



# North Dakota Department of Transportation

Grant Levi, P.E.  
Director

Jack Dalrymple  
Governor

September 1, 2016

## ADDENDUM 2 – JOB 2

TO: All prospective bidders on project SOIB-7-804(054)312, Job No. 2 scheduled for the September 9, 2016 bid opening.

The following plan and request for proposal revisions shall be made:

### Plan Revisions:

See attached summary from Adam McGill, PE, Dowl, dated September 1, 2016 for an explanation.

### Request for Proposal Revisions:

Remove and replace page 7 of 19 of the Proposal pages located at the beginning of the Request for Proposal, with the enclosed page revised 9/1/2016.

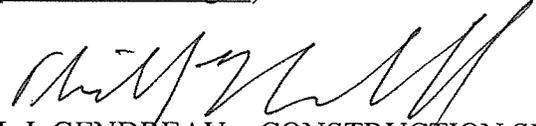
Page 7 of 19:

Item 302 0050 TRAFFIC SERVICE AGGREGATE; quantity increased from 6960 to 13,069 TON.

Remove and replace Special Provision SP 5117(14) PERMITS AND ENVIRONMENTAL CONSIDERATIONS with the enclosed SP 5117(14) revised 8/31/16.

Section 408 Permission was removed from the first page.

This addendum is to be incorporated into the bidder's proposal for this project. Expedite bid files should be updated by downloading the addendum file from the Bid Express on-line bidding exchange at <http://www.bidx.com/> or the Department's web page (<http://www.dot.nd.gov>) and load it into the Expedite program.

  
For CAL J. GENDREAU – CONSTRUCTION SERVICES ENGINEER  
80:plm  
Enclosure



September 1, 2016

**To: All prospective bidders on Project SOIB-7-804(054)312, scheduled for the September 9, 2016 bid opening.**

The following plan revisions shall be made:

**Remove and replace Section 6 sheets 1-7, Section 8 sheets 1-3, Section 10 sheet 1 with the enclosed sheets revised on 8/29/16 and 8/31/2016.**

Section	Sheet	Description of Change
6	1	Revised note 100-P05
6	2	Reformatted page
6	3	Revised note 107-P05
6	4	Revised note 302-115
6	5	Reformatted page
6	6	Reformatted page
6	7	Resigned Sheet
8	1	Added quantity columns for Mainline, City Cost Share, and 100% Local to the estimate and updated the quantity for 302-0050 "Traffic Service Aggregate"
8	2	Added quantity columns for Mainline, City Cost Share, and 100% Local to the estimate.
8	3	Added quantity columns for Mainline, City Cost Share, and 100% Local to the estimate.
10	1	Updated "Temporary Traffic Control Surfacing" Table.

This addendum is to be incorporated into the bidder's proposal for this project.

Sincerely,

DOWL

Adam McGill, P.E.  
Transportation Engineer  
amcgill@dowl.com

Attachment(s): SOIB-7-804(054)312 Addendum 2 Sheets

BID ITEMS

Project: SOIB-7-804(054)312 (PCN-20890)

**Bidder must type or neatly print unit prices in numerals, make extensions for each item, and total. Do not carry unit prices further than three (3) decimal places.**

Item No.	Spec No.	Code No.	Description	Unit	Approx. Quantity	Unit Price		Amount	
						\$\$\$\$\$	000	\$\$\$\$\$	00
033	256	0200	RIPRAP GRADE II	CY	132.				
034	260	0200	SILT FENCE SUPPORTED	LF	10,971.				
035	260	0201	REMOVE SILT FENCE SUPPORTED	LF	10,971.				
036	261	0112	FIBER ROLLS 12IN	LF	26,063.				
037	261	0113	REMOVE FIBER ROLLS 12IN	LF	25,007.				
038	265	0100	STABILIZED CONSTRUCTION ACCESS	EA	1.				
039	265	0101	REMOVE STABILIZED CONSTRUCTION ACCESS	EA	1.				
040	302	0050	TRAFFIC SERVICE AGGREGATE	TON	13,069.				
041	302	0100	SALVAGED BASE COURSE	TON	100,331.				
042	430	0500	COMMERCIAL GRADE HOT MIX ASPHALT	TON	4,714.				
043	550	0310	10IN NON REINF CONCRETE PVMT CL AE-DOWELED	SY	117,871.				
044	602	1208	CONCRETE BRIDGE BARRIER	LF	80.				
045	702	0100	MOBILIZATION	L SUM	1.				
046	704	0100	FLAGGING	MHR	2,000.				
047	704	1000	TRAFFIC CONTROL SIGNS	UNIT	2,968.				
048	704	1035	ATTENUATION DEVICE-TYPE B-25	EA	6.				

**NORTH DAKOTA DEPARTMENT OF TRANSPORTATION**

**SPECIAL PROVISION**

**PERMITS AND ENVIRONMENTAL CONSIDERATIONS**

**PROJECT NUMBER: SOIB-7-804(054)312 – PCN 20890**

This Special Provision incorporates the US Army Corps of Engineers (USACE) Section 404 Permit and the Floodplain Permit from the City of Williston obtained by the North Dakota Department of Transportation (NDDOT) into the bidder's proposal.

The Contractor shall be responsible for complying with all the terms and conditions as contained in the permit(s) attached hereto. Bidders shall become familiar with all standard conditions and special conditions of the permit(s) and submit their bid for the construction of this project based on the following:

- **Section 404 Permit**

The Section 404 Permit number NWO-2016-00066-BIS authorizes temporary and permanent impacts to jurisdiction wetlands and other waters from activities associated with the box culvert installation on Stony Creek, riprap placement, drainage ditch reconstruction, and widening. Temporary impacts were assumed by the designer and will be restored to preconstruction contours.

See the Section 6 Environmental Commitments Sheet and Section 75 sheets of the design plans for the authorized impact footprint areas. The Section 404 Permit is attached.

- **Floodplain Permit**

The Floodplain Permit from the City of Williston authorizes removal of the existing Stony Creek Bridge and replacement with a box culvert. A floodplain permit also authorizes storm drain improvements and grading. The Floodplain Permit and Flood Insurance Rate Map are attached.

The contractor shall be responsible for obtaining permits for impacts not authorized by the attached Permit(s) obtained by the NDDOT.



REPLY TO  
ATTENTION OF

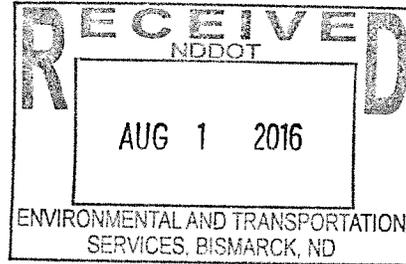
**DEPARTMENT OF THE ARMY**  
CORPS OF ENGINEERS, OMAHA DISTRICT  
NORTH DAKOTA REGULATORY OFFICE  
1513 SOUTH 12TH STREET  
BISMARCK ND 58504-6640

July 27, 2016

North Dakota Regulatory Office

NWO-2016-00066-BIS

North Dakota Department of Transportation  
Attn: Ms. Cassandra Torstenson  
608 E Boulevard Avenue  
Bismarck, North Dakota 58505-0700



Dear Ms. Torstenson:

We are responding to your 06/15/2016 request for a Department of the Army permit for improvements on ND Highway 1804 (PCN 20891). The project is located in Sections 19, 20 and 21, Township 154 North, Range 100 West, Latitude 48.1505937°, Longitude -103.471991°, Williams County, North Dakota.

Based on the information you provided to this office, the proposed project is for roadway improvements on ND Highway 1804. Work includes widening, reconstruction of an existing storm drainage ditch, removal of the existing bridge on Stony Creek and installing a box culvert. Section 408 was required because the project will take place on fee title property owned by the Corps. Section 408 was approved on June 22, 2016. The project will have 0.10 acres of permanent and 0.08 acres of temporary impacts to wetlands. Stream impacts will include 20 linear feet of temporary and 195 linear feet of permanent to Stony Creek. Impacts to Waters of The United States (WOUS) do not exceed the 1/10th of an acre threshold and the project does not require compensatory mitigation. We have determined activities in waters of the U.S. associated with the project are authorized by Nationwide Permit Number (NWP) NWP 23 Approved Categorical Exclusions.

You must comply with all terms and conditions of the NWP, applicable regional conditions, and project-specific special conditions. Information about the NWP and regional conditions are available on our website at <http://www.nwo.usace.army.mil/Missions/RegulatoryProgram/NorthDakota> In addition, your work must comply with the following special conditions:

1. This verification remains valid provided that the 3 sites and 1 site lead indicated in the cultural resource report are fenced and monitored, as suggested by the State Historic Preservation Office (SHPO).

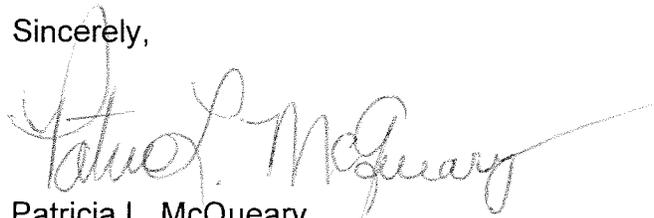
Within 30 days after completion of the authorized work, you must sign the enclosed Compliance Certification and return it to this office.

This verification is valid until March 18, 2017, when the existing NWP's are scheduled to be modified, reissued, or revoked. Furthermore, if you commence or are under contract to commence this activity before the date the NWP is modified, reissued, or revoked, you will have 12 months from the date of the modification, reissuance or revocation to complete the activity under the present terms and conditions. Failure to comply with the general and regional conditions of this NWP, or the project-specific special conditions of this authorization, may result in the suspension or revocation of your authorization.

We would appreciate your feedback on this permit action including your interaction with our staff. At your earliest convenience, please tell us how we are doing by completing the Corps' Regulatory Program national customer service survey found on our website at [http://corpsmapu.usace.army.mil/cm\\_apex/f?p=regulatory\\_survey](http://corpsmapu.usace.army.mil/cm_apex/f?p=regulatory_survey).

Please refer to identification number **NWO-2016-00066-BIS** in any correspondence concerning this project. If you have any questions, please contact Swade Hammond at, by email at [Swade.D.Hammond@usace.army.mil](mailto:Swade.D.Hammond@usace.army.mil), or telephone at 701-255-0015.

Sincerely,



Patricia L. McQueary  
North Dakota State Program Manager  
Omaha District Regulatory Division

Enclosures

**COMPLIANCE CERTIFICATION**

**Permit File Name:** NDDOT; Highway 1804 Improvements; PCN 20891; SS-7-804(055)304; Williams County

**Action ID:** NWO-2016-00066-BIS

**Nationwide Permit Number:** NWP 23 Approved Categorical Exclusions.

**Permittee:** North Dakota Department of Transportation  
Attn: Ms. Cassandra Torstenson  
608 E Boulevard Avenue  
Bismarck, North Dakota 58505-0700

**County:** Williams

**Date of Verification:** July 27, 2016

Within 30 days after completion of the activity authorized by this permit, sign this certification and return it to the following address:

U.S. Army Corps of Engineers, Omaha District  
North Dakota Regulatory Office  
1513 South 12<sup>th</sup> Street  
Bismarck, North Dakota 58504  
[CENWO-OD-RND@usace.army.mil](mailto:CENWO-OD-RND@usace.army.mil)

Please note that your permitted activity is subject to a compliance inspection by a U.S. Army Corps of Engineers representative. If you fail to comply with the terms and conditions of the permit your authorization may be suspended, modified, or revoked. If you have any questions about this certification, please contact the U.S. Army Corps of Engineers.

\*\*\*\*\*

***I hereby certify that the work authorized by the above-referenced permit, including all the required mitigation, was completed in accordance with the terms and conditions of the permit verification.***

\_\_\_\_\_  
Permittee Signature

\_\_\_\_\_  
Date

**FACT SHEET  
NATIONWIDE PERMIT 23  
(2012)**

**APPROVED CATEGORICAL EXCLUSIONS.**

Activities undertaken, assisted, authorized, regulated, funded, or financed, in whole or in part, by another Federal agency or department where:

(a) That agency or department has determined, pursuant to the Council on Environmental Quality's implementing regulations for the National Environmental Policy Act (40 CFR part 1500 et seq.), that the activity is categorically excluded from environmental documentation, because it is included within a category of actions which neither individually nor cumulatively have a significant effect on the human environment; and

(b) The Office of the Chief of Engineers (Attn: CECW-CO) has concurred with that agency's or department's determination that the activity is categorically excluded and approved the activity for authorization under NWP 23.

