PROJECT CONCEPT REPORT

STRUCTURE REPLACEMENT

Project No.	PCN
BRS-8-013(043)363	17502

RP 363.552/Elk Creek

Prepared by

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION
BISMARCK, NORTH DAKOTA

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

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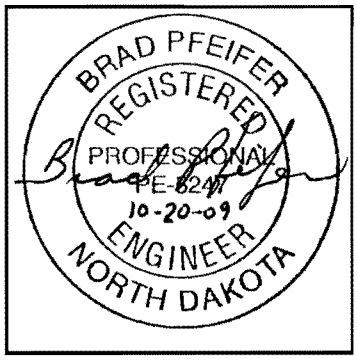
October 2009

BRS-8-013(043)363

RP 363.552/Elk Creek

CERTIFICATION

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 North Dakota. This document was originally issued and sealed by Brad Pfeifer, Registration number PE-5247 on 10/20/2009 and the original document is stored at the North Dakota Department of Transportation.



Brad Pfeifer

Brad Pfeifer, P.E.

10-20-09

Date

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I. Executive Summary

A. Project Description

Highway: ND Highway 13 *District:* Fargo *Project:* RP 363.552/Elk Creek
Location: ND Highway 13 at Reference Point 363.552

Current ADT		*Forecast ADT*	
Total: 1,475	Trucks: 295	Total: 1,910	Trucks: 385

B. Project Schedule

Plans Complete	*Bid Opening*
January 25, 2010	March 26, 2010

C. Purpose of Project

The purpose of this project is to correct structural deficiencies, in order to improve safety and ride quality across the structure.

D. Need for Project

Existing Conditions: The existing box culvert was originally constructed in 1950 and extended to a length of 85 feet in 1977. The existing structure is a triple 8'x8'x85' reinforced concrete box culvert. The culvert conveys the flow of Elk Creek through ND Highway 13. The culvert is structurally deficient and has a sufficiency rating of 63.1.

Deficiencies: The channel and channel protection has a condition rating of 5, or "fair" condition. The culvert and retaining walls are rated as a 4, or "poor" condition. There is random cracking throughout the box and horizontal cracking of the east and west exterior walls that is approximately half of the way up the box. There is some rebar that is exposed on the north parapet. The culvert extensions have separated from the original box by two inches. The north extension has also settled two inches below the original box. Moderate vegetation is growing in the channel and both ends of the culvert are showing signs of erosion.

E. Scope of Work

This project is programmed as a structure replacement project. Only the "No Build" and "Build" alternatives are included for consideration.
STIP (State Transportation Improvement Plan) Cost: $126,000
PCR Cost: $449,546

F. Alternatives

Alternative A: *No Build ($0)*

Alternative B: Culvert Replacement ($431,641)
This alternative includes the removal and replacement of the existing structure with new reinforced concrete box culvert having a size estimated as approximately a triple 9'x9'x96'. The new culvert will be skewed to approximately 20 degrees from perpendicular with the roadway. This will help increase efficiency and decrease channel erosion as well as providing a more natural flowing stream curve than what is presently in place.

Engineering Issues: Alternative B will require a temporary bypass during the construction work.

Environmental Issues: Slight wetland impacts may be incurred by Alternative B due to the realignment of the proposed culvert. However, installation of the box culvert one foot below the channel bottom will serve to mitigate a wetland area which exceeds the loss of wetland areas.

Comparison of Alternatives:

Alternative	Advantages	Disadvantages
A – No Build	- Lowest initial cost - No disruption of traffic patterns at present	- Continued deterioration of the culvert may require the imposition of load limits on this roadway and possible future closure of roadway
B – Culvert Replacement	- Increase efficiency and decrease channel erosion - Long expected service life	- Highest cost - Some affected wetlands - Inconvenience to highway traffic

G. Comments from the Draft PCR

Materials and Research Division

Page 1 under Scope of Work states "This project is programmed as a structural rehabilitation project. However, an alternative for replacement is included for consideration." The concept discusses the replacement but not the structural rehabilitation.

Response: *The scope of work has been revised to state that only replacement of the structure is being proposed.*

The detour route on the north side of the highway appears may be in conflict with utility poles and a water line. Can the detour be placed on the south side of the highway?

Response: *Temporary bypasses are typically located upstream of the structure to reduce the risk of flooding the site. Unless significant terrain, geometric, or utility conflicts exist, the upstream side is preferred. At this location, utilities are located on the north (upstream) side of the roadway, but the terrain is more suitable, and it appears that the temporary bypass can be built without relocation of utility poles. The depth of the water line should preclude any problems with it.*

Recommend project to proceed and agree with proposed concepts.

Clayton Schumaker July 02, 2009

Planning & Programming Division

This project as proposed is not eligible for Bridge Replacement (BR) funds, the funds programmed in the STIP. According to the PCR, the sufficiency rating is greater than 50, the upper limit for using federal BR funds to replace a structure. However, after talking with the Bridge Division, P&PD believes this project should proceed, in the reasonably near future. Because this structure is on the National Highway System, P&PD can likely make the funding work for this project overrun, assuming the 2010 federal funding is provided at a similar rate and with similar criteria to the current program. The Division appreciates the opportunity to comment.

Scott Zainhofsky July 06, 2009

Construction Division

I have reviewed the draft and have no comments.

Dennis Hermanson July 6, 2009

ETS Division - Cultural Resources

There is no discussion or listing of cultural resources as an unaffected category in your draft PCR. Please add the following to unaffected category:
Cultural Resources (SHPO concurs NHPA - #09-1154). Also, I've asked Sheri if we have a standard environmental commitment in regard to discovery of cultural resources. If so, please include.

Response: *A cultural resources section has been added to Section IV, Subsection E – Cultural Resources. Discovery of cultural resources during construction is addressed in the standard specifications.*

Jeani Borchert July 02, 2009

ETS Division – Environmental

1. Please label/number the sections in the Executive Summary pursuant to the outline template in the Design Manual. This will then affect the numbering system throughout the rest of the document.

Response: *The Executive Summary is now numbered correctly.*

2. Section III Subsection C Wetlands – the field delineation was conducted June 24, 2009. Also, please state that the wetland jurisdictional request was submitted July 2, 2009 and the wetland jurisdictional determination is pending.

   Response: *These changes have been made.*

3. The wetland impacts are 0.09 acres. The mitigation proposed is 0.06 acres, resulting in a shortage of 0.03 acres. Can this be accommodated onsite? USFWS recommended a mitigation effort to maintain the cutoff portion of the channel on the north side be maintained. Were any additional acres created for mitigation purposes?

   Response: *The wetland impacts have been recalculated as 0.03 acres. The bottom of the box will be used for mitigation of these wetlands by placing the box 1 foot lower than existing channel bottom. The area of this mitigation is calculated as 0.06 acres. This has been updated in the report.*

4. Subsection E – please remove jurisdictional waters of the US from the list of unaffected categories.

   Response: *This category has been removed from the list.*

5. A discussion on Cultural Resource Impacts was not included in the PCR; please address.

   Response *A section for Cultural Resources has been added to the PCR in Section IV Subsection E – Cultural Resources.*

6. Please describe the methodology for bypass construction; what will it be constructed of, will a box or pipe be installed across the river, etc.

   Response: *Additional discussion relative to the temporary bypass has been provided in Section III Subsection C – Work Zone Traffic Control.*

7. Pursuant to the Endangered Species Act, we are required to state whether or not the project will impact T & E species. Therefore, please add the following statement (based on consultation):

   Consultation with USFWS (US Fish and Wildlife Service) indicated that # species occur in XX County. These include the endangered names; as well as the threatened names. The proposed project may effect, but is not likely to adversely affect listed species, and is not likely to jeopardize the continued existence of the species, and is not likely to destroy or adversely modify critical habitat of the species.

   Response: *A section for Threatened and Endangered species has been added to the PCR in Section IV Subsection F.*

8. Please remove the letter to the chief missile engineer from the appendix; please replace with the general SOV letter and also include the project mailing list.

   Response: *This letter has been replaced with the general SOV letter. The mailing list is now included at the beginning of Appendix D.*

9. Please remove the letter to the ND Department of Emergency Services from the Appendix. Also, please remove the second copy of the response from USFWS.

   Response: *These letters have been removed.*

10. Check milestone dates, it appears that some dates have not been entered when tasks were completed, i.e. Predraft and Draft PCR, SOVs, etc.).

    Response: *The milestone dates are now entered.*

11. It appears that the concrete structure will be removed /demolished. Please include a description of that work and any associated impacts.

    Response: *Discussion of the removal of this structure and the associated impacts are now included in the report under Section IV, Subsection C – wetlands.*

12. Please include any commitments made to agencies beyond what is contained in our standard specs.

    Response: *The new structure will be installed with its invert elevation set one foot below the channel bottom, as requested by US Fish and Wildlife Service. This has been noted in Section V – Environmental Commitments and Permitting.*

Sheri Lares July 6, 2009

Design Division

The cover page calls this project a "Structural Rehabilitation". Also in the Executive Summary it states: *The project is programmed as a structural rehabilitation project. However, an alternative for replacement is included for consideration.* The entire report only explores replacement. If this project is still programmed as rehabilitation, an alternative should be added to the report for rehabilitation. If a change of scope has been approved, then reference should only be made to replacement.

Response: *The scope of work has been revised to state that only replacement of the structure is being proposed.*

Since this project is still programmed as Structure Rehabilitation, the estimated cost ($431,641) is significantly higher than the STIP cost ($126,000). Can this project still be constructed in 2010 based on this new cost estimate? Planning and Programming should be contacted to see if funding is available.

Response: *Planning and Programming has been contacted. They concur that this project should continue in the near future and will be able to make the funding work for this project overrun.*

In the *Executive Decisions* section, the question "Which alternative should be developed for this project?" should be asked.

Response: *This question has been added.*

The *Purpose of the Proposed Action* describes what the project is trying to accomplish. Replacing the box culvert is what is being done to achieve this purpose. Example: the purpose of a HBP overlay would be to improve load carrying capacity and ride quality on the roadway.

Response: *This statement has been changed to "The purpose of this project is to correct structural deficiency."*

Under *II.B Description of the Proposed Build Alternative – Culvert Replacement,* this should also be referenced as *Alternative B.*

Response: *This has been changed.*

A *Right of Way* section should be added to the report, stating that temporary construction easement is required for the temporary bypass.

Response: *This section has been added under Section III Subsection D – Right of Way.*

In section *III.A.1 Water,* BMPs should be spelled out the first time it appears in the report.

Response: *BMP's has now been changed to "best management practices".*

In section *III.C Wetlands,* It states that 0.6 acres will be mitigated on site and 0.09 acres will be permanently impacted. Where will the remaining 0.03 acres be mitigated? The letters soliciting the US Army Corp of Engineers (USACE) and their response need to be included in the Appendix. Are these wetlands jurisdictional according to the USACE? If they are, a 404 permit will be required for this project.

Response: *The wetland impacts have been recalculated as 0.03 acres. The bottom of the box will be used for mitigation of these wetlands by placing the box 1 foot lowers than existing channel bottom. The area of this mitigation area is calculated as 0.06 acres. This has been updated in the report.*

Under section *III.D. Water body modification*, what is the response to USFWS's suggestion to install the box culvert 1' below invert elevation and 18" high lips on two of the three barrels? Is this going to be done or is there some engineering reasoning not to do this?

Response: *The box culvert will be installed 1 foot lower than the channel bottom.*

A *Cultural Resources* section needs to be added to the *Environmental Impacts.* Was the State Historic Preservation Office (SHPO) contacted? Their finding needs to be included in this section, along with their response letter being added to the Appendix.

Response: *This section has been added to Section IV Subsection E – Cultural Resources. The State Historic Preservation Office was contacted and they found no historic properties affected. This is stated in the Cultural Resources section and their letter is included in Appendix D.*

In Appendix D, include a list of who Solicitation of Views letters were sent to.

Response: *This list is now included in Appendix D.*

Matt Linneman June 24, 2009

Office of Project Development

On page 1 of the report we indicate that there should be an option for a rehabilitation strategy but I did not see one in the report.

Response: *The scope of work has been revised to state that only replacement of the structure is being proposed.*

The traffic detour is set up in the report to go on the North side which may have impacts to utilities. The report is silent on why the detour is not being considered for the south side. The report should give some information on why the south side is not an option. The report is also silent on if R/W easements will be needed for the detour route.

Response: *Temporary bypasses are typically located upstream of the structure to reduce the risk of flooding the site. Unless significant terrain, geometric, or utility conflicts exist, the upstream side is preferred. At this location, utilities are located on the north (upstream) side of the roadway, but the terrain is more suitable and it appears that the temporary bypass can be built without relocation of utility poles.*

A right of way section has now been added that addresses the need for temporary construction easements.

My last comment is this project could be used as a design-build project.

Response: *At this time, this project is being considered as a design-build project.*

Ron Henke June 30, 2009

Fargo District

The Fargo District's comments to the Executive Decisions are:

YES, we recommend the project proceed as indicated.
YES, we recommend concurring with concepts as proposed and we recommend Alternative B – Culvert Replacement.

Comments: While we support an on-site detour on the north side of the RCB, we are not opposed to a south side detour if that is determined to be a better option during the design phase.

Bob Walton July 8, 2009

Bridge Division

Bridge Division recommends that we proceed with the replacement of the RCB as proposed in the draft PCR.

Larry Schwartz July 2, 2009

H. Public Concerns / Need for Public Input

Based on the rural location of the project and the comments received in the Solicitation of Views process, no further public input will be needed. The Solicitation of Views process did not reveal any controversial issues.

I. Executive Decisions

1. Should the project proceed as indicated?
   _X_ Yes
   _____ No

2. Do you concur with the project concepts as proposed?
   _X_ Yes
   _____ No

3. Which alternative should be developed for this project?
   _____ Alternative A
   _X_ Alternative B

Amendments/Comments for Project No. BRS-8-013(043)363:

Grant Levi

Grant Levi, P.E., Deputy Director For Engineering

10/24/09

Date

II. Purpose and Need

A. Purpose of the Proposed Action

The purpose of this project is to replace the existing box culvert located on ND Highway 13 at Reference Point 363.553 to correct the structural deficiencies, in order to improve safety and ride quality.

B. Need for the Proposed Action

This structure has a sufficiency rating of 63.1 and is considered to be structurally deficient. The channel and channel protection have a condition rating of 5 or "fair" condition. The culvert and retaining walls have a condition rating of 4 or "poor" condition. There is random cracking throughout the box and both ends of the culvert are showing signs or erosion. The bid opening for this project is scheduled on March 26, 2010.

C. Existing Project Conditions

1. Drainage

The existing box culvert conveys the flow of Elk Creek through ND Highway 13. Elk Creek is a tributary of the Wild Rice River. Tri-county Drain 6 drains into Elk Creek, approximately 1.5 miles northwest of the structure. The drainage area for this culvert is estimated at 93.3 square miles. See Figure 3 for the project location map.

2. Structure

The triple 8'x8' reinforced concrete box culvert was built normal to the roadway in 1950 and its length was extended to 85 feet in 1977. According to the Bridge Inventory SI&A sheet, the culvert is considered to be structurally deficient and has a sufficiency rating of 63.1.

The channel and channel protection have a condition rating of 5, which is a "fair" condition. There is moderate vegetation located within the channel and signs of erosion at both ends of the culvert.

The culvert and retaining walls have a condition rating of 4, which is a "poor" condition. There is random cracking throughout the box. There is horizontal cracking of the east and west exterior walls of the culvert, located half of the way up the walls. Concrete has broken away, leaving rebar exposed on the north parapet.

