

## Information for File #2013-04630-SEW

**Applicant:** Goodhue County Highway Department, c/o Mr. Dale Marty

**Corps Contact Information:** Sarah Wingert; U.S. Army Corps of Engineers, 180 5<sup>th</sup> Street East, Suite 700, St. Paul, Minnesota 55101-1678; [sarah.e.wingert@usace.army.mil](mailto:sarah.e.wingert@usace.army.mil); (651) 290-5358

**County:** Goodhue

**Location:** Sections 5, 8, 17, and 20 of Township 111N., Range 15W., and Sections 29 and 32, of Township 112N., Range 15W.

**Information Complete On:** March 25, 2014

**Posting Expires On:** April 7, 2014

**Authorization Type:** Section 404 Letter of Permission (LOP-5-MN)

This application is being reviewed in accordance with the practices for documenting Corps jurisdiction under Sections 9 & 10 of the Rivers and Harbor Act of 1899 and Section 404 of the Clean Water Act identified in Regulatory Guidance Letter 07-01. We have made a preliminary determination that the aquatic resources that would be impacted by the proposed project are regulated by the Corps of Engineers under Section 404 of the Clean Water Act. Our jurisdictional review and final jurisdictional determination could result in modifications to the scope of the project's regulated waterbody/wetland impacts and compensatory mitigation requirements identified above.

**PROJECT ROUTE:** The project would occur on County State Aid Highway (CSAH) 6 from the junction of CSAH 9 to approximately 1,700 feet south of the intersection with CSAH 1.

**PROJECT DESCRIPTION AND PURPOSE:** Goodhue County Public Works proposes to reconstruct approximately 5.2 miles of CSAH 6 in Goodhue and Featherstone Townships. The purpose of the project is to increase the safety and the capacity of the roadway for the traveling public. In this location, CSAH 6 is a rural minor arterial with a posted speed of 55 miles-per-hour (mph) and an average daily traffic (ADT) of 1,750 in 2007. The roadway includes two 11-foot wide travel lanes, 2-to-4 foot wide aggregate shoulders, and 1V:2H inslopes and approach sideslopes with no recovery area. The pavement has a 7-ton structural design strength. This segment of CSAH 6 is proposed to be reconstructed because it has the following deficiencies: 1) it does not meet state design and safety standards, as travel lane and shoulder widths are too narrow, inslopes and sideslopes are too steep, a recovery zone is absent, and existing vertical and horizontal curves are too great; 2) the road does not have accommodations for pedestrian, bicycle, and farm traffic; 3) the pavement is deteriorating, and 4) it has inadequate pavement structural design strength for heavy farm-to-market and commercial traffic.

To counteract these deficiencies, the road would be widened on the existing alignment to meet minimum state design standards, and horizontal and vertical curves would be corrected to safely accommodate the 55 mph design speed. The proposed roadway would include two 12-foot travel lanes with 8-foot wide paved shoulders to accommodate pedestrian, bicycle, and farm equipment. Inslopes and approach sideslopes would be flattened to 1V:4H in the 30-foot recovery zone. Vertical

alignment deficiencies would be corrected by cutting high spots and filling in low spots. The road surface would be constructed to achieve a 10-ton axle load rating to accommodate farm and commercial traffic. All existing culverts on this segment of CSAH 6 would be replaced with longer culverts to accommodate the widened road cross-section.

**NAME, AREA AND TYPES OF WATERS (INCLUDING WETLANDS) SUBJECT TO LOSS:**

Approximately 0.47 acres of wetlands that are part of tributary systems to Hay Creek and the North Fork Zumbro River would be permanently impacted by the proposed project through fill, and approximately 0.08 acre of wetlands would be temporarily impacted by construction staging. A table of the proposed impacts is attached (“2013-04630-SEW, Table 1 of 2”), while the locations of each proposed impact are shown on the attached figures (“2013-04630-SEW, Figures 1, 3-7”).

Ten streams that are tributaries to Hay Creek or the North Fork Zumbro River would be permanently impacted by this project to facilitate culvert replacements, with impacts ranging between 130 linear feet to 298 linear feet. The replacement culverts would be similar in capacity to the existing structures, but would be longer and would include riprap at the culvert inlets and outlets. A table of the proposed stream impacts and bridge details is attached (“2013-04630-SEW, Table 2 of 2”), and the locations of each proposed stream impact are shown on the attached figure labeled “2013-04630-SEW, Figures 2 of 7”. Between the proposed wetland and stream impacts, the total permanent impacts to aquatic resources would be approximately 0.64 acre.

**ALTERNATIVES CONSIDERED:** The applicant considered the following alternatives to the project described above:

- 1) *No-Build alternative:* The no-build alternative would avoid wetland impacts, but it was rejected as impracticable because it would not address the safety concerns associated with the sub-standard vertical alignment, sub-standard lane and shoulder widths, lack of accommodations for pedestrian, bicycle and farm equipment traffic, and the structural deficiency of the roadway.
- 2) *Resurfacing alternative:* The resurfacing alternative would improve pavement structure and would avoid wetland impacts; however, this alternative was rejected because it would not provide the significant structural improvement that would increase the load capacity and it would not allow the road to meet road cross-section and vertical alignment design standards.
- 3) *Relocation/realignment of the roadway:* While this alternative could potentially reduce wetland and stream impacts, off-site alternatives were deemed impracticable because they would require substantial cost and social impacts to adjacent land owners, and would require substantial public funds to purchase additional right-of-way and remove structures that exist along the current roadway.

