



Application

04774 - 2016 Roadway Modernization

05203 - Scott County Highway 21 and State Trunk Highway 13 Intersection Improvements

Regional Solicitation - Roadways Including Multimodal Elements

Status: Submitted

Submitted Date: 07/15/2016 3:18 PM

Primary Contact

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

Organization Information

Name: SCOTT COUNTY

Jurisdictional Agency (if different):

Organization Type:

County Government

Organization Website:

Address:

600 COUNTRY TRAIL E

*

JORDAN

Minnesota

55352

City

State/Province

Postal Code/Zip

County:

Scott

Phone:*

612-496-8355

Ext.

Fax:

PeopleSoft Vendor Number

0000024262A3

Project Information

Project Name

CSAH 21/TH 13 Intersection

Primary County where the Project is Located

Scott

Jurisdictional Agency (If Different than the Applicant):

The proposed project is to improve the CSAH 21/TH 13 intersection in downtown Prior Lake by adding left and right turn lanes to the intersection approaches, upgrading traffic signals to improve operations, modifying access and traffic control to the surrounding local roadway connections to support the CSAH 21/TH 13 capacity/operational needs, and upgrading pedestrian/bicycle facilities in the project area for safe and efficient access to the downtown and the surrounding regional trail/parks.

Both CSAH 21 and TH 13 are A-Minor Arterials. The primary improvements for this project are operational elements that add turn lanes to separate turning movements from the thru lanes and reduce delay at the intersection. There are currently no turn lanes on CSAH 21, and the existing traffic signal at the intersection uses split-phase timing. This results in an inefficient operation of the intersection and leads to long delays for both turning and thru movements. It also makes it challenging for pedestrians to cross at the intersection. The project will improve traffic flow in downtown Prior Lake by reconstructing the CSAH 21/Main Avenue intersection from an all-way stop to a right-in/right-out only intersection, and adding a traffic signal to CSAH 21/Arcadia Avenue to facilitate movements across CSAH 21 to both sides of the downtown area. The project will improve existing transit stops by adding bus pullouts and transit supportive infrastructure.

Prior Lake's 2030 Vision and Strategic Plan prioritizes economic development as one of the city's most important goals, and this is focused in the downtown which is relatively small and is divided by CSAH 21. CSAH 21 is projected to carry over 27,000 vehicles per day by 2040. The project is consistent with the recommendations of the 2005 CSAH 21 Corridor Study that identified improvements to CSAH 21 through Prior Lake for

Brief Project Description (Limit 2,800 characters; approximately 400 words)

traffic operations and safety.

Include location, road name/functional class, type of improvement, etc.

TIP Description Guidance (will be used in TIP if the project is selected for funding)

CSAH 21 and TH 13 Intersection

Project Length (Miles)

0.5

Project Funding

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

No

If yes, please identify the source(s)

Federal Amount

\$4,929,040.00

Match Amount

\$1,232,260.00

Minimum of 20% of project total

Project Total

\$6,161,300.00

Match Percentage

20.0%

Minimum of 20%

Compute the match percentage by dividing the match amount by the project total

Source of Match Funds

Local

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:

2020

For TDM projects, select 2018 or 2019. For Roadway, Transit, or Trail/Pedestrian projects, select 2020 or 2021.

Additional Program Years:

2019

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

Specific Roadway Elements

CONSTRUCTION PROJECT ELEMENTS/COST ESTIMATES

	Cost
Mobilization (approx. 5% of total cost)	\$208,800.00
Removals (approx. 5% of total cost)	\$208,800.00
Roadway (grading, borrow, etc.)	\$740,600.00
Roadway (aggregates and paving)	\$987,500.00
Subgrade Correction (muck)	\$150,000.00
Storm Sewer	\$596,500.00
Ponds	\$0.00
Concrete Items (curb & gutter, sidewalks, median barriers)	\$571,800.00

Traffic Control	\$417,600.00
Striping	\$30,000.00
Signing	\$50,000.00
Lighting	\$75,000.00
Turf - Erosion & Landscaping	\$125,000.00
Bridge	\$0.00
Retaining Walls	\$495,000.00
Noise Wall (do not include in cost effectiveness measure)	\$0.00
Traffic Signals	\$500,000.00
Wetland Mitigation	\$0.00
Other Natural and Cultural Resource Protection	\$0.00
RR Crossing	\$0.00
Roadway Contingencies	\$489,800.00
Other Roadway Elements	\$92,200.00
Totals	\$5,738,600.00

Specific Bicycle and Pedestrian Elements

CONSTRUCTION PROJECT ELEMENTS/COST ESTIMATES	Cost
Path/Trail Construction	\$39,500.00
Sidewalk Construction	\$42,000.00
On-Street Bicycle Facility Construction	\$0.00
Right-of-Way	\$0.00
Pedestrian Curb Ramps (ADA)	\$30,000.00
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	\$11,200.00
Other Bicycle and Pedestrian Elements	\$0.00
Totals	\$122,700.00

Specific Transit and TDM Elements

CONSTRUCTION PROJECT ELEMENTS/COST ESTIMATES	Cost
---	-------------

Fixed Guideway Elements	\$0.00
Stations, Stops, and Terminals	\$300,000.00
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	\$300,000.00

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	\$6,161,300.00
Construction Cost Total	\$6,161,300.00
Transit Operating Cost Total	\$0.00

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, 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 objectives and strategies that relate to the project.

Goal A: Transportation System Stewardship (Page 2.17), Objectives A & B

Strategies A1 (Page 2.17) & A2 (Page 2.18)

List the goals, objectives, strategies, and associated pages:

Goal C: Access to Destinations (Page 2.24), Objectives A & B

Strategies C1 (Page 2.24), C2 (Page 2.25), C9 (Page 2.32)

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:

Scott County 2016-2025 Transportation Improvement Program (part of County's CIP).
Listed in program year 2018 on page 65 of CIP.
City of Prior Lake CIP Page 2 Project Detail Sheets

4. The project must exclude costs for studies, preliminary engineering, design, or construction engineering. Right-of-way costs are only eligible as part of bicycle/pedestrian projects, 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: \$1,000,000 to \$7,000,000

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.

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

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

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

10. The owner/operator of the facility must operate and maintain the project for the useful life of the improvement.

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

11. 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

12. 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

13. 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 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 MnDOT's 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.

Requirements - Roadways Including Multimodal Elements

Project Information-Roadways

County, City, or Lead Agency	Scott County
Functional Class of Road	A- Minor Arterial Expander
Road System	CSAH
<i>TH, CSAH, MSAS, CO. RD., TWP. RD., CITY STREET</i>	
Road/Route No.	21
<i>i.e., 53 for CSAH 53</i>	
Name of Road	Credit River Road
<i>Example; 1st ST., MAIN AVE</i>	
Zip Code where Majority of Work is Being Performed	55372
(Approximate) Begin Construction Date	05/01/2020
(Approximate) End Construction Date	11/15/2021
TERMINI:(Termini listed must be within 0.3 miles of any work)	
From: (Intersection or Address)	CSAH 21 and Arcadia Ave
To: (Intersection or Address)	CSAH 21 east of TH 13
<i>DO NOT INCLUDE LEGAL DESCRIPTION</i>	
Or At	
Primary Types of Work	GRADE, AGG BASE, BIT BASE, BIT SURF, SIDEWALK, CURB AND GUTTER,STORM SEWER, SIGNALS, LIGHTING, BIKE PATH, PED RAMPS
<i>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.</i>	
BRIDGE/CULVERT PROJECTS (IF APPLICABLE)	
Old Bridge/Culvert No.:	
New Bridge/Culvert No.:	
Structure is Over/Under (Bridge or culvert name):	

Expander/Augmentor/Connector/Non-Freeway Principal Arterial

Select one:	Expander
Area	4.299
Project Length	0.505

Average Distance

8.5129

Upload Map

1468529564062_TH13_CH21_Roadway_Area_Definition.pdf

Reliever: Relieves a Principal Arterial that is a Freeway Facility

Facility being relieved

Number of hours per day volume exceeds capacity (based on the Congestion Report) 0

Reliever: Relieves a Principal Arterial that is a Non-Freeway Facility

Facility being relieved

Number of hours per day volume exceeds capacity (based on the table below) 0

Non-Freeway Facility Volume/Capacity Table

Hour	NB/EB Volume	SB/WB Volume	Capacity	Volume exceeds capacity
12:00am - 1:00am			0	
1:00am - 2:00am			0	
2:00am - 3:00am			0	
3:00am - 4:00am			0	
4:00am - 5:00am			0	
5:00am - 6:00am			0	
6:00am - 7:00am			0	
7:00am - 8:00am			0	
8:00am - 9:00am			0	
9:00am - 10:00am			0	
10:00am - 11:00am			0	
11:00am - 12:00pm			0	
12:00pm - 1:00pm			0	
1:00pm - 2:00pm			0	
2:00pm - 3:00pm			0	
3:00pm - 4:00pm			0	
4:00pm - 5:00pm			0	
5:00pm - 6:00pm			0	
6:00pm - 7:00pm			0	

7:00pm - 8:00pm	0
8:00pm - 9:00pm	0
9:00pm - 10:00pm	0
10:00pm - 11:00pm	0
11:00pm - 12:00am	0

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

Existing Employment within 1 Mile:	3482
Existing Manufacturing/Distribution-Related Employment within 1 Mile:	321
Existing Students:	0
Upload Map	1468529632546_TH13_CH21_Regional_Economy_Map.pdf

Measure C: Current Heavy Commercial Traffic

Location:	TH 21 at TH 13
Current daily heavy commercial traffic volume:	825
Date heavy commercial count taken:	May 4, 2016

Measure D: Freight Elements

Response (Limit 1,400 characters; approximately 200 words)

CSAH 21 is an important freight route in the County and region connecting US 169 and I-35. CSAH 21 is a 9 ton road which will be upgraded to a 10 ton road. Gravel mining occurs in the area near CSAH 27 and CSAH 44. Currently, the intersection of TH 13/CSAH 21 has split phasing and no exclusive right or left turn lanes on CSAH 21. Due to the split phased signal and the Main Ave four way stop only 350 ft west of TH 13, considerable congestion occurs on CSAH 21, often backing up a 1/4 mile in each direction in peak periods and creating freight delay. Improvements include constructing turn lanes on all approaches at CSAH 21 and TH 13, reducing the Main Ave four way stop to a right-in/right-out only, and realigning the Pleasant St intersection to connect to TH 13 further south of CSAH 21. This access will allow delivery trucks headed to southern downtown Prior Lake to utilize less fuel and avoid out of direction travel. The Pleasant St relocation will create additional stacking distance at the TH 13/CSAH 21 intersection. A signal will be added at the CSAH 21 and Arcadia Ave SE intersection to facilitate delivery truck movement in and out of downtown Prior Lake area and improve traffic flow capacity at the CSAH 21 and TH 13 intersection. All legs of the intersections will have designated right and left turn lanes modeled to accommodate 20-year traffic projections.

