

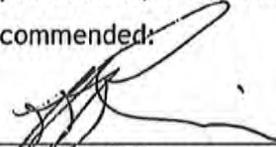
STATE OF MINNESOTA
DEPARTMENT OF TRANSPORTATION
and
CITY OF GOLDEN VALLEY

PROJECT MEMORANDUM
FOR RIGHT OF WAY ACQUISITION AND SECTION 4(F) EVALUATION
FOR
SP 128-091-004
Minn Proj. No. NMTP 2713 ()

HENNEPIN CSAH 102 (Douglas Drive)
FROM: Trunk Highway 55
TO: CSAH 70 (Medicine Lake Road)
IN THE CITY OF: GOLDEN VALLEY

PROPOSED IMPROVEMENT: Reconstruction of 1.6 miles of CSAH 102; Extend Culvert No. 90614, signal installation; roundabout construction; railroad crossing improvements; and 1.6 miles of multi-use bituminous trail.

Recommended:

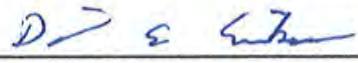


Golden Valley City Engineer

12/20/12

Date

Reviewed and Recommended:

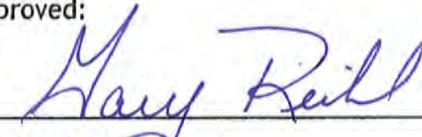


District State Aid Engineer

12/21/12

Date

Approved:

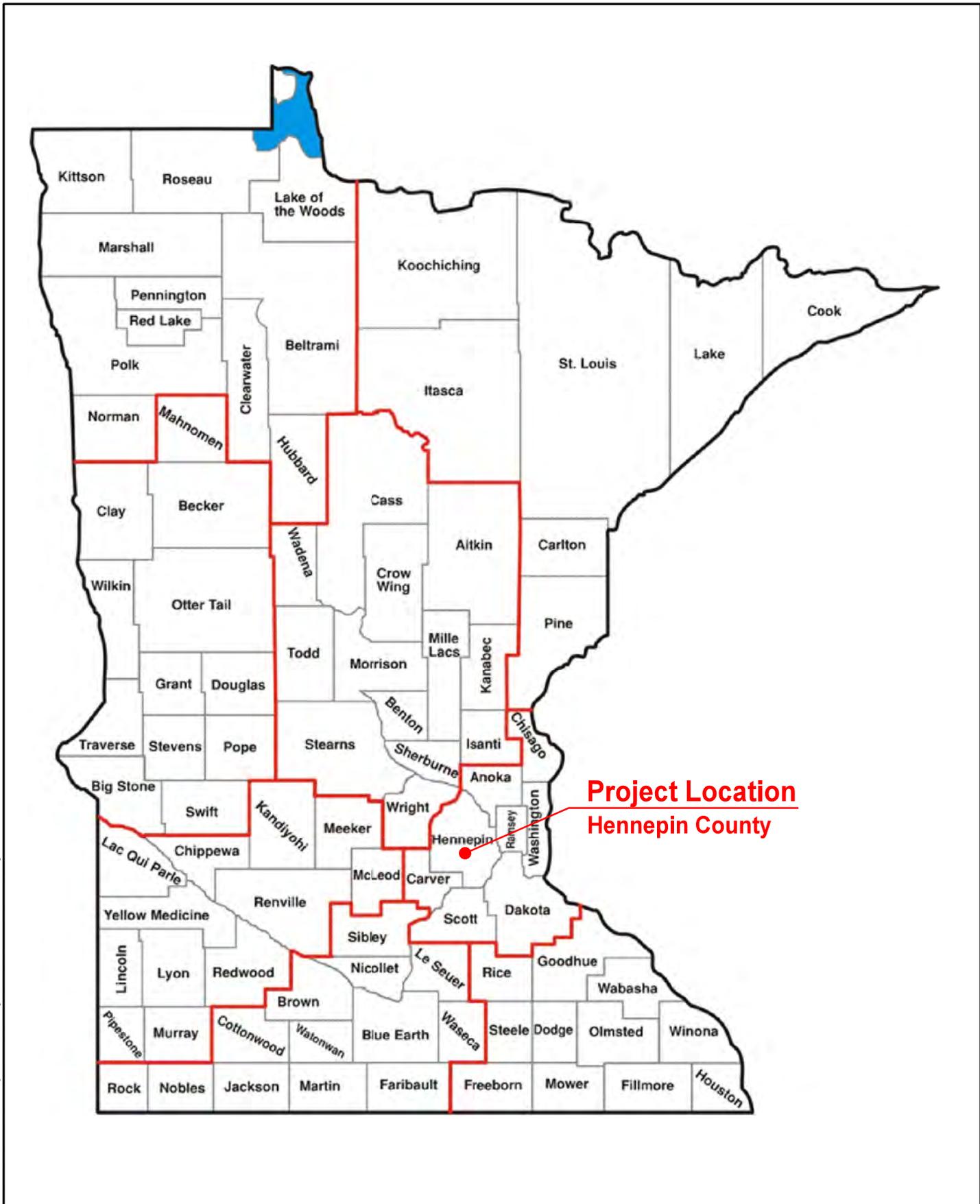


State Aid Engineer

12/27/2012

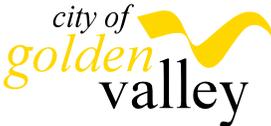
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for
State Aid For Local Transportation



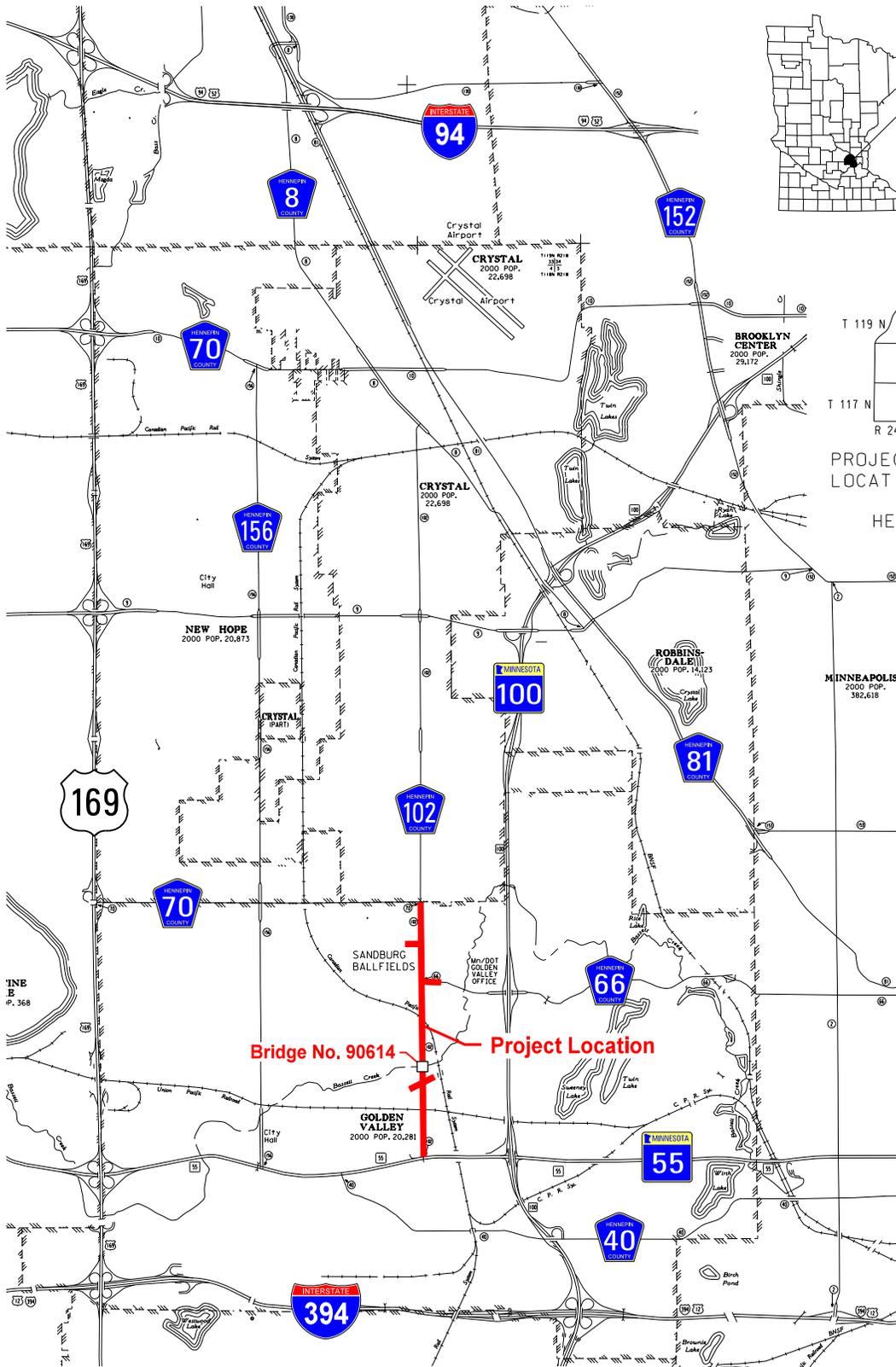
**Project Location
Hennepin County**

Date: Printed: 9/26/2012
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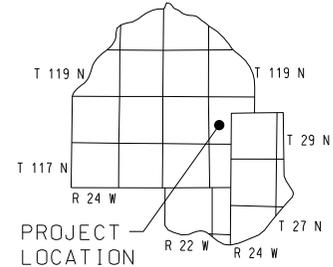


Project Memorandum
 CSAH 102 (Douglas Drive) S.P. 128-091-00 4
 City of Golden Valley, Minnesota

Figure Number 1
State Location Map

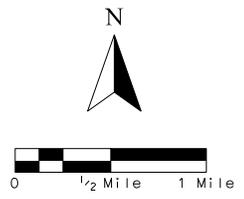


PROJECT LOCATION
 COUNTY: HENNEPIN
 DISTRICT: METRO



PROJECT LOCATION
 HENNEPIN COUNTY

**City of Golden Valley
 Hennepin County, Minnesota**



Date: P: 9/26/2012
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Project Memorandum
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 City of Golden Valley, Minnesota

Figure Number 2
Project Location Map

I. REPORT PURPOSE

This Project Memorandum (PM) documents the need for the proposed improvement, environmental impacts and mitigation, and schedule, funding and design information.

This documentation was prepared to demonstrate that the project does not have a significant environmental effect and is excluded from the requirement to prepare an EA or EIS in accordance with 23 CFR 771.115.

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II. HIGHWAY SECTION DESCRIPTION

Hennepin County State Aid Highway (CSAH) 102 (Douglas Drive) is a north/south A Minor Reliever Arterial from Trunk Highway (TH) 55 in Golden Valley to CSAH 8 (Broadway Avenue) in the City of Crystal. An A Minor Arterial Reliever is intended to provide direct relief for traffic on Metropolitan Highway Principal Arterials. They are intended to support medium length trips and are usually parallel to congested Principal Arterials. In addition, the Met Council recommends that the spacing of A Minor Arterials be between one-half and one mile apart in developed areas. Douglas Drive is generally located one-half mile west of TH 100, a Principal Arterial, and one mile east of Winnetka Avenue (CSAH 156), an A Minor Reliever. Douglas Drive also intersects several east-west arterials including TH 55, CSAH 66 (Duluth Street), CSAH 70 (Medicine Lake Road), CSAH 9 (42nd Avenue), and CSAH 8 (Broadway Avenue).

Highway Section Termini:

From: TH 55

To: Medicine Lake Road

Length: 1.6 miles

See additional 'existing condition' elements description in **Tables 8** through **15** in the Design Study starting on page 31.

Unusual Traffic or Road / Facility Use:

The roadway is a typical urban thoroughfare with no unusual traffic.

Horizontal/Vertical Alignment:

The roadway is straight and rolling.

Adjacent Land Use:

There are a variety of land uses along Douglas Drive. The bullets below summarize existing land uses (per the City's 2008 land use map) along the corridor.

- From TH 55 to the Union Pacific Railroad - West: Industrial
- From TH 55 to the Union Pacific Railroad - East: Commercial and industrial

- From Union Pacific Railroad to Golden Valley Road - West: Office
- From Union Pacific Railroad to Golden Valley Road - East: Industrial

- Golden Valley Road to Canadian Pacific Railroad - West: Low density residential
- Golden Valley Road to Canadian Pacific Railroad - East: High density residential

- Canadian Pacific Railroad to Duluth Street - West: Open space and industrial
- Canadian Pacific Railroad to Duluth Street - East: Office, commercial and high density residential
- Duluth Street to Medicine Lake Road - West: Industrial, public facilities and low density residential

- Duluth Street to Medicine Lake Road - East: Public facilities, medium density residential and low density residential

Bridge Crossing(s):

Bridge number: 90614 (Culvert)

Location (over): Bassett Creek

If waterway crossing:

Designated Trout Stream: No

Wild, Scenic or Recreational River of State or Federal Designation: No

Designated Canoe or Boating River: No

Railroad Crossing Location (s): Yes

There are two existing railroad crossings on Douglas Drive. The southern crossing belongs to the Union Pacific (UP) Railroad. Approximately two trains a day use the rail line. There are currently cantilevers, gates and flashing lights at this crossing. There are also overhead street lights that illuminate the crossing. The crossing was noted as being in “good condition” in 2009 per the MnDOT crossing forms. There are trees and brush along the track that somewhat limit visibility.

The northern crossing belongs to the Canadian Pacific (CP) Railroad. Approximately three trains a day use the rail line. There are currently cantilevers and flashing lights at this crossing. There are no gates, nor are there overhead street lights to illuminate the crossing. The crossing was noted as being in “fair condition” in 1996 per the MnDOT crossing forms. There are trees and brush along the track that impair visibility.

Because federal funding is included as part of this project, gates will need to be installed at the CP crossing. The City and County will work with the railroad to incorporate updated cantilevers and flashing lights along with the required gates.

The required railroad data forms were submitted to MnDOT’s Office of Freight and Commercial Vehicle Operations in December 2011. MnDOT indicated that gates would be required as part of this project.

Airport Proximity: No

III. PROJECT PURPOSE AND NEED

Purpose/Objectives:

The purpose of the project is to preserve right of way and construct transportation improvements to Douglas Drive. Improvements have been identified to provide safer accommodations for pedestrians and bicyclists as well as to improve traffic operations and motor vehicle safety along the corridor.

Need/Deficiencies:

Primary Needs

The following summarizes the primary needs that have been established for the Douglas Drive corridor.

Pedestrian Facilities

Existing pedestrian facilities along Douglas Drive are inadequate and incomplete. There are a number of gaps along the corridor that force pedestrians to cross from one side of the roadway to the other in order to continue along a path. In addition, there is a section of the roadway that has no pedestrian accommodations on either side of the corridor. The gaps in the system preclude a safe pedestrian experience and actually discourage pedestrian trips. Existing pedestrian facilities along Douglas Drive are listed in Table 1.

Table 1: Existing Pedestrian Facilities along Douglas Drive

Location		Existing Pedestrian and Bicycle Facilities along Douglas Drive	
From	To	West Side	East Side
TH 55	Country Club Dr	Concrete Sidewalk	None
Country Club Dr	N Frontage Rd	Luce Line Regional Trail	None
N Frontage Rd	Union Pacific RR	None	Luce Line Regional Trail
Union Pacific RR	Golden Valley Rd	None	None
Golden Valley Rd	Duluth St	Concrete Sidewalk	None
Duluth St	Medicine Lake Rd	Concrete Sidewalk	Concrete Sidewalk

Bicycle Facilities

There are currently no bicycle specific accommodations on the Douglas Drive Corridor. Similar to the situation for pedestrians, there are limited segments of trail parallel to the corridor. The Luce Line Regional Trail is parallel to Douglas Drive between Country Club Drive and the Union Pacific Railroad. It crosses Douglas Drive at North Frontage Road. However, the Luce Line Regional Trail is predominantly an east-west non-motorized corridor, and was never intended to accommodate cyclists traveling along Douglas Drive. Due to the lack of facilities, cyclists must share travel

lanes and/or narrow shoulders with motorized vehicles.

Safety

A three year crash history (2007-2009) includes a total of 77 crashes on Douglas Drive between TH 55 and Medicine Lake Road. There were no fatalities resulting from vehicle on vehicle crashes during this time period. However, there were two crashes involving bicyclists and two fatal crashes involving pedestrians.

In addition, two intersections along the corridor have crash rates and severity rates above metro area averages. These intersections are at both ends of the corridor. At the northern end, Medicine Lake Road has a severity rate twice the metro average. At the southern end, TH 55 and the North Frontage Road, have crash and severity rates that are slightly above the metro average.

The crash and severity rates for these intersections are shown in **Table 2**. The crash and severity rates observed at the other intersections along the corridor were at or below the metro area average rates for similar intersections.

Table 2: Intersection Crash and Severity Rates Above Metro Area Average Rates

Intersection	2007-2009 Observed Crashes			Metro Area Averages for Similar Intersections	
	Total Crashes	Crash Rate*	Severity Rate**	Crash Rate*	Severity Rate**
Douglas Drive & Medicine Lake Road	23	0.9	1.6	0.6	0.8
Douglas Drive & North Frontage Road	5	0.3	0.3	0.2	0.2

* Crash rates represent the number of crashes observed per million entering vehicles.

** Severity rates are presented without units.

Roadway Capacity

Projected traffic volumes on Douglas Drive will exceed the roadway’s capacity north of Duluth Street. Forecast 2035 daily and AM and PM peak-hour traffic volumes were developed using existing counts and projected land use from redevelopment along the corridor.

Table 3 provides the projected traffic volumes along Douglas Drive and the related existing capacity of each roadway segment. The 2035 forecast volumes for Douglas Drive exceeds its capacity near TH 55 and north of Duluth Street.

Table 3: Existing and Daily Forecast Volumes

Douglas Drive Segment		2005-2007 Traffic Volumes (Mn/DOT)	2011 Traffic Volumes (WSB & Assoc.)	2035 Forecast Traffic Volumes	Existing Roadway Capacity*	
From	To				Geometry	AADT
TH 55	N Frontage Road	none	13200	27000	4-lane undivided	16,000 - 22,000
N Frontage Road	Golden Valley Road	9100	8700	14600	4-lane undivided	16,000 - 22,000
Golden Valley Road	Olympia St	11400	10600	14600	3-lane (TWLTL)	14,000 - 16,000
Olympia St	Duluth St	11400	10800	14700	3-lane (TWLTL)	14,000 - 16,000
Duluth St	Sandburg Rd	10900	13600	18100	3-lane (TWLTL)	14,000 - 16,000
Sandburg Rd	Medicine Lake Rd	10000	11600	16000	3-lane (TWLTL)	14,000 - 16,000

*Note: Capacities based on Highway Capacity Manual (2000) analysis. Threshold capacities are highly dependent on assumptions used such as access spacing, peak hour percent, directional distribution, saturation flow rates, etc. Values should not be used for operational analysis or final design.

Traffic Operations

Along with congestion on segments of the corridor, intersections will experience unacceptable Level of Service (LOS) in the future. LOS is a measure used to identify mobility. The LOS system uses the letters A through F, with A being best and F being worst. LOS A is when traffic is free flowing and vehicles do not have to wait at intersections. LOS F flow is forced and every vehicle moves in lockstep with the vehicle in front of it, with frequent slowing and stopping. The boundary between LOS D and LOS E is the boundary between acceptable and unacceptable operations.

Table 4 shows LOS for intersections along Douglas Drive for the No Build Alternative.

Table 4: 2035 Intersection LOS

Douglas Drive and the Intersection of:	2011 Level of Service (am/pm)	2035 No-Build Level of Service (am/pm)
TH 55 North Frontage Road	A/A	D/E
Golden Valley Road	A/A	B/B
Olympia Street	A/A	A/A
Duluth Street	B/B	D/E
Sandburg Road	B/A	E/A
Medicine Lake Road	B/B	F/B

Secondary Needs

The following secondary needs have been established for the Douglas Drive corridor.

- Promote Transit Use - Douglas Drive will accommodate the existing bus routes, as well as allow for future increased bus service.
- Vehicle Speeds - Douglas Drive will be designed to encourage compliance with the 35 mile-per-hour speed limit.
- Facilitate Redevelopment - Douglas Drive will be designed to facilitate and encourage redevelopment along the corridor.
- Pavement Condition - Reconstruction of Douglas Drive will provide an opportunity to correct the existing poor pavement quality.
- Geometric Deficiencies - Several intersections along the corridor currently have channelized right turns, which have been problematic for pedestrians to cross.

Bridge 90614 (Culvert):

Sufficiency Rating: 79.9

Structurally Deficient: No

Functionally Obsolete: No

IV. ALTERNATIVES

No Build Alternative

The No Build alternative would leave the existing Douglas Drive corridor in its current condition. This alternative does not address the stated primary needs since it would not address the lack of pedestrian and bicycle accommodations, it would not address the current safety issues identified, nor would it adequately accommodate the increases in traffic expected along the corridor.

Preferred Alternative

The preferred alternative includes reconstructing (new pavement, curb and gutter, storm sewer, treatment ponds) Douglas Drive from TH 55 to Medicine Lake Road with the following improvements:

- A separated six foot walk:
 - along the east side from TH 55 to the TH 55 Frontage Road
 - along the west side from Golden Valley Road to Medicine Lake Road
- A separated trail:

- along the east side from the TH 55 Frontage Road to Golden Valley Road (10 foot wide trail)
 - along the east side from Golden Valley Road to Medicine Lake Road (eight foot wide trail)
 - along the west side from the TH 55 Frontage Road to Golden Valley Road
 - a trail already exists (Luce Line Regional Trail) along the west side from TH 55 to the TH 55 Frontage Road
 - the proposed trail connects into the Luce Line Regional Trail near the TH 55 Frontage Road
- Six foot wide on-street bicycle lanes on both sides of Douglas Drive from Golden Valley Road to Medicine Lake Road.
 - A four-lane section with dedicated turn lanes from TH 55 to north of the TH 55 Frontage Road. A 4-lane section exists along this segment today. The improvements will include turn lane capacity at both TH 55 and the North Frontage Road.
 - A three-lane section (one southbound lane, one northbound lane and a continuous center two-way left-turn lane [with the exception of median development at the proposed Golden Valley Road roundabout]) from north of the TH 55 Frontage Road to St. Croix Avenue.
 - A hybrid 4-lane section (two southbound lanes, one northbound lane and a continuous center two-way left-turn lane [with the exception of median development for Duluth Street and at the proposed Sandberg Road roundabout]) from St. Croix Avenue to Medicine Lake Road.
 - A revised traffic signal at TH 55 with dedicated through and turn lanes.
 - Closing off access to Douglas Drive at Country Club Drive with a cul-de-sac on Country Club Drive and a right-in/out onto TH 55.
 - A revised signal at the TH 55 Frontage Road with Douglas Drive and dedicated turn lanes.
 - A multi-lane roundabout at Golden Valley Road.
 - The removal of access at Hampshire Place with a cul-de-sac.
 - Addition of dedicated turn lanes at St. Croix Avenue/Honeywell access.
 - Revised signal and additions of dedicated turn lanes at Duluth Street.
 - A multi-lane roundabout at Sandberg Road.
 - A revised signal and dedicated turn lanes at Medicine Lake Road.

The proposed layout and typical sections are provided in the **Attachment A, Figures 3A - 3D and Figures 4A-4B.**

Other Reasonable Location or Design Alternatives

Other Location Alternatives

The identified needs for this corridor, such as a lack of adequate pedestrian/bicycle facilities, safety issues, forecasted traffic volume increases, and forecasted congestion, would not be addressed by constructing a new roadway in a new location or reconstructing a parallel roadway. Considering that the surrounding area is fully developed, creating a corridor in a new location would result in significant impacts to existing development and would require a significant amount of right of way acquisition. Since none of the needs are met with an alternative in a new location or a separate corridor, this is not considered a reasonable alternative requiring additional analysis.

Reasonable Design Alternatives Considered

Number of Lanes on Douglas Drive

The number of through lanes that service Douglas Drive would remain mostly the same with the exception of its intersection with TH 55 and from south of Duluth Street to Medicine Lake Road.

Douglas Drive at TH 55

Currently Douglas Drive terminates at TH 55 with one through lane turning into a dedicated right turn-lane and a through lane turning into a shared left-through lane (since the through provides access across TH 55 to the TH 55 South Frontage Road). Under this configuration the signal must operate as a split phase which is inefficient. By providing a dedicated through lane (as shown in the preferred alternative) it would free up green time creating less delay for users of Douglas Drive.

Douglas Drive from South of Duluth Street to Medicine Lake Road

Continuing the three lane section from Duluth Street to Medicine Lake Road was considered but rejected after analysis of the peak hour volumes indicated that Douglas Drive also serves as a west-east movement from Medicine Lake Road to Duluth Street. The southbound to eastbound movement is heaviest during the AM peak hour, 20 percent higher than the PM peak hour, and is southbound. This heavy peak exceeds the capacity of a single through lane in this direction and therefore it was determined that two southbound lanes were needed along this segment of roadway. The lanes would be carried through the Duluth Street intersection to maximize green time at this high-volume intersection.

Intersection Improvements

Intersections were evaluated to determine the number of lanes required and traffic control to accommodate traffic at an acceptable LOS. The number of required lanes

and intersection control determine the physical footprint of the intersection. An analysis of the year 2035 traffic operations was conducted using microsimulation software. Synchro/SimTraffic software was used to analyze signalized and stop controlled intersections while RODEL and VISSIM were used for roundabouts.

For all intersections a “no change” to existing geometry and traffic control was considered, a roundabout was examined and a modified geometric and traffic control device was reviewed.

TH 55 North Frontage Road / Douglas Drive Intersection

The no change alternative resulted in LOS E and the roundabout alternative required a third lane along the east side in order to accommodate traffic in the intersection. As a result, these alternatives were rejected. The preferred alternative modified the geometrics and included a reconstructed traffic signal. The LOS is B in the AM and LOS C during the PM.

Golden Valley Road / Douglas Drive Intersection

The no change alternative operated at LOS B. However, the existing skew would remain and the associated safety concerns would continue. The revised signal alternative with geometric fixes would result in LOS C. The roundabout provided similar levels of service as the revised signal (LOS B). Adjacent property owners and other stakeholders preferred the roundabout concept to keep speeds lower.

Olympia Street / Douglas Drive Intersection

The no change alternative would provide acceptable LOS for the intersection. However, left-turning vehicles would experience LOS E during the AM peak. The traffic signal with revised geometrics did not meet signal warrants. The roundabout alternative was analyzed even though warrants were not met. The Roundabout operated at an acceptable LOS. However, because warrants were not met, the existing side street stop condition will remain in place.

Duluth Street / Douglas Drive Intersection

The no change alternative would operate at LOS D in the AM and LOS E in the PM. Substantial queues would result from this alternative. The modify geometrics and construct a new traffic signal alternative would operate at LOS B during the AM and LOS C during the PM. The roundabout alternative required a third lane along the west side to accommodate the southbound three-lane approach. The roundabout operated LOS C during the AM and LOS B during the PM.

Operationally, a signal would offer the public a more standard intersection than a roundabout that introduces a third circulating lane. Since the public is not as familiar with three-lane roundabouts, it was not selected.

Sandburg Road/Douglas Drive Intersection

The no change alternative would result in long queues and would have an unacceptable LOS during the AM. As a result, this alternative was not considered. The LOS analysis indicated that a traffic signal or roundabout would provide acceptable operations. A roundabout would provide access to properties close to the intersection because it has shorter medians. For this reason, a roundabout was preferred.

Medicine Lake Road / Douglas Drive Intersection

The no change alternative would operate at LOS F. The roundabout alternative would have resulted in relocations in order to be constructed. The revised intersection geometrics with updated traffic signal would operate at an overall LOS C and would have fewer property impacts. This was the preferred alternative.

The proposed project will impact a park Section 4(f) resource, the 100-year floodway and a Section 4(f) resource that is eligible for the National Register. Specific analyses are documented in the SEE section. These analyses include alternatives to avoid or reduce impacts in each of these areas.

Bridge Alternatives--Replacement vs. Rehabilitation

The proposed project impacts Bridge No. 90614, twin box culverts built in 1939 and remodeled in 1959. The project proposes to extend the culverts approximately 29 feet on the west side of Douglas Drive and 11 feet on the east side. The bridge is structurally sound and does not need to be replaced or rehabilitated.

V. PROJECT COST, FUNDING & SCHEDULE

Estimate of Cost:

Roadway Construction Costs:	\$14,900,000
Bridge/Culvert Construction Costs:	\$300,000
Right of Way Cost Estimate:	\$3,400,000
Engineering/Admin Costs:	\$3,800,000
Total Costs:	\$22,400,000

Anticipated Funding:

Type and amount of Federal and matching funds:

Federal:	\$675,000 Non-Motorized Transportation Project (NMTP)
State Aid:	Unknown at this time
Other State:	Unknown at this time
Local:	\$21,725,000 (could be a combination of state aid and local)

The project is in the 2013-2016 State Transportation Improvement Program (STIP).

Federal fiscal year 2011, Sequence # 1538

Estimated cost shown in STIP: \$ 675,000

Federal funding shown in STIP: \$ 675,000

Anticipated Schedule:

Public Open House	October 2011
Public Hearing, if any	NA
Project Memorandum	January 2013
Right-of-Way Acquisition	February 2013 - Winter 2016
Plans, Specifications & Estimate	Winter 2014
Letting	Spring 2016

Future Stages or Improvements:

The initial grant was for preliminary design, environmental documentation and right of way acquisition. The project is recognized in the Capital Improvement Plans for both the City and the County in 2015 (right-of-way) and 2016 (construction). However, complete funding sources have not been identified at this time.

VI. SOCIAL, ECONOMIC AND ENVIRONMENTAL (SEE) IMPACTS

Section 4(f) of the Transportation Act of 1966

The proposed project impacts two properties identified as Section 4(f). The proposed project impacts the land referred to as Sandburg Ball Fields and the Golden Valley Congregation of Jehovah's Witnesses. The Jehovah's Witnesses property is further detailed under the Section 106 of the National Historic Preservation Act of 1966. This section of the document will only address Sandburg Ball Fields.

The Sandburg Ball Fields are located along the west side of Douglas Drive, immediately north of Sandburg Road. **Figure 5** in Attachment A shows the location of the ball fields. **Figure 6** shows the impacts to the site.

As shown in **Figure 6**, the project impacts approximately 0.50 acres of land. Of that, approximately 0.30 acres involve permanent right of way acquisition or permanent easement. Approximately 0.20 acres involve temporary easements. No functions at the park will be affected by the project. The impacted area is a back slope between Douglas Drive and the ball fields. It does not impact any playing area on the fields. The project will require a fence to be relocated.

The City of Golden Valley has been working with the Robbinsdale Area School District (IDS #218) who is the owner of the property. The school district is supportive of the project and has provided a letter indicating so. The letter is included in **Attachment B - De Minimis Request**.

Please refer to **Attachment B** for the full Section 4(f) Evaluation and De Minimis request.

Section 6(f) of the Land and Water Conservation Fund Act of 1965

The project will not impact Section 6(f) lands or properties.

Section 106 of the National Historic Preservation Act of 1966

As noted under the Section 4(f) topic, the proposed project will impact the Kingdom Hall of the Golden Valley Congregation of Jehovah's Witnesses. The site is shown in **Figure 7** and the impacts to the parcel are shown in **Figure 8**.

As shown in **Figure 8**, the project impacts approximately 0.09 acres of land. Of that, approximately 0.20 acres involve permanent right of way acquisition or permanent easement. The remaining 0.70 acres involve temporary easements. Twenty parking spaces along the south side of the building will be removed as a result of encroachment from the roadway and sidewalk, and the existing access off Duluth Street will be limited to right-in, right-out only. The parking spaces will be replaced in an area northwest of the building, resulting in no net loss of parking spaces, and a new access will be constructed off CSAH 102 (Douglas Drive).

This property has been identified as a historic resource that could be eligible for the National Register of Historic Places. The City of Golden Valley has been coordinating with the owners of the property, who are supportive of the project and have provided a letter indicating so. MnDOT's Cultural Resource Unit has determined that the proposed project will have **no adverse effect** on the Kingdom Hall site and SHPO has concurred with this determination. Copies of letters and coordination on the Section 106 impact, as well as the Section 4(f) De Minimis request, can be found in **Attachment C**.

