Application

10353-2018 Roadway Expansion
10823-7. CSAH 17 (Lexington Ave NE) Roadway Expansion in Blaine (Pheasant Ridge to CSAH 14)
Regional Solicitation - Roadways Including Multimodal Elements

Status: Submitted
Submitted Date:
07/13/2018 9:51 AM

## Primary Contact

| Name:* | Mr. |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Salutation | First Name | Middle Name | Last Name |
| Title: | Transportation Planner |  |  |  |
| Department: | Anoka County Transportation Division |  |  |  |
| Email: | jack.forslund@co.anoka.mn.us |  |  |  |
| Address: | 1440 Bunker Lake Boulevard NW |  |  |  |
| * | Andover | Min |  | 55304-4005 |
|  | City | State |  | Postal Code/Zip |
| Phone:* | 763-324-3179 |  |  |  |
|  | Phone |  | Ext. |  |
| Fax: | 763-324-3 |  |  |  |
| What Grant Programs are you most interested in? | Regional Elements | tation - Ro | s Includin | Multimodal |

## Organization Information

Name:

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

| * | ANDOVER | Minnesota |
| :--- | :--- | :--- |
| County: | City | State/Province |
| Postal Code/Zip |  |  |
| Phone:* | $763-324-3100$ |  |
| Fax: | $763-324-3020$ | Ext. |
| PeopleSoft Vendor Number | $0000003633 A 15$ |  |

## Project Information

| Project Name | CSAH 17 (Lexington Avenue NE) Expansion 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):

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

The roadway section proposed for the improvement is CSAH 17 (Lexington Avenue NE) from Pheasant Ridge Drive to CSAH 14 (125th Avenue NE) in the city of Blaine. CSAH 17, an A Minor Expander, is currently a four-lane divided roadway that has experienced substantial traffic growth in recent years and needs expansion to a six-lanes, for which the roadway was originally designed. The median of the existing roadway was designed so that the roadway could easily be expanded to the inside. The expansion project will also include turning lane treatments at major intersections.
(Limit 2,800 characters; approximately 400 words)
TIP Description Guidance (will be used in TIP if the project is selected for funding)

Project Length (Miles)

CSAH 17 (Lexington Avenue NE) Expansion from Pheasant Ridge Drive to CSAH 14 in Blaine
2.3

## Project Funding

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

No

If yes, please identify the source(s)
Federal Amount \$5,132,000.00
Match Amount \$1,283,000.00
Minimum of $20 \%$ of project total
Project Total \$6,415,000.00
Match Percentage 20.0\%
Minimum of 20\%
Compute the match percentage by dividing the match amount by the project total
Source of Match Funds Anoka County Highway Fund
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: 2023

Select 2020 or 2021 for TDM projects only. For all other applications, select 2022 or 2023.
Additional Program Years:
Select all years that are feasible if funding in an earlier year becomes available.

## Project Information: Roadway Projects

County, City, or Lead Agency
Functional Class of Road

Road System
TH, CSAH, MSAS, CO. RD., TWP. RD., CITY STREET
Road/Route No.
i.e., 53 for CSAH 53

Name of Road
Example; 1st ST., MAIN AVE
Zip Code where Majority of Work is Being Performed
(Approximate) Begin Construction Date
(Approximate) End Construction Date

Anoka County Highway Department
A Minor Arterial
CSAH

17

Lexington Avenue NE

55449
04/01/2023
11/02/2023

TERMINI:(Termini listed must be within 0.3 miles of any work)
From:
(Intersection or Address)
Pheasant Ridge NE

To:
(Intersection or Address)
DO NOT INCLUDE LEGAL DESCRIPTION
Or At

Primary Types of Work

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

CSAH 14(125th Avenue NE)

GRADE, AGG BASE, BIT SURF, STORM SEWER, CURB and GUTTER, MEDIAN

## 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 (2015), the 2040 Regional Parks Policy Plan (2015), 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.

From the 2040 TPP, Table 2-1, pages 2.6 through 2.16 as well as text from pages 2.17 to 2.55 .
A. Goal: Transportation System Stewardship. Objectives:
A.Efficiently preserve and maintain the regional transportation system in a state of good repair.
B. Operate the regional transportation system to efficiently and cost-effectively connect people and freight to destinations.

Strategies:
A1.
A2.
B. Goal: Safety and Security.

Objectives:
A.Reduce crashes and improve safety and security for all modes
of passenger travel and freight transport.
List the goals, objectives, strategies, and associated pages:
Strategies:
B1.
B6.
C. Goal: Access to Destinations.

Objectives:
A.Increase the availability of multimodal travel options, especially in congested highway corridors.
B. Increase travel time reliability and predictability for travel on highway and transit systems
E.Improve multimodal travel options for people of all ages and abilities to connect to jobs and other opportunities, particularly for historically underrepresented populations.

Strategies:
C3.
C4.

C7.
C9.
C10.
D. Goal: Competitive Economy.

Objectives:
B. Invest in a multimodal transportation system to attract and retain businesses and residents.
C.Support the region?s economic competitiveness through the efficient movement of freight.

Strategies:
D1.
D4.
E. Goal: Healthy Environment.

Objectives:
A.Reduce transportation-related air emissions.
B.Reduce impacts of transportation construction, operations, and use on the natural, cultural, and developed environments.
C. Increase the availability and attractiveness of transit, bicycling, and walking to encourage healthy communities and active car-free lifestyles.
D.Provide a transportation system that promotes community cohesion and connectivity for people of all ages and abilities, particularly for historically under-represented populations.

Strategies:
E1.
E3.
E4.
E5.
E6.
E7.

# F. Goal: Leveraging Transportation Investments to Guide Land Use. <br> Objectives: <br> C.Encourage local land use design that integrates highways, streets, transit, walking, and bicycling. 

## Strategies:

F1.
F3.
F7.
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:
Anoka County 2030 Transportation Plan, Pages 718 through 7-20.
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.

Check the box to indicate that the project meets this requirement. Yes
5.Applicants that are not 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.
Roadway Expansion: \$1,000,000 to \$7,000,000
Roadway Reconstruction/ Modernization Modernization and Spot Mobility: \$1,000,000 to \$7,000,000
Traffic Management Technologies (Roadway System Management): \$250,000 to \$7,000,000
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, or be substantially working towards, completing 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 applicant is a public agency that employs 50 or more people and has an adopted ADA transition plan that covers the public

The applicant is a public agency that employs 50 or more people and is currently working towards completing an ADA transition plan that covers the public rights of way/transportation. Date process started completion/adoption people and has a completed ADA self-evaluation that covers the public rights of way/transportation.

