METROPOLITAN COUNCIL

Application

10353 - 2018 Roadway Expansion

11045 - TH 13 and Dakota Avenue Freight Access and Mobility Project

Regional Solicitation - Roadways Including Multimodal Elements

Status:	Submitted
Submitted Date:	07/13/2018 3:28 PM

Primary Contact

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

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

Organization Information

Name:	SCOTT COUNTY

Jurisdictional Agency (if different):	
Organization Type:	County Government
Organization Website:	
Address:	600 COUNTRY TRAIL E
*	JORDAN (City) Minnesota (State/Province) 55352 (Postal Code/Zip)
County:	Scott
Phone:*	612-496-8355 Ext.
Fax:	
PeopleSoft Vendor Number	0000024262A3

Project Information

Project Name	TH 13 and Dakota Avenue Freight Access and Mobility Project
Primary County where the Project is Located	Scott
Cities or Townships where the Project is Located:	Savage
Jurisdictional Agency (If Different than the Applicant):	

Brief Project Description (Include location, road name/functional class, type of improvement, etc.) *(Limit 2,800 characters; approximately 400 words)*	The proposed TH 13 Port Access and Mobility Project includes the construction of a grade separation, frontage roads, and accompanying access ramps at the intersection of Minnesota State Trunk Highway 13 and Dakota Avenue (referred to as TH 13/Dakota Avenue). TH 13/Dakota Avenue is currently an atgrade unsignalized intersection. The project will provide a supporting road network that removes direct access to TH 13 and offers alternate routes and safer access to TH 13 for truck traffic generated from the adjacent Ports of Savage and industrial uses. The supporting road network and the underpass connecting Dakota Avenue will facilitate movement across TH 13 and allow for rightin rightout access through the use of access ramps on to TH 13 at Yosemite Avenue. This project is located in the city of Savage along TH 13 (Principal Arterial) and provides direct access to the Ports of Savage. The Ports of Savage consists of five separate private ports off the Minnesota River and two rail corridors served by three railroad companies. Over three million tons of material was shipped through the Ports of Savage in 2016 from major operators. Since 2000, the Ports have moved as much as five million tons of products per year. Operators have indicated that they are operating at under fifty percent capacity and congestion and delay on TH 13 is a significant factor in the level of commodities moving into and out of the Ports. Today the Port is accessed via the at-grade intersections of Dakota, Yosemite, and Lynn Avenues along TH 13. This project will directly serve three private ports.
TIP Description Guidance (will be used in TIP if the project is selected for funding)	MN 13, 0.5 MI N OF MN901B /MN 13 TO QUENTIN AVE - CONSTRUCT INTERCHANGE AND FRONTAGE ROADS, CONSTRUCT BRIDGES
Project Length (Miles) *to the nearest one-tenth of a mile*	1.1

Project Funding

Are you applying for competitive funds from another source(s) to implement this project?	No
If yes, please identify the source(s)	
Federal Amount	$5,750,000.00
Match Amount	$20,190,000.00

Minimum of 20% of project total

Project Total	$25,940,000.00
Match Percentage	77.83%

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

Source of Match Funds	County Transportation Sales Tax, Federal Freight Hwy Program

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

Preferred Program Year

Select one:	2022

Select 2020 or 2021 for TDM projects only. For all other applications, select 2022 or 2023.

Additional Program Years:

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

Project Information: Roadway Projects

County, City, or Lead Agency	Scott County
Functional Class of Road	Principal Arterial
Road System	Trunk Highway and City Street

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

Road/Route No.	13

i.e., 53 for CSAH 53

Name of Road	Highway 13

Example; 1st ST., MAIN AVE

Zip Code where Majority of Work is Being Performed	55378
(Approximate) Begin Construction Date	09/01/2022
(Approximate) End Construction Date	10/31/2024

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

From: **(Intersection or Address)**	0.5 miles west of Dakota Avenue

To: **(Intersection or Address)**	Quentin Avenue
DO NOT INCLUDE LEGAL DESCRIPTION	
Or At	
Primary Types of Work	CONSTRUCT INTERCHANGE AND FRONTAGE ROADS, CONSTRUCT BRIDGES
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.:	Unknown
Structure is Over/Under **(Bridge or culvert name):**	Over Dakota Avenue

Requirements - All Projects

All Projects

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

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

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

List the goals, objectives, strategies, and associated pages:	Goal B: Safety and Security (p2.20) -Objective A (p2.20) --Strategies B1 (p.2.20) Goal C Access to Destinations (p2.24) -Objectives A, B,C (2.24) --Strategies C1(2.24), C7 (2.30), C8 (2.30), C10 (2.32), C19 (2.37) Goal D Competitive Economy (2.38) -Objective C (2.38) --Strategies D5 (2.40) Goal F Leverage Transportation Investments to Guide Land Use (2.48) -Objective B (2.48) --Strategies F8 (2.53)

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

List the applicable documents and pages:	Scott County 2018-2027 Transportation Improvement Program (part of County?s CIP). --Listed in program year 2022 on page 57 of CIP. Project # CTP 13-04 Scott County 2030 Comprehensive Plan --TH 13 Corridor Management Study Page VI-68 Scott County 2040 Draft Comprehensive Plan --TH 13 and Dakota StudyVI-67 --TH 13 Corridor Management Study Page VI-67 TH 13 Dakota ?Yosemite Corridor Study 2016. Prepared by WSB --The full study is applicable including the B1 Alternative in Appendix A Transportation Tax Implementation Plan, --Page 4 on list of projects Metropolitan Council, Truck Freight Corridor Study --TH 13 Truck Delay page 42 --Field Visit reports page 65 Minnesota Highway Freight Program, MnDOT --Project List page 1 Principal Arterial Intersection Conversion Study, Metropolitan Council --Page 64

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

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

5.Applicants that are not cities or counties in the seven-county metro area with populations over 5,000 must contact the MnDOT Metro State Aid Office prior to submitting their application to determine if a public agency sponsor is required.

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

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

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

7.The requested funding amount must be more than or equal to the minimum award and less than or equal to the maximum award. The cost of preparing a project for funding authorization can be substantial. For that reason, minimum federal amounts apply. Other federal funds may be combined with the requested funds for projects exceeding the maximum award, but the source(s) must be identified in the application. Funding amounts by application category are listed below.

Roadway Expansion: *$1,000,000 to $7,000,000*

Roadway Reconstruction/ Modernization Modernization and Spot Mobility: *$1,000,000 to $7,000,000*

Traffic Management Technologies (Roadway System Management): *$250,000 to $7,000,000*

Bridges Rehabilitation/ Replacement: *$1,000,000 to $7,000,000*

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

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

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

9.In order for a selected project to be included in the Transportation Improvement Program (TIP) and approved by USDOT, the public agency sponsor must either have, or be substantially working towards, completing a current Americans with Disabilities Act (ADA) self-evaluation or transition plan that covers the public right of way/transportation, as required under Title II of the ADA.

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

Date plan adopted by governing body

The applicant is a public agency that employs 50 or more people and is currently working towards completing an ADA transition plan that covers the public rights of way/transportation. Yes

05/01/2016 — Date process started

09/30/2018 — Date of anticipated plan completion/adoption

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

Date self-evaluation completed

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

Date process started

Date of anticipated plan completion/adoption

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

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

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

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

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

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

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

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

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

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

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

Roadways Including Multimodal Elements

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

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

Roadway Expansion and Reconstruction/Modernization and Spot Mobility projects only:

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

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

Bridge Rehabilitation/Replacement projects only:

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

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

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

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

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

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

6. The bridge must have a sufficiency rating less than 80 for rehabilitation projects and less than 50 for replacement projects. Additionally, the bridge must also be classified as structurally deficient or functionally obsolete.

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

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

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

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

Requirements - Roadways Including Multimodal Elements

Specific Roadway Elements

CONSTRUCTION PROJECT ELEMENTS/COST ESTIMATES	Cost
Mobilization (approx. 5% of total cost)	$1,120,000.00
Removals (approx. 5% of total cost)	$370,000.00
Roadway (grading, borrow, etc.)	$3,359,000.00
Roadway (aggregates and paving)	$2,256,000.00
Subgrade Correction (muck)	$281,000.00
Storm Sewer	$1,685,000.00
Ponds	$0.00
Concrete Items (curb & gutter, sidewalks, median barriers)	$425,000.00
Traffic Control	$1,125,000.00
Striping	$112,000.00
Signing	$280,000.00
Lighting	$270,000.00
Turf - Erosion & Landscaping	$252,000.00
Bridge	$2,103,000.00
Retaining Walls	$4,495,000.00
Noise Wall (not calculated in cost effectiveness measure)	$0.00
Traffic Signals	$618,000.00
Wetland Mitigation	$0.00
Other Natural and Cultural Resource Protection	$225,000.00
RR Crossing	$1,400,000.00
Roadway Contingencies	$3,225,000.00
Other Roadway Elements	$2,250,000.00
Totals	**$25,851,000.00**

Specific Bicycle and Pedestrian Elements

CONSTRUCTION PROJECT ELEMENTS/COST ESTIMATES	Cost
Path/Trail Construction	$23,000.00
Sidewalk Construction	$27,000.00
On-Street Bicycle Facility Construction	$0.00
Right-of-Way	$0.00
Pedestrian Curb Ramps (ADA)	$39,000.00

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	**$89,000.00**

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
Subtotal	$0.00
Other Costs - Administration, Overhead,etc.	$0.00

Totals

Total Cost	$25,940,000.00
Construction Cost Total	$25,940,000.00
Transit Operating Cost Total	$0.00

Congestion on adjacent Parallel Routes:

Adjacent Parallel Corridor	Interstate 494

Adjacent Parallel Corridor Start and End Points:

Start Point:	Bush Lake Road
End Point:	1,200 Feet East of Normandale Boulevard
Free-Flow Travel Speed:	63
The Free-Flow Travel Speed is black number.	
Peak Hour Travel Speed:	17
The Peak Hour Travel Speed is red number.	
Percentage Decrease in Travel Speed in Peak Hour Compared to Free-Flow:	73.02%
Upload Level of Congestion Map:	1531424710546_TH 13_Dakota Mobility - Modernization - Cognestion.pdf

Principal Arterial Intersection Conversion Study:

Proposed interchange or at-grade project that reduces delay at a High Priority Intersection:	
(80 Points)	
Proposed at-grade project that reduces delay at a Medium Priority Intersection:	Yes
(60 Points)	
Proposed at-grade project that reduces delay at a Low Priority Intersection:	
(50 Points)	
Proposed interchange project that reduces delay at a Medium Priority Intersection:	
(40 Points)	
Proposed interchange project that reduces delay at a Low Priority Intersection:	
(0 Points)	
Not listed as a priority in the study:	
(0 Points)	

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

Existing Employment within 1 Mile:	6172
Existing Manufacturing/Distribution-Related Employment within 1 Mile:	2643
Existing Post-Secondary Students within 1 Mile:	0
Upload Map	1531424822593_TH 13_Dakota Mobility - Modernization - Economy.pdf

Please upload attachment in PDF form.

Measure C: Current Heavy Commercial Traffic

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

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

Measure A: Current Daily Person Throughput

Location	TH 13 at Dakota Ave
Current AADT Volume	48500
Existing Transit Routes on the Project	492, 495

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

Upload Transit Connections Map	1531424954984_TH 13_Dakota Mobility - Modernization - Transit Connect.pdf

Please upload attachment in PDF form.

Response: Current Daily Person Throughput

Average Annual Daily Transit Ridership	290.0
Current Daily Person Throughput	63340.0

Measure B: 2040 Forecast ADT

Use Metropolitan Council model to determine forecast (2040) ADT volume	No
If checked, METC Staff will provide Forecast (2040) ADT volume	

OR

Identify the approved county or city travel demand model to determine forecast (2040) ADT volume	Scott County 2040 Model
Forecast (2040) ADT volume	58300

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

Select one:

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

(up to 100% of maximum score)

Project located in Area of Concentrated Poverty:

(up to 80% of maximum score)

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

(up to 60% of maximum score)

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

(up to 40% of maximum score)

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

As part of the TH 13 and Dakota Planning Study public engagement efforts were made. The study made efforts to involve local businesses and company representatives from 2 of the 3 port operators served by this project. Business involvement included invitation to and attendance at the concept development workshop where attendees discussed and proposed more than 20 different solutions for the Dakota intersection. Study public involvement also included a May 22, 2017 open house meeting with notifications sent to area businesses and residents. Including low-income area residents located near Downtown Savage.

Response:

As the project enters environmental review and design phases, Scott County will work with MnDOT to ensure opportunities are provided to residents, employers, workers, and roadway users to be engaged in the process and understand potential impacts to property and current roadway operations. Other public engagement opportunities include a project website, newsletter mailings, updates on the County's social media feeds, press releases, meetings with city officials, and one-on-one meetings with property owners and neighborhoods. The county encourages community participation from disadvantaged populations, and in the past has held special meetings at alternate locations to enhance engagement. Translation and interpretation services will be utilized as needed.

(Limit 1,400 characters; approximately 200 words)

2.(0 to 7 points) Describe the projects benefits to low-income populations, people of color, children, people with disabilities, and the elderly. Benefits could relate to safety; public health; access to destinations; travel time; gap closure; leveraging of other beneficial projects and investments; and/or community cohesion. Note that this is not an exhaustive list.

Response:

The TH 13 and Dakota Avenue project is located in an area above the regional average for a concentration of race or poverty. In this Census Tract (801), 24 percent of the population is nonwhite with 11.6 percent reporting as Asian or Other Asian (2010 U.S. Census). Compared to 17.1% of nonwhites and 5.9% Asian for all of Scott County. Approximately 10.7 percent of the population is below the poverty level according to the Poverty Status for Individuals computation from the U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimate as compared to 5.7% in Scott County. Additionally, 12.1 percent of the population in the area is over the age of 65 compared to 7.2% for the entire county.

The project will include a bicycle and pedestrian crossing under TH 13. This grade separated pedestrian crossing of TH 13 is safer for non-auto users such as bicyclists and pedestrians compared to the existing at grade, high speed traffic signal control. The underpass will be constructed wide enough on one side to accommodate a future regional trail crossing which will make a connection to the Minnesota River. The grade separation also allows for a safer vehicle crossing of TH 13 for residents or the local dial-a-ride transit service. All pedestrian facilities will be built to current ADA standards to improve access for populations with disabilities.

Because of the current traffic volume and turning movements at the 13/Dakota intersection the intersection is at risk of being signalized. The 13 Dakota Project will help prevent the rise of negative externalizes caused by a signal such as congestion and air and noise pollution that may have a significant impact on residents, businesses, and their employees along the roadway. The project will also help reduce crashes for turning vehicles.

TH 13 is a high volume corridor for commuter related traffic. Improvements in mobility and removal of high volume, peak hour, left turn movements will allow all employees to have a safer and faster more predictable commute. The project corridor is surrounded by manufacturing, industrial, and seasonal jobs that employ several levels of income ranges. The proposed project will ensure these employees can access TH 13 with reduced safety and accesses issues. Finally the corridor has two MVTA operated express bus routes, including a reverse commute service bringing lower wage employees to the southern suburbs. Increased vehicle mobility will allow improved speed for these routes.

(Limit 2,800 characters; approximately 400 words)

3.(-3 to 0 points) Describe any negative externalities created by the project along with measures that will be taken to mitigate them. Negative externalities can result in a reduction in points, but mitigation of externalities can offset reductions.

Below is a list of negative impacts. Note that this is not an exhaustive list.

Increased difficulty in street crossing caused by increased roadway width, increased traffic speed, wider turning radii, or other elements that negatively impact pedestrian access.

Increased noise.

Decreased pedestrian access through sidewalk removal / narrowing, placement of barriers along the walking path, increase in auto-oriented curb cuts, etc.

Project elements that are detrimental to location-based air quality by increasing stop/start activity at intersections, creating vehicle idling areas, directing an increased number of vehicles to a particular point, etc.

Increased speed and/or cut-through traffic.

Removed or diminished safe bicycle access.

Inclusion of some other barrier to access to jobs and other destinations.

Displacement of residents and businesses.

Construction/implementation impacts such as dust; noise; reduced access for travelers and to businesses; disruption of utilities; and eliminated street crossings. These tend to be temporary.

Other

No negative impacts to low income individuals as this project is primary located in industrial and manufacturing area. The project is anticipated to have positive benefits for employees and businesses due to reduced safety and congestion concerns and increased mobility. The project will also remove agricultural trucks who have a tendency to stack on TH 13 while waiting for access to the port facilities and commonly make risky turning movements in front of oncoming traffic in an attempt to find an open gap in traffic.