The Office of the Chief of Engineers may require additional conditions, including pre-construction notification, for authorization of an agency's categorical exclusions under this NWP. (Sections 10 and 404)

Notification: Certain categorical exclusions approved for authorization under this NWP require the permittee to submit a pre-construction notification to the district engineer prior to commencing the activity (see general condition 31). The activities that require pre-construction notification are listed in the appropriate Regulatory Guidance Letters.

**Nationwide Permit General Conditions**

Note: To qualify for NWP authorization, the prospective permittee must comply with the following general conditions, as applicable, in addition to any regional or case-specific conditions imposed by the division engineer or district engineer.

**1. Navigation.** (a) No activity may cause more than a minimal adverse effect on navigation.

(b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.

(c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

**2. Aquatic Life Movements.** No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those

species that normally migrate through the area, unless the activity's primary purpose is to impound water. All permanent and temporary crossings of waterbodies shall be suitably culverted, bridged, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species.

**3. Spawning Areas.** Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.

**4. Migratory Bird Breeding Areas.** Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.

**5. Shellfish Beds.** No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWP 4 and 48, or is a shellfish seeding or habitat restoration activity authorized by NWP 27.

**6. Suitable Material.** No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see Section 307 of the Clean Water Act).

**7. Water Supply Intakes.** No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.

**8. Adverse Effects From Impoundments.** If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.

**9. Management of Water Flows.** To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization and storm water management activities, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

**10. Fills Within 100-Year Floodplains.** The activity must comply with applicable FEMA-approved state or local floodplain management requirements.

**11. Equipment.** Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.

**12. Soil Erosion and Sediment Controls.** Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow.

**13. Removal of Temporary Fills.** Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

**14. Proper Maintenance.** Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety and compliance with applicable NWP general conditions, as well as any activity-specific conditions added by the district engineer to an NWP authorization.

**15. Single and Complete Project.** The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.

**16. Wild and Scenic Rivers.** No activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status. Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency responsible for the designated Wild and Scenic River or study river (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service).

**17. Tribal Rights.** No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

**18. Endangered Species.** (a) No activity is authorized under any NWP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify the critical habitat of such species. No activity is authorized under any NWP which "may affect" a listed species or critical habitat, unless Section 7 consultation addressing the effects of the proposed activity has been completed.

(b) Federal agencies should follow their own procedures for complying with the requirements of the ESA. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will review the documentation and determine whether it is sufficient to address ESA compliance for the NWP activity, or whether additional ESA consultation is necessary.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species or designated critical habitat, the pre-construction notification must include the name(s) of the endangered or threatened species that might be affected by the proposed work or that utilize the designated critical habitat that might be affected by the proposed work. The district engineer will determine whether the proposed activity "may affect" or will have "no effect" to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps' determination within 45 days of receipt of a complete pre-construction notification. In cases where the non-Federal applicant has identified listed species or critical habitat that might be affected or is in the vicinity of the project, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification the proposed

activities will have "no effect" on listed species or critical habitat, or until Section 7 consultation has been completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(d) As a result of formal or informal consultation with the FWS or NMFS the district engineer may add species-specific regional endangered species conditions to the NWP.

(e) Authorization of an activity by a NWP does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the U.S. FWS or the NMFS, The Endangered Species Act prohibits any person subject to the jurisdiction of the United States to take a listed species, where "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The word "harm" in the definition of "take" means an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.

(f) Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the U.S. FWS and NMFS or their world wide web pages at <http://www.fws.gov/> or <http://www.fws.gov/ipac> and <http://www.noaa.gov/fisheries.html> respectively.

**19. Migratory Birds and Bald and Golden Eagles.** The permittee is responsible for obtaining any "take" permits required under the U.S. Fish and Wildlife Service's regulations governing compliance with the Migratory Bird Treaty Act or the Bald and Golden Eagle Protection Act. The permittee should contact the appropriate local office of the U.S. Fish and Wildlife Service to determine if such "take" permits are required for a particular activity.

**20. Historic Properties.** (a) In cases where the district engineer determines that the activity may affect properties listed, or eligible for listing, in the National Register of Historic Places, the activity is not authorized, until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

(b) Federal permittees should follow their own procedures for complying with the requirements of Section 106 of the National Historic Preservation Act. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will review the documentation and determine whether it is sufficient to address section 106 compliance for the NWP activity, or whether additional section 106 consultation is necessary.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if the authorized activity may have the potential to cause effects to any historic properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties may be affected by the proposed work or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of or potential for the presence of historic resources can be sought from the State Historic Preservation Officer or Tribal Historic Preservation Officer, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). When reviewing pre-construction notifications, district engineers will comply with the current procedures for addressing the requirements of Section 106 of the National Historic Preservation Act. The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts, which may include background research, consultation, oral history interviews, sample field investigation, and field survey. Based on the information submitted and these efforts, the district engineer

shall determine whether the proposed activity has the potential to cause an effect on the historic properties. Where the non-Federal applicant has identified historic properties on which the activity may have the potential to cause effects and so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects or that consultation under Section 106 of the NHPA has been completed.

(d) The district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA Section 106 consultation is required. Section 106 consultation is not required when the Corps determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR §800.3(a)). If NHPA section 106 consultation is required and will occur, the district engineer will notify the non-Federal applicant that he or she cannot begin work until Section 106 consultation is completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(e) Prospective permittees should be aware that section 110k of the NHPA (16 U.S.C. 470h-2(k)) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of Section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

**21. Discovery of Previously Unknown Remains and Artifacts.** If you discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by this permit, you must immediately notify the district engineer of what you have found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The district engineer will initiate the Federal, Tribal and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

**22. Designated Critical Resource Waters.** Critical resource waters include, NOAA-managed marine sanctuaries and marine monuments, and National Estuarine Research Reserves. The district engineer may designate, after notice and opportunity for public comment, additional waters officially designated by a state as having particular environmental or ecological significance, such as outstanding national resource waters or state natural heritage sites. The district engineer may also designate additional critical resource waters after notice and opportunity for public comment.

(a) Discharges of dredged or fill material into waters of the United States are not authorized by NWP 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, 50, 51, and 52 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.

(b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, and 38, notification is required in accordance with general condition 31, for any activity proposed in the

designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWP's only after it is determined that the impacts to the critical resource waters will be no more than minimal.

**23. Mitigation.** The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that adverse effects on the aquatic environment are minimal:

(a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site).

(b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating for resource losses) will be required to the extent necessary to ensure that the adverse effects to the aquatic environment are minimal.

(c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse effects of the proposed activity are minimal, and provides a project-specific waiver of this requirement. For wetland losses of 1/10-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in minimal adverse effects on the aquatic environment. Compensatory mitigation projects provided to offset losses of aquatic resources must comply with the applicable provisions of 33 CFR part 332.

(1) The prospective permittee is responsible for proposing an appropriate compensatory mitigation option if compensatory mitigation is necessary to ensure that the activity results in minimal adverse effects on the aquatic environment.

(2) Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, wetland restoration should be the first compensatory mitigation option considered.

(3) If permittee-responsible mitigation is the proposed option, the prospective permittee is responsible for submitting a mitigation plan. A conceptual or detailed mitigation plan may be used by the district engineer to make the decision on the NWP verification request, but a final mitigation plan that addresses the applicable requirements of 33 CFR 332.4(c)(2) – (14) must be approved by the district engineer before the permittee begins work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation (see 33 CFR 332.3(k)(3)).

(4) If mitigation bank or in-lieu fee program credits are the proposed option, the mitigation plan only needs to address the baseline conditions at the impact site and the number of credits to be provided.

(5) Compensatory mitigation requirements (e.g., resource type and amount to be provided as compensatory mitigation, site protection, ecological performance standards, monitoring requirements) may be addressed through conditions added to the NWP authorization, instead of components of a compensatory mitigation plan.

(d) For losses of streams or other open waters that require pre-construction notification, the district engineer may require compensatory mitigation, such as stream rehabilitation, enhancement, or preservation, to ensure that the activity results in minimal adverse effects on the aquatic environment.

(e) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWP's. For example, if an NWP has an acreage limit of 1/2-acre, it cannot be used to authorize any project resulting in the loss of greater than 1/2-acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of

the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that a project already meeting the established acreage limits also satisfies the minimal impact requirement associated with the NWP.

(f) Compensatory mitigation plans for projects in or near streams or other open waters will normally include a requirement for the restoration or establishment, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, riparian areas may be the only compensatory mitigation required. Riparian areas should consist of native species. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. If it is not possible to establish a riparian area on both sides of a stream, or if the waterbody is a lake or coastal waters, then restoring or establishing a riparian area along a single bank or shoreline may be sufficient. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.

(g) Permittees may propose the use of mitigation banks, in-lieu fee programs, or separate permittee-responsible mitigation. For activities resulting in the loss of marine or estuarine resources, permittee-responsible compensatory mitigation may be environmentally preferable if there are no mitigation banks or in-lieu fee programs in the area that have marine or estuarine credits available for sale or transfer to the permittee. For permittee-responsible mitigation, the special conditions of the NWP verification must clearly indicate the party or parties responsible for the implementation and performance of the compensatory mitigation project, and, if required, its long-term management.

(h) Where certain functions and services of waters of the United States are permanently adversely affected, such as the conversion of a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse effects of the project to the minimal level.

**24. Safety of Impoundment Structures.** To ensure that all impoundment structures are safely designed, the district engineer may require non-Federal applicants to demonstrate that the structures comply with established state dam safety criteria or have been designed by qualified persons. The district engineer may also require documentation that the design has been independently reviewed by similarly qualified persons, and appropriate modifications made to ensure safety.

**25. Water Quality.** Where States and authorized Tribes, or EPA where applicable, have not previously certified compliance of an NWP with CWA Section 401, individual 401 Water Quality Certification must be obtained or waived (see 33 CFR 330.4(c)). The district engineer or State or Tribe may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.

**26. Coastal Zone Management.** In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). The district engineer or a State may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

**27. Regional and Case-By-Case Conditions.** The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

**28. Use of Multiple Nationwide Permits.** The use of more than one NWP for a single and complete project is prohibited, except when the acreage loss of waters of the United States authorized by the NWPs does not exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.

**29. Transfer of Nationwide Permit Verifications.** If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature:

"When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below."

\_\_\_\_\_  
(Transferee)

\_\_\_\_\_  
(Date)

**30. Compliance Certification.** Each permittee who receives an NWP verification letter from the Corps must provide a signed certification documenting completion of the authorized activity and any required compensatory mitigation. The success of any required permittee-responsible mitigation, including the achievement of ecological performance standards, will be addressed separately by the district engineer. The Corps will provide the permittee the certification document with the NWP verification letter. The certification document will include:

(a) A statement that the authorized work was done in accordance with the NWP authorization, including any general, regional, or activity-specific conditions;

(b) A statement that the implementation of any required compensatory mitigation was completed in accordance with the permit conditions. If credits from a mitigation bank or in-lieu fee program are used to satisfy the compensatory mitigation requirements, the certification must include the documentation required by 33 CFR 332.3(l)(3) to confirm that the permittee secured the appropriate number and resource type of credits; and

(c) The signature of the permittee certifying the completion of the work and mitigation.

