

Application				
04774 - 2016 Roadway Modernization				
05084 - CSAH 13 Rolling Acres Road Reconstruction Project				
Regional Solicitation - Roadways Including Multimodal Element	S			
Status:	Submitted			
Submitted Date:	07/14/2016 8:4	9 AM		
Primary Contact				
•				
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Fax:				
What Grant Programs are you most interested in?	Regional Solicitation - Roadways Including Multimodal Elements			

**CARVER COUNTY** 

**Organization Information** 

Name:

Jurisdictional Agency (if different):			
Organization Type:	County Government	t	
Organization Website:			
Address:	PUBLIC WORKS		
	11360 HWY 212 W #1		
*	COLOGNE	Minnesota	55322-9133
	City	State/Province	Postal Code/Zip
County:	Carver		
Phone:*			
Thore.		Ext.	
Fax:			
PeopleSoft Vendor Number	0000026790A12		

# **Project Information**

Project Name CSAH 13 Rolling Acres Road Reconstruction Project

Primary County where the Project is Located Carver

Jurisdictional Agency (If Different than the Applicant):

The proposed project will modernize County State-Aid Highway (CSAH) 13, for approximately 1.2 miles between Trunk Highway (TH) TH 5 and TH 7 in the City of Victoria (see Figure 1). This segment of road is currently a two-lane undivided A-Minor Expander and will be reconstructed to an urban three-lane roadway with a center left turn lane and right turn lanes at local streets (Figure 2). The project will also include:

- Signal modifications and turn lane improvements at the TH 5 and TH 7 intersections
- Paved multi-use trail on the east side of CSAH 13
- Curb and gutter
- Drainage and ponding infrastructure

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

CSAH 13 is unique in that it provides a vital northsouth connection between TH 5 (A Minor Expander) and TH 7 (Principal Arterial). The corridor as a whole also provides direct access to TH 41 (A Minor Expander) and TH 212 (Principal Arterial). Because of its regional connections to the trunk highway system, CSAH 13 carries large volumes of commuter and freight traffic, as well as travelers bound for the area's regional destinations (e.g., the Minnesota Landscape Arboretum (315,000 annual visitors), Carver Park Reserve, and downtown Victoria. Travel demand on CSAH 13 will continue to increase as the City of Victoria expects to nearly double its population from 7,345 people in 2010 to 15,400 people in 2040. Though employment is also expected to grow, the large majority of people living in Victoria will be commuting to jobs outside of the city via TH 5 and TH 7, placing significant importance on the CSAH 13 connection. It is also important to recognize that there are limited north-south connections between TH 5 and TH 7, as the area's natural features constrain the placement of roadways. The closest north-south arterials to CSAH 13 are 5.6 miles to

the west and 2.7 miles to the east.

Consistent with Carver County's policy of developing and linking trails as roads are upgraded, this project includes construction of a multi-use trail along the east side of CSAH 13. The trail will provide a safer environment for bicyclists and pedestrians, directly connecting users to the Landscape Arboretum trail, as well as to the Lake Minnetonka LRT Regional Trail - linking downtown Victoria to the Carver Park Reserve, the cities of Excelsior, Minnetonka, and Hopkins and the broader regional trail system. The trail will also connect to a planned trail along TH 5 to downtown Victoria.

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

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

**Project Length (Miles)** 

CSAH 13, CARVER COUNTY, FROM TH 5 TO TH 7, 1.2 MILES, CONSTRUCT/RECONSTRUCT

1.2

## **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 \$7,000,000.00

Match Amount \$5,119,000.00

Minimum of 20% of project total

Project Total \$12,119,000.00

Match Percentage 42.24%

Minimum of 20%

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

Source of Match Funds Carver County, City of Victoria

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.

# **Specific Roadway Elements**

CONSTRUCTION PROJECT ELEMENTS/COST ESTIMATES	Cost
Mobilization (approx. 5% of total cost)	\$580,000.00
Removals (approx. 5% of total cost)	\$565,000.00
Roadway (grading, borrow, etc.)	\$2,980,000.00
Roadway (aggregates and paving)	\$4,200,000.00
Subgrade Correction (muck)	\$400,000.00
Storm Sewer	\$1,400,000.00
Ponds	\$200,000.00
Concrete Items (curb & gutter, sidewalks, median barriers)	\$500,000.00
Traffic Control	\$200,000.00
Striping	\$50,000.00
Signing	\$80,000.00
Lighting	\$0.00
Turf - Erosion & Landscaping	\$200,000.00
Bridge	\$0.00
Retaining Walls	\$184,000.00
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	\$0.00
Other Roadway Elements	\$0.00
Totals	\$12,039,000.00

# **Specific Bicycle and Pedestrian Elements**

CONSTRUCTION PROJECT ELEMENTS/COST ESTIMATES	Cost
Path/Trail Construction	\$30,000.00
Sidewalk Construction	\$0.00

On-Street Bicycle Facility Construction	\$0.00
Right-of-Way	\$0.00
Pedestrian Curb Ramps (ADA)	\$50,000.00
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	\$80,000.00

# **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
Other Transit and TDM Elements	\$0.00
Totals	\$0.00

# **Transit Operating Costs**

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

## **Totals**

 Total Cost
 \$12,119,000.00

 Construction Cost Total
 \$12,119,000.00

# **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 B: Safety and Security? The regional transportation system is safe and secure for all users

Objectives: Reduce crashes and improve safety and security for all modes of passenger travel and freight transport

Strategies: Regional transportation partners will use best practice to provide and improve facilities for safe walking and bicycling, since pedestrians and bicyclists are the most vulnerable users of the transportation system

Goal C: Access to Destinations? People and businesses prosper by using a reliable, affordable, and efficient multimodal transportation system that connects them to destinations throughout the region and beyond

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

Objectives: Increase the availability of multimodal travel options, especially in congested highway corridors

Strategies: C1. Regional transportation partners will continue to work together to plan and implement transportation systems that are multimodal and provide connections between modes. The Council will prioritize regional projects that are multimodal and cost-effective and encourage investments to include appropriate provisions for bicycle and pedestrian travel.

Strategies: C9. The Council will support investments in A-minor arterials that build, manage, or improve the system?s ability to supplement the capacity of the principal arterial system and support access to the region?s job, activity, and industrial and manufacturing concentrations.

Strategies: C15. Regional transportation partners

should focus investments on completing Priority Regional Bicycle Transportation Corridors and on improving the larger Regional Bicycle Transportation Network.

Goal F: Leveraging Transportation Investment to Guide Land Use

Objectives: Encourage local land use design that integrates highways, streets, transit, walking, and bicycling.

Strategies: F7. Local Governments should include bicycle and pedestrian elements in local comprehensive plans.

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:

Carver County Roadway Systems Plan Chapter 3 Page 25 (roadway); City of Victoria Comprehensive Plan Page 77 (trail)

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 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 <u>are exclusively</u> 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.

## Requirements - Roadways Including Multimodal Elements

## **Project Information-Roadways**

County, City, or Lead Agency Carver County

Functional Class of Road "A" Minor Arterial Expander

Road System CSAH

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

Road/Route No. 13

i.e., 53 for CSAH 53

Name of Road Rolling Acres Rd.

Example; 1st ST., MAIN AVE

Zip Code where Majority of Work is Being Performed 55386

(Approximate) Begin Construction Date 06/01/2020

(Approximate) End Construction Date 06/30/2021

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

**From** 

(Intersection or Address)

--

(Intersection or Address)

DO NOT INCLUDE LEGAL DESCRIPTION

Or At

**Primary Types of Work** 

Roadway Reconstruction, Trail, Signal Modifications and Turn

Lanes

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):

 Select one:
 Expander

 Area
 8.826

 Project Length
 1.2

 Average Distance
 7.355

 Upload Map
 1467921348407\_RoadwayAreaDefinitionMap.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)

# 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)

## 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: 870

Existing Manufacturing/Distribution-Related Employment within 1

Mile:

31

Existing Students: 0

Upload Map 1467921467182\_RegionalEconomyMap.pdf

# **Measure C: Current Heavy Commercial Traffic**

Location: CSAH 13 north of TH 5

Current daily heavy commercial traffic volume: 450

Date heavy commercial count taken: 2015

# **Measure D: Freight Elements**

The CSAH 13 project will help accommodate freight movement throughout the project area and region. For example, CSAH 13 serves as a vital north-south freight connector between the trunk highway system (e.g., TH 5, 7, 41, and 212). Therefore, CSAH 13 is crucial to the movement of goods and products throughout the region. Major freight industries in the area include the Minnesota Landscape Arboretum and ENKI Brewing Company.

Improvements include a center-turn lane on CSAH 13. By providing these turn lanes, freight will have the opportunity to move more efficiently along the corridor without the slowdown of left turning vehicles within the existing through lane. In addition to providing paved shoulders.

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

Not only will the addition of paved shoulders and turn lanes help facilitate a more robust freight network, the intersection improvements at TH 5 and TH 7 will have a positive impact on the region's freight network. For example, according to MnDOT, TH 7 is recognized as part of the State?s ?Principal Freight Network?. The intersection improvements at TH 5 and TH 7 will include the following:

- Two eastbound through lanes both east/west of CSAH 13 on TH 5
- Two westbound through lanes both east/west of CSAH 13 on TH 7
- Dual northbound left-turn lanes on CSAH 13 at TH 7
- Dual southbound left-turn lanes on CSAH 13 at TH 5

Transforming CSAH 13 into an urbanized freight

corridor.

## **Measure A: Current Daily Person Throughput**

Location CSAH 13 north of TH 5

Current AADT Volume 9200

Existing Transit Routes on the Project N/A

For New Roadways only, list transit routes that will be moved to the new roadway

Upload Transit Map 1467921686584\_TransitConnectionsMap.pdf

## **Response: Current Daily Person Throughput**

Average Annual Daily Transit Ridership 0

Current Daily Person Throughput 11960.0

#### 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

Approved Met Council Carve County Travel

Demand Model

Forecast (2040) ADT volume 10900

## 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

The proposed CSAH 13 reconstruction will improve travel times and economic efficiencies for commuter and freight travel along the project corridor, both of which support the health and growth of Carver County?s local economy and provide opportunities for job growth and stability for populations living near the project area. The direct north-south connection between TH 5 and TH 7 will also enable efficient connections to regional job concentrations and manufacturing centers for all populations.

While all users will benefit from the new trail constructed as part of the proposed project, off-road facilities are especially ideal for people who are new to cycling and need the safety and security of riding their bicycles on facilities that offer minimal contact with automobile traffic. As nearly 30 percent of people living in the project area are children, the trails will have an enormous benefit on the nearby population. The trail will enable families to walk or cycle to the nearby Landscape Arboretum or Carver Park Reserve, where there are a range of family and kid-friendly recreational options.

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

The proposed project will also be good for business. CSAH 13 is heavily used by commuters and freight haulers as it offers the shortest route between TH 5 and TH 7. As the City of Victoria has grown from a small village to a large town and added residential neighborhoods in the CSAH 13 area, new streets have been built that connect to the roadway and create points of conflict. Reconstruction of the roadway will improve access management and safety for users of all modes in the corridor, and transition the roadway from a rural to an urban facility with curb, gutter, and ADA-compliant features that will enable safe travel for individuals with disabilities (5 percent) and the elderly (8 percent) traveling in the corridor.

**Upload Map** 

Victoria

1467921805596\_Socio-EconomicConditionsMap.pdf

1

## **Measure B: Affordable Housing**

City/Township Segment Length in Miles (Population)

1.2

## **Total Project Length**

Total Project Length (Total Population)

1.2

## Affordable Housing Scoring - To Be Completed By Metropolitan Council Staff

City/Township Segment Total Length Score Segment Length/Total Length (Miles) (Miles) Score Length/Total Length Dercent

0 0 0 0

## Affordable Housing Scoring - To Be Completed By Metropolitan Council Staff

Total Project Length (Miles) 1.2

Total Housing Score 0

## **Measure A: Year of Roadway Construction**

**Year of Original** 

Roadway Construction or Most Recent Reconstruction

1957

1.2

2348.4

1957.0

## **Average Construction Year**

Weighted Year 1957

## **Total Segment Length (Miles)**

## 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)

CSAH 13 is currently posted as a 10-ton roadway. Future improvements will also be built to a 10-ton roadway and will comply with State Aid Standards.

Improved clear zones or sight lines:

Yes

Response (Limit 700 characters; approximately 100 words)

The proposed CSAH 13 reconstruction project includes improving slope and various upgrades throughout the modernization process. These improvements, including clear zone and sight lines will be built to State Aid Standards.

Improved roadway geometrics:

Yes

The proposed CSAH 13 reconstruction project will provide improved roadway geometrics along the length of the corridor between TH 5 and TH 7, in addition to intersection improvements. The improved roadway geometrics include:

- Reconstruction of a two-lane rural roadway to an urban three-lane roadway
- Center left-turn lane
- Right-turn lanes at local streets

Response (Limit 700 characters; approximately 100 words)

- Two eastbound through lanes both east/west of CSAH 13 on TH 5
- Two westbound through lanes both east/west of CSAH 13 on TH 7
- Dual northbound left-turn lanes on CSAH 13 at TH 7
- Dual southbound left-turn lanes on CSAH 13 at TH 5

Access management enhancements:

Yes

The proposed CSAH 13 reconstruction project will help facilitate better access management by providing center left-turn lanes and right-turn lanes at local streets. Separating left-turning vehicles from mainline traffic will minimize conflicts and improve the corridor's overall mobility and safety. Below is a list of additional access management enhancements associated with the propose project:

- Center left-turn lane
- Right-turn lane at local streets

Response (Limit 700 characters; approximately 100 words)

- Two eastbound through lanes both east/west of CSAH 13 on TH 5
- Two westbound through lanes both east/west of CSAH 13 on TH 7
- Dual northbound left-turn lanes on CSAH 13 at TH 7
- Dual southbound left-turn lanes on CSAH 13 at TH 5

Vertical/horizontal alignments improvements:

Yes

Response (Limit 700 characters; approximately 100 words)

At this time, the proposed CSAH 13 reconstruction project does not require any vertical or horizontal alignment improvements. All improvements will comply with the State Aid Standards.

Improved stormwater mitigation:

Yes

Response (Limit 700 characters; approximately 100 words)

The proposed CSAH 13 reconstruction project will include improved stormwater management. The appropriate stormwater mitigation strategies will be incorporated to accommodate the transition from a rural two-lane facility to an urban roadway segment. The reconstruction of CSAH 13 will include the following stormwater mitigation improvements:

- The construction of curb and gutter
- The implementation of drainage and ponding infrastructure

Signals/lighting upgrades:

Yes

Response (Limit 700 characters; approximately 100 words)

The proposed CSAH 13 reconstruction project will provide signal upgrades at both the TH 5 and TH 7 intersections. Signal improvements are required to accommodate the dual left-turn lanes and the intersection modifications identified in Figure 1. Each intersection will be equipped with the appropriate intersection lighting and the use of LED lights. Signal upgrades at the intersections will be owned and operated by MnDOT.

**Other Improvements** 

Yes

Response (Limit 700 characters; approximately 100 words)

The proposed CSAH 13 reconstruction will include the construction of a multi-use trail along the east side of CSAH 13. Consistent with Carver County?s policy of development and linking trails as roads are upgraded, this trail will provide a safer environment for bicyclists and pedestrians throughout the CSAH 13 corridor. In addition to the multi-use trail construction all new facilities will be ADA compliant, enabling use of the trail and crossings for all populations.