Response:

During project construction, there may be temporary impacts that will be mitigated including increased levels of noise and dust and traffic disruptions. The county will require the contractor to utilize best management practices for dust control, erosion control, traffic control, and follow local ordinances to meet all relevant noise regulations. Construction phasing will also be key to ensure the port facilities and other surrounding businesses are allowed to continue operations despite of changes in traffic and detours. Access to the port facilities is even more crucial during construction because many of the agricultural truck drivers are non-commercial drivers and will tend to make risky maneuvers.

(Limit 2,800 characters; approximately 400 words)

Upload Map

1531425172125_TH 13_Dakota Mobility - Modernization - SocioEconomic.pdf

Measure B: Affordable Housing

City	Segment Length (For stand-alone projects, enter population from Regional Economy map) within each City/Township	Segment Length/Total Project Length	Score	Housing Score Multiplied by Segment percent
Savage	8748.0	1.0	58.0	58.0

Total Project Length

Total Project Length (as entered in the "Project Information" form)	1.1

Affordable Housing Scoring

Total Project Length (Miles) or Population	8748.0
Total Housing Score	58.0

Affordable Housing Scoring

Measure A: Infrastructure Age

Year of Original Roadway Construction or Most Recent Reconstruction	Segment Length	Calculation	Calculation 2
1966.0	1.118	2197.988	1966.0
	1	**2198**	**1966**

Average Construction Year

Weighted Year	1966.0

Total Segment Length (Miles)

Total Segment Length	1.118

Measure A: Congestion Reduction/Air Quality

Total Peak Hour Delay Per Vehicle Without The Project (Seconds/Vehicle)	Total Peak Hour Delay Per Vehicle With The Project (Seconds/Vehicle)	Total Peak Hour Delay Per Vehicle Reduced by Project (Seconds/Vehicle)	Volume (Vehicles per hour)	Total Peak Hour Delay Reduced by the Project:	EXPLANATION of methodology used to calculate railroad crossing delay, if applicable.	Synchro or HCM Reports
56.9	1.6	55.3	11590	640927.0		1531425584796_TH 13 Delay and Emissions Analysis.pdf

Vehicle Delay Reduced

Total Peak Hour Delay Reduced 640927.0

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

Total (CO, NOX, and VOC) Peak Hour Emissions without the Project (Kilograms):	Total (CO, NOX, and VOC) Peak Hour Emissions with the Project (Kilograms):	Total (CO, NOX, and VOC) Peak Hour Emissions Reduced by the Project (Kilograms):
56.43	24.33	32.1
56	**24**	**32**

Total

Total Emissions Reduced: 32.1

Upload Synchro Report 1531509952015_Synchro Files - TH 13 and Dakota.pdf

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

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

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

0	**0**	**0**

Total Parallel Roadway

Emissions Reduced on Parallel Roadways	0
Upload Synchro Report	

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

New Roadway Portion:

Cruise speed in miles per hour with the project:	0
Vehicle miles traveled with the project:	0
Total delay in hours with the project:	0
Total stops in vehicles per hour with the project:	0
Fuel consumption in gallons:	0
Total (CO, NOX, and VOC) Peak Hour Emissions Reduced or Produced on New Roadway (Kilograms):	0
EXPLANATION of methodology and assumptions used:(Limit 1,400 characters; approximately 200 words)	
Total (CO, NOX, and VOC) Peak Hour Emissions Reduced by the Project (Kilograms):	0.0

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

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

Measure A: Benefit of Crash Reduction

Crash Modification Factor Used:

(Limit 700 Characters; approximately 100 words)

Crash Modification Factor ID #460 or Convert at-grade intersection into grade-separated interchange (CMF Value: 0. 43)

Crash Modification Factor ID #2219 or Install Raised Median (CMF Value: 0.29)

Crash Modification Factor ID #1283 or Install lighting at interchanges (CMF Value 0.5)

Crash Modification Factor ID #460 or convert at-grade intersection into grade-separated interchange was utilized for this analysis because the proposed project will result in Dakota Avenue in Savage being converted from an at-grade intersection into a grade separated intersection. The project results in TH 13 being elevated over Dakota Avenue with a west bound acceleration lane and an East bond deceleration lane. This five star CMF studied 4-leg intersections being converted to interchanges with ramp terminals experiencing serious, minor, and possible (A,B and C) injuries.

Rationale for Crash Modification Selected:

Crash Modification Factor ID #2219 or Install Raised Median was utilized for this analysis because of the result of the proposed project at Yosemite Avenue. Yosemite and Vernon Avenues will be closed to cross traffic (closed median) and access would be gained through right-ins or right-outs. This CMF involved principal arterial roadways at all times of day in urban areas. The study also involved all crash types and severity levels.

Crash Modification Factor ID #1283 or Install lighting at Intersections was utilized for this analysis because the improvements in the corridor will result in increased lighting and improved visibility. The study included a review of intersections in the State Ohio before and after the installation of Stop lights.

(Limit 1400 Characters; approximately 200 words)

Project Benefit ($) from B/C Ratio: 2.2495898E7

Worksheet Attachment 1531440626812_13_Dakota Grade Seperation - benefit-cost-worksheet.pdf

Please upload attachment in PDF form.

Roadway projects that include railroad grade-separation elements:

Current AADT volume: 0

Average daily trains: 0

Crash Risk Exposure eliminated:	0

Measure A: Multimodal Elements and Existing Connections

Response:

The 13/Dakota Project is the way for the City of Savage to gain pedestrian access across TH 13 and north to the Minnesota River. The project will obtain this access by constructing a bridge and having TH 13 travel over Dakota Ave. A bituminous trail will be constructed on one side of Dakota under the bridge. Additional sidewalks and trail facilities will be constructed on the frontage roads and connections to Dakota. The project will construct Savage?s only grade crossing of TH 13.

There are currently no pedestrian or bicycle facilities on this segment of Highway 13 or Dakota Avenue. The shoulders of TH 13 are over 10 feet wide when a turn or acceleration lane is not present and are not ideal for cyclists due to the high traffic volumes (58,000 AADT by 2040) and a 55 mph speed limit. Moreover, crossing the TH13 corridor will become limited in the future with the vision established by the 2000 MN13 Corridor Study to turn the corridor into a freeway with no traffic signals.

In 2018, the City of Savage adopted a new Pedestrian and Bicycle Master Plan. The focus in this area is on the City to find a way to gain public access and use of the Minnesota River which is primarily consumed by the Ports of Savage facilities. The document recognizes this project and a proposed future project at Chowen Avenue as the two of the best ways to cross the 13 barrier. Additionally the Master Plan outlines the need for bicycle facilities that will run along TH 13 frontage roads as a way of connecting downtown Savage to the northeastern edge of the City and Shakopee.

The Project is located between two Tier 2 RBTN Corridors. The project is on the far southern edge of a Tier 2 Corridor that follows the Minnesota River. This Corridor starts at the US169 Bridge over the River on the west and follows the River to the northeast concluding at I494. The second Tier 2 Corridor is located under 1 mile to the south and serves as a connection between the Cities of Shakopee and Savage. The project will assist with a connection between these two corridors.

The project area is within MVTA's 492 and 495 transit service routes. Both of these routes are express connections from the Burnsville Cedar Grove Transit Station and either downtown Minneapolis or the Mall of America. TH 13 currently has bus shoulders that will be extended with the project. Shoulders will be placed on the new frontage roads for future transit, ped/bike or freight stacking needs. Land to Air Express an inter-city bus transit provider serving the US 169 Corridor also tends to utilize TH 13 as a backup route for access to downtown Minneapolis.

Dial-a-ride service is also available to all residents in Scott County and Savage. The service will pick-up and drop-off users at their homes and to their destination.

(Limit 2,800 characters; approximately 400 words)

Transit Projects Not Requiring Construction

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

Check Here if Your Transit Project Does Not Require Construction

Measure A: Risk Assessment - Construction Projects

1)Layout (30 Percent of Points)

Layout should include proposed geometrics and existing and proposed right-of-way boundaries.

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

100%

Attach Layout	1531439935140_TH13 Port Access and Mobility Project - Project Layout - Fed App1.pdf

Please upload attachment in PDF form.

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

50%

Attach Layout

Please upload attachment in PDF form.

Layout has not been started

0%

Anticipated date or date of completion

2)Review of Section 106 Historic Resources (20 Percent of Points)

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

100%

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

100%

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

80%

Historic/archeological property impacted; determination of adverse effect anticipated

40%

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

0%

Project is located on an identified historic bridge

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

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

100%

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

50%

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

25%

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

0%

Anticipated date or date of acquisition

4)Railroad Involvement (20 Percent of Points)

No railroad involvement on project or railroad Right-of-Way agreement is executed (include signature page, if applicable)

100%

Signature Page

Please upload attachment in PDF form.

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

50%

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

0%

Anticipated date or date of executed Agreement

Measure A: Cost Effectiveness

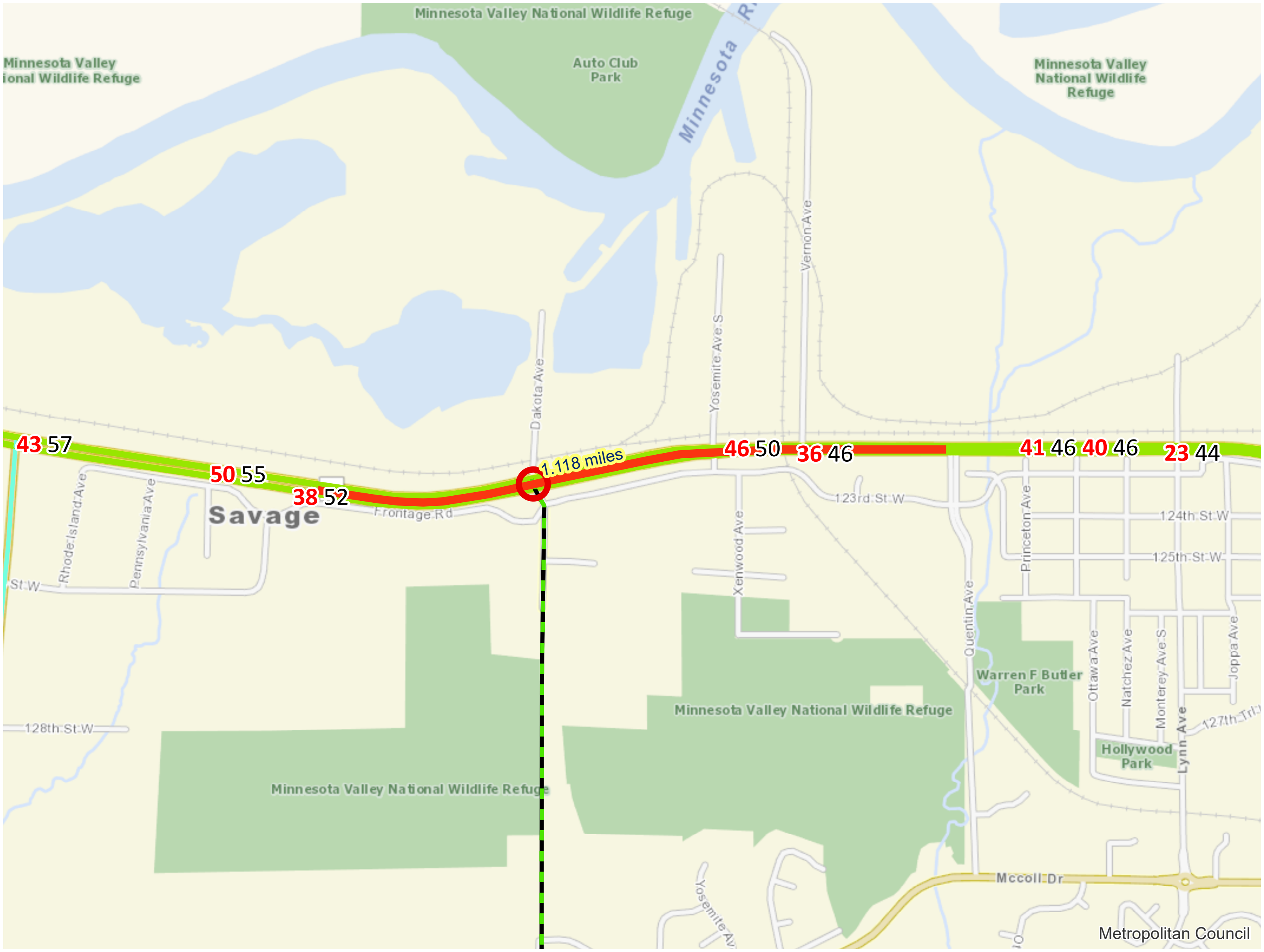
Total Project Cost (entered in Project Cost Form):	$25,940,000.00
Enter Amount of the Noise Walls:	$0.00
Total Project Cost subtract the amount of the noise walls:	$25,940,000.00
Points Awarded in Previous Criteria	
Cost Effectiveness	$0.00

Other Attachments

File Name	Description	File Size
13_Dakota Grade Seperation - benefit-cost-worksheet.pdf	Safety Benefit Cost	35 KB
13_Dakota Grade Seperation - Corridor Picture.pdf	Corridor Picture	387 KB
13_Dakota Grade Seperation - One Page Summary.pdf	One Page Summary	451 KB
CMF 1283 - Lighting at Intersections.pdf	CMF 1283	125 KB
CMF 2219 - Install Raised Median.pdf	CMF 2219	126 KB
CMF 460 - Convert At-Grade to Grade Seperated.pdf	CMF 640	127 KB
Completion Letter - Appendix F.pdf	Appendix F Completion Letter	182 KB
Letter of Support TH 13 Expansion 062718.pdf	City of Savage Support Letter	59 KB
Support ltr Scott Co- TH13 and Dakota Intersection Improvement.pdf	MnDOT Support Letter	470 KB
Synchro Files - TH 13 and Dakota.pdf	Synchro	830 KB
TAB resolution.pdf	Scott County Resolution	74 KB
TH 13_Dakota Mobility - Modernization - All Web Maps.pdf	All Make-A-Map web-based Maps	7.5 MB
TH13 Port Access and Mobility Project - Project Layout - Fed App1.pdf	Concept Drawing	320 KB

Level of Congestion

Roadway Reconstruction/Modernization Project: TH 13 and Dakota Modernization | Map ID: 1529356543938



Project Points
Principal Arterials
Principal Arterials Planned
Project
A Minor Arterials
A Minor Arterials Planned