Measure A: Current Daily Person Throughput

Location	CSAH 21 west of TH 13
Current AADT Volume	18000
Existing Transit Routes on the Project	490, 491, 492
<i>For New Roadways only, list transit routes that will be moved to the new roadway</i>	
Upload Transit Map	1468529759375_TH13_CH21_Transit_Connections_Map.pdf

Response: Current Daily Person Throughput

Average Annual Daily Transit Ridership	0
Current Daily Person Throughput	23400.0

Measure B: 2040 Forecast ADT

Use Metropolitan Council model to determine forecast (2040) ADT volume

No

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

Scott County 2040 Model

Forecast (2040) ADT volume

27000

Measure A: Project Location and Impact to Disadvantaged Populations

Select one:

Project located in Area of Concentrated Poverty with 50% or more of residents are people of color (ACP50):

Project located in Area of Concentrated Poverty:

Projects census tracts are above the regional average for population in poverty or population of color:

Project located in a census tract that is below the regional average for population in poverty or populations of color or includes children, people with disabilities, or the elderly:

Yes

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

The CSAH 21 and TH 13 project is located in downtown Prior Lake, in Census Tract 809.04. This Census Tract has an estimated population below the poverty level of 10.3 percent (2010-2014 American Community Survey 5-Year Estimates). This estimate is above Scott County's 5.7 percent and Prior Lake's 6.5 percent. The Census Tract is large at about 3 square miles, and the population below the poverty level is concentrated in the downtown Prior Lake area of the Census Tract near the project. Downtown Prior Lake area is home to a number of apartment units, including a senior apartment complex. Modest sized homes constructed in the early 1900s are located a block from the project area and downtown. These home values are below the median home value in the Twin Cities region and below Scott County median home values. Single family homes within a 0.25 mile radius of the project have a median home value of \$152,832, which is 43 percent lower than Prior Lake's median value of \$266,900 and 37 percent below Scott County's \$241,800 (Scott County Assessor's Office). The majority of these homes are occupied by either young lower income families, or elderly lifelong residents of Prior Lake. Census Tract 809.04 has a non-white population of 12.3 percent and population 62 years and over of 29.7 percent (2010-2014 ACS). A combined 12,358 people live in the two Census Tracts in the project area, potentially within walking or bicycling distance of the project. These residents all need access to the commercial businesses located in the downtown area. This project will bridge pedestrian gaps by adding sidewalk facilities where none exist, and improve access across CSAH 21 between the north and south ends of downtown for residents to access these destinations without having to cross traffic at uncontrolled locations or a 4-way stop multilane intersection.

The project is not anticipated to negatively impact low income populations, populations of color, or the elderly. No homes are impacted by this project. A signal at Arcadia Ave. SE will be installed with pedestrian amenities. No signal exists at Arcadia today so residents currently navigate across this uncontrolled intersection as best they can to make it to the other side of CSAH 21. All facilities (including signals) will be upgraded to current ADA standards to improve access for people with disabilities. The project will provide improved access to transit for all populations.

The response should address the benefits, impacts, and mitigation for the populations affected by the project.

Upload Map

1468529853750_TH13_CH21_Socio-Economic_Cond_Map.pdf

Measure B: Affordable Housing

City/Township	Segment Length in Miles (Population)
Prior Lake	0.5
	1

Total Project Length

Total Project Length (Total Population)	0.5
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Affordable Housing Scoring - To Be Completed By Metropolitan Council Staff

City/Township	Segment Length (Miles)	Total Length (Miles)	Score	Segment Length/Total Length	Housing Score Multiplied by Segment percent
		0	0	0	0

Affordable Housing Scoring - To Be Completed By Metropolitan Council Staff

Total Project Length (Miles)	0.5
Total Housing Score	0

Measure A: Year of Roadway Construction

Year of Original Roadway Construction or Most Recent Reconstruction	Segment Length	Calculation	Calculation 2
1989	0.5	994.5	1989.0
	1	995	1989

Average Construction Year

Weighted Year 1989

Total Segment Length (Miles)

Total Segment Length 0.5

Measure B: Geometric, Structural, or Infrastructure Improvements

Improving a non-10-ton roadway to a 10-ton roadway:

Yes

Response (Limit 700 characters; approximately 100 words)

Within the project area, CSAH 21 is a 9-ton roadway. The project will upgrade CSAH 21 to 10-ton roadway.

Improved clear zones or sight lines:

Yes

Response (Limit 700 characters; approximately 100 words)

Right-of-way sight triangles are anticipated to be acquired at the intersection of CSAH 21 and TH 13 with the project. Clear zones and sight lines are improved. A shoulder is added on southbound TH 13, and all four legs of the intersection are widened, giving drivers additional space and time to regain control of an errant vehicle. The expansion of every intersection leg and the intersection itself will give drivers better sight lines over current conditions.

Improved roadway geometrics:

Yes

Response (Limit 700 characters; approximately 100 words)

Currently CSAH 21 is a four lane undivided roadway. There are no turn lanes on CSAH 21. Due to high crashes experienced at this intersection, MnDOT changed the Signal at TH 13 to a split phased signal. While this split phase reduced the severe crashes that were occurring at this intersection, the congestion has grown considerably at the TH13 signal. The geometric turn lane improvements to the intersection and adjacent roads enhance efficiency, access and safety. The turn lanes increase the AM and PM Capacity of the TH 13 intersection by 20%, compared to the no-build scenario.

Access management enhancements:

Yes

Main Ave intersection with CSAH 21 is only 350' west of TH 13 and is a 4-way stop. Main Ave will be converted from a full intersection to a right in-right out access allowing for turn lanes to be constructed on CSAH 21 at TH 13. Pleasant Street is only 275' south of CSAH 21 on TH 13. This access is being moved south approximately 250' to allow for standard left hand turn lanes to be installed on TH 13 at CSAH 21 to avoid today's turn lane issue of backing up into the northbound through lane. This is part of the approved corridor plan with MnDOT.

Response (Limit 700 characters; approximately 100 words)

Vertical/horizontal alignments improvements:

Yes

The design will improve the horizontal approach to the intersection of TH 13. A combination of the curve on westbound CSAH 21 and the backup on CSAH 21 due to lack of turn lanes creates a crash issue as drivers may not be able to see stopped traffic in time. The projects will soften the curve on CSAH 21 by one lane width and median width and remove turning traffic out of the through lanes.

Response (Limit 700 characters; approximately 100 words)

Improved stormwater mitigation:

Yes

Response (Limit 700 characters; approximately 100 words)

This downtown area of Prior lake was developed prior to any stormwater quality or mitigation requirements. The project would require this area to be brought up to current watershed district standards, including rate control, water quality, and volume control. The project will also comply with MPCA NPDES construction stormwater permit requirements.

Signals/lighting upgrades:

Yes

The existing split-phased signal at CSAH 21/TH 13 will be changed to regular phasing, which will create better access for bicyclists and pedestrians. A flashing yellow feature will also be added to the signal. A signal will be constructed at the Arcadia Ave intersection with CSAH 21 where today there is no signal system. Today, pedestrians, vehicles, and bicyclists needing to cross at CSAH 21 cross 4-lanes of undivided traffic with numerous, unregulated vehicle-pedestrian conflict points. At peak periods, CSAH 21 backs up from TH 13 past Arcadia further complicating navigation of this intersection. The City will replace existing downtown lighting in the area with upgraded streetlights.

Response (Limit 700 characters; approximately 100 words)

Other Improvements

Yes

A sidewalk will be constructed on the west side of TH 13 north of CSAH 21. This sidewalk allows pedestrians to cross CSAH 21 at TH 13 to access businesses on both sides of the Prior Lake Downtown area. All pedestrian infrastructure including curb ramps will be constructed to ADA standards. Amenities will be added to existing transit stops including shelters and benches.

