ENVIRONMENTAL ASSESSMENT

County State Aid Highway 7
State Project: 74-607-14 and 74-607-15
Minnesota Project: Federal Project Number Pending

From SW 18th St. to US Highway 14 in
City: Owatonna, in County: Steele of Minnesota
Section(s), Township(s), Range(s): T107N, R20W, Sections 7 and 18

Submitted pursuant to 42 U.S.C. 4332 and M. S. 116D
By the
U.S. Department of Transportation
Federal Highway Administration and
Minnesota Department of Transportation
for
New construction of an approximately 2 mile segment of a two-lane
roadway and construction of bridge #74551 over the DM&E Railroad.

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Approved as an Environmental Assessment per 23 CFR Part 771.119(c):

6/13/08
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1. REPORT PURPOSE

This Environmental Assessment (EA) provides background information including:

- need for the proposed project
- alternatives considered
- environmental impacts and mitigation
- agency coordination and public involvement

This EA was prepared as a part of the National Environmental Policy Act (NEPA) process to fulfill requirements of 42 USC 4332. At the federal level, the EA is used to provide sufficient environmental documentation to determine the need for an Environmental Impact Statement (EIS) or that a Finding of No Significant Impact (FONSI) is appropriate.

At the state level, an Environmental Assessment Worksheet (EAW) was completed and approved by Steele County with a Negative Declaration on September 13, 2005. A copy of the approved EAW can be viewed at the Steele County Highway Department Office.

Steele County is the proposer and Responsible Governmental Unit for this project.

This document is made available for public review and comment in accordance with the requirements of 23 CFR 771.119 (d).

2. PURPOSE AND NEED FOR PROJECT

2.1 Project Description

The project consists of construction of a new, 10-ton, two-lane, minor arterial, rural roadway connecting SW 18th Street and existing US Highway 14 West on the west side of Owatonna including an overpass of the DM&E Railroad tracks.

2.2 Project Need

There are three main items for the purpose and need of the project:

- System Linkage
- Transportation Demand
- Safety

2.2.1 System Linkage - Mn/DOT will be constructing a new alignment for US Highway 14. In the US Highway 14 EIS (approved in July 1999) an interchange is identified at 39th Avenue NW to provide highway access to western Owatonna and to connect the new US Highway 14 with the existing US Highway 14. CSAH 7 will serve as that link between the two highways. Mn/DOT will construct ½ mile of roadway between the new interchange and SW 18th Street with the new US Highway 14 project to complete the link.
2.2.2 Transportation Demand - Traffic levels are increasing due to industrial
development in western Owatonna. Between 1999 and 2003 the number of vehicles per
day increased over 17% from 2600 to 3050 on 24th Avenue in western Owatonna. The
proposed roadway will serve as a minor arterial for the area and as a direct route between
north and south Owatonna for local traffic. The roadway classification for the proposed
road was changed to minor arterial after discussions with Mn/DOT District 6 Planning
staff. Much of the traffic is for the commercial and industrial developments including
passenger vehicles and heavy trucks. With full build-out, traffic is anticipated to be up to
21,000 vehicles per day.

2.2.3 Safety - The Dakota, Minnesota and Eastern (DM&E) Railroad has proposed an
upgrade to their tracks between Wyoming and the Mississippi River for an increase in
coal transport. Currently four trains per day travel the corridor. DM&E was sold to the
Canadian Pacific Railroad in September 2007. It is unclear if the expansion is still
planned. If it happens, there could be an increase to 34 trains per day on the tracks. The
proposed roadway will include a grade-separated railroad crossing. The roadway will
also have restricted access, with no new private accesses, and public accesses spaced at 1/2
mile intervals. Accesses on the two existing blocks of 39th Avenue will remain unless
agreements can be worked out with the property owners.

3. ALTERNATIVES

The approved 2005 EAW reviewed five potential alignments for the proposed roadway.
Each alternative assumes Mn/DOT will build a 1/2 mile connection between the proposed
interchange on new US Highway 14 and SW 18th Street.

3.1 Alternatives Considered but Eliminated

1) Highway 17/52nd Avenue and SW 18th Street
This alternative would utilize existing Highway 17/52nd Avenue and SW 18th Street west
of 39th Avenue. The Minnesota Department of Transportation (Mn/DOT) US Highway
14 project will include an interchange at 39th Avenue and a road connecting the proposed
interchange to SW 18th Street. This alternative would then route traffic approximately 1.5
miles west and then north for 2 miles before connecting with existing US Highway 14
West. The alternative would have the following impacts if constructed:

A. Does not provide a direct link between proposed and existing US Highway 14
   West.
B. Of the five original alternatives, this alternative was identified by the National
   Resource Conservation Service (NRCS) to have the greatest impact to prime
   and unique farmland.
C. Impacts approximately nine acres of potential wetlands (the areas need
   additional analysis to determine wetland status) and impacts Crane Creek.

See Figure 1 in Appendix A
2) 32nd Avenue
This alternative would connect 39th Avenue to 32nd Avenue. The alignment would begin at the intersection of SW 18th Street and the connection to the new US Highway 14 West interchange. The alignment would turn northeasterly and connect to the southern end of 32nd Avenue. This alternative would then use the existing 32nd Avenue corridor to connect to existing US Highway 14 West. The alternative would have the following impacts if constructed:

A. This alternative would have significant impacts to adjacent properties, existing accesses and business operations.
B. The overpass of the Dakota, Minnesota and Eastern (DM&E) Railroad would have additional impacts to two adjacent businesses.
C. The alternative would impact eight potentially contaminated properties identified in the Phase I Environmental Site Assessment (ESA). Two properties have medium potential for contamination. Six other sites have low potential for contamination.

See Figure 1 in Appendix A

3) 24th Avenue and SW 18th Street
This alternative would make use of existing SW 18th Street and 24th Avenue. Starting at the intersection with 39th Avenue, this alternative would send traffic east one mile before providing a north-south connection between SW 18th Street and existing US Highway 14 West on existing 24th Avenue. The alternative would have the following impacts if constructed:

A. Does not provide a direct link between proposed and existing US Highway 14 West.
B. Changes to access will significantly impact adjacent property owners and business operations.
C. An overpass of the DM&E Railroad on 24th Avenue would have significant impacts to at least four adjacent properties.
D. Approximately 0.8 acres of potential wetlands (the areas need additional analysis to determine wetland status) may be impacted.
E. Would impact 15 potentially contaminated properties identified in the Phase I ESA. Four sites have medium potential for contamination. Eleven sites have low potential for contamination.

See Figure 1 in Appendix A

3.2 Alternatives under Consideration
1) No build
This alternative includes regular maintenance of existing local roadways. The no build option is not considered the preferred alternative, as it does not address the issues of system linkage, traffic demand and safety as described in section 2.0 Purpose and Need.
2) **New Alignment – ½ Mile West of 39th Avenue**
Alignment 2 does not follow any existing roads or affect any existing access locations. It starts at the intersection of SW 18th Street and 39th Avenue. It then angles northwest about ½ miles west of 39th Avenue. The road straightens out and is a north/south roadway when it intersects SW 8th Street and the railroad until it ends with an intersection at existing US Highway 14. This alignment does address the issues defined in section 2.0 **Purpose and Need** but has more negative impacts than the preferred alternative (see below).