The applicant is a public agency that employs fewer than 50 people and is working towards completing an ADA self-evaluation that covers the public rights of way/transportation.

Date of anticipated plan completion/adoption
(TDM Applicants Only) The applicant is not a public agency subject to the self-evaluation requirements in Title II of the ADA.
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.

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 Expansion 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 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.

> 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.
> 5.The length of the bridge must equal or exceed 20 feet.
> Check the box to indicate that the project meets this requirement.
> 6. The bridge must have a sufficiency rating less than 80 for rehabilitation projects and less than 50 for replacement projects. Additionally, the bridge must also be classified as structurally deficient or functionally obsolete.
> Check the box to indicate that the project meets this requirement.
> Roadway Expansion, Reconstruction/Modernization and Spot Mobility, 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.

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 <br> Cost

Mobilization (approx. $5 \%$ of total cost)
\$565,000.00
Removals (approx. 5\% of total cost) \$438,000.00

Roadway (grading, borrow, etc.)
\$491,000.00
Roadway (aggregates and paving)
\$1,772,000.00
Subgrade Correction (muck)
Storm Sewer \$948,000.00
Ponds
\$515,000.00
Concrete Items (curb \& gutter, sidewalks, median barriers) \$480,000.00
Traffic Control
\$62,000.00
Striping
\$73,000.00
Signing
\$32,000.00
Lighting \$0.00
Turf - Erosion \& Landscaping
\$256,000.00
Bridge
Retaining Walls \$47,000.00

Noise Wall (not calculated in cost effectiveness measure)
Traffic Signals ..... $\$ 688,000.00$
Wetland Mitigation ..... $\$ 0.00$
Other Natural and Cultural Resource Protection ..... $\$ 0.00$
RR Crossing ..... $\$ 0.00$
Roadway Contingencies ..... $\$ 0.00$
Other Roadway Elements ..... \$28,000.00
Totals ..... \$6,395,000.00
Specific Bicycle and Pedestrian Elements CONSTRUCTION PROJECT ELEMENTS/COST ESTIMATES ..... Cost
Path/Trail Construction ..... $\$ 0.00$
Sidewalk Construction ..... $\$ 0.00$
On-Street Bicycle Facility Construction ..... $\$ 0.00$
Right-of-Way ..... $\$ 0.00$
Pedestrian Curb Ramps (ADA) ..... \$20,000.00
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 ..... \$20,000.00
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 ..... $\$ 0.00$
$\begin{array}{ll}\text { Totals } & \$ 0.00\end{array}$

## 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 | $\$ 6,415,000.00$ |
| :--- | :--- |
| Construction Cost Total | $\$ 6,415,000.00$ |
| Transit Operating Cost Total | $\$ 0.00$ |

## Congestion on adjacent Parallel Routes:

Adjacent Parallel Corridor TH 65

Adjacent Parallel Corridor Start and End Points:

| Start Point: | 105th Avenue NW |
| :--- | :--- |
| End Point: | CSAH 14 |
| Free-Flow Travel Speed: | 53 |
| The Free-Flow Travel Speed is black number. |  |
| Peak Hour Travel Speed: | 44 |

The Peak Hour Travel Speed is red number.
Percentage Decrease in Travel Speed in Peak Hour Compared to Free-Flow:

Upload Level of Congestion Map:
1530634482514_1. LOC Map.pdf

## Principal Arterial Intersection Conversion Study:

Proposed interchange or at-grade project that reduces delay at a High Priority Intersection:
(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: 5460

Existing Manufacturing/Distribution-Related Employment within 11857
Mile:
Existing Post-Secondary Students within 1 Mile: 0
Upload Map 1530634611498_4. RE Map.pdf
Please upload attachment in PDF form.

## Measure C: Current Heavy Commercial Traffic

RESPONSE: Select one for your project, based on the Regional Truck Corridor Study:
Along Tier 1:
Along Tier 2:
Along Tier 3:
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:
Yes

## Measure A: Current Daily Person Throughput

Location
CSAH 17, between Pheasant Ridge and CSAH 12
Current AADT Volume
23600
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 1530634748170_3. TC Map.pdf
Please upload attachment in PDF form.

## Measure B: 2040 Forecast ADT

Use Metropolitan Council model to determine forecast (2040) ADT No volume

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
Met Council ABM (refined by SEH/Haifeng Xiao for use on the Anoka County 2040 Transportation Plan)

37500

## Measure A: Connection to disadvantaged populations and projects benefits, impacts, and mitigation

## Select one:

Project located in Area of Concentrated Poverty with 50\% or more of residents are people of color (ACP50):
(up to $100 \%$ of maximum score)
Project located in Area of Concentrated Poverty:
(up to $80 \%$ of maximum score )
Projects census tracts are above the regional average for population in poverty or population of color:
(up to $60 \%$ of maximum score )
Project located in a census tract that is below the regional average for population in poverty or populations of color or Yes includes children, people with disabilities, or the elderly:
(up to $40 \%$ of maximum score )

1. (0 to 3 points) A successful project is one that has actively engaged low-income populations, people of color, children, persons with disabilities, and the elderly during the project's development with the intent to limit negative impacts on them and, at the same time, provide the most benefits.
Describe how the project has encouraged or will engage the full cross-section of community in decision-making. Identify the communities to be engaged and where in the project development process engagement has occurred or will occur. Elements of quality engagement include: outreach to specific communities and populations that are likely to be directly impacted by the project; techniques to reach out to populations traditionally not involved in the community engagement related to transportation projects; residents or users identifying potential positive and negative elements of the project; and surveys, study recommendations, or plans that provide feedback from populations that may be impacted by the proposed project. If relevant, describe how NEPA or Title VI regulations will guide engagement activities.

Response:
When developing a project, Anoka County reaches out to all members of the community, ranging from residents and businesses located adjacent to the project as well as commuters that may use the facility. For residents and businesses adjacent to the project, our design and environmental impact team meet with them early in the process and provide them a project folder containing information on the project as well as information for their own use such as plats and right-of-way limits. A robust stakeholder engagement plan will also be defined that involves collaboration with city staff, emergency service providers, and directly with the public through a series of project open houses and small group meetings (e.g. city council meetings, chamber of commerce, and citizen advocacy groups). Additional outreach efforts include the use of social media, newsletters, local cable access tv stations, and variable message boards to alert the public of upcoming meetings and/or events. Additionally, our Anoka County Highway Department website contains links for people to contact us for general information or requests, project specifics, and even grievances. Furthermore, the ACHD just recently completed our ADA Transition Plan, which is readily available at various outlets (including websites) to maximize its usefulness for us in reaching out to the public on how we can improve our projects.