0 0.15 0.3 0.6 0.9 1.2 Miles

Created: 6/18/2018
LandscapeRSA1

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

METROPOLITAN COUNCIL

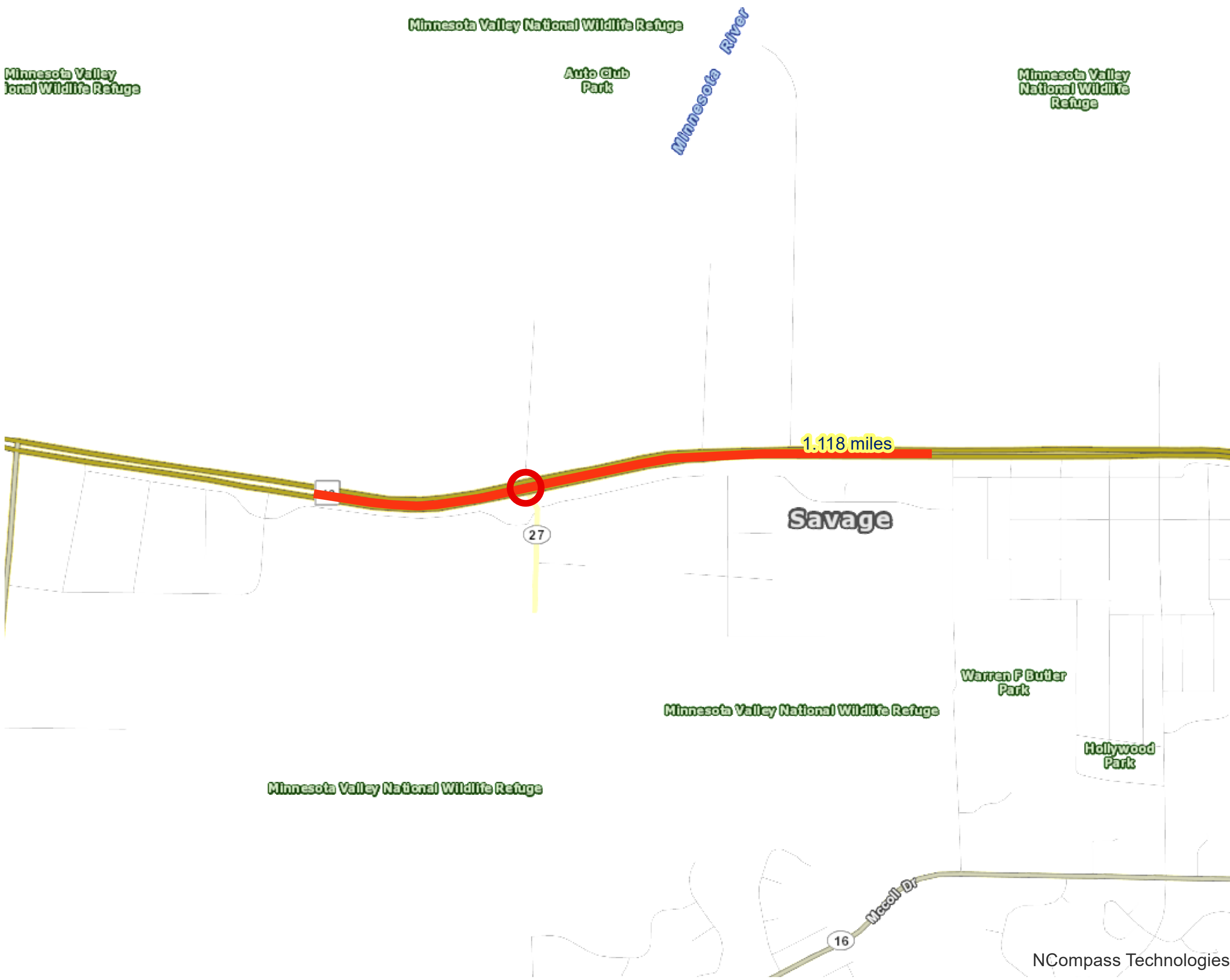
Regional Economy

Roadway Reconstruction/Modernization Project: TH 13 and Dakota Modernization | Map ID: 1529356543938

Results

WITHIN ONE MI of project:
Postsecondary Students: 0

Totals by City:
Bloomington
Population: 3972
Employment: 2293
Mfg and Dist Employment: 1030
Savage
Population: 8748
Employment: 3879
Mfg and Dist Employment: 1613



Project Points
Manfacturing/Distribution Centers
Project
Job Concentration Centers

0 0.175 0.35 0.7 1.05 1.4 Miles

Created: 6/18/2018
LandscapeRSA5

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

METROPOLITAN COUNCIL

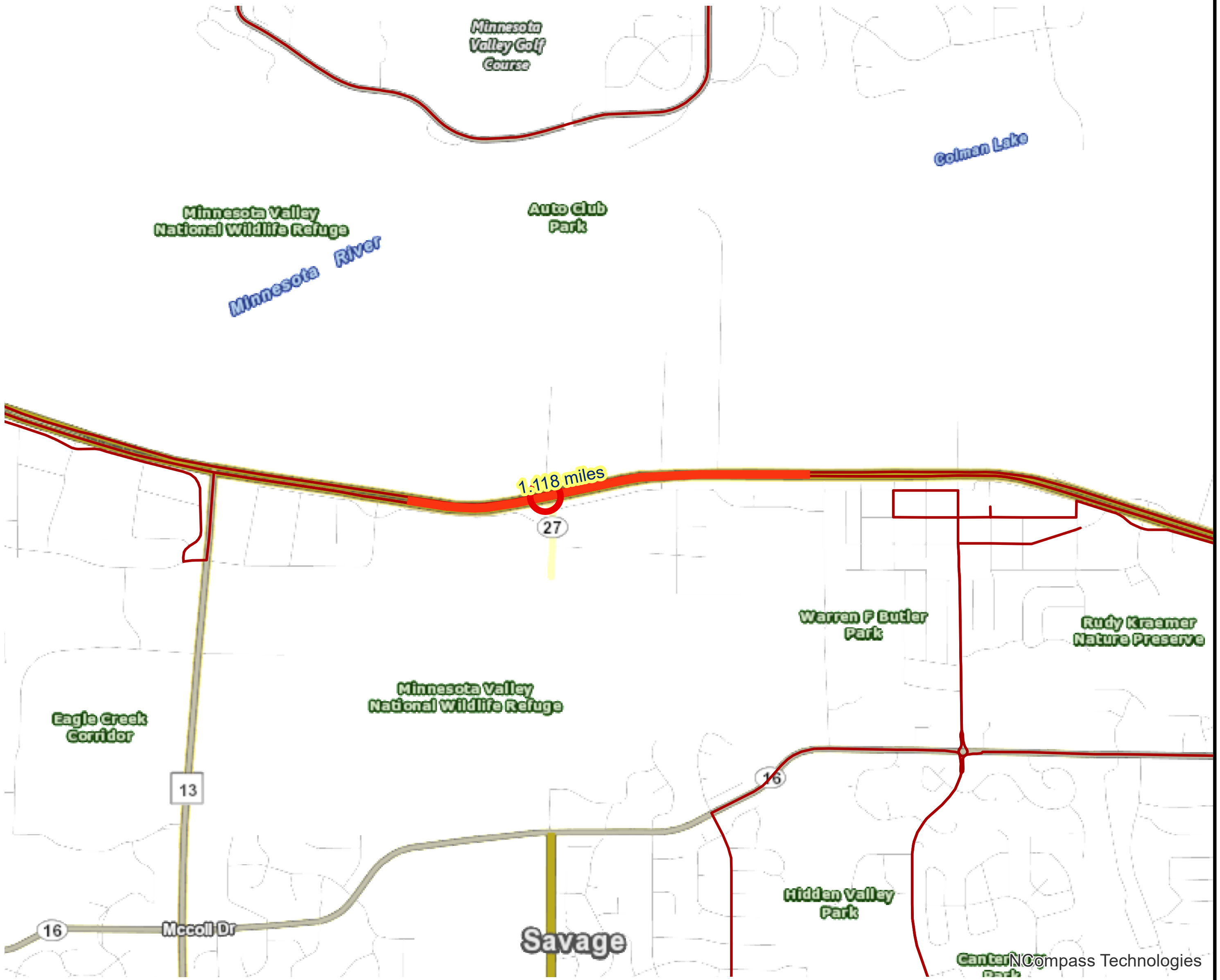
Transit Connections

Roadway Reconstruction/Modernization Project: TH 13 and Dakota Modernization | Map ID: 1529356543938

Results

Transit with a Direct Connection to project:
491 495

**indicates Planned Alignments*



Project Points — Transit Routes

Project

0 0.275 0.55 1.1 1.65 2.2 Miles

Created: 6/18/2018
LandscapeRSA3

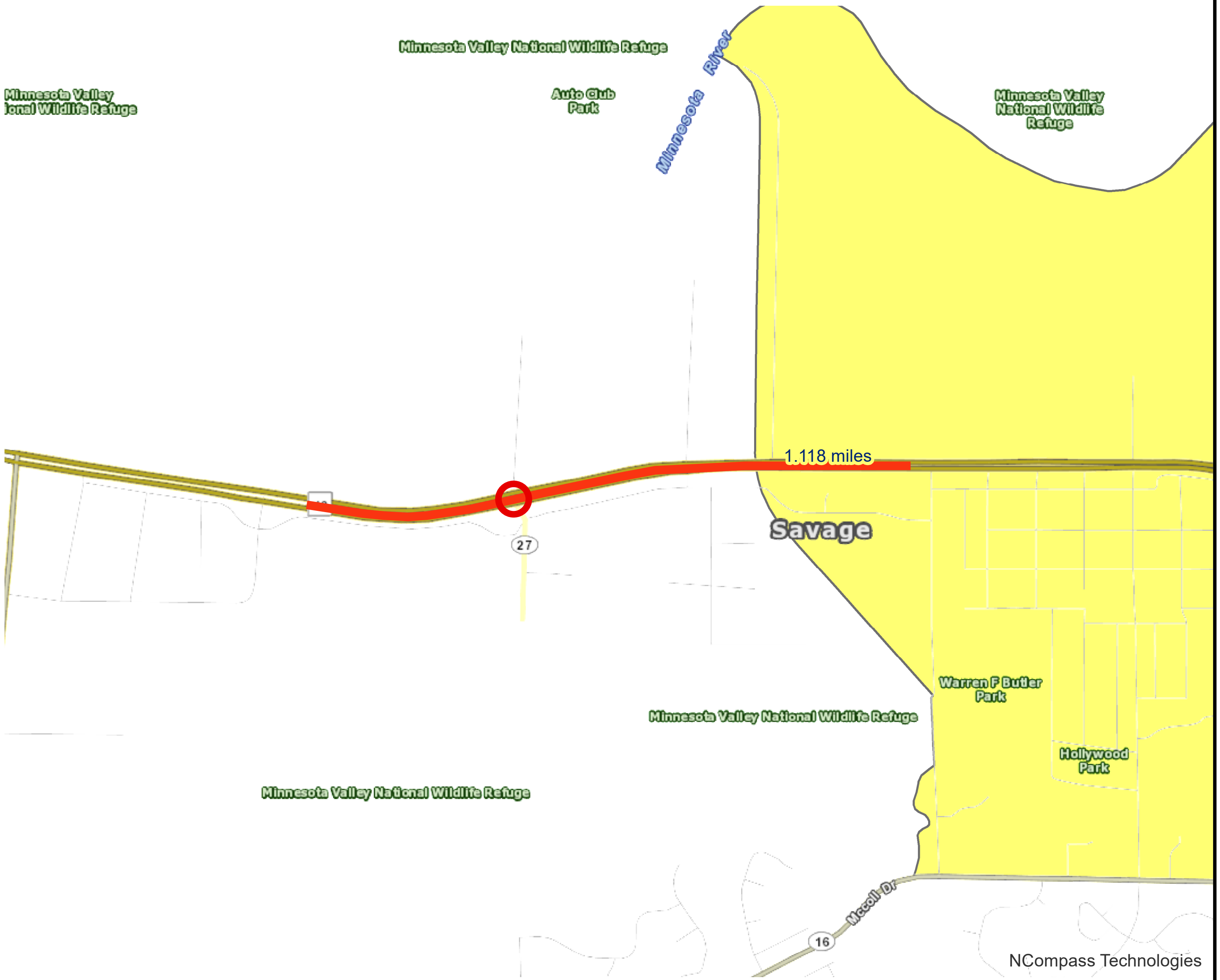
For complete disclaimer of accuracy, please visit http://giswebsite.metc.state.mn.us/gissitenew/notice.aspx

METROPOLITAN COUNCIL

Socio-Economic Conditions Roadway Reconstruction/Modernization Project: TH 13 and Dakota Modernization | Map ID: 1529356543938

Results

Project census tracts are above the regional average for population in poverty or population of color:
(0 to 18 Points)



Project Points

Project

Area of Concentrated Povertry > 50% residents of color

Area of Concentrated Poverty

Above reg'l avg conc of race/poverty

0 0.175 0.35 0.7 1.05 1.4 Miles

Created: 6/18/2018
LandscapeRSA2

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

METROPOLITAN COUNCIL

701 Xenia Avenue South | Suite 300 | Minneapolis, MN 55416 | (763) 541-4800

Memorandum

To: ***Jarrett Hubbard, Scott County Transportation Planner***

From: ***Erik Seiberlich***

Date: ***June 22, 2018***

Re: ***TH 13 and Dakota Delay and Emissions Modeling Analysis***
WSB Project No. 012248-000

INTRODUCTION

The purpose of this technical memorandum is to analyze peak hour intersection delay and carbon emissions associated with the 2040 No-Build alternative and the 2040 selected Build alternative from the 2017 Trunk Highway (TH) 13 Dakota Avenue/Yosemite Avenue Corridor Study in the City of Savage. The results of these analyses will address the criteria in Section 5, "Congestion Reduction/Air Quality" of the Metropolitan Council Roadway Expansion Application. The existing intersections within in the TH 13 analysis include:

- TH 13 & Dakota Avenue
- Dakota Avenue & 13th Avenue (South Frontage Road)
- TH 13 & Yosemite Avenue
- Yosemite Avenue & 13th Avenue (South Frontage Road)

The selected B1 Alternative included the following improvements: replacing the Dakota Avenue intersection with an overpass and entrance ramps, removing several turning movements at the Yosemite Avenue intersection, providing a north frontage road running parallel to TH 13, and installing a traffic signal at Dakota Avenue and the proposed north frontage road.

METHODOLOGY

The subsequent steps in Section 5. Congestion Reduction/Air Quality were followed to determine the reduction in delay and emissions using Synchro Software. Both A.M. and P.M. peak hours were analyzed for delay and emissions; the A.M. peak hour was selected due to the significantly higher delay reduction on the network. All intersection Synchro Reports including delay and emission information are included in the Appendix.

Synchro is a macroscopic software application used for optimizing traffic signal timing and performing capacity analysis of roadway networks consisting of stop, yield, and signalized traffic control conditions. The underlying equations are based on Highway Capacity Manual procedures.

A. MEASURE DELAY

Using Synchro, a capacity analysis was conducted at each of the intersections being improved by the roadway project, using projected 2040 turning movement volumes during the A.M. peak hour. The delay at each intersection was added together to determine a total network delay.

Table 1. 2040 A.M. Peak Hour No-Build Alternative Delay

Intersection	Total Peak Hour Delay Per Vehicle (seconds)	Vehicles Per Hour	Total Peak Hour Delay (seconds)
TH 13 & Dakota Ave	47	5,705	268,135
Dakota Ave & 13th Ave	2	95	190
Yosemite Ave & 13th Ave	6	129	774
TH 13 & Yosemite Ave	69	5,661	390,609
		Network Total Delay	**659,708**

Table 2. 2040 A.M. Peak Hour Build Alternative B1 Delay

Intersection	Total Peak Hour Delay Per Vehicle (seconds)	Vehicles Per Hour	Total Peak Hour Delay (seconds)
Dakota Ave & N Frontage Rd	9	328	2,952
Dakota Ave & 13th Ave	9	291	2,619
Yosemite Ave & N Frontage Rd	-	179	-
Yosemite Ave & 13th Ave	5	337	1,685
TH 13 & Yosemite Ave	2	5,666	11,332
Vernon Ave & North Frontage Rd	-	108	-
		Network Total Delay	**18,588**

Table 3. 2040 A.M. Peak Hour Total Delay Reduction

Intersection	2040 No Build Total Peak Hour Delay Per Vehicle (seconds)	2040 Build Total Peak Hour Delay Per Vehicle (seconds)	Total Peak Hour Delay Reduced (seconds)
TH 13 & Dakota Ave	268,135	-	268,135
Dakota Ave & N Frontage Rd	-	2,952	(2,952)
Dakota Ave & 13th Ave	190	2,619	(2,429)
Yosemite Ave & N Frontage Rd	-	-	-
Yosemite Ave & 13th Ave	774	1,685	(911)
TH 13 & Yosemite Ave	390,609	11,332	379,277
Vernon Ave & North Frontage Rd	-	-	-
		Network Total Delay Reduction	**641,120**

Response to Part A:

- Total Peak Hour Delay/Vehicle without the Project (seconds/vehicle): 56.9
- Total Peak Hour Delay/Vehicle with the Project (seconds/vehicle): 1.6
- Total Peak Hour Delay/Vehicle Reduced by the Project (seconds/vehicle): 55.3
- Volume (vehicles/hour): 11,590
- Total Peak Hour Delay Reduced by the Project (seconds): 641,120

B. MEASURE EMISSION REDUCTION

Using Synchro, the emissions from the 2040 A.M. No-Build and Build Alternatives were identified for each intersection and any new roadways to be constructed in the build scenario. The emissions from each intersection were added together to get a total network emission for the A.M. peak hour. **Table 4** shows the 2040 A.M. Peak Hour No-Build Emissions. It should be noted that the P.M. peak hour resulted in a higher emission reduction than the A.M. peak hour when comparing the No-Build to the Build scenario.

