Superfund Sites (sites which are nationally prioritized for cleanup) within 1.5 miles of the TH 65 alignment. A further search of the Minnesota Pollution Control Agency (MPCA) "What's In My Neighborhood" (WIMN) database was conducted to identify listed hazardous waste sites and contaminated properties located within project review area. The WIMN database identifies listings associated with air quality, environmental review, feedlots, hazardous waste, investigation and cleanup, water quality, and tanks.

A total of 527 unique points were found in the project review area; these sites have the potential to impact the project, due to the presence or likely presence of contamination associated with the properties.

A review of the database search results found the types and number of listings that have the most potential to impact the corridor. A majority of the listings are related to hazardous material use and wastes associated with commercial and industrial properties located along the corridor. Eighty-three sites were identified as having multiple listings in several databases. A number of former dump sites, brownfields properties, gas stations, automotive repair facilities, automotive dealerships, and industrial uses are also concentrated in the project review area, particularly in the southern half of the corridor, between 109th Ave and TH 10.

6.6.1 Evaluation Results

Level 2 of the Alternatives Analysis evaluation considered impacts to contaminated materials by documenting the number of potential sites impacted. Level 3 of the evaluation assessed only sites identified as "sites of elevated concern" as documented by MnDOT staff. In Section 1, municipal wells are present, but are likely below any construction depth. In Section 2, the Freeway Alternative may require a partial acquisition near the Lee Wrecking site at 117th Ave where residual waste could be encountered. Section 2 also has a few dump sites near 117th Ave, but all alternatives avoid these. Section 3 contains no sites of elevated concern. A Phase I and Phase II Environmental Site Assessment will be required in future NEPA review to adequately characterize the corridor for contamination issues.

6.7 Impervious Surface

Impervious surfaces are defined as areas where water cannot infiltrate, such as roadway pavement. Increases in impervious surfaces force runoff to enter the stormwater systems in greater volume, which can lead to flooding of local streams and water quality issues if not properly managed. The impervious surface category was added to the evaluation criteria for the Level 3 evaluation in response to comments received from the EPA on the Purpose and Need and Evaluation Criteria (see Appendix A: Public Engagement and Agency Coordination for comment letter).

6.7.1 Evaluation Results

Level 3 of the Alternatives Analysis evaluation measured the change in impervious surface by documenting the percent change from the no-build. All the alternatives in all sections resulted in an increase of impervious surface, from as little as 18 percent up to 93 percent. These findings indicate an unavoidable increase in impervious surface and future NEPA analyses should consider strategies to manage surface water. See Section 8.1 for more discussion regarding drainage risks with the implementation of alternatives.

6.8 Least Environmental Damaging Alternatives

The following alternatives were identified as the least environmental damaging from the Level 3 screening analysis. Future NEPA review will include a more detailed impact analysis with refined design. For additional detail on the results of the Level 3 screening analysis, refer toAppendix G: Alternatives Analysis Memo.

6.8.1 Section 1: US 10 Alternative 1 (Standard Diamond at CSAH 10)

In Section 1, US 10 Alternative 1 (Standard Diamond at CSAH 10) was identified as the least environmentally damaging alternative based on the Level 3 screening analysis. This alternative included the fewest number and acreage of community and natural resources by a small margin. It should be noted that all three alternatives in Section 1 are similar in terms of impacts with all documenting less than 3.5 acres in property impacts, include no residential relocations, less than 3 acres of potential environmental justice properties, less than 0.5 acres in wetland impacts, 0.2 acres of impact to Aquatore Park, and a similar increase in impervious surface (8-10 acres). There were no identified contamination sites of elevated concern, nor any floodplain impacts identified. The visibility and accessibility of existing and planned retail/commercial properties showed similar access benefits across all alternatives and potential impacts to visibility with retaining walls near US 10. Additional design refinement could potentially avoid or minimize some of these impacts with any of the alternatives.