The box culvert extensions were not tied to the original structure and are exhibiting various problems. Both the north and the south extensions have separated from the original box by 2 inches. The north extension has also settled 2 inches below the original box. Loss of soil through the open construction joints has occurred. Because of this, 3"x12" timber planks were placed on the exterior walls. The timber planks on the east and west walls are aligned with the joints in order to keep the remaining fill in place.

Table 1 – Bridge Data

Structure No.	Crossing	Size	Year Built	Sufficiency Rating
13-363.552	Elk Creek	Concrete Culvert Triple 8x8x85' RCB	1950/1977	63.1

3. Approach Roadway

North Dakota Highway 13 is a two-lane, two-way highway and is classified as a state corridor.

Table 2 – Traffic Data

Location	Traffic Year	Passenger Cars	Trucks	Total	30th Max. Hr.	ESAL's	
						Flex	Rigid
ND 13 at RP 363.552	2008	1,180	295	1,475	150	190	290
	2028	1,525	385	1,910	195	245	375

III. Alternatives

A. Description of the No-Build Alternative (Alternative A)

The No-Build Alternative leaves the structure in its present condition.

B. Description of the Proposed Build Alternative – Culvert Replacement (Alternative B)

The existing box culvert will be removed and replaced with a new box culvert. Preliminary size of a triple 9'x9'x96' has been estimated for a replacement structure. It is recommended to skew the proposed culvert to approximately 20 degrees right, ahead from perpendicular with ND Highway 13. This will help maintain a more natural flowing creek and improve the flow through the structure. This will increase efficiency and decrease erosion of the banks of the creek. The box will be placed 1 foot lower than the existing channel bottom in order to provide for a fish passage. Figure 1 shows the existing box culvert and its alignment. Figure 2 shows the culvert with the proposed skew.

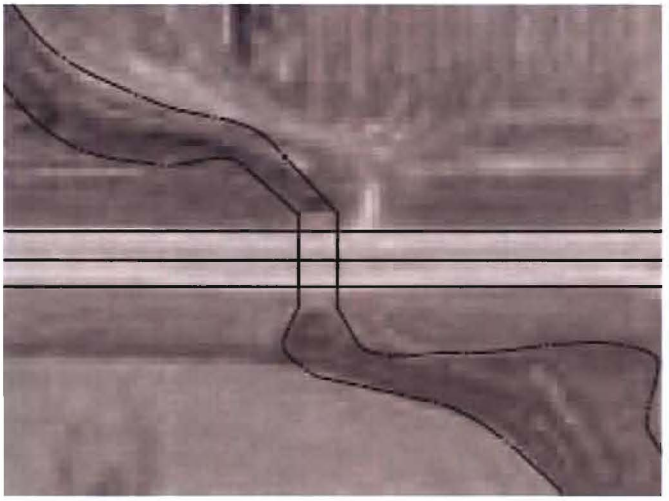


Figure 1 Existing RCB Culvert

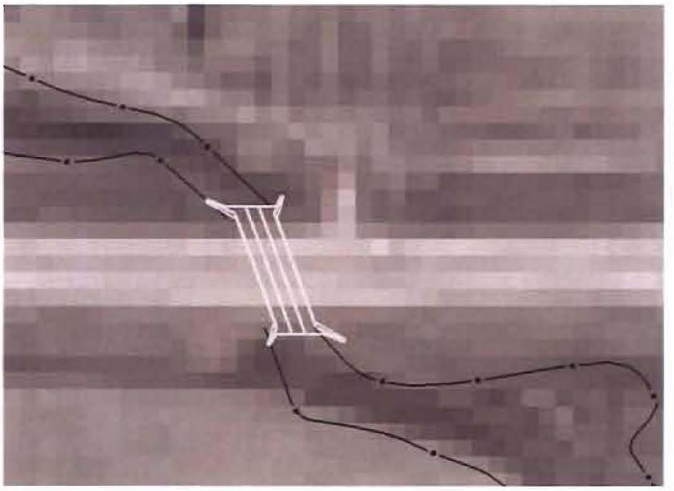
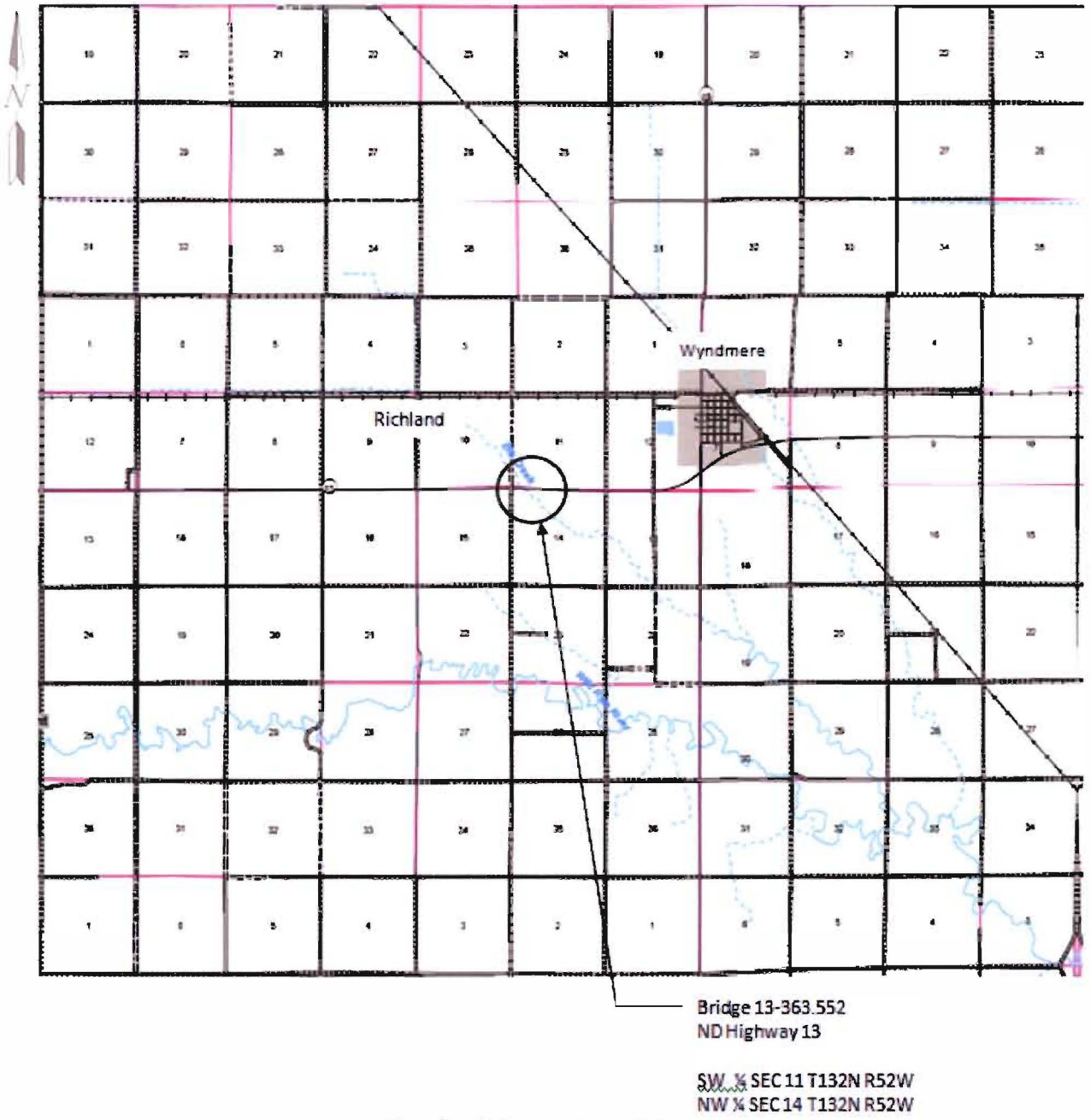


Figure 2 Proposed RCB Culvert with 20° Skew

C. Work Zone Traffic Control

Alternative B will require the construction of a temporary bypass in order to provide a detour route for traffic. A temporary bypass will be constructed of earth and surfaced with gravel. The contractor will be required to maintain the flows of the creek through the bypass via culverts. The bypass will be located on the north side of the highway and shall consist of a two-lane, two-way bypass with reduced speeds. This will cause a slight travel delay time. There are utility poles located on the north side of the highway; however it is anticipated that the bypass will be built without a need to relocate these utility poles. There is also a rural water line that is located 108 feet north of and approximately parallel to the centerline of ND Highway 13. The water line should not interfere with the construction of the temporary bypass due to the depth of the line.

Figure 3 Project Location Map



Project Location Map
BRS-8-013(043)363

D. Summary of Estimated Costs

The following table shows the estimated cost for the build alternative.

Table 3 – Summary of Costs – Alternative B

Structural Rehabilitation: Replacement of Reinforced Concrete Box Culvert				
Item	Unit	Quantity	Unit Cost	Total Cost
Contract Bond	L SUM	1	$7,000	$7,000
Mobilization	L SUM	1	$10,000	$10,000
Removal of Structure	L SUM	1	$17,000	$17,000
Triple 9'x8'x96' RCB	L SUM	1	$232,820	$232,820
Riprap	CY	80	$50	$4,000
Temporary Bypass	L SUM	1	$59,710	$59,710
Mainline Paving and Base	L SUM	1	$51,862	$51,860
Flagging	MHR	200	$22	$4,400
Traffic Control Devices	L SUM	1	$4,120	$4,120
GRAND TOTALS				
TOTAL CONSTRUCTION COST				$390,910
15% Engineering Cost				$58,636
TOTAL PROJECT COST				$449,546

IV. Environmental Impacts

A. Temporary Construction Impacts

1. Water

Temporary impacts may occur during construction; therefore best management practices (BMP's) will be utilized to minimize the effects.

2. Air

   Temporary impacts may occur during construction due to exposed soils; therefore BMP's will be utilized to minimize fugitive dust emissions.

3. Noise

   Temporary impacts may occur during construction activities from equipment, therefore the contractor will ensure that all construction equipment is equipped with a recommended muffler in good working order. Construction activities will not take place during early morning or late evening hours.

B. Social

Driving inconveniences will be experienced by motorists during construction due to reduced travel speeds through the work zone. The temporary bypass will minimize effects on motorists during construction by maintaining the existing traffic patterns on ND 13.

C. Wetlands

Impacts determined from a wetland delineation (USACE jurisdictional determination NWO-2009-01667-BIS) conducted on June 24, 2009 by Mike Davis of the North Dakota Department of Transportation identified 0.98 acres of wetlands within the right of way. Of these, 0.03 acres will be permanently impacted as a result of the project and the alignment change of the culvert. These permanent wetland impacts will be mitigated on site, by placing the box culvert 1 foot lower than the natural channel bottom. The estimated wetland area that will be mitigated due to this is calculated at 0.062 acres. Please see Table 4 – Wetland Impact Table.

Temporary impacts resulting from the demolition of the existing box culvert would be various sized chunks of concrete and pieces of reinforcing steel that could be in the water and on the surrounding banks of the creek. NDDOT specifications required that the contractor collect and remove all the debris generated from this demolition of the box. After removal of the concrete and cleanup, there should be no permanent impacts to this area.

It is anticipated that sheet pile cofferdams will not be needed at this site to construct the new box culvert. Depending upon weather conditions, it is possible that some small earthen embankment dikes may be necessary to route water past the structure through the site. These embankments would be temporary in nature and would have minimal impacts to the stream.

Table 4 – Wetland Impact Table

Wetland Number	Location	LONG / LAT (Dec. Deg)	Cowardin Classification	Wetland Type	Wetland Feature	Wetland Size (acres)	Wetlands Protected Under E.O. 11990	USACE Jurisdictional Wetlands* (acres)
1N	Sec. 11, T132N, R52W	-97.173500 W 46.253745 N	PEMC	Drainage (Elk Creek)	Natural	0.59	X	X
1S	Sec 14, T132N, R52W	-97.173892 W 46.253233 N	PEMC	Drainage (Elk Creek)	Natural	0.39	X	X

* A wetland jurisdictional determination was issued by the USACE on July 27, 2009; NWO-2009-01667-BIS

D. Water body modification, wildlife, and invasive plant species

The Solicitation of Views letter to the U.S. Fish and Wildlife Service was written on February 2, 2009. Their response was received on March 3, 2009. The Fish and Wildlife Service recommends taking precautions to avoid impacts to Elk Creek by maintaining existing drainage patterns and avoiding the placement of fill material in the stream channel. Due to the realignment of the box culvert, the Service recommends that the cutoff portion of the channel on the north side of the roadway be maintained to minimize habitat loss and reduce/avoid the need to develop mitigation offsite. The cutoff portion, however, is a minimal area adjacent to the existing structure which, due to the required length of the new structure, will fall behind the northeast wingwall. This area needs to be filled in to match the adjacent inslope, for safety reasons, and to maintain the integrity of the structure.

State and Federal natural resource agencies have worked with the North Dakota Department of Transportation and the Federal Highway Administration to develop guidance that maintains fish passage at bridge sites and can reduce or eliminate the need to mitigate off site. In their original Solicitation of View response, US Fish and Wildlife Service recommended that the invert elevation of the box culvert be set one foot below the existing grade of the stream channel and that an 18 inch high lip should be installed on two of the three barrels to direct low flows through the remaining barrel. This design helps to ensure that the structure does not act as a barrier preventing the movement of fish and other aquatic organisms in the creek channel under low flow conditions. The use of the 18" lip in the invert of box culverts at other locations with minimal channel slope has caused aggradation of sediment at the upstream end of the structure. Therefore, it has been proposed by the NDDOT that the 18" lips not be installed at this structure. In an email from Bill Bicknell of US Fish and Wildlife Service, to Chad Orn dated October 19, 2009, US Fish and Wildlife Service concurs with this proposal. Therefore the 18" lips will not be installed. A copy of this email is located in Appendix E- Solicitation of Views along with the original response from US Fish and Wildlife Service.

E. Cultural Resources

The North Dakota State Historic Preservation Office (SHPO) has concurred with a determination of "No Historic Properties Affected." (#09-1154). A copy of their letter is included in Appendix D.

F. Threatened and Endangered Species

Consultation with US Fish and Wildlife Service (USFWS) indicated that two endangered species occur in Richland County. These species are the Whooping crane (Grus Americana) and the Gray wolf (Canis lupus). The USFWS also indicated that there is one threatened species in Richland County which is W. prairie-fringed orchid (Platanthera praeclara). Consultation with North Dakota Parks and Recreation Department indicate that there are no known occurrences of plant or animal species of concern within a one mile radius of the project area.

The proposed project may effect, but is not likely to adversely affect listed species, is not likely to jeopardize the continued existence of the species, and is not likely to destroy or adversely modify critical habitat to the species.

G. Right of Way

Temporary construction easements will be required in order to construct the temporary bypass.

H. Unaffected Categories

- Pedestrians/Bicyclists
- Energy
- Visual
- Section 4(f) and 6(f) Involvement
- Low Income and Minority Living Areas
- State Scenic River
- Floodplain
- Trees
- Land Use
- Relocations
- Air Quality
- Prime and Unique Farmland
- Economic
- Water Quality
- Hazardous Waste

V. Environmental Commitments and Permitting

- All disturbed areas will be reseeded upon completion of construction.
- Erosion and sedimentation into adjacent wetlands will be minimized.
- Measures will be taken to limit construction noise, control dust, and maintain reasonable accessibility during construction.
- Measures must be taken to insure the protection of the environment.
- Coordination with any affected utility companies will be required during design and construction of the project.
- The invert of the box culvert will be set 1 foot lower than the existing channel bottom in order to provide for a fish passage.