Response:
CSAH 17 (Lexington Avenue) is an important regional route because it serves as a north/south arterial corridor through the eastern part of Anoka County. CSAH 17 connects several communities (East Bethel, Columbus, Ham Lake, Blaine, Circle Pines and Lexington) to l-35W. The study area includes children, people with disabilities, people of color, elderly residents, and low-income populations; although not in concentrations recognized by the Metropolitan Council. The CSAH 17 project is located in an area defined as a Transit Market Area IV by the Met Council (i.e. an area that supports dial-a-ride and peak period express/commuter service). Therefore, this project will improve multimodal connectivity between transit facilities and benefit populations that depend on transit services to access job centers, shopping, recreational facilities, educational opportunities, and other destinations throughout the Twin Cities. The proposed roadway improvements and existing trail provide safety, security, and travel time benefits for all motorized and non-motorized users, including children, the elderly, and the disabled, and will be compliant with the Americans with Disabilities Act (ADA).
(Limit 2,800 characters; approximately 400 words)
3.(-3 to 0 points) Describe any negative externalities created by the project along with measures that will be taken to mitigate them. Negative externalities can result in a reduction in points, but mitigation of externalities can offset reductions.
Below is a list of negative impacts. Note that this is not an exhaustive list.
Increased difficulty in street crossing caused by increased roadway width, increased traffic speed, wider turning radii, or other elements that negatively impact pedestrian access.
Increased noise.
Decreased pedestrian access through sidewalk removal / narrowing, placement of barriers along the walking path, increase in auto-oriented curb cuts, etc.
Project elements that are detrimental to location-based air quality by increasing stop/start activity at intersections, creating vehicle idling areas, directing an increased number of vehicles to a particular point, etc.
Increased speed and/or cut-through traffic.
Removed or diminished safe bicycle access.
Inclusion of some other barrier to access to jobs and other destinations.
Displacement of residents and businesses.
Construction/implementation impacts such as dust; noise; reduced access for travelers and to businesses; disruption of utilities; and eliminated street crossings. These tend to be temporary.
Other

None.
(Limit 2,800 characters; approximately 400 words)
Upload Map
1530635069858_2. SE Map.pdf

## Measure B: Affordable Housing

|  | Segment Length <br> (For stand-alone <br> projects, enter <br> population from | Segment <br> Length/Total <br> Regional Economy <br> map) within each <br> City/Township | Project Length | Score |
| :---: | :---: | :---: | :---: | :---: | | Housing Score |
| :---: |
| Multiplied by |
| Segment percent |

## Total Project Length

Total Project Length (as entered in the "Project Information" form) 2.3

## Affordable Housing Scoring

Total Project Length (Miles) or Population 2.3
Total Housing Score 83.0

## Affordable Housing Scoring

## Measure A: Infrastructure Age

Year of Original
Roadway Construction or Most Recent Reconstruction

$$
2004.0
$$

2004.0

Segment Length
Calculation
Calculation 2
2.3
4609.2
2004.0

2
4609
2004

## Average Construction Year

## Total Segment Length (Miles)

Total Segment Length 2.3

## Measure A: Congestion Reduction/Air Quality

|  |  |  |  |  | EXPLANATIO |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total Peak | Total Peak | Total Peak |  |  | N of |  |
| Hour Delay | Hour Delay | Hour Delay |  | Total Peak | methodology |  |
| Per Vehicle | Per Vehicle | Per Vehicle | Volume | Hour Delay | used to | Synchro or |
| Without The Project | With The Project | Reduced by Project | (Vehicles per hour) | Reduced by | calculate railroad | HCM Reports |
| (Seconds/Veh | (Seconds/Veh | (Seconds/Veh |  | Project: | crossing |  |
| icle) | icle) | icle) |  |  | delay, if |  |
|  |  |  |  |  | applicable. |  |

15306408667
64_1-2 CSAH
17 at 12
Synchro
DELAY
Reports.pdf

## Vehicle Delay Reduced

## 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):

| 3.38 | 3.18 | 0.2 |
| ---: | ---: | ---: |
| $\mathbf{3}$ | $\mathbf{3}$ | $\mathbf{0}$ |

## Total

| Total Emissions Reduced: | 0.2 |
| :--- | :--- |
|  | 1530641592952 _3-4 CSAH 17 at 12 Synchro EMISSION |
| Upload Synchro Report | Reports.pdf |

# Measure B: Roadway projects that are constructing new roadway segments, but do not include railroad grade-separation elements (for Roadway Expansion applications only): <br> Total (CO, NOX, and VOC) <br> Peak Hour Emissions without the Project (Kilograms): <br> Total (CO, NOX, and VOC) <br> Peak Hour Emissions with the Project (Kilograms): <br> Total (CO, NOX, and VOC) <br> Peak Hour Emissions <br> Reduced by the Project (Kilograms): <br> 0 <br> 0 <br> 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 0
Produced on New Roadway (Kilograms):
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:
CMF Used: 0.85

Safety Improvements include:

Expand the existing 4-lane divided roadway to a 6lane divided roadway.

Safety Improvements include:
Rationale for Crash Modification Selected:
(Limit 1400 Characters; approximately 200 words)
Project Benefit (\$) from B/C Ratio: 0.26

Worksheet Attachment
1531164109420_5- CSAH 17 (Lexington Ave) - N of Pheasant Ridge Dr.pdf

Please upload attachment in PDF form.
Expand the existing 4-lane divided roadway to a 6lane divided roadway. CMF 7924 of 0.85 (15\% reduction) applied to all crash severities and types

## Roadway projects that include railroad grade-separation elements:

## Measure A: Multimodal Elements and Existing Connections

Within the study area, an existing multiuse trail exists along the west side of CSAH 17. This trail corridor has long been identified in the Anoka County Transportation Plan and is categorized as a Tier II trail alignment on the Regional Bicycle Transportation Network (RBTN).
No fixed transit service is provided on CSAH 17 within the project limits. However, the project is located in an area designated as a "Transit Market Area IV" by the Met Council (i.e. an area that supports dial-a-ride and peak period express/commuter service). The CSAH 17 capacity improvements will achieve much more than supporting this designation. Nearby bus stops (14831 and 14771) on Route 250, located approximately 0.6 miles south of the project area, provide a multi-modal connection to community amenities and provide greater opportunities to access jobs, shopping/retail, recreational, and public services for individuals without having to depend on a vehicle.