3) **39th Avenue/CSAH 7 (Preferred Alternative)**
Construction of a new two-lane, rural, graded to accommodate a future four lane urban section, 10-ton, concrete roadway with bituminous shoulders directly linking new US Highway 14 West to existing US Highway 14 West will provide a safe and efficient route between the City of Owatonna and the US Highway 14 corridor. The roadway will intersect with SW 18th Street and the Mn/DOT constructed connection to the new US Highway 14 interchange. The alignment will continue north to the existing US Highway 14 and includes an overpass of the DM&E Railroad for increased safety. The road includes a northeasterly jog north of the DM&E tracks to tie into existing 39th Avenue.

### 3.3 Project Schedule
The preliminary schedule for implementing the CSAH 7/39th Avenue project is presented below:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Hearing</td>
<td>Fall 2007</td>
</tr>
<tr>
<td>Project Letting</td>
<td>See below</td>
</tr>
<tr>
<td>Begin Construction</td>
<td>See below</td>
</tr>
</tbody>
</table>

Project construction is anticipated to occur at the same time as the US Highway 14 project between Waseca and Owatonna. According to the Mn/DOT website (http://www.dot.state.mn.us/d7/projects/14owatonna/#StageCD), construction of new US Highway 14 between Waseca and Owatonna is scheduled for 2008-2011.

### 3.4 Project Funding Sources
The total estimated cost to construct the corridor from SW 18th Street to Existing US Highway 14 is $7,000,000 fiscal year 2007 dollars. This total includes construction and right of way acquisition costs. The final cost will be determined as the project design proceeds. Project funding will be finalized through the federal, state and local approval processes. Steele County received $3.4 million in Federal funding for 2010 through the ATP process. State Aid and local (County and City) funds will be used for the remaining $3,600,000 project costs.
4. **SOCIAL, ECONOMIC AND ENVIRONMENTAL IMPACTS (SEE)**

4.1 Social Impacts
Under the 1969 National Environmental Policy Act, all federally funded highway projects must assess impacts to public safety, sensitive groups and community cohesion. Under this law efforts to avoid impacts, minimize identified impacts and mitigate those impacts must be implemented.

**Affect on Public Safety**
As proposed, this project should improve public safety by creating a local route with restricted access. The overpass of the DM&E Railroad will eliminate conflict between vehicles and trains.

**Affect on Sensitive Groups**
No sensitive groups were identified in the project area.

**Affect on Community Cohesion**
The proposed project is not expected to cause any adverse impact to community cohesion.

4.2 Considerations Relating to Pedestrians and Bicyclists
The preferred alignment does not include a trail or sidewalk system. It is anticipated that the need for a recreational trail will be limited because of the industrial land use in the area. There will be paved shoulders on the roadway that can be used for pedestrians and bicyclists.

4.3 Environmental Justice
Executive Order 12898 Federal Actions to address environmental Justice in Minority Populations and Low-Income Populations, dated February 11, 1994, directed each federal agency to achieve “environmental justice as part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its program, policies and activities on minority populations and low-income populations.” The project has federal funding and federal permit requirements, and is considered a federal project for purposes of compliance with the Executive Order.

There are three fundamental Environmental Justice Principles:

- To avoid, minimize or mitigate disproportionately-high and adverse human health and environmental effects, including social and economic effects, on minority and low-income populations;
- To ensure the full and fair participation by all potentially-affected communities in the transportation decision-making process; and,
To prevent the denial of reduction in or significant delay in the receipt of benefits by minority and low-income populations.

Determination of Affected Populations for Environmental Justice Analysis
The Federal DOT Order 5610.2, defines “low income” as having a household income that is at or below the Department of Health and Human Service poverty threshold guideline. In 2008, for the 48 contiguous states, the poverty threshold for annual income is $10,400 for a one-person family unit, $14,000 for a two-person family unit, $17,600 for a three-person family unit, and $21,200 for a four-person family unit. (Source: Federal Register, Vol. 73, No. 15, January 23, 2008, pp. 3971-3972)

A “low income population” is defined in the Federal DOT Order as any readily-identifiable group of low-income persons who live in close geographic proximity, and, if circumstances warrant, geographically-dispersed/transient person who will be similarly affected by a proposed DOT program, policy or activity.

“Minority” is defined as; 1) Black (having origins in any of the black racial groups of Africa); 2) Hispanic (having origins in Mexican, Puerto Rican, Cuban, Central or South American, or any other Spanish culture, regardless of race); Asian American (having origins in original people from the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands); American Indian and Alaskan Native (having origins in any of the original people of North America and who maintain cultural identification through tribal affiliation or community recognition).

A “minority population” is defined in the DOT Order as any readily-identifiable group of minority persons who live in close geographic proximity, and, if circumstances warrant, geographically-dispersed/transient person who will be similarly affected by a proposed DOT program, policy or activity.

Affected Populations
Based on the public involvement (Public Information Meetings – Sept. 29, 2003, Dec. 15, 2003, and Sept. 27, 2005, Public Hearings - Sept. 9, 2004 and August 9, 2005), one-on-one discussions with area residents, county records, and through observations of the area, low income and minority populations will not be affected by the proposed alternative. The area is mainly agricultural with three businesses on the existing two blocks of 39th Avenue.

4.4 Economics
No substantial economic impacts are expected as a result of this project. Some short term economic losses may befall three businesses while construction occurs due to traffic detours and/or construction staging on the existing 39th Avenue. Impacts to the businesses will be minimal because access on 39th Avenue will be maintained during construction.
4.5 Relocation
Under the preferred alternative, there will be no relocations. If unanticipated relocations are required, relocations will be conducted in accordance with the Uniform Relocation Assistance and Real Estate Property Policy Act of 1970, as amended.

4.6 Right of Way
The typical right of way required for the proposed roadway is 150’ wide. The area around the overpass will require additional right of way. Right of way for the bridge approaches is anticipated to be 220’ wide. The construction activities for 39th Avenue will require the acquisition of approximately 34 acres of roadway right of way from 10 adjacent property owners. Nine of the ten property owners are private. The City of Owatonna is the tenth landowner.

Steele County has coordinated directly with the DM&E railroad. On December 12, 2006 Steele County staff met with Beth Lynn, DM&E engineer. The DM&E will be adding a siding track on the north side of the existing mainline track. Steele County will be constructing a three-span bridge over the tracks. One piling group will be located within the DM&E railroad right of way, out of the track clear zone.

4.7 Noise
Noise monitoring was conducted in the area in April 2005. Conditions have not changed in the area to warrant additional analysis for this document. What follows is a summary of the 2005 analysis.

Federal noise abatement criteria have been established for five land use categories. The federal criteria are shown in the table below. Locations where noise levels are “approaching” (defined as being within 1 decibel of the criterion threshold, e.g. 69 dBA in a residential area) or exceeding the criterion level must be evaluated for noise abatement reasonableness.

<table>
<thead>
<tr>
<th>Category</th>
<th>L10 dBA</th>
<th>Land Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>60</td>
<td>Special areas requiring serenity</td>
</tr>
<tr>
<td>B</td>
<td>70</td>
<td>Residential and recreational areas</td>
</tr>
<tr>
<td>C</td>
<td>75</td>
<td>Commercial and industrial areas</td>
</tr>
<tr>
<td>D</td>
<td>NA</td>
<td>Undeveloped areas</td>
</tr>
<tr>
<td>E</td>
<td>55</td>
<td>Residential, hospitals, libraries, etc.*</td>
</tr>
</tbody>
</table>

- Applies to interior noise levels. All other land uses are exterior levels.