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:	N of methodology used to calculate railroad crossing delay, if applicable.	Synchro or HCM Reports
109.0	38.0	71.0	3967	281657.0	See attachment	14684368630 27_CSAH 13 Syncro Reports.pdf

## **Total Delay**

**Total Peak Hour Delay Reduced** 

281657.0

# 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):
11.18	7.66	3.52	3967.0	13963.84
11	8		3967	13964

#### Total

Total Emissions Reduced:

13963.84

**Upload Synchro Report** 

1468418842330\_CSAH 13 Syncro Reports.pdf

EVEL ANIATIO

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

Measure B:Roadway	projects	that include	railroad	grade-se	paration	elements

0

0

0.0

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

Total stops in vehicles per hour with the project:

Produced on New Roadway (Kilograms):

1,400 characters; approximately 200 words)

Total (CO, NOX, and VOC) Peak Hour Emissions Reduced or

**EXPLANATION** of methodology and assumptions used:(Limit

Total (CO, NOX, and VOC) Peak Hour Emissions Reduced by the

Fuel consumption in gallons:

Project (Kilograms):

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	ı
If the applicant is completing a transit or TDM application that is operation.  These projects will receive full points for the Risk Assessment.  Park-and-Ride and other transit construction projects require completion.	
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	
100%	
Stakeholders have been identified	Yes
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 in progress; environmental impacts identified; review request letters sent

50%

**Document not started** 

Yes

0%

Anticipated date or date of completion/approval

02/01/2018

#### 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

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

Yes

0%

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

02/01/2018

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

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

Yes

80%

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

50%

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	
50%	
Right-of-way, permanent or temporary easements required, parcels identified	Yes
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	01/01/2020
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%	

Project impacts to Section 4f/6f resources likely

#### 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

10/01/2019

10)Letting

**Anticipated Letting Date** 

02/01/2020

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

**Crash Modification Factor Used:** 

0.89

**Rationale for Crash Modification Selected:** 

Improvements include a 2 lane to 3 lane conversion with installation of a two way left-turn lane. The intersection of CSAH 13/TH 7 adds a NBL turn lane, and the CSAH 13/TH 5 intersection adds a SBL turn lane. TH 5 EB and TH 7 WB expand to four lanes through the intersection to accommodate the new dual left-turn lanes. Determined that the two factors below give best result for B/C.

(Limit 1400 Characters; approximately 200 words)

**Worksheet Attachment** 

1467922494628\_CSAH 13 Crash Complete.pdf

# Roadway projects that include railroad grade-separation elements:

Current AADT volume: 9200.0

Average daily trains: 0

Crash Risk Exposure eliminated: 0

# **Measure A: Multimodal Elements and Existing Connections**

The proposed project will implement a missing link in the local trail system by constructing a ten-foot wide multi-use trail on the east side of CSAH 13. This will provide a complete trail link from neighborhoods to the north and west to the Lake Minnetonka LRT Regional Trail, the TH 5 Trail, and the trail underpass to the Minnesota Landscape Arboretum. The project will connect to the many outdoor exploration options in Carver Park Reserve and the Landscape Arboretum, as well as to the downtowns of Victoria, Excelsior, and Hopkins. The value of the diversity of recreational, educational, and employment opportunities along the Regional Trail is recognized in the City of Victoria Parks and Trails Master Plan, as it recommends full connection of trails along the east side of CSAH 13 to the Regional Trail.

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

Today, pedestrians and cyclists trying to access these regional destinations via CSAH 13 are forced to walk or cycle on the roadway's narrow shoulder alongside high volumes of freight and commuter traffic (Figure 3). In addition to the trail connection, the expansion of CSAH 13 will include construction of shoulders that can accommodate on-road bike commuters, who may choose to take a more direct path at faster speeds. The project will also link to the planned TH 5 Trail to downtown Victoria called for in the 2030 Carver County Comprehensive Plan.

Transit is not incorporated into the CSAH 13 expansion project because there are no existing transit routes that use the facility. However, the proposed project will improve access for commuters to two nearby park and ride facilities at Excelsior City Hall near TH 7, and at Chanhassen Transit Station, near TH 5. Both park and ride facilities are served by peak period express service

to downtown Minneapolis. The lack of transit service is consistent with the project area's designation as a Transit Market Area IV by the

Metropolitan Council (i.e. an area that only supports dial-a-ride and peak period express/commuter service).

The project's multimodal elements include the completion of a multi-use trail, connection to transit stations, and improved shoulders for on-street bicycle commuters. All new facilities will be ADA compliant, enabling use of the trail by elderly people and people with disabilities.

#### **Measure A: Cost Effectiveness**

Total Project Cost (entered in Project Cost Form): \$12,119,000.00

Enter Amount of the Noise Walls: \$0.00

Total Project Cost subtract the amount of the noise walls: \$12,119,000.00

**Points Awarded in Previous Criteria** 

Cost Effectiveness \$0.00

#### **Other Attachments**

File Name	Description	File Size
CSAH 13 Figure 1.pdf	Figure 1 - Project Area	1.5 MB
CSAH 13 Figure 2 Updated.pdf	Figure 2 - Layout	913 KB
CSAH 13 Figure 3.pdf	Figure 3 - Existing Conditions	241 KB
CSAH 13 Rolling Acres Rd MnDOT letter of support.pdf	MnDOT Letter of Support	107 KB
CSAH13VictoriaResolution.pdf	City of Victoria Resolution	414 KB

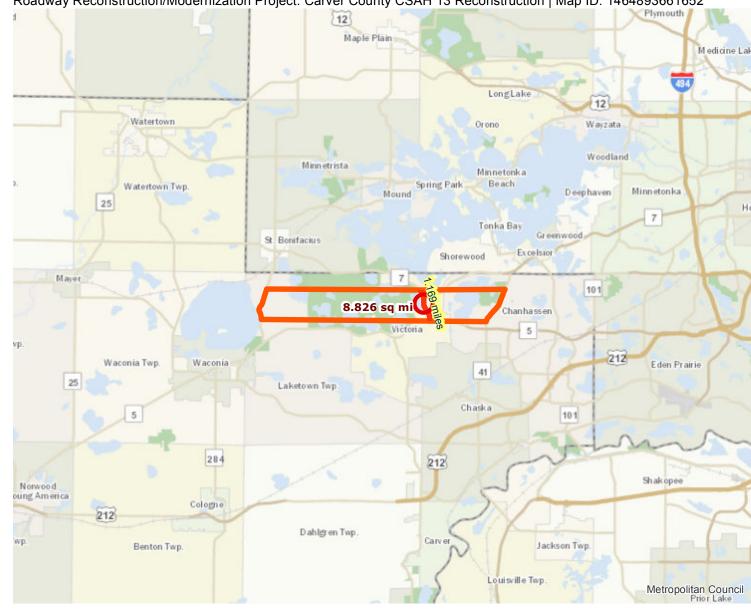
# Roadway Area Definition

Roadway Reconstruction/Modernization Project: Carver County CSAH 13 Reconstruction | Map ID: 1464893661652

Results

Project Length: 1.169 miles

Project Area: 8.826 sq mi



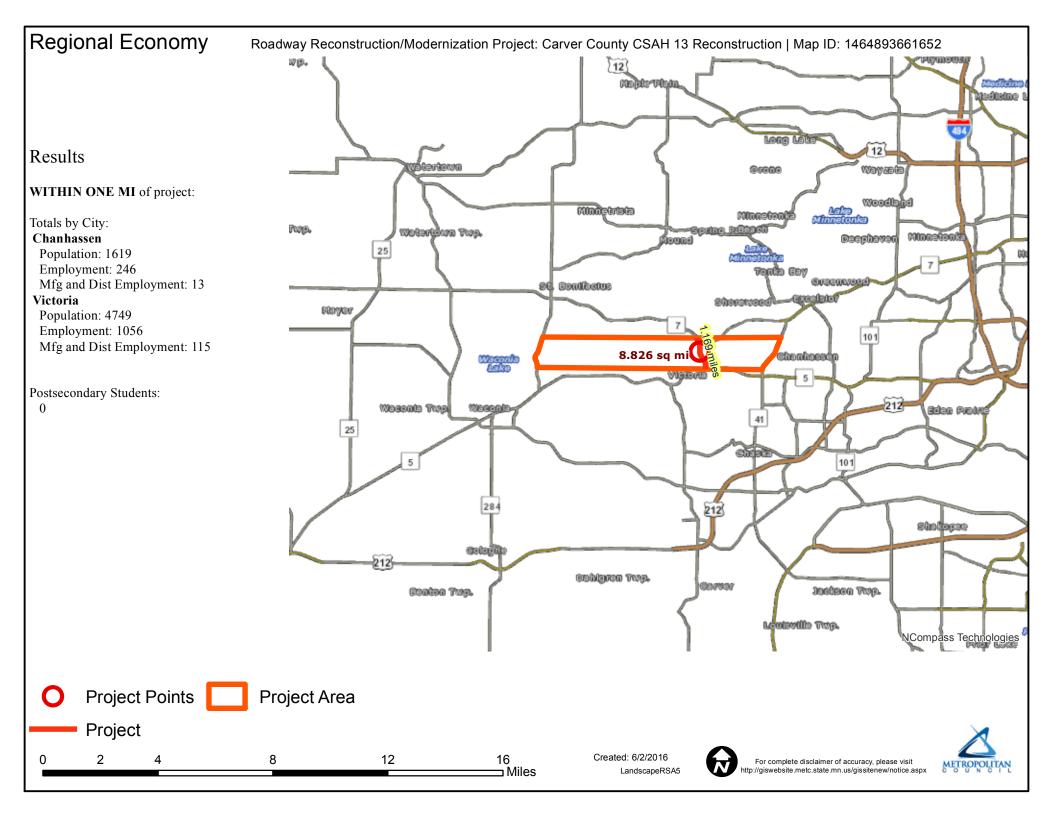


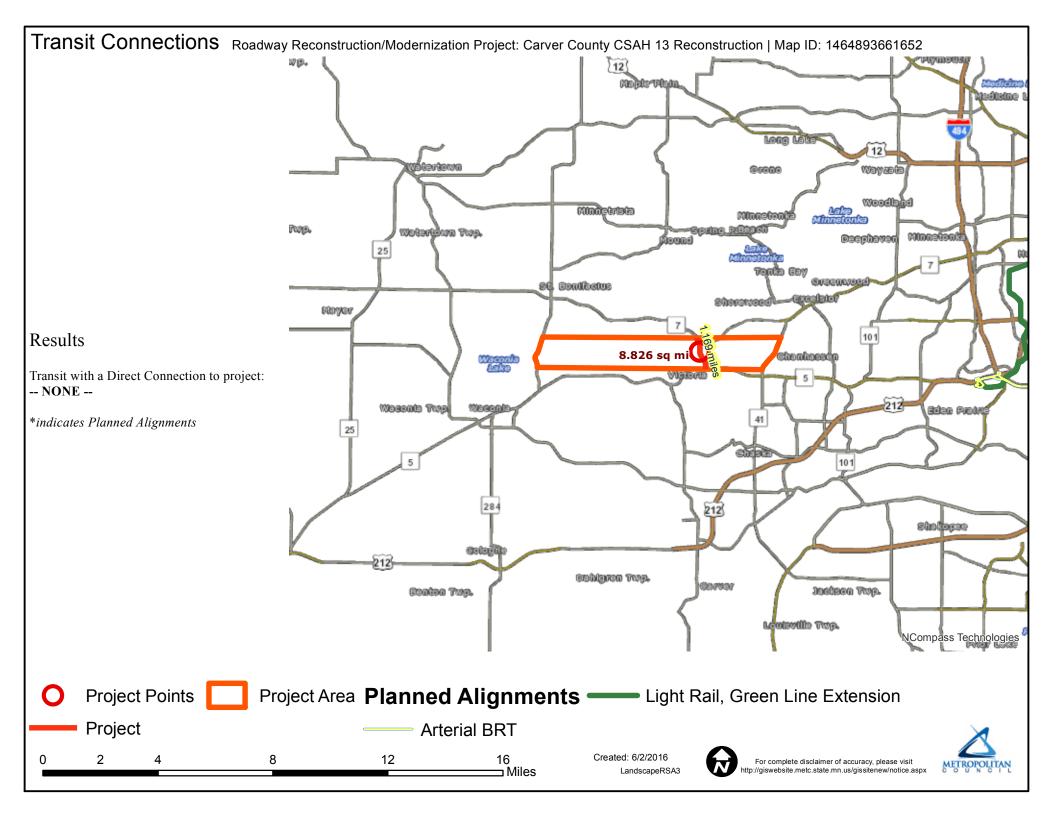
16 2 8 12 ⊐ Miles

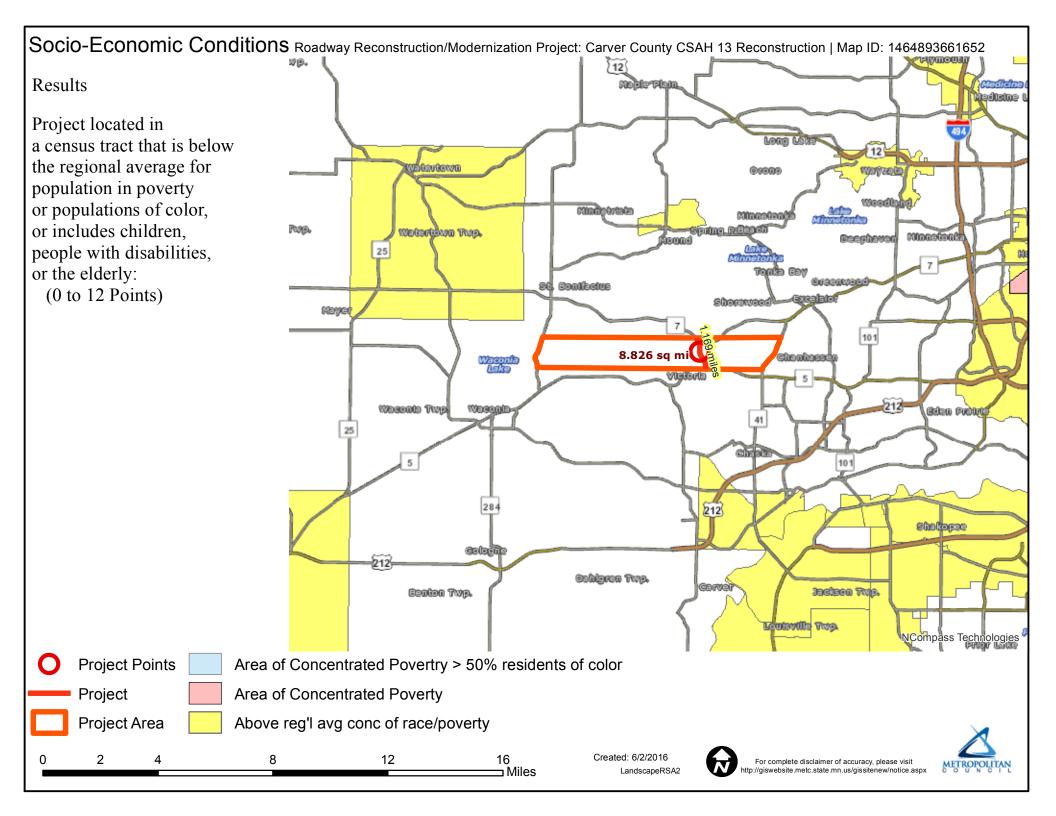
Created: 6/2/2016 LandscapeRSA1











# 3: CSAH 13/Smithtown Rd & Hwy 7

Direction	All	
Future Volume (vph)	1740	
Total Delay / Veh (s/v)	21	
CO Emissions (kg)	2.23	
NOx Emissions (kg)	0.43	
VOC Emissions (kg)	0.52	

# 8: CSAH 13 & Hwy 5

Direction	All	
Future Volume (vph)	2227	
Total Delay / Veh (s/v)	98	
CO Emissions (kg)	5.61	
NOx Emissions (kg)	1.09	
VOC Emissions (kg)	1.30	

Synchro 8 Report Page 1

# 3: CSAH 13/Smithtown Rd & Hwy 7

Direction	All	
Future Volume (vph)	1740	
Total Delay / Veh (s/v)	17	
CO Emissions (kg)	2.07	
NOx Emissions (kg)	0.40	
VOC Emissions (kg)	0.48	

