

Trunk Highway 336/ 12th Avenue South Corridor Study FINAL REPORT

Prepared for the

***Fargo-Moorhead Metropolitan
Council of Governments***

Prepared by

SRF CONSULTING GROUP, INC.

June 2006



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I. BACKGROUND AND STUDY PURPOSE

The Trunk Highway 336/12th Avenue South Corridor Study represents the culmination of a series of important local and metropolitan transportation land use and infrastructure plans that were prepared in the last five years. These earlier efforts were used as the study team addressed the key objectives of the corridor study. A brief summary of the past efforts and the specific purpose of the corridor study is presented below.

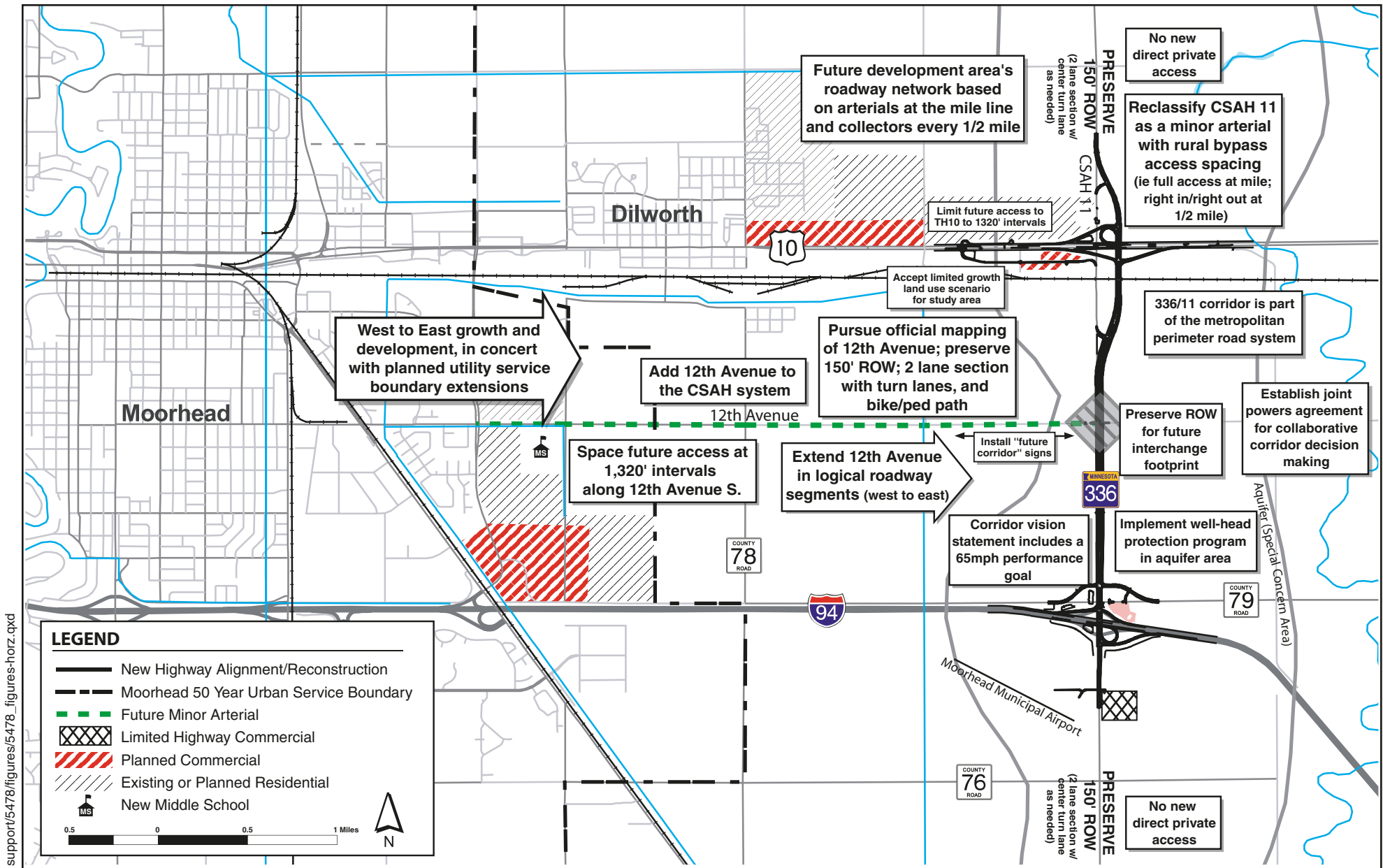
A. Background

In 2004, the Fargo-Moorhead Metropolitan Council of Governments (Metro COG), along with state and local partners, developed a Corridor Management Plan (CMP) for TH 336/County State Aid Highway 11 in Clay County, Minnesota. Metro COG completed the CMP to ensure that future development in the area would not significantly affect the safety or mobility of the TH 336/CSAH 11 corridor. All affected governmental bodies unanimously approved the CMP. The CMP provides:

- A cooperative vision for the corridor and its connecting roadways
- A major land use, zoning, and platting strategy that is harmonious with the TH 336 and CSAH 11 development plan
- A complementary land use and access plan for the subarea within the context of smart growth land development concepts
- An evaluation of traffic impacts to TH 336 for different land use scenarios
- An access, right-of-way, corridor preservation, and funding strategy for the west to east extension of 12th Avenue South
- A collaborative corridor management decision-making process for this interjurisdictional corridor
- A staged CMP action plan that identifies activities, agency responsibilities, and timeframes

The CMP also addressed important issues, including US 75 turnback routing, utility extension to developing rural areas along the corridor, and sensitive environmental issues (i.e., protection of groundwater, prime agricultural land, and wetlands). The CMP provided Metro COG with a sound basis for undertaking the next logical phase of the subarea planning.

The key CMP findings and recommendations are summarized in Figure 1. For a synopsis of the TH 336/CSAH 11 Corridor Management Plan action plan, see Appendix A.



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CORRIDOR MANAGEMENT PLAN FINDINGS AND RECOMMENDATIONS

TRUNK HIGHWAY 336/12TH AVENUE SOUTH CORRIDOR STUDY
 Fargo-Moorhead Metropolitan Council of Governments

Figure 1

B. Corridor Study Purpose and Study Area

The purpose of the TH 336/12th Avenue South Corridor Study is to more closely explore the macro-level issues discussed in the CMP, with an emphasis on the TH 336/12th Avenue South intersection. The key corridor study objectives include:

- Developing geometric alternatives for a grade-separated interchange at TH 336 and 12th Avenue South and associated cost estimates.
- Defining right-of-way needs for a grade-separated interchange at TH 336 and 12th Avenue South and a new west to northbound ramp at TH 336 and TH 10.
- Presenting the operational impacts to TH 336 of land use scenarios adjacent to the TH 336/12th Avenue South intersection.
- Delineating a backage/frontage road system for areas west of TH 336 to accommodate future development and intersection improvements, traffic movement, relevant east-west corridors, and access changes along TH 336.
- Investigating an interim intersection configuration at TH 336 and 12th Avenue South that would precede eventual grade separation.
- Developing an understanding of the potential to extend 12th Avenue South east of TH 336.
- Developing a mutually agreeable timeline for the 12th Avenue South extension beyond CSAH 78 (50th Street), while considering the potential buildout of other east-west corridors between the City of Moorhead's 40th Street and TH 336.
- Soliciting comments from key resource agencies regarding the potential issues related to new interchange layouts at TH 336 and 12th Avenue South and at TH 336 and TH 10.

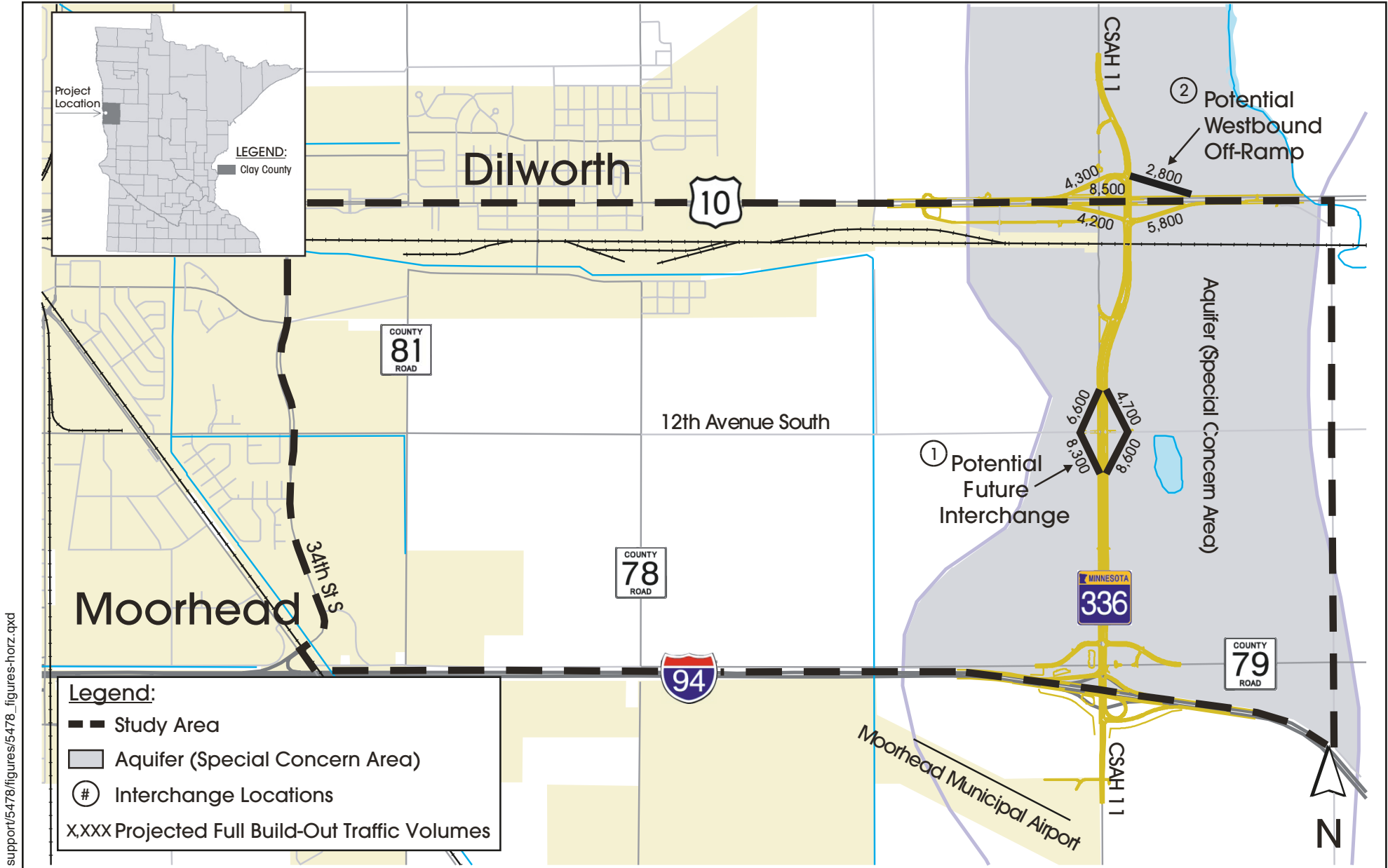
Figure 2 shows the study area and highlights the TH 336 corridor between I-94 and TH 10.

C. Related Studies and Planning Activities

Recently, other agencies have completed important planning activities that are germane to this corridor study. These planning efforts include the:

- Moorhead Comprehensive Plan
- Moorhead Growth Area Plan (GAP)
- Moorhead Long-Range Sanitary and Storm Sewer Master Plan
- Clay County Development Code
- Dilworth Comprehensive Plan and Growth Area Amendment
- Metropolitan Short- and Long-Range Transportation Plan
- Moorhead Public Service Wellhead Protection Plan

The TH 336/12th Avenue South Corridor Study used these planning results in preparing the subarea's land use and roadway network alternatives and analysis.



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STUDY AREA

TRUNK HIGHWAY 336/12TH AVENUE SOUTH CORRIDOR STUDY
 Fargo-Moorhead Metropolitan Council of Governments

Figure 2

II. PUBLIC INVOLVEMENT

Public involvement was an important part of the study process. This project used various methods to obtain public input, which included a Study Review Committee, focus group meetings, and open house meetings. The study team and Metro COG also presented the draft study findings to the various affected planning commissions, the Dilworth and Moorhead City Councils, and the Clay County Board of Commissioners.

A. Study Review Committee

The Study Review Committee (SRC) included representatives from the Cities of Moorhead, Dilworth, and Glyndon; Moorhead and Glyndon Townships; Clay County; Metro COG; the Buffalo-Red River Watershed District (BRRWD); and the Advanced Traffic Analysis Center (ATAC). The purpose of the SRC was to guide the study process, provide input, review alternatives, assist in refining concepts, and act as a feedback mechanism to their respective governing bodies.

The SRC met several times during the study process, and agendas and meetings minutes are presented in Appendix B.

B. Focus Group

The focus group consisted of key stakeholders, including landowners with development interests and senior staff representatives from Moorhead and Dilworth, Clay County, and the Minnesota Department of Transportation (Mn/DOT). The purpose of the focus group was to provide direct input regarding project issues/needs and proposed alternatives.

The study team conducted two focus group meetings. The first meeting was held early in the process where focus group members provided input on issues/needs/constraints, land development scenario policies, public utility extensions, future TH 336 access options, future subarea roadway network alternatives, and guiding principles for accelerated development. The second focus group meeting was held in the middle of the study process, and focus group members were asked to provide input on various alternatives.

The SRC considered focus group input prior to preparing the draft report. Appendix C includes agendas and meeting minutes from each of the focus group meetings.

C. Public Meetings

The study team conducted two open house meetings: one at the beginning of the study process and the other in the middle of the project. Each meeting used an open house format with a formal presentation. At the first meeting, the study team presented the study background/purpose and preliminary roadway network

systems and asked for participants to provide input on study issues/needs. The purpose of the second open house was three-fold: 1) to present results of the technical analysis, 2) to explain environmental issues/impacts, and 3) to discuss alternative evaluation findings. The public was asked to comment on this information, and the SRC considered this input prior to preparing the draft report. Appendix C includes sign-in sheets and comments from each of the public meetings.

D. Planning Commission Meetings

Upon preparation of the draft report, Metro COG staff met with the Planning Commissions representing each affected township, the cities of Moorhead and Dilworth, and Clay County to discuss the study findings and preliminary recommendations. Comments from each planning commission were assembled and considered by the study team prior to finalizing the document for presentation to the three governing bodies.

E. City Council Meetings

The study team and Metro COG met with the Dilworth City Council on May 8, 2006, and with the Moorhead City Council on May 15, 2006, to present the draft study findings and recommendations. Each City Council approved the Study recommendations and agreed to cooperatively work with other stakeholders to implement these recommendations. Resolutions of Adoption are provided in Appendix D.

F. Clay County Board of Commissioners

After meeting with the Dilworth and Moorhead City Councils, the Metro COG and the study team also presented the draft study findings and recommendations to the Clay County Board of Commissioners on June 6, 2006. At this meeting, the County Board also approved the Study and its recommendations, and committed to working with key project partners in implementing the study's findings. A Resolution of Adoption is provided in Appendix D.

III. SUBAREA ISSUES AND CONSTRAINTS

The subarea and the area adjacent to the TH 336 corridor presented some environmental challenges. Also, there were jurisdictional and transportation issues that needed to be addressed as alternatives were being developed. These concerns were grouped into three categories and are described below and presented in Figure 3.

A. Environmental

The study considered several environmental factors when developing the various roadway network alternatives. These environmental concerns are described below:

1. Agricultural Land

Currently, the area between the City of Moorhead municipal boundary and TH 336 is virtually all in agricultural use. Clay County and the Cities of Moorhead and Dilworth have Growth Area Plans (GAPs) that propose various urban land uses for this area. The local jurisdictions and developers will need to work with United States Department of Agriculture's Natural Resources Conservation Service (USDA NRCS) to determine the impacts to prime farmland resulting from the conversion to urban development.

2. Aquifer

Directly adjacent to the TH 336 corridor is a very sensitive aquifer area that is used for municipal drinking water. Moorhead Public Service developed a Wellhead Protection Plan in consultation with the Buffalo-Red River Watershed District (BRRWD), affected local governments and landowners within the protection areas. The Plan requires that new commercial businesses within the Wellhead Protection Area/Drinking Water Supply Management Area (WHPA/DWSMA) be connected to municipal sewage treatment and water supply. The goal of this objective is to preserve existing groundwater resources by preventing potential contaminant sources. Also, the Moorhead Public Service has established an objective proposing that land use zoning regulations prevent placement of new underground tanks or bulk storage of hazardous materials within designated sensitive areas. This is to prevent contamination of the aquifer from land use in areas of known sensitivity. Clay County has incorporated the key elements of the Wellhead Protection Plan into the County Zoning Ordinance.

3. Contaminated Sites

When TH 336 was reconstructed, an Environmental Assessment was conducted along the corridor to investigate any contaminated sites. To date, four sites have been identified: two near the I-94/TH 336 interchange and two near the TH 336/TH 10 interchange. In the future, as the subarea

develops and roadway networks are considered, local agencies should coordinate with other federal and state agencies to determine if other sites exist within the study area.

4. Wetlands

According to the U.S. Fish and Wildlife's National Wetlands Inventory (NWI), there is one wetland located near the southeast quadrant of the TH 336/12th Avenue South intersection. This wetland was created by the gravel operations on the site. According to the Moorhead Public Services (MPS) hydrologist, this pond is linked with the sensitive aquifer. Therefore, any proposed alternatives should avoid or minimize impacts to this wetland.

B. Jurisdictional

The SRC and public input identified specific jurisdictional constraints that must be considered during the development of various subarea alternatives:

1. Utility Services

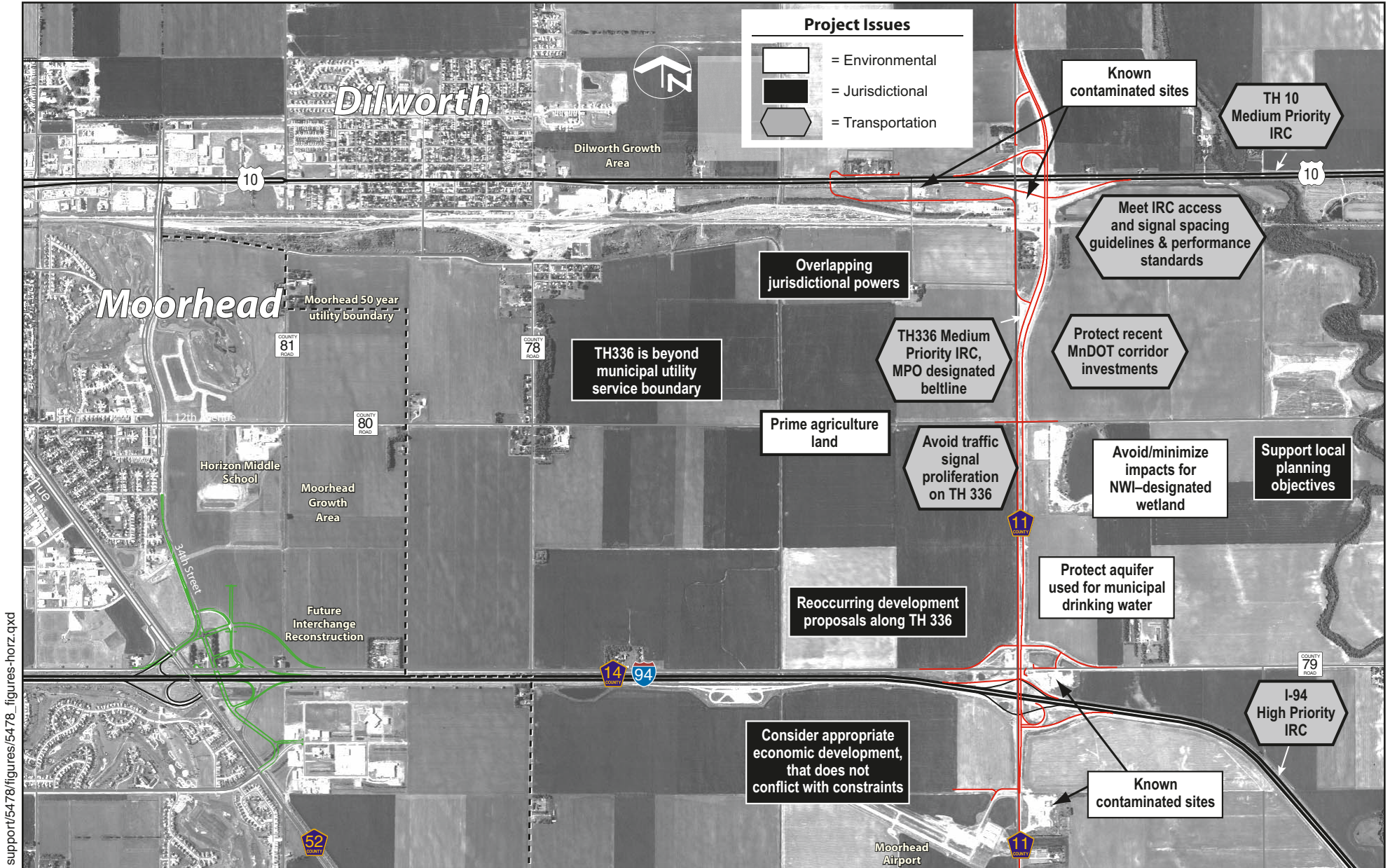
The City of Moorhead's 50-year urban service boundary does not extend into the study's subarea, and TH 336 is beyond the municipal utility service boundary. Neither city nor county are able to provide utility service to this area without significant investment.

2. Development Objectives

Future economic or other types of development within the subarea must not conflict with study objectives. Development must also support city and county local planning objectives for the area, which are reflected by recently approved growth plans.

3. Multi-jurisdictional Powers

Within the study area, there are five jurisdictions that exert some form of decision-making over land use. These jurisdictions include two townships, two cities, and Clay County. In addition, the BRRWD and the County Soil Conservation District also have powers that indirectly affect land development. Mn/DOT and state regulatory agencies also have interest and powers that apply to the TH 336 corridor. All interested parties must work together to develop a subarea land use plan and roadway network that is consistent with jurisdictional planning objectives.



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SUBAREA ISSUES

TRUNK HIGHWAY 336/12TH AVENUE SOUTH CORRIDOR STUDY
 Fargo-Moorhead Metropolitan Council of Governments

Figure 3

C. Transportation

The TH 336/CSAH 11 Corridor Management Plan (2004) identifies several transportation guidelines for the TH 336/CSAH 11 corridor, which are listed below:

1. Mn/DOT Recent Investments

Mn/DOT recently made a major \$27 million investment in the TH 336 corridor by reconstructing TH 336 between I-94 and TH 10. The improvements included constructing TH 336 as a four-lane divided highway with limited access, building a railroad/TH 10 overpass, and reconstructing the I-94 interchange. In order to protect these major investments as the subarea develops and roadway networks are considered, local transportation improvements should not adversely affect the functioning TH 336 corridor.

2. Interregional Corridor Guidelines

Mn/DOT has designated TH 336 as a medium interregional corridor (IRC) and its access spacing is defined as a Category 2A, because TH 336 functions as an exurban, bypass facility. A Category 2A roadway has primary access every mile and secondary access every half mile. Also, signals are strongly discouraged, and private access is not allowed. TH 336 connects two other IRCs: TH 10, a medium priority IRC, and I-94, a high priority IRC.

3. MPO Transportation Plan Recommendations

The Metro COG's Short- and Long-Range Transportation Plan has established a future functional classification roadway system for the subarea, and it makes specific recommendations on both short- (2004-2010) and long-term (2010 - 2025) roadway/structure and trail improvements for the study area. Major objectives of this future roadway system include:

- TH 336 serving as the eastern segment of a metropolitan beltline
- The extension of 12th Avenue South from Moorhead to TH 336 as a minor arterial
- The preservation of right of way for an interchange at TH 336/12th Avenue South

These recommendations were approved by all affected local governments and should be considered the basic transportation system framework for the study area's roadway network.

IV. SUBAREA VISION STATEMENT, CORRIDOR PERFORMANCE OBJECTIVES AND PRINCIPLES GUIDING DEVELOPMENT

Mn/DOT, Clay County, and other local jurisdictions have made significant investments in the TH 336/CSAH 11 corridor. All parties wish to ensure that future development and/or other changes will not adversely affect the safety and mobility of the corridor or negatively impact the sensitive aquifer under TH 336. Early in the process, study partners developed a corridor vision statement that achieves both regional and local transportation goals and accommodates previously established development land use and conservation goals. The vision statement and its ancillary corridor performance objectives were used to develop, analyze, and evaluate proposed roadway network alternatives and their impacts.

A. Corridor Vision Statement

Based on the 2004 TH336/CSAH 11 Corridor Management Plan (CMP) recommendations and direction from the SRC and stakeholder and public input, the following key elements were incorporated into the TH 336 corridor vision statement:

- Metro COG's Transportation Plan includes the TH 336/CSAH 11 corridor as the eastern segment of the metropolitan perimeter system.
- Metro COG's Transportation Plan includes the extension of 12th Avenue South from Moorhead to TH 336 as a short-term element (2004-2010).
- The average corridor speed on TH 336 should remain near the current posted speed limit of 65 miles per hour (mph).

B. Corridor Performance Objectives/Measures

In addition to the vision statement, the TH 336/12th Avenue South Corridor Study established performance measures/criteria on which to evaluate proposed alternatives. One of the main performance measures was Mn/DOT's classification of TH 336 as a Medium-Priority IRC and its Category 2A access standard. Category 2A covers exurban bypass areas where primary access is allowed every mile, secondary access is allowed every half mile (full movement only if low risk conflicts exist), traffic signals are strongly discouraged, and additional private access is to be avoided. However, if an interchange is located along the corridor, (i.e., at 12th/TH 336), then the half-mile secondary access is not permitted.

Other performance measures that were added by the public input process and used when evaluating the TH 336 corridor and roadway network alternatives included:

- Traffic operations level of service (LOS) at the intersection/interchanges of TH 336 and 12th Avenue South should be LOS C or better for all major movements.

- Environmental impacts must be avoided, minimized, or mitigated.
- Aquifer quality must not be degraded.
- Moorhead Public Service's Wellhead Protection Plan must be complied with.

C. Principles Guiding Accelerated Development

The land use assumptions for this study assume that, over the next 25 years, development will occur east of County Road 81, within the City of Dilworth to its current city limits, and along portions on the west side of TH 336. These land use plans are based primarily on the Moorhead and Dilworth GAPS. If, however, a jurisdiction wishes to deviate from the plans, the SRC agreed that certain principles should be established by affected governing bodies before development is approved. The SRC developed a list of principles to guide future decisions concerning accelerated development within the TH 336/ TH 10 subarea that apply to areas between Moorhead's eastern city limits and TH 336 and Dilworth's southern city limits and I-94:

- Consensual acceptance of the proposed development should be secured among all affected jurisdictions (e.g., cities, townships, and county). If an area is annexed, then this particular principle would no longer be applicable, and the remaining principles would be implemented at the discretion of the annexing governing body.
- Development should be of a size and density sufficient to justify the accelerated utility/infrastructure investment and its benefits should outweigh its costs. Development justification can be judged based on several factors, such as the number of jobs created, the balance between tax revenue generated, the cost to provide services, and environmental risks associated with the development.
- Agreement should be secured from developers that they will pay for a portion of the cost needed to accommodate accelerated development, such as infrastructure construction, including utility extensions, and roadway extensions.
- Local governments that support the development in this subarea should consider cooperatively bonding for the necessary roadway/infrastructure improvements that are not paid by developer contributions.
- Development should comply with Moorhead Public Service Wellhead Protection Program.
- Development should not degrade the TH 336 corridor's performance or adversely affect the corridor's vision statement.

V. ALTERNATIVE DEVELOPMENT AND ANALYSIS

Development of the subarea's alternative network used information from the Moorhead and Dilworth Growth Area Plans (GAPs). The GAPs were used to establish future land uses within the subarea. The proposed land uses were planned for "full buildout," which is beyond the year 2030 time frame for the corridor study. Therefore, the SRC developed two land use scenarios: one for 2030 and one for full buildout. Based on the land use scenario, subarea roadway networks were developed for both. Full buildout scenarios were developed to determine an ultimate roadway section and ancillary corridor preservation. In this section, the current land uses in the area are discussed, planned future land uses for 2030 and full buildout are described, and roadway alternatives and their anticipated future traffic volumes under various growth scenarios are presented.

A. Important Existing Land Use Considerations

1. Agriculture

Current land use in the study area is predominantly agriculture with some isolated commercial and industrial development. There is an agricultural processing business south of Dilworth on CR 78 and 12th Avenue South, a grain elevator located in the southwest quadrant of the TH 10/ TH 336 interchange, and a KOA Campground along 28th Avenue South. Additionally, there is a non-active gravel pit along the eastside of TH 336. The pit owner has a permit to mine some material from the south end of the pit above the water line; however, the previously mentioned Wellhead Protection Plan prohibits the expansion of existing and new gravel or mining operations within the sensitive areas of the aquifer.

2. Airport

Another significant land use in the general area is the Moorhead Municipal Airport. Currently, the airport has one runway and can accommodate nighttime landings. The airport also has a helicopter landing pad and chemical loading facility that is provided for crop-spraying airplanes. The chemical loading facility is located outside of the sensitive aquifer area.

3. Aquifer Area

Under the TH 336 corridor exists an aquifer that has been designated a sensitive area. The Moorhead Public Service has established a Wellhead Protection Program to prevent contamination of this aquifer, which serves as the primary source of municipal water supply for both cities. The Wellhead Protection Program requires that all new commercial businesses be connected to a municipal sewage treatment and water supply and that land use zoning regulations prevent placement of new underground tanks or bulk storage of hazardous materials within the sensitive area.

4. Contaminated Sites

Four known or potentially contaminated properties were identified in the study area during the Environmental Assessment for the Reconstruction of TH 336 (year 2000). Three of these sites were considered at high-risk for contamination.

Two of the four sites are located south of TH 10 and east of TH 336. One, the former Agro Distributing property, stored agricultural chemicals and releases were reported. This site was remediated during the construction of the TH 10/TH 336 interchange project. The other, Northern Grain Company property, has above and under ground petroleum storage tanks on site but was not considered high risk since no evidence of spills or releases were present.