6.8.2 Section 2: Hybrid Freeway

In Section 2, the Hybrid Freeway Alternative was identified as the least environmentally damaging alternative based on the Level 3 screening analysis. This alternative has notably fewer community and natural resources impacts when compared with the Freeway 3 Alternative, and slightly fewer impacts when compared with the Hybrid Freeway Sub-Alternative (Interchange at 109th Ave). This alternative has the fewest property impacts at 2.3 acres when compared with Freeway Alternative 3 (26 acres), and the Hybrid Freeway Sub-Alternative (Interchange at 109th Ave) (7.6 acres). In

terms of floodplain (1.1 acres), wetland (0.4-0.5 acres), contamination impacts (avoids sites of elevated concern), and impervious surface increase (40 acres), the Hybrid Freeway and Sub-Alternative perform similarly. None of the alternatives identified any park impacts (4f or 6f properties). The visibility and accessibility of existing and planned retail/commercial properties showed similar access benefits across all alternatives with the addition of the frontage road system and potential impacts to visibility with retaining walls near ramps.

6.8.3 Section 3: Superstreet (RCUT at Bunker Lake Blvd)

In Section 3, the Superstreet (RCUT at Bunker Lake Blvd) was identified as the least environmentally damaging alternative based on the Level 3 screening analysis. This alternative has minor property impacts of 0.2 acres, 0.1 acres of wetland impacts, and a minor increase in impervious surface (9 acres). There were no visibility/accessibility, environmental justice, floodplain, parks, or contamination impacts identified. The Freeway Alternative has slightly more property impacts of 1.4 acres, but no wetland impacts. Other than these two categories, the two alternatives resulted in similar community and environmental impacts.

7. Implementation Plan

The PEL process is intended to provide a framework for the long-term implementation of recommended improvements as funding becomes available and to be used as a resource for future NEPA documentation. It is anticipated that the funding for all the recommended corridor improvements will not be available at one time. Potential separate projects to implement the study recommendations were identified in coordination with MnDOT and the Technical Advisory Committee.

The following breaks out potential separate projects within the three geographical sections of roadway which as described in the Alternatives Analysis include concept alternatives that can be interchangeable by section. While the timing of funding is unknown, each separate project implementation timeline has the potential to affect other areas of the corridor due removal of bottlenecks and changes in driver expectations. While a project could be implemented independently, in some locations it will be critical to evaluate and complete the NEPA decision making document for the overall section since the preferred alternative may dictate the outcome of another project within the section.

7.1 Identification of Projects

To implement separate projects, care must be taken to ensure that the area transportation system operates acceptably at the conclusion of each separate project and selecting a recommended alternative is evaluated for each section so that the project does not predetermine a section alternative. The ability of each separate project to operate on its own is referred to as “independent utility”. Also, mitigation measures needed in response to overall area impacts must be implemented with the project in which the impacts occur, and not deferred to a later phase of the ultimate planned transportation system. The separate projects should meet the following criteria:

- Independent Utility – Each project should have independent utility to the extent that the project provides a functional transportation system even in the absence of other elements of the recommended alternative.
- Elements of the Purpose and Need – Each project should contribute to meeting the Purpose and Need for the overall recommended alternative.
- Environmental Impacts – Each project should avoid the introduction of substantial additional environmental impacts that cannot be mitigated.
- Mitigation Directly Related to Impacts – Each project should include appropriate mitigation measures to match the environmental impacts of that project phase of the overall recommended alternative.

7.2 Section 1 – 81st Ave to North of 93rd Ln

Figure 7-1 identifies three potential projects located in Section 1 of the study area. These projects could be constructed at different times but selecting a preferred alternative is necessary at the section level under one NEPA document. The

only exception to this is if a standalone bicycle and pedestrian improvements project advanced. Logical termini and independent utility will need to be solidified once the NEPA process officially begins. The Transportation System Management & Operations (TSMO) improvements identified in the Alternatives Analysis which include Transit Signal Priority, Variable Speed Signs and Intelligent Transportation Systems. Transit Signal Priority can be done project by project, but Variable Speed Signs and Intelligent Transportation Systems will likely need to be applied from south to north to capture the intended benefits. The potential separate projects described in detail in the Alternatives Analysis include improvements at the following locations:

- CSAH 10 - spot improvement
- 83rd Ave to 89th Ave – section improvement that changes access and local circulation
- US 10 to 93rd Ln - section improvement that changes access and local circulation

The recommended alternatives identified in the Alternatives Analysis could likely be interchanged in this area but the breakout of potential separate projects are recommended due to how the improvements change TH 65 access and local circulation and the likelihood of independent utility. Note, there are no specified improvements to the frontage road system between CSAH 10 and US 10 with the exception of how TH 65 is accessed therefore if improvements are proposed to these existing roadways they can be completed independent of TH 65 potential projects identified in Section 1.