**COMPENSATORY MITIGATION:** The applicant proposes to compensate for unavoidable adverse wetland impacts through use of wetland credits provided by the BWSR Road Replacement Program. The need for compensatory mitigation will be evaluated by the Corps during the permit review process.

**DRAWINGS:** See attached.

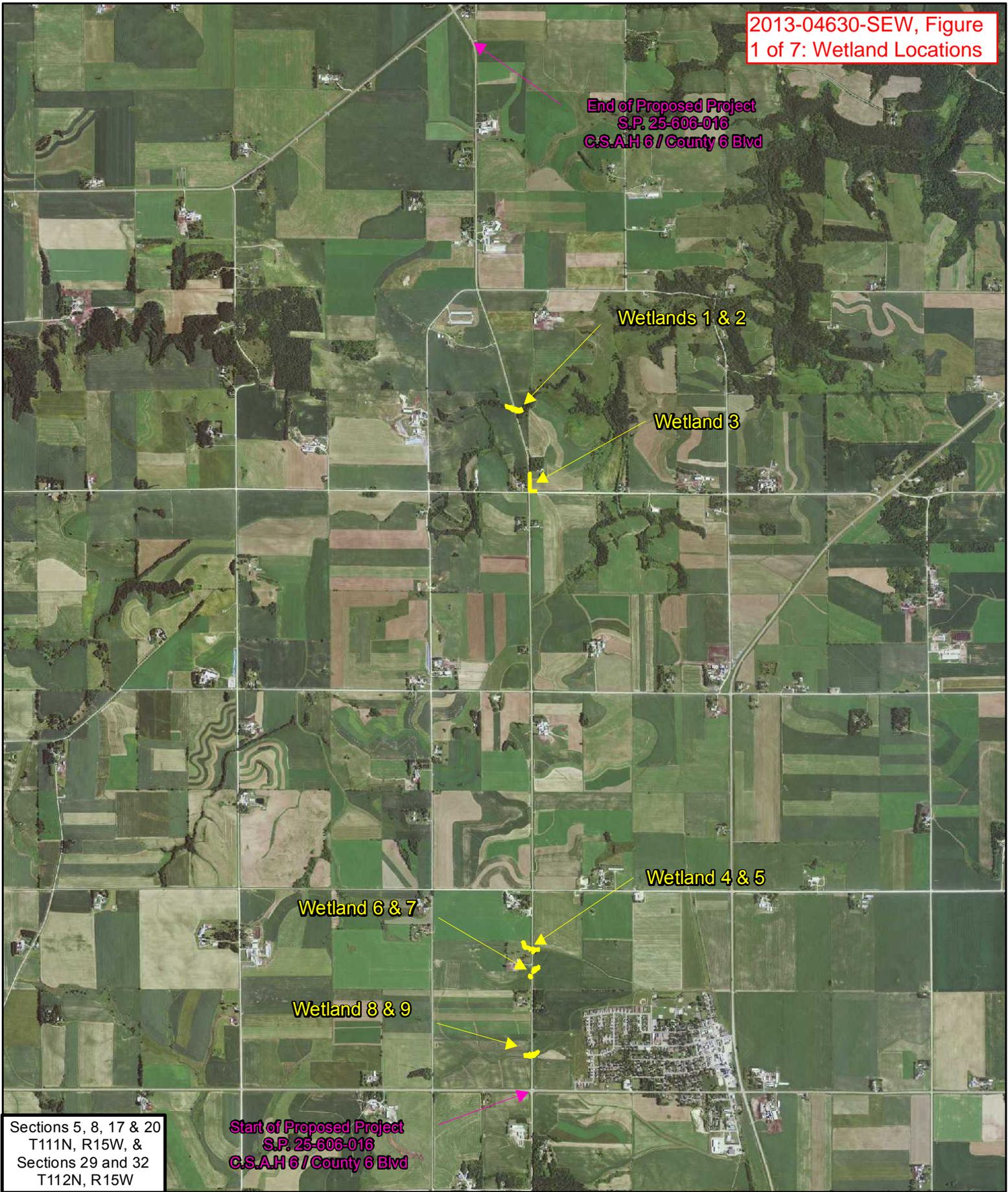
**Goodhue County's CSAH 6 Reconstruction - Proposed Wetland Impacts**