Response (Limit 700 characters; approximately 100 words)

Measure A: Congestion Reduction/Air Quality

Total Peak Hour Delay Per Vehicle Without The Project	Total Peak Hour Delay Per Vehicle With The Project	Total Peak Hour Delay Per Vehicle Reduced by Project	Volume (Vehicles per hour)	Total Peak Hour Delay Reduced by the Project:	EXPLANATION of methodology used to calculate railroad crossing delay, if applicable.	Synchro or HCM Reports
96.0	35.0	61.0	4206	256566.0		14685313848 43_CSAH 21-TH 13 PM Peak Hour Synchro.pdf

Total Delay

Total Peak Hour Delay Reduced 256566.0

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

Total (CO, NOX, and VOC) Peak Hour Emissions Per Vehicle without the Project (Kilograms):	Total (CO, NOX, and VOC) Peak Hour Emissions Per Vehicle with the Project (Kilograms):	Total (CO, NOX, and VOC) Peak Hour Emissions Reduced Per Vehicle by the Project (Kilograms):	Volume (Vehicles Per Hour):	Total (CO, NOX, and VOC) Peak Hour Emissions Reduced by the Project (Kilograms):
10.24	5.82	4.42	4206.0	18590.52
10	6		4206	18591

Total

Total Emissions Reduced: 18590.52

Upload Synchro Report 1468531518062_CSAH 21-TH 13 PM Peak Hour Synchro.pdf

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

Total Parallel Roadways

Emissions Reduced on Parallel Roadways	0
Upload Synchro Report	

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)	

Transit Projects Not Requiring Construction

If the applicant is completing a transit or TDM 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

1)Project Scope (5 Percent of Points)

Meetings or contacts with stakeholders have occurred Yes

100%

Stakeholders have been identified

40%

Stakeholders have not been identified or contacted

0%

2)Layout or Preliminary Plan (5 Percent of Points)

Layout or Preliminary Plan completed Yes

100%

Layout or Preliminary Plan started

50%

Layout or Preliminary Plan has not been started

0%

Anticipated date or date of completion

3)Environmental Documentation (5 Percent of Points)

EIS

EA

PM Yes

Document Status:

Document approved (include copy of signed cover sheet) 100%

Document submitted to State Aid for review

75%

date submitted

Document in progress; environmental impacts identified; review request letters sent

50%

Document not started

Yes

0%

Anticipated date or date of completion/approval

05/31/2019

4)Review of Section 106 Historic Resources (10 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%

Historic/archeological review under way; determination of no historic properties affected or no adverse effect anticipated

80%

Historic/archaeological review under way; determination of adverse effect anticipated

40%

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

0%

Anticipated date or date of completion of historic/archeological review:

Project is located on an identified historic bridge

5)Review of Section 4f/6f Resources (10 Percent of Points)

4(f) Does the project impacts any public parks, public wildlife refuges, public golf courses, wild & scenic rivers or public private historic properties?
6(f) Does the project impact any public parks, public wildlife refuges, public golf courses, wild & scenic rivers or historic property that was purchased or improved with federal funds?

No Section 4f/6f resources located in the project area

Yes

100%

No impact to 4f property. The project is an independent bikeway/walkway project covered by the bikeway/walkway Negative Declaration statement; letter of support received

100%

Section 4f resources present within the project area, but no known adverse effects

80%

Project impacts to Section 4f/6f resources likely coordination/documentation has begun

50%

Project impacts to Section 4f/6f resources likely coordination/documentation has not begun

30%

Unsure if there are any impacts to Section 4f/6f resources in the project area

0%

6)Right-of-Way (15 Percent of Points)

Right-of-way, permanent or temporary easements not required

100%

Right-of-way, permanent or temporary easements has/have been acquired

100%

Right-of-way, permanent or temporary easements required, offers made

75%

Right-of-way, permanent or temporary easements required, appraisals made

Yes

50%

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

25%

Right-of-way, permanent or temporary easements required, parcels not identified

0%

Right-of-way, permanent or temporary easements identification has not been completed

0%

Anticipated date or date of acquisition

06/29/2018

7)Railroad Involvement (25 Percent of Points)

No railroad involvement on project

Yes

100%

Railroad Right-of-Way Agreement is executed (include signature page)

100%

Railroad Right-of-Way Agreement required; Agreement has been initiated

60%

Railroad Right-of-Way Agreement required; negotiations have begun

40%

Railroad Right-of-Way Agreement required; negotiations not begun

0%

Anticipated date or date of executed Agreement

8)Interchange Approval (15 Percent of Points)*

**Please contact Karen Scheffing at MnDOT (Karen.Scheffing@state.mn.us or 651-234-7784) to determine if your project needs to go through the Metropolitan Council/MnDOT Highway Interchange Request Committee.*

Project does not involve construction of a new/expanded interchange or new interchange ramps Yes

100%

Interchange project has been approved by the Metropolitan Council/MnDOT Highway Interchange Request Committee

100%

Interchange project has not been approved by the Metropolitan Council/MnDOT Highway Interchange Request Committee

0%

9)Construction Documents/Plan (10 Percent of Points)

Construction plans completed/approved (include signed title sheet)

100%

Construction plans submitted to State Aid for review

75%

Construction plans in progress; at least 30% completion

50%

Construction plans have not been started Yes

0%

Anticipated date or date of completion 07/31/2018

10)Letting

Anticipated Letting Date 09/28/2018

Measure A: Roadway Projects that do not Include Railroad Grade-Separation Elements

Crash Modification Factor Used: 0.6

CSAH 21 & TH 13 Intersection

CMF ID 1581 - Install left-turn lane (signal has left-turn phase)

Chosen because it was the only CMF which addressed installing left-turn lanes at a signalized intersection.

CMF = 0.65

CMF ID 380 - Modify change plus clearance interval to ITE 1985 Proposed Recommended Practice.

Chosen because it was the only CMF which addressed the benefit of completing signal retiming.

CMF = 0.92

Combined = $0.65 * 0.92 = 0.60$

Rationale for Crash Modification Selected:

CRF = 40%

CSAH 21 & Main

CMF ID 2219 - Install raised median

Chosen because it was the only CMF which addressed installing a raised median along a corridor.

CMF = 0.29

CSAH 21 & Arcadia

CMF ID 325 - Install a traffic signal

Chosen because the CMF had the highest rating possible.

CMF = 0.56

TH 13 & Pleasant St

CMF ID 1516 - Create directional median openings to allow left-turns and u-turns.

CMF = .49

(Limit 1400 Characters; approximately 200 words)

Project Benefit (\$) from B/C Ratio

\$0.53

Worksheet Attachment

1468600662843_21 FINAL cost benefit.xls

Roadway projects that include railroad grade-separation elements:

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

Measure A: Multimodal Elements and Existing Connections

This project will improve non-motorized connections to downtown Prior Lake, a pedestrian oriented district, by improving safety for trail and sidewalk users crossing the CSAH 21/TH 13 intersection. Currently the split-phased signal at CSAH 21/TH 13 makes it challenging for pedestrians and bicyclists to cross the intersection. The project will upgrade the signal and remove the split-phased timing to increase the ability for pedestrian activity. The intersection will be upgraded to ADA standards to improve access for all populations. A new trail segment will be installed at the northeast quadrant to improve access to the neighborhoods and the downtown district. The existing uncontrolled Arcadia Ave. intersection will be upgraded with a traffic signal to improve access on both sides of downtown.

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

The Scott County West Regional Trail (RBTN Tier 2 Alignment) runs adjacent to CSAH 21 and connects to the Mystic Lake campus and Spring Lake Regional Park on the west end and downtown Prior Lake, Lakefront Park, and Cleary Lake Regional Park on the east. Five local/regional parks are served by this trail connection. A portion of the trail will be reconstructed with the project. In between commercial, employment, and recreation nodes, neighborhoods connect to the trail through local pedestrian networks. The regional trail provides an alternative mode of transportation to the variety of entertainment, recreational, and retail land uses along the CSAH 21 and CSAH 82 corridors.

Three transit routes serve the project area: 490, 491, and 492. The closest transit stop is within the project area at the intersection of CSAH 21/Main Ave. SE, serving both eastbound and westbound buses. Transit stop amenities will be upgraded to include waiting shelters and bus pullouts. A Park & Pool Lot is currently located on the northeast corner

of the TH 13/CSAH 21 intersection. This lot will be relocated and rehabilitated to a lot southwest of the intersection just west (1/2 block) of the Main Ave. SE/Colorado St. SE intersection. The relocation of the lot provides increased connectivity to the transit stops at CSAH 21/Main Ave. SE as pedestrians no longer have to cross TH 13 to access transit. The rehabilitation of the lot will directly connect via sidewalk and crosswalk system to the transit stops. In addition, of the 2,532 workers employed in Census Block Groups in the project area, 365 or 14.4 percent live and work within the area, increasing the probability of bicycling or walking to work.

The Eagle Creek Transit Station is located north of the project area on CSAH 21. A continuous trail connection exists between the transit station and downtown Prior Lake, providing the opportunity for non-motorized access between the commercial center and expanded transit access.

Measure A: Cost Effectiveness

Total Project Cost (entered in Project Cost Form):	\$6,161,300.00
Enter Amount of the Noise Walls:	\$0.00
Total Project Cost subtract the amount of the noise walls:	\$6,161,300.00
Points Awarded in Previous Criteria	
Cost Effectiveness	\$0.00

Other Attachments

File Name	Description	File Size
CSAH 21-TH 13 Intersection Layout.pdf	Project Layout	1.5 MB
CSAH 21-TH 13 Prior Lake Letter of Support.pdf	Prior Lake Letter of Support	283 KB
CSAH 21-TH 13 Streetview.pdf	Project Streetview	116 KB
Scott County Resolution 2016-130.pdf	Local Match Resolution	258 KB
TH 13_CSAH 21 MnDOT letter of support.pdf	MnDOT Letter of Support	106 KB

