

# STRUCTURE REPAIR

**Project No.**

ABC-1-234(567)890

**PCN**

12345

Structure Repair RP 890



---

Prepared by

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION  
BISMARCK, NORTH DAKOTA

<http://www.dot.nd.gov/>

DIRECTOR  
Francis G. Ziegler, P.E.

PROJECT DEVELOPMENT DIRECTOR  
Ronald J. Henke, P.E.

Principal Author: John Doe  
December 2009

**TABLE OF CONTENTS**

I. Introduction .....1  
II. Methods .....1  
III. Results .....1  
IV. References .....2  
V. Delineator’s Credentials .....2

**Tables**

Table 1, Wetland Table .....3

**Exhibits**

Exhibit 1, Project Location Map .....4  
Exhibit 2, Wetland Map .....5

**Appendices**

Appendix A, Additional Information for Jurisdictional Requests

## I. Introduction

The North Dakota Department of Transportation (NDDOT), in cooperation with the Federal Highway Administration (FHWA), is planning roadway improvements within a project area along ND 234 near Reference Point (RP) 890. **Please refer to Exhibit 1, Project Location Map.** The project consists of structural repair and incidentals. The project is planned to be built during the 2011 construction season.

John Doe of the NDDOT conducted an office wetland delineation for the proposed project on December 25, 2009. Supplementary project area information can be found in **Appendix A, Additional Information for Jurisdictional Requests.**

## II. Methods

The office wetland delineation was conducted in accordance with Section II-03.10.01 of the NDDOT Design Manual. Wetland boundaries within the study area were determined by interpreting 2003, 2004, and 2005 aerial photography and referencing the National Wetlands Inventory (NWI) layer and the United States Geological Survey (USGS) topographic layer.

The project area was extended to 200 feet on either side of the roadway due to the potential addition of a bypass during project design.

## III. Results

Five wetlands were identified within the project area. Three of the delineated wetlands (1-S, 1-E, and 1-W) are part of a natural stream, and one of the wetlands (1-N) is a meander cut off from the same stream. The remaining wetland (2) is a natural basin. The USGS topographic layer indicates that the stream delineated within the project area is Otter Creek, which flows into Square Butte Creek, and later into the Missouri River. **Please refer to Table 1, Wetland Table.**

Approximately 0.61 acres of wetlands were delineated within the project area. Some wetlands extended beyond the limits of the project area; however, wetlands were only delineated to the boundary of the project area. **Please refer to Exhibit 2, Wetland Map.**

#### IV. References

Cowardin, L. M., V. Carter, F. C. Golet, E. T. LaRoe. 1979. Classification of wetlands and deepwater habitats of the United States. *U.S. Department of the Interior, Fish and Wildlife Service*. Available online: [http://www.fws.gov/wetlands/\\_documents/gNSDI/ClassificationWetlandsDeepwaterHabitatsUS.pdf](http://www.fws.gov/wetlands/_documents/gNSDI/ClassificationWetlandsDeepwaterHabitatsUS.pdf)

National Hydric Soils List by State [Electronic Database]. 2009. United States Department of Agriculture: Natural Resources Conservation Service. Available online: <http://soils.usda.gov/use/hydric/lists/state.html>

North Dakota Department of Transportation. 2009. *NDDOT Design Manual*. Available online: <http://www.dot.nd.gov/manuals/design/designmanual/designmanual.htm>

U.S. Army Corps of Engineers. 1987. *US Army Corps of Engineers Wetlands Delineation Manual*. Available online: <http://www.wetlands.com/regs/tlpge02e.htm>

