Application

01969 - 2014 Roadway System Management

02243 - Scott County Traffic Management System

Regional Solicitation - Roadways Including Multimodal Elements

Status:	Submitted
Submitted Date:	12/01/2014 2:16 PM

Primary Contact

Name:*		Craig		Jenson
	Salutation	First Name	Middle Name	Last Name
Title:	Transportation Planner			
Department:				
Email:	cjenson@co.scott.mn.us			
Address:	600 Country Trail East			
*	Jordan	Minnesota	55352	
	City	State/Province	Postal Code/Zip	
Phone:*	952-496-8329			
	Phone		Ext.	
Fax:				
What Grant Programs are you most interested in?	Regional Solicitation - Bicycle and Pedestrian Facilities			

Organization Information

Name:	SCOTT COUNTY
Jurisdictional Agency (if different):	

Organization Type:	County Government
Organization Website:	
Address:	600 COUNTRY TRAIL E

*	JORDAN	Minnesota	55352
	City	State/Province	Postal Code/Zip

County:	Scott
Phone:*	612-496-8355 Ext.
Fax:	
PeopleSoft Vendor Number	0000024262A3

Project Information

Project Name	Scott County Traffic Management System
Primary County where the Project is Located	Scott
Jurisdictional Agency (If Different than the Applicant):	

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

The proposed project will alleviate special event congestion around Canterbury Park Racetrack and the Valleyfair Amusement Park through the deployment of intelligent transportation systems (ITS) that will direct vehicles to alternate routes and provide motorist feedback. Deployment of the ITS devices will include cameras, dynamic message signs (DMS), and vehicle detectors. This project is a collaborative effort between Scott County and MnDOT.

The primary route for accessing Scott Countys popular entertainment destinations includes travel via Trunk Highway (TH) 169 to County State Aid Highway (CSAH) 83 (Canterbury Road). Special events at these destinations frequently cause sharp increases in traffic that lead to substantial congestion and safety issues on TH 169 and CSAH 83, including queues on the interchange off-ramps that extend onto mainline TH 169.

The proposed plan includes the deployment of cameras and vehicle detectors along CSAHs 83 and 101, a DMS board on eastbound TH 169, and DMS boards on the local roadways surrounding the Canterbury Park facility (see Figure 1). The project will also include an interface with rail crossing preemption hardware for two highway-rail crossings to alert County staff to the presence of trains that may block one of the alternate routes. These proposed improvements are subject to minor modifications based on the more detailed systems engineering process.

The proposed deployment will also build upon MnDOTs existing and programmed DMS boards and cameras on TH 169. Two MnDOT cameras are currently located along this corridor. Two additional

cameras and a DMS board on westbound TH 169 are programmed for installation in 2016.

During large special events, County staff will be assigned to monitor conditions on the approach roadways. The cameras and vehicle detectors will allow for a real-time assessment of the traffic conditions. As congestion worsens, staff will use an integrated advanced traffic management software package to deploy a coordinated set of messages on the DMS boards. The coordinated system with MnDOT may also be used to divert through traffic on TH 169 to alternate river crossing routes such as TH 41 or CSAH 101 in the case of severe congestion.

Scott County and MnDOT have collaborated on the proposed improvements and their future operation. MnDOT has a history of collaboration with both county and city jurisdictions for traffic management and is committed to working with Scott County to implement and operate the proposed system. Specifically, MnDOT and Scott County will share access to roadside devices through the advanced traffic management system software packages. Scott County and MnDOT are working together to develop policies for use of the system and protocols for interagency communication.

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

Project Length (Miles) 1.23

Connection to Local Planning:

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 MnDOT 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.

Connection to Local Planning

Scott County 2030 Comprehensive Plan: Pages VI-29, VI-35, VI-49.

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	$794,400.00
Match Amount	$198,600.00
Minimum of 20% of project total	
Project Total	$993,000.00
Match Percentage	20.0%
Minimum of 20% *Compute the match percentage by dividing the match amount by the project total*	
Source of Match Funds	Scott County

Preferred Program Year

Select one:	2017 (Roadway Projects Only)

MnDOT State Aid Project Information: Roadway Projects

County, City, or Lead Agency	Scott County
Functional Class of Road	A Minor Expander, A Minor Reliever, Principle Arterial
Road System	CSAH, TH
TH, CSAH, MSAS, CO. RD., TWP. RD., CITY STREET	
Name of Road	CSAH 83 (Canterbury Rd), CSAH 101, Trunk Highway 169
Example; 1st ST., MAIN AVE	
Zip Code where Majority of Work is Being Performed	55379
(Approximate) Begin Construction Date	05/01/2017
(Approximate) End Construction Date	10/31/2017

LOCATION

From: **(Intersection or Address)**	CSAH 83 & 12th Avenue
Do not include legal description; *Include name of roadway if majority of facility runs adjacent to a single corridor.*	
To: **(Intersection or Address)**	CSAH 101 & TH 169
Type of Work	ITS Device Installation (DMS, Cameras, Vehicle Detection), Rail Signal Interconnection

Examples: grading, aggregate base, bituminous base, bituminous surface, sidewalk, signals, lighting, guardrail, bicycle path, ped ramps, bridge, Park & Ride, etc.)

Old Bridge/Culvert? No

New Bridge/Culvert? No

Structure is Over/Under (Bridge or culvert name):

Specific Roadway Elements

CONSTRUCTION PROJECT ELEMENTS/COST ESTIMATES	Cost
Mobilization (approx. 5% of total cost)	$0.00
Removals (approx. 5% of total cost)	$0.00
Roadway (grading, borrow, etc.)	$0.00
Roadway (aggregates and paving)	$0.00
Subgrade Correction (muck)	$0.00
Storm Sewer	$0.00
Ponds	$0.00
Concrete Items (curb & gutter, sidewalks, median barriers)	$0.00
Traffic Control	$0.00
Striping	$0.00
Signing	$0.00
Lighting	$0.00
Turf - Erosion & Landscaping	$0.00
Bridge	$0.00
Retaining Walls	$0.00
Noise Wall	$0.00
Traffic Signals	$0.00
Wetland Mitigation	$0.00
Other Natural and Cultural Resource Protection	$0.00
RR Crossing	$0.00
Roadway Contingencies	$148,950.00
Other Roadway Elements	$844,050.00
Totals	**$993,000.00**

Specific Bicycle and Pedestrian Elements

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

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
Transit and TDM Contingencies	$0.00
Other Transit and TDM Elements	$0.00
Totals	**$0.00**

Transit Operating Costs

OPERATING COSTS	Cost
Transit Operating Costs	$0.00
Totals	**$0.00**

Totals

Total Cost	$993,000.00
Construction Cost Total	$993,000.00
Transit Operating Cost Total	$0.00

Requirements - All Projects

All Projects

1.The project must be consistent with the goals and policies in these adopted regional plans: Thrive MSP 2040 (2014), the 2030 Transportation Policy Plan (amended 2013), the 2030 Regional Parks Policy Plan (amended 2013), and the 2030 Water Resources Management Policy Plan (2005).

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

2.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

3.Applicants must not submit an application for the same project in more than one funding sub-category.

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

4.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. Expansion, reconstruction/modernization, and bridges must be between $1,000,000 and $7,000,000. Roadway system management must be between $250,000 and $7,000,000.

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

5.The project must comply with the Americans with Disabilities Act.

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

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

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

7.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

8.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

9.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

10.The project applicant must send written notification regarding the proposed projected to all affected communities and other levels and units of government prior to submitting the application.

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

Requirements - Roadways Including Multimodal Elements

Expansion and Reconstruction/Modernization Projects Only

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

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

2.Federal funds are available for roadway construction and reconstruction on new alignments or within existing right-of-way, including associated construction and excavation, bridges, or installation of traffic signals, signs, utilities, bikeway or walkway components and transit components.
The project must exclude costs for right-of-way, studies, preliminary engineering, design, or construction engineering. Noise barriers, drainage projects, fences, landscaping, etc., are not eligible for funding unless included as part of a larger project, which is otherwise eligible.

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

Bridge Projects Only

3.The bridge project 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.

4.Bridges selected in previous Bridge Improvement and Replacement solicitations (1994 2011) are not eligible. A previously selected project is not eligible unless it has been withdrawn or sunset prior to the deadline for proposals in this solicitation.

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

5.Projects requiring a grade-separated crossing of a Principal Arterial of freeway design 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.

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

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

7.The length of the bridge must equal or exceed 20 feet.

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

8.Project limits for bridge projects are limited from abutment to abutment.

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

9.The project must exclude costs for studies, preliminary engineering, design, construction engineering, and right-of-way.

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

Bridge Replacement Projects Only

10.The bridge must have a sufficienty rating less than 50. Additionally, it must also be classified as structurally deficient or functionally obsolete.

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

Bridge Rehabilitiation Projects Only

11.The bridge must have a sufficienty rating less than 80. Additionally, it must also be classified as structurally deficient or functionally obsolete.

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

Other Attachments

File Name	Description	File Size
Figure1_ITS 2014-11-12.pdf	Figure displaying the location of the proposed ITS improvements, including existing and programmed MnDOT improvements.	1.9 MB
Hwy 169 TSM MnDOT letter of support.pdf	MnDOT letter of support for the Scott County Traffic Systems Management project.	38 KB
Scott County Resolution.pdf	Scott County Resolution	82 KB
Shakopee Letter of Support-169ITS.pdf	Letter of Support - Shakopee	220 KB

Measure A: Functional Classification

Address how the project fulfills its role in the regional economy as identified by its current functional classification. If the project serves a system of routes, respond using the route with the highest functional classification. This system must include a Non-Freeway Principal Arterial or an "A" Minor Arterial.
Reference the Roadway Area Definition map generated at the beginning of the application process. Report the total area and project length, as depicted on the Roadway Project Summary map, to calculate the average distance between the project route (highest functional classification) and the closest parallel A Minor Arterials or Principal Arterials on both sides of the project.
Upload the "Roadway Area Definition" map used for this measure.

Area	5.551
Project Length	1.227
Average Distance	4.524
Upload Map	RdwyAreaDef.pdf

Measure B: Current Heavy Commercial Traffic

Location	CSAH 101 north of TH 169
Current daily heavy commercial traffic volume	2075.0

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

Select all that apply:

Direct connection to or within a mile of a Job Concentration	
Direct connection to or within a mile of a Manufacturing/Distribution Location	Yes
Direct connection to or within a mile of an Educational Institution	
Project provides a direct connection to or within a mile of an existing local activity center identified in an adopted county or city plan	Yes

County or City Plan Reference

Response (Limit 700 characters; approximately 100 words)	This project location provides a direct connection to both Valleyfair and the Canterbury Park Racetrack, which are identified as local activity centers in the City of Shakopee 2030 Comprehensive Plan.
Upload Map	RegnlEconomy.pdf

Measure A: Current Daily Person Throughput

Location	CSAH 83 between TH 169 and 12th Ave
Current AADT Volume	19200.0
Existing Transit Routes on the Project	496, 498

Response - Daily Person Throughput

Average Annual Daily Transit Ridership	0
Current Daily Person Throughput	24960.0

Measure B: 2030 Forecast ADT

Use Metropolitan Council model to determine forecast (2030) ADT volume	No
METC Staff - Forecast (2030) ADT volume	0
OR	
Approved county or city travel demand model to determine forecast (2030) ADT volume	Yes
Forecast (2030) ADT volume	28000.0

Measure A: Project Location and Impact to Disadvantaged Populations

Select one:

Project located in Racially Concentrated Area of Poverty	
Project located in Concentrated Area of Poverty	
Projects census tracts are above the regional average for population in poverty or population of color	Yes
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.	