Endangered Species Act Of 1973

The project will have no effect on Federally-listed T&E species or critical habitat. See attached (**Attachment D**) letter from MnDOT's Office of Environmental Stewardship (OES) for federally listed species.

Right Of Way

The proposed project will require right of way acquisition. **Figures 9A - 9D** show the parcels that will be impacted by the proposed project. The project will require approximately:

- 4.35 acres of permanent right of way acquisition from 41 parcels
- 1.26 acres of permanent easements from 2 parcels
- 9.2 acres of temporary easements from 62 parcels

The project will require six residential relocations. Five of the parcels are on the west side of the corridor between Phoenix Street and Hampshire Place. The home on the east side of Douglas Drive is immediately across from Sandburg Road. This home is needed to accommodate changes in intersection geometrics. This property would

have been acquired regardless of traffic control device selected (roundabout or signal). Acquisition and relocation will be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended.

The project will require changes in access to provide for better safety conditions. Access changes are described below, moving along the corridor from south to north and are shown in **Figures 3A-3D**. The following access changes will be made:

- Country Club Drive: This road will be cul-de-saced and will not connect to Douglas Drive. Access to Country Club Drive will be provided from TH 55 just west of the Douglas Drive intersection.
- Parcel on the west side of Douglas Drive- 6300 Douglas Drive: This property has three accesses. The southern driveway (intended to be a right out, but currently also used as a left-in) will be converted to a right-out. The middle access, currently signalized, will remain. The northern access will be closed.
- Parcel on the west side of Douglas Drive - 1111 Douglas Drive: This parcel has two accesses. Both will be closed and a new one will be constructed in the middle of the parcel. An access will be added to Golden Valley Road.
- Golden Valley Road: The access at Golden Valley Road will be converted to a roundabout and the alignment will be modified to reduce the skew. Driveways off of Golden Valley Road will be reconnected to the realigned roadway.
- Hampshire Place: This roadway access will be closed.
- Honeywell - 1885 Douglas Drive: Honeywell has three accesses. The southern access will be converted into a three-quarter access. The middle access, which is currently signalized, will remain. The northern access will be converted to a right-in/out.
- The Kingdom Hall of the Golden Valley Congregation of Jehovah's Witnesses - 1950 Duluth Street: The Jehovah's Witnesses site presently has full access on Duluth Street and no access onto Douglas Drive. Access on Duluth Street will be converted to a right-in/out. A right-in/out access will be provided on Douglas Drive.
- Three residential properties north of the Jehovah's Witnesses site - 2000, 2010 and 2020 Douglas Drive: These parcels have full access to Douglas Drive. The project converts them to right-in/out.
- Parcel north of the three residential properties - 2040 Douglas Drive: This parcel has two accesses. The southern access will be converted to a right-in/out. The northern access will remain.
- Parcel south and north of Sandburg Road intersection on the east side - 2230 and 2310 Douglas Drive: Existing access will be converted from full access to right-in/out access.

Hazardous Materials

WSB has reviewed available background information regarding the location of potentially contaminated properties in the Douglas Drive project area between TH 55

and Medicine Lake Drive. The information reviewed includes the following:

- MPCA “What’s in my Neighborhood?” website search
- MPCA Storage Tank Leak site website search

As part of the Douglas Drive project, information has been gathered for sites within 0.5-mile of the corridor for inclusion in this document and sites within 0.125-mile of the corridor to determine if a Phase I Environmental Site Assessment is needed for the project. A summary of the results is outlined below and shown on **Figure 10**.

- Super America store #4443 (formerly Ron's Golden Valley Service), located at 1930 Douglas Drive. This site has active storage tanks, three historic leaks, and is currently participating in the VIC cleanup program. One of the leaks was documented to have contaminated the groundwater; however, the extent of this contamination is unknown. Disturbance in the immediate proximity of the storage tanks will be avoided and coordination with the MPCA will occur if necessary to avoid disturbance to the areas affected by the cleanup program. If it is determined that impacts will occur to the site in areas affected by the cleanup program, appropriate steps will be taken to clean-up the site in accordance with state rules and regulations.
- Gregg & Jim’s Service, located at 1900 Douglas Drive North. This site has active storage tanks. Disturbance in the immediate proximity of these tanks will be avoided and coordination with the MPCA will occur if necessary. If it is determined that impacts will occur to the site in areas affected by the cleanup program, appropriate steps will be taken to clean-up the site in accordance with state rules and regulations.
- Honeywell Parcel #2, located at 1985 Douglas Drive North (also Honeywell International). This site has an active storage tank, historic leaks, and is currently participating in both the VIC and RCRA cleanup programs. The historic leak was documented to have contaminated the groundwater. Monitoring wells exist immediately along the west side of Douglas Drive which provide ongoing reports to the MPCA. It is believed the contamination is considerably deep and the plume extends horizontally into the project area. Additional site investigation will need to occur prior to letting the project for construction. It is recommended that borings be taken to determine the extent of the plume and the potential impacts to the project. As part of construction, soils will need to be removed and disposed of according to state rules and regulations. A Phase II and RAPP will need to be completed to identify specific measures for clean-up. The city and county will coordinate with the property owner.

Farmland Protection Policy Act Of 1981

The project will not involve the acquisition of farmland.

Air Quality

The project will not significantly impact air quality.

Highway Traffic Noise

The proposed project reconfigures through lanes along the project corridor. There are changes in traffic flow and concentration and right of way acquisition that bring vehicles closer to existing homes along the corridor. As a result, the project is being treated as a Type 1 project under FHWA noise regulation 23 CFR 772. An evaluation of noise impacts was completed. Please note the project completed the first noise wall model prior to the June 2011 rule taking effect. This project falls under the old noise rule.

A copy of the complete noise analysis can be obtained by contacting the City of Golden Valley.

Results from the noise analysis indicate that sound will increase at some receptors along the corridor. In some of these areas, the sound levels approach, are at or exceed federal thresholds. When sound exceeds these levels, a noise barrier must be considered. Noise barriers were considered at eight locations along the corridor (**Figure 11**). In order for a barrier to be constructed, it must be deemed “feasible” - physically being able to be constructed and “reasonable” - able to reduce noise to a certain threshold and be cost-effective according to state guidelines. None of the eight potential walls were deemed both “feasible” and “reasonable”. As a result, no noise walls are proposed.

Alternative Noise Abatement

Noise abatement measures, other than noise barriers, were considered for the proposed project. Such measures included traffic control devices, signing for prohibition of certain vehicle types, time-use restrictions for certain vehicle types, modified speed limits, exclusive land use designations, and other methods as listed in 23 CFR 772.13c. It was determined that these types of measures are not feasible or practical for this project. To limit the vehicle types, time of use, and speeds on the roadway would not be consistent with the function of Douglas Drive.

Construction Noise

Elevated noise levels are, to a degree, unavoidable for this type of project. Construction equipment will be properly muffled and in proper working order for the duration of the project. Local noise ordinances will be complied with during the construction phase of the project. Advanced notice will be provided of any planned abnormally loud construction activities. While some night-time construction may be required to minimize traffic impacts and improve safety, when feasible construction will take place primarily during the less noise-sensitive daylight hours to avoid impacts during hours associated with sleep.

Any associated high-impact equipment noise, such as pile driving, pavement sawing,

or jack hammering, will be avoided as much as possible with construction of the proposed project. While pile driving equipment results in the highest peak noise level, it is limited in duration to the activities noted above. The use of pile drivers, jack hammers, and pavement sawing equipment will be prohibited during nighttime hours.

Floodplain Management

The project will include non-significant floodway encroachment. The provisions of Executive Order 11988 have been complied with.

The proposed project will impact the floodway of Bassett Creek. The creek crosses underneath Douglas Drive between Phoenix and Knoll Streets. The proposed project will widen the roadway section in this area and require the culverts to be extended to accommodate the wider roadway. As a result, the 100-year floodway will be impacted. Hydraulic modeling shows that there will be no change in the flood profile upstream of the culvert. **Figure 12** shows the location of the floodway impact. Based on the assessment, no significant floodway impacts are expected.

A Floodplain Assessment, including a Hydraulic Analysis and Risk Assessment, has been completed and is in **Attachment E**. Mitigating storage will be required by the City and Bassett Creek Watershed Management Commission. In addition, within six months of completion of the project, the City of Golden Valley must apply for a Letter of Map Revision (LOMR) by submitting as-built survey data and the updated hydraulic model showing there is no increase in the flood stage with the culvert extensions.

Wetland Protection

The project will include non-significant wetland encroachment. The provisions of Executive Order 11990 have been complied with. A Wetland Assessment, including a Two Part Finding, which evaluates the proposed wetland impacts along with avoidance alternatives, minimization measures and replacement options, is shown in **Attachment F**.

The proposed project will impact 1.78 acres of wetland along the Douglas Drive corridor. **Figures 13A - 13B** show the impacts to the wetlands. **Table 5** lists the impacts by wetland.

Wetland mitigation for the road construction is anticipated through the BWSR Road Mitigation Program since the project will address safety issues. Mitigation for new sidewalks or trails will be through the purchase of wetland credit from the BWSR Road Mitigation program or through a private bank.

Table 5: Impacts by Wetland Location

WETLAND ASSESSMENT - PREFERRED ALTERNATIVE: Reconstruction with Separated Sidewalk & Trail				
	ID # A	ID # B	ID # C	ID # D
Classification (Type of wetland)	Seasonally Flooded Basin / Shallow Marsh	Seasonally Flooded Basin/ Shallow Marsh	Deep Marsh	Shallow Marsh
Approx. Basin Size, acres	1.2	1.9	1.77	0.06
Anticipated Encroachment Size, acres	0.12	0.11	1.53	0.02
Type of Impact: fill, excavation, Drain	Fill	Fill	Excavation	Fill
% Encroachment to Basin Size	10%	5.8%	86%	33%
Protected wetland? Y/N	N	N	N	N
Connection to other wetlands? Y/N	N	N	N	Y
Impacts to public water supply? Y/N	N	N	N	N
Water Quality impacts? ----recharge/discharge ----water pollution ----flooding ----sedimentation ----erosion	N	N	N	N
Impacts to fish/wildlife & habitat?	N	N	N	N
Impacts to recreational, cultural, or scientific uses?	N	N	N	N

Water Pollution / MPCA--NPDES

The construction activities will disturb 1 or more acre of land area (including clearing, grading, & excavation). A Phase II NPDES permit is required. The permit will be submitted to MnDOT State Aid prior to project authorization, and a Stormwater Pollution Prevention Plan (SWPPP) will be included in the construction plan package.

The project increases impervious surface by 1.6 acres, so permanent storm water management is required. In addition to meeting the requirements of the NPDES rules, the project should also meet the requirements outlined in the Bassett Creek Watershed Management Commission (BCWMC) Storm Water Management Policies.

Furthermore, a TMDL study has been completed for Sweeny Lake (a receiving water body for a portion of the project.) If possible, the City of Golden Valley wishes to incorporate improvements into this project that will addresses all, or a portion thereof, the load reductions required as part of the TMDL.

A brief summary of the requirements for storm water management follows:

Infiltration - BCWMC encourages, but does not require, infiltration volume equal to 1 inch of runoff from new impervious surfaces.

Treatment - City of Golden Valley and BCWMC rules require sediment storage (dead-pool) volume consistent with NURP guidelines.

Rate control - City of Golden Valley and BCWMC rules require live-pool storage to match peak flow under existing conditions.

For purposes of this discussion, the project is divided into three segments:

Segment 1 - TH 55 to Golden Valley Road (0.6 acres new impervious surface)

Segment 2 - Golden Valley Road to 100 feet north of Winsdale Street (0.1 acres new impervious surface)

Segment 3 - 100 feet north of Winsdale Street to Medicine Lake Road (1.0 acres new impervious surface)

Table 6 summarizes the approximate volume required to meet each requirement and the volume available for each segment. Once the City has secured agreements with the property owners, the volume provided will be better defined. There will be a need to provide increased volume in some areas to compensate for lack of volume in other areas.

Table 6: Infiltration, Dead-Pool and Live-Pool Volumes

<i>Segment</i>	<i>Infiltration Volume (cu.ft.)</i>		<i>Dead-pool Volume (acre-ft.)</i>		<i>Live-pool Volume (acre-ft.)</i>	
	<i>Required*</i>	<i>Available</i>	<i>Required</i>	<i>Available</i>	<i>Required</i>	<i>Available</i>
1	2,200	4,550	0.7	1.5	0.3	3.1
2	400	770	0.4	-	0.1	-
3	3,600	880	1.3	7.6	0.5	6.5
TOTAL	6,200	6,200	2.4	10.5	0.9	8.6

* *Infiltration is encouraged rather than required. Volumes shown are required only if infiltration is selected as a treatment method.*

Infiltration will be provided in three locations. The configurations will be further defined once soil borings for the areas are completed. If underlying soils are not conducive to infiltration, water reuse for irrigation is an alternative that may be considered.

Controversial Issues

The proposed project has controversial issues associated with it.

Property Owner Impacts

The proposed project will require the acquisition of right of way from property located along the corridor. In some locations, portions of the property will be taken for the project and the property owner will be able to stay in their home. In some

locations (six) total takings will be required in order to accommodate the proposed improvements. These property owners will need to be relocated. It is likely that condemnation proceedings will be necessary in order to acquire all of the right of way needed for the corridor.

Traffic Control

The proposed improvements include a mix of traffic control devices. Some intersections are side-street stop controlled, some are signalized and two are roundabouts. Although roundabouts are becoming more common in Minnesota, they are a relatively new traffic control device for use on the county system in Hennepin County. Motorists are not necessarily used to these traffic control devices and some have expressed concern about their use even though they are shown to reduce conflicts and severe crashes.

Historic Site

The Kingdom Hall of the Golden Valley Congregation of Jehovah's Witnesses has been identified as a property that is likely eligible for the National Register of Historic Places. While the project will impact the site and require the construction of retaining walls and a new access/driveway location, the project itself will not impact the building. However, the property owners have indicated that they are interested in redeveloping the site, including removing the existing building. The redevelopment of the site is a concern to some of the resource agencies that would like to see the building preserved and/or restored. It should be noted that the Douglas Drive project is not causing the redevelopment of the site.

Environmental Justice

The purpose of Executive Order 12898 is to identify, address, and avoid disproportionately high and adverse human health or environmental effects on minority and low income populations.

An Environmental Justice Assessment analysis was completed using 2010 Census Data and American Community Survey Data. Data for minority populations is provided at the Census Tract level. The entire project area is within Census Tract 216.02. Data for low-income populations is estimated at the Census Tract level through the American Community Survey and is provided at the county level through the Census data.

Minority population for the project area is 16.9 percent. Minority population for Hennepin County is 25.6 percent. The minority population within the project area is lower than that of Hennepin County.

The low income population for the project area is estimated at 13.9 percent and the low income population for the county is 12.1 percent. The project area low income population is estimated to be slightly higher than the county average.

Based on a field review of the project area, the analysis completed with Census Data

and American Community Survey estimates and discussions with City officials, it has been determined that there are no concentrations of minority or low income populations within the project area. Therefore, there are no Environmental Justice concerns on this project. Please refer to **Attachment G** for the complete Environmental Justice analysis.

State Environmental Review (MEQB)

The project does not meet the mandatory EAW threshold and does not have potential for significant environmental effects.

Federal Action Determination Statement

Based on the environmental study in accordance with 23 CFR 771.117, it is determined that the proposed improvement is a Class II Action (categorical exclusion) anticipated to have no foreseeable change on the quality of the human environment.

VII. AGENCY COORDINATION (Not covered in the “SEE” impact section above)

Hennepin County

The proposed project has been led by the City of Golden Valley with coordination and input from Hennepin County and MnDOT. Staff from these agencies met on a regular basis to move the concept and design forward to this point. Additional coordination and cooperation will occur through final design and right of way acquisition. Please refer to **Attachment D** for correspondence from Hennepin County indicating their support for the proposed layout.

City of Golden Valley

The proposed project has been led by the City of Golden Valley with coordination and input from Hennepin County and MnDOT. Staff from these agencies met on a regular basis to move the concept and design forward to this point. Additional coordination and cooperation will occur through final design and right of way acquisition. The Golden Valley City Council was included in the layout development process; the study was formally presented to the City Council for feedback and input two times during the study and preliminary design process. In addition, two workshops were held with the City Council. The Golden Valley City Council formally provided municipal consent for the project in November 2011.

MnDOT

The proposed project has been led by the City of Golden Valley with coordination and input from Hennepin County and MnDOT. Staff from these agencies met on a regular basis to move the concept and design forward to this point. Additional coordination and cooperation will occur through final design and right of way acquisition. MnDOT will ultimately need to provide approval for the modifications for access/geometrics

at the intersection with TH 55 and the proposed right-in/out on TH 55 for Country Club Drive. Permits will also need to be obtained from MnDOT in order to work in their right of way as part of construction.

Watershed Management Commission

The proposed project will require additional ponding for water and treatment of water before it enters local waterways. The City of Golden Valley has been coordinating with the Bassett Creek Watershed Management Commission to address issues related to drainage along the corridor. The project should meet the requirements outlined in the Bassett Creek Watershed Management Commission's Storm Water Management Policies. Because Bassett Creek and Sweeney Lake are considered impaired the City will continue to work with the Commission to ensure compliance with policies and the TDML study.

DNR Natural Heritage and Nongame Research Program

Coordination with the DNR indicated that although this project has records of rare features within a one-mile radius, it is not expected to adversely affect any known occurrences of rare features. See **Attachment D** for letter from the MnDNR for State species.

Railroad Companies

There are two railroad companies (Union Pacific and Canadian Pacific) with lines that pass through the project area. It is anticipated that improvements will be needed at both crossings, with more extensive improvements (adding gates and replacing lights and cantilevers) required at the Canadian Pacific crossing. Both crossings have a limited number of trains per day (one to three trains).

The City of Golden Valley has initiated contact with the railroad companies and has provided copies of the layout to them for comment. The proposed project will impact the railroad right of way and will require permits to work in the right of way. Additionally, easements and right of way may need to be acquired from the railroad companies. The Canadian Pacific Railroad has provided contact names for individuals to work with on securing easements for construction. The Union Pacific Railroad has not provided any comments at this time. Please refer to **Attachment D** for the CP letter.

Metro Transit

As noted previously, there are three transit routes presently operating along the corridor. As part of the project process, the City of Golden Valley worked with Metro Transit to review bus stop locations, existing service and potential future service in the corridor. Coordination with Metro Transit will need to continue in the future as the project moves into the construction phase so that service disruptions can be minimized and/or eliminated.

Transit for Livable Communities

Transit for Livable Communities provided grant funding for the proposed project in order to improve transportation opportunities for bicyclists, pedestrians and transit users. The layout concept was initially presented to this group in June of 2011. Comments from representatives of Transit for Livable Communities were minor and were addressed in subsequent revisions. Generally, the organization indicated, the proposed improvements were beneficial in promoting bicycles, pedestrian and transit usage.

Permits

Several permits will be required to complete construction of this project. Because the exact timeframe for construction has not been identified, it is possible that the required permits could change. If any federal, state, regional or local rules/laws change between now and construction, the appropriate permits at that time will be pursued. At this time, the permits listed in **Table 7** are anticipated.

Table 7: Required Permits

Permits Required			
Agency	REQ'D	Status / Date Received	Attached
USACE Section 404	?	Unknown, Corps has not indicated if impacts will be under their jurisdiction. If needed, it will be a Letter of Permission.	N
Coast Guard	N		N
MnDOT - Right of Way	Y	To be acquired prior to construction.	N
DNR—Public Waters/Wetlands	Y	Permits will be applied for as part of final design.	N
MPCA—Phase II NPDES	Y	To be acquired prior to construction.	N
MPCA—Section 401	Y	This is a part of the USACE process.	N
Bassett Creek Watershed Management Commission	Y	To be acquired prior to construction, after city approval.	N
Hennepin County - Right	Y	To be acquired prior to construction	N

of Way			
Wetland Conservation Act / City	Y	To be acquired prior to construction.	N
City of Golden Valley - Plan Approval	Y	Municipal consent provided.	N
City of Golden Valley - Stormwater	Y	To be acquired prior to construction.	N
City of Golden Valley - Right of Way	Y	To be acquired prior to construction	N
Railroad - Right of Way (CP and UP lines)	Y	To be acquired prior to construction.	N

VIII. PUBLIC INVOLVEMENT

Information Meeting(s):

Two information meetings were held for the proposed project. The first meeting was a smaller meeting that targeted property owners that would likely be acquired as part of the project. The second meeting included a broader list of invitees, all property owners adjacent to the corridor, who had interest in the proposed improvements. Specific meeting details are provided below.

Meeting 1

Date: September 22, 2011

Who was invited & how: Property owners of parcels that were identified as total acquisitions as part of the proposed project were invited to this meeting via a letter. Six letters were sent and all property owners attended the meeting.

Concerns raised: In general, most property owners wanted to be purchased as part of the project rather than have the roadway and/or intersection closer to their home. Timing and a concern about the likelihood of the project occurring were the primary concerns of the property owners. Presently, some funding for right of way acquisition is in place and that money will first be targeted to those parcels where total acquisition is required. The City of Golden Valley and Hennepin County regard the proposed project as a real project to go forward with construction in 2016.

Meeting 2

Date: October 5, 2011

Who was invited & how: Property owners of parcels adjacent to the Douglas Drive corridor and side streets intersecting Douglas Drive that had proposed improvements

included in the project were invited to this meeting via a letter. Approximately 80 notifications were sent; less than 30 people attended.

Concerns raised: Property owners were primarily concerned about impacts to their individual property and to changes in traffic control along the corridor. Two of the existing traffic signals on the corridor will be converted to roundabouts and that was a concern for some residents. These individuals were worried about motorists not knowing how to drive through the roundabout, especially because one of the roundabouts had two lanes in one direction.

Owners that have property impacted by the project will be notified as the right of way acquisition process moves forward. Owners will be met with individually as part of the appraisal process to further discuss property impacts.

The proposed traffic control changes have been shown to offer equal, if not better, traffic operations than the existing traffic signals today. While roundabouts are not as common as traffic signals, more communities are using them and drivers are becoming more familiar with navigating them. As part of the project, signing showing the traffic movement through the roundabout will be installed. This will assist motorists in navigating the roundabouts.

A copy of the comment received from the meeting is included in **Attachment H**.

In addition to the meetings identified above, a Douglas Drive Corridor Study was completed that looked at future land use and transportation along the corridor. This process also had public meetings and invited nearby property owners to participate in the concept development.

Individual Property Owner Meetings

In addition to public information meetings, individual property owner meetings were held to discuss site impacts and potential drainage facilities. Many of these properties are larger sites that will experience the most impact as a result of the project. Individual property owner meetings were held with the following owners:

- Winkley Prosthetics (740 Douglas Drive)
- Optum Health (6300 Olson Memorial Hwy)
- CenterPoint (6161 Golden Valley Road)
- Villas on Bassett Creek (1350 Douglas Drive)
- Honeywell (1885 Douglas Drive)
- Welsh Companies (6110 Olson Memorial Hwy)
- Tennant Companies (1111 Douglas Drive)

Public Hearing(s): Duplicate the following for each meeting held

A public hearing was held on November 15, 2011 as part of the municipal consent process. At this meeting property owners were invited to comment on items such as

property impacts, noise on the corridor, impacts to the ball field site, proposed traffic control changes and other resources on the corridor. No additional public hearings are planned for this project.

Although no additional public hearings will be held, a public notice and opportunity for comment will be included as part of this project to address Section 4(f) impacts. The public notice will be published in the city's official newspaper and a direct mailing will be made to owners and occupants of contiguous properties. Comments will be submitted to the city and will be included as part of the official record. The comments will be used/considered when making future project-related decisions.

In addition, comments related to the Section 4(f) resource will be incorporated into the De Minimis Request for Concurrence Letter that will be submitted to the Robbinsdale School District and Federal Highway Administration and to the Kingdom Hall of the Jehovah's Witnesses and Federal Highway Administration.

IX. DESIGN STUDY

The project will be designed in accordance with the FHWA-MnDOT Stewardship Plan. For this project, the following design standards are applicable:

State Aid Geometric Design Standards:

- **8820.9936** Urban; New or Reconstruction Projects.
- **8820.9995** State Aid Minimum Bicycle Path Standards

MnDOT Bikeway Facility Design Manual, March 2007.

Minnesota Manual on Uniform Traffic Control Devices (MMUTCD)

AASHTO Guide for the Planning, Design, and Operation of Pedestrian Facilities, July 2004

Americans with Disabilities Act (ADA)

The project will be constructed in accordance with the current edition of the Minnesota Department of Transportation's "Standard Specifications for Construction", including all Supplemental Specifications.

Geometric Design Elements

If the "existing condition" or "proposed design" changes within the project limits, add additional tables for each different design segment. Please note this project has multiple design segments. The following pages note the geometric design elements.

Table 8: From TH 55 to North of TH 55 North Frontage Road

Design Element	Existing Condition	Proposed Design	Required
Roadway Type	Urban	Urban	
Segment length, ft	875	875	
Functional Class	A Minor Reliever	A Minor Reliever	
ADT (Year)	13,200 (2011)	27,000 (2035)	
Heavy Commercial, %	3.9	3.9	
Speed, mph	40	40	40
# Thru Lanes each direction	2	2	
Lane width, ft	11	11	11
On Street Bicycle Lane width, ft	N/A	N/A	N/A
Surfacing type	Bituminous Asphalt	Bituminous Asphalt	Bituminous Asphalt
Structural Design Strength, ton	10	10	10
Turn Lane, ft	12	11	11
Right-of-Way Width, ft	100	113	
Median, ft, raised/painted	None	4	4 min.
Median Curb Reaction, ft	N/A	2	1
Curb & Gutter type	B624	B624	

Design Element	Existing Condition	Proposed Design	Required
Curb Reaction, ft	2	2	2
Clearance from Face Curb, ft	2	2	2
Parking Lane, ft	N/A	N/A	N/A
Storm Sewer	Y	Y	
Utilities	Y	Y	
Trail/Sidewalk Width, ft	Trail 10' West Side	Trail 10' West Side and 6' Sidewalk East Side	
Distance from edge of traveled way to sidewalk, ft	44' West Side	10' East Side, 30' West Side	
Curb Ramps with detectable warning	N	Y	

Table 9: From North of TH 55 North Frontage Road to Golden Valley Road

Design Element	Existing Condition	Proposed Design	Required
Roadway Type	Urban	Urban	
Segment length, ft	1,520	1,520	
Functional Class	A Minor Reliever	A Minor Reliever	
ADT (Year)	8,400 (2009)	14,600 (2035)	
Heavy Commercial, %	3.9	3.9	
Speed, mph	40	40	40
# Thru Lanes each direction	1	1	
Lane width, ft	11	11	11
On Street Bicycle Lane width, ft	N/A	N/A	N/A
Surfacing type	Bituminous Asphalt	Bituminous Asphalt	Bituminous Asphalt
Structural Design Strength, ton	10	10	10
Turn Lane, ft	12	11	11
Right-of-Way Width, ft	100	119	
Median, ft, raised/painted	None	10'-25'	4 min.
Median Curb Reaction, ft	N/A	2	1
Curb & Gutter type	B624	B624	

Design Element	Existing Condition	Proposed Design	Required
Curb Reaction, ft	2	2	2
Clearance from Face Curb, ft	2	2	2
Parking Lane, ft	N/A	N/A	N/A
Storm Sewer	Y	Y	
Utilities	Y	Y	
Trail/Sidewalk Width, ft	Trail 10' East Side	Trail 10' East and West Sides	
Distance from edge of traveled way to sidewalk, ft	2' East Side	10' East Side and West Side	
Curb Ramps with detectable warning	N	Y	

Table 10: From Golden Valley Road to 750' South of Duluth Street

Design Element	Existing Condition	Proposed Design	Required
Roadway Type	Urban	Urban	
Segment length, ft	2,491	2,491	
Functional Class	A Minor Reliever	A Minor Reliever	
ADT (Year)	10,400 (2009)	14,700 (2035)	
Heavy Commercial, %	3.9	3.9	
Speed, mph	35	35	35
# Thru Lanes each direction	1	1	
Lane width, ft	11	11	11
On Street Bicycle Lane width, ft	N/A	6	5
Surfacing type	Bituminous Asphalt	Bituminous Asphalt	Bituminous Asphalt
Structural Design Strength, ton	10	10	10
Turn Lane, ft	NA	11	11
Right-of-Way Width, ft	63'	78'	
Median, ft, raised/painted	None	none	NA
Median Curb Reaction	N/A	n/a	n/a
Curb & Gutter type	B624	B660 (bike lane)	
Curb Reaction, ft	2	6	2

Design Element	Existing Condition	Proposed Design	Required
Clearance from Face Curb, ft	2	6	2
Parking Lane, ft	N/A	N/A	N/A
Storm Sewer	Y	Y	
Utilities	Y	Y	
Trail/Sidewalk Width, ft	4' West Side	6' Sidewalk West Side and 8' Trail East Side	
Distance from edge of traveled way to sidewalk, ft	4' West Side	14' Both Sides	
Curb Ramps with detectable warning	N	Y	

Table 11: From South of Duluth Street to Medicine Lake Road

Design Element	Existing Condition	Proposed Design	Required
Roadway Type	Urban	Urban	
Segment length, ft	3,388	3,388	
Functional Class	A Minor Reliever	A Minor Reliever	
ADT (Year)	10,600 (2009)	18,100 (2035)	
Heavy Commercial, %	3.9	3.9	
Speed, mph	35	35	35
# Thru Lanes each direction	2	1 northbound, 2 southbound	
Lane width, ft	11	11	11
On Street Bicycle Lane width, ft	N/A	6	5
Surfacing type	Bituminous Asphalt	Bituminous Asphalt	Bituminous Asphalt
Structural Design Strength, ton	10	10	10
Turn Lane, ft	NA	11	11
Right-of-Way Width, ft	83	89	
Median, ft, raised/painted	None	4 to 27 raised	4 min.
Median Curb Reaction, ft	N/A	2	1
Curb & Gutter type	B624	B660 (bike lane)	

Design Element	Existing Condition	Proposed Design	Required
Curb Reaction, ft	2	6	2
Clearance from Face Curb, ft	2-6	6	2
Parking Lane, ft	N/A	N/A	N/A
Storm Sewer	Y	Y	
Utilities	Y	Y	
Trail/Sidewalk Width, ft	4	6' Sidewalk West Side, 8' Trail East Side	
Distance from edge of traveled way to sidewalk, ft	4'	14' West Side & East Side	
Curb Ramps with detectable warning	N	Y	

Table 12: Traffic Control

Design Element	Existing Condition	Proposed Design	Required
Traffic Signal(s)	Existing Location(s): TH 55 TH 55 North Frontage Road Golden Valley Road Sandburg Road Duluth Street Medicine Lake Road	Proposed Location(s): TH 55 TH 55 North Frontage Road Duluth Street Medicine Lake Road	
SJRs have not been completed at this time.			
Design Element	Existing Condition	Proposed Design	Required
Roundabout	Existing Traffic Control: Signal	Proposed Location(s): Golden Valley Road Sandburg Road	
ICEs have not been completed at this time.			

Table 13: Other Elements

Design Element	Existing Condition	Proposed Design	Required
Roadway Lighting, Type	Intersection - Cobra	Intersection - Cobra Trail - Ornamental	
Railroad Crossing	Existing Protection Union Pacific - Gates, Flashers, Cantilever CP Line Railroad Co. - Flashers, Cantilever	Proposed Protection Union Pacific - Gates, Flashers, Cantilever CP Line Railroad Co. - Gates, Flashers, Cantilever	
Landscaping	N/A	Trees in Blvd	
Signing	N/A	Nothing Unusual	
Pavement Marking	N/A	Nothing Unusual	

Table 14: Bridges

Design Element	Existing Condition	Proposed Design	Required
Bridge or Culvert Number	90614	90614	
Location (over/under)	Bassett Creek	Bassett Creek	
Bridge or Culvert Type	(2) 8x8 RCBC	(2) 8x8 RCBC	
Design Loading	Unknown		
Bridge Roadway width, ft Face-of-curb to Face-of-curb	44'	45'	
Sidewalk, ft	4' West side	6' sidewalk West side; 8' trail East side	
Bridge Length, ft	NA	NA	
Bridge: # of Spans	NA	NA	
Skew	0°	0°	
Culvert Size, ft	8x8	8x8	
Culvert Length, ft (barrel length)	79	118	
Culvert: # of Lines	2	2	
Guardrail	N	N (ornamental railing)	
Attachments for each bridge: Please See Attachment I			

Table 15: 8820.9995 Minimum Bicycle Path Standards

Design Element	Existing Condition	Proposed Design	Required
Bike Path Type	Off-road / On-Road	Off Road	
	One Way / Two Way	Two Way	
	Multi Use / Bike only / Ped only	Multi Use	
Path Width, ft	NONE	8' (10' South of Golden Valley Road)	8'
Path Surfacing	N/A	Bituminous Asphalt	
Shoulder Width, ft	N/A	0'	0'
Shoulder Surfacing	N/A	N/A	
Clear Zone, ft	N/A	2'	2'
Inslope, rise:run	N/A	1:4	1:4
Design Speed, mph	n/a	20 mph	20 mph
Maximum Grade, %	n/a	5%	5%
Vertical Clearance, ft		NO BRIDGES	
Please See Attachment A, Figures 4A and 4B for Typical Sections			

No design exceptions are being requested for the proposed project.