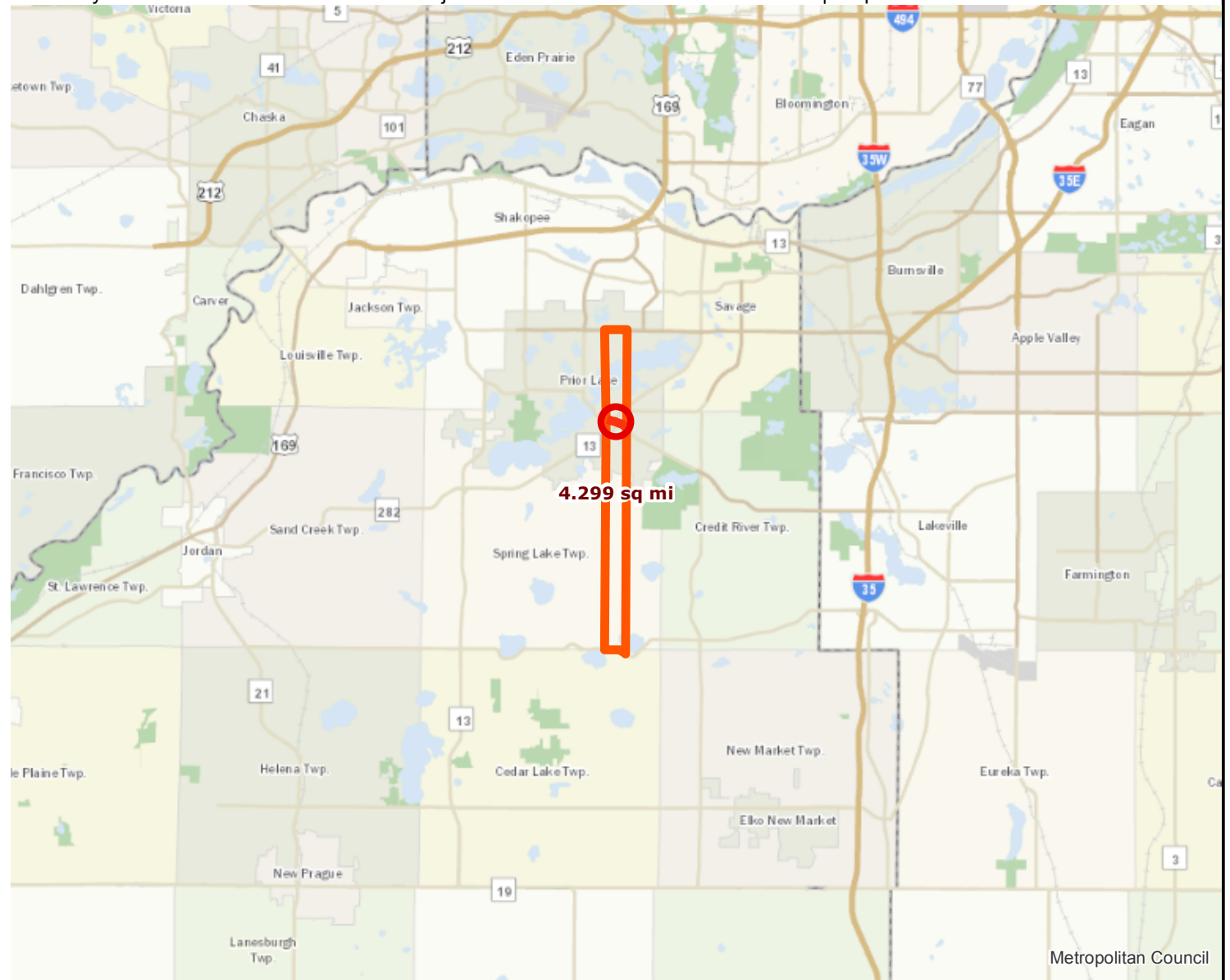
Roadway Area Definition

Roadway Reconstruction/Modernization Project: CSAH 21 at TH 13 Modernization | Map ID: 1467825486875

Results

Project Length: 0.505 miles

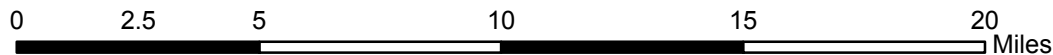
Project Area: 4.299 sq mi



Metropolitan Council

 Project Points  Project Area

 Project



Created: 7/6/2016
LandscapeRSA1



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



Regional Economy

Roadway Reconstruction/Modernization Project: CSAH 21 at TH 13 Modernization | Map ID: 1467825486875

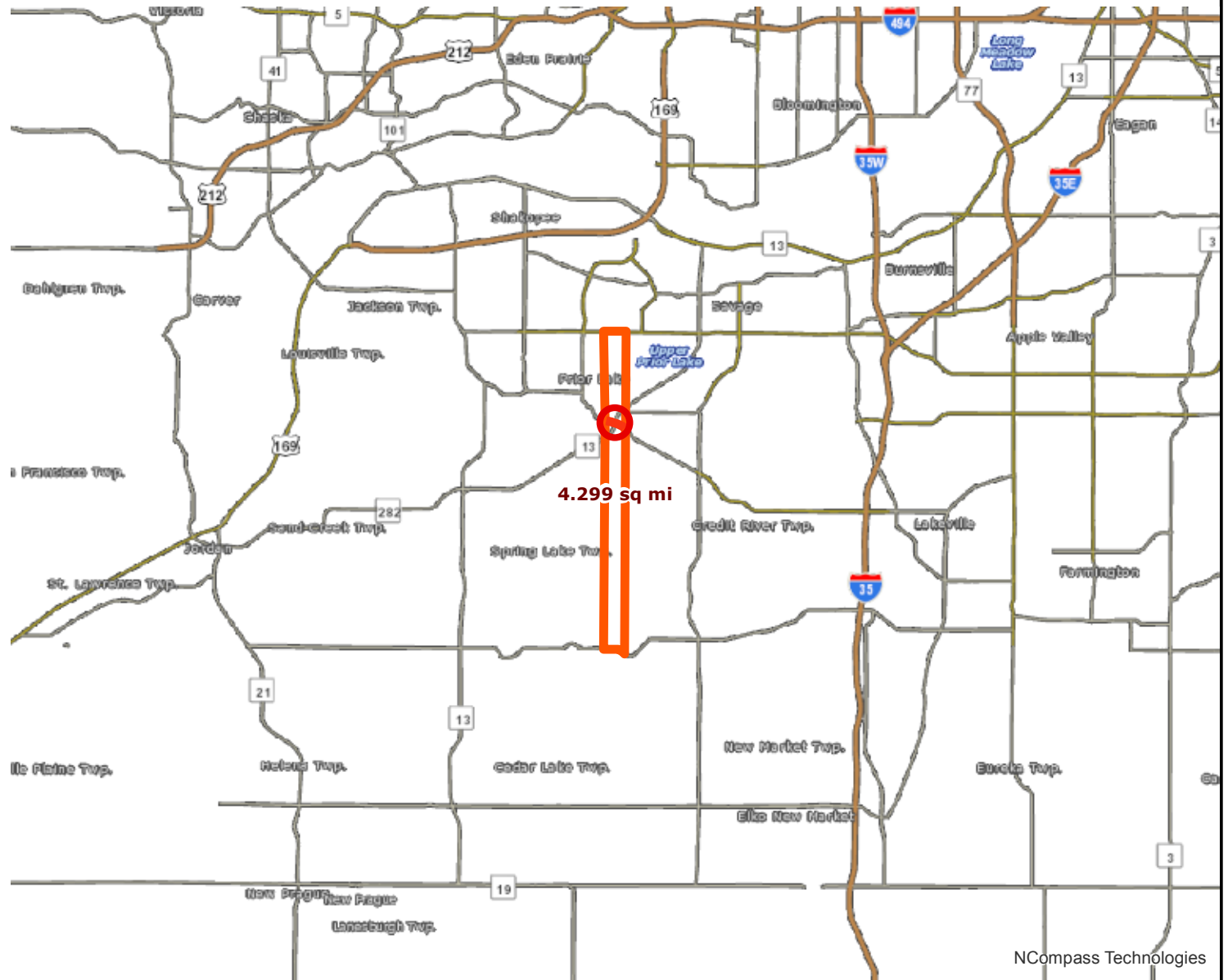
Results

WITHIN ONE MI of project:

Totals by City:

- Prior Lake**
Population: 17194
Employment: 3381
Mfg and Dist Employment: 245
- Spring Lake Twp.**
Population: 927
Employment: 101
Mfg and Dist Employment: 76

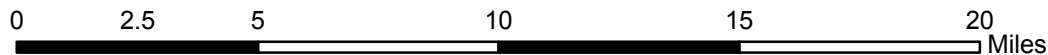
Postsecondary Students:
0



NCompass Technologies

 Project Points  Project Area

 Project

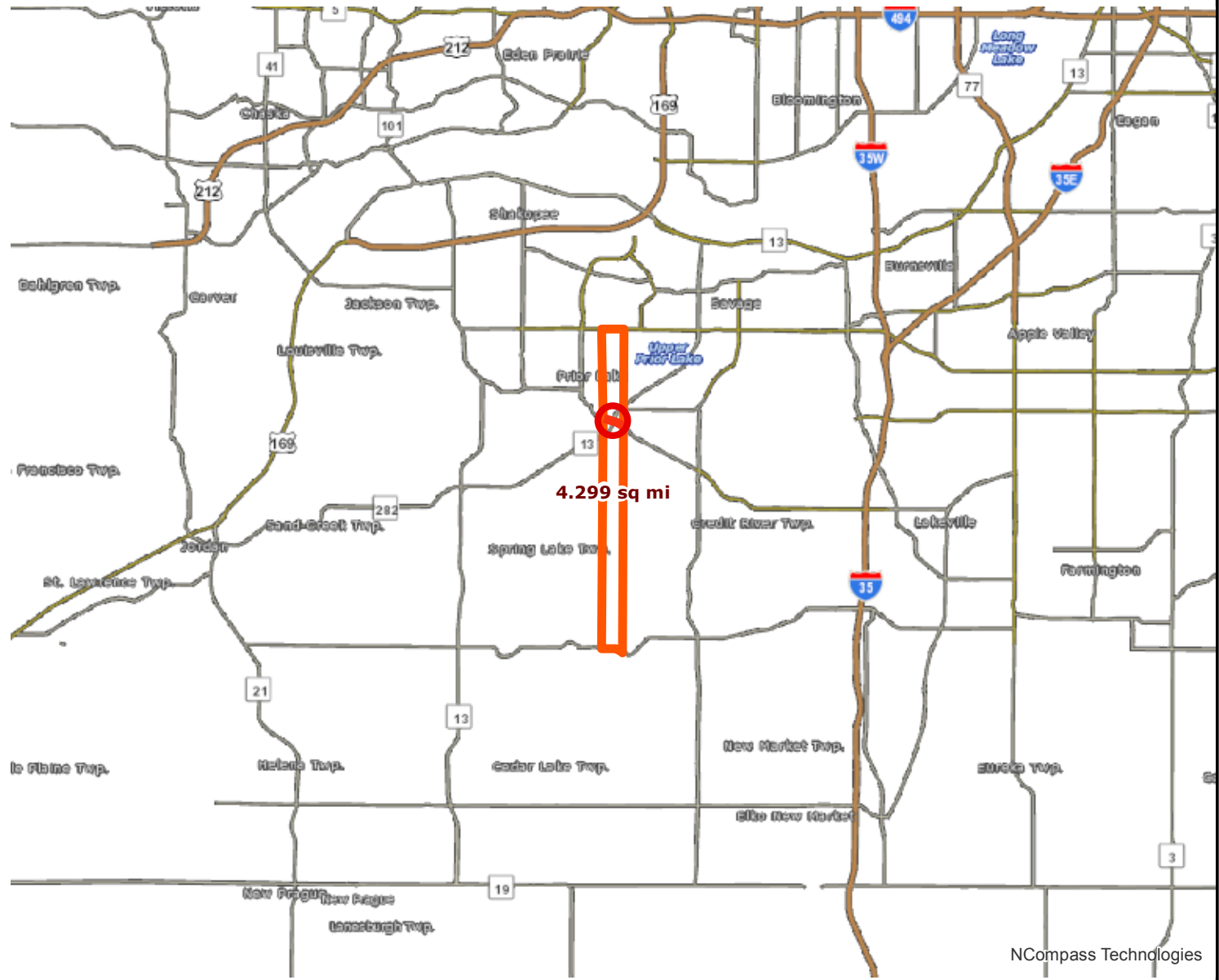


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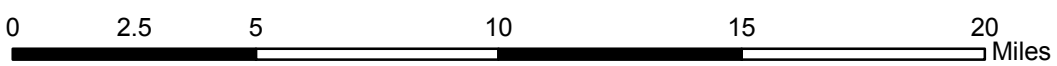
Results