The two other sites, near the I-94/TH 336 interchange, were former truck stops, and both are contaminated with petroleum products and wastewater pond seepage. The southernmost site was tax-forfeited to the state in 1996, and state funds have been used to remove the contaminants from this site. The other site is located north of I-94. Preliminary tests indicate that as much as 18 feet of fuel has filtered downward toward the Buffalo Aquifer.

5. New 34th Street/I-94 Interchange

The City of Moorhead is completing final design plans and anticipates the reconstruction of the interchange by 2008. As part of this \$11 million project, the roadway system on the southeast corner of the subarea will be reconfigured, and major retail developments in the north side of the interchange are anticipated.

6. Horizon Middle School

Just east of the intersection of 12th Avenue South and 34th Street, the Horizon Middle School has been constructed. It is anticipated that the school will continue to generate increased housing development on the eastern segment of the subarea.

7. Intermodal Facility

Currently, local governments, Metro COG, and the BNSF Railway are studying the feasibility of a major intermodal facility in the metropolitan area. One possible location is east of Dilworth and just south of the existing BNSF trackage. This facility, if developed, could generate up to 800 truck deliveries per day.

B. Future Land Use Assumptions

The Metro COG developed a land use plan for the study area based on approved GAPs. The future land use plan represents full buildout, which will occur sometime beyond 2030. The corridor study's timeframe and traffic forecasts are

for the year 2030 (a 25-year planning horizon). Therefore, Metro COG worked closely with the SRC to determine future land use assumptions (i.e., growth rates and areas) affecting development patterns for the next 25 years. Conceptual roadway networks were then developed based on these land use assumption maps. Both the 2030 and full build roadway networks assumed land uses are compatible with the Moorhead and Dilworth GAPS.

At the October 2005 meeting, the SRC agreed on the location of growth over the next 25 years. Growth is anticipated for the following areas:

1. The City of Moorhead will develop to the east of County Road 81.
2. The City of Dilworth will fully develop to its current city limits (Phase 1 of their utility phasing plan).
3. Development will occur along the west side of TH 336.

C. Roadway Alternatives and Future Traffic Volumes

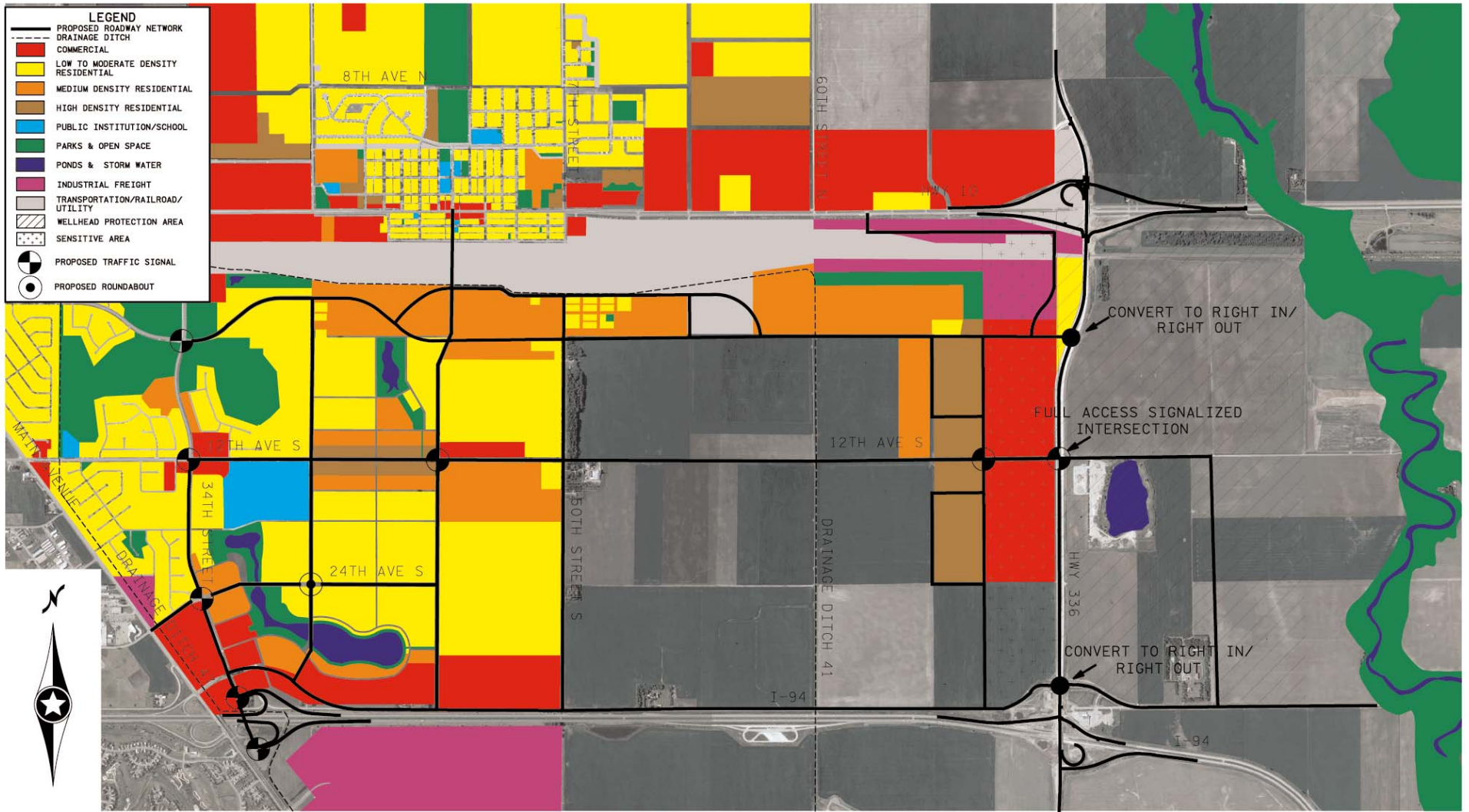
Based on the 25-year future and full buildout land use scenarios, the SRC developed the following five roadway network and traffic model alternatives for the year 2030 and for the full buildout scenario:

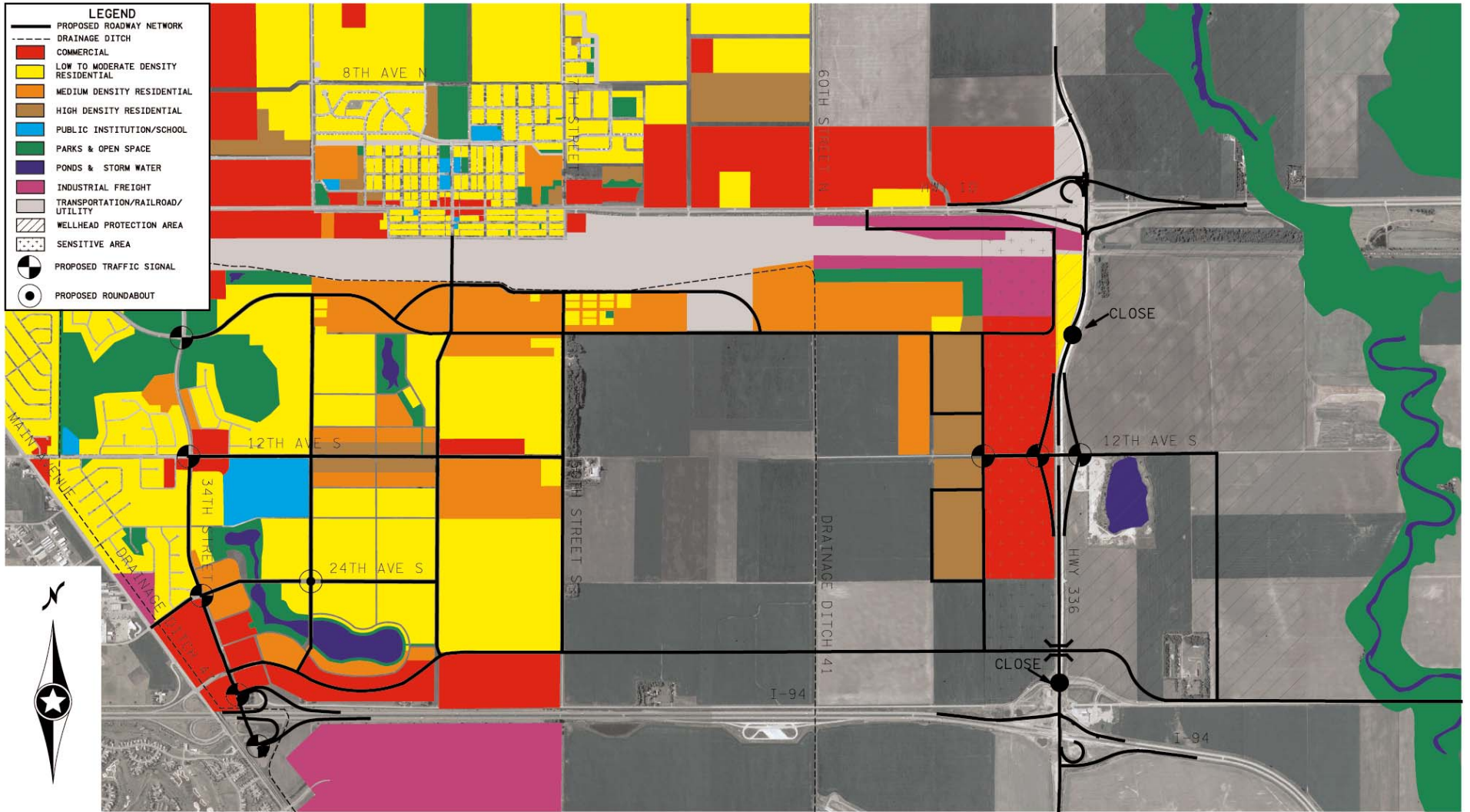
- Alternative 1 –2030 land use assumptions with 12th Avenue South extension and with TH 336/12th Avenue South at-grade intersection (Figure 4)
- Alternative 2A – 2030 land use assumptions without 12th Avenue South extension, with TH 336/12th Avenue South interchange, and with a 28th Avenue overpass of TH 336 (Figure 5)
- Alternative 2B – 2030 land use assumptions with 12th Avenue South extension, with TH 336/12th Avenue South interchange, and with 4th Avenue overpass of TH 336 (Figure 6)
- Alternative 3A – Full buildout land use assumptions with 12th Avenue South extension, with TH 336/12th Avenue South interchange, with 55th Street overpass of the railroad, and with an I-94/55th Street interchange (Figure 7)
- Alternative 3B – Full buildout land use assumptions with 12th Avenue South extension, with TH 336/12th Avenue South interchange, and with 55th Street overpasses of the railroad and I-94 (Figure 8)

Table 1 below summarizes these roadway configurations and is coded to Figures 4 to 8, which present the forecasted 2030 traffic volumes for each scenario.

**TABLE 1
LAND USE SCENARIOS AND ROADWAY NETWORK ALTERNATIVES SUMMARY**

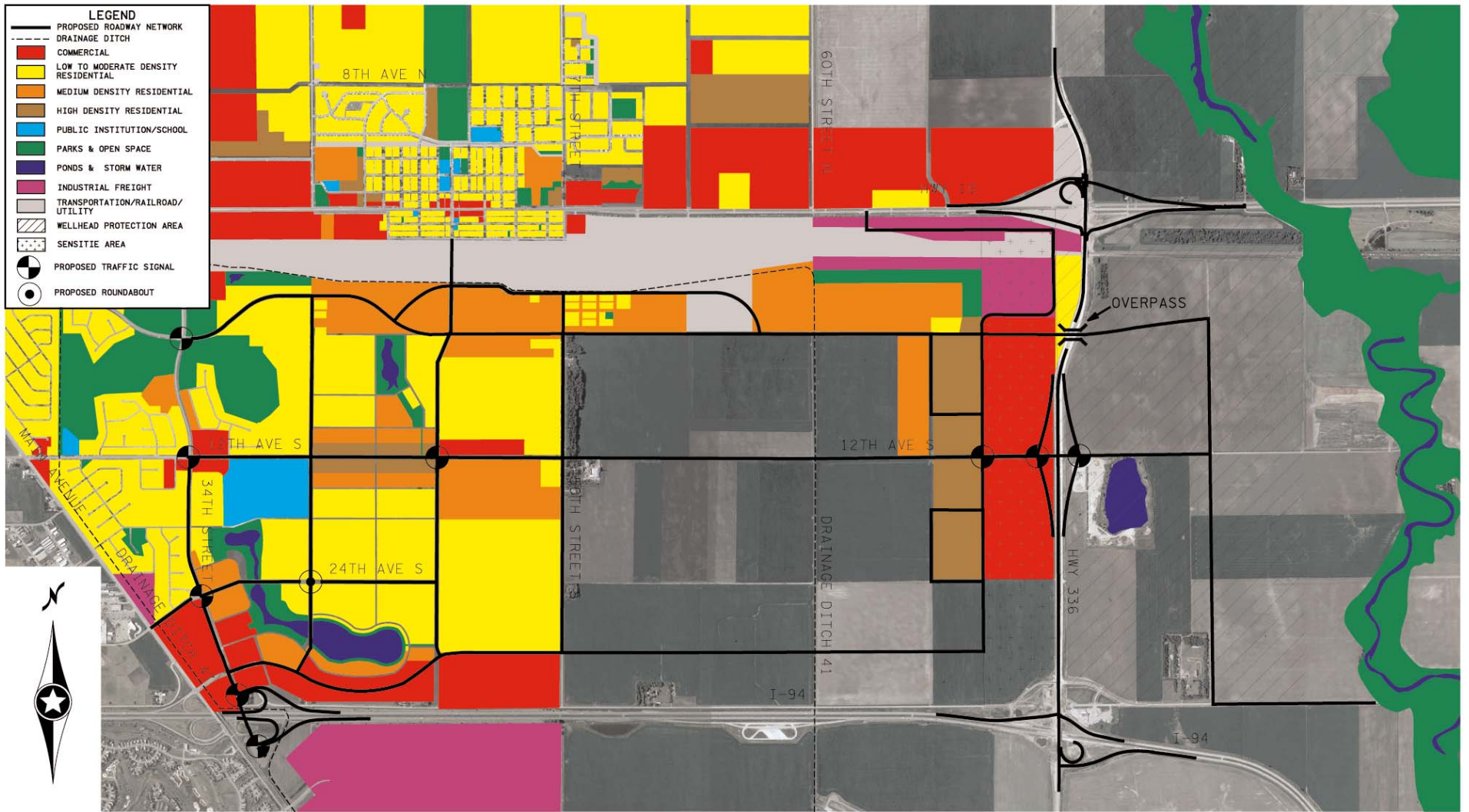
		ROADWAY NETWORK CONFIGURATIONS										
		12th Avenue extension		TH 336/ 12th Avenue South		28th Avenue		4th Avenue		55th Street		
	Alternative	With	Without	At-grade intersection	Interchange	At-grade intersection	Overpass	At-grade intersection	Overpass	RR Overpass	I-94 Overpass	I-94 interchange
2030	1	X		X		X		X				
	2A		X		X		X					
	2B	X			X				X			
Full Build-out	3A	X			X					X		X
	3B	X			X					X	X	





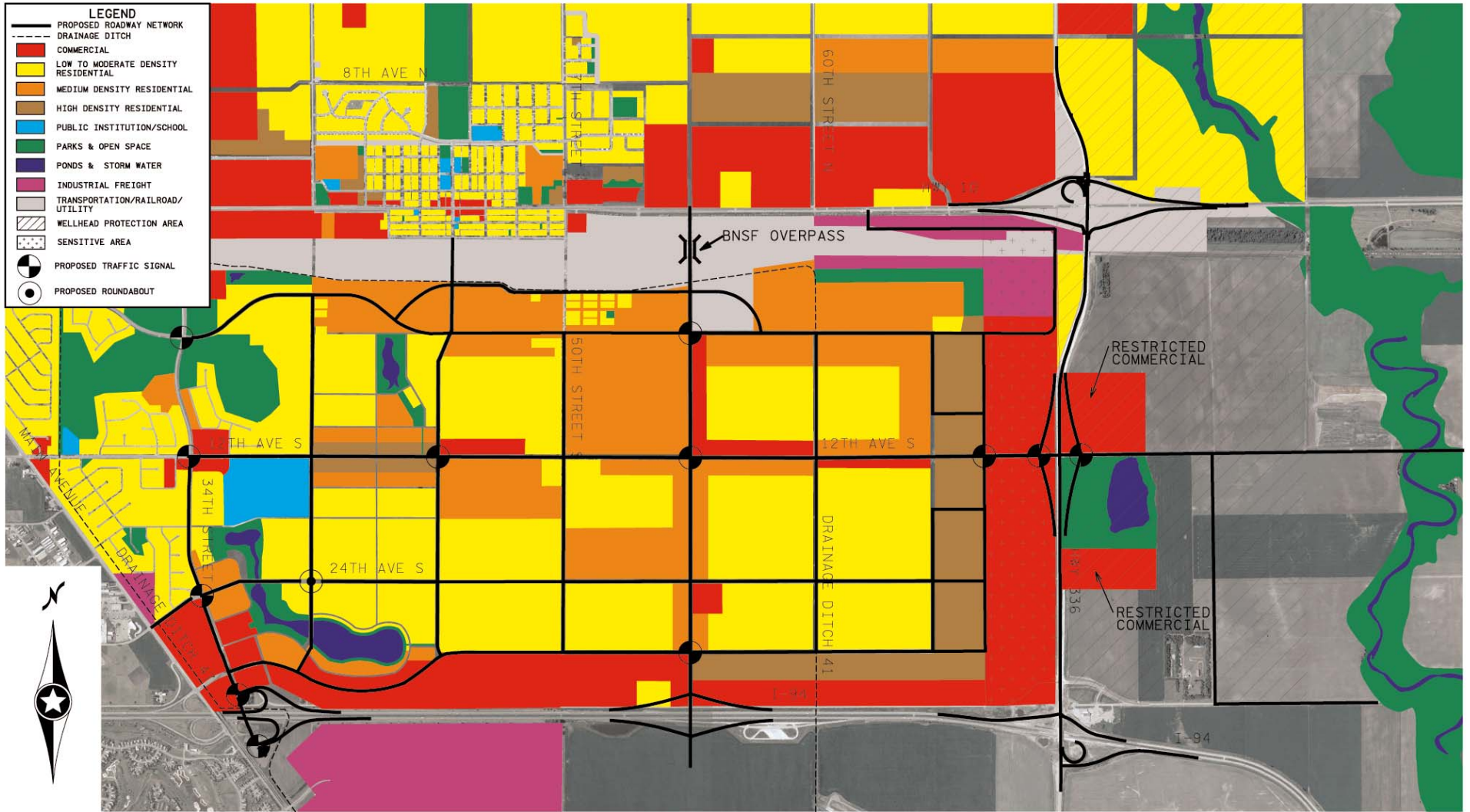
ROADWAY NETWORK – ALTERNATIVE 2A
 TRUNK HIGHWAY 336/12TH AVENUE SOUTH CORRIDOR STUDY
 Fargo-Moorhead Metropolitan Council of Governments

Figure 5



ROADWAY NETWORK – ALTERNATIVE 2B
 TRUNK HIGHWAY 336/12TH AVENUE SOUTH CORRIDOR STUDY
 Fargo-Moorhead Metropolitan Council of Governments

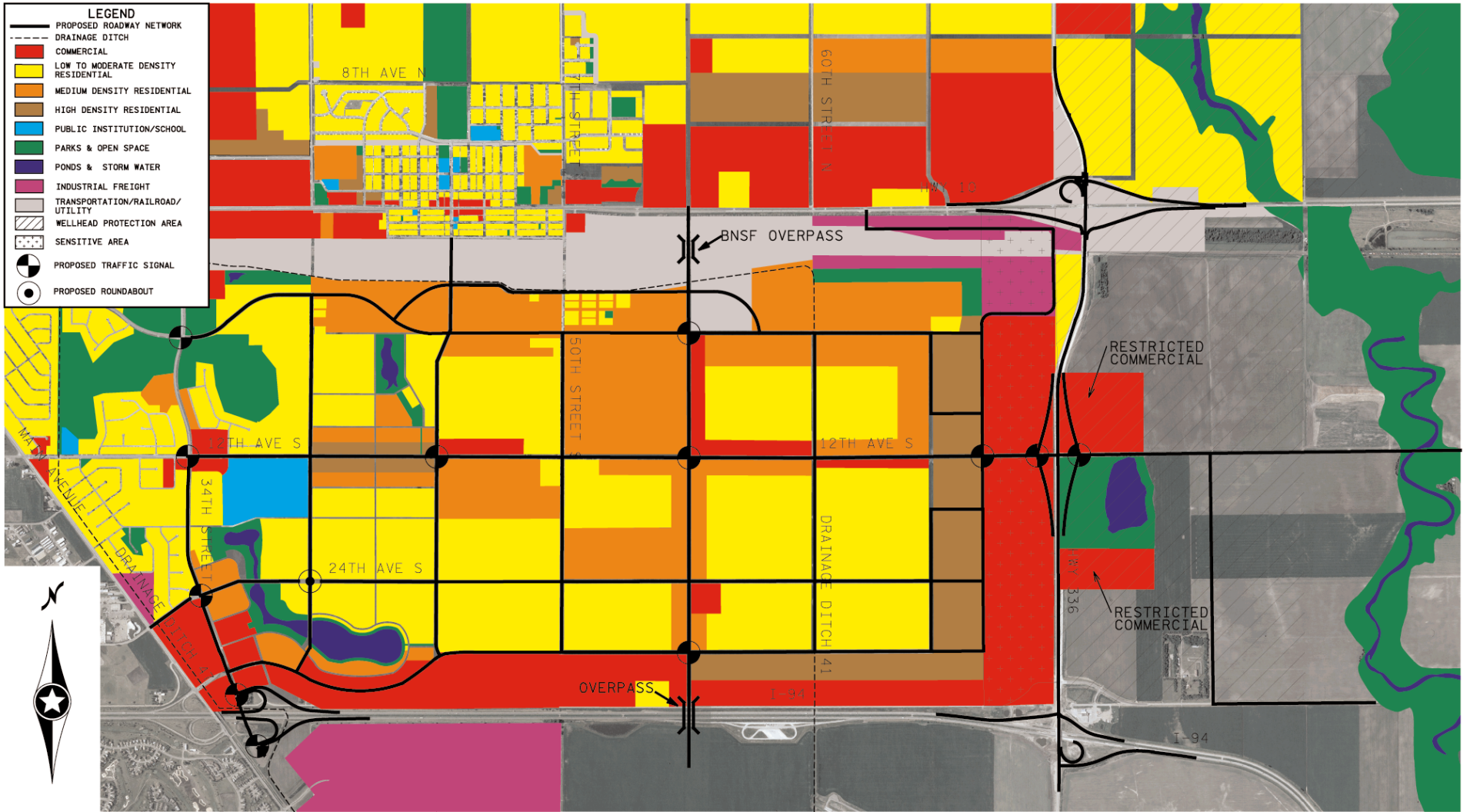
Figure 6



ROADWAY NETWORK – ALTERNATIVE 3A – FULL BUILDOUT

TRUNK HIGHWAY 336/12TH AVENUE SOUTH CORRIDOR STUDY
 Fargo-Moorhead Metropolitan Council of Governments

Figure 7



ROADWAY NETWORK – ALTERNATIVE 3B – FULL BUILDOUT

TRUNK HIGHWAY 336/12TH AVENUE SOUTH CORRIDOR STUDY
 Fargo-Moorhead Metropolitan Council of Governments

Figure 8

VI. TRAFFIC OPERATIONS ANALYSIS

As requested by the SRC, traffic operations for this study focused on the intersection of TH 336 and 12th Avenue South. The 2004 CMP indicated that a grade-separated crossing will be needed at this location in the future. The corridor study examined traffic operations for 2030 and for full buildout (beyond 2030) for both an at-grade intersection and an interchange at this location. The study also included an interim analysis for the year 2010 to determine if an at-grade intersection could operate within the established performance measures and approved corridor vision statement. The 2010 analysis includes a 12th Avenue South extension and/or potential future development near the intersection. Also, at the request of focus group members, the impact of the slip ramp onto southbound TH 336 from a possible future intermodal facility was analyzed.

The traffic operations analyses that follow for each alternative use Level of Service (LOS) to indicate the quality of traffic flow through an intersection. Intersections are given a ranking from LOS A through LOS F. LOS A indicates the best traffic operation, with vehicles experiencing minimal delays. LOS F indicates an intersection where demand exceeds capacity or a breakdown of traffic flow. LOS A through D are generally considered acceptable by drivers. LOS E indicates that an intersection is operating at, or very near its capacity, and that vehicles experience substantial delays.

The following discussion describes the analysis results for the various TH 336/12th Avenue South access configurations.

A. 2030 At-Grade Intersection Analysis (Alternative 1)

Based on future 2030 land use and projected traffic volumes, the analysis for an at-grade intersection at TH 336 and 12th Avenue South assumed a signalized intersection. Other assumptions included that the lane configuration on TH 336 was based on the existing lane geometry. Because TH 336 was recently reconstructed to a four-lane facility, the intent was to avoid lane expansion on the corridor. The lane geometry on 12th Avenue South is based on projected turning movement volumes, which included one lane in each direction and turn lanes as needed. Figure 9 documents the assumed lane configuration for the intersection with projected peak hour turning movement volumes.

FIGURE 9
TH 336/12TH AVENUE SOUTH 2030 AT-GRADE INTERSECTION
CONFIGURATION WITH PEAK HOUR VOLUMES

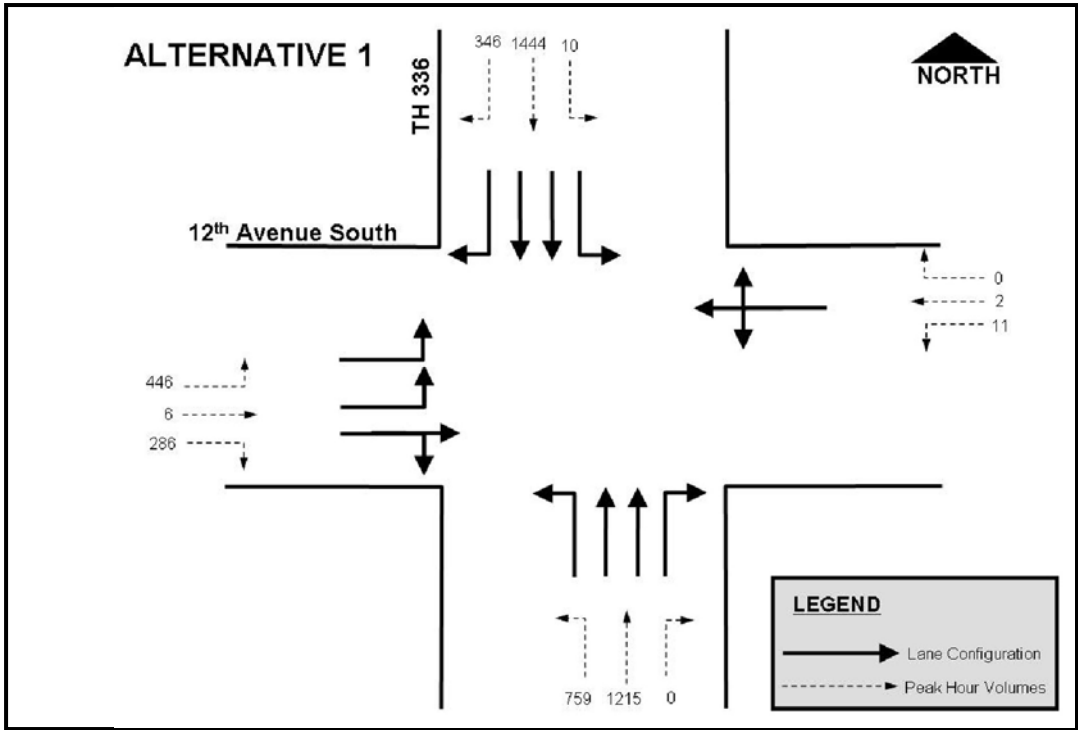


Table 2 documents the analysis results, which indicate that in 2030, with an at-grade intersection, TH 336 and 12th Avenue South will operate poorly, with most movements operating at LOS D, E, or F. According to Metro COG standards, they will accept an overall intersection LOS C or better, with some left-turning movements operating at LOS D. However, this analysis indicates that some movements will experience delays of more than five minutes and queue lengths will extend more than 1000 feet.

TABLE 2
TH 336/12TH AVENUE SOUTH 2030 AT-GRADE TRAFFIC OPERATIONS

		Peak Hour Volumes	Delay (sec/veh)	LOS	Max queue (ft)
North Approach	Left	10	*	F	170
	Through	1444	*	F	**
	Right	346	*	F	260
East Approach	Left	11	45.6	D	---
	Through	2	54.5	D	45
	Right	0			
South Approach	Left	759	*	F	290
	Through	1215	*	F	**
	Right	0			
West Approach	Left	446	43.3	D	230
	Through	6	32.7	C	200
	Right	286	16.5	B	---
TOTAL			*	F	

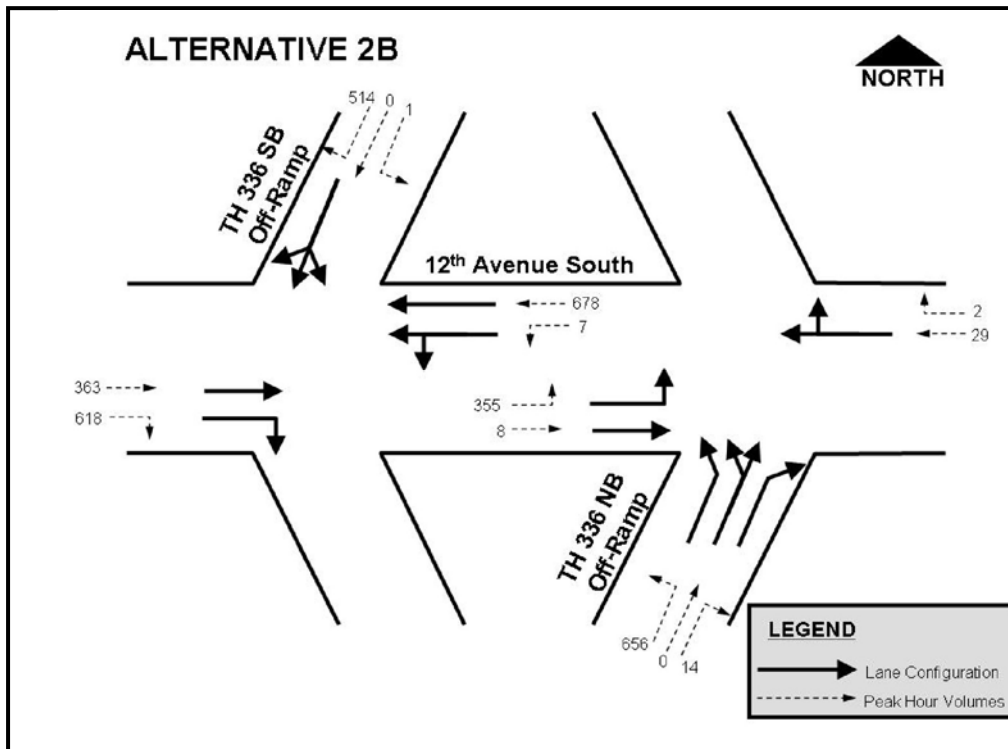
NOTES: * = Delay > 300 seconds
 ** = Queues > 1000 feet

B. 2030 Interchange Analysis (Alternative 2B)

Because traffic operations were very poor at the TH 336/12th Avenue South at-grade intersection, the 2030 analysis also considered a diamond interchange at this location. It is worth noting that a TH 336/12th Avenue South interchange is consistent with recommendations of the TH 336/CSAH 11 CMP. Although the corridor study investigated two roadway network scenarios (Alternatives 2A and 2B), Alternative 2B had higher projected traffic volumes at the interchange than Alternative 2A. Therefore, Alternative 2B (which includes the extension of 12th Avenue South to TH 336) was analyzed because it presented the “worse-case” scenario for an interchange at TH 336 and 12th Avenue South in 2030. If Alternative 2A (no 12th Avenue connection) was selected as the preferred alternative, the proposed geometric configuration at the interchange would still be able to accommodate Alternative 2A traffic volumes.