**31. Pre-Construction Notification—(a) *Timing.*** Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the

PCN is complete within 30 calendar days of the date of receipt and, if the PCN is determined to be incomplete, notify the prospective permittee within that 30 day period to request the additional information necessary to make the PCN complete. The request must specify the information needed to make the PCN complete. As a general rule, district engineers will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either: (1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or (2) 45 calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 18 that listed species or critical habitat might be affected or in the vicinity of the project, or to notify the Corps pursuant to general condition

20 that the activity may have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that there is "no effect" on listed species or "no potential to cause effects" on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or Section 106 of the National Historic Preservation (see 33 CFR 330.4(g)) has been completed. Also, work cannot begin under NWPs 21, 49, or 50 until the permittee has received written approval from the Corps. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee may not begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

(b) *Contents of Pre-Construction Notification:* The PCN must be in writing and include the following information: (1) Name, address and telephone numbers of the prospective permittee; (2) Location of the proposed project; (3) A description of the proposed project; the project's purpose; direct and indirect adverse environmental effects the project would cause, including the anticipated amount of loss of water of the United States expected to result from the NWP activity, in acres, linear feet, or other appropriate unit of measure; any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity. The description should be sufficiently detailed to allow the district engineer to determine that the adverse effects of the project will be minimal and to determine the need for compensatory mitigation. Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the project and when provided results in a quicker decision. Sketches should contain sufficient detail to provide an illustrative description of the proposed activity (e.g., a conceptual plan), but do not need to be detailed engineering plans); (4) The PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial, intermittent, and ephemeral streams, on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many waters of the United States. Furthermore, the 45 day period will not start until the

delineation has been submitted to or completed by the Corps, as appropriate; (5) If the proposed activity will result in the loss of greater than 1/10-acre of wetlands and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied, or explaining why the adverse effects are minimal and why compensatory mitigation should not be required. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan. (6) If any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, for non-Federal applicants the PCN must include the name(s) of those endangered or threatened species that might be affected by the proposed work or utilize the designated critical habitat that may be affected by the proposed work. Federal applicants must provide documentation demonstrating compliance with the Endangered Species Act; and (7) For an activity that may affect a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, for non-Federal applicants the PCN must state which historic property may be affected by the proposed work or include a vicinity map indicating the location of the historic property. Federal applicants must provide documentation demonstrating compliance with Section 106 of the National Historic Preservation Act. (c) *Form of Pre-Construction Notification*: The standard individual permit application form (Form ENG 4345) may be used, but the completed application form must clearly indicate that it is a PCN and must include all of the information required in paragraphs (b)(1) through (7) of this general condition. A letter containing the required information may also be used. (d) *Agency Coordination*: (1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWP's and the need for mitigation to reduce the project's adverse environmental effects to a minimal level. (2) For all NWP activities that require pre-construction notification and result in the loss of greater than 1/2-acre of waters of the United States, for NWP 21, 29, 39, 40, 42, 43, 44, 50, 51, and 52 activities that require pre-construction notification and will result in the loss of greater than 300 linear feet of intermittent and ephemeral stream bed, and for all NWP 48 activities that require pre-construction notification, the district engineer will immediately provide (e.g., via email, facsimile transmission, overnight mail, or other expeditious manner) a copy of the complete PCN to the appropriate Federal or state offices (U.S. FWS, state natural resource or water quality agency, EPA, State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Office (THPO), and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will have 10 calendar days from the date the material is transmitted to telephone or fax the district engineer notice that they intend to provide substantive, site specific comments. The comments must explain why the agency believes the adverse effects will be more than minimal. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the preconstruction notification. The district engineer will fully consider agency comments received within the specified time frame concerning the proposed activity's compliance with the terms and conditions of the NWP's, including the need for mitigation to ensure the net adverse environmental effects to the aquatic environment of the proposed activity are minimal. The district engineer will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5. (3) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by Section

305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act. (4)  
Applicants are encouraged to provide the Corps with either electronic files or multiple copies of preconstruction notifications to expedite agency coordination.

**Further Information**

1. District Engineers have authority to determine if an activity complies with the terms and conditions of an NWP.
2. NWPs do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.
3. NWPs do not grant any property rights or exclusive privileges.
4. NWPs do not authorize any injury to the property or rights of others.
5. NWPs do not authorize interference with any existing or proposed Federal project.

**2012 Nationwide Permits  
Regional Conditions  
Omaha District  
State of North Dakota**

The following Nationwide Permit regional conditions will be used in the State of North Dakota. Regional conditions are placed on Nationwide Permits to ensure projects result in less than minimal adverse impacts to the aquatic environment and to address local resources concerns.

**Wetlands Classified as Peatlands – Revoked for Use**

All Nationwide Permits, with the exception of 3, 5, 20, 32, 38 and 45, are revoked for use in peatlands in North Dakota.

Peatlands are saturated and inundated wetlands where conditions inhibit organic matter decomposition and allow for the accumulation of peat. Under cool, anaerobic, and acidic conditions, the rate of organic matter accumulation exceeds organic decay. Peatlands can be primarily classified into ombrotrophic bogs and minerotrophic fens; the latter subdivided into poor, moderate-rich, and extreme-rich fens, each with distinctive indicator species, community physiognomy, acidity, alkalinity, and base cation content.

**Wetlands Classified as Peatlands – Pre-construction Notification Requirement**

For Nationwide Permits 3, 5, 20, 32, 38, and 45 permittees must notify the Corps in accordance with General Condition 31 (Notification) prior to initiating any regulated activity impacting peatlands in North Dakota.

**Waters Adjacent to Natural Springs – Pre-construction Notification Requirement**

For all Nationwide Permits permittees must notify the Corps in accordance with General Condition No. 31 (Notification) for regulated activities located within 100 feet of the water source in natural spring areas in North Dakota. For purposes of this condition, a spring source is defined as any location where there is artesian flow emanating from a distinct point at any time during the growing season. Springs do not include seeps and other groundwater discharge areas where there is no distinct point source.

**Missouri River, including Lake Sakakawea and Lake Oahe within the State of North Dakota – Pre-construction Notification Requirement**

For all Nationwide Permits permittees must notify the Corps in accordance with General Condition No. 31 (Notification) prior to initiating any regulated activity in the Missouri River, including Lake Sakakawea and Lake Oahe, within the State of North Dakota.

### **Borrow Site Identification – All Nationwide Permits**

The permittee is responsible for ensuring that the Corps is notified of the location of any borrow site that will be used in conjunction with the construction of the authorized activity so that the Corps may evaluate the site for potential impacts to aquatic resources, historic properties, and endangered species. For projects where there is another lead Federal agency, the permittee shall provide the Corps documentation indicating that the lead Federal agency has complied with the National Historic Preservation Act and Endangered Species Act for the borrow site. The permittee shall not initiate work at the borrow site in conjunction with the authorized activity until approval is received from the Corps.

### **Counter-sinking Culverts and Associated Riprap – All Nationwide Permits**

That culverts and riprap proposed to be installed within waters of the United States listed as Class III or higher on the 1978 Stream Evaluation Map for the State of North Dakota shall be installed one foot below the natural streambed. The 1978 Stream Evaluation Map for the State of North Dakota can be accessed on the North Dakota Regulatory Office's website at: <http://www.nwo.usace.army.mil/html/od-rnd/ndhome.htm>.

## **REGIONAL CONDITIONS APPLICABLE TO SPECIFIC NATIONWIDE PERMITS**

### **Nationwide Permit 7 – Outfall Structures and Associated Intake Structures and Nationwide Permit 12 – Utility Line Activities**

**Intake Structures** - Intake screens with a maximum mesh opening of 1/4-inch must be provided, inspected annually, and maintained. Wire, Johnson-like, screens must have a maximum distance between wires of 1/8-inch. Water velocity at the intake screen shall not exceed 1/2-foot per second.

Pumping plant sound levels will not exceed 75 dB at 50 feet.

Intakes located in Lake Sakakawea, above river mile 1519, are subject to the following conditions:

- The intakes shall be floating.
- At the beginning of the pumping season, the intake shall be placed over water with a minimum depth of 20 feet.
- If the 20-foot depth is not attainable, then the intake shall be located over the deepest water available.
- If the water depth falls below six feet, the intake shall be moved to deeper water or the maximum intake velocity shall be limited to 1/4 foot per second.

Intakes located in Lake Sakakawea, below river mile 1519, and in the Missouri River below Garrison Dam are subject to the following conditions:

- The intakes shall be submerged.
- At the beginning of the pumping season, the intake will be placed at least 20 vertical feet below the existing water level.
- The intake shall be elevated 2 to 4 feet off the bottom of the river or reservoir bed.
- If the 20-foot depth is not attainable, then the intake velocity shall be limited to 1/4-foot per second with the intake placed at the maximum practicable attainable depth.

### **Nationwide Permit 11 – Temporary Recreational Structures - Boat Docks**

- a. If future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.
- b. No boat dock shall be located on a sandbar or barren sand feature located in or along the banks of the Missouri River.
- c. The farthest point riverward on the dock located on the Missouri River proper shall not exceed a total length of 30 feet from the ordinary high water line found along the high bank out into the River. Information Note: Issuance of this permit does not supersede authorization required by the North Dakota State Engineer's Office.
- d. Any boat dock located on the Missouri River shall be anchored to the top of the high bank.
- e. Any boat dock located within an excavated bay or marina off the main river channel may be anchored to the bay or marina bottom with spuds.

### **Nationwide Permit 13 - Bank Stabilization**

Permittees must notify the Corps in accordance with General Condition No. 31 (Notification) prior to initiating any regulated activity within the State of North Dakota.

### **Nationwide Permit 23 - Approved Categorical Exclusions**

Permittees must notify the Corps in accordance with General Condition No. 31 (Notification) prior to initiating any regulated activity within the State of North Dakota. In addition to information required by General Condition 31, permittees must identify the approved categorical exclusion that applies and provide documentation that the project fits the categorical exclusion.

### **Nationwide Permit 27 - Aquatic Habitat Restoration, Establishment and Enhancement Activities**

Permittees must notify the Corps in accordance with General Condition No. 31 (Notification) prior to initiating any regulated activity within the State of North Dakota.

## **GENERAL CONDITIONS (REGIONAL ADDITIONS)**

### **General Condition 3- Spawning Areas**

No regulated activity within waters of the United States listed as Class III or higher on the 1978 Stream Evaluation Map for the State of North Dakota or on the North Dakota Game and Fish Department's website as a North Dakota Public Fishing Water shall occur between 15 April and 1 June. No regulated activity within the Red River of the North shall occur between 15 April and 1 July. North Dakota Public Fishing Waters can be accessed at: <http://gf.nd.gov/fishing/nd-fish-wat.html>. The 1978 Stream Evaluation Map for the State of North Dakota can be accessed on the North Dakota Regulatory Office's website at: <http://www.nwo.usace.army.mil/html/od-rnd/ndhome.htm>.

### **General Condition 6 – Suitable Material**

Permittees are reminded that General Condition No. 6 prohibits the use of unsuitable material. In addition, organic debris, some building waste, and materials excessive in fines are not suitable material. Specific verbiage on prohibited materials can be accessed on the North Dakota Regulatory Office's website at: <http://www.nwo.usace.army.mil/html/od-rnd/ndhome.htm>.

### **General Condition 9 - Management of Water Flows**

Permittees are reminded that water flow management addressed in General Condition 9 is applicable to all aspects of a permitted project, including temporary features.

### **General Condition 31 – Pre-construction Notification**

Prospective permittees should be aware that a **field delineation** may be required for applications where notification is required in accordance with General Condition 31 and/or mitigation may be required. The Corps 1987 Wetland Delineation Manual and applicable Regional Supplements to the Manual can be accessed on the North Dakota Regulatory Office's website at: <http://www.nwo.usace.army.mil/html/od-rnd/ndhome.htm>.



**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.



**DEVELOPMENT ACTIVITIES:** (check all that apply and explain the activity)

- Fill placement (fill brought in from outside the floodplain)
- Excavation (where subgrade fill is removed from the floodplain)
- Landscaping (cut and fill, fill borrow and placement)
- Construction or maintenance of a dike/levee/floodwall
- Removal of fill, embankment, or dikes
- Watercourse alterations (river, stream, lake – channel modifications, rip-rap)
  
- Road, street or bridge construction (new, repair or replacement, realignment)
- Drainage improvements (including culvert work)
- Mining (removal of gravel, rock, fill or other natural materials)
- Installation of utilities (water, sewer, pipeline, gas, electric, communications)
- Well drilling (water, oil, natural gas, etc.)
- Subdivision (new or expansion)
- Other (temporary features, please specify and describe)

Explanation of Activities:

**STONY CREEK ZONE A FLOODPLAIN IMPACTS**

In this area the project includes the removal of the existing Stony Creek bridge, construction of the replacement quad RCB culvert, and roadway reconstruction. The following activities will occur during bridge removal and construction of the replacement structure: fill placement, fill removal, excavation, and channel modifications (riprap will extend out 10.0 ft. upstream and 20.0 ft. downstream of the culvert ends), and temporary channel diversion during construction of box sections. Roadway reconstruction will include drainage improvements (culvert and storm drain work), fill placement, fill removal, and excavation.