While the proposed improvements will benefit event attendees, they will also benefit employees of Canterbury Park, Valleyfair, and many manufacturing companies in the project area such as Shutterfly Inc., Fremont Industries, and Elkay Manufacturing. The project will provide more reliable trip time for event attendees and low-income workers in this area.

Two employment assistance services are also located within the project area. The Scott County WorkForce Center provides services that connect job seekers with business, hosts career fairs, and provides training opportunities. MRCI WorkSource is a non-profit organization specializing in the rehabilitation of disabled adults through innovative employment programs.

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

Scott County is home to a large Native American community. The Shakopee-Mdewakanton Sioux Community Reservation owns and operates the Mystic Lake Casino Hotel, another regional entertainment destination that is located to the south of the project area. The project will reduce congestion and improve air quality for this community and its workers.

Construction impacts to the surrounding communities will be minimal since all construction is proposed on existing rights-of-way and will require only short periods of construction. Information regarding the project will be distributed to the surrounding communities to alert them to any potential impacts from the project.

Upload Map

SocioEconomic.pdf

Measure B: Affordable Housing

City/Township	Segment Length (Miles)
Shakopee	1.227
	1

Total Project Length

Total Project Length	1.23

Affordable Housing Scoring - To Be Completed By Metropolitan Council Staff

City/Township	Segment Length (Miles)	Total Length (Miles)	Score	Segment Length/Total Length	Housing Score Multiplied by Segment percent
Shakopee	1.23	1.227	60.0	1.002	60.147
		1	**60**	**1**	**60**

Affordable Housing Scoring - To Be Completed By Metropolitan Council Staff

Total Project Length (Miles)	1.227
Total Housing Score	60.147

Measure A: Equipment Improvements and Installation Year

Equipment to be Improved	New equipment only
Date of Equipment Installation	05/01/2017

Measure A: Cost Effectiveness of Vehicle Delay Reduction

Total Project Cost from Cost Sheet	$993,000.00
Total Peak Hour Vehicle Delay Without The Project	27816.0
Total Peak Hour Vehicle Delay With The Project	23199.0
Total Peak Hour Vehicle Delay Reduced by Project	4617.0
Cost Effectiveness	$215.07
Synchro or HCM Reports	CSAH 83 and North Ramps Existing and Proposed Friday Event PM - HCM.pdf

Measure B: Cost Effectiveness of Emissions Reduction

Total Project Cost from Cost Sheet	$993,000.00
Total Peak Hour Kilograms Reduced by Project	0.27
Cost Effectiveness	$3,677,777.78
Synchro or HCM Reports	CSAH 83 and North Ramps Existing and Proposed Friday Event PM - HCM.pdf

Measure A: Benefit/Cost of Crash Reduction

Project Benefit/Cost Ratio	1.15
Worksheet Attachment	CSAH 83 Crash Worksheet.pdf

Measure A: Transit Connections

Existing Routes Directly Connected to the Project	496, 498
Planned Transitways directly connected to the project (alignment and mode determined and identified in the 2030 TPP)	N/A
Upload Map	TransitConnections.pdf

Response

Met Council Staff Data Entry Only

Route Ridership	35524.0
Transitway Ridership	0

Measure B: Bicycle and Pedestrian Connections

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

Bicyclists and pedestrians are currently served by an off-street bike path on CSAH 83. This path begins at 12th Avenue and extends 3 miles to the south. This path connects to other paths and sidewalks spread throughout Shakopee and Scott County, providing access to high pedestrian activity zones including downtown Shakopee.

The City of Shakopee 2030 Comprehensive Plan identifies CSAH 83 north of 12th Avenue and CSAH 101 east of CSAH 83 as potential links in the Shakopee Parks and Trails system. The proposed CSAH 83 bike path would also provide access to existing and propose regional trails located along the Minnesota River.

The proposed ITS improvements would reduce congestion and improve air quality along this corridor, improving the potential of this corridor to become a usable part of the trail system.

Measure C: Multimodal Facilities

Bicyclists and pedestrians are currently served by an off-street bike path on CSAH 83. This path begins at 12th Avenue and extends 3 miles to the south. This path connects to other paths and sidewalks spread throughout Shakopee and Scott County. The proposed project will alleviate congestion, improve the travel experience, and improve air quality in the area, resulting in greater safety and security for bicyclists and pedestrians, as well as drivers. The proposed CCTV cameras will also allow for quicker identification and response to crashes, severe weather conditions, and other incidents that could impact the safety of all modes of transportation.

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

The Seagate Park and Ride Facility is located near the intersection of TH 169 and CSAH 83. The Marschall Road Transit Center and Park and Ride is located near the intersection of TH 169 and CSAH 17. Both of the transit routes (496, 498) in the area utilize bus stops at these park and rides. These transit routes also make use of the portions of CSAH83 and TH 169 that experience the highest levels of congestion from special event traffic. The transit routes provide connections to the rest of the region via connections to routes at the Southbridge Crossings Transit Station. The proposed ITS improvements will reduce overall congestion on these routes, resulting in quicker transit speeds and more reliable on-time performance.

Transit Projects Not Requiring Construction

If the applicant is completing a transit or TDM application, only Park-and-Ride and other construction projects require completion of the Risk Assessment below. Check the box below if the project does not require the Risk Assessment fields, and do not complete the remainder of the form. These projects will receive full points for the Risk Assessment.

Check Here if Your Transit Project Does Not Require Construction

Measure A: Risk Assessment

1)Project Scope (5 Percent of Points)

Meetings or contacts with stakeholders have occurred Yes

100%

Stakeholders have been identified

40%

Stakeholders have not been identified or contacted

0%

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

Layout or Preliminary Plan completed Yes

100%

Layout or Preliminary Plan started

50%

Layout or Preliminary Plan has not been started

0%

Anticipated date or date of completion

3)Environmental Documentation (10 Percent of Points)

EIS

EA

PM Yes

Document Status:

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

Document submitted to State Aid for review
75%

Document in progress; environmental impacts identified

50%

Document not started Yes

0%

Anticipated date or date of completion/approval

4)Review of Section 106 Historic Resources (15 Percent of Points)

No known potential for archaeological resources, no historic resources known to be eligible for/listed on the National Register of Historic Places located in the project area, and project is not located on an identified historic bridge Yes

100%

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

80%

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

40%

Unknown impacts to historic/archaeological resources

0%

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

Project is located on an identified historic bridge

5)Review of Section 4f/6f Resources (15 Percent of Points)

(4f is publicly owned parks, recreation areas, historic sites, wildlife or waterfowl refuges; 6f is outdoor recreation lands where Land and Water Conservation Funds were used for planning, acquisition, or development of the property)

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

100%

Project is an independent bikeway/walkway project covered by the bikeway/walkway Negative Declaration statement; letter of support received

100%

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

80%

Adverse effects (land conversion) to Section 4f/6f resources likely

30%

Unknown impacts to Section 4f/6f resources in the project area

0%

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

Right-of-way or easements not required Yes

100%

Right-of-way or easements has/have been acquired

100%

Right-of-way or easements required, offers made

75%

Right-of-way or easements required, appraisals made

50%

Right-of-way or easements required, parcels identified

25%

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

0%

Right-of-way or easements identification has not been completed

0%

Anticipated date or date of acquisition

7)Railroad Involvement (25 Percent of Points)

No railroad involvement on project Yes

100%

Railroad Right-of-Way Agreement is executed (include signature page) 100%

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

60%

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

40%

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

0%

Anticipated date or date of executed Agreement

8)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%

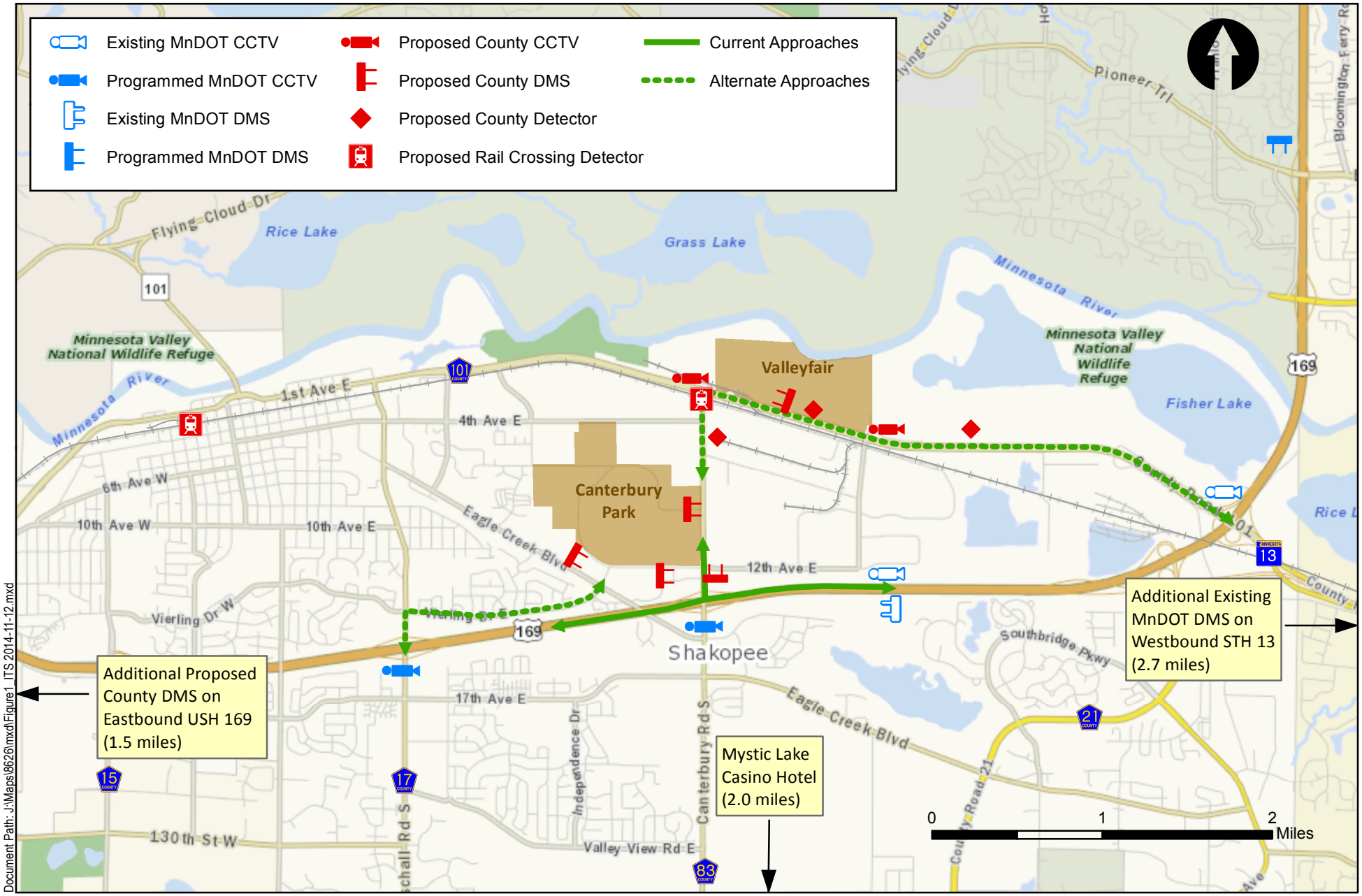
Construction plans have not been started Yes

0%

Anticipated date or date of completion 10/01/2016

9)Letting

Anticipated Letting Date 01/02/2017



Proposed ITS Deployment

Scott County Roadway System Management Regional Solicitation Application

Scott County

Figure 1

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

November 25, 2014

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

RE: Regional Solicitation Application for Highway 169 Traffic Systems Management

Dear Lisa:

Thank you for requesting a letter of support from MnDOT for the Metropolitan Council's 2014 Regional Solicitation. Your application for Highway 169 Traffic Systems Management (TSM) impacts MnDOT right of way on Highway 169.