Based on projected traffic volumes, it was assumed that both ramp terminals were signalized, that 12th Avenue would be a four-lane section accommodating a separate eastbound left-turn lane at the west terminal and four through lanes at the east terminal (two lanes each direction). The northbound TH 336 off ramp would be three lanes wide at the east terminal to accommodate double northbound to westbound left turns. Figure 10 presents the assumed geometry with peak hour volumes and Table 3 details the analysis results.

**FIGURE 10
TH 336/12TH AVENUE SOUTH 2030 INTERCHANGE CONFIGURATION
WITH PEAK HOUR VOLUMES**



**TABLE 3
TH 336/12TH AVENUE SOUTH 2030 INTERCHANGE TRAFFIC OPERATIONS**

Intersection		West Ramp Terminal				East Ramp Terminal			
		Peak Hour Volumes	Delay (sec/veh)	LOS	Max queue (ft)	Peak Hour Volumes	Delay (sec/veh)	LOS	Max queue (ft)
North Approach	Left	1	0	A					
	Through								
	Right	514	7.7	A	250				
East Approach	Left	7	16.1	B					
	Through	678	7.8	A	160	29	37.2	D	60
	Right					2	9.3	A	
South Approach	Left					656	9.6	A	190
	Through								
	Right								
West Approach	Left					14	6.1	A	25
	Through	363	33.8	C	340	355	40.6	D	360
	Right	618	16.3	B	155	8	16.7	B	130
	TOTAL		14.6	B			20.5	C	

NOTES: - LOS threshold for LOS = 35 seconds, movements at LOS D are slightly below that threshold

The 2030 analysis indicates that, if TH 336/12th Avenue South was constructed as a diamond interchange, most ramp terminals would operate at LOS C or better. Although one left-turn movement would operate at LOS D, this operation level would meet Metro COG's LOS requirements.

C. Full Build Interchange Analysis (Alternative 3B)

While the study timeframe only extended until 2030, the purpose of analyzing an interchange at TH 336 and 12th Avenue South for full buildout was to determine if:

- A diamond interchange could accommodate the projected full buildout traffic volumes
- How much right-of-way must be preserved for the interchange traffic operations indicate that a diamond interchange could accommodate the projected traffic volumes

Table 4 summarizes the traffic operations for full buildout. Traffic operations indicate that when the entire subarea is built out, the interchange will still be able to accommodate the projected traffic volumes. Assumptions include both ramp terminals being signalized, 12th Avenue South being a four-lane facility with a five-lane cross-section over TH 336 to accommodate let-turn lanes, and the TH 336 off-ramps being required for additional turn lanes (Figure 11 illustrates the interchange lane configurations).

FIGURE 11
TH 336/12TH AVENUE SOUTH FULL BUILDOUT INTERCHANGE
CONFIGURATION WITH PEAK HOUR VOLUMES

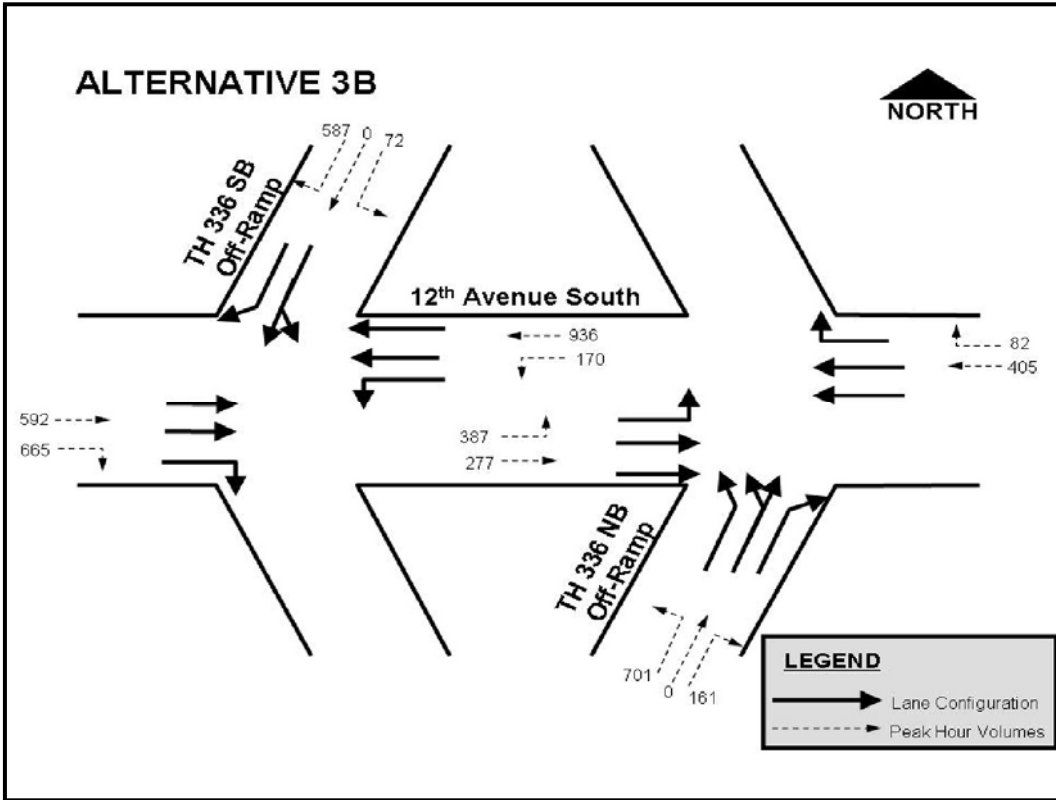


TABLE 4
TH 336/12TH AVENUE SOUTH FULL BUILDOUT INTERCHANGE TRAFFIC
OPERATIONS

Intersection		West Ramp Terminal				East Ramp Terminal			
		Peak Hour Volumes	Delay (sec/veh)	LOS	Max queue (ft)	Peak Hour Volumes	Delay (sec/veh)	LOS	Max queue (ft)
North Approach	Left	72	21.8	C	170				
	Through								
	Right	587	21.8	C	275				
East Approach	Left	170	26.1	C	175				
	Right	936	8.7	A	175	405	22.2	C	150
South Approach	Left					82	8.8	A	45
	Through					701	19.1	B	245
	Right								
West Approach	Left					161	8.6	A	90
	Through					387	29.8	C	250
	Right	665	20.3	C	150	277	5.3	A	55
TOTAL			19.9	B			18.7	B	

D. 2010 At-Grade Intersection Analysis

During the December 2005 meeting, the SRC requested that the consultant analyze traffic operations at the TH 336/12th Avenue South intersection during an interim timeframe between now and 2030. The SRC agreed that 2010 was an appropriate interim year. The purpose of analyzing an interim year was to determine if an at-grade intersection would operate within the established corridor performance measures. The 2010 analysis also included a gap analysis that examined whether there would be adequate gaps on TH 336 for 12th Avenue South traffic to enter onto mainline.

The 2010 analysis examined two at-grade alternatives at TH 336 and 12th Avenue South. Alternative 1 included a 12th Avenue South extension and analyzed the impact of the minor arterial extension to TH 336, but it did not include any development near the intersection. Alternative 2 did not include the 12th Avenue South extension, but it considered “pocket” development near the intersection and analyzed the level of development that would cause the intersection to operate poorly and/or affect safety.

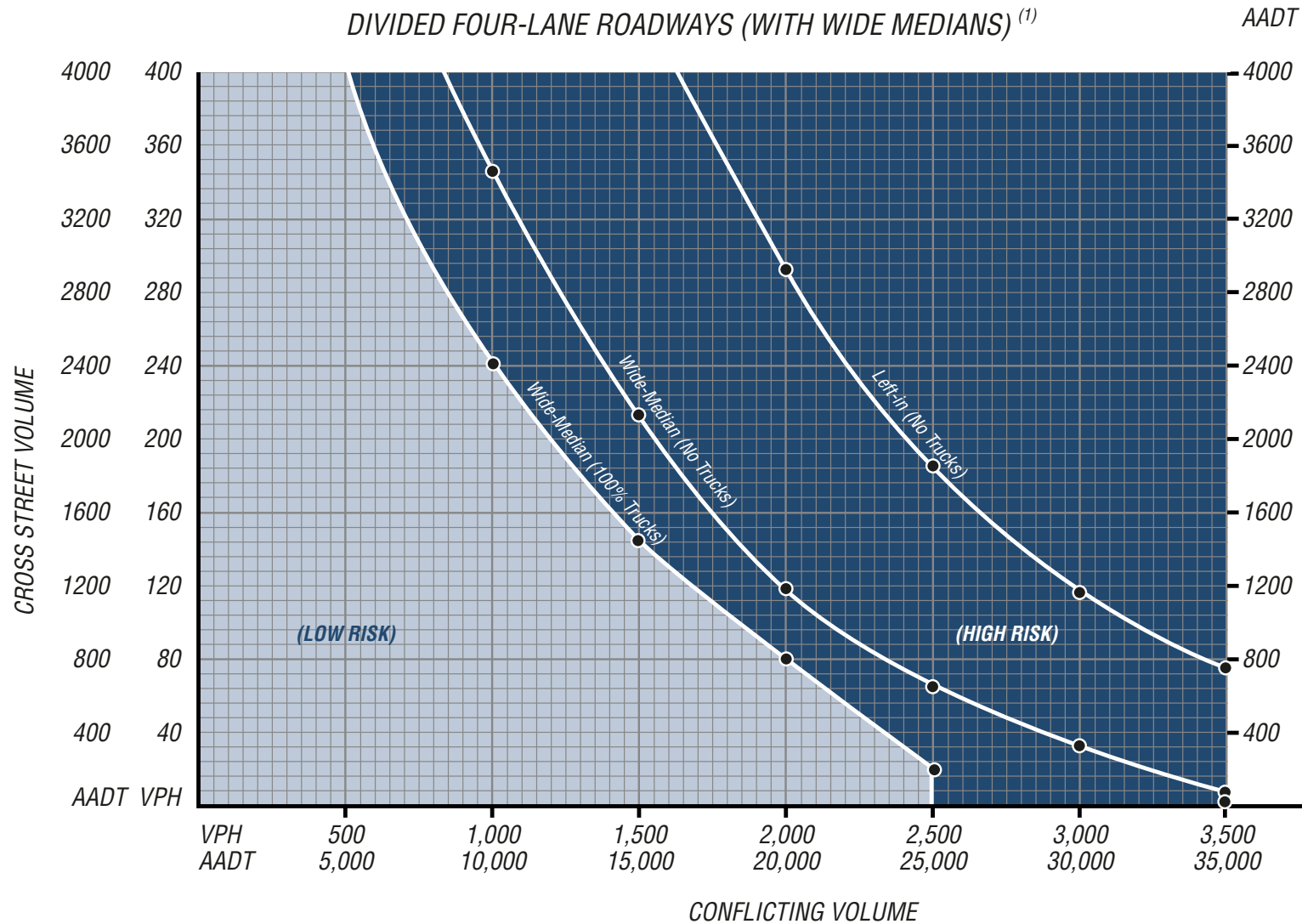
1. Alternative 1

Alternative 1 considered the extension of 12th Avenue South from 50th Street to TH 336, with no additional development at the TH 336/12th Avenue South intersection.

The TH 336/12th Avenue South intersection was analyzed as unsignalized using the Highway Capacity Manual (HCM) Software. The analysis indicated that almost all yielding movements will operate at acceptable LOS, either LOS A or B. However, the eastbound-to-northbound movement (i.e., 12th Avenue to TH 336) was projected to be very high (more than 500 vehicles during the peak hour); therefore, this movement operated at LOS F with delays of two to three minutes.

Overall, the traffic operations analysis indicated that the intersection operated at an acceptable LOS with the exception of one major left-turn movement. Next, a gap analysis was completed to determine when drivers would begin to take risks due to limited gaps in the TH 336 traffic stream. The gap analysis was completed using the HCM. Traffic volumes on TH 336 in 2010 were projected to be 11,000 vehicles per day (vpd) south of 12th Avenue South and approximately 17,400 vpd north of 12th Avenue South and 12th Avenue projections show about 8,300 vpd. Based on the gap assessment chart from the HCM (Figure 12), the analysis documents that the gap availability for 12th Avenue South traffic to enter TH 336’s traffic stream is very poor, indicating a high risk factor for drivers and increased safety concerns.

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(1) Based on HCM: assumes side street stops, random arrivals and level grades, and storage for up to two autos in the median (wide median).



DIVIDED FOUR-LANE ROADWAYS (with wide medians) – GAP ASSESSMENT

TRUNK HIGHWAY 336/12TH AVENUE SOUTH CORRIDOR STUDY
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Figure 12

With poor gap availability, the analysis next studied the daily traffic volumes to determine if the TH 336/12th Avenue South intersection would meet traffic signal warrants in 2010. The analysis was completed using the Mn/DOT Guide to Estimating Traffic Signal Warrants and Test of ADT Estimates (1965). Based on 2010 projected ADT volumes, the TH 336/12th Avenue South at-grade intersection would meet traffic signal warrants. If the at-grade intersection was signalized in 2010, the analysis shows that the intersection would operate at LOS B, with all movements operating at LOS C or better.

However, signalizing this intersection would significantly reduce the performance of the TH 336 corridor (i.e., the corridor's vision statement seeks to maintain average speed to as near as 65 miles per hour as possible). Further, the signal would countermand Mn/DOT's major investment in TH 336 by reintroducing a stop situation along the corridor (part of the TH 336 improvement eliminated an at-grade rail crossing that was often blocked and a west-to-south left-turn across TH 10 that creates delays and safety problems.)

2. Alternative 2

Alternative 2 did not include a 12th Avenue South extension, but it considered the "what if" scenario of pocket commercial development occurring near the TH 336/12th Avenue intersection. The analysis examined several commercial development scenarios on the west side of TH 336, which would have less potential impact on the aquifer. These scenarios also reflected preferred development patterns per local land use plans. It was assumed the commercial development would have direct access onto 12th Avenue South, which would then access TH 336. Table 5 illustrates the impacts on TH 336 operations from various levels of commercial development.

**TABLE 5
IMPACTS OF 12TH AVENUE SOUTH DEVELOPMENT IN 2010**

Commercial Development (Acres)¹	Additional Traffic Volume on 12th Avenue (vehicles per day) due to development²	Volume on TH 336 (vehicles per day)	Gap Availability³	Signal Justification⁴
0	0	14,250	N/A	No
5	2,300	14,250	Poor (high risk)	No
10	4,700	14,250	Poor (high risk)	Yes
20	9,300	14,250	Poor (high risk)	Yes

Results indicated that without a 12th Avenue South extension and with development near the TH 336/12th Avenue South intersection, the gap availability for 12th Avenue South vehicles becomes poor with just five acres of commercial development. At 10 acres, side-street traffic operations would reach a point where a traffic signal installation would be warranted. This analysis, therefore, indicates that the intersection would have very little tolerance for additional traffic generated by new commercial development, especially if it is unsignalized.

If pocket development is proposed near the TH 336/12th Avenue South intersection, the governing jurisdiction will have to consider if they should allow it and the cost to construct utilities and necessary infrastructure to serve the development. During these deliberations, while the local jurisdiction weighed development costs versus economic benefit, they should also consider impacts to TH 336 as a significant limiting factor, until an interchange is constructed at 12th Avenue South. One of the Principles Guiding Accelerated Development states “development should be of size and density sufficient to justify the accelerated utility/infrastructure investment and its benefits should outweigh costs.” Also, according to the Wellhead Protection Plan and the Clay County Zoning Ordinance, new commercial businesses in the Wellhead Protection Area/Drinking Water Supply Management Area (WHPA/DWSMA) will be required to connect to municipal sewage treatment and water supply. Further, these rules prevent the placement of new underground tanks or bulk storage of hazardous materials within designated sensitive areas.

¹ Assumes commercial development adjacent to 12th Avenue South is ¼ gross leaseable area per acre.

² Volumes calculated using the Institute of Transportation Engineers *Trip Generation Manual*, 2003.

³ Average daily traffic analysis based on *Highway Capacity Manual* – assumes side street stops, random arrivals, level grades and storage for up to two automobiles in the median (wide median).

⁴ Based on Mn/DOT’s *Guide to Estimating Traffic Signal Warrants and Tests of ADT Estimates*, 1965.

The analysis documents that by 2010, if 12th Avenue is extended or pocket development is allowed, that installation of a traffic signal at the TH 336/12th Avenue South intersection is likely under either Alternative 1 or 2. Based on the corridor's vision statement, performance measure criteria, and safety concerns with gap availability for 12th Avenue South traffic, the SRC does not recommend an interim at-grade intersection.

This analysis and the SRC's recommendation emphasize the need for Mn/DOT and local governments to work together now to preserve a footprint for a TH 336/12th Avenue South interchange. Moreover, local governments should begin developing a financial plan for the future construction of the interchange, and the state, County and the Cities should cooperating in managing and limiting development in the area until the interchange is constructed.

E. Slip Ramp Assessment

Focus group members suggested that, if an intermodal facility was built in the southwest quadrant of the TH 336/TH 10 interchange, a slip ramp should be considered for trucks to access TH 336 without traveling on local roads. Therefore, an analysis was completed examining the feasibility of constructing a slip ramp.

This assessment indicates that constructing a slip ramp from the industrial area onto TH 336 is physically possible. The ramp would have to be designed such that it enters TH 336 near the existing 4th Avenue access point. At this location, the slope is relatively flat and profile grades would not be a concern. As noted earlier Mn/DOT categorizes TH 336 as a medium-level IRC that has specific access spacing requirements (full-access every mile and secondary access every half mile). However, with an interchange at 12th Avenue South, the current access at 4th Avenue would not meet Mn/DOT standards. Nonetheless, Mn/DOT District and Central office staff have indicated that if traffic operations were acceptable, they could provide some flexibility on TH 336 access configurations.

The analysis did identify significant operational and safety concerns, which included:

- The slip ramp would only provide direct access onto TH 336 for southbound vehicles. Vehicles destined to/from TH 10 and vehicles northbound on TH 336 would still have to travel through the TH 336/12th Avenue South interchange.
- Driver expectations would not be met on this freeway/expressway facility; drivers would not anticipate at-grade intersections.
- The slip ramp would cause weaving concerns between the slip ramp and the off-ramp at TH 336 and 12th Avenue South.

- Traffic speed differential between TH 336 mainline traffic, traveling at 65 miles per hour (the posted speed limit), and truck traffic accelerating from the slip ramp, would be a concern.

For these reasons, the SRC decided to not carry this alternative forward at this time, but to hold off any further design or analysis work until more is known regarding the feasibility of the intermodal facility in Dilworth.

VII. INTERCHANGE LAYOUT OPTIONS

The importance of early right of way preservation work, especially for the future interchange at TH 336/12th Avenue South and for the proposed westbound TH 336/TH 10 off-ramp was documented in the earlier sections. To assist local officials in initiating the preservation process, the study team prepared preliminary layout options for each. Based on input from environmental review agencies, the focus group, and the general public, the SRC revised these preliminary footprints to accommodate specific concerns. Preliminary design and right of way requirements for each interchange are discussed below.

A. TH 336/12th Avenue South Interchange

The preliminary design for this interchange is a typical diamond layout, which permits a future loop in the northeast quadrant. The interchange will require that approximately 62 acres of additional right of way be acquired. The SRC was concerned about the minimal distance between the gravel pit pond and 12th Avenue South just east of TH 336, so the 12th Avenue alignment was curved a bit north to maintain a buffer between the roadway and the pond. The SRC decided it was not an acceptable alternative to shift the entire interchange north or to fill a portion of the pond, as it would be expensive and potentially difficult to maintain consolidation. Figure 13 presents the interchange layout and the right of way footprint.

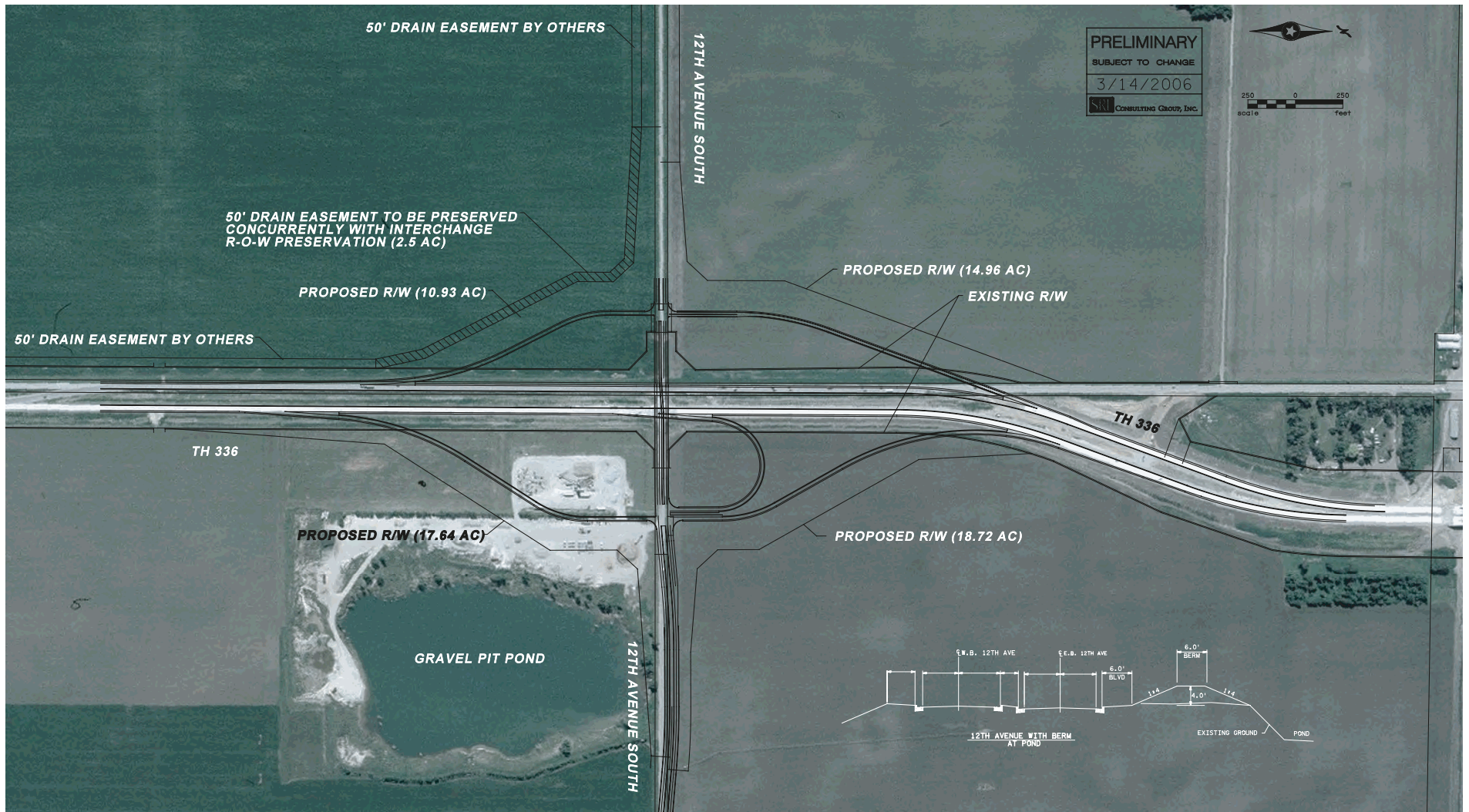
Also, comments received from the BRRWD recommend that, during the design and construction of the TH 336/12th Avenue interchange, an existing drainage issue be resolved. The drainage improvement would consist of installing a lateral ditch system for the target area and regrading the ditch along the west side of TH 336, so it flows north. This mitigation action would require another 2.5 acres of land to be acquired or dedicated.

B. TH 336/TH 10 Westbound Off-Ramp

Mn/DOT officials desired that the preliminary design and right of way needs for this off-ramp be analyzed as part of this corridor study. While traffic forecasts indicate the ramp is a long-range need, preserving the right of way in this developing area will save public expenditures.

The new off-ramp will require approximately 12 acres of land and one existing residential property to be acquired. Also, the Moorhead Wellfield lies within the ramp footprint. The SRC recommends that sufficient right of way (approximately nine additional acres) be acquired north and adjacent to TH 10 to allow expansion and relocation of the wellfield and to create a 200-foot buffer around the new wellfield area. Finally, the SRC suggested that Mn/DOT should also acquire approximately 7 acres of land just north of the northwest loop ramp and west of TH 336 for future modifications. Acquiring this land will remove a remnant private parcel which could develop someday and adversely affect access on TH 336. Further public ownership will offer Mn/DOT greater interchange design options for future operations. Figure 14 presents the west ramp preliminary design, the right of way footprint, and the property recommended for acquisition.

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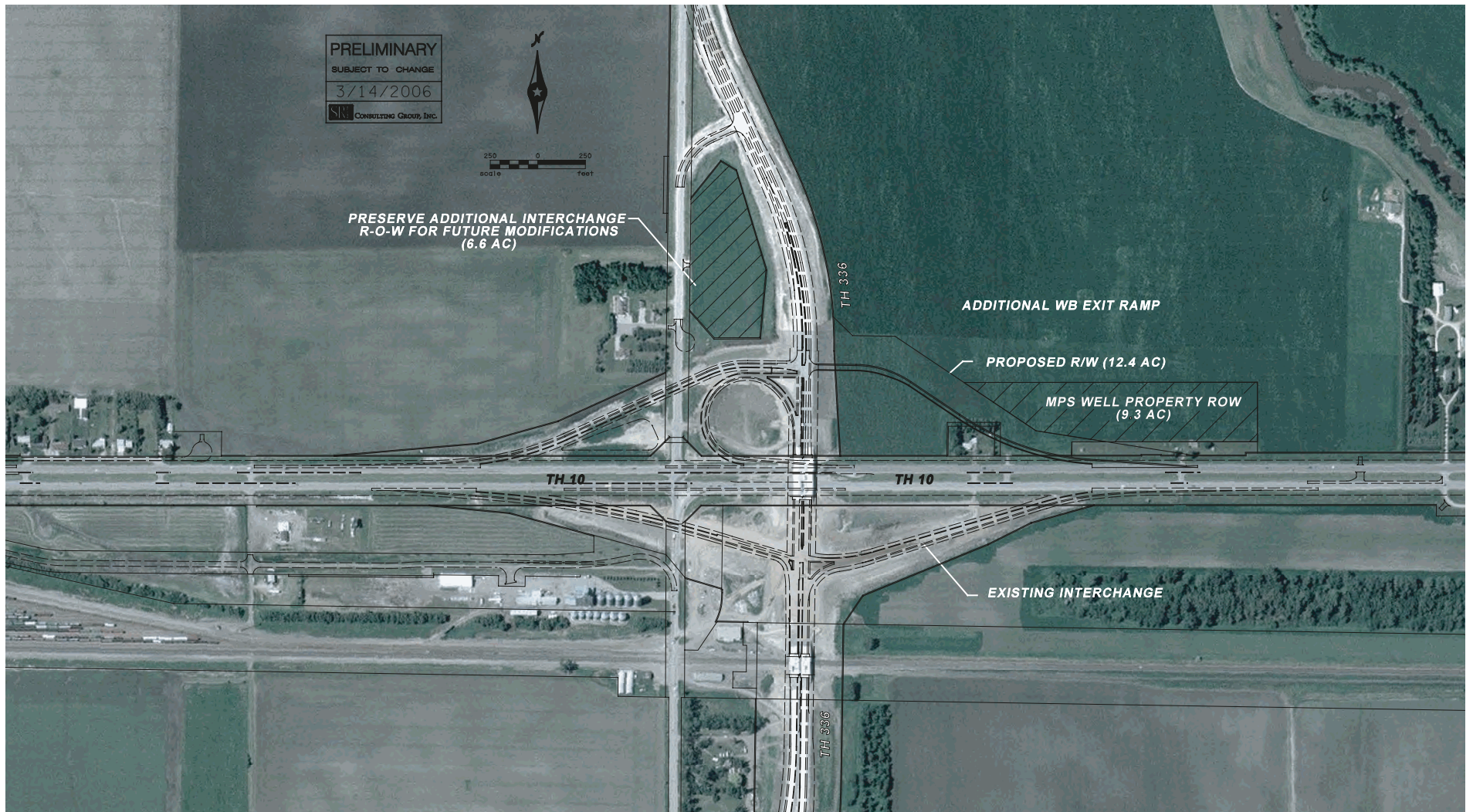


PROPOSED TH 336/12TH AVENUE SOUTH INTERCHANGE

TRUNK HIGHWAY 336/12TH AVENUE SOUTH CORRIDOR STUDY
 Fargo-Moorhead Metropolitan Council of Governments

Figure 13

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PROPOSED TH 336/TH 10 ADDITIONAL WESTBOUND OFF RAMP
TRUNK HIGHWAY 336/12TH AVENUE SOUTH CORRIDOR STUDY
Fargo-Moorhead Metropolitan Council of Governments

Figure 14

C. **Right of Way Preservation**

The SRC has indicated an interest in the official mapping of key roadway corridors and the footprints for the new interchange or ramps. Cities and counties have the authority to conduct official mapping under Mn Statute Section 462.359. The specific official mapping process is defined in greater detail in Appendix F. However, in general terms, official mapping is used to preserve a future roadway corridor. The local government develops an official map that defines the centerline or right of way needed for future roadway or interchange. The local agency holds a public hearing showing the location of the future roadway and incorporates the map into their comprehensive transportation plan. Official mapping is a formal process that enables both public and private property owners to adjust their building plans equitably and conveniently before investments are made. The process also allows the local government to influence development adjacent to the proposed corridor to encourage compatible land uses.

