Appendix I

TH 3/CSAH 1 Access Management
Technical Memorandum
I. Study Background and Purpose
The Rice County Transportation Plan identified Rice County CSAH 1 between TH 246 and I-35 as a Countywide Continuity Corridor. Increasing development in the growing cities of Northfield and Dundas is adding more traffic to CSAH 1. CSAH 1 does not traverse the City of Dundas in a straight east-west fashion, but winds its way through the City following the city street grid.

The governmental jurisdictions of Bridgewater Township, Northfield Township, City of Dundas, City of Northfield, Rice County, and the Minnesota Department of Transportation partnered to develop a study to identify and evaluate potential planning alignment concepts for CSAH 1 between Baldwin Avenue and TH 246.

As part of this study, study partners identified existing intersection issues along TH 3 between CSAH 20 and CSAH 1. Concerns raised included the number and spacing of these intersections and the desired intersection spacing for TH 3. The purpose of this study is to evaluate existing intersections and possible modifications to these intersections.

Figure 1 illustrates the TH 3 subarea study location.

II. Study Approach and Findings
A planning-level intersection spacing evaluation was completed to document existing function and spacing of intersections along TH 3. Intersection characteristics including distances from other intersections and traffic controls were reviewed to confirm issues identified by study partners. Figure 2 illustrates the existing intersection areas and traffic controls.

Intersection Geometry and Spacing
TH 3 is a two-lane undivided highway transitioning to four-lane divided highway within the study segment. The 2004 Average Daily Traffic on TH 3 is 9,400 and TH 3 is posted with a 55 MPH speed limit. There are currently 4 intersection areas on TH 3 in the subarea study:

1. CSAH 20/Cannon City Boulevard
2. Hester Street (approximately 2000’ north of CSAH 20)
3. Gleason Road/Access Road (approximately 1000’ north of Hester Street)
4. CSAH 1 (approximately 1100’ north of Gleason Road)

The closest signalized intersection to the north of the study area is Honeylocust Drive approximately 1600’ north of CSAH 1.
Traffic control signals exist on TH 3 at CSAH 1 and at Hester Street.

Approximately midway between CSAH 1 and Hester Street is a partial intersection with Gleason Road/Access Road. This location currently does not provide left turn access across the median on TH 3. Due to desired access management goals of MnDOT, increased access to TH 3 in this area is not anticipated.

The existing intersection of CSAH 20/Cannon City Boulevard provides full access and is controlled with stop signs on the cross street. Due to approach roadway alignments, this intersection is on a 45° skew. As traffic and intersection issues develop, this skew is anticipated to introduce safety issues.

**Access Management Goals**

TH 3 is categorized as a Minor Arterial in an Urban/Urbanizing area. This category suggests that full access intersections should not be located closer than ½ mile apart. Conditional/secondary intersections could be permitted at 1/8 mile spacing. These intersection types are generally restricted (prohibiting crossing traffic and left turns). Median openings would not be permitted at intersections closer than ¼ mile spacing. Mn/DOT desires to maintain ½ mile spacing of primary intersections.

**Figure 3** illustrates the opportunities for roadway system improvements and expansion in this area. The existing intersections at CSAH 1 and at Hester Street would remain as full access intersections with traffic signal control. The existing partial intersection in the Gleason Road area would remain as right-in/right-out only.

**CSAH 20 Intersection Area**

The existing intersection area skew poses long-term difficulties that at some time will need correction to minimize safety issues. CSAH 20 is proposed to be realigned to improve the intersection angle to near 90° and increase spacing from the existing TH 3/Hester Street intersection. The two intersections would be spaced approximately 7/16 mile apart with the proposed realignment of CSAH 20. Further realignment south would likely result in significant wetland impacts west of TH 3 and therefore is not recommended.

**East Access-Road Continuity**

As development continues on the east side of TH 3, the extension of Stafford Road (east frontage road) should be extended south to intersect with CSAH 20 approximately 660’ southeast of TH 3. This road could also be connected to Eaton Avenue to allow a common intersection with CSAH 20. This would permit orderly traffic patterns to develop as growth continues.

At the CSAH 1 roadway, Stafford Road should be relocated away from TH 3 to line up with the intersection with Jefferson Road. This roadway change would also permit orderly development and traffic patterns that can be dealt with as traffic grows. The CSAH 1/Jefferson Road intersection should be the first primary, full access intersection east of TH 3. Area topography may make the Stafford Road connection to this...
intersection unfeasible. In this case, Stafford Road should be closed at CSAH 1 or realigned to intersect with CSAH 1 at least 1/8 mile east of TH 3 and be restricted to right-in, right-out access only.

Schilling Drive should be extended south to CSAH 20 to provide a continuous public street parallel to TH 3 between CSAH 20 and CSAH 1.

Figures 4 and 5 illustrate the local road connections recommended.

III. Alternatives

The existing intersection spacing is in general conformance with the access standards for roadways of this type. The alternative to the recommendations above, would result in a ‘do nothing’ approach and would result in ultimate traffic safety issues with the skewed intersection area at CSAH 20 and growing congestion and safety problems with close spacing of the access roads to TH 3 at CSAH 20 and at CSAH 1. The ‘do nothing’ approach is not deemed responsive to the identified issues and is not recommended.