# 8: CSAH 13 & Hwy 5

Direction	All	
Future Volume (vph)	2227	
Total Delay / Veh (s/v)	21	
CO Emissions (kg)	3.30	
NOx Emissions (kg)	0.64	
VOC Emissions (kg)	0.77	

Synchro 8 Report Page 1

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Phase Number	2	3	4	6	7	8
Movement	NBTL	WBL	EBT	SBTL	EBL	WBT
Lead/Lag		Lead	Lag		Lead	Lag
Lead-Lag Optimize		Yes	Yes		Yes	Yes
Recall Mode	None	None	None	None	None	None
Maximum Split (s)	32	24	64	20	20	68
Maximum Split (%)	22.9%	17.1%	45.7%	14.3%	14.3%	48.6%
Minimum Split (s)	20	8	20	20	20	20
Yellow Time (s)	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
Minimum Initial (s)	4	4	4	4	4	4
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)	5		5	5	5	5
Flash Dont Walk (s)	11		11	11	11	11
Dual Entry	Yes	No	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	52	76	32	52	72
End Time (s)	32	76	0	52	72	0
Yield/Force Off (s)	28	72	136	48	68	136
Yield/Force Off 170(s)	17	72	125	37	57	125
Local Start Time (s)	0	52	76	32	52	72
Local Yield (s)	28	72	136	48	68	136
Local Yield 170(s)	17	72	125	37	57	125
Intersection Summary		. =				
Cycle Length			140			
Control Type	Actuate	ed-Uncoo				
Natural Cycle		2000	90			
- <b>,</b>						
Splits and Phases: 3: CSA	AH 13/Smi	thtown R	d & Hwy	7		
<b>♦</b>	1	<b>76</b>	•	ø3		₩ Ø4
32 s	20 s		24 s			64 s
			<b>∌</b>		4	<u>6</u>
				Ø7		Ø8

Synchro 8 Report Page 1

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Phase Number	1	2	3	4	5	6	7	8	
Movement	SBL	NBTL	WBL	EBT	NBL	SBTL	EBL	WBT	
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	
Lead-Lag Optimize	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	Max	None	None	None	Max	None	None	
Maximum Split (s)	8	20	15	27	8	20	8	34	
Maximum Split (%)	11.4%	28.6%	21.4%	38.6%	11.4%	28.6%	11.4%	48.6%	
Minimum Split (s)	8	20	8	20	8	20	8	20	
Yellow Time (s)	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	
Minimum Initial (s)	4	4	4	4	4	4	4	4	
Vehicle Extension (s)	3	3	3	3	3	3	3	3	
Minimum Gap (s)	3	3	3	3	3	3	3	3	
Time Before Reduce (s)	0	0	0	0	0	0	0	0	
Time To Reduce (s)	0	0	0	0	0	0	0	0	
Walk Time (s)		5		5		5		5	
Flash Dont Walk (s)		11		11		11		11	
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes	
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Start Time (s)	0	8	28	43	0	8	28	36	
End Time (s)	8	28	43	0	8	28	36	0	
Yield/Force Off (s)	4	24	39	66	4	24	32	66	
Yield/Force Off 170(s)	4	13	39	55	4	13	32	55	
Local Start Time (s)	62	0	20	35	62	0	20	28	
Local Yield (s)	66	16	31	58	66	16	24	58	
Local Yield 170(s)	66	5	31	47	66	5	24	47	
Intersection Summary									
Cycle Length			70						
Control Type	Actuate	ed-Uncoo							
Natural Cycle			90						
Splits and Phases: 8: CS	AH 13 & H	wv 5							
ø <sub>1</sub> ø <sub>2</sub>		<i>J</i> -		ÿ3			- W4		
8 s 20 s				▼ Ø3			₩ 104 27 s		
20 5				4	-	4	2/3		

Phase Number         2         3         4         6         7         8           Movement         NBTL         WBL         EBT         SBTL         EBL         WBT           Lead/Lag         Lead         Lag         Lead         Lag           Lead-Lag Optimize         Yes         Yes         Yes         Yes           Recall Mode         None         14<
Lead/Lag         Lead         Lag         Lead         Lag           Lead-Lag Optimize         Yes         Yes         Yes         Yes           Recall Mode         None         None         None         None         None         None           Maximum Split (s)         26         10         84         20         20         74           Maximum Split (w)         18.6%         7.1%         60.0%         14.3%         14.3%         52.9%           Minimum Split (s)         20         8         20         20         20         20           Yellow Time (s)         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           Minimum Initial (s)         4         4         4         4         4         4           Vehicle Extension (s)         3         3         3         3         3         3           Minimum Gap (s)         3         3         3         3         3         3           Time Before Reduce (s)         0         0         0         0         0         0
Lead-Lag Optimize         Yes         Yes         Yes         Yes           Recall Mode         None         None
Recall Mode         None         None         None         None         None         None         None           Maximum Split (s)         26         10         84         20         20         74           Maximum Split (w)         18.6%         7.1%         60.0%         14.3%         14.3%         52.9%           Minimum Split (s)         20         8         20         20         20         20           Yellow Time (s)         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           Minimum Initial (s)         4         4         4         4         4         4           Vehicle Extension (s)         3         3         3         3         3         3           Minimum Gap (s)         3         3         3         3         3         3           Time Before Reduce (s)         0         0         0         0         0         0
Maximum Split (s)         26         10         84         20         20         74           Maximum Split (%)         18.6%         7.1%         60.0%         14.3%         14.3%         52.9%           Minimum Split (s)         20         8         20         20         20         20           Yellow Time (s)         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           Minimum Initial (s)         4         4         4         4         4         4           Vehicle Extension (s)         3         3         3         3         3         3           Minimum Gap (s)         3         3         3         3         3         3           Time Before Reduce (s)         0         0         0         0         0         0           Time To Reduce (s)         0         0         0         0         0         0
Maximum Split (%)         18.6%         7.1%         60.0%         14.3%         14.3%         52.9%           Minimum Split (s)         20         8         20         20         20         20           Yellow Time (s)         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           Minimum Initial (s)         4         4         4         4         4         4           Vehicle Extension (s)         3         3         3         3         3         3           Minimum Gap (s)         3         3         3         3         3         3           Time Before Reduce (s)         0         0         0         0         0         0           Time To Reduce (s)         0         0         0         0         0         0
Minimum Split (s)       20       8       20       20       20       20         Yellow Time (s)       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         Minimum Initial (s)       4       4       4       4       4       4         Vehicle Extension (s)       3       3       3       3       3         Minimum Gap (s)       3       3       3       3       3         Time Before Reduce (s)       0       0       0       0       0         Time To Reduce (s)       0       0       0       0       0
Yellow Time (s)       3.5       3.5       3.5       3.5       3.5         All-Red Time (s)       0.5       0.5       0.5       0.5       0.5         Minimum Initial (s)       4       4       4       4       4       4         Vehicle Extension (s)       3       3       3       3       3         Minimum Gap (s)       3       3       3       3       3         Time Before Reduce (s)       0       0       0       0       0         Time To Reduce (s)       0       0       0       0       0
All-Red Time (s) 0.5 0.5 0.5 0.5 0.5 0.5 Minimum Initial (s) 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
All-Red Time (s) 0.5 0.5 0.5 0.5 0.5 0.5 Minimum Initial (s) 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
Minimum Initial (s) 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
Vehicle Extension (s)       3       3       3       3       3         Minimum Gap (s)       3       3       3       3       3       3         Time Before Reduce (s)       0       0       0       0       0       0         Time To Reduce (s)       0       0       0       0       0       0
Minimum Gap (s) 3 3 3 3 3 3 3 3 Time Before Reduce (s) 0 0 0 0 0 0 0 0 0 Time To Reduce (s) 0 0 0 0 0 0
Time Before Reduce (s) 0 0 0 0 0 0 0 Time To Reduce (s) 0 0 0 0 0 0
Time To Reduce (s) 0 0 0 0 0
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Flash Dont Walk (s) 11 11 11 11 11
Dual Entry Yes No Yes Yes Yes Yes
Inhibit Max Yes Yes Yes Yes Yes Yes
Start Time (s) 0 46 56 26 46 66
End Time (s) 26 56 0 46 66 0
Yield/Force Off (s) 22 52 136 42 62 136
Yield/Force Off 170(s) 11 52 125 31 51 125
Local Start Time (s) 0 46 56 26 46 66
Local Yield (s) 22 52 136 42 62 136
Local Yield 170(s) 11 52 125 31 51 125
Intersection Summary
Cycle Length 140
Control Type Actuated-Uncoordinated
Natural Cycle 90
70
Splits and Phases: 3: CSAH 13/Smithtown Rd & Hwy 7
<b>1</b>
26 s 20 s 10 s 84 s
<b> </b>
07 08 20 s

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Phase Number	1	2	3	4	5	6	7	8
Movement	SBL	NBTL	WBL	EBT	NBL	SBTL	EBL	WBT
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	None	None	Max	None	None
Maximum Split (s)	8	24	11	27	8	24	10	28
Maximum Split (%)	11.4%	34.3%	15.7%	38.6%	11.4%	34.3%	14.3%	40.0%
Minimum Split (s)	8	20	8	20	8	20	8	20
Yellow Time (s)	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
Minimum Initial (s)	4	4	4	4	4	4	4	4
Vehicle Extension (s)	3	3	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0	0	0
Walk Time (s)		5		5		5		5
Flash Dont Walk (s)		11		11		11		11
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	8	32	43	0	8	32	42
End Time (s)	8	32	43	0	8	32	42	0
Yield/Force Off (s)	4	28	39	66	4	28	38	66
Yield/Force Off 170(s)	4	17	39	55	4	17	38	55
Local Start Time (s)	62	0	24	35	62	0	24	34
Local Yield (s)	66	20	31	58	66	20	30	58
Local Yield 170(s)	66	9	31	47	66	9	30	47
Intersection Summary								
Cycle Length			70					
Control Type	Actuate	d-Uncoo	rdinated					
Natural Cycle			60					
Splits and Phases: 8: CSA	AH 13 & H	wy 5						

## 3: CSAH 13/Smithtown Rd & Hwy 7

Direction	All	
Future Volume (vph)	1740	
Total Delay / Veh (s/v)	21	
CO Emissions (kg)	2.23	
NOx Emissions (kg)	0.43	
VOC Emissions (kg)	0.52	

## 8: CSAH 13 & Hwy 5

Direction	All	
Future Volume (vph)	2227	
Total Delay / Veh (s/v)	98	
CO Emissions (kg)	5.61	
NOx Emissions (kg)	1.09	
VOC Emissions (kg)	1.30	

## 3: CSAH 13/Smithtown Rd & Hwy 7

Direction	All	
Future Volume (vph)	1740	
Total Delay / Veh (s/v)	17	
CO Emissions (kg)	2.07	
NOx Emissions (kg)	0.40	
VOC Emissions (kg)	0.48	

## 8: CSAH 13 & Hwy 5

Direction	All	
Future Volume (vph)	2227	
Total Delay / Veh (s/v)	21	
CO Emissions (kg)	3.30	
NOx Emissions (kg)	0.64	
VOC Emissions (kg)	0.77	

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Phase Number	2	3	4	6	7	8
Movement	NBTL	WBL	EBT	SBTL	EBL	WBT
Lead/Lag		Lead	Lag		Lead	Lag
Lead-Lag Optimize		Yes	Yes		Yes	Yes
Recall Mode	None	None	None	None	None	None
Maximum Split (s)	32	24	64	20	20	68
Maximum Split (%)	22.9%	17.1%	45.7%	14.3%	14.3%	48.6%
Minimum Split (s)	20	8	20	20	20	20
Yellow Time (s)	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
Minimum Initial (s)	4	4	4	4	4	4
Vehicle Extension (s)	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0
Walk Time (s)	5		5	5	5	5
Flash Dont Walk (s)	11		11	11	11	11
Dual Entry	Yes	No	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	52	76	32	52	72
End Time (s)	32	76	0	52	72	0
Yield/Force Off (s)	28	72	136	48	68	136
Yield/Force Off 170(s)	17	72	125	37	57	125
Local Start Time (s)	0	52	76	32	52	72
Local Yield (s)	28	72	136	48	68	136
Local Yield 170(s)	17	72	125	37	57	125
Intersection Summary		. =	. = 0			.=0
Cycle Length			140			
Control Type	Actuate	ed-Uncoo				
Natural Cycle			90			
- <b>,</b>						
Splits and Phases: 3: CS	AH 13/Smi	thtown R	d & Hwy	7		
<b>√</b> 1 <sub>Ø2</sub>	₩,	<b>76</b>	€	_ Ø3		₩ 04
32 s	20 s	-	24 s			64 s
			j.		4	<u>e</u>
				Ø7	`	Ø8
			20 c		68.4	

	<b>\</b>	- ◆∳	•	*	4	- \$⊳	۶	4	
Phase Number	1	2	3	4	5	6	7	8	
Movement	SBL	NBTL	WBL	EBT	NBL	SBTL	EBL	WBT	
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	
Lead-Lag Optimize	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	Max	None	None	None	Max	None	None	
Maximum Split (s)	8	20	15	27	8	20	8	34	
Maximum Split (%)	11.4%	28.6%	21.4%	38.6%	11.4%	28.6%	11.4%	48.6%	
Minimum Split (s)	8	20	8	20	8	20	8	20	
Yellow Time (s)	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	
Minimum Initial (s)	4	4	4	4	4	4	4	4	
Vehicle Extension (s)	3	3	3	3	3	3	3	3	
Minimum Gap (s)	3	3	3	3	3	3	3	3	
Time Before Reduce (s)	0	0	0	0	0	0	0	0	
Time To Reduce (s)	0	0	0	0	0	0	0	0	
Walk Time (s)		5		5		5		5	
Flash Dont Walk (s)		11		11		11		11	
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes	
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Start Time (s)	0	8	28	43	0	8	28	36	
End Time (s)	8	28	43	0	8	28	36	0	
Yield/Force Off (s)	4	24	39	66	4	24	32	66	
Yield/Force Off 170(s)	4	13	39	55	4	13	32	55	
Local Start Time (s)	62	0	20	35	62	0	20	28	
Local Yield (s)	66	16	31	58	66	16	24	58	
Local Yield 170(s)	66	5	31	47	66	5	24	47	
Intersection Summary									
Cycle Length			70						
Control Type	Actuate	ed-Uncoo							
Natural Cycle			90						
Splits and Phases: 8: CS	AH 13 & H	wv 5							
ø <sub>1</sub> ø <sub>2</sub>		<i>J</i> -		ÿ3			- W4		
8 s 20 s				▼ Ø3			₩ 104 27 s		
20 5				4	-	4	2/3		