If a property owner directly affected by the officially mapped corridor requests to develop the property, agencies have six months to initiate acquisition of the property to prevent development of the parcel. If the parcel is not purchased, the owner is allowed to develop it in conformance with current zoning and subdivision regulations.

The advanced right of way purchase is eligible for federal funding, but typically Mn/DOT considers right of way a local responsibility. If the local jurisdictions officially map the required right of way, they should prepare a plan to address the possible purchase of the right of way. In addition, even though National Environmental Protection Act (NEPA) documentation is not necessary for an official map, local jurisdictions may want to initiate a more formal environmental review process to eliminate possible future conflicts.

Sometimes corridor preservation is accomplished merely through cooperation between a landowner and the public road authority. Often, the landowner will dedicate the desired right of way to the government entity during the platting process because the future roadway or interchange footprint is anticipated to improve the marketability of the property. Local governments can also use their zoning and subdivision authority to further protect the corridor through building setbacks, compatible land use, and appropriate access spacing guidelines.

The SRC felt strongly that securing right of way for key roadway corridors and especially for the TH 336/12th Avenue interchange should begin as soon as possible.

VIII. ENVIRONMENTAL DOCUMENTATION

The SRC felt it was important to engage key review agencies in the preparation of the corridor study so that the transportation system developed for the subarea could avoid, minimize, or mitigate any potential issues. Therefore, early coordination letters were sent to 13 local, state, and federal environmental agencies to solicit their comments and concerns regarding a potential TH 336/12th Avenue South interchange and a potential additional westbound off-ramp at TH 336 and TH 10. Their feedback was considered during the selection of a preferred alternative at both locations. Comments received during the 30-day comment period are presented in Table 6. In Appendix G, a list of agencies, a copy of the early coordination letter, and agency responses are presented

TABLE 6
ENVIRONMENTAL REVIEW AGENCY COMMENTS

Organization	Name	Title	Address	Phone #	Comment
Buffalo-Red River Watershed District (BRRWD)	Bruce Albright	Office Administrator	123 Front Street Barnesville, MN 56514	218.354.7710	The BRRWD would like their project (needed to remedy drainage problems that were created when TH 336 was reconstructed) to be incorporated into the proposed future TH 336/12th Avenue interchange project. At the time of construction of any of the proposed projects, a BRRWD permit will be required.
USDA NRCS Clay County	Mike Lieser	Area Resource Soil Scientist	1004 Frontier Drive Fergus Falls, MN 56537	218.736.5445	The proposed interchange construction project would convert Prime and/or Statewide Important Farmland and will require a number of acres to be converted under the Farmland Protection Policy Act. As this project moves along a stated AD1006 form will need to be completed. When final designs are completed a detailed wetland review will be needed to assess any impacts.
Minnesota Department of Natural Resources	Sarah Hoffman	Endangered Species Review Coordinator	500 Lafayette Road Saint Paul, MN 55155	651.296.7863	There are no known occurrences of rare species or native plant communities within a one mile radius of the area indicated for proposed construction.
Federal Highway Administration	Kevin Kleithermus	Division Engineer	308 Jackson Street Saint Paul, MN 55101	651.291.6123	Kevin and staff reviewed information and FHWA had no comments.

IX. ALTERNATIVES EVALUATION

As noted earlier, the SRC worked with local stakeholders to develop roadway network alternatives based on the Moorhead and Dilworth GAPS and the Long-Range Metropolitan Transportation Plan (MTP). The roadway alternatives were prepared to accommodate anticipated growth through 2030 and to meet transportation needs under a full buildout (beyond 2030) scenario. Using these alternative networks, the study team reviewed the impact on key corridors and analyzed the traffic operational impacts of the various configurations at the key intersection of TH336/12th Avenue South. The operations analysis considered an at-grade intersection (unsignalized and signalized) and an interchange. As a result of this preliminary analysis, the study team also conducted a 2010 interim analysis to help determine the level of development that would trigger the need for improvements. During this study process, planning partners raised nine key questions, which were subsequently evaluated:

1. Will an at-grade intersection at TH 336 and 12th Avenue South, unsignalized or signalized, operate well in 2010 and 2030 and meet the TH 336 corridor vision and performance measures? If not, how will an interchange at this location operate?
2. Based on 2030 projected development and full buildout, is a 12th Avenue South corridor extension to TH 336 needed to maintain consistency with the proposed functional classifications for 4th Avenue South and 12th Avenue South?
3. Based on 2030 and full buildout traffic volumes, will the future roadway functional classifications accommodate projected traffic volumes on 24th Avenue South and 28th Avenue South?
4. Does the proposed future subarea roadway network provide a continuous/discontinuous system in 2030?
5. Are 4th Avenue South and 28th Avenue South overpasses of TH 336 needed?
6. Under full buildout, what amount right of way widths should be preserved for the following corridors: 4th Avenue South, 12th Avenue South, 24th Avenue South, 28th Avenue South, 55th Street, and other subarea roadways?
7. Under full buildout, what should be the geometric configuration of the TH 336/12th Avenue South interchange? What is the footprint for the interchange, and how many acres should be officially mapped?
8. Is there a need for an additional TH 10 westbound off-ramp at the TH 336/TH 10 interchange based on 2030 and/or full buildout, and, if needed, what is the footprint for the ramp, and how many acres should be officially mapped.
9. Under full buildout, how does a 55th Street overpass/interchange at I-94 affect TH 336 traffic operations, and what volumes would be generated on I-94 at the existing and proposed interchanges?

To answer these questions, the alternatives were evaluated using the following criteria: safety, mobility, traffic operations, consistency with established parameters (i.e., TH336 corridor vision, performance measures, and the Principles Guiding Accelerated Development), and public/review agency input. The evaluation of the alternatives produced the following responses to the nine key questions:

1. Will an at-grade intersection at TH 336 and 12th Avenue South, unsignalized or signalized, operate well in 2010 and 2030 and meet the TH 336 corridor vision and performance measures? If not, how will an interchange at this location operate?

The study examined traffic operations at TH 336 and 12th Avenue South for an at-grade intersection. The study looked at 2010 intersection traffic operations as unsignalized and in 2030 as signalized. In 2010, the unsignalized intersection operates fairly well, with the exception of a left-turn movement that operates at LOS F. However, a gap analysis indicated that in 2010, the amount of traffic on TH 336 would not allow adequate gaps for 12th Avenue South traffic to enter the traffic stream. Since TH 336 vehicles generally travel at the 65 mph speed limit, this will create a safety concern because 12th Avenue South drivers would have large delays and are likely to take more risks entering TH 336.

If the TH 336/12th Avenue South intersection was signalized in 2010, the intersection would operate at acceptable levels of service (LOS C or better); however, installing a signal would reintroduce delay on TH 336, negating the benefits of the recent \$27 million reconstruction of TH 336, which eliminated a signal and at-grade rail crossing specifically to reduce delay and improve safety.

The study also looked at the “what if” scenario of pocket commercial development near the TH 336/12th Avenue South intersection in 2010. The study examined several scenarios of commercial development on the west side of TH 336. The commercial development would have direct access onto 12th Avenue South, and 12th Avenue South would access TH 336. Results indicated that without the 12th Avenue South extension, but with development near the TH 336/12th Avenue South intersection, the gap availability for 12th Avenue South vehicles became poor with just five acres of development. At 10 acres, side-street traffic operations reached a point where a traffic signal installation will be warranted. This suggests that there was very little tolerance for development at the intersection, especially if it was unsignalized.

Based on the amount of traffic projected on TH 336 and 12th Avenue South, the 2030 analysis assumed that the TH 336/12th Avenue South intersection was signalized. Similar to the 2010 scenario, the traffic signal would reintroduce delay on the TH 336 corridor. According to Metro COG, acceptable overall intersection LOS is C, but some left-turning movements can operate at LOS D.

However, the analysis indicated that the intersection would operate poorly, with most movements operating at LOS D, E, or F. In some instances, delays may be more than five minutes, and queue lengths may be greater than 1000 feet.

Because traffic operations were very poor at the TH 336/12th Avenue South at-grade intersection, the 2030 analysis also considered an interchange at this location. Assuming lane geometries based on projected traffic volumes, both interchange ramp terminals would operate at LOS C or better, with one left-turn movement operating at LOS D, which meets Metro COG's LOS requirements.

In summary, in 2010 and 2030, the TH 336/12th Avenue South at-grade intersection operates poorly. With an interchange at this intersection, traffic operations indicated that both ramp terminals would operate well with overall intersection LOS B or C.

2. Based on 2030 projected development and full buildout, is a 12th Avenue South corridor extension to TH 336 needed to maintain consistency with the proposed functional classifications for 4th Avenue South and 12th Avenue South?

The Metro COG Short- and Long-Range Transportation Plan classifies 12th Avenue South as a Minor Arterial and 4th Avenue South as a Collector. In 2030 without 12th Avenue, traffic projections on 4th Avenue South were between 7,000 and 8,000 vehicles per day (vpd) in 2030. With the 12th Avenue extension to TH 336, traffic volumes on 4th Avenue South drop to about 5,000 vpd, and traffic volumes on 12th Avenue South are projected to be about 12,000 vpd. If the 12th Avenue South extension was not constructed, 4th Avenue South would need to operate more like a minor arterial, because vehicles would use the roadway as a "through" route to access TH 336 although they would have to make several turns. Collectors have more access points and are designed for lower speeds than minor arterials. If the 12th Avenue South extension was not in place and all the traffic that was destined to/from TH 336 had to use 4th Avenue South, safety would become a concern because of conflicts with the many access points. Therefore, in order to meet the proposed functional classification for both 4th Street South (collector) and 12th Avenue South (minor arterial), the 12th Avenue South extension is needed.

In the full buildout scenario, the 12th Avenue South extension was assumed to be constructed based on the projected land uses. Traffic volumes on 4th Avenue South were projected to be about 8,000 to 10,000 vpd, with about 25,000 vpd on 12th Avenue South. 4th Avenue South would still be classified as a collector and 12th Avenue South would still be classified as an arterial even with the higher traffic volumes. Intersection improvements (i.e., turn lanes and/or traffic signal modifications) on both 4th Avenue South and 12th Avenue South may be required to accommodate such additional levels of traffic.

3. Based on 2030 and full buildout traffic volumes, will the future roadway functional classifications accommodate projected traffic volumes on 24th and 28th Avenue South?

According to Metro COG's Short- and Long-Range Transportation Plan, both 24th Avenue South and 28th Avenue South are classified as collectors. Full buildout traffic volumes on 24th Avenue South range from about 6,000 to 14,000 vpd, depending on the roadway segment. Projected traffic volumes on County Road 14 are similar to 24th Avenue South, ranging between 7,000 to 13,000 vpd. The range in traffic volumes varies depending on the alternative. Therefore, according to Metro COG's roadway classifications for these two roadways, they would be able to accommodate future traffic volumes.

4. Does the proposed subarea roadway network provide a continuous/discontinuous system in 2030?

Alternatives 1 and 2B include the 12th Avenue South extension by 2030; however, Alternative 2A does not. The proposed subarea roadway network develops streets on section lines and is generally a grid-type layout. Without the 12th Avenue extension, the grid layout would not be complete, and it would provide a discontinuous system for vehicles that want to travel to/from Moorhead. Drivers would have to travel along either 4th Avenue South or 28th Avenue South, which is somewhat "circuitous." Also, without the 12th Avenue South connection, regional mobility would be decreased because travel time would increase going to/from Moorhead. Providing the 12th Avenue South connection completes the grid roadway network and provides drivers a more direct and continuous roadway system. Therefore, Alternative 2A offers a discontinuous roadways system, while Alternatives 1 and 2B provide a continuous network.

Alternatives 1, 2A, and 2B all provide relatively good north/south mobility within the subarea. 45th Street, which is Dilworth's Main Street extended to the south, would provide a connection north to Dilworth and 40th and 50th Streets connect 28th Avenue South, 12th Avenue South, and 4th Avenue South. However, there would be no north/south connection on either 55th or 60th Streets, which creates a north/south gap. Since, there is no land use planned along these two streets between 4th Avenue South and 28th Avenue South, a roadway would not needed. However, when the full buildout scenarios were considered both 55th and 60th Streets were needed.

5. Are 4th Avenue South and 28th Avenue South overpasses of TH 336 needed?

In 2030, traffic projections indicated that a 4th Street South overpass of TH 336 would draw about 300 vpd and a 28th Avenue South overpass would draw about 800 vpd. These traffic volumes were relatively low because there was no planned development east of TH 336 in 2030, and only limited development under the full buildout scenarios.

Based on the low traffic volumes that these overpasses would attract, they would not be needed. If the overpasses were not constructed, the traffic would likely use 12th Avenue South; however, the additional volume would not adversely affect traffic operations on 12th Avenue South or TH 336.

6. Under full buildout, what amount right of way widths should be preserved for the following corridors: 4th Avenue South, 12th Avenue South, 24th Avenue South, 28th Avenue South, 55th Street, and other subarea roadways?

According to Metro COG’s Metropolitan Transportation Plan, 4th Avenue South, 24th Avenue South, and 28th Avenue South are all classified as collectors, while 12th Avenue South is classified as a minor arterial. 55th Street is not classified in Metro COG’s Plan.

Table 7 indicates the appropriate amount of right of way that should be preserved for each corridor.

**TABLE 7
RIGHT-OF-WAY PRESERVATION**

Roadway Corridor	Functional Classification	Corridor Right of Way Preserved (feet)⁵	Corridor Right of Way Preservation (at intersections) (feet)
4th Avenue South	Collector	120	120
12th Avenue South	Minor Arterial	150	170
24th Avenue South	Collector	120	120
28th Avenue South	Collector	150 ⁶	170
55th Street	Minor Arterial	150	170
Other subarea roadways	Not classified	100-120	120

In general, about 150 feet of right of way should be preserved for arterial roadways, which would include room for a four-lane roadway, shoulders, and bike lanes. At intersections along minor arterials, about 170 feet of right of way should be preserved to accommodate turn lanes. On average, 120 feet of right of way would be adequate to accommodate a two-lane cross section with shoulders and turn lanes as needed. All other roadways within the subarea roadway should be classified as collectors or local roads and 100-120 feet of right of way would be enough to accommodate either classification.

⁵ Consistent with right-of-way guidelines set forth in Metro COG’s *Minnesota Extraterritorial Corridor Preservation Planning Study*, December 2001

⁶ Although 28th Avenue South is classified as a collector, Metro COG should consider classifying it as a minor arterial because it is directly adjacent to commercial development on the north side of I-94.

7. Under full buildout, what should be the geometric configuration of the TH 336/12th Avenue South interchange? What is the footprint for the interchange, and how many acres should be officially mapped?

The study analyzed an interchange at TH 336 and 12th Avenue South at full buildout to determine the following: 1) can a diamond interchange accommodate the projected full buildout traffic volumes? and 2) if traffic operations show that a diamond interchange can accommodate the traffic volumes, what is the right of way footprint for the interchange based on the appropriate lane configuration to accommodate the projected traffic? Traffic operations indicate that when the entire subarea is built out, the interchange would still be able to handle projected traffic volumes with both ramp terminals signalized. At the interchange, the lane configuration should include 12th Avenue South as a four-lane facility with a five-lane cross-section over TH 336 to accommodate left-turn lanes. The TH 336 northbound off-ramp should include a dedicated right-turn lane with dual left-turn lanes, while the southbound off-ramp should have a right-turn lane and a shared through/left lane.

There is a wetland located in the southeast quadrant of the TH 336/12th Avenue South intersection, which is identified on the US Fish and Wildlife's National Wetlands Inventory (NWI). To date, no reviewing agency has expressed concern with this site and potential impacts of the proposed interchange. However, due to the close proximity of the gravel pit pond to the 12th Avenue South alignment and possible contamination (if an accident occurred that caused a spill), the SRC requested that three alternatives be considered to provide a buffer between the roadway and pond:

- A. Shift the entire interchange complex north.
- B. Fill a portion of the pond.
- C. Slightly shift the 12th Avenue South roadway alignment to the north on the east side of the interchange, and construct a berm between the roadway and pond.

Shifting the entire interchange to the north would require considerably more right of way and would require alignment curves both east and west of the interchange on 12th Avenue South. Therefore, this alternative was dropped from consideration.

The existing pond is very deep and has relatively steep slopes; therefore, the cost to fill even a portion on the pond is considered very high. Also, filling the pond may create other environmental concerns. Therefore, this alternative was also ruled out.

Providing a slight alignment shift to 12th Avenue South to the north on the east side of the interchange and providing a berm to protect the pond was selected as the most cost-effective and best alternative. Because the projected volumes on 12th Avenue east of the interchange were considerably less than the projected

volumes west of the interchange, the alignment shift on the east side only will minimize impacts. Also, this alternative allows the location of the interchange to remain at 12th Avenue, which provides the best overall geometrics. In addition, this alternative will require the least amount of new right of way.

Nonetheless, if the reviewing agencies indicate that the pond is a site that should be completely avoided and the proposed 12th Avenue South slight realignment and buffer berming is insufficient, the alternative to the northbound off-ramp would be to include this movement with the loop ramp in the northeast quadrant of the interchange. This loop should be planned to accommodate the future volume of northbound to westbound traffic (more than 700 vehicles in the peak hour). The proposed loop could be constructed with the initial interchange improvements (environmental concerns may require it in place of the southeast off-ramp) or could be delayed until the northbound to westbound left-turn volume warranted the addition of the loop.

The BRRWD has requested that during the design and construction of the TH 336/12th Avenue South interchange an existing drainage issue be resolved. The drainage improvement would consist of installing a lateral ditch system for the target area and regrading the ditch along the west side of TH 336 so it will then flow north.

Based on this planning-level design analysis, the amount of right of way required and that should be officially mapped for a diamond interchange at TH 336 and 12th Avenue South should be about 62 acres or 64.5 acres if the drainage mitigation project requested by the BRRWD is incorporated into the interchange design.

8. Is there a need for an additional TH 10 westbound off-ramp at the TH 336/TH 10 interchange based on 2030 and/or full buildout, and, if needed, what is the footprint for the ramp, and how many acres should be officially mapped?

Currently, there is an existing loop ramp for westbound TH 10 traffic to access southbound TH 336. This loop ramp was constructed, because there is a significant amount of traffic that currently makes this movement. In 2030, traffic volumes on this loop ramp are projected to reach about 14,000 vpd, which is a significant amount of traffic for the loop ramp to accommodate. The typical capacity for a one-lane loop ramp ranges between 800 and 1,200 vehicles per hour (vph). Assuming a 10 percent peak hour factor, traffic would equate to 8,000 to 12,000 vpd. With the addition of the westbound off-ramp (diamond interchange configuration), the projected traffic volumes on the loop ramp drop to 11,000 to 12,000 vpd and volumes projected on the new off-ramp were about 2,000 vpd. The additional westbound off-ramp relieves congestion on the loop ramp. Therefore, an additional TH 10 westbound off-ramp is needed to accommodate the projected traffic volumes.

Based on this planning-level design analysis, the amount of right of way required and that should be officially mapped for an additional westbound off-ramp should be about 12 acres.

Construction of a new westbound off-ramp will impact the existing City of Moorhead municipal water supply located adjacent to the existing TH 10 north right of way line just east of the existing interchange. As a result, a portion of the right of way for the new ramp will have to be acquired from MPS. Therefore an equal amount of property will have to be acquired to replace the MPS property taken for the new ramp. In addition, MPS has indicated that additional property would be needed to provide an adequate buffer for the relocated and/or new wells. Therefore, an additional 9.3 acres should be officially mapped and/or acquired at the same time that the 12 acres for the new ramp is acquired.

It was also recommended by the SRC that approximately 7 acres of land north of the northwestern loop ramp and west of TH 336 be acquired during the right of way acquisition process to protect this remnant of the original TH 336 project from development.

9. Under full buildout, how does a 55th Street overpass/interchange at I-94 affect TH 336 traffic operations, and what volumes would be generated on I-94 at the existing and proposed interchanges?

With a 55th Street South overpass of I-94, full buildout traffic volumes on TH 336 were projected to be about 41,000 vpd between 12th Avenue South and I-94. Projected 55th Street traffic volumes were between 10,000 and 12,000 vpd south of 24th Avenue South. Also, traffic volumes on I-94 were projected to be about 53,000 vpd.

However, with an I-94/55th Street interchange (versus an overpass), TH 336 traffic volumes decreased from 41,000 vpd to about 33,000 vpd and traffic volumes increased on both 55th Street and I-94. 55th Street traffic volumes increased from about 12,000 to about 40,000 vpd just north of the proposed interchange, and I-94 volumes increased from about 52,000 to 70,000 vpd west of the proposed interchange. The significant increase in traffic volumes was due to direct access to I-94 (i.e., many of the vehicles traveling to/from the subarea do not have to travel east to TH 336 or west to 34th Street to access I-94.) Also, because of direct access to I-94, overall traffic volumes at the existing interchanges (i.e., I-94/TH 336, I-94/34th Street, and TH 336/TH 10 interchanges) decreased. Traffic volumes at the proposed TH 336/12th Avenue South interchange decreased on the southbound on- and off-ramps and south of the interchange. Therefore, with a 55th Street interchange, TH 336 traffic operations and mobility would improve because there would be less traffic on the corridor.

Due to these perceived system benefits, focus group members urged that affected local governments preserve the right of way for a future 55th Street Corridor including grade separations at the BNSF tracks and at I-94. Early preservation efforts would include revising local land use plans to accommodate the corridor and its grade separations and making efforts to avoid encroachment of possible corridor right of way during zoning and platting decisions. Regarding the 55th Street grade separations, it should be understood that each will be costly, and that no state or federal funds are available in the foreseeable future. Further, for the I-94 grade separation, state and federal approval will be required and in obtaining these approvals, various detailed justification studies will also be required.

X. COLLABORATIVE COORDINATION PROCESS

The SRC clearly understood that implementation of the corridor study's recommendations will be a critical challenge upon adoption. Therefore, due to the complex jurisdictional coordination issues associated with land and facility development for the subarea, the study team reviewed current governance, identified informal collaboration options, and recommended a workable coordination process that met the prescribed parameters.

A. Current Governance in the Study Area

The study area for the TH 336/12th Avenue South exhibits complex and overlapping governance powers. There are five jurisdictions that exert some form of decision-making in the corridor area. These jurisdictions include two townships, two cities, and Clay County. Also, Moorhead Public Service, as part of its Wellhead Protection Program, has proposed specific land use related measures to protect the Buffalo Aquifer that were incorporated into the Clay County Zoning Ordinance in 2005. Finally, state regulatory agencies (e.g., Minnesota Pollution Control Agency, Department of Health, and Department of Natural Resources) also have interest and powers that apply to the corridor.

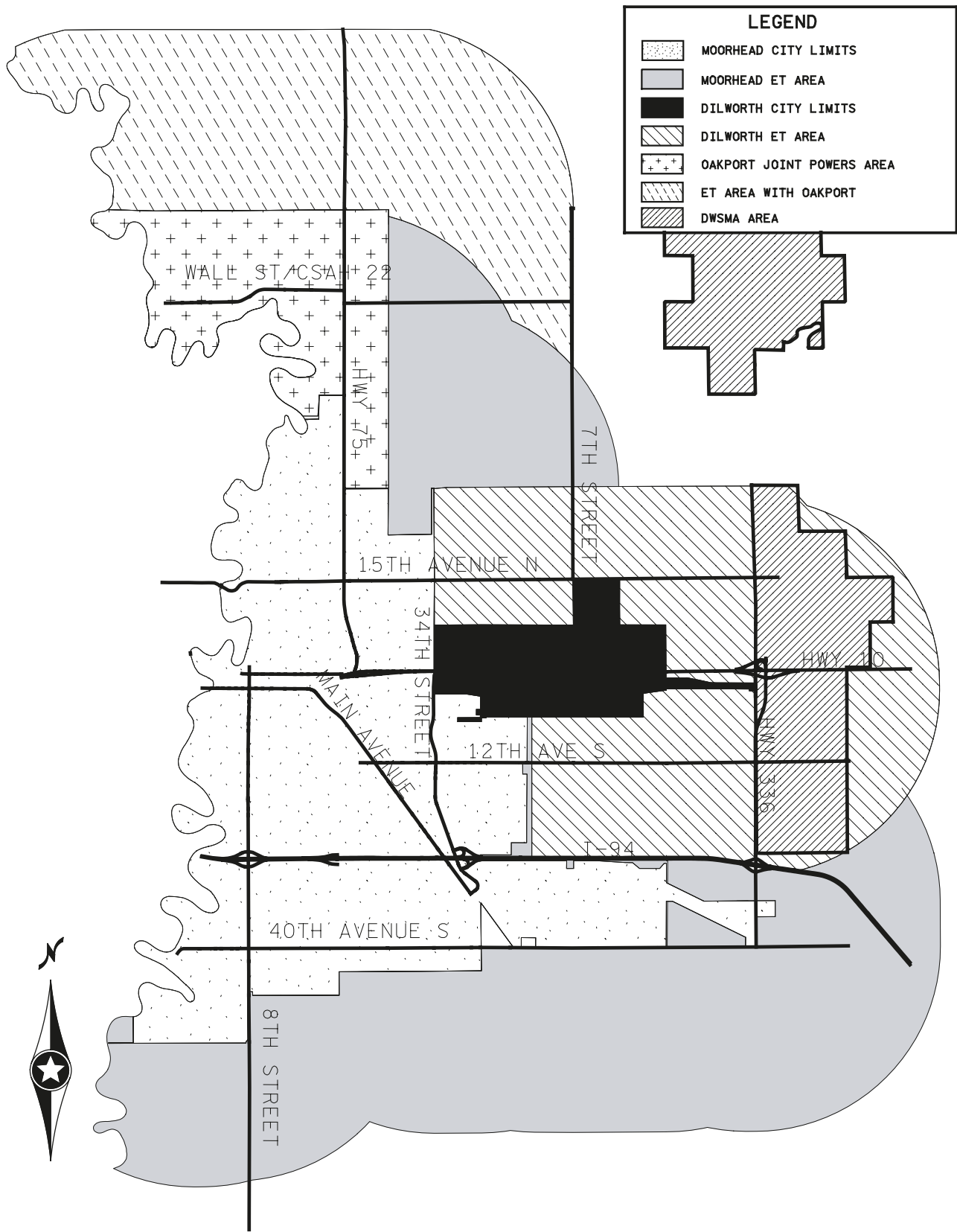
Table 8 documents the overlapping zoning powers of the Moorhead and Glyndon Townships and Clay County. Additionally, the Cities of Moorhead and Dilworth exercise subdivision authority and platting approval within their extraterritorial areas, although this area is in the County and the County's subdivision powers cover the two townships, except for those areas within each City's extraterritorial area. Figure 15 documents the joint extraterritorial planning jurisdiction of the Cities in the study area.

Due to the present situation, a person interested in obtaining a building permit or seeking to rezone a property may need to secure approval from multiple jurisdictions, each with their own land management controls. Thus, it is important for the prospective developer to initiate discussions with the governing body that has the most restrictive rules first and then move through the remainder. This uncertain and potentially time consuming review and approval process could be streamlined if local governments prepared a common zoning and subdivision ordinance and each administered the new ordinance in a coordinated manner.

Planning, zoning, and subdivision powers regulate new development, building expansion, platting, land use, and various design factors including important transportation elements (e.g., right of way access, street width, and official mapping) The jurisdiction's regulatory decisions will greatly affect the subarea's transportation system. Further, the multijurisdictional nature of the corridor suggests that complications could arise implementing the TH 336/12th Avenue South Study recommendations unless a collaborative coordination process is established among these sovereign jurisdictions. The SRC, early in the study process, identified overlapping jurisdictional powers as an issue that must be addressed by this study.

Table 8
Governance Matrix for Study Area

Jurisdiction	Zoning Ordinances	Subdivision/Platting Regulations
Moorhead Township	Yes	None
Glyndon Township	Yes	None
Clay County	Clay County zoning covers all areas of the County including Moorhead and Glyndon Townships, even though they have their own ordinances.	Has authority within townships except for areas within Dilworth and Moorhead extraterritorial boundaries.
Dilworth	Within the city limits	Within the city limits and its extraterritorial boundaries
Moorhead	Within the city limits	Within the city limits and its extraterritorial boundaries



EXTRATERRITORIAL JURISDICTION BOUNDARIES
 TRUNK HIGHWAY 336/12TH AVENUE SOUTH CORRIDOR STUDY
 Fargo-Moorhead Metropolitan Council of Governments

Figure 15

B. Collaborative Coordination Options

The SRC believed that preparing and adopting the TH 336/12th Avenue South Plan was an important action. However, for the plan to be most effective, the committee felt it should also propose a collaborative coordination process to assure cooperative land use and development decisions. This process is intended to address the complex inter-jurisdictional nature of the study area and provide a method for cooperatively discussing plan recommendations and coordination as it relates to the official land use powers held by several political subdivisions. This process should also assure that all affected regulatory authorities continue to have timely information regarding the future development along the corridor. In addition, the committee felt that the collaboration process should define roles and responsibilities for establishing the new process, so that jurisdictions and landowners have advance notice and can adjust accordingly.

The TH 336/CSAH 11 CMP dealt with similar governance issues, although its solutions were aimed at collaborative decision making for the TH 336 and CSAH 11 corridor.

Affected local governments desire a different approach for this study. Specifically, they seek to develop a framework for a non-binding forum to review potential growth and development in the study area. This informal forum should meet periodically to discuss growth in the subarea and its associated public infrastructure, zoning, land use, and subdivision issues. The forum's purpose is to coordinate and share information and maintain consistency with the overall area plan, but to not act as a decision-making body.