MnDOT, as the agency with jurisdiction over Highway 169, supports the application for TSM and is willing to work with the county to display event related message on MnDOT dynamic messaging signs. Details of any future maintenance agreement with the county will be determined during project development.

This project currently has no funding from MnDOT.

Sincerely,

Scott McBride, P.E.
Metro District Engineer

Cc: Elaine Koustsoukos, Metropolitan Council
Jon Solberg, MnDOT Metro District - South Area Manager
Brian Kary, MnDOT Metro District - Freeway Operations Engineer

BOARD OF COUNTY COMMISSIONERS
SCOTT COUNTY, MINNESOTA

Date:	November 18, 2014
Resolution No.:	2014-204
Motion by Commissioner:	Ulrich
Seconded by Commissioner:	Menden

RESOLUTION NO. 2014-204; AUTHORIZING SUBMITTAL OF TRANSPORTATION PROJECTS TO THE TRANSPORTATION ADVISORY BOARD (TAB) FOR CONSIDERATION IN THE 2014 REGIONAL SOLICITATION PROCESS

WHEREAS, the TAB is requesting project submittals for federal funding under Surface Transportation Program (STP), Transportation Alternatives Program (TAP), and Congestions Mitigation and Air Quality (CMAQ); and

WHEREAS, funding is available in the 2017-2019 federal fiscal years; and

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

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

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

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

BOARD OF COUNTY COMMISSIONERS
SCOTT COUNTY, MINNESOTA

Date:	November 18, 2014
Resolution No.:	2014-204
Motion by Commissioner:	Ulrich
Seconded by Commissioner:	Menden

NOW, THEREFORE, BE IT RESOLVED, that the Scott County Board of Commissioners hereby supports the submittal of the following projects to the Transportation Advisory Board for consideration in the 2014 Regional Solicitation process:

1. CH 21/TH13 Intersection Improvements
2. CH 42/TH13 Intersection Improvements
3. CH 8 Reconstruction from CH 27 to CH 91
4. CH 16 Expansion from CH 83 to CH 21
5. CH 27 Expansion from CH 44 to CH 21
6. CH 42 Expansion from CH 17 to CH 83
7. TH 169/TH 41/78 Interchange
8. TH 169 System Management
9. TH 169 Connector Transit Service

COMMISSIONERS	VOTE
Wagner	☑ Yes ☐ No ☐ Absent ☐ Abstain
Wolf	☑ Yes ☐ No ☐ Absent ☐ Abstain
Menden	☑ Yes ☐ No ☐ Absent ☐ Abstain
Marschall	☑ Yes ☐ No ☐ Absent ☐ Abstain
Ulrich	☑ Yes ☐ No ☐ Absent ☐ Abstain

State of Minnesota)
County of Scott)

I, Gary L. Shelton, duly appointed qualified County Administrator for the County of Scott, State of Minnesota, do hereby certify that I have compared the foregoing copy of a resolution with the original minutes of the proceedings of the Board of County Commissioners, Scott County, Minnesota, at their session held on the 18th day of November, 2014 now on file in my office, and have found the same to be a true and correct copy thereof.
Witness my hand and official seal at Shakopee, Minnesota, this18th day of November, 2014.

County Administrator

Administrator's Designee

SHAKOPEE

November 7, 2014

Craig Jenson
Transportation Planner
Scott County Highway Department
600 Country Trail East
Jordan, MN 55352

Re: TH 169, CSAH 101, CSAH 83 Dynamic Message Signs

Dear Mr. Jenson:

The City of Shakopee is aware Scott County is applying for funding through the Regional Solicitation for TH 169, CSAH 101, CSAH 83 Dynamic Message Signs, under the Roadways System Management category. These improvements are endorsed by the City of Shakopee and we are supportive of the Regional Solicitation application.

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

Sincerely,

Bruce Loney
Public Works Director

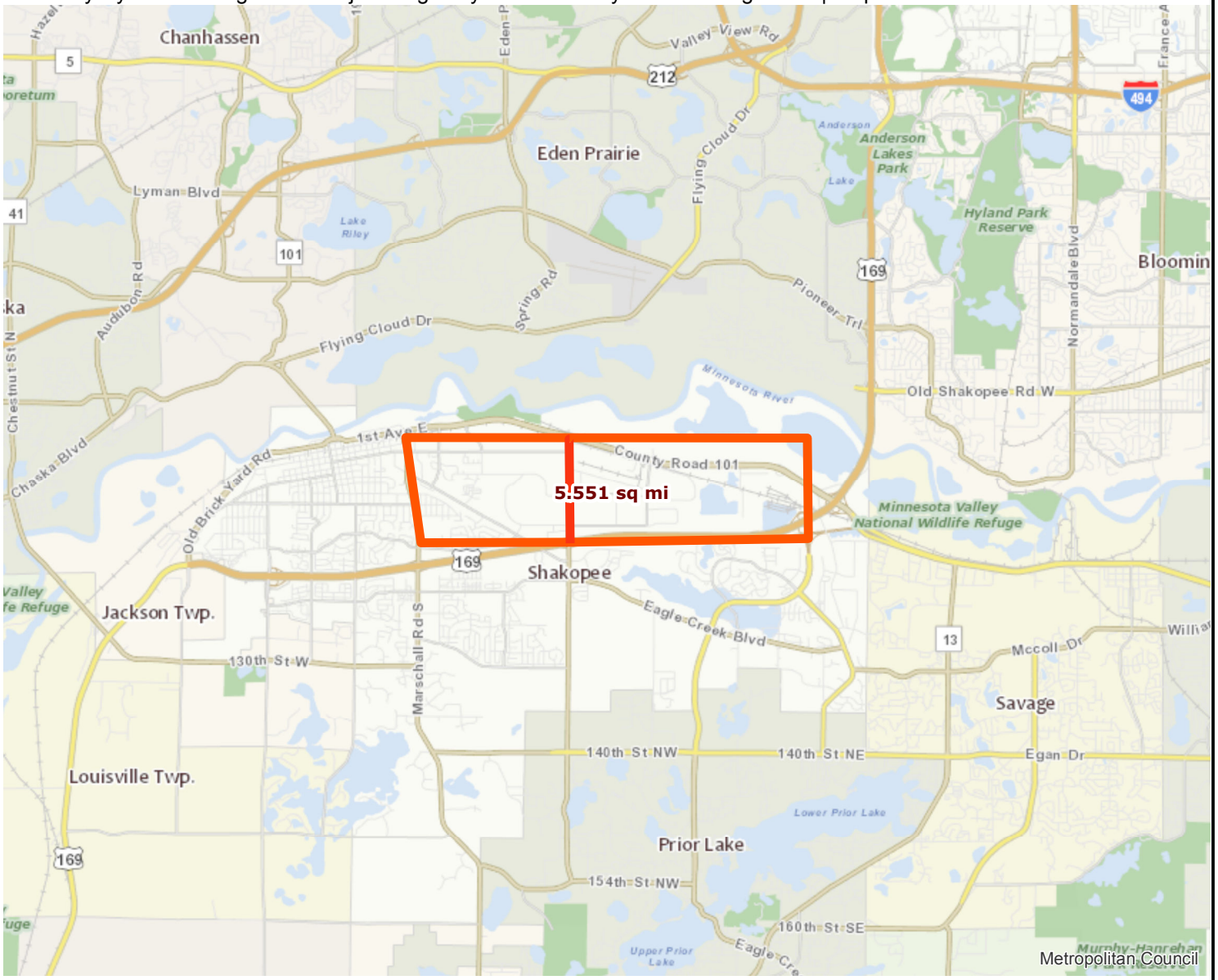
Roadway Area Definition

Roadway System Management Project: Highway 169 Traffic Systems Management | Map ID: 1414690692886