Wetland ID	Location	Wetland Type	Permanent (sf)	Temporary (sf)	Adjacent to Tributary of? (Hay Creek or North Fork Zumbro River)	Major Watershed
W1	S. 5, T. 111N, R. 15W; associated with Hay Creek (Stream 8, Bridge L0402)	floodplain forest	1,762	418	Hay Creek (tributary of Mississippi River)	38- Mississippi River & Lake Pepin
W2	S. 5, T. 111N, R. 15W; associated with Hay Creek (Stream 8, Bridge L0402)	floodplain forest	2,298	296	Hay Creek (tributary of Mississippi River)	38- Mississippi River & Lake Pepin
W3	S. 5, T. 111N, R. 15W	wet meadow/shallow marsh; wetland in bottom of roadside ditch	7,900	0	Hay Creek (tributary of Mississippi River)	38- Mississippi River & Lake Pepin
W4	S. 20, T. 111N, R. 15W; associated with Stream 2	ditched seasonally flooded basin	567	287	North Fork Zumbro River (tributary of Zumbro River and Mississippi River)	41- Zumbro River
W5	S. 20, T. 111N, R. 15W; associated with Stream 2	grazed and ditched seasonally flooded basin	1,795	222	North Fork Zumbro River (tributary of Zumbro River and Mississippi River)	41- Zumbro River
W6	S. 20, T. 111N, R. 15W	partly farmed and ditched seasonally flooded basin	2,166	1,721	North Fork Zumbro River (tributary of Zumbro River and Mississippi River)	41- Zumbro River
W7	S. 20, T. 111N, R. 15W	partly farmed and ditched seasonally flooded basin	724	0	North Fork Zumbro River (tributary of Zumbro River and Mississippi River)	41- Zumbro River
W8	S. 20, T. 111N, R. 15W; associated with Stream 1 (Bridge L0407)	ditched wet meadow	1,706	358	North Fork Zumbro River (tributary of Zumbro River and Mississippi River)	41- Zumbro River
W9	S. 20, T. 111N, R. 15W; associated with Stream 1 (Bridge L0407)	ditched wet meadow	1,433	288	North Fork Zumbro River (tributary of Zumbro River and Mississippi River)	41- Zumbro River
<b>Total Wetland Impact (sf)</b>			<b>20,351</b>	<b>3,590</b>		
<b>Total Wetland Impact (ac)</b>			<b>0.47</b>	<b>0.082</b>		

Goodhue County's CSAH 6 Reconstruction - Proposed Stream Impacts

Stream ID	Location	Existing Bridge Number (if applicable) & Existing Structure	Proposed Bridge Number (if applicable)	Proposed Bridge Structure	Impact - Linear Feet (permanent)	Impact Area - Permanent (sf)	NHD Mapped Stream Type (intermittent or perennial)	Tributary System	Major Watershed
S1	S. 20, T. 111N, R. 15W; <b>Wetlands 8-9</b> , Station 19+47	<b>Bridge L0407</b> ; double line 10'x5' box culverts	Bridge25J75	double line 10'x5' box culverts w/aprons & riprap	237	3139*	intermittent	North Fork Zumbro River	41 - Zumbro River
S2	S. 20, T. 111N, R. 15W; <b>Wetlands 4-5</b> , Station 47+43	60" RCP	n/a	72"RCP w/aprons & riprap	246	2362*	intermittent	North Fork Zumbro River	41- Zumbro River
S3	S. 17, T. 111N, R. 15W; Station 77+25	<b>Bridge L0405</b> ; double line 10'x4' box culverts	Bridge 25J76	double line 10'x4' box culverts w/aprons & riprap	238	1044	intermittent	Hay Creek	38- Mississippi River & Lake Pepin
S4	S. 8, T. 111N, R. 15W; Station 119+20	48" RCP	n/a	54" RCP w/aprons & riprap	266	277	intermittent	Hay Creek	38- Mississippi River & Lake Pepin
S5	S. 8, T. 111N, R. 15W; Station 35+30	36" CMP	n/a	48" RCP w/aprons & riprap	130	457	intermittent	Hay Creek	38- Mississippi River & Lake Pepin
S6	S. 8, T. 111N, R15W; Station 138+00	8'x6' box culvert	Bridge 25J77	10'x5' box culvert w/aprons & riprap	159	753	intermittent	Hay Creek	38- Mississippi River & Lake Pepin
S7	S. 5, T. 111N, R. 15W; <b>Wetland 3</b> , Station 172+90	18" RCP	n/a	24" RCP, aprons, & riprap	not applicable	7900*	Ditch with wetlands in bottom	Hay Creek	38- Mississippi River & Lake Pepin
S8 - Hay Creek	S. 5, T. 111N, R. 15W; <b>Wetlands 1-2</b> , Station 191+09	<b>Bridge L0404</b> - double line 10'x10' box culverts	Bridge 25J78	double line 12'x11' box culverts w/aprons & riprap	298	2541*	perennial	Mississippi River	38- Mississippi River & Lake Pepin
S9	S. 5, T. 111N, R. 15W; Station 221+00	<b>Bridge L0403</b> - double line 10'x5' box culverts	Bridge 25J79	double line 10'x5' box culverts w/aprons & riprap	175	4060	intermittent	Hay Creek	38- Mississippi River & Lake Pepin
S10	S. 32, T. 111N, R15W; Station 249+50	<b>Bridge L0402</b> - 10'x4' box culvert	Bridge 25J80	10'x4' box culvert w/aprons & riprap	185	880	intermittent	Hay Creek	38- Mississippi River & Lake Pepin
<b>TOTAL IMPACTS</b>					<b>1,934</b>	<b>7,471</b>			
<b>TOTAL IMPACTS (ac)</b>						<b>0.17</b>			

\*already calculated in wetland total, so square footage is not included in the impacts total given above.