In addition to the identified noise criteria, the Federal Highway Administration (FHWA) also defines a noise impact as a “substantial increase” in the future noise levels over the existing noise levels. The Minnesota Department of Transportation (Mn/DOT) considers an increase of 5 dBA or greater to be a substantial noise level increase.
As part of this noise analysis study, noise level monitoring was conducted at two locations along the proposed project route. Monitoring (receptor) locations are shown in Figure 5 (Appendix A). The purpose of the monitoring was to identify existing noise levels and to validate the noise modeling. Results of the monitoring are provided in Table 1.

<table>
<thead>
<tr>
<th>Monitoring Location Designation</th>
<th>Date</th>
<th>Time</th>
<th>Description</th>
<th>$L_{10}$ (dBA)</th>
<th>$L_{50}$ (dBA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>M1</td>
<td>4/1/05</td>
<td>5:56 – 6:57 am</td>
<td>TH 14 – near intersection with 39th Ave. - 132 ft. from median</td>
<td>71.0</td>
<td>62.5</td>
</tr>
<tr>
<td>M1</td>
<td>4/1/05</td>
<td>7:08 – 8:08 am</td>
<td>TH 14 – near intersection with 39th Ave. - 132 ft. from median</td>
<td>71.5</td>
<td>64.0</td>
</tr>
<tr>
<td>M2</td>
<td>4/1/05</td>
<td>9:05 – 9:37 am</td>
<td>SW 18th Street – near SW 33rd Avenue</td>
<td>&lt;45*</td>
<td>&lt;45*</td>
</tr>
</tbody>
</table>

*The measured $L_{10}$ and $L_{50}$ noise levels at this location were higher than 45 dBA, however, this was due to wind related noise. The reported results are based on noise level readings taken when the wind speed was low.

The primary noise source at the TH 14 location (M1) was traffic from the highway itself. The SW 18th Street location (M2) resulted mainly from wind noise on the day the noise measurement was taken. There was little audible traffic noise at this location except for a single automobile that passed by on SW 18th Street.

The Minnoise model is a Minnesota Department of Transportation modified (to more accurately reflect Minnesota truck emissions) version of the Federal Highway Administration’s Optima/Stamina model. It is used to predict noise levels from highway projects and to assist with the development of noise barriers.

Noise level predictions were based on the following data and assumptions:

For existing and no-development conditions, traffic noise levels were predicted based on constant operating speeds of 55 mph for existing U.S. Highway 14. For build conditions, traffic noise levels were predicted based on speeds limits of 55 mph for U.S. Highway 14 and the proposed West Beltline (39th Avenue).

Peak noise-hour existing, 2025 no-build, and 2025 build traffic volumes and vehicle mix provided by Bonestroo, Rosene, Anderlik & Associates, Inc. were used.
Table 2 shows the results of the modeling analysis at each of the receptors. The results show the predicted noise levels to be within the Federal standards at modeled residential locations at all receptors.

Table 2
Noise Modeling Results (dBA) Daytime

<table>
<thead>
<tr>
<th>Receptor</th>
<th>Existing Noise Levels</th>
<th>No-Build Noise Levels</th>
<th>No-Build Increase Over Existing Noise Levels</th>
<th>2025 Build Noise Levels</th>
<th>2025 Build Increase Over Existing Noise Levels</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>L₁₀</td>
<td>L₁₀</td>
<td>L₁₀</td>
<td>L₁₀</td>
<td>L₁₀</td>
</tr>
<tr>
<td>R1</td>
<td>37.4</td>
<td>40.9</td>
<td>3.5</td>
<td>61.4</td>
<td>24.0</td>
</tr>
<tr>
<td>R2</td>
<td>36.4</td>
<td>39.9</td>
<td>3.5</td>
<td>49.7</td>
<td>13.3</td>
</tr>
<tr>
<td>R3</td>
<td>36.6</td>
<td>40.0</td>
<td>3.4</td>
<td>51.7</td>
<td>15.1</td>
</tr>
<tr>
<td>R4</td>
<td>40.1</td>
<td>43.5</td>
<td>3.4</td>
<td>52.1</td>
<td>12.0</td>
</tr>
<tr>
<td>C1</td>
<td>41.9</td>
<td>45.3</td>
<td>3.4</td>
<td>51.4</td>
<td>9.5</td>
</tr>
<tr>
<td>C2</td>
<td>59.0</td>
<td>62.4</td>
<td>3.4</td>
<td>67.6</td>
<td>8.6</td>
</tr>
<tr>
<td>C3</td>
<td>64.6</td>
<td>68.3</td>
<td>3.7</td>
<td>70.8</td>
<td>6.2</td>
</tr>
</tbody>
</table>

FWHA criteria require mitigation analysis if area receptors are predicted to experience a "substantial" increase above current L₁₀ levels in the project design year. FHWA defines a "substantial" noise increase as 5 dBA or greater. The modeling indicates that several residential receptors will receive a "substantial" increase in noise in the project design year (2025) as defined by FWHA criteria.

Mn/DOT policy is to consider noise barriers reasonable if the barriers achieve a minimum noise reduction of 5 dBA and the cost of the barrier does not exceed $3250.00/dBA/residence. Wall costs are estimated at $15.00 per square foot. A noise wall that meets the reasonableness requirement may not be feasible due to other constraints such as construction limitations.

The residences potentially impacted by the proposed West Beltline project are part of a rural agricultural area. The low number and density of residential receptors currently in the project area are not sufficient to meet the Mn/DOT cost reasonableness requirement of $3250.00/dBA/residence. Therefore, no noise barriers are proposed.

4.8 Mobile Source Air Toxics
In addition to the criteria air pollutants for which there are National Ambient Air Quality Standards (NAAQS), EPA also regulates air toxics. Most air toxics originate from human-made sources, including on-road mobile sources, non-road mobile sources (e.g., airplanes), area sources (e.g., dry cleaners) and stationary sources (e.g., factories or refineries).

Mobile Source Air Toxics (MSATs) are a subset of the 188 air toxics defined by the Clean Air Act. The MSATs are compounds emitted from highway vehicles and non-road...
equipment. Some toxic compounds are present in fuel and are emitted to the air when the fuel evaporates or passes through the engine unburned. Other toxics are emitted from the incomplete combustion of fuels or as secondary combustion products. Metal air toxics also result from engine wear or from impurities in oil or gasoline.