Phase Number         2         3         4         6         7         8           Movement         NBTL         WBL         EBT         SBTL         EBL         WBT           Lead/Lag         Lead         Lag         Lead         Lag           Lead-Lag Optimize         Yes         Yes         Yes         Yes           Recall Mode         None         14<
Lead/Lag         Lead         Lag         Lead         Lag           Lead-Lag Optimize         Yes         Yes         Yes         Yes           Recall Mode         None         None         None         None         None         None           Maximum Split (s)         26         10         84         20         20         74           Maximum Split (w)         18.6%         7.1%         60.0%         14.3%         14.3%         52.9%           Minimum Split (s)         20         8         20         20         20         20           Yellow Time (s)         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           Minimum Initial (s)         4         4         4         4         4         4           Vehicle Extension (s)         3         3         3         3         3         3           Minimum Gap (s)         3         3         3         3         3         3           Time Before Reduce (s)         0         0         0         0         0         0
Lead-Lag Optimize         Yes         Yes         Yes         Yes           Recall Mode         None         None
Recall Mode         None         None         None         None         None         None         None           Maximum Split (s)         26         10         84         20         20         74           Maximum Split (w)         18.6%         7.1%         60.0%         14.3%         14.3%         52.9%           Minimum Split (s)         20         8         20         20         20         20           Yellow Time (s)         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           Minimum Initial (s)         4         4         4         4         4         4           Vehicle Extension (s)         3         3         3         3         3         3           Minimum Gap (s)         3         3         3         3         3         3           Time Before Reduce (s)         0         0         0         0         0         0
Maximum Split (s)         26         10         84         20         20         74           Maximum Split (%)         18.6%         7.1%         60.0%         14.3%         14.3%         52.9%           Minimum Split (s)         20         8         20         20         20         20           Yellow Time (s)         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           Minimum Initial (s)         4         4         4         4         4         4           Vehicle Extension (s)         3         3         3         3         3         3           Minimum Gap (s)         3         3         3         3         3         3           Time Before Reduce (s)         0         0         0         0         0         0           Time To Reduce (s)         0         0         0         0         0         0
Maximum Split (%)         18.6%         7.1%         60.0%         14.3%         14.3%         52.9%           Minimum Split (s)         20         8         20         20         20         20           Yellow Time (s)         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           Minimum Initial (s)         4         4         4         4         4         4           Vehicle Extension (s)         3         3         3         3         3         3           Minimum Gap (s)         3         3         3         3         3         3           Time Before Reduce (s)         0         0         0         0         0         0           Time To Reduce (s)         0         0         0         0         0         0
Minimum Split (s)       20       8       20       20       20       20         Yellow Time (s)       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         Minimum Initial (s)       4       4       4       4       4       4         Vehicle Extension (s)       3       3       3       3       3         Minimum Gap (s)       3       3       3       3       3         Time Before Reduce (s)       0       0       0       0       0         Time To Reduce (s)       0       0       0       0       0
Yellow Time (s)       3.5       3.5       3.5       3.5       3.5         All-Red Time (s)       0.5       0.5       0.5       0.5       0.5         Minimum Initial (s)       4       4       4       4       4       4         Vehicle Extension (s)       3       3       3       3       3         Minimum Gap (s)       3       3       3       3       3         Time Before Reduce (s)       0       0       0       0       0         Time To Reduce (s)       0       0       0       0       0
All-Red Time (s) 0.5 0.5 0.5 0.5 0.5 0.5 Minimum Initial (s) 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
All-Red Time (s) 0.5 0.5 0.5 0.5 0.5 0.5 Minimum Initial (s) 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
Minimum Initial (s) 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
Vehicle Extension (s)       3       3       3       3       3         Minimum Gap (s)       3       3       3       3       3       3         Time Before Reduce (s)       0       0       0       0       0       0         Time To Reduce (s)       0       0       0       0       0       0
Minimum Gap (s) 3 3 3 3 3 3 3 3 Time Before Reduce (s) 0 0 0 0 0 0 0 0 0 Time To Reduce (s) 0 0 0 0 0 0
Time Before Reduce (s) 0 0 0 0 0 0 0 Time To Reduce (s) 0 0 0 0 0 0
Time To Reduce (s) 0 0 0 0 0
· /
\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
Flash Dont Walk (s) 11 11 11 11 11
Dual Entry Yes No Yes Yes Yes Yes
Inhibit Max Yes Yes Yes Yes Yes Yes
Start Time (s) 0 46 56 26 46 66
End Time (s) 26 56 0 46 66 0
Yield/Force Off (s) 22 52 136 42 62 136
Yield/Force Off 170(s) 11 52 125 31 51 125
Local Start Time (s) 0 46 56 26 46 66
Local Yield (s) 22 52 136 42 62 136
Local Yield 170(s) 11 52 125 31 51 125
Intersection Summary
Cycle Length 140
Control Type Actuated-Uncoordinated
Natural Cycle 90
70
Splits and Phases: 3: CSAH 13/Smithtown Rd & Hwy 7
<b>1</b>
26 s 20 s 10 s 84 s
<b> </b>
07 08 20 s

	<b>&gt;</b>	<₽	•	*	4	\$⊳	٠	4.
Phase Number	1	2	3	4	5	6	7	8
Movement	SBL	NBTL	WBL	EBT	NBL	SBTL	EBL	WBT
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	None	None	Max	None	None
Maximum Split (s)	8	24	11	27	8	24	10	28
Maximum Split (%)	11.4%	34.3%	15.7%	38.6%	11.4%	34.3%	14.3%	40.0%
Minimum Split (s)	8	20	8	20	8	20	8	20
Yellow Time (s)	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
Minimum Initial (s)	4	4	4	4	4	4	4	4
Vehicle Extension (s)	3	3	3	3	3	3	3	3
Minimum Gap (s)	3	3	3	3	3	3	3	3
Time Before Reduce (s)	0	0	0	0	0	0	0	0
Time To Reduce (s)	0	0	0	0	0	0	0	0
Walk Time (s)		5		5		5		5
Flash Dont Walk (s)		11		11		11		11
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Inhibit Max	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Start Time (s)	0	8	32	43	0	8	32	42
End Time (s)	8	32	43	0	8	32	42	0
Yield/Force Off (s)	4	28	39	66	4	28	38	66
Yield/Force Off 170(s)	4	17	39	55	4	17	38	55
Local Start Time (s)	62	0	24	35	62	0	24	34
Local Yield (s)	66	20	31	58	66	20	30	58
Local Yield 170(s)	66	9	31	47	66	9	30	47
Intersection Summary								
Cycle Length			70					
Control Type	Actuate	d-Uncoo	rdinated					
Natural Cycle			60					
Splits and Phases: 8: CSA	AH 13 & H	wy 5						

HS works		et		Roadway  CSAH 13	From TH 5 to TH	<b>Location</b> 7			]	Beginning Ref. Pt.	Ending Ref. Pt.	State, County, City or Township  Carver	Study Period Begins	Study Period Ends	
	Proposed Work Construct a 3-lane					urban section with TWLTL and Right Turn Lanes at all local roads									
Accid			2 Sideswipe Same Direction	3 Left Tur	n Main Line	5 Right Angle	4,7	Ran off Road	8, 9 Head On/ Sideswipe - Opposite Direction	Pedestrian	6, 90, 99 <b>Other</b>	Total			
	Fatal	$\overline{}$									<b>→</b>				
		F A													
Study Period: Number of Crashes	Personal Injury (PI)	B		2										2	
Crasnes	Property Damage			8						5	1		1	15	
% Change in Crashes	Fatal	F A													
*Use Crash Modification	PI	В													
Factors Clearinghouse	Property Damage	C PD		-85% -85%						-71%	-71%		-71%		
	Fatal L	F		-0370						7170	- / 1 /0		-7170		
	I														
Change in Crashes	PI	B													
= No. of		C		-1.70										-1.70	
crashes <b>X</b> % change in crashes	Property Damage	PD		-6.80						-3.55	-0.71		-0.71	-11.77	
Year (Safety l	mpro	vemen	t Construct	tion)	2020							1 i			
Project Cost	(exclı	ıde Ri	ght of Way	·)	\$ 12,119,000	Type of Crash	Study Period: Change in Crashes	Annual Change in Crashes		Cost per Crash	Annual Benefit		B/C=	0.11	
Right of Way Costs (optional)		F			\$	1,400,000		Using present	worth value						
Traffic Growth Factor 3%		A			\$	570,000		<b>B</b> =	\$	1,345,648					
Capital Reco	very					В			\$	170,000		<b>C</b> =	\$ 1	2,119,000	
1. Discoun	1. Discount Rate 4.5%			C	-1.70	-0.57	\$	83,000	\$ 47,076	See "Calculati	ions" sheet f	or amortization.			
2. Project	Servi	ce Lif	če (n)		20	PD	-11.77	-3.93	\$	7,600	·	Office of Tra	ffic. Safety	and	
						Total						Technology		mber 2014	

HS works			Control Section	Roadway			Location			1	Beginning Ref. Pt.	Ending Ref. Pt.	State, County, City or Township	Study Period Begins	Study Period Ends
			Descripti		TH 5/CSAH	13							Carver	1/1/2013	12/31/2015
Aggid	ont Di		Proposed 1 Rear End		Add Dual SF 2 Sideswipe				lanes to acco		nodate the dua Ran off Road	al SBL, improve 1 8, 9 Head On/		6, 90, 99	
Accid		Codes			Same Direction		5 Left Turi	Wam Line	5 Kigiit Aligic	<del>-</del> , /		Sideswipe - Opposite Direction		0, 90, 99	
			<b>—</b>	<b></b>		<b>&gt;</b>	<u>_</u>					Opposite Direction	Pedestrian	Other	Total
	Fatal	F									,				
Study	Personal Injury (PI)	A													
Period: Number of	sonal I	В							1					1	2
Crashes		C		1				1	1			2			5
	Property Damage	PD		5		1						1		1	8
% Change	Fatal	F													
in Crashes															
	PI	A							<b>77</b> 0/					<b>7</b> 00/	
*Use Crash	11	В							-57%					-59%	
Modification Factors	> 0	C		-86%				-83%	-57%			-72%			
<u>Clearinghouse</u>	Property Damage	PD		-86%	-8	39%						-72%		-59%	
	Fatal	F													
		A													
Change in Crashes	PI	В							-0.57	,				-0.59	-1.16
= No. of		C		-0.86				-0.83	-0.57			-1.44			-3.70
crashes <b>X</b> % change in crashes	Property Damage	DD		-4.30		0.89						-0.72		-0.59	-6.50
			t Comoton of									-0.72		-0.59	-0.50
Year (Safety I	mprov	cinen	Construct	11011)		2020		Study					]		
Project Cost	(exclı	ıde Ric	ght of Way	<i>t</i> )	\$ 12,119.		Type of Crash	Period: Change in Crashes	Annual Change in Crashes		Cost per Crash	Annual Benefit		B/C=	0.27
-				,	<b>Ф 12,119</b> ,	000		Crashes	Crasiics	ф		Delicit	TI	,1 1	
Right of Way Traffic Grow			ionai)		3%		F A			\$ \$	1,400,000 570,000		Using present <b>B=</b>		3,231,746
		.0.01			370						,		C=		2,119,000
Capital Reco	very						В	-1.16	-0.39	\$	170,000	\$ 65,793		ψ 1	<b>-</b> 911/9000
1. Discoun	t Rate	e			4.5%		C	-3.70	-1.23	\$	83,000	\$ 102,460	See "Calculati	ions" sheet f	or amortization.
2. Project Service Life (n) 20			PD	-6.50	-2.17	\$	7,600	•	O 88	an	_				
							Total						Office of Tra Technology	•	and nber 2014

MF	CRF(%)	Quality	Crash Type	Crash Severity	Area Type	Reference	Comments
0.64	36	****	All	All	Rural	Persaud et al., 2008	
0.53	47	会会会会会	Rear end	All	Rural	Persaud et al., 2008	
0.65	35	***	All	Serious injury,Minor injury	Rural	Persaud et al., 2008	

٠,	Count	ermeasure	e: Install TW	/LTL (two-w	ay left turn la	ane) on	two lane ro	ad
	CMF	CRF(%)	Quality	Crash Type	Crash Severity	Area Type	Reference	Comments
	0.797	20.3	****	AII	All	All	Lyon et al., 2008	
	0.739	26.1 🐈	***	All	Fatal,Serious injury,Minor injury	AII	Lyon et al., 2008	
	0.613	38.7 🌟	***	Rear end	All	All	Lyon et al., 2008	
	0.775	22.5 🌟	***	AII	All	All	Lyon et al., 2008	
	0.686	31.4	***	AII	AII	All	Lyon et al., 2008	

	0.843	15.7	***	All	AII	All	Lyon et al., 2008	
	0.629	37.1	****	AII	Fatal,Serious injury,Minor injury	AII	Lyon et al., 2008	
•								
	0.725	27.5	****	AII	Fatal,Serious injury,Minor injury	All	Lyon et al., 2008	
	1.019	- 1.9	****	All	Fatal,Serious injury,Minor injury	All	Lyon et al., 2008	
	0.501	49.9	****	Rear end	AII		Lyon et al., 2008	
	0.506	49.4	***	Rear end	All	All	Lyon et al., 2008	
							2006	
							2006	
-	0.783	21.7	常常常常常	Rear end	All	AII	Lyon et al., 2008	
	0.783	21.7	***	Rear end	All	AII	Lyon et al.,	
			********	Rear end	AII	All Rural	Lyon et al.,	

0.492	50.8	***	All	All	Rural	Lyon et al., 2008	
0.727	27.3	****	All	All	Rural	Lyon et al., 2008	
1.05	-5	<b>亲亲亲亲</b>	All	All	Urban	Lyon et al., 2008	
0.874	12.6	***	All	All	AII	Lyon et al., 2008	
0.469	53.1	***	All	Fatal,Serious injury,Minor injury	AII	Lyon et al., 2008	

٠,	Count	ermeasure	e: Improve <sub>l</sub>	pavement fr	riction (incre	ase skid	resistance)	
	CMF	CRF(%)	Quality	Crash Type	Crash Severity	Area Type	Reference	Comments
	0.799	20.1	***	All	All	All	Lyon and Persaud, 2008	
•								
	0.667	33.3 🌟	<b>全全全</b>	All	All	All	Lyon and Persaud, 2008	
•								
	0.819	18.1 🌟	***	All	AII	All	Lyon and Persaud, 2008	
	0.797	20.3	***	All	All	All	Lyon and Persaud, 2008	
	1.271	- 27.1 *	***	All	All	All	Lyon and Persaud, 2008	
	0.426	57.4 🜟	***	Wet road	AII	All	Lyon and Persaud, 2008	
	0.372	62.8	***	Wet road	All	All	Lyon and Persaud,	

0.575	42.5	***	Rear end,Wet road	All		Lyon and Persaud, 2008	
0.59	41	***	All	All	All	Lyon and Persaud, 2008	
0.589	41.1	食食食食食	All	All	All	Lyon and Persaud, 2008	
0.361	63.9	***	Wet road	All	All	Lyon and Persaud, 2008	
0.304	69.6	<b>含含含</b> 含含	Rear end	All	All	Lyon and Persaud, 2008	
0.943	5.7	***	Rear end	All	All	Lyon and Persaud, 2008	
0.504	49.6	***	Rear end	All	All	Lyon and Persaud, 2008	

	0.221	77.9	常常常宗宗	Rear end,Wet road	All	All	Lyon and Persaud, 2008	
	0.787	21.3	***	Angle	All	All	Lyon and Persaud, 2008	
	0.828	17.2	***	Angle	All	All	Lyon and Persaud, 2008	
	0.898	10.2	***	Angle	All	All	Lyon and Persaud, 2008	
	0.799	20.1	***	Angle,Wet road	All	All	Lyon and Persaud, 2008	
-								
	0.47	53	***	Angle,Wet road	All	All	Lyon and Persaud, 2008	
	0.828	17.2	***	Angle,Wet road	All	All	Lyon and Persaud, 2008	

Desition Reference to							Effectiveness		-  -		
Countermeasure(s)	Crash Type	Crash Severity	Area Type	Road Type	Daily Traffic Volume (veh/day)	Ref	Crash Reduction Factor / Function	Std Error	Ra Low	nge High	Study Type
Flatten side slopes and remove guardrail	All	All	All	All		27	42	58			EB Before- After
	All	All	Rural	All		21	0				Expert Panel
Improve curve superelevation	All	All	Rural			21	100(1-(1.00+6(SD-0.01))) SD=superelevation deficient of the superelevation deficient of the superelevation deficiency of the superel		etweer	า 0.01	Expert Panel
Superelevation	All	All	Rural			21	100(1-(1.06+3(SD-0.02))) SD=superelevation defici- 0.02		reater	than	Expert Panel
Improvo goro aroa	All	All				15	25				
Improve gore area	All	All	All	All		1	25				
	All	All				15	58				
Improve horizontal and	All	All	All	All		1	50				
vertical alignments	All	All				15	50				
vertical alignments	All	All				15	50				
	All	All				15	73				
	All	All				15	49				
	All	All	All	All		1	40				
Improve longitudinal	All	All				15	40				
grade	All	All				15	57				
grade	All	Fatal/ Injury				15	87				
	All	PDO				15	83				
	All	All				15	40				
Improve superelevation	All	All				1	40				
	ROR	All				15	50				
Improve superelevation	All	All				15	45				
(for drainage)	All	All				15	40				
(ioi didilidge)	All	All				15	49				
	All	All			<5,000/lane	15	20				
Increase number of	All	All			>5,000/lane	15	(31)				
lanes	All	All				15	10				
	All	All				15	20				
	All	All				15	22				