Figure 7-1 – Section 1 Projects

The potential separate projects each contribute to meeting the purpose and need as described in Table 7-1 below. The table also summarizes the opinion of costs (2020 $) and potential environmental resources that will need to be considered with further project development.

Table 7-1 – Section 1 Projects

Project	Crash Reduction	Congestion Reduction	Multi-modal Enhancements	Key Environmental Resources Affected	Opinion of Cost
CSAH 10	Reduction in conflict points	Reduces corridor travel time.	Incorporates multi-modal trail along TH 65. Improves bicycle/pedestrian crossings with signal.	Noise	$6M to $16M
83rd Ave to 89th Ave	Substantial reduction in conflict points	Reduces corridor and crossing travel time.	Improves bicycle/ pedestrian crossings by removing conflict with TH 65.	Noise Visual	$16M to $30M
US 10 to 93rd Ln	Substantial reduction in conflict points	Reduces corridor and crossing travel time.	Incorporates multi-modal trail along TH 65. Improves bicycle/ pedestrian crossings by removing conflict with TH 65.	Noise Visual Parks Right-of-Way Environmental Justice	$40M to $71M

7.2.1 Project Timeline

The timeline (potentially 5-10 years) for implementing Section 1 Projects are recommended after implementing the projects in Section 2 (a very congested part of the corridor) and will depend on funding availability. While Section 2 is a bottleneck along the corridor, so is Section 1. Improving congestion at US 10 has the potential to shift regional traffic to the TH 65 corridor, resulting in the pursuit for mobility improvements, due to the pent-up travel demand on TH 65. The PEL did not evaluate how travel demand shifts with improvements to each individual section and should be considered in the next phase of project development. The order of improvements in this section would potentially start with the US 10 to 93rd Ln due to the congestion that is expected to worsen over time at this heavily utilized interchange with US 10. The closely spaced traffic signals are contributing to the congestion and removing the bottleneck in Section 2 could potentially increase demand at the interchange with US 10. The next project would shift to 83rd Ave to 89th Ave which would remove closely spaced traffic signals also contributing to congestion. Finally, CSAH 10 would be improved which would eliminate the weaving contributing to congestion at this location.

7.2.2 Vision south of CSAH 10

A PEL Study is currently underway on TH 65 south of CSAH 10. The study outcomes have the potential of influencing the improvements at CSAH 10.

7.2.3 Interaction with Section 2

The distance between access (ramp locations) between 93rd Ln and 99th Ave has the potential to introduce a weave. The recommended alternatives for the US 10 and 93rd Ln is a shared access resulting in substantial demand on the ramps north of 93rd Ln. Traffic operations should be considered when developing the preferred alternative at this location and the next project to the north in Section 2.

Section 2 is a bottleneck on TH 65 which results in users choosing other routes to avoid congestion along this section. If this bottleneck is relieved it has the potential to shift more demand to TH 65 in Section 1 especially at US 10. Future phases should evaluate how this shift affects congestion in this area.

7.3 Section 2 – North of 93rd Ln to 117th Ave

Section 2 consists of three potential separate projects that incorporate access changes and lane additions on TH 65 and new frontage roads shown in Figure 7-2. The lane additions are necessary to increase mainline capacity and in some locations to provide auxiliary lanes between proposed ramp locations. During the concept development phase it was assumed that TH 65 would be elevated in each alternative in Section 2, therefore lane additions for capacity would likely occur when each project is implemented. While each project could be built separately, one NEPA document is likely necessary to determine the preferred alternative for this section since the recommended alternatives are section wide and the selection of one-element would determine the preferred alternative section-wide. The breakout of potentially separate projects is predicated on how access and changes to local circulation is affected within each project. The Transportation System Management & Operations (TSMO) improvements identified in the Alternatives Analysis which include Transit Signal Priority, Variable Speed Signs and Intelligent Transportation Systems. Transit Signal Priority can be done project by project, but Variable Speed Signs and Intelligent Transportation Systems will likely need to be applied from south to north to capture the intended benefits. The potential separate projects described in detail in the Alternatives Analysis include improvements at the following locations:

- 97th Ave to 103rd Way – section improvement that changes access and local circulation (including new frontage roads) and adds lanes on TH 65
- 103rd Way to 113th Ave – section improvement that changes access and local circulation (including new frontage roads) and adds lanes on TH 65
- 113th Ave to north of 117th Ave - section improvement that changes access and local circulation (including new frontage roads) and adds lanes on TH 65

Figure 7-2 – Section 2 Projects

The potential separate projects each contribute to meeting the purpose and need as described in Table 7-2 below. The table also summarizes the opinion of costs (2020 $) and potential environmental resources that will need to be considered with further project development.

Table 7-2 – Section 2 Projects

Project	Crash Reduction	Congestion Reduction	Multi-modal Enhancements	Key Environmental Resources Affected	Opinion of Cost
97rd Ave to 103rd Way	Substantial reduction in conflict points.	Reduces corridor travel time.	Incorporates multi-modal trail along new TH 65 frontage roads. Improves bicycle/ pedestrian crossings by removing conflicts with TH 65.	Noise Visual Right-of-Way Wetlands Floodplains Environmental Justice	$30M to $83M
103rd Way to 113th Ave	Substantial reduction in conflict points.	Reduces corridor travel time and crossing travel time.	Incorporates multi-modal trail along new TH 65 frontage roads. Improves bicycle/ pedestrian crossings by removing conflicts with TH 65.	Noise Visual Right-of-Way	$30M to $102M
113th Ave to north of 117th Ave	Substantial reduction in conflict points.	Reduces corridor travel time and crossing travel time.	Incorporates multi-modal trail along new TH 65 frontage roads. Improves bicycle/ pedestrian crossings by removing conflicts with TH 65.	Noise Visual Right-of-Way	$37M to $76M

7.3.1 Project Timeline

This section includes a substantial bottleneck along the corridor and east-west travel. Addressing the congestion and safety needs in this section is considered a priority with a shorter-term timeline (potentially within five years) for implementation depending on funding availability. Anoka County is prioritizing improvements at 105th and 109th Aves including obtaining state bonding for preliminary and final design, and the City of Blaine has received federal funding and state funding for construction of improvements between 97th and 113th Aves. The City of Blaine is also seeking funding to construct all improvements between 93rd and 113th Aves. Their next priority is to implement improvements between 113th Ave to north of 117th Ave.

7.3.2 Interaction with Section 1

The distance between access (ramp locations) between 93rd Ln and 99th Ave has the potential to introduce a weave. The recommended alternatives for the US 10 and 93rd Ln is a shared access resulting in substantial demand on the ramps north of 93rd Ln. Traffic operations should be considered when developing the preferred alternative in this section and future projects to the north in Section 1.