Sections 5, 8, 17 & 20  
T111N, R15W, &  
Sections 29 and 32  
T112N, R15W

Start of Proposed Project  
S.P. 25-606-016  
C.S.A.H 6 / County 6 Blvd

End of Proposed Project  
S.P. 25-606-016  
C.S.A.H 6 / County 6 Blvd

Wetlands 1 & 2

Wetland 3

Wetland 4 & 5

Wetland 6 & 7

Wetland 8 & 9

— Approximate Wetland Boundaries

# Approximate Wetland Boundaries

Overlaid on 2010 Aerial Photography

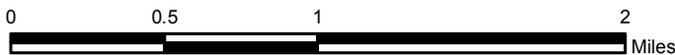
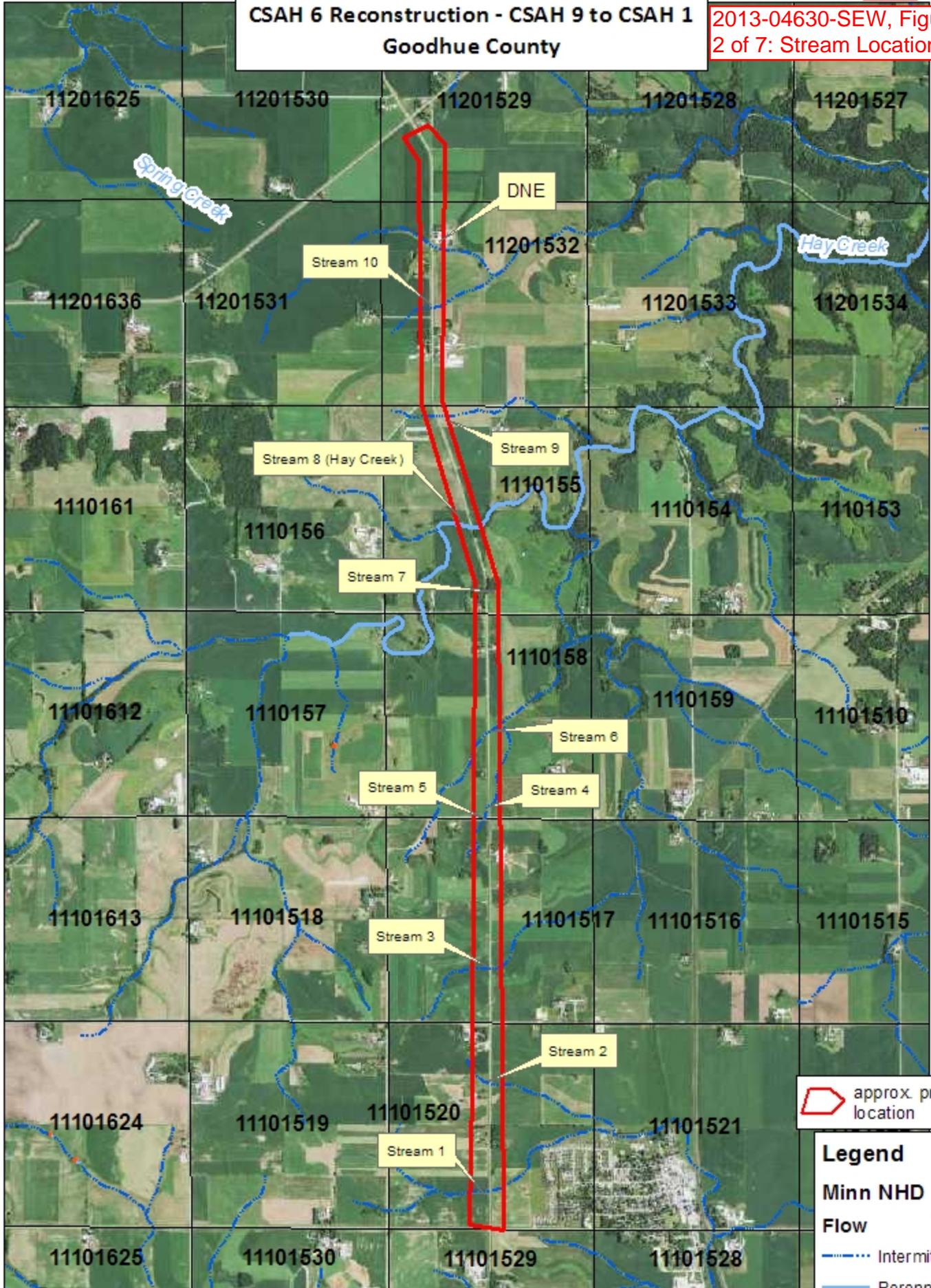