- SFN 17987 Asbestos Notification of Demolition and Renovation is required due to the removal of the concrete structure. The contractor must submit SFN 17987 to the North Dakota Department of Health 10 days prior to beginning the activity.
- This project is located in the U.S. Army Corps of Engineer jurisdictional wetland area. All permanent wetland impacts will be mitigated on site. A 404 permit will be applied for.

VI. Public Involvement

No relocation of people or businesses is necessary, and no additional permanent right of way is required. The on-site location of the temporary bypass will provide the necessary accommodations to allow for the movement of the traffic. Therefore, the Bridge Division does not recommend a public hearing.

Letters soliciting views and comments for the proposed project were sent to various federal, state, and local agencies on February 2, 2009. No controversial issues were discovered through the Solicitation of Views process. Copies of the solicitation of views (SOV) letters and responses received can be found in Appendix E.

APPENDICES

Appendix A
Traffic Data

ESTIMATE OF CURRENT AND FUTURE TRAFFIC
NORTH DAKOTA DEPARTMENT OF TRANSPORTATION
(PLANNING DIV. TRAFFIC INFO. SECTION)

RECNO: 6613 PCN: 17502

DATE PRINTED OR REPRINTED: 12/19/2008 PROJECT NO: BRS-8-013(043)363

DATE PREPARED: 12/09/2008 COUNTY: RICHLAND ROUTE ID: 0

HIGHWAY NO: 13 HWY SUFFIX: HWY DIRECTION: E

REF PT: 363.000 OFFSET: .6520 LENGTH: 0.1000

PASSENGER EXPANSION FACTOR: 1.29 TRUCK EXPANSION FACTOR: 1.29

TRAFFIC'S ANNUAL % OF GROWTH: 1.3 ESAL'S ANNUAL % OF GROWTH: 1.3

LOCATION: RP 363.00+0.6520 TO 363.00+0.7520
2 WEST OF ND HIGHWAY 18

* * * * * * * * * * * * * * * * * * * *
* ALL AADT'S & ESALS, ARE AT THE HIGHEST POINT OF THE PROJECT SEGMENT *

	YEAR	PASS	TRUCKS	TOTAL	30TH MAX HR	E.S.A.L.'S FLEX	E.S.A.L.'S RIGID
CURRENT	2008	1,180	295	1,475	150	190	290
FORECAST	2028	1,525	385	1,910	195	245	375

* * * * * * * * * * * * * * * * * * * *

PAVEMENT EQUIVALENCY FACTORS: FLEXIBLE AT SN4 RIGID AT 9 INCHES

WAS CLASS WIM DATA AVAILABLE FOR THIS PARTICULAR LOCATION? Y

IS THIS A REVISED ESTIMATE? N SUPERCEDES EST. OF

REQUESTED BY: MILESTONE

* * * * * * * * REMARKS! * * * * * * * * *

TRAFFIC FORECAST ESTIMATE IS BASED ON 2007 TRAFFIC COUNTS. COMPLETED BY NR.

Appendix B
Structure Inventory & Appraisal

STRUCTURE NO. 13-363.552

200	SYSTEM DESIGNATION	STATE
201	STATUS	STRUCTURALLY DEFICIENT
202	SUFFICIENCY RATING	* 63.1

IDENTIFICATION

01	STATE	NORTH DAKOTA
02	HIGHWAY DISTRICT	FARGO
03	COUNTY	RICHLAND
04	CITY	WYNDMERE TOWNSHIP
05	INV. ROUTE STATE HIWAY	13 MAINLINE ON
06	FEATURES INTERSECTED	ELK CREEK
07	FACILITY CARRIED ON STRUC	ND HIGHWAY 13
08	STRUCTURE NO.	13-363.552
09	LOCATION	2 WEST OF ND HIGHWAY 18
11	MILEPOINT	363.552
13	LRS INVENTORY ROUTE, SUBROUTE NO.	000000000000
16	LATITUDE	46 DEG 15.2 MIN
17	LONGITUDE	97 DEG 10.5 MIN
98	BORDER BRIDGE	NOT APPLICABLE
99	BOROER BRIDGE STRUCTURE NUMBER	

STRUCTURE TYPE AND MATERIAL

43	MAIN STRUC. TYPE	CONCRETE CULVERT
44	APPROACH STRUC TYPE	NOT APPLICABLE
45	NO. SPANS IN MAIN UNIT	3
46	NO. APPROACH SPANS	NOT APPLICABLE
107	OECK STRCT. TYPE	NOT APPLICABLE
108	WEARING SURFACE	NOT APPLICABLE
	MEMBRANE	NOT APPLICABLE
	DECK PROTECTION	NOT APPLICABLE
208	DECK OVERBURDEN	NOT APPLICABLE

AGE AND SERVICE

27	YEAR BUILT 1950	106 YEAR RECONSTRUCTED 1977
42	TYPE SERVICE	HIGHWAY ON WATERWAY UNDER
28	LANES ON STRUCTURE	2 LANES ON; 0 LANES UNDER
29	ADT CARS & TRUCKS 1,820	30 YR OF ADT 2007
109	AVERAGE DAILY TRUCK TRAFFIC	16%
19	BYPASS DETOUR LENGTH	48 MILES

GEOMETRIC OATA

10	MIN VER CLEARANCE	UNLIMITED
32	APPROACH ROADWAY WIOTH	46 FEET
33	BRIDGE MEDIAN	NO MEDIAN
34	SKEW	0 OEG
35	STRUCTURE FLARED	NO
47	TOTAL HORIZ. CLEARANCE	54.0 FEET
48	LENGTH OF MAX SPAN	8 FEET
49	STRUCTURE LENGTH	25 FEET
50	CURB/SIOEWALK WIDTHS NONE FEET RT-SIDE;NONE FEET LT-SIOE	
51	BRIDGE RDWY WIDTH-CURB TO CURB	0.0 FEET
52	DECK WIDTH	0.0 FEET
53	MIN. VERT. CLEARANCE OVER RDWY	UNLIMITED
54	MIN. VERT UNOERCLEARANCE	NOT HIGHWAY/RAILROAO
55	MIN. LATERAL UNDERCLEARANCE-RT	NOT APPLICABLE
56	MIN. LATERAL UNDERCLEARANCE-LT	NOT APPLICABLE
210	CULVERT	TRIPLE
211	DESCRIPTION CULVERT	8X8X85' RCB

NAVIGATION OATA

38	NAVIGATIONAL CONTROL	NO
39	NAVIGATION VERTICAL CLEARANCE	0 FEET
40	NAVIGATION HORIZONTAL CLEARANCE	0 FEET
111	PIER OR ABUTMENT PROTECTION	
116	MINIMUM NAVIGATION VERTICAL CLEARANCE	

CLASSIFICATION

12	BASE HIGHWAY NETWORK	ON BASE NETWORK
20	TOLL	FREE ROAD
21	MAINTENANCE RESP.	STATE HIGHWAY AGENCY
22	OWNER	STATE HIGHWAY AGENCY
26	FUNCTIONAL	RURAL PRINCIPAL ARTERIAL - OTHER
37	HISTORICAL SIGNIFICANCE	NOT ELIGIBLE FOR NATL. REG.
100	STRATEGIC HIGHWAY NETWORK	NOT A STRAHNET ROUTE
101	PARALLEL STRUCTURE DESIGNATION	NO PARALLEL STRUCTURE EXISTS
102	DIRECTION OF TRAFFIC	TWO-WAY TRAFFIC
103	TEMPORARY STRUCTURE DESIGNATION	NO
104	HIGHWAY SYSTEM OF INVENTORY RTE	ON NATL HWY SYSTEM
105	FEDERAL LANDS HIGHWAYS	NOT APPLICABLE
110	DESIGNATED NATIONAL NETWORK	YES
112	NBIS BRIDGE LENGTH	YES
226	FUNCTIONAL UNDER	

CONDITION

58	DECK	N NOT APPLICABLE
59	SUPERSTRUCTURE	N NOT APPLICABLE
60	SUBSTRUCTURE	N NOT APPLICABLE
61	CHAN & CHAN PROT	5 FAIR CONDITION
62	CULV & RTNG WALLS	4 POOR CONDITION

LOAD RATING AND POSTING

31	OESIGN LOAO	HS20
41	STRUCTURE OPEN OR CLOSED	OPEN, NO RESTRICTION
63	OPERATING RATING METHOD	LOAD FACTOR (LF)
64	OPER RATING 260	HS-33
65	INVENTORY RATING METHOD	LOAD FACTOR (LF)
66	INV RATING 236	HS-20
70	BRIDGE POSTING POSTING NOT REQUIRED	5
209	POSTEO IN "TONS"	TON

APPRAISAL

67	STRUCTURAL CONDITION	4 MINIMUM TOLERABLE LIMITS
68	OECK GEOMETRY	N NOT APPLICABLE
69	UNDERCLEAR. VERT & HORIZ	N NOT APPLICABLE
71	WATERWAY AOEQUACY 7 BETTER THAN PRES. MIN. CRITERIA	EST.
72	APP RDWAY ALIGNMENT	8 NO SPEED REDUCTION
36	TRAFFIC SAFETY FEATURES	NN11
113	SCOUR CRITICAL BRIDGE 8 CALC'D SCOUR ABOVE TOP OF FOOTING	

INSPECTIONS

90	DATE OF LAST INSPECTION	SEPTEMBER 2007
91	DESIGNATED INSPECTION FREQUENCY	24 MONTHS
92	CRITICAL FEATURE INSPECTION N	N N
93	CRITICAL FEATURE INSPECTION OATE	
218	CHANNEL PROFILE	N
207	TRANSPORTER ERECTOR ROUTES & SITES	
212	STRUCTURE LOAD RATED	OATE: OECEMBER 1996
213	FAP NUMBER	F-8-013(30)339
214	DELAYED INSPECTION	
216	INSPECTOR	LILLEHOFF & NGUYEN
217	REMARKS	

1RANDOM CRACKING THROUGHOUT BOX.* CONCRETE HAS FALLEN OUT OF JOINTS WHERE OLD MEET NEW. CHANNEL HAS MODERATE VEGETATION GROWTH. EROSION AT BOTH ENDS OF BOX.
2BOX SECTIONS ARE MISALIGNEO.* E & W BOX WALL HAS HORIZONTAL CRACK HALF WAY UP WALL. CONSTRUCTION JOINT AT CENTER OF BARRELS IS OPEN 2 TO 2 1/2 INCHES, HAS BEEN COVERED WITH 3"X12" TIMBER PLANKS ON EXTERIOR WALLS.* 10/04 NO CHANGE. TIMBER PLNKS ON WEST & EAST WALLS ALIGNED WITH WALL KEEPING FILL IN PLACE. NORTH PARAPET SHOWING REBAR.

Appendix C
Bridge Division's Recommendations

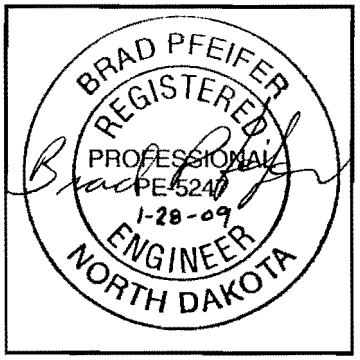
MEMORANDUM

TO: File

FROM: Lindsay Bossert LB
Preliminary Engineering, Bridge Division

DATE: January 28, 2009

SUBJECT: Project BRS-8-013(043)363 PCN 17502
ND 13 – 2 miles west of ND 18 and west of Wyndmere (RP 363.552)
Project Concept Report Input



A field review of the project area was conducted on January 5, 2009. Those in attendance were:

Bob Walton	Fargo District
Matt Linneman	Design
Brad Pfeifer	Bridge
Lindsay Bossert	Bridge

The project is scheduled for the March 26, 2010 bid opening. The project consists of the removal and replacement of a triple 8'x8'x85' reinforced concrete box culvert. A temporary bypass will also need to be constructed which is included in this project.

STRUCTURE NO.	CROSSING	SIZE	YEAR BUILT	SUFFICIENCY RATING
13-363.552	Elk Creek	Concrete Culvert Triple 8'x8'x85' RCB	1950/1977	63.1

Existing Conditions

The triple 8'x8'x85' reinforced concrete box culvert conveys the flow of Elk Creek through ND Highway 13, which is a two-lane, two-way highway. The existing box culvert is normal to the highway. There are 3 field drives located along the north side of the highway and 1 field drive located along the south side of the highway. All of these drives are located east of the structure. There are utility poles located on the north side of the highway.

The box culvert was originally constructed in 1950 and its length was extended to 85 feet in 1977. According to the Bridge Inventory SI&A sheet, the culvert is considered to be structurally deficient with a sufficiency rating of 63.1. The channel and channel protection has a condition rating of 5, or fair condition. The culvert and retaining walls have a condition rating of 4, or poor condition.

The existing box culvert is deteriorating. There is random cracking throughout the box. There is horizontal cracking of the east and west exterior walls of the culvert, located half of the way up the wall. Moderate vegetation is growing in the channel and both ends of the culvert are showing signs of erosion. Rebar is also exposed on the north parapet.

The box culvert extensions were not tied to the original structure and are exhibiting various problems. Both the north and south extensions have separated from the original box by 2 inches. The north extension has also settled 2 inches below the original box. Concrete is falling out of the construction joints between the original box and extensions. Because of this, 3" x 12" timber planks were placed on the exterior walls. The timber planks on the east and west walls are aligned with the joints in order to keep the remaining fill in place.

Recommendations:

Due to the deterioration of the current box culvert, it is recommended that it be replaced with a new structure. Currently, Elk Creek is forced to make a sharp turn due to the perpendicular orientation of the existing culvert. It is recommended to skew the proposed culvert to approximately 20 degrees from perpendicular with ND Highway 13 in order to maintain a more natural flowing creek and improve the flow through the structure. This will help increase efficiency and decrease erosion in the banks of the creek.

There will also be a need for a temporary bypass while construction work is being conducted for this project. During the field review, it was thought that the bypass would be best located on the north side of the highway. The field drives will need to be taken into consideration when designing the bypass as it is preferred that field drives not be allowed to intersect with the temporary bypass during construction. The utility poles located on the north side of the highway might need to be temporary relocated for the bypass.

The final structure size of the culvert will be determined in the hydraulic report. A triple 9'x8'x96' reinforced concrete box will be assumed for the estimate.

The estimated cost for the replacement of the reinforced concrete box culvert is as follows:

Removal of Structure		$ 17,000
Triple 9'x8'x96' RCB		$ 217,250
Riprap		$ 4,000
	Total	$ 238,250

c: Terry Udland
Bob Walton
Kevin Gorder
Larry Schwartz
Matt Linneman

Appendix D
Materials and Research Division's Recommendations

MEMORANDUM

TO: Roger Weigel
Design Engineer

ATTN: Matt Linneman

FROM: Matt Luger
Materials & Research Division

DATE: March 4, 2009

SUBJECT: BRS-8-013(043)363 – 2 west of ND Highway 18
Pavement Thickness Recommendation

Attached is a pavement thickness recommendation for BRS-8-013(043)363, PCN 17502. If you have any questions please contact Matt Luger at (701)328-6903.

Pavement Thickness Recommendation

Project: BRS-8-013(043)363

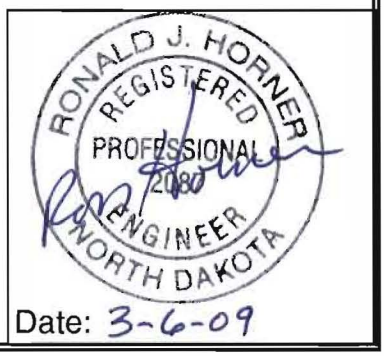
PCN: 17502

Project Description: 2 west of ND Highway 18

Project Length: 0.1 miles

Project Limits: RP 363.652 to RP 363.752

Date: March 4, 2009



Date: 3-6-09

This highway is classified as a State Corridor.