X. TRAFFIC DURING CONSTRUCTION

It is anticipated that the proposed project will be constructed under traffic conditions. Lane shifts and closures, as well as intersection control changes are expected as construction occurs. Nighttime construction will be avoided if possible. Some intersection control improvements may require short-term closure and/or evening construction. Additional staging details will be identified during final design. Motorists will experience delay during construction.

ATTACHMENTS

1. Attachment A: Figures

Figures 3a - 3d: Project Layout

Figures 4A - 4B: Typical Sections

Figure 5: Sandburg Ball Field Location

Figure 6: Sandburg Ball Field Impacts

Figure 7: Jehovah's Witnesses Site Location

Figure 8: Jehovah's Witnesses Site Impacts

Figures 9a - 9d: Right of Way Impacts

Figure 10: Contaminated Properties

Figure 11: Noise Monitoring and Receptor Sites

Figure 12: Floodplain Map

Figures 13a - 13b: Wetlands Map

2. Attachment B: Section 4(f) - Sandburg Ball Fields

3. Attachment C: Section 106 - Jehovah's Witnesses Kingdom Hall Site

4. Attachment D: Correspondence

Threatened and endangered species - federal

Threatened and endangered species - state

Request to US Army Corps of Engineers for jurisdictional determination

Hennepin County letter of support

Canadian Pacific Railroad

5. Attachment E: Floodplain Assessment

6. Attachment F: Wetland Impacts Analysis

7. Attachment G: Environmental Justice

8. Attachment H: Public Meeting Comment

9. Attachment I: Bridge Information

Structure Inventory

Bridge Inspection Report

Hydraulic Analysis

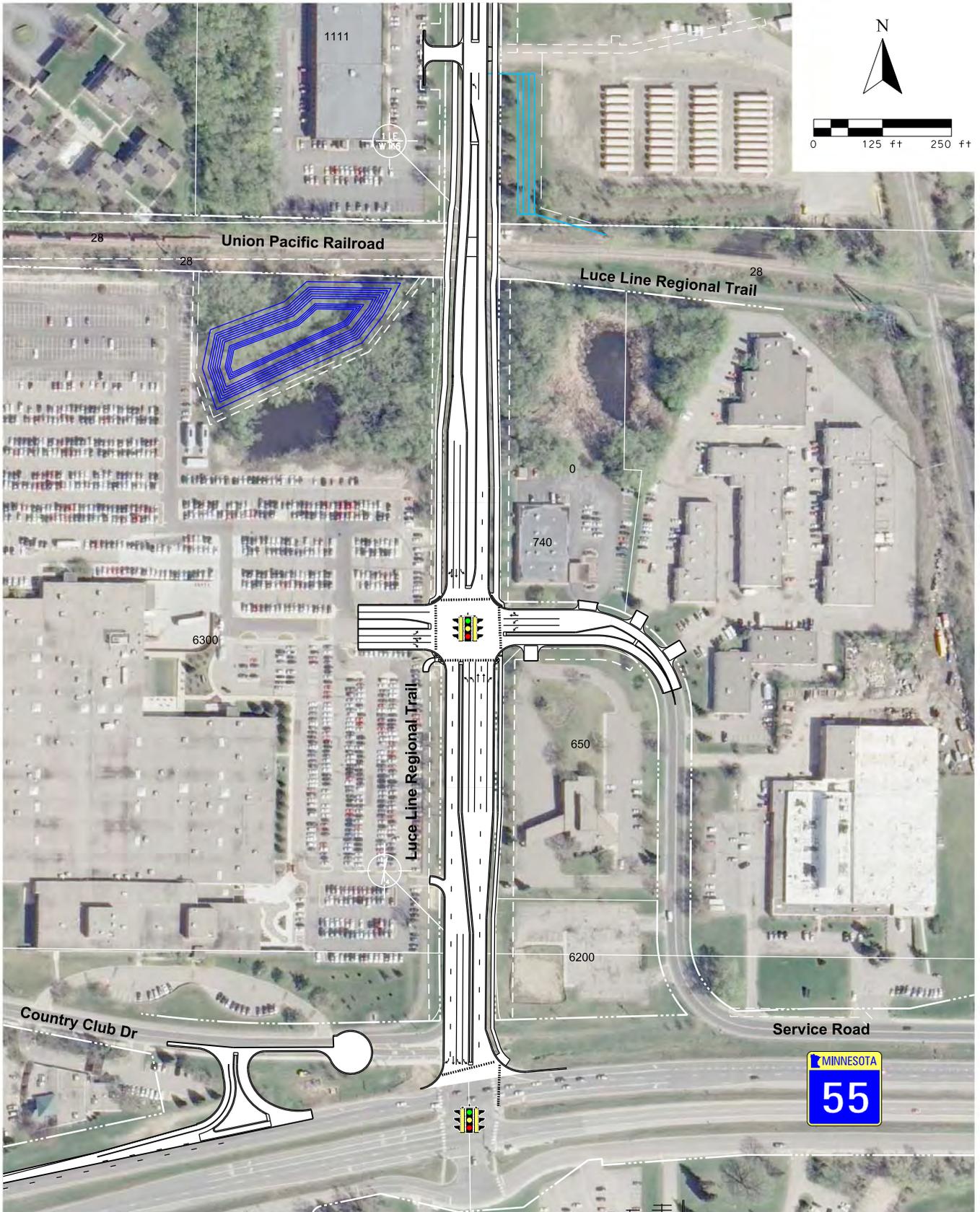
Risk Assessment

Creek Profile

Bridge Cross-Section

Bridge Survey Cross-Section

ATTACHMENT A: FIGURES

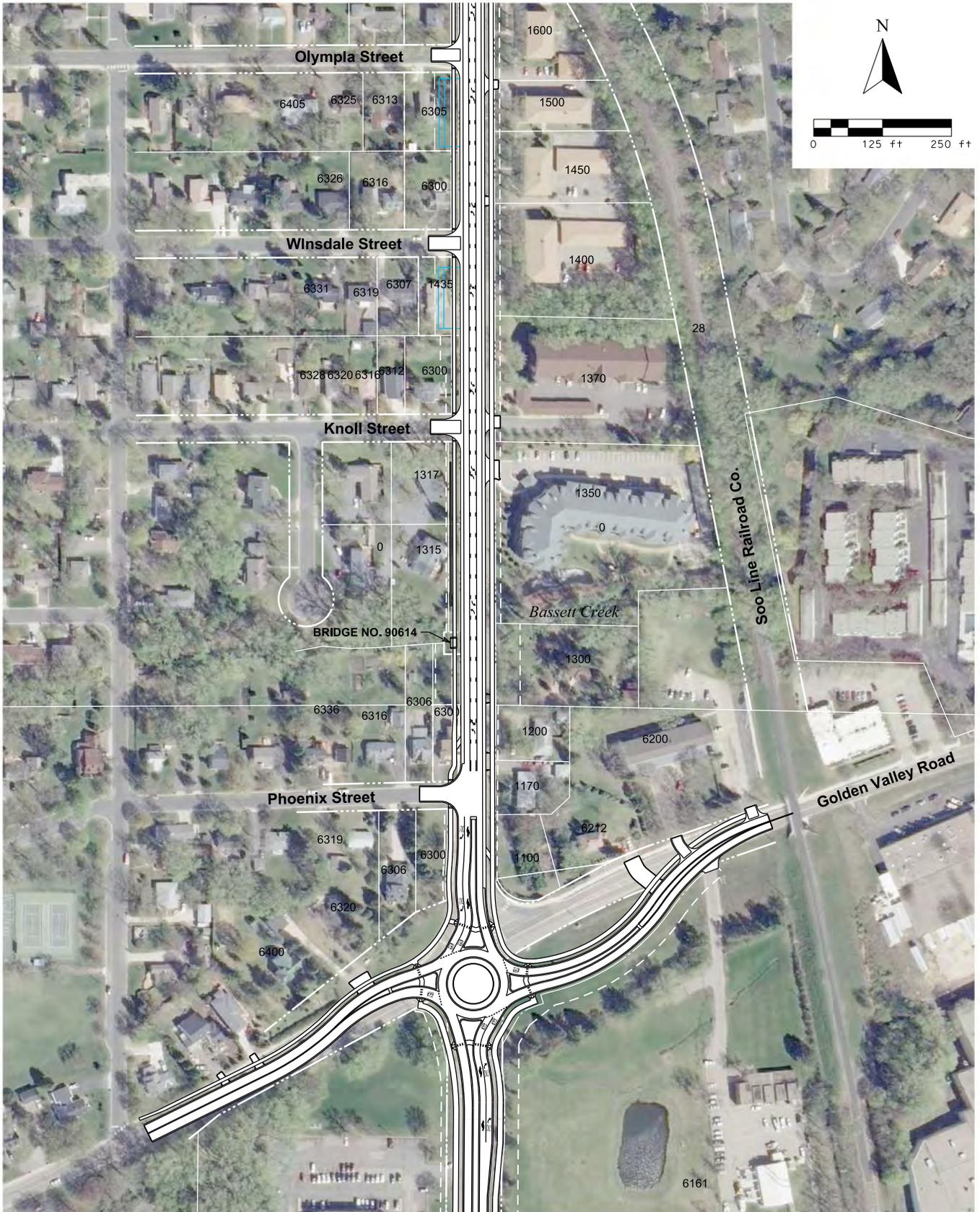


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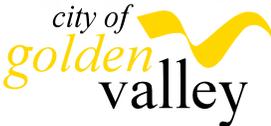


Project Memorandum
 CSAH 102 (Douglas Drive) S.P. 128-091-003
 City of Golden Valley, Minnesota

Figure Number 3a
Sheet 1 of 4
Project Layout

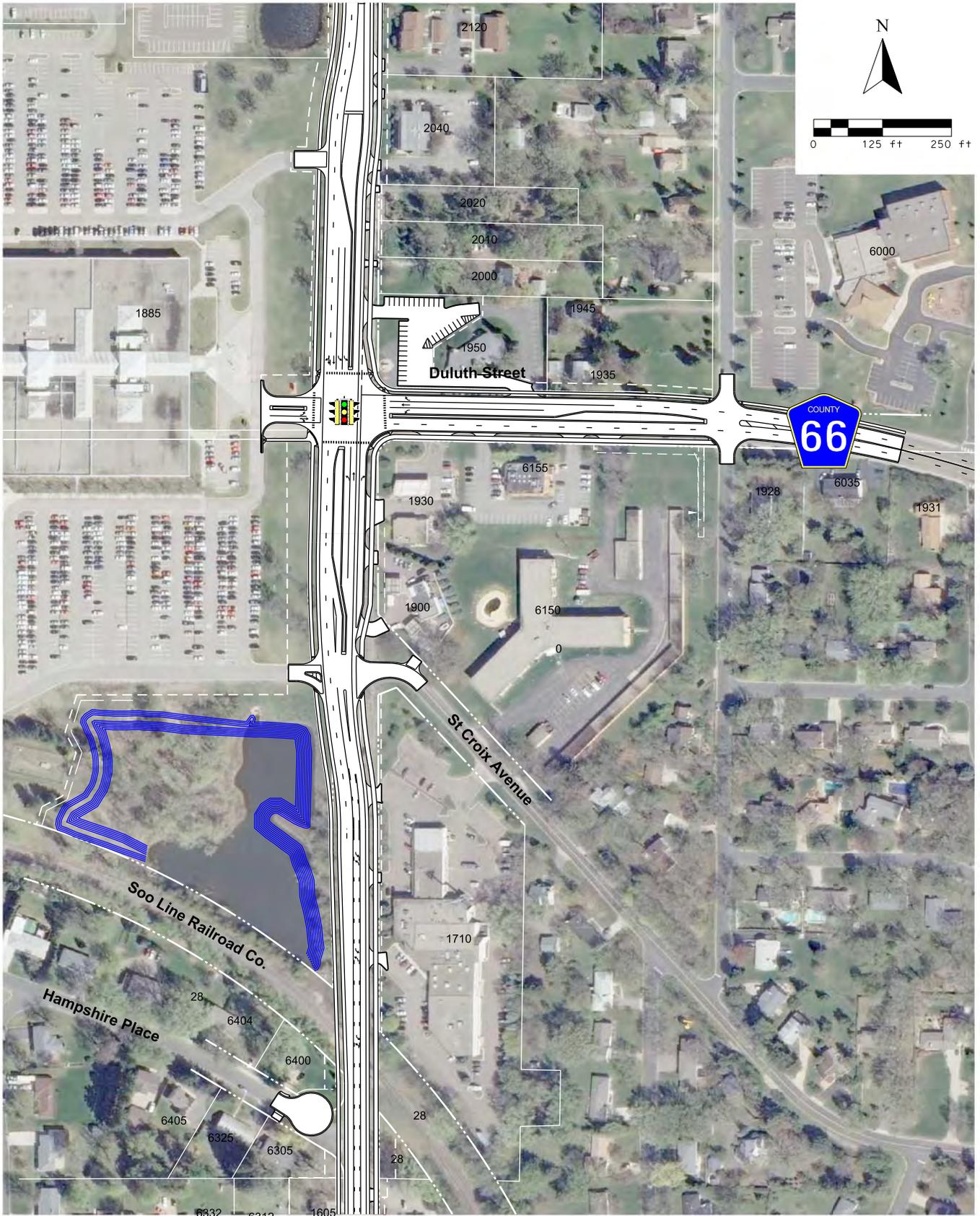


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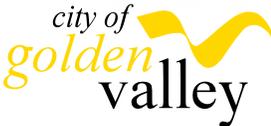


Project Memorandum
 CSAH 102 (Douglas Drive) S.P. 128-091-003
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Figure Number 3b
Sheet 2 of 4
Project Layout



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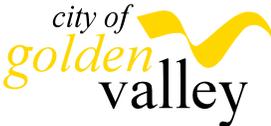


Project Memorandum
 CSAH 102 (Douglas Drive) S.P. 128-091-003
 City of Golden Valley, Minnesota

Figure Number 3c
Sheet 3 of 4
Project Layout



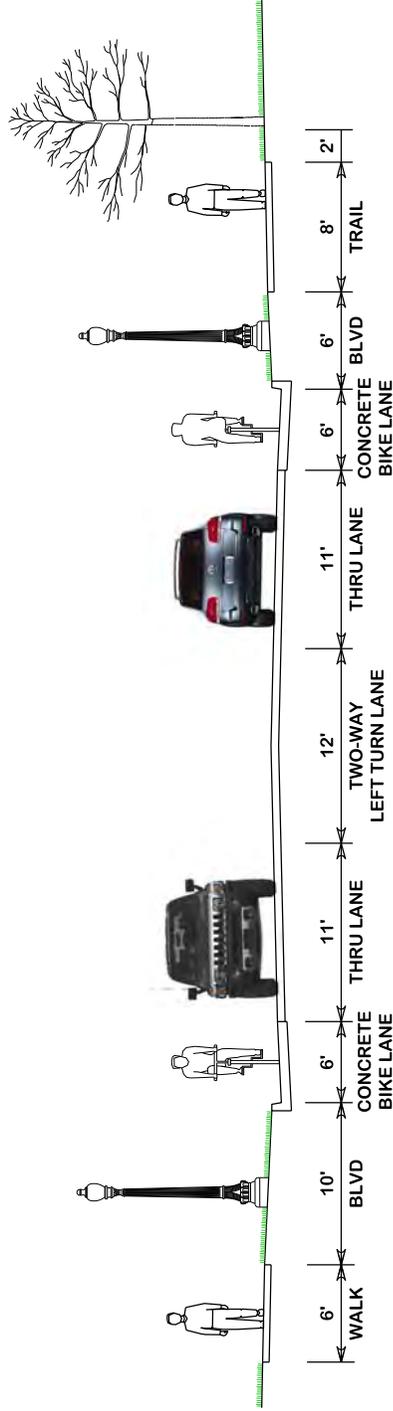
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 WSB Filename: K:\0101-05\Cad\Exhibits\Project Memo\fig-03d Project Layout.dgn



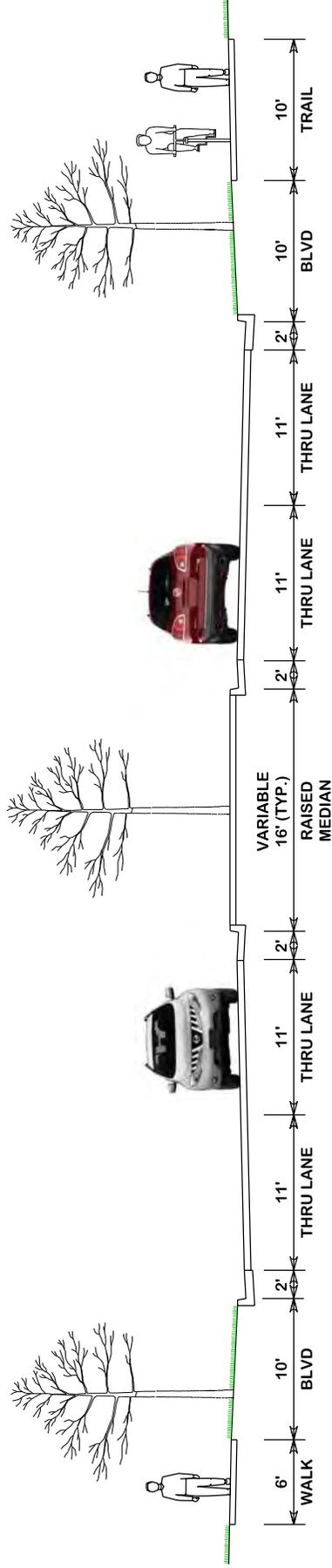
Project Memorandum
 CSAH 102 (Douglas Drive) S.P. 128-091-003
 City of Golden Valley, Minnesota

Figure Number 3d
Sheet 4 of 4
Project Layout

Proposed 3 Lane Section (Looking North)



Proposed 4 Lane Section (Looking North)




Project Memorandum
 CSAH 102 (Douglas Drive) S.P. 128-091-003
 City of Golden Valley, Minnesota

Figure Number 4a

Typical Sections

Proposed 4 Lane Section (Looking North)

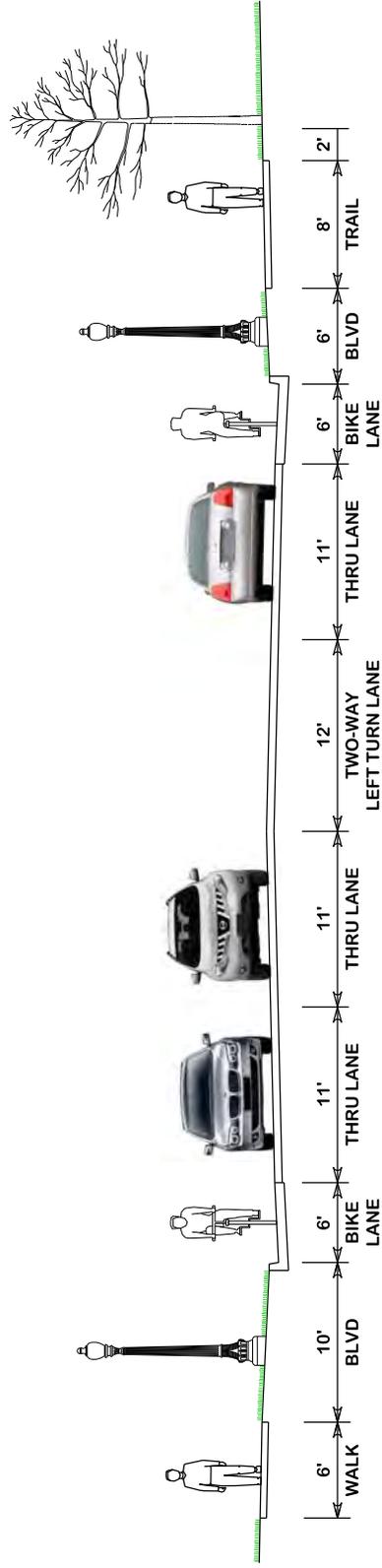
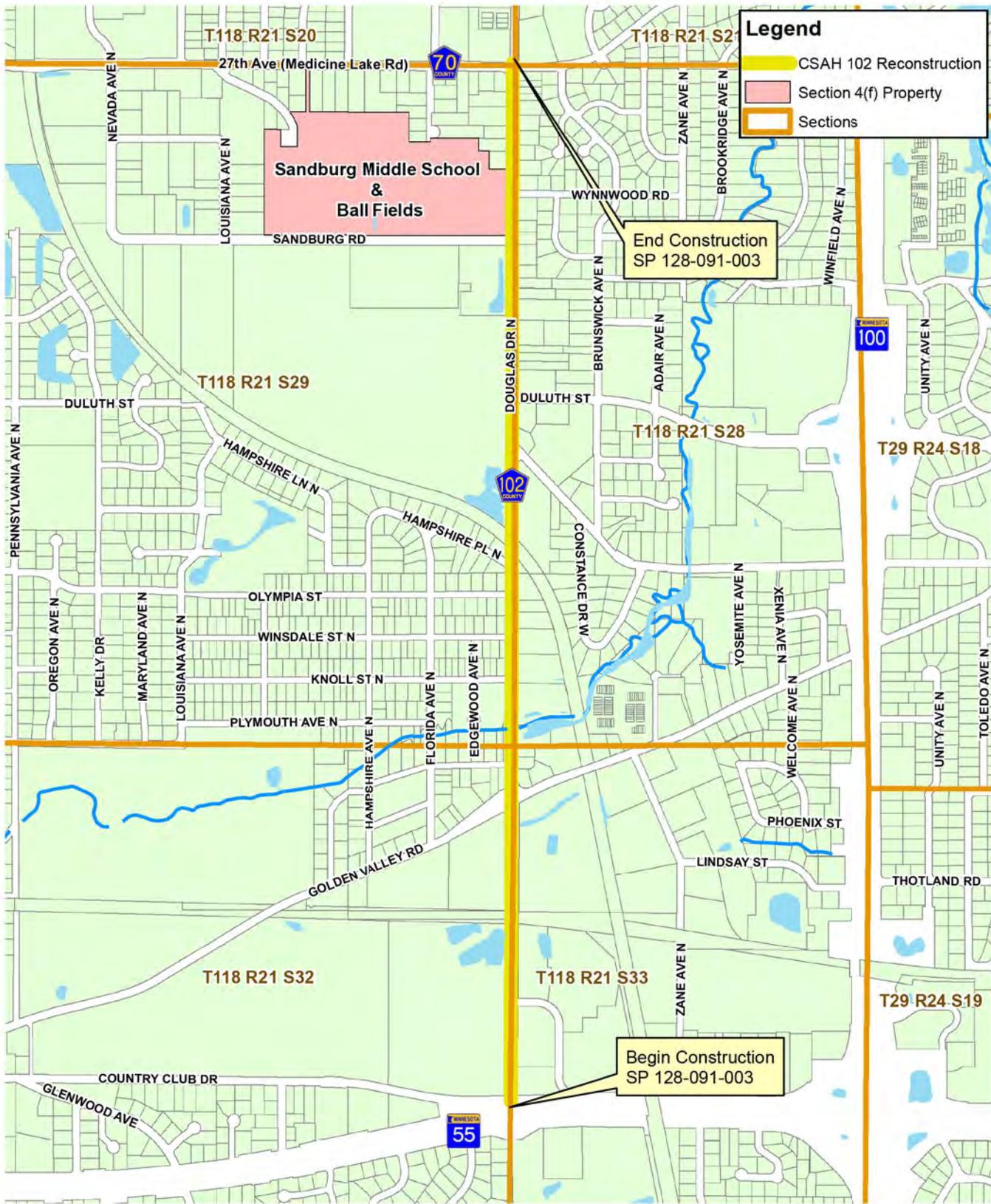


Figure Number 4b

Typical Sections

Project Memorandum
 CSAH 102 (Douglas Drive) S.P. 128-091-003
 City of Golden Valley, Minnesota



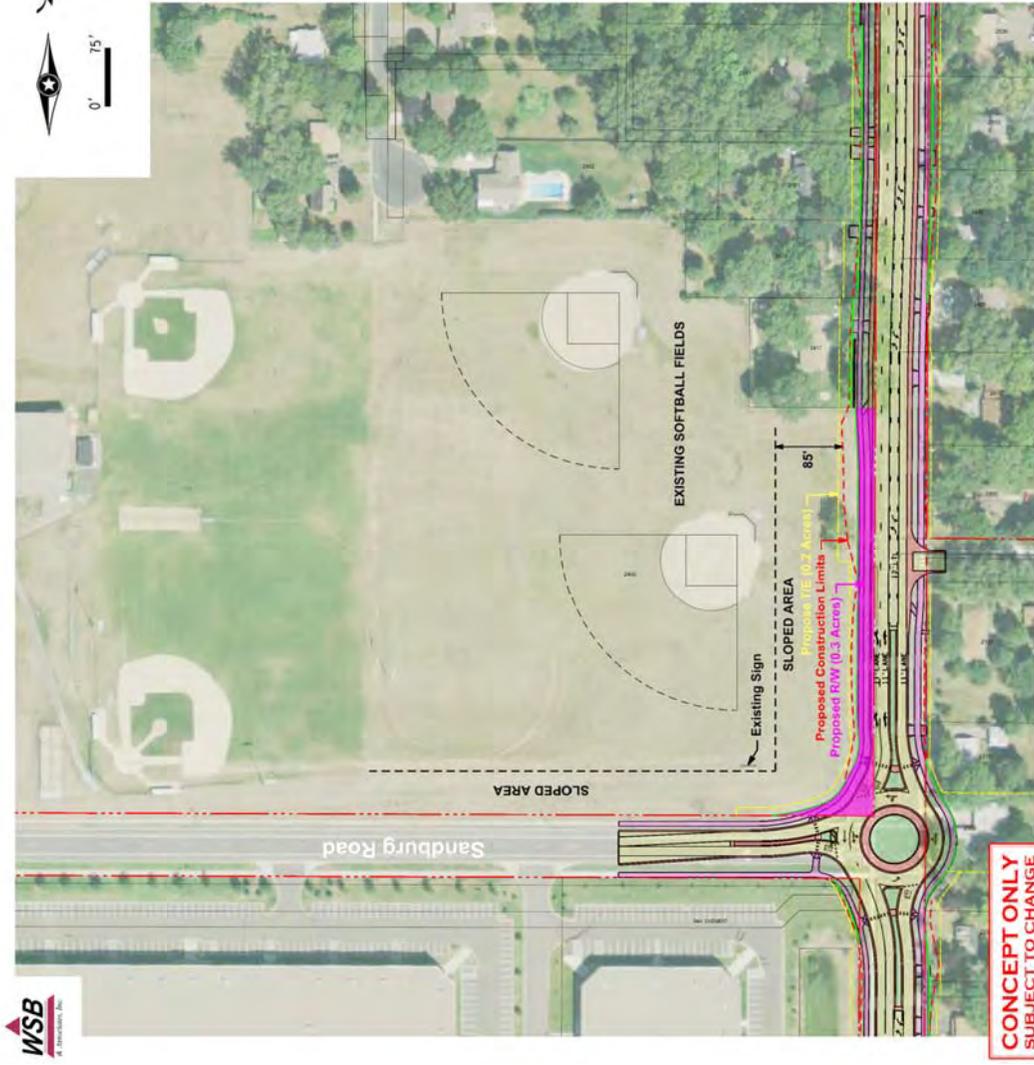


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Project Memorandum
 CSAH 102 (Douglas Drive) S.P. 128-091-003
 City of Golden Valley, Minnesota

Figure Number 5
Sandburg Ball Fields
Section 4(f) Property



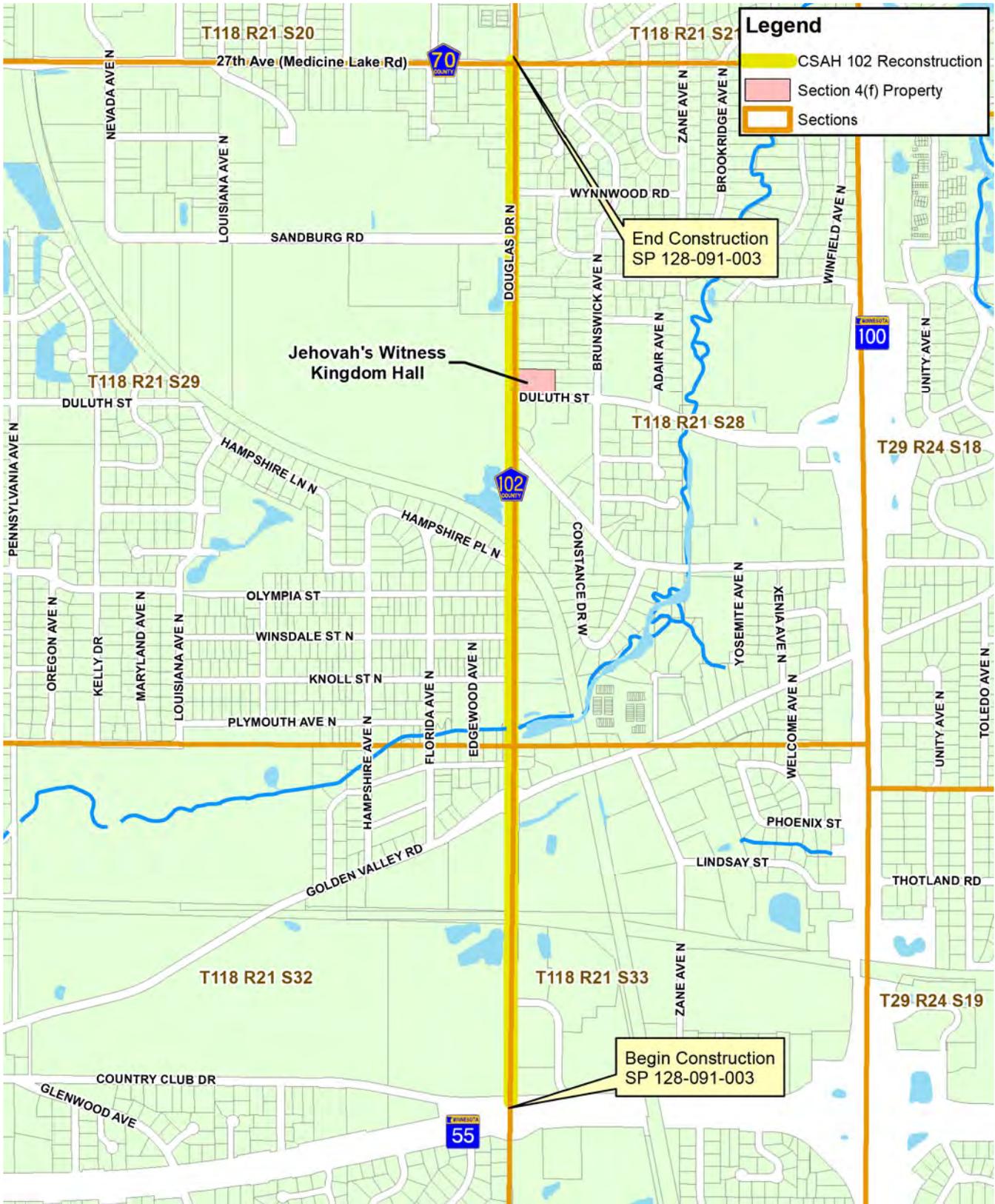
Looking towards Softball Fields from Sandburg Road



Looking towards Softball Fields from Douglas Drive

city of golden valley
Project Memorandum
CSAH 102 (Douglas Drive) S.P. 128-091-003
City of Golden Valley, Minnesota

Figure Number 6
Sandburg Ball Fields Detail
Section 4(f) Property



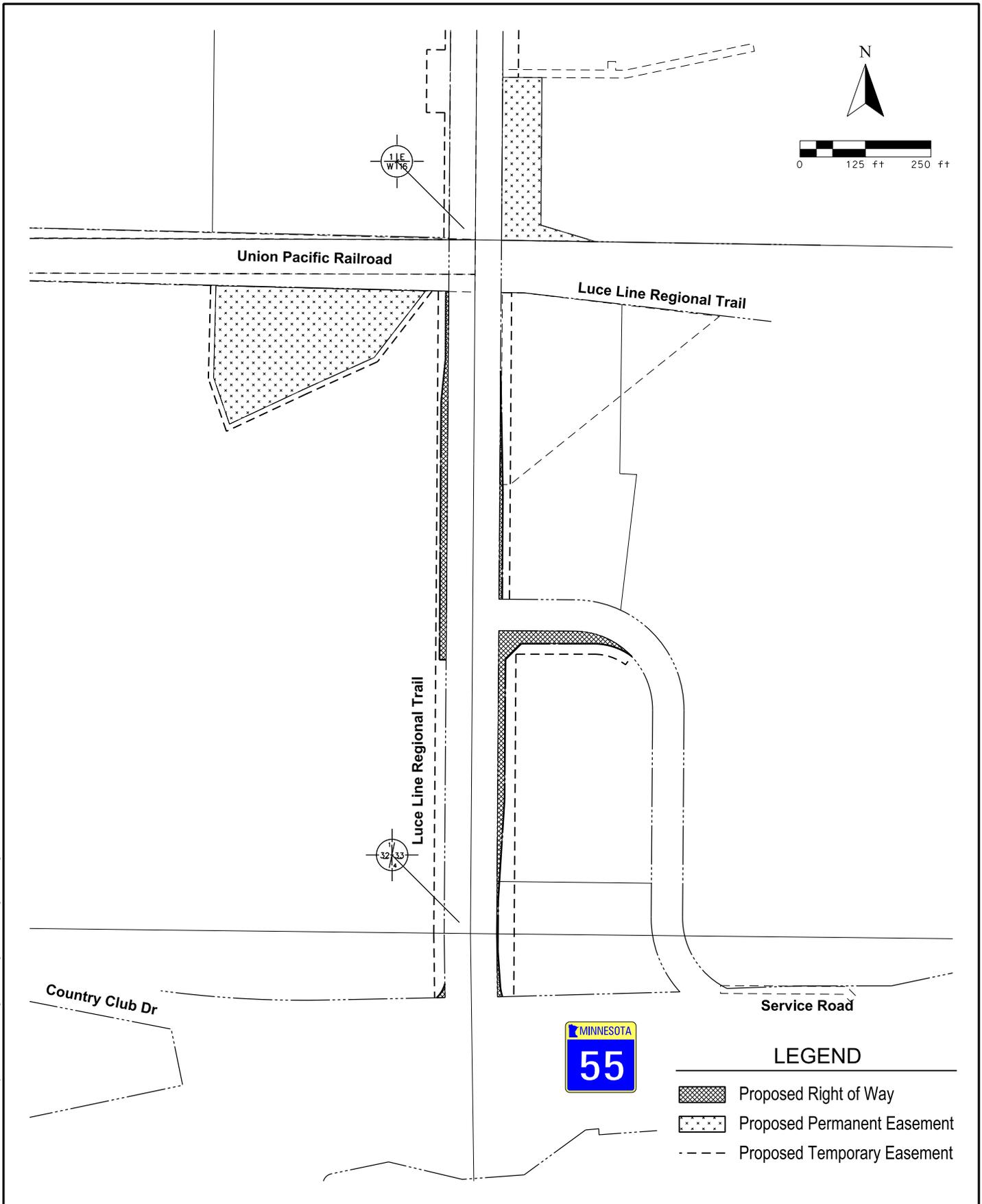
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Project Memorandum
 CS AH 102 (Douglas Drive) S.P. 128-091-003
 City of Golden Valley, Minnesota

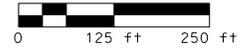
Figure Number 7
Jehovah's Witnesses
Section 4(f) Property

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Project Memorandum
CSAH 102 (Douglas Drive) S.P. 128-091-003
City of Golden Valley, Minnesota

Figure Number 9a
Sheet 1 of 4
Right-of-Way Map



Olympa Street

Winsdale Street

Knoll Street

BRIDGE NO. 90614

Phoenix Street

Bassett Creek

Soo Line Railroad Co.