·	i Ciasii Ne						Effectiven	Effectiveness			
Countermeasure(s)	Crash Type	Crash Severity	Area Type	Road Type	Daily Traffic Volume (veh/day)	Ref	Crash Reduction Factor / Function	Std Error	Ra Low	nge High	Study Type
	All	All				15	25				
	All	All				15	25				
	All	All				15	25				
	All	Fatal				15	39				
	All	Injury				15	23				
	All	PDO				15	27				
	Head-on	All			<5,000/lane	15	38				
	Head-on	All			>5,000/lane	15	44				
	Head-on	All				15	(53)				
	Head-on	All				15	53				
	Head-on	PDO				15	50				
	Left-turn	All				15	(71)				
	Left-turn	PDO				15	67				
	ROR	All				15	(44)				
	ROR	All				15	26				
	ROR	All				15	44				
	ROR	All				15	44				
Increase number of	ROR	PDO				15	(50)				
lanes (cont'd)	Overturn	All			<5,000/lane	15	42				
	Overturn	All			>5,000/lane	15	52				
	Rear-end	All			<5,000/lane	15	42				
	Rear-end	All			>5,000/lane	15	52				
	Rear-end	All				15	32				
	Rear-end	All				15	32				
	Rear-end	All				15	40				
	Rear-end	All				15	53				
	Rear-end	PDO				15	53				
	Right- angle	All			<5,000/lane	15	35				
	Right- angle	All			>5,000/lane	15	45				
	Right- angle	All				15	15				
	Right- angle	PDO				15	46				
	Sideswipe	All			<5,000/lane	15	38				_

					D 11 T 65		Effectiveness			•	are eraeriee
Countermeasure(s)	Crash Type	Crash Severity	Area Type	Road Type	Daily Traffic Volume (veh/day)	Ref	Crash Reduction Factor / Function	Std Error		nge	Study Type
					(1011100)		7. 6.101.		Low	High	
	Sideswipe	All			>5,000/lane	15	(44)				
Increase number of	Sideswipe	All				15	30				
lanes (cont'd)	Sideswipe	All				15	30				
	Sideswipe	All				15	35				
	Sideswipe	PDO				15	64				
Increase vertical grade by 1%	All	All	Rural	2-lane		23	-1.6P; P=percent grade (	absolut	te valu	e)	
	All	All				15	26				
	All	All	All	All		1	10				
	All	All				15	10				
	All	All				15	10				
Install acceleration/	All	All				15	10				
deceleration lanes	All	All				15	25				
	All	All				15	75				
	Rear-end	All				15	75				
	Sideswipe	All				15	75				
	All	All				15	67				
Install channelized lane	All	PDO				15	62				
	Rear-end	All				15	93				
Install climbing lane (where large difference between car and truck speed)	All	Fatal/ Injury	Rural	2-lane		38	33				
Inotall nagaing/alimhing	All	All	All	All		1	20				
Install passing/climbing lane	All	Fatal/ Injury	Rural	2-lane		38	33				
Install shoulder	All	All				15	9				
	Head-on	Fatal/ Injury				15	50				
Install shoulder bus	Head-on	PDO				15	86				
lanes	Left-turn	Fatal/ Injury				15	42				
	Left-turn	PDO				15	57				

Improvements include a 2 lane to 3 lane conversion with installation of a two way left-turn lane. The intersection of CSAH 13/TH 7 adds a NBL turn lane, and the CSAH 13/TH 5 intersection adds a SBL turn lane. TH 5 EB and TH 7 WB expand to four lanes through the intersection to accommodate the new dual left-turn lanes. Determined that the two factors below give best result for B/C.

### Three Lane Section between Hwy 5 and Hwy 7

CR1=Introduce TWLTL
CR2=Improve Pavement Friction

$$CR=1-(1-CR1)*(1-CR2)$$

All = 
$$CR = 1 - (1-.51)*(1-.41) = .71$$
  
All (injury):  $CR = 1 - (1-.53)*(1-.41) = .72$   
Rear End:  $CR = 1 - (1-.50)*(1-.70) = .85$ 

### **TH 5 Intersection**

CR1=Increase Lanes
CR2=Improve Pavement Friction

$$CR=1 - (1-CR1)*(1-CR2)$$

All: CR=1 - (1-.31)\*(1-.41) = .59Rear End: CR=1 - (1-.53)\*(1-.70) = .86Angle: CR=1 - (1-.45)\*(1-.21) = .57Left Turn: CR=1 - (1-.71)\*(1-.41) = .83Head On: CR=1 - (1-.53)\*(1-.41) = .72Sideswipe: CR=1 - (1-.64)\*(1-.70) = .89

CSAH 13 From TH 5 to TH 7 (2013 - 2015) - created on 06-17-2016 by ri
Crash data is managed by the Mn/DOT Office of Traffic, Safety, and Operations.

SYS	NUM	REF_POINT	GIS_ROUTE	GIS_TM	RD_DIR	ELEM
04	10000013	808.00+000	0410000013	0.808	S	
04	10000013	000+00.860	0410000013	0.860	Z	
04	10000013	001+00.084	0410000013	1.084	Z	
04	10000013	001+00.165	0410000013	1.165	Z	
04	10000013	001+00.225	0410000013	1.225	Z	
04	10000013	001+00.315	0410000013	1.315	Z	
04	10000013	001+00.465	0410000013	1.465	Z	
04	10000013	001+00.465	0410000013	1.465	Z	
04	10000013	001+00.465	0410000013	1.465	N	
04	10000013	001+00.892	0410000013	1.892	Z	
04	10000013	001+00.545	0410000013	1.545	Z	
04	10000013	001+00.295	0410000013	1.295	Z	
04	10000013	001+00.404	0410000013	1.404	Z	
04	10000013	001+00.680	0410000013	1.680	Z	
04	10000013	001+00.866	0410000013	1.866	Z	
04	10000013	001+00.290	0410000013	1.290	Z	
04	10000013	001+00.465	0410000013	1.465	Z	

# le1che

RELY	INV	R_U
1	2	U
2	2	U
1	2	U
2	2 2 2 2	U
1	2	U
3	2	U
1	2 2 2	U
1	2	U
1	2	U
2	2	U
1	2	U
1	2	U
2	2 2	U
1	2	U
1	0	U
1	2	U
1	0	U

#### **ATP**

21 SAID SHE WAS STATED SHE WAS STOPPED SB, JUST PAST TAMARACK ROAD, IN A LINE OF TRAFFIC WAITING FOR EH 1, 2, AND 3 WERE SOUTHBOUND ON CO RD 13, APPROACHING A TRAFFIC LIGHT. VEH #3 AND 2 SLOWED WIT RIVER OF VEH 1 WAS SB ON CO RD 13 WHEN THE VEHICLE IN FRONT SLOWED. DRIVER OF VEH 1 SLOWED AS WE /EH #2 WAS SB ON CO RD 13. AS VEH #2 APPROACHED THE CROSSWALK FOR THE LRT TRAIL, DRIVER #2 STATED SAID V2 WERE BOTH SB ON CO RD 13. V2 WAS STOPPED WITHIN THE ROADWAY WAITING FOR AN UNKNOWN VI VEHICLE 1 TRAVELING NB CO RD 13/ROLLING ACRES RD. VEHICLE 2 TRAVELING NB CO RD 13/ROLLING ACRES RD. AT INTERLAKEN, WAITING FOR INIT #1 WAS STOPPED LEGALLY IN ROADWAY NORTHBOUND ROLLING ACRES RD. AT INTERLAKEN, WAITING FOR INIT #1 WAS STOPPED IN TRAFFIC. UNIT #2 WAS SLOWING TO STOP. UNIT #3 WAS ALSO SLOWING TO STOP AND V1 WAS NB CO. RD. 13, STOPPED IN TRAFFIC WAITING TO MAKE A LEFTHAND TURN INTO MT. OLIVET CHURCH, V1 INIT #1 WAS TRAVELLING NB ON CO RD. 13 APPROACHING HWY. 7. TRAFFIC IN FRONT OF UNIT #1 WAS STOPPED IN TRAFFIC WAITING TO FISHTAIL ON THE ICE COVERED ROADWAY. DRIVER STAFFICLE #1 WAS SOUTHBOUND ON COUNTY ROAD 13. VEHICLE #1 LOST CONTROL, RAN OFF THE RIGHT SIDE OF 1 INIT 1 WAS TRAVELLING SOUTHBOUND ON ROLLING ACRES RD. AT A CURVE IN THE ROAD, UNIT 1 TRAVELLED OFF UNIT #1 WAS TRAVELLING NB ON ROLLING ACRES RD. (CO RD. 13). UNIT #1 APPROACHED CURVE AT A SPEED FA

CLE #1 WAS SOUTHBOUND ON COUNTY ROAD 11 DRIVING THROUGH A CRASH SCENE WITH EMERGENCY VEHICL

со	CITY	DOW	MONTH	DAY	YEAR	TIME	SEV
10	3895	2-Mon	5	18	2015	0756	N
10	3895	2-Mon	11	18	2013	0752	С
10	3895	2-Mon	8	17	2015	1730	N
10	3895	3-Tue	7	23	2013	1522	N
10	3895	3-Tue	2	3	2015	1544	N
10	3895	4-Wed	7	10	2013	1915	N
10	3895	5-Thu	2	6	2014	1752	С
10	3895	4-Wed	12	10	2014	0730	N
10	3895	3-Tue	8	11	2015	1714	N
10	3895	3-Tue	12	23	2014	1830	N
10	3895	6-Fri	3	15	2013	2259	N
10	3895	4-Wed	1	22	2014	1005	N
10	3895	4-Wed	12	30	2015	0645	N
10	3895	1-Sun	8	17	2014	1950	N
10	3895	7-Sat	3	16	2013	0900	N
10	3895	4-Wed	1	22	2014	1140	N
10	3895	2-Mon	10	20	2014	1926	N

NUM_KILLED	NUM_VEH	JUNC	SL	TYPE	DIAG	LOC1	TCD
0	2	1	45	1	1	1	98
0	3	1	45	1	1	1	98
0	2	1	45	1	1	1	98
0	2	11	45	1	1	1	98
0	2	2	45	1	1	1	98
0	2	11	40	1	1	1	98
0	3	4	45	1	1	1	4
0	3	4	45	1	1	1	98
0	2	4	45	1	1	1	98
0	2	1	45	1	1	1	1
0	1	8	45	30	4	2	98
0	1	2	45	25	7	2	98
0	1	1	45	37	7	2	98
0	1	1	45	37	7	8	98
0	1	0	45	26	7	0	98
0	2	1	45	1	9	1	98
0	1	0	40	8	90	0	98

							PERSON1
LIT	WTHR1	WTHR2	SURF	CHAR	DESGN	ACC_NUM	VTYPE
1	1	0	1	1	8	151410114	1
1	1	0	1	1	8	133220059	38
1	2	3	1	1	8	152360027	1
1	1	0	1	1	8	132060061	1
1	4	2	3	1	8	150360121	3
1	1	1	1	1	1	131920017	1
3	1	0	1	1	8	140380014	3
1	7	0	5	1	8	143440038	3
1	1	0	1	1	8	152240109	1
4	2	3	2	1	8	143570335	1
6	5	0	5	1	8	130750046	1
1	7	0	5	6	8	140220342	3
6	2	2	2	5	8	153640036	1
3	2	0	1	5	8	142310202	1
1	2	0	5	0	0	131090078	1
1	7	0	5	6	8	140220345	38
7	1	0	1	0	0	143280071	11

DIR	ACT	FAC1	FAC2	POSN	INJ	EQP	PHYS	AGE
5	1	1	0	1	N	4	1	29
5	1	15	0	1	N	3	1	44
5	1	1	0	1	N	4	1	32
5	1	15	0	1	N	4	1	19
5	1	61	3	1	N	4	1	17
1	10	1	1	1	N	4	1	23
1	1	15	0	1	N	4	1	60
1	11	1	0	1	N	4	1	36
1	1	1	0	1	N	4	1	17
1	10	4	0	1	N	4	1	19
1	1	61	16	1	N	4	1	18
5	1	3	0	1	N	4	1	66
5	1	1	1	1	N	4	1	19
2	1	3	15	1	N	4	1	20
5	1	0	0	1	N	4	0	21
1	1	90	0	1	N	4	1	56
5	1	0	0	1	N	12	0	67

	PERSON2							
SEX	VTYPE	DIR	ACT	FAC1	FAC2	POSN	INJ	EQP
F	4	5	1	15	4	1	N	4
M	2	5	10	1	0	1	N	4
F	1	5	1	15	0	1	N	4
F	1	5	57	1	0	1	N	4
F	1	5	1	1	0	1	N	4
M	1	1	1	4	15	1	N	4
F	3	1	11	1	0	1	С	4
F	1	1	10	1	0	1	N	4
F	1	1	11	1	0	1	N	4
F	3	1	11	1	0	1	N	4
M								
F								
F								
F								
М								
M	1	5	1	90	0	1	N	4
М								

			PERSON3					
PHYS	AGE	SEX	VTYPE	DIR	ACT	FAC1	FAC2	POSN
1	24	M						
1	41	M	1	5				
1	20	F						
1	40	F						
1	24	F						
1	34	M						
1	60	F	1	1				
1	22	F	1	1				
1	18	M						
1	28	F						
1	36	F						

					PERSON4			
INJ	EQP	PHYS	AGE	SEX	VTYPE	DIR	ACT	FAC1

FAC2 POSN INJ EQP PHYS AGE SEX

TH 5 from 250' East and West of CSAH 13 (2013 -2015) - created on 06

Crash data is managed by the Mn/DOT Office of Traffic, Safety, and Operations.