The improvements will provide a more comfortable, safe, and reliable travel experience for all modes. Bicycles, pedestrians, and general traffic will be separated throughout the project area, which also continues both north and south along CSAH 17. The project will also include ADA compliant curb ramps to allow easy access for disabled (wheelchairs) users.

## 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)Layout (30 Percent of Points)
Layout should include proposed geometrics and existing and proposed right-of-way boundaries.

Layout approved by the applicant and all impacted jurisdictions (i.e., cities/counties that the project goes through or agencies that maintain the roadway(s)). A PDF of the layout must be attached along with letters from each jurisdiction to receive points.
$100 \%$

Attach Layout
1531415529843_7. CSAH 17_PheasantRidge-CSAH14_07-12-2018.pdf

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

50\%

## Attach Layout

Please upload attachment in PDF form.
Layout has not been started
$0 \%$

Anticipated date or date of completion
2)Review of Section 106 Historic Resources (20 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

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

Yes

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
3)Right-of-Way (30 Percent of Points)

Right-of-way, permanent or temporary easements either not
required or all have been acquired

Yes

100\%
Right-of-way, permanent or temporary easements required, plat, legal descriptions, or official map complete

50\%
Right-of-way, permanent or temporary easements required, parcels identified

25\%
Right-of-way, permanent or temporary easements required, parcels not all identified

0\%
Anticipated date or date of acquisition
4)Railroad Involvement (20 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\%
Anticipated date or date of executed Agreement

## Measure A: Cost Effectiveness

| Total Project Cost (entered in Project Cost Form): | $\$ 6,415,000.00$ |
| :--- | :--- |
| Enter Amount of the Noise Walls: | $\$ 0.00$ |
| Total Project Cost subtract the amount of the noise walls: | $\$ 6,415,000.00$ |
| Points Awarded in Previous Criteria |  |
| Cost Effectiveness | $\$ 0.00$ |

## Other Attachments

| File Name | Description | File Size |
| :--- | :--- | :---: |
| 1-Page Project Information Sheet - 1-Page Project Information Sheet <br> CSAH 17 Expansion in Blaine.pdf  | 450 KB |  |
| Anoka County Resolution of Support for | Anoka County Resolution of Support for |  |
| CSAH 17.pdf | 668 KB |  |
| CSAH 17 Letter of Support from | Letter of Support from Blaine for CSAH | 278 KB |
| Blaine.pdf | 17 | 296 KB |
| PROJECT Area Map - CSAH 17 | Project Area Map |  |






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| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ${ }^{17}$ | 中t |  | ${ }^{711}$ | 中4 | F＇ | ${ }^{7}$ | 中 ${ }^{\text {a }}$ |  | ${ }^{*}$ | 中 ${ }^{\text {a }}$ |  |
| Traffic Volume（vph） | 108 | 132 | 167 | 116 | 117 | 74 | 255 | 1024 | 90 | 43 | 325 | 42 |
| Future Volume（vph） | 108 | 132 | 167 | 116 | 117 | 74 | 255 | 1024 | 90 | 43 | 325 | 42 |
| Ideal Flow（vphpl） | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length（ft） | 375 |  | 0 | 450 |  | 325 | 325 |  | 0 | 500 |  | 0 |
| Storage Lanes | 2 |  | 0 | 2 |  | 1 | 1 |  | 0 | 1 |  | 0 |
| Taper Length（ft） | 135 |  |  | 165 |  |  | 300 |  |  | 165 |  |  |
| Satd．Flow（prot） | 3433 | 3242 | 0 | 3433 | 3539 | 1583 | 1770 | 3497 | 0 | 1770 | 3479 | 0 |
| Flt Permitted | 0.950 |  |  | 0.554 |  |  | 0.510 |  |  | 0.143 |  |  |
| Satd．Flow（perm） | 3433 | 3242 | 0 | 2002 | 3539 | 1583 | 950 | 3497 | 0 | 266 | 3479 | 0 |
| Right Turn on Red |  |  | Yes |  |  | Yes |  |  | Yes |  |  | Yes |
| Satd．Flow（RTOR） |  | 183 |  |  |  | 91 |  | 20 |  |  | 31 |  |
| Link Speed（mph） |  | 30 |  |  | 30 |  |  | 30 |  |  | 30 |  |
| Link Distance（ft） |  | 915 |  |  | 814 |  |  | 838 |  |  | 962 |  |
| Travel Time（s） |  | 20.8 |  |  | 18.5 |  |  | 19.0 |  |  | 21.9 |  |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 101\％ | 101\％ | 101\％ | 101\％ | 101\％ | 101\％ | 101\％ | 101\％ | 101\％ | 101\％ | 101\％ | 101\％ |
| Shared Lane Traffic（\％） |  |  |  |  |  |  |  |  |  |  |  |  |
| Lane Group Flow（vph） | 119 | 328 | 0 | 127 | 128 | 81 | 280 | 1223 | 0 | 47 | 403 | 0 |
| Turn Type | Prot | NA |  | Perm | NA | Perm | Perm | NA |  | Perm | NA |  |
| Protected Phases | 7 | 4 |  |  | 8 |  |  | 2 |  |  | 6 |  |
| Permitted Phases |  |  |  | 8 |  | 8 | 2 |  |  | 6 |  |  |
| Minimum Split（s） | 8.0 | 20.0 |  | 20.0 | 20.0 | 20.0 | 20.0 | 20.0 |  | 20.0 | 20.0 |  |
| Total Split（s） | 8.0 | 28.0 |  | 20.0 | 20.0 | 20.0 | 32.0 | 32.0 |  | 32.0 | 32.0 |  |
| Total Split（\％） | 13．3\％ | 46．7\％ |  | 33．3\％ | 33．3\％ | 33．3\％ | 53．3\％ | 53．3\％ |  | 53．3\％ | 53．3\％ |  |
| Yellow Time（s） | 3.5 | 3.5 |  | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |  | 3.5 | 3.5 |  |
| All－Red Time（s） | 0.5 | 0.5 |  | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |  | 0.5 | 0.5 |  |
| Lost Time Adjust（s） | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 |  |
| Total Lost Time（s） | 4.0 | 4.0 |  | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |  | 4.0 | 4.0 |  |
| Lead／Lag | Lag |  |  | Lead | Lead | Lead |  |  |  |  |  |  |
| Lead－Lag Optimize？ | Yes |  |  | Yes | Yes | Yes |  |  |  |  |  |  |
| Act Effct Green（s） | 4.0 | 24.0 |  | 16.0 | 16.0 | 16.0 | 28.0 | 28.0 |  | 28.0 | 28.0 |  |
| Actuated g／C Ratio | 0.07 | 0.40 |  | 0.27 | 0.27 | 0.27 | 0.47 | 0.47 |  | 0.47 | 0.47 |  |
| v／c Ratio | 0.52 | 0.23 |  | 0.24 | 0.14 | 0.17 | 0.63 | 0.74 |  | 0.38 | 0.25 |  |
| Control Delay | 35.7 | 5.8 |  | 18.7 | 17.3 | 5.1 | 20.1 | 16.3 |  | 21.4 | 9.3 |  |
| Queue Delay | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 |  |
| Total Delay | 35.7 | 5.8 |  | 18.7 | 17.3 | 5.1 | 20.1 | 16.3 |  | 21.4 | 9.3 |  |
| LOS | D | A |  | B | B | A | C | B |  | C | A |  |
| Approach Delay |  | 13.8 |  |  | 14.9 |  |  | 17.0 |  |  | 10.6 |  |
| Approach LOS |  | B |  |  | B |  |  | B |  |  | B |  |
| Stops（vph） | 103 | 85 |  | 88 | 84 | 15 | 194 | 852 |  | 35 | 191 |  |
| Fuel Used（gal） | 2 | 3 |  | 2 | 2 | 1 | 4 | 16 |  | 1 | 5 |  |
| CO Emissions（g／hr） | 150 | 208 |  | 117 | 114 | 44 | 267 | 1105 |  | 49 | 318 |  |
| NOx Emissions（g／hr） | 29 | 41 |  | 23 | 22 | 9 | 52 | 215 |  | 10 | 62 |  |
| VOC Emissions（g／hr） | 35 | 48 |  | 27 | 26 | 10 | 62 | 256 |  | 11 | 74 |  |
| Dilemma Vehicles（\＃） | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 |  |
| Queue Length 50th（ft） | 22 | 16 |  | 18 | 18 | 0 | 72 | 175 |  | 10 | 39 |  |
| Queue Length 95th（ft） | \＃45 | 38 |  | 38 | 36 | 24 | \＃151 | 246 |  | 40 | 63 |  |
| Internal Link Dist（ft） |  | 835 |  |  | 734 |  |  | 758 |  |  | 882 |  |