Golden Valley Road

LEGEND

-  Proposed Right of Way
-  Proposed Permanent Easement
-  Proposed Temporary Easement

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WSB Filename: K:\0101-05\Cad\Exhibits\Project Memo\fig-09b Right-of-Way Map.dgn



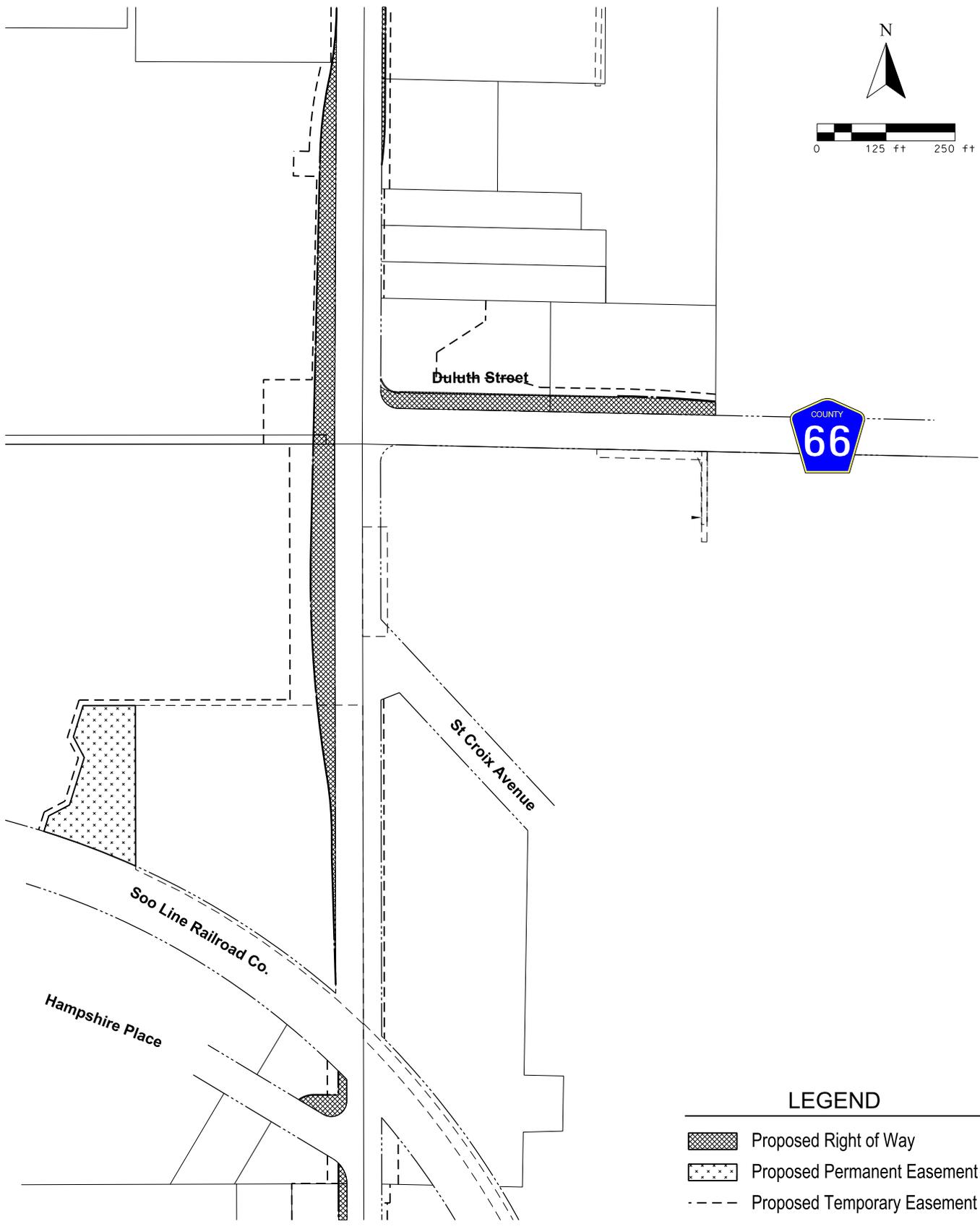
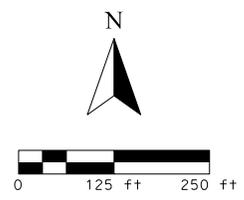
Project Memorandum

CSAH 102 (Douglas Drive) S.P. 128-091-003
City of Golden Valley, Minnesota

Figure Number 9b

Sheet 2 of 4

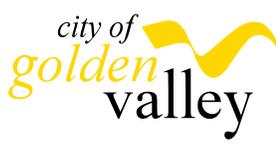
Right-of-Way Map



LEGEND

-  Proposed Right of Way
-  Proposed Permanent Easement
-  Proposed Temporary Easement

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Project Memorandum
CSAH 102 (Douglas Drive) S.P. 128-091-003
City of Golden Valley, Minnesota

Figure Number 9c
Sheet 3 of 4
Right-of-Way Map



Medicine Lake Road



Sandburg Road

Wymwood Road

LEGEND

-  Proposed Right of Way
-  Proposed Permanent Easement
-  Proposed Temporary Easement

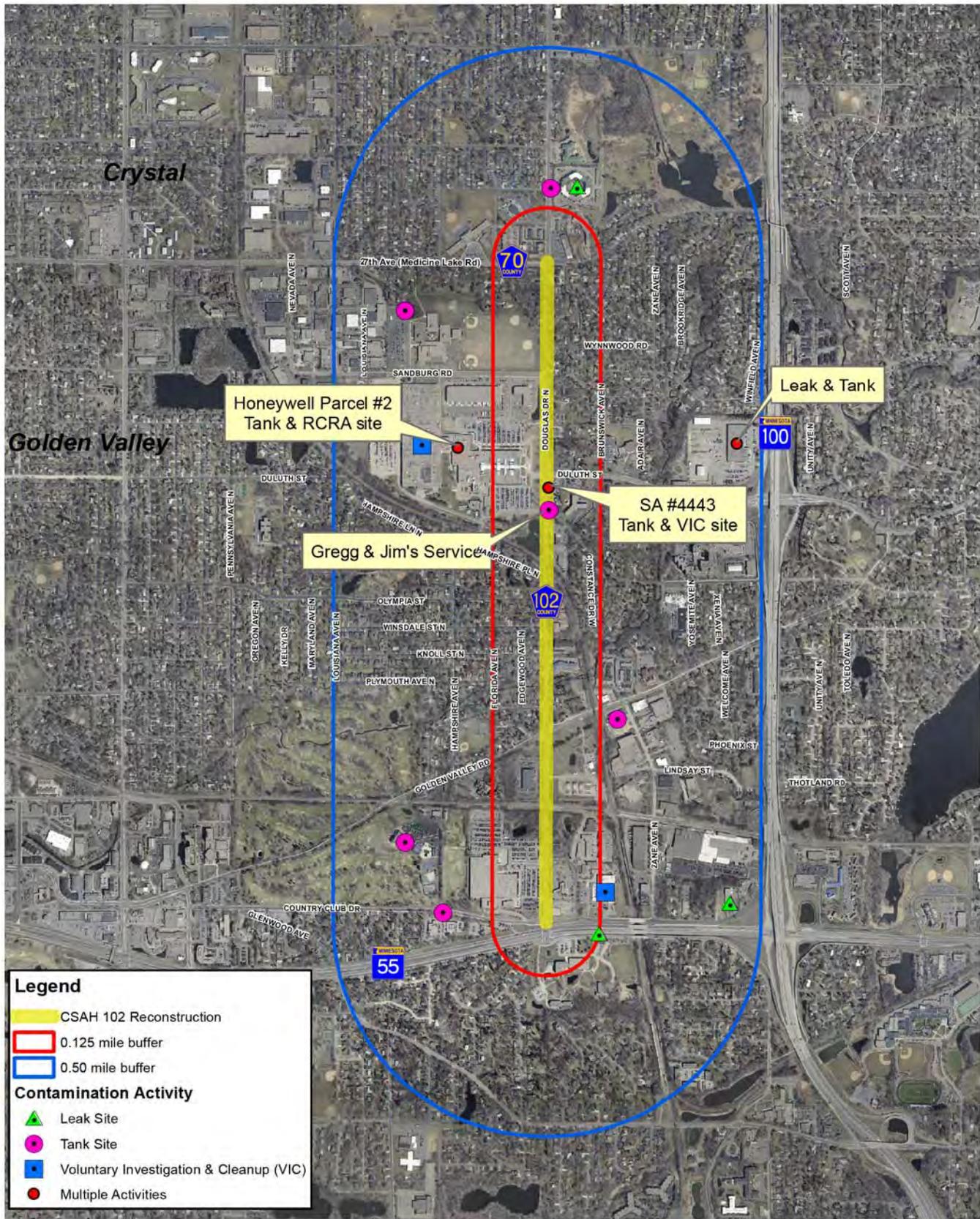
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Project Memorandum

CSAH 102 (Douglas Drive) S.P. 128-091-003
City of Golden Valley, Minnesota

Figure Number 9d
Sheet 4 of 4
Right-of-Way Map



Legend

- CSAH 102 Reconstruction
- 0.125 mile buffer
- 0.50 mile buffer

Contamination Activity

- Leak Site
- Tank Site
- Voluntary Investigation & Cleanup (VIC)
- Multiple Activities

Date: Printed: 10/11/2012
 File Name: K:\0101-05\Cad\Exhibits\Project Memo\fig-10 Contaminated Property.dgn



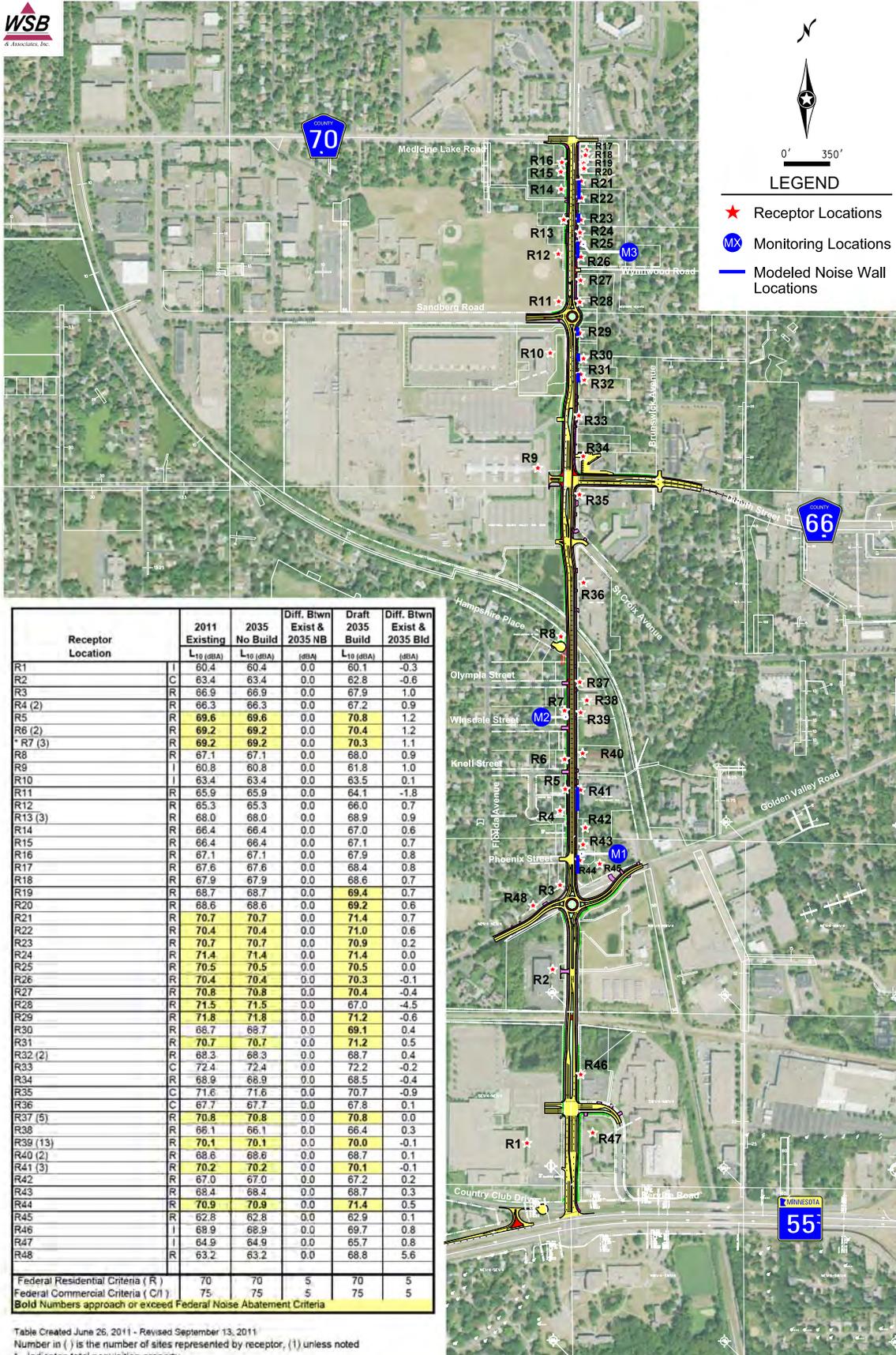
Project Memorandum
 CSAH 102 (Douglas Drive) S.P. 128-091-003
 City of Golden Valley, Minnesota

Figure Number 10
Contaminated Property



LEGEND

- ★ Receptor Locations
- MX Monitoring Locations
- Modeled Noise Wall Locations



Receptor Location		2011		Diff. Btwn Exist & 2035 NB (dBA)	Draft 2035 Build (dBA)		Diff. Btwn Exist & 2035 Bld (dBA)
		-10 (dBA)	-10 (dBA)		-10 (dBA)	-10 (dBA)	
R1	I	60.4	60.4	0.0	60.1	-0.3	
R2	C	63.4	63.4	0.0	62.8	-0.6	
R3	R	66.9	66.9	0.0	67.9	1.0	
R4 (2)	R	66.3	66.3	0.0	67.2	0.9	
R5	R	69.6	69.6	0.0	70.8	1.2	
R6 (2)	R	69.2	69.2	0.0	70.4	1.2	
* R7 (3)	R	69.2	69.2	0.0	70.3	1.1	
R8	R	67.1	67.1	0.0	68.0	0.9	
R9	I	60.8	60.8	0.0	61.8	1.0	
R10	I	63.4	63.4	0.0	63.5	0.1	
R11	R	65.9	65.9	0.0	64.1	-1.8	
R12	R	65.3	65.3	0.0	66.0	0.7	
R13 (3)	R	68.0	68.0	0.0	68.9	0.9	
R14	R	66.4	66.4	0.0	67.0	0.6	
R15	R	66.4	66.4	0.0	67.1	0.7	
R16	R	67.1	67.1	0.0	67.9	0.8	
R17	R	67.6	67.6	0.0	68.4	0.8	
R18	R	67.9	67.9	0.0	68.6	0.7	
R19	R	68.7	68.7	0.0	69.4	0.7	
R20	R	68.6	68.6	0.0	69.2	0.6	
R21	R	70.7	70.7	0.0	71.4	0.7	
R22	R	70.4	70.4	0.0	71.0	0.6	
R23	R	70.7	70.7	0.0	70.9	0.2	
R24	R	71.4	71.4	0.0	71.4	0.0	
R25	R	70.5	70.5	0.0	70.5	0.0	
R26	R	70.4	70.4	0.0	70.3	-0.1	
R27	R	70.8	70.8	0.0	70.4	-0.4	
R28	R	71.5	71.5	0.0	67.0	-4.5	
R29	R	71.8	71.8	0.0	71.2	-0.6	
R30	R	68.7	68.7	0.0	69.1	0.4	
R31	R	70.7	70.7	0.0	71.2	0.5	
R32 (2)	R	68.3	68.3	0.0	68.7	0.4	
R33	C	72.4	72.4	0.0	72.2	-0.2	
R34	R	68.9	68.9	0.0	68.5	-0.4	
R35	C	71.6	71.6	0.0	70.7	-0.9	
R36	C	67.7	67.7	0.0	67.8	0.1	
R37 (5)	R	70.8	70.8	0.0	70.8	0.0	
R38	R	66.1	66.1	0.0	66.4	0.3	
R39 (13)	R	70.1	70.1	0.0	70.0	-0.1	
R40 (2)	R	68.6	68.6	0.0	68.7	0.1	
R41 (3)	R	70.2	70.2	0.0	70.1	-0.1	
R42	R	67.0	67.0	0.0	67.2	0.2	
R43	R	68.4	68.4	0.0	68.7	0.3	
R44	R	70.9	70.9	0.0	71.4	0.5	
R45	R	62.8	62.8	0.0	62.9	0.1	
R46	I	69.9	69.9	0.0	69.7	0.8	
R47	I	64.9	64.9	0.0	65.7	0.8	
R48	R	63.2	63.2	0.0	68.8	5.6	
Federal Residential Criteria (R)		70	70	5	70	5	
Federal Commercial Criteria (C / I)		75	75	5	75	5	

Table Created June 26, 2011 - Revised September 13, 2011
 Number in () is the number of sites represented by receptor, (I) unless noted
 * - Indicates total acquisition property

Date: 9/26/2012
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Project Memorandum
 CSAH 102 (Douglas Drive) S.P. 128-091-003
 City of Golden Valley, Minnesota

Figure Number 11
Noise Receptors
and Modeled Sites



Legend

- 100-YR FLOODPLAIN
- 500-YR FLOODPLAIN

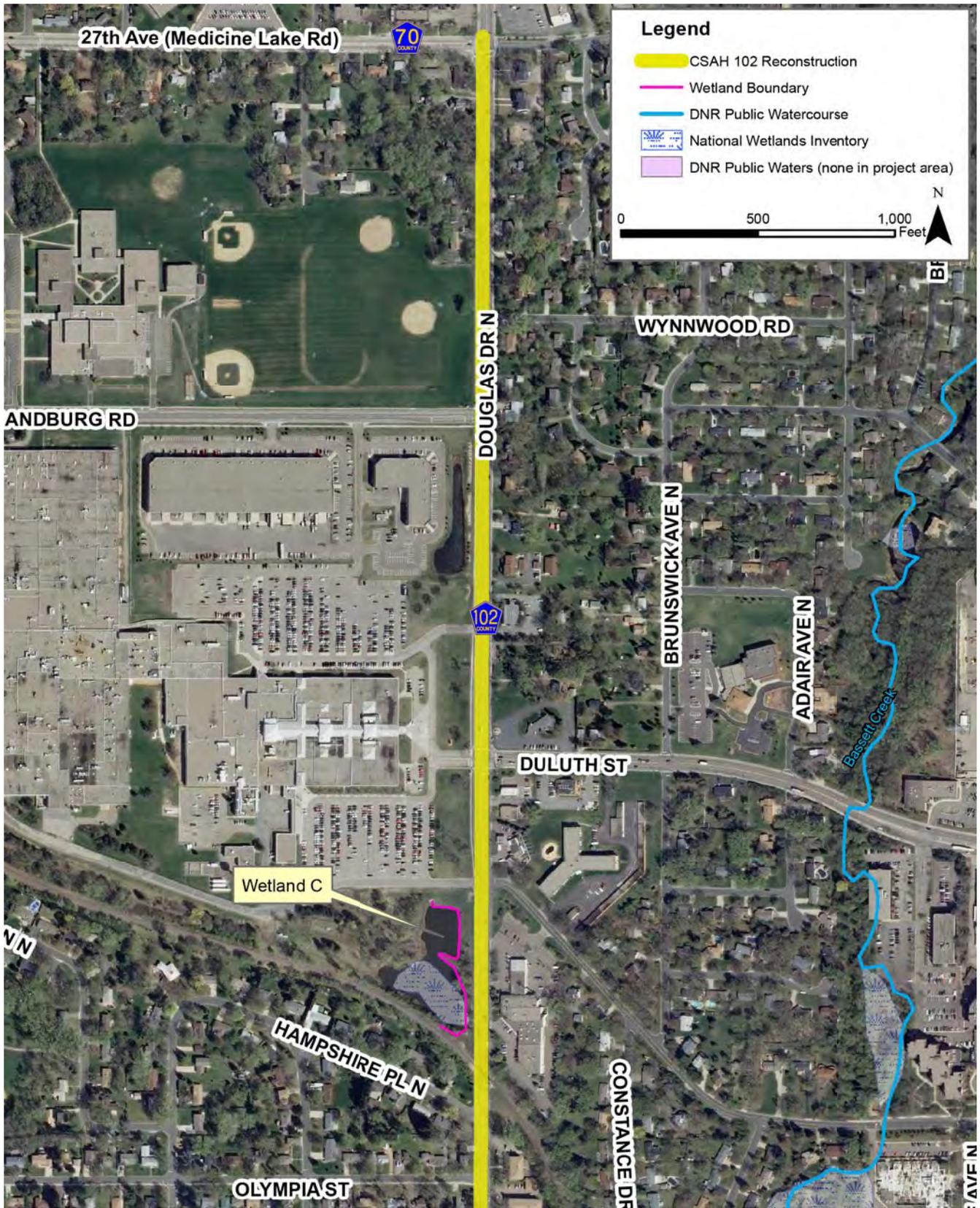
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Project Memorandum
 CSAH 102 (Douglas Drive) S.P. 128-091-003
 City of Golden Valley, Minnesota

Figure Number 12

Floodplain



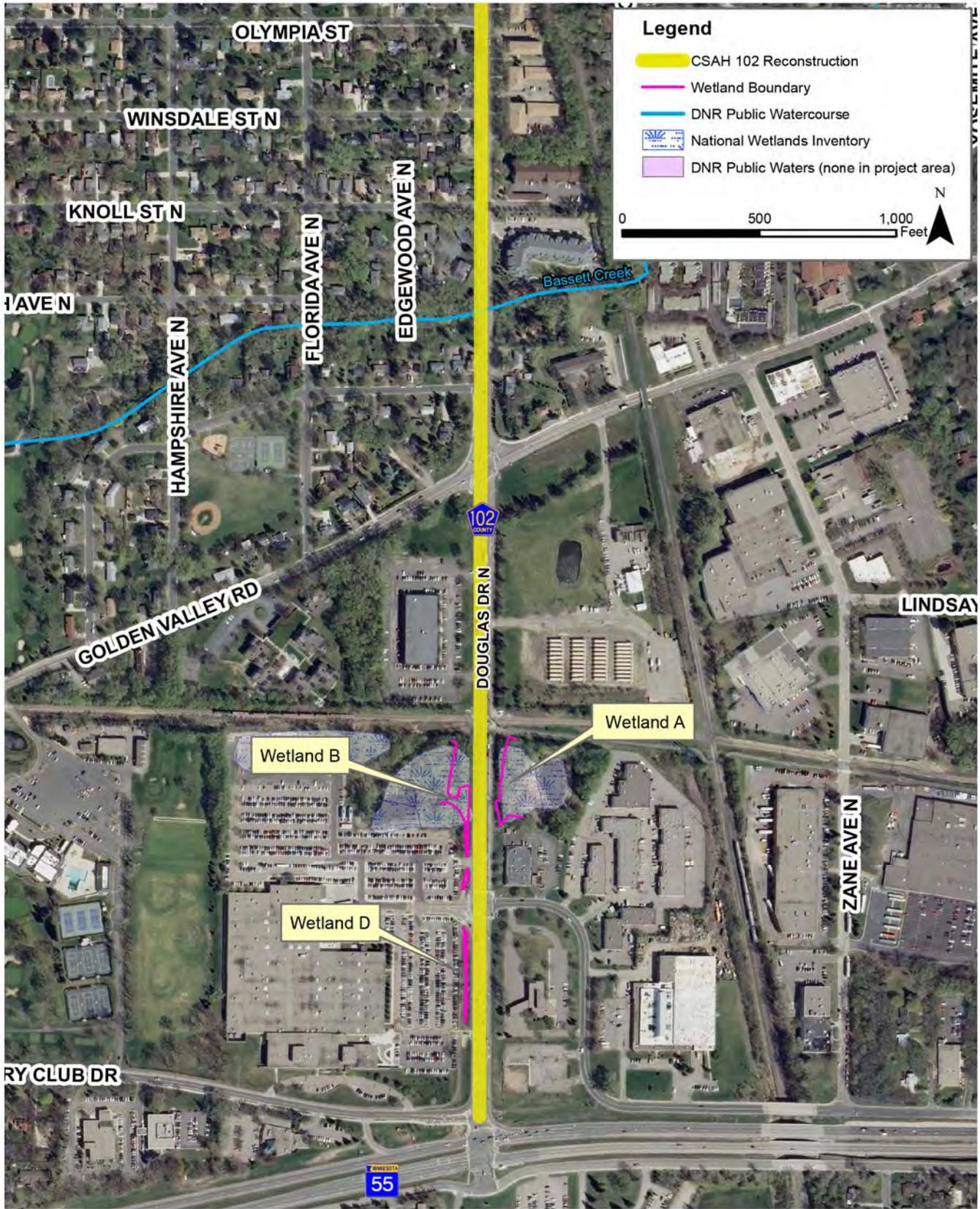
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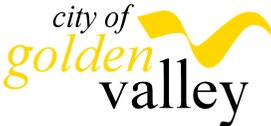
Project Memorandum
 CSAH 102 (Douglas Drive) S.P. 128-091-003
 City of Golden Valley, Minnesota

Figure Number 13b

Wetlands



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Project Memorandum
 CSAH 102 (Douglas Drive) S.P. 128-091-003
 City of Golden Valley, Minnesota

Figure Number 13a

Wetlands

**ATTACHMENT B: SECTION 4(f) - SANDBURG BALL
FIELDS**



SP 128-091-004 Federal Project No. _____

Route CSAH 102 (Douglas Drive)

From TH 55 To CSAH 70 (Medicine Lake Road)

Proposed Improvement:

The proposed CSAH 102 (Douglas Drive) project improvements involve the reconstruction (new pavement, curb and gutter, storm sewer, treatment ponds) of CSAH 102 from TH 55 to Medicine Lake Rd. The following summarizes these improvements.

- The four-lane section from TH 55 to north of the TH 55 Frontage Road will be reconstructed as a four-lane section with dedicated turn lanes at both of those intersections.
- A three-lane section (one southbound lane, one northbound lane and a continuous center two-way left turn lane [with the exception of median development at the proposed Golden Valley Rd roundabout]) will be constructed from north of the TH 55 Frontage Rd to St. Croix Ave.
- A four-lane section (two southbound lanes, one northbound lanes and a continuous center two-way left turn lane [with the exception of median development for Duluth St and at the proposed Sandberg Rd roundabout]) will be constructed from St. Croix Ave to Medicine Lake Rd.
- Revised signals and dedicated turn lanes will be installed at the intersections with TH 55, TH 5 Frontage Rd, Duluth St, and Medicine Lake Rd.
- Multi-lane roundabouts will be constructed at the intersections with Sandberg Road and Golden Valley Road.
- Dedicated turn lanes will be constructed at the St. Croix Ave/Honeywell access.
- Access to CSAH 102 from Hampshire Place and Country Club Drive will be removed.
- Access to TH 55 from Country Club Drive will be limited to right in/right out only.
- A separated six foot sidewalk will be constructed along the east side of CSAH 102 from TH 55 to the TH 55 Frontage Road and along the west side of CSAH 102 from the TH 55 Frontage Road to Medicine Lake Rd.
- A separated trail (8 foot wide) will be constructed along the west side of CSAH 102 from Medicine Lake Rd to Golden Valley Rd.



- A separated trail (10 foot wide) will be constructed along the east side of CSAH 102 from Golden Valley Rd to the TH 55 Frontage Road.
- The proposed trail will connect to the existing Loose Line Regional Trail, which is located along the west side of CSAH 102 from TH 55 to the TH 55 Frontage Road. This trail follows TH 55 then jogs onto CSAH 102 and continues east along the Union Pacific Railroad.
- Six foot wide on-street bicycle lanes will be constructed on both sides of CSAH 102 from Golden Valley Rd to Medicine Lake Rd.