Table 4. 2040 A.M. Peak Hour No-Build Alternative Emissions

Intersection	CO (kg)	NO_X (kg)	VOC (kg)	Total Peak Hour Emissions (kilograms)
TH 13 & Dakota Ave	25.67	5.00	5.95	36.62
Dakota Ave & 13th Ave	0.06	0.01	0.01	0.08
Yosemite Ave & 13th Ave	0.09	0.02	0.02	0.13
TH 13 & Yosemite Ave	13.74	2.67	3.19	19.60
Network Total Emissions	39.56	7.70	9.17	**56.43**

For projects that are constructing new roadway segments, but do not include railroad grade-separation elements, the new emissions on the new roadway were also calculated. The new roadway (North Frontage Road) was inserted into the new synchro file with the proposed intersections. North Frontage Road will intersect Dakota Avenue, Yosemite Avenue, and Vernon Avenue. The four variables (speed, vehicle miles traveled, delay, total vehicle stops) were calculated by Synchro in the model, therefore they were not estimated by the applicant as part of this step. **Table 5** shows the 2040 A.M. Peak Hour Build Emissions at the existing and new intersections within the project network. **Table 6** shows the 2040 A.M. Peak Hour Emissions Reduction by the project.

Table 5. 2040 A.M. Peak Hour Build Alternative B1 Emissions

Intersection	CO (kg)	NO_X (kg)	VOC (kg)	Total Peak Hour Emissions (kilograms)
TH 13 & Dakota Ave*	12.00	2.34	2.78	17.12
Dakota Ave & N Frontage Rd	0.32	0.06	0.07	0.45
Dakota Ave & 13th Ave	0.37	0.07	0.09	0.53
Yosemite Ave & N Frontage Rd	0.14	0.03	0.03	0.20
Yosemite Ave & 13th Ave	0.21	0.04	0.05	0.30
TH 13 & Yosemite Ave	4.02	0.78	0.93	5.73
Vernon Ave & North Frontage Rd	0.04	0.01	0.01	0.00
Network Total Emissions	17.10	3.33	3.96	**24.33**

*Intersection does not exist in build scenario, however through traffic on TH 13 will still generate emissions at previous intersection location.

Although the intersection of TH 13 and Dakota Avenue was removed in the build alternative, emissions are still released by the through traffic on TH 13 at the existing intersection location, and therefore are included within the project.

Table 6. 2040 A.M. Peak Hour Build Emissions Reduction

Intersection	CO (kg) Reduction	NO_X (kg) Reduction	VOC (kg) Reduction	Total Peak Hour Emissions (kilograms)
TH 13 & Dakota Ave	13.67	2.66	3.17	19.50
Dakota Ave & N Frontage Rd	(0.32)	(0.06)	(0.07)	(0.45)
Dakota Ave & 13th Ave	(0.31)	(0.06)	(0.08)	(0.45)
Yosemite Ave & N Frontage Rd	(0.14)	(0.03)	(0.03)	(0.20)
Yosemite Ave & 13th Ave	(0.12)	(0.02)	(0.03)	(0.17)
TH 13 & Yosemite Ave	9.72	1.89	2.26	13.87
Vernon Ave & North Frontage Rd	(0.04)	(0.01)	(0.01)	0.00
Network Total Emissions Reduction	22.46	4.37	5.21	**32.10**

Response to Part B:

- Total (CO, NO_X, and VOC) Peak Hour Emissions without the Project (kg): 56.43
- Total (CO, NO_X, and VOC) Peak Hour Emissions with the Project (kg): 24.33
- Total (CO, NO_X, and VOC) Peak Hour Emissions reduced by the Project (kg): 32.10

The at-grade rail crossing that is located within the project area is not being modified with this project. The delay and emissions at the crossing should remain constant between the No-Build and Build scenarios.

Synchro Reports including delay and emission information for all study intersections are included in the Appendix.

APPENDIX

2040 A.M. Peak Hour No-Build

1: Dakota Ave & TH 13

Direction	EB	WB	NB	SB	All
Future Volume (vph)	3044	2559	18	84	5705
Control Delay / Veh (s/v)	23	1	647	2177	47
Queue Delay / Veh (s/v)	0	0	0	0	0
Total Delay / Veh (s/v)	23	1	647	2177	47
Total Delay (hr)	19	1	3	51	74
Stops / Veh	4.61	0.17	1.00	1.00	2.55
Stops (#)	14025	428	18	84	14555
Average Speed (mph)	27	29	1	1	22
Total Travel Time (hr)	179	28	3	52	262
Distance Traveled (mi)	4778	833	2	36	5648
Fuel Consumed (gal)	288	37	3	39	367
Fuel Economy (mpg)	16.6	22.5	0.8	0.9	15.4
CO Emissions (kg)	20.16	2.59	0.18	2.74	25.67
NOx Emissions (kg)	3.92	0.50	0.03	0.53	5.00
VOC Emissions (kg)	4.67	0.60	0.04	0.63	5.95
Unserved Vehicles (#)	0	0	0	0	0
Vehicles in dilemma zone (#)	0	0	0	0	0

2: Yosemite Ave & TH 13

Direction	EB	WB	NB	SB	All
Future Volume (vph)	2570	2983	66	42	5661
Control Delay / Veh (s/v)	4	1	3679	3228	69
Queue Delay / Veh (s/v)	0	0	0	0	0
Total Delay / Veh (s/v)	4	1	3679	3228	69
Total Delay (hr)	3	0	67	38	108
Stops / Veh	0.80	0.12	1.00	1.00	0.44
Stops (#)	2054	351	66	42	2513
Average Speed (mph)	46	44	0	0	14
Total Travel Time (hr)	18	30	68	38	154
Distance Traveled (mi)	837	1320	3	16	2175
Fuel Consumed (gal)	68	50	50	28	197
Fuel Economy (mpg)	12.3	26.4	0.1	0.6	11.1
CO Emissions (kg)	4.77	3.49	3.49	1.99	13.74
NOx Emissions (kg)	0.93	0.68	0.68	0.39	2.67
VOC Emissions (kg)	1.11	0.81	0.81	0.46	3.19
Unserved Vehicles (#)	0	0	0	0	0
Vehicles in dilemma zone (#)	0	0	0	0	0

5: Dakota Ave & 13th Ave

Direction	EB	WB	NB	SB	All
Future Volume (vph)	5	5	8	77	95
Control Delay / Veh (s/v)	9	8	0	2	2
Queue Delay / Veh (s/v)	0	0	0	0	0
Total Delay / Veh (s/v)	9	8	0	2	2
Total Delay (hr)	0	0	0	0	0
Stops / Veh	1.00	1.00	0.00	0.34	0.38
Stops (#)	5	5	0	26	36
Average Speed (mph)	19	25	30	26	26
Total Travel Time (hr)	0	0	0	0	1
Distance Traveled (mi)	1	2	3	8	14
Fuel Consumed (gal)	0	0	0	1	1
Fuel Economy (mpg)	NA	NA	NA	NA	NA
CO Emissions (kg)	0.00	0.01	0.01	0.04	0.06
NOx Emissions (kg)	0.00	0.00	0.00	0.01	0.01
VOC Emissions (kg)	0.00	0.00	0.00	0.01	0.01
Unserved Vehicles (#)	0	0	0	0	0
Vehicles in dilemma zone (#)	0	0	0	0	0

16: 13th Ave & Yosemite Ave

Direction	EB	WB	SB	All
Future Volume (vph)	33	33	63	129
Control Delay / Veh (s/v)	10	8	2	6
Queue Delay / Veh (s/v)	0	0	0	0
Total Delay / Veh (s/v)	10	8	2	6
Total Delay (hr)	0	0	0	0
Stops / Veh	1.00	1.00	0.38	0.70
Stops (#)	33	33	24	90
Average Speed (mph)	24	17	22	22
Total Travel Time (hr)	0	0	0	1
Distance Traveled (mi)	11	3	3	17
Fuel Consumed (gal)	1	0	0	1
Fuel Economy (mpg)	NA	NA	NA	12.7
CO Emissions (kg)	0.05	0.03	0.02	0.09
NOx Emissions (kg)	0.01	0.01	0.00	0.02
VOC Emissions (kg)	0.01	0.01	0.00	0.02
Unserved Vehicles (#)	0	0	0	0
Vehicles in dilemma zone (#)	0	0	0	0

2040 A.M. Peak Hour Build

Timings
1: Dakota Ave & North Frontage Rd

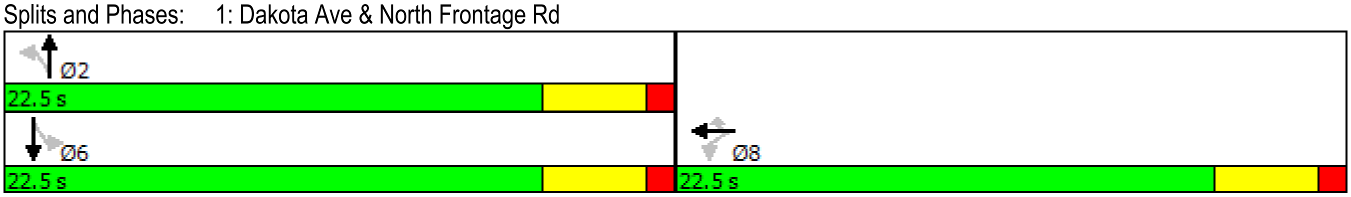
06/21/2018

Lane Group	WBT	WBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	29	13	25	76	16
Future Volume (vph)	29	13	25	76	16
Turn Type	NA	Perm	Perm	NA	NA
Protected Phases	8			2	6
Permitted Phases		8	2		
Detector Phase	8	8	2	2	6
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5
Total Split (s)	22.5	22.5	22.5	22.5	22.5
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	None	Max	Max	Max
Act Effct Green (s)	9.4	9.4	27.5	27.5	27.5
Actuated g/C Ratio	0.24	0.24	0.70	0.70	0.70
v/c Ratio	0.44	0.06	0.05	0.17	0.14
Control Delay	17.9	2.5	6.3	5.5	3.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	17.9	2.5	6.3	5.5	3.5
LOS	B	A	A	A	A
Approach Delay	16.1			5.7	3.5
Approach LOS	B			A	A

Intersection Summary

Cycle Length: 45
Actuated Cycle Length: 39.4
Natural Cycle: 45
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.44
Intersection Signal Delay: 8.7 — Intersection LOS: A
Intersection Capacity Utilization 21.0% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 1: Dakota Ave & North Frontage Rd



1: Dakota Ave & North Frontage Rd

Direction	WB	NB	SB	All
Future Volume (vph)	113	131	84	328
Control Delay / Veh (s/v)	16	6	4	9
Queue Delay / Veh (s/v)	0	0	0	0
Total Delay / Veh (s/v)	16	6	4	9
Total Delay (hr)	1	0	0	1
Stops / Veh	0.73	0.46	0.25	0.50
Stops (#)	83	60	21	164
Average Speed (mph)	21	21	27	23
Total Travel Time (hr)	2	1	1	3
Distance Traveled (mi)	36	14	26	76
Fuel Consumed (gal)	2	1	1	5
Fuel Economy (mpg)	15.5	13.3	20.9	16.4
CO Emissions (kg)	0.16	0.07	0.09	0.32
NOx Emissions (kg)	0.03	0.01	0.02	0.06
VOC Emissions (kg)	0.04	0.02	0.02	0.07
Unserved Vehicles (#)	0	0	0	0
Vehicles in dilemma zone (#)	0	0	0	0

2: North Frontage Rd & Yosemite Ave

Direction	EB	WB	SB	All
Future Volume (vph)	29	108	42	179
Control Delay / Veh (s/v)	0	0	0	0
Queue Delay / Veh (s/v)	0	0	0	0
Total Delay / Veh (s/v)	0	0	0	0
Total Delay (hr)	0	0	0	0
Stops / Veh	1.00	0.00	1.00	0.40
Stops (#)	29	0	42	71
Average Speed (mph)	30	30	30	30
Total Travel Time (hr)	0	1	0	1
Distance Traveled (mi)	9	17	12	38
Fuel Consumed (gal)	1	1	1	2
Fuel Economy (mpg)	NA	NA	NA	19.4
CO Emissions (kg)	0.04	0.05	0.05	0.14
NOx Emissions (kg)	0.01	0.01	0.01	0.03
VOC Emissions (kg)	0.01	0.01	0.01	0.03
Unserved Vehicles (#)	0	0	0	0
Vehicles in dilemma zone (#)	0	0	0	0

3: Yosemite Ave & TH 13

Direction	EB	WB	NB	All
Future Volume (vph)	2704	2875	87	5666
Control Delay / Veh (s/v)	0	0	0	0
Queue Delay / Veh (s/v)	0	0	0	0
Total Delay / Veh (s/v)	0	0	0	0
Total Delay (hr)	0	0	0	0
Stops / Veh	0.00	0.00	0.00	0.00
Stops (#)	0	0	0	0
Average Speed (mph)	55	45	45	50
Total Travel Time (hr)	15	19	0	34
Distance Traveled (mi)	853	841	3	1696
Fuel Consumed (gal)	29	29	0	57
Fuel Economy (mpg)	29.9	29.2	NA	29.5
CO Emissions (kg)	1.99	2.01	0.01	4.02
NOx Emissions (kg)	0.39	0.39	0.00	0.78
VOC Emissions (kg)	0.46	0.47	0.00	0.93
Unserved Vehicles (#)	0	0	0	0
Vehicles in dilemma zone (#)	0	0	0	0

4: 13th Ave & Yosemite Ave

Direction	EB	WB	SB	All
Future Volume (vph)	84	66	187	337
Control Delay / Veh (s/v)	10	10	1	5
Queue Delay / Veh (s/v)	0	0	0	0
Total Delay / Veh (s/v)	10	10	1	5
Total Delay (hr)	0	0	0	0
Stops / Veh	1.00	1.00	0.20	0.55
Stops (#)	84	66	37	187
Average Speed (mph)	24	16	24	22
Total Travel Time (hr)	1	0	0	2
Distance Traveled (mi)	27	6	6	40
Fuel Consumed (gal)	2	1	1	3
Fuel Economy (mpg)	15.4	NA	NA	13.2
CO Emissions (kg)	0.12	0.05	0.04	0.21
NOx Emissions (kg)	0.02	0.01	0.01	0.04
VOC Emissions (kg)	0.03	0.01	0.01	0.05
Unserved Vehicles (#)	0	0	0	0
Vehicles in dilemma zone (#)	0	0	0	0

5: Dakota Ave & 13th Ave

Direction	WB	NB	SB	All
Future Volume (vph)	187	17	87	291
Control Delay / Veh (s/v)	11	0	6	9
Queue Delay / Veh (s/v)	0	0	0	0
Total Delay / Veh (s/v)	11	0	6	9
Total Delay (hr)	1	0	0	1
Stops / Veh	1.00	0.00	1.24	1.01
Stops (#)	187	0	108	295
Average Speed (mph)	23	30	20	23
Total Travel Time (hr)	3	0	0	3
Distance Traveled (mi)	60	6	9	76
Fuel Consumed (gal)	4	0	1	5
Fuel Economy (mpg)	15.2	NA	8.6	14.3
CO Emissions (kg)	0.27	0.02	0.08	0.37
NOx Emissions (kg)	0.05	0.00	0.01	0.07
VOC Emissions (kg)	0.06	0.00	0.02	0.09
Unserved Vehicles (#)	0	0	0	0
Vehicles in dilemma zone (#)	0	0	0	0

8: North Frontage Rd & Vernon Ave

Direction	WB	All
Future Volume (vph)	108	108
Control Delay / Veh (s/v)	0	0
Queue Delay / Veh (s/v)	0	0
Total Delay / Veh (s/v)	0	0
Total Delay (hr)	0	0
Stops / Veh	0.00	0.00
Stops (#)	0	0
Average Speed (mph)	30	30
Total Travel Time (hr)	0	0
Distance Traveled (mi)	15	15
Fuel Consumed (gal)	1	1
Fuel Economy (mpg)	NA	NA
CO Emissions (kg)	0.04	0.04
NOx Emissions (kg)	0.01	0.01
VOC Emissions (kg)	0.01	0.01
Unserved Vehicles (#)	0	0
Vehicles in dilemma zone (#)	0	0

11: Dakota Ave & TH 13

Direction	EB	WB	All
Future Volume (vph)	2704	2875	5579
Control Delay / Veh (s/v)	0	0	0
Queue Delay / Veh (s/v)	0	0	0
Total Delay / Veh (s/v)	0	0	0
Total Delay (hr)	0	0	0
Stops / Veh	0.00	0.00	0.00
Stops (#)	0	0	0
Average Speed (mph)	55	55	55
Total Travel Time (hr)	77	16	93
Distance Traveled (mi)	4227	907	5134
Fuel Consumed (gal)	141	30	172
Fuel Economy (mpg)	29.9	29.9	29.9
CO Emissions (kg)	9.88	2.12	12.00
NOx Emissions (kg)	1.92	0.41	2.34
VOC Emissions (kg)	2.29	0.49	2.78
Unserved Vehicles (#)	0	0	0
Vehicles in dilemma zone (#)	0	0	0