#### V. Delineator's Credentials

Education: University of North Dakota – BS Biology

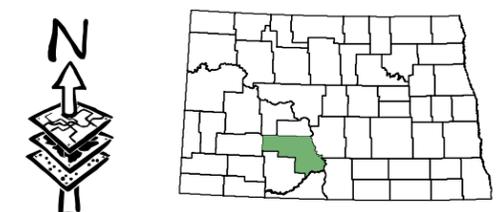
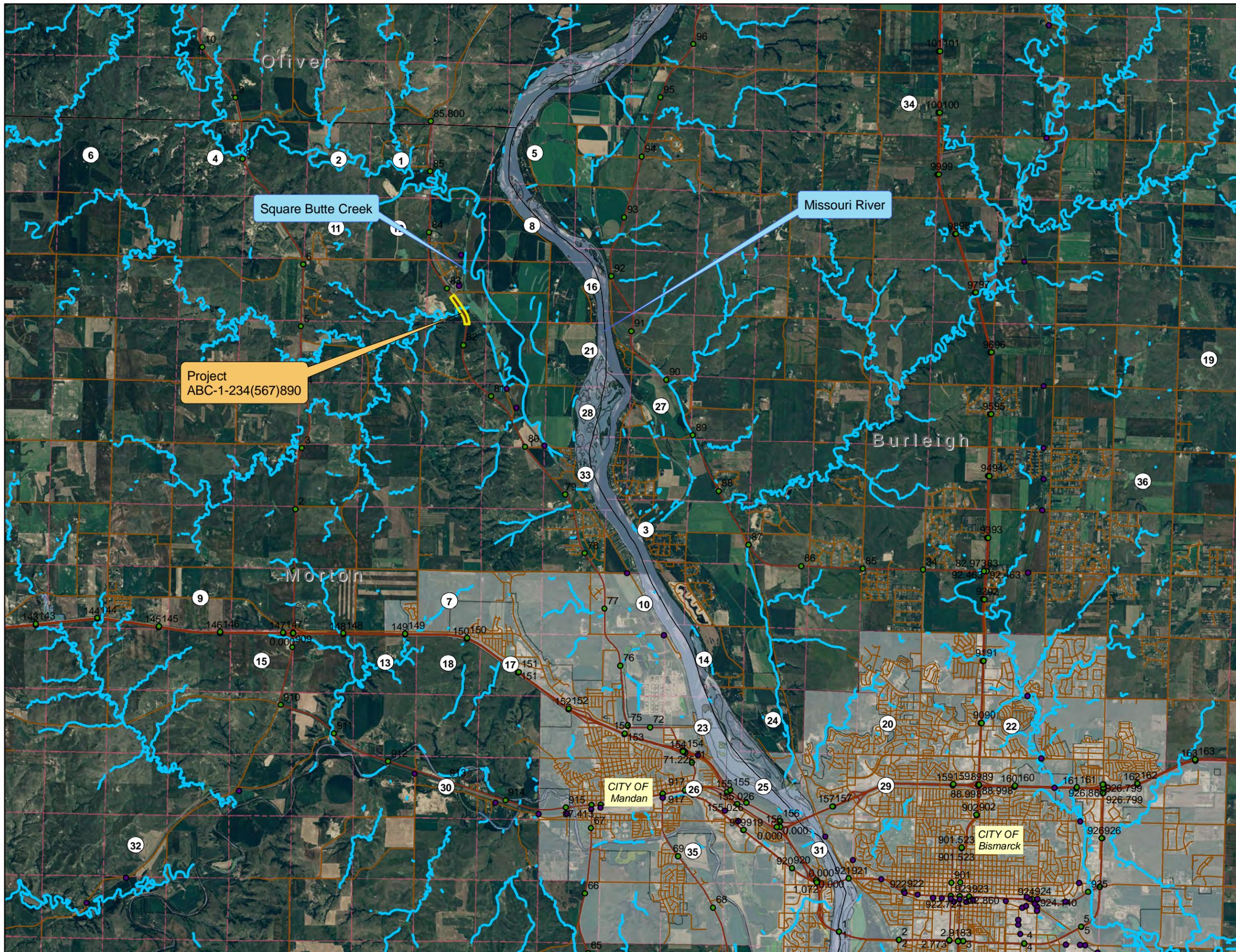
Professional Membership: Society of Wetland Scientists  
Wetland Professionals Association

Training: Society of Wetland Scientists – Introduction to Wetlands  
Wetland Training Institute – Basic Wetland Delineation Field Practicum  
Wetland Training Institute – Wetland Delineation with Emphasis on Soils and Hydrology  
NRCS – Field Indicators of Hydric Soil  
NRCS – Regulatory IV - Wetland Delineation, US Army Corps of Engineers

**Table 1, Wetland Table**

The office wetland delineation for PCN 12345, Project ID # ABC-1-234(567)890 (Structure Repair RP 890), was conducted on December 25, 2009 by John Doe of the North Dakota Department of Transportation. The wetland delineations were conducted using a combination of NWI maps and aerial photography, assuming a 200 foot buffer around the project area. The project is located within the Painted Woods / Square Butte Creek (10130101) Hydrologic Unit Code (HUC).