Note: The delineated floodplain at the Stony Creek Bridge crossing is from backwater from the Missouri River/Lake Sakakawea and has no effect on the hydraulics. A hydraulic evaluation was completed for Stony Creek to verify the crossing hydraulically performs similar or better than the existing bridge structure. The replacement structure for conveying Stony Creek flows beneath N.D. State Highway 1804 will have 100-year upstream water surface elevations ranging from 1.88 to 3.29-ft lower than the existing bridge.

**WEST OF LITTLE MUDDY RIVER ZONE A FLOODPLAIN IMPACTS**

In this area the project includes minor grading side slope grading and improvements to the existing storm drain facilities. Activities will include placing fill, grading, excavation, installation of the storm drain pipe, removal of storm drain pipe, and the placing of backfill material.

Note: The delineated floodplain at the area west of Little Muddy River crossing will be minor because the existing mapping appears to show an old roadway alignment and Little Muddy River Bridge.

**ADDITIONAL INFORMATION NEEDED**

<u>Agency</u>	<u>Type of Approval</u>	<u>Date Submitted</u>	<u>Date Received</u>
<a href="#">USACE</a>	<a href="#">Section 404</a>	<a href="#">Submittal Pending</a>	<a href="#">N/A</a>
<a href="#">N.D. Dep. of Health</a>	<a href="#">Section 401</a>	<a href="#">Submittal Pending</a>	<a href="#">N/A</a>
<a href="#">State of North Dakota</a>	<a href="#">Section 402</a>	<a href="#">Submittal Pending</a>	<a href="#">N/A</a>

**OTHER NOTIFICATION OR PERMITS NECESSARY?**

U.S. Army Corps of Engineers – [Yes \(Section 404\)](#)

County Water Resource District – [No](#)

Neighboring political entities – [No](#)

**ELEVATION INFORMATION:**

Attach information about the completed project elevations with registered professional engineer or registered land surveyor certifications if required for National Flood Insurance recordkeeping.

[DOWL completed a peak flow hydrologic analysis and determined the 100-year water surface elevations through hydraulic modeling. The replacement structure is sized such that water surface upstream of the crossing are not increased. The replacement structure will have 100-year upstream water surface elevations ranging from 1.88 to 3.29-ft lower than the existing bridge. The table below presents the modeled water surface elevations for the 100-year event for all cross sections upstream of the existing bridge and the proposed quad RCB culvert. See the attached Stony Creek Bridge Modeling Extents figure for cross-section stationing numbers.](#)

Station (ft)	100-year Water Surface Elevation (ft)		Water Surface Elevation Difference (ft)
	Existing Bridge	Quad RCB Culvert	
3369.31	1,865.91	1,863.63	-2.28
2940.34	1,865.93	1,864.05	-1.88
2646.5	1,865.90	1,863.97	-1.93
2356.91	1,865.43	1,863.06	-2.37
2228.26	1,865.47	1,862.18	-3.29

– [See attached Hydraulics Report for more details.](#)

ACTION/APPROVAL:

Reviewed for compliance with FEMA/NFIP  
Regulations and found No adverse impact,  
No rise in floodplain.

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PERMIT APPLICATION IS:

APPROVED

DENIED

Conditions: Approved as submitted.

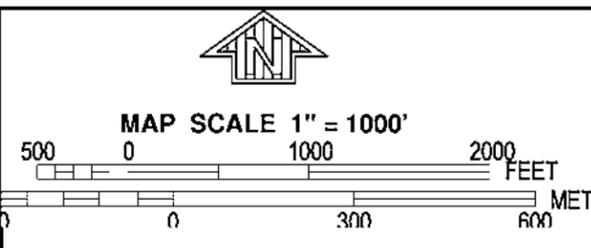
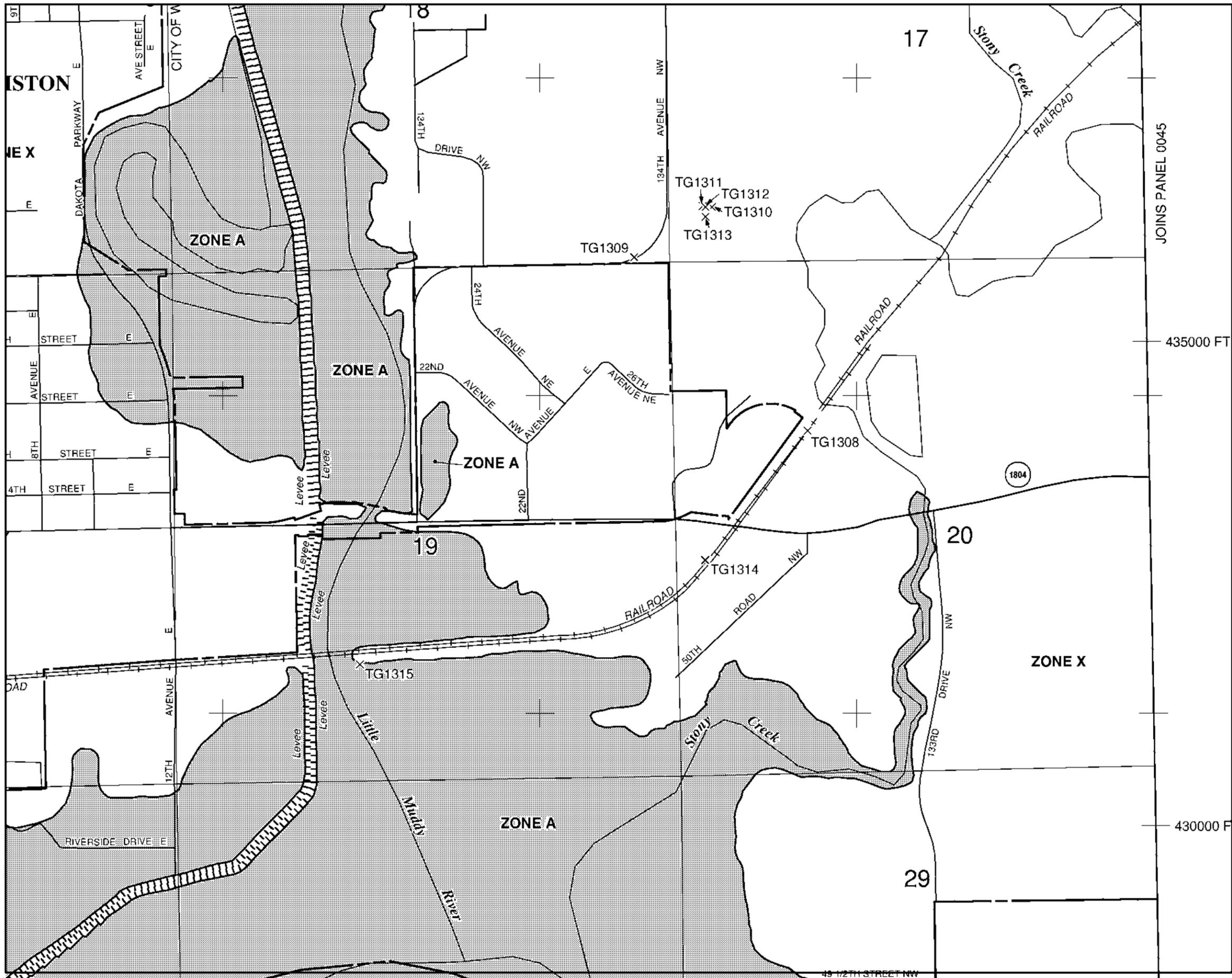
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Signature of Floodplain Administrator:

Richard A. Turnbull, CBO, CFM

Date:

1/29/2016



PANEL 0040D

**FIRM**  
FLOOD INSURANCE RATE MAP

CITY OF  
**WILLISTON,**  
NORTH DAKOTA  
WILLIAMS AND MCKENZIE  
COUNTIES  
PANEL 40 OF 45  
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:	COMMUNITY	NUMBER	PANEL	SUFFIX
	WILLISTON CITY OF	380319	0040	D

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

**MAP NUMBER**  
3803190040D  
**MAP REVISED**  
AUGUST 5, 2010

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at [www.msc.fema.gov](http://www.msc.fema.gov)

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	SOIB-7-804(054)312	6	1

**NOTES**

100-P01 WEEKLY PLANNING/REPORTING MEETING: Organize a weekly meeting to coordinate efforts between subcontractors, utilities, local authorities, and others.

Send a knowledgeable representative to conduct the weekly reporting/planning meeting. Prepare minutes for each meeting and make the appropriate distribution of the minutes. Have the minutes approved by the Engineer before distribution.

Provide a written schedule of the next week's work and a tentative schedule of the following week. Include a discussion of problems encountered during the current week; also include information of interest to local authorities, subcontractors, and utilities.

Invite interested agencies to the meeting. Include the following agencies and any other agencies that are necessary:

- a. North Dakota Department of Transportation (NDDOT)
- b. Local Government Agencies
- c. USACE Garrison - Riverdale
- d. Police department
- e. Fire department
- f. Ambulance service
- g. Telephone Co.
- h. Power Co.
- i. Cable T.V.
- j. Gas Co.
- k. Railroad Co.
- l. Subcontractors
- m. Chamber of Commerce

100-P02 PUBLIC RELATIONS COORDINATOR: Provide a public relations and information coordinator. The coordinator should not be the project superintendent or construction foreman. The coordinator should be knowledgeable in construction operations, be able to develop effective media releases, possess written and verbal communication skills, and be able to organize productive meetings.

Provide the name, work address, and work phone number to the relevant project, community, and media personnel.

The public relations coordinator is responsible for providing the following:

1. Organizing, scheduling, and conducting the meeting specified in Note 100-P01, "Weekly Planning/Reporting Meeting".
2. Advise the City of Williston, City Engineering Office, PH: 701-577-6368; in addition contact Emergency Dispatch at the non-emergency number PH: 701-577-1212, to notify of upcoming construction activities so that city police, emergency services, schools, and other pertinent city agencies may be notified.
3. Provide news releases and necessary drawings to the media before and during construction. News releases should inform the public on construction activities, schedules, and width or height restrictions to traffic. Update news releases regarding construction activities every other week, at a minimum.
4. Be available for media interviews.
5. Work directly with property owners and businesses affected by construction activities. The coordinator must have sufficient knowledge and authority to resolve property owner and business concerns regarding scheduling, maintaining access, and construction operations.

100-P03 COORDINATION OF PROJECTS: Another project in the vicinity of this project may be under contract during the 2017 construction season. This project is SOIB-7-804(058)304, PCN 21594 and is located east of 131st Avenue NW to 123rd Avenue NW.