The existing roadway section in RIMS is as follows:

RP 350.0000 NEAR MILNOR EAST TO JCT 18-WYNDMERE 14.9217 Miles

Surface Components	Left Shld.	Roadway Width	Right Shld.	Year	Material	Depth
GRADE		32'		1950		
TRAFFIC SERVICE GRAVEL		20'		1950		4.0"
AGGREGATE BASE		29'		1953		5.0"
STABILIZED BASE		28'		1953		2.0"
HOT BIT PAVEMENT		22'		1953	120-150	2.5"
COLD BITUMINOUS PAVEMENT				1965	SC-4	
SELECTIVE WIDENING		26'		1977		
HOT BIT PAVEMENT		24'		1978	120-150	2.0"
CONTRACT CHIP SEAL		32'		1990	HFMS-2	
HOT BIT PAVEMENT		36'		1998	PG 58-28	3.5"
FEDERAL AID CHIP SEAL		40'		2001	HFMS-2	
CONTRACT CHIP SEAL		26'		2007	HFMS-2	

COMMENTS:

Pavement Thickness Recommendation

The recommended pavement thickness for mainline pavement is 15.0" of dense graded base with 5.0" of Class 29 HBP or Superpave.

This design is based on 190 two-way daily flexible ESALs; 1.3% annual ESAL growth rate; 786,213 accumulated one-way flexible ESALs; 6,000 psi soil modulus; 80% reliability and a 20 year design period.

Appendix E
Solicitation of Views

Letter 1:
Mr. Bob Christensen
Cultural Resource Specialist
Cultural Resource Section
ND Department of Transportation
608 E. Boulevard Ave.
Bismarck ND 58505-0700
No.:

Ms. Jeani Borchert
Cultural Resource Specialist
Cultural Resource Section
ND Department of Transportation
608 E. Boulevard Ave.
Bismarck ND 58505-0700
No.:

Sir or Madam
Chief Missile Engineer
91st Missile Maintenance Squadron
Cable Affairs Office
417 Bomber Blvd.
Minot AFB ND 58705
No.:

Ms. Alice Harwood
Acting Regional Director
Bureau of Indian Affairs
115 4th Ave. SE
Aberdeen SD 57401
No.:

Sir or Madam
Acting Regional Administrator
Regional Office
Department of HUD
1670 Broadway, Ste. 200
Denver CO 80202-4813
No.:

Sir or Madam
Office of Economic Analysis
Federal Railroad Administration
400 7th St. SW
Washington DC 20590
No.:

Ms. Mary Giltner
Deputy Base Civil Engineer
319 CES/CEVA
Grand Forks Air Force Base
525 Tuskagee Airmen Rd.
Grand Forks AFB ND 58205-6434
No.:

Mr. Gerald Paulson
Director, Transmission Lines and Substations
Western Area Power Admin.
US Department of Energy
PO Box 1173
Bismarck ND 58502-1173
No.:

Mr. Jeffrey Towner
Field Supervisor
ND Field Office
US Fish & Wildlife Service
3425 Miriam Ave.
Bismarck ND 58501
No.:

Mr. Greg Wiche
Director
Water Resources Division
US Geological Survey
821 E. Interstate Ave.
Bismarck ND 58501
No.:

Ms. Cheryl Kulas
Executive Director
Indian Affairs Commission
600 E. Blvd. Ave.
1st Floor, Judicial Wing, Rm 117
Bismarck ND 58505-0300
No.:

Mr. Lonnie Hoffer
Disaster Recovery Chief
Department of Homeland Security
ND Department of Emergency Services
PO Box 5511
Bismarck ND 58506
No.:

Mr. Mike McKenna
Chief
Conservation & Communication Division
ND Game & Fish Department
100 Bismarck Expressway
Bismarck ND 58501-5095
No.:

Mr. Ed Murphy
State Geologist
ND Geological Survey
600 E. Blvd. Ave.
Bismarck ND 58505-0840
No.:

Mr. Doug Prchal
Director
ND Parks & Recreation Dept.
1600 E. Century Ave., Suite 3
Bismarck ND 58503-0649
No.:

Mr. Dale Frink
State Engineer
ND State Water Commission
900 E. Blvd. Ave.
Bismarck ND 58505-0850
No.:

Mr. Scott Hochhalter
Soil Conservation Specialist
NDSU Extension Service
Soil Conservation Committee
2718 Gateway Ave., #104
Bismarck ND 58503
No.:

Mr. Nathan Brandt
Mayor
City of Wyndmere
P.O. Box 220
Wyndmere ND 58081-0220
No.:

Mr. Rochelle Huseth
Auditor
City of Wyndmere
P.O Box 220
Wyndmere ND 58081-0220
No.:

Mr. Mike Connell
Superintendent
Wyndmere School District
418 2nd Ave N
Wahpeton ND 58078
No.:

Mr. Harris Bailey
Director
Finance
Richland County
418 2nd Ave N
Wahpeton ND 58078
No.:

Mr. David Muehler
Chairman
Soil Conservation District
Richland County
1687 Bypass Rd
Wahpeton ND 58075-3107
No.:

Mr. James Lyons
Chairman
Water Resource District
Ransom County
PO Box 388
Lisbon ND 58054-0388
No.:

Mr. Robert Rostad
Chairman
Water Resource District
Richland County
418 2nd Ave N
Wahpeton ND 58075
No.:

Mr. Mark Breker
Chairman
Water Resource District
Sargent County
355 Main St S Ste 1
Forman ND 58032
No.:

Mr. Ronald Rotenburger
Chairman
Water Resource District
Tri-County Joint
7231 143rd Ave SE
Milnor ND 58060
No.:

Mr. Bryan Flaa
Commission
Richland County
418 2nd Ave N
Wahpeton ND 58075
No.:

Mr. Brett Lambrecht
Emergency Management
Richland County
418 2nd Ave N
Wahpeton ND 58075
No.:

Mr. Tim Schulte
Highway Engineer/Supervisor
Richland County
418 2nd Ave N
Wahpeton ND 58075
No.:

Mr. Irv Rustad
Executive Director
Region V
Regional Planning Council
417 Main Ave
Fargo ND 58103-1956
No.:

Ms. JoAnn Solberg
Township Board
Wyndmere Township
7995 Co Rd 17
Wyndmere ND 58081
No.:

Ms. Lynn Leibfried
Manager of Public Projects
Engineering Division
Burlington Northern Railroad Co.
80 44th Ave. NE
Minneapolis MN 55421
No.:

Mr. Joel Heitkamp
Manager
Southeast Water Users
P.O. Box 10
Mantador ND 58058-0010
No.:

Mr. Jeff Olsen
Manager
Red River Telecom Inc.
P.O. Box 136
Abercrombie ND 58001-0136
No.:

Mr. Jay Jacobson
Manager
Dakota Valley Electric Coop.
PO Box 159
Milnor ND 58060-0159
No.:

Mr. Bob Krava
Right of Way Supervisor
Otter Tail Power Company
215 S. Cascade St.
Fergus Falls MN 56537
No.:

Sir or Madam
Engineer
Engineering Department
Qwest Communications
409 1st Ave. N.
Fargo ND 58102
No.:

Sir or Madam
Engineer
Engineering Department
Qwest Communications
220 N. 5th St.
Bismarck ND 58506-5508
No.:

Sir or Madam
Engineer
Engineering Department
Qwest Communications
103 N. 5th St.
Grand Forks ND 58203
No :

Ms. Sue Cotton
Special Construction Manager
Qwest Communications
2800 Wayzata Boulevard Rm 330
Minneapolis MN 55406
No.:

Letter 2:
Mr. Dan Cimarosti
Manager
ND Regulatory Office
US Army Corps of Engineers
1513 S. 12th St.
Bismarck ND 58504
No.:

Letter 3:
Mr. J.R. Flores
State Conservationist
US Department of Agriculture
PO Box 1458
Bismarck ND 58502-1458
No.:

Letter 4:
Mr. L. David Glatt
Chief
Environmental Health Section
Gold Seal Center
ND Department of Health
918 E. Divide Ave., 4th floor
Bismarck ND 58501-1947
No.:

Letter 5:
Merl Paaverud
ND State Historic Preservation Officer
ND Heritage Center
612 East Boulevard Avenue
Bismarck, ND 58505-0830

Letter 1

North Dakota Department of Transportation

Francis G. Ziegler, P.E.
Director

John Hoeven
Governor

February 2, 2009

«CTitle» «First» «Last»
«Title»
«Department»
«Agency»
«Address»
«City», «State» «Zip»

PROJECT NO. BRS-8-013(043)363, PCN 17502
STRUCTURAL REHABILITATION
ND 13 - 2 MILES WEST OF ND 18
RICHLAND COUNTY

A roadway improvement project is being planned for ND Highway 13 at Reference Point 363.552, which is two miles west of ND Highway 18 and Wyndmere, North Dakota. The existing triple 8'x8'x85' reinforced concrete box culvert conveys the flow of Elk Creek through ND Highway 13. The proposed improvements for this project include the removal and replacement of the existing RCB culvert.

The existing RCB culvert demonstrates signs of deterioration, including random cracking throughout the box, horizontal cracking of the east and west exterior walls that is approximately halfway up the box, and concrete falling out of several of the joints. There are also signs of erosion at both ends of the box. The existing structure was extended in 1977, and the extended portions of the structure have separated and settled.

It is proposed to skew the new box culvert approximately 20 degrees from perpendicular with the roadway. Several advantages will be realized if the new culvert is skewed, including increased efficiency and decreased channel erosion as well as providing a more natural flowing stream curve than what is presently in place.

There will be a need for a temporary bypass while the construction work is being completed. The temporary bypass is expected to be located on the north side of ND Highway 13. Currently, there are three field drives located along the north side of the roadway and one field drive located along the south side. All of these drives are located east of the structure. It is preferred that field drives not be allowed to intersect with the temporary bypass during construction.

This project is expected to be constructed during the 2010 construction season.

To ensure that all social, economic, and environmental effects are considered in the development of this project, we are soliciting your views and comments on the proposed project pursuant to Section 102(2) (D) (IV) of the National Environmental Policy Act of 1969, as amended. We are particularly interested in any property which your department may own or have an interest in and which would be adjacent to the proposed roadway improvement. We would also appreciate being made aware of any proposed developments your department may be contemplating in the areas under consideration for the proposed roadway facility. Any information that might help us in our studies would be appreciated.

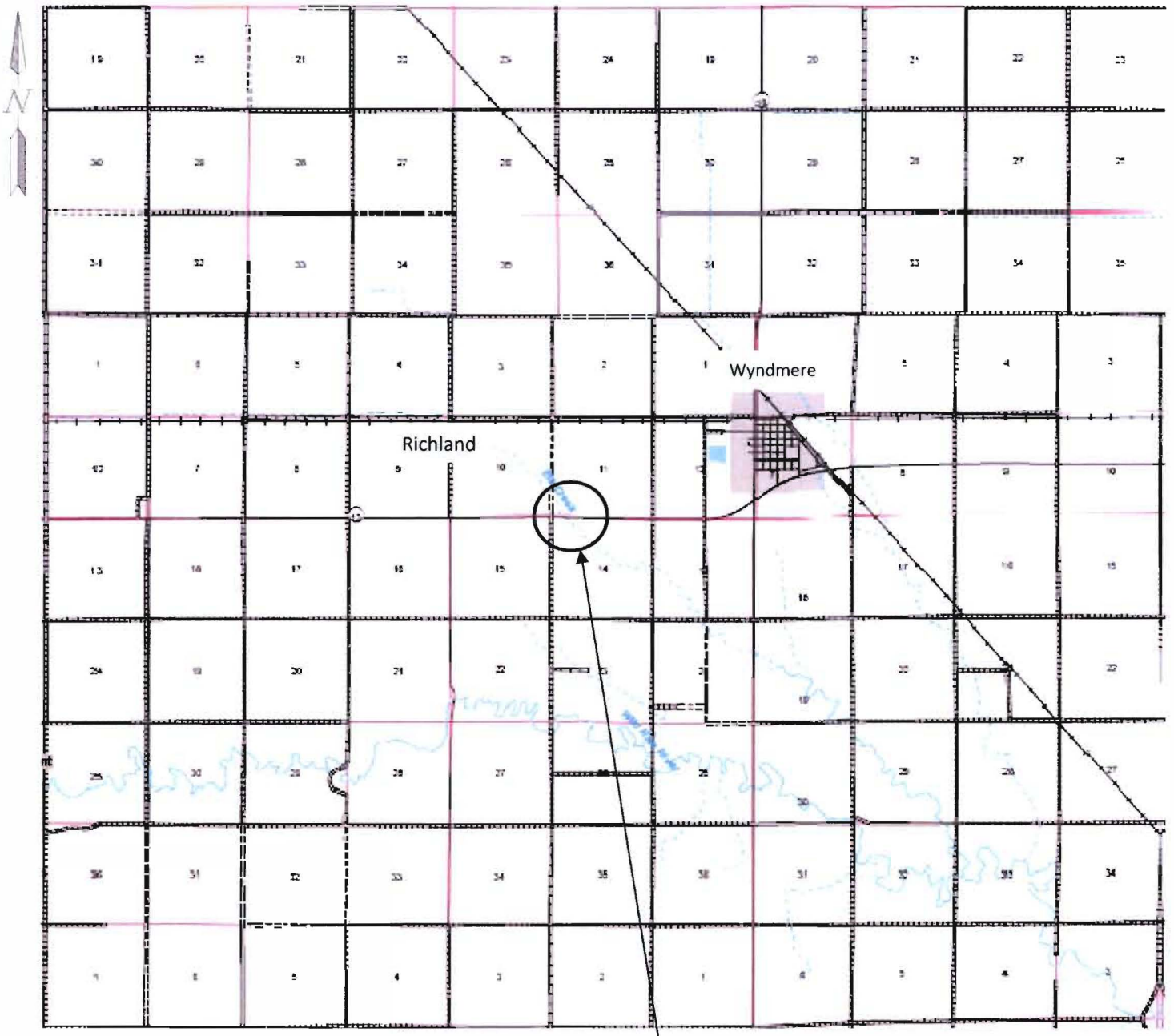
Information or comments relating to environmental or other matters that you might furnish will be used in determining if this project is a "categorical exclusion" or whether an "Environmental Assessment" or a "Draft Environmental Impact Statement" will be prepared.

It is requested that any comments or information be forwarded to our office on or before March 6, 2009. If no reply is received by this date, it will be assumed that you have no comment on this project.

If further information is desired regarding the proposed roadway improvement, please contact Lindsay Bossert at 701-328-2137 in Bismarck, North Dakota.

Terrence R. Udland

TERRENCE R. UDLAND, P.E., BRIDGE ENGINEER
BL
Enclosure



SW ¼ SEC 11 T132N R52W
NW ¼ SEC 14 T132N R52W

Project Location Map
BRS-8-013(043)363

Letter 2

North Dakota Department of Transportation

Francis G. Ziegler, P.E.
Director

John Hoeven
Governor

July 2, 2009

Mr. Dan Cimarosti, State Program Manager
US Army Corps of Engineers
North Dakota Regulatory Office
1513 S. 12th St.
Bismarck, ND 58504

PROJECT NO. **BRS-8-013(043)363; PCN 17502**
SEC 11& 12, T132N, R52W
Richland County
Wetland Jurisdictional Request

A roadway improvement is being planned on **ND Highway 13 at Reference Point 363.552, which is two miles west of ND Highway 18 and Wyndmere, North Dakota.** The existing triple 8'x8'x85' reinforced concrete box culvert conveys the flow of Elk Creek through ND Highway 13. The proposed improvements for this project include the removal and replacement of the existing RCB culvert.

