

400 North Fourth Street  
Bismarck, ND 58501  
(701) 222-7900

March 21, 2013

Executive Secretary  
North Dakota Public Service Commission  
State Capitol Building  
600 E. Boulevard, Dept. 408  
Bismarck, ND 58505

Re: Montana-Dakota Utilities Co.  
Heskett Station Natural Gas Pipeline  
Morton County, North Dakota

Case No. PU-11-680

This letter is in response to the request for additional information regarding the Montana-Dakota Utilities Co. (Montana-Dakota), a Division of MDU Resources Group, Inc., Application for a Certificate of Site Compatibility and Energy Transmission Facility Route Permit for a Natural Gas Pipeline to serve the 88 megawatt Natural Gas Simple Cycle Combustion Turbine in Morton County, North Dakota.

Each of the requested items, as discussed during the March 4, 2013 meeting with the North Dakota Public Service Commission Staff (Commission Staff) and Montana-Dakota, are listed below, followed by a response or a reference to the attached figures.

- 1. Urban versus rural residences - In accordance with Section 49-22-05.1 of the North Dakota Century Code (NDCC) and Chapter 69-06-08-02(2)(e) of the North Dakota Administrative Code (NDAC), “areas within five hundred feet [152.4 meters] of an inhabited rural residence must be designated avoidance areas”. For rural residences, the Company can provide waivers or re-route the pipeline. For urban residences, the Company must demonstrate there are no reasonable alternatives to the route. Are the homes shown on Map 7 inside the city limits or are they rural? If they are inside the city limits, please provide a demonstration that there are no reasonable alternatives.**

As shown on the attached map of the northern end of the project (Appendix A), all of the homes that are within 500 feet of the proposed pipeline are outside of the city limits of Mandan. As stated in the application, there are 20 residences and two businesses within 500 feet of the proposed pipeline. Montana-Dakota has obtained signed waivers from 12 owners (Appendix B). Montana-Dakota anticipates that all waivers will be obtained in the next week or two. All waivers, once received, will be submitted to the Commission.

At the request of one of the landowners, Montana-Dakota is currently evaluating a minor re-route of the pipeline in the Northwest quarter of Section 13, Township 139 North, Range 82 West. The re-route would shift the proposed pipeline route to the east and would follow the section line that separates the Northwest quarter and the Northeast quarter of Section 13, Township 139 North, Range 82 West. This proposed re-route would result in one additional home, which is located south of Interstate 94 in the Southwest quarter of the Northeast quarter of Section 13, Township 139 North, Range 82 West, being within 500 feet of the proposed pipeline. Montana-Dakota will seek a waiver from this landowner if the re-route is approved. A map of the re-route will be filed with the Public Service Commission, once the easement is acquired. A second re-route has been proposed as depicted in Appendix C. However, no additional homes or businesses will be located within 500 feet of the pipeline as a result of the second re-route.

#### REASONABLE ALTERNATIVES DISCUSSION

While the current proposed route does not pass through the city limits of Mandan, Montana-Dakota has determined that there are no reasonable alternatives to the pipeline route. It is Montana-Dakota's policy to route pipelines based upon: (1) minimizing impacts to existing or projected (future/planned) land uses; (2) minimizing the number of landowners affected by the pipeline project; (3) avoiding topographical hazards and other obstacles if possible; (4) avoiding or minimizing impacts to cultural, biological or other environmental resources; and (5) ensuring compliance with all applicable laws and regulations. These items were listed in no particular order of importance, as all items must be considered before selecting a final route.

Addressing each of these items leads Montana-Dakota to the conclusion that the selected route is the best route for the proposed Heskett Natural Gas Pipeline and no reasonable alternative exists because:

- This route has been selected to conform to proposed plans for the City of Mandan. Montana-Dakota's land agent has worked closely with both the officers and administrators of the City of Mandan, the Directors for the Mandan City Parks Board, and with the recent buyer of properties located in the northern portion of the corridor, in adapting the route to the plans for future development.
- Other route options were considered on the north end near the Heskett Station, however the proposed route was selected because it reduces the impacts to existing residential areas and avoids other infrastructure on the Heskett Station Property. Two residential developments are located to the north of the Heskett Station. In addition, a northern route would locate the pipeline in closer proximity to the Missouri River and its associated wetlands. For these reasons, a northerly route is not a reasonable alternative to the proposed route.
- Attached is a map (Appendix C) that depicts the northern portion of the proposed route. The route currently proposed, avoids Tesoro operations that are located

south of the proposed route. In addition, a more southern route would locate the pipeline closer to more homes and businesses that are located north of Mandan. Therefore, a southern route is not a reasonable alternative to the proposed route.