The SRC discussed various models to enhance cooperation in the study area:

- One option that was discussed was periodic staff (Metro COG, Clay County, Moorhead, and Dilworth planners; Moorhead Public Service, and Mn/DOT) coordination meetings to provide information on upcoming issues and developments. In the Fargo-Moorhead area, a current example of this model is the as-needed meetings held among floodplain administrators to coordinate planning and regulatory activities and cooperatively establish mitigation and emergency preparedness efforts.
- A second model considered by the SRC was the product of the 1997 Fringe Area Land Use and Transportation Study for Cass County. This collaborative, informal communication method was proposed and sporadically implemented by Fargo, West Fargo, and Cass County in an effort to maintain the long-range recommendations of the planning effort. Through a cooperative agreement contained in the plan's recommendations, staff and elected leaders from the jurisdictions were scheduled to meet when changes to the extraterritorial area's land use or transportation plans were proposed by one of the planning partners. This process provided for improved communications

regarding development, but it did not bind any of the governments to joint implementation of the discussion and conclusions. This mechanism, over time, lost its effectiveness as a dispute resolution process.

- A third model considered was using the Metro COG as a clearing house for all major development proposals. This option would require the local governments to bring all development proposals that exceed certain triggers to either the Metro COG Transportation Technical Committee (TTC) or Policy Board. Although the Metro COG bylaws do permit it to conduct advisory discussion sessions of important needs issues and the Policy Board or TTC periodically discuss issues of regional significance, playing an active coordinating function in the local development process would be a new role for the Metro COG.

While other more formal collaborative models could be explored (i.e., various joint powers agreement scenarios) or exclusive decision-making actions (expansion of municipal zoning powers across the subarea per Mn Statute 462.357 or annexation), these options were not considered, because they did not meet the informal and non-binding criteria.

C. Recommended Collaborative Coordination Process

After considering these options, the SRC determined that the most appropriate collaboration method for the study area would be to semi-annually have Metro COG convene and facilitate intergovernmental forums to discuss potential development in the subarea. It is proposed that forum invitees include elected officials, if interested, and staff (planners, engineers, etc.) representing Moorhead, Moorhead Public Service, Dilworth, Clay County, Metro COG, Mn/DOT as well as elected township officials from Moorhead and Glyndon. The forums will provide an opportunity to share and discuss information on anticipated development, especially development that would affect the GAPS and specific state and local roadway facilities in the subarea.

Held every six months, this gathering will offer a proactive process to monitor and anticipate potential development and to ascertain its consistency with the land use and roadway network planned for the subarea. If, in the interim between meetings, a development issue arises (i.e., any development proposal of any size) that is outside the existing City limits, it would be subject to this non-binding review process. In such an instance, the planning staff with zoning jurisdiction for the proposed project location would notify Metro COG staff, and Metro COG staff would be responsible for providing, as soon as practical, all other parties with a short summary of the development proposal. If any of the recipient parties desire more information or wish to comment on the proposal, they will notify Metro COG staff within two weeks of notification. If desired, all parties would be invited to a forum convened by Metro COG. It is anticipated that few forums will be held as the summary information mailed to each participant may suffice to meet information-sharing objective.

At the forum, data will be shared and advice/input will be provided. If the development will conflict with the subarea growth or roadway plans and amendments to certain documents (e.g., Metropolitan Transportation Plan, TH 336/12th Avenue South Study, Dilworth GAP, Moorhead GAP, or Clay County Development Code) will be necessary, the forum partners can discuss alternatives or impacts. However, no decisions should be made or positions taken at the forums. Based on the information discussed, Metro COG staff will prepare meeting minutes and submit them to forum participants and to elected officials from each affected jurisdiction. Any further comment or actions by affected or interested governments will be outside the forum process and will be completed in accordance with customary intergovernmental input processes and within the 60-day response period required by Mn Statute.

XI. MAJOR STUDY RECOMMENDATIONS

The study makes the following recommendations for 12th Avenue South access onto TH 336, the subarea roadway network, and the additional westbound off-ramp at TH 336 and TH 10. These recommendations are based on a variety of factors, which include:

- Adherence to the TH 336 Corridor Vision and performance measures
- Compliance with local and metropolitan plans
- Results of future traffic modeling and traffic operations analysis
- Evaluation of land use and roadway configurations
- Input from the SRC and focus group
- Comments from federal, state, and local review agencies
- Comments received from the public during open house meetings

A. TH 336 and 12th Avenue South Access

- Clay County, and the Cities of Dilworth and Moorhead should work together (using the methods offered in Section VII-C and Appendix F) to preserve and officially map 64.5 acres of right of way for the future TH 336/12th Avenue South interchange, and this footprint preservation effort should be coordinated with Mn/DOT.
 - The ultimate interchange configuration should be based on Alternative 3B – full buildout. The bridge deck should be able to accommodate a five-lane cross-section, and the off-ramps should be able to accommodate double left-turn lanes.
- A TH 336/12th Avenue South at-grade intersection should not be encouraged, because it will create the need for signalized intersection.
 - Signalizing the intersection does not meet the corridor vision statement.
 - Signalizing the intersection reintroduces delay along the TH 336 corridor.
 - Signalizing the intersection presents a safety concern for higher-speed TH 336 traffic, because drivers expect that they will not have to slow down and/or stop on an expressway facility.
- Clay County and the Cities of Moorhead and Dilworth should not allow “pocket” development near the TH 336/12th Avenue South intersection, until the TH 336 interchange is constructed
 - A small amount of development (about five acres) near the intersection deteriorates intersection operations and presents safety concerns.
 - The local jurisdiction should weigh the size and density of the proposed development and its economic benefits compared to the additional utility/infrastructure costs needed to serve the development as well as the environmental risks before it decides on the appropriate action.

- Since no state and federal funds are available in the foreseeable future from customary transportation revenue streams, Clay County, and the Cities of Dilworth and Moorhead should begin a collaborative effort to prepare the necessary financial package to construct the TH 336/12th Avenue South interchange, so that it can be built within the next decade.
 - The extension of 12th Avenue South to TH 336 should be coordinated with the construction of the TH 336 interchange.

B. Subarea Roadway Network

- Clay County and the Cities of Moorhead and Dilworth should preserve and officially map appropriate right of way (or obtain land dedications) for all key roadway corridors in the subarea (i.e., 4th, 12th, and 24th Avenues and 55th Street).
 - The right of way recommendations noted in this report for each corridor and its intersections can serve as a guide for the preservation effort.
 - The future 55th Street grade separation at I-94 will require additional studies to justify access onto the interstate system. At this time, funding for such a project is not anticipated in Mn/DOT's long range construction program. However, local governments can initiate right of way preservation efforts for both the I-94 and BNSF grade separations along 55th Street by revising land use plans and avoiding encroachment of potential right of way footprints during zoning and platting actions.

C. TH 336 and TH 10 Additional Westbound Off-Ramp

- Mn/DOT should encourage the County to preserve and officially map a total of 28 acres of right of way for an additional westbound off-ramp at TH 336 and TH 10 and ancillary purposes. The additional off-ramp will relieve future congestion on the existing loop ramp.
 - The property acquisition should include sufficient land to relocate the city wellfield and provide a buffer around it.
 - A private property remnant north of the northwest loop and west of TH 336 should be acquired to prevent development.

XII. CONSTRUCTION IMPLEMENTATION/STAGING

The following staging schedule is suggested by the SRC to advance the various preservation and construction activities recommended by the plan.

1. Preserve and officially map right of way for the TH 336/12th Avenue South interchange and additional TH 10 westbound off-ramp, and cooperatively develop a funding package to construct the interchange.
2. Complete corridor preservation activities for all subarea collector and minor arterial roadways, including preservation of a possible I-94/55th Street future interchange and/or a possible 55th Street overpass of the BNSF tracks in Dilworth.
3. Construct the TH 336/12th Avenue South interchange and 12th Avenue South extension.
4. Construct 4th Avenue South and/or 28th Avenue South from 34th Street to approximately 68th Street.
5. Construct 55th Street from TH 10 in Dilworth to approximately 30th Avenue South in Moorhead.
6. Construct all remaining roadways.

APPENDIX A

TH 336/CSAH 11 CORRIDOR MANAGEMENT PLAN – ACTION PLAN (Adopted 2004)

TH 336/CSAH 11 Corridor Management Action Plan (from 2004 study)

Timeframe	Responsibility	Activity
Immediate (within 1 year)	FM-COG	Reclassify CSAH 11 as a Minor Arterial roadway in the new FM-COG Plan
		Incorporate Mn/DOT's rural bypass access spacing parameters into metropolitan access guidelines
	Clay County	Prohibit new direct private property access on CSAH 11; allow current private access until major reconstruction occurs; and then consider consolidation, alternative access or right-in/right-out if appropriate
		Install corridor preservation signage along CSAH 11
		Install "Future Corridor" signs along 12th Avenue
		Add a portion of 12th Avenue South to the County's CSAH System
		Incorporate Moorhead's Wellhead Protection Plan recommendations into pertinent local zoning and subdivision ordinances
	Dilworth/ Clay County	Utilize the "Limited Growth" land use scenario for the sub area's future land use plan, thereby limiting development along TH 336
	Affected Local Governments	Prepare joint powers agreement (JPA), per suggestions provided in the Corridor Management Plan, prepare the corridor's overlay district as part of the JPA, and secure each affected jurisdiction's approval
Affected Local Governments	Establish Joint Powers Board with duties described in Section 7	
Short term (2-5 years)	Moorhead/ Clay County/ Dilworth	Preserve a 150-foot right of way and complete official mapping along 12th Avenue
		Space future access along 12th Avenue at 1,320 foot intervals
	Clay County/ Mn/DOT	Preserve ROW for the possible future construction of the 12th Avenue/TH 336 interchange
		Pursue official mapping for the 12th Ave/TH 336 interchange
	Clay County	Permit access on CSAH 11 consistent with Mn/DOT rural bypass guidelines
	Dilworth	Continue developing Dilworth's system of local and collector streets, for the planned growth area north of TH 10 and to 336, consistent with the Corridor Plan's recommendations (see Section 5.3 and Figure 9)
Limit access of Dilworth's development area to 1,320-foot spacing along TH 10		
Long term (6-10 years)	Moorhead/Dilworth	Enforce the orderly expansion of Moorhead and Dilworth's city limits
	Clay County/ Mn/DOT	Ensure that the 12th Avenue and TH 336 intersection continues to operate without the need for a traffic signal
	Clay County	Consider a two-lane section type, with a turn lane for the CSAH 11 as the preferred design to function as a rural bypass, and preserve 150-foot right of way

APPENDIX B

STUDY REVIEW COMMITTEE AGENDAS AND MEETING MINUTES

TH 336/12th AVENUE STUDY STUDY REVIEW COMMITTEE MEETING

September 8, 2005 - 8:00 to 9:30 a.m.

Metro COG Conference Room

One North Second Street

Case Plaza, Suite 232

Fargo, ND

(701) 232-3242

AGENDA

- 8:00 A.M.** Welcome and Introductions
- 8:05 A.M.** Consider Findings and Recommendations from Earlier Studies (Attachment A)
- 8:15 A.M.** Present Study Overview/Schedule (Attachment B)
- 8:20 A.M.** Discuss Project Issues and Needs (Attachments C, D, E)
- 8:30 A.M.** Review Preliminary Alternative Road Network Concepts (Attachment F, G, H)
- 8:50 A.M.** Consider Proposed I-94/55th Street Interchange
- 9:00 A.M.** Discuss Focus Group Membership (Attachment I)
- 9:15 A.M.** Review Questions for Focus Group Discussion (Attachment J)
- 9:30 A.M.** Adjourn

Attachments

RECORD OF MEETING

**TH 336/12TH AVENUE SOUTH STUDY
First Study Review Committee Meeting
Thursday, September 8, 2005, 8:00 a.m.
Case Plaza Council of Governments Conference Room**

Members in Attendance:

Wade Kline
Brian Gibson
Tim Magnusson
Jody Martinson
Cliff McLain
Bob Zimmerman
Dave Overbo
Stan Thurlow
Jerilyn Swenson
Kevin Nelson
Robert Olson
Rick Lane
Brian Shorten
Peggy Harter

Representing:

Metro COG
Metro COG
Clay County
Mn/DOT
Moorhead Public Service
City of Moorhead
Clay County
City of Dilworth
ATAC - NDSU
Glyndon Township
Buffalo-Red River Watershed District
SRF Consulting Group, Inc.
SRF Consulting Group, Inc.
SRF Consulting Group, Inc.

INTRODUCTIONS

Wade Kline welcomed everyone to the meeting, gave a brief project background and asked the group to introduce themselves and who they are representing.

PROJECT OVERVIEW

Brian Shorten referred the group to the meeting handouts that had been e-mailed to them prior to the meeting. The group reviewed and discussed each attachment as follows:

- Attachment A – Findings and Recommendations from earlier studies
 - Limited land use scenario
 - West to east growth and development, in concert with utility extensions; 150-foot right-of-way for 12th Avenue South extension, add 12th to CSAH system, access spacing at quarter-mile intervals on 12th Avenue
 - Aquifer/well-head protection program
 - Preservation of right-of-way for future interchange at TH 336 and 12th Avenue

TH 336/12th Avenue South Study
Study Review Committee Meeting Minutes
September 8, 2005

- Attachment B – Study Schedule
 - The study is well into the data collection process
 - We have started alternative development and will begin with analysis.
 - We will work on developing the Focus Group membership as part of today’s meeting.
 - The first focus group meeting and public open house are scheduled for Thursday September 22, 2005.
 - Completion of study by April 30, 2006
 - Extensive public involvement process
 - Bob Olson brought to the group’s attention that the watershed district is doing a project with Mn/DOT along TH 336 in regards to drainage of the roadway.

- Attachment C – Issues and Study Objectives Map
 - Brian Shorten reviewed key study objectives and identified environmental, jurisdictional, and transportation issues
 - Tim Magnusson stated that the zoning half-mile west of TH 336 between Highway 10 and I-94 is zoned limited commercial. Brian Shorten showed a graphic of the future land use and verified that it also showed that area as commercial land.
 - Bob Olson further discussed the current drainage issues with TH 336. There is currently a low point east of TH 336 and the runoff sits on what is currently agricultural land in the well head protection area. The project they are working on is looking at taking the TH 336 drainage north to drainage ditch 41. He said that more information about the project can be obtained from Bruce Albright with the Buffalo Red River Watershed District.

- Attachment D – Moorhead and Dilworth Future Land Use
 - Wade Kline discussed the Dilworth future land use plan
 - Stan Thurlow added that the current growth pressure for Dilworth is to the east.
 - Brian Shorten questioned whether high-density residential should be along the I-94 corridor or if it should be changed to commercial due to noise issues. Consensus was to change this to commercial.
 - Brian Shorten showed that a section of 12th Avenue in the future is shown as a collector, and asked if it should be shown as an arterial all the way through. The decision was to change it to an arterial.
 - Land use shown as industrial in the southeast quadrant of the TH 336 and Hwy 10 intersection should be changed to Transportation/RR. The RR property west of this area should also show a strip of Transportation/RR.

- Attachment E – Utility Extension Growth Plan for Dilworth and Moorhead
 - Wade Kline discussed this graphic and how utility extension correlates with the future land use growth. He pointed out the different phases of the proposed utility extensions.
 - Bob Zimmerman asked Stan Thurlow at what phase he sees Dilworth reaching 5,000 people. Stan Thurlow felt that Dilworth would reach 5,000 people at phase 1, or by 2010.

- Attachments F, G & H – Preliminary Alternative Road Networks 1, 2 & 3
 - Rick Lane discussed the three preliminary alternative road networks that SRF developed. He stated that all three alternatives meet Mn/DOT access management guidelines.

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- The group agreed that as we develop a future roadway network, we may want to make appropriate land use changes to accommodate for industrial areas/truck traffic etc.
 - Rick Lane stated that we plan to test three major intersections within the area. ATAC and Metro COG have a separate budget to complete model runs for the different scenarios. Rick Lane would like to have a model run of the three alternatives shown.
 - Tim Magnusson pointed out that the connection to Highway 10 from the current at-grade railroad crossing actually connects further west. This change will be made on all three alternatives.
 - Bob Zimmerman noted the Offut Development has a roundabout platted at 24th Avenue South and 40th Street
 - Rick Lane asked the SRC if they were comfortable showing the three alternatives to the public or if there is anything that they would like to change.
 - Stan Thurlow stated that Dilworth and Metro COG will refine/update the land use to reflect the transportation network.
 - Jody Martinson questioned whether or not the SRC would show a future interchange at I-94 to the public – she will check with Mn/DOT district staff.
 - Metro COG agreed that they use the three alternatives to develop future ADT's.
- Attachment I – Focus Group Membership
 - Brian Shorten referred the committee to a list of potential landowners that could be invited to the first focus group meeting. He asked the group if there were any other landowners that should be added to the list or taken off the list. The decision was to leave the list as it is and add the owner of KOA Campground. The group helped fill in contact names for landowners.
 - Brian Shorten then asked the SRC if they would like senior policy staff from involved agencies to be invited to the Focus Group meetings. The group consensus was yes.
 - Brian Shorten asked the SRC if they would like elected officials to be invited to the Focus Group meetings. The group consensus was to not invite elected leaders and to keep them informed through the SRC representatives.
- Attachment J – Focus Group Discussion Items
 - Brian Shorten presented the four focus group discussion topics and specific questions and asked the group if they would like to change or add to them. The SRC thought that while discussing the future road network they should ask the focus group their opinion about 24th Avenue frontage road. The SRC was comfortable with the rest of the focus group discussion items.

Tentative date for next meeting: Thursday, October 13, 2005, 8 a.m., at Metro COG.

ACTION ITEMS FROM THIS MEETING

- Peggy Harter will work with Wade Kline to make revisions to the future land use plan.
- Metro COG will work with ATAC to get started on the models of the three future roadway network alternatives.
- Peggy Harter will contact Bruce Albright to get information on drainage plans for the subarea.
- Brian Shorten will send out Focus Group invitations and landowner letters (within the subarea) announcing the open house.
- Peggy Harter will make sure the open house meeting announcement is in the Fargo Forum by 9/15/05.

Minutes provided by SRF Consulting Group, Inc. If there are any additions or corrections to these minutes, please contact Peggy Harter at the SRF Fargo office at 701-237-0010.

TH 336/12th AVENUE STUDY STUDY REVIEW COMMITTEE MEETING

October 13, 2005 - 8:00 to 9:30 a.m.

Metro COG Conference Room

One North Second Street

Case Plaza, Suite 232

Fargo, ND

(701) 232-3242

AGENDA

- 8:00 A.M.** Welcome and Introductions
- 8:05 A.M.** Review September Meeting Minutes
- 8:10 A.M.** Discuss Summary and Comments from Focus Group and Public Meeting
- 8:25 A.M.** Review revised sub-area land use map and Discuss and Determine Future Land Use Assumptions (growth rates, growth areas, etc.)
- 9:15 A.M.** Discuss Locations for Operations Analysis
- 9:25 A.M.** Schedule Next Meeting
- 9:30 A.M.** Adjourn

RECORD OF MEETING

**TH 336/12TH AVENUE SOUTH STUDY
Second Study Review Committee Meeting
Thursday, October 13, 2005, 8:00 a.m.
Case Plaza Council of Governments Conference Room**

Members in Attendance:

Wade Kline
Brian Gibson
Tim Magnusson
Jody Martinson
Cliff McLain
Bob Zimmerman
Dave Overbo
Deb Martzahn
Stan Thurlow
Jerilyn Swenson
Diome Motuba
Arvid Leiseth
Robert Olson
Rick Lane
Peggy Harter

Representing:

Metro COG
Metro COG
Clay County
Mn/DOT
Moorhead Public Service
City of Moorhead
Clay County
City of Moorhead
City of Dilworth
ATAC - NDSU
ATAC - NDSU
Moorhead Township
Buffalo-Red River Watershed District
SRF Consulting Group, Inc.
SRF Consulting Group, Inc.

INTRODUCTIONS

Wade Kline welcomed everyone to the meeting and asked the group to introduce themselves and who they are representing.

REVIEW OF MEETING MINUTES

Rick Lane asked the Study Review Committee (SRC) if anyone had any comments or changes to the First SRC meeting minutes that had been sent to them. No comments or changes were stated.

SUMMARY AND COMMENTS FROM FOCUS GROUP AND PUBLIC MEETING

The first Focus Group and Public Meeting was held on September 22, 2005. A summary of the meetings' public comments were sent to the SRC for their review with their meeting packet. Rick Lane highlighted the general and specific comments received from the Focus Group discussion. The group discussed some of the following key points:

- The Focus Group was in favor of going straight to an interchange or grade separated crossing at the intersection of 12th Avenue and TH 336. They felt a temporary at-grade crossing would not be worth the investment. SRF indicated per the study's scope of work that an analysis of an at-grade intersection will be provided for the 2030 land use scenario to document impacts.
- The Focus Group did not want to see scattered development. Mr. Lane clarified that they did not want to see pocket development in the study area.
- Mr. Lane pointed out that there was a high level of support for building the 55th Street Corridor. ATAC did some initial modeling with full growth and found that an overpass on 55th Street over the railroad in Dilworth and an I-94 interchange would have high usage.

The public meeting had approximately 20 people sign in. Mr. Lane felt there were more people at the meeting that had not signed in. A summary of verbal and written comments from the public meeting is included:

- Mr. and Mrs. Deборе would like to see the overpass into Dilworth over the railroad at Main Street in Dilworth instead of 55th Street. Mr. Lane replied to the SRC that the overpass will work better over the long range if constructed at 55th Street.
- Mr. Tobolt indicated that he is unwilling to donate or sell land along the proposed 12th Avenue South extension because he does not support the extension. The SRC discussed this issue and determined that Mr. Tobolt may own the right of way that would be necessary to extend 12th Avenue South.
- Joe and Nancy Kolo were concerned that if an Interchange at 55th Street and I-94 was built, the ramps for it would affect their property.

Stan Thurlow commented that he was pleased with the format and turn-out at the public meeting.

PROJECT ISSUES

Project issues that were discussed at the SRC meeting include the following:

- Cliff McClain stated that the railroad is considering fueling the locomotives in the area east of TH 336 which is over the aquifer. If the trains stop further to the west to fuel, they block at-grade crossings. Cliff felt that an overpass at 55th Street would allow the trains to stop further west which would help resolve the issue.

- The group discussed John Tobolt's contention that there is no public right-of-way along the proposed 12th Avenue South alignment. Mr. Tobolt feels the land is his. Arvid Leiseth verified that the Moorhead Township does not maintain that portion of 12th Avenue South and that they do not consider it their road. According to Dave Overbo, not all section lines have established right of way in Minnesota.
- Robert Olson stated that Ditch 41 is full to capacity and with future improvements in the area, Ditch 41 will need to be cleaned and maintained, if not improved. The Cities of Moorhead and Dilworth both require storm water retention for new development. The Committee verified that Ditch 41 would not need to be relocated to improve it.
- Rick Lane asked what the Water District was doing with the current problem of water not draining along the west side of TH 336. Robert Olson replied that the standing water is on the Feder properties. The current plan is to drain the water west across the Feder property to its western boundary and then south to approximately County Road 14 and then west to Ditch 41.
- Rick Lane referred the group to the future land use map and pointed out that changes have been made to the land use since the last SRC meeting based on public input and additional research. The industrial area southwest of the intersection of TH 336 and Highway 10 has been reduced and an open space buffer has been added between the industrial area and the residential areas.
- Rick Lane and Wade Kline explained to the SRC that the future land use presented on the graphics represented full buildout, which may not occur for 50 years or more. The traffic model that ATAC is developing is a 25 year model (year 2030). Mr. Lane and Mr. Kline asked the Committee for guidance on the percent of buildout and its location for the 25-year (2030) model.
- The SRC decided that the growth scenario to be used in the 25 year (2030)-traffic model should include Moorhead developing to the east to County Road 81 with portions of the west side of the 336 corridor being developed and with Dilworth having full development within its current city limits and out to Phase 1 of the municipal utility phasing plan. SRF will prepare a land use map that represents this 25 year (2030) growth scenario.
- Rick Lane discussed the possible roadway network alternatives that could be part of the traffic modeling and operations analysis. The Committee decided to make changes to some of the network alternatives. The final alternatives are as follows:
 1. Base Model - 2030 network + 2030 land use assumptions + no 12th Avenue South extension
 2. Alternative 1 - 2030 network + 2030 land use assumptions + 12th Avenue South extension + TH 336/12th Avenue South at-grade intersection
 3. Alternative 2A - 2030 network + 2030 land use assumptions + no 12th Avenue South extension + TH 336/12th Avenue South interchange + one overpass over TH 336 (26th Avenue South)

4. Alternative 2B - 2030 network + 2030 land use assumptions + 12th Avenue South extension + TH 336/12th Avenue South interchange + I-94 overpass + one overpass over TH 336 (4th Avenue South) + RR overpass at 55th Street
5. Alternative 3A - Full Build out Network + SRC full build out land use assumptions + 12th Avenue South extension + TH 336/12th Avenue South interchange + I-94 interchange + one overpass over TH 336 (26th Avenue South) + RR overpass at 55th Street
6. Alternative 3B - Full Build out Network + SRC full build out land use assumptions + 12th Avenue South extension + TH 336/12th Avenue South interchange + I-94 interchange + one overpass over TH 336 (4th Avenue South) + RR overpass at 55th Street

FMCOG and SRF will work together to finalize the roadway network alternatives and determine which corridors will become grade-separated. The finalized road network alternatives will be passed on to ATAC to begin the traffic modeling process.

A slip ramp from the future industrial area/intermodal facility onto TH 336 will not be part of the traffic model. However, SRF will check to see if the geometrics of a slip ramp would work and if it would be permitted by Mn/DOT's Access Spacing Guidelines for such an IRC corridor.

Apart from this study, ATAC will model full buildout and include the study's preferred roadway network alternative.

NEXT MEETING

The next SRC meeting will tentatively be held either the week of November 14, 2005 or the week of December 5, 2005. The 4th SRC meeting that is shown at the end of December on the project schedule will be changed to either earlier in December or early January to avoid conflicts with the holidays.

ACTION ITEMS FROM THIS MEETING

- **FMCOG and SRF will work together to make the changes to the 2030 land use maps and the alternatives for the roadway network.**
- **SRF will check to see if the geometrics will work for a slip ramp from the future intermodal facility onto TH 336 and contact Mn/DOT to ascertain if a slip ramp would meet IRC access spacing guidelines.**
- **ATAC will work with FMCOG to do the traffic modeling based on the roadway network alternatives.**

- **SRF will prepare LOS traffic operations analysis using the ATAC forecast date for three key future roadway network intersections.**

Minutes provided by SRF Consulting Group, Inc. If there are any additions or corrections to these minutes, please contact Peggy Harter at the SRF Fargo office at 701-237-0010.

TH 336/12th AVENUE STUDY STUDY REVIEW COMMITTEE MEETING

December 22, 2005 – 10:00 a.m. to 12:00 p.m.

Metro COG Conference Room

One North Second Street

Case Plaza, Suite 232

Fargo, ND

(701) 232-3242

AGENDA

- 10:00 A.M.** Welcome and Introductions
- 10:05 A.M.** Review October Meeting Minutes (Attachment 1)
- 10:10 A.M.** Discuss Revised Land Use/Roadway Network Scenarios (Attachment 2) and Corridor Vision/Guiding Principles (Attachments 3 and 4)
- 10:30 A.M.** Discuss Slip Ramp Evaluation (Attachment 5)
- 10:50 A.M.** Discuss Traffic Operations Analysis (Attachment 6)
- 11:20 A.M.** Discuss Alternative Evaluation Criteria
- 11:50 A.M.** Schedule Next Meeting
- 11:55 A.M.** Adjourn

RECORD OF MEETING

**TH 336/12TH AVENUE SOUTH STUDY
Third Study Review Committee Meeting
Thursday, December 22, 2005, 10:00 a.m.
Case Plaza Council of Governments Conference Room**

Members in Attendance:

Brian Gibson
Jody Martinson
Cliff McLain
Tim Magnusson
Jerilyn Swenson
Diomo Motuba
Stan Thurlow
Robert Olson
Clair Hanson
Kevin Nelson
Arvid Leiseth
Carrie Smith
Rick Lane
Brian Shorten
Rebecca Yao

Representing:

Metro COG
Mn/DOT
Moorhead Public Service
Clay County
ATAC
ATAC
City of Dilworth
Buffalo-Red River Watershed District
City of Moorhead
Glyndon Township
Moorhead Township
City of Glyndon
SRF Consulting Group, Inc.
SRF Consulting Group, Inc.
SRF Consulting Group, Inc.

INTRODUCTIONS

Brian Shorten welcomed everyone to the meeting and asked the group to introduce themselves and who they are representing.

REVIEW OCTOBER MEETING MINUTES

Brian Shorten asked the Study Review Committee (SRC) if anyone had any comments or changes to the October meeting minutes. No comments or changes were stated.

DISCUSS REVISED LAND USE/ROADWAY NETWORK SCENARIOS

Rick Lane discussed the revised land use/roadway network maps. He explained that the original land uses were based on both the Moorhead and Dilworth Growth Area Plans (GAP). Some of the additions/changes made to the maps included the aquifer protection area along TH 336, no growth east of TH 336 in 2030, and limited growth near the TH 336/12th Avenue South interchange in full buildout. These changes were based on comments received from the SRC in November 2005.

Rick also described the various roadway alternatives. Alternative 1 includes a 12th Avenue extension and at-grade intersection at TH 336 and 12th Avenue South. Alternatives 2A and 2B are for the year 2030 and include a diamond interchange at TH 336 and 12th Avenue South. Alternative 2A does not include a 12th Avenue extension, but does include a 28th Avenue South overpass of TH 336. Alternative 2B includes a 12th Avenue South extension and a 4th Avenue South overpass of TH 336. One observation that should be noted between Alternative 2A and 2B is that with the 12th Avenue South extension, volumes on 4th Avenue decrease because 12th Avenue draws much of the traffic. Without the 12th Avenue South extension, 4th Avenue South would probably require a 4-lane cross section to accommodate the projected traffic volumes. However, 4th Avenue South is planned to be a collector instead of an arterial and not meant to handle such traffic volumes.

Rick noted that Alternatives 3A and 3B are for full buildout. Both options include a 12th Avenue South extension and diamond interchange at TH 336 and 12th Avenue South; the difference between the two is a proposed I-94/55th Street interchange (Alternative 3A) or a 55th Street overpass of I-94 (Alternative 3B). Traffic volumes on I-94 between 34th Street and 55th Street are projected at approximately 70,000 and 52,000 vehicles per day (vpd) for Alternative 3A and 3B, respectively. Such traffic volumes would typically require three lanes in each direction; however, Mn/DOT does not currently have any plans to increase I-94 to 6-lanes. Without an interchange at I-94 and 55th Street, traffic volumes are higher on TH 336 because vehicles that want to access I-94 have to use the interchange at TH 336.