Figure 5.1

**2013-04630-SEW: Stream Impact Locations  
CSAH 6 Reconstruction - CSAH 9 to CSAH 1  
Goodhue County**



2013-04630-SEW, Figure  
2 of 7: Stream Locations



 approx. project location

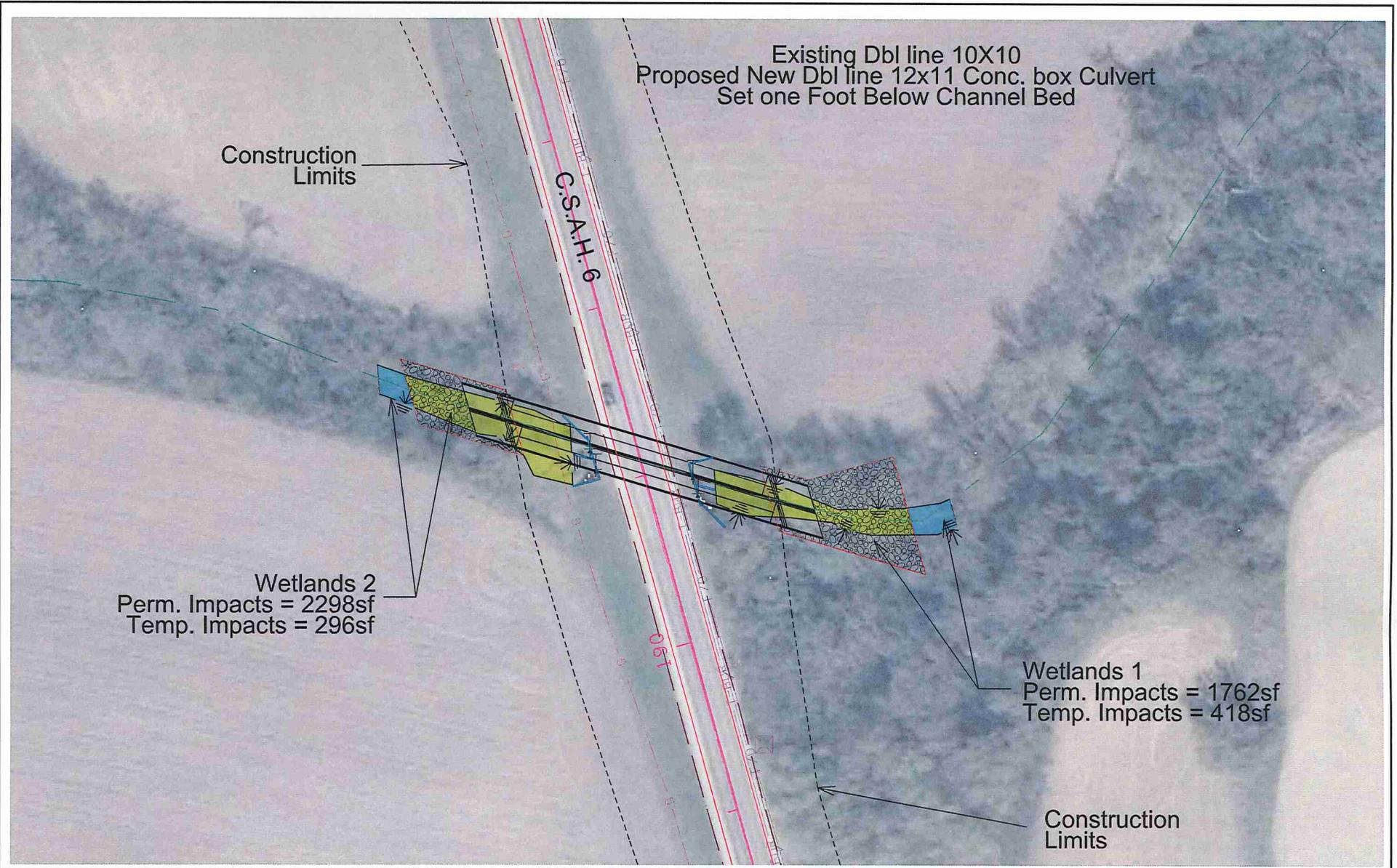
**Legend**

**Minn NHD  
Flow**

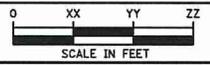
-  Intermittent
-  Perennial
-  Unidentified