Results

Project Length: 1.227 miles

Project Area: 5.551 sq mi



Project

Project Area

0 1 2 4 6 8 Miles

Created: 10/30/2014

LandscapeRSA1

METROPOLITAN COUNCIL

Regional Economy

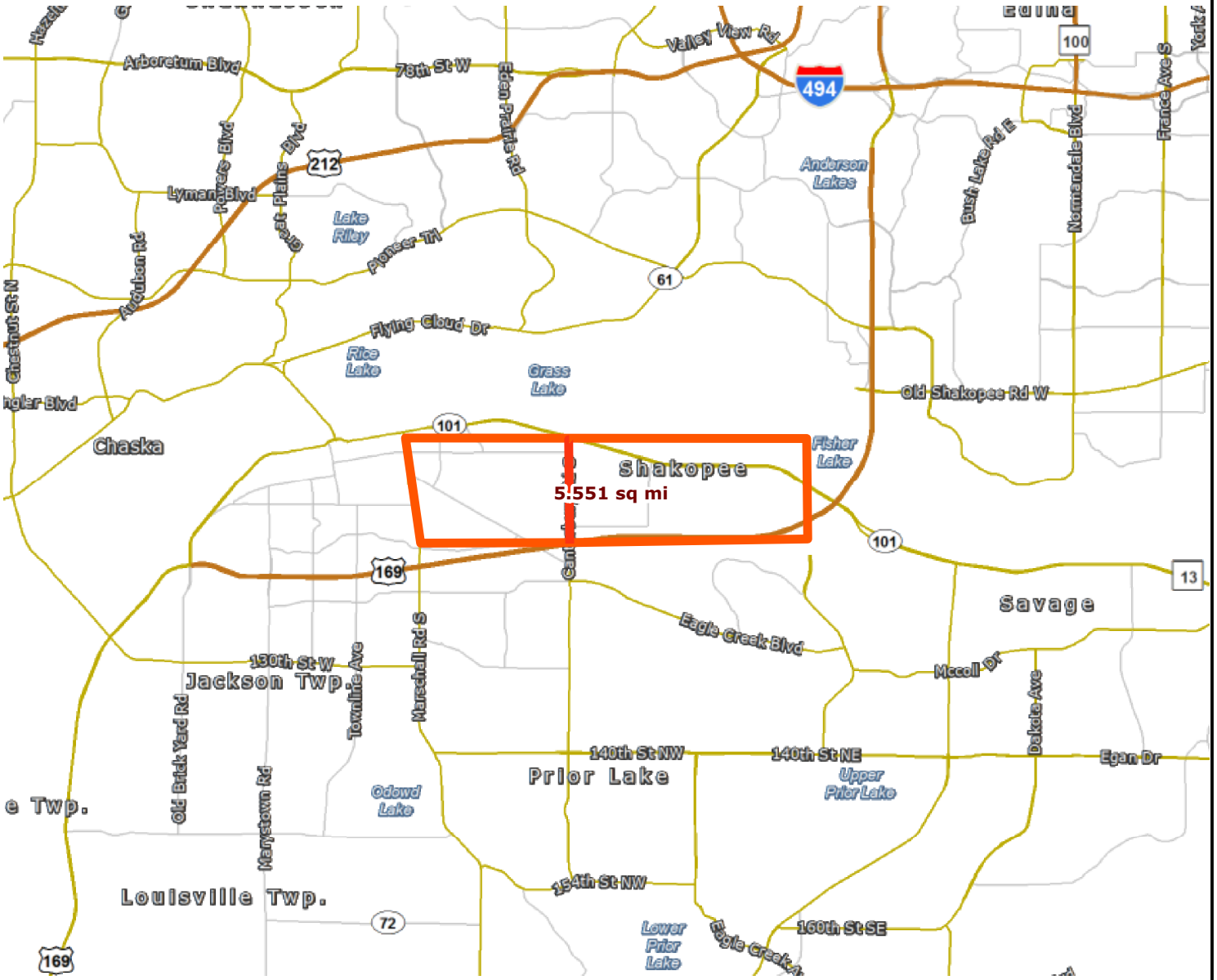
Roadway System Management Project: Highway 169 Traffic Systems Management | Map ID: 1414690692886

Results

Project **NOT IN** area of Job Concentration.

Project **IN** area of Manufacturing and Distribution.

Project **NOT CONNECTED** to area of Education Institutions.



Created: 10/30/2014
LandscapeRSA5

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

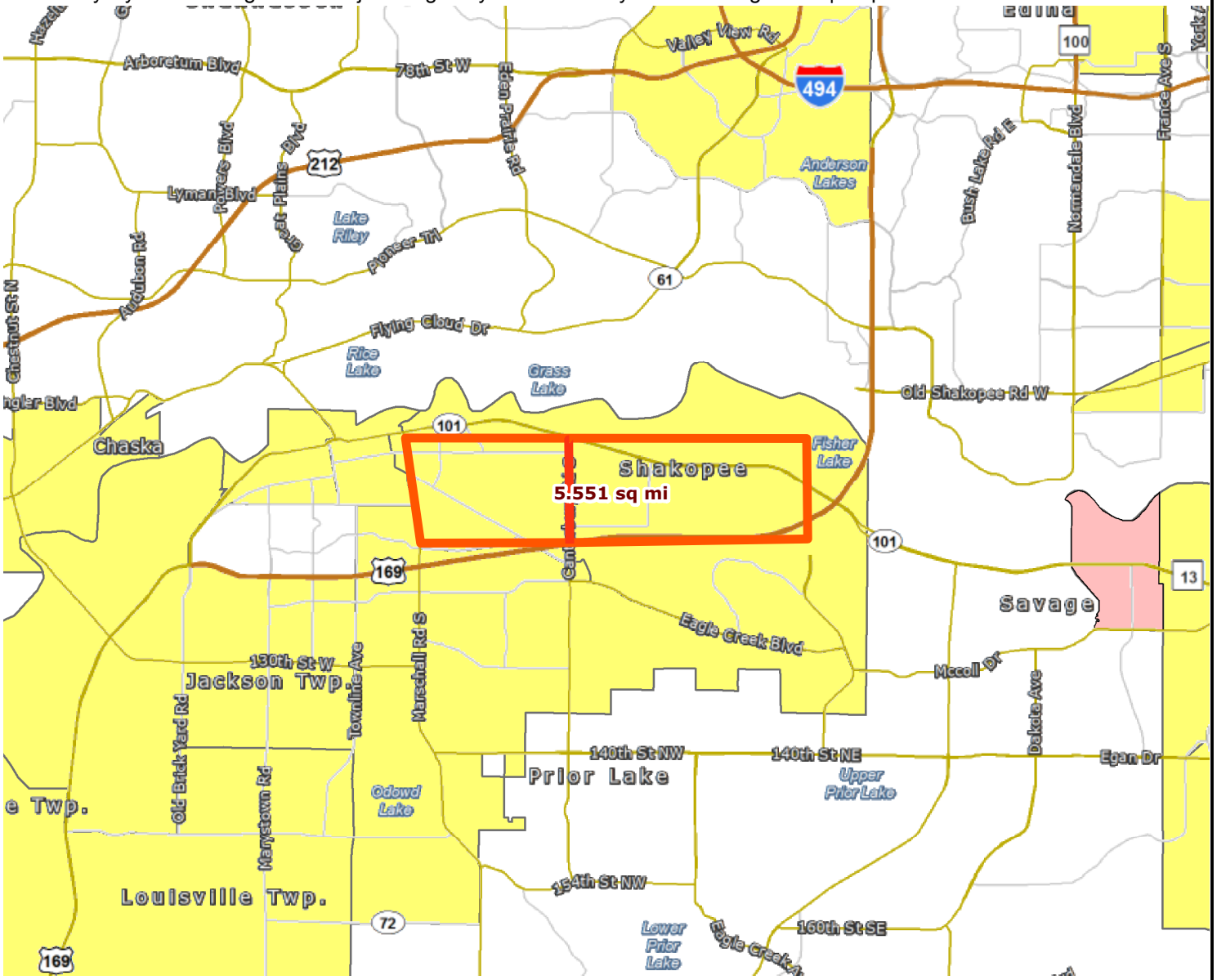
METROPOLITAN COUNCIL

Socio-Economic Conditions

Roadway System Management Project: Highway 169 Traffic Systems Management | Map ID: 1414690692886

Results

Project **IN** area of above average concentration of race or poverty.



Project
Project Area
Racially concentrated area of poverty
Concentrated area of poverty
Above reg'l avg conc of race/poverty

0 1 2 4 6 8 Miles

Created: 10/30/2014
LandscapeRSA2

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

METROPOLITAN COUNCIL

3: 169 North Ramps & CSAH 83

Direction	All
Volume (vph)	2318
Total Delay / Veh (s/v)	12
CO Emissions (kg)	1.68
NOx Emissions (kg)	0.33
VOC Emissions (kg)	0.39

3: 169 North Ramps & CSAH 83

Direction	All
Volume (vph)	2109
Total Delay / Veh (s/v)	11
CO Emissions (kg)	1.49
NOx Emissions (kg)	0.29
VOC Emissions (kg)	0.35

3: 169 North Ramps & CSAH 83

Direction	All
Volume (vph)	2318
Total Delay / Veh (s/v)	12
CO Emissions (kg)	1.68
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HSIP worksheet

Control Section	T.H. / Roadway	Location	Beginning Ref. Pt.	Ending Ref. Pt.	State, County, City or Township	Study Period Begins	Study Period Ends
	CSAH 83	Suth 169 Ramps, North 169 Ramps, Secretariat, and 12th Avenue Intersection			Scott County	1/1/2011	12/31/2013

Description of Proposed Work: Install Advanced Warning Signs (Positive Guidance)

Accident Diagram Codes		1 Rear End	2 Sideswipe Same Direction	3 Left Turn Main Line	5 Right Angle	4,7 Ran off Road	8, 9 Head On/ Sideswipe - Opposite Direction	Pedestrian	6, 90, 99 Other	Total
Study Period: Number of Crashes	Fatal **F**									
	Personal Injury (PI) **A**									
	Personal Injury (PI) **B**			1						**1**
	Personal Injury (PI) **C**	1			2	1	1		1	**6**
	Property Damage **PD**	8	9	5	7		2		2	**33**
% Change in Crashes *Use Crash Modification Factors Clearinghouse	Fatal **F**									
	PI **A**									
	PI **B**			-22%						
	PI **C**	-22%			-22%	-22%	-22%		-22%	
	Property Damage **PD**	-22%	-22%	-22%	-22%		-22%		-22%	
Change in Crashes = No. of crashes **X** % change in crashes	Fatal **F**									
	PI **A**									
	PI **B**			**-0.22**						**-0.22**
	PI **C**	**-0.22**			**-0.44**	**-0.22**	**-0.22**		**-0.22**	**-1.32**
	Property Damage **PD**	**-1.76**	**-1.98**	**-1.10**	**-1.54**		**-0.44**		**-0.44**	**-7.26**

Year (Safety Improvement Construction): **2017**

Project Cost (exclude Right of Way): **$ 993,000**

Right of Way Costs (optional):

Traffic Growth Factor: **3%**

Capital Recovery

1. **Discount Rate:** **4.5%**
2. **Project Service Life (n):** **20**

Type of Crash	Study Period: Change in Crashes	Annual Change in Crashes	Cost per Crash	Annual Benefit
F			$ 1,100,000	
A			$ 550,000	
B	-0.22	-0.07	$ 160,000	$ 11,733
C	-1.32	-0.44	$ 81,000	$ 35,640
PD	-7.26	-2.42	$ 7,400	$ 17,908
Total				$ 65,281

B/C= 1.15

Using present worth values,

B= $ 1,142,026

C= $ 993,000

See "Calculations" sheet for amortization.