SYS	NUM	REF_POINT	GIS_ROUTE	GIS_TM	RD_DIR	ELEM	RELY
04	10000013	000+00.760	0410000013	<del>0.760</del>	Z	_	1
04	10000013	000+00.760	0410000013	0.760	Ε		1
04	10000013	000+00.760	0410000013	0.760	Z		1
04	10000013	000+00.760	0410000013	0.760	Z		1
04	10000013	000+00.760	0410000013	<del>0.760</del>	<del>Z</del>	_	4
04	10000013	000+00.760	0410000013	<del>0.760</del>	Z	_	4
<del>03</del>	00000005	040+00.383	030000005	<del>40.443</del>	₩	_	4
03	00000005	040+00.388	0300000005	40.448	Ε		1
03	00000005	040+00.400	0300000005	40.460	Ε		1
<del>03</del>	00000005	040+00.403	030000005	<del>40.463</del>	Z	_	2
03	00000005	040+00.403	030000005	40.463	Z		1
03	00000005	040+00.403	030000005	40.463	Z		1
03	00000005	040+00.403	030000005	40.463	Z		1
03	00000005	040+00.403	0300000005	40.463	Z		1
03	00000005	040+00.403	030000005	40.463	Z		1
03	00000005	040+00.403	030000005	40.463	Z		1
03	00000005	040+00.403	030000005	40.463	Z		1
03	00000005	040+00.403	030000005	40.463	Z		1
03	00000005	040+00.403	030000005	40.463	Ε		1
<del>03</del>	00000005	040+00.403	030000005	<del>40.463</del>	Z	_	4
<del>03</del>	00000005	040+00.403	030000005	<del>40.463</del>	₩	_	4
03	00000005	040+00.403	030000005	<del>40.463</del>	₩	_	3
<del>03</del>	00000005	040+00.403	030000005	<del>40.463</del>	Z	_	4
<del>03</del>	00000005	040+00.403	030000005	<del>40.463</del>	Z	_	4
<del>03</del>	00000005	040+00.403	030000005	<del>40.463</del>	Z	_	4
03	00000005	040+00.413	030000005	40.473	Ε		1
<del>03</del>	00000005	040+00.453	030000005	40.513	Z	_	4
<del>03</del>	00000005	040+00.459	030000005	<del>40.519</del>	Z	_	2
03	00000005	040+00.459	030000005	<del>40.519</del>	Z	_	<del>2</del>

# i-17-2016 by rile

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#### **ATP**

1 WAS IN THE STRAIGHT/RIGHT TURN LANE, V2 WAS BEHIND V1. BOTH VEHICLES WERE MAKING A RIGHT HAND TO POKE TO DRIVER OF UNIT 1 WHO SAID SHE WAS DRIVING EAST ON HIGHWAY 5 AND REAR ENDED UNIT 2. SPOKE 1 WAS POSITIONED TO TURN RIGHT ON RED FROM SOUTHBOUND ROLLING ACRES ROAD TO GO WESTBOUND ON INIT 2 WAS SOUTH ON BAVARIA RD. IN VICTORIA MN. UNIT 1 WAS ON THE SOUTHBOUND SHOULDER. UNIT 1 STA 1. V1, V2 AND V4 ALL SUSTAINED LIGHT DAMAGE. V3 SUSTAINED MODERATE DAMAGE AND WAS TOWED BY WILL 1 TRAVELING EB HWY 5 APPROACHING CO RD 13 WITH A GREEN LIGHT. V2 TRAVELING WB HWY 5 APPROACHING 1 SLOWWING FOR TRAFFIC AHEAD APPROACHING STOP LIGHT AND WAS STRUCK FROM BEHIND BY V2. L. G. WELK -V1 AND V2 WERE E/B HWY 5 -V2 STOPPED IN TRAFFIC -V1 DID NOT STOP IN TIME -V1 COLLIDED WITH V2. -V1 WAS S/B CR 13 TO E/B HWY 5 -V2 WAS N/B CR 13. -V1 COLLIDED WITH V2 IN THE MIDDLE OF THE INTERSE

#1 DRIVER STATED HE WAS DRIVING AT POSTED 55 MPH. #1 DRIVER STATED HE DID NOT SEE THAT VEHICLE IN VEHICLE WAS STOPPED AT THE STOP LIGHT. VEHICLE 2 WAS NOT PAYING ATTENTION TO TRAFFIC IN FRONT OF H UNIT 1 WAS STOPPED AT RED LIGHT GOING EB ON HWY 5 AT BAVARIA ROAD. DRIVER OF UNIT 2 ADMITTED SHE L JNITS 1 & 2 WERE STOPPED NEAR THE INTERSECTION OF HWY 5 AND BAVARIA ROAD FOR A RED LIGHT. WHEN TH 1/1 WAS SOUTH ROLLING ACRES ROAD, TURNING EAST ON MNTH 5. IN THE PROCESS OF MAKING HIS TURN, V/1 V VEH #1 WAS WB ON HWY 5. VEH #2 WAS AT A STOP LIGHT SB ON CO RD 13 AT HWY 5. A SEMI TRUCK IN THE TUR L WAS MAKING A RIGHT HAND TURN, WHEN U1 SLID INTO U2, WHICH WAS JUST ABOUT TO MAKE A LEFT HAND TI N 06/10/2014 AT 0830 HOURS, THERE WAS A 2 VEHICLE PROPERTY DAMAGE CRASH AT THE INTERSECTION OF MN RIVER 1 WAS TRAVELLING EASTBOUND ON HIGHWAY 5. DRIVER 1 WAS TRAVELLING APPROXIMATLEY 55-60 MILES I-02/02/2013 AT APPROXIMETLY 0915 HOURS THERE WAS A PROPERTY DAMAGE CRASH AT THE INTERSECTION OF -V1, V2, V3 AND V4 WERE W/B HWY 5. V2, V3, AND V4 WERE STOPPED AT THE TRAFFIC LIGHT. V1 DID NOT S 1 SLOWING IN TRAFFIC. V2 DIRECTLY BEHIND D2 STATED SHE LOOKED DOWN AND THEN WAS UNABLE TO STOP E 'RIVER OF VEHICLE #2 REPORTED HE WAS W/B MNTH 5 AND WAS STOPPED FOR THE RED LIGHT AT THE INTERSEC' V/1 AND V/2 BOTH WEST BOUND ON MNTH 5. V/2 WAS THE LEAD VEHICLE, STOPPED AT A RED LIGHT. NOT ABLE VEHICLE #1 WAS STOPPED IN TRAFFIC AT THE STOP LIGHT AT THE INTERSECTION OF HWY 5 AND ROLLING ACRES '1 ENTERED INTERSECTION ON A RED LIGHT AND WAS STRUCK BY V2. V3 WAS STOPPED IN LTL WB HWY 5 AND W V1 WAS TRAVELING WB HWY 5 JUST BEFORE CO RD. 13. V2 WAS STOPPED IN LEFT TURN LANE AT HWY 5/CO RD. 1 RIVER OF UNIT 1 WAS WB ON MN HWY 5 APPROACHING CO.RD. 13 WHEN HE DID NOT NOTICE THAT TRAFFIC IN F

CO	CITY	DOW	MONTH	DAY	YEAR	TIME	SEV	NUM_KILLED
<del>10</del>	<del>3895</del>	<del>5-Thu</del>	6	<del>18</del>	<del>2015</del>	<del>1104</del>	N	0
10	3895	1-Sun	5	10	2015	0816	С	0
10	3895	7-Sat	10	4	2014	1637	N	0
10	3895	1-Sun	10	19	2014	1345	С	0
<del>10</del>	<del>3895</del>	<del>3-Tue</del>	3	<del>31</del>	<del>2015</del>	<del>1550</del>	E	0
<del>10</del>	<del>3895</del>	4-Wed	<del>5</del>	<del>6</del>	<del>2015</del>	<del>2234</del>	B	0
<del>10</del>	<del>3895</del>	4-Wed	<del>3</del>	4	<del>2015</del>	<del>1733</del>	E	0
10	3895	5-Thu	9	19	2013	1456	N	0
10	3895	2-Mon	9	9	2013	0610	С	0
<del>10</del>	<del>3895</del>	<del>5 Thu</del>	4	<del>18</del>	<del>2013</del>	<del>1400</del>	N	0
10	3895	6-Fri	2	15	2013	0754	N	0
10	3895	4-Wed	11	20	2013	0619	N	0
10	3895	6-Fri	10	17	2014	0910	N	0
10	3895	7-Sat	12	6	2014	1520	N	0
10	3895	3-Tue	12	22	2015	1605	С	0
10	3895	2-Mon	12	9	2013	1257	В	0
10	3895	1-Sun	12	8	2013	1849	N	0
10	3895	3-Tue	6	10	2014	0830	N	0
10	3895	2-Mon	8	17	2015	1109	В	0
<del>10</del>	<del>3895</del>	<del>2-Mon</del>	<del>2</del>	4	<del>2013</del>	<del>0915</del>	N	0
<del>10</del>	<del>3895</del>	<del>2 Mon</del>	<del>5</del>	<del>20</del>	<del>2013</del>	<del>2115</del>	N	0
<del>10</del>	<del>3895</del>	<del>6-Fri</del>	9	<del>20</del>	<del>2013</del>	<del>1738</del>	N	0
<del>10</del>	<del>3895</del>	<del>2-Mon</del>	<del>10</del>	7	<del>2013</del>	<del>0653</del>	N	0
<del>10</del>	<del>3895</del>	<del>5 Thu</del>	<del>12</del>	<del>5</del>	<del>2013</del>	<del>2123</del>	N	0
<del>10</del>	<del>3895</del>	<del>1-Sun</del>	<del>12</del>	8	<del>2013</del>	<del>1715</del>	N	0
10	3895	2-Mon	6	17	2013	1807	С	0
<del>10</del>	<del>3895</del>	4-Wed	4	<del>16</del>	<del>2014</del>	<del>1858</del>	N	0
<del>10</del>	<del>3895</del>	<del>2-Mon</del>	<del>11</del>	<del>18</del>	<del>2013</del>	<del>1750</del>	E	θ
<del>10</del>	<del>3895</del>	<del>6-Fri</del>	<del>5</del>	8	<del>2015</del>	<del>1719</del>	N	0

NUM_VEH	JUNC	SL	TYPE	DIAG	LOC1	TCD	LIT	WTHR1
<del>2</del>	4	<del>45</del>	4	1	4	1	1	4
4	4	55	1	1	1	1	1	2
2	4	45	1	2	1	1	1	1
2	1	40	1	3	1	98	1	1
4	1	<del>55</del>	4	1	4	1	1	4
<del>2</del>	4	<del>55</del>	4	<del>5</del>	4	4	4	4
<del>2</del>	4	<del>55</del>	4	4	4	4	4	4
2	4	55	1	1	1	1	1	1
2	4	55	1	8	1	1	1	1
1	0	<del>10</del>	<del>2</del>	7	0	<del>98</del>	4	7
2	1	55	1	1	1	98	1	1
2	1	55	1	1	1	1	2	1
2	4	55	1	1	1	1	1	2
2	4	55	1	1	1	1	1	1
2	4	55	1	5	1	1	1	2
2	4	55	1	5	1	1	1	1
2	4	55	1	6	1	1	4	4
2	4	55	1	9	1	1	1	1
1	1	55	90	98	1	98	1	1
<del>2</del>	4	<del>55</del>	1	<del>5</del>	1	1	1	1
4	4	<del>55</del>	4	<del>1</del>	4	<del>1</del>	4	2
<del>2</del>	1	<del>55</del>	1	1	1	<del>98</del>	1	2
<del>2</del>	4	<del>55</del>	1	1	1	1	2	2
<del>2</del>	4	<del>55</del>	4	4	4	1	4	1
<del>2</del>	4	<del>55</del>	4	2	4	<del>1</del>	4	4
4	4	55	1	8	1	1	1	1
3	1	<del>55</del>	1	1	1	<del>98</del>	1	2
4	4	<del>55</del>	4	<del>1</del>	4	<del>1</del>	4	2
2	0	<del>55</del>	1	1	0	1	1	1

					PERSON1			
WTHR2	SURF	CHAR	DESGN	ACC_NUM	VTYPE	DIR	ACT	FAC1
0	1	1	8	<del>151700080</del>	1	1	3	4
0	1	1	3	151300046	3	3	1	15
0	1	1	8	142790054	3	6	3	1
0	1	1	8	142940042	1	5	1	1
0	<b>1</b>	1	8	<del>150910086</del>	3	7	1	4
1	<del>1</del>	4	8	<del>151280021</del>	<del>1</del>	7	4	<del>5</del>
2	<del>1</del>	4	8	<del>150630364</del>	2	7	1	8
0	1	1	8	132780154	1	3	1	15
0	1	1	8	132530181	3	4	6	2
Ð	<del>5</del>	0	θ	<del>131410106</del>	<del>99</del>	0	Ð	θ
1	2	3	8	130460077	3	3	1	3
0	1	1	8	133250288	2	3	1	1
0	1	1	5	142900051	1	3	1	15
0	1	2	8	143400107	1	3	9	15
0	1	1	8	153570289	2	1	1	1
0	1	1	8	133470062	3	5	9	1
0	5	1	5	133420276	2	5	11	1
0	1	1	8	141610040	3	5	6	2
0	1	1	1	152290134	11	3	1	18
0	4	4	8	<del>130350155</del>	1	7	1	3
0	<del>1</del>	4	8	<del>131510227</del>	<del>1</del>	7	<del>11</del>	4
0	<del>1</del>	1	8	<del>132710130</del>	<del>1</del>	7	<del>1</del>	<del>15</del>
0	<del>1</del>	1	<del>5</del>	<del>132800086</del>	<del>1</del>	7	<del>1</del>	<del>15</del>
0	<del>5</del>	4	8	<del>133400530</del>	4	7	<del>1</del>	3
0	<del>5</del>	4	8	<del>133430040</del>	3	7	<del>11</del>	4
0	1	1	8	131820201	1	1	9	2
4	4	4	8	<del>141060207</del>	1	7	<del>10</del>	<del>61</del>
2	<del>1</del>	4	8	<del>133230017</del>	<del>1</del>	7	<del>11</del>	4
0	<b>1</b>	0	0	<del>151610060</del>	3	7	<del>11</del>	0

							PERSON2	
FAC2	POSN	INJ	EQP	PHYS	AGE	SEX	VTYPE2	DIR3
0	1	N	4	4	<del>30</del>	F	3	4
0	1	N	4	1	54	F	1	3
0	1	N	4	1	35	М	3	6
0	1	С	4	1	23	F	3	5
0	1	N	4	1	<del>47</del>	F	3	7
<del>2</del>	<del>1</del>	N	<del>99</del>	<del>1</del>	<del>43</del>	M	3	3
4	1	N	4	4	<del>17</del>	F	<del>2</del>	7
0	1	N	4	1	44	M	3	3
0	1	С	4	1	64	F	1	1
0	1	N	<del>98</del>	0	<del>901</del>	Z		
4	1	N	4	1	16	M	3	3
0	1	N	4	1	61	M	1	3
0	1	N	4	1	19	F	3	3
0	1	N	4	1	49	F	3	3
0	1	N	4	1	32	М	1	4
0	1	С	4	1	40	F	1	7
0	1	N	4	1	39	М	3	7
0	1	N	4	1	42	М	3	1
0	1	В	15	3	51	М		
Ð	1	N	4	4	<del>22</del>	M	3	<del>5</del>
Ð	<b>1</b>	N	4	4	<del>23</del>	M	<del>2</del>	7
0	1	<b>A</b>	4	1	44	F	3	7
Ð	1	N	4	4	<del>23</del>	M	<del>2</del>	7
4	4	N	<del>99</del>	4	<del>18</del>	M	4	7
0	4	N	4	4	<del>74</del>	M	3	7
15	1	N	4	1	46	F	35	3
0	1	N	4	<del>1</del>	<del>17</del>	M	1	7
<del>1</del>	<b>1</b>	N	4	4	<del>24</del>	F	4	7
0	<b>1</b>	N	4	0	<del>32</del>	M	<del>1</del>	7

ACT4	FAC15	FAC26	POSN7	INJ8	EQP9	PHYS10	AGE11	SEX12
3	4	<del>5</del>	1	N	4	1	<del>17</del>	M
11	1	0	1	N	4	1	24	F
3	8	0	1	N	4	1	67	F
7	10	0	1	N	4	1	19	F
4	1	0	1	N	4	1	43	F
4	4	4	4	₽	<del>99</del>	4	<del>41</del>	M
<del>10</del>	<del>1</del>	0	4	N	4	<del>1</del>	<del>22</del>	M
1	1	0	1	N	4	1	41	M
1	1	0	1	С	4	1	51	F
11	1	1	1	N	4	1	43	М
1	15	0	1	N	4	1	32	М
1	1	0	1	N	4	1	68	F
9	1	0	1	N	4	1	49	М
6	2	0	1	N	4	1	18	М
1	5	0	1	N	4	1	42	F
5	3	61	1	N	4	1	41	М
1	1	0	1	N	4	1	50	F
_	_	· ·	_		·	_		•
6	1	θ	1	N	4	1	<del>27</del>	F
4	<del>15</del>	0	1	N	4	1	<del>37</del>	M
<del>10</del>	1	0	1	N	4	1	49	M
<del>11</del>	1	Đ	1	N	4	4	<del>20</del>	M
4	<del>1</del>	θ	<del>1</del>	N	<del>99</del>	4	<del>37</del>	F
<del>5</del>	<del>46</del>	0	4	N	4	<del>1</del>	<del>35</del>	F
1	1	0	1	С	4	1	44	М
<del>11</del>	1	0	1	N	4	1	44	Ę
<del>11</del>	<del>1</del>	<del>1</del>	<del>1</del>	N	4	<del>1</del>	<del>47</del>	M
1	0	0	<u>-</u> 1	N N	4	0	<del>54</del>	Ę.
_	_	-	-	. •	•	-		•