2040 A.M. Peak Hour No-Build

1: Dakota Ave & TH 13

Direction	EB	WB	NB	SB	All
Future Volume (vph)	3044	2559	18	84	5705
Control Delay / Veh (s/v)	23	1	647	2177	47
Queue Delay / Veh (s/v)	0	0	0	0	0
Total Delay / Veh (s/v)	23	1	647	2177	47
Total Delay (hr)	19	1	3	51	74
Stops / Veh	4.61	0.17	1.00	1.00	2.55
Stops (#)	14025	428	18	84	14555
Average Speed (mph)	27	29	1	1	22
Total Travel Time (hr)	179	28	3	52	262
Distance Traveled (mi)	4778	833	2	36	5648
Fuel Consumed (gal)	288	37	3	39	367
Fuel Economy (mpg)	16.6	22.5	0.8	0.9	15.4
CO Emissions (kg)	20.16	2.59	0.18	2.74	25.67
NOx Emissions (kg)	3.92	0.50	0.03	0.53	5.00
VOC Emissions (kg)	4.67	0.60	0.04	0.63	5.95
Unserved Vehicles (#)	0	0	0	0	0
Vehicles in dilemma zone (#)	0	0	0	0	0

2: Yosemite Ave & TH 13

Direction	EB	WB	NB	SB	All
Future Volume (vph)	2570	2983	66	42	5661
Control Delay / Veh (s/v)	4	1	3679	3228	69
Queue Delay / Veh (s/v)	0	0	0	0	0
Total Delay / Veh (s/v)	4	1	3679	3228	69
Total Delay (hr)	3	0	67	38	108
Stops / Veh	0.80	0.12	1.00	1.00	0.44
Stops (#)	2054	351	66	42	2513
Average Speed (mph)	46	44	0	0	14
Total Travel Time (hr)	18	30	68	38	154
Distance Traveled (mi)	837	1320	3	16	2175
Fuel Consumed (gal)	68	50	50	28	197
Fuel Economy (mpg)	12.3	26.4	0.1	0.6	11.1
CO Emissions (kg)	4.77	3.49	3.49	1.99	13.74
NOx Emissions (kg)	0.93	0.68	0.68	0.39	2.67
VOC Emissions (kg)	1.11	0.81	0.81	0.46	3.19
Unserved Vehicles (#)	0	0	0	0	0
Vehicles in dilemma zone (#)	0	0	0	0	0

5: Dakota Ave & 13th Ave

Direction	EB	WB	NB	SB	All
Future Volume (vph)	5	5	8	77	95
Control Delay / Veh (s/v)	9	8	0	2	2
Queue Delay / Veh (s/v)	0	0	0	0	0
Total Delay / Veh (s/v)	9	8	0	2	2
Total Delay (hr)	0	0	0	0	0
Stops / Veh	1.00	1.00	0.00	0.34	0.38
Stops (#)	5	5	0	26	36
Average Speed (mph)	19	25	30	26	26
Total Travel Time (hr)	0	0	0	0	1
Distance Traveled (mi)	1	2	3	8	14
Fuel Consumed (gal)	0	0	0	1	1
Fuel Economy (mpg)	NA	NA	NA	NA	NA
CO Emissions (kg)	0.00	0.01	0.01	0.04	0.06
NOx Emissions (kg)	0.00	0.00	0.00	0.01	0.01
VOC Emissions (kg)	0.00	0.00	0.00	0.01	0.01
Unserved Vehicles (#)	0	0	0	0	0
Vehicles in dilemma zone (#)	0	0	0	0	0

16: 13th Ave & Yosemite Ave

Direction	EB	WB	SB	All
Future Volume (vph)	33	33	63	129
Control Delay / Veh (s/v)	10	8	2	6
Queue Delay / Veh (s/v)	0	0	0	0
Total Delay / Veh (s/v)	10	8	2	6
Total Delay (hr)	0	0	0	0
Stops / Veh	1.00	1.00	0.38	0.70
Stops (#)	33	33	24	90
Average Speed (mph)	24	17	22	22
Total Travel Time (hr)	0	0	0	1
Distance Traveled (mi)	11	3	3	17
Fuel Consumed (gal)	1	0	0	1
Fuel Economy (mpg)	NA	NA	NA	12.7
CO Emissions (kg)	0.05	0.03	0.02	0.09
NOx Emissions (kg)	0.01	0.01	0.00	0.02
VOC Emissions (kg)	0.01	0.01	0.00	0.02
Unserved Vehicles (#)	0	0	0	0
Vehicles in dilemma zone (#)	0	0	0	0

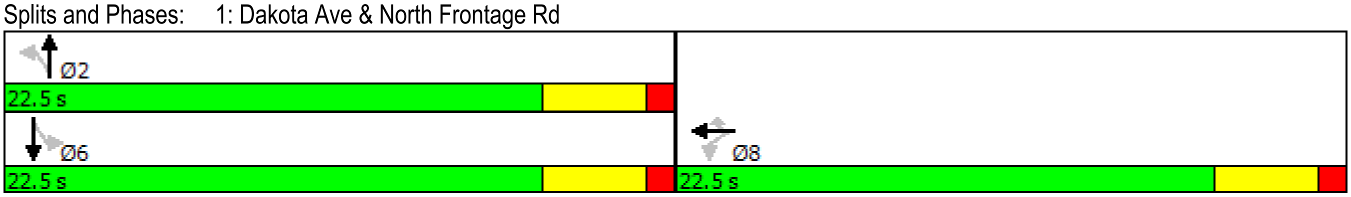
2040 A.M. Peak Hour Build

Lane Group	WBT	WBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	29	13	25	76	16
Future Volume (vph)	29	13	25	76	16
Turn Type	NA	Perm	Perm	NA	NA
Protected Phases	8			2	6
Permitted Phases		8	2		
Detector Phase	8	8	2	2	6
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5
Total Split (s)	22.5	22.5	22.5	22.5	22.5
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	None	Max	Max	Max
Act Effct Green (s)	9.4	9.4	27.5	27.5	27.5
Actuated g/C Ratio	0.24	0.24	0.70	0.70	0.70
v/c Ratio	0.44	0.06	0.05	0.17	0.14
Control Delay	17.9	2.5	6.3	5.5	3.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	17.9	2.5	6.3	5.5	3.5
LOS	B	A	A	A	A
Approach Delay	16.1			5.7	3.5
Approach LOS	B			A	A

Intersection Summary

Cycle Length: 45
Actuated Cycle Length: 39.4
Natural Cycle: 45
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.44
Intersection Signal Delay: 8.7 Intersection LOS: A
Intersection Capacity Utilization 21.0% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 1: Dakota Ave & North Frontage Rd



1: Dakota Ave & North Frontage Rd

Direction	WB	NB	SB	All
Future Volume (vph)	113	131	84	328
Control Delay / Veh (s/v)	16	6	4	9
Queue Delay / Veh (s/v)	0	0	0	0
Total Delay / Veh (s/v)	16	6	4	9
Total Delay (hr)	1	0	0	1
Stops / Veh	0.73	0.46	0.25	0.50
Stops (#)	83	60	21	164
Average Speed (mph)	21	21	27	23
Total Travel Time (hr)	2	1	1	3
Distance Traveled (mi)	36	14	26	76
Fuel Consumed (gal)	2	1	1	5
Fuel Economy (mpg)	15.5	13.3	20.9	16.4
CO Emissions (kg)	0.16	0.07	0.09	0.32
NOx Emissions (kg)	0.03	0.01	0.02	0.06
VOC Emissions (kg)	0.04	0.02	0.02	0.07
Unserved Vehicles (#)	0	0	0	0
Vehicles in dilemma zone (#)	0	0	0	0

2: North Frontage Rd & Yosemite Ave

Direction	EB	WB	SB	All
Future Volume (vph)	29	108	42	179
Control Delay / Veh (s/v)	0	0	0	0
Queue Delay / Veh (s/v)	0	0	0	0
Total Delay / Veh (s/v)	0	0	0	0
Total Delay (hr)	0	0	0	0
Stops / Veh	1.00	0.00	1.00	0.40
Stops (#)	29	0	42	71
Average Speed (mph)	30	30	30	30
Total Travel Time (hr)	0	1	0	1
Distance Traveled (mi)	9	17	12	38
Fuel Consumed (gal)	1	1	1	2
Fuel Economy (mpg)	NA	NA	NA	19.4
CO Emissions (kg)	0.04	0.05	0.05	0.14
NOx Emissions (kg)	0.01	0.01	0.01	0.03
VOC Emissions (kg)	0.01	0.01	0.01	0.03
Unserved Vehicles (#)	0	0	0	0
Vehicles in dilemma zone (#)	0	0	0	0

3: Yosemite Ave & TH 13

Direction	EB	WB	NB	All
Future Volume (vph)	2704	2875	87	5666
Control Delay / Veh (s/v)	0	0	0	0
Queue Delay / Veh (s/v)	0	0	0	0
Total Delay / Veh (s/v)	0	0	0	0
Total Delay (hr)	0	0	0	0
Stops / Veh	0.00	0.00	0.00	0.00
Stops (#)	0	0	0	0
Average Speed (mph)	55	45	45	50
Total Travel Time (hr)	15	19	0	34
Distance Traveled (mi)	853	841	3	1696
Fuel Consumed (gal)	29	29	0	57
Fuel Economy (mpg)	29.9	29.2	NA	29.5
CO Emissions (kg)	1.99	2.01	0.01	4.02
NOx Emissions (kg)	0.39	0.39	0.00	0.78
VOC Emissions (kg)	0.46	0.47	0.00	0.93
Unserved Vehicles (#)	0	0	0	0
Vehicles in dilemma zone (#)	0	0	0	0

4: 13th Ave & Yosemite Ave

Direction	EB	WB	SB	All
Future Volume (vph)	84	66	187	337
Control Delay / Veh (s/v)	10	10	1	5
Queue Delay / Veh (s/v)	0	0	0	0
Total Delay / Veh (s/v)	10	10	1	5
Total Delay (hr)	0	0	0	0
Stops / Veh	1.00	1.00	0.20	0.55
Stops (#)	84	66	37	187
Average Speed (mph)	24	16	24	22
Total Travel Time (hr)	1	0	0	2
Distance Traveled (mi)	27	6	6	40
Fuel Consumed (gal)	2	1	1	3
Fuel Economy (mpg)	15.4	NA	NA	13.2
CO Emissions (kg)	0.12	0.05	0.04	0.21
NOx Emissions (kg)	0.02	0.01	0.01	0.04
VOC Emissions (kg)	0.03	0.01	0.01	0.05
Unserved Vehicles (#)	0	0	0	0
Vehicles in dilemma zone (#)	0	0	0	0

5: Dakota Ave & 13th Ave

Direction	WB	NB	SB	All
Future Volume (vph)	187	17	87	291
Control Delay / Veh (s/v)	11	0	6	9
Queue Delay / Veh (s/v)	0	0	0	0
Total Delay / Veh (s/v)	11	0	6	9
Total Delay (hr)	1	0	0	1
Stops / Veh	1.00	0.00	1.24	1.01
Stops (#)	187	0	108	295
Average Speed (mph)	23	30	20	23
Total Travel Time (hr)	3	0	0	3
Distance Traveled (mi)	60	6	9	76
Fuel Consumed (gal)	4	0	1	5
Fuel Economy (mpg)	15.2	NA	8.6	14.3
CO Emissions (kg)	0.27	0.02	0.08	0.37
NOx Emissions (kg)	0.05	0.00	0.01	0.07
VOC Emissions (kg)	0.06	0.00	0.02	0.09
Unserved Vehicles (#)	0	0	0	0
Vehicles in dilemma zone (#)	0	0	0	0

8: North Frontage Rd & Vernon Ave

Direction	WB	All
Future Volume (vph)	108	108
Control Delay / Veh (s/v)	0	0
Queue Delay / Veh (s/v)	0	0
Total Delay / Veh (s/v)	0	0
Total Delay (hr)	0	0
Stops / Veh	0.00	0.00
Stops (#)	0	0
Average Speed (mph)	30	30
Total Travel Time (hr)	0	0
Distance Traveled (mi)	15	15
Fuel Consumed (gal)	1	1
Fuel Economy (mpg)	NA	NA
CO Emissions (kg)	0.04	0.04
NOx Emissions (kg)	0.01	0.01
VOC Emissions (kg)	0.01	0.01
Unserved Vehicles (#)	0	0
Vehicles in dilemma zone (#)	0	0

11: Dakota Ave & TH 13

Direction	EB	WB	All
Future Volume (vph)	2704	2875	5579
Control Delay / Veh (s/v)	0	0	0
Queue Delay / Veh (s/v)	0	0	0
Total Delay / Veh (s/v)	0	0	0
Total Delay (hr)	0	0	0
Stops / Veh	0.00	0.00	0.00
Stops (#)	0	0	0
Average Speed (mph)	55	55	55
Total Travel Time (hr)	77	16	93
Distance Traveled (mi)	4227	907	5134
Fuel Consumed (gal)	141	30	172
Fuel Economy (mpg)	29.9	29.9	29.9
CO Emissions (kg)	9.88	2.12	12.00
NOx Emissions (kg)	1.92	0.41	2.34
VOC Emissions (kg)	2.29	0.49	2.78
Unserved Vehicles (#)	0	0	0
Vehicles in dilemma zone (#)	0	0	0

B/C worksheet

Control Section	T.H. / Roadway	Location	Beginning Ref. Pt.	Ending Ref. Pt.	State, County, City or Township	Study Period Begins	Study Period Ends
7001	TH 13	300' W of Dakota Avenue to 300' E of Vernon Avenue	091+00.721	092+00.223	Scott Co.	1/1/2013	12/31/2015

Description of Proposed Work: Construct TH13 over Dakota Avenue and make existing intersections right-in right-out

Accident Diagram Codes			1	2	3	5	4, 7	8, 9	Pedestrian	6, 90, 98, 99 Other	Total
Study Period: Number of Crashes	Fatal	F			1						1
	Personal Injury (PI)	A									
		B	1			1					2
		C				1	1			1	3
	Property Damage	PD	3	4		1	1			1	10
% Change in Crashes *Use FHWA cmfclearinghouse for Crash Reduction Factors	Fatal	F			-94%						
	PI	A									
		B	-94%			-94%					
		C				-94%	-94%			-94%	
	Property Damage	PD	-94%	-94%		-94%	-94%			-94%	
Change in Crashes = No. of crashes x % change in crashes	Fatal	F			-0.94						-0.94
	PI	A									
		B	-0.94			-0.94					-1.88
		C				-0.94	-0.94			-0.94	-2.82
	Property Damage	PD	-2.82	-3.76		-0.94	-0.94			-0.94	-9.40

Year (Safety Improvement Construction)	2022
Project Cost (exclude Right of Way)	$ 25,940,000
Right of Way Costs (optional)	$ -
Traffic Growth Factor	3%
Capital Recovery	
1. Discount Rate	1.3%
2. Project Service Life (n) See Appx F	30

Type of Crash	Study Period: Change in Crashes	Annual Change in Crashes	Cost per Crash	Annual Benefit
F	-0.94	-0.31	$ 1,180,000	$ 370,071
A			$ 590,000	
B	-1.88	-0.63	$ 170,000	$ 106,631
C	-2.82	-0.94	$ 87,000	$ 81,855
PD	-9.40	-3.14	$ 7,800	$ 24,462
Total				$ 583,019

B/C= 0.87

Using present worth values,

B= $ 22,495,898

C= $ 25,940,000

See "Calculations" sheet for amortization.