Office of Traffic, Safety and Technology **September 2014**

Amortizing…

Year	Crash Benefits	Present Worth Benefits	Present Worth Costs
2017	$ 65,281	$ 65,281	$ 993,000
2018	$ 67,240	$ 64,344	
2019	$ 69,257	$ 63,421	
2020	$ 71,335	$ 62,510	
2021	$ 73,475	$ 61,613	
2022	$ 75,679	$ 60,729	
2023	$ 77,949	$ 59,857	
2024	$ 80,288	$ 58,998	
2025	$ 82,696	$ 58,151	
2026	$ 85,177	$ 57,316	
2027	$ 87,733	$ 56,493	
2028	$ 90,365	$ 55,683	
2029	$ 93,076	$ 54,883	
2030	$ 95,868	$ 54,096	
2031	$ 98,744	$ 53,319	
2032	$ 101,706	$ 52,554	
2033	$ 104,757	$ 51,799	
2034	$ 107,900	$ 51,056	
2035	$ 111,137	$ 50,323	
2036	$ 114,471	$ 49,601	
0	$ -	$ -	
0	$ -	$ -	
0	$ -	$ -	
0	$ -	$ -	
0	$ -	$ -	
0	$ -	$ -	
0	$ -	$ -	
0	$ -	$ -	
0	$ -	$ -	
0	$ -	$ -	
0	$ -	$ -	
	Totals =	**$ 1,142,026 (B)**	**$ 993,000 (C)**

year (n)= 1, 2, 3,….
discount rate (i) = 7%

$$\text{Crash Benefits (@ year n)} = (\text{Crash Benefits})_{n-1} \times (1 + \text{Traffic Growth Factor})$$

$$\text{Present Worth Benefits (@ year n)} = (\text{Crash Benefits})_{n} \times 1/(1 + \text{Discount Rate})^{n}$$

CSAH 83 (Canterbury Road) from CSAH 16 (Eagle Creek BLVD) to Shenandoah Drive 2011 -2013 - created on 11-08-2014 by rile1che