100-P04

CONTAMINATED AREA CONSTRUCTION PHASING: The known contaminated area of the project extends from station 16693+00 to 16706+20 at a depth of approximately 4 feet or greater. See special provision 290(14) "Contaminated Work Area" for more information. Construct the storm drain within the contaminated area in the following phasing:

1. Construct the proposed storm sewer downstream of contaminated zone up to and including trench plug 6 (see sheet 55-29). Do not excavate beyond trench plug 6 until it is fully in place and ready to intercept groundwater flows.
2. Continue pipe construction to each subsequent trench plug (Plugs 5 through 1), but do not progress past it until the trench plug is in place and ready to intercept groundwater flows. Do not allow contaminated water to flow into a non-contaminated part of the project or into the new storm sewer during construction.
3. Use the existing storm drain trunk line to divert clean storm water runoff from the north around the construction zone. Construct the upstream structures 63 A-D and have them ready for operation before extending the new storm sewer through the existing storm sewer at station 16704+60. Complete connection of new storm sewer within one day of the removal of the existing storm sewer.
4. Remove the north curb line and create a swale with a stabilized surface to route the upstream storm water around the storm sewer construction to the nearest downstream manhole between stations 16694+00 and 16704+60. See 20-15 (Temporary Drainage Swale) and 75-10 for more information.
5. Backfill trenching operations as the pipe construction progresses to limit the open trench to 100 feet or less at one time to minimize seepage of groundwater into the trench. Anticipate an estimated 2,900 gallons per day of groundwater seepage into the trench with 100 feet of open trench within the contaminated area. Seepage rate is based on a trench excavation that matches the standard drawings (6.5 feet wide x 2 feet deep below pipe). Excavations and the resulting increased groundwater infiltration beyond what is described in the standard drawings will not be compensated for. The estimate of quantities is based on completing construction in the contaminated area in 15 days.

Backfill all trenching operations at the end of each day. Open trenches are not allowed in the contaminated area overnight.

100-P05

US ARMY CORP OF ENGINEER (USACE) LAND: The USACE requires a final inspection of the USACE lands between stations 16710+45 and 16721+00, south and west of the ¼ lines in Section 19, T154N, R100W. Provide written notification to the Engineer 14 calendar days prior to the inspection when the work is completed. The Engineer will notify the USACE Lake Manager "Skip Stonesifer" (701-654-7746) to arrange the inspection.

105-110

PAVEMENT SWEEPING: Sweep paved areas that were used by construction traffic before opening these areas to public traffic. Sweep all newly constructed pavement no more than 24 hours before a scheduled final inspection. Use a vacuum or pick-up type sweeper to perform this work.

105-200

UTILITY COORDINATION: A utility coordination meeting is required.

105-P01

RAILROAD CONSTRUCTION COORDINATION: Provide the BNSF ten working days advance notice of construction to be done within fifty feet of their tracks. Coordinate phasing of the roadway traffic control with the railroad traffic control to maintain two-way traffic at all times.

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STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	SOIB-7-804(054)312	6	2

**NOTES**

105-P02 UTILITY RELOCATIONS: Not all utilities will be relocated prior to the beginning of construction. Work directly with and coordinate schedules with all utility companies which have utilities to be relocated once construction has begun. Provide a minimum of two week notice to the utility companies of work to be done. Special coordination items of note are as follows:

- 1) Leave a 10 foot radius mound of dirt with 3:1 (desired, 2:1 minimum) side slopes, undisturbed around overhead utility poles that are in cut sections until such time that the utility company relocates the impacted poles. The known utility poles in cut sections are:  
 16522+73 LT      16542+59 LT  
 16525+53 LT      16545+43 LT  
 Fill up to the following utility poles in fill sections. Prior to fill being placed coordinate wrapping of these poles with Mountrail Williams Electric (MWE). Provide MWE 14 calendar days of notice before the work is to be done. The following poles require wrapping:  
 16531+19 LT      16537+51 LT  
 16534+48 LT      16635+73 RT
- 2) The design cuts around the utility poles at station 16549+62 LT and 16550+00 RT are approved by MWE without relocation of the utility poles. Cuts up to two feet around the guy anchors are approved by MWE. Provide MWE a minimum of 14 calendar days of notice for cuts greater than two feet and provide phasing of construction as required for MWE to relocate guy anchors. Construction phasing may include grading an adjacent area to finished grade, installing a guy pole, removing existing guy anchors, grading the existing guy anchor area to finished grade, and installing permanent guy anchors at finished grade.
- 3) The MWE underground electric line running east-west, north of ND 1804 is noted as an abandoned electric line. When grading is required to impact this line, cut the electric line back past the grading limits to provide 2 feet of cover over the end of the abandoned line to finished grade.
- 4) Work around utilities in conflict which are in the proposed roadway ditches, if the utility relocations have not taken place by the time roadway construction progresses to that location. Complete final grading after the utilities have been relocated if completed before the final acceptance of the project.
- 5) The MDU gas line on the north side of ND 1804 from station 16694+50 to 16721+00 is a high priority gas line. This line is noted as being a possible conflict from station 16716+00 to 16721+00 on the conflict plan sheets. Notify MDU immediately if this line is exposed. Direct all notifications to MDU contact, Paul Riley, at 701-516-4357. See sheet 60-20 for further instructions.
- 6) Locations are anticipated that will have an existing crossing utility in the storm sewer trench bedding. Protect in place any existing utility exposed in the storm sewer trench, not in direct conflict with the storm sewer pipe or manholes. Immediately notify the Engineer and Utility if a utility is found in direct conflict.
- 7) Fiber optic lines from station 16711+00 LT to 16721+00 LT may be in direct conflict with the storm sewer outfalls. Immediately notify Nemont if lines are found in direct conflict. Protect these fiber optic lines in place until Nemont relocates.

Complete all earthwork grading resulting from the completion of utility relocations before the final completion. Include the cost for this grading work in the contract unit price for "COMMON EXCAVATION – TYPE A". The utility companies will complete earthwork grading resulting from utility relocations completed after the final completion of the project.

105-P03 UTILITY RELOCATION PHASING: High priority conflicts have been identified for the utility companies. These conflicts will be the first conflicts that the utility companies relocate. Conflicts identified as "high priority" include: FEC3, FEC5, FEC7, FEC9, FEC46, FEC62, FEC63, FEC64, FEC65, MWE25, and MWE26 shown in the utility conflict plans and summary (reference conflict summary for station and offset information). Once the priority conflicts are relocated, coordinate the order of importance of the remaining conflicts with the respective utility companies.

105-P04 REMOVE APPROACH AND TEMPORARY FENCE: Remove existing approach on ND 1804 and establish the new approach on 27<sup>th</sup> Avenue East to the Winfield Solutions property by October 31, 2016.  
  
Remove fencing from station 16692+00 RT to 16692+70 RT and install temporary chain link fence as noted on the plans to secure the property. Include the cost for removal and installation of the temporary chain link fence in the contract unit price for "FENCE CHAIN LINK". Remove existing and install the new fencing by October 31, 2016.

105-P05 PIPE CONC – STORM DRAIN PHASING: Complete the construction of the storm sewer trunk line between stations 16695+00 to 16712+00 by November 18<sup>th</sup>, 2016. Follow the traffic control phasing identified on sheets 100-29 through 100-32.

107-115 RAILROAD PROTECTIVE LIABILITY INSURANCE: This project crosses the BNSF Railway Company at RP 315.966 and 316.165. The type of work that will be performed within the railroad right of way is pavement surfacing, storm drain improvements, pavement markings, etc. Direct inquiries regarding protective liability insurance to:  
  
Rosa Martinez  
 Marsh USA Inc.  
 4400 Comerica Bank Tower  
 1717 Main Street  
 Dallas, TX 75201-7357, USA  
 214-303-8519  
 Rosa.M.Martinez@marsh.com

Obtain information regarding crossing number DOT 093398A from the Federal Railroad Administration website: <http://safetydata.fra.dot.gov/Officeofsafety/>

107-710 HAUL ROADS: Before submitting a proposal, contact the appropriate State, County, Township, or City officials to determine if there are any roadways that will be designated as "no haul routes."

107-P01 MULTI-USE TRAIL: Maintain access on the multi-use trail from station 16715+50 RT to 16721+00 RT by constructing the relocated trail before removal of the existing trail.

107-P02 POST BID RAILROAD COORDINATION MEETING: Host a post-bid railroad coordination meeting that is to include the following entities: Contractor, Engineer, NDDOT, and BNSF. BNSF contact information:  
  
KRISTOPHER SWANSON, PE  
 Manager Public Projects  
 BNSF Railway Company  
 763-782-3492 office  
 Kristopher.Swanson@BNSF.com

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**NOTES**

107-P03 ABANDONED MINES: The Public Service Commission identified abandoned mines in the vicinity of the proposed roadway. The abandoned mine locations are based on historical records. Actual locations, and extents of potential underground facilities connected to these mines are unknown. Approximate entrance locations of the identified mines are noted on the Scope of Work in Section 4. Other abandoned mines may exist in the area. See abandoned mines memorandum dated April 20, 2016 for more information.

155-100

any excavation within this station range. The Engineer will hire a North Dakota Geological Survey (NDGS) permitted paleontologist to monitor all earthwork cuts within this station range.

107-P04 AVOIDANCE AREAS: Provide written notification to the Engineer 10 days prior to any earth disturbing activity between station 16522+44.37 and 16525+50. The avoidance areas are shown in Section 60.

202-P01

CONCRETE EQUIPMENT: Provide a NRMCA Certified plant for concrete used in Sections 550, "Concrete Pavement", 570 "Concrete Pavement Repair", 602 "Concrete Structures", and 622 "Pilings".

The Engineer will contact Jeani Borchert (PH: 701-328-4378) of the Environmental and Transportation Services Division at least 1 week prior to earth disturbing work within the stationing listed above.

202-P02

SAW BITUMINOUS SURFACING: Include the cost of the full depth vertical saw cuts adjacent to pavement removal areas, specified in Section 202.04 A "General", in the contract unit price for REMOVE AND SALVAGE BITUMINOUS SURFACING.

Work within the avoidance areas is prohibited except as defined below. The following work within avoidance buffer zones will be allowed under coordination with the Engineer's Archaeologist and Tribal Traditional Cultural Specialist:

202-P03

REMOVE EXISTING FENCE: Install permanent fence prior to the removal of existing fence, to maintain closure of lands.

- Removal of existing ROW fence;
- Installation of temporary safety fence and permanent ROW fencing; and
- Locating an appropriate reroute and monitoring placement of the new fiber optic and telephone lines.

202-P04

REMOVE & RESET INLET: Remove inlet as per 202.04 E and reset inlet to proper grade as shown in the plans. Replace inlet if any damage to inlet box occurs during construction.

107-P05 CULTURAL RESOURCE CONSTRUCTION MONITORING: The Engineer will hire a North Dakota permitted archaeologist, along with a Tribal Traditional Cultural Specialist (TCS) from the NDDOT's consulting tribes list, to monitor earth disturbing activities between station 16522+44.37 and 16525+50 (see Environmental Notes EN-2 and EN-3 of Section 6 of the Plans for more information) and the USACE land between stations 16710+45 and 16721+00. The archaeologist will notify Jeani Borchert who the TCS is, prior to any field work.

202-P05

REMOVAL OF RIPRAP – LOOSE ROCK: Remove concrete rubble or other non-hazardous construction materials encountered near the Little Muddy River Bridge as needed to perform the work specified in the plans. Dispose of the concrete rubble at a contractor furnished disposal site. If paint is found on the concrete, test it for lead. If lead is found, dispose of it in accordance with state and federal regulations.

The archaeological firm will provide an Archaeologist and a Tribal Traditional Cultural Specialist to

See section 40 for location of rubble. See supplemental data, Environmental Site Assessment, March 2016, Appendix C-4 for more discussion. Include the cost for removal of the concrete rubble disposed of in the contract unit price for "REMOVAL OF RIPRAP – LOOSE ROCK". The estimated quantity is based on an average depth of 5 feet of rubble to be removed. The actual volume of rubble may vary.

- Oversee removal and placement of permanent ROW fencing near cultural resource avoidance areas,
- Oversee placement of temporary avoidance fencing around the landforms that extend into the ROW of these avoidance areas,
- Monitor earthmoving construction activities within the existing and newly designed ditch bottom and backslope areas between stations 16508+50 and 16525+50 including areas near and within 300' on either side of the avoidance areas, and
- Assist in finding a route and monitoring placement of a rerouted fiber optic and telephone lines within the established ROW on the north and south sides of the highway in the vicinity of the avoidance areas.
- Do not remove or disturb any historical, archeological, architectural, or other cultural artifacts, relics, vestiges, remains or objects of antiquity are found within the USACE land. If encountered, notify the Engineer who will notify Jeani Borchert at the NDDOT

203-010

REMOVAL OF BITUMINOUS SURFACING: The "REMOVAL OF BITUMINOUS SURFACING" quantity includes only the asphalt surfacing. Salvaging of the base material is not included in this quantity. Salvage bituminous surfacing for use in "SALVAGED BASE COURSE".