Some comments/questions that came up during discussion include:

- How do you prevent growth in the wellhead protection area and who regulates it? Cliff McLain replied that the intent is not to prevent growth in that area, but to manage and restrict growth (e.g., avoid gas stations and businesses with large septic tanks).
- Will we be looking at interim operations at TH 336 and 12th Avenue South? Rick Lane responded that is something the SRC should discuss. (See discussion in the Traffic Operations Analysis section)
- Stan Thurlow mentioned that the City of Dilworth is having a comprehensive plan adoption meeting in January and that our land use recommendations use for this study appear to be consistent with the comprehensive plan. SRF will review the approved comprehensive plan for consistency with this study.

DISCUSS REVISED CORRIDOR VISION/GUIDING PRINCIPLES

Brian Shorten reviewed the revised TH 336 Corridor Vision and Performance Measures. Based on comments from the SRC, additional visions and performance measures were added. The

following was added to the corridor vision: "Metro COG's Short- and Long-range Transportation Plan includes the extension of 12th Avenue South from Moorhead to TH 336 as a short-term element (2004-2010). Additional performance measures included: "environmental impacts should be avoided, minimized, or mitigated" and "quality of the aquifer must not be degraded."

Brian also touched on the Principles Guiding Accelerated Development. Brian asked the SRC if these guiding principles should also be applied to other developments within the planned land use for 2030 (i.e., if there are "pockets" of development within the 2030 planned growth that leap-frog a logical sequence). The consensus of the SRC was that the guiding principles should apply to both planned and unplanned development.

Stan Thurlow brought up a question on how development would be approved based on the fact that one governmental body could veto another. Tim Magnusson noted that there would have to be a pre-annexation cooperative agreement between the governmental bodies and that these guiding principles could only apply to pre-annexation.

Brian stated that SRF would revise the Guiding Principles to reflect that after annexation, interregional acceptance of accelerated development would no longer apply.

DISCUSS SLIP RAMP EVALUATION

Rick Lane discussed the slip ramp preliminary assessment memorandum. The SRC requested the study team to evaluate the feasibility of construction a slip ramp from the industrial area onto TH 336, as suggested by focus group members. Results indicate that construction of a slip ramp is physically possible. However, the addition of the slip ramp would require a different access configuration on TH 336 than originally planned. Also, discussions with Mn/DOT indicate that they are flexible on TH 336 access configurations as long as traffic operations are acceptable. However, SRF identified serious concerns about the slip ramp, which include meeting TH 336 performance measures and criteria, access, driver expectations, weaving issues, and traffic speed differential. Therefore, based on the safety and operational concerns, SRF does not recommend conducting additional analysis for the slip ramp.

The SRC agreed with the preliminary analysis and decided that additional slip ramp analysis is not necessary.

DISCUSS TRAFFIC OPERATIONS ANALYSIS

Rebecca Yao discussed the traffic operation results of the TH 336/12th Avenue South intersection or interchange. Alternative 1 is an at-grade intersection at TH 336 and 12th Avenue South. Alternative 1 assumptions included a signalized intersection, four lanes on TH 336 (based on existing geometry), and four lanes on 12th Avenue South west of TH 336 and two lanes east of TH 336. The geometrics were based on projected turning movement counts. Two lanes east of TH 336 on 12th Avenue South seemed appropriated based on limited development. Because TH 336 was recently reconstructed, it was not the intent to increase the capacity of the roadway. Traffic modeling results indicate the at-grade intersection operates

very poorly with most movements operating at level of service (LOS) D, E, or F. Delays for some movements reach over five minutes and queues reach over 1000 feet.

Alternatives 2A and 2B are based on 2030 land use assumptions. In order to best evaluate the proposed TH 336/12th Avenue interchange, SRF modeled the highest forecasted traffic volumes through the interchange. In this case, Alternative 2B generated the higher traffic volumes. The lane configuration assumptions were based on the projected traffic volumes. TH 336 12th Avenue South traffic volumes are not very high and therefore, could operate well with one lane in each direction. The northbound-to-westbound movement is very high (600 vehicles turning left during the peak hour), which requires a double left-turn lane. The traffic modeling indicates that with an interchange at this location, both ramp terminals would operate at acceptable LOS, with all major movements operating at LOS C or better.

Similar to Alternatives 2A and 2B, SRF evaluated the TH 336/12th Avenue interchange with the higher full buildout traffic volumes for Alternatives 3A and 3B. Although this study goes through 2030, the intent of looking at full build traffic operations is to determine two things: 1) whether a diamond interchange will still operate at acceptable levels of service with increased traffic volumes and 2) to determine the appropriate right-of-way "footprint" for the proposed interchange. Alternative 3B had the higher traffic volumes, and therefore, SRF used Alternative 3B for the traffic analysis. Traffic operations indicate that with a 5-lane cross section across the bridge and four lanes (plus turn lanes) on 12th Avenue South, the interchange ramp terminals will still operate at acceptable LOS.

Some comments/questions that came up during the traffic operations discussion include:

- Should we be looking at how the TH 336/12th Avenue South intersection operates between now and 2030?
 - The consensus among the SRC was that we should look at how the TH 336/12th Avenue South intersection operates during an interim year. The SRC agreed that 2010 traffic levels would be adequate.
 - SRF should look at the 2010 model with the 12th Avenue South extension. If traffic operations indicate that the TH 336/12th Avenue at-grade intersection operates at acceptable LOS, SRF should see how much commercial development would adversely affect the intersection.
 - Brian explained that his work was not included in the original scope. SRF will proceed with the analysis however it's important that everyone realize that it may impact the project budget. SRF will make every effort to stay within the approved project budget.

DISCUSS ALTERNATIVE EVALUATION CRITERIA

Brian Shorten discussed the alternative evaluation criteria and how the original scope included and evaluation matrix for determining the preferred alternative. However, based on the evaluation and analysis that is completed, it seems that an evaluation matrix might not be the best method to help determine the preferred alternative. Brian suggested that instead, the study answer several key questions and describe the findings in the report. Using critical evaluation criteria (safety, mobility, traffic operations, etc.), the questions could include:

1. Does the TH 336/12th Avenue intersection operate well in 2010 and 2030?

2. How does the timing of the 12th Avenue South corridor extension affect the proposed functional classifications for 4th Avenue South?
3. Does the proposed subarea roadway network provide a continuous/discontinuous system?
4. Are 4th Avenue South and 28th Avenue South overpasses of TH 336 needed?
5. Under full buildout, what should be the geometric configuration of the TH 336/12th Avenue South interchange? What is the footprint for the interchange and how many acres should be officially mapped?
6. Is there a need for an additional TH 10 westbound off-ramp at the TH 336/TH 10 interchange?
7. Under full buildout, how does a 55th Street overpass/interchange at I-94 affect TH 336 traffic operations and what volumes would be generated on I-94, at existing interchanges, and proposed interchanges?

OTHER COMMENTS

- Jody Martinson mentioned that Mn/DOT will be updating its long-range plan in 2007 and results/recommendations from this study should be included.
- In the report, the SRC feels all alternatives should be discussed, but it should be clear that Alternative 2B generates the higher traffic volumes in 2030 and Alternative 3B for full buildout.
- The SRC agreed to move forward with Alternatives 2B and 3B.

NEXT MEETING

The next SRC meeting is scheduled for Thursday, January 26, 2006. The meeting agenda will include the evaluation/decision framework, interim traffic operations at TH 336 and 12th Avenue South, potential implementation/construction schedule, and right-of-way estimates for a TH 336/12th Avenue South interchange and a westbound off-ramp at TH 336 and TH 10.

ACTION ITEMS FROM THIS MEETING

- **SRF will prepare LOS traffic operations analysis for 2010 at the TH 336/12th Avenue South intersection based on the extension of 12th Avenue South and development-lead scenarios.**
- **SRF will provide a draft of the decision framework prior to the next SRC meeting.**
- **SRF will prepare a draft evaluation report of the key questions identified by the SRC and that are noted in these meeting minutes.**
- **SRF will determine a preliminary right-of-way "footprint" for the TH 336/12th Avenue South interchange and for the TH 10 westbound off-ramp.**
- **SRF will develop a draft implementation/construction schedule.**
- **SRF will revise the Guiding Principles to include additional comments.**

Minutes provided by SRF Consulting Group, Inc. If there are any additions or corrections to these minutes, please contact Rebecca Yao at the SRF Minneapolis office at 763-475-0010.

TH 336/12th AVENUE STUDY STUDY REVIEW COMMITTEE MEETING

January 26, 2006 – 10:00 a.m. to 12:00 p.m.

Metro COG Conference Room

One North Second Street

Case Plaza, Suite 232

Fargo, ND

(701) 232-3242

AGENDA

- 10:00 A.M.** Welcome and Introductions
- 10:05 A.M.** Review December Meeting Minutes (Attachment 1)
- 10:10 A.M.** Consider Decision Framework (Attachment 6)
- 10:30 A.M.** Discuss 2010 TH 336/12th Avenue South Intersection Traffic Operations Analysis (Attachment 2)
- 10:50 A.M.** Present Preliminary Interchange Footprints (Attachments 3 and 4)
- 11:10 A.M.** Discuss Key Alternative Evaluation Questions (Attachment 5)
- 11:40 A.M.** Discuss Implementation/Construction Schedule/Project Sequencing (Attachment 7)
- 11:50 A.M.** Discuss/Schedule Next Focus Group, Open House, and SRC Meetings
- 12:00 P.M.** Adjourn

RECORD OF MEETING

**TH 336/12TH AVENUE SOUTH STUDY
Fourth Study Review Committee Meeting
Thursday, January 26, 2006, 10:00 a.m.
Case Plaza Council of Governments Conference Room**

Members in Attendance:

Brian Gibson
Wade Kline
Jody Martinson
Cliff McLain
Tim Magnusson
Dave Overbo
Stan Thurlow
Deb Martzahn
Clair Hanson
Rick Lane
Peggy Harter
Brian Shorten (via telephone)

Representing:

Metro COG
Metro COG
MNDOT
Moorhead Public Service
Clay County
Clay County
City of Dilworth
City of Moorhead
City of Moorhead
SRF Consulting Group, Inc.
SRF Consulting Group, Inc.
SRF Consulting Group, Inc.

INTRODUCTIONS

Rick Lane welcomed everyone to the meeting and asked the group to introduce themselves and who they are representing.

REVIEW DECEMBER MEETING MINUTES

Rick Lane asked the Study Review Committee (SRC) if anyone had any comments or changes to the December 22, 2005, meeting minutes (Attachment 1 of the meeting packet). No comments or changes were stated.

DISCUSS COLLABORATIVE COORDINATION PROCESS

Brian Shorten joined the meeting via teleconference to discuss (Attachment 6 of the meeting packet) the Collaborative Coordination Process concepts for reviewing development decisions in the project area. The TH 336/12th Avenue South area has overlapping governance including five jurisdictions. SRF developed collaboration concepts for the SRC to review with the goal of keeping all parties informed as new development proposals are considered within the study area by the various jurisdictions. Furthermore, per the RFP requirements, SRF provided only options that were informal and non-binding. Brian Shorten also referred the group to the Extraterritorial (ET) Jurisdiction Boundary graphic that was distributed at the meeting. The concepts presented and discussion about which concept to pursue was as follows:

- SRF Recommendation – The coordination process should include staff from the same parties that are part of the SRC. The meetings would provide an opportunity for the committee to discuss information regarding anticipated development and would occur on an as needed basis. The committee would meet for information sharing and discussion on alternatives or to identify impacts, but no decisions are to be made and no positions taken. Based on the information discussed, each staff person may report back to their respective body with the information. Any further comments or action by affected or interested governments will be outside the forum process, and will be completed in adherence with the customary intergovernmental input process.
- Wade Kline felt that there should be set meeting dates at least twice a year instead of just having a meeting whenever new development proposals arise.
- Tim Magnusson added that Minnesota statute has a 60-day rule, that if a zoning request is brought to them, they have 60 days to rule on it or it is approved automatically. This would require the committee to meet on an as needed basis as well.
- Brian Shorten suggested that the committee have scheduled meetings twice a year as well as meetings that are scheduled based on responses needed for zoning requests that may occur throughout the year.
- The SRC decided FM COG will host and facilitate all meetings. If one of the committee members needs to convene a meeting in between the semi annual meetings they should contact relevant Metro COG staff to schedule the meeting.
- Wade Kline will include the committee maintenance in the next FM COG UPWP to get approval for the FM COG to host and facilitate all meetings for this committee.
- Cliff McLain requested that the wellhead protection area be added to the ET jurisdiction graphic.

DISCUSS 2010 TH 336/12TH AVE S INTERSECTION TRAFFIC OPERATIONS ANALYSIS

Rick Lane discussed the findings of the 2010 TH 336/12th Avenue South intersection traffic operations analysis (Attachment 2 of the meeting handout). Two alternatives were considered. The first was just the extension of 12th Avenue from 34th Street to TH 336. The second was pockets of development (5 acres, 10 acres, 20 acres) near the intersection of TH 336 and 12th Avenue South without the extension of 12th Avenue. The analysis indicates that by the year 2010, if 12th Avenue is extended with no development, it is likely that the intersection operations will deteriorate to the point where traffic signal warrants would be met. A preliminary operational analysis shows the signal would operate at an acceptable LOS however;

the vision for the TH 336 corridor is to maintain a 65 mph average speed and strongly discourages the installation of a traffic signal. Therefore, the extension of 12th Avenue, even without development, should be discouraged due to its impacts on the TH 336 corridor unless an interchange is constructed. Analysis of pocket development without the extension of 12th Avenue showed gap acceptance concerns with as little as 5 acres of development and that even as little as 10 acres of development by the year 2010 would warrant the installation of a traffic signal. Therefore the overall recommendation for the intersection is to construct an interchange at the intersection and discourage any development in the area until the interchange is constructed. The SRC strongly concurred with the recommendation to discourage development until the interchange is constructed.

PRELIMINARY INTERCHANGE FOOTPRINTS

Rick Lane presented a preliminary interchange footprint (Attachment 3 of the meeting handout). The preliminary design is a typical diamond interchange with the potential to place a loop in the NE quadrant. The interchange would require approximately 60 acres of additional right-of-way to be acquired. The committee was concerned about the minimal amount of distance between the gravel pit pond and 12th Avenue South, just east of TH 336. SRF will look at the options of adding curvature to 12th Avenue South around the gravel pit pond to maintain a buffer between the road and pond or filling in a portion of the pond to create the buffer. The group decided that it was not an acceptable option to shift the entire interchange to the north. The option to fill in a portion of the pond is anticipated to be very expensive and may be difficult to maintain consolidation.

PROPOSED TH 336/TH 10 WESTBOUND OFF RAMP

Rick Lane discussed the proposed TH 336/TH 10 westbound off ramp (Attachment 4 of the meeting handout). The additional west bound off ramp would require an approximate 12 acres of land to be acquired. He noted that one existing residential property would have to be acquired. Rick Lane suggested that at the time this right-of-way is acquired they should also acquire a strip of land north and adjacent to TH 10 to allow expansions, relocation, and to create a 200-foot buffer around the City of Moorhead wells. Cliff McLain noted that the well closest to the proposed westbound off ramp is not in use and will be filled in. The committee also suggested that the approximate 10 acres of land just north of the northwest loop ramp and west of TH 336 should also be acquired during the right-of-way acquisition process.

The SRC discussed the procedure for officially mapping the property for the off-ramp and TH 336/12th Avenue South interchange and noted that it only preserves the right-of-way as a public record. If a property owner presents a request to develop the land or build even a small structure that is allowable under current zoning, the jurisdiction could be forced to purchase the property much earlier than anticipated. The SRC discussed the need to acquire the right-of-way as soon as possible. Mr. Lane noted that advanced right-of-way purchase is eligible for federal funding but typically MNDOT considers right-of-way a local responsibility. In this case since it is an important IRC corridor, and MNDOT is actively involved with the local jurisdiction in preserving the integrity of the corridor, they may consider participating in early right-of-way acquisition.

ALTERNATIVE EVALUATION

Rick Lane discussed ten key questions that have been reviewed during the study process (Attachment 5 of the meeting handout). He then discussed the analysis used for each question and the recommendation that had been developed.

Some comments/questions that occurred during this discussion include the following:

- Brian Gibson - Should we consider preserving ROW for a future 4th Avenue and 28th Avenue overpass? Rick Lane - Using the land use assumptions the SRC has created show very low future volumes on the overpass. However, this is something the committee can continue to think about and we can have more discussion about it at the next meeting.
- In Table 1, question 6, 55th Street should be labeled a minor arterial, instead of not classified.
- Question 7 regarding the geometric configuration of the intersection TH 336 and 12th Avenue South, the response should include discussion about pond impacts and the possibility of re-aligning 12th Avenue South to create a buffer between the road and the pond.
- Question 8 regarding the TH 336/TH 10 westbound off ramp, the response should include discussion about acquiring additional right-of-way to create room for expansion and a buffer around the City of Moorhead wells.
- Question 10 regarding environmental issues and concerns about the diamond interchange at TH 336/12th Avenue South or an additional westbound of ramp at TH 336 and TH 10, will be answered when comments are received from the agencies that SOV letters were sent to.
- Tim Magnusson asked Jody Martinson with MNDOT, "If Clay County maps the footprint for the TH 336/12th Avenue South interchange and the TH 336/TH 10 westbound off ramp, which agency will have to purchase the right-of-way?" Jody Martinson will check into this.

PROPOSED CONSTRUCTION IMPLEMENTATION/STAGING

Rick Lane discussed the proposed construction implementation/staging for the proposed improvements (Attachment 7 of the meeting handout). The proposed order is as follows:

1. Corridor preservation for all sub area roadways.
2. Preserve and officially map right-of-way for the TH 336/12th Avenue South interchange and additional TH 10 westbound off ramp.
3. Construct TH 336/12th Avenue South interchange.
4. Construct 12th Avenue South extension.
5. Construct 4th Avenue South and/or 28th Avenue South.
6. Construct 55th Street.
7. Construct all remaining roadways.

Tim Magnusson recommended that items number 3 and 4 be combined into one stage.

NEXT MEETING

The next SRC meeting will be scheduled to coincide with the next Focus Group and Public Open House. The Focus Group meeting and Public Open House are tentatively scheduled for Thursday, February 23, 2006, at the Depot in Dilworth. (Discussion after the meeting suggests that the SRC meeting should be held the morning after the Public Input Meeting to allow for review of the public input.)

ACTION ITEMS FROM THIS MEETING

- **Brian Shorten will update the collaborative coordination process based on comments from this meeting.**
- **Peggy Harter will update the extraterritorial jurisdiction graphic to include the wellhead protection area and some additional roadways.**
- **Rick Lane and Gina Pizzo will analyze different options to create a buffer between 12th Avenue South and the gravel pit pond.**
- **Jody Martinson will check into R-O-W acquisition requirements in regards to the TH 336/12th Avenue South interchange and the TH 336/TH 10 additional westbound off ramp.**
- **SRF will continue with the development of the report.**
- **SRF will schedule and prepare for the next Focus Group and Open House Meetings to be held on Thursday February 23, 2006 and the next SRC meeting on Friday February 24 2006.**

Minutes provided by SRF Consulting Group, Inc. If there are any additions or corrections to these minutes, please contact Peggy Harter at the SRF Fargo office at 701-237-0010, Extension #5.

TH 336/12th AVENUE STUDY STUDY REVIEW COMMITTEE MEETING

February 24, 2006 – 10:00 a.m. to 12:00 p.m.

Metro COG Conference Room

One North Second Street

Case Plaza, Suite 232

Fargo, ND

(701) 232-3242

AGENDA

- 10:00 A.M.** Welcome and Introductions
- 10:05 A.M.** Review January Meeting Minutes (Attachment 1)
- 10:10 A.M.** Consider Public Comment and Focus Group Input from February 23, 2006 meetings
- 10:30 A.M.** Review Updated Decisions Framework (Attachment 2) and Extraterritorial Jurisdiction Graphic (Attachment 3)
- 10:50 A.M.** Review Updated Footprints of TH 336/12th Avenue South Interchange and TH 336/Hwy 10 Interchange
- 11:15 A.M.** Discuss Environmental Review Comments
- 11:35 A.M.** Finalize Alternative Evaluations
- 11:50 A.M.** Discuss/Schedule Next SRC Meeting
- 12:00 P.M.** Adjourn

RECORD OF MEETING

**TH 336/12th AVENUE SOUTH STUDY
Fifth Study Review Committee Meeting
Friday, February 24, 2006, 10:00 a.m.
Case Plaza Council of Governments Conference Room**

Members in Attendance:

Brian Gibson
Wade Kline (via telephone)
Jody Martinson
Cliff McLain
Bob Zimmerman
Kevin Nelson
E. Robert Olson
Tim Magnusson
Dave Overbo
Stan Thurlow
Deb Martzahn
Rick Lane
Peggy Harter
Cindy Gray
Brian Shorten

Representing:

Metro COG
Metro COG
MNDOT
Moorhead Public Service
City of Moorhead
Glyndon Township
Buffalo Red River Watershed District
Clay County
Clay County
City of Dilworth
City of Moorhead
SRF Consulting Group, Inc.
SRF Consulting Group, Inc.
SRF Consulting Group, Inc.
SRF Consulting Group, Inc.

INTRODUCTIONS

Brian Shorten welcomed everyone to the meeting and asked the group to introduce themselves and who they were representing.

REVIEW JANUARY MEETING MINUTES

Brian Shorten asked the Study Review Committee (SRC) if anyone had any comments or changes to the January 26, 2006, meeting minutes (Attachment 1 of the meeting packet). No comments or changes were stated.

DISCUSS FOCUS GROUP INPUT AND PUBLIC COMMENT

The second Focus Group Meeting was held in the afternoon on Thursday February 23, 2006. Brian Shorten reviewed comments/questions from the focus group meeting. Brian Shorten also stated that the Focus Group members that attended the meeting were in general agreement with the current project recommendations. The focus group comments discussed were as follows:

- How does the traffic model deal with differing roadway classes for 24th Avenue South and CR 14? (Jeff Schaumann)
 - Both roadways are in the model as collectors. The existing model does not have a classification of residential collector, only a general classification of collector. Therefore, both roadways are modeled the same. In regards to the termination of County Road 14, the current model connects County Road 14 to 34th Street. If it were terminated at 40th Street, both 24th Avenue South and 12th Avenue South would likely see increased volumes.
- Why weren't underpasses of 336 considered? (Jerry Feder)
 - Underpasses will not work in this area due to the aquifer. An underpass would need constant de-watering.
- The right-of-way is already platted for 24th Avenue South and is only 70 to 80 feet. (Jeff Schaumann)
- Could all of 336 be shifted to the west so that a full interchange could be constructed? (Bruce Messelt)
 - This portion of TH 336 is a fairly new roadway and this would require an increased amount of right-of-way to be acquired.
- Should we be looking into other ways to geometrically fit a slip ramp onto TH 336, especially if there may be an inter-modal facility at this location someday? (Bruce Messelt)
 - Staff will discuss this issue at the SRC meeting tomorrow to see if they feel that additional analysis needs to be completed on the slip ramp.
- What is a realistic timeline for the development of the corridor/interchange? Currently, there is no money set aside on this project. (Vijay Sethi)
 - SRF has prepared a proposed construction/implementation staging plan that was included in the information packet. It provides the proposed sequence of actions, but does not include dates. The dates that the projects are to be completed depend greatly on funding and proposed development.
 - It was generally agreed that the TH 336/12th Avenue South grade separation would cost approximately \$15 million and could easily take ten years to advance to the construction stage.
- The Focus Group recommended that the implementation schedule indicate right-of-way preservation and official mapping for both the TH 336 and 12th Avenue South interchange and the TH 10 westbound off ramp. The implementation schedule should also indicate the right-of-way preservation activities for the 55th Street overpass of BNSF on the north and a future overpass or interchange at I-94.

- The 55th Street grade separation, TH 336/12th Avenue South Interchange and the TH 336/TH 10 westbound off ramp should be put in the City of Moorhead's long range plan. (Bruce Messelt)
- Are you planning to preserve any right-of-way for a 55th Street interchange? (Bruce Messelt)
 - This could be done with the understanding that it is difficult to obtain federal or state approval of new interchanges and various detailed future studies would be necessary to justify this new access with no guarantee of access approval. The best approach is for local governments to reflect an interchange in their land use zoning plans and to make every effort to avoid encroachment of the possible interchange footprint during platting decisions to preserve the opportunity for a future interchange.
- What is MNDOT's perspective on a future 55th Street/I-94 interchange? (Brian Shorten)
 - Mike Ginnaty replied that it is not in the current long range plan and MNDOT is currently in a preservation mode as opposed to an expansion mode and this project would be an expansion project.
- If 12th Avenue is extended to TH 336 without the interchange, signal will be warranted quickly and MNDOT will have problems with putting signals onto TH 336. They may want to think about this. (Tim Magnusson)

Rick Lane discussed the focus group comment regarding a slip ramp onto TH 336. Wade Kline suggested that the slip ramp should be referenced in the TH 336 study report. It should state that if the Intermodal Facility is built southwest of the TH 336/TH 10 intersection in Dilworth, then the geometrics of a slip ramp should have further analysis. The committee agreed with this recommendation.

The second Public Input Meeting was held in the evening on Thursday February 23, 2006. Brian Shorten stated that the Public Meeting had good attendance by MNDOT personnel, Dilworth City officials and some citizens. No comments were received at the meeting but we will be taking comment forms until Monday March 6, 2006. The consensus of the people in attendance at the public meeting agreed with the current project recommendations.

DISCUSS UPDATED DECISIONS FRAMEWORK

Brian Shorten reviewed the updated decision framework process (Attachment 2) that reflected comments made at the January 26, 2006, SRC meeting. Brian Gibson distributed a handout of Wade Kline's comments regarding the updated decision framework process. Discussion about the updated process and Wade Kline's comments is as follows:

- Wade Kline suggested that meeting minutes for future coordination committee discussions should be made public record and should be sent to the governing bodies of the involved agencies/jurisdictions as opposed to representative staff reporting back to their governing bodies. The SRC agreed that they would be comfortable with FMCOG sending meeting summaries to their elected officials.

- Wade Kline suggested that the coordination process list specific plans that may need to be amended if incompatible development proposals are brought for review. The SRC decided on the following four plans to list as examples that may need to be amended:
 - Metropolitan Transportation Plan (MTP)
 - TH 336/12th Avenue South Study
 - Dilworth Growth Area Plan
 - Moorhead Growth Area Plan
- Wade Kline felt that the Table on governance included in the collaborative coordination process may be overcomplicating the process. He questioned that if the area is zoned in the Urban Expansion District (UED) does the county or township zoning apply for the area?
- Tim Magnusson explained that the township ordinance must be as restrictive or may be more restrictive than the county zoning ordinance. In this case, the Glyndon Township has a more restrictive zoning ordinance than the county and the most restrictive zoning ordinance will apply. However, the township has the option to re-zone if development is proposed. In order for a zoning ordinance to change a potential developer must start with the most restrictive ordinance. The SRC felt that text should be included in the study report to reflect this process.

Rick Lane reviewed the updated Extraterritorial Planning graphic to reflect changes that were suggested at the previous SRC meeting. Tim Magnusson suggested that the graphic be updated to reflect Moorhead's new annexation. SRF will get the new GIS information from Clay County to add to the map.

REVIEW OF UPDATED INTERCHANGE FOOTPRINTS

Rick Lane reviewed the updated proposed interchange footprint (meeting handout) of TH 336/12th Avenue South interchange. The updated TH 336/12th Avenue South interchange includes the realignment of 12th Avenue South to the north on the east side of TH 336. The purpose of the realignment is to place a berm that serves as a buffer between 12th Avenue South and the gravel pit pond. The change in proposed right-of-way acquisition due to the realignment is an additional two acres. Cliff McLain indicated the proposed berm addressed his earlier concerns.

PROPOSED TH 336/TH 10 WESTBOUND OFF RAMP

Rick Lane reviewed the updated proposed TH 336/TH 10 westbound off ramp. The westbound off ramp requires approximately 12 acres of right-of-way to be acquired. The graphic has been updated to show an additional 9.3 acres of right-of-way to be acquired for the Moorhead Public Service Well Protection area.

After the meeting it was brought to attention that the USGS monitoring well is located in the proposed westbound off ramp footprint and should be relocated as part of this project.

DISCUSS ENVIRONMENTAL REVIEW COMMENTS

Bob Olson discussed the drainage problem that the Buffalo Red River Watershed District (BRRWD) has been trying to resolve. Storm water currently drains from the east to the west side of TH 336 between 12th Avenue South and I-94. The storm water then has no place to go and sits on the Feder Property. BRRWD has been exploring solutions to the drainage problem but all have been very expensive. Mr. Olson noted that this storm water could drain north to 12th Avenue and then west to Drain 41 and requested that it be included as part of the proposed TH 336/12th Avenue South interchange project. Rick Lane stated that the interchange footprint will be updated to show additional right-of-way along the west side of TH 336 and the south side of 12th Avenue for a drainage ditch.

Brian Shorten discussed the three environmental review comments (meeting handout) that were received from the Buffalo Red River Watershed District, USDA NRCS, and Minnesota DNR. Letters were sent to a total of 12 agencies and after the 30-day comment period many have not responded. Cliff McLain questioned if a letter was sent to the Department of Health Source Water Protection? A letter had not been sent to this agency but will be sent with the allowed 30-day response time. Cliff McLain suggested that the letter be sent to Bruce Olson as a contact for the agency.

FINALIZE ALTERNATIVE EVALUATIONS

Rick Lane reviewed the updates made to questions 6, 7 and 8 on the Alternative Evaluation handout. Question #7 will be updated to reflect additional right-of-way to be added for a drainage ditch. Rick Lane reviewed the preliminary recommendations from SRF provided at the end of the Alternative Evaluation. He stated that there were no objections to the recommendations at the Focus Group Meeting or Public Meeting. The committee also concurred with the recommendations.

Some comments/questions that occurred during this discussion include the following:

- Tim Magnusson asked if we should recommend a funding set aside now from all of the agencies involved as part of the study report. Rick Lane replied that SRF will be recommending that the process start with the next update to MTP.
- Jody Martinson stated that she didn't feel the two TH 336 interchange projects would get funded by MNDOT due to competition from other projects.