- The Missouri River is located to the east of the Heskett Station. Montana-Dakota has proposed an interconnection with the Northern Border Pipeline system to supply the natural gas requirements for the proposed 88 megawatt (MW) Simple Cycle Combustion Turbine. The Northern Border Pipeline system traverses from northwestern North Dakota to south central North Dakota. Heading east, under the Missouri River, would route the pipeline away from the Northern Border Pipeline system. Therefore, a route from the east is not a reasonable alternative to the proposed route.

**2. Have there been discussions with the Department of Health in regards to potential groundwater issues?**

Mr. Carl Anderson, Program Manager for Ground Water Protection Programs with the North Dakota Department of Health, was contacted on March 13, 2013 in regards to potential groundwater issues. Mr. Anderson stated, "It does not appear that the Ground Water Protection Program reviewed this project, consequently, the NDDH's December 7, 2011 letter did not discuss groundwater issues." Mr. Anderson stated that, "Portions of the construction project overlie the Heart and the Little Heart aquifers." Mr. Anderson went on to state that, "Care should be taken to avoid spills of any materials that may have an adverse effect on groundwater quality, all spills must be immediately reported to the Department of Health, and that appropriate remedial actions must be performed for any spill." In addition, "Several domestic and stock wells are located within the proposed pipeline right-of-way and the construction and operation of the pipeline should be conducted in a manner that minimizes potential impacts to groundwater resources in the vicinity of the pipeline."

Montana-Dakota will take necessary precautions during construction and restoration to protect against the pollution of the environment. Specific requirements for reporting and responding to fuel spills or other similar instances will be specified in the construction contract documents. The Montana-Dakota Environmental Inspector(s) will ensure that spill response activities are properly accomplished.

The qualified Environmental Inspector(s) will ensure environmental compliance throughout the duration of the Project. Environmental inspection activities will include monitoring compliance with permit requirements, inspection of erosion and sedimentation control methods, inspection of topsoil segregation procedures, compliance with stream and wetland construction and mitigation procedures and permits, spill response activities, inspection of water appropriation and dewatering activities and implementation of restoration plans. The Environmental Inspector(s) will be given the authority to issue stop-activity orders and corrective actions to maintain environmental compliance. The Environmental Inspector(s) will have peer status with all other activity inspectors. The Project contract documents will specifically address environmental

compliance requirements and the construction contractor will be held responsible for mitigating any adverse impacts as identified by Montana-Dakota, applicable agencies or landowners.

Montana-Dakota will utilize a Spill Prevention Containment and Countermeasure (SPCC) Plan which will be enforced by the Environmental Inspector(s). If required, the SPCC Plan will be submitted to the North Dakota Department of Health in conjunction with an application for a North Dakota Pollutant Discharge Elimination System General Permit. In addition, temporary erosion and sediment control Best Management Practices (BMPs) will be installed across the entire width of the construction right-of-way if necessary, after clearing and before ground surface disturbance.

**3. If there is the potential for temporary turbidity during construction, is there a chance that groundwater would be affected if the pipe leaks? Please provide more specific information on how the aquifers are going to be protected.**

Turbidity resulting from construction activities will be covered under the North Dakota Pollutant Discharge Elimination System General Permit and the U.S. Army Corps of Engineer's Section 404 Permit. Ground disturbance associated with pipeline construction is generally limited to approximately six feet or less below the existing ground surface, except where horizontal directional drilling is proposed. Where horizontal directional drilling is proposed, the pipeline may be installed as deep as 50 feet.

Based on records from nearby wells (Appendix D), the depth to the Heart aquifer in the vicinity of the pipeline is estimated to be between 19 feet and 31.5 feet below ground surface. The depth to the Little Heart aquifer in the vicinity of the pipeline is estimated to be between 142 feet and 215 feet below ground surface. Most construction impacts will be well above the Heart and the Little Heart aquifers. In addition, according to the well logs, both aquifers are overlain by a layer of clay/sandy clay. A layer made up of clay particles does not allow contaminants to easily pass through, so it can protect groundwater by slowing or stopping the movement of contaminants.