The Archaeological firm will prepare weekly updates of monitoring when monitoring is longer than 1 week. The firm will also prepare a final report of monitoring findings delivered to NDDOT Cultural Resource Section.

203-P01

SHRINKAGE: 20 percent additional volume is included for shrinkage in earth embankment.

107-P06 PALEONTOLOGICAL MONITORING: Notify the Engineer 10 days in advance of excavation beginning between stations 16527+00 and 16540+00. The Engineer will contact Bob Christensen (PH: 701-328-4539) of the Environmental and Transportation Services Division one week prior to

COMMON EXCAVATION - WASTE: Common Excavation - Waste consists of coal. Dispose of coal removed from the common excavation areas at the coal disposal site shown in Section 4, located off the Phase 1 project limits. Place a minimum of 2 feet of compacted soil (2' cover) and 6" of topsoil over the coal disposal site. Compact the cover material in accordance with section 203.04.E.4. Dispose of the excavated soil from the coal waste site at a contractor furnished waste site. Coordinate activities with the NDDOT and the Phase 2 contractor during construction. Include the costs for labor, materials, and equipment necessary for coal removal and disposal along with the 2 feet of cover material in the contract unit price for "COMMON EXCAVATION – WASTE". The engineer will measure Common Excavation – Waste by taking an initial measurement of the original ground, and then a second measurement after removing the coal material. The quantity of topsoil for the coal waste site is included in the quantities for "TOPSOIL". The quantity of excavation for the coal waste site is included in the quantities for "Common Excavation - Type A". Temporary stockpiling of topsoil, excavation, 2' cover, and coal shall be done entirely within the limits of the coal waste site area. All work to phase the coal waste area shall be included in the price bid for "Common Excavation – Waste".

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**NOTES**

203-P02 EXCESS EXCAVATION: Dispose of Common Excavation – Type A not needed for embankment at a contractor furnished waste site. Include the cost for disposal in the contract unit price for “COMMON EXCAVATION-TYPE A”.

203-P03 TOPSOIL: Scrape and set to one side all topsoil within the temporary construction easement, between stations 16548+99.29 RT and 16549+45.06 RT. Replace topsoil after easement work has been completed. If additional topsoil is needed, take it ONLY from a location on this property. Notify the property owner a minimum of 7 days in advance of the work to coordinate the location it will be taken from. Dispose of all rocks with a diameter 3 inches or greater following dirt work. Include the cost for topsoil handing and rock removal in accordance with this note in the contract unit price for “TOPSOIL”.

203-P04 CONTRACTOR FURNISHED WASTE AREA: All waste areas are contractor furnished. The waste discussed in this note is excess excavation as noted in 203-P02. Dispose of coal waste in accordance with note 203-P01. The following land owner is interested in having excess excavation wasted on his property. A Class III Cultural Resources Investigation has been performed on this site for the areas within 250 feet from the centerline of the ND 1804. A report of the findings and any avoidance areas or monitoring requirements is available for review.  
 Mr. Don Eide  
 NE ¼ Sec 22, T154N, R100W

203-P05 DITCH BLOCKS: Include the cost for ditch blocks in the contract unit price for “COMMON EXCAVATION –TYPE A.” See sheet 20-12 for more information.

251-P01 SEEDING: Use the following seed mix for all permanent seeding. Include the cost for Seeding in the contract unit price for “SEEDING CLASS III”.

		Mix A	Mix B	
		PLS/Ac	PLS/Ac	
	Species	Variety		
Grasses	Blue Grama	Bad River	0.90	0.60
	Green Needlegrass	Lordom	2.70	3.15
	Sideoats Grama	Killdeer	3.60	1.35
	Western Wheatgrass	Rodan	6.00	6.00
	Canada Wildrye		2.00	2.93
	Little Bluestem	Badlands	2.40	0.60
	Slender Wheatgrass		1.50	2.25
	Switchgrass	Dacotah	0.53	0.26
Forbs	Black-eyed Susan		0.02	0.02
	Blue aster		0.11	0.11
	Purple prairieclover		0.29	0.29
	Stiff Sunflower		0.08	0.08
	Western Yarrow		0.01	0.01
	Wild bergamont		0.03	0.03
	Lewis Flax		0.29	0.29
	Prairie (Yellow) Coneflower		0.11	0.11
Shell-leaf Penstemon		0.3	0.3	

If any of the varieties are not available, contact the Environmental and Transportation Services (ETS) Section II for a replacement. Seed mix “A” must be planted between April 20th and June 15th. If seeding will not take place within this time frame, seed mix “B” may be used after November 1st, and before the ground freezes. Between June 15 and November 1st use a

temporary crop cover of oats. Seed mix B will then be seeded directly into the crop cover after November 1st.

255-P01 ECB TYPE 1: Install the erosion control blanket from D-255-2 so that it extends up the foreslope and backslope of the ditch, a minimum of one foot, so that the edge of the blanket is not in the ditch bottom.

256-P01 RIPRAP-SALVAGED: Riprap is available for salvage from under the Stony Creek Bridge. Salvaged riprap incorporated into the project will meet the gradation requirements outlined in specification section 256.03C. Include the cost of salvaging riprap in the contract unit price for “RIPRAP GRADE I”.

302-115 BASE COURSE: Trim base course as specified in Section 302.04 C.2, "Surface Tolerance Type C."

430-P01 BOX CULVERT SETTLEMENT: Install temporary asphalt at finished grade over the box culvert to allow settlement of the box culvert before finished surfacing is installed. Keep the temporary asphalt in place for a minimum of 60 days, starting from the date that the temporary asphalt installation is complete. Once the 60 day period is complete, remove the temporary asphalt, perform necessary grading, and place final concrete surfacing.  
 Include the cost for the temporary asphalt in the contract unit price for “COMMERCIAL GRADE HOT MIX ASPHALT”. Include the cost for removal of temporary asphalt in the contract unit price for “REMOVE & SALVAGE BITUMINOUS SURFACING”.

550-001 CORRECTIVE ACTION: The Engineer will apply liquidated damages of \$1,500 for each trip required after the second profile for areas needing further corrective action.

550-P01 RIDE QUALITY: Construct all concrete surfaces to comply with “Tolerance in Surface and Ride Quality” (Section 550.04 M) for speeds greater than 45 MPH.

704-100 TRAFFIC CONTROL SUPERVISOR: Provide a Traffic Control Supervisor.

704-200 PRECAST CONCRETE MEDIAN BARRIERS – STATE FURNISHED: Obtain barriers from the US Highway 2 storage area near Reference Point 12. Return barriers to the same location.  
 Some 4 inch x 4 inch boards are available at the return location. Provide any additional 4 inch x 4 inch boards necessary to stack barriers. The boards will become property of the Department. Include the cost for boards in the contract unit price for PRECAST CONCRETE MEDIAN BARRIER - STATE FURNISHED.

704-255 TRAFFIC CONTROL FOR SHOULDER DROP-OFF: If the shoulder and adjacent driving lane are not even at the end of the day, the following criteria will apply:  
 Place the following sign assembly at the locations listed below.  
 Sign Assembly: Sign No. W8-9a-48 "Shoulder Drop Off" and supplemental plate Sign No. W20-52-54 to identify the distance. Locations:

- In advance of the drop off;
- Spaced at each mile from the advance sign; and
- At major intersections (CMC routes, state and US highways, and Interstate ramps).

If the difference in elevation between the shoulder and the driving lane is 2" or greater, construct a slough on the driving lane that is 4:1 or flatter. If the difference in elevation between the shoulder and driving lane is less than 2", no slough is required. Sign assemblies will be measured and paid for according to Section 704 "Temporary Traffic Control".

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**NOTES**

704-P01 STATE ROUTE MARKERS: Provide State Route Marker signs for temporary traffic control. State Route Markers may be either the old design or the new state outlined design; however, all Route Marker signs provided must be of the same type.

Upon project completion, the State Route Marker sign panels will become property of the State. Stockpile sign panels within the project limits. The Engineer will arrange to have the stockpiled panels removed from the project limits.

Include the cost of furnishing, installing, maintaining, stockpiling, and other incidentals in the contract unit price for "Traffic Control Signs".

704-P02 TRAFFIC CONTROL: Implement traffic control to allow for 2 way traffic at all times unless otherwise approved by the Engineer.

704-P03 TEMPORARY EMBANKMENT: Include the cost for additional embankment needed beyond the typical section, to maintain two way traffic at all times, in the contract unit price for "Common Excavation-Type A". No measurement will be made of the temporary embankment.

704-P04 VERTICAL PANELS – BACK TO BACK: In locations where Vertical Panels – Back to Back are to be installed in pavement, coring the pavement is incidental to the contract unit price for "VERTICAL PANELS – BACK TO BACK".

714-P01 PIPE CONC XXIN-STORM DRAIN: Complete the following work on the storm sewer in the contaminated area as defined in SP 290(14).

Install rubber gaskets that meet the following criteria, on all reinforced concrete pipe (RCP):

- Meeting the requirements of ASTM C 443,
- Solid gaskets of circular cross section.

Grout all tie bar penetrations through the pipe walls.

Before the RCP is placed in the trench, coat the exterior surface with a masonry waterproofing paint that is designed for the following:

- A minimum water pressure of 12 PSI when tested according to ASTM D 7088;
- Designed for below grade exterior foundation walls; and
- Resistant to gasoline and diesel fuels.

Prepare the surface and apply the paint according to the paint manufacturer's recommendations.

Conduct the following tests on the RCP.

- ASTM C1214M - Standard Test Method for Concrete Pipe Sewer Lines by Negative Air Pressure (Vacuum) Test Method (Metric).
- ASTM Designation C 361 Standard Specification for Reinforced Concrete Low-Head Pressure Pipe.

If tests fail, repair the leaks and retest the pipe until the tests are passed.

Include the cost for gaskets, grout, surface coating, and testing in the contract unit price "PIPE CONC XXIN-STORM DRAIN".

714-P02 STORM SEWER: The storm sewer pipe to be installed will either be constructed with Reinforced Concrete Pipe (RCP) or Pipe Conduit in accordance with SP 314(14). The section 55 plan and Profile sheets were prepared with the pay items of Pipe Conduit. If the project is constructed with RCP, the corresponding RCP pay item will be used in place of the pay item of pipe conduit.

714-P03 PIPE CONDUIT - STORM DRAIN - VERTICAL ELBOWS: Install prefabricated vertical elbow sections in the storm drain conduits at the following locations as shown in the plans.

STATION	PIPE DIAMETER (Inches)	Vertical Deflection Angle
16658+23	18	11° 50' 00"
16665+58	18	8° 39' 00"
16668+05	18	11° 01' 00"
16669+12	18	13° 45' 00"
16670+54	18	14° 23' 00"
16674+00	18	15° 11' 00"
16678+00	18	16° 00' 00"
16687+25	18	13° 22' 00"

The prefabricated elbows will be measured for payment by the lineal foot of the length of pipe bend section installed.

Include all costs to furnish and install the prefabricated bend sections in the contract unit price for the corresponding size of "Pipe Conduit - Storm Drain."

722-100 INLETS AND MANHOLES: Inlets and manholes were designed with a minimum 4 foot riser height. Fill the bottom of each drainage structure with concrete, up to the lowest invert elevation.

722-P01 ABANDON STORM SEWER SYSTEM: Abandon portions of the storm sewer by covering the pipe penetrations in the storm sewer manholes with plywood and filling the bottom of the manhole with slurry to the crown of the pipe. Eight cubic yards of slurry is anticipated to abandon the storm sewer system. Use slurry that meets ASTM C 928 R1. Remove the manhole barrel to a minimum of 1 foot below the roadway base coarse and fill with embankment, compacted per subgrade specifications. Plug and abandon outlet pipes as called out in section 40. Remove end section of outlet pipe before plugging and bury plugged outlet to match adjacent grading. Include the cost for plywood, concrete slurry, plugging, removal of concrete barrel, and embankment in the contract unit price for "ABANDON STORM SEWER SYSTEM".