The existing RCB culvert demonstrates signs of deterioration including random cracking throughout the box, horizontal cracking of the east and west exterior walls that are approximately half of the way up the box, and some concrete has fallen out of several of the construction joints. There are also signs of erosion at both ends. The existing structure was extended in 1977 and the extended portions of the structure have separated and settled.

It is proposed to skew the new box culvert approximately 20 degrees from perpendicular with the roadway. Several advantages will be realized if the new culvert is skewed, including increase efficiency and decrease channel erosion as well as providing a more natural flowing stream curve than what is presently in place.

There will be a need for a temporary bypass while the construction work is being completed. The temporary bypass is expected to be located on the north side of ND Highway 13. Currently, there are 3 field drives located along the north side of the roadway and 1 field drive located along the south side. All of these drives are located east of the structure. It is preferred that field drives not be allowed to intersect with the temporary bypass during construction.

This project is expected to be constructed during the **2010** construction season.

To ensure that all social, economic, and environmental effects are considered in the development of this project, we are soliciting your views and comments on the proposed project pursuant to Section 102(2) (D) (IV) of the National Environmental Policy Act of 1969, as amended.

We are particularly interested in any property which your agency may own or have an interest in adjacent to the proposed highway improvement. We would also appreciate being made aware of any proposed developments your agency, or any other parties, may be contemplating in the areas under consideration for the proposed highway project. Any information that might help us in our studies would be appreciated.

Information or comments relating to environmental or other matters that you might furnish will be used in determining if this project is a "Categorical Exclusion" or whether an "Environmental Assessment" or a "Draft Environmental Impact Statement" will be prepared.

Waterbodies in the vicinity of the project include **Elk Creek and the Wild Rice River.** A map indicating the delineated waterbodies and/or wetlands within the project area is enclosed. The delineation map was completed by the **NDDOT** on **June 24, 2009.**

Please provide a determination for each of the waterbodies and/or wetlands to indicate whether they are jurisdictional waters of the United States, and identify them on the enclosed table. It is requested that you forward the jurisdictional determination, and any comments or other information to our office by **August 3, 2009.** We will apply for a Section 404 Permit if any jurisdictional waters will be impacted by the project.

If further information is desired regarding the proposed roadway improvement, please contact me at (701)328-2188.

Sheri G. Lares

SHERI G. LARES, ENGINEERING & ENVIRONMENTAL SECTION LEADER

Enclosure

ADDITIONAL INFORMATION FOR WETLAND JURISDICTIONAL REQUESTS

A. Project Location and Background Information:

PCN / Project Number: 17502 / BRS-8-013(043)363
City: Wyndmere
County: Richland
State: North Dakota
Short Project Description: Box culvert replacement on ND13 at RP 363.55 and temporary bypass.
Name of nearest waterbody: Wild Rice River
Name of nearest Traditional Navigable Water (TNW): Wild Rice River
Name of watershed or Hydrologic Unit Code (HUC): 9020105, Western Wild Rice

Number of wetlands being considered in this cumulative analysis: 1 (5 combined)
Approximately __0.97__ acres in total are being considered in this cumulative analysis.

A table is attached that lists information for each individual wetland (number, location, Lat. / Long. in degree decimal format, Cowardin wetland classification, and acreage).
Maps of the project area showing the numbered wetlands are also included. Data sheets are included when a Field Delineation is completed.

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

X_ Office (Desk) Determination. Date: 10-24-08
X_ Field Determination. Date: 6-24-09

C. General Information:

1. General Area Conditions:
   a. HUC watershed size (specify acres or square miles): 2,380 sq. miles
   b. Average annual rainfall (inches): 20.54
      Source: High Plains Regional Climate Center
   c. Average annual snowfall (inches): 34.30
      Source: High Plains Regional Climate Center

2. Biological Characteristics (*Field Determination only*):
   a. The wetland supports (use space below each to elaborate for applicable wetlands):
      ___ Riparian buffer. Characteristics (type, average width)
      ___ 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):

_X_ 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:
__ USDA Natural Resources Conservation Service Soil Survey. Citation:
_X_ National wetlands inventory map(s). Cite name:
__ State/Local wetland inventory map(s):
__ 100-year Floodplain Elevation is: _____ (National Geodectic Vertical Datum of 1929)
_X_ Photographs: _X_ Aerial (Name & Date):
  or __ Other (Name & Date):
__ Applicable/supporting scientific literature:
__ Other information (please specify):

E. Additional Comments:

Wetlands 1N and 1S (Elk Creek) with adjacent branches are characterized by a clearly defined vegetative boundary between upland and wetland. These branches, seen as lateral - adjacent wetlands running along the ditch, are essentially deep cuts created during times of sufficient meteorological events. They are approximately two to three feet in depth, with the series connected by culverts underneath the access roads.

The wetland delineation for PCN 17502, Project ID # BRS-8-013(043)363 (Box culvert replacement on ND highway 13 at RP 363.55 and temporary bypass), was conducted on June 24, 2009 by Dan Ackerman and Nicole Kunkel of the North Dakota Department of Transportation. The wetland delineations were conducted in accordance with the 1987 Corps of Engineers Wetland Delineation Manual and the Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region. Observations at each sample location were recorded on standard Corps of Engineers data sheets. Wetland boundaries and paired sample locations were recorded by GPS. The project is located within the WILD RICE RIVER (9020105) Hydrologic Unit Code (HUC).

Wetland Number	Test Hole (in wetland)	Location	LONG / LAT (Dec. Deg.)	Cowardin Classification	Wetland Type	Wetland Feature	Wetland Size (acres)	Wetlands Protected Under E.O. 11990	Assumed USACE Jurisdictional Wetlands*	Physical Characteristics of Potential Tributary**
1N	1	Sec.11, T132N, R52W	-97.173500 W 46.253745 N	PEMC	Drainage (Elk Creek)	Natural	0.59	X		1,2,3,4,6,8,10,12 ,13,17,18,19,23
1S	4	Sec.14, T132N, R52W	-97.173892 W 46.253233 N	PEMC	Drainage (Elk Creek)	Natural	0.39	X		1,2,3,4,6,8,10,12 ,13,17,18,19,23

* Pending guidance from the recent Supreme Court Ruling and determination by the USACE.

** Physical Characteristics of Potential Tributary:

Substrate composition:

1) Silts
2) Sands
3) Concrete
4) Cobbles
5) Gravel
6) Muck
7) Bedrock
8) Vegetation (Type/% Cover)
9) Other. Explain:

Other Tributary Features:

10) Bed and banks
11) Ordinary High Water Mark
12) Clear, natural line impressed on the bank
13) The presence of litter and debris
14) Changes in the character of soil
15) Destruction of terrestrial vegetation
16) Shelving
17) The presence of wrack line
18) Vegetation matted down, bent, or absent
19) Sediment sorting
20) Leaf litter disturbed or washed away
21) Scour
22) Sediment deposition
23) Multiple observed or predicted flow events
24) Water staining
25) Abrupt change in plant community

Letter 3

North Dakota Department of Transportation

Francis G. Ziegler, P.E.
Director

John Hoeven
Governor

February 2, 2009

Mr. J.R. Flores, State Conservationist
U.S. Department of Agriculture
P.O. Box 1458
Bismarck, ND 58502

PROJECT NO. BRS-8-013(043)363, PCN 17502
STRUCTURAL REHABILITATION
ND 13 - TWO MILES WEST OF ND 18
RICHLAND COUNTY

A roadway improvement project is being planned for ND Highway 13 at Reference Point 363.552, which is two miles west of ND Highway 18 and Wyndmere, North Dakota. The existing triple 8'x8'x85' reinforced concrete box culvert conveys the flow of Elk Creek through ND Highway 13. The proposed improvements for this project include the removal and replacement of the existing RCB culvert.

The existing RCB culvert demonstrates signs of deterioration, including random cracking throughout the box, horizontal cracking of the east and west exterior walls that is approximately halfway up the box, and concrete falling out of several of the joints. There are also signs of erosion at both ends of the box. The existing structure was extended in 1977, and the extended portions of the structure have separated and settled.

It is proposed to skew the new box culvert approximately 20 degrees from perpendicular with the roadway. Several advantages will be realized if the new culvert is skewed, including increased efficiency and decreased channel erosion as well as providing a more natural flowing stream curve than what is presently in place.

There will be a need for a temporary bypass while the construction work is being completed. The temporary bypass is expected to be located on the north side of ND Highway 13. Currently, there are three field drives located along the north side of the roadway and one field drive located along the south side. All of these drives are located east of the structure. It is preferred that field drives not be allowed to intersect with the temporary bypass during construction.

This project is expected to be constructed during the 2010 construction season.

To ensure that all social, economic, and environmental effects are considered in the development of this project, we are soliciting your views and comments on the proposed project pursuant to Section 102(2) (D) (IV) of the National Environmental Policy Act of 1969, as amended. We are particularly interested in any property which your department may own or have an interest in and which would be adjacent to the proposed roadway improvement. We would also appreciate being made aware of any proposed developments your department may be contemplating in the areas under consideration for the proposed roadway facility. Any information that might help us in our studies would be appreciated.

Please identify any prime farmland in the area. In addition, we request your comments on any effect this project will have on prime farmland. If there is prime or unique farmland within the project area, the information you provide will be used to fill out the Site Assessment portion of the Farmland Conversion Impact Rating Sheet for each alternative under consideration, as required by the Farmland Protection Policy Act (FPPA).

The Federal Highway Administration's Guidelines for Implementing the Final Rule of the Farmland Protection Policy Act for Highway Projects states that if all project alternatives receive a site assessment rating of less than 60 (and, therefore, a maximum overall rating of less than 160), the rating sheet does not have to be sent to the NRCS but will be placed in the project file. Under FPPA, projects with scores of less than 160 are given a minimum level of consideration for protection and no further sites would need to be evaluated.

Information or comments relating to environmental or other matters that you might furnish will be used in determining if this project is a "categorical exclusion" or whether an "Environmental Assessment" or a "Draft Environmental Impact Statement" will be prepared.

It is requested that any comments or information be forwarded to our office on or before March 6, 2009. If no reply is received by this date, it will be assumed that you have no comment on this project.

If further information is desired regarding the proposed roadway improvement, please contact Lindsay Bossert at 701-328-2137 in Bismarck, North Dakota.

Terry Udland

TERRY UDLAND, P.E., BRIDGE ENGINEER
BL
Enclosure

Letter 4

North Dakota Department of Transportation

Francis G. Ziegler, P.E.
Director

John Hoeven
Governor

February 2, 2009

Mr. David Glatt
Chief
Environmental Health Section
ND Department of Health
P.O. Box 5520
Bismarck, ND 58506-5520

PROJECT NO. BRS-8-013(043)363, PCN 17502
STRUCTURAL REHABILITATION
ND 13 - TWO MILES WEST OF ND 18
RICHLAND COUNTY

A roadway improvement project is being planned for ND Highway 13 at Reference Point 363.552, which is two miles west of ND Highway 18 and Wyndmere, North Dakota. The existing triple 8'x8'x85' reinforced concrete box culvert conveys the flow of Elk Creek through ND Highway 13. The proposed improvements for this project include the removal and replacement of the existing RCB culvert.

The existing RCB culvert demonstrates signs of deterioration, including random cracking throughout the box, horizontal cracking of the east and west exterior walls that is approximately halfway up the box, and concrete falling out of several of the joints. There are also signs of erosion at both ends of the box. The existing structure was extended in 1977, and the extended portions of the structure have separated and settled.

It is proposed to skew the new box culvert approximately 20 degrees from perpendicular with the roadway. Several advantages will be realized if the new culvert is skewed, including increased efficiency and decreased channel erosion as well as providing a more natural flowing stream curve than what is presently in place.

There will be a need for a temporary bypass while the construction work is being completed. The temporary bypass is expected to be located on the north side of ND Highway 13. Currently, there are three field drives located along the north side of the roadway and one field drive located along the south side. All of these drives are located east of the structure. It is preferred that field drives not be allowed to intersect with the temporary bypass during construction.

This project is expected to be constructed during the 2010 construction season.

The following tabulation shows the average daily traffic volumes (ADT) once the new facility is completed and the expected ADT in 20 years after completion.

LOCATION	ADT UPON COMPLETION OF IMPROVEMENT	FORECAST ADT
RP 363.6520 to RP 363.7520	1,514 (2010)	1,960 (2030)

We believe that these volumes are not of the magnitude that would result in the violation of any Air Quality Standards and the project is consistent with the State Implementation Plan for air quality.

Your concurrence in this determination is requested.

To ensure that all social, economic, and environmental effects are considered in the development of this project, we are soliciting your views and comments on the proposed project pursuant to Section 102(2) (D) (IV) of the National Environmental Policy Act of 1969, as amended. We are particularly interested in any issues pertaining to solid and hazardous waste; municipal wastewater; water quality; and the occurrence of past contamination along the project area.

Information or comments relating to environmental or other matters that you might furnish will be used in determining if this project is a "categorical exclusion" or whether an "Environmental Assessment" or a "Draft Environmental Impact Statement" will be prepared.

It is requested that any comments or information be forwarded to our office on or before March 6, 2009. If no reply is received by this date, it will be assumed that you have no comment on this project.

If further information is desired regarding the proposed roadway improvement, please contact Lindsay Bossert at 704-328-2137 in Bismarck, North Dakota.

Terry Udland

TERRY UDLAND, P.E., BRIDGE ENGINEER
BL
Enclosure

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, OMAHA DISTRICT
NORTH DAKOTA REGULATORY OFFICE
1513 SOUTH 12TH STREET
BISMARCK ND 58504-6640

REPLY TO
ATTENTION OF

July 27, 2009

North Dakota Regulatory Office [NWO-2009-01667-BIS]

North Dakota Department of Transportation
ATTN: Ms. Sheri Lares
Enginneering & Environmental Section
608 East Boulevard Avenue
Bismarck, North Dakota 58505-0700

Dear Ms. Lares:

This is in reference to your request for a jurisdictional determination (JD) for a planned roadway improvement project on North Dakota Highway 13 **(Project No. BRS-8-013(043)363)[PCN 17502]**. The project will involve the removal and replacement of an existing 8' x 8' x 85' RCB culvert in/over Elk Creek. The project review area is located in Section 11/12, Township 132 North, Range 52 West, Richland County, North Dakota.

We have determined that Elk Creek and its ***abutting*** wetlands are jurisdictional waters of the United States subject to regulation under Section 404 of the Clean Water Act. Therefore, a permit will be required for the proposed project.

While the aforementioned waterbodies are waters of the United States, we have also determined that the disconnected linear ditch wetland, identified by Test Holes 3 and 4 on your Wetland Map, is not a water of the United States. Therefore, the discharge of dredged or fill material into this wetland will not require authorization under Section 404 of the Clean Water Act.

An approved JD has been completed for your project (copy enclosed). Copies of supporting materials used in making this determination are available upon request. Within 30 days, the JD will also be posted on our website at https://www.nwo.usace.army.mil/html/od-rnd/jur/jur.htm. **This JD is valid for a period of five (5) years.**

If you do not agree with the JD, you may request an administrative appeal under US Army Corps of Engineers regulations found at 33 CFR 331. A *Notification of Administrative Appeal Options and Process and Request for Appeal (NAO-RFA)* is enclosed. The NAO-RFA must be received in the Office specified on the second page within 60 days from the date of this letter. **It is not necessary to submit the NAO-RFA if you do not object to the determination made in the JD.** If you would like more information on the appeal process, please contact this Office.