0 1,125 2,250 4,500 6,750 9,000 Feet

Base Map: FSA 2013  
aerial photograph



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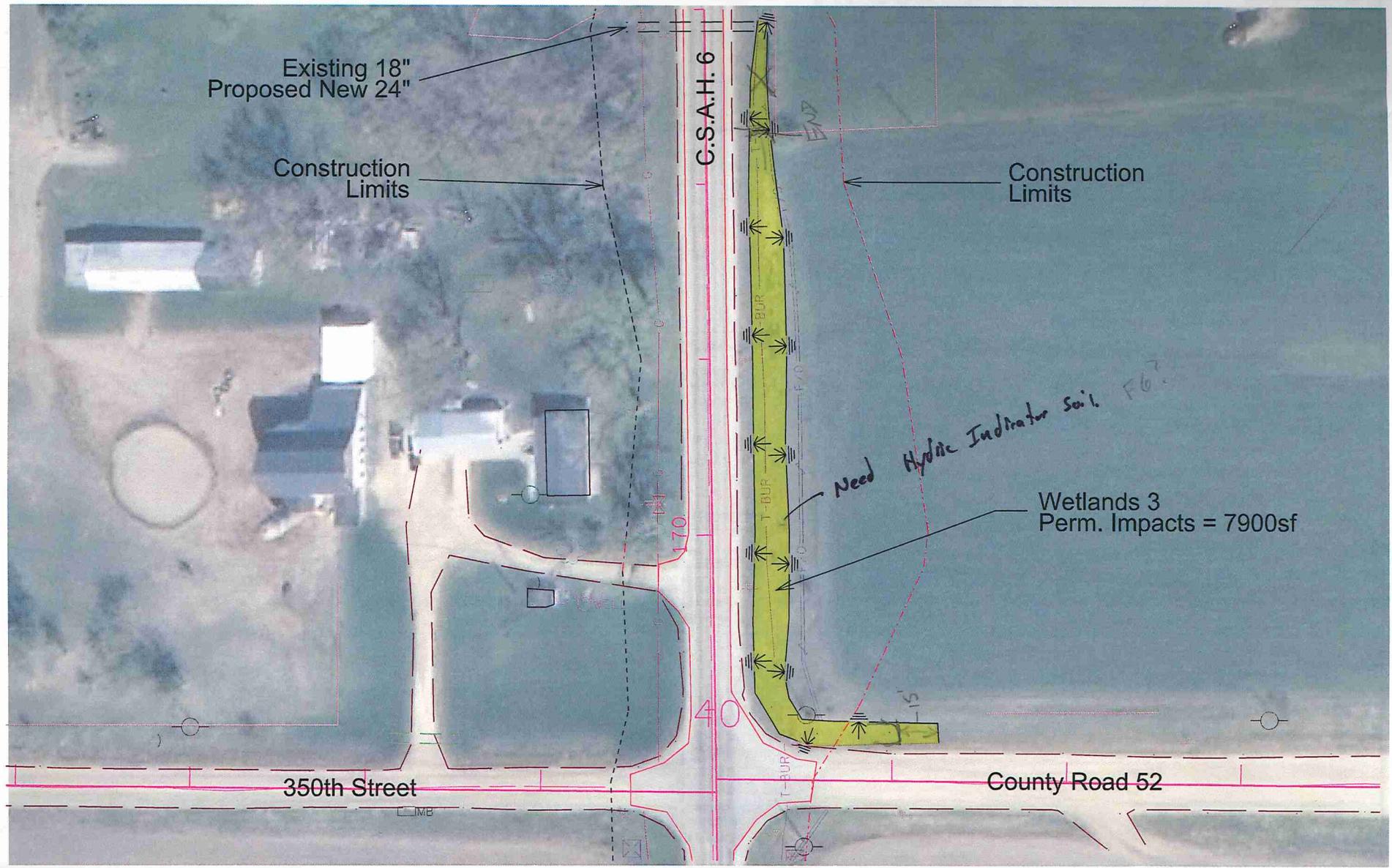


I HEREBY CERTIFY THAT THIS PLAN SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
DATE \_\_\_\_\_ LIC. NO. 21765 ENGINEER \_\_\_\_\_

GOODHUE COUNTY  
DEPARTMENT OF PUBLIC WORKS

WETLANDS 1 AND 2  
Goodhue County Road No 6

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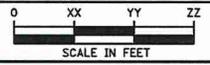
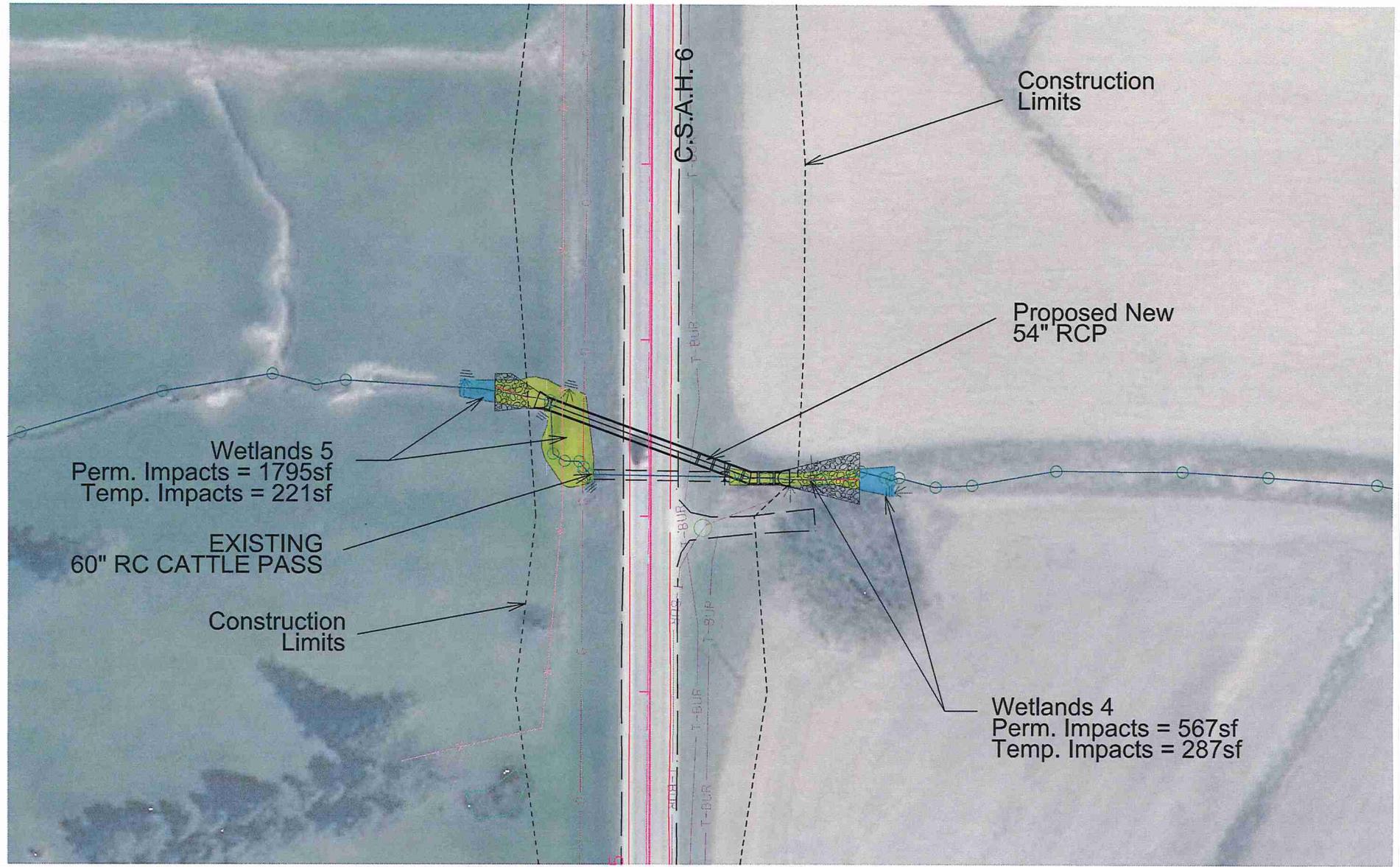