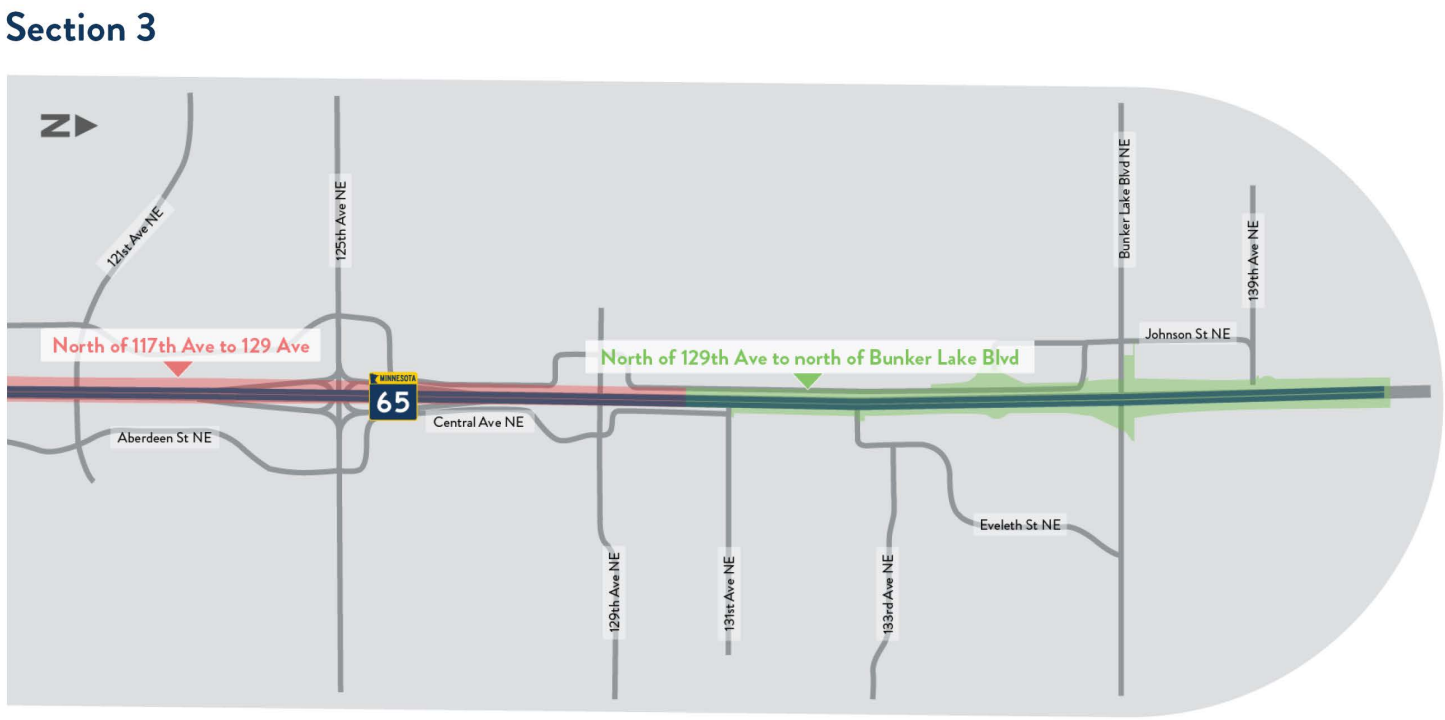
Section 2 is a bottleneck on TH 65 which results in users choosing other routes to avoid congestion along this section. If this bottleneck is relieved it has the potential to shift more demand to TH 65 in Section 1 especially at US 10 although US 10 is also a substantial bottleneck. Future phases should evaluate how this shift affects travel demands along the corridor including the timing for adding an additional lane on TH 65.

7.4 Section 3 – 117th Ave NE to North of Bunker Lake Blvd

Section 3 consists of two potential separate projects that incorporate access changes and lane additions on TH 65 shown in Table 7-3. The lane additions are necessary to increase mainline capacity. During the concept development phase it was assumed that TH 65 would be elevated at Bunker Lake Blvd, therefore lane additions for capacity would likely occur when this location improvement is implemented. While each project could be built separately, one NEPA document would cover the entire section to determine the preferred alternative. The breakout of potentially separate projects is predicated on how access and changes to local circulation is affected within each project. The Transportation System Management & Operations (TSMO) improvements identified in the Alternatives Analysis which include Transit Signal Priority, Variable Speed Signs and Intelligent Transportation Systems. Transit Signal Priority can be done project by project, but Variable Speed Signs and Intelligent Transportation Systems will likely need to be applied from south to north to capture the intended benefits. The potential separate projects described in detail in the Alternatives Analysis include improvements at the following locations:

- North of 117th Ave to north of 129th Ave – Add lane on TH 65
- North of 129th Ave to north of Bunker Lake Blvd - section improvement that changes access, improves Bunker Lake Blvd intersection, adds frontage road and adds lanes on TH 65

Figure 7-3 – Section 3 Projects



The potential separate projects each contribute to meeting the purpose and need as described in Table 7-3 below. The table also summarizes the opinion of costs (2020 $) and potential environmental resources that will need to be considered with further project development.