IV. Recommendations

1. CSAH 20 realignment to the south to provide a near 90° intersecting angle with TH 3 and access spacing of nearly ½ mile from TH 3/Hester Street.

2. As development continues on the east side of TH 3, the extension of Stafford Road (east frontage road) should be extended south to intersect with CSAH 20 approximately 660’ southeast of TH 3. Eaton Avenue should be aligned to this intersection.

3. At the CSAH 1 roadway, Stafford Road should be relocated away from TH 3 to line up with the intersection with Jefferson Road.

4. Schilling Drive should be extended south to CSAH 20 to provide a continuous public street parallel to TH 3 between CSAH 20 and CSAH 1.
January 24, 2008

Dennis Luebbe, County Engineer
Rice County
610- NW 20th Street
Faribault, MN 55021

Chris Chromy, Transportation Engineer
Bolton & Menk, Inc.
12224 Nicollet Avenue
Burnsville, MN 55337

Re: CSAH 1 Study Final Comments

Dear Mr. Luebbe and Mr. Chromy:

Minnesota Department of Transportation (Mn/DOT) District 6 staff has discussed the findings from the Rice County CSAH 1 Study and reviewed some of the discussion points from the CSAH 1 Technical Advisory Committee meeting of December 19, 2007. Mn/DOT supports the findings of the document as a whole and would like to provide clarification to previous comments from the comment letter dated July 30, 2007.

In the initial letter, comments addressing Minnesota State Highways 3 and 246 were made. The following amendments to the letter are for your consideration:

**Minnesota State Highway 3**

- Mn/DOT is favorable to a concept that would provide a 4-legged intersection at MN 3/CASAH 20 at a proposed southern junction.
- The bulging out of Stafford Road by an additional 100 feet from MN 3 at Hester Street may not be feasible due to the close proximity of Fastenal’s front doors. Achieving the maximum distance possible for the purposes of vehicle stacking is the primary goal at this intersection.

**Minnesota State Highway 246**

- A joint effort between Mn/DOT and other partners (Rice County, townships) will be necessary to study the feasibility of both 4-legged and 5-legged roundabout concepts when appropriate.
- While 115th Street is just outside the study area, Mn/DOT still feels strongly that there should be local buy-in on the recommendations for closure of the west access of 115th Street and squaring up of the east access to MN 246.

**Favored Alternative**
Mn/DOT would prefer that the maps for the preferred alternative(s) be placed up front so the potential for confusion between alternatives is reduced.

Please call me should you have further questions or concerns.

Sincerely,

Chris Moates
Planning Director

cc: Greg Paulson
    Chad Hanson
    File
July 30, 2007

Dennis Luebbe, County Engineer  
Rice County Highway Department  
610 20th Street NW  
Faribault, MN 55021

Chris Chromy  
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RE: CSAH 1 Study Access Management proposals  
MN 3   CS 6603  
MN 246   CS 6604

Dear Mr. Luebbe and Mr. Chromy:

Minnesota Department of Transportation (Mn/DOT) District 6 staff has reviewed the proposals in the access management portion of the Rice County CSAH 1 Corridor Preservation Study affecting Minnesota State Highways 3 and 246. Considerable effort has obviously gone into the Plan, including the access management portion of the Plan. Mn/DOT would like to take this time to offer some modifications to the alternatives to those that were proposed.

The following points pertain to MN 3 and are as follows:

- The frontage road system on the west side MN 3 should be continuous from CSAH 1 to CSAH 20 as part of the local transportation network. This frontage road should also serve Menards.
- A disjointed CSAH 20 crossing MN 3 will not function well. Mn/DOT would prefer to see a full movement intersection. Without the full intersection, too much traffic would be pushed onto MN 3 between the east and west junctions of CSAH 20. Mn/DOT would favor the realignment of CSAH 20 (east) to the north of the existing farm to match with the proposed realignment of CSAH 20 (west).
- Stafford Road North should be bulbed out by approximately an additional 100 feet from MN 3 at Hester Street.
- The right-in, right-out at Cannon Lane is acceptable.

The following points pertain to MN 246 and are as follows:

- Access to 115th Street should be closed from MN 246 on the west side of MN 246. The leg of 115th Street east of MN 246 should be squared up with MN 246.
- The proposed reconfiguration of the MN 246/CSAH 1 intersection is an expensive fix. Left turn lanes would be needed and culverts would need to be extended.
• Should a roundabout be determined to be the best intersection control in the future, a 5-legged roundabout appears to be a viable alternative, incorporating CSAH1, MN 246 north, MN 246 south, County Road 82, and CSAH 81.
• The AADT is listed both as 2500 (Figure 3 and 3650 (Page 2 of the text) on MN 246 south of CSAH 1 and 81.

Mn/DOT would appreciate these modifications be placed in the plan as viable alternatives.

Thank you again for your efforts in putting together this study of an important east-west corridor in Rice County. We look forward to continuing our working relationship for this corridor and others in Rice County.

Sincerely,

Chris Moates
District 6 Planning Director

cc: Greg Paulson, Chad Hanson, File

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