Transit with a Direct Connection to project:
490 491 492

**indicates Planned Alignments*

NCompass Technologies

○ Project Points
 Project Area
 Project



Created: 7/6/2016
LandscapeRSA3



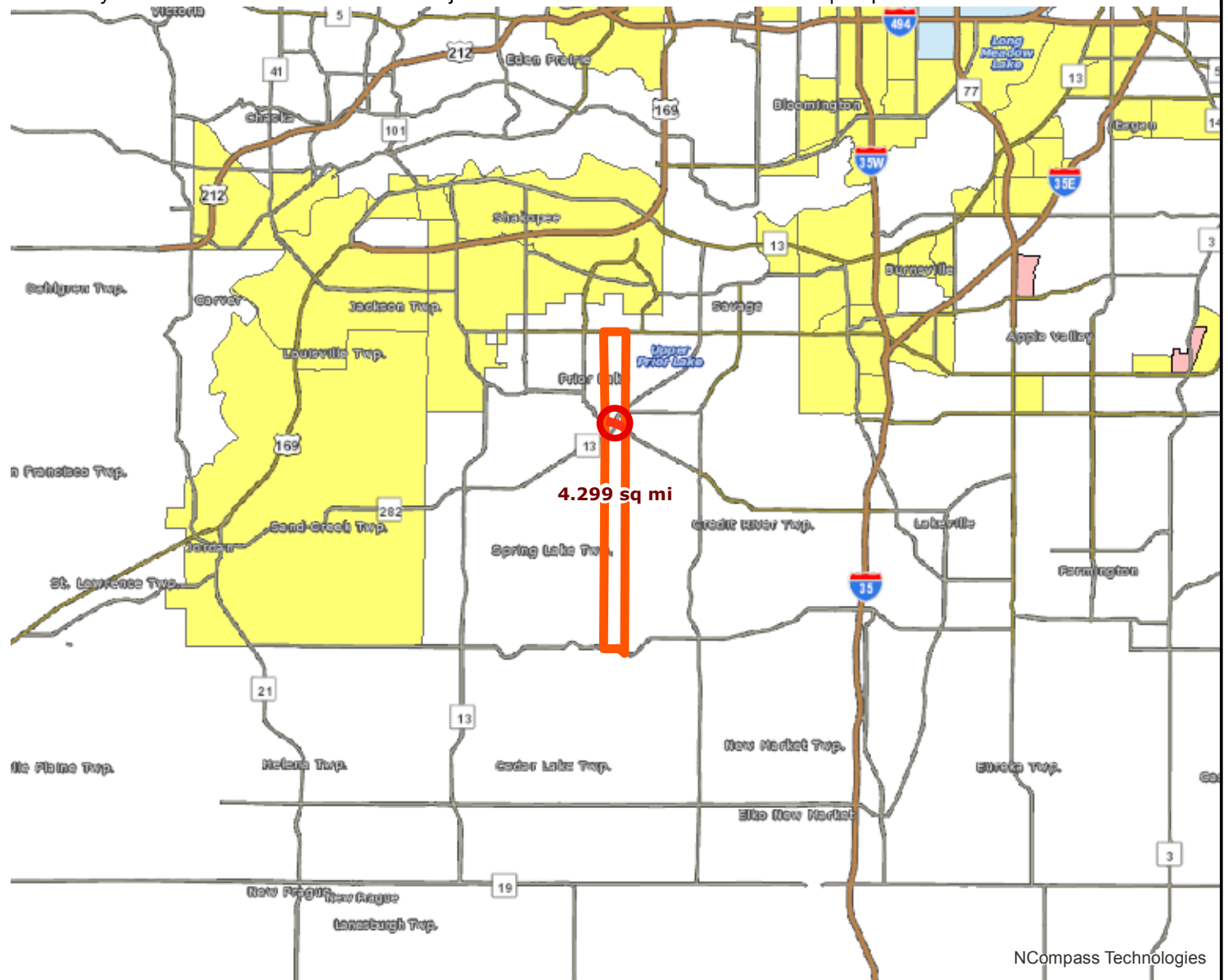
For complete disclaimer of accuracy, please visit
<http://giswebsite.metc.state.mn.us/gissitenew/notice.aspx>









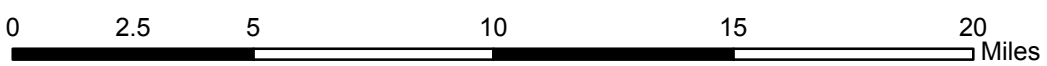
Socio-Economic Conditions Roadway Reconstruction/Modernization Project: CSAH 21 at TH 13 Modernization | Map ID: 1467825486875

Results

Project located in a census tract that is below the regional average for population in poverty or populations of color, or includes children, people with disabilities, or the elderly:
(0 to 12 Points)



-  Project Points
-  Project
-  Project Area
-  Area of Concentrated Poverty > 50% residents of color
-  Area of Concentrated Poverty
-  Above reg'l avg conc of race/poverty



Created: 7/6/2016
LandscapeRSA2



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

NCompass Technologies



1: TH 13 & CR 21

Direction	All
Future Volume (vph)	2579
Total Delay / Veh (s/v)	79
CO Emissions (kg)	5.43
NOx Emissions (kg)	1.06
VOC Emissions (kg)	1.26

2: Main Ave & CR 21

Direction	All
Future Volume (vph)	1627
Total Delay / Veh (s/v)	17
CO Emissions (kg)	1.75
NOx Emissions (kg)	0.34
VOC Emissions (kg)	0.40



Lane Group	EBT	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								
Traffic Volume (vph)	521	315	139	338	82	79	638	104
Future Volume (vph)	521	315	139	338	82	79	638	104
Lane Group Flow (vph)	657	542	139	338	82	79	638	104
Turn Type	NA	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	3	5	2		1	6	
Permitted Phases					2			6
Detector Phase	4	3	5	2	2	1	6	6
Switch Phase								
Minimum Initial (s)	8.0	8.0	7.0	15.0	15.0	7.0	15.0	15.0
Minimum Split (s)	17.0	17.0	15.0	31.5	31.5	15.0	33.5	33.5
Total Split (s)	35.0	32.0	18.0	75.0	75.0	18.0	75.0	75.0
Total Split (%)	21.9%	20.0%	11.3%	46.9%	46.9%	11.3%	46.9%	46.9%
Yellow Time (s)	3.5	4.0	3.0	4.5	4.5	3.0	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	6.0	5.0	6.5	6.5	5.0	6.5	6.5
Lead/Lag	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	29.5	26.0	13.0	68.5	68.5	13.0	68.5	68.5
Actuated g/C Ratio	0.18	0.16	0.08	0.43	0.43	0.08	0.43	0.43
v/c Ratio	1.06	1.00	1.01	0.44	0.12	0.57	0.83	0.15
Control Delay	113.2	104.3	149.0	34.5	2.8	87.7	51.6	6.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	113.2	104.3	149.0	34.5	2.8	87.7	51.6	6.9
LOS	F	F	F	C	A	F	D	A
Approach Delay	113.2	104.3		58.3			49.4	
Approach LOS	F	F		E			D	
Stops (vph)	580	487	118	235	4	76	554	14
Fuel Used(gal)	23	22	6	6	0	3	17	1
CO Emissions (g/hr)	1604	1550	422	430	21	190	1155	56
NOx Emissions (g/hr)	312	302	82	84	4	37	225	11
VOC Emissions (g/hr)	372	359	98	100	5	44	268	13
Dilemma Vehicles (#)	18	16	0	11	0	0	20	0

Intersection Summary

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 124 (78%), Referenced to phase 2:NBT and 6:SBT, Start of 1st Green

Natural Cycle: 115

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.06

Intersection Signal Delay: 79.1

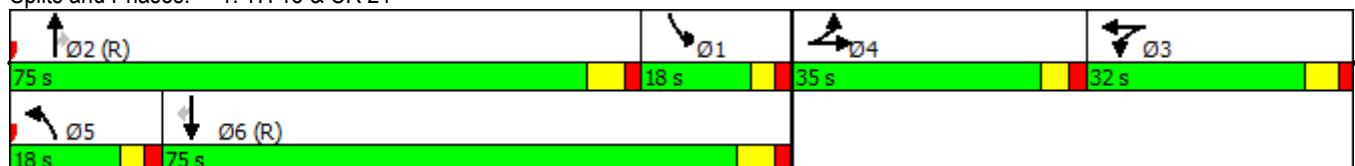
Intersection LOS: E

Intersection Capacity Utilization 94.3%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 1: TH 13 & CR 21