PROJECT SCHEDULE

SRF will be working on a draft study report and will send it out to the SRC to review prior to the next meeting which is scheduled in April. An exact date for the April SRC meeting has not been scheduled at this time. The SRC will give their report comments back to SRF to make final changes. The process to present the study findings at planning commission meetings and to governing bodies will also be discussed at the next SRC meeting.

ACTION ITEMS FROM THIS MEETING

- **Brian Shorten will update the collaborative coordination process based on comments from this meeting.**
- **Peggy Harter will update the extraterritorial jurisdiction graphic to include Moorhead's new annexation.**
- **The proposed TH 336/12th Avenue South interchange footprint will be updated to show additional right-of-way for a drainage ditch.**
- **SRF will send an environmental review letter to the Department of Health Source Water Protection Agency.**
- **SRF will continue with the development of the draft report and incorporate any of the decisions made at the last Focus Group, Public Input and Study Review Committee meetings.**
- **SRF will follow up with members of the Focus Group who were unable to attend the meeting and send them information discussed at the meeting.**
- **SRF will schedule the next SRC meeting to be held in April. SRF will send out a draft study report prior to the next meeting for the committee to review.**

Minutes provided by SRF Consulting Group, Inc. If there are any additions or corrections to these minutes, please contact Peggy Harter at the SRF Fargo office at 701-237-0010, Extension #5.

APPENDIX C

**FOCUS GROUP
AND
PUBLIC MEETING SUMMARIES**

TH 336/12th AVENUE SOUTH STUDY

Focus Group and Public Meeting Summary

September 22, 2005

The study team held a focus group meeting on Thursday, September 22, 2005. The focus group consists of landowners, developers, senior staff from Moorhead and Dilworth, county commissioners, and Minnesota Department of Transportation (Mn/DOT) officials. The Study Review Committee (SRC) selected the focus group members. The purpose of this focus group meeting was for members to give stakeholder input on key issues and possible land use/roadway network alternatives. The study team also conducted a project public meeting on the evening of September 22. The purpose of this public meeting was to present the study purpose and solicit additional input/comments/issues from area residents. The following summarizes both the focus group meeting and the public meeting.

Focus Group Summary

The focus group meeting was held on September 22, 2005 from 3 p.m. to 4:30 p.m. at the Dilworth Historic Depot. This meeting focused on discussing development, access, and future roadway network issues/considerations. The following summarizes the order in which topics were discussed and also includes stakeholder input.

- Brian Shorten opened the meeting and made introductions. He presented the following:
 1. TH 336 Corridor Management Plan's major findings (completed in 2004)
 2. Project scope of work and key study elements and issues

- After Brian's opening presentation, members of the focus group had the following questions/comments:
 1. What type of roadway would be constructed on 12th Ave.? (Mr. Tobolt)
 2. Is 150 feet of right-of-way enough for a corridor like 12th Ave. - wouldn't it be better to get 200 feet? (Mr. Feder).
 3. If Co. Rd. 11 is going to be a future beltway, you shouldn't short yourself on the right-of-way. (Mr. Feder)
 4. Show the future ultimate roadway sections with right-of-way information to justify the right-of-way recommendations.

- Wade Kline presented information related to the Dilworth Growth Area Plan.
 1. He presented the draft land use plan and explained the growth phases and how the growth phases coincide with Moorhead's utility growth plan.
 2. He explained that phase 3, south of the tracks, is very long-range, but it is important to consider growth in this area for transportation and utility planning purposes.

**TH 336/12th Avenue South Study
Focus Group and Public Meeting Summary – September 22, 2005**

- After Wade’s presentation, focus group members had the following questions/comments:
 1. How would Dilworth grow south of the tracks given that it was shown in Moorhead’s utility growth area? (Conrad Olson)
 - Wade explained how Dilworth and Moorhead have a cooperative agreement regarding sewer and water utility extensions and that the agreement would have to be updated to provide for growth in either phase 2 or 3. He also noted that it was important to show future full build-out for transportation planning purposes.

- Rick Lane presented three early roadway network concepts for the transportation system in the study area. The concepts were developed based on the draft Dilworth Growth Area Plan. He explained that some features such as the extension of 12th Ave. to TH 336 were included in all three concepts and that long- range improvements, like the 55th Street interchange, were only included in the “ultimate” alternative.

- After Rick’s presentation, focus group members had the following questions/comments:
 1. Consider an overpass on TH 336 as an extension of 4th Ave. So. (Bruce Messelt)
 2. Consider a slip ramp directly to TH 336 for the future intermodal facility.
 3. Consider a folded diamond interchange to the south of 12th Ave to allow more space for a southbound slip ramp from the intermodal facility.
 4. There needs to be better direct access from the proposed intermodal facility to the 12th Ave interchange.
 - Move the first signalized intersection west of TH 336 closer to the interchange and provide a more direct frontage road connection to the intermodal facility.
 5. The eastbound-to-northbound left-turn movement at TH 336 and 12th Ave. may be heavy enough to require a loop ramp in the southeast quadrant.

- The following comments were made during the focus group discussion. The main items discussed included four specific topics/questions that were mailed to the focus group members prior to the meeting.

A. Development

1. Conrad Olson commented that the construction of the TH 336 corridor changed the way development will occur in this area. Now that the corridor is there, developers will want exposure and access to/from it.
 - Mr. Waller agreed with Conrad’s comments regarding how development will occur in the area.

2. Mr. Tobolt commented that development and the need for roadway right-of-way will take a lot of good agricultural land out of production.

**TH 336/12th Avenue South Study
Focus Group and Public Meeting Summary – September 22, 2005**

3. Conrad Olson commented that if the intermodal facility is constructed in the area shown, other residential and commercial uses shown on the growth plan will not happen. Developers will not invest in residential or commercial property adjacent to an intensive industrial use.
4. Bruce Messelt made the following comments:
 - The TH 336 corridor was built, in part, to spur development of the area.
 - “Leap-frog” development will happen – jurisdictions must manage it.
 - The interchange should be built now, and do it right so that it works well – do not build interim at-grade signalized intersections.
 - It is possible that the infrastructure development in this area could happen much sooner than anticipated; it might happen in as little as 15 years.
 - Likes the continuous east-west corridor route south of 12th Ave with a grade-separated crossing of TH 336 as shown on alternative 3, however, there could be a problem where the route connects to 34th Street – need to review 24th Street connections.
 - He agrees that the proposed intermodal facility’s access needs to be more direct to TH 336.
 - He supports the interchange at 12th Ave and TH 336, and a future interchange at I-94 and 55th Street.
5. Jeff Schauman, RDO Development, commented on the amount of future commercial development shown in the draft land use plan. He noted that there is already a considerable amount of commercial property available in the metro area.

B. THE 336 Access

1. Steve Schroeder commented that he supports the Highway 10 eastbound-to-northbound off-ramp. He also supports the need for utility extension to the development areas. He is concerned about the development of small rural residential developments. He also brought up that the US 75 rerouting could affect CSAH 11 and TH 336.
2. Mike Ginity (Mn/DOT) had the following comments :
 - He is concerned about the amount of truck traffic produced by the proposed intermodal facility. He noted that when TH 336 was developed, BNSF wanted the rail crossing closed. With the increased truck traffic and disconnection with TH 336, BNSF may push for closure of the crossing.
 - The cost of a new interchange at 12th Ave and TH 336 is in the range of \$10 to \$12 million, and if that investment is going to be made, the existing direct accesses to TH 336 will have to be closed.

**TH 336/12th Avenue South Study
Focus Group and Public Meeting Summary – September 22, 2005**

C. Future Roadway Network

1. Mr. Feder commented that a signalized intersection at TH 336 and 12th Avenue South would give the wrong impression to developers and closing access on TH 336 is acceptable to maintain a 65 mph corridor if the interchange is constructed.
2. Conrad Olson commented that if the interchange is built, it will spur development which could help pay for a part of the interchange. He was also in favor of a CSAH 14 overpass, but was concerned that the embankment would create parcels that cannot be developed. Therefore he felt that a CSAH 14 overpass should be located farther north along TH 336.
3. Mr. Waller commented that a signalized intersection would be counter productive to what we are trying to achieve with the TH 336 corridor investment, an interchange would be much better. He also emphasized the need for good TH 336 access for the grain elevator. He does not want the current rail crossing to be closed.
4. Steve Grabill suggested that the TH 336 overpass south of 12th Ave. be moved further north to align with 24th Ave. and loops be considered in the TH 336/12th Avenue interchange design.
5. Bruce Messelt commented that Moorhead wouldn't be opposed to building improvements (12th Ave corridor and 12th Ave/TH 336 interchange) to help direct the development in the area.
6. Jeff Schauman requested land ownership parcel boundaries be noted on the maps; he asked that any specific frontage road or access proposals be presented to landowners. He also asked that as the analysis is completed, 12th Avenue cross-sections should be presented and he thought CSAH 14 should remain where it is.

D. Guiding Principles

1. General agreement and support for the four principles presented – little objection.
2. Bruce Messelt thought an additional principle might be: promote development in certain areas by providing public roadway/infrastructure, and city/county cooperation in bonding for these improvements could be considered.

Summary of General Comments received during focus group discussion:

- 12th Avenue needs to be allowed to develop as a retail corridor, with the residential uses in close proximity. Make sure the creation of an intermodal facility does not impact 12th Avenue's potential as a retail corridor or impact new school or limit future residential growth. It was stressed that an effort may be needed to more clearly understand the land use vision of 12th Avenue.
- Impacted governments need to recognize the marketplace and what the potential development may be for the study area, specifically along TH 336; marketplace is likely ahead of public sector in terms of readiness to consider urban uses.

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Focus Group and Public Meeting Summary – September 22, 2005

- Interim access plan at TH 336 and 12th Avenue is likely too costly and not worth the investment; start laying the ground for a grade separation. Some felt that 12th Avenue may grow in both directions.
- Development in the study area needs to be coordinated and should not be scattered; avoid low-density rural developments; fiscal conservatism should be applied to utility expansion; lets be sure the public can get a return on its investment.
- At a minimum an overpass should be considered at 55th Street; do not rule out an interchange. A 55th Street overpass/interchange will facilitate access to and from the study area and will also assist service to growth areas in Moorhead south of I-94 and the industrial park. Given existing truck movements in the eastern section of the metro, there may be the need to relocate the weigh station sooner rather than later, especially if an intermodal facility is established southwest of the TH 336/ Highway 10 interchange.
- Still a desire for agricultural operations to continue on several large tracts of land in the study area; recognize the need for cooperation between future urbanization and the desire of some owners to farm. Build in safeguards to ensure those wishing to farm can do so.
- Extension of 12th seems inevitable; multi-jurisdictional consensus needs to develop an achievable action plan. A long-range action plan is needed for how future utility expansions are built and how it is going to be paid for.
- Major infrastructure expansions are needed in order for the sub-area to develop; inter-jurisdictional and property owner consensus is needed.
- Moorhead's existing utility service boundary may have more of a 15-year design life, as opposed to 50.

**TH 336/12th Avenue South Study
Focus Group and Public Meeting Summary – September 22, 2005**

Public Meeting Summary

The public meeting was held on September 22, 2005 from 6-8 p.m. at the Dilworth Historic Depot. The public meeting was on open-house format with one formal presentation. About 20 area residents came to the public meeting. During the open house session, staff answered numerous questions from participants.

The formal presentation followed a similar format to the focus group meeting. Brian Shorten opened by welcoming everyone to the meeting and introducing project team representatives. He presented background information and the purpose of the study. Brian also discussed the project schedule. Wade Kline presented information related to the Dilworth Growth Area Plan and Rick Lane continued by describing three early conceptual roadway networks for the study area.

After the formal presentation, the following comments were received:

- Mr. Kolo was worried that the proposed location of the proposed I-94 interchange would require the relocation of this house.
- Mr. Tobolt indicated his unwillingness to donate or sell land along the 12th Avenue South extension for the proposed 150-foot right-of-way and does not support the extension.

The following written comments were received:

- Mr. and Mrs. Bedore submitted an e-mail (see attached) indicating their preferred location for a new overpass across the BNSF tracks in Dilworth connecting to Little Italy.

**TH 336/12th Avenue South Study
Focus Group and Public Meeting Summary – September 22, 2005**

TH 336/12th Avenue South Study – Written Comments

Email Comment Received 9-24-05

Mr. Lane,

We are Mike and Sue Bedore, at 19 Avon St., Dilworth MN. 56529. 218-233-4424 (After Noon) We attended the meeting at the Dilworth Historic Depot on Sept. 22. and were very pleased to see that you are considering an overpass for the south side (Little Italy). Our entire area has been asking for an overpass for years and with recent development of the area we believe the overpass to be quite necessary.

The overpass you suggested is too far east for us. We would have to go out of our way to go uptown, just as we do now. It wouldn't be that much of an improvement. We NEED the overpass on Main St. The farm right there as you come across the bridge is not to be farmed anymore and I believe the woman who owns the property is in negotiation with developers. With that land developed, people will need a more direct way out to highway 10. So in the very near future the absolute NEED for an overpass on Main St. is justified. I realize the biggest problem you have with that is the homes on the north side of the tracks. The properties there are not expensive, the homes are in very bad shape and should be torn down anyway and therefore should be easily appropriated. It's not as if you would be dealing with large, expensive homes. This is not a huge money problem. I can't speak for the city, but it would be to their benefit also. I don't know why they are so reluctant to go through with putting the overpass there when it makes more sense than where you suggested. Maybe it has something to do with the city hall building being in the way? I don't see how that could be. Look at the 34th St. overpass. The overpass didn't hinder any of the businesses along the side of that road. So what's the holdup? We know the city doesn't want this but we don't understand why.

You can contact us by phone or email (dollytoad@wmconnect.com) if we can be of any help. We would love to get this project at least started or know it is in the city's plan for the NEAR future.

THANK-YOU for your time.

Mike and Sue Bedore

SIGN-IN SHEET

TH 336/12th Avenue South - Focus Group Meeting
September 22, 2005
Dilworth Historic Depot

Present	Name	Representing	Address	City	State	Zip	Phone	E-mail
X	Wade Kline	Metro COG	One Second Street North, Case Plaza, Suite 232	Fargo	ND	58102	701.232.3242	kline@mmetrocog.org
X	Bruce Messelt	City of Moorhead	500 Center Avenue, P.O. Box 779	Moorhead	MN	56561		
X	Ken Parke	City of Dilworth	P.O. Box 187	Dilworth	MN	56529	(218) 237-2313	kparke@corpcomm.net
X	Vijay Sethi	Clay County	807 11th Street North	Moorhead	MN	56560	218.299.5002	
X	Lee Berger	Grandy MnDOT	1000 TH 10 West, MS 040	Detroit Lakes	MN	56501	218.547.1552	jody.murphyson@dot.state.mn.us michael.gjoharty@" " "
X	Scott Havel	RD Offut Company	700 South 7th Street	Fargo	ND	58103	(701) 239-8744	jshavel@rdoffut.com
X	Andy Skavold	Paragon Development	819 30th Avenue South, Suite 200	Moorhead	MN	56560		
X	Willy Jacobson	Glyndon Farms	28 10th Street North	Fargo	ND	58102	701-234-1808	willyj@parkcompany.com
X	Jerry Feder	Feder Properties	29 North University Drive	Fargo	ND	58102	701-232-9412	Jerry@federreality.com
X	Ruth Landfield	Landfield Family, Ltd.	1625 8th Street South	Fargo	ND	58103		
X	Lucille Ford	Lucille Ford, Ltd. Partnership	7424 Gila Road	Albuquerque	NM	87109		
X	Dave Backlund	KOA Campground	4396 28th Avenue South	Moorhead	MN	56560		
X	Konrad Olson	tebolt seed	2501 13th Avenue South	Fargo	ND	58103	280-1606	KONRADOLSON@QUEST.NET
X	John Tolbolt		1334 50 Street South	Moorhead	MN	56560	287-2904	
X	Warren Johnson		2920 Eagle Drive	Moorhead	MN	56560		
X	Steven Schroeder		7768 Highway 10	Glyndon	MN	56547	287-2122	Schroeder51@msn.com
X	John Flاندaca		6063 40th Street North	Moorhead	MN	56560		

No Steve Grabill
 Terry Waller
 Kevin Campbell

1708 35th St. S. - Moorhead MN 56560 Steve Grabill@ultraig.com
 8233 3rd AVE. N. Glyndon MN 56547 JTWALLER@IDENRE.NET
 1361 Grand Ave N. Moorhead MN 56560 Kevin_Campbell@redgy.net

COMMENT FORM
TH 336/12th AVENUE SOUTH
Dilworth Historic Depot
September 22, 2005
6-8 P.M.

YOUR COMMENTS ARE IMPORTANT TO US! If you have any comments or questions about the TH 336/12th Avenue South project, please fill out this form and place in the comment box at the registration table or give to a project team member. You can also mail or fax your comments to the address listed at the bottom of this page.

If we need to contact you to clarify your comments, please provide us with your name, address and telephone number. Thank you.

Name: _____ Telephone: _____

Address: _____

Your Comments (Use back of sheet if necessary):

Please complete and return this form by **September 30, 2005** to:

Rick Lane, P.E.
SRF Consulting Group Inc.
Case Plaza
One North Second Street, Suite 226
Fargo, ND 58102-4807
telephone: (701) 237-0010 fax: (701) 237-0017
or e-mail comments to:
rlane@srfconsulting.com

PUBLIC MEETING

for the Trunk Highway 336/12th Ave. S. Study

Thursday, Sept. 22, 2005 • 6-8pm

Presentation at 6:30 pm

Dilworth Historic Depot

#3 4th Street NE, Dilworth, MN (by the locomotive)

The Fargo-Moorhead Metropolitan Council of Governments (Metro COG) and its transportation planning consultant, SRF Consulting Group, Inc., will be hosting an open house-style public meeting to discuss the future road network and other planning issues in the sub-area bounded by the Moorhead east city limits to one mile past Trunk Highway (TH) 336, and between Interstate 94 (I-94) and TH 10.

The study will explore the area's transportation needs today and in the future, with special emphasis on access to TH 336, including a future TH 336/12th Avenue South intersection or interchange and modifications to the current TH 336/TH 10 interchange. The Metro COG and its study partners including the Minnesota Department of Transportation, Clay County, the cities of Moorhead and Dilworth, and the Glyndon and Moorhead townships want to ensure that roadway improvements made to TH 336 and its surrounding sub-area meet the area's needs and function for many years to come.

The open house public meeting will offer the public an opportunity early in the study process to review information pertaining to the study area and discuss concerns and ideas for future roadways, roadway improvements, and future land use scenarios. The public is welcome to stop in at any time between 6:00 and 8:00 p.m. to informally review the display materials and discuss the study with Metro COG and SRF staff. A formal presentation will be held at 6:30 p.m.

For more information on this project, please call Wade E. Kline, AICP, at Metro COG (701) 232-3242 or Rick Lane, P.E., at SRF Consulting Group (701) 237-0010.

10020760 22-SRF Consulting thurs 9-15 2x5.5 1op blawrence

RECORD OF MEETING

TH 336/12th AVENUE SOUTH STUDY Second Focus Group Meeting Thursday, February 23, 2006, 2:00 p.m. Dilworth Historic Depot

Members in Attendance:

Wade Kline
Bruce Messelt
Jody Martinson
Judy Jacobs
Mike Ginnaty
Ken Parke
Tim Magnusson
Jeff Schaumann
Willy Jacobson
Vijay Sethi
Jerry Feder
John Tobolt
Mary Tobolt
Konrad Olson
Rick Lane
Peggy Harter
Brian Shorten

Representing:

Metro COG
City of Moorhead
MNDOT
MNDOT
MNDOT
City of Dilworth
Clay County
RD Offut Company
Glyndon Farms
Clay County
Feder Properties

SRF Consulting Group, Inc.
SRF Consulting Group, Inc.
SRF Consulting Group, Inc.

INTRODUCTIONS

Brian Shorten opened the meeting and made introductions.

BACKGROUND INFORMATION

Brian Shorten reviewed the following background information:

- Vision and Performance Measure for the TH 336 Corridor
- Principle Guiding Accelerated Development for the TH 336 Corridor
- The year 2030 and Full Build Future Land Use Scenarios that were the basis for traffic modeling.

ROADWAY NETWORK ALTERNATIVES

Rick Lane reviewed the future roadway network alternatives and the traffic analyses that were completed for the different alternatives. He discussed the following:

- An at-grade intersection at TH 336/12th Avenue does not work well. According to the traffic analysis, either extending 12th Avenue to TH 336 or adding a small amount (5 acres) of development would create an unacceptable LOS.
- The poor intersection operations would likely warrant a signal at the at-grade intersection of TH 336 and 12th Avenue. A traffic signal at this intersection would adversely affect the TH 336 corridor vision goal of maintaining a 65 mph speed without stops.
- The Study Review Committee is proposing that the extension of 12th Avenue to TH 336 and the interchange be built as part of the same project.
- The conceptual interchange layout presented is a standard diamond interchange with a loop ramp in the N.E. quadrant.
- The geometrics for a slip ramp just north of the interchange were discussed. The SRC is currently not recommending a slip ramp due to it creating weaving issues between the slip ramp and the interchange.
- The proposed TH 336/12th Avenue interchange would require approximately an additional 60 acres of right-of-way to be purchased.
- The SRC is recommending that a N.E. off ramp be constructed for the TH 10/TH 336 interchange. The new off ramp would require approximately 12 acres of new right-of-way. During this project, approximately 9.3 acres of additional right-of-way for the Moorhead Public Service well protection area should be acquired.

ALTERNATIVE EVALUATION

Rick Lane reviewed the 10 Evaluation Criteria questions and answers. A handout was provided for the Focus Group to follow along with the discussion. He reviewed the following:

- Traffic operations of an at-grade intersection and interchange of TH 336 and 12th Avenue South in 2010 and 2030.
- The effects of the extension of 12th Avenue South to TH 336 while maintaining consistency with the functional classification system for 4th Avenue South and 12th Avenue South.
- Projected 2030 traffic volumes on 24th Avenue South and County Road 14.
- The future sub area roadway network and whether it provides a continuous or discontinuous roadway system in the year 2030.
- Whether or not an overpass of TH 336 is needed at 4th Avenue South or 28th Avenue South.
- The amount of right-of-way that should be preserved for 4th Avenue South, 12th Avenue South, 24th Avenue South, 28th Avenue South, 55th Street and other sub area roadways.
- The proposed geometric configuration and right-of-way preservation for the TH 336/12th Avenue South interchange. This includes the alignment of 12th Avenue South shifting to the north, just east of the proposed interchange, to create a buffer between the roadway and the gravel pit ponds.
- The 2030 and Full Build traffic operations of a 55th Street/I-94 overpass or interchange.

- Environmental comments received from agencies in regards to the proposed diamond interchange at TH 336/12th Avenue South and the westbound off ramp at TH 336/TH 10.

After Rick's presentation the following questions/comments were received:

- How does the traffic model deal with differing roadway classes for 24th Avenue South and CR 14? (Jeff Schaumann)
 - Both roadways are in the model as collectors. The existing model does not have a classification of residential collector, only a general classification of collector. Therefore, both roadways are modeled the same. In regards to the termination of County Road 14, the current model connects County Road 14 to 34th Street. If it were terminated at 40th Street, both 24th Avenue South and 12th Avenue South would likely see increased volumes.
- Were underpasses of 336 considered? (Jerry Feder)
 - Underpasses will not work in this area due to the aquifer. An underpass would need constant de-watering.
- The right-of-way is already platted for 24th Avenue South and is only 70 to 80 feet. (Jeff Schaumann)
- Could all of 336 be shifted to the west so that a full interchange could be constructed? (Bruce Messelt)
 - This portion of TH 336 is a fairly new roadway and this would require an increased amount of right-of-way to be acquired.
- Should we be looking into other ways to geometrically fit a slip ramp onto TH 336, especially if there may be an inter-modal facility at this location someday? (Bruce Messelt)
 - Staff will discuss this issue at the SRC meeting tomorrow to see if they feel that additional analysis needs to be completed on the slip ramp.
- What is a realistic timeline for the development of the corridor/interchange? Currently, there is no money set aside for this project. (Vijay Sethi)
 - SRF has prepared a proposed construction implementation staging plan that was included in the information packet. It provides the proposed sequence of actions, but does not include dates. The dates that the projects are to be completed depend greatly on funding and proposed development.
- The Focus Group recommends that the implementation schedule should indicate the right of preservation and official mapping for both the TH 336 and 12th Avenue South interchange and the TH 10 westbound off ramp. The implementation schedule should also indicate the right-of-way preservation activities for the 55th Street overpass of BNSF on the north and a future overpass or interchange at I-94.
- This project should be put in the City of Moorhead's long range plan. (Bruce Messelt)
- Are you planning to preserve any right-of-way for a 55th Street interchange? (Bruce Messelt)
 - This could be done with the understanding that it is difficult to obtain federal or state approval of new interchanges and various detailed future studies would be necessary to justify this new access with no guarantee of access approval. The best approach is for local governments to reflect an interchange in their land use zoning plans and to make effort to avoid encroachment of a possible interchange

footprint during platting decisions to preserve the opportunity for a future interchange.

- What is MNDOT's perspective on a future 55th Street/I-94 interchange? (Brian Shorten)
 - Mike Ginnaty replied that it is not in the current long range plan and MNDOT is currently in a preservation mode as opposed to an expansion mode and this project would be an expansion project.
- If 12th Avenue is extended to TH 336 without the interchange, signal will be warranted quickly and MNDOT will have problems with putting signals onto TH 336. They may want to think about this. (Tim Magnusson)

The public meeting will be held this evening from 5:30 to 7:00 p.m. This was the last focus group meeting; however focus group members will be notified of the future governing body review/adoption meetings.

Minutes provided by SRF Consulting Group, Inc. If there are any additions or corrections to these minutes, please contact Peggy Harter at the SRF Fargo office at 701-237-0010, Extension #5.

Fargo-Moorhead Metropolitan Council of Governments
Summary of Public Information Meeting
Thursday, February 23, 2006 from 5:30 p.m. to 7:00 p.m.
TH 336/12th Avenue South Corridor Study

Introduction

A Public Information Meeting (PIM) for the referenced project was held on February 23, 2006 from 5:30 p.m. to 7:00 p.m. at the Dilworth Historic Depot in Dilworth, Minnesota.

Notice of the Public Information Meeting

The public meeting was advertised in the Fargo Forum on Thursday February 16, 2006. A copy of the newspaper ad is attached to this summary.

Attendees

An attendance record sheet was prominently displayed on a table at the entrance to the Depot and all persons entering were asked to sign in for the record. The attendance record sheet is attached to this summary.

Summary of Meeting

The meeting was held from 5:30 p.m. to 7:00 p.m., February 23, 2006. The meeting consisted of an informal open house with a formal presentation give at 6:00 p.m. Attendees viewed informational exhibits and engaged in one-on-one discussions with the project staff, then participated in a question and answer discussion as a group following the formal presentation.

Attendees received handouts regarding answers to the project evaluation criteria and comment forms upon entering the community room. Meeting attendees were highly encouraged to submit written comments either directly after the meeting in the comment box, by mail, or by e-mail. The comment forms were addressed on the bottom of the form to the Fargo SRF office. A copy of the project information handout and the comment form is attached to this summary.

Informational displays presented at the meeting included the following:

- Land Ownership Base Map
- Vision and Performance Measures
- Roadway Network Alternatives 1, 2A, 2B, 3A and 3B
- Impacts of 12th Avenue South Development in 2010
- Proposed TH 336/12th Avenue South Interchange Footprint with Preliminary ROW Limits
- Proposed TH 10/TH 336 Westbound Off-Ramp Footprint with Preliminary ROW Limits
- Right-of-Way Preservation
- Evaluation Criteria Questions
- Preliminary Construction Implementation/Staging

Brian Shorten opened the formal presentation by welcoming everyone to the meeting. He then turned the discussion of the boards over to Rick Lane. Rick Lane reviewed each of the project boards and opened the meeting for questions. No questions or comments were made.

Wade Kline added that a few changes in land use were made after the roadway network alternatives graphics were completed. Rick Lane added that the land use changes will be made to the graphics and included in the final report. Brian Shorten stated that the next steps in this project include a Study Review Committee meeting to consider public comments followed by the preparation of a draft report and then presenting the draft report to planning commissions and associated governing bodies for adoption.

Written Comments

Written comments were accepted up until March 6, 2006; 10 days after the meeting was held. No comment forms were received.

Attachments

The House report - called "A Failure of Initiative" - found ample fault with state and local officials, including delays in ordering early evacuations in New Orleans. But it also criticized President Bush for failing to get more deeply involved as the crisis unfolded.

In a sampling of 63 communications to the White House that the report documents, at least eight were dated before Katrina's Aug. 29 landfall. The documents show that presidential advisers were warned about potential disaster as

Agency, which coordinated the federal response. He promised the senators he would repair many of the shortfalls by the start of the 2006 hurricane season June 1.

"Our logistics capability in Katrina was woefully inadequate," he said. "I was astonished to see we didn't have the capability most 21st-century corporations have to track the flow of goods and services."

Republican and Democratic senators alike lectured Chertoff for his department's lackluster performance.

Sen. Joe Lieberman of Connecticut, the panel's top Democrat.

Lieberman needled Chertoff on why the security chief was in Atlanta at a bird flu seminar on Aug. 30, the day after Katrina hit, instead of rushing to the disaster scene.

"How could you go to bed that night (Aug. 29) not knowing what was going on in New Orleans?" Lieberman asked.

Chertoff maintained he did not realize that New Orleans levees had been breached until the next day. The levee failure

Study: Sick spouse ups risk of death for partner

Associated Press

BOSTON - A husband or wife with a debilitating illness can hasten your own death, a study suggests.

The researchers blame the stress and the loss of companionship, practical help, income and other support that can occur when a spouse gets sick.

"You can die of a broken heart not just when a partner dies, but when your partner falls ill," said chief researcher Dr. Nicholas Christakis at Harvard Medical School.

The study at Harvard and the University of Pennsylvania was published today in *The New England Journal of Medicine*. The research, backed by the National Institutes of Health, analyzed Medicare records from a representative national sample of 518,240 elderly couples over nine years.

Past research has shown that the spouses of sick people face higher risks of illness and death themselves - a phenomenon sometimes called the "caregiver burden." But this study examined an extraordinarily large group of couples and quantified the risk associated with a range of illnesses.

It found that the risk is considerable: Men were 4.5 percent more likely than usual to die on any given day after their wives were hospitalized; women with sick husbands were almost 3 percent more likely to die.