722-P02 MANHOLE CASTINGS: Use a floating manhole casting (D-722-5A) for all manhole castings within the concrete pavement. Use a standard manhole casting compliant with D-722-5 for all manholes outside of the concrete pavement.

748-P01 CURB & GUTTER – TYPE 1: Align all joints in the curb and gutter with the joint in the concrete pavement.

752-P01 FENCE BARBED WIRE 3 STRAND-STEEL POST: Install the 3 strand barbed wire fence in accordance with standard drawing D-752-1. Maintain the wire distance, shown in Standard Drawing D-752-1, from the top of the post to the top wire and from the ground to the bottom wire. Evenly space the third wire in between the top and bottom wires.

752-P02 TEMPORARY SAFETY FENCE: The bid item for the installation of TEMPORARY SAFETY FENCE includes removal of the fence.

762-050 PAVEMENT MARKING: If the Engineer and Contractor agree, plan quantity will be used as the measurement for payment for pavement marking items.

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STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	SOIB-7-804(054)312	6	6

**NOTES**

- 764-P01 REMOVE BOX BEAM GUARDRAIL: Salvage and deliver the box beam rail to the NDDOT Williston District Maintenance yard; all other parts will be disposed as specified in Section 107.17. Coordinate delivery of salvaged materials with Rick Sigvaldsen at 701-774-2738. Include the cost for salvage and delivery in the contract unit price for "REMOVE BOX BEAM GUARDRAIL".
- 772-009 PADLOCKS: Obtain padlocks for feed points from the City of Williston.
- 772-P01 EMERGENCY VEHICLE PRE-EMPTION: Provide 3M Opticom Emergency Vehicle Pre-emption (EVP) equipment. Mount the confirmation light at the same location on the mast arm as the EVP detector.
- 772-P02 REMOVE TRAFFIC SIGNAL SYSTEM: Remove the Traffic Signal System and deliver to the City of Williston. Contact Neil Bakken, City of Williston, at (701)577-6368, 2 days before delivering the Traffic Signals System to the City of Williston Public Works Storage yard at 809 5th Street E.
- 772-P03 TEMPORARY TRAFFIC SIGNAL: Include all costs to use portable trailer mounted traffic signals during the signal replacement, in the contract unit price for "TEMPORARY TRAFFIC SIGNALS".
- 885-001 CAST IRON DETECTABLE WARNING PANELS: If cast iron detectable warning panels are used, provide cast iron panels with a minimum thickness of 0.2 inches.

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**NOTES**

Revised 8/29/2016

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	SOIB-7-804(054)312	6	7

- 770-P01 LIGHT STANDARDS: Use the transformer base type for all light standard bases.
- 770-P02 FEED POINT: Meet the requirements of the local utility companies for the meter trim for all lighting and traffic signals. Include the cost for the meter trim in the contract unit price for other items. Use stainless steel feed point cabinets.
- 770-P03 CONDUIT: Use schedule 40 pvc below grade conduit. Use schedule 80 pvc Below grade conduit at street and driveway crossings. Use galvanized rigid steel for all above grade conduit. Provide all required fittings as necessary for a complete and working system.
- 770-P04 LOW VOLTAGE POWER CONDUCTORS AND CABLE: Provide copper conductor as called out in section 140. Use Anaconda, Cyprus Wire and Cable Company (Rome), General Electric Company, Pirelli, or equal manufacturer.
- 770-P05 LIGHT STANDARD FOUNDATION: Construct the light standard foundations 24 inches in diameter and 8 feet deep. See Standard D-770-1 for additional foundation information.
- 770-P06 REMOVE LIGHT STANDARD: Remove the standards and deliver to the City of Williston. Contact Neil Bakken, City of Williston, at (701)577-6368, 2 day before delivering the light standards to the City of Williston Public Works Storage yard at 809 5th Street E.

770-P07 LUMINAIRE REQUIREMENTS: Provide luminaires that meet the following:

<b>Light Source</b>	LED
<b>Light Output</b>	30,000 Delivered Lumens (Minimum)
<b>Driver</b>	1000mA
<b>Wattage</b>	274 W (Maximum)
<b>Color Temperature</b>	4000K ±300K
<b>Operating Temperature Range</b>	-40°C to +40°C
<b>Luminaire Housing</b>	Die Cast Aluminum
<b>Vibration Testing</b>	ANSI/NEMA C136.31 Level 2, 3 G
<b>Surge Suppression Rating</b>	ANSI/IEEE C62.41 Cat C
<b>Outdoor rating for housing, wiring, and drivers</b>	ANSI C136.25 IP-65
<b>Photo Control on each luminaire</b>	No
<b>Tool-less Access</b>	Yes
<b>Qualified with Design Lights Consortium</b>	Yes

Ensure the Effective Projective Area of the luminaire does not exceed the capacity of the light standard.

The lighting system was designed using these values:

<b>Roadway Classification</b>	Minor Arterial - Intermediate
<b>Average Maintained Illuminance</b>	1.0 foot-candles
<b>Illuminance Uniformity Ratio</b>	4.0:1
<b>Minimum Illuminance</b>	0.2 foot-candles
<b>Light Loss Factor</b>	0.69

Provide one of the luminaires listed or an approved equal.

Company	Catalog Number
American Electric Lighting	Autobahn series ATB2
Cooper Streetworks	Navion Series
Hubbell Lighting	RL Roadway series

Include all cost associated with the LED lighting system in the contract unit price for "LIGHTING SYSTEM".

This document was originally issued and sealed by Darem W. Beckloff, Registration Number PE-7946, on 8/29/2016 and the original document is stored at the North Dakota Department of Transportation.

## ESTIMATE OF QUANTITIES

Spec	Code	Description	Unit	City Cost		Total
				Mainline	100% Local	
103	0100	CONTRACT BOND	L SUM	1		1
103	0200	ESCROW OF BID DOCUMENTATION	L SUM	1		1
107	0100	RAILWAY PROTECTION INSURANCE	L SUM	1		1
201	0300	CLEARING & GRUBBING	ACRE	41		41
202	0105	REMOVAL OF STRUCTURE	L SUM	1		1
202	0114	REMOVAL OF CONCRETE PAVEMENT	SY	30		30
202	0130	REMOVAL OF CURB & GUTTER	LF	7323		7323
202	0135	REMOVAL OF BITUMINOUS SURFACING	TON	39995		39995
202	0152	REMOVAL OF BRIDGE RAIL	L SUM	1		1
202	0174	REMOVAL OF PIPE ALL TYPES AND SIZES	LF	1818		1818
202	0210	REMOVAL OF MANHOLES	EA	2		2
202	0230	REMOVAL OF INLETS	EA	14		14
202	0231	REMOVE & RESET INLETS	EA	1		1
202	0288	EXCAVATION & DISPOSAL OF CONTAMINATED SOIL	CY	1100		1100
202	0289	REMOVE APPROACH	EA	3		3
202	0312	REMOVE EXISTING FENCE	LF	16348		16348
202	0400	REMOVAL OF RIPRAP - LOOSE ROCK	CY	1470		1470
202	0812	DISPOSAL OF CONTAMINATED WATER	GAL	43500		43500
203	0101	COMMON EXCAVATION-TYPE A	CY	234150		234150
203	0109	TOPSOIL	CY	40851		40851
203	0113	COMMON EXCAVATION-WASTE	CY	22629		22629
203	0138	COMMON EXCAVATION-SUBCUT	CY	6683		6683
210	0050	BOX CULVERT EXCAVATION	EA	1		1
210	0212	FLOWABLE FILL	CY	75		75
210	0405	FOUNDATION PREPARATION-BOX CULVERT	EA	1		1
216	0100	WATER	M GAL	4443		4443
230	0165	SUBGRADE PREPARATION-TYPE A-12IN	STA	199		199
251	0300	SEEDING CLASS III	ACRE	48.34		48.34
251	2000	TEMPORARY COVER CROP	ACRE	46.73		46.73
253	0101	STRAW MULCH	ACRE	78.95		78.95
255	0101	ECB TYPE 1	SY	80417		80417
256	0100	RIPRAP GRADE I	CY	416		416
256	0200	RIPRAP GRADE II	CY	132		132
260	0200	SILT FENCE SUPPORTED	LF	10971		10971
260	0201	REMOVE SILT FENCE SUPPORTED	LF	10971		10971
261	0112	FIBER ROLLS 12IN	LF	26063		26063
261	0113	REMOVE FIBER ROLLS 12IN	LF	25007		25007
265	0100	STABILIZED CONSTRUCTION ACCESS	EA	1		1
265	0101	REMOVE STABILIZED CONSTRUCTION ACCESS	EA	1		1
302	0050	TRAFFIC SERVICE AGGREGATE	TON	13069		13069
302	0100	SALVAGED BASE COURSE	TON	100331		100331
430	0500	COMMERCIAL GRADE HOT MIX ASPHALT	TON	4714		4714
550	0310	10IN NON REINF CONCRETE PVM T CL AE-DOWELED	SY	117871		117871

Spec	Code	Description	Unit	City Cost		Total
				Mainline	100% Local	
602	1208	CONCRETE BRIDGE BARRIER	LF	80		80
702	0100	MOBILIZATION	L SUM	1		1
704	0100	FLAGGING	MHR	2000		2000
704	1000	TRAFFIC CONTROL SIGNS	UNIT	2968		2968
704	1035	ATTENUATION DEVICE-TYPE B-25	EA	6		6
704	1052	TYPE III BARRICADE	EA	20		20
704	1060	DELINEATOR DRUMS	EA	405		405
704	1067	TUBULAR MARKERS	EA	350		350
704	1080	STACKABLE VERTICAL PANELS	EA	350		350
704	1081	VERTICAL PANELS-BACK TO BACK	EA	122		122
704	1086	SEQUENCING ARROW PANEL-TYPE B	EA	1		1
704	1087	SEQUENCING ARROW PANEL-TYPE C	EA	1		1
704	3510	PRECAST CONCRETE MED BARRIER-STATE FURNISHED	EA	40		40
706	0500	AGGREGATE LABORATORY	EA	1		1
706	0600	CONTRACTOR'S LABORATORY	EA	1		1
708	1010	RIPRAP-GROUTED JOINT	SY	60		60
708	1540	INLET PROTECTION-SPECIAL	EA	88		88
708	1541	REMOVE INLET PROTECTION-SPECIAL	EA	89		89
709	0100	GEOSYNTHETIC MATERIAL TYPE G	SY	18090		18090
709	0151	GEOSYNTHETIC MATERIAL TYPE R1	SY	18788		18788
709	0155	GEOSYNTHETIC MATERIAL TYPE RR	SY	1231		1231
709	0161	GEOSYNTHETIC MATERIAL TYPE S1	SY	15167		15167
709	0162	GEOSYNTHETIC MATERIAL TYPE S2	SY	1361		1361
714	0115	PIPE CONC REINF 12IN CL III-STORM DRAIN	LF	16		16
714	0210	PIPE CONC REINF 15IN CL III-STORM DRAIN	LF	900		900
714	0315	PIPE CONC REINF 18IN CL III-STORM DRAIN	LF	61		61
714	0500	PIPE CONC REINF 24IN CL II-45DEG BEND	EA	3		3
714	0620	PIPE CONC REINF 24IN CL III-STORM DRAIN	LF	37	184	221
714	4097	PIPE CONDUIT 15IN-STORM DRAIN	LF	318		318
714	4099	PIPE CONDUIT 18IN-APPROACH	LF	188		188
714	4101	PIPE CONDUIT 18IN-STORM DRAIN	LF	682		682
714	4106	PIPE CONDUIT 24IN-APPROACH	LF	495		495
714	4107	PIPE CONDUIT 24IN-STORM DRAIN	LF	187		187
714	4112	PIPE CONDUIT 30IN-STORM DRAIN	LF	1786		1786
714	4115	PIPE CONDUIT 36IN	LF	88		88
714	4116	PIPE CONDUIT 36IN-APPROACH	LF	295		295
714	4117	PIPE CONDUIT 36IN-STORM DRAIN	LF	734		734
714	4120	PIPE CONDUIT 42IN	LF	170		170
714	4122	PIPE CONDUIT 42IN-APPROACH	LF	102		102
714	9200	CATTLE PASS CONC INTERMED SECTION	LF	150		150
714	9611	REMOVE & RELAY CONC CATTLE PASS END SECTION	EA	4		4
714	9660	REMOVE & RELAY END SECTION-ALL TYPE & SIZES	EA	2		2
714	9680	PLUG PIPE-ALL TYPES & SIZES	EA	2		2