Table 7-3 – Section 3 Projects

Project	Crash Reduction	Congestion Reduction	Multi-modal Enhancements	Key Environmental Resources Affected	Opinion of Cost
North of 117th Ave to 129th Ave	No change.	Reduces corridor travel time.	None	Noise	$7M to $13M
North of 129th Ave to north of Bunker Lake Blvd	Reduction in conflict points.	Reduces corridor travel time and crossing travel time.	Improves bicycle/ pedestrian crossings by removing conflicts with TH 65.	Noise Visual Right-of-Way	$10M to $44M

7.4.1 Project Timeline

This section includes is the least congested area along the corridor. Addressing the congestion and safety needs in this section is considered less of a priority and is considered longer term (greater than ten years) for implementation depending on funding availability. The timing of lane additions, access changes and intersection improvements at Bunker Lake Blvd will likely depend on how traffic demands change due to improvements occurring in Sections 1 and 2.

8. Corridor Risks

The following risks have been identified and should be considered when further developing the projects listed in the implementation plan and in future NEPA review.

8.1 Drainage

8.1.1 Sections 1, 2, and 3

While additional impervious surface was estimated for the recommended alternatives, mitigation was not studied. The footprints have the potential to change and grow based how the project resolves increases in impervious surface. Future study will include developing an overall stormwater plan at logical drainage basin breaks for the corridor.

8.2 Noise

8.2.1 Sections 1, 2, and 3

Noise impacts were not analyzed in the Alternatives Analysis. The alternatives considered assumed TH 65 would be elevated with the grade separated alternatives. This resulted in an assumption of short noise walls on top of retaining walls along TH 65 mainline. The assumption of elevating TH 65 could change during the next phase of study which could shift the location of noise walls as well as their height (potentially requiring additional right-of-way beyond the existing footprint).

8.3 Right-of-Way

8.3.1 Section 1

Alternatives in Section 1 assumed lower (non-freeway) design speeds that dictated geometric design, elevating TH 65 using retaining walls, and designated offsets in determining footprints and potential impacts to adjacent private properties. Right-of-way costs considered market values and general multipliers. Market values can change over time and multipliers could differ depending on the impacts. Design criteria changes have the potential to change overall footprints and potential right-of-way impacts.

8.3.2 Sections 2 and 3

Recommended Alternatives in Section 2 assumed different (non-freeway and freeway) design speeds that dictated geometric design, elevating TH 65 using retaining walls, and designated offsets in determining footprints and potential impacts to adjacent private properties. Right-of-way costs considered market values and general multipliers. Market values can change over time and multipliers could differ depending on the impacts. Design criteria changes have the potential to change overall footprints and potential right-of-way impacts. This section includes recommended alternatives with very different right-of-way footprints. Some alternatives have more infrastructure than right-of-way needs while others have less infrastructure but greater right-of-way needs.

8.4 Public Concerns

8.4.1 Section 1

The changes in access between 83rd Ave and 89th Ave were met with some resistance due to circulation changes in the surrounding area. Education and additional outreach regarding these changes will be critical in the next phase. Concerns were also expressed regarding removal of the cloverleaf interchanges at CSAH 10. The removal has been recommended to reduce congestion due to weaves between ramps.

8.4.2 Section 2

The alternatives that considered grade separated median U-turns were met with some resistance due to circulation changes in the surrounding area. Education and additional outreach regarding these changes will be critical in the next phase.

8.4.3 Section 3

The alternatives that considered signalized median U-turns (RCUT) were met with resistance due to circulation changes at Bunker Lake Blvd. Education and additional outreach regarding these changes will be critical in the next phase.

8.5 Driver Expectations and Safety

8.5.1 Section 2

While the potential separate projects result in substantial reduction in conflicts, improving safety, they have a potential to shift crashes to the next traffic signal due to driver's expectations of a free flowing driving environment.

8.6 Maintenance

8.6.1 Section 2

The recommended alternatives include frontage roads, some of which would be essential to completing the access from TH 65 to the local system along the corridor (i.e. grade separated median U-turns). MnDOT and the City of Blaine would need an ownership and maintenance agreements for proposed frontage roads.

8.7 Downstream Effects

8.7.1 Section 3

Improving capacity and removing bottlenecks south of Bunker Lake Blvd has shown to draw more traffic demand on TH 65. This has the potential to affect operations at the next major signalized intersection at Andover Blvd and need to be considered with the next phase for Section 3.