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PUBLIC MEETING

for the

Trunk Highway 336/12th Avenue South Study

The Fargo-Moorhead Metropolitan Council of Governments (Metro COG) and its consultant, SRF Consulting Group, Inc., will be hosting an open house-style public meeting to discuss the future transportation and land use planning alternatives for the sub-area bounded by the Moorhead east city limits to one mile past Trunk Highway (TH) 336, and between Interstate 94 (I-94) and TH 10.

The current analysis identifies the area's transportation needs today and in the future, with special emphasis on access to TH 336, including a future TH 336/12th Avenue South intersection or interchange and modifications to the current TH 336/TH 10 interchange. The Metro COG and its study partners including the Minnesota Department of Transportation, Clay County, the cities of Moorhead and Dilworth, and the Glyndon and Moorhead townships want to ensure that roadway improvements made to TH 336 and in the surrounding sub-area meet the area's needs and function for many years to come.

The open house public meeting will offer the public an opportunity to review information pertaining to the study area and discuss: future roadway alternatives and land use scenarios, 2010 & 2030 traffic operations analysis, conceptual layouts and right-of-way needs for possible new or reconstructed interchanges along TH 336, the evaluation of the alternatives and a proposed implementation schedule for feasible projects. The public is welcome to stop in at any time between 5:30 and 7:00 p.m. to informally review the display materials and discuss the study with Metro COG and SRF staff. A formal presentation will be held at 6:00 p.m.

Thursday February 23, 2006

5:30 - 7:00 p.m.

Presentation @ 6:00 p.m.

Dilworth Historic Depot (by the locomotive)
Three 4th Street NE, Dilworth, MN

For more information on this project, please call Wade E. Kline, AICP, at Metro COG (701) 232 3242 or Rick Lane, P.E., at SRF Consulting Group (701) 237-0010.

COMMENT FORM
TH 336/12th AVENUE SOUTH
Dilworth Historic Depot
February 23, 2006
5:30-7:00 P.M.

YOUR COMMENTS ARE IMPORTANT TO US! If you have any comments or questions about the TH 336/12th Avenue South project, please fill out this form and place in the comment box at the registration table or give to a project team member. You can also mail or fax your comments to the address listed at the bottom of this page.

If we need to contact you to clarify your comments, please provide us with your name, address and telephone number. Thank you.

Name: _____ Telephone: _____
Address: _____

Your Comments (Use back of sheet if necessary):

Please complete and return this form by **March 6, 2006** to:

Rick Lane, P.E.
SRF Consulting Group Inc.
Case Plaza
One North Second Street, Suite 226
Fargo, ND 58102-4807
telephone: (701) 237-0010 fax: (701) 237-0017
or e-mail comments to:
rlane@srfconsulting.com

APPENDIX D

RESOLUTIONS OF SUPPORT

- ❑ MOORHEAD**
- ❑ DILWORTH**
- ❑ CLAY COUNTY**

COUNTY COMMISSIONERS

1st District - BEN E. BRUNSVOLD, Moorhead
2nd District - JERRY WALLER, Dilworth
3rd District - JON EVERT, Comstock
4th District - KEVIN CAMPBELL, Moorhead
5th District - MIKE (MAC) McCARTHY, Moorhead
Office Telephone: (218) 299-5002
Fax: (218) 299-5195



RESOLUTION 2006-34

RESOLUTION OF ADOPTION FOR THE TH 336/12TH AVENUE SOUTH CORRIDOR STUDY

WHEREAS, Mn/DOT has made significant investments in the TH 336 (a designated Interregional Corridor) and all parties wish to ensure that future development will not adversely affect the safety and mobility of the corridor or impact sensitive environment conditions along the corridor (e.g. the aquifer that provides municipal water supplies); and

WHEREAS, the TH 336/12th Avenue South Corridor Study represents the culmination of a series of important local and metropolitan transportation, land use and infrastructure plans that have been adopted over the past five years for the six square mile subarea to promote orderly growth while preserving the function of TH 336; and

WHEREAS, the TH 336/12th Avenue South Corridor Study process was guided by a Study Review Committee (SRC) that represented all affected governments; and

WHEREAS, the TH 336/12th Avenue South Corridor Study included:

- A subarea vision statement and performance measures
- A 2030 and full buildout land use plan, as well as future traffic operations and alternative analysis, which resulted in a recommended subarea roadway system
- Layouts for a future TH 336/12th Avenue South Interchange and a TH 336/TH 10 westbound off ramp
- A collaborative intergovernmental coordination process for the subarea which includes elected officials
- A list of major study recommendations and an implementation/staging strategy for key right of way preservation and construction activities; and

WHEREAS, the SRC has recommended adoption of the Corridor Study by their respective governing bodies;

NOW, THEREFORE, BE IT RESOLVED, that the Clay County Board of Commissioners does hereby approve the TH 336/12th Avenue South Corridor Study and agrees to cooperatively work with other key stakeholders in implementing its recommendations.

Approved and adopted this 6th day of June, 2006.

Attest:

Vijay K. Acharya

County Administrator

By:

Mike McCarthy

Chair, County Board of Commissioners

Clay County Courthouse
807 11th Street North
P.O. Box 280
Moorhead, Minnesota 56561-0280

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RESOLUTION

WHEREAS, Mn/DOT has made significant investments in TH 336 (a designated Interregional Corridor) and all parties wish to ensure that future development will not adversely affect the safety and mobility of the corridor or impact sensitive environmental conditions along the corridor (e.g. the aquifer that provides municipal water supplies); and

WHEREAS, the TH 336/12th Ave S Corridor Study represents the culmination of a series of important local and metropolitan transportation, land use and infrastructure plans that have been adopted over the past five years for the six square mile subarea to promote orderly growth while preserving the function of TH 336; and

WHEREAS, the TH 336/12th Ave S Corridor Study process was guided by a Study Review Committee (SRC) that represented all affected governments; and

WHEREAS, the TH 336/12th Avenue South Corridor Study included:

- a subarea vision statement and performance measures,
- a 2030 and full buildout land use plan, as well as future traffic operations and alternative analysis, which resulted in a recommended subarea roadway system,
- layouts for a future TH 336/12th Ave S Interchange and TH 336/TH 10 westbound off ramp,
- a collaborative intergovernmental coordination process for the subarea, and
- a list of major study recommendations and an implementation/staging strategy for key right-of-way preservation and construction activities; and

WHEREAS, the SRC has recommended adoption of the Corridor Study by their respective governing bodies;

NOW, THEREFORE, BE IT RESOLVED, that the City Council of the City of Moorhead does hereby approve the TH 336/12th Ave S Corridor Study and agrees to cooperatively work with other key stakeholders in implementing its recommendations.

PASSED by the City Council of the City of Moorhead this 15th day of May 2006.

APPROVED BY:

/s/ Mark Voxland
MARK VOXLAND, Mayor

ATTEST:

/s/ Becky Jahnke
BECKY JAHNKE, Deputy City Clerk

STATE OF MINNESOTA }
COUNTY OF CLAY } ss
CITY OF MOORHEAD }

(SEAL)

I do hereby certify that the foregoing document is a true and correct copy of said document presented to and adopted by the City Council of the City of Moorhead, Minnesota at a duly authorized meeting thereof held on the 15 day of May, 2006. I further certify that this document has not been rescinded or modified and is still in force and effect.

Dated this 20 day of June, 2006.

Kaye Buckholz
City Clerk

#2006-554



CITY OF DILWORTH

2 1st AVENUE SE, P.O. BOX 187, DILWORTH, MN 56529
(218) 287-2313 FAX: (218) 287-2309

RESOLUTION 06-16

ADOPTING THE TH 336/12th AVENUE SOUTH CORRIDOR STUDY

WHEREAS, MnDOT has made significant investments in the TH 336 (a designated Interregional Corridor) and all parties wish to ensure that future development will not adversely affect the safety and mobility of the corridor or impact sensitive environment conditions along the corridor (e.g. the aquifer that provides municipal water supplies); and

WHEREAS, the TH 336/12th Avenue South Corridor Study represents the culmination of a series of important local and metropolitan transportation, land use and infrastructure plans that have been adopted over the past five years for the six square mile subarea to promote orderly growth while preserving the function of TH 336; and

WHEREAS, the 336/12th Avenue South Corridor Study process was guided by a Study Review Committee (SRC) that represented all affected governments; and

WHEREAS, the 336/12th Avenue South Corridor Study included:

- A subarea vision statement and performance measures
- A 2030 and full buildout land use plan, as well as future traffic operations and alternative analysis, which resulted in a recommended subarea roadway system.
- Layouts for a future TH 336/12th Avenue South Interchange and a TH 336/TH 10 westbound off ramp
- A collaborative intergovernmental coordination process for the subarea.
- A list of major study recommendations and an implementation/staging strategy for key right of way preservation and construction activities; and

WHEREAS, the SRC has recommended adoption of the Corridor Study by their respective governing bodies;

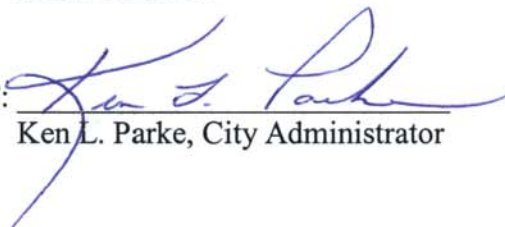
DILWORTH
a Minnesota



NOW, THEREFORE, BE IT RESOLVED, that the Dilworth City Council does hereby approve the TH 336/12th Avenue South Corridor Study and agrees to cooperatively work with other key stakeholders in implementing its recommendations.

Approved and adopted this 8th day of May, 2006, in the City of Dilworth, MN.

Mayor 
Keith Coalwell

ATTEST: 
Ken L. Parke, City Administrator

APPENDIX E

SLIP RAMP ANALYSIS

MEMORANDUM

TO: Study Review Committee – TH 336/12th Avenue South Corridor Study

FROM: Rick Brown, PE, Vice President
SRF Consulting Group, Inc.

Rebecca Yao, PE, Senior Engineer
SRF Consulting Group, Inc.

DATE: December 15, 2005

SUBJECT: TH 336/12TH AVENUE SOUTH CORRIDOR STUDY – SLIP RAMP PRELIMINARY ASSESSMENT

BACKGROUND

The Study Review Committee (SRC) requested the study team to examine the feasibility of constructing a slip ramp from the industrial area onto TH 336, as suggested by the Focus Group. This memorandum summarizes the results of our preliminary analysis. This memorandum also summarizes slip ramp concerns and provides a recommendation regarding this alternative.

SLIP RAMP PRELIMINARY ASSESSMENT

SRF Consulting Group, Inc. (SRF) completed a preliminary assessment of constructing the slip ramp and found that construction of a southbound slip ramp from the industrial area onto TH 336 is physically possible. If the proposed ramp is designed so that it enters TH 336 near the existing 4th Avenue South access point, the slope is relatively flat, and profile grades meet the desirable criteria. A slip ramp would require an access configuration different from originally planned and constructed for TH 336.

SRF also discussed access spacing with the Minnesota Department of Transportation (Mn/DOT) staff. Although TH 336 is a medium-level Interregional Corridor (IRC) with a preferred access spacing plan, Mn/DOT district and central office staff have indicated that they are flexible on any corridor access configuration, as long as TH 336 traffic operations are acceptable. Using standard computer models, traffic operations could be modeled along TH 336 and results would be expressed in terms of level of service (LOS). However, it should be noted that the LOS of a highway segment would not indicate potential safety problems of the proposed slip ramp.

SLIP RAMP CONCERNS

SRF has significant concerns with constructing the slip ramp on TH 336. The following summarizes these points:

- Constructing the slip ramp would not meet the performance measure/criteria of limiting private access along TH 336.
- The slip ramp would provide direct TH 336 access for southbound trucks only. Trucks destined to/from TH 10 and trucks northbound on TH 336 would not have direct access to the industrial area and would still have to travel through the TH 336/12th Avenue interchange. This may lead to driver confusion, especially for trucks traveling to/from I-94; these trips would require using a different route depending on whether the trip is entering or leaving the area.
- Driver expectations are not met on this type of facility, which is a freeway with interchanges. Drivers do not expect at-grade access points on freeways.
- Constructing the slip ramp would cause weaving issues between the slip ramp and the off-ramp at TH 336 and 12th Avenue. TH 336 southbound drivers wishing to exit at 12th Avenue would have conflicts with trucks accelerating to reach mainline speeds and trying to merge onto TH 336.
- Traffic speed differential between mainline traffic, traveling at 65 miles per hour (mph), and truck traffic accelerating from the slip ramp, is a safety concern. As noted in the American Association of State and Highway Transportation Officials' (AASHTO) *A Policy on Geometric Design of Highways and Streets*, "Crashes are not related as much to speed as to the range of speeds from highest to lowest." Also, the Institute of Traffic Engineers (ITE) *Traffic Engineering Handbook* states "When undue deceleration and acceleration by leaving or entering traffic takes place directly on a traveled highway, it disrupts the flow of through-traffic and often is hazardous." Trucks entering southbound TH 336 from the slip ramp would be accelerating directly onto the traveled highway and would be traveling much slower than mainline traffic. On the other hand, trucks entering TH 336 from the

12th Avenue south interchange would be accelerating on the entrance ramp and acceleration taper area. Furthermore, trucks using the 12th Avenue South interchange ramp would be traveling downgrade while accelerating, which provides a significant improvement in their ability to reach mainline speeds when merging with traffic.

SLIP RAMP RECOMMENDATIONS

Physically, a slip ramp can be constructed as evaluated. However, based on safety and operational concerns, we do not recommend conducting further investigation of the slip ramp. We also do not recommend including it as one of the three options to be analyzed as part of the traffic operations.

APPENDIX F

SUMMARY OF STATE STATUTE FOR OFFICIAL MAPPING

Summary of State Statutes for Official Maps

Section 462.359

Statement of Purpose:

Land that is needed for future street purposes is frequently diverted to nonpublic uses which could have been located on other lands without hardship or inconvenience to the owners. When this happens, public uses of land may be denied or may be obtained at prohibitive cost or at the expense of dislocating the owners and occupants of the land. Identification of an official map of land needed for future public uses permits both the public and private property owners to adjust their building plans equitably and conveniently before investments are made.

Key Points:

1. Cities have the right to preserve land in advance for roadways that are needed in the future.
2. Advanced notice of the location provides property owners to adjust plans before investments are made that the city would have a difficult time replacing.

Adoption:

After the planning agency has adopted a major thoroughfare plan and a community facilities plan, it may prepare and recommend to the governing body a proposed official map. The governing body may, after holding a public hearing, adopt and amend the official map by ordinance. A notice of the time, place and purpose of the hearing shall be published in the official newspaper at least 10 days prior to the date of the hearing.

The official map shall be prepared in sufficient detail to permit the establishment of the future acquisition line on the ground. In unplatted areas, a minimum of a centerline survey shall be made prior to the preparation of the final draft of the official map. The accuracy of the acquisition lines shown on the map shall be attested to by a licensed land surveyor.

After adoption, a copy of the official map, with a copy of the adopting ordinances attached shall be filed with the county recorder.

Key Points:

1. City needs to adopt a thoroughfare plan. Generally the transportation plan section of a comprehensive plan showing existing and future roadways as well as city policies associated with the plan should be sufficient.
2. Hold a public hearing – proper notice includes notice published in the official newspaper at least 10 days before hearing. Include hearing time date location and purpose.
3. The map should be prepared in sufficient detail to identify acquisition areas. Minimum of a centerline survey in unplatted areas.
4. Licensed land surveyor needs to attest to the lines shown on the map.
5. After adoption, a copy of the official map with a copy of the adopting ordinance shall be filed with the county recorder.

Effect:

After an official map has been adopted and filed, the issuance of building permits shall be subject to the provisions of this section. Whenever any street is widened or improved or any new street is opened, it is not required in such proceedings to pay for any building or structure placed without a permit or in violation of conditions of a permit within the limits of the mapped street or outside of any building line that may have been established upon the existing street or within any area thus identified for public purposes.

The adoption of an official map does not give the municipality any right, title or interest in areas identified for public purposes thereon, but the adoption of the map does authorize the municipality to acquire such interest without paying compensation for buildings or structures erected in such areas without a permit or in violation of the conditions of a permit.

Key Points:

1. Any buildings constructed without a permit in the officially mapped area after the map has been adopted do not receive compensation for their removal.
2. Buildings constructed in violations of permits in the officially mapped area after the map has been adopted do not receive compensation for their removal.

Appeals:

If a land use or zoning permit or approval for a building in such location is denied, the board of appeals and adjustments shall have the power, upon appeal filed with it by the owner of the land, to grant a permit or approval for building in such location in any case in which the board finds that, upon the evidences and the arguments presented to it, (a) that the entire property of the appellant of which such area identified for public purposes forms a part cannot yield a reasonable return to the owner unless such a permit or approval is granted, and (b) that balancing the interest of the municipality in preserving the integrity of the official map and of the comprehensive municipal plan and the interest of the owner of the property in the use of the property and in the benefits of ownership, the grant of such permit or approval is required by consideration of justice and equity.

In addition, a notice of hearing shall be published in the official newspaper at least once 10 days before the day of the hearing. If the board of appeals and adjustments authorizes the issuance of a permit or approval the governing body or other board or commission having jurisdiction shall have six months from the date of the decision of the board to institute proceedings to acquire such land or interest therein, and if no such proceedings are started within that time, the officer responsible for issuing permit or approvals shall issue the permit or approval if the application otherwise conforms to local ordinances. The board shall specify the exact location, ground area, height and other details as to the extent and character of the building for which the permit or approval is granted.

Key Points:

1. Property owners can appeal a denial of a building permit to the board of appeals and adjustments.
2. If board of appeals and adjustments authorizes the issuance of a permit, the city has six months to initiate proceedings to acquire the land.

APPENDIX G

AGENCY COORDINATION

January 17, 2006

«T1» «NAME_»
«TITLE»
«ORGANIZATION»
«ADDRESS»

SUBJECT: TH 336/12TH AVENUE SOUTH STUDY, CLAY COUNTY, MINNESOTA

Dear «T1» «NAME_»:

The Fargo-Moorhead Metropolitan Council of Governments (Metro COG) is studying future roadway networks and land use scenarios near TH 336 in Clay County, Minnesota (see Figure 1). As part of this study, Metro COG is examining a potential new interchange at TH 336 and 12th Avenue South (see Figure 1, #1) and an additional westbound off ramp at TH 336 and TH 10 (see Figure 1, #2). Metro COG has retained SRF Consulting Group, Inc. to complete this planning study. We are initiating early coordination with several agencies to collect information that will be used in assessing possible environmental impacts/opportunities at these locations. We would like to use your input and feedback prior to evaluating the alternatives.

The purpose of this letter is to provide you with an opportunity to offer your input on any issues or concerns you have regarding these proposed improvements. The study area is located within Township 139 N, Range 48 W, Sections 10, 11, 12, 13, 14, 15; and Township 139 N, Range 47 W, Sections 7, 8, 17, 18, 19, 20. Figure 1 shows projected full buildout (after 2030) traffic volumes and Figures 2 and 3 detail the proposed conceptual improvements.

Figure 2 presents the proposed diamond interchange at TH 336 and 12th Avenue South. Preliminary right-of-way estimates indicate that about 60 new acres would be required to construct a diamond interchange at this location. When TH 336 was reconstructed, Mn/DOT bought right-of-way along TH 336, which is not included in the total. Planning for and constructing an interchange at TH 336 and 12th Avenue South is consistent with recommendations from the *TH 336/CSAH 11 Corridor Management Plan (2004)*, conducted by Mn/DOT, Metro COG, Clay County, and local governments. Figure 3 presents the proposed westbound off ramp at TH 336 and TH 10. For this proposed alternative, about 12 acres of right-of-way would be required in the northeast quadrant of the interchange. The additional westbound off ramp is being considered to relieve future congestion of the existing loop ramp. These proposed improvements have not yet been programmed or funded, but after the appropriate environmental documentation and design has been completed, construction could be as early as 2010.

«T1» «NAME_»
«ORGANIZATION»

January 17, 2006
Page 2

Your input early in the process will enable us to understand potential impacts or identify possible opportunities related to the proposed improvements to the greatest extent possible. Completion of your review by February 17, 2006 would be greatly appreciated. Please send your written comments to:

Brian Shorten, Senior Associate
SRF Consulting Group, Inc.
One Carlson Parkway North, Suite 150
Minneapolis, MN 55447
OR
bshorten@srfconsulting.com

Please contact me (763-475-0010) or Wade Kline, Metro COG Community Development Planner (701-232-3242) if you have any questions or need additional information regarding this project.

Sincerely,

SRF Consulting Group, Inc.

Brian Shorten
Senior Associate

cc: Wade Kline, Metro COG

Attachments

H:\ProjFRGO\5478\Agency Coordination\request for agency input letter.doc

	NAME	TITLE	ORGANIZATION	ADDRESS	PHONE #
T1					
Mr.	Dennis Gimmestad		Minnesota State Historic Preservation Office Minnesota History Center	345 Kellogg Boulevard Saint Paul, MN 55102	(651)205-4205
Mr.	Tom Balcom		Minnesota Department of Natural Resources Environmental Review and Assistance Unit Office of Management and Budget Services	500 Lafayette Road Saint Paul, MN 55155	(651)259-5075
Mr.	Bruce Albright		Buffalo-Red River Watershed District	123 Front Street PO Box 341 Barnesville, MN 56514	(218)354-7710
Mr.	Joseph B. Day	Executive Director	Minnesota Indian Affairs Council	3801 Bemidji Avenue, Suite 5 Bemidji, MN 56601	(218)755-3825
Mr.	Paul Hoff		Environmental Information and Reporting Minnesota Pollution Control Agency Environmental Planning and Review Office	520 Lafayette Road Saint Paul, MN 55155	(651)296-7799
Ms.	Sharon Lean	District Conservationist	USDA NRCS Clay County	1615 30th Avenue South Moorhead, MN 56560	(218)287-2255
Mr.	Jeffrey D. Stoner	Minnesota Water District Chief	Water Resources Division US Geological Survey	2280 Woodale Drive Mounds View, MN 55112	(763)783-3100
Mr.	Tom Sorel	Division Administrator	Federal Highway Administration	Galtier Plaza 380 Jackson Street, Suite 500 Saint Paul, MN 55101	(651)291-6100
	Robyn Thorson		USFWS - Region 3 BHW Federal Building	One Federal Drive Fort Snelling, MN 55111	(612)713-5301
Mr.	Gerry Larson		Minnesota Department of Transportation Office of Environmental Services	395 John Ireland Boulevard, MS 620 Saint Paul, MN 55155	(651)284-3775
Mr.	Kenneth S. Kasprisin	District Engineer and Commander	Army Corps of Engineers	190 Fifth Street East Saint Paul, MN 55101	
Ms.	Sarah Hoffman	Endangered Species Review Coord	Minnesota Department of Natural Resources	500 Lafayette Road Saint Paul, MN 55155	651-296-7863
Mr.	Bruce Olson		Minnesota Department of Health	Environmental Health Division 925 SE Delaware Street PO Box 64975 Saint Paul, MN 55164	



Minnesota Department of Natural Resources

Natural Heritage and Nongame Research Program, Box 25
500 Lafayette Road

St. Paul, Minnesota 55155-40__

Phone: (651) 259-5107 Fax: (651) 296-1811 E-mail: sarah.hoffmann@dnr.state.mn.us

February 8, 2006

Mr. Brian Shorten
SRF Consulting Group, Inc.
One Carlson Parkway North, Suite 150
Minneapolis, MN 55447-4443

Re: Request for Natural Heritage information for vicinity of proposed TH 336 / 12th Ave. South Study;
T139N R48W Sections 10-15 and T139N R47W Sections 7, 8, 17-20; Clay County
NHNRP Contact #: ERDB 20060565

Dear Mr. Shorten,

The Minnesota Natural Heritage database has been reviewed to determine if any rare plant or animal species or other significant natural features are known to occur within an approximate one-mile radius of the area indicated on the map enclosed with your information request. Based on this review, there are no known occurrences of rare species or native plant communities in the area searched.

The Natural Heritage database is maintained by the Natural Heritage and Nongame Research Program, a unit within the Division of Ecological Services, Department of Natural Resources. It is continually updated as new information becomes available, and is the most complete source of data on Minnesota's rare or otherwise significant species, native plant communities, and other natural features. Its purpose is to foster better understanding and protection of these features.

Because our information is not based on a comprehensive inventory, there may be rare or otherwise significant natural features in the state that are not represented in the database. A county-by-county survey of rare natural features is now underway, and has been completed for Clay County. Our information about native plant communities is, therefore, quite thorough for that county. However, because survey work for rare plants and animals is less exhaustive, and because there has not been an on-site survey of all areas of the county, ecologically significant features for which we have no records may exist on the project area.

Please be aware that review by the Natural Heritage and Nongame Research Program focuses only on *rare natural features*. It does not constitute review or approval by the Department of Natural Resources as a whole. If you require further information on the environmental review process for other natural resource-related issues, you may contact your Regional Environmental Assessment Ecologist, Paul Stolen, at (218) 755-4068.

An invoice in the amount of \$76.36 will be mailed to you under separate cover within several weeks of the date of this letter. You are being billed for map and database search and staff scientist review. Thank you for consulting us on this matter, and for your interest in preserving Minnesota's rare natural resources.

Sincerely,

FOR Sarah D. Hoffmann
Endangered Species Environmental Review Coordinator

DNR Information: 651-296-6157 • 1-888-646-6367 • TTY: 651-296-5484 • 1-800-657-3929

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FAX: (218) 736-7215



February 6, 2006

SRF Consulting Group
Attn: Brian Shorten
One Carlson Parkway North
Suite 150
Minneapolis, MN 55447-4443

Re: TH 336/12th Ave. South study, Clay County Minnesota and the Farmland Protection Policy Act PL97-98.

Dear Mr. Shorten:

I was forwarded information and plans concerning the above named project by our Field Office in Moorhead, MN. Thank you for contacting our Agency for us to review the plans for this future project.

I have reviewed the construction plans and it appears the interchange construction projects will be converting Prime and/or Statewide Important Farmland. There will be a good number of acres that will be permanently converted per definition of PL97-98 Farmland Protection Policy Act.

I am including several blank AD1006 forms for your reference and use. Also a copy of PL97-98 you can refer to. NRCS also has a website that has more information regarding Farmland Protection: <http://www.nrcs.usda.gov/programs/fppa/index.html>

As this project moves along with more firm plans and design, a started AD1006 form will need to be completed. This can be forwarded to me at our Fergus Falls Office for completion of Parts II, IV, and V.

Our office has looked at the sites for any potential wetland impacts as they pertain to FSA Farm programs. At this early stage of design it appears those impacts will be minimal. However, when final designs are completed a detailed wetland review will be needed to assess any impacts. This does not address any concerns the local Soil and Water Conservation District may have as they pertain to the State Wetland Law (WCA).

If you have any questions concerning this response please contact me.

Sincerely,


Mike Lieser
Area Resource Soil Scientist

Encl:

Cc: S. Lean, DC, NRCS, Moorhead, MN
Lenore Marken, Wetland Biologist, NRCS, Fergus Falls, MN
File

BUFFALO - RED RIVER WATERSHED DISTRICT

BARNESVILLE, MINNESOTA 56514

123 FRONT STREET SOUTH — P.O. BOX 341

PHONE 218 354-7710

February 7, 2006



Brian Shorten, Senior Associate
SRF Consulting Group, Inc.
One Carlson Parkway North, Suite 150
Minneapolis, MN 55447

RE: T.H. 336/12th AVE S Study, Clay County, Minnesota

Dear Mr. Shorten:

Thank you for your 1/17/06 correspondence regarding the above. The area of both proposed projects is within the boundaries of the Buffalo-Red River Watershed District (BRRWD). We are also the drainage authority for Clay County Ditch No. 41, which traverses through the project area. We do have a representative (E. Robert Olson) that does participate with the Study Review Committee on this project.

Since the Minnesota Department of Transportation (MNDOT) constructed Trunk Highway (T.H.) No. 336 in 2004, we have been working on a drainage problem that was created along the west side of this road. They have a centerline culvert between Sections 17 and 18, Glyndon Township, Clay County, that drains directly across agricultural land in Section 18, as the water works its way towards Clay County Ditch No. 41. On 11/23/04, a petition was filed in accordance with Minnesota Statutes Annotated (M. S. A.) 103E.225 (Drainage Law) to install a ditch system lateral into this area. To date, we are still working on that project, which includes several alternatives that should resolve the downstream landowner concerns. Discussions with MNDOT representatives show that one possibility might be to address this drainage concern when the diamond interchange at T.H. 336 and 12th Avenue South is developed. The ditch along the west side of T.H. 336 could be regraded to drain north with the interchange project.

On a related matter, as indicated, we are the ditch authority for Clay County Ditch No. 41. This ditch runs in a north-south direction along the west lines of Sections 7 and 18, Glyndon Township, and crosses through 12th Avenue South. Several years ago, Houston Engineering, Inc. (H.E.), completed a hydraulic analysis for a new structure at this location. This information will be readily shared with the Study Review Committee when and if discussions regarding this area come up.

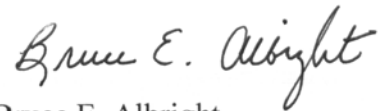
At this time, we would have no comments regarding the potential westbound off-ramp proposed for T.H. 10. Of course, any actual construction work on either of the proposed projects covered in your 1/17/06 letter would require a BRRWD permit once more details are developed.

February 7, 2006
SRF Consulting Group, Inc.
Page 2

If you should have questions or comments concerning the above or enclosed, please feel free to contact this office.

Sincerely,

BUFFALO-RED RIVER WATERSHED DISTRICT.

A handwritten signature in cursive script that reads "Bruce E. Albright".

Bruce E. Albright
Office Administrator

BEA/jj

cc: Wade Kline, Fargo-Moorhead Metropolitan Council of Governments, Case Plaza, Suite 232,
One 2nd ST N, Fargo, ND 58102



SRF No. 5478

RECORD OF TELEPHONE CONVERSATION

Route to _____ Copy to _____ Date 3/2/06 Time 6²⁵ pm
Employee B. Shorten
Conversation with Kevin Kleithermus ~~XXXX~~
Telephone 651 291 6123
Organization FITWA
Re. TH 336 / 12 Ave Corridor Study

DETAILS OF CONVERSATION

Kevin left a voice mail message -
" He + Jim McCarthy have looked
at TH 336 layouts (TH 10 + 12th Ave)
- neither has any comments - Kevin
will be out of office 'til mid-
March