PERSON	3							
VTYPE13	B DIR14	ACT15	FAC116	FAC217	POSN18	INJ19	EQP20	PHYS21
							•	
3	3							
3	3							
1	7							

		PERSON4						
AGE22	SEX23	VTYPE24	DIR25	ACT26	FAC127	FAC228	POSN29	INJ30

EQP31 PHYS32 AGE33 SEX34 Column35 Column36 Column37 Column38

Column39 Column41 Column42 Column43 Column44 Column45

Column46 Column47 Column48 Column49 Column50 Column51 Column52

Column53 Column54 Column55 Column56 Column57 Column58 Column59

Column60 Column61 Column62 Column63 Column64 Column65 Column66

Column67 Column68 Column69 Column70 Column71 Column72 Column73

Column74 Column75 Column76 Column77 Column78 Column79 Column80

Column81 Column82 Column83 Column84 Column85 Column86 Column87

Column88 Column89 Column90 Column91 Column92 Column93 Column94

Column95 Column96 Column97 Column98 Column99 Column100 Column101

Column102 Column103 Column104 Column105 Column106 Column107

Column108 Column109 Column110 Column111 Column112 Column113

Column114 Column115 Column116 Column117 Column118 Column119

Column120 Column121 Column122 Column123 Column124 Column125

Column126 Column127 Column128 Column129 Column130 Column131

Column132 Column134 Column135 Column136 Column137

Column138 Column139 Column140 Column141 Column142 Column143

Column144 Column145 Column146 Column147 Column148 Column149

Column150 Column151 Column152 Column153 Column154 Column155

Column156 Column157 Column158 Column159 Column160 Column161

Column162 Column163 Column164 Column165 Column166 Column167

Column168 Column169 Column170 Column171 Column172 Column173

Column174 Column175 Column176 Column177 Column178 Column179

Column180 Column181 Column182 Column183 Column184 Column185

Column186 Column187 Column188 Column189 Column190 Column191

Column192 Column193 Column194 Column195 Column196 Column197

Column198 Column200 Column201 Column202 Column203

Column204 Column205 Column206 Column207 Column208 Column209

Column210 Column211 Column212

TH 5 from 250' East and West of CSAH 13 (2013 -2015) - created on 06-17-2016 by rile Crash data is managed by the Mn/DOT Office of Traffic, Safety, and Operations.

SYS	NUM	REF_POINT	GIS_ROUTE	GIS_TM	RD_DIR	ELEM	RELY	INV	R_U
04	10000013	000+00.760	0410000013	0.760	Z	_	4	<del>2</del>	U
04	10000013	000+00.760	0410000013	0.760	Е		1	2	U
04	10000013	000+00.760	0410000013	0.760	Z		1	2	U
04	10000013	000+00.760	0410000013	0.760	Z		1	2	U
04	10000013	000+00.760	0410000013	<del>0.760</del>	Z	_	4	2	Ħ
04	10000013	000+00.760	0410000013	0.760	Z	_	1	2	Ħ
<del>03</del>	00000005	040+00.383	030000005	40.443	₩	_	4	4	U
03	00000005	040+00.388	0300000005	40.448	Ε		1	1	U
03	00000005	040+00.400	0300000005	40.460	Ε		1	1	U
<del>03</del>	00000005	040+00.403	030000005	<del>40.463</del>	Z	_	<del>2</del>	0	Ħ
03	00000005	040+00.403	0300000005	40.463	Z		1	2	U
03	00000005	040+00.403	0300000005	40.463	Z		1	1	U
03	00000005	040+00.403	0300000005	40.463	Z		1	2	U
03	00000005	040+00.403	030000005	40.463	Z		1	2	U
03	00000005	040+00.403	0300000005	40.463	Z		1	1	U
03	00000005	040+00.403	030000005	40.463	Z		1	2	U
03	00000005	040+00.403	030000005	40.463	Z		1	2	U
03	00000005	040+00.403	0300000005	40.463	Z		1	2	U
03	00000005	040+00.403	0300000005	40.463	Е		1	2	U
<del>03</del>	00000005	<del>040+00.403</del>	030000005	<del>40.463</del>	Z	_	4	<del>2</del>	<del>U</del>
<del>03</del>	00000005	040+00.403	030000005	<del>40.463</del>	₩	_	4	4	Ħ
<del>03</del>	00000005	040+00.403	030000005	<del>40.463</del>	₩	_	3	4	Ħ
<del>03</del>	00000005	040+00.403	030000005	<del>40.463</del>	<del>Z</del>	_	4	<del>2</del>	Ħ
<del>03</del>	00000005	<del>040+00.403</del>	030000005	<del>40.463</del>	Z	_	4	4	₩
<del>03</del>	00000005	040+00.403	030000005	<del>40.463</del>	Z	_	4	<del>2</del>	Ħ
03	00000005	040+00.413	0300000005	40.473	Е		1	1	U
<del>03</del>	00000005	040+00.453	030000005	40.513	Z	_	1	2	Ħ
<del>03</del>	00000005	<del>040+00.459</del>	030000005	<del>40.519</del>	Z	_	<del>2</del>	<del>2</del>	H
<del>03</del>	00000005	<del>040+00.459</del>	030000005	<del>40.519</del>	Z	_	<del>2</del>	0	<del>U</del>



#### e1che

V1 WAS IN THE STRAIGHT/RIGHT TURN LANE, V2 WAS BEHIND V1. BOTH VEHICLES WERE MAKING A RIGHT HAND TU SPOKE TO DRIVER OF UNIT 1 WHO SAID SHE WAS DRIVING EAST ON HIGHWAY 5 AND REAR ENDED UNIT 2. SPOKE T UNIT 1 WAS POSITIONED TO TURN RIGHT ON RED FROM SOUTHBOUND ROLLING ACRES ROAD TO GO WESTBOUND ON HW UNIT 2 WAS SOUTH ON BAVARIA RD. IN VICTORIA MN. UNIT 1 WAS ON THE SOUTHBOUND SHOULDER. UNIT 1 STAT V1. V1, V2 AND V4 ALL SUSTAINED LIGHT DAMAGE. V3 SUSTAINED MODERATE DAMAGE AND WAS TOWED BY WILLIA V1 TRAVELING EB HWY 5 APPROACHING CO RD 13 WITH A GREEN LIGHT. V2 TRAVELING WB HWY 5 APPROACHING C V1 SLOWWING FOR TRAFFIC AHEAD APPROACHING STOP LIGHT AND WAS STRUCK FROM BEHIND BY V2. L. G. WELK S -V1 AND V2 WERE E/B HWY 5 -V2 STOPPED IN TRAFFIC -V1 DID NOT STOP IN TIME -V1 COLLIDED WITH V2. -V1 WAS S/B CR 13 TO E/B HWY 5 -V2 WAS N/B CR 13. -V1 COLLIDED WITH V2 IN THE MIDDLE OF THE INTERSE

**ATP** 

#1 DRIVER STATED HE WAS DRIVING AT POSTED 55 MPH. #1 DRIVER STATED HE DID NOT SEE THAT VEHICLE IN VEHICLE WAS STOPPED AT THE STOP LIGHT. VEHICLE 2 WAS NOT PAYING ATTENTION TO TRAFFIC IN FRONT OF H UNIT 1 WAS STOPPED AT RED LIGHT GOING EB ON HWY 5 AT BAVARIA ROAD. DRIVER OF UNIT 2 ADMITTED SHE L UNITS 1 & 2 WERE STOPPED NEAR THE INTERSECTION OF HWY 5 AND BAVARIA ROAD FOR A RED LIGHT. WHEN THE V/1 WAS SOUTH ROLLING ACRES ROAD, TURNING EAST ON MNTH 5. IN THE PROCESS OF MAKING HIS TURN, V/1 W VEH #1 WAS WB ON HWY 5. VEH #2 WAS AT A STOP LIGHT SB ON CO RD 13 AT HWY 5. A SEMI TRUCK IN THE TUR U1 WAS MAKING A RIGHT HAND TURN, WHEN U1 SLID INTO U2, WHICH WAS JUST ABOUT TO MAKE A LEFT HAND TUR ON 06/10/2014 AT 0830 HOURS, THERE WAS A 2 VEHICLE PROPERTY DAMAGE CRASH AT THE INTERSECTION OF MNT DRIVER 1 WAS TRAVELLING EASTBOUND ON HIGHWAY 5. DRIVER 1 WAS TRAVELLING APPROXIMATLEY 55-60 MILES P ON 02/02/2013 AT APPROXIMETLY 0915 HOURS THERE WAS A PROPERTY DAMAGE CRASH AT THE INTERSECTION OF M -V1, V2, V3 AND V4 WERE W/B HWY 5. -V2, V3, AND V4 WERE STOPPED AT THE TRAFFIC LIGHT. -V1 DID NOT S V1 SLOWING IN TRAFFIC. V2 DIRECTLY BEHIND D2 STATED SHE LOOKED DOWN AND THEN WAS UNABLE TO STOP BE DRIVER OF VEHICLE #2 REPORTED HE WAS W/B MNTH 5 AND WAS STOPPED FOR THE RED LIGHT AT THE INTERSECTI V/1 AND V/2 BOTH WEST BOUND ON MNTH 5. V/2 WAS THE LEAD VEHICLE, STOPPED AT A RED LIGHT. NOT ABLE VEHICLE #1 WAS STOPPED IN TRAFFIC AT THE STOP LIGHT AT THE INTERSECTION OF HWY 5 AND ROLLING ACRES V1 ENTERED INTERSECTION ON A RED LIGHT AND WAS STRUCK BY V2. V3 WAS STOPPED IN LTL WB HWY 5 AND WA V1 WAS TRAVELING WB HWY 5 JUST BEFORE CO RD. 13, V2 WAS STOPPED IN LEFT TURN LANE AT HWY 5/CO RD. 1 DRIVER OF UNIT 1 WAS WB ON MN HWY 5 APPROACHING CO.RD. 13 WHEN HE DID NOT NOTICE THAT TRAFFIC IN FR

СО	CITY	DOW	MONTH	DAY	YEAR	TIME	SEV
<del>10</del>	<del>3895</del>	<del>5-Thu</del>	6	<del>18</del>	<del>2015</del>	<del>1104</del>	N
10	3895	1-Sun	5	10	2015	0816	С
10	3895	7-Sat	10	4	2014	1637	N
10	3895	1-Sun	10	19	2014	1345	С
<del>10</del>	<del>3895</del>	<del>3-Tue</del>	3	<del>31</del>	<del>2015</del>	<del>1550</del>	€
<del>10</del>	<del>3895</del>	4 <del>-Wed</del>	<del>5</del>	6	<del>2015</del>	<del>2234</del>	₽
<del>10</del>	<del>3895</del>	4-Wed	<del>3</del>	4	<del>2015</del>	<del>1733</del>	E
10	3895	5-Thu	9	19	2013	1456	N
10	3895	2-Mon	9	9	2013	0610	С
<del>10</del>	<del>3895</del>	<del>5-Thu</del>	4	<del>18</del>	<del>2013</del>	<del>1400</del>	N
10	3895	6-Fri	2	15	2013	0754	N
10	3895	4-Wed	11	20	2013	0619	N
10	3895	6-Fri	10	17	2014	0910	N
10	3895	7-Sat	12	6	2014	1520	Ν
10	3895	3-Tue	12	22	2015	1605	С
10	3895	2-Mon	12	9	2013	1257	В
10	3895	1-Sun	12	8	2013	1849	Ν
10	3895	3-Tue	6	10	2014	0830	N
10	3895	2-Mon	8	17	2015	1109	В
<del>10</del>	<del>3895</del>	<del>2 Mon</del>	<del>2</del>	4	<del>2013</del>	<del>0915</del>	N
<del>10</del>	<del>3895</del>	<del>2-Mon</del>	<del>5</del>	<del>20</del>	<del>2013</del>	<del>2115</del>	N
<del>10</del>	<del>3895</del>	<del>6-Fri</del>	9	<del>20</del>	<del>2013</del>	<del>1738</del>	N
<del>10</del>	<del>3895</del>	<del>2-Mon</del>	<del>10</del>	7	<del>2013</del>	<del>0653</del>	И
<del>10</del>	<del>3895</del>	<del>5 Thu</del>	<del>12</del>	<del>5</del>	<del>2013</del>	<del>2123</del>	N
<del>10</del>	<del>3895</del>	<del>1-Sun</del>	<del>12</del>	8	<del>2013</del>	<del>1715</del>	N
10	3895	2-Mon	6	17	2013	1807	С
<del>10</del>	<del>3895</del>	4 <del>-Wed</del>	4	<del>16</del>	<del>2014</del>	<del>1858</del>	N
<del>10</del>	<del>3895</del>	<del>2 Mon</del>	<del>11</del>	<del>18</del>	<del>2013</del>	<del>1750</del>	E
<del>10</del>	<del>3895</del>	<del>6 Fri</del>	<del>5</del>	8	<del>2015</del>	<del>1719</del>	N

															PERSON1				
NUM_KILLED	NUM_VEH	JUNC	SL	TYPE	DIAG	LOC1	TCD	LIT	WTHR1	WTHR2	SURF	CHAR	DESGN	ACC_NUM	VTYPE	DIR	ACT	FAC1	FAC2
0	<del>2</del>	4	<del>45</del>	1	4	4	4	1	4	0	4	4	8	<del>151700080</del>	4	4	3	1	0
0	4	4	55	1	1	1	1	1	2	0	1	1	3	151300046	3	3	1	15	0
0	2	4	45	1	2	1	1	1	1	0	1	1	8	142790054	3	6	3	1	0
0	2	1	40	1	3	1	98	1	1	0	1	1	8	142940042	1	5	1	1	0
0	4	1	<del>55</del>	4	<del>1</del>	4	1	<del>1</del>	4	0	4	4	8	<del>150910086</del>	3	7	4	4	0
0	<del>2</del>	4	<del>55</del>	4	<del>5</del>	4	1	4	4	4	4	4	8	<del>151280021</del>	<del>1</del>	7	4	<del>5</del>	<del>2</del>
θ	2	4	<del>55</del>	<del>1</del>	<del>1</del>	4	<del>1</del>	<del>1</del>	4	<del>2</del>	4	4	8	<del>150630364</del>	2	7	4	8	4
0	2	4	55	1	1	1	1	1	1	0	1	1	8	132780154	1	3	1	15	0
0	2	4	55	1	8	1	1	1	1	0	1	1	8	132530181	3	4	6	2	0
0	<del>1</del>	0	<del>10</del>	2	7	0	<del>98</del>	4	7	0	<del>5</del>	0	0	<del>131410106</del>	<del>99</del>	0	0	0	0
0	2	1	55	1	1	1	98	1	1	1	2	3	8	130460077	3	3	1	3	4
0	2	1	55	1	1	1	1	2	1	0	1	1	8	133250288	2	3	1	1	0
0	2	4	55	1	1	1	1	1	2	0	1	1	5	142900051	1	3	1	15	0
0	2	4	55	1	1	1	1	1	1	0	1	2	8	143400107	1	3	9	15	0
0	2	4	55	1	5	1	1	1	2	0	1	1	8	153570289	2	1	1	1	0
0	2	4	55	1	5	1	1	1	1	0	1	1	8	133470062	3	5	9	1	0
0	2	4	55	1	6	1	1	4	4	0	5	1	5	133420276	2	5	11	1	0
0	2	4	55	1	9	1	1	1	1	0	1	1	8	141610040	3	5	6	2	0
0	1	1	55	90	98	1	98	1	1	0	1	1	1	152290134	11	3	1	18	0
0	<del>2</del>	4	<del>55</del>	<del>1</del>	<del>5</del>	4	<del>1</del>	<del>1</del>	<del>1</del>	0	4	4	8	<del>130350155</del>	<del>1</del>	7	4	3	0
0	4	4	<del>55</del>	4	<del>1</del>	4	<del>1</del>	4	2	0	4	4	8	<del>131510227</del>	<del>1</del>	7	<del>11</del>	4	0
0	<del>2</del>	<del>1</del>	<del>55</del>	<del>1</del>	<del>1</del>	4	98	<del>1</del>	<del>2</del>	0	4	4	8	<del>132710130</del>	<del>1</del>	7	4	<del>15</del>	0
0	<del>2</del>	4	<del>55</del>	4	4	4	<del>1</del>	2	2	0	4	4	<del>5</del>	<del>132800086</del>	4	7	4	<del>15</del>	0
0	<del>2</del>	4	<del>55</del>	<del>1</del>	<del>1</del>	4	<del>1</del>	4	<del>1</del>	0	<del>5</del>	4	8	<del>133400530</del>	<del>1</del>	7	4	3	4
0	<del>2</del>	4	<del>55</del>	<del>1</del>	2	4	<del>1</del>	4	4	0	<del>5</del>	4	8	<del>133430040</del>	3	7	<del>11</del>	<del>1</del>	0
0	4	4	55	1	8	1	1	1	1	0	1	1	8	131820201	1	1	9	2	15
0	3	<del>1</del>	<del>55</del>	<del>1</del>	<del>1</del>	4	<del>98</del>	<del>1</del>	2	4	4	4	8	<del>141060207</del>	<del>1</del>	7	<del>10</del>	<del>61</del>	0
0	4	4	<del>55</del>	<del>1</del>	<del>1</del>	4	<del>1</del>	4	2	<del>2</del>	4	4	8	<del>133230017</del>	<del>1</del>	7	<del>11</del>	4	<del>1</del>
0	<del>2</del>	0	<del>55</del>	<del>1</del>	<del>1</del>	0	<del>1</del>	<del>1</del>	<del>1</del>	0	<del>1</del>	0	0	<del>151610060</del>	3	7	<del>11</del>	0	0