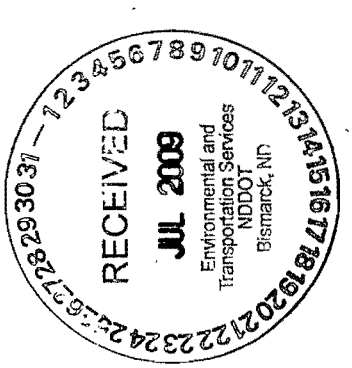
Should you have any questions regarding this determination, please do not hesitate to contact Matthew Mikulecky of my staff by letter or telephone (701)-255-0015 and reference Project Number **NWO-2009-01667-BIS**.

The Omaha District, North Dakota Regulatory Office is committed to providing quality and timely service to our customers. In an effort to improve customer service, please take a moment to complete our Customer Service Survey found on our website at http://per2.nwp.usace.army.mil/survey.html. If you do not have Internet access, you may call and request a paper copy of the survey that you can complete and return to us by mail or fax.

Sincerely

Daniel E. Cimarosti
Regulatory Program Manager
North Dakota

Enclosures



APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): 27 July 2009

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Omaha District – ND DOT - NWO-2009-01667-BIS

C. PROJECT LOCATION AND BACKGROUND INFORMATION: Elk Creek, adjacent wetlands & non-waters (preamble waterway) S11/12, T132N, R52W

State: North Dakota County/parish/borough: Richland City: n/a
Center coordinates of site (lat/long in degree decimal format): Lat. 46.2536° N, Long. -97.17434° W.
Universal Transverse Mercator: 14
Name of nearest waterbody: **Elk River**
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Red River
Name of watershed or Hydrologic Unit Code (HUC): **Western Wild Rice - 9020105**
☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc…) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):
☒ Office (Desk) Determination. Date: **27 July 2009**
☐ Field Determination. Date(s):

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are no** "*navigable waters of the U.S.*" within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [*Required*]
☐ Waters subject to the ebb and flow of the tide.
☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain:

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are** "*waters of the U.S.*" within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [*Required*]

1. **Waters of the U.S.**
   a. **Indicate presence of waters of U.S. in review area (check all that apply):** [1]
      ☐ TNWs, including territorial seas
      ☐ Wetlands adjacent to TNWs
      ☒ Relatively permanent waters[2] (RPWs) that flow directly or indirectly into TNWs
      ☐ Non-RPWs that flow directly or indirectly into TNWs
      ☒ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
      ☐ Impoundments of jurisdictional waters
      ☐ Isolated (interstate or intrastate) waters, including isolated wetlands

   b. **Identify (estimate) size of waters of the U.S. in the review area:**
      Non-wetland waters: 200 linear feet: 20width (ft) and/or 0 1 acres.
      Wetlands: 0.88 acres.

   c. **Limits (boundaries) of jurisdiction** based on: **1987 Delineation Manual**
      Elevation of established OHWM (if known):

2. **Non-regulated waters/wetlands (check if applicable):**[3]
   ☒ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain: **A small artificial ditch wetland approximately 0.1 acre in size, is located within the project review area. This pocket of wetland is part of an upland drainage ditch and lacks a contiguous surface connection to WOUS. Given these considerations, this 0.1 acre wetland is determined to be non-waters of the U.S. per the 1986 Preamble to the Federal Register; Volume 51; No. 219; under Section 328.3: Definitions..**

[1] Boxes checked below shall be supported by completing the appropriate sections in Section III below.
[2] For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).
[3] Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. **TNW**
   Identify TNW: .

   Summarize rationale supporting determination: .

2. **Wetland adjacent to TNW**
   Summarize rationale supporting conclusion that wetland is "adjacent": .

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody[4] is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. **Characteristics of non-TNWs that flow directly or indirectly into TNW**

   (i) **General Area Conditions:**
   Watershed size: **Pick List**
   Drainage area: **Pick List**
   Average annual rainfall: inches
   Average annual snowfall: inches

   (ii) **Physical Characteristics:**
   (a) Relationship with TNW:
   ☐ Tributary flows directly into TNW.
   ☐ Tributary flows through **Pick List** tributaries before entering TNW.

   Project waters are **Pick List** river miles from TNW.
   Project waters are **Pick List** river miles from RPW.
   Project waters are **Pick List** aerial (straight) miles from TNW.
   Project waters are **Pick List** aerial (straight) miles from RPW.
   Project waters cross or serve as state boundaries. Explain: .

   Identify flow route to TNW[5]: .
   Tributary stream order, if known: .

[4] Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.
[5] Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

(b) General Tributary Characteristics (check all that apply):

Tributary is: ☐ Natural
☐ Artificial (man-made). Explain: .
☐ Manipulated (man-altered). Explain: .

Tributary properties with respect to top of bank (estimate):
Average width: feet
Average depth: feet
Average side slopes: **Pick List**.

Primary tributary substrate composition (check all that apply):

☐ Silts	☐ Sands	☐ Concrete
☐ Cobbles	☐ Gravel	☐ Muck
☐ Bedrock	☐ Vegetation. Type/% cover:	
☐ Other. Explain:		

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: .
Presence of run/riffle/pool complexes. Explain: .
Tributary geometry: **Pick List**
Tributary gradient (approximate average slope): %

(c) Flow:
Tributary provides for: **Pick List**
Estimate average number of flow events in review area/year: **Pick List**
Describe flow regime: .
Other information on duration and volume: .

Surface flow is: **Pick List**. Characteristics: .

Subsurface flow: **Pick List**. Explain findings: .
☐ Dye (or other) test performed: .

Tributary has (check all that apply):
☐ Bed and banks
☐ OHWM[6] (check all indicators that apply):

☐ clear, natural line impressed on the bank	☐ the presence of litter and debris
☐ changes in the character of soil	☐ destruction of terrestrial vegetation
☐ shelving	☐ the presence of wrack line
☐ vegetation matted down, bent, or absent	☐ sediment sorting
☐ leaf litter disturbed or washed away	☐ scour
☐ sediment deposition	☐ multiple observed or predicted flow events
☐ water staining	☐ abrupt change in plant community
☐ other (list):	

☐ Discontinuous OHWM.[7] Explain: .

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

☐ High Tide Line indicated by:	☐ Mean High Water Mark indicated by:
☐ oil or scum line along shore objects	☐ survey to available datum;
☐ fine shell or debris deposits (foreshore)	☐ physical markings;
☐ physical markings/characteristics	☐ vegetation lines/changes in vegetation types.
☐ tidal gauges	
☐ other (list):	

(iii) Chemical Characteristics:
Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
Explain: .
Identify specific pollutants, if known: .

(iv) Biological Characteristics. Channel supports (check all that apply):
☐ Riparian corridor. Characteristics (type, average width): .
☐ Wetland fringe. Characteristics: .

[6]A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.
[7]Ibid.

☐ Habitat for:
- ☐ Federally Listed species. Explain findings: .
- ☐ Fish/spawn areas. Explain findings: .
- ☐ Other environmentally-sensitive species. Explain findings: .
- ☐ Aquatic/wildlife diversity. Explain findings: .

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:

(a) General Wetland Characteristics:

Properties:

Wetland size: acres

Wetland type. Explain: .

Wetland quality. Explain: .

Project wetlands cross or serve as state boundaries. Explain: .

(b) General Flow Relationship with Non-TNW:

Flow is: **Pick List**. Explain: .

Surface flow is: **Pick List**

Characteristics: .

Subsurface flow: **Pick List**. Explain findings: .

☐ Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:

☐ Directly abutting

☐ Not directly abutting

- ☐ Discrete wetland hydrologic connection. Explain: .
- ☐ Ecological connection. Explain: .
- ☐ Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW

Project wetlands are **Pick List** river miles from TNW.

Project waters are **Pick List** aerial (straight) miles from TNW.

Flow is from: **Pick List**.

Estimate approximate location of wetland as within the **Pick List** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: .

Identify specific pollutants, if known: .

(iii) Biological Characteristics. Wetland supports (check all that apply):

☐ Riparian buffer. Characteristics (type, average width): .

☐ Vegetation type/percent cover. Explain: .

☐ Habitat for:

- ☐ Federally Listed species. Explain findings: .
- ☐ Fish/spawn areas. Explain findings: .
- ☐ Other environmentally-sensitive species. Explain findings: .
- ☐ Aquatic/wildlife diversity. Explain findings: .

3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis: **Pick List**

Approximately ( ) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)

Summarize overall biological, chemical and physical functions being performed:

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:

2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

4. **Relatively Permanent Waters with seasonal flows:**

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:
   - ☐ TNWs: linear feet width (ft), Or, acres.
   - ☐ Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**
   - ☒ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: Elk Creek is a USGS mapped perennial system with approximately 11,000 acres of drainage. This stream is expected to provide year-round flows during normal years.
   - ☐ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally:

   Provide estimates for jurisdictional waters in the review area (check all that apply):

☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .

3. **Non-RPWs[8] that flow directly or indirectly into TNWs.**
☐ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):
☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**
☒ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
☒ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: **Elk Creek is a perennial stream (RPW). The project review area includes 3 adjacent wetlands that have been field delineated and exhibit a contiguous surface connection to Elk Creek. This connectivity is the basis for determining that they are directly abutting the RPW; therefore, they are waters of the U.S. (See attached delineation map).**

☐ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

Provide acreage estimates for jurisdictional wetlands in the review area: **0.88**acres.

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**
☐ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

6. **Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**
☐ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres.

7. **Impoundments of jurisdictional waters.[9]**
As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
☐ Demonstrate that impoundment was created from "waters of the U.S.," or
☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

E. **ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):[10]**
☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.
☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
☐ which are or could be used for industrial purposes by industries in interstate commerce.
☐ Interstate isolated waters. Explain: .
☐ Other factors. Explain: .

---

[8]See Footnote # 3.
[9] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.
[10] **Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos.***

Identify water body and summarize rationale supporting determination: .

Provide estimates for jurisdictional waters in the review area (check all that apply):

- ☐ Tributary waters: linear feet width (ft).
- ☐ Other non-wetland waters: acres.
  - Identify type(s) of waters: .
- ☐ Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):

- ☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
- ☐ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
  - ☐ Prior to the Jan 2001 Supreme Court decision in "*SWANCC*," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
- ☐ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: .
- ☒ Other: (explain, if not covered above): **Approximately 0.1 acre of artificial wetlands located within an upland drainage ditch were identified. This aquatic feature is determined to be non-WOUS per the 1986 Preamble (cited above).**

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

- ☐ Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
- ☐ Lakes/ponds: acres.
- ☐ Other non-wetland waters: acres. List type of aquatic resource: .
- ☐ Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

- ☐ Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
- ☐ Lakes/ponds: acres.
- ☐ Other non-wetland waters: acres. List type of aquatic resource: .
- ☐ Wetlands: acres.

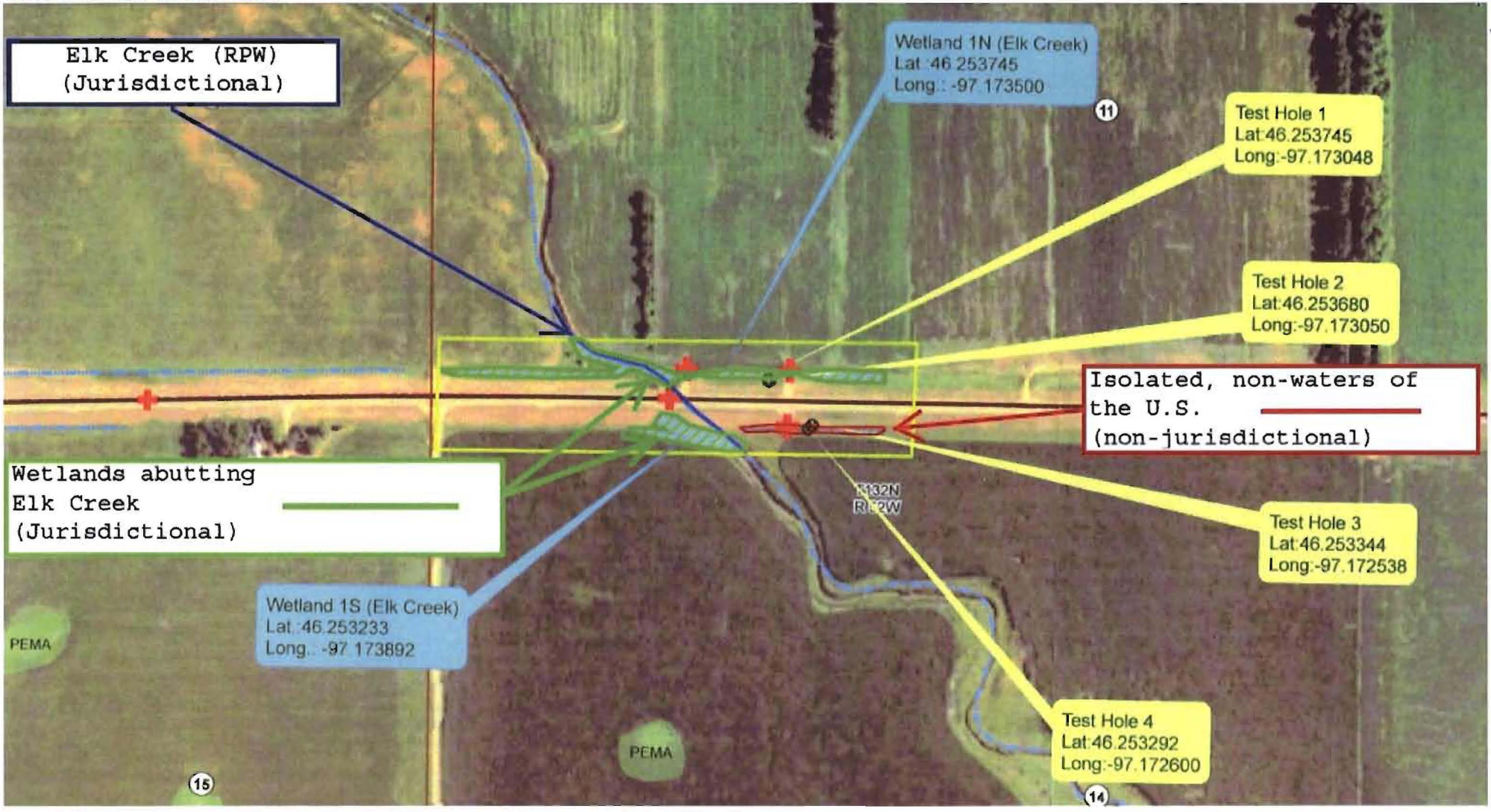
SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):

- ☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Submitted as part of applicant's request/application.
- ☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
  - ☒ Office concurs with data sheets/delineation report.
  - ☐ Office does not concur with data sheets/delineation report.
- ☐ Data sheets prepared by the Corps: .
- ☐ Corps navigable waters' study: .
- ☒ 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: 1 : 24,000 - WYNDMERE, NORTH DAKOTA.
- ☐ USDA Natural Resources Conservation Service Soil Survey. Citation: .
- ☒ National wetlands inventory map(s). Cite name:FWS NWI.
- ☐ State/Local wetland inventory map(s): .
- ☐ FEMA/FIRM maps: .
- ☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
- ☒ Photographs: ☒ Aerial (Name & Date):Google Maps (2009); NDDOT provided aerial (2009).
  - or ☐ Other (Name & Date): .
- ☐ Previous determination(s). File no. and date of response letter: .
- ☐ Applicable/supporting case law: .
- ☐ Applicable/supporting scientific literature: .
- ☐ Other information (please specify): .