The EPA is the lead Federal agency for administering the Clean Air Act and has certain responsibilities regarding the health effects of MSATs. The EPA issued a Final Rule on Controlling Emissions of Hazardous Air Pollutants from Mobile Sources. (66 FR 17229 March 29, 2001). This rule was issued under the authority in Section 202 of the Clean Air Act. In its rule, EPA examined the impacts of existing and newly promulgated mobile source control programs, including its reformulated gasoline (RFG) program, its national low emission vehicle (NLEV) standards, its Tier 2 motor vehicle emissions standards and gasoline sulfur control requirements, and its proposed heavy duty engine and vehicle standards and on-highway diesel fuel sulfur control requirements. Between 2000 and 2020, FHWA projects that even with a 64 percent increase in VMT, these programs will reduce on-highway emissions of benzene, formaldehyde, 1,3-butadiene, and acetaldehyde by 57 percent to 65 percent, and will reduce on-highway diesel PM emissions by 87 percent, as shown in the following graph:

![U.S. Annual Vehicle Miles Traveled (VMT) vs. Mobile Source Air Toxics Emissions, 2000-2020](image)

Notes: For on-road mobile sources. Emissions factors were generated using MOBILE6.2. MTBE proportion of market for oxygenates is held constant, at 50%. Gasoline RVP and oxygenate content are held constant. VMT: Highway Statistics 2000, Table VM-2 for 2000, analysis assumes annual growth rate of 2.5%. "DPM + DEOG" is based on MOBILE6.2-generated factors for elemental carbon, organic carbon and SO4 from diesel-powered vehicles, with the particle size cutoff set at 10.0 microns.

As a result, EPA concluded that no further motor vehicle emissions standards or fuel standards were necessary to further control MSATs. The agency is preparing another rule under authority of CAA Section 202(l) that will address these issues and could make adjustments to the full 21 and the primary six MSATs.
Unavailable Information for Project Specific MSAT Impact Analysis
This EA includes a basic analysis of the likely MSAT emission impacts of this project. However, available technical tools do not enable us to predict the project specific health impacts of the emission changes associated with the alternatives in this EA. Due to these limitations, the following discussion is included in accordance with CEQ regulations (40 CFR 1502.22(b)) regarding incomplete or unavailable information.

Evaluating the environmental and health impacts from MSATs on a proposed highway project would involve several key elements, including emissions modeling, dispersion modeling in order to estimate ambient concentrations resulting from the estimated emissions, exposure modeling in order to estimate human exposure to the estimated concentrations, and then final determination of health impacts based on the estimated exposure. Each of these steps is encumbered by technical shortcomings or uncertain science that prevents a more complete determination of the MSAT health impacts of this project.

**Emissions.** The EPA tools to estimate MSAT emissions from motor vehicles are not sensitive to key variables determining emissions of MSATs in the context of highway projects. While MOBILE 6.2 is used to predict emissions at a regional level, it has limited applicability at the project level. MOBILE 6.2 is a trip-based model--emission factors are projected based on a typical trip of 7.5 miles, and on average speeds for this typical trip. This means that MOBILE 6.2 does not have the ability to predict emission factors for a specific vehicle operating condition at a specific location at a specific time. Because of this limitation, MOBILE 6.2 can only approximate the operating speeds and levels of congestion likely to be present on the largest-scale projects, and cannot adequately capture emissions effects of smaller projects. For particulate matter, the model results are not sensitive to average trip speed, although the other MSAT emission rates do change with changes in trip speed. Also, the emissions rates used in MOBILE 6.2 for both particulate matter and MSATs are based on a limited number of tests of mostly older-technology vehicles. Lastly, in its discussions of PM under the conformity rule, EPA has identified problems with MOBILE6.2 as an obstacle to quantitative analysis.

These deficiencies compromise the capability of MOBILE 6.2 to estimate MSAT emissions. MOBILE6.2 is an adequate tool for projecting emissions trends, and performing relative analyses between alternatives for very large projects, but it is not sensitive enough to capture the effects of travel changes tied to smaller projects or to predict emissions near specific roadside locations.

**Dispersion.** The tools to predict how MSATs disperse are also limited. The EPA's current regulatory models, CALINE3 and CAL3QHC, were developed and validated more than a decade ago for the purpose of predicting episodic concentrations of carbon monoxide to determine compliance with the NAAQS. The performance of dispersion models is more accurate for predicting maximum
concentrations that can occur at some time at some location within a geographic area. This limitation makes it difficult to predict accurate exposure patterns at specific times at specific highway project locations across an urban area to assess potential health risk. The NCHRP is conducting research on best practices in applying models and other technical methods in the analysis of MSATs. This work also will focus on identifying appropriate methods of documenting and communicating MSAT impacts in the NEPA process and to the general public. Along with these general limitations of dispersion models, FHWA is also faced with a lack of monitoring data in most areas for use in establishing project specific MSAT background concentrations.

Exposure Levels and Health Effects. Finally, even if emission levels and concentrations of MSATs could be accurately predicted, shortcomings in current techniques for exposure assessment and risk analysis preclude us from reaching meaningful conclusions about project-specific health impacts. Exposure assessments are difficult because it is difficult to accurately calculate annual concentrations of MSATs near roadways, and to determine the portion of a year that people are actually exposed to those concentrations at a specific location. These difficulties are magnified for 70-year cancer assessments, particularly because unsupportable assumptions would have to be made regarding changes in travel patterns and vehicle technology (which affects emissions rates) over a 70-year period. There are also considerable uncertainties associated with the existing estimates of toxicity of the various MSATs, because of factors such as low-dose extrapolation and translation of occupational exposure data to the general population. Because of these shortcomings, any calculated difference in health impacts between alternatives is likely to be much smaller than the uncertainties associated with calculating the impacts. Consequently, the results of such assessments would not be useful to decision makers, who would need to weigh this information against other project impacts that are better suited for quantitative analysis.

Summary of Existing Credible Scientific Evidence Relevant to Evaluating the Impacts of MSATs

Research into the health impacts of MSATs is ongoing. For different emission types, there are a variety of studies that show that some either are statistically associated with adverse health outcomes through epidemiological studies (frequently based on emissions levels found in occupational settings) or that animals demonstrate adverse health outcomes when exposed to large doses.

Exposure to toxics has been a focus of a number of EPA efforts. Most notably, the agency conducted the National Air Toxics Assessment (NATA) in 1996 to evaluate modeled estimates of human exposure applicable to the county level. While not intended for use as a measure of or benchmark for local exposure, the modeled estimates in the NATA database best illustrate the levels of various toxics when aggregated to a national or State level.
The EPA is in the process of assessing the risks of various kinds of exposures to these pollutants. The EPA Integrated Risk Information System (IRIS) is a database of human health effects that may result from exposure to various substances found in the environment. The IRIS database is located at http://www.epa.gov/iris. The following toxicity information for the six prioritized MSATs was taken from the IRIS database Weight of Evidence Characterization summaries. This information is taken verbatim from EPA's IRIS database and represents the Agency's most current evaluations of the potential hazards and toxicology of these chemicals or mixtures.

- **Benzene** is characterized as a known human carcinogen.
- The potential carcinogenicity of **acrolein** cannot be determined because the existing data are inadequate for an assessment of human carcinogenic potential for either the oral or inhalation route of exposure.
- **Formaldehyde** is a probable human carcinogen, based on limited evidence in humans, and sufficient evidence in animals.
- **1,3-butadiene** is characterized as carcinogenic to humans by inhalation.
- **Acetaldehyde** is a probable human carcinogen based on increased incidence of nasal tumors in male and female rats and laryngeal tumors in male and female hamsters after inhalation exposure.
- **Diesel exhaust (DE)** is likely to be carcinogenic to humans by inhalation from environmental exposures. Diesel exhaust as reviewed in this document is the combination of diesel particulate matter and diesel exhaust organic gases.
- **Diesel exhaust** also represents chronic respiratory effects, possibly the primary noncancer hazard from MSATs. Prolonged exposures may impair pulmonary function and could produce symptoms, such as cough, phlegm, and chronic bronchitis. Exposure relationships have not been developed from these studies.