However, construction activities such as trenching, drilling, dewatering, and backfilling could encounter shallow aquifers and cause minor fluctuations in groundwater levels and/or increased turbidity within the aquifer adjacent to the activity. Impacts on deeper aquifers are not anticipated. Since most shallow aquifers exhibit rapid recharge and groundwater movement, shallow aquifers would quickly re-establish equilibrium if disturbed, and turbidity levels would rapidly subside. Consequently, the effects of construction would be minor and short term.

Montana-Dakota will prepare a Stormwater Pollution Prevention Plan (SWPPP) as required by the North Dakota Pollutant Discharge Elimination System General Permit. Erosion and sedimentation control measures will be utilized to minimize impacts, some of which are described below. Temporary erosion control measures such as trench breakers, slope breakers, silt fences, and staked straw bales will be installed and maintained at appropriate locations as necessary, to minimize erosion and

sedimentation. Temporary erosion controls will be properly maintained throughout construction and reinstalled as necessary until restoration is complete. Mitigation measures, such as Environmental Inspector(s) and implementation of construction BMPs, the SWPPP, and the Environmental Mitigation Plan, will help reduce these impacts and will ensure compliance with all regulations and permit conditions.

#### *Trench Breakers*

Trench breakers will be installed as necessary in sloped areas, to prevent subsurface erosion along the pipe; and will be installed in wetlands as needed, to maintain original wetland hydrology. Trench breakers are sacks of soil placed from the bottom of the ditch to the natural ground surface, completely surrounding the pipe. Trench breakers help to prevent erosion of the backfill from both surface flow and subsurface flow of water.

#### *Slope Breakers*

Slope breakers will be utilized if necessary on side hills and consist of a ditch or mound of excavated material which slows the flow of water by re-directing the flow nearly 90 degrees, while decreasing its velocity. Slope breakers act to impede the water's ability to carry and transport suspended solids down the slope.

#### *Silt Fence*

Silt fences will be installed as necessary to filter waterborne sediment, acting as a temporary replacement for the natural filtration effect of the vegetative cover. Silt fences will be installed as needed adjacent to wetland areas and creek crossings to minimize silt-laden water from entering these waterbodies. Staked straw bales may also be utilized for the same purposes as the silt fencing.

The general daily operation and maintenance requirements of the pipeline should not have any additional impacts on groundwater. In the event of a pipeline leak, the groundwater would not be affected, because natural gas will defuse in an upward direction.

#### **4. Has an Environmental Mitigation Plan been prepared for the proposed Project?**

Montana-Dakota has prepared an Environmental Mitigation Plan as requested by the North Dakota Public Service Commission. The Environmental Mitigation Plan is included in Appendix E.

ProSource continues to secure the required easements, with seven easements outstanding at this time. As noted in the meeting with Commission Staff on March 4, Montana-Dakota has extensive experience constructing and operating similar type pipelines in North Dakota and South Dakota. This pipeline will be buried at 48 inches with weights used as necessary to ensure a 48 inch depth. Plans are to operate the Heskett pipeline at 900 psi with the delivery into the generating station at 500 psi.

Montana-Dakota requests that the Application be deemed complete and a Notice of Hearing be scheduled.