B. ADDITIONAL COMMENTS TO SUPPORT JD: See attached delineation map:.

WETLAND DELINEATION MAP:



NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: NDDOT	File No: NWO-2009-01667-BIS	Date: Jul 27, 2009
Attached is:		See Section below
	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A
	PROFFERED PERMIT (Standard Permit or Letter of permission)	B
	PERMIT DENIAL	C
X	APPROVED JURISDICTIONAL DETERMINATION	D
	PRELIMINARY JURISDICTIONAL DETERMINATION	E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at http://usace.army.mil/inet/functions/cw/cecwo/reg or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the District Engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- OBJECT: If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the District Engineer. Your objections must be received by the District Engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the District Engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the District Engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the District Engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- APPEAL: If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the Division Engineer. This form must be received by the Division Engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the Division Engineer. This form must be received by the Division Engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- ACCEPT: You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- APPEAL: If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the Division Engineer. This form must be received by the Division Engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact: District Engineer
US Army Corp of Engineers
South Dakota Regulatory Office
Attn: Steven E. Naylor, State Program Manager
28563 Powerhouse Rd, Rm. 118
Pierre, SD 57501 ph. (605) 224-8531

If you only have questions regarding the appeal process you may also contact:
US Army Corps of Engineers, Northwestern Division
Attn: David Gesl, Regulatory Program Manager
PO Box 2870
Portland, OR 97208-2870 Telephone (503) 808-3825

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

	Date:	Telephone number:
_____ Signature of appellant or agent.		

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ecological Services
3425 Miriam Avenue
Bismarck, North Dakota 58501

MAR - 3 2009

Mr. Terrence R. Udland, P.E.
North Dakota Department of Transportation
608 East Boulevard Avenue
Bismarck, North Dakota 58505-0700

Re: Project No. BRS-8-013(043)363, PCN 16775
Structural Rehabilitation
Richland County, North Dakota

Dear Mr. Udland:

The U.S. Fish and Wildlife Service (Service) has reviewed your letter of February 2, 2009, concerning the North Dakota Department of Transportation's (NDDOT) plans to rehabilitate a structure spanning Elk Creek along North Dakota Highway 13. This project is located approximately two miles west of the community of Wyndmere, North Dakota, at Reference Point 363.552. The existing triple 8'x8'x85' reinforced concrete box culvert at this site is deteriorating and needs to be replaced. The NDDOT plans to skew the new box culvert approximately 20 degrees from perpendicular and realign the creek channel to reduce erosion and improve channel efficiency. A temporary bypass will be installed on the north side of North Dakota Highway 13 to facilitate the flow of traffic during construction. The identified improvements are scheduled to be completed during the 2010 construction season. We offer the following comments to assist with the project planning process in accordance with the provisions of the National Environmental Policy Act (Pub. L. 91-190, 42 U.S.C. 4321-4347, January 1, 1970, as amended), the Migratory Bird Treaty Act (16 U.S.C. 703 et seq.), the Endangered Species Act (16 U.S.C. 1531 et seq.), and Executive Order 11990 concerning the protection of wetlands.

Elk Creek is a tributary to the Wild Rice River and provides habitat for forage fish, furbearers, and migratory birds. The Service recommends taking precautions to avoid impacts to Elk Creek by maintaining existing drainage patterns and avoiding the placement of fill material in the stream channel. If the NDDOT proceeds with the plans to realign Elk Creek, the Service recommends that the cutoff portion of the channel on the north side of the roadway be maintained to minimize habitat loss and reduce/avoid the need to develop mitigation offsite.

If impacts to the creek channel cannot be avoided, a mitigation plan to compensate for project impacts should be developed. The mitigation site should restore wetland functions comparable to those that were impacted by project construction. Please provide this office with a copy of the

project mitigation plan, if construction activities will result in an unavoidable loss of aquatic habitat.

In addition to the recommendations provided above, the following standard precautions should be implemented during construction to reduce environmental impacts:

1. Develop and implement a project erosion control plan to minimize soil loss, including the use of silt fences to reduce sedimentation in wetland habitat and drainageways.

2. Promptly reseed all upland areas that are disturbed during construction with a native grass mixture suited for the soil types in the project area. On steep slopes, coconut matting or other similar material should be used to help ensure that the initial planting is successful.

During the past year, several bridge replacement projects in North Dakota have been installed using a modified box culvert design to minimize environmental impacts at the bridge site and downstream. State and Federal natural resource agencies have worked with the North Dakota Department of Transportation and the Federal Highway Administration to develop guidance that maintains fish passage at bridge sites and can reduce or eliminate the need to mitigate off site. We recommend that the invert elevation of the box culvert be set one foot below the existing grade of the stream channel. If a triple box culvert is used, an 18 inch high lip should be installed on two of the three barrels to direct low flows through the remaining barrel. This design helps to ensure that the bridge structure does not act as a barrier preventing the movement of fish and other aquatic organisms in the creek channel under low flow conditions. Riprap material placed in the deepest portion of the stream channel should be set at the same elevation as the lowered box culvert to maintain fish passage under low flow conditions.

The Service has no property interest or proposed developments within the project area.

A list of federally endangered, threatened, and candidate species that have been documented in Richland County is attached. This list fulfills the requirements of the Service under Section 7 of the Endangered Species Act.

If a Federal agency authorizes, funds, or carries out a proposed action, the responsible Federal agency, or its delegated agent, is required to evaluate whether the proposed action "may affect" listed species. If it is determined that the action "may affect" a listed species, then the responsible agency will need to consult with this office. If the evaluation indicates that there will be "no affect" to listed species, further consultation is not necessary. At this time, we are not aware of any listed species in the project area.

A 404 permit may be required if fill material will be placed in waters of the United States. Please contact Mr. Dan Cimarosti, U.S. Army Corps of Engineers, North Dakota Regulatory Office, 1513 South 12th Street, Bismarck, North Dakota 58504 (701-255-0015), to determine

their permit requirements. If a permit is required, the Service will provide comments concerning the planned construction activities to the Corps of Engineers.

The Service has no objection to the proposed highway improvement project provided the recommendations in this letter are incorporated into the project's construction plans. Thank you for the opportunity to provide comments on the NDDOT's plans to remove and replace the reinforced concrete box culvert at Reference Point 363.552 on North Dakota Highway 13. If additional information is needed, please contact me or Bill Bicknell of my staff at (701) 250-4481.

Sincerely,

Jeffrey K. Towner

Jeffrey K. Towner
Field Supervisor
North Dakota Field Office

Enclosure

cc: Project Leader, Tewaukon WMD, Cayuga
Director, ND Game and Fish Dept., Bismarck
(Attn: Mike McKenna)
Director, NDDOT, Bismarck
(Attn: Sheri Lares)

FEDERAL THREATENED, ENDANGERED, AND CANDIDATE SPECIES
FOUND IN RICHLAND COUNTY
NORTH DAKOTA
March 2009

ENDANGERED SPECIES

Birds

Whooping crane (Grus Americana): Migrates through North Dakota counties during spring and fall. Prefers to roost on wetlands and stockdams with good visibility. Current flock size of the Aransas - Wood Buffalo migratory population is estimated to be 266 birds.

Mammals

Gray wolf (Canis lupus): Occasional visitor in North Dakota. Most frequently observed in the Turtle Mountains area.

THREATENED SPECIES

Plants

W. prairie-fringed orchid (Platanthera praeclara): Locally common in moist swales on Sheyenne National Grasslands. Largest known U.S. population is on the Sheyenne.

CANDIDATE SPECIES

Invertebrates

Dakota skipper (Hesperia dacotae): Found in native prairie containing a high diversity of wildflowers and grasses. Habitat includes two prairie types: 1) low (wet) prairie dominated by bluestem grasses, wood lily, harebell, and smooth camas; 2) upland (dry) prairie on ridges and hillsides dominated by bluestem grasses, needlegrass, pale purple and upright coneflowers and blanketflower.

Bossert, Lindsay

From: William_Bicknell@fws.gov
Sent: Monday, October 19, 2009 9:26 AM
To: Orn, Chad M
Cc: Pfeifer, Bradley A., Bossert, Lindsay; Schrader, Mark, Lares, Sheri G.
Subject: Re: FW: BRS-8-013(043)363 PCN 17502

Good Morning Chad,

I've review our comment letter concerning the NDDOT's plans to replace the structure spanning Elk Creek along ND Highway 13 in Richland County. This project is located approximately 2 miles west of the community of Wyndmere, North Dakota. I have no objection to the plans to sink the box culvert without installing a lip. We have implemented the interagency culvert recomendations on an experimental basis to evaluate this approach to ensure structures do not restrict fish passage and the movement of aquatic organisms under low flow conditions. I think it would be a good idea to add this site to the list of potential locations to inspect as part of the annual interagency field review. It would also be helpful if DOT staff will take before and after photos at the site of the construction activities and the creek channel both up and downstream of the culverts.

I agree with Mark's comments that we should get together and discuss under what circumstances a lip should be installed.

Chad, thanks for coordinating the planned project modifications.

Bill

355-8512

"Orn, Chad M." <corn@nd.gov>
10/16/2009 10:30 AM

To: "William Bicknell@fws.gov" <William Bicknell@fws.gov>, "Schrader, Mark" <Mark.Schrader@fhwa.dot.gov>
cc: "Lares, Sheri G." <slares@nd.gov>, "Pfeifer, Bradley A." <bpfeifer@nd.gov>, "Bossert, Lindsay" <lbossert@nd.gov>
Subject: FW: BRS-8-013(043)363 PCN 17502

STATE HISTORICAL SOCIETY OF NORTH DAKOTA

June 22, 2009

Ms. Jeani Borchert
Archaeologist Design Division
Dep't of Transportation
608 East Boulevard Avenue
Bismarck, ND 58505-0700

ND SHPO Ref.:09-1154 ND DOT BRS-8-013(043)363 PCN: 17502 replace box culvert and temporary detour [T132N R52W Sections 11, 14] Richland County, North Dakota

Dear Ms. Borchert,

We received ND SHPO Ref.:09-1154 ND DOT BRS-8-013(043)363 PCN: 17502 replace box culvert and temporary detour [T132N R52W Sections 11, 14] Richland County, North Dakota. We concur with the determination of "No Historic Properties Affected," provided the project is of the nature specified and takes place in the legal description outlined and mapped in the correspondence.

Thank you for the opportunity to review this project. If you have any questions please contact Susan Quinnell, Review and Compliance Coordinator at (701) 328-3576, e-mail squinnell@nd.gov

Sincerely,

Merlan E. Paaverud, Jr.
State Historic Preservation Officer (North Dakota)

North Dakota State Water Commission

900 EAST BOULEVARD AVENUE, DEPT 770 • BISMARCK, NORTH DAKOTA 58505-0850
701-328-2750 • TDD 701-328-2750 • FAX 701-328-3696 • INTERNET http //swc nd gov

March 4, 2009

Terrence Udland
ND DOT
Inside Mail

Dear Mr. Udland:

This is in response to your request for review of environmental impacts associated with the Project No. BRS-8-013(043)363, PCN 17502, Structural Rehabilitation, ND 13 – 2 miles west of ND 18, Richland County.

The proposed project have been reviewed by State Water Commission staff and the following comments are provided:

- The property is not located in an identified floodplain and it is believed the project will not affect an identified floodplain.

- All waste material associated with the project must be disposed of properly and not placed in identified floodway areas.

- No sole-source aquifers have been designated in ND.

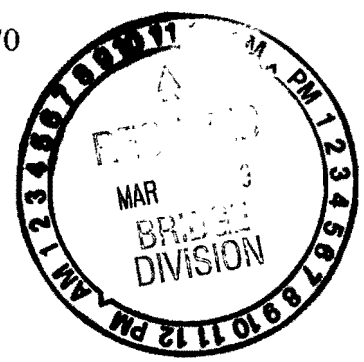
There are no other concerns associated with this project that affect State Water Commission or State Engineer regulatory responsibilities.

Thank you for the opportunity to provide review comments. If you have any questions, please call me at 328-4969.

Sincerely,

Larry Knudtson
Research Analyst

LJK:ds/1570



SOUTHEAST WATER USERS

PO Box 10
MANTADOR, ND 58058
PHONE (701) 242-7432 • TOLL FREE (800) 400-8888
FAX (701) 242-7807 • EMAIL: sewu@rrt.net

February 11, 2009

ND DOT
Attn: Terrence R. Udland, P.E.
608 East Boulevard AV
Bismarck ND 58505-0700

Dear Mr. Udland:

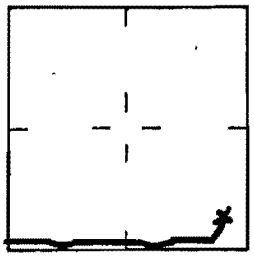
This letter is in response to your PROJECT NO. BRS-8-013 (043) 363, PCN 17502.

Enclosed you will find our as-built that shows the location of our rural water line concerning this project.

If you have any further questions, please feel free to give me a call at 701.242.7432 and I will be glad to help you.

Sincerely,

Steve Hansen
General Manager



TWP. WYNDMERE

SEC. 11

T. 132 N.

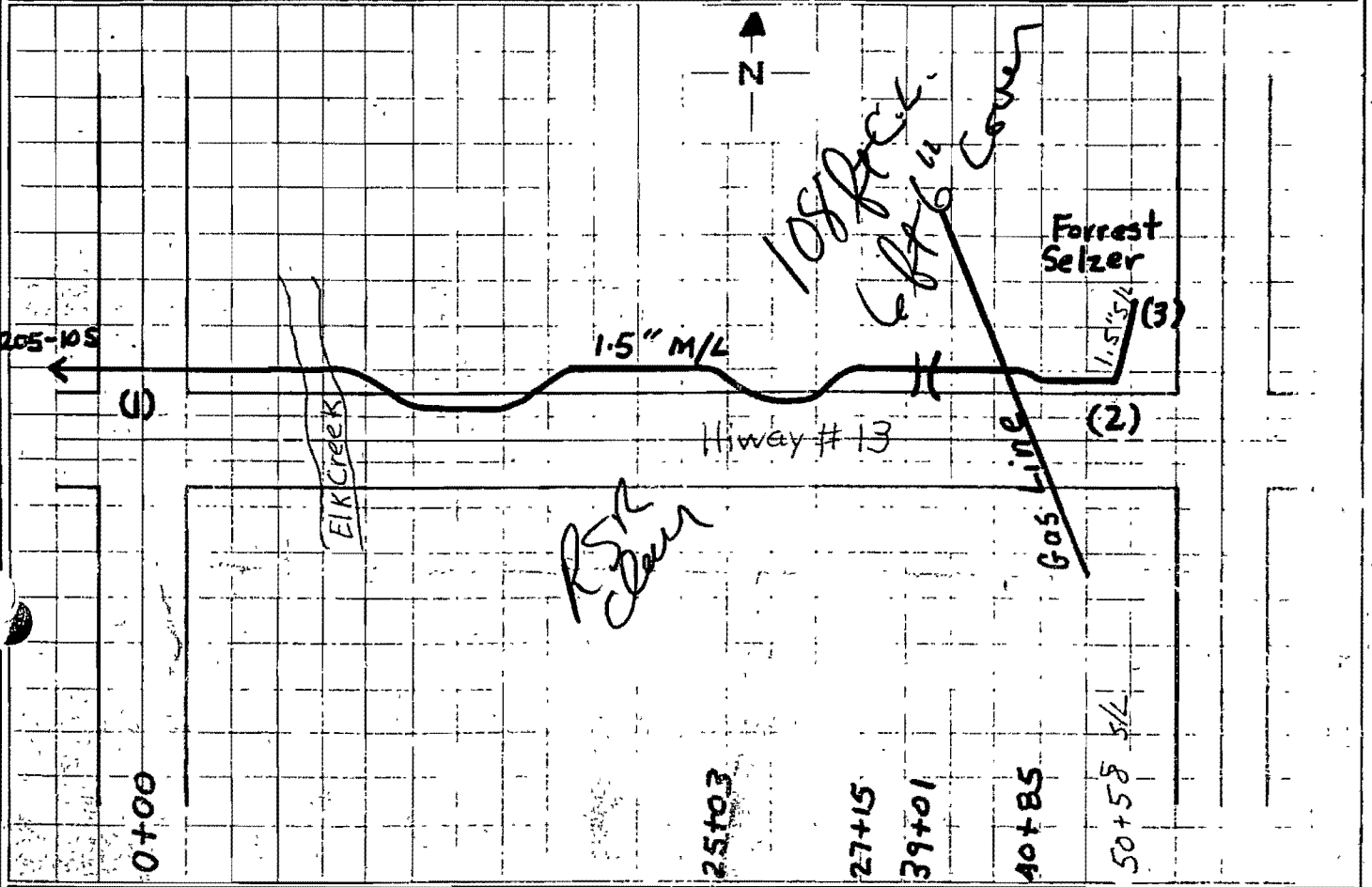
R. 52 W.