## ESTIMATE OF QUANTITIES

Spec	Code	Description	Unit	City Cost 100%		
				Mainline	Share	Local
714	9685	TRENCH PLUG	EA	6		6
720	0110	RIGHT OF WAY MARKERS	EA	168		168
720	0125	ALIGNMENT MONUMENTS	EA	28		28
720	0130	IRON PIN R/W MONUMENTS	EA	149		149
720	0135	IRON PIN REFERENCE MONUMENTS	EA	19		19
722	0100	MANHOLE 48IN	EA	7		7
722	0107	MANHOLE 54IN	EA	6		6
722	0110	MANHOLE 60IN	EA	4		4
722	0115	MANHOLE 66IN	EA	1		1
722	0130	MANHOLE 84IN	EA	2		2
722	0315	MANHOLE CASTING	EA	2		2
722	1100	MANHOLE RISER 48IN	LF	50		50
722	1106	MANHOLE RISER 54IN	LF	11		11
722	1110	MANHOLE RISER 60IN	LF	39		39
722	1115	MANHOLE RISER 66IN	LF	6		6
722	1120	MANHOLE RISER 72IN	LF	4		4
722	1130	MANHOLE RISER 84IN	LF	15		15
722	2490	MANHOLE STORM CONNECTION	EA	1		1
722	3296	ABANDON STORM SEWER SYSTEM	LSUM	1		1
722	3510	INLET-TYPE 2	EA	101		101
722	3520	INLET-TYPE 2 DOUBLE	EA	5		5
722	3701	INLET SPECIAL-TYPE 2 48IN	EA	5		5
722	3761	INLET SPECIAL-TYPE 2 60IN	EA	2		2
722	3766	INLET SPECIAL-TYPE 2 72IN	EA	1		1
722	3910	INLET SLOTTED DRAIN 15IN	LF	315		315
722	4565	MEDIAN DRAIN PRECAST CONCRETE-TYPE A	EA	1		1
722	6140	ADJUST GATE VALVE BOX	EA	11		11
722	6160	ADJUST INLET	EA	2		2
724	0314	GATE VALVE & BOX 12IN	EA			2
724	0420	HYDRANT-RELOCATE	EA	4		4
748	0140	CURB & GUTTER-TYPE I	LF	24320		24320
748	1000	VALLEY GUTTER 36IN	LF	248		248
750	0115	SIDEWALK CONCRETE 4IN	SY	45		45
750	1000	DRIVEWAY CONCRETE	SY	379		379
750	2115	DETECTABLE WARNING PANELS	SF	53		53
752	0110	FENCE BARBED WIRE 3 STRAND-STEEL POST	LF	10159		10159
752	0320	FENCE BARBED WIRE 4 STRAND-STEEL POST	LF	4603		4603
752	0600	FENCE CHAIN LINK	LF	581		581
752	0700	FENCE WOVEN WIRE	LF	1173		1173
752	0911	TEMPORARY SAFETY FENCE	LF	551		551
752	0995	FENCE TERMINAL-WOOD POSTS	EA	20		20
752	2100	VEHICLE GATE	EA	2		2
752	2120	REMOVE VEHICLE GATE	EA	1		1
752	3100	CORNER ASSEMBLY CHAIN LINK	EA	4		4
752	3120	CORNER ASSEMBLY WOVEN WIRE	EA	2		2

Spec	Code	Description	Unit	City Cost 100%		
				Mainline	Share	Local
752	3140	CORNER ASSEMBLY BARBED WIRE	EA	42		42
752	4100	DOUBLE BRACE ASSEMBLY BARBED WIRE	EA	7		7
754	0110	FLAT SHEET FOR SIGNS-TYPE XI REFL SHEETING	SF	253		253
754	0112	FLAT SHEET FOR SIGNS-TYPE IV REFL SHEETING	SF	189		189
754	0150	DELINEATORS-TYPE A	EA	4		4
754	0206	STEEL GALV POSTS-TELESCOPING PERFORATED TUBE	LF	668		668
754	0563	REFERENCE MARKER-TYPE C	EA	8		8
754	0592	RESET SIGN PANEL	EA	25		25
754	0805	OBJECT MARKERS - CULVERTS	EA	20		20
760	0005	RUMBLE STRIPS - ASPHALT SHOULDER	MILE	2		2
762	0430	SHORT TERM 4IN LINE-TYPE NR	LF	59149		59149
762	1280	PREFORMED THERMO PLASTIC PVMT MK MESSAGE	SF	1764		1764
762	1305	PREFORMED PATTERNED PVMT MK 4IN LINE-GROOVED	LF	72312		72312
762	1309	PREFORMED PATTERNED PVMT MK 8IN LINE-GROOVED	LF	6587		6587
762	1315	PREFORMED PATTERNED PVMT MK 12IN LINE-GROOVED	LF	420		420
762	1325	PREFORMED PATTERNED PVMT MK 24IN LINE-GROOVED	LF	134		134
764	0131	W-BEAM GUARDRAIL	LF	474		474
764	0145	W-BEAM GUARDRAIL END TERMINAL	EA	6		6
764	0151	REMOVE W-BEAM GUARDRAIL & POSTS	LF	116		116
764	2020	REMOVE 3-CABLE GUARDRAIL & POSTS	LF	263		263
764	2080	REMOVE BOX BEAM GUARDRAIL	LF	596		596
764	2081	REMOVE END TREATMENT & TRANSITION	EA	10		10
766	0100	MAILBOX-ALL TYPES	EA	26		26
770	0001	LIGHTING SYSTEM	EA	1		1
770	4560	REMOVE LIGHT STANDARD	EA	13		13
772	0001	TRAFFIC SIGNALS SYSTEM	EA	1		1
772	2810	TEMPORARY TRAFFIC SIGNALS	EA	4		4
772	3125	REMOVE TRAFFIC SIGNAL SYSTEM	EA	1		1
772	3180	REMOVE WOOD POLE	EA	4		4
900	1000	TEMPORARY STREAM DIVERSION	EA	1		1
910	0480	TRASH RACK	EA	2		2
920	1233	HEALTH AND SAFETY PLAN	L SUM	1		1
930	8230	SHORING	EA	4		4
930	9647	BARRIER END MODIFICATION	EA	4		4
980	0170	CATTLE GUARD RESET	EA	2		2

## ESTIMATE OF QUANTITIES

### BOX CULVERT

#### Alternative A: Cast-In-Place Box Culvert

Spec	Code	Description	Unit	City Cost		100% Local	Total
				Mainline	Share		
210	0210	FOUNDATION FILL	CY	966.3			966.3
210	0225	FOUNDATION FILL - TYPE 1	CY	874.5			874.5
602	1131	CLASS AE-3 CONCRETE-BOX CULVERT	CY	810.4			810.4
612	0114	REINFORCING STEEL-GRADE 60-BOX CULVERT	LBS	108,494.00			108494

#### Alternative B: Precast Box Culvert

Spec	Code	Description	Unit	City Cost		100% Local	Total
				Mainline	Share		
210	0210	FOUNDATION FILL	CY	962.5			962.5
210	0225	FOUNDATION FILL - TYPE 1	CY	888.8			888.8
606	3112	DBL 11FTx12FT PRECAST RCB CULVERT	LF	284			284
606	7112	DBL 11FTx12FT PRECAST RCB END SECTION	EA	2			2

### STORM DRAIN

#### Option 1: Pipe Conduit Storm Sewer (See Section 51 for Allowable Materials)

Spec	Code	Description	Unit	City Cost		100% Local	Total
				Mainline	Share		
714	4097	PIPE CONDUIT 15IN - STORM DRAIN	LF	990			990
714	4101	PIPE CONDUIT 18IN - STORM DRAIN	LF	847			847
714	4107	PIPE CONDUIT 24IN - STORM DRAIN	LF	24	586		610
714	4112	PIPE CONDUIT 30IN - STORM DRAIN	LF	108			108
714	4113	PIPE CONDUIT 30IN - APPROACH	LF	218			218
714	4116	PIPE CONDUIT 36IN - APPROACH	LF	33			33

#### Option 2: Reinforced Concrete Pipe Storm Sewer

Spec	Code	Description	Unit	City Cost		100% Local	Total
				Mainline	Share		
714	0210	PIPE CONC REINF 15IN CL III - STORM DRAIN	LF	990			990
714	0315	PIPE CONC REINF 18IN CL III - STORM DRAIN	LF	847			847
714	0620	PIPE CONC REINF 24IN CL III - STORM DRAIN	LF	24	586		610
714	0820	PIPE CONC REINF 30IN CL III	LF	218			218
714	0825	PIPE CONC REINF 30IN CL III - STORM DRAIN	LF	108			108
714	0905	PIPE CONC REINF 36IN CL III	LF	33			33

# BASIS OF ESTIMATE

Revised 8/26/2016  
Revised 8/29/2016

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	SOIB-7-804(054)312	10	1

RUMBLE STRIPS	
Location	RUMBLE STRIPS ASPHALT SHOULDER (MILE)
16522+44 to 16575+10	2.0

TEMPORARY TRAFFIC CONTROL SURFACING				
Station	Station	TRAFFIC SERVICE AGGREGATE (8")	COMMERCIAL GRADE HOT MIX ASPHALT (4")	SALVAGED BASE COURSE (12")
		(TON)	(TON)	(TON)
		<b>302-0050</b>	<b>430-0500</b>	<b>302-0100</b>
16508+50	16511+00	265	0	0
16511+00	16519+50	177	582	1771
16519+50	16525+50	600	235	833
16525+50	16540+00	302	992	3021
16540+00	16632+00	9763	0	0
16632+00	16655+00	1962	0	0
16659+00	16668+00	0	756	2128
<b>Total</b>		<b>13069**</b>	<b>2565*</b>	<b>7753**</b>

\* Quantity included in "Removal of Bituminous Surfacing".  
 \*\* Include the cost for removal of "Traffic Service Aggregate" and "Salvage Base Course" in the contract unit price of these bid items.

SALVAGED BASE COURSE CALCULATION			
			% Breakdown
Total Bituminous Removed	21331	CY	98.3%
Total Concrete Removed	358	CY	1.7%
<b>Total Removals</b>	<b>21689</b>	<b>CY</b>	<b>100.0%</b>
5% Less in Removals	1084	CY	
<b>Total Material Available from Removals</b>	<b>20604</b>	<b>CY</b>	
Subtract Required Salvage Base Course	53510	CY	
<b>Additional Material needed for Salvaged Base Course</b>	<b>32906</b>	<b>CY</b>	

MATERIALS		
Material Description	Material Use	Rate
Water	Aggregates	20 Gal/Ton
	Embankment	10 Gal/CY
	Dust Palliative	25 MGal/Mile
	Subgrade Preparation	25 MGal/Mile
Remove & Salvage Bituminous Surfacing	Base	1.875 Ton/CY
Salvaged Base Course	Base	1.875 Ton/CY
Commercial Grade Hot Mix Asphalt	Surfacing	2 Ton/CY

SUBGRADE PREPARATION - TYPE A - 12IN	
Location	Length (Station)
Sta. 16522+44 to 16721+00	199

SEEDING	
Within Highway R/W	Quantity (Acres)
Class III	48.34
Temporary Cover Crop	46.73

MULCHING	
Within Highway R/W	Quantity (Acres)
Grass, Hay, or Straw	78.95

RIPRAP-SALVAGED	
Location	Quantity (CY)
Stony Creek Bridge	531 *

\*Quantity based on an existing riprap thickness of 1.5'

This document was originally issued and sealed by Adam McGill, Registration Number PE-7565, on 8/29/2016 and the original document is stored at the North Dakota Department of Transportation.