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| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Turn Bay Length (ft) | 375 |  |  | 450 |  | 325 | 325 |  |  | 500 |  |  |
| Base Capacity (vph) | 228 | 1406 |  | 533 | 943 | 488 | 443 | 1642 |  | 124 | 1640 |  |
| Starvation Cap Reductn | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 |  |
| Spillback Cap Reductn | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 |  |
| Storage Cap Reductn | 0 | 0 |  | 0 |  | 0 | 0 | 0 |  | 0 | 0 |  |
| Reduced v/c Ratio | 0.52 | 0.23 |  | 0.24 | 0.14 | 0.17 | 0.63 | 0.74 |  | 0.38 | 0.25 |  |
| Intersection Summary |  |  |  |  |  |  |  |  |  |  |  |  |
| Area Type: Other |  |  |  |  |  |  |  |  |  |  |  |  |
| Cycle Length: 60 |  |  |  |  |  |  |  |  |  |  |  |  |
| Actuated Cycle Length: 60 |  |  |  |  |  |  |  |  |  |  |  |  |
| Offset: 0 (0\%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green |  |  |  |  |  |  |  |  |  |  |  |  |
| Natural Cycle: 60 |  |  |  |  |  |  |  |  |  |  |  |  |
| Control Type: Pretimed |  |  |  |  |  |  |  |  |  |  |  |  |
| Maximum v/c Ratio: 0.74 |  |  |  |  |  |  |  |  |  |  |  |  |
| Intersection Signal Delay: 15.2 |  |  |  |  | ntersection LOS: B |  |  |  |  |  |  |  |
| Intersection Capacity Utilization 60.6\% |  |  |  |  | ICU Level of Service B |  |  |  |  |  |  |  |
| Analysis Period (min) 15 |  |  |  |  |  |  |  |  |  |  |  |  |
| \# 95th percentile volume exceeds capacity, queue may be longer. |  |  |  |  |  |  |  |  |  |  |  |  |
| Queue shown is maximum after two cycles. |  |  |  |  |  |  |  |  |  |  |  |  |

Splits and Phases: $\quad 3$ : CSH 17/CSAH 17 \& 109th


3: CSH 17/CSAH 17 \& 109th

| Direction | All |
| :--- | ---: |
| Future Volume $(\mathrm{vph})$ | 2518 |
| Control Delay $\mathrm{Veh}(\mathrm{s} / \mathrm{v})$ | 15 |
| Total Delay / Veh $(\mathrm{s} / \mathrm{v})$ | 15 |