1: TH 13 & CSAH 21

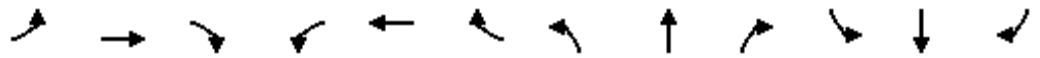
Direction	All
Future Volume (vph)	2689
Total Delay / Veh (s/v)	33
CO Emissions (kg)	3.59
NOx Emissions (kg)	0.70
VOC Emissions (kg)	0.83

2: Main Ave & CSAH 21

Direction	All
Future Volume (vph)	1415
Total Delay / Veh (s/v)	2
CO Emissions (kg)	0.49
NOx Emissions (kg)	0.10
VOC Emissions (kg)	0.11

Timings
2016 Build

Timing Plan: PM Peak Hour
6/22/2016



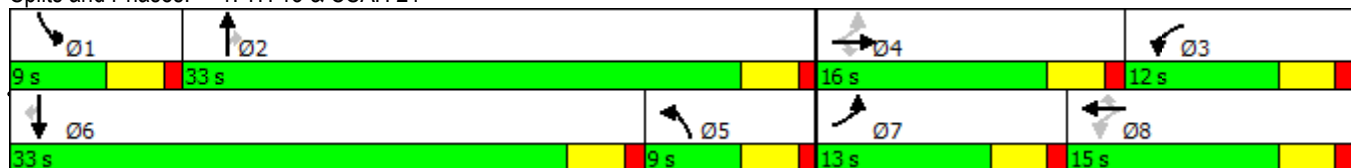
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (vph)	191	521	42	226	281	35	124	338	82	105	651	93
Future Volume (vph)	191	521	42	226	281	35	124	338	82	105	651	93
Lane Group Flow (vph)	199	543	44	235	293	36	129	352	85	109	678	97
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	10.0	10.0	8.0	10.0	10.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	12.0	14.0	14.0	12.0	14.0	14.0	9.0	19.0	19.0	9.0	19.0	19.0
Total Split (s)	13.0	16.0	16.0	12.0	15.0	15.0	9.0	33.0	33.0	9.0	33.0	33.0
Total Split (%)	18.6%	22.9%	22.9%	17.1%	21.4%	21.4%	12.9%	47.1%	47.1%	12.9%	47.1%	47.1%
Yellow Time (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
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
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)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	12.1	12.1	12.1	11.4	11.4	11.4	5.1	27.0	27.0	5.1	27.0	27.0
Actuated g/C Ratio	0.18	0.18	0.18	0.17	0.17	0.17	0.08	0.41	0.41	0.08	0.41	0.41
v/c Ratio	0.59	0.85	0.10	0.75	0.49	0.08	0.50	0.47	0.12	0.42	0.91	0.14
Control Delay	35.3	43.3	0.4	45.7	29.6	0.4	38.5	17.3	1.2	36.6	38.3	1.6
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	35.3	43.3	0.4	45.7	29.6	0.4	38.5	17.3	1.2	36.6	38.3	1.6
LOS	D	D	A	D	C	A	D	B	A	D	D	A
Approach Delay		38.8			34.5			19.7			34.1	
Approach LOS		D			C			B			C	
Stops (vph)	166	441	0	188	244	0	113	232	3	95	533	5
Fuel Used(gal)	4	11	0	5	6	0	3	5	0	2	15	1
CO Emissions (g/hr)	253	741	10	376	410	16	188	345	19	171	1028	36
NOx Emissions (g/hr)	49	144	2	73	80	3	37	67	4	33	200	7
VOC Emissions (g/hr)	59	172	2	87	95	4	44	80	4	40	238	8
Dilemma Vehicles (#)	0	34	0	0	19	0	0	20	0	0	44	0

Intersection Summary

Cycle Length: 70
 Actuated Cycle Length: 66.2
 Natural Cycle: 70
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.91
 Intersection Signal Delay: 32.6
 Intersection Capacity Utilization 78.7%
 Analysis Period (min) 15

Intersection LOS: C
 ICU Level of Service D

Splits and Phases: 1: TH 13 & CSAH 21



1: TH 13 & CR 21

Direction	All
Future Volume (vph)	2579
Total Delay / Veh (s/v)	79
CO Emissions (kg)	5.43
NOx Emissions (kg)	1.06
VOC Emissions (kg)	1.26

2: Main Ave & CR 21

Direction	All
Future Volume (vph)	1627
Total Delay / Veh (s/v)	17
CO Emissions (kg)	1.75
NOx Emissions (kg)	0.34
VOC Emissions (kg)	0.40



Lane Group	EBT	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								
Traffic Volume (vph)	521	315	139	338	82	79	638	104
Future Volume (vph)	521	315	139	338	82	79	638	104
Lane Group Flow (vph)	657	542	139	338	82	79	638	104
Turn Type	NA	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	4	3	5	2		1	6	
Permitted Phases					2			6
Detector Phase	4	3	5	2	2	1	6	6
Switch Phase								
Minimum Initial (s)	8.0	8.0	7.0	15.0	15.0	7.0	15.0	15.0
Minimum Split (s)	17.0	17.0	15.0	31.5	31.5	15.0	33.5	33.5
Total Split (s)	35.0	32.0	18.0	75.0	75.0	18.0	75.0	75.0
Total Split (%)	21.9%	20.0%	11.3%	46.9%	46.9%	11.3%	46.9%	46.9%
Yellow Time (s)	3.5	4.0	3.0	4.5	4.5	3.0	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	6.0	5.0	6.5	6.5	5.0	6.5	6.5
Lead/Lag	Lead	Lag	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	29.5	26.0	13.0	68.5	68.5	13.0	68.5	68.5
Actuated g/C Ratio	0.18	0.16	0.08	0.43	0.43	0.08	0.43	0.43
v/c Ratio	1.06	1.00	1.01	0.44	0.12	0.57	0.83	0.15
Control Delay	113.2	104.3	149.0	34.5	2.8	87.7	51.6	6.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	113.2	104.3	149.0	34.5	2.8	87.7	51.6	6.9
LOS	F	F	F	C	A	F	D	A
Approach Delay	113.2	104.3		58.3			49.4	
Approach LOS	F	F		E			D	
Stops (vph)	580	487	118	235	4	76	554	14
Fuel Used(gal)	23	22	6	6	0	3	17	1
CO Emissions (g/hr)	1604	1550	422	430	21	190	1155	56
NOx Emissions (g/hr)	312	302	82	84	4	37	225	11
VOC Emissions (g/hr)	372	359	98	100	5	44	268	13
Dilemma Vehicles (#)	18	16	0	11	0	0	20	0

Intersection Summary

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 124 (78%), Referenced to phase 2:NBT and 6:SBT, Start of 1st Green

Natural Cycle: 115

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.06

Intersection Signal Delay: 79.1

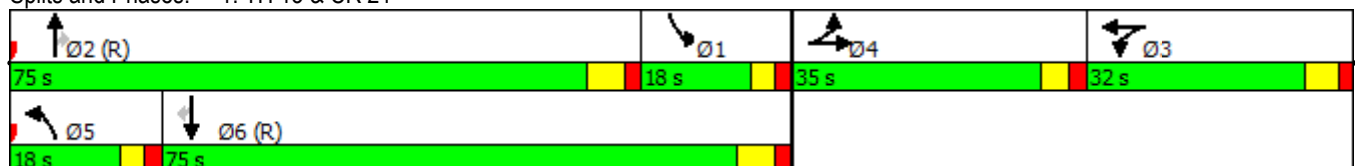
Intersection LOS: E

Intersection Capacity Utilization 94.3%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 1: TH 13 & CR 21



1: TH 13 & CSAH 21

Direction	All
Future Volume (vph)	2689
Total Delay / Veh (s/v)	33
CO Emissions (kg)	3.59
NOx Emissions (kg)	0.70
VOC Emissions (kg)	0.83

2: Main Ave & CSAH 21

Direction	All
Future Volume (vph)	1415
Total Delay / Veh (s/v)	2
CO Emissions (kg)	0.49
NOx Emissions (kg)	0.10
VOC Emissions (kg)	0.11

Timings
2016 Build

Timing Plan: PM Peak Hour
6/22/2016



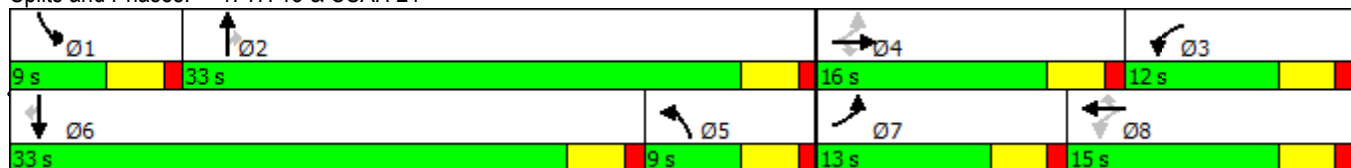
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗	↘	↘	↗	↘	↗	↗	↗	↗	↗	↗
Traffic Volume (vph)	191	521	42	226	281	35	124	338	82	105	651	93
Future Volume (vph)	191	521	42	226	281	35	124	338	82	105	651	93
Lane Group Flow (vph)	199	543	44	235	293	36	129	352	85	109	678	97
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8			2			6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	8.0	10.0	10.0	8.0	10.0	10.0	5.0	15.0	15.0	5.0	15.0	15.0
Minimum Split (s)	12.0	14.0	14.0	12.0	14.0	14.0	9.0	19.0	19.0	9.0	19.0	19.0
Total Split (s)	13.0	16.0	16.0	12.0	15.0	15.0	9.0	33.0	33.0	9.0	33.0	33.0
Total Split (%)	18.6%	22.9%	22.9%	17.1%	21.4%	21.4%	12.9%	47.1%	47.1%	12.9%	47.1%	47.1%
Yellow Time (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
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
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)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lag	Lag	Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Act Effct Green (s)	12.1	12.1	12.1	11.4	11.4	11.4	5.1	27.0	27.0	5.1	27.0	27.0
Actuated g/C Ratio	0.18	0.18	0.18	0.17	0.17	0.17	0.08	0.41	0.41	0.08	0.41	0.41
v/c Ratio	0.59	0.85	0.10	0.75	0.49	0.08	0.50	0.47	0.12	0.42	0.91	0.14
Control Delay	35.3	43.3	0.4	45.7	29.6	0.4	38.5	17.3	1.2	36.6	38.3	1.6
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	35.3	43.3	0.4	45.7	29.6	0.4	38.5	17.3	1.2	36.6	38.3	1.6
LOS	D	D	A	D	C	A	D	B	A	D	D	A
Approach Delay		38.8			34.5			19.7			34.1	
Approach LOS		D			C			B			C	
Stops (vph)	166	441	0	188	244	0	113	232	3	95	533	5
Fuel Used(gal)	4	11	0	5	6	0	3	5	0	2	15	1
CO Emissions (g/hr)	253	741	10	376	410	16	188	345	19	171	1028	36
NOx Emissions (g/hr)	49	144	2	73	80	3	37	67	4	33	200	7
VOC Emissions (g/hr)	59	172	2	87	95	4	44	80	4	40	238	8
Dilemma Vehicles (#)	0	34	0	0	19	0	0	20	0	0	44	0