There have been other studies that address MSAT health impacts in proximity to roadways. The Health Effects Institute, a non-profit organization funded by EPA, FHWA, and industry, has undertaken a major series of studies to research near-roadway MSAT hot spots, the health implications of the entire mix of mobile source pollutants, and other topics. The final summary of the series is not expected for several years.

Some recent studies have reported that proximity to roadways is related to adverse health outcomes -- particularly respiratory problems (1). Much of this research is not specific to MSATs, instead surveying the full spectrum of both criteria and other pollutants. The FHWA cannot evaluate the validity of these studies, but more importantly, they do not provide information that would be useful to alleviate the uncertainties listed above and enable us to perform a more comprehensive evaluation of the health impacts specific to this project.
Relevance of Unavailable or Incomplete Information to Evaluating Reasonably Foreseeable Significant Adverse Impacts on the Environment, and Evaluation of impacts based upon theoretical approaches or research methods generally accepted in the scientific community.

Because of the uncertainties outlined above, a quantitative assessment of the effects of air toxic emissions impacts on human health cannot be made at the project level. While available tools do allow us to reasonably predict relative emissions changes between alternatives for larger projects, the amount of MSAT emissions from each of the project alternatives and MSAT concentrations or exposures created by each of the project alternatives cannot be predicted with enough accuracy to be useful in estimating health impacts. Therefore, the relevance of the unavailable or incomplete information is that it is not possible to make a determination of whether any of the alternatives would have significant adverse impacts on the human environment relative to MSATs.

Qualitative Analysis
As discussed above, technical shortcomings of emissions and dispersion models and uncertain science with respect to health effects prevent meaningful or reliable estimates of MSAT emissions and effects of this project. However, even though reliable methods do not exist to accurately estimate the health impacts of MSATs at the project level, it is possible to qualitatively assess the levels of future MSAT emissions under the project, and give a basis for identifying and comparing the potential differences among MSAT emissions, if any, from the various alternatives. The qualitative assessment presented below is derived in part from a study conducted by the FHWA entitled A Methodology for Evaluating Mobile Source Air Toxic Emissions Among Transportation Project Alternatives, found at:

www.fhwa.dot.gov/environment/airtoxic/msatcompare/msatemissions.htm

For each alternative in this EA, the amount of MSATs emitted would be proportional to the vehicle miles traveled (VMT), assuming that other variables such as fleet mix are the same for each alternative. The VMT estimated for each of the Build Alternatives is slightly higher than that for the No Build Alternative, because the additional capacity increases the efficiency of the roadway and attracts rerouted trips from elsewhere in the transportation network. See Table 3 below. This increase in VMT would lead to higher MSAT emissions for the action alternative along the highway corridor, along with a corresponding decrease in MSAT emissions along the parallel routes. The emissions increase is offset somewhat by lower MSAT emission rates due to increased speeds; according to EPA's MOBILE6 emissions model, emissions of all of the priority MSATs except for diesel particulate matter decrease as speed increases. The extent to which these speed related emissions decreases will offset VMT related emissions increases cannot be reliably projected due to the inherent deficiencies of technical models.
Table 3
Annual Vehicle Miles Traveled by Alternative

<table>
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<th>Alternative</th>
<th>Projected ADT</th>
<th>Length (miles)</th>
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<td>24th Avenue</td>
<td>21000</td>
<td>3</td>
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Emissions will likely be lower than present levels in the design year as a result of EPA’s national control programs that are projected to reduce MSAT emissions by 57 to 87 percent between 2000 and 2020. Local conditions may differ from these national projections in terms of fleet mix and turnover, VMT growth rates, and local control measures. However, the magnitude of the EPA projected reductions is so great (even after accounting for VMT growth) that MSAT emissions in the study area and Owatonna are likely to be lower in the future in nearly all cases.

In summary, when a new highway is constructed, the localized level of MSAT emissions for the Build Alternative will be higher relative to the No Build Alternative. This could be offset due to increases in speeds and reductions in congestion (which are associated with lower MSAT emissions) in other locations when traffic shifts away from them. On a regional basis, EPA’s vehicle and fuel regulations, coupled with fleet turnover and less congestion, will over time cause substantial reductions that, in almost all cases, will cause region wide MSAT levels to be significantly lower than today.

(1) South Coast Air Quality Management District, Multiple Air Toxic Exposure Study-II (2000); Highway Health Hazards, The Sierra Club (2004) summarizing 24 Studies on the relationship between health and air quality); NEPA’s Uncertainty in the Federal Legal Scheme Controlling Air Pollution from Motor Vehicles, Environmental Law Institute, 35 ELR 10273 (2005) with health studies cited therein.

4.9 Section 4(f) of the Transportation Act of 1966
There are no Section 4(f) lands or properties adjacent to this project, and the project will not use Section 4(f) lands or properties.

4.10 Section 6(f) of the Land and Water Conservation Fund Act of 1965
The project will not impact Section 6(f) lands or properties.

4.11 Section 106 of the National Historic Preservation Act of 1966
It has been determined that no historic properties eligible for or listed in the Nation Register of Historic Places will be affected by the project. See Appendix B for letters from Mn/DOT’s Cultural Resources Unit.
4.12 Endangered Species Act of 1973
The project will have no effect on Federally-listed T&E species or critical habitat. See Appendix B for a letter from Mn/DOT’s Office of Environmental Services.

4.13 Hazardous Materials
Potential for impacts from contaminated properties have been considered, but because of the project location and nature of the planned work, there is little potential for encountering contaminated materials. Any potentially contaminated materials encountered during construction will be handled and treated in accordance with applicable state and federal regulations.

NRCS analyzed the five alternatives to determine farmland impacts. 39th Avenue/CSAH 7 impacts 35 acres of prime and unique farmland from 10 parcels. The other alternatives impact between 22.54 acres and 39.6 acres. Because avoidance isn’t possible, measures to minimize construction impacts will be used. Where feasible, retaining walls or reinforced soil slopes will be utilized to reduce the amount of land impacted by the railroad overpass and large fill areas. See Appendix B for a copy of the NRCS-CPA-106 form and associated letters.

4.15 Construction Noise
Construction noise has been considered and no impact is anticipated. The rural area has few receptors near the project. Construction will occur during daylight hours.

4.16 Floodplain Management
The project will not encroach into a floodplain.

4.17 Wetland Protection
The project will not impact or encroach into a wetland.

4.18 Section 404 of the Clean Water Act
The project will not involve placement of fill into waters of the U.S. (defined in 33CFR 328).

4.19 Water Pollution/MPCA-NPDES
The project will add approximately 5.1 acres of new impervious area which will account for an estimated additional 1.8 acre-feet of storm water runoff over the 2 miles of road construction during a 10-year, 24 hour event. This estimate used methodology from the “U.S. Soil Conservation Service Technical Release No. 55.”