|  | 4 | $\rightarrow$ |  |  |  | 4 | 4 | $\dagger$ | \％ | ＊ | $\dagger$ | $\pm$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ＊ | 中t |  | 41 | 中4 | 「 | ${ }^{7}$ | 性\％ |  | ${ }^{7}$ | 虾 |  |
| Traffic Volume（vph） | 108 | 132 | 167 | 116 | 117 | 74 | 255 | 1024 | 90 | 43 | 325 | 42 |
| Future Volume（vph） | 108 | 132 | 167 | 116 | 117 | 74 | 255 | 1024 | 90 | 43 | 325 | 42 |
| Ideal Flow（vphpl） | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length（ ft ） | 375 |  | 0 | 450 |  | 325 | 325 |  | 0 | 500 |  | 0 |
| Storage Lanes | 2 |  | 0 | 2 |  | 1 | 1 |  | 0 | 1 |  | 0 |
| Taper Length（ft） | 135 |  |  | 165 |  |  | 300 |  |  | 165 |  |  |
| Satd．Flow（prot） | 3433 | 3242 | 0 | 3433 | 3539 | 1583 | 1770 | 5024 | 0 | 1770 | 4999 | 0 |
| Flt Permitted | 0.950 |  |  | 0.554 |  |  | 0.506 |  |  | 0.166 |  |  |
| Satd．Flow（perm） | 3433 | 3242 | 0 | 2002 | 3539 | 1583 | 943 | 5024 | 0 | 309 | 4999 | 0 |
| Right Turn on Red |  |  | Yes |  |  | Yes |  |  | Yes |  |  | Yes |
| Satd．Flow（RTOR） |  | 183 |  |  |  | 91 |  | 32 |  |  | 46 |  |
| Link Speed（mph） |  | 30 |  |  | 30 |  |  | 30 |  |  | 30 |  |
| Link Distance（ft） |  | 915 |  |  | 814 |  |  | 838 |  |  | 962 |  |
| Travel Time（s） |  | 20.8 |  |  | 18.5 |  |  | 19.0 |  |  | 21.9 |  |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 101\％ | 101\％ | 101\％ | 101\％ | 101\％ | 101\％ | 101\％ | 101\％ | 101\％ | 101\％ | 101\％ | 101\％ |
| Shared Lane Traffic（\％） |  |  |  |  |  |  |  |  |  |  |  |  |
| Lane Group Flow（vph） | 119 | 328 | 0 | 127 | 128 | 81 | 280 | 1223 | 0 | 47 | 403 | 0 |
| Turn Type | Prot | NA |  | Perm | NA | Perm | Perm | NA |  | Perm | NA |  |
| Protected Phases | 7 | 4 |  |  | 8 |  |  | 2 |  |  | 6 |  |
| Permitted Phases |  |  |  | 8 |  | 8 | 2 |  |  | 6 |  |  |
| Minimum Split（s） | 8.0 | 20.0 |  | 20.0 | 20.0 | 20.0 | 20.0 | 20.0 |  | 20.0 | 20.0 |  |
| Total Split（s） | 8.0 | 28.0 |  | 20.0 | 20.0 | 20.0 | 32.0 | 32.0 |  | 32.0 | 32.0 |  |
| Total Split（\％） | 13．3\％ | 46．7\％ |  | 33．3\％ | 33．3\％ | 33．3\％ | 53．3\％ | 53．3\％ |  | 53．3\％ | 53．3\％ |  |
| Yellow Time（s） | 3.5 | 3.5 |  | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |  | 3.5 | 3.5 |  |
| All－Red Time（s） | 0.5 | 0.5 |  | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |  | 0.5 | 0.5 |  |
| Lost Time Adjust（s） | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 |  |
| Total Lost Time（s） | 4.0 | 4.0 |  | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |  | 4.0 | 4.0 |  |
| Lead／Lag | Lag |  |  | Lead | Lead | Lead |  |  |  |  |  |  |
| Lead－Lag Optimize？ | Yes |  |  | Yes | Yes | Yes |  |  |  |  |  |  |
| Act Effct Green（s） | 4.0 | 24.0 |  | 16.0 | 16.0 | 16.0 | 28.0 | 28.0 |  | 28.0 | 28.0 |  |
| Actuated g／C Ratio | 0.07 | 0.40 |  | 0.27 | 0.27 | 0.27 | 0.47 | 0.47 |  | 0.47 | 0.47 |  |
| v／c Ratio | 0.52 | 0.23 |  | 0.24 | 0.14 | 0.17 | 0.64 | 0.52 |  | 0.33 | 0.17 |  |
| Control Delay | 35.7 | 5.8 |  | 18.7 | 17.3 | 5.1 | 20.4 | 11.9 |  | 17.9 | 8.4 |  |
| Queue Delay | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 |  |
| Total Delay | 35.7 | 5.8 |  | 18.7 | 17.3 | 5.1 | 20.4 | 11.9 |  | 17.9 | 8.4 |  |
| LOS | D | A |  | B | B | A | C | B |  | B | A |  |
| Approach Delay |  | 13.8 |  |  | 14.9 |  |  | 13.5 |  |  | 9.4 |  |
| Approach LOS |  | B |  |  | B |  |  | B |  |  | A |  |
| Stops（vph） | 103 | 85 |  | 88 | 84 | 15 | 196 | 712 |  | 32 | 174 |  |
| Fuel Used（gal） | 2 | 3 |  | 2 | 2 | 1 | 4 | 14 |  | 1 | 4 |  |
| CO Emissions（g／hr） | 150 | 208 |  | 117 | 114 | 44 | 268 | 979 |  | 46 | 306 |  |
| NOx Emissions（g／hr） | 29 | 41 |  | 23 | 22 | 9 | 52 | 191 |  | 9 | 60 |  |
| VOC Emissions（g／hr） | 35 | 48 |  | 27 | 26 | 10 | 62 | 227 |  | 11 | 71 |  |
| Dilemma Vehicles（\＃） | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 |  |
| Queue Length 50th（ft） | 22 | 16 |  | 18 | 18 | 0 | 72 | 103 |  | 10 | 25 |  |
| Queue Length 95th（ft） | \＃45 | 38 |  | 38 | 36 | 24 | \＃154 | 138 |  | 36 | 40 |  |
| Internal Link Dist（ft） |  | 835 |  |  | 734 |  |  | 758 |  |  | 882 |  |


|  |  |  |  | \% |  |  |  | 4 | $p$ | , | 1 | $\downarrow$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Turn Bay Length (ft) | 375 |  |  | 450 |  | 325 | 325 |  |  | 500 |  |  |
| Base Capacity (vph) | 228 | 1406 |  | 533 | 943 | 488 | 440 | 2361 |  | 144 | 2357 |  |
| Starvation Cap Reductn | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 |  |
| Spillback Cap Reductn | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 |  |
| Storage Cap Reductn | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 |  |
| Reduced v/c Ratio | 0.52 | 0.23 |  | 0.24 | 0.14 | 0.17 | 0.64 | 0.52 |  | 0.33 | 0.17 |  |
| Intersection Summary |  |  |  |  |  |  |  |  |  |  |  |  |
| Area Type: Other |  |  |  |  |  |  |  |  |  |  |  |  |
| Cycle Length: 60 |  |  |  |  |  |  |  |  |  |  |  |  |
| Actuated Cycle Length: 60 |  |  |  |  |  |  |  |  |  |  |  |  |
| Offset: 0 (0\%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green |  |  |  |  |  |  |  |  |  |  |  |  |
| Natural Cycle: 60 |  |  |  |  |  |  |  |  |  |  |  |  |
| Control Type: Pretimed |  |  |  |  |  |  |  |  |  |  |  |  |
| Maximum v/c Ratio: 0.64 |  |  |  |  |  |  |  |  |  |  |  |  |
| Intersection Signal Delay: 13.0 |  |  |  |  | Intersection LOS: B |  |  |  |  |  |  |  |
| Intersection Capacity Utilization 51.1\% |  |  |  |  | ICU Level of Service A |  |  |  |  |  |  |  |
| Analysis Period (min) 15 |  |  |  |  |  |  |  |  |  |  |  |  |
| \# 95th percentile volume exceeds capacity, queue may be longer. |  |  |  |  |  |  |  |  |  |  |  |  |
| Queue shown is maximum after two cycles. |  |  |  |  |  |  |  |  |  |  |  |  |