The existing right of way along CSAH 102, adjacent to the ball fields, is approximately 66 feet. The proposed reconstruction would require the right of way to be increased to approximately 87 to 125 feet (the latter is for the roundabout on Sandberg Rd). The proposed increase is planned to maintain the center line of CSAH 102 or shift to the west of CSAH 102. The increase is planned to avoid a shift to the east.

Environmental Document anticipated: Environmental Assessment (EA)

Project Manager Name: Ron Nims
 Title: Public Works Project Coordinator
 Address: 7800 Golden Valley Road, Golden Valley, MN 55427
 Phone: 763-593-8032
 Email: rnims@goldenvalleymn.gov

This project will impact the following Section 4(f) property.

1. Description of The Section 4(f) Property.
(Refer to Attached Figure)

Name: Sandberg Middle School Ball Fields

Size (acre): 20 acres

Location: 2400 Sandburg Lane

Ownership: Robbinsdale School District (ISD #218)

Type of Section 4(f) Property: Recreational Area

Function of or Available Activities on the Property: Baseball/Softball



Description and Location of Existing and Planned Facilities:

Two baseball and two softball diamonds

Access:

There is no direct access to the ball fields from CSAH 102 (Douglas Drive). Access is provided from the middle school parking lots to the west.

Usage: The city estimated that the ball fields are used for approximately 75-100 games out of each year. Various practices are also commonly held at the ball fields.

Relationship to Other Similarly Used Lands in the Vicinity:

The Honeywell Little League Field is located approximately 0.25 mile west of the Sandburg Ball Fields. This property is owned by the City of Golden Valley.

Seeman Park is located approximately 0.75 mile south of the Sandburg Ball Fields and is also owned by the City of Golden Valley.

Applicable Clauses Affecting Ownership: Not applicable

Unusual Characteristics Reducing or Enhancing the Value of the Property:

Not applicable

LAWCON Section 6(f) (or other Federal Encumbrances) Impacts:

Not applicable

2. Impacts to the Section 4(f) Property.

Amount of land impacted: 0.30 acre

Permanent R/W Acquisition/Easements: 0.30 acre

Temporary Easements: 0.20 acre

Functions Affected: Not applicable

Facilities Affected: Back slope between roadway and ball fields

3. Coordination with Responsible Official with Jurisdiction Over the Section 4(f) Property: Please refer to the attached letter from the Robbinsdale Area School District (IDS #218).



4. Considerations.

Impact Avoidance:

The proposed reconstruction would result in the need for an additional 21 to 59 feet of right of way (total width would be 87 to 125 feet). The existing right of way along the corridor is 66 feet.

In order to completely avoid impacting the Section 4f property, the alignment would have to be shifted to the east. The land use along the east side of the corridor is primarily residential, with several homes having driveway access directly onto CSAH 102. This shift would result in partial takes to several residential homes and at least five total takes near the intersection with Sandburg Road, where a roundabout is proposed. In addition to the relocation impacts, the roadway alignment would also be inconsistent with the existing geometrics of the CSAH 102/CSAH 70 intersection immediately to the north. While minor geometric improvements could be accommodated at the CSAH 102/CSAH 70 intersection, the land uses in the southeast and northeast quadrant would be impacted, likely resulting in a partial, if not total, take of the residential property in the southeast quadrant.

Planning to minimize harm:

The roadway is being widened to the west to prevent the relocation of four single family homes on the east side of CSAH 102. The widening that is proposed is necessary to:

- accommodate the existing and future traffic demand, especially in the southbound direction, which results in one additional travel lane,
- replace the sidewalks on the east side of CSAH 102 with a multi-use trail, and
- provide a landscaped (plantings, trees, and street lights) boulevard on either side of CSAH 102 between the proposed sidewalk (on west) and multi-use trail (on east) and the roadway.

The impacts to the Section 4(f) property have been minimized to the greatest extent feasible. A roundabout is proposed at the CSAH 102/Sandberg Road intersection rather than a T-intersection with traffic signal. A T-intersection would require the addition of two lanes (a northbound left-turn lane and southbound right-turn lane) in addition to the travel lanes. The use of a roundabout, rather than the T-intersection, reduces impacts to the 4(f) property by approximately 9,360 square feet.

The impacts that are proposed are minimal and occur to a steeply sloped area which is currently not useable for recreational purposes.



STATE AID FOR LOCAL TRANSPORTATION
De MINIMIS PRELIMINARY DETERMINATION REQUEST
 For parks, recreation areas, wildlife or waterfowl refuges

Mitigation:

In consideration of the design's consistency with the project's purpose and need and in consideration of the substantial right of way impacts that would occur with complete avoidance of the Section 4(f) resource, appropriate mitigation has been reviewed and agreed upon with the Robbinsdale School District (ISD #218). It has been determined that the 0.30-acre impact to the Section 4(f) resource on the western edge of Douglas Drive, including replacement of fencing that will be removed to accommodate construction, will mitigate the impact to the Section 4(f) resource.

Enhancement:

The Robbinsdale School District reviewed the proposed design and has determined that the proposed improvements will improve mobility and safety for motorists and pedestrians traveling to and from the ball fields and nearby school.

Recommended:

Local Agency Engineer

[Signature]

Date

3/29/12

District State Aid Engineer

[Signature]

Date

4/2/12

State Aid Engineer

[Signature]

Date

4/2/12

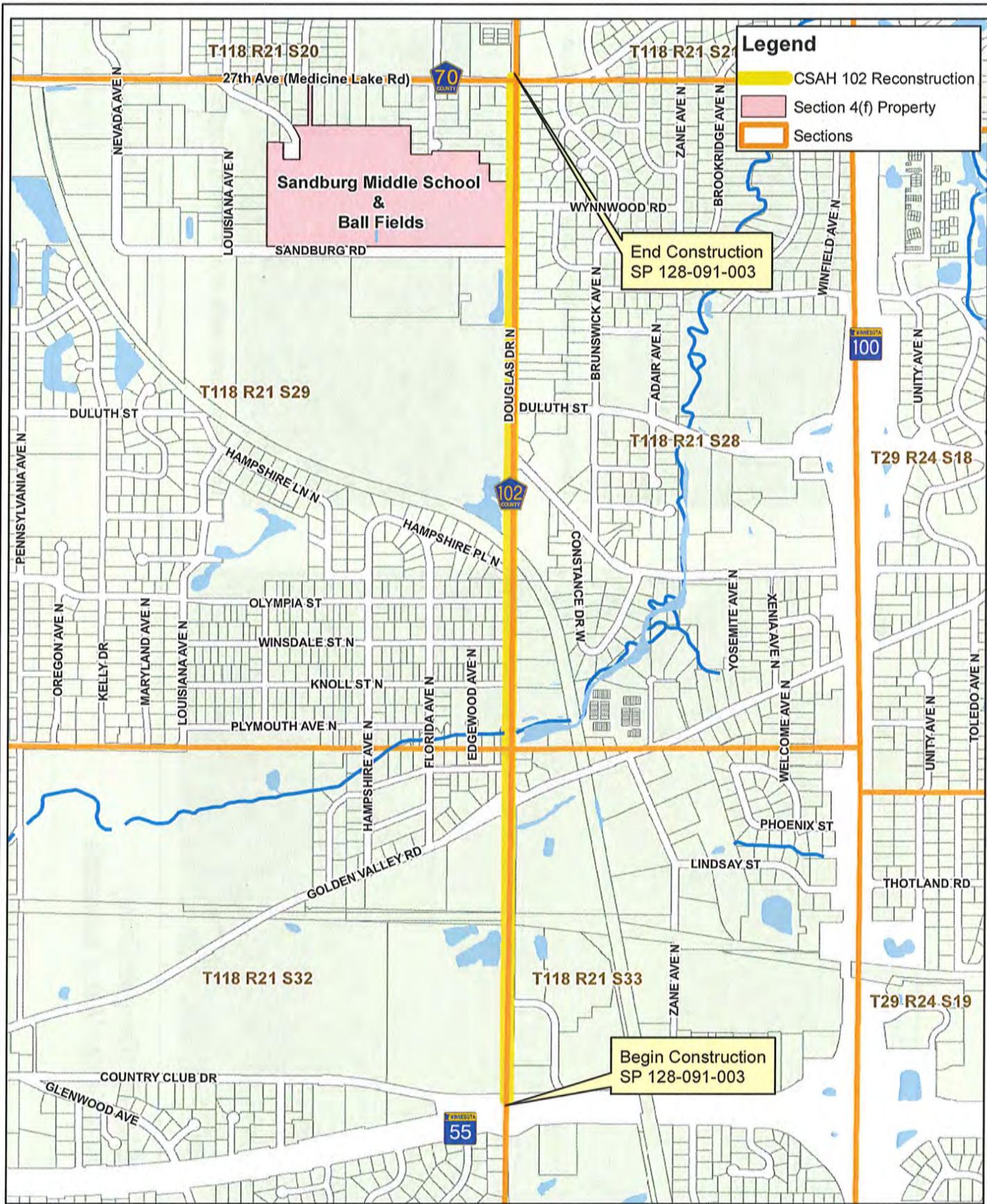
Preliminary Approval conditioned on results of public notice & comment period:

FHWA Engineer

[Signature]

Timothy J Anderson
2012.04.02 14:34:00 -05'00'

Date



Legend

- CSAH 102 Reconstruction
- Section 4(f) Property
- Sections

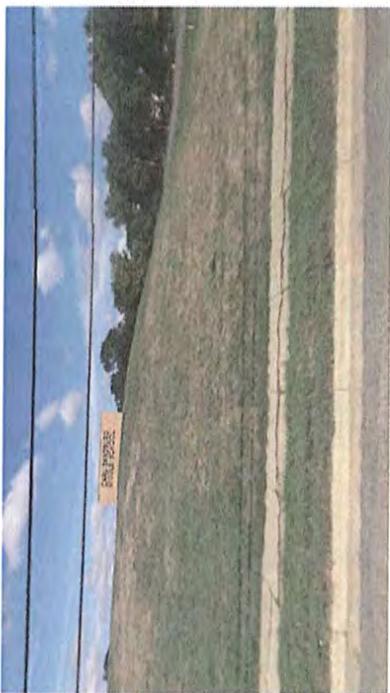
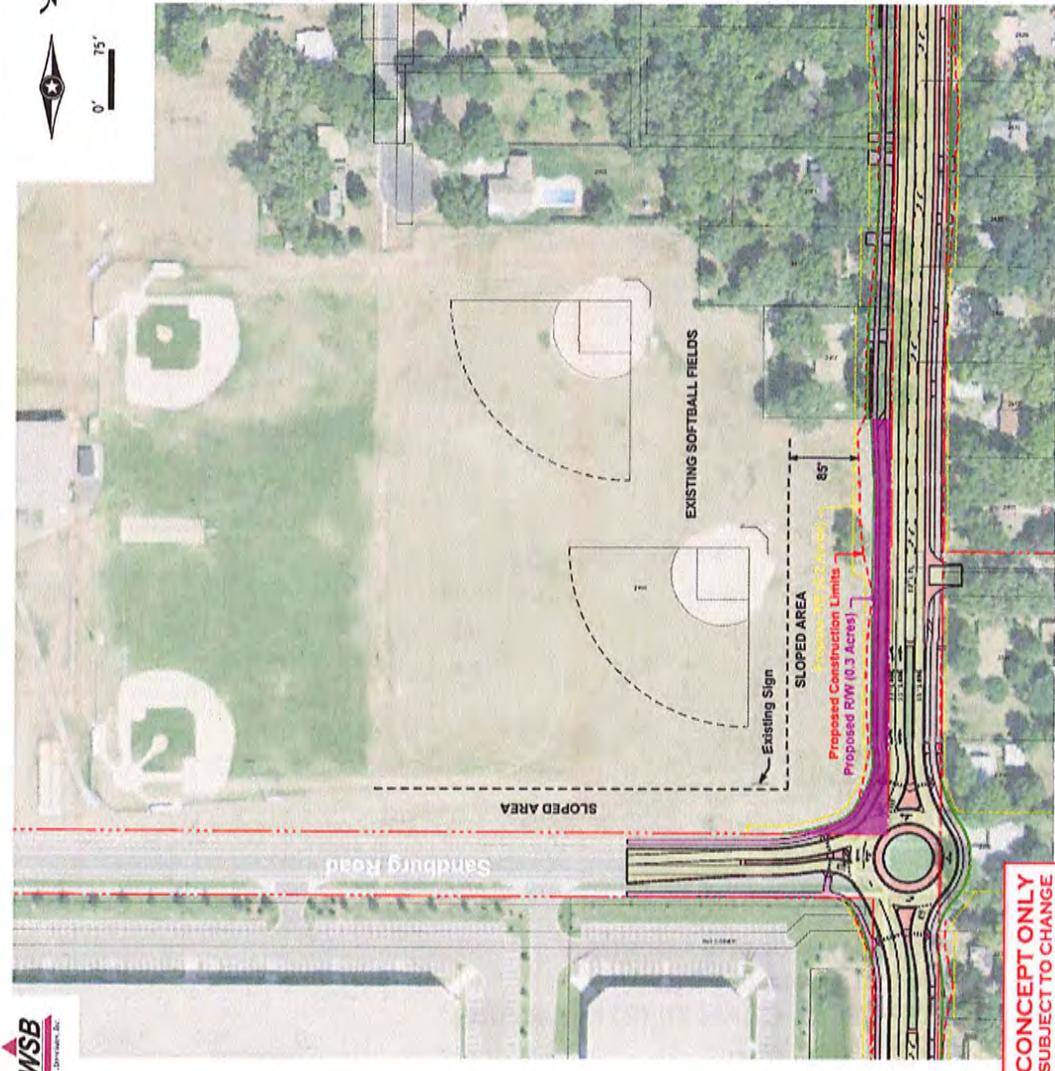
End Construction
SP 128-091-003

Begin Construction
SP 128-091-003

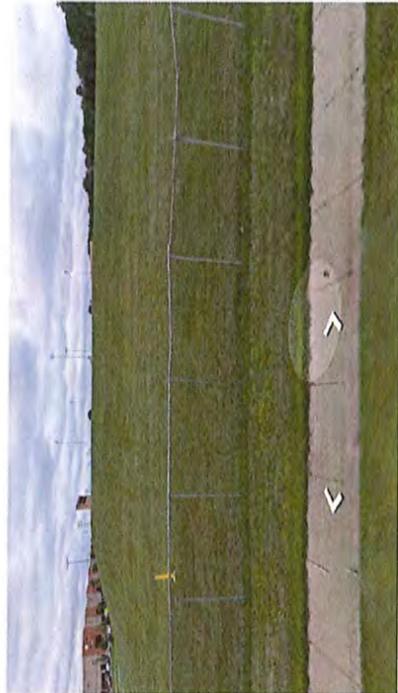


Section 4(f) Property Location
CSAH 102 (Douglas Drive)
From TH 55 to CSAH 70 (27th Avenue)
Golden Valley, MN

0 500 1,000 Feet



Looking towards Softball Fields from Sanberg Road

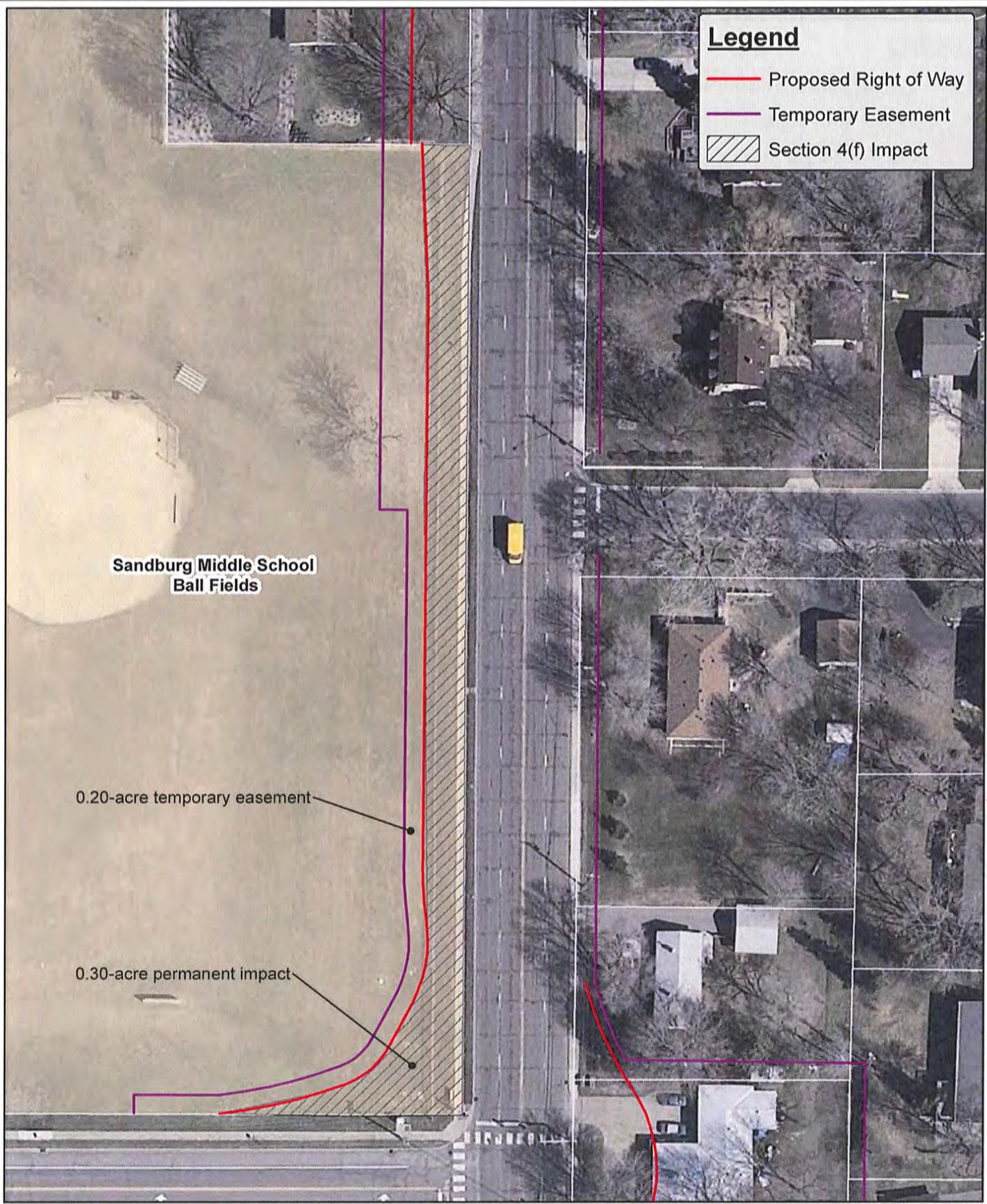


Looking towards Softball Fields from Douglas Drive

**CONCEPT ONLY
SUBJECT TO CHANGE**

Legend

- Proposed Right of Way
- Temporary Easement
- / / / / / Section 4(f) Impact



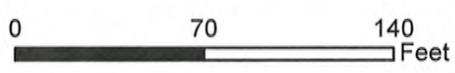
**Sandburg Middle School
Ball Fields**

0.20-acre temporary easement

0.30-acre permanent impact

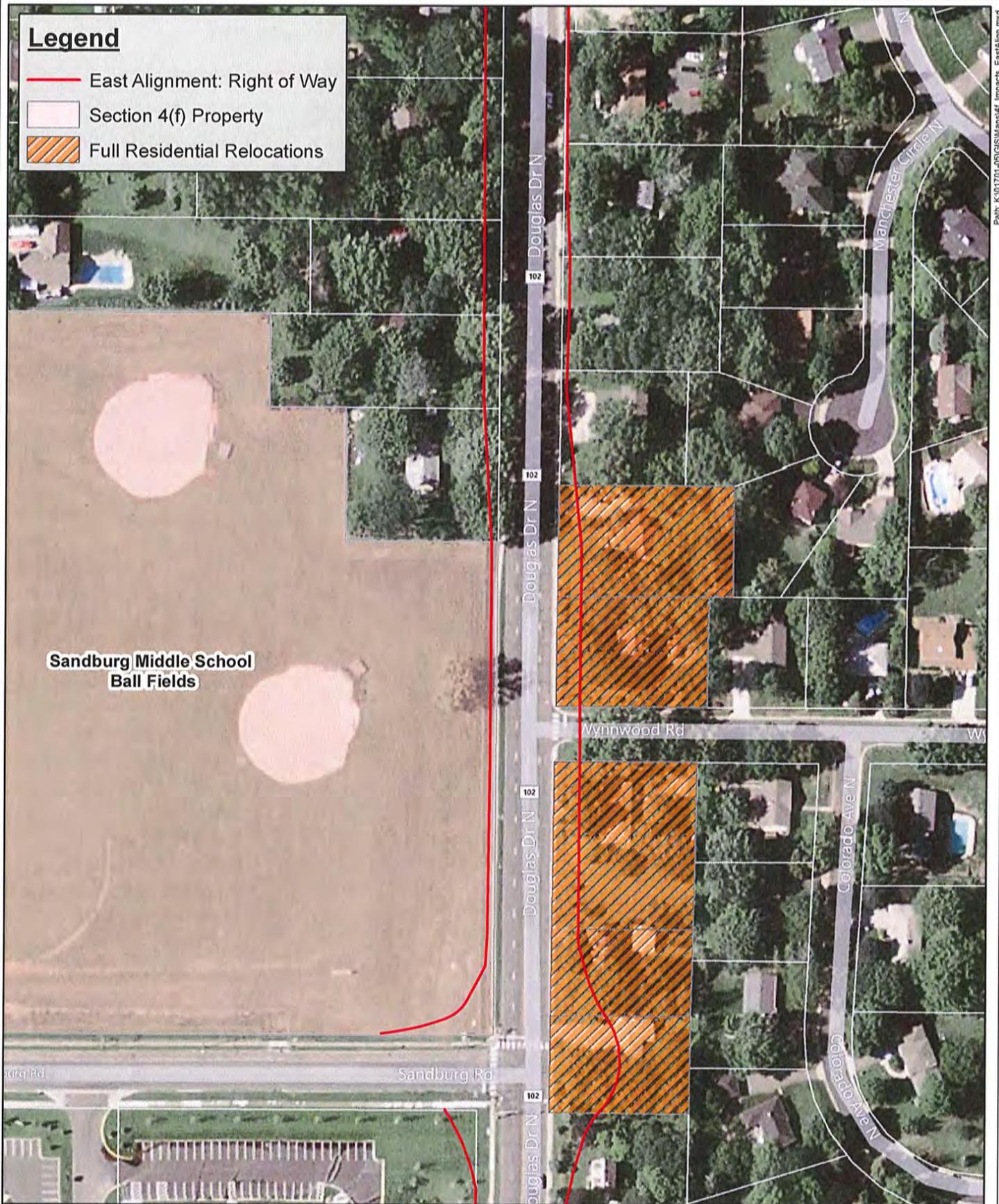


**Section 4(f) Property Impacts
CSAH 102 (Douglas Drive)
Golden Valley, MN**



Legend

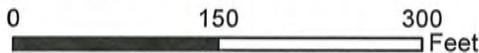
- East Alignment: Right of Way
- Section 4(f) Property
- ▨ Full Residential Relocations



Path: K:\01701-05\GIS\Map\4f_ Impacts_EastAlign.mxd



Section 4(f) Property Impacts: East Alignment Alternative CSAH 102 (Douglas Drive) Golden Valley, MN





January 30, 2012

Mr. Ron Nims
Public Works Project Coordinator
City of Golden Valley Public Works Department
7800 Golden Valley Road
Golden Valley, MN 55427

Subject: CSAH 102 from TH 55 to CSAH 70 (Medicine Lake Road)
Transportation Improvements-Golden Valley, Hennepin County, Minnesota

Dear Mr. Nims:

Independent School District No. 281 would like to express its support for the CSAH 102 (Douglas Drive) Transportation Improvements. The School district is aware that the proposed improvements will result in some impacts to land at the ball field area at the Sandburg Learning Center site which is owned and utilized by the school district, and that this use is thus covered by 49 USC 303, commonly referred to as Section 4(f). The attached exhibits provide additional details on the proposed project. The School district is aware that the proposed improvements are estimated to result in the acquisition of less than one (1) acre of recreational property along the east side of the property.

The School district believes the proposed improvements will not have an impact to the recreation area or activities. The School District is therefore supportive of the proposed project to reconstruct CSAH 102 as a three-lane roadway with dedicated turning lanes, on-street bicycle lanes, and off-street sidewalks. The School District anticipates the project will improve mobility and safety for motorists and pedestrians traveling to and from the school and the ball fields.

Sincerely,

Jeff Pries, ISD No. 281
Executive Director of business Services

Cc: "Exhibit A"
"Exhibit B"

**ATTACHMENT C: SECTION 106 - JEHOVAH'S WITNESSES
SITE**

Golden Valley Congregation of Jehovah's Witnesses

1950 Douglas Dr. N Golden Valley, MN 55422

AUG 22 2012

August 20, 2012

Mr. Ron Nims
Public Works Project Coordinator
City of Golden Valley Public Works Department
7800 Golden Valley Road
Golden Valley, MN 55427

Subject: CSAH 102 from TH 55 to CSAH 70 (Medicine Lake Road)
Transportation Improvements-Golden Valley, Hennepin County,
Minnesota

Dear Mr. Nims:

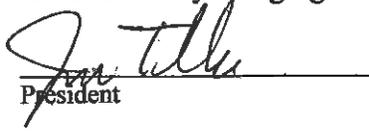
The Golden Valley Congregation of Jehovah's Witness would like to express its support for the CSAH 102 (Douglas Drive) Transportation Improvements. The Congregation is aware that the proposed improvements will impact the Kingdom Hall property, which is being utilized by the Golden Valley Congregation of Jehovah's Witnesses, Plymouth Congregation of Jehovah's Witnesses and Russian Congregation of Jehovah's Witnesses. The Congregations further understand that the proposed improvements are estimated to result in the acquisition of less than one (1) acre along the south side of the property. We are also aware that the property that has been determined to be eligible for listing in the National Register of Historic Places.

However, the Congregations have decided that the existing structure, although recognized by some to have some architectural significance, is no longer of any value to them because the inefficiencies of the interior design, structure and energy consumption. It is cost prohibitive to make the essential changes. At this time the Congregations have decided to demolish the building and construct a new Kingdom Hall on site. Refer to the attached site plan for additional details.

The Congregations believe the proposed improvements and parcel boundary change will not have an impact on our ability to use the new building and site as proposed on the attached site plan. We feel the new location of the Kingdom Hall and parking lot will enhance the proposed access changes (removal of left turns, but an additional entrance off of Douglas Drive) and believe they will not negatively impact the ability of our multiple congregations to access the new Kingdom Hall and parking lot. The Congregations are therefore supportive of the proposed project to reconstruct CSAH 102 as a three-lane roadway with dedicated turning lanes, on-street bicycle lanes, and off-street sidewalks. The Congregations anticipate the project will improve mobility and safety for motorists and pedestrians traveling to and from Kingdom Hall.

Sincerely,

Golden Valley Congregation of Jehovah's Witnesses, Corporation Officers:


President


Secretary


Treasurer

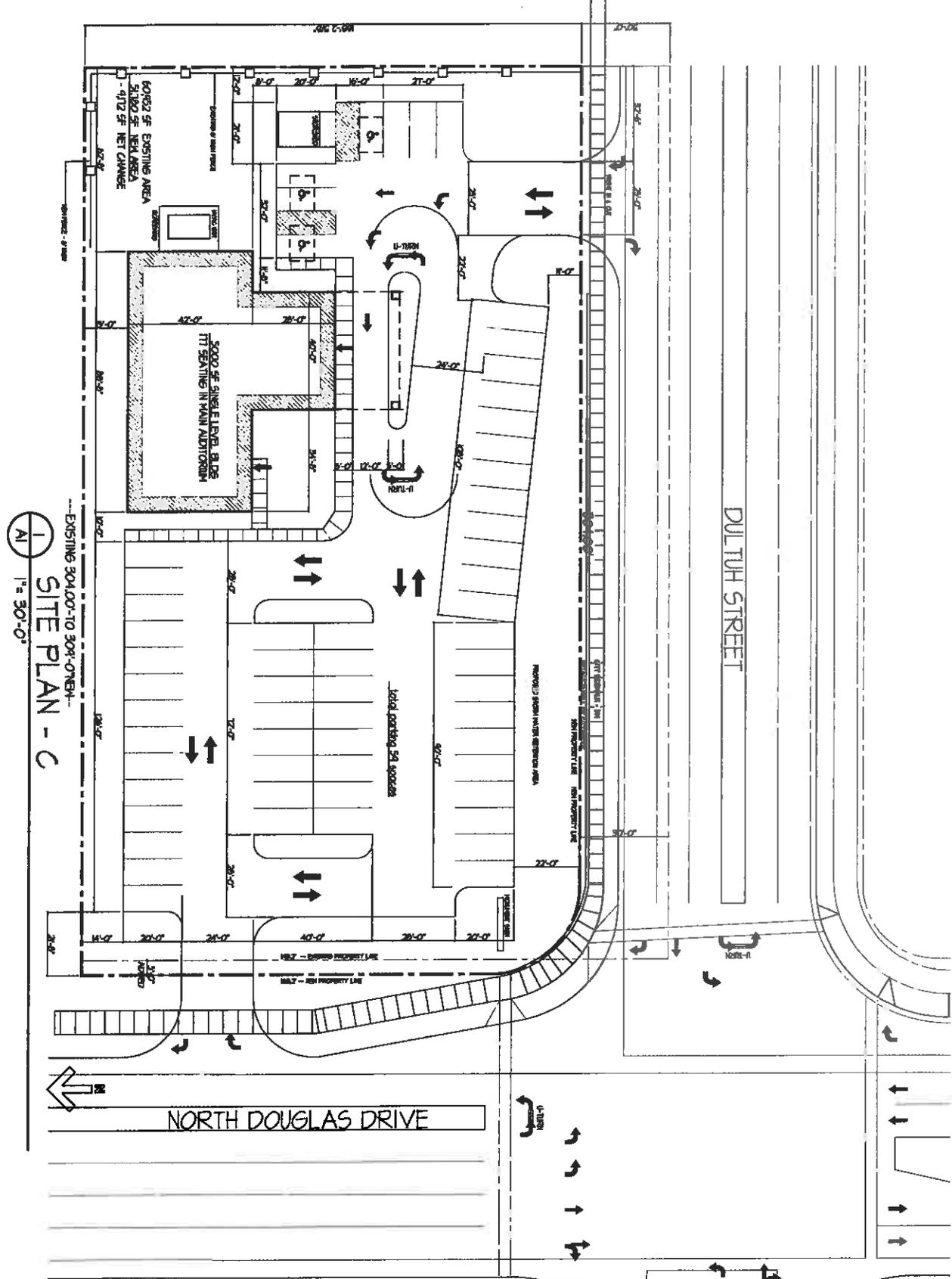
Date: AUGUST 20, 2012

Cc:

Plymouth Congregation of Jehovah's Witnesses

Russian (speaking) Congregation of Jehovah's Witnesses

Attachment: Site plan of proposed new Kingdom Hall.