Intersection Summary

Cycle Length: 70
 Actuated Cycle Length: 66.2
 Natural Cycle: 70
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.91
 Intersection Signal Delay: 32.6
 Intersection Capacity Utilization 78.7%
 Analysis Period (min) 15

Intersection LOS: C
 ICU Level of Service D

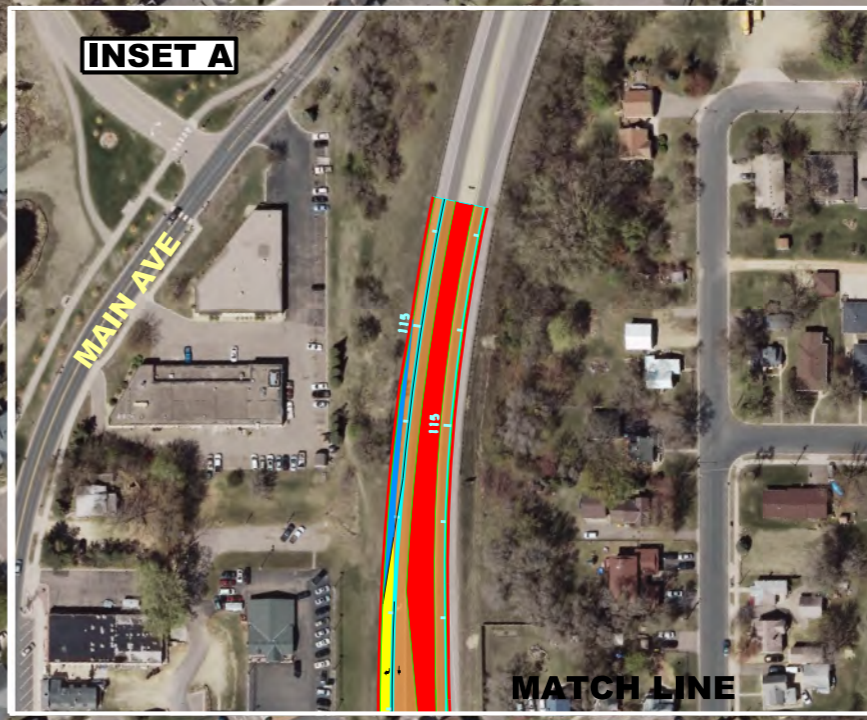
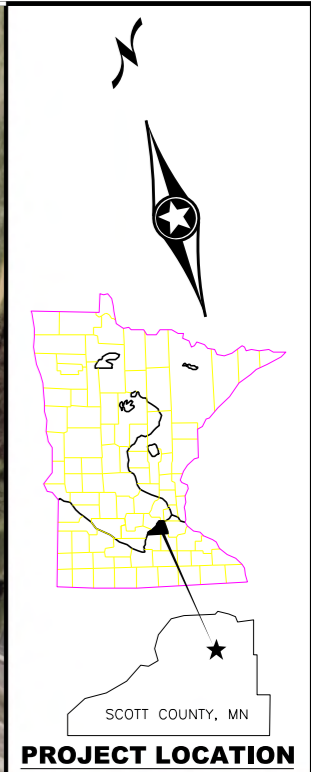
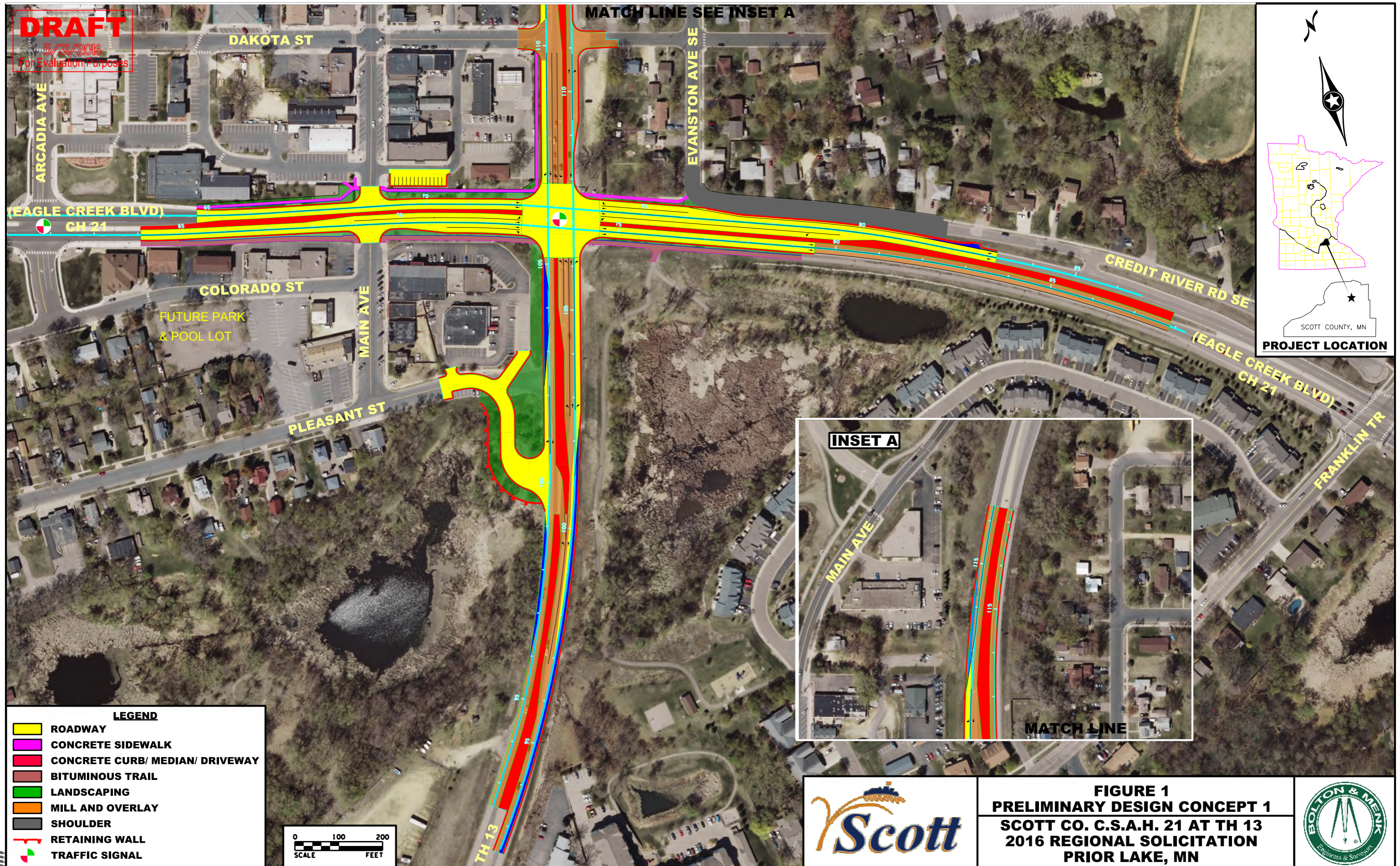
Splits and Phases: 1: TH 13 & CSAH 21



DRAFT

5/31/2016
For Evaluation Purposes

MATCH LINE SEE INSET A



LEGEND

	ROADWAY
	CONCRETE SIDEWALK
	CONCRETE CURB/ MEDIAN/ DRIVEWAY
	BITUMINOUS TRAIL
	LANDSCAPING
	MILL AND OVERLAY
	SHOULDER
	RETAINING WALL
	TRAFFIC SIGNAL

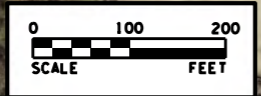


FIGURE 1
PRELIMINARY DESIGN CONCEPT 1
SCOTT CO. C.S.A.H. 21 AT TH 13
2016 REGIONAL SOLICITATION
PRIOR LAKE, MN





4646 Dakota Street SE
Prior Lake, MN 55372

July 13, 2016

Lisa Freese
Transportation Program Director
Scott County Highway Department
600 Country Trail East
Jordan, MN 55352

Re: Intersection Improvement – CSAH 21 & TH 13

Dear Ms. Freese:

The City of Prior Lake is aware Scott County is applying for funding through the Regional Solicitation for intersection improvements at CSAH 21/TH 13. The local match is expected to come from a combination of City and County sources. These improvements are endorsed by the City of Prior Lake and we are supportive of the Regional Solicitation application.

Please let me know if there is any additional information you need from us regarding this funding application.