Wetland Number	Location	LONG / LAT (Dec. Deg.)	Cowardin Classification	Wetland Type	Wetland Size (acres)	Wetland Feature
1-S	T140N, R81W, Section 18	-100.952665 / 46.939710	R4SBF	Stream	0.06	Natural
1-E	T140N, R81W, Section 18	-100.953145 / 46.940198	R4SBF	Stream	0.22	Natural
1-N	T140N, R81W, Section 18	-100.953707 / 46.940799	PEMC	Meander Cutoff	0.04	Natural
2	T140N, R81W, Section 18	-100.955542 / 46.940846	PEMC	Basin	0.18	Natural
1-W	T140N, R81W, Section 18	-100.954241 / 46.939917	R4SBF	Stream	0.11	Natural
				<b>TOTAL</b>	<b>0.61</b>	



**Morton County,  
North Dakota**

- Linear Wetlands
- NDHUB.Counties\_Poly
- Delineated Wetlands

**NDHUB.Wetlands**

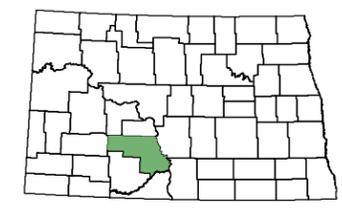
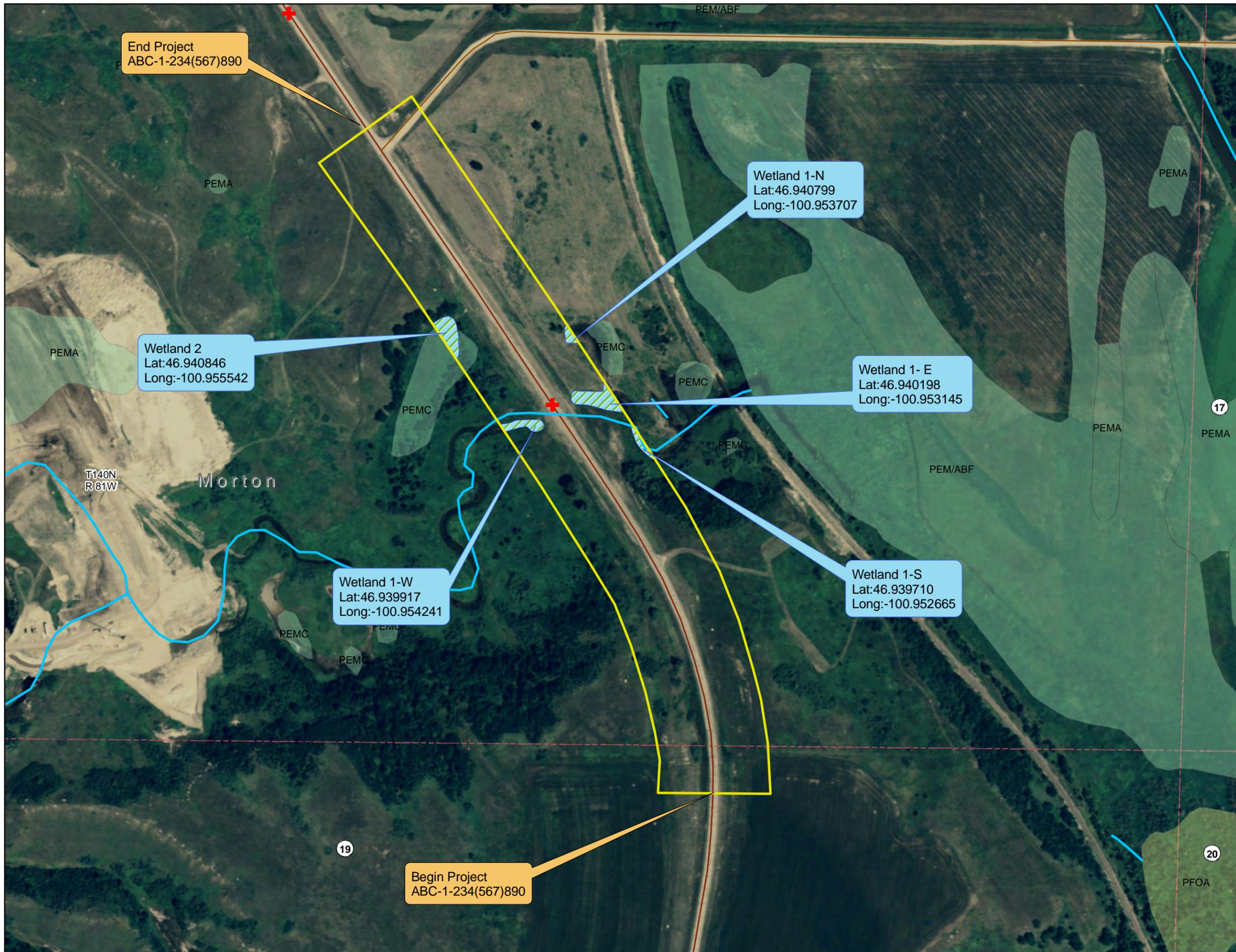
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine
- Corporate Boundaries
- PLSS Sections