N

RICHLAND RURAL WATER USERS, INC.
KINDRED, NORTH DAKOTA

PREPARED BY
HOUSTON ENGINEERING, INC.
P O BOX 5056 FARGO, NORTH DAKOTA 58102

DRAWN BY	PROJECT NO.	DATE
VLT	1516	8-3-78



REF NO.		TRANSMISSION PIPE (SIZE & LENGTH)			SERVICE LINE	VALVES			CURB STOP	CASING PIPE			HWY. BORING	
										HWY.	R. R.	INTER.	1.5"	2"
		1.5"x			1.5"x									
1	2	5058												
2	3				125'				1					
		1.5"x			1.5"x									
		5058			125'				1					

(113) INDEX NO. 205-115

United States Department of Agriculture

NRCS

Natural Resources Conservation Service
P.O. Box 1458
Bismarck, ND 58502-1458

February 10, 2009

Terry Udland
North Dakota Department of Transportation
608 East Boulevard Avenue
Bismarck, ND 58505-0700

RE: BRS-8-013(043)363, PCN 17502 – Richland County, ND

Dear Mr. Udland:

The Natural Resources Conservation Service (NRCS) has reviewed your letter regarding the referenced activity and acknowledges your request to determine whether your project affects farmland as defined in Sec. 658.2(a) of the Code of Federal Regulations (CFR) dealing with the Farmland Protection Policy Act (FPPA).

Important Farmlands - NRCS has a major responsibility with FPPA in documenting conversion of farmland (i.e., prime, statewide, and local importance) to non-agricultural use. Your proposed project appears to be within the existing road right-of-way; therefore, FPPA has previously been addressed and no further action is required.

Wetlands – The Wetland Conservation Provisions of the 1985 Food Security Act, as amended, provide that if a USDA participant converts a wetland for the purpose of, or to have the effect of, making agricultural production possible, loss of USDA benefits could occur. NRCS has developed the following guidelines for the installation of buried utilities. If these guidelines are followed, the impacts to the wetland(s) will be considered minimal allowing USDA participants to continue to receive USDA benefits. Following are the requirements: 1) Disturbance to the wetland(s) must be temporary, 2) no drainage of the wetland(s) is allowed (temporary or permanent), 3) mechanized landscaping necessary for installation is kept to a minimum and preconstruction contours are maintained, 4) temporary side cast material must be placed in such a manner not to be dispersed in the wetland, and 5) all trenches must be backfilled to the original wetland bottom elevation.

NRCS would recommend that impacts to wetlands be avoided. If the project requires passage through or disturbance of a wetland, NRCS can complete a certified wetland determination, if requested by the landowner/operator.

If you have additional questions pertaining to FPPA, please contact Steve Sieler, State Soil Liaison, at (701) 530-2019.

Sincerely,

J.R. FLORES
State Conservationist

cc:
Steven Cole, DC, NRCS, Wahpeton, ND
Mike Collins, ASTC (FO), NRCS, Jamestown, ND

ND Department of Emergency Services

NDDES
Homeland Security
State Radio

PO Box 5511
Bismarck, ND 58506-5511

Tel: (701) 328-8100
Fax: (701) 328-8181

Email: nddes@nd.gov
Website: www.nd.gov/des

"Ensuring a safe and secure homeland for all North Dakotans"

February 5, 2009

Mr. Terrence R. Udland, PE
North Dakota Department of Transportation
608 East Boulevard Avenue
Bismarck, ND 58505-0700

Re: Project No. BRS-8-013(043)363,PCN 17502 Structural Rehabilitation, Richland Co.

Dear Mr. Udland:

Thank you for your letter dated February 2, 2009 requesting comments on the environmental impact on a roadway improvement planned for ND Highway 13, Richland County.

The North Dakota Department of Emergency Services, Division of Homeland Security has no comments on the proposed project.

Should you have any additional questions, I may be contacted at 701 328-8100.

Sincerely,

Lonnie G. Hoffer
Disaster Recovery Chief

United States Department of the Interior

BUREAU OF INDIAN AFFAIRS
Great Plains Regional Office
115 Fourth Avenue S.E.
Aberdeen, South Dakota 57401

TAKE PRIDE IN AMERICA

IN REPLY REFER TO
DESCRM
MC-208

FEB 18 2009

Terrence R. Udland, P.E.
Bridge Engineer
North Dakota Department of Transportation
608 East Boulevard Avenue
Bismarck, North Dakota 58505-0700

Dear Mr. Udland:

We received your letter regarding the proposed ND Highway 13 culvert replacement project. We have considered the potential for both environmental damage and impacts to archaeological and Native American religious sites on lands held in trust by the Bureau of Indian Affairs, Great Plains Region. You should be aware, however, that tribes or tribal members may have lands in fee status near the site of interest. These lands would not necessarily be in our databases, and the tribes should be contacted directly to be sure all concerns are recognized. The action considered has the following notification date and project location:

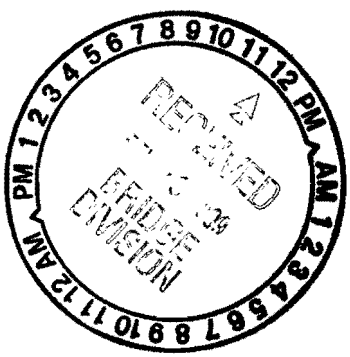
- February 2, 2009 — Structural Rehabilitation ND 13 – two miles west of ND 18, Richland County, North Dakota, BRS-8-013(043)363, PCN 17502

We have no environmental objections to this action, as long as the project complies with all pertinent laws and regulations. Questions regarding environmental opinions and conditions can be addressed to Marilyn Bercier, Supervisory Environmental Protection Specialist, at (605) 226-7656.

We also find that the listed action will not affect cultural resources on tribal or individual landholdings for which we are responsible. Methodologies for the treatment of cultural resources now known or yet to be discovered – particularly human remains – must nevertheless utilize the best available science in accordance with provisions of the Native American Graves Protection and Repatriation Act, the Archaeological Resources Protection Act of 1979 (as amended), and all other pertinent legislation and implementing regulations. Archaeological concerns can be addressed to Dr. Carson N. Murdy, Regional Archaeologist, at (605) 226-7656.

Sincerely,

Deputy Regional Director – Indian Services



John Hoeven, Governor
Douglass A. Prchal, Director

1600 East Century Avenue, Suite 3
Bismarck, ND 58503-0649
Phone 701-328-5357
Fax 701-328-5363
E-mail parkrec@nd.gov
www.parkrec.nd.gov

February 18, 2009

Terrence R. Udland
ND Department of Transportation
608 East Boulevard Avenue
Bismarck, ND 58505-0700

RE: ND Highway 13 Improvement Project
Richland County, North Dakota

Dear Mr. Udland:

The North Dakota Parks and Recreation Department has reviewed the above referenced proposal to make roadway improvements to a portion of ND Highway 13 by replacing the existing RCB culvert located in Sections 11 and 14, T132N, R52W, Richland County.

Our agency scope of authority and expertise covers recreation and biological resources (in particular rare plants and ecological communities). The project as defined does not affect state park lands that we manage or Land and Water Conservation Fund recreation projects that we coordinate.

The North Dakota Natural Heritage biological conservation database has been reviewed to determine if any plant or animal species of concern or other significant ecological communities are known to occur within an approximate one-mile radius of the project area. Based on this review, there are no known occurrences within or adjacent to the project area.

Because this information is not based on a comprehensive inventory, there may be species of concern or otherwise significant ecological communities in the area that are not represented in the database. The lack of data for any project area cannot be construed to mean that no significant features are present. The absence of data may indicate that the project area has not been surveyed, rather than confirm that the area lacks natural heritage resources. We would appreciate receiving a hard copy or digital copy of the wildlife and botanical surveys and evaluations for the project area.

Regarding any reclamation efforts, we recommend that any impacted areas be revegetated with species native to the project area.

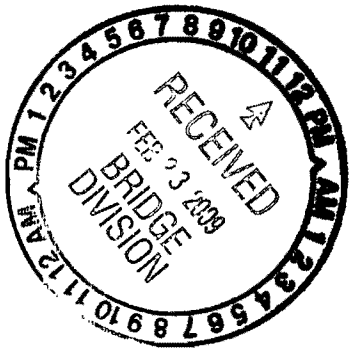
We appreciate your commitment to rare plant, animal and ecological community conservation, management and inter-agency cooperation to date. For additional information please contact Kathy Duttenhefner (701-328-5370 or kgduttenhefner@nd.gov) of our staff. Thank you for the opportunity to comment on this proposed project.

Sincerely,

Jesse Hanson

Jesse Hanson, Coordinator
Planning and Natural Resources Division

R.USNDNHI*2009-038



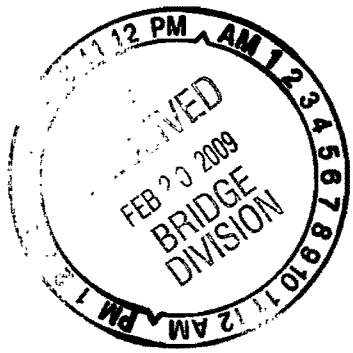
Play in our backyard!

NORTH DAKOTA
DEPARTMENT of HEALTH

ENVIRONMENTAL HEALTH SECTION
Gold Seal Center, 918 E. Divide Ave.
Bismarck, ND 58501-1947
701.328.5200 (fax)
www.ndhealth.gov

February 17, 2009

Terrence R. Udland, P.E., Bridge Engineer
North Dakota Department of Transportation
608 East Boulevard Avenue
Bismarck, ND 58505-0700



Re: Project No. BRS-8-013(043)363, PCN 17502
ND Highway 13, Richland County

Dear Mr. Udland:

This department has reviewed the information concerning the above-referenced project submitted under date of February 2, 2009, with respect to possible environmental impacts.

This department believes that environmental impacts from the proposed construction will be minor and can be controlled by proper construction methods. With respect to construction, we have the following comments:

1. All necessary measures must be taken to minimize fugitive dust emissions created during construction activities. Any complaints that may arise are to be dealt with in an efficient and effective manner.

2. Care is to be taken during construction activity near any water of the state to minimize adverse effects on a water body. This includes minimal disturbance of stream beds and banks to prevent excess siltation, and the replacement and revegetation of any disturbed area as soon as possible after work has been completed. Caution must also be taken to prevent spills of oil and grease that may reach the receiving water from equipment maintenance, and/or the handling of fuels on the site. Guidelines for minimizing degradation to waterways during construction are attached.

3. Projects disturbing one or more acres are required to have a permit to discharge storm water runoff until the site is stabilized by the reestablishment of vegetation or other permanent cover. Further information on the storm water permit may be obtained from the Department's website or by calling the Division of Water Quality (701-328-5210). Also, cities may impose additional requirements and/or specific best management practices for construction affecting their storm drainage system. Check with the local officials to be sure any local storm water management considerations are addressed.

4. Noise from construction activities may have adverse effects on persons who live near the construction area. Noise levels can be minimized by ensuring that construction equipment is

equipped with a recommended muffler in good working order. Noise effects can also be minimized by ensuring that construction activities are not conducted during early morning or late evening hours.

The department owns no land in or adjacent to the proposed improvements, nor does it have any projects scheduled in the area. In addition, we believe the proposed activities are consistent with the State Implementation Plan for the Control of Air Pollution for the State of North Dakota.

These comments are based on the information provided about the project in the above-referenced submittal. The U.S. Army Corps of Engineers may require a water quality certification from this department for the project if the project is subject to their Section 404 permitting process. Any additional information which may be required by the U.S. Army Corps of Engineers under the process will be considered by this department in our determination regarding the issuance of such a certification.

If you have any questions regarding our comments, please feel free to contact this office.

Sincerely,

L. David Glatt, P.E., Chief
Environmental Health Section

LDG:cc
Attach.

NORTH DAKOTA
DEPARTMENT *of* HEALTH

ENVIRONMENTAL HEALTH SECTION
Gold Seal Center, 918 E. Divide Ave.
Bismarck, ND 58501-1947
701.328.5200 (fax)
www.ndhealth.gov

Construction and Environmental Disturbance Requirements

These represent the minimum requirements of the North Dakota Department of Health. They ensure that minimal environmental degradation occurs as a result of construction or related work which has the potential to affect the waters of the State of North Dakota. All projects will be designed and implemented to restrict the losses or disturbances of soil, vegetative cover, and pollutants (chemical or biological) from a site.

Soils

Prevent the erosion of exposed soil surfaces and trapping sediments being transported. Examples include, but are not restricted to, sediment dams or berms, diversion dikes, hay bales as erosion checks, riprap, mesh or burlap blankets to hold soil during construction, and immediately establishing vegetative cover on disturbed areas after construction is completed. Fragile and sensitive areas such as wetlands, riparian zones, delicate flora, or land resources will be protected against compaction, vegetation loss, and unnecessary damage.

Surface Waters

All construction which directly or indirectly impacts aquatic systems will be managed to minimize impacts. All attempts will be made to prevent the contamination of water at construction sites from fuel spillage, lubricants, and chemicals, by following safe storage and handling procedures. Stream bank and stream bed disturbances will be controlled to minimize and/or prevent silt movement, nutrient upsurges, plant dislocation, and any physical, chemical, or biological disruption. The use of pesticides or herbicides in or near these systems is forbidden without approval from this Department.

Fill Material

Any fill material placed below the high water mark must be free of top soils, decomposable materials, and persistent synthetic organic compounds (in toxic concentrations). This includes, but is not limited to, asphalt, tires, treated lumber, and construction debris. The Department may require testing of fill materials. All temporary fills must be removed. Debris and solid wastes will be removed from the site and the impacted areas restored as nearly as possible to the original condition.

DEPARTMENT OF THE AIR FORCE
319TH CIVIL ENGINEER SQUADRON
GRAND FORKS AIR FORCE BASE, NORTH DAKOTA

Wayne A. Koop
319 CES/CEV
525 Tuskegee Airmen Blvd
Grand Forks AFB ND 58205-6434

FEB 24 2009

North Dakota Department of Transportation
Attn: Terrence R. Udland, P.E.
608 East Boulevard Avenue
Bismarck, North Dakota 58505-0700

Dear Mr. Udland:

Your 2 February 2009 letter concerning a proposed roadway improvement project being planned for ND Highway 13 at Reference Point 363.552, two miles west of ND Highway 18 and Wyndmere, ND, has been reviewed by our Environmental Management and Real Estate Offices. We have found that Grand Forks AFB owns no property in or adjacent to the proposed project area and have no pertinent information or comments to contribute to your environmental assessment. Thank you for bringing this matter to our attention.

Sincerely,

WAYNE A. KOOP, R.E.M.
Environmental Management Flight Chief