The quality of site runoff will be improved through the use of shallow, minimum grade ditches along the roadway and infiltration ponds. The shallow ditches will accept runoff from the roadway and remove pollutants and sediment prior to discharging into infiltration ponds. The water will then enter the county ditch system.
During the project development process, a meeting was held with David Morrison and Sara Konrad, staff with the MPCA. The MPCA does have concerns regarding the use of infiltration ponds in an area zoned for industrial development. Owatonna has an ordinance requiring all developments to treat water prior to release into waters of the state. No untreated industrial wastewater will be received in the infiltration ponds.

Erosion prevention and sediment control requirements will be followed in accordance with the NPDES Permit and as outlined in the SWPPP, which includes an erosion control plan, as well as BMP’s as contained in Mn/DOT’s standard specifications, details, and special provisions. During construction the contractor will be responsible for maintaining the erosion and sediment control measures. Steele County will be responsible for maintenance of the erosion and sediment control measures after construction completion.

MPCA also recommends creating a vegetative buffer/riparian area along streams and the county ditch system to prevent the spread of pollution. Steele County will consider a riparian buffer where it is feasible without adding excessive cost to the project.

4.20 Controversial Issues
The project is not anticipated to be controversial.

5. PUBLIC AND AGENCY INVOLVEMENT (AND PERMITS/APPROVALS)

5.1 Public Involvement Plan
The informal public involvement plan for this project included two public information meetings and a public hearing for the original US Highway 14 – Owatonna Beltline study. A public hearing regarding the right of way dedication for the beltlines was held February 8, 2005. Specific to the CSAH 7 project, a meeting was held with Lakeside Foods and the project was discussed with individual property owners that had questions regarding the project. A public hearing was held during the EAW comment period for this project on August 9, 2005. An additional public involvement meeting was held on September 27, 2005 to discuss the potential SW 8th Street/Bridge Street alignments with residents on SW 8th Street. A public hearing will be held for this EA document.

5.2 Summary of Agency Coordination
The following is a list of the agencies contacted during the preparation of this EA:

Minnesota Department of Natural Resources
U.S. Fish and Wildlife Service
State Historic Preservation Office
Minnesota Department of Transportation – District 6
Minnesota State Aid Office – Central Office
Minnesota Department of Transportation – Cultural Resources Unit
Minnesota Department of Transportation – Office of Environmental Services
Lower Sioux Community Council
Dakota, Minnesota and Eastern Railroad  
City of Owatonna  
Steele County  
Minnesota Pollution Control Agency

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<td>Permit</td>
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<tr>
<td>City Plan Approval</td>
<td>City of Owatonna</td>
<td>Approval</td>
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</table>

5.3 Public Comment Period and Public Hearing

Comments from the public and agencies affected by this project are requested during the public comment period described on the transmittal letter distributing this Environmental Assessment. A public hearing will be held after this Environmental Assessment has been distributed to public and required interested Federal, Native American Tribes, state and local agencies for their review.

The public will be given the opportunity to express their comments, ideas and concerns about the proposed project. These comments will be received at the hearing and during the remainder of the comment period, and will become a part of the official hearing record.

5.4 Process Beyond the Hearing

Following the comment period, Steele County, Mn/DOT State Aid and the FHWA will make a determination as to the adequacy of this environmental document. If further documentation is necessary it could be accomplished by preparing an Environmental Impact Statement (EIS), by revising the Environmental Assessment, or clarification in the Findings of Fact and Conclusion, whichever is appropriate.

Steele County prepared a "Negative Declaration" during the 2005 EAW approval process for the state environmental requirements. If an EIS is not necessary, Steele County will also prepare a request for a "Finding of No Significant Impacts" (FONSI) that will be submitted to State Aid and FHWA. If the FHWA agrees that this finding is appropriate, it will issue a FONSI.

Notices of the federal and state decisions and availability of the above documents will be placed in the Minnesota Environmental Quality Boards (MEQB) Monitor. Steele County will also publish notices in local newspapers announcing the environmental and project alternative decisions that were made.
6.2 Bridge Type Selection

A detailed comparison of three bridge alternatives was performed in November 2006. The planned future use of the rail line segment by the DM&E Railroad requires consideration of a future siding and off-track roadway through the underpass. The alternatives studied were 3-Span PCB with Low Abutments, Single-Span PCB with High Abutments, and Single-Span PCB with Low Abutments. A Single-Span Steel Girder Bridge with Low Abutments was also considered, but rejected for detailed comparison based on
preliminary cost computations. The Single Span PCB with Low Abutments was found to be inadequate to satisfy the underpass design criteria. The comparison indicated that the 3-Span PCB alternate was the most economical bridge that would satisfy the underpass design criteria.

6.3 Design Exception
No design exception requests are needed for CSAH 7.

6.4 Traffic During Construction:
It is anticipated that construction will begin in 2009 or 2010. Construction will occur in rural areas and will not have a significant impact on existing traffic. There may be detours or lane closures on SW 18th Street, SW 8th Street, Bridge Street, Park Street and US Highway 14.

6.5 Future Improvements
The road will be widened to four-lanes when traffic levels warrant the expansion. At that time curb and gutter will be added.

6.6 Typical Sections
Typical sections are located in Appendix C.
Figure 5

M# - Monitoring Location
R# - Modeled Residential Receptor
C# - Modeled Commercial Receptor
Appendix B – T/E Species and Cultural Resources

Threatened and Endangered Species Letter – Federal

Mn/DOT CRU letter to Lower Sioux Community Council

Mn/DOT CRU letter – No Historical Property Impacts

NRCS Letters and Form
November 7, 2006

Bryan Benjamin
Bonestroo Rosene Anderlik & Associates
112 7th Street N.E.
Rochester, MN 55906

RE: No Effect Determination (Federal Threatened and Endangered Species)
S.P. 74-607-14.15, County State Aid Highway 7/39th Avenue
West Beltline Construction (New Road Construction)
City of Owatonna
Steele County

Dear Mr. Benjamin:

In response to your request, the proposed action has been reviewed for potential effects to federally-listed threatened and endangered (T&E) species, candidate species and listed critical habitat. As a result of this review, a determination of no effect has been made.

If a Federal agency authorizes, funds, or carries out a proposed action, the responsible Federal agency, or its delegated agent, is required to evaluate whether the proposed action "may affect" listed species. If it is determined that the action "may affect" a listed species, then the responsible Federal agency shall request Section 7 consultation with the U.S. Fish and Wildlife Service. If the consultation shows "no effect" on the listed species, further consultation is not necessary.

Scope of Action
The proposed action involves the construction of County State Aid Highway 7 (39th Avenue) between U.S. Highway 14 and SW 18th Street.

Listed Species
According to the County Distribution of Minnesota's Federally-Listed Threatened, Endangered, Proposed, and Candidate Species list maintained by the U.S. Fish and Wildlife Service, Steele County is within the distribution range of the dwarf trout lily (Erythronium propullans), a federally-listed species.

Critical Habitat
There is no designated critical habitat within the action area.

Known Occurrences
According to the information provided by the Natural Heritage Database (updated 3-6-06) maintained by the Minnesota Department of Natural Resources and the U.S. Fish and Wildlife Service (Twin Cities ES Field Office), there are no known occurrences of federally-listed T&E or candidate species within the action area. As such, the proposed action has little to no potential to have any measurable influence on federally-listed T&E species, candidate species or on the habitat for which they depend.