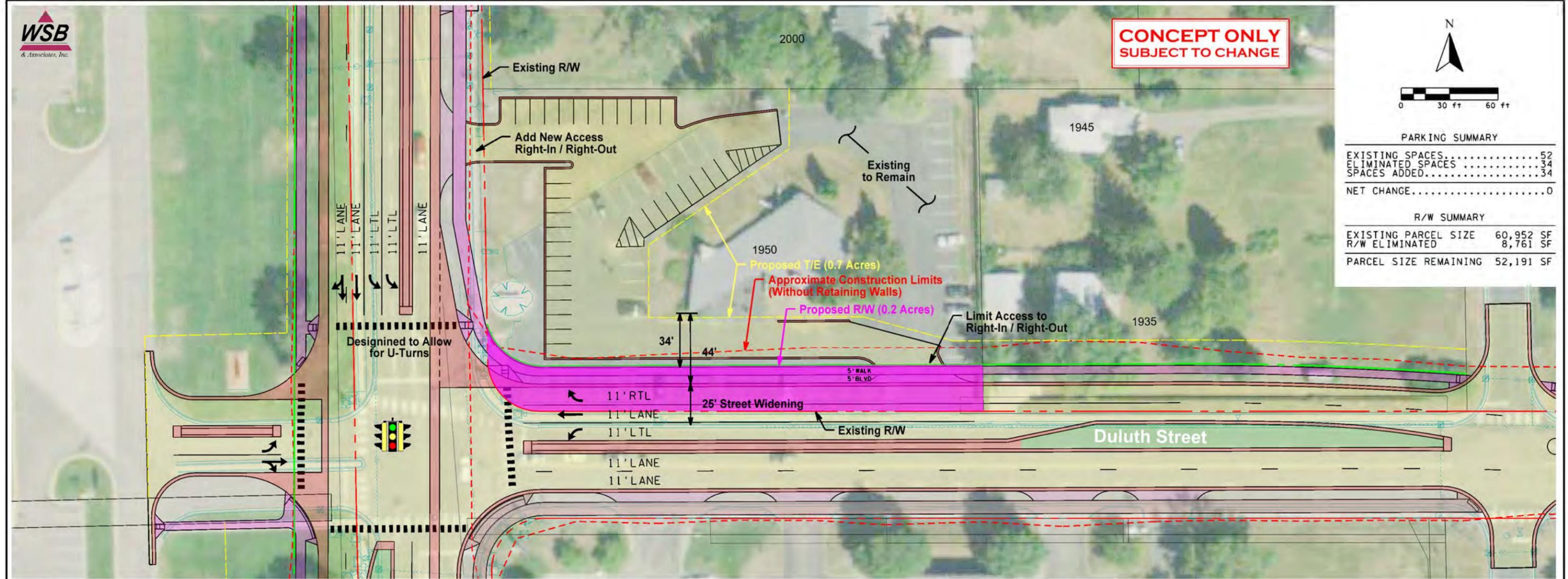
1
 AI
 1" = 30'-0"
SITE PLAN - C
 ---EXISTING 304.00'-TO 304'-07EN---

SHEET NO. **A1**
 CAD # CV-SITE.dwg
 DATE: 4-13-12
 SCALE: 1" = 30'
 DWN BY: PVB (CPO BY)
 1

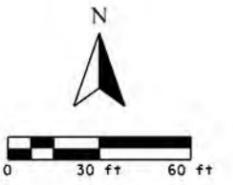
SHEET TITLE
**PROPOSED SITE PLAN - C
 FOR NEW BUILDING**
 PROJECT TITLE
**GOLDEN VALLEY KINGDOM HALL
 1950 NO. DOUGLAS DRIVE
 GOLDEN VALLEY, MINNESOTA**

NO	DATE
1	3-20-09

REVISION		BY
I DO HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A TRULY LICENSED ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA. REGISTRATION NUMBER 13008 DATE: PHILIP V. BLASKO, 952-278-1100 # 952-431-8568-H		



**CONCEPT ONLY
 SUBJECT TO CHANGE**



PARKING SUMMARY	
EXISTING SPACES.....	52
ELIMINATED SPACES	34
SPACES ADDED.....	34
NET CHANGE.....	0

R/W SUMMARY	
EXISTING PARCEL SIZE	60,952 SF
R/W ELIMINATED	8,761 SF
PARCEL SIZE REMAINING	52,191 SF



Looking East at
 Church Property
 from
 Douglas Drive



Looking North at
 Church Property
 from
 Duluth Street



Section 4(f) Impacts
 CSAH 102 (Douglas Drive) S.P. 128-091-003
 City of Golden Valley, Minnesota

Property Impacts
 Church Property (1950 Duluth Street)



Minnesota Department of Transportation

Office of Environmental Stewardship

Mail Stop 620
395 John Ireland Boulevard
St. Paul, MN 55155

Office Tel: (651) 366-3615

Fax: (651) 366-3603

April 20, 2012

Dr. Mary Ann Heidemann
Government Programs & Compliance Officer
State Historic Preservation Office
Minnesota Historical Society
345 Kellogg Blvd. W.
St. Paul, MN 55101

RE: S.P. 128-091-033 (Douglas Drive (CSAH 102) Reconstruction, Hennepin County, Minnesota)

Dear Dr. Heidemann:

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

Enclosed for your review is a final copy of *Phase I and II Architecture-History Survey for the Douglas Drive (CSAH 102) Reconstruction, Golden Valley, Hennepin County, Minnesota* completed for MnDOT by Summit EnviroSolutions, Inc. in March 2012. The report was completed in order to identify and evaluate cultural resources within the project's area of potential effect.

The City of Golden Valley is proposing to reconstruct Douglas Drive (CSAH 102) between Trunk Highway 55 (Olson Memorial Highway) and CSAH 70 (Medicine Lake Road). The purpose of the project is to reconstruct the street, incorporating street widening, improved traffic-lane marking and intersection improvements. The street widening and intersection improvements will result in some property acquisitions west of Douglas Drive between Golden Valley Road and the MN&S Railroad.

Based on the scope of the project and the agreements between the FHWA and various tribal groups, our office consulted with all tribal groups who have expressed an interest in reviewing projects in this part of the state. No tribes responded with concerns.

The area of potential effects (APE) was delineated to assess direct and indirect effects to historic properties within the project area. The APE encompasses the project construction limits as well as adjacent area in order to account for indirect effects, including changes in visual qualities, noise levels, and traffic patterns (see Figures 7a, b, c, d). Generally, the APE encompasses the first tier of properties adjacent to the proposed roadwork along Douglas Drive, Golden Valley Road and Duluth Street. The APE is widened on the west side of Douglas Drive between Phoenix Street and Hampshire Place because of proposed property takings in that area. The APE also

incorporates areas north of Golden Valley Road and east of Douglas Drive that are bounded by the two railroad lines.

There are no previously recorded archaeological resources within the APE. The project area on either side of Douglas Drive has been developed for several decades. In addition, an archaeologist and historian from this office visited the project area to better ascertain whether further archaeological survey was necessary in areas of right-of-way acquisition. Based on the extensive development in the area and the site visit, our office determined that the project area has low potential for containing intact, significant archaeological sites. No further archaeological work was conducted.

Completion of an architectural history survey identified three properties that were considered for Phase II eligibility. These properties included the Honeywell Golden Valley industrial complex; the Luce Line railroad; and the Kingdom Hall of the Golden Valley Congregation of Jehovah's Witnesses. Both Honeywell and the Luce Line were found to be not eligible.

Our office supports the consultant recommendation **that the Kingdom Hall of the Golden Valley Congregation of Jehovah's Witnesses is eligible for listing in the National Register** under Criterion C (see Pg. 99 in report). The 1957 building displays the plan, forms and design features of Usonian architecture as developed by Frank Lloyd Wright, and as carried out by Wright's student, Herbert Fritz, Jr. The building has an asymmetric plan, set into a sloping site that allows for a multilevel interior. The building's low-pitch roof has broad overhanging eaves, and makes use of local materials such as the split-stone facing. Fritz studied with Wright at Taliesin from 1937 to 1941. His work was more concentrated in the area around Madison, Wisconsin, and has been increasingly studied in the last decade as his designs achieve the half-century mark.

The building retains all seven aspects of integrity, including location, design, setting, materials, workmanship, feeling, and association. The setting has been somewhat affected by the extension of Duluth Street in 1967 along the property's southern boundary; previously access was off of Douglas Street.

Potential Effects

As noted in the attached figure, the project proposes widening along Duluth Street. The City and their consultants met with representatives of the Kingdom Hall to discuss the changes and to ensure that the church can continue to maintain current operation and function on the site. The church sought to retain the same number of parking spaces and appropriate access to the site. MnDOT CRU sought to retain the distinctive lawn that mirrors the shape of the church and has been present since the building was constructed in 1957.

The attached plan represents a compromise and the result of consultation among the City, the Church, and CRU. The widening of Duluth Street will bring the south curb line approximately 25 feet closer to the building, and will eliminate 20 parking spaces along the south side. The west curb line will extend approximately 11 feet farther from the building, as Douglas Drive shifts west. Additional parking spaces will be added west and northwest of the building, resulting in no net change in parking capacity. The current access point on Duluth Street will be reconfigured to right-in/right-out due to a new median. A new right-in/right-out access will be added off Douglas Drive at the northwest corner of the property. The intersection throat (at Douglas and Duluth) has also been designed to allow for a U-turn movement on southbound Douglas, to provide access to the church parking lot. The new access off Douglas Drive and parking will remove the lawn area in the northwest corner of the site.

CRU asked for as much green space to be retained as possible, especially around the church lawn. The reconfigured plan largely retains the distinctive lawn that reflected the angle of the building on the northwest and west sides. A small retaining wall is proposed along the south side of the building to ensure a safe drive aisle, and will remove approximately 210 square feet of lawn. However, the plan will add green space (approximately 2,250 square feet) in the southwest corner of the property (currently bituminous) between the new line of west parking and the west curb line.

Based on the consultation between the church, the City and their consultants and CRU, we believe we have a compromise solution that addresses the concerns of all parties. We ask for your concurrence in our determination of eligibility, and our determination that the plan will have **No Adverse Effect** on the Kingdom Hall Congregation of Jehovah's Witnesses property. Please contact me at garneth.peterson@state.mn.us or at (651)366-3615 with any questions.

Sincerely,



Garneth O. Peterson
Historian
Cultural Resources Unit (CRU)

CC: Ron Nims, City of Golden Valley
Jupe Hale, WSB & Associates
Kingdom Hall Congregation
MnDOT CRU Files

The Section 4(f) De Minimis Preliminary Determination Request is attached here, but is being routed simultaneously along with the Project Memorandum. The completed document will be added to the Attachment upon approval.



STATE AID FOR LOCAL TRANSPORTATION
De MINIMIS PRELIMINARY DETERMINATION REQUEST
For parks, recreation areas, wildlife or waterfowl refuges

SP 128-091-004 Federal Project No. _____

Route CSAH 102 (Douglas Drive)

From TH 55 To CSAH 70 (Medicine Lake Road)

Proposed Improvement:

The proposed project is located in Golden Valley in Hennepin County, MN (Figure 1). The proposed CSAH 102 (Douglas Drive) project improvements involve the reconstruction (new pavement, curb and gutter, storm sewer, treatment ponds) of CSAH 102 from TH 55 to Medicine Lake Rd. The following summarizes these improvements.

- The four-lane section from TH 55 to north of the TH 55 Frontage Road will be reconstructed as a four-lane section with dedicated turn lanes at both of those intersections.
- A three-lane section (one southbound lane, one northbound lane and a continuous center two-way left turn lane [with the exception of median development at the proposed Golden Valley Rd roundabout]) will be constructed from north of the TH 55 Frontage Rd to St. Croix Ave.
- A four-lane section (two southbound lanes, one northbound lanes and a continuous center two-way left turn lane [with the exception of median development for Duluth St and at the proposed Sandberg Rd roundabout]) will be constructed from St. Croix Ave to Medicine Lake Rd.
- Revised signals and dedicated turn lanes will be installed at the intersections with TH 55, TH 55 Frontage Rd, Duluth St, and Medicine Lake Rd.
- Multi-lane roundabouts will be constructed at the intersections with Sandburg Road and Golden Valley Road.
- Additional dedicated turn lanes will be constructed on northbound CSAH 102 at the St. Croix Ave/Honeywell access.
- Access to CSAH 102 from Hampshire Place and Country Club Drive will be removed.
- Access to TH 55 from Country Club Drive will be modified from right-in only to right in/right out only.
- A separated six foot sidewalk will be constructed along the east side of CSAH 102 from TH 55 to the TH 55 Frontage Road and along the west side of CSAH 102 from Golden Valley Road to Medicine Lake Road.



- A separated trail (8 foot wide) will be constructed along the west side of CSAH 102 from Golden Valley Road to Medicine Lake Road.
- A separated trail (10 foot wide) will be constructed along the east side of CSAH 102 from Golden Valley Rd to the TH 55 Frontage Road.
- The proposed trail will connect to the existing Luce Line Regional Trail, which is located along the west side of CSAH 102 from TH 55 to the TH 55 Frontage Road. This trail follows TH 55 then jogs onto CSAH 102 and continues east along the Union Pacific Railroad.
- Six foot wide on-street bicycle lanes will be constructed on both sides of CSAH 102 from Golden Valley Rd to Medicine Lake Rd.

The existing right of way along CSAH 102 and Duluth Street, adjacent to the church property, is approximately 69 and 64 feet, respectively. The proposed reconstruction would require the right of way along Duluth Street to be increased to approximately 92 feet. Right of way along CSAH 102 will also increase, but will not encroach into the church parcel. The proposed increase is planned to maintain the existing centerline of Duluth Street, but add a center median and right-turn lane in the westbound lane. The increase is planned to avoid a shift to the south.

Environmental Document anticipated: Categorical Exclusion - Project Memo (PM)

Project Manager Name: Ron Nims
 Title: Public Works Project Coordinator
 Address: 7800 Golden Valley Road, Golden Valley, MN 55427
 Phone: 763-593-8032
 Email: rnims@goldenvalleymn.gov

This project will impact the following Section 4(f) property.

1. Description of The Section 4(f) Property. Refer to attached Figure 2.

Name: Kingdom Hall of the Golden Valley Congregation of Jehovah's Witnesses

Size (acre): 1.4 acres

Location: 1950 Duluth Street, Golden Valley, MN

Ownership: Kingdom Hall of the Golden Valley Congregation of Jehovah's Witnesses

Type of Section 4(f) Property: Historic Property



Function of or Available Activities on the Property: Church

Description and Location of Existing and Planned Facilities:
Church facility and 52 parking spaces

Access:

Full access to the church property is available off Duluth Street.

Usage: The church has three congregations of between 35 and 110 people each. The total of all three congregations is 245 people. Given that each congregation has two services per week, and always separate from one another, the maximum usage at any one time is 110.

Relationship to Other Similarly Used Lands in the Vicinity:

Based on data gathered from Google Maps, the next nearest Jehovah's Witness churches are found in Minneapolis and Minnetonka, Minnesota.

Applicable Clauses Affecting Ownership: Not applicable

Unusual Characteristics Reducing or Enhancing the Value of the Property:

Not applicable

LAWCON Section 6(f) (or other Federal Encumbrances) Impacts:

Not applicable

2. Impacts to the Section 4(f) Property.

Amount of land impacted: 0.90 acre

Permanent R/W Acquisition/Easements: 0.20 acre

Temporary Easements: 0.70 acre

Functions Affected: Parking and access

Facilities Affected: The existing 20 parking spaces along the south side of the parking lot will be removed as a result of encroachment from the roadway and sidewalk and access off Duluth Street will be limited to right-in, right-out only.

3. Coordination with Responsible Official with Jurisdiction Over the Section 4(f) Property: The site plan and identified changes have been reviewed by the church leadership, including their national building management, and they are in agreement that the impacts and mitigation as indicated on the site plan allow them to fully maintain current operation and function of the site. Please refer to



the attached letter from the Kingdom Hall of the Golden Valley Congregation of Jehovah's Witnesses.

4. Considerations.

Impact Avoidance:

The proposed reconstruction would result in the south right-of-way line moving approximately 28 feet closer to the building. The west right-of-way line will remain unchanged. The existing right of way along the corridor is approximately 64 feet. The following alternatives were considered to avoid impacting the 4(f) property:

No Build Alternative:

The No Build Alternative is not feasible because it would not correct the existing and projected capacity deficiencies at the intersection and it would not address bicycle and pedestrian needs along the corridor.

Build Roadway in New Location:

Building the roadway in a new location is not a feasible alternative because a roadway in a new location would not solve the existing and projected capacity deficiencies on CSAH 102.

Shift to South to Avoid 4(f) Property

In order to completely avoid impacting the Section 4(f) property, the alignment would have to be shifted to the south 28 feet. The land use along the south side of Duluth Street is commercial business, and consists of a gas station and medical care center directly south of the church property. This shift would result in a partial take at a minimum, if not total business relocation for the medical center and potentially the gas station as well (Figure 3). In addition to the relocation impacts, a shift to the south would result in soil disturbance to the Super America gas station property. Based on information gathered from the MPCA's What's in My Neighborhood web application, the Super America station located in the southeast quadrant of Duluth Street and CSAH 102 is the site of a former leak and two existing tanks. The former gasoline leak resulted in contaminated soils and groundwater. Contaminated soils still remain onsite. Any impacts to the gas station property could involve contaminated soils remediation and tank removal.

Planning to minimize harm:

The roadway is being widened to the north to prevent the potential for relocation of commercial businesses and to avoid potentially contaminated soils. The widening that is proposed is necessary to improve the safety and capacity along Duluth street, which results in the construction of a center median and dedicated right- and left-turn lanes.

The impacts to the Section 4(f) property have been minimized to the greatest extent feasible. Although right of way along CSAH 102 is also being increased, the



this corridor is being shifted to the west in order to avoid impacting the church and other properties in the area. In order to maintain a safe drive aisle width along the south side of the building, a small retaining wall is proposed, and approximately 210 square feet of green space (currently lawn) will be replaced by bituminous. The retaining wall will be built using white limestone or the equivalent to match the existing planter box near the church's entrance (see attached photos).

The impacts that are proposed are minimal and occur to the parking lot only. Mitigation for the removal of the 20 parking spaces and removal of left-turn access is described below.

The City has coordinated with MnDOT's Cultural Resource Unit and the State Historic Preservation Office (SHPO). Based on this coordination, MnDOT's Cultural Resources Unit determined, and SHPO concurred, that this project and the associated impacts to the church property will have no adverse effect on the Kingdom Hall site. A copy of this coordination is attached.

Mitigation:

In consideration of the design's consistency with the project's purpose and need and in consideration of the substantial right of way impacts that would occur with complete avoidance of the Section 4(f) resource, appropriate mitigation has been reviewed and agreed upon with the Kingdom Hall of the Golden Valley Congregation of Jehovah's Witnesses. It has been determined that the proposed expansion of the existing parking area to the northwest, reconfiguration of the parking area to contain 52 parking spaces (no net loss of parking spaces), and the construction of a new parking lot access off CSAH 102 (Douglas Drive) will mitigate for the impact to the Section 4(f) resource (Figure 2). Currently, an area that will eventually be between the parking lot and the right-of-way line is bituminous (areas south and west of the building). It is proposed to remove and replace it with 2,250 square feet of new green space. In the northwest corner of the site, 5,720 square feet of green area (currently lawn) will be replaced by bituminous as part of the parking lot reconfiguration. The new access off CSAH 102 (Douglas Drive) will be right-in, right-out only, but the median at the intersection of Douglas Drive and Duluth Street will be designed to allow for U-turns for south-bound traffic.

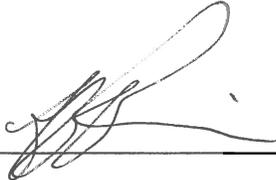
Enhancement:

The Kingdom Hall of the Golden Valley Congregation of Jehovah's Witnesses reviewed the proposed design and has determined that the proposed improvements will improve mobility and safety for motorists and pedestrians traveling to and from the church.



STATE AID FOR LOCAL TRANSPORTATION
De MINIMIS PRELIMINARY DETERMINATION REQUEST
For parks, recreation areas, wildlife or waterfowl refuges

Recommended:

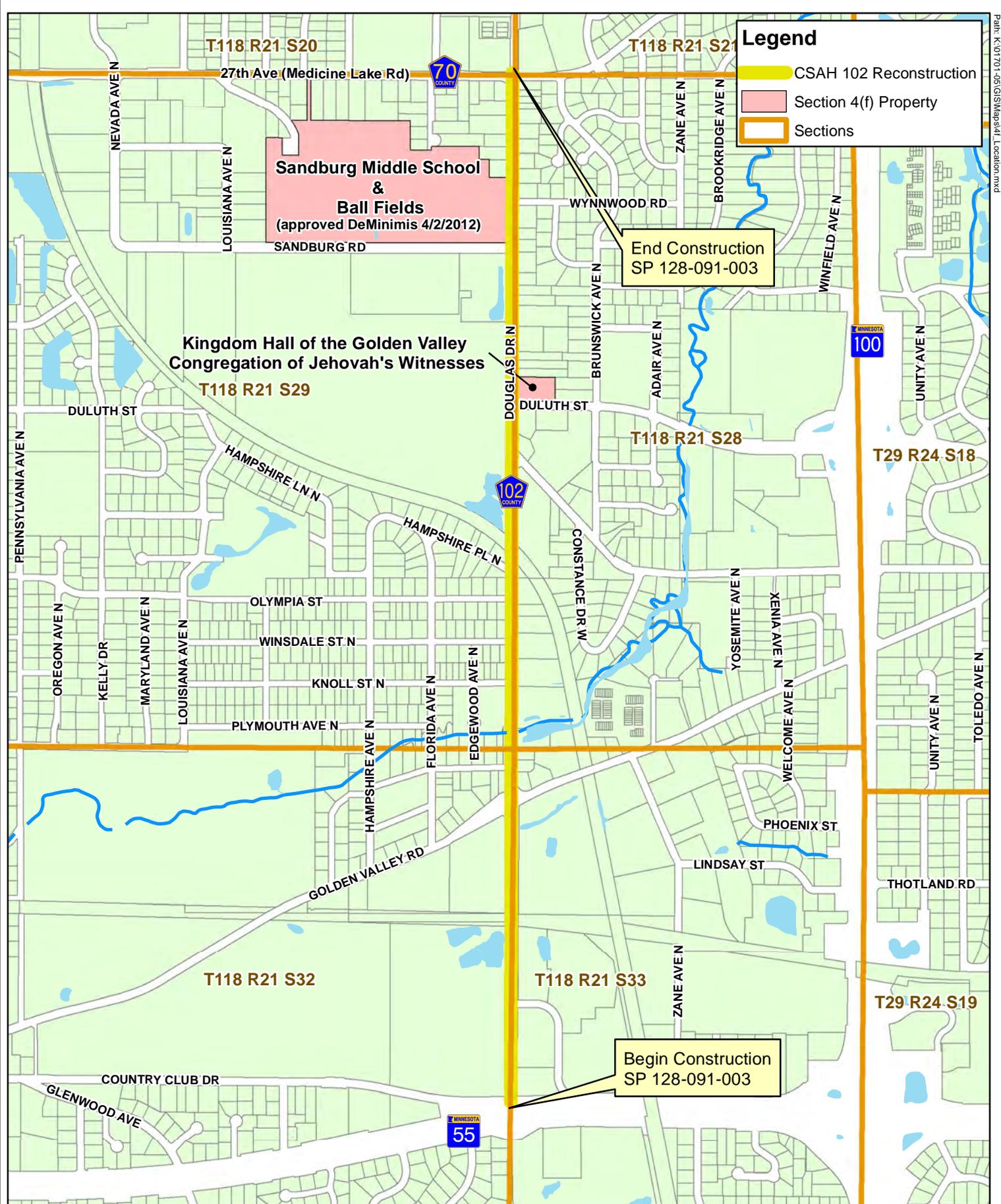
Local Agency Engineer  Date 12/20/12

District State Aid Engineer _____ Date _____

State Aid Engineer _____ Date _____

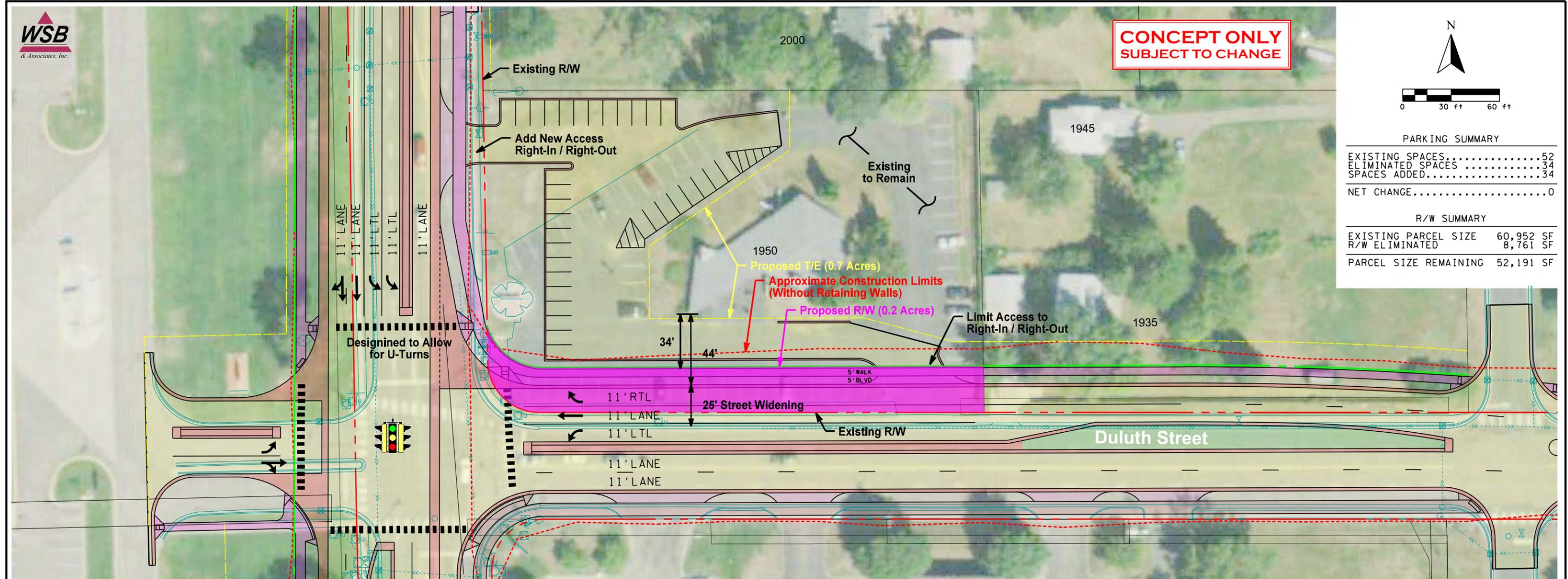
Preliminary Approval conditioned on results of public notice & comment period:

FHWA Engineer _____ Date _____



**Figure 1: Section 4(f) Property Locations
CSAH 102 (Douglas Drive)
From TH 55 to CSAH 70 (27th Avenue)
Golden Valley, MN**





PARKING SUMMARY	
EXISTING SPACES	52
ELIMINATED SPACES	34
SPACES ADDED	34
NET CHANGE	0

R/W SUMMARY	
EXISTING PARCEL SIZE	60,952 SF
R/W ELIMINATED	8,761 SF
PARCEL SIZE REMAINING	52,191 SF



Looking East at Church Property from Douglas Drive



Looking North at Church Property from Duluth Street

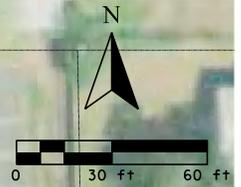


Section 4(f) Impacts

CSAH 102 (Douglas Drive) S.P. 128-091-003
 City of Golden Valley, Minnesota

Figure 2
Property Impacts
 Church Property (1950 Duluth Street)

**CONCEPT ONLY
SUBJECT TO CHANGE**



Duluth Street

Existing R/W

Proposed R/W

Approximate Construction Limits

Existing R/W

Date: Printed: 11/11/2012
WSB Filename: K:\010101-05\Cad\Exhibits\Section 4(f)\Alternate Limits.dgn



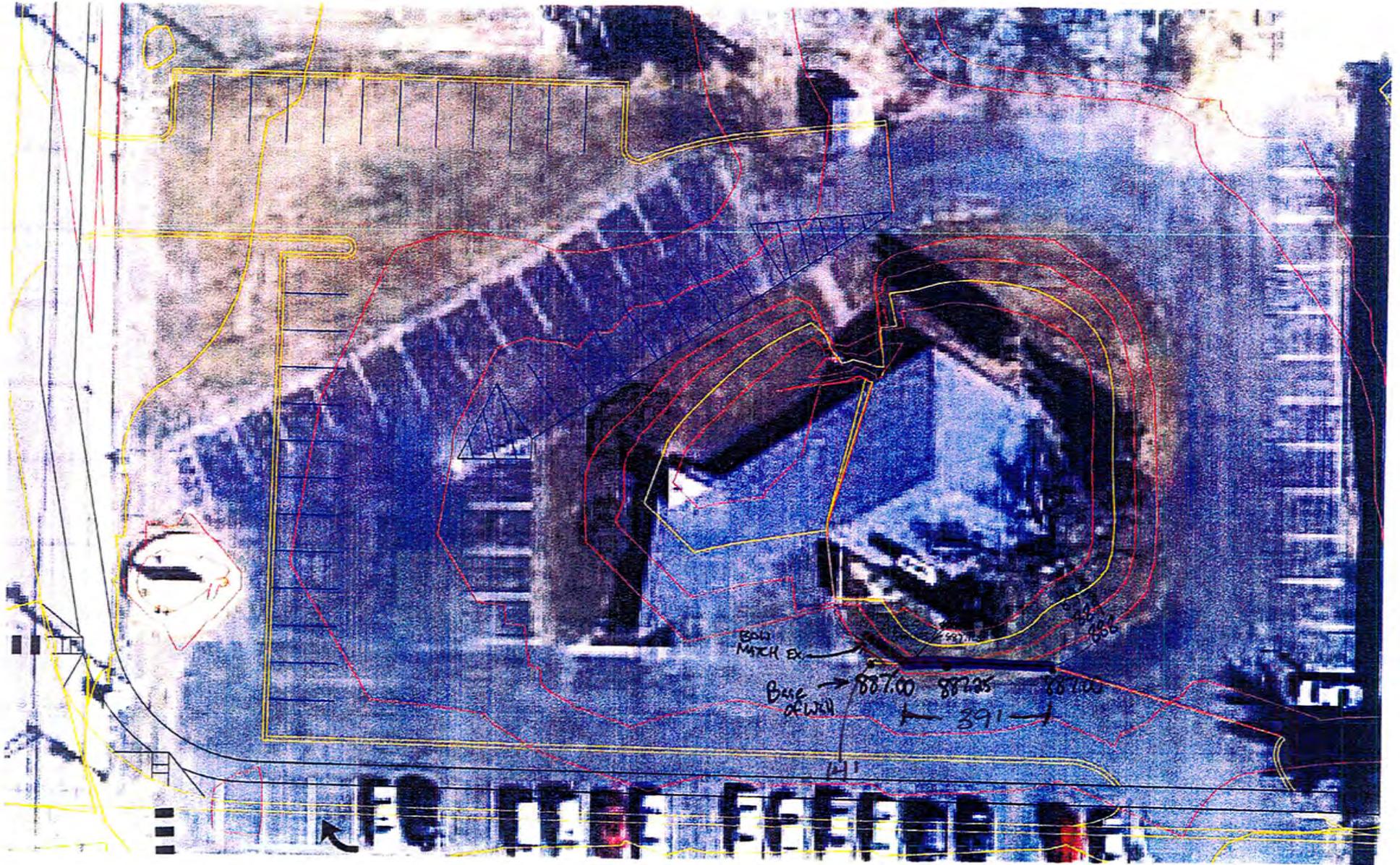
Section 4(f) Impacts

CSAH 102 (Douglas Drive) S.P. 128-091-003
City of Golden Valley, Minnesota

South Alignment Alternative

Figure 3

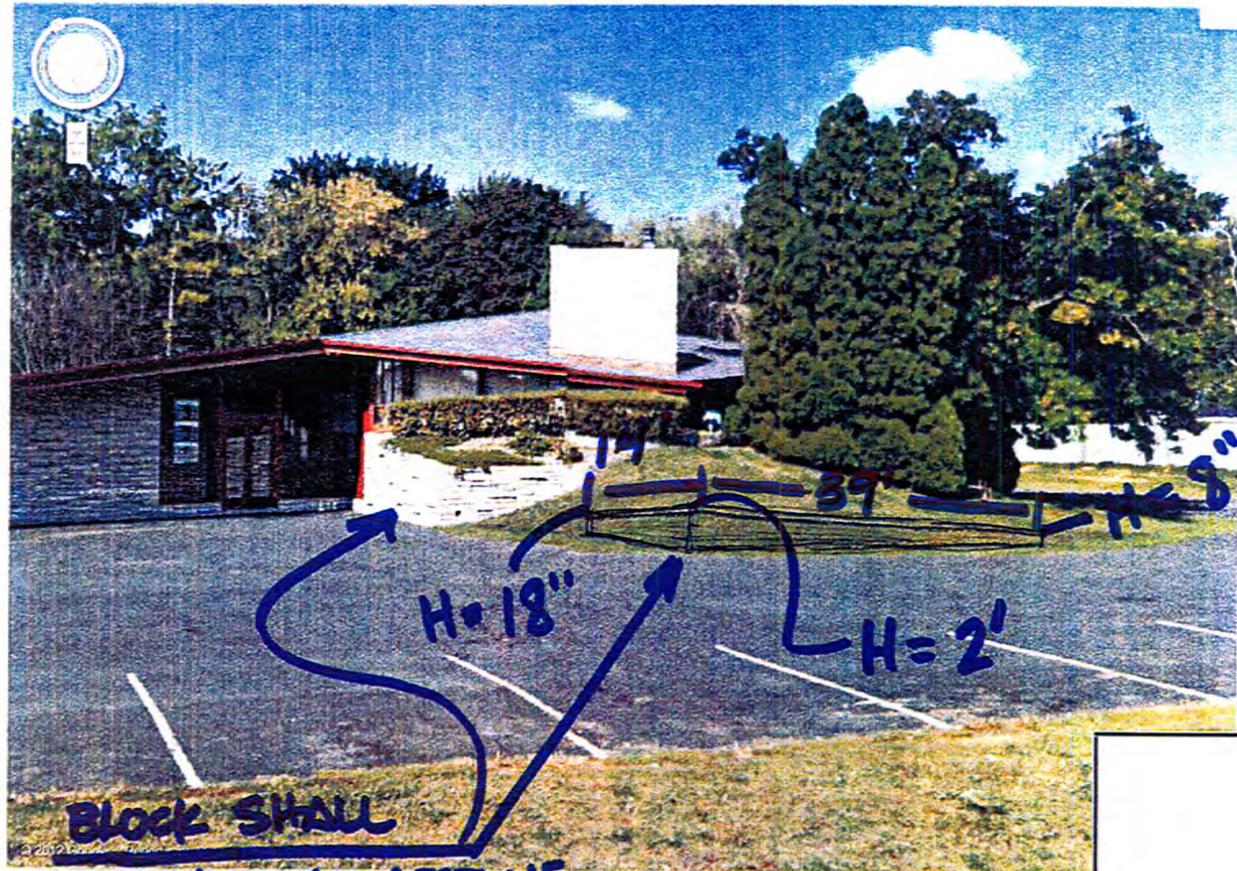
Property Impacts



Retaining Wall Plans (1 of 2)



To see all the details that are visible on the screen, use the "Print" link next to the map.