Updated 3-02-2018

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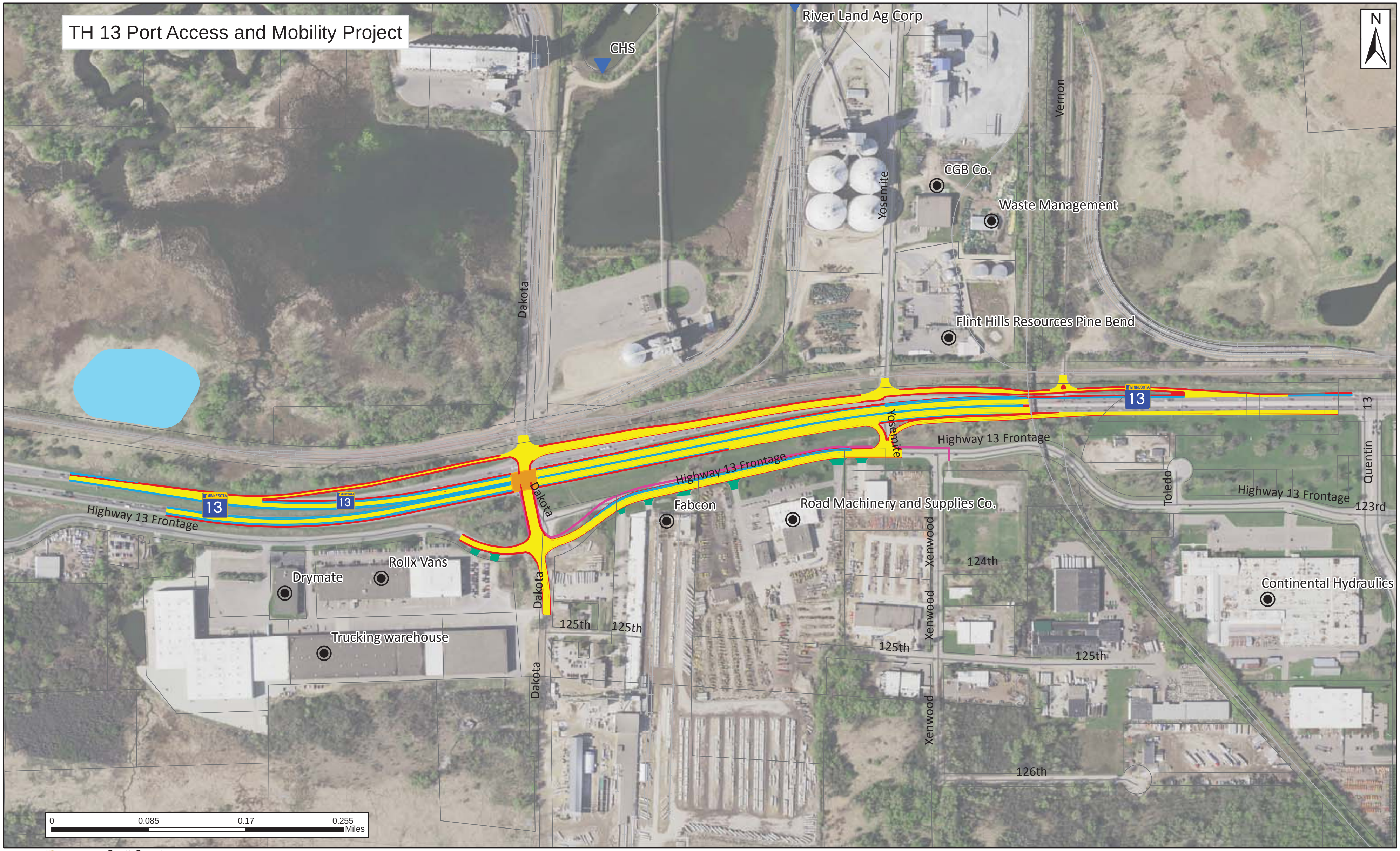
Project Layout



Scott County
Transportation Services
600 Country Trail East
Jordan, MN 55352

B/C worksheet

Control Section	T.H. / Roadway	Location	Beginning Ref. Pt.	Ending Ref. Pt.	State, County, City or Township	Study Period Begins	Study Period Ends
7001	TH 13	300' W of Dakota Avenue to 300' E of Vernon Avenue	091+00.721	092+00.223	Scott Co.	1/1/2013	12/31/2015

Description of Proposed Work: Construct TH13 over Dakota Avenue and make existing intersections right-in right-out

		Accident Diagram Codes	1	2	3	5	4, 7	8, 9	Pedestrian	6, 90, 98, 99 Other	Total
Study Period: Number of Crashes	Fatal	F			1						1
	Personal Injury (PI)	A									
		B	1			1					2
		C				1	1			1	3
	Property Damage	PD	3	4		1	1			1	10
% Change in Crashes *Use FHWA cmfclearinghouse for Crash Reduction Factors	Fatal	F			-94%						
	PI	A									
		B	-94%			-94%					
		C				-94%	-94%			-94%	
	Property Damage	PD	-94%	-94%		-94%	-94%			-94%	
Change in Crashes = No. of crashes x % change in crashes	Fatal	F			-0.94						-0.94
	PI	A									
		B	-0.94			-0.94					-1.88
		C				-0.94	-0.94			-0.94	-2.82
	Property Damage	PD	-2.82	-3.76		-0.94	-0.94			-0.94	-9.40

Year (Safety Improvement Construction)	2022
Project Cost (exclude Right of Way)	$ 25,940,000
Right of Way Costs (optional)	$ -
Traffic Growth Factor	3%
Capital Recovery	
1. Discount Rate	1.3%
2. Project Service Life (n) See Appx F	30

Type of Crash	Study Period: Change in Crashes	Annual Change in Crashes	Cost per Crash	Annual Benefit
F	-0.94	-0.31	$ 1,180,000	$ 370,071
A			$ 590,000	
B	-1.88	-0.63	$ 170,000	$ 106,631
C	-2.82	-0.94	$ 87,000	$ 81,855
PD	-9.40	-3.14	$ 7,800	$ 24,462
Total				$ 583,019

B/C= 0.87

Using present worth values,

B= $ 22,495,898

C= $ 25,940,000

See "Calculations" sheet for amortization.

Updated 3-02-2018

-

TH 13 and Dakota Freight Access and Mobility Project

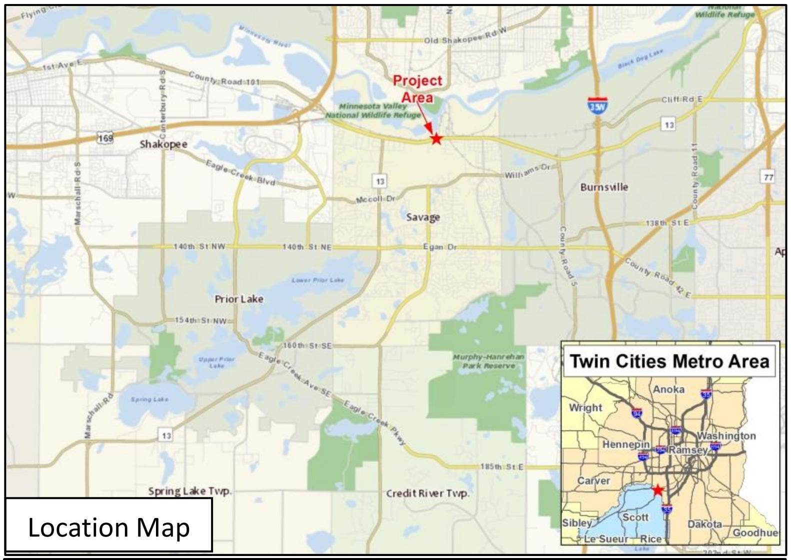
Intersection of TH 13 and Dakota Avenue

Looking Southwest

One Page Summary

Project Name: TH 13 and Dakota Avenue Freight Access and Mobility Project
Applicant: Scott County
Project Location: City of Savage
Route: From 0.5 miles N OF MN901B /MN 13 TO Quentin Avenue

Requested Award Amount: $5,750,000
Total Project Cost: $25,940,000



Location Map

Project Description: The proposed TH 13 Port Access and Mobility Project includes the construction of a grade separation, frontage roads, and accompanying access ramps at the intersection of Minnesota State Trunk Highway 13 and Dakota Avenue (referred to as TH 13/Dakota Avenue). TH 13/Dakota Avenue is currently an at-grade unsignalized intersection. The project will provide a supporting road network that removes direct access to TH 13 and offers alternate routes and safer access to TH 13 for truck traffic generated from the adjacent Ports of Savage and industrial uses. The supporting road network and the underpass connecting Dakota Avenue will facilitate movement across TH 13 and allow for right-in right-out access through the use of access ramps on to TH 13 at Yosemite Avenue.

This project is located in the city of Savage along TH 13 (Principal Arterial) and provides direct access to the Ports of Savage. The Ports of Savage consists of five separate private ports off the Minnesota River and two rail corridors served by three railroad companies. Over three million tons of material was shipped through the Ports of Savage in 2016 from major operators. Since 2000, the Ports have moved as much as five million tons of products per year. Operators have indicated that they are operating at under fifty percent capacity and congestion and delay on TH 13 is a significant factor in the level of commodities moving into and out of the Ports. Today the Port is accessed via the at-grade intersections of Dakota, Yosemite, and Lynn Avenues along TH 13. This project will directly serve three private ports.

Project Benefits: Reduced intersection conflicts (left turns) with grain trucks and other large commercial vehicles (Link). Acceleration lanes for commercial vehicles. Improved corridor mobility. Improve access to the three Ports of Savage businesses which serves as a major intermodal hub for agricultural products in Minnesota. Remove grain trucks from stacking up and waiting on TH13 to gain access to the Port facilities.

CMF / CRF Details

CMF ID: 1283

Install lighting at interchanges

Description:

Prior Condition: *No Prior Condition(s)*

Category: Highway lighting

Study: [*Development of Crash Reduction Factors*, Hovey and Chowdhury, 2005]

Star Quality Rating:	★★★☆☆ [View score details]

Crash Modification Factor (CMF)	
Value:	0.5
Adjusted Standard Error:	
Unadjusted Standard Error:	0.166

Crash Reduction Factor (CRF)	
Value:	50 *(This value indicates a **decrease** in crashes)*
Adjusted Standard Error:	
Unadjusted Standard Error:	16.6

Applicability	
Crash Type:	All
Crash Severity:	All
Roadway Types:	All
Number of Lanes:	
Road Division Type:	
Speed Limit:	
Area Type:	All
Traffic Volume:	
Time of Day:	
If countermeasure is intersection-based	
Intersection Type:	
Intersection Geometry:	
Traffic Control:	
Major Road Traffic Volume:	
Minor Road Traffic Volume:	

Development Details	
Date Range of Data Used:	
Municipality:	
State:	OH
Country:	

Type of Methodology Used:	Before/after using empirical Bayes or full Bayes
Sample Size Used:	Sites
Before Sample Size Used:	3 Sites
After Sample Size Used:	3 Sites

Other Details

Included in Highway Safety Manual?	No
Date Added to Clearinghouse:	Dec-01-2009
Comments:	

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

CRASH MODIFICATION FACTORS CLEARINGHOUSE

CMF / CRF Details

CMF ID: 2219

Install raised median

Description:

Prior Condition: *No Prior Condition(s)*

Category: Access management

Study: *Correlating Access Management to Crash Rate, Severity, and Collision Type, Schultz et al., 2008*

Star Quality Rating:	[View score details]

Crash Modification Factor (CMF)	
Value:	0.29
Adjusted Standard Error:	
Unadjusted Standard Error:	0.184

Crash Reduction Factor (CRF)	
Value:	70.77 *(This value indicates a* ***decrease*** *in crashes)*
Adjusted Standard Error:	

Unadjusted Standard Error:	18.37

Applicability

Crash Type:	All
Crash Severity:	All
Roadway Types:	Principal Arterial Other
Number of Lanes:	
Road Division Type:	
Speed Limit:	
Area Type:	Urban
Traffic Volume:	1390 to 51200 *Average Daily Traffic (ADT)*
Time of Day:	All
If countermeasure is intersection-based	
Intersection Type:	
Intersection Geometry:	
Traffic Control:	
Major Road Traffic Volume:	
Minor Road Traffic Volume:	

Development Details

Date Range of Data Used:	2002 to 2004
Municipality:	
State:	UT

Country:	
Type of Methodology Used:	Regression cross-section
Sample Size Used:	525 Site-years

Other Details

Included in Highway Safety Manual?	No
Date Added to Clearinghouse:	Dec-01-2009
Comments:	

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

CMF / CRF Details

CMF ID: 460

Convert at-grade intersection into grade-separated interchange

Description:

Prior Condition: *No Prior Condition(s)*

Category: Interchange design

Study: [*Revision of the Hand Book of Road Safety Measures*, Elvik, R. and Erke, A., 2007]

Star Quality Rating:	★★★★★

Crash Modification Factor (CMF)	
Value:	0.43
Adjusted Standard Error:	0.05
Unadjusted Standard Error:	0.03

Crash Reduction Factor (CRF)	
Value:	57 *(This value indicates a **decrease** in crashes)*
Adjusted Standard Error:	5

Unadjusted Standard Error:	3

Applicability

Crash Type:	All
Crash Severity:	A (serious injury),B (minor injury),C (possible injury)
Roadway Types:	Not Specified
Number of Lanes:	
Road Division Type:	
Speed Limit:	
Area Type:	Not Specified
Traffic Volume:	
Time of Day:	
If countermeasure is intersection-based	
Intersection Type:	Roadway/roadway (interchange ramp terminal)
Intersection Geometry:	4-leg
Traffic Control:	Not specified
Major Road Traffic Volume:	
Minor Road Traffic Volume:	

Development Details

Date Range of Data Used:	
Municipality:	
State:	

Country:	
Type of Methodology Used:	Meta-analysis
Sample Size Used:	

Other Details

Included in Highway Safety Manual?	Yes. HSM lists this CMF in **bold** font to indicate that it has the highest reliability since it has an adjusted standard error of 0.1 or less.
Date Added to Clearinghouse:	Dec-01-2009
Comments:	

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

DEPARTMENT OF TRANSPORTATION

Metropolitan District
1500 County Road B2 West
Roseville, MN 55113

June 9, 2017

Lisa Freese
Scott County Director of Transportation
200 Fourth Ave West
Shakopee MN 55397

Dear Ms. Freese,

This letter is to serve as your notification that the Interchange Review Committee has determined that the proposed new grade separation at MN13 and Dakota Ave. is consistent with the qualifying criteria found in Appendix F of the Council's Transportation Policy Plan and no additional documentation is necessary.

As the project develops additional information will be needed regarding the County's plans to connect Dakota Avenue and changing from a planned to an actual A-minor.

As the project layout and design progresses, please continue to work with MnDOT, FHWA and Met Council to assure the technical and design criteria of Appendix F continue to be met and that appropriate steps are taken to complete the Metropolitan Council's Controlled Access Approval (Contact Steve Peterson 651-602-1819) when needed.

We appreciate your efforts to work with the Interchange Review Committee in our effort to understand this project.

If you have any questions concerning this review please contact me at (651) 234-7784.

Sincerely,

Karen Scheffing
Principal Planner

City Offices | 6000 McColl Drive, Savage, MN 55378-1800
Direct | 952-882-2660 **Fax** | 952-882-2656

June 27, 2018

Craig Jenson
Transportation Planning Manager
Scott County Transportation Services
600 Country Trail East
Jordan, MN 55352

RE: TH 13 and Dakota Avenue

Dear Mr. Jenson:

The City of Savage is aware Scott County is applying for federal funding through the Metropolitan Council's Regional Solicitation for road reconstruction, under the Expansion category.

The project will reconstruct a TH 13/Dakota and TH 13/Yosemite. The project will provide grade separation for the Ports of Savage and other freight generators in the area.

The City of Savage supports the layout 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. You may contact me at 952-224-3419 or sthongvanh@ci.savage.mn.us.

Sincerely,
City of Savage

Seng Thongvanh, P.E.
City Engineer

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

June 20, 2018

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

Re: Letter of Support for Scott County
Metro Council/Transportation Advisory Board 2018 Regional Solicitation Funding Request for TH 13 and Dakota Intersection Improvements

Dear Ms. Freese,

This letter documents MnDOT Metro District's support for Scott County's funding request to the Metro Council for the 2018 regional solicitation for 2022-23 funding for the TH 13 and Dakota Intersection Improvements project.

As proposed, this project would impact MnDOT right-of-way on TH 13. As the agency with jurisdiction over TH 13, MnDOT will support Scott County and will allow the improvements proposed in the application for the TH 13 and Dakota Intersection Improvements project. Details of a future maintenance agreement with Scott County will need to be determined during project development to define how the improvements will be maintained for the project's useful life.

MnDOT has awarded federal freight funding to this project. No additional funding from MnDOT is currently committed for this project, and the Metro District currently does not anticipate any available discretionary funding in years 2022-23 that could fund project construction, nor do we have the resources to assist with construction or with MnDOT services such as the design or construction engineering of the project. However, I would request that you please continue to work with MnDOT Area staff to coordinate project development and to periodically review needs and opportunities for cooperation.