8.8 Environmental Justice

8.8.1 Sections 1, 2, and 3

As described in Section 6.3, the Freeway Alternative in Section 2 would result in 3 residential parcel acquisitions and two mobile home relocations of potential EJ populations near 103rd Ave. Future NEPA analyses should include field verification beyond desktop census demographic analysis to confirm the presence of EJ populations around 103rd Ave and elsewhere in the corridor. Future study and design refinement should seek to avoid or minimize property impacts in these communities and conduct more community engagement to better understand how these alternatives may benefit or impact these communities.

8.9 Parks – 4(f) and 6(f)

8.9.1 Sections 1, 2, and 3

As described in Section 6.5, all three Section 1 alternatives document an impact of 0.2 acres to Aquatore Park. Future NEPA analyses will need to re-evaluate parks impacts based on refined design. Aquatore Park is both a 4(f) resource and a Minnesota park subject to permanent land use requirements. Future coordination will be required with MnDNR

8.10 Other Environmental Resources

8.10.1 Sections 1, 2, and 3

The Alternatives Analysis process analyzed several environmental and community resource categories as described in Section 6; however, the NEPA process will require detailed analysis of additional categories. While the resource categories chosen were the result of the existing conditions analysis, resource issues could potentially surface depending on refined design decisions.

Additionally, the Office of the State Archaeologist recommended a literature review and archaeological assessment. This should be addressed in future NEPA review. See Appendix A: Public Engagement and Agency Coordination for the letter dated September 29, 2020.

9. Next Steps

The PEL documentation provides reference framework for future implementation of projects as identified in the implementation plan. When a project is chosen for implementation, project proposers will need to complete environmental review in accordance with NEPA, which requires additional design advancement, social, economic and environmental impact analysis, and public involvement.

TH 65 Interchanges to serve CSAH 12 (109th Avenue) and 105th Avenues in Blaine

Trunk Highway (TH) 65 is a principal arterial located in the Twin Cities metropolitan area in Anoka County. As the only continuous north/south corridor of its size and capacity in Anoka County, TH 65 is a vital link for traffic traveling between the Twin Cities urban core and northern suburban and exurban communities. At the project location, TH 65 is currently a four-lane divided highway with the following characteristics:

- Classified as a principal arterial with a primary function of providing mobility, while also providing access to adjacent land uses
- Posted speed limit is 55 miles per hour (mph)
- Signalized intersection with 109thth and 105th Aves NE with no restricted turn movements
- Serves approximately 50,000 vehicles per day and is forecasted to serve approximately 60,000 vehicles per day in 2045

Funding Opportunity: Roadway Expansion

Applicant: Anoka County

Location: Blaine, MN

Project Limits: 103rd Ave NE to 113th Ave NE

Total Project Cost: $42,000,000

Requested Award Amount: $10,000,000

The proposed project includes grade separated crossings at 105th Avenue and CSAH 12 and conversion of TH 65 to a limited access facility. The improvements would reduce congestion and improve pedestrian and bicycle access across TH 65, a major barrier for residents. The need for the project was identified as part of the Metropolitan Council's Principal Arterial Conversion Study.

A Planning and Environmental Linkages (PEL) study resulted in the development of four alternatives for this section of TH 65. The National Environmental Policy Act (NEPA) review phase of the project began in early 2022 and will select a preferred alternative from the four proposed alternatives. Given analysis of alternatives for the NEPA process, it is likely Alternative 1A (Figure 1) will be selected as the preferred alternative due to the similar benefits it provides at a lower cost compared to other alternatives. Alternative 1A was used in the development of Anoka County's Regional Solicitation application given its likelihood of selection as the preferred alternative. Features of Alternative 1A include:

- Bridges carrying TH 65 traffic above grade at 105th and 109th Avenues allowing local traffic, cyclists, and pedestrians to cross TH 65 more comfortably and without traffic signal delay.
- Frontage roads on both sides of TH 65 with separated pedestrian and bicycle facilities allowing for more direct north-south travel in the corridor for local traffic.

Figure 1. TH 65 Alternative 1A Improvements at CSAH 12 (109th Ave) and 105th Ave