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	ATP	CO	CITY	DOW	MONTH	DAY	YEAR	TIME	SEV	DIAG	LOC1	TCD	LIT	WTHR1	WTHR2	SURF
04	70000083	003+00.558	0470000083	3.558	N	—	1	3	U	ON 4/3/2011, I OFFICER DAVIS AND OTHER SHAKOPEE OFFICERS RESPONDED TO AN INJURY ACCIDENT ON CANTERB	70	3515	1-Sun	4	3	2011	2045	B	1	1	1	4	1	0	1
04	70000083	003+00.558	0470000083	3.558	S	—	1	3	U	BOTH UNITS STOPPED AT LIGHT ON SB CR 83 AT CR 16 INTERSECTION. UNIT 1 STOPPED BEHIND UNIT 2. DRIVER	70	3515	4-Wed	2	22	2012	1142	N	1	1	1	1	1	0	1
04	70000083	003+00.558	0470000083	3.558	N	—	1	3	U	V1 TRAVELING NB CR83. V2 SLOWING TO A STOP NB CR83 AT EAGLE CREEK FOR THE YELLOW LIGHT. BEFORE V2 W	70	3515	2-Mon	3	19	2012	2046	C	1	1	1	4	3	0	2
04	70000083	003+00.558	0470000083	3.558	N	—	1	3	U	V1 TRAVELING NB CANTERBURY RD. CAME TO A STOP AFTER GOING THROUGH INTERSECTION OF 17TH AVE DUE TO T	70	3515	1-Sun	7	15	2012	2133	C	1	1	1	4	1	0	1
04	70000083	003+00.558	0470000083	3.558	E	—	1	1	U	V1 STOPPED AT RED LIGHT WAS REAR ENDED FROM BEHIND. V2 REPORTED HE HAD BEEN STOP AND LIGHT TURNED	70	3515	4-Wed	8	8	2012	1203	C	1	1	1	1	1	2	1
04	70000083	003+00.558	0470000083	3.558	Z	—	1	3	U	UNIT TWO WAS STOPPED IN TRAFFIC SOUTHBOUND ON CANTERBURY ROAD APPROACHING THE INTERSECTION WITH 17T	70	3515	3-Tue	9	11	2012	2019	C	1	1	1	4	1	0	1
04	70000083	003+00.558	0470000083	3.558	Z	—	1	3	U	VEH 1 WAS TRAVELING SOUTHBOUND ON CR83 FROM 17TH AVE. DRIVER OF VEH 1 STATED VEH 2 REAR-ENDED HIM A	70	3515	4-Wed	6	5	2013	0547	N	1	1	98	1	2	0	1
04	70000083	003+00.558	0470000083	3.558	Z	—	1	3	U	DRIVER OF VEH.#1 SAID SHE WAS STOPPED AT THE LIGHT OF EB 17TH AVE AND CO RD 83. DRIVER OF VEH#2 SA	70	3515	5-Thu	2	3	2011	1647	N	2	1	1	3	1	0	1
04	70000083	003+00.558	0470000083	3.558	Z	—	1	3	U	V1 WAS NB 83 AT 16. V1 DROVE THROUGH THE INTERSECTION ON A RED LIGHT, STRIKING V2 WHO WAS EB 16 GOI	70	3515	6-Fri	4	29	2011	1501	C	5	1	1	1	2	0	1
04	70000083	003+00.558	0470000083	3.558	N	—	1	3	U	UNIT 1 TRAVELING NB ON CR 83 APPROACHING INTERSECTION WITH CR 16. UNIT 2 TURNING FROM SB CR 16 ONTO	70	3515	7-Sat	7	20	2013	1408	C	5	1	1	1	1	0	1
04	70000083	003+00.558	0470000083	3.558	S	—	1	3	U	UNIT 1 TURNING LEFT ONTO WEST COUNTY ROAD 16 FROM NORTH COUNTY ROAD 83; FAILED TO STOP FOR RED ARRO	70	3515	2-Mon	11	11	2013	1731	A	5	1	1	4	2	0	1
04	70000083	003+00.558	0470000083	3.558	Z	—	1	3	U	ON 11/15/2013 I, OFFICER DAVIS WAS DISPATCHED TO A TWO VEHICLE ACCIDENT ON CANTERBURY ROAD AT EAGLE	70	3515	6-Fri	11	15	2013	0534	C	8	1	1	4	1	0	1
04	70000083	003+00.558	0470000083	3.558	S	—	1	3	U	V1/SNOWMOBILE AT INTERSECTION OF CR83 AND 17TH AVENUE ON TRAIL. V2 WB 17TH AVE. V2 HAD GREEN LIGHT	70	3515	1-Sun	1	2	2011	1731	C	90	2	1	4	2	4	3
04	70000083	003+00.586	0470000083	3.586	S	—	2	3	U	VEHICLE NUMBER 1 WAS TRAVELING SO. ON CTY. RD. 83. TRAFFIC WAS SLOWING DOWN. HE SAW IN HIS MIRROR V	70	3515	6-Fri	7	22	2011	1606	C	1	1	98	1	1	0	1
04	70000083	003+00.595	0470000083	3.595	Z	—	1	3	U	ALL 3 UNITS TRAVELING NB ON CANTERBURY RD. UNITS 2 AND 3 SLOWING IN TRAFFIC, DRIVER OF UNIT 1 STATE	70	3515	2-Mon	4	11	2011	0722	C	1	1	98	1	1	0	1
04	70000083	003+00.618	0470000083	3.618	N	—	2	3	U	UNIT 1 AND UNIT 2 WERE NORTHBOUND ON CANTERBURY RD S PASSING EAGLE CREEK BLVD. HEAVY TRAFFIC WAS SL	70	3515	7-Sat	4	28	2012	1545	N	1	1	1	1	2	0	1
04	70000016	003+00.636	0470000016	3.636	E	—	1	3	U	DRIVER OF UNIT 1, MOULTON, STATED SHE WAS EB EAGLE CREEK BLVD IN THE LEFT TRU LANE APPROACHING CANT	70	3515	7-Sat	10	12	2013	1759	N	2	1	1	1	1	0	1
04	70000016	003+00.642	0470000016	3.642	W	—	1	3	U	DRIVER OF UNIT 2, ENGH, STATED SHE WAS ON WB EAGLE CREEK BLVD STOPPED IN THE RIGHT TURN LANE AT CAN	70	3515	4-Wed	3	13	2013	0943	N	1	1	1	1	1	0	1
04	70000016	003+00.642	0470000016	3.642	Z	—	1	3	U	ON 9/18/2013 I, OFFICER DAVIS WAS DISPATCHED TO A TWO VEHICLE ACCIDENT ON 17TH AVE AND CANTERBURY R	70	3515	4-Wed	9	18	2013	0549	C	1	1	1	4	1	0	1
04	70000016	003+00.642	0470000016	3.642	N	—	1	3	U	V1 TRAVELING NORTH ON CO. RD. 83 AND HAD GREEN LIGHT AT EAGLE CREEK BLVD. V2 TRAVELING EAST ON EAG	70	3515	2-Mon	12	3	2012	0032	B	5	1	1	4	1	0	1
04	70000016	003+00.642	0470000016	3.642	Z	—	1	3	U	BICYCLIST ON WRONG SIDE OF STREET, BUT DID CROSS WITH GREEN LIGHT. DRIVER DID NOT SEE CYCLIST WHEN	70	3515	2-Mon	9	16	2013	0819	B	5	1	1	1	1	1	1
04	70000016	003+00.642	0470000016	3.642	E	—	1	3	U	PED/BIKE CROSSING IN CROSS WALK WHEN LIGHT TURNED GREEN FOR WEST BOUND TRAFFIC. CONTACT MADE IN CR	70	3515	5-Thu	7	11	2013	1450	C	8	1	1	1	1	1	1
04	70000016	003+00.648	0470000016	3.648	Z	—	1	3	U	VEHICLE 2 STOPPED FOR TRAFFIC AT THE LIGHT. VEHICLE 1 SLOWED BEHIND TRAFFIC AND STRUCK REAR END OF	70	3515	3-Tue	8	13	2013	1742	C	1	1	1	1	1	90	1
04	70000083	003+00.652	0470000083	3.652	N	—	3	3	U	UNIT 1 STATED THAT SHE WAS NOT PAYING ATTENTION TO THE ROADWAY (WAS WATCHING EMERGENCY VEHICLES RES	70	3515	7-Sat	2	4	2012	1910	N	1	1	98	4	1	0	1
04	70000083	003+00.738	0470000083	3.738	W	—	1	3	U	VEHICLE ONE WAS PARKED AT THE RED LIGHT FACING EAST BOUND ON EAGLE CREEK BLVD AT COUNTY ROAD 83. TH	70	3515	2-Mon	1	10	2011	1829	N	1	1	1	4	4	2	3
04	70000083	003+00.738	0470000083	3.738	S	—	1	3	U	V2 STOPPED FOR A YELLOW LIGHT ABOUT TO CHANGE TO RED AND V1 COUNDNT STOP FAST ENOUGH. MADE MINOR C'	70	3515	6-Fri	4	20	2012	1323	C	1	1	1	1	1	1	1
04	70000083	003+00.738	0470000083	3.738	Z	—	1	3	U	DRIVER ONE STATED THAT HE DID NOT SEE DRIVER TWO AND MERGED INTO HER. DRIVER TWO SAID DRIVER ONE M	70	3515	6-Fri	6	10	2011	1531	C	2	1	1	1	2	2	1
04	70000083	003+00.738	0470000083	3.738	N	—	1	3	U	BOTH UNITS ON DEAN LAKES BLVD ATTEMPTING TO TURN NB ONTO CANTERBURY RD. UNIT 1 (SEMI AND TRAILER) I	70	3515	4-Wed	2	8	2012	0933	N	2	1	1	1	1	0	1
04	70000083	003+00.738	0470000083	3.738	N	—	1	3	U	V1 MAKING A RIGHT TURN ONTO CR 83 DIDNT SEE V2 MAKING A LEFT TURN ON A GREEN LIGHT IN THE OUTSIDE '	70	3515	2-Mon	7	23	2012	1543	C	2	1	1	1	1	1	1
04	70000083	003+00.738	0470000083	3.738	Z	—	1	3	U	VEHICLE #1 AND VEHICLE #2 WERE TRAVELING WEST ON DEAN LAKES BLVD. BOTH VEHICLES WERE TAKING A RIG'	70	3515	5-Thu	9	12	2013	0830	N	2	1	1	1	1	0	1
04	70000083	003+00.738	0470000083	3.738	N	—	1	3	U	V1 TRAVELING NB CANTERBURY ROAD. V2 TRAVELING EB EAGLE CREEK BLVD. DRIVER OF V2 STATED HE HAD GRE	70	3515	6-Fri	1	4	2013	2142	B	5	1	1	4	1	0	1
04	70000083	003+00.738	0470000083	3.738	N	—	1	3	U	U1 WAS IN LEFT OF TWO RIGHT TURN LANES OF WESTBOUND DEAN LAKES BLVD AT CANTERBURY RD. U2 WAS NORTHB	70	3515	7-Sat	3	23	2013	1221	N	5	1	1	1	1	0	1
04	70000083	003+00.738	0470000083	3.738	N	—	1	3	U	V2 WAS SEEN BY WITNESSES ENTERING LEFT TURN LANE TO TRAVEL FROM SOUTH CANTERBURY ROAD TO EAST EAGLE	70	3515	4-Wed	7	10	2013	2250	C	5	1	1	4	1	0	1
04	70000083	003+00.738	0470000083	3.738	N	—	1	3	U	UNIT 1 TRAVELING SB ON CANTERBURY AND TURNING ONTO EB DEAN LAKES. UNIT 2 TRAVELING NB ON CANTERBUR	70	3515	4-Wed	11	6	2013	1714	C	5	1	1	6	1	99	1
04	70000083	003+00.808	0470000083	3.808	Z		2	3	U	VEHICLE #2 WAS SITTING STATIONARY BACKED UP IN TRAFFIC WAITING TO TURN NORTH ON CO. RD 83 WHILE EAS	70	3515	7-Sat	5	18	2013	1424	C	1	1	1	1	1	1	1
04	70000083	003+00.876	0470000083	3.876	N		2	1	U	BOTH VEHICLES TRAVELING NB ON CANTERBURY ROAD. DRIVER OF V1 STATED HE WAS MAKING A LANE CHANGE FROM	70	3515	3-Tue	8	20	2013	0139	N	2	1	98	4	1	0	1
04	70000083	003+00.925	0470000083	3.925	N		1	3	U	UNIT 2 WAS TRAVELING SOUTH BOUND IN THE NORTH BOUND LANE OF TRAFFIC (ON CO RD 83). UNIT 1 WAS TRAVE	70	3515	5-Thu	12	1	2011	2310	N	8	1	98	4	1	0	1
04	70000083	003+00.925	0470000083	3.925	N		1	3	U	. BELIEVING THE CAR WAS NOT GOING TO STOP, ABER APPLIED HEAVY BRAKE PRESSURE TO AVOID COLLISION.	70	3515	2-Mon	6	13	2011	1404	N	3	1	1	1	1	0	1
04	70000083	003+00.925	0470000083	3.925	Z		1	3	U	VEHICLE #1 WAS TRAVELING NORTH ON CO. RD 83 APPROACHING THE NORTHERN INTERSECTION WITH HWY. 169 APP	70	3515	4-Wed	8	24	2011	1130	C	5	1	1	1	1	1	1
04	70000083	003+00.925	0470000083	3.925	N		1	3	U	DRIVER OF UNIT 2, HENRY, WAS NB CANTERBURY RD APPROACHING THE SB USTH 169 OFF RAMP INTERSECTION. HE	70	3515	3-Tue	12	4	2012	1510	N	6	1	1	1	1	0	1
04	70000083	004+00.028	0470000083	4.028	S	352	1	3	U	ACCORDING TO BOTH WITNESSES V1 SB ON CR 83 WENT THROUGH INTERSECTION ON A RED LIGHT HITTING V2 ATTE	70	3515	1-Sun	8	21	2011	1314	B	3	1	1	1	1	1	1
04	70000083	004+00.028	0470000083	4.028	S	352	1	3	U	UNIT 1 WAS EXITING OFF 169 AND MADE A RIGHT TURN ONTO CANTERBURY RD. UNIT 1 LOST CONTROL AND DROVE	70	3515	4-Wed	1	16	2013	0512	N	90	1	1	4	5	0	5
04	70000083	004+00.028	0470000083	4.028	N	351	1	3	U	UNIT 2 TRAVELING NB ON CANTERBURY AT 169. UNIT 1 ATTEMPTING TO TURN ONTO NB CANTERBURY. UNIT 2 DR	70	3515	3-Tue	9	3	2013	2147	N	5	1	1	4	1	99	1
04	70000083	004+00.028	0470000083	4.028	S	352	1	3	U	VEH 2 WAS STOPPED AT RED SEMAPHORE AT THE INTERSECTION OF SB CR83 AND HWY 169. VEH 1 WAS SLOWING A	70	3515	1-Sun	1	1	2012	1907	N	1	1	1	4	8	2	5
04	70000083	004+00.028	0470000083	4.028	S	409	1	3	U	UNIT1 WAS ON SOUTH CANTERBURY ROAD IN THE LEFT TURN LANE TO GO NB HWY 169. UNIT2 WAS BEHIND UNIT1.	70	3515	6-Fri	10	25	2013	0132	N	1	1	1	4	1	0	1
04	70000083	004+00.028	0470000083	4.028	Z	352	1	3	U	UNIT 1 BRAKES WENT OUT. TRAFFIC LIGHT WAS RED AND UNIT 1 COULD NOT STOP. UNIT 2 IN RIGHT TURN LAN	70	3515	2-Mon	10	7	2013	1355	C	7	1	1	1	1	0	1
04	70000083	004+00.028	0470000083	4.028	S	351	3	1	U	VEH 1 IN LEFT TURN LANE TO GO ON HWY 169. VEH 2 NEXT TO VEH 1 (RIGHT) IN OTHER LEFT TURN LANE. TH	70	3515	7-Sat	3	17	2012	1725	N	2	1	1	1	1	0	1
04	70000083	004+00.028	0470000083	4.028	N	A05	1	1	U	UNIT 2 WAS ENTERING FROM CR 83 RAMP LOST CONTROL OF VEHICLE AND BEGAN TO SPIN ACROSS ROADWAY.UNIT 1	70	3515	2-Mon	2	13	2012	1952	N	2	1	98	4	4	0	2
04	70000083	004+00.028	0470000083	4.028	Z	352	1	0	U		70	3515	1-Sun	1	27	2013	1900	N	2	0	1	4	4	0	4
04	70000083	004+00.028	0470000083	4.028	Z	352	1	3	U	V1 WAS MAKING A LEFT TURN FROM NORTH BOUND CANTERBURY ROAD TO GO SOUTH ONTO HWY 169. HE WAS MAKING	70	3515	7-Sat	12	28	2013	2125	N	2	1	1	4	1	0	5
04	70000083	004+00.031	0470000083	4.031	Z		1	3	U	UNIT 2 STOPPED AT TRAFFIC LIGHT ON EXIT RAMP FROM NB 169 TO CR 83. UNIT 1 APPROACHED ON SAME RAMP,	70	3515	6-Fri	8	31	2012	1135	B	1	1	1	1	1	0	1
04	70000083	004+00.148	0470000083	4.148	N		1	3	U	VEH 1 WAS TRAVELING SB CANTERBURY RD. DRIVER SAID HE WAS GOING TO FAST. HE SWERVED TO MISS A SQUIRR	70	3515	7-Sat	11	5	2011	1340	C	90	7	98	1	1	0	1
04	70000083	004+00.148	0470000083	4.148	S		1	3	U	V3 STOPPED ON SB CR83 AT SECRETARIAT DRIVE IN TRAFFIC. THE SEMAPHORE AT 169 WAS RED. V2 DIRECTLY BE	70	3515	3-Tue	4	10	2012	1710	N	1	99	1	1	1	0	1
04	70000083	004+00.148	0470000083	4.148	Z		1	3	U	VEH 1 AND VEH 2 TRAVELING SB ON S. CANTERBURY RD AT SECRETARIAT DR. VEH 2 STOPPED IN TRAFFIC. VEH 1	70	3515	7-Sat	4	13	2013	1816	N	1	1	98	1	2	0	1
04	70000083	004+00.148	0470000083	4.148	Z		1	3	U	ON 07-23-12 JOSHUA MENSING REPORTED A HIT AND RUN ACCIDENT. MENSING STATED HE WAS DRIVING EAST ON S	70	3515	2-Mon	7	23	2012	1905	N	2	1	4	1	2	0	1
04	70000083	004+00.218	0470000083	4.218	S		1	3	U	ON 11/26/2012, I OFFICER DAVIS WAS DISPATCHED TO A MOTOR VEHICLE ACCIDENT ON CANTERBURY ROAD. I AR	70	3515	2-Mon	11	26	2012	1725	N	1	1	1	5	1	0	1
04	70000083	004+00.236	0470000083	4.236	Z		1	3	U	UNIT 1 TRAVELING WEST ON 12TH AVENUE AND TURNING LEFT TO SOUTHBOUND CANTERBURY ROAD ON GREEN LIGHT.	70	3515	6-Fri	10	25	2013	1417	N	2	1	1	1	1	90	1
04	70000083	004+00.238	0470000083	4.238	Z		1	3	U	VEHICLE #1 WAS TRAVELING WEST ON 12TH AVE. AND WAS WAITING FOR THE LIGHT TO TURN TO GO SOUTH ON CO.	70	3515	3-Tue	10	30	2012	1845	N	8	1	1	4	1	1	1
04	70000083	004+00.238	0470000083	4.238	Z		1	3	U	UNIT 1 TRAVELING NB ON CANTERBURY AT INTERSECTION OF 12TH AVENUE HAD GREEN SIGNAL TO CONTINUE NB AN	70	3515	7-Sat	6	8	2013	1232	C	8	1	1	1	1	99	1
04	70000083	004+00.238	0470000083	4.238	W		1	3	U	UNIT 1 W/B MAKING S/B TURN FAILED TO YIELD TO ONCOMING TRAFFIC. UNIT 1 MADE CONTACT WITH UNIT 2.	70	3515	5-Thu	6	28	2012	1805	N	3	1	1	3	1	0	1
04	70000083	004+00.238	0470000083	4.238	Z		1	3	U	VEHICLE #1 WAS TRAVELING EAST ON 12TH AVENUE. VEHICLE #2 WAS TRAVELING WEST ON 12TH AVENUE AND MAK	70	3515	3-Tue	9	25	2012	1148	N	3	1	1	1	1	0	1
04	70000083	004+00.238	0470000083	4.238	E		1	3	U	VEHICLE ONE WAS TRAVELING WEST BOUND ON 12TH AVENUE GOING TO TURN SOUTH BOUND COUNTY ROAD 83. VEHIC	70	3515	7-Sat	10	27	2012	0556	N	3	1	1	4	1	0	1
04	70000083	004+00.238	0470000083	4.238	Z		1	3	U	V1 WAS SB CANTERBURY RD AND WAS TAKING A LEFT TURN TO GO EB ON 12TH AVE. V1 DRIVER STATED HE STOPPE	70	3515	2-Mon	12	23	2013	1338	N	3	1	1	1	1	1	2
04	70000083	004+00.238	0470000083	4.238	S		1	3	U	V1 WAS EASTBOUND 12TH AVE. DRIVER STATED THAT SHE STOPPED AT THE RED LIGHT, LOOKED, DID NOT SEE A C	70	3515	4-Wed	2	9	2011	2312	N	5	1	1	4	1	0	1
04	70000083	004+00.238	0470000083	4.238	Z		1	3	U	VEHICLE 1 WAS DRIVING OUT OF THE CULVERS PARKING. VEH 1 WAS ATTEMPTING TO MAKE A LEFT TURN TO GO WB	70	3515	2-Mon	3	21	2011	1807	N	5	1	98	1	2	2	1
04	70000083	004+00.238	0470000083	4.238	E		1	3	U	DRIVER 1 TRAVELING WEST ON E 12 AV, MAKING LEFT TURN ONTO SOUTH S CANTERBURY RD WITH SOLID GREEN SE	70	3515	2-Mon	9	23	2013	2150	N	5	1	1	4	1	0	1
04	70000083	004+00.238	0470000083	4.238	E		1	3	U	DRIVER 1 TRAVELING WEST ON E 12 AV, TURNING LEFT ONTO SOUTH S CANTERBURY RD. DRIVER 2 EAST ON E 12	70	3515	2-Mon	9	30	2013	1704	N	5	1	1	1	1	0	1
04	70000083	004+00.238	0470000083	4.238	Z		1	3	U	VEHICLE #1 WAS TRAVELING NORTH ON CANTERBURY ROAD AND HAD GREEN LIGHT. VEHICLE #2 WAS TRAVELING EA	70	3515	2-Mon	11	4	2013	1227	N	5	1	1	1	2	0	2
04	70000083	004+00.238	0470000083	4.238	Z		1	3	U	UNIT 1 WAS TRAVELING NB CO RD 83, OUTSIDE LANE, AND APPROACHING THE 12TH AVE E INTERSECTION. UNIT	70	3515	6-Fri	11	22	2013	1053	C	5	1	1	1	1	0	1
04	70000083	004+00.238	0470000083	4.238	E		1	3	U	DRIVER OF UNIT 1, VUE, WAS EB 12TH AVE APPROACHING CANTERBURY ROAD. VUE STATED HE WAS ENROUTE TO TH	70	3515	6-Fri	11	22	2013	1339	N	5	1	1	1	1	0	1
04	70000083	004+00.238	0470000083	4.238	Z		1	3	U	VEHICLE #2 WAS STOPPED AT THE RED LIGHT IN THE LEFT TURN LANE ON NB CO. RD 83 AT 12TH AVE., WAITING	70	3515	5-Thu	12	8	2011	1742	N	1	1	1	4	1	1	1
04	70000083	004+00.238	0470000083	4.238	Z		1	3	U	UNIT 2 STOPPED AT RED TRAFFIC LIGHT IN LEFT TURN LANE ON CANTERBURY RD. UNIT 1 WAS STOPPED BEHIND U	70	3515	3-Tue	1	8	2013	1558	N	1	1	1	1	2	0	1
04	70000083	004+00.238	0470000083	4.238	E		1	3	U	UNIT 1 WAS STOPPED AT THE RED LIGHT AND WAS WAITING TO TURN RIGHT. I WAS STOPPED IN MY SQUAD CAR	70	3515	3-Tue	1	29	2013	2259	N	1	1	1	4	5	6	5
04	70000083	004+00.238	0470000083	4.238	Z		1	3	U	VEHICLE 1-4 WERE TRAVELING SOUTH ON COUNTY ROAD 83 NEAR 12TH AVENUE. THERE WAS A LARGE AMOUNT OF TR	70	3515	1-Sun	7	21	2013	2107	N	1	1	1	3	1	0	1
04	70000083	004+00.238	0470000083	4.238	S		1	3	U	V2 WAS STOPPED WAITING TO MAKE A RIGHT TURN ONTO 12TH AVE WHEN V1 CAME FROM BEHIND WENT TO THE LEFT	70	3515	6-Fri	5	20	2011	1700	N	2	6	4	1	2	3	2
04	70000083	004+00.238	0470000083	4.238	Z		1	3	U	UNIT 1 EXITING CULVERS LOT IN HEAVY TRAFFIC. TRAFFIC IN INSIDE WESTBOUND LANE STOPPED TO ALLOW HIM	70	3515	5-Thu	4	4	2013	1641	N	2	1	4	1	1	99	1
04	70000083	004+00.256	0470000083	4.256	E		1	3	U	BOTH VEH 1 AND 2 E/B 12TH AVE. DRIVER VEH 2 STATES WAS DRIVING ON 12TH AVE WHEN HE WAS ABRUPTLY RE	70	3515	1-Sun	6	19	2011	0239	N	1	1	98	4	1	0	1
04	70000083	004+00.288	0470000083	4.288	Z		2	3	U	UNIT 1 ATTEMPTING TO MAKE U-TURN FROM NB 83 ONTO SB 83. DRIVER OF UNIT 1 STATED HE PARTIALLY VEERED	70	3515	6-Fri	4	15	2011	1552	N	1	1	98	1	2	0	1
04	70000083	004+00.313	0470000083	4.313	S		2	3	U	WITNESS CALLED TO REPORT THAT A VEHICLE WITH MN LIS. 513-ETV HAD GONE ONTO THE MEDIAN AND STRUCK TH	70	3515	4-Wed	1	30	2013	1724	N	8	3	98	3	1	0	3
04	70000083	004+00.418	0470000083	4.418	Z		2	3	U	DRIVER 2 STOPPED IN LANE OF TRAFFIC TO MAKE A U-TURN. DRIVER 1 DID NOT NOTICE HE STOPPED AND STRUC	70	3515	3-Tue	10	8	2013	0815	C	1	1	98	1	1	1	1