Orthophoto Source: NRCS  
Date of Photography: 2004  
Data Source: NDGIS Hub & NDDOT

**Exhibit 1  
Project Location Map**

Drawn By: MAD	Date: 12/25/09	Project ID: ABC-1-234(567)890	PCN: 12345	Sheet: 1 of 1
------------------	-------------------	----------------------------------	---------------	------------------





**Morton County,  
North Dakota**

- + Culvert
- Reference Points
- Linear Wetlands
- NDHUB.Counties\_Poly
- ▨ Delineated Wetlands

**NDHUB.Wetlands**

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine
- Corporate Boundaries
- PLSS Sections
- PLSS Townships

Orthophoto Source: NRCS  
Date of Photography: 2004  
Data Source: NDGIS Hub & NDDOT

<b>Exhibit 2 Wetland Map</b>				
Drawn By: MAD	Date: 12/25/09	Project ID: ABC-1-234(567)890	PCN: 12345	Sheet: 1 of 1



**Appendix A**  
**Additional Information for Jurisdictional Requests**

**ADDITIONAL INFORMATION FOR WETLAND JURISDICTIONAL REQUESTS  
ON NDDOT PROJECTS**

**A. Project Location and Background Information**

1. PCN / Project Number: **12345 / ABC-1-234(567)890**
  - a. City: **Mandan**
  - b. County: **Morton**
  - c. State: **North Dakota**
2. Short project description: **Structure Repair RP 890**
3. Name of nearest waterbody: **Square Butte Creek**
4. Name of nearest Traditional Navigable Water (TNW): **Missouri River**
5. Name of watershed or Hydrologic Unit Code (HUC): **Painted Woods - Square Butte Creek / 10130101**
6. Number of wetlands being considered in this cumulative analysis: **2 (see comments below)**
7. Approximate acreage being considered in this cumulative analysis (Total Basin Size): **0.61 ac.**

**B. Review Performed for Site Evaluation (Check all that apply)**

1. Office Determination Date: **12/25/09**
2. Field Determination Date:

**C. General Information**

1. General area conditions:
  - a. HUC watershed size (specify acres or square miles): **40.01 sq. miles**
  - b. Average annual rainfall (inches): **16.35**
    - i. Source: **High Plains Regional Climate Center**
  - c. Average annual snowfall (inches): **32.60**
    - i. Source: **High Plains Regional Climate Center**
2. Biological characteristics (*Field Determination only; list applicable wetland numbers*):
  - a. The wetland supports (use space below each to elaborate for applicable wetlands):
    - i. Riparian buffer characteristics (type, average width):
    - ii. Habitat for:
      - \_\_\_ Federally Listed species. Explain findings:
      - \_\_\_ Fish/spawn areas. Explain findings:
      - \_\_\_ Other environmentally-sensitive species. Explain findings:
      - \_\_\_ Aquatic/wildlife diversity. Explain findings:

**D. Data Sources (Check all that apply)**

- Maps, plans, plots, or plat submitted by or on behalf of the applicant/consultant
- Data Sheets prepared/submitted by or on behalf of the applicant/consultant
- U.S. Geological Survey Hydrologic Atlas
- USGS NHD data:
- USGS 8 and 12 digit HUC maps:
- U.S. Geological Survey map(s)  
Cite scale & quad name: **24K - Harmon**
- USDA Natural Resources Conservation Service Soil Survey

- Citation: **SSURGO, ND GIS Data Hub**
- National Wetlands Inventory map(s)  
Cite name/date: USFWS NWI Maps ND GIS Data Hub
- State/Local wetland inventory map(s)  
Cite name/date:
- 100-year Floodplain Elevation is: \_\_\_\_\_ (National Geodetic Vertical Datum of 1929)
- Aerial Photographs  
Cite name/date: **NDDOT / 2004**
- Applicable/supporting scientific literature:
- Other information (please specify):

#### **E. Additional Comments**

**Wetlands 1-S, 1-E, and 1-W are all part of the same continuous intermittent stream. Wetland 1-N is a portion of a meander cutoff. The entire region is / are the headwaters of Square Butte Creek, which flows into the Missouri River.**