Sincerely,

Larry Poppler
City Engineer/Inspections Director
City of Prior Lake



Google Street View screen capture: CSAH 21 at TH 13 intersection facing west

AGENDA # 5.3
SCOTT COUNTY, MINNESOTA
REQUEST FOR BOARD ACTION
MEETING DATE: JULY 5, 2016

ORIGINATING DIVISION:	Community Services	CONSENT AGENDA:	☑ Yes ☐ No
ORIGINATING DEPARTMENT:	Physical Development		
PRESENTER:	Lisa Freese - 8363 Program Director	ATTACHMENTS:	☑ Yes ☐ No
PROJECT:	Regional Solicitation Grant Applications	TIME REQUESTED:	N/A
ACTION REQUESTED:	Adopt Resolution No. 2016-130; Authorizing Submittal of Transportation Projects to the Transportation Advisory Board (TAB) for Consideration in the 2016 Regional Solicitation Process		
CONTRACT/POLICY/GRANT:	☐ County Attorney Review ☐ Risk Management Review	FISCAL:	☑ Finance Review ☐ Budget Change
ORGANIZATIONAL VALUES:	<input type="checkbox"/> Provide a Supportive Organizational Culture <input checked="" type="checkbox"/> Develop Strong Public Partnerships <input checked="" type="checkbox"/> Manage Challenges and Create Opportunities <input checked="" type="checkbox"/> Assure Long Term Fiscal Stability <input type="checkbox"/> Emphasize Excellence in Customer Service		
DEPARTMENT/DIVISION HEAD SIGNATURE:		COUNTY ADMINISTRATOR SIGNATURE:	
			
Approved:	MB JU says	DISTRIBUTION/FILING INSTRUCTIONS:	
Denied:		Community Services, Tony Winiecki Community Services, Lisa Freese	
Tabled:			
Other:			
Deputy Clerk :			
Date:	7-5-16		

Background/Justification:

The purpose of this agenda item is to adopt Resolution No. 2016-130, authorizing submittal of transportation projects to the Transportation Advisory Board (TAB) for consideration in the 2016 Regional Solicitation process.

The Metropolitan Council, in partnership with TAB, is requesting project submittals for federal funding under the Surface Transportation Block Grant Program (STBGP), Congestion Mitigation and Air Quality (CMAQ) and Transportation Alternatives Program (TA). This funding provides up to 80 percent of the project construction cost. The local agency submitting the applications must commit to providing at least 20 percent local match and maintaining the constructed facilities for their useful life. A total of approximately \$180 million in federal funds is anticipated to be available in this solicitation for program years 2020 and 2021 for projects in the 7-County Twin Cities Metropolitan Area. Also, due to increased funding levels under the new federal FAST Act legislation, limited federal funding is also available in 2017, 2018, and 2019 for projects that can be implemented sooner. Project submittals are due on July 15, 2016 for all applications. The Highway Safety

Improvement Program Solicitation (HSIP) applications are administered by the Minnesota Department of Transportation (MnDOT) and are due September 1, 2016. The HSIP applications will be brought to the County Board for consideration in August as a separate action.

Funding applications are categorized by transportation mode (auto/roadway, bike/ped, transit) instead of by funding program. The applications also include considerations based on measures emphasized in Thrive MSP 2040, including project relationship to regional economy, equity and affordable housing, and system preservation and modernization.

Staff is recommending six projects be submitted for scoring under the regional solicitation process. If successful, projects dates of delivery may need to be accelerated by the County to align with federal funding or if federal funding availability is after the County program year, Advanced Construction (AC) will be requested. The selection process timeline will allow the County to make adjustments for successful applications in the annual update of the Transportation Improvement Program (TIP) 2018-2027,

Roadway Reconstruction/Modernization		
1.	CH 21 / TH 13 Intersection Improvements	The intersection of County Highway (CH) 21 and Trunk Highway (TH) 13 in Prior Lake has been studied by the City, County, and MnDOT. This project would add right and left turn lanes to improve operations of the intersection. TIP Year 2019
2.	CH 83 from 12 th to 4 th Improvements	CH 83 Corridor Readiness Study completed in 2016 with the City of Shakopee and MnDOT recommended several features to upgrade and modernize this segment. The reconstruction of CH 83 would include such improvements as a median down the center of the roadway, turn lanes extension at 12 th and a grade separated trail on both sides.
3.	CH21 from CH87 to Adelman Ave	This segment of CH 21 was studied in the CH 21 Study by the City and County. This project would realign CH 87 and 170 th street/Credit River Road, add medians, and turn lanes, and replace deteriorated pavement on this segment of the corridor. TIP Program year 2018.
Roadway Expansion		
4.	CH 27 from CH 21 to CH 44	The CH 27 Corridor Study is completed. This segment of CH 27 is planned to be reconstructed to a four lane divided roadway with bike/pedestrian connections to Cleary Lake Regional Park. TIP Program Year 2021
5.	CH 14 Overpass of US 169	The soon to be completed US 169 South Frontage Study identified the need to create additional grade separated crossings of US 169. An overpass of US 169 would be the next stage of extending freeway status south of CH 78.
Multiuse Trails and Bicycle Facilities		
6.	CH 17 Bike/Ped Overpass of US 169	A pedestrian and bicycle overpass at County State Aid Highway (CSAH) 17 is required to complete a gap in the current trail system near the intersection with US 169. The overpass would connect the core of Shakopee and the commercial area north of US 169 with the Marschall Road Transit Station, Saint Francis Regional Medical Center and other commercial businesses.
Transit Expansion		
7.	Scott County Transportation Management Association (TMA)	The proposed Scott County TMA would consist of representatives from Scott County working with area Chambers of Commerce, employers, Mystic Lake Transportation, health and human service providers and other stakeholders yet to be determined. The mission would be to increase the overall accessibility of Scott County employers by leveraging and promoting existing transportation services – SmartLink, MVTA reverse commute routes, Mystic Lake Transportation, Metro Vanpools, Land to Air, etc. –as well as aiding creation and setting up of new options (fixed route, 169 transit way and Orange Line, ride sharing, van pools, volunteer drivers and programs aimed at increasing transit, and alternative forms of transportation)

Fiscal Impact:

The federal grant programs require a 20 percent local match for the project. Funding match obligations for several of the projects are included in the 2016-2025 Transportation Improvement Program (TIP). If the grant is secured for a currently non-funded project, the funding match obligations will be identified in the 2017 update of the County's TIP.

**BOARD OF COUNTY COMMISSIONERS
SCOTT COUNTY, MINNESOTA**

Date:	July 5, 2016
Resolution No.:	2016-130
Motion by Commissioner:	Beard
Seconded by Commissioner:	Ulrich

**RESOLUTION NO. 2016-130; AUTHORIZING SUBMITTAL OF TRANSPORTATION
PROJECTS TO THE TRANSPORTATION ADVISORY BOARD FOR
CONSIDERATION IN THE 2016 REGIONAL SOLICITATION PROCESS**

WHEREAS, the Transportation Advisory Board (TAB) is requesting project submittals for federal funding under Surface Transportation Block Grant Program (STBGP), Transportation Alternatives Program (TA), and Congestions Mitigation and Air Quality (CMAQ); and

WHEREAS, funding is available in the 2017-2021 federal fiscal years; and

WHEREAS, funding provides up to 80 percent of project construction costs; and

WHEREAS, this federal funding of projects reduces the burden on local taxpayers for regional improvements; and

WHEREAS, Scott County has identified projects that improve the safety and transportation system of the region; and

WHEREAS, the Scott County Board of Commissioners desires to support these projects.

NOW, THEREFORE BE IT RESOLVED, that the Scott County Board of Commissioners hereby supports the submittal of the following projects to the Transportation Advisory Board for Consideration in 2016 Regional Solicitation Process:

1. CH21/TH13 Intersection Improvements
2. CH83 Improvements from 12th to 4th Ave
3. CH21 Improvements from Adelman St to CH87
4. CH27 Expansion from CH44 to CH 21
5. CH14 Overpass of US 169
6. CH17 Bike/Ped Overpass of US 169
7. Scott County Transportation Management Association

COMMISSIONERS	VOTE			
Wagner	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Absent	<input type="checkbox"/> Abstain
Wolf	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Absent	<input type="checkbox"/> Abstain
Beard	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Absent	<input type="checkbox"/> Abstain
Marschall	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Absent	<input type="checkbox"/> Abstain
Ulrich	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Absent	<input type="checkbox"/> Abstain

State of Minnesota)
County of Scott)

I, Gary L. Shelton, duly appointed qualified County Administrator for the County of Scott, State of Minnesota, do hereby certify that I have compared the foregoing copy of a resolution with the original minutes of the proceedings of the Board of County Commissioners, Scott County, Minnesota, at their session held on the 5th day of July, 2016 now on file in my office, and have found the same to be a true and correct copy thereof.
Witness my hand and official seal at Shakopee, Minnesota, this 5th day of July, 2016.



County Administrator
Administrator's Designee



Minnesota Department of Transportation

Metro District
1500 West County Road B-2
Roseville, MN 5511

July 8, 2016

Lisa Freese,
Transportation Program Director
Scott County Highways
Physical Development
600 Country Trail East
Jordan, MN 55352-9339

RE: Regional Solicitation Application for TH 13 and CSAH 21 Intersection Improvement

Dear Ms. Freese:

Thank you for requesting a letter of support from MnDOT for the Metropolitan Council/Transportation Advisory Board (TAB) 2016 Regional Solicitation. Your application for the TH 13 and CSAH 21 Intersection Improvement project impacts MnDOT right of way on TH 13.

MnDOT, as the agency with jurisdiction over TH 13, would allow the improvements included in the application for TH 13 and CSAH 21 Intersection Improvement. Details of a future maintenance agreement with the City would be determined during project development to define how the improvements will be maintained for the project's useful life.

This project has no funding from MnDOT. In addition, the Metro District currently has no discretionary funding in year 2020 of the State Transportation Improvement Program (STIP) or year 2021 of the Capital Highway Investment Plan (CHIP) to assist with construction or assist with MnDOT services such as the design or construction engineering of the project. There are programmed MnDOT projects in 2017 and 2019 on TH 13; however coordination with the County projects at this time has not been finalized. Please continue to work with MnDOT Area staff to assist in identifying additional project funding.

Sincerely,

A handwritten signature in blue ink that reads "Scott McBride".

Scott McBride, P.E.
Metro District Engineer

Cc: Elaine Koustoukos, Metropolitan Council
Jon Solberg, MnDOT Metro District – South Area Manager

An Equal Opportunity Employer