			PERSON1											PERSON2										PERSON3										PERSON4	
CHAR	DESGN	ACC_NUM	VTYPE	DIR	ACT	FAC1	FAC2	POSN	INJ	EQP	PHYS	AGE	SEX	VTYPE	DIR	ACT	FAC1	FAC2	POSN	INJ	EQP	PHYS	AGE	SEX	VTYPE	DIR	ACT	FAC1	FAC2	POSN	INJ	EQP	PHYS	AGE	SEX	VTYPE	DIR
2	3	110930133	4	1	1	4	0	1	C	4	1	50	F	1	1	1	1	0	1	N	4	1	42	M	1	1											
1	5	120540139	3	5	9	15	0	1	N	4	1	58	M	1	5	11	1	0	1	N	4	1	40	M													
1	3	120790215	1	1	1	16	0	1	N	4	1	33	M	1	1	1	1	0	1	C	4	1	66	M													
2	90	121970164	2	1	0	0	0	1	N	0	0	900	Z	1	1	1	0	0	1	N	4	1	29	F													
1	3	122220188	4	3	11	1	0	1	C	4	1	41	F	1	3	1	4	0	1	N	4	1	77	M													
1	5	122560011	3	5	1	15	0	1	C	4	1	61	M	3	5	11	1	0	1	C	4	1	43	F													
1	3	131570006	1	5	1	21	0	1	N	4	1	30	M	2	5	1	99	0	1	N	99	99	901	Z													
2	5	110340334	3	1	3	2	0	1	N	4	1	27	F	1	1	6	1	0	1	N	4	1	24	F													
2	5	111190113	3	3	1	1	0	1	C	4	1	28	F	3	1	1	5	0	1	C	4	1	28	M													
1	3	132020036	1	1	1	1	0	1	N	4	1	62	M	1	3	6	1	0	1	C	4	1	59	F													
2	3	133150215	1	7	4	5	0	1	N	4	1	18	M	4	5	1	1	0	1	A	4	1	43	M	3	5											
2	3	133250016	3	1	6	1	0	1	C	4	1	59	M	3	5	1	5	0	1	N	4	1	48	M													
1	5	110030206	2	7	1	1	0	1	N	4	1	43	M	9	5	37	2	0	1	C	12	1	17	M													
1	5	112050255	3	5	1	1	1	1	N	4	1	30	M	1	5	1	8	0	1	C	4	1	51	M													
1	5	111010046	1	1	1	15	0	1	N	4	1	24	M	1	1	1	1	0	1	N	4	1	36	M	1	1											
1	3	121190106	1	1	1	1	0	1	N	4	1	65	M	3	1	1	4	15	1	N	4	1	38	F													
1	5	132860046	1	2	14	8	0	1	N	4	1	17	F	1	3	1	1	0	1	N	4	1	17	M													
2	5	130720113	3	7	11	1	0	1	N	4	1	49	F	1	7	57	4	15	1	N	4	1	23	F													
1	3	132620016	4	3	11	1	0	1	C	4	1	41	M	1	3	1	15	0	1	C	4	1	25	F													
1	3	123380012	3	3	1	5	2	1	N	4	2	27	M	4	1	1	1	0	1	C	4	1	43	F													
1	3	132590131	53	3	1	2	15	21	8	12	1	72	M	4	3	5	15	1	1	N	4	1	31	M													
1	5	131920138	2	7	1	2	1	1	N	4	1	50	F	53	98	31	1	1	21	C	98	98	16	M													
1	3	132250169	1	7	1	16	32	1	N	4	1	17	F	1	7	1	1	1	1	N	4	1	35	M													
1	5	120350125	3	1	1	4	15	1	N	4	1	63	F	1	1	1	1	0	1	N	4	1	68	F													
1	5	110110017	1	3	11	1	0	1	N	98	1	67	M																									
1	5	121110073	1	5	1	4	1	1	N	4	1	30	F	1	5	11	1	1	1	C	4	1	24	M													
1	3	111620067	1	1	16	2	16	1	N	4	1	17	M	1	1	1	1	1	1	C	4	1	39	F													
1	5	120390116	35	1	5	9	0	1	N	4	1	50	M	1	1	5	1	0	1	N	4	1	42	M													
1	5	122050197	1	1	3	2	99	1	N	4	1	40	F	11	1	6	1	1	1	C	11	1	53	M													
2	5	132550089	1	8	5	1	0	1	N	4	1	44	M	35	8	5	8	10	1	N	4	1	51	M													
1	90	130040320	3	3	1	1	0	1	C	1	1	26	M	1	1	1	2	0	1	B	99	1	20	M													
1	3	130820127	1	1	0	1	0	1	N	4	1	40	M	1	8	5	1	0	1	N	4	1	67	F													
2	3	131920009	1	3	4	5	18	1	N	4	2	26	M	4	1	1	1	0	1	C	4	1	44	M													
1	3	133100224	1	7	11	1	1	1	N	4	1	39	M	1	1	1	15	5	1	C	4	1	33	M	3	5											
1	5	131440035	3	3	1	15	1	1	N	4	1	20	F	1	3	1	1	1	1	N	4	1	41	M													
1	3	132420259	3	1	14	8	0	1	N	4	1	53	M	1	1	1	1	0	1	N	4	1	22	M													
1	3	113360001	3	1	1	1	0	1	N	4	1	36	F	1	5	2	16	8	1	N	4	1	57	F													
1	5	111640129	1	1	1	5	15	1	N	4	1	25	F	2	7	6	1	0	1	N	4	1	54	M													
1	5	112370296	1	1	1	5	2	1	N	2	1	86	M	1	6	6	1	1	1	C	4	1	66	F													
1	2	123390157	1	1	1	1	0	1	N	4	1	18	F	35	7	3	2	0	1	N	4	1	41	M													
1	5	112330132	1	7	6	1	1	1	C	4	1	78	M	3	5	1	16	15	1	B	4	1	17	F													
1	2	130160021	1	1	5	61	46	1	N	4	1	24	M																									
1	3	132460285	1	1	1	2	5	1	N	4	1	39	F	1	5	1	1	90	1	N	4	1	54	M													
2	3	120010203	1	5	10	46	0	1	N	4	1	19	F	1	5	11	90	0	1	N	4	1	40	M													
1	3	132980010	1	5	11	1	0	1	N	4	1	65	M	1	0	1	9	0	1	N	0	0	901	Z													
2	2	132830115	35	7	13	41	0	1	N	99	1	43	M	3	3	3	1	0	1	C	99	1	39	M													
1	90	120800175	1	4	6	1	0	1	N	4	1	72	M	1	4	6	8	7	1	N	4	1	36	F													
1	1	121350216	1	1	16	3	61	1	N	4	1	23	F	2	1	1	1	0	1	N	4	1	25	F													
0	0	130590057	3	6	6	0	0	1	N	4	0	38	M	1	6	6	0	0	1	N	0	0	20	M													
1	2	133630005	1	7	6	1	0	1	N	4	1	51	M	1	7	5	46	0	1	N	4	1	20	M													
2	90	122480044	1	3	11	1	0	1	N	4	1	65	F	1	3	57	15	0	1	B	4	1	22	F													
1	3	113090147	1	5	13	15	13	1	C	4	1	47	M																									
1	90	121020010	1	5	1	4	0	1	N	4	1	22	M	2	5	11	1	0	1	N	4	1	51	M	1	5											
1	3	131030154	3	5	1	15	0	1	N	4	1	69	M	1	5	1	50	0	1	N	4	1	72	M													
1	8	122050221	1	3	5	16	2	1	N	99	1	17	M	35	3	5	99	0	1	N	99	99	900	Z													
1	3	123310157	1	5	1	4	0	1	N	4	1	40	M	1	5	11	1	0	1	N	4	1	25	M	3	5											
1	3	133000121	1	5	6	2	10	1	N	4	1	30	M	4	5	5	99	99	1	N	4	1	53	M													
1	5	123060006	1	7	6	2	5	1	N	4	1	23	M	4	3	1	1	1	1	N	4	1	51	M													
1	3	131590107	1	1	6	2	1	1	N	4	1	75	M	3	5	1	1	1	1	C	4	1	40	M													
1	90	121800160	1	7	6	2	90	1	N	4	1	24	F	3	3	1	1	1	1	N	4	1	47	M													
1	5	122690140	2	6	6	2	0	1	N	4	1	32	M	1	3	1	1	0	1	N	4	1	37	F													
1	90	123010035	1	3	1	1	0	1	N	98	1	21	F	1	7	6	15	0	1	N	98	1	36	M													
1	5	133600016	3	5	54	2	0	1	N	4	1	23	M	4	1	1	1	1	1	N	4	1	30	M													
1	5	110400368	3	5	3	2	0	1	N	4	1	35	F	1	5	1	1	0	1	N	4	1	40	M													
1	8	110810001	31	5	17	11	2	1	N	4	1	71	M	1	3	1	15	15	1	N	4	1	39	M													
1	3	132660167	1	3	1	1	0	1	N	4	1	21	M	3	7	6	2	0	1	N	4	1	38	F													
1	3	132730179	1	7	6	2	0	1	N	5	1	66	F	1	3	1	1	0	1	N	5	1	37	M													
1	5	133080073	1	1	1	1	0	1	N	4	1	27	M	1	3	1	5	15	1	N	4	1	61	M													
1	5	133260117	1	3	1	1	0	1	C	99	1	43	M	1	1	1	5	15	1	C	4	1	43	M	1	7											
1	5	133260124	1	3	1	2	5	1	N	4	1	52	M	35	5	1	1	0	1	N	4	1	46	M													
1	5	113430007	2	1	1	15	1	1	N	4	1	47	M	1	1	11	1	1	1	N	4	1	31	F													
1	5	130090040	3	1	9	15	0	1	N	4	1	63	M	1	1	11	1	0	1	N	4	1	66	M													
1	3	130290013	1	3	57	1	0	1	N	4	1	62	M	1	3	1	3	16	1	N	4	1	24	F													
1	90	132030010	1	5	1	4	15	1	N	98	1	17	M	3	5	1	1	0	1	N	98	1	45	M	3	5											
1	9	111400171	3	5	1	99	99	1	N	99	99	899	Z	3	5	5	1	1	1	N	4	1	51	M													
1	5	130940142	1	1	34	2	8	1	N	4	1	52	M	5	7	1	1	1	1	N	4	1	53	M													
1	8	111700111	1	3	1	4	18	1	N	99	2	22	M	3	3	1	1	0	1	N	4	1	59	M													
1	5	111090017	2	1	7	8	10	1	N	4	1	50	M	1	1	1	15	0	1	N	4	1	20	M													
2	8	130300298	1	5	2	99	0	1	N	99	99	27	M																									
1	5	132810086	3	1	1	15	3	1	C	4	1	54	F	3	1	7	10	8	1	N	4	1	58	M													