**BE WHITE LIMESTONE
OR EQUIVALENT
TO MATCH EXIST.
PLANTER BOX**

Golden Valley Congregation of Jehovah's Witnesses

1950 Douglas Dr. N Golden Valley, MN 55422

AUG 22 2012

August 20, 2012

Mr. Ron Nims
Public Works Project Coordinator
City of Golden Valley Public Works Department
7800 Golden Valley Road
Golden Valley, MN 55427

Subject: CSAH 102 from TH 55 to CSAH 70 (Medicine Lake Road)
Transportation Improvements-Golden Valley, Hennepin County,
Minnesota

Dear Mr. Nims:

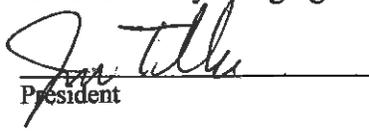
The Golden Valley Congregation of Jehovah's Witness would like to express its support for the CSAH 102 (Douglas Drive) Transportation Improvements. The Congregation is aware that the proposed improvements will impact the Kingdom Hall property, which is being utilized by the Golden Valley Congregation of Jehovah's Witnesses, Plymouth Congregation of Jehovah's Witnesses and Russian Congregation of Jehovah's Witnesses. The Congregations further understand that the proposed improvements are estimated to result in the acquisition of less than one (1) acre along the south side of the property. We are also aware that the property that has been determined to be eligible for listing in the National Register of Historic Places.

However, the Congregations have decided that the existing structure, although recognized by some to have some architectural significance, is no longer of any value to them because the inefficiencies of the interior design, structure and energy consumption. It is cost prohibitive to make the essential changes. At this time the Congregations have decided to demolish the building and construct a new Kingdom Hall on site. Refer to the attached site plan for additional details.

The Congregations believe the proposed improvements and parcel boundary change will not have an impact on our ability to use the new building and site as proposed on the attached site plan. We feel the new location of the Kingdom Hall and parking lot will enhance the proposed access changes (removal of left turns, but an additional entrance off of Douglas Drive) and believe they will not negatively impact the ability of our multiple congregations to access the new Kingdom Hall and parking lot. The Congregations are therefore supportive of the proposed project to reconstruct CSAH 102 as a three-lane roadway with dedicated turning lanes, on-street bicycle lanes, and off-street sidewalks. The Congregations anticipate the project will improve mobility and safety for motorists and pedestrians traveling to and from Kingdom Hall.

Sincerely,

Golden Valley Congregation of Jehovah's Witnesses, Corporation Officers:


President


Secretary


Treasurer

Date: AUGUST 20, 2012

Cc:

Plymouth Congregation of Jehovah's Witnesses

Russian (speaking) Congregation of Jehovah's Witnesses

Attachment: Site plan of proposed new Kingdom Hall.

Section 106 Coordination



Minnesota Department of Transportation

Office of Environmental Stewardship

Mail Stop 620
395 John Ireland Boulevard
St. Paul, MN 55155

Office Tel: (651) 366-3615

Fax: (651) 366-3603

November 28, 2012

Dr. Mary Ann Heidemann
Government Programs & Compliance Officer
State Historic Preservation Office
Minnesota Historical Society
345 Kellogg Blvd. W.
St. Paul, MN 55101

RE: S.P. 128-091-033 (Douglas Drive (CSAH 102) Reconstruction, Hennepin County, Minnesota; RETAINING WALL)

Dear Dr. Heidemann:

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

On May 23, 2012, your office concurred with MnDOT CRU's determination that the Kingdom Hall of the Golden Valley Congregation of Jehovah's Witnesses is eligible for listing in the National Register of Historic Places under Criterion C. Your office further concurred that the efforts to limit potential impacts of the right-of-way expansion on Duluth Street, and review of the proposed site plan, parking replacement, lawn retention and new access plans will have no adverse effect on the property. These findings were made subject to review of a retaining wall plan; the retaining wall is needed in the parking lot due to shifting of the two-way drive aisle on the south side of the building (see Figure 2, graphic indicating property impacts to property).

In order to complete the Section 106 review of the eligible property, a retaining wall plan has been submitted. In both this submittal and the original submittal, MnDOT CRU sought to retain the distinctive lawn area that mirrors the shape of the church and has been present since the building was constructed in 1957. In consultation with the project engineer, our office questioned whether the lawn slope in this area could be graded in a manner to avoid construction of the proposed retaining wall. The engineers responded that grading the lawn area would create a slope too steep to be maintained with a mower; it would also cut deeper into the lawn and bring vehicles closer to the building. It was concluded that the retaining wall would better preserve the distinctive shape of the lawn while also providing adequate space for the driving lanes.

The plan for the retaining wall has been drawn on a photograph of the site (see attached). The wall will be constructed of white limestone to match the existing planter box wall near the building entrance. The wall will be adjusted in height to match the lawn slope, beginning at 18" nearest the building

entrance and continuing in length for 14 feet, rising to 24” at a corner. The wall then continues eastward from the corner for 39 feet, sloping down to 8” at the eastern edge.

Based on the consultation between the church, the City and their consultants and CRU, it is our determination that the retaining wall plan will have **No Adverse Effect** on the Kingdom Hall Congregation of Jehovah’s Witnesses property.

Please contact me at garneth.peterson@state.mn.us or at (651)366-3615 with any questions.

Sincerely,

A handwritten signature in black ink that reads "Garneth O. Peterson". The signature is written in a cursive style with a large initial 'G'.

Garneth O. Peterson
Historian
Cultural Resources Unit (CRU)

CC: Ron Nims, City of Golden Valley
Alison Harwood, WSB & Associates
Golden Valley Congregation, Jehovah’s Witness Church
MnDOT CRU File

December 18, 2012

Garneth Peterson
MnDOT Cultural Resource Unit
Transportation Building, MS 620
395 John Ireland Blvd.
St. Paul, MN 55155-1899

RE: S.P. 128-091-033
Douglas Drive Reconstruction between TH 55 and CSAH 70
Golden Valley, Hennepin County
SHPO Number: 2012-1738

Dear Ms Peterson:

Thank you for sending us additional information on the above project. We have reviewed the project plans pursuant to the responsibilities given the State Historic Preservation Officer by the National Historic Preservation Act of 1966 and implementing regulation (36CFR800), the Minnesota Historic Sites Act and the Minnesota Field Archaeology Act.

As documented earlier, the Kingdom Hall of the Golden Valley Congregation of Jehovah's Witness is eligible for listing in the National Register of Historic Places. Therefore, all work on the property should meet the Secretary of the Interior's Standards for Rehabilitation.

In our prior consultation about this project, we agreed that the project as proposed will have no adverse effect on the Kingdom Hall of Golden Valley property, subject to review of the retaining wall plans. Based on our review of the retaining wall plans you provided, we find that the plans meet Standards. Therefore, we concur that the project will have **no adverse effect** on the Kingdom Hall.

Feel free to call me at (651) 259-3456 if you have any questions on our review.

Sincerely,


Mary Ann Heidemann, Manager
Government Programs and Compliance

ATTACHMENT D: CORRESPONDENCE

- **Threatened and Endangered Species - Federal**
- **Threatened and Endangered Species - State**
- **Letter/form to US Army Corps of Engineers requesting jurisdictional determination**
- **Hennepin County Letter of Support**
- **Canadian Pacific Railroad**

From: Alcott, Jason (DOT) [jason.alcott@state.mn.us]
Sent: Thursday, May 19, 2011 2:52 PM
To: Courtney Bot
Cc: Reihl, Gary (DOT); Ross, Jennie (DOT)
Subject: S.P. 128-091-003 - ESA (Section 7) - Determination of No Effect
Endangered Species Act of 1973, as amended - Section 7 -Determination of No Effect
S.P. 128-091-003, County State Aid Highway 102
Roadway Reconstruction
City of Golden Valley
Hennepin County

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

Section 7 of Endangered Species Act of 1973, as amended, requires each Federal agency to review any action that it funds, authorizes or carries out to determine whether it may affect threatened, endangered, proposed species or listed critical habitat. Federal agencies, or their designated non-federal representatives (FHWA has delegated Mn/DOT) as their non-federal representative) must consult with the Service if any such effects may occur as a result of their actions. Consultation with the Service is not necessary if the proposed action will not directly or indirectly affect listed species or critical habitat. If a federal agency finds that an action will have no effect on listed species or critical habitat, it should maintain a written record of that finding that includes the supporting rationale.

Based on the information you have provided, it has been determined that no further action under Section 7 of the Act is required. However, if information becomes available indicating that federally-listed species or designated critical habitat may be affected, please contact this office and consultation with the Service will be initiated, if necessary.

Jason Alcott
Minnesota Department of Transportation
Office of Environmental Services
Mail Stop 620
395 John Ireland Boulevard
St. Paul, MN 55155-1899
Phone: 651-366-3605
Email: jason.alcott@state.mn.us



Minnesota Department of Natural Resources

Division of Ecological and Water Resources, Box 25

500 Lafayette Road

St. Paul, Minnesota 55155-4025

Phone: (651) 259-5109 E-mail: lisa.joyal@state.mn.us

May 9, 2011

Correspondence # ERDB 20110459

Ms. Courtney Bot
WSB & Associates, Inc.
701 Xenia Avenue South, Suite 300
Minneapolis, MN 55416

RE: Natural Heritage Review of the proposed CSAH 102 Reconstruction;
T118N R21W Sections 20, 21, 28, 29, 32, & 33; Hennepin County

Dear Ms. Bot,

As requested, the above project has been reviewed for potential effects to known occurrences of rare features. A search of the Minnesota Natural Heritage Information System (NHIS) did identify rare features within an approximate one-mile radius of the proposed project, but these records did not include any federally listed species and were either historical or not of concern given the project details that were provided with the data request form. As such, I do not believe the proposed project will adversely affect any known occurrences of rare features.

The Natural Heritage Information System, a collection of databases that contains information about Minnesota's rare natural features, is maintained by the Division of Ecological and Water Resources, Department of Natural Resources. The NHIS 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. However, the NHIS is not an exhaustive inventory and thus does not represent all of the occurrences of rare features within the state. Therefore, ecologically significant features for which we have no records may exist within the project area.

For environmental review purposes, the results of this Natural Heritage Review are valid for one year; the results are only valid for the project location (noted above) and project description provided on the NHIS Data Request Form. Please contact me if project details change or if an updated review is needed.

Please note that locations of the gray wolf (*Canis lupus*), federally-listed as threatened and state-listed as special concern, and the Canada lynx (*Lynx canadensis*), federally-listed as threatened, are not currently tracked in the NHIS. As such, the Natural Heritage Review does not address these species.

Furthermore, the Natural Heritage Review does not constitute review or approval by the Department of Natural Resources as a whole. Instead, it identifies issues regarding known occurrences of rare features and potential effects to these rare features. Additional rare features for which we have no data may be present in the project area, or there may be other natural resource concerns associated with the proposed project. For these concerns, please contact your DNR Regional Environmental Assessment Ecologist (contact information available at http://www.dnr.state.mn.us/eco/ereview/erp_regioncontacts.html). Please be aware that additional site assessments or review may be required.

Thank you for consulting us on this matter, and for your interest in preserving Minnesota's rare natural resources. An invoice will be mailed to you under separate cover.

Sincerely,

A handwritten signature in black ink that reads "Lisa Joyal".

Lisa Joyal
Natural Heritage Review Coordinator



US Army Corps of Engineers St. Paul District

Request for Corps of Engineers Wetland Delineation Review

Please enter the following general information about the property under review:

Name of property owner		
City of Golden Valley, Minnesota		
Property Address (No. & Street, City, State, Zip Code)		
Douglas Drive from TH55 to CSAH 70 (Medicine Lake Road)		
Lat. 44.997 °	Long. -93.36 °	(decimal degrees)
County Hennepin		
Location: 1/4 Section 29,29 ² Township 118N Range 21W		
Size of review area 35	acre(s)	

By submission of this wetland delineation report I am requesting that the U.S. Army Corps of Engineers, St. Paul District provide me with the following (check only one box):

Wetland Delineation Concurrence. Concurrence with a wetland delineation is a written notification from the Corps concurring, not concurring, or commenting on the wetland boundaries delineated on a property. Under this request, the Corps will not address the jurisdictional status of the wetlands on the property, only the boundaries of the resources within the review area.

Preliminary Jurisdictional Determination. Preliminary Jurisdictional Determination. A preliminary jurisdictional determination is a nonbinding written indication that there may be waters of the United States, including wetlands, on a parcel or indications of the approximate location(s) of waters of the United States or wetlands on a parcel. For purposes of computation of impacts and compensatory mitigation requirements a permit decision made on the basis of a preliminary jurisdictional determination will treat all waters and wetlands in the review area as if they are jurisdictional waters of the U.S. Preliminary jurisdictional determinations are advisory in nature and may not be appealed.

Approved Jurisdictional Determination. An approved jurisdictional determination is an official Corps determination that jurisdictional waters of the United States or navigable waters of the United States, or both, are either present or absent on the property. An approved jurisdictional determination precisely identifies the limits of those waters on the project site determined to be jurisdictional under the Clean Water Act or Rivers and Harbors Act. Approved jurisdictional determinations can be relied upon by the affected party for a period of five years. An approved jurisdictional determination may be appealed through the Corps' administrative appeal process.

In order for the Corps to process your request, the wetland delineation must be prepared in accordance with the 1987 Corps of Engineers Wetland Delineation Manual, any approved Regional Supplements to the 1987 Manual, and the Guidelines for Submitting Wetland Delineations in Minnesota and Wisconsin (<http://www.mvp.usace.army.mil/regulatory/>).

Requestor Alison Harwood

Date 8/31/2011

Name (typed) Alison Harwood



Hennepin County Transportation Department

1600 Prairie Drive
Medina, MN 55340-5421

612-596-0300, Phone
763-478-4000, FAX
763-478-4030, TDD
www.hennepin.us

October 19, 2011

OCT 21 2011

Ms. Jeannine Clancy, P.E.
Director of Public Works
City of Golden Valley
7800 Golden Valley Road
Golden Valley, MN 55427

RE: CSAH 102 (Douglas Drive)
From TH 55 to CSAH 70 (Medicine Lake Drive)
County Project No. 1007

Dear Ms. Clancy:

The purpose of this letter is to express the County's concurrence with Preliminary Layout No. 2 (dated October 14, 2011) for the referenced project.

City staff and their consultant, WSB and Associates, presented the concept layout and supporting traffic analysis to County staff on June 15, 2011. The County provided comments on the design, and the preliminary layout has been revised to reflect these comments.

We look forward to continuing to work with you on the detail design phase for this important project. If you have any questions, please feel free to contact me at 612-596-0360.

Sincerely,

A handwritten signature in blue ink that reads 'Craig M. Twinem'.

Craig M. Twinem, P.E.
Design Division Manager

c: Ron Nims, City of Golden Valley
Jupe Hale, WSB



**CANADIAN
PACIFIC
RAILWAY**

Real Estate – U.S.

501 Marquette Ave, Suite 1525
Minneapolis, MN 55402

November 4, 2011

NOV 07 2011

Ron Nims
Public Works Project Coordinator
City of Golden Valley
7800 Golden Valley Road
Golden Valley, MN 55427

Subject: CSAH 102 (Douglas Drive)

Dear Mr. Nims,

Thank you for sending a preliminary design plan for the reconstruction of Douglas Drive N (CSAH 102.) On the preliminary design, the crossing detail indicates additional footage outside of the dedicated 66' for public right of way may be needed for permanent improvements and temporary construction.

Please be aware that once final plans have been drafted, the city of Golden Valley will need to acquire permanent and temporary easements for improvements and construction. The person to contact when this stage of design is reached is:

Eric Holm – Area Rep Real Estate U.S.
501 Marquette Ave, Suite 1525
Minneapolis, MN 55402
P: 612-904-6141 F: 612-904-6147
Eric.Holm@cpr.ca

Thank you,

Nikol R. Daniels

Nikol Daniels | Area Representative Real Estate Right of Way - US | Suite 1525
501 Marquette Ave Minneapolis MN 55402 | **612 904 6142**

Canadian Pacific *Driving the Digital Railway*

ATTACHMENT E: FLOODPLAIN ASSESSMENT

FLOODPLAIN ANALYSIS FOR DOUGLAS DRIVE BASSETT CREEK

Floodplain Management

The Flood Insurance Rate Map (FIRM) for Golden Valley (Map number 27053C0351E, dated September 2, 2004) has been examined for this project. See Figure 12 for flood boundaries.

The project consists of widening Douglas Drive to improve safety and upgrade pedestrian facilities. To accommodate this widening, the existing box culverts will be extended.

The project will encroach on the following floodway:

FLOODPLAIN ENCROACHMENT		
Floodplain	Type of Encroachment	Length, ft
Bassett Creek	Transverse	Existing: 80 ft Proposed: 120 ft

The culvert extension will involve encroachment into the floodway; however, hydraulic modeling shows that there will be no change in the flood profile upstream of the culvert.

Transverse Encroachment

1. There is no significant potential for interruption of a transportation facility which is needed for emergency vehicles or provides a community's only evacuation route.

a. Is the roadway grade above the 100 year flood elevation?

YES Roadway elevation(s) 878.4

100 year flood elevation 870.9

NO Frequency of overtopping NA

Reason(s) why roadway grade will not be raised: NA

Are there reasonable alternative routes available that are above the 100 year flood elevations? NA

b. If the 100 year flood elevation is not known, does roadway have a history of overtopping?

NO Reference and length of record NA

YES Discuss correcting deficiency NA

c. Describe how emergency services will be maintained during construction:
Existing culvert will remain intact

2. There is no significant impact on natural and beneficial floodplain values.

a. Impacts:

	Beneficial Impacts	Adverse Impacts
Fisheries	None	None
Wetlands	None	Mitigation Required
Plants	None	None
Open Space/Aesthetics	None	None
Public Access (boat/canoe)	N/A	N/A
Channel Changes	None	None
Boat Passage	N/A	N/A
Threatened/Endangered Species	None	None
Water Quality	None	None

b. Minimization/Mitigation Measures:

Permanent erosion control (riprap) will be installed to minimize sediment transport.

Stream work will be done outside the spawning season, if required by the DNR permit.

3. There is no significant increased risk of flooding.

a. Does the project result in any headwater or tailwater elevations that would endanger life or property? NA

Stage Increase 0.7 feet (matches in-place condition)

- b. Are there any special hydraulic features? What is their purpose? No, NA
4. The project will not support and/or result in incompatible floodplain development. Reason(s) why project will not cause incompatible floodplain development:

The city has zoning regulations that control floodplain development.

Longitudinal Encroachment

Discuss reasons why longitudinal encroachment cannot be practicably avoided: N/A

Coordination

The Bassett Creek Watershed Management Commission will require a permit for this work. Required documentation will include demonstration of no additional stage increase above existing conditions and compensatory storage for floodplain fill.

The DNR will require an Individual Permit for this work. Required documentation will include demonstration of no additional increase in stage and completion of a No-Rise Certificate once final design is completed.

The US Army Corps of Engineers does not have specific requirements related to floodplain impacts, but will, as part of the wetland permitting process, require evidence that State and WMC requirements are met.

Within six months of completion of the project, the City must apply for a Letter of Map Revision (LOMR) by submitting as-built survey data and the updated hydraulic model showing there is no increase in stage with the culvert extensions.

Concluding Statement

Based on the above assessment, no significant floodway impacts are expected.

The Hydraulic Analysis and Risk Assessment have been completed and are on the following pages.



District ____ County Hennepin Vicinity of Golden Valley

DATA REQUIREMENTS

1. Location of Crossing: Roadway Douglas Drive C.S. ____ M.P. ____
2. Name of Stream Bassett Creek Bridge No. Old 90614 New ____
3. Current ADT 10,400 Projected ADT 14,700
4. Practicable Detour Available YES X NO ____
If NO, explain _____

(If there is no practicable detour available, then the use of the road must be analyzed. Considerations such as emergency vehicle access, emergency supply and evacuation route, and the need for school bus, milk and mail routes should be studied. Factors to consider include design frequency, depth, duration, and frequency of inundation, and available funding.)

5. Hydraulic Data *(Fill in as appropriate)*
Approximate Flowline Elevation 863.9

Q ₂ = _____	TW ₂ Elevation _____
Q ₅ = _____	TW ₅ Elevation _____
Q ₁₀ = _____	TW ₁₀ Elevation _____
Q ₂₅ = _____	TW ₂₅ Elevation _____
Q ₅₀ = _____	TW ₅₀ Elevation _____
Q ₁₀₀ = <u>670 cfs</u>	TW ₁₀₀ Elevation <u>870.2</u>

(Circle Design Frequency)
Reasons for selecting Design Frequency Mn Rule 6115.0231, Subp. 2,B.

6. Magnitude and Frequency of the smaller of "Overtopping" or "500 yr" (Greatest) flood: 930 cfs 500 year frequency
7. Low member elevation N/A
8. Minimum roadway overflow elevation if appropriate N/A
9. Elevation of high risk property *(i.e. residences)* 872 +/-
Other buildings _____
10. Horizontal location of overflow:
At structure _____ Not at structure X
11. Type of proposed structure:
Bridge _____ Culvert(s) Extend Existing Twin 8x8 RCBC

(If the proposed structure is a bridge with the sag point located on the bridge and there is ice and debris potential, strong consideration should be given to using Q₅₀ as design discharge with 3 ft of clearance between the 50 year tailwater stage and low member.)



ASSESSMENT

1. Backwater Damage

(Major flood damage in this context refers to shopping centers, hospitals, chemical plants, power plants, housing developments, etc.)

- 1a. Is the overtopping flood greater than the 100 yr flood?
YES (Go to 1b) NO (Go to 1e)
- 1b. Is the overtopping flood greater than the “greatest” flood (500 yr frequency)?
YES (Go to 1d) NO (Go to 1c)
- 1c. Is there major flood damage potential for the overtopping flood?
NO (Go to 1e)
- 1d. Is there major flood damage potential for the “greatest” flood (500 yr frequency)?
NO (Go to 1e)
- 1e. Will there be flood damage potential to residence(s) or other buildings during a 100 yr flood?
YES (Go to 1f) NO (Go to 2)
- 1f. Could this flood damage occur even if the roadway crossing wasn’t there?
YES (Go to 1g) NO (Go to 1h)
- 1g. Could this flood damage be significantly increased by the backwater caused by the proposed crossing?
YES (Go to 1h) NO (Go to 2)
- 1h. Could the stream crossing be designed in such a manner as to minimize this potential flood damage?
YES (Go to 1i) NO (Go to 2)
- 1i. Does the value of the building(s) and/or its contents have sufficient value to justify further evaluation of risk and potential flood damage?
NO (Go to 2)

LTEC DESIGN*

**Least Total Economic Cost*

YES
(Go to 1e)

YES
(Go to 1e)

YES
(Go to 2)

2. Traffic related Losses

- 2a. Is the overtopping flood greater than the “greatest” flood (500 yr frequency)?
YES (Go to 3) NO (Go to 2b)
- 2b. Does the ADT exceed 50 vehicles per day?
YES (Go to 2c) NO (Go to 3)
- 2c. Would the “duration of road closure”(in days) multiplied by the “length of detour minus the length of normal route” (in miles) exceed 20?
YES (Go to 2d) NO (Go to 3)



- 2d. Does the annual risk cost for traffic related costs exceed 10% of the annual capital costs?
NO ___ (Go to 3) *(See Figures A & B for assistance)*
http://www.dot.state.mn.us/bridge/Hydraulics-Internet-Web-Site/MnDOT_Drainage_Manual/appendix%20A.pdf
YES ___
(Go to 3)
3. Roadway and/or Structure Repair Costs
- 3a. Is the overtopping flood less than a 100 yr frequency flood?
YES ___ (Go to 3b) NO X (Go to 3i)
- 3b. Compare the tailwater (TW) elevation with the roadway sag point elevation for the overtopping flood.
(Check the appropriate category.)
___ When TW is above the sag point (Go to 4)
___ When TW is between 0 and 0.5 ft below sag point (Go to 3c)
___ When TW is between 0.5 and 1.0 ft below sag point (Go to 3d)
___ When TW is between 1.0 and 2.0 ft below sag point (Go to 3e)
___ When TW is more than 2.0 ft below sag point (Go to 3g)
- 3c. Does the embankment have a good erosion resistant vegetative cover?
YES ___ (Go to 3i) NO ___ (Go to 3d)
- 3d. Is the shoulder constructed from erosion resistant material such as paved, coarse gravel, or clay type soil?
YES ___ (Go to 3i) NO ___ (Go to 3e)
- 3e. Will the duration of overtopping for the 25 year flood exceed 1 hour?
YES ___ (Go to 3f) NO ___ (Go to 3i)
- 3f. Is the embankment constructed from erosion resistant material such as clay type soil?
YES ___ (Go to 3i) NO ___ (Go to 3g)
- 3g. Is the overtopping flood less than a 25 year frequency flood?
YES ___ (Go to 3h) NO ___ (Go to 3i)
- 3h. Will the cost of protecting the roadway and/or embankment from severe damage caused by overtopping exceed the cost of providing additional culvert or bridge capacity?
NO ___ (Go to 3i)
YES ___
(Go to 3i)
- 3i. Is there damage potential to the structure caused by scour, ice, debris or other means during the lesser of the overtopping flood or the 100 year flood?
YES ___ (Go to 3j) NO X (Go to 4)



<p>3j. Will the cost of protecting the structure from damage exceed the cost of providing additional culvert or bridge water capacity? NO ___ (Go to 4)</p>	<p>YES ___ (Go to 4)</p>
<p>4. Will the capital cost of the structure exceed \$500,000? NO <u>X</u> (Go to 5)</p>	<p>YES ___ (Go to 5)</p>
<p>5. In your opinion, are there any other factors which you feel should require further study through a risk analysis? NO <u>X</u></p>	<p>YES ___ (Indicate)</p>

No checks in the LTEC DESIGN column:

X The risk assessment has demonstrated that potential flood damage costs, traffic related costs, roadway and/or structure repair costs are minor and therefore disregarded for this project.

(Proceed with the design, selecting the lowest acceptable grade line and the smallest waterway opening consistent with the constraints imposed on the project.)

One or more checks in the LTEC DESIGN column:

___ The risk assessment indicates further analysis in the category checked may be required utilizing the LTEC design process (see attached risk analysis) or justification (below) why it is not required.

JUSTIFICATION:

I hereby certify that this report was prepared by me or under my direct supervision and that I am a duly registered Professional Engineer under the laws of the State of Minnesota:

Signature: PRELIMINARY - to be signed when final design is complete

Registration Number:

Date: September 25, 2012

ATTACHMENT F: WETLAND IMPACTS ANALYSIS

WETLAND ASSESSMENT & TWO PART FINDING

County: Hennepin

Watershed: 20 - Mississippi River (Metro); Bassett Creek

State Aid Manual Chapter 5.1, VI.J

BACKGROUND

Wetlands within the project corridor were delineated in conformance with the US Corps of Engineers guidelines in 2011 as shown on **Figures 13A and 13B**. The delineation was approved in 2011 by the City of Golden Valley, the Local Government Unit for the Wetland Conservation Act. The US Army Corps of Engineers was also contacted to review and approve the wetland delineation and provide a jurisdictional determination. This determination is currently under review (**Attachment D**).

WETLAND ASSESSMENT

The table showing the assessment is attached.

AVOIDANCE ALTERNATIVES

Two alternatives and the No Build condition were considered as part of the project development. These alternatives included reviewing wetland impacts. A description of these alternatives is provided below.

No Build Alternative: The No Build Alternative assumes that Douglas Drive (CSAH 102) between Trunk Highway (TH) 55 and Medicine Lake Road (CSAH 70) remains in its current state. No wetlands would be impacted by this alternative. However, this alternative does not address the stated primary needs since it would not address the lack of pedestrian and bicycle accommodations, it would not address the current safety issues identified, nor would it adequately accommodate the increases in traffic expected along the corridor. The primary needs and deficiencies of the existing roadway are described in detail in Section III of the Project Memorandum.

Although the No Build Alternative does not address this corridor's purpose and needs, it is a federal requirement to carry the No Build Alternative through the Environmental Assessment process as a baseline for comparison.

Other Alternatives: A variety of alternatives were analyzed as part of the Project Memorandum (PM) process. A complete description of these alternatives can be reviewed within the PM. A summary of two major alternatives that were considered to meet the purpose and needs of the project are provided below.

Alternative 1 - Maintain 3 Lanes from Golden Valley Rd to Medicine Lake Rd: Under this alternative, the number of through lanes that service Douglas Dr would remain mostly the same with the exception with TH 55 and from south of Duluth St to Medicine Lake Rd. Between just north of the North TH 55 Frontage Rd to TH 55, this alternative would have left the lane configuration in its existing condition, with the southbound shared left-through lane. This alternative was rejected because the lane configuration must operate as a split phase which is inefficient. Between just south

of Duluth St to Medicine Lake Rd, the three lane section was considered. However, this configuration was rejected given that the peak hour analysis indicated that the AM peak hour in the southbound direction exceeds the capacity of the single through lane. In addition, given that the majority of the corridor would maintain the same lane configuration as the preferred alternative, and that the Honeywell Pond would be disturbed under both scenarios, the wetland impacts would not be reduced under this alternative.

Alternative 2 - Shift Corridor East or West: Both of these configurations were only considered for the 3-lane section of the corridor (north of TH 55 Frontage Rd to St. Croix Ave). The only wetland along the stretch that would be shifted is the Honeywell Pond, which would be impacted equally under either Alternative 2 or the Preferred Alternative. Therefore, Alternative 2 would not reduce wetland impacts along the project corridor.

Additional alternatives involving several of the intersections were reviewed, but these alternatives would not have changed impacts to the wetlands along the corridor. Therefore, they were not addressed in this assessment.

AVOIDANCE ALTERNATIVES			
	Anticipated Encroachment per Alternative, acres		
	No Build Alternative	Alt. 1 Maintain 3 Lanes from Golden Valley Rd to Medicine Lake Rd	Alt. 2 Alignment Shift
ID # A	0	0.12	0.12
ID # B	0	0.11	0.11
ID # C	0	1.53	1.53
ID # D	0	0.02	0.02
Total, acres	0	1.78	1.73

MINIMIZATION MEASURES

The road improvements have been designed to generally remain within the existing alignment. The road is being designed with an urban section, thus reducing impacts associated with roadside ditches. The sidewalk and trail in the vicinity of the wetlands are designed with a 1:3 slope to reduce impacts to the adjacent wetlands.