MnDOT Metro District looks forward to continued cooperation with Scott County as this project moves forward and as we work together to improve safety and travel options within the Metro Area.

If you have questions or require additional information at this time, please reach out to your Area Manager at Jon.Solberg@state.mn.us or 651-234-7729.

Sincerely,

Scott McBride
Metro District Engineer

CC: Jon Solberg, Metro District South Area Manager
Lynne Bly, Metro Program Director
Dan Erickson, Metro State Aid Engineer

Equal Opportunity Employer

2040 A.M. Peak Hour No-Build

1: Dakota Ave & TH 13

Direction	EB	WB	NB	SB	All
Future Volume (vph)	3044	2559	18	84	5705
Control Delay / Veh (s/v)	23	1	647	2177	47
Queue Delay / Veh (s/v)	0	0	0	0	0
Total Delay / Veh (s/v)	23	1	647	2177	47
Total Delay (hr)	19	1	3	51	74
Stops / Veh	4.61	0.17	1.00	1.00	2.55
Stops (#)	14025	428	18	84	14555
Average Speed (mph)	27	29	1	1	22
Total Travel Time (hr)	179	28	3	52	262
Distance Traveled (mi)	4778	833	2	36	5648
Fuel Consumed (gal)	288	37	3	39	367
Fuel Economy (mpg)	16.6	22.5	0.8	0.9	15.4
CO Emissions (kg)	20.16	2.59	0.18	2.74	25.67
NOx Emissions (kg)	3.92	0.50	0.03	0.53	5.00
VOC Emissions (kg)	4.67	0.60	0.04	0.63	5.95
Unserved Vehicles (#)	0	0	0	0	0
Vehicles in dilemma zone (#)	0	0	0	0	0

2: Yosemite Ave & TH 13

Direction	EB	WB	NB	SB	All
Future Volume (vph)	2570	2983	66	42	5661
Control Delay / Veh (s/v)	4	1	3679	3228	69
Queue Delay / Veh (s/v)	0	0	0	0	0
Total Delay / Veh (s/v)	4	1	3679	3228	69
Total Delay (hr)	3	0	67	38	108
Stops / Veh	0.80	0.12	1.00	1.00	0.44
Stops (#)	2054	351	66	42	2513
Average Speed (mph)	46	44	0	0	14
Total Travel Time (hr)	18	30	68	38	154
Distance Traveled (mi)	837	1320	3	16	2175
Fuel Consumed (gal)	68	50	50	28	197
Fuel Economy (mpg)	12.3	26.4	0.1	0.6	11.1
CO Emissions (kg)	4.77	3.49	3.49	1.99	13.74
NOx Emissions (kg)	0.93	0.68	0.68	0.39	2.67
VOC Emissions (kg)	1.11	0.81	0.81	0.46	3.19
Unserved Vehicles (#)	0	0	0	0	0
Vehicles in dilemma zone (#)	0	0	0	0	0

5: Dakota Ave & 13th Ave

Direction	EB	WB	NB	SB	All
Future Volume (vph)	5	5	8	77	95
Control Delay / Veh (s/v)	9	8	0	2	2
Queue Delay / Veh (s/v)	0	0	0	0	0
Total Delay / Veh (s/v)	9	8	0	2	2
Total Delay (hr)	0	0	0	0	0
Stops / Veh	1.00	1.00	0.00	0.34	0.38
Stops (#)	5	5	0	26	36
Average Speed (mph)	19	25	30	26	26
Total Travel Time (hr)	0	0	0	0	1
Distance Traveled (mi)	1	2	3	8	14
Fuel Consumed (gal)	0	0	0	1	1
Fuel Economy (mpg)	NA	NA	NA	NA	NA
CO Emissions (kg)	0.00	0.01	0.01	0.04	0.06
NOx Emissions (kg)	0.00	0.00	0.00	0.01	0.01
VOC Emissions (kg)	0.00	0.00	0.00	0.01	0.01
Unserved Vehicles (#)	0	0	0	0	0
Vehicles in dilemma zone (#)	0	0	0	0	0

16: 13th Ave & Yosemite Ave

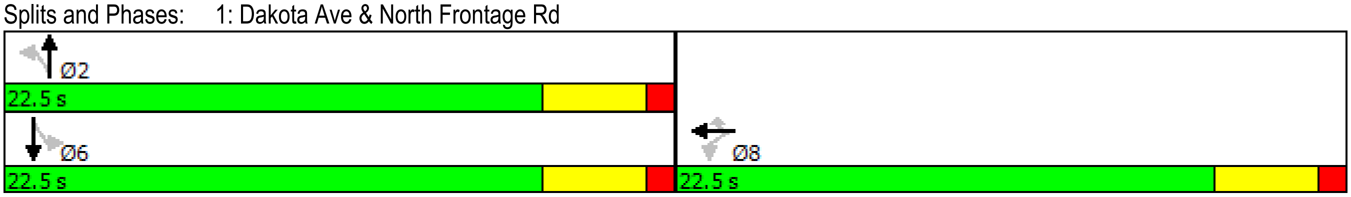
Direction	EB	WB	SB	All
Future Volume (vph)	33	33	63	129
Control Delay / Veh (s/v)	10	8	2	6
Queue Delay / Veh (s/v)	0	0	0	0
Total Delay / Veh (s/v)	10	8	2	6
Total Delay (hr)	0	0	0	0
Stops / Veh	1.00	1.00	0.38	0.70
Stops (#)	33	33	24	90
Average Speed (mph)	24	17	22	22
Total Travel Time (hr)	0	0	0	1
Distance Traveled (mi)	11	3	3	17
Fuel Consumed (gal)	1	0	0	1
Fuel Economy (mpg)	NA	NA	NA	12.7
CO Emissions (kg)	0.05	0.03	0.02	0.09
NOx Emissions (kg)	0.01	0.01	0.00	0.02
VOC Emissions (kg)	0.01	0.01	0.00	0.02
Unserved Vehicles (#)	0	0	0	0
Vehicles in dilemma zone (#)	0	0	0	0

2040 A.M. Peak Hour Build

Lane Group	WBT	WBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	29	13	25	76	16
Future Volume (vph)	29	13	25	76	16
Turn Type	NA	Perm	Perm	NA	NA
Protected Phases	8			2	6
Permitted Phases		8	2		
Detector Phase	8	8	2	2	6
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5
Total Split (s)	22.5	22.5	22.5	22.5	22.5
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	None	Max	Max	Max
Act Effct Green (s)	9.4	9.4	27.5	27.5	27.5
Actuated g/C Ratio	0.24	0.24	0.70	0.70	0.70
v/c Ratio	0.44	0.06	0.05	0.17	0.14
Control Delay	17.9	2.5	6.3	5.5	3.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	17.9	2.5	6.3	5.5	3.5
LOS	B	A	A	A	A
Approach Delay	16.1			5.7	3.5
Approach LOS	B			A	A

Intersection Summary	
Cycle Length: 45	
Actuated Cycle Length: 39.4	
Natural Cycle: 45	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.44	
Intersection Signal Delay: 8.7	Intersection LOS: A
Intersection Capacity Utilization 21.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1: Dakota Ave & North Frontage Rd



1: Dakota Ave & North Frontage Rd

Direction	WB	NB	SB	All
Future Volume (vph)	113	131	84	328
Control Delay / Veh (s/v)	16	6	4	9
Queue Delay / Veh (s/v)	0	0	0	0
Total Delay / Veh (s/v)	16	6	4	9
Total Delay (hr)	1	0	0	1
Stops / Veh	0.73	0.46	0.25	0.50
Stops (#)	83	60	21	164
Average Speed (mph)	21	21	27	23
Total Travel Time (hr)	2	1	1	3
Distance Traveled (mi)	36	14	26	76
Fuel Consumed (gal)	2	1	1	5
Fuel Economy (mpg)	15.5	13.3	20.9	16.4
CO Emissions (kg)	0.16	0.07	0.09	0.32
NOx Emissions (kg)	0.03	0.01	0.02	0.06
VOC Emissions (kg)	0.04	0.02	0.02	0.07
Unserved Vehicles (#)	0	0	0	0
Vehicles in dilemma zone (#)	0	0	0	0

2: North Frontage Rd & Yosemite Ave

Direction	EB	WB	SB	All
Future Volume (vph)	29	108	42	179
Control Delay / Veh (s/v)	0	0	0	0
Queue Delay / Veh (s/v)	0	0	0	0
Total Delay / Veh (s/v)	0	0	0	0
Total Delay (hr)	0	0	0	0
Stops / Veh	1.00	0.00	1.00	0.40
Stops (#)	29	0	42	71
Average Speed (mph)	30	30	30	30
Total Travel Time (hr)	0	1	0	1
Distance Traveled (mi)	9	17	12	38
Fuel Consumed (gal)	1	1	1	2
Fuel Economy (mpg)	NA	NA	NA	19.4
CO Emissions (kg)	0.04	0.05	0.05	0.14
NOx Emissions (kg)	0.01	0.01	0.01	0.03
VOC Emissions (kg)	0.01	0.01	0.01	0.03
Unserved Vehicles (#)	0	0	0	0
Vehicles in dilemma zone (#)	0	0	0	0

3: Yosemite Ave & TH 13

Direction	EB	WB	NB	All
Future Volume (vph)	2704	2875	87	5666
Control Delay / Veh (s/v)	0	0	0	0
Queue Delay / Veh (s/v)	0	0	0	0
Total Delay / Veh (s/v)	0	0	0	0
Total Delay (hr)	0	0	0	0
Stops / Veh	0.00	0.00	0.00	0.00
Stops (#)	0	0	0	0
Average Speed (mph)	55	45	45	50
Total Travel Time (hr)	15	19	0	34
Distance Traveled (mi)	853	841	3	1696
Fuel Consumed (gal)	29	29	0	57
Fuel Economy (mpg)	29.9	29.2	NA	29.5
CO Emissions (kg)	1.99	2.01	0.01	4.02
NOx Emissions (kg)	0.39	0.39	0.00	0.78
VOC Emissions (kg)	0.46	0.47	0.00	0.93
Unserved Vehicles (#)	0	0	0	0
Vehicles in dilemma zone (#)	0	0	0	0

4: 13th Ave & Yosemite Ave

Direction	EB	WB	SB	All
Future Volume (vph)	84	66	187	337
Control Delay / Veh (s/v)	10	10	1	5
Queue Delay / Veh (s/v)	0	0	0	0
Total Delay / Veh (s/v)	10	10	1	5
Total Delay (hr)	0	0	0	0
Stops / Veh	1.00	1.00	0.20	0.55
Stops (#)	84	66	37	187
Average Speed (mph)	24	16	24	22
Total Travel Time (hr)	1	0	0	2
Distance Traveled (mi)	27	6	6	40
Fuel Consumed (gal)	2	1	1	3
Fuel Economy (mpg)	15.4	NA	NA	13.2
CO Emissions (kg)	0.12	0.05	0.04	0.21
NOx Emissions (kg)	0.02	0.01	0.01	0.04
VOC Emissions (kg)	0.03	0.01	0.01	0.05
Unserved Vehicles (#)	0	0	0	0
Vehicles in dilemma zone (#)	0	0	0	0

5: Dakota Ave & 13th Ave

Direction	WB	NB	SB	All
Future Volume (vph)	187	17	87	291
Control Delay / Veh (s/v)	11	0	6	9
Queue Delay / Veh (s/v)	0	0	0	0
Total Delay / Veh (s/v)	11	0	6	9
Total Delay (hr)	1	0	0	1
Stops / Veh	1.00	0.00	1.24	1.01
Stops (#)	187	0	108	295
Average Speed (mph)	23	30	20	23
Total Travel Time (hr)	3	0	0	3
Distance Traveled (mi)	60	6	9	76
Fuel Consumed (gal)	4	0	1	5
Fuel Economy (mpg)	15.2	NA	8.6	14.3
CO Emissions (kg)	0.27	0.02	0.08	0.37
NOx Emissions (kg)	0.05	0.00	0.01	0.07
VOC Emissions (kg)	0.06	0.00	0.02	0.09
Unserved Vehicles (#)	0	0	0	0
Vehicles in dilemma zone (#)	0	0	0	0

8: North Frontage Rd & Vernon Ave

Direction	WB	All
Future Volume (vph)	108	108
Control Delay / Veh (s/v)	0	0
Queue Delay / Veh (s/v)	0	0
Total Delay / Veh (s/v)	0	0
Total Delay (hr)	0	0
Stops / Veh	0.00	0.00
Stops (#)	0	0
Average Speed (mph)	30	30
Total Travel Time (hr)	0	0
Distance Traveled (mi)	15	15
Fuel Consumed (gal)	1	1
Fuel Economy (mpg)	NA	NA
CO Emissions (kg)	0.04	0.04
NOx Emissions (kg)	0.01	0.01
VOC Emissions (kg)	0.01	0.01
Unserved Vehicles (#)	0	0
Vehicles in dilemma zone (#)	0	0

11: Dakota Ave & TH 13

Direction	EB	WB	All
Future Volume (vph)	2704	2875	5579
Control Delay / Veh (s/v)	0	0	0
Queue Delay / Veh (s/v)	0	0	0
Total Delay / Veh (s/v)	0	0	0
Total Delay (hr)	0	0	0
Stops / Veh	0.00	0.00	0.00
Stops (#)	0	0	0
Average Speed (mph)	55	55	55
Total Travel Time (hr)	77	16	93
Distance Traveled (mi)	4227	907	5134
Fuel Consumed (gal)	141	30	172
Fuel Economy (mpg)	29.9	29.9	29.9
CO Emissions (kg)	9.88	2.12	12.00
NOx Emissions (kg)	1.92	0.41	2.34
VOC Emissions (kg)	2.29	0.49	2.78
Unserved Vehicles (#)	0	0	0
Vehicles in dilemma zone (#)	0	0	0

BOARD OF COUNTY COMMISSIONERS
SCOTT COUNTY, MINNESOTA

Date:	July 10, 2018
Resolution No.:	2018-111
Motion by Commissioner:	Beard
Seconded by Commissioner:	Ulrich

RESOLUTION NO. 2018-111; AUTHORIZING SUBMITTAL OF TRANSPORTATION PROJECTS TO THE TRANSPORTATION ADVISORY BOARD FOR CONSIDERATION IN THE 2018 REGIONAL SOLICITATION PROCESS

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

WHEREAS, funding is available in the 2020-2023 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 projects are also consistent with the Scott County Transportation Plan and Scott County Parks Plan; and

WHEREAS, the Scott County Board of Commissioners desires to submit and support these projects:

1. CH 16 from CH 18 to TH 13
2. TH 13 and Dakota Interchange
3. CH 17 Bike/Ped Overpass of US 169 & MRTS connection
4. Merriam Junction Trail
5. CH 16 ADA Project – Savage
6. Scott County Transportation Demand Management (TDM)
7. TH169 Interim Bus Service (from Shakopee to Golden Valley)

NOW, THEREFORE BE IT RESOLVED, that the Scott County Board of Commissioners hereby supports the submittal of the above named projects to the Transportation Advisory Board for consideration in the 2018 Regional Solicitation Process.

COMMISSIONERS	VOTE
Weckman Brekke	☑ Yes ☐ No ☐ Absent ☐ Abstain
Wolf	☑ Yes ☐ No ☐ Absent ☐ Abstain
Beard	☑ Yes ☐ No ☐ Absent ☐ Abstain
Beer	☑ 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 10th day of July, 2018 now on file in my office, and have found the same to be a true and correct copy thereof.
Witness my hand and official seal at Shakopee, Minnesota, this 10th day of July, 2018.