If modifications are made or new information becomes available which indicates that listed species may be affected, please contact this office. This review was completed for federally-listed T&E and candidate species only. For information on state-listed T&E species, contact the Endangered Species Environmental Review Coordinator, Natural Heritage and Nongame Research Program, Minnesota Department of Natural Resources (651) 259-5107.

Sincerely,

Jason Alcott
Natural Resource Specialist, Senior

cc: USFWS, Gary Wege
OBS, Gerry Larson

An equal opportunity employer
October 20, 2006

Ms. Shannon Blue, Chairperson
Lower Sioux Community Center, Community Council
P.O. Box 308
Morton, MN 56270

Re: SP 74-607-14, (Proposed Construction of 2 Miles of New Rural Roadway from 39th Avenue in the City of Owatonna, Steele County) T107N R20W Sections 7, 18 and 19

Dear Chairperson Blue:

Mn/DOT District 6 is proposing build a new roadway with federal funds administered by the Federal Highway Administration (FHWA). This undertaking is subject to review under Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended, and under the National Environmental Policy Act (NEPA). Section 106 of the NHPA requires Federal agencies to take into account the effects of their undertakings on historic properties (i.e., those properties eligible for or listed on the National Register of Historic Places). This process involves efforts to identify historic properties potentially affected by the undertaking, assess its effects and seek ways to avoid, minimize or mitigate any adverse effects on historic properties. On behalf of the FHWA, which has designated its Section 106 responsibilities to the Minnesota Department of Transportation (Mn/DOT) Cultural Resources Unit (CRU), we are now initiating review to determine the possible effects of the undertaking (if any) on historic properties. In accordance with 36 CFR 800.2(c) of the NHPA and as per the terms of the Programmatic Agreement between the Lower Sioux Community Center, Community Council and the FHWA, we are contacting you to see if you know of any historic properties of religious or historic significance in the area, and to see if you would like to participate in the Section 106 process for this project (i.e., to be a consulting party).

A new road is proposed that will connect US 14 to 18th Street SW in Owatonna, Minnesota. The road would be a 2 mile long, two lane, rural section concrete roadway. The roadbed will be graded wide enough to allow for future expansion to four lanes. The traffic lanes will be 12 feet wide with bituminous shoulders. The road right-of-way will be 150 feet. The road will generally follow the vertical alignment of the existing ground except where it meets the DM&E railroad tracks. At this juncture the road will be elevated and a bridge will be built over the tracks.

The materials taken from adjacent the proposed road to create stormwater ponds will be used to build the railroad overpass. Additional right-of-way will be required to build the bridge and stormwater ponds.

Our office has defined the area of potential effect (APE) for the project as the proposed construction limits. The APE is defined as the geographic area or areas...
We would appreciate any comments you may have about historic, cultural, and archaeological resources and other concerns regarding this project. Our planning schedule is such that we must initiate work on our environmental and historic preservation studies, so we hope to hear from you within 30 days of receipt of this letter. If you indicate that you are not aware of any historic properties with religious or cultural significance and that you do not wish to comment on the project, or if our office does not receive a response within 30 days, we will conclude that you do not wish to be a consulting party for this project and no further project information will be forwarded.

Thank you for your attention to this request. We look forward to working with you on this project.

Sincerely,

Teresa Martin
Archaeologist
Cultural Resources Unit

cc: Bryan Benjamin, Project Engineer
    Joe Hudak, Mn/DOT CRU
    Mn/DOT CRU Project File
November, 27, 2006

Bryan Benjamin, Project Engineer
Bonestroo Rosene Anderlik & Associates
112 7th Street NE
Rochester, MN 55906

Dear Mr. Benjamin,

Regarding: SP 74-607-14, (Proposed Construction of 2 Miles of New Rural Roadway from US 14 to 18th Street SE in the City of Owatonna, Steele County) T107N R20W Sections 7, 18 and 19.

We have reviewed the above-referenced undertaking pursuant to our FHWA-delegated responsibilities for compliance with Section 106 of the National Historic Preservation Act, as amended (36 CFR 800), and as per the terms of the Programmatic Agreement (PA) between the FHWA and the Minnesota State Historic Preservation Office (SHPO) (June 2005).

The project request for review memo indicates a new road is proposed that will connect US 14 to 18th Street SW in Owatonna, Minnesota. The road would be a 2 mile long, two lane, rural section concrete roadway. The roadbed will be graded wide enough to allow for future expansion to four lanes. The traffic lanes will be 12 feet wide with bituminous shoulders. The road right-of-way will be 150 feet. The road will generally follow the vertical alignment of the existing ground except where it meets the DM&E railroad tracks. At this juncture the road will be elevated and a bridge will be built over the tracks.

The materials taken from adjacent the proposed road to create stormwater ponds will be used to build the railroad overpass. Additional right-of-way will be required to build the bridge and stormwater ponds.

Our office defined the archaeological APE for the project to be the construction limits and the APE for architectural history to be the construction limits and the first tier of properties adjacent to those limits. Research found there are no previously recorded cultural resource properties within the APE’s. Mn/Model maps this are as having low potential for archaeology.

We have determined that there will be no historic properties affected by the project as currently proposed. As there are no historic properties within the project APE, the section 106 review of this project is now complete and no SHPO comment period and response are required under the terms of the new PA. If the project scope changes,
Please provide our office with the revised information and we will conduct an additional review.

Sincerely,

[Signature]

Teresa Martin
Archaeologist
Cultural Resources Unit (CRU)

cc:      Scott Anfinson, State Archaeologist
         Joe Hudak, Mn/DOT CRU
         Mn/DOT CO File
         Mn/DOT CRU Project File
January 12, 2005

John Beck
Area Resource Soil Scientist
NRCS
1485 Industrial Boulevard
Rochester, MN  55901-0750

RE:  Steele County/Owatonna West Beltline Farmland Impact Analysis for an Environmental Assessment/Environmental Assessment Worksheet (EA/EAW)

Dear John:

Enclosed you will find two pages of Form NRCS-CPA-106 “Farmland Conversion Impact Rating for Corridor Type Projects” for the Steele County/City of Owatonna West Beltline project.  We are in the process of drafting an EA/EAW for the construction of a roadway between SW 18th Street and existing US Highway 14 West.  The West Beltline right-of-way will be 150’ wide.  A bridge will be built to create a grade-separated crossing of the DM&E Railroad.  I have also included a project area map for your reference.  The alignments from west to east include:

- Red line = SW 18th Street and County Highway 17/52nd Avenue – Corridor A on page 1 of the CPA-106 form;
- Purple line = New alignment – Corridor B on page 1 of the CPA-106 form;
- Green line = 39th Avenue (currently only 2 blocks of city street near existing US Highway 14) – Corridor C on page 1 of the CPA-106 form;
- Orange line = 32nd Avenue and new alignment – Corridor D on page 1 of the CPA-106 form;
- Yellow line = SW 18th Street and 24th Avenue – Corridor A on page 2 of the CPA-106 form.

The EA/EAW will be analyzing the five corridors to determine a preferred alignment for the new West Beltline.  The Minnesota Department of Transportation has already completed the environmental work for the proposed US Highway 14 between Owatonna and Waseca and determined the location of a new interchange and roadway that will connect the proposed US Highway 14 with SW 18th Street.

If you have any questions regarding the project I can be reached at 507-529-6047 or at bbenjamin@bonestroo.com

Sincerely
Bonestroo, Rosene, Anderlik & Associates, Inc.