						PERSON2											PERSON3			
POSN	INJ	EQP	PHYS	AGE	SEX	VTYPE2	DIR3	ACT4	FAC15	FAC26	POSN7	INJ8	EQP9	PHYS10	AGE11	SEX12	VTYPE13	DIR14	ACT15	FAC116
1	N	4	4	<del>30</del>	F	3	1	3	4	<del>5</del>	1	N	4	1	<del>17</del>	M				
1	N	4	1	54	F	1	3	11	1	0	1	N	4	1	24	F	3	3		
1	N	4	1	35	M	3	6	3	8	0	1	N	4	1	67	F				
1	С	4	1	23	F	3	5	7	10	0	1	N	4	1	19	F				
<del>1</del>	N	4	<del>1</del>	<del>47</del>	F	3	7	4	1	0	4	N	4	1	43	ŧ	<del>1</del>	7		
<del>1</del>	N	<del>99</del>	<del>1</del>	43	M	<del>3</del>	3	1	1	1	1	₽	<del>99</del>	1	<del>41</del>	M				
<del>1</del>	N	4	<del>1</del>	<del>17</del>	F	<del>2</del>	7	<del>10</del>	1	0	4	N	4	<del>1</del>	<del>22</del>	M				
1	N	4	1	44	M	3	3	1	1	0	1	N	4	1	41	M				
1	С	4	1	64	F	1	1	1	1	0	1	С	4	1	51	F				
1	N	<del>98</del>	0	<del>901</del>	Z															
1	N	4	1	16	M	3	3	11	1	1	1	N	4	1	43	M				
1	N	4	1	61	M	1	3	1	15	0	1	N	4	1	32	M				
1	N	4	1	19	F	3	3	1	1	0	1	N	4	1	68	F				
1	N	4	1	49	F	3	3	9	1	0	1	N	4	1	49	M				
1	N	4	1	32	M	1	4	6	2	0	1	N	4	1	18	M				
1	С	4	1	40	F	1	7	1	5	0	1	N	4	1	42	F				
1	N	4	1	39	M	3	7	5	3	61	1	N	4	1	41	M				
1	N	4	1	42	M	3	1	1	1	0	1	N	4	1	50	F				
1	В	15	3	51	M															
<del>1</del>	N	4	<del>1</del>	<del>22</del>	M	3	<del>5</del>	<del>6</del>	<del>1</del>	0	4	N	4	<del>1</del>	<del>27</del>	F				
4	N	4	<del>1</del>	<del>23</del>	M	<del>2</del>	7	<del>1</del>	<del>15</del>	0	1	N	4	<del>1</del>	<del>37</del>	M	3	7		
<del>1</del>	N	4	4	44	F	3	7	<del>10</del>	<del>1</del>	0	<del>1</del>	N	4	<del>1</del>	<del>49</del>	M				
<del>1</del>	N	4	<del>1</del>	<del>23</del>	M	<del>2</del>	7	<del>11</del>	<del>1</del>	0	4	N	4	<del>1</del>	<del>20</del>	M				
<del>1</del>	N	<del>99</del>	4	<del>18</del>	M	4	7	4	<del>1</del>	0	<del>1</del>	N	99	<del>1</del>	<del>37</del>	F				
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4	H	4	<del>1</del>	<del>17</del>	M	<del>1</del>	7	<del>11</del>	<del>1</del>	0	1	N	4	<del>1</del>	44	F	4	7		
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4	N	4	0	<del>32</del>	M	1	7	<del>1</del>	0	0	<del>1</del>	N	4	0	<del>54</del>	F				

							PERSON4												
FAC217	POSN18	INJ19	EQP20	PHYS21	AGE22	SEX23	VTYPE24	DIR25	ACT26	FAC127	FAC228	POSN29	INJ30	EQP31	PHYS32	AGE33	SEX34	Column35	Column36

Column37 Column38 Column39 Column40 Column41 Column42 Column43 Column44 Column45 Column46 Column47 Column48 Column49 Column50 Column51 Column52

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Column116 Column117 Column118 Column119 Column120 Column121 Column122 Column123 Column124 Column125 Column126 Column127 Column128 Column129 Column130

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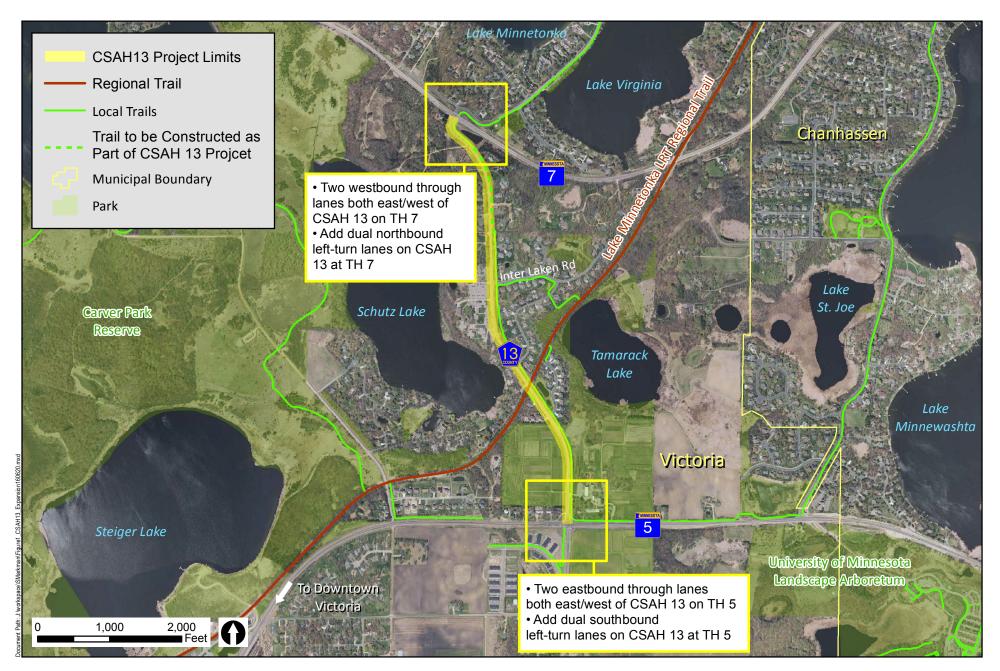
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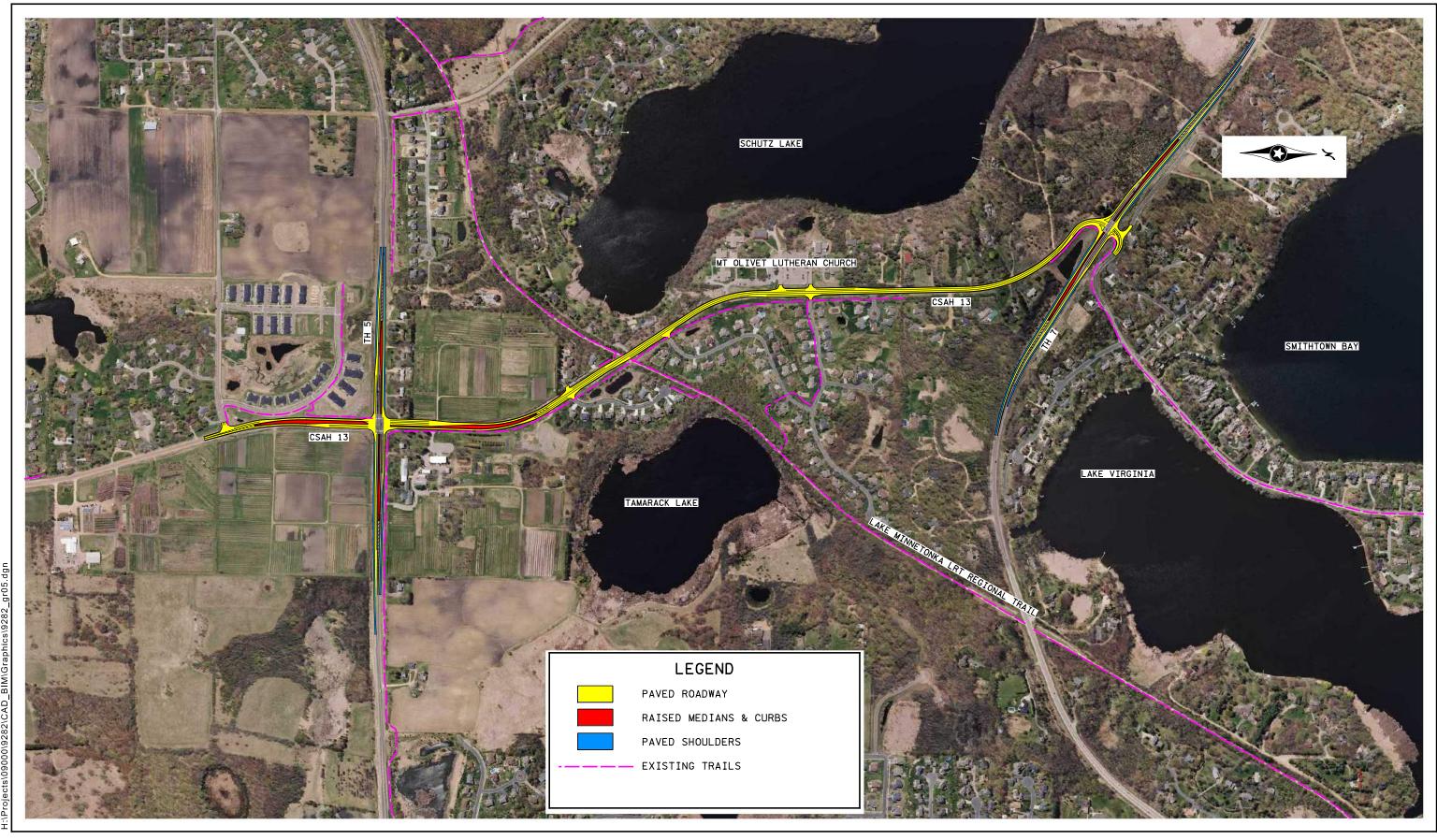
Column161 Column162 Column163 Column164 Column165 Column166 Column167 Column168 Column169 Column170 Column171 Column172 Column173 Column174 Column175

Column176 Column177 Column178 Column179 Column180 Column181 Column182 Column183 Column184 Column185 Column186 Column187 Column188 Column189 Column190

Column191 Column192 Column193 Column194 Column195 Column196 Column197 Column198 Column199 Column200 Column201 Column202 Column203 Column204 Column205

Column206 Column207 Column208 Column209 Column210 Column211 Column212







CSAH 13

CSAH 13 Roadway Reconstruction from TH 5 to TH 7

Carver County, MN

Existing Conditions







# Minnesota Department of Transportation Metro District 1500 West County Road B-2 Roseville, MN 5511

July 8, 2016

Darin Mielke PE LSIT PMP Assistant Public Works Director, Deputy County Engineer Carver County Public Works 11360 Highway 212, Suite 1 Cologne, MN 55322

RE: Regional Solicitation Application for CSAH 13 Rolling Acres Road Reconstruction

**Project** 

Dear Mr. Mielke:

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 CSAH 13 Rolling Acres Road Reconstruction Project impacts MnDOT right of way on TH 5 and TH 7.

MnDOT, as the agency with jurisdiction over TH 5 and TH 7, would allow the improvements included in the application for CSAH 13 Rolling Acres Road Reconstruction Project. 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. Please continue to work with MnDOT Area staff to assist in identifying additional project funding if needed.

Sincerely,

Scott McBride, P.E. Metro District Engineer

Cc: Elaine Koustsoukos, Metropolitan Council

Jon Solberg, MnDOT Metro District – South Area Manager

An Equal Opportunity Employer

















## CITY OF VICTORIA, MINNESOTA

DATE: June 27, 2016 RESOLUTION NUMBER: 16-53

MOTION BY: Council Member Crowley SECOND BY: Council Member Basa

## A RESOLUTION SUPPORTING CARVER COUNTY'S APPLICATION FOR FUNDING FOR THE RECONSTRUCTION OF CSAH 13 FROM HWY 7 TO HWY 5.

WHEREAS, County State Aid Highway (CSAH) 13 is an A Minor Expander from Hwy 5 to Hwy 7 in the City of Victoria;

WHEREAS, the 2030 Carver County Road System Plan recognizes the need to improve transportation connections and operations in order to provide a safe and efficient transportation system that meets the anticipated future needs and demands;

**WHEREAS**, said transportation plan demonstrates the need to improve and modernize CSAH 13;

**WHEREAS**, the City of Victoria, Carver County and the Minnesota Department of Transportation are working cooperatively to meet the future needs to CSAH 13 and adjacent highways and city streets;

**AND WHEREAS,** the improvement and modernization of CSAH 13 will create a highly accessible facility that will help reduce traffic congestion, improve reliability to the highway users, improve safety and enhance the economic vitality of the community.

### NOW, THEREFORE, BE IT RESOLVED.

- 1. The City of Victoria endorses Carver County's regional solicitation application submittal to the Metropolitan Council for federal funding for the improvement and modernization of CSAH 13 from approximately Hwy 7 to Hwy 5.
- 2. The City of Victoria agrees to financially participate with Carver County and the Minnesota Department of Transportation in providing the matching funding at such time that the project is awarded federal funding subject to agreement on the project details.

## Adopted this 27th day of June, 2016 by the Victoria City Council.

Councilmember	Aye	Nay	Abstain	Absent
Tom O'Connor	X			
Lani Basa	X			
Jim Crowley	X			
Tom Strigel				X
Tom Vogt	X			

Tom O'Connor, Mayor

ATTEST:

Jennifer Kretsch, City Clerk