______________________ County Administrator

______________________ Administrator's Designee

Regional Economy

Roadway Reconstruction/Modernization Project: TH 13 and Dakota Modernization | Map ID: 1529356543938

Results

WITHIN ONE MI of project:
Postsecondary Students: 0

Totals by City:
Bloomington
Population: 3972
Employment: 2293
Mfg and Dist Employment: 1030
Savage
Population: 8748
Employment: 3879
Mfg and Dist Employment: 1613

Project Points
Project
Manfacturing/Distribution Centers
Job Concentration Centers

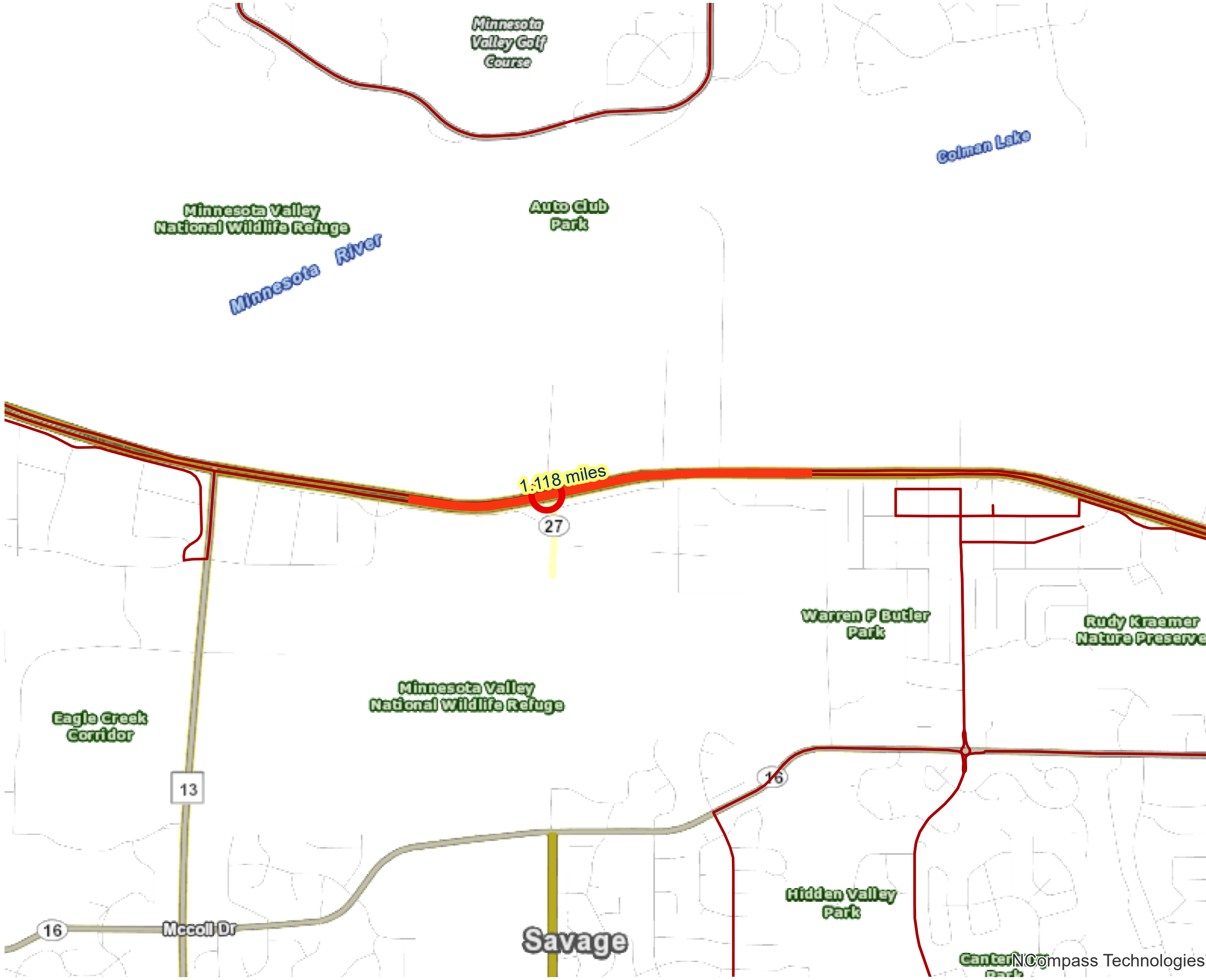
0 0.175 0.35 0.7 1.05 1.4 Miles

Created: 6/18/2018
LandscapeRSA5

METROPOLITAN COUNCIL

Transit Connections

Roadway Reconstruction/Modernization Project: TH 13 and Dakota Modernization | Map ID: 1529356543938



Results

Transit with a Direct Connection to project:
491 495

**indicates Planned Alignments*

Project Points — Transit Routes

Project

0 0.275 0.55 1.1 1.65 2.2 Miles

Created: 6/18/2018
LandscapeRSA3

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

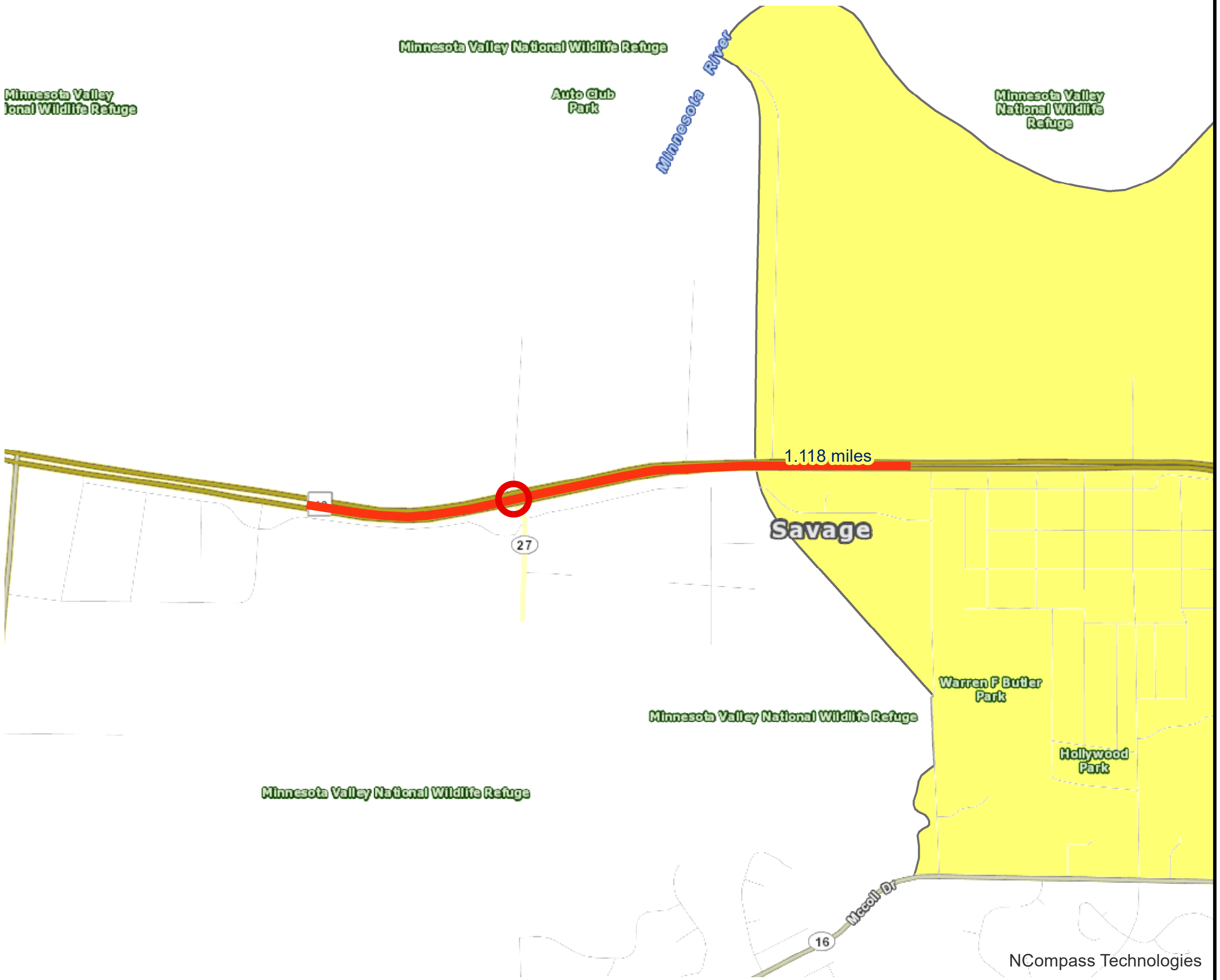
METROPOLITAN COUNCIL

Socio-Economic Conditions

Roadway Reconstruction/Modernization Project: TH 13 and Dakota Modernization | Map ID: 1529356543938

Results

Project census tracts are above the regional average for population in poverty or population of color:
(0 to 18 Points)



Project Points

Project

Area of Concentrated Povertry > 50% residents of color

Area of Concentrated Poverty

Above reg'l avg conc of race/poverty

0 0.175 0.35 0.7 1.05 1.4 Miles

Created: 6/18/2018
LandscapeRSA2

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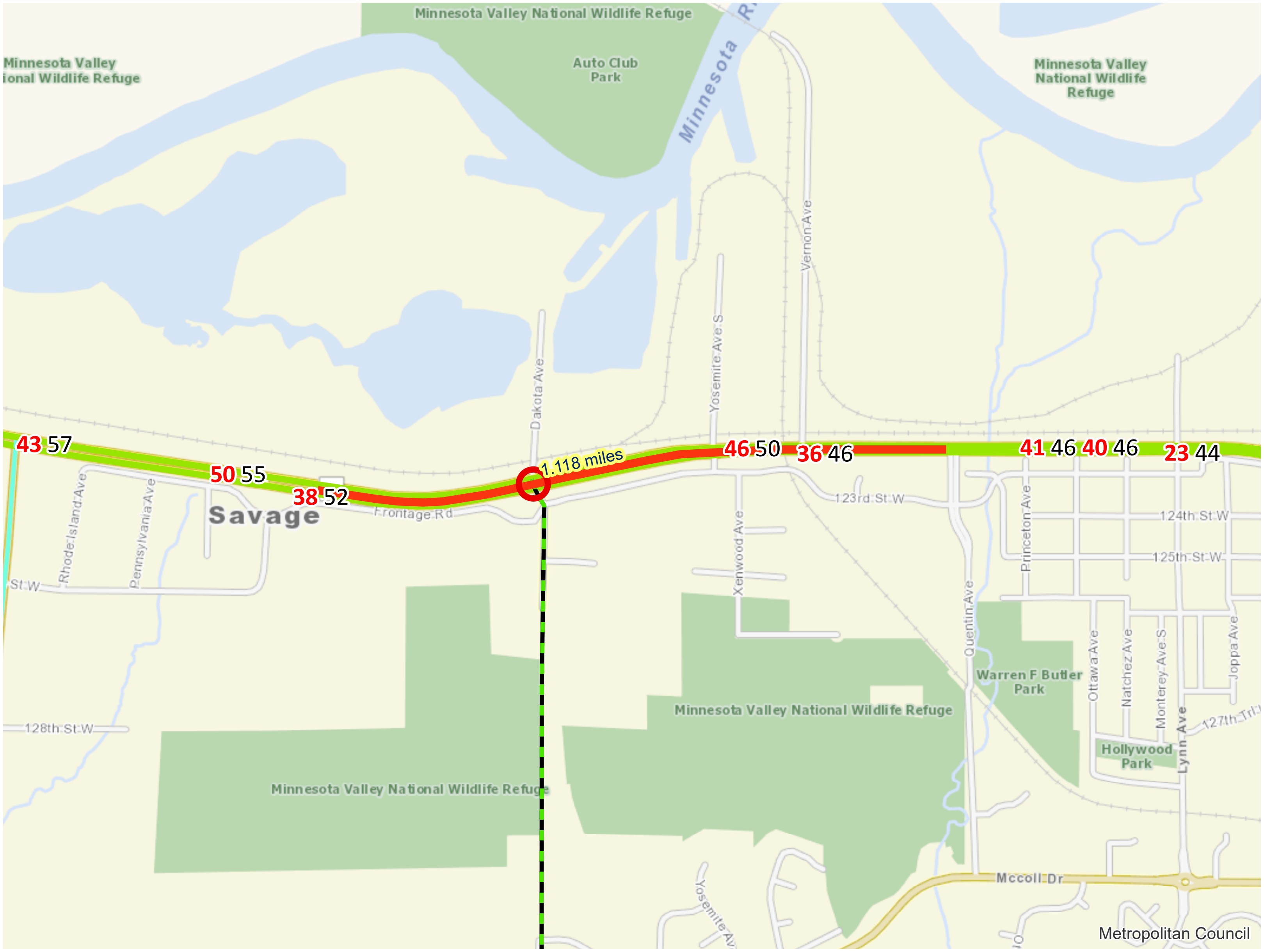
METROPOLITAN COUNCIL

Level of Congestion

Roadway Reconstruction/Modernization Project: TH 13 and Dakota Modernization | Map ID: 1529356543938



Project Points
Principal Arterials
Principal Arterials Planned
Project
A Minor Arterials
A Minor Arterials Planned

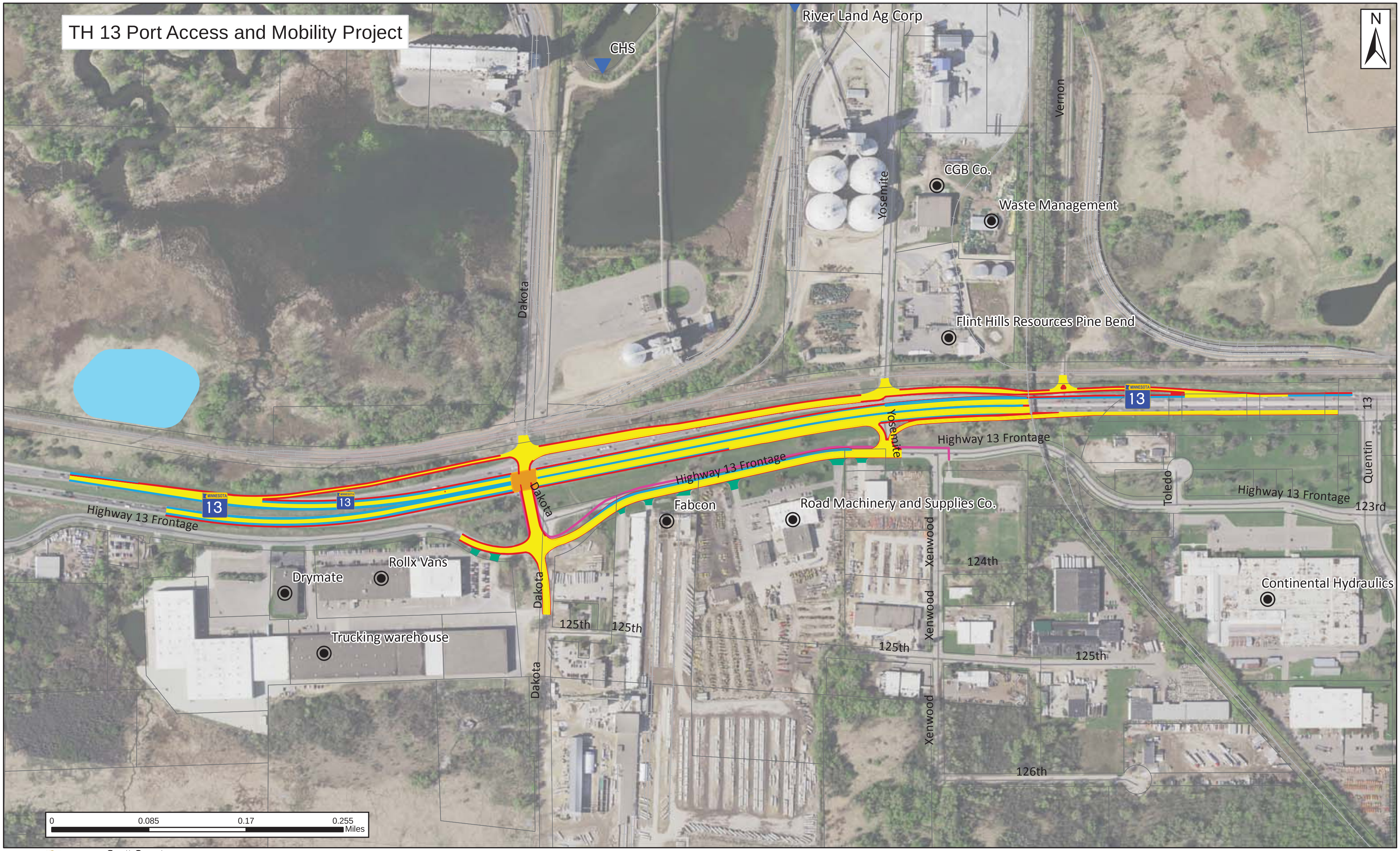
0 0.15 0.3 0.6 0.9 1.2 Miles

Created: 6/18/2018
LandscapeRSA1

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

METROPOLITAN COUNCIL

Project Layout



Scott County
Transportation Services
600 Country Trail East
Jordan, MN 55352