Bryan Benjamin, P.E.
Project Engineer

Enclosures
cc: Gary Bruggeman, P.E. – Steele County Engineer
February 2, 2005

Mr. Bryan Benjamin, P.E.
Bonestroo, Rosene, Anderlik & Associates
112 7th Street, Northeast
Rochester, MN 55906

Re: Steele County/Owatonna West Beltline Farmland Impact Analysis for an Environmental Assessment/Environmental Assessment Worksheet (EA/EAW)

Enclosed you will find the AD-1006 form with the NRCS parts completed.

If you have any questions regarding the enclosed information, please call me at the above number.

John F. Beck
Area Resource Soil Scientist

Cc: Noel Frank, District Conservationist, Steele County
FARMLAND CONVERSION IMPACT RATING FOR CORRIDOR TYPE PROJECTS

PART I (To be completed by Federal Agency)

1. Name of Project: Steele Co.-Owatonna West Beltline
2. Type of Project: Road Construction, Enviro. Documentation
3. Date of Land Evaluation Request: 1/12/05
4. Sheet 1 of 2
5. Federal Agency Involved: MnDOT/FHWA - Steele County - City of Owatonna
6. County and State: Steele County, Minnesota

PART II (To be completed by NRCS)

1. Date Requested Completed by NRCS: 2/11/01
2. Person Completing Form: Buck
3. Acres Irrigated: 14
4. Average Farm Size: 359.4
5. FSA Farm Number: 67132
6. Estimated acres of cropland that will be converted: 26
7. Amount of Farmland as Certified: 241.6
8. Vacant Land: 63
9. Name of Site Assessment Reviewer: None
10. Date Land Evaluation Requested by NRCS: 2/11/05

PART III (To be completed by Federal Agency)

A. Total Acres To Be Converted Directly: 28
B. Total Acres To Be Converted Indirectly, Or To Receive Services: 40
C. Total Acres In Corridor: 40

PART IV (To be completed by NRCS-Land Evaluation Information)

A. Acres of Forested Land, Utilized Farmland: 6,260
B. Average Farm Size: 39.6
C. Protection Provided By State And Local Government: 20
D. Percent (urban/county) land use: 0.016
E. Value Of Farm To Be Converted/Estimated Value Of Farm: 166,605
F. Corridor D: 91

PART VI (To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))

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<td>4. Protection Provided By State And Local Government</td>
<td>20</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>5. Size of Present Farm Unit Compared To Average</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>6. Creation Of Nonfarmable Farmland</td>
<td>25</td>
<td>0</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>7. Availability Of Farm Support Services</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>8. On-Farm Investments</td>
<td>20</td>
<td>15</td>
<td>13</td>
<td>10</td>
</tr>
<tr>
<td>9. Effects Of Conversion On Farm Support Services</td>
<td>25</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>10. Compatibility With Existing Agricultural Use</td>
<td>10</td>
<td>10</td>
<td>8</td>
<td>4</td>
</tr>
</tbody>
</table>

TOTAL CORRIDOR ASSESSMENT POINTS: 160

PART VII (To be completed by Federal Agency)

Relative Value Of Farmland (From Part V) 100

Total Corridor Assessment (From Part VI above or a local site assessment) 160

TOTAL POINTS (Total of above 2 lines) 280

1. Corridor Selected: 96
2. Total Acres of Farmlands to be Converted by Project: 96
3. Date Of Selection: 100
4. Was A Local Site Assessment Used? Yes

5. Reason For Selection:

Signature of Person Completing this Part: [Signature] DATE

NOTE: Complete a form for each segment with more than one Alternate Corridor
**FARMLAND CONVERSION IMPACT RATING**

**FOR CORRIDOR TYPE PROJECTS**

**PART I (To be completed by Federal Agency)**

1. **Name of Project**: Steele Co.-Owatonna West Beltline
   2. **Type of Project**: Road Construction Environ. Documentation
   3. **Date of Land Evaluation Request**: 1/12/05
   4. **Federal Agency involved**: MnDOT/FHWA - Steele County - City of Owatonna
   5. **County and State**: Steele County, Minnesota

**PART II (To be completed by NRCS)**

6. **Date Request Received by NRCS**: 1/14/05

7. **Persons Completing Form**: [Signature]

8. **Persons Injured**: [Signature]

9. **Average Farmland Size**: 266.605 acres

10. **Assess of Farmland Affected in Project**: 221.685 acres

11. **Local Soil Assessment System**: [Signature]

**PART III (To be completed by Federal Agency)**

12. **Total Acres To Be Converted Directly**: 23
   13. **Total Acres To Be Converted Indirectly, Or ToReceive Services**: 0
   14. **Total Acres in Corridor**: 23

**PART IV (To be completed by NRCS Land Evaluation Information)**

15. **Crop Value/Acre**: 24.54
   16. **Total Acres Statewide**: 0.0095
   17. **Estimated Life Of Economic Activity**: [Signature]

**PART VI (To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 655.5(c))**

<table>
<thead>
<tr>
<th>Corridor</th>
<th>Maximum Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>B</td>
</tr>
</tbody>
</table>

1. **Area in Nonurban Use**: 15
   2. **Perimeter in Nonurban Use**: 10
   3. **Percent Of Corridor Being Farmed**: 20
   4. **Protection Provided By State And Local Government**: 20
   5. **Size Of Present Farm Unit Compared To Average**: 10
   6. **Creation Of Nonfarmable Farmland**: 25
   7. **Availability Of Farm Support Services**: 5
   8. **On-Farm Investments**: 20
   9. **Effects Of Conversion On Farm Support Services**: 25
   10. **Compatibility With Existing Agricultural Use**: 10

**TOTAL CORRIDOR ASSESSMENT POINTS**: 150

**PART VII (To be completed by Federal Agency)**

1. **Relative Value Of Farmland (From Part VI)**: 100
2. **Total Corridor Assessment (From Part VI above or a local site assessment)**: 150

**TOTAL POINTS (Total of above 2 lines)**: 250

**5. Reason For Selection:**

**Signature of Person Completing this Part**: [Signature]

**NOTE**: Complete a form for each segment with more than one Alternate Corridor.
Appendix C – Design Study Report

Typical Sections
PROPOSED BRIDGE NO. 74551

1'-8" LEVEL
1'-6"

50'-4"
56'-0" ROADWAY
28'-0"
28'-0"

4'-0"
FUTURE 12'-0" LANE
12'-0" LANE
12'-0" LANE
FUTURE 12'-0" LANE
4'-0"
SHLDR.

2"

6 C.S.A.H. 7 / 39TH AVENUE
AND WORKING LINE

0.02'/FT

PROFILE GRADE

9" DECK

5'-0"

3'-0"

5 SP. @ 10'-8" = 53'-4"

45M PRESTRESSED CONCRETE BEAMS

NOTE:
ANY RAILROAD REQUIREMENTS FOR SPLASHBOARD AND/OR
PROTECTIVE FENCE ABOVE CONCRETE BARRIER WILL BE COORDINATED
WITH RAILROAD AND INCLUDED IN FINAL DESIGN IF REQUIRED.

PROPOSED TYPICAL SECTION
S.P. 74-607-14 (C.S.A.H. 7)