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GOODHUE COUNTY  
 DEPARTMENT OF PUBLIC WORKS

WETLAND 3 Northeast Corner CSAH 6 and Co Rd 54  
 Goodhue County Road No 6 SHEET NO. 1 OF 4 SHEETS

24-SEP-2013 09:29  
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 DATE \_\_\_\_\_ LIC. NO. 21765 ENGINEER \_\_\_\_\_

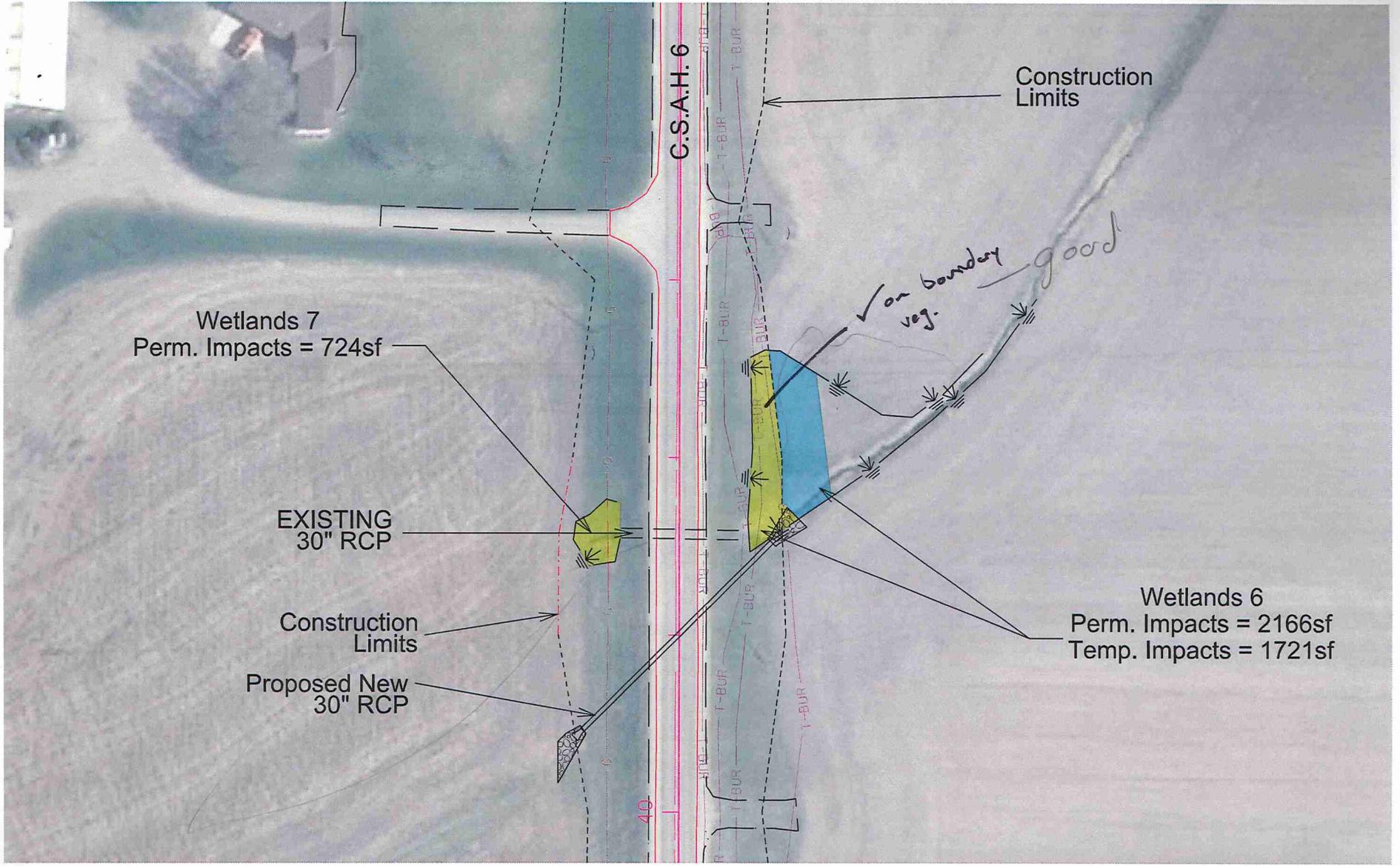
GOODHUE COUNTY  
 DEPARTMENT OF PUBLIC WORKS