Splits and Phases: $\quad 3$ : CSH 17/CSAH 17 \& 109th


## 3: CSH 17/CSAH 17 \& 109th

| Direction | All |
| :--- | ---: |
| Future Volume (vph) | 2518 |
| Control Delay / Veh $(\mathrm{s} / \mathrm{v})$ | 13 |
| Total Delay / Veh $(\mathrm{s} / \mathrm{v})$ | 13 |

3: CSH 17/CSAH 17 \& 109th

| Direction | All |
| :--- | ---: |
| Future Volume (vph) | 2518 |
| Total Delay $/$ Veh (s/v) | 15 |
| CO Emissions $(\mathrm{kg})$ | 2.37 |
| NOx Emissions | $\mathrm{kg})$ |
| VOC Emissions $(\mathrm{kg})$ | 0.46 |
|  | 0.55 |

## 3: CSH 17/CSAH 17 \& 109th

| Direction | All |
| :--- | ---: |
| Future Volume $(\mathrm{vph})$ | 2518 |
| Total Delay / Veh $(\mathrm{s} / \mathrm{v})$ | 13 |
| CO Emissions $(\mathrm{kg})$ | 2.23 |
| NOx Emissions $(\mathrm{kg})$ | 0.43 |
| VOC Emissions $(\mathrm{kg})$ | 0.52 |



Amortizing...

| Year | Crash Benefits |  | Present Worth Benetits |  | Present Worth Costs |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2018 | \$ | 96,018 | \$ | 96,018 | \$ | 6,415,000 |
| 2019 | \$ | 99,013 | \$ | 94,750 |  |  |
| 2020 | \$ | 102,103 | \$ | 93,498 |  |  |
| 2021 | \$ | 105,288 | \$ | 92,264 |  |  |
| 2022 | \$ | 108,573 | \$ | 91,045 |  |  |
| 2023 | \$ | 111,961 | \$ | 89,843 |  |  |
| 2024 | \$ | 115,454 | \$ | 88,657 |  |  |
| 2025 | \$ | 119,056 | \$ | 87,486 |  |  |
| 2026 | \$ | 122,771 | \$ | 86,330 |  |  |
| 2027 | \$ | 126,601 | \$ | 85,190 |  |  |
| 2028 | \$ | 130,551 | \$ | 84,065 |  |  |
| 2029 | \$ | 134,624 | \$ | 82,955 |  |  |
| 2030 | \$ | 138,824 | \$ | 81,860 |  |  |
| 2031 | \$ | 143,156 | \$ | 80,779 |  |  |
| 2032 | \$ | 147,622 | \$ | 79,712 |  |  |
| 2033 | \$ | 152,228 | \$ | 78,659 |  |  |
| 2034 | \$ | 156,978 | \$ | 77,621 |  |  |
| 2035 | \$ | 161,875 | \$ | 76,596 |  |  |
| 2036 | \$ | 166,926 | \$ | 75,584 |  |  |
| 2037 | \$ | 172,134 | \$ | 74,586 |  |  |
| 0 | \$ | - | \$ | - |  |  |
| 0 | \$ | - | \$ | - |  |  |
| 0 | \$ | - | \$ | - |  |  |
| 0 | \$ | - | \$ | - |  |  |
| 0 | \$ | - | \$ | - |  |  |
| 0 | \$ | - | \$ | - |  |  |
| 0 | \$ | - | \$ | - |  |  |
| 0 | \$ | - | \$ | - |  |  |
| 0 | \$ | - | \$ | - |  |  |
| 0 | \$ | - | \$ | - |  |  |
| 0 | \$ | - | \$ | - |  |  |
| Totals = |  |  | \$ | $\begin{aligned} & 1,697,498 \\ & (\mathrm{~B}) \end{aligned}$ | \$ | $\begin{aligned} & 415,000 \\ & (C) \end{aligned}$ |

year $(n)=1,2,3, \ldots$.
discount rate (i) $=7 \%$
Crash Benefits
$\left(\right.$ @ year n) $=(\text { Crash Benefits })_{n-1} \quad$ X $\quad(1+$ Traffic Growth Factor $)$

Present Worth Benefits (@year n) $\left(\right.$ Crash Benefits $_{n} \quad$ X $\quad 1 /(1+\text { Discount Rate })^{n}$

| Compare | CMF | CRF(\%) | Quality | Crash Type | Crash Severity | Area <br> Type | Reference | Comments |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0.85 | 15 | manar | All | All | Urban | Park et al., 2015 |  |
| $\square$ | 0.847 | 15.3 |  | All | All | Urban | Park et al., 2015 | CMF after 2nd year of [read more] |
| $\square$ | 0.798 | 20.2 | hather | All | All | Urban | Park et al., 2015 | CMF after 3rd year of [read more] |
| $\square$ | 0.802 | 19.8 | bherine | All | All | Urban | Park et al., 2015 | CMF after 4th year of [read more] |
| $\square$ | 0.761 | 23.9 | birmers | All | K,A,B,C | Urban | $\begin{gathered} \text { Park et } \\ \text { al., } \\ 2015 \end{gathered}$ |  |
| $\square$ | 0.755 | 24.5 | mirkire | All | K, A, B, C | Urban | Park et al., 2015 | CMF after 2nd year of [read more] |
| $\square$ | 0.696 | 30.4 | mixher | All | K,A,B,C | Urban | Park et al., 2015 | CMF after 3rd year of [read more] |
| $\square$ | 0.702 | 29.8 | Mrexime | All | K, A, B, C | Urban | Park et al., 2015 | CMF after 4th year of. [read more] |
| $\square$ | 0.809 | 19.1 | \%hmer | All | All | Urban | Park et al., 2015 | LOS change from $E$ (4 <br> [read more] |
| $\square$ | 0.657 | 34.3 | mincore | All | K, A, B, C | Urban | Park et al., 2015 | LOS change from $E$ (4 [read more] |
| $\square$ | 0.737 | 26.3 | Hencors | All | All | Urban | Park et al., 2015 | Shoulder width of 6 feet [read more] |

## CRASH MODIFICATION FACTORS CLEARINGHOUSE

## CMF / CRF Details

CMF ID: 7924

Increase from 4 lanes to 6 lanes
Description:
Prior Condition: 4 lane roadway
Category: Roadway
Study: Assessment of safety effects for widening urban roadways in developing crash modification functions using nonlinearizing link functions, Park et al., 2015

```
Star Quality Rating:
```