The landscape is generally flat in the project area and therefore including retaining walls to minimize wetland impact is not practical, nor would it significantly reduce wetland impacts.

WETLAND IMPACTS

WETLAND IMPACTS (Preferred Alternative)										
	Anticipated Encroachment per Type of Wetland, acres									
	1	1L	2	3	4	5	6	7	8	
ID # A	0.12									
ID # B	0.11									
ID # C					1.53					
ID # D				0.02						
Total	0.23			0.02	1.53					1.78

COMPENSATION (REPLACEMENT/ENHANCEMENTS)

The project includes upgrading the existing roadway to either a three-lane urban section with center two-way turn lane or four-lane urban section with dedicated turn lanes to address existing and future safety concerns along the corridor. A separated six foot walk and eight to ten foot separated multi-use trail will also be constructed on the east and west side of the road, respectively, to address pedestrian safety. Wetland mitigation for the road construction is anticipated through the BWSR Road Mitigation Program since the project will address safety issues. Mitigation for new sidewalks or trails will be through the purchase of wetland credit from the BWSR Road Mitigation program or through a private bank.

CONCLUSION

Based upon the above factors and considerations, it is determined that there is no practicable alternative to the proposed construction in the identified wetlands, and the proposed action includes all practicable measures to minimize harm to the wetlands.

WETLAND ASSESSMENT - PREFERRED ALTERNATIVE: Reconstruction with Separated Sidewalk & Trail				
	ID # A	ID # B	ID # C	ID # D
Classification (Type of wetland)	Seasonally Flooded Basin/Shallow Marsh	Seasonally Flooded Basin/Shallow Marsh	Deep Marsh	Shallow Marsh
Approx. Basin Size, acres	1.2	1.9	1.77	0.06
Anticipated Encroachment Size, acres	0.12	0.11	1.53	0.02
Type of Impact: fill, excavation, drain	Fill	Fill	Excavation	Fill
% Encroachment to Basin Size	10%	5.8%	86%	33%
Protected wetland? Y/N	N	N	N	N
Connection to other wetlands? Y/N	N	N	N	Y
Impacts to public water supply? Y/N	N	N	N	N
Water Quality impacts? ----recharge/discharge ----water pollution ----flooding ----sedimentation ----erosion	N	N	N	N
Impacts to fish/wildlife & habitat?	N	N	N	N
Impacts to recreational, cultural, or scientific uses?	N	N	N	N

ATTACHMENT G: ENVIRONMENTAL JUSTICE



Memorandum

To: *Mark Grimes, Director of Planning & Development - City of Golden Valley*

From: *Jack Corkle, Senior Transportation Planner, PTP, AICP
Addison Lewis, Community Planner*

Copy: *Jupe Hale, WSB & Associates*

Date: *September 25, 2012*

Re: *CSAH 102 (Douglas Drive) – Environmental Justice Review
WSB Project No. 1701-05*

WSB & Associates, Inc. has collected and reviewed the data for minority populations and poverty status as it relates to the residents within the project area. Review of this information is necessary to the impacts analysis for the CSAH 102 (Douglas Drive) Categorical Exclusion (CE). Additional background for this Environmental Justice review requirements are provided below.

The minority population and poverty status data for the residents in the project area was collected through the use of the 2010 US Census Bureau's Factfinder data sets. This is the standard first step in completing the Environmental Justice review.

A draft of the data and information WSB collected is provided below. We are requesting the City of Golden Valley review this information for its accuracy. If upon review, the city determines that the minority or poverty information is not accurate based on their familiarity with the project area, we would like to discuss the additional information with you.

If you have any questions upon reviewing the following information, please contact Jack Corkle by email message at jcorkle@wsbeng.com or by telephone at 763.231.4871. We would greatly appreciate your response by October 5, 2012.

CSAH 102 (Douglas Drive) Environmental Assessment Text for Environmental Justice

Background

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations, dated February 11, 1994, directed that "each federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States..." The proposed

project has federal funding and federal permit requirements and is considered a federal project for purposes of compliance with the Executive Order.

Project Area Demographics

The first step in the Environmental Justice evaluation and documentation process is to assess the project area in terms of minority and income characteristics.

Minority Populations

The most current census information available that was used in this analysis is the 2010 Census. The smallest unit of Census data analysis is the Census Tract. The project area lies entirely within Census Tract 216.02. Minority data for the Census Tract that includes the project area is summarized in **Table 1**.

Table 1. Minority Population Information by Census Tract (2010 Census)

Location	Total Population	White Alone Individuals	Minority ¹ Individuals	Percent Minority
Census Tract 216.02	5,567	4,625	942	16.9%
Hennepin County	1,152,425	856,834	295,591	25.6%

¹'Minority' is comprised of all races other than White Alone.

The overall percent of minority races identified in the project area Census Tract is 16.9 percent. The county-wide average is approximately 25.6 percent.

The City of Golden Valley was contacted as part of this Environmental Justice evaluation process. The city concurred with the data available that indicates there is not a concentration of minority individuals in the project corridor.

Low Income Populations:

Following MnDOT guidelines for Environmental Justice analysis, "low-income" households are defined as those with incomes below the poverty level as defined by the Department of Health and Human Services (DHHS) guidelines. Income-related data from the 2010 Census is only available as an estimate at the Census Tract level. The 2010 American Community Survey (ACS) 5-Year Estimates were used for the purpose of obtaining this data. The proposed project lies entirely within Census Tract 216.02.

Data on median income and percent of households below the poverty level are presented in **Table 2**. The overall percent of the population with incomes below the poverty level within Census Tract 216.02 is estimated at 13.9 percent (+/-5.9). The economic characteristics of the project area are considered to be generally consistent with that of Hennepin County, which estimates the county-wide population below the poverty level to be 12.1 percent (+/-0.4). The median household income for households within the Census Tract is estimated to be \$60,881 (+/- \$11,069). This would also be considered to be generally consistent with the median household income of Hennepin County as a whole, which is estimated to be \$61,328 (+/- \$421).

Table 2. Household Income Information by Census Tract (2010 ACS 5-Year Estimates)

Location	Household Median Income	Population Below DHHS Poverty Level
Census Tract 216.02	\$60,881	13.9%
Hennepin County	\$61,328	12.1%

The City of Golden Valley was contacted as part of this Environmental Justice evaluation process. The city concurred with the data available that indicates there is not a concentration of low income households in the project corridor.

Minority and Low-Income Analysis Conclusion:

Based on the information provided above, there are no known concentrations of low income or minority populations in the project area.

Environmental Justice Finding:

The proposed action will not have disproportionately high and adverse human health or environmental effects to any minority or low income populations.

ATTACHMENT H: PUBLIC MEETING COMMENT

**Douglas Drive Reconstruction Project
Corridor Property Owners
Public Informational Open House**



7800 Golden Valley Road, Golden Valley, MN 55427
Wednesday, October 5, 2011 from 4 to 7 pm

Name: Ric Lager
Address: 6306 Golden Valley Road
Phone: 763-377-2006 lagerandco@comcast.net

Please check all applicable items:

- I have an invisible pet fence.
- I have an automatic sprinkler system.
- I have a sump pump. It discharges (location) _____
- I have retaining walls and/or landscape features within 10 feet of the street.
- I have sanitary sewer service problems.

Comments (e.g., drainage concerns, sight problems, safety concerns, etc.):

I own these parcels 6300 Golden Valley Road
6306 Golden Valley Road

I would be interested in meeting with the property
acquisition team as their timetable proceeds.
My concerns are with the amount of right away
taken from the 6300 Golden Valley Road parcel, does
the parcel still meet set back requirements.
Also, would the property acquisition team be interested
in the purchase of the 6306 Golden Valley Road parcel
at a later date.

ATTACHMENT I: BRIDGE INFORMATION

Mn/DOT Structure Inventory Report

Bridge ID: 90614 CSAH 102(DOUG DR) over BASSETT CREEK

Date: 09/25/2012

+ GENERAL +	+ ROADWAY +	+ INSPECTION +
Agency Br. No. 387	Bridge Match ID (TIS) 1	Deficient Status ADEQ
District METRO Maint. Area	Roadway O/U Key 1-ON	Sufficiency Rating 68.5
County 27 - HENNEPIN	Route Sys/Nbr CSAH 102	Last Inspection Date 05-17-2012
City GOLDEN VALLEY	Roadway Name or Description	Inspection Frequency 24
Township	CSAH 102	Inspector Name HENNEPIN
Desc. Loc. 0.5 MI S OF JCT CSAH 66	Roadway Function MAINLINE	Structure A-OPEN
Sect., Twp., Range 32 - 118NN - 21W	Roadway Type 2 WAY TRAF	+ NBI CONDITION RATINGS +
Latitude 44d 59m 35.54s	Control Section (TH Only)	Deck N
Longitude 93d 21m 36.55s	Ref. Point (TH Only)	Superstructure N
Custodian COUNTY	Date Opened to Traffic 07-01-1959	Substructure N
Owner COUNTY	Detour Length 2 mi.	Channel 6
Inspection By HENNEPIN COUNTY	Lanes 4 Lanes ON Bridge	Culvert 5
BMU Agreement	ADT (YEAR) 11,503 (2008)	+ NBI APPRAISAL RATINGS +
Year Built 1937	HCA DT 460	Structure Evaluation 5
Year Fed Rehab	Functional Class. URB/MINOR ART	Deck Geometry N
Year Remodeled 1959	+ RDWY DIMENSIONS +	Underclearances N
Temp	If Divided NB-EB SB-WB	Waterway Adequacy 8
Plan Avail. COUNTY	Roadway Width 44.0 ft	Approach Alignment 8
+ STRUCTURE +	Vertical Clearance	+ SAFETY FEATURES +
Service On HWY;PED	Max. Vert. Clear.	Bridge Railing 0-SUBSTANDARD
Service Under STREAM	Horizontal Clear.	GR Transition 0-SUBSTANDARD
Main Span Type CONC BOX CULV	Lateral Clr. - L/Rt	Appr. Guardrail 0-SUBSTANDARD
Main Span Detail	Appr. Surface Width 44.0 ft	GR Termini 0-SUBSTANDARD
Appr. Span Type	Roadway Width	+ IN DEPTH INSP. +
Appr. Span Detail	Median Width	Frac. Critical
Skew	+ MISC. BRIDGE DATA +	Underwater
Culvert Type W88D	Structure Flared NO	Pinned Asbly.
Barrel Length 79 ft	Parallel Structure NONE	Spec. Feat.
Number of Spans	Field Conn. ID	+ WATERWAY +
MAIN: 2 APPR: 0 TOTAL: 2	Cantilever ID	Drainage Area 23.5 sq mi
Main Span Length 8.0 ft	Foundations	Waterway Opening 128 sq ft
Structure Length 18.5 ft	Abut.	Navigation Control NO PRMT REQD
Deck Width	Pier	Pier Protection NOT APPL
Deck Material N/A	Historic Status NOT ELIGIBLE	Nav. Vert./Horz. Clr.
Wear Surf Type BITUMINOUS	On - Off System OFF	Nav. Vert. Lift Bridge Clear.
Wear Surf Install Year	+ PAINT +	MN Scour Code E-CULVERT
Wear Course/Fill Depth 7.00 ft	Year Painted Pct. Unsound	Scour Evaluation Year 1990
Deck Membrane NONE	Painted Area	+ CAPACITY RATINGS +
Deck Protect. N/A	Primer Type	Design Load UNKN
Deck Install Year	Finish Type	Operating Rating HS 59.10
Structure Area	+ BRIDGE SIGNS +	Inventory Rating HS 30.20
Roadway Area	Posted Load NOT REQUIRED	Posting
Sidewalk Width - L/R 5.0 ft 0.6 ft	Traffic NOT REQUIRED	Rating Date 05-01-1990
Curb Height - L/R 0.50 ft 0.50 ft	Horizontal NOT REQUIRED	Mn/DOT Permit Codes
Rail Codes - L/R 35 NN	Vertical NOT APPLICABLE	A: N B: N C: N

Mn/DOT BRIDGE INSPECTION REPORT

Inspected by: HENNEPIN COUNTY

BRIDGE 90614 CSAH 102(DOUG DR) OVER BASSETT CREEK

INSP. DATE: 05-17-2012

County: HENNEPIN	Location: 0.5 MI S OF JCT CSAH 66	Length: 18.5 ft
City: GOLDEN VALLEY	Route: CSAH 102 Ref. Pt.: 000+00.570	Deck Width:
Township:	Control Section: Maint. Area:	Rdwy. Area / Pct. Unsnd:
Section: 32 Township: 118NN Range: 21W	Local Agency Bridge Nbr: 387	Paint Area/ Pct. Unsnd:
Span Type: CONC BOX CULV		Culvert W88D / 79 ft

NBI Deck: N Super: N Sub: N Chan: 6 Culv: 5 Open, Posted, Closed: OPEN

Appraisal Ratings - Approach: 8 Waterway: 8 MN Scour Code: E-CULVERT Def. Stat: ADEQ Suff. Rate: 68.5

Required Bridge Signs - Load Posting: NOT REQUIRED Traffic: NOT REQUIRED

Horizontal: NOT REQUIRED Vertical: NOT APPLICABLE

STRUCTURE UNIT: 0

ELEM NBR	ELEMENT NAME	ENV	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4	QTY CS 5
334	METAL RAIL-COATED	4	05-17-2012	43 LF	0	0	0	38	5
			05-19-2010	43 LF	0	0	38	5	0
Notes: [334. 2-Line pipe rail on W side only. Rail has major rust w/ some pitting. Some holes in rail.]									
241	CONCRETE CULVERT	2	05-17-2012	157 LF	110	39	8	0	N/A
			05-19-2010	157 LF	132	25	0	0	N/A
Notes: [241. Crack up the wall and across top slab in both barrels near center. Vert cracks, honeycombed areas and some spalls in culvert. Honeycomb in old portion of top slab. Deterioration and spalling @ bottom of N and S storm sewers. N Barrel-diag crack @ sewer outlet. S Barrel-rebars are exposed in top slab. Barrel is spalled @ W end const joint.]									
388	CULVERT HEADWALL	2	05-17-2012	2 EA	0	2	0	0	N/A
			05-19-2010	2 EA	0	2	0	0	N/A
Notes: [388. Diag crack in center wings. Wings weathered @ both ends. West-vert cracks and spalls @ headwall. 2' X 3' spall @ S wingwall.]									
964	CRITICAL FINDING	2	05-17-2012	1 EA	1	0	N/A	N/A	N/A
			05-19-2010	1 EA	1	0	N/A	N/A	N/A
Notes: [964.]									
981	SIGNING	2	05-17-2012	1 EA	1	0	0	0	0
			05-19-2010	1 EA	1	0	0	0	0
Notes: [981. No Parking signs on both sides of roadway.]									
984	DRAINAGE	2	05-17-2012	1 EA	0	1	0	N/A	N/A
			05-19-2010	1 EA	0	1	0	N/A	N/A
Notes: [984. Storm sewer outlet in both outside walls @ E end.]									
985	SLOPES	2	05-17-2012	1 EA	1	0	0	N/A	N/A
			05-19-2010	1 EA	1	0	0	N/A	N/A
Notes: [985. Erosion @ NE wing.]									
986	CURB & SIDEWALK	2	05-17-2012	1 EA	0	1	0	N/A	N/A
			05-19-2010	1 EA	0	1	0	N/A	N/A
Notes: [986. Conc walk on W side only.]									
987	ROADWAY OVER CULVERT	2	05-17-2012	1 EA	0	1	0	N/A	N/A
			05-19-2010	1 EA	1	0	0	N/A	N/A
Notes: [987. Trans and long cracks in bit surface. Surface is sealed. 10' section of curb and gutter settled on W side near CB.]									

Mn/DOT BRIDGE INSPECTION REPORT

Inspected by: HENNEPIN COUNTY

BRIDGE 90614 CSAH 102(DOUG DR) OVER BASSETT CREEK

INSP. DATE: 05-17-2012

STRUCTURE UNIT: 0

ELEM NBR	ELEMENT NAME	ENV	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4	QTY CS 5
988	MISCELLANEOUS	2	05-17-2012	1 EA	0	1	0	N/A	N/A
			05-19-2010	1 EA	0	1	0	N/A	N/A

Notes: [988. Stone masonry retaining wall in SW corner. Debris @ inlet.]

General Notes: *Bridge 90614 (387) CSAH 102 (Douglas Dr.) / Basset Creek 5/17/12 BJJ & PTH.

Recommended Repairs:

- 334. Repair or replace railing.
- 988. Clean debris away from inlet(W side).

Inspector's Signature

Reviewer's Signature / Date



STATE AID FOR LOCAL TRANSPORTATION
 HYDRAULIC FLOOD ANALYSIS

Feb 2011

Page 1 of 1

Bridge Number 90614

Date September 14, 2011

* Stream name	<u>Bassett Creek</u>
Drainage area	<u>23.5 sq. mi.</u>
Flood of record	<u>Unknown</u>
Maximum observed highwater elevation	<u>Unknown</u>
* Design flood (- year frequency)	<u>670 cfs</u>
Road sag point elevation	<u>878.4</u>
Design stage	<u>870.2</u>
Total stage increase	<u>0.7 ft</u>
* Headwater elevation	<u>870.9</u>
Stage increase of the inplace condition	<u>0.7 ft</u>
Min. waterway opening below elevation	<u>128 sq. ft.</u>
Low member at or above elevation	<u>N/A</u>
Mean velocity through structure	<u>5.2 fps</u>
Main channel velocity	<u>6.4 fps</u>
Overtopping flood or Greatest flood (500 -year frequency)	<u>930 cfs</u>
Road sag point elevation	<u>878.4</u>
Stage	<u>870.8</u>
Total stage increase	<u>1.5 ft</u>
* Headwater elevation	<u>872.3</u>
Stage increase of the inplace condition	<u>1.5 ft</u>
Mean velocity through structure	<u>7.3 fps</u>
* Basic flood (100-year frequency)	<u>670 cfs</u>
Stage	<u>870.2</u>
Total stage increase	<u>0.7 ft</u>
* Headwater elevation	<u>870.9</u>
Stage increase of the inplace condition	<u>0.7 ft</u>
Min. overflow area above sag point elev.	<u>N/A</u>
Mean overflow velocity	<u>N/A</u>
Mean velocity through structure	<u>5.2 fps</u>
Approximate flowline elevation	<u>863.9</u>
Estimated pier scour elevation	<u>N/A</u>
Year frequency scour was calculated for	<u>N/A</u>
Skew	<u>0</u>
Scour Code	<u>E-Culvert</u>

*Items to be shown on Grading Plan



District ____ County Hennepin Vicinity of Golden Valley

DATA REQUIREMENTS

1. Location of Crossing: Roadway Douglas Drive C.S. ____ M.P. ____
2. Name of Stream Bassett Creek Bridge No. Old 90614 New ____
3. Current ADT 10,400 Projected ADT 14,700
4. Practicable Detour Available YES X NO ____
If NO, explain _____

(If there is no practicable detour available, then the use of the road must be analyzed. Considerations such as emergency vehicle access, emergency supply and evacuation route, and the need for school bus, milk and mail routes should be studied. Factors to consider include design frequency, depth, duration, and frequency of inundation, and available funding.)

5. Hydraulic Data *(Fill in as appropriate)*
Approximate Flowline Elevation 863.9

Q ₂ = _____	TW ₂ Elevation _____
Q ₅ = _____	TW ₅ Elevation _____
Q ₁₀ = _____	TW ₁₀ Elevation _____
Q ₂₅ = _____	TW ₂₅ Elevation _____
Q ₅₀ = _____	TW ₅₀ Elevation _____
Q ₁₀₀ = <u>670 cfs</u>	TW ₁₀₀ Elevation <u>870.2</u>

(Circle Design Frequency)
Reasons for selecting Design Frequency Mn Rule 6115.0231, Subp. 2,B.

6. Magnitude and Frequency of the smaller of "Overtopping" or "500 yr" (Greatest) flood: 930 cfs 500 year frequency
7. Low member elevation N/A
8. Minimum roadway overflow elevation if appropriate N/A
9. Elevation of high risk property *(i.e. residences)* 872 +/-
Other buildings _____
10. Horizontal location of overflow:
At structure _____ Not at structure X
11. Type of proposed structure:
Bridge _____ Culvert(s) Extend Existing Twin 8x8 RCBC

(If the proposed structure is a bridge with the sag point located on the bridge and there is ice and debris potential, strong consideration should be given to using Q₅₀ as design discharge with 3 ft of clearance between the 50 year tailwater stage and low member.)



ASSESSMENT

1. Backwater Damage

(Major flood damage in this context refers to shopping centers, hospitals, chemical plants, power plants, housing developments, etc.)

- 1a. Is the overtopping flood greater than the 100 yr flood?
YES (Go to 1b) NO (Go to 1e)
- 1b. Is the overtopping flood greater than the “greatest” flood (500 yr frequency)?
YES (Go to 1d) NO (Go to 1c)
- 1c. Is there major flood damage potential for the overtopping flood?
NO (Go to 1e)
- 1d. Is there major flood damage potential for the “greatest” flood (500 yr frequency)?
NO (Go to 1e)
- 1e. Will there be flood damage potential to residence(s) or other buildings during a 100 yr flood?
YES (Go to 1f) NO (Go to 2)
- 1f. Could this flood damage occur even if the roadway crossing wasn’t there?
YES (Go to 1g) NO (Go to 1h)
- 1g. Could this flood damage be significantly increased by the backwater caused by the proposed crossing?
YES (Go to 1h) NO (Go to 2)
- 1h. Could the stream crossing be designed in such a manner as to minimize this potential flood damage?
YES (Go to 1i) NO (Go to 2)
- 1i. Does the value of the building(s) and/or its contents have sufficient value to justify further evaluation of risk and potential flood damage?
NO (Go to 2)

LTEC
DESIGN*

**Least Total Economic Cost*

YES
(Go to 1e)

YES
(Go to 1e)

YES
(Go to 2)

2. Traffic related Losses

- 2a. Is the overtopping flood greater than the “greatest” flood (500 yr frequency)?
YES (Go to 3) NO (Go to 2b)
- 2b. Does the ADT exceed 50 vehicles per day?
YES (Go to 2c) NO (Go to 3)
- 2c. Would the “duration of road closure”(in days) multiplied by the “length of detour minus the length of normal route” (in miles) exceed 20?
YES (Go to 2d) NO (Go to 3)



- 2d. Does the annual risk cost for traffic related costs exceed 10% of the annual capital costs?
NO ___ (Go to 3) *(See Figures A & B for assistance)*
http://www.dot.state.mn.us/bridge/Hydraulics-Internet-Web-Site/MnDOT_Drainage_Manual/appendix%20A.pdf
YES ___
(Go to 3)
3. Roadway and/or Structure Repair Costs
- 3a. Is the overtopping flood less than a 100 yr frequency flood?
YES ___ (Go to 3b) NO X (Go to 3i)
- 3b. Compare the tailwater (TW) elevation with the roadway sag point elevation for the overtopping flood.
(Check the appropriate category.)
___ When TW is above the sag point (Go to 4)
___ When TW is between 0 and 0.5 ft below sag point (Go to 3c)
___ When TW is between 0.5 and 1.0 ft below sag point (Go to 3d)
___ When TW is between 1.0 and 2.0 ft below sag point (Go to 3e)
___ When TW is more than 2.0 ft below sag point (Go to 3g)
- 3c. Does the embankment have a good erosion resistant vegetative cover?
YES ___ (Go to 3i) NO ___ (Go to 3d)
- 3d. Is the shoulder constructed from erosion resistant material such as paved, coarse gravel, or clay type soil?
YES ___ (Go to 3i) NO ___ (Go to 3e)
- 3e. Will the duration of overtopping for the 25 year flood exceed 1 hour?
YES ___ (Go to 3f) NO ___ (Go to 3i)
- 3f. Is the embankment constructed from erosion resistant material such as clay type soil?
YES ___ (Go to 3i) NO ___ (Go to 3g)
- 3g. Is the overtopping flood less than a 25 year frequency flood?
YES ___ (Go to 3h) NO ___ (Go to 3i)
- 3h. Will the cost of protecting the roadway and/or embankment from severe damage caused by overtopping exceed the cost of providing additional culvert or bridge capacity?
NO ___ (Go to 3i)
YES ___
(Go to 3i)
- 3i. Is there damage potential to the structure caused by scour, ice, debris or other means during the lesser of the overtopping flood or the 100 year flood?
YES ___ (Go to 3j) NO X (Go to 4)



<p>3j. Will the cost of protecting the structure from damage exceed the cost of providing additional culvert or bridge water capacity? NO ___ (Go to 4)</p>	<p>YES ___ (Go to 4)</p>
<p>4. Will the capital cost of the structure exceed \$500,000? NO <u>X</u> (Go to 5)</p>	<p>YES ___ (Go to 5)</p>
<p>5. In your opinion, are there any other factors which you feel should require further study through a risk analysis? NO <u>X</u></p>	<p>YES ___ (Indicate)</p>

No checks in the LTEC DESIGN column:

X The risk assessment has demonstrated that potential flood damage costs, traffic related costs, roadway and/or structure repair costs are minor and therefore disregarded for this project.

(Proceed with the design, selecting the lowest acceptable grade line and the smallest waterway opening consistent with the constraints imposed on the project.)

One or more checks in the LTEC DESIGN column:

___ The risk assessment indicates further analysis in the category checked may be required utilizing the LTEC design process (see attached risk analysis) or justification (below) why it is not required.

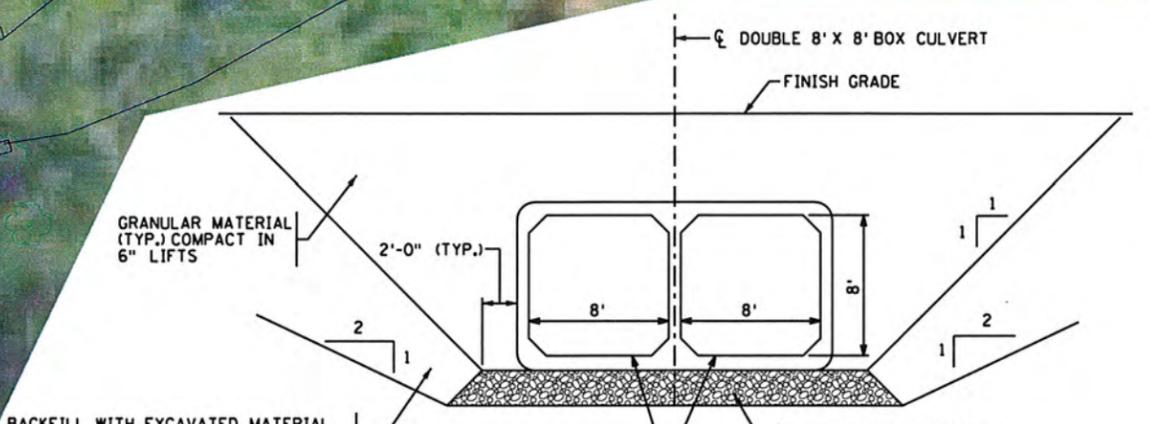
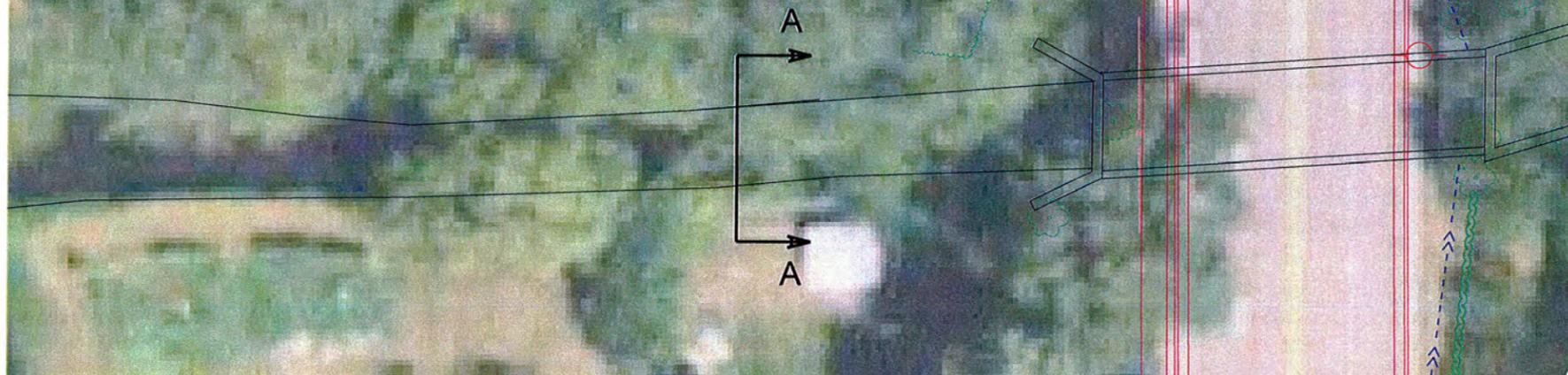
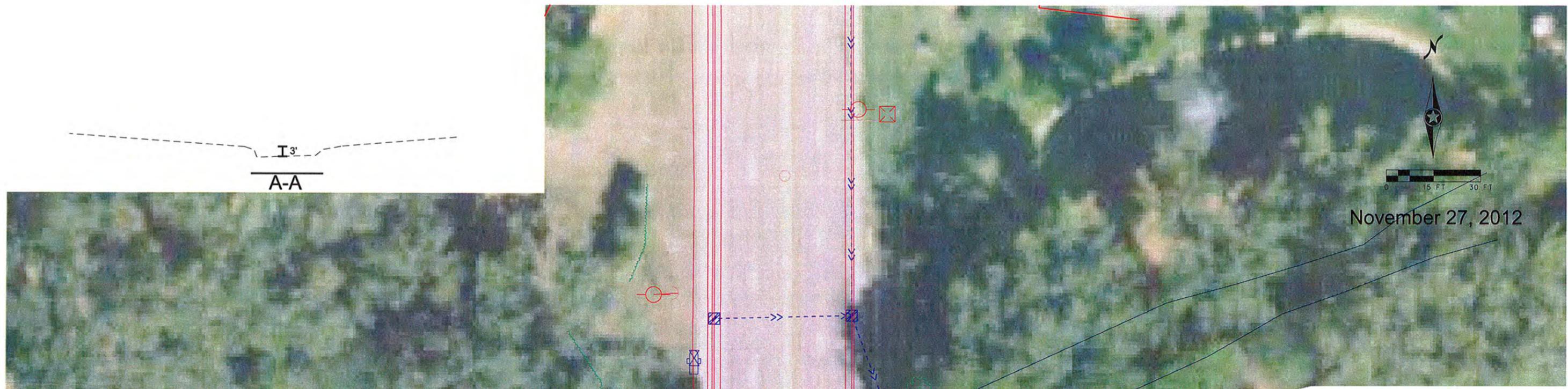
JUSTIFICATION:

I hereby certify that this report was prepared by me or under my direct supervision and that I am a duly registered Professional Engineer under the laws of the State of Minnesota:

Signature: PRELIMINARY - to be signed when final design is complete

Registration Number:

Date: September 25, 2012

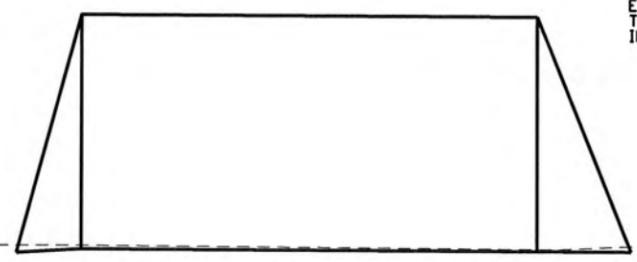


BACKFILL WITH EXCAVATED MATERIAL. COMPACT IN 6" LIFTS. COMMON BORROW MATERIAL SHALL BE USED SHOULD THE EXCAVATED MATERIAL BE DETERMINED TO BE UNSUITABLE BY THE ENGINEER IN THE FIELD.

APPROXIMATE FLOW LINE ELEVATION = 863.9

2'-0" GRANULAR BEDDING (3149.2F) UNDER BARREL AND END SECTIONS.

PROPOSED SECTION THRU BOX CULVERT
(ASSUMED EXISTING)



865.86 865.87 865.57 865.46 865.44 865.40 865.40 865.28 864.67