WETLANDS 4 & 5  
 Goodhue County Road No 6

SHEET NO. 2 OF 3 SHEETS

9,561 PERM IMPACTS ✓  
 1868 TEMP IMPACTS

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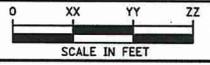
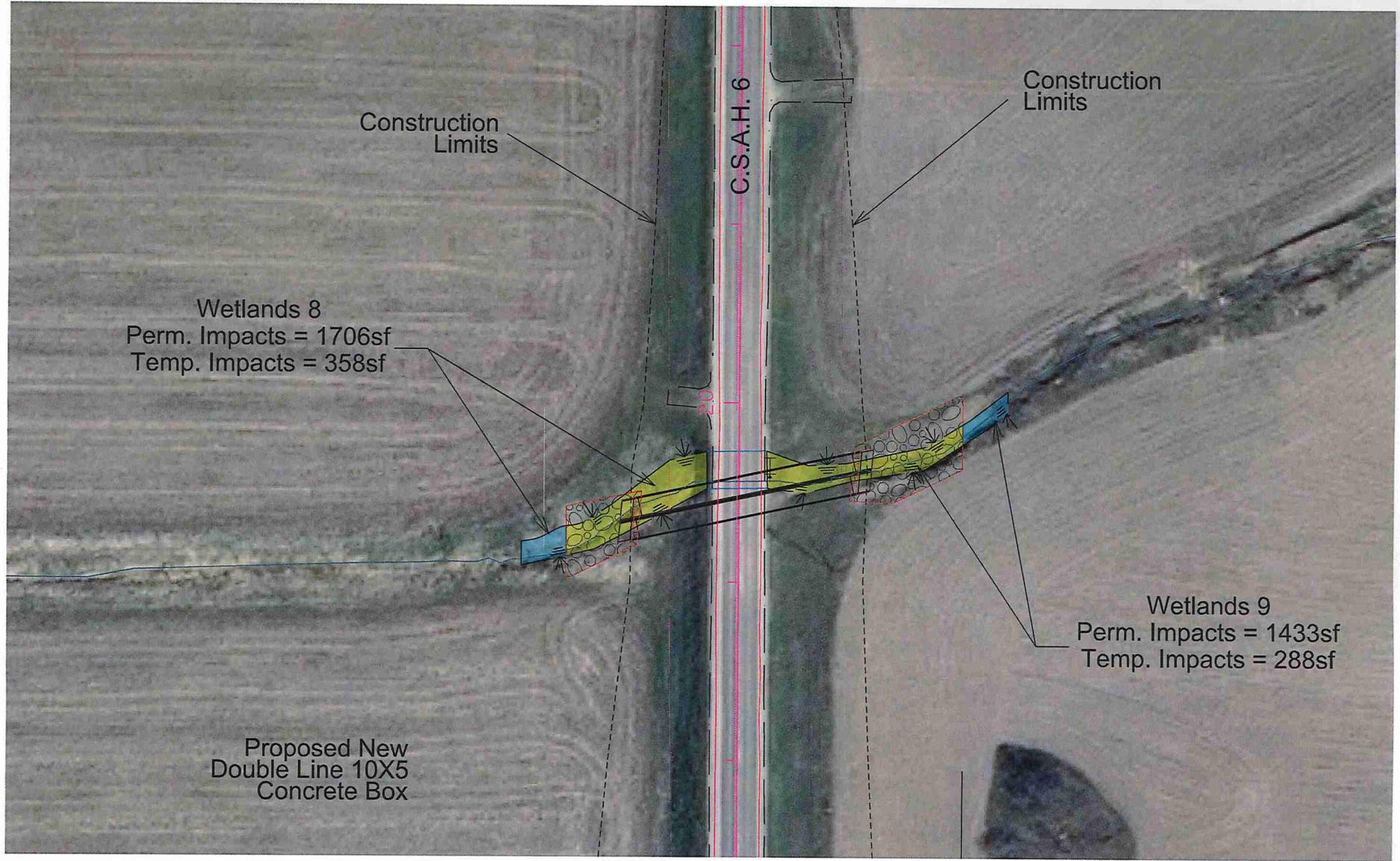


I HEREBY CERTIFY THAT THIS PLAN SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
 DATE \_\_\_\_\_ LIC. NO. 21765 ENGINEER \_\_\_\_\_

GOODHUE COUNTY  
 DEPARTMENT OF PUBLIC WORKS

WETLANDS 6 & 7 Existing 30" Sta. = 42+56  
 Goodhue County Road No 6 SHEET NO. 1 OF 3 SHEETS

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I HEREBY CERTIFY THAT THIS PLAN SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
 DATE \_\_\_\_\_ LIC. NO. 21765 ENGINEER \_\_\_\_\_

GOODHUE COUNTY  
 DEPARTMENT OF PUBLIC WORKS

WETLANDS 8 & 9 Existing Bridge No. L0407 Sta. = 19+63  
 Goodhue County Road No 6 SHEET NO. 1 OF 3 SHEETS