鼠鼠 [View score details]

| Crash Modification Factor (CMF) |  |
| ---: | :--- |
| Value: | 0.85 |
| Adjusted Standard Error: |  |
| Unadjusted Standard Error: | 0.073 |


| Crash Reduction Factor (CRF) |  |
| ---: | :--- |
| Value: | 15 (This value indicates a decrease in crashes) |
| Adjusted Standard Error: |  |

## Applicability

| Crash Type: | All |
| ---: | :--- | :--- |
| Crash Severity: | All |
| Roadway Types: | Not specified |
| Number of Lanes: |  |
| Road Division Type: |  |
| Speed Limit: | $40-60$ |
| Area Type: | Urban |
| Traffic Volume: | 20500 to 60683 Annual Average Daily Traffic (AADT) |
| Time of Day: |  |

If countermeasure is intersection-based

Intersection Type:

Intersection Geometry:

Traffic Control:

Major Road Traffic Volume:

Minor Road Traffic Volume:

## Development Details

Date Range of Data Used:

Municipality:

State:

2003 to 2012

FL

| Country: |  |
| :---: | :---: |
| Type of Methodology Used: | Before/after using empirical Bayes or full Bayes |
| Sample Size Used: |  |
| Other Details |  |
| Included in Highway Safety Manual? | No |
| Date Added to Clearinghouse: | Mar-08-2016 |
| Comments: |  |

This site is funded by the U.S. Department of Transportation Federal Highway Administration and maintained by the University of North Carolina Highway Safety Research Center

The information contained in the Crash Modification Factors (CMF) Clearinghouse is disseminated under the sponsorship of the U.S. Department of Transportation in the interest of information exchange. The U.S. Government assumes no liability for the use of the information contained in the CMF Clearinghouse. The information contained in the CMF Clearinghouse does not constitute a standard, specification, or regulation, nor is it a substitute for sound engineering judgment.


Project Area Map: CSAH 17 Expansion in Blaine


PROJECT NAME: CSAH 17 (Lexington Avenue NE) Expansion to 6-lanes
GEOGRAPHIC LIMITS: 2.3 miles. From north of Pheasant Ridge Ave. NE to CSAH 14 (125th Avenue NE)
PROJECT LOCATION: City of Blaine, Anoka County
APPLICANT: Anoka County Highway Department
FUNDING REQUEST: \$5,132,000
TOTAL PROJECT COST: \$6,415,000

## PROJECT DESCRIPTION

CSAH 17, an A Minor Expander, is currently a four-lane divided roadway that has experienced substantial traffic growth in recent years and needs expansion to a six-lanes, for which the roadway was originally designed. The median of the existing roadway was designed so that the roadway could easily be expanded to the inside. The expansion project will also include turn-lane treatments at major intersections.


GEOMETRY
EXISTING: 4-lane Divided
Daily Traffic Capacity: 34,000*

PROPOSED: 6-lane Divided
Daily Traffic Capacity: 53,200*

## PROJECT BENEFITS

Reduction in Congestion:

- 2017 Daily Traffic: 23,600 (LOS C)
- 2040 Daily Traffic: 37,500 EXCEEDS 34,000 capacity resulting in LOS F travel conditions.


[^0]
# BOARD OF COUNTY COMMISSIONERS 

## AUTHORIZING SUBMITTAL OF FEDERAL FUNDING APPLICATION FOR THE CSAH 17 EXPANSION PROJECT

WHEREAS, CSAH 17 (Lexington Avenue NE) is an "A" Minor Arterial Expander route that provides an important north-south transportation connection in Anoka County; and,

WHEREAS, traffic volumes on CSAH 17 have been increasing over the past decade and are expected to continue to increase in the future as the area continues to grow; and,

WHEREAS, existing and future traffic volumes are such that congestion is and will continue to negatively impact the ability of the corridor to move traffic; and,

WHEREAS, existing and future traffic volumes are such that safety is a concern at intersections and along some segments of the corridor; and,

WHEREAS, Anoka County and the City of Blaine have worked together in the past to make capacity and safety improvements to other segments of CSAH 17 to serve long-term growth and development along the corridor:

NOW, THEREFORE, BE IT RESOLVED that the Anoka County Highway Department is hereby authorized to submit an application through the Metropolitan Council's 2018 Regional Solicitation program to the Transportation Advisory Board to receive federal transportation funds to make capacity and safety improvements on CSAH 17 (Lexington Avenue NE) from Pheasant Ridge Avenue NE to CSAH 14 ( $125^{\text {th }}$ Avenue NE) in the Roadway Expansion category.

| STATE OF MINNESOTA) COUNTY OF ANOKA ) SS |  | YES | NO |
| :---: | :---: | :---: | :---: |
| I, Jerry Soma, County Administrator, Anoka County, Minnesota, hereby certify that I have compared the foregoing copy of the | DISTRICT \#1 - Look | X |  |
| resolution of the county board of said county with the original record thereof on file in the Administration Office, Anoka County, | DISTRICT \#2 - Brasistad | X |  |
| Minnesota, as stated in the minutes of the proceedings of said board at a meeting duly held | District \#3 - West | X |  |
| correct copy of said original record and of the whole thereof, and that said resolution was duly passed by said board at said meeting. | DISTRICT \#4 - KORDIAK | X |  |
| Witness my hand and seal this 22nd day <br> of May 2 | District \#5 - Gamache | X |  |
| , | DISTRICT \#6-SIVARAJAH | X |  |
| JERRY SOMA COUNTY ADMINISTRATOR | DISTRICT \#7 - Schulte | X |  |

July 3, 2018

Doug Fischer, PE
County Engineer
Anoka County Highway Department
1440 Bunker Lake Blvd. NW
Andover, MN 55304

Subject: Letter of Support for CSAH 17 Corridor Improvements

Dear Mr. Fischer,
This letter documents the City of Blaine's support for Anoka County's funding request to the Metropolitan Council for the 2018 Regional Solicitation for 2022-2023 funding for the expansion of CSAH 17 (Lexington Avenue NE). to six lanes from Pheasant Ridge to CSAH 14 ( $125^{\text {th }}$ Avenue NE).

Blaine looks forward to continued cooperation with Anoka County as this project moves forward and as we work together to improve travel mobility and safety in Anoka County. If you have any questions or require additional information, please reach out to me at 763-785.6121

Sincerely,


[^1]Blaine City Manager

Project Area Map: CSAH 17 Expansion in Blaine



[^0]:    * Daily Capacity of the roadway was obtained directly for the roadway from the Met Council Regional Activity Based Model. For simplicity, when volume exceeds capacity the roadway is congested.

[^1]:    Clark Arneson