Countermeasure(s)	Crash Type	Crash Severity	Area Type	Config	Control	Major Daily Traffic Volume (veh/day)	Minor Daily Traffic Volume (veh/day)	Ref	Obs	Effectiveness: Crash Reduction Factor / Function	Effectiveness: Std Error	Effectiveness: Range Low	Effectiveness: Range High	Study Type
Install advance warning signs (positive guidance)	All	All	All					1		35				
	All	All			Signal			28		22		3	40	
	All	All	Urban					15		30				Cross-section
	All	All	Rural					15		40				
	Right-angle	All			Signal			47	11	35		20	100	Simple Before-After
	Right-angle	All			Signal			28		35				
Provide overhead lane-use signs	Rear-end	All						51		10				
	Sidewipe	All						51		20				
PAVEMENT MARKINGS/MODIFICATIONS														
Add centerline and move STOP bar to extended curb lines	All	All			No signal			28		29				
	Right-angle	All			No signal			28		24				
Add centerline and move STOP bar to extended curb lines, double stop signs	All	All			No signal			28		9				
	Right-angle	All			No signal			28		0				
Add centerline and STOP bar, replace 24-inch with 30-inch stop signs	Right-angle	All			No signal			47		67	11	27	100	Simple Before-After
	Right-angle	All			No signal			28		67				
Improve pavement friction (groove)	All	All						28		25				
	Wet	All						28		59		42	75	
Improve/install pedestrian crossing	All	All						15		25				
	Ped	All						15		25				
Install pedestrian crossing	Ped	All						15		25				
	Ped	All						15		25				
	Ped	Fatal/Injury	Rural					38		60				EB Before-After
Install pedestrian crossing (raised)	All	All						5		30	67			Meta-analysis
	All	Fatal/Injury						5		36	54			Meta-analysis
	Ped	All						28		8				

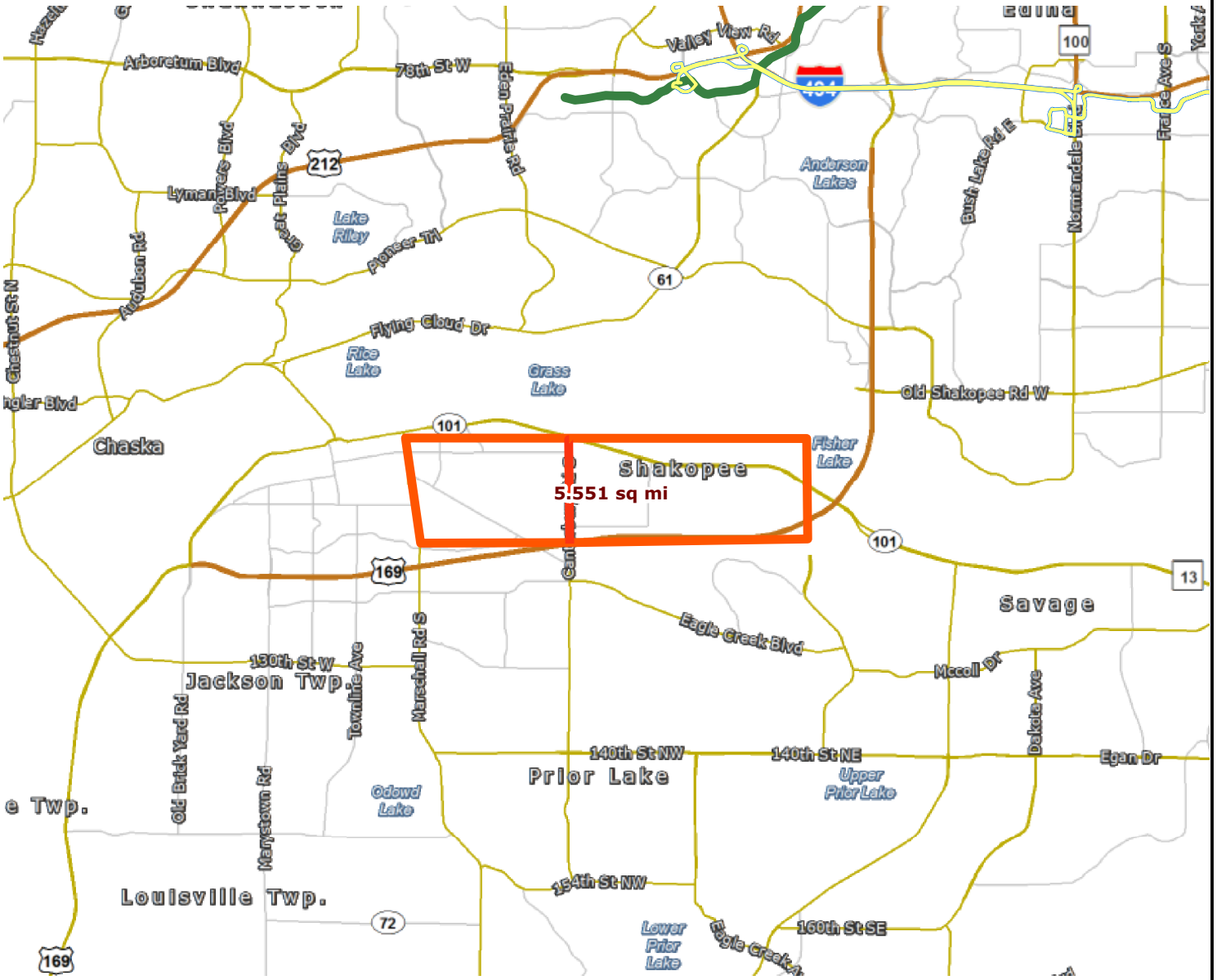
Transit Connections

Roadway System Management Project: Highway 169 Traffic Systems Management | Map ID: 1414690692886

Results

Transit with a Direct Connection to project:
496 498

**indicates Planned Alignments*



Project
Project Area
Planned Alignments
Light Rail, Green Line Extension
Arterial BRT

0 1 2 4 6 8 Miles

Created: 10/30/2014
LandscapeRSA3

METROPOLITAN COUNCIL