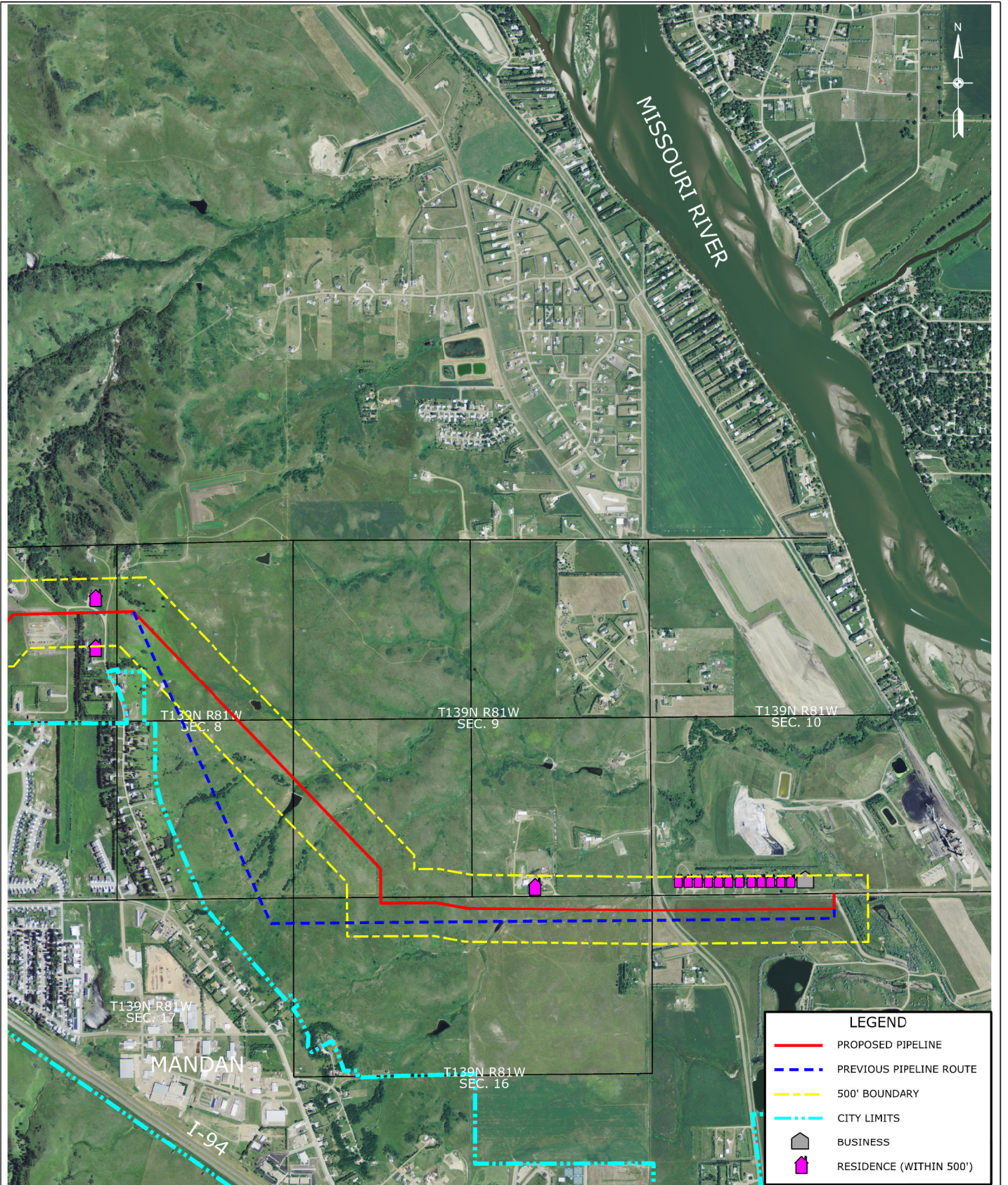
Sincerely,



Tamie A. Aberle  
Director of Regulatory Affairs

## **Appendix A**

### **Homes within 500 Feet of Proposed Pipeline, Showing City Limits**



**LEGEND**

- PROPOSED PIPELINE
- - - PREVIOUS PIPELINE ROUTE
- - - 500' BOUNDARY
- - - CITY LIMITS
- BUSINESS
- RESIDENCE (WITHIN 500')

SCALE: 1"=1000'  
 0 1000 2000

MDU - HESKETT STATION  
 NORTHERN RE-ROUTE  
 10" NATURAL GAS PIPELINE  
 MANDAN, ND

**MONTANA-DAKOTA**  
 UTILITIES CO.  
 A Division of MDU Resources Group, Inc.  
*In the Community to Serve®*

**ProSource**  
 THE MOUNTAIN GROUP

## **Appendix B**

### **Signed Waivers**

February 27, 2013

ProSource Technologies, LLC  
9219 East River Road NW  
Minneapolis, MN 55433  
Phone 763-786-1445  
Fax 763-786-1030

**VIA HAND DELIVERY**

Morton County Parcel Number: 41-0060000 (Home) and 41-0065000 (Garages)  
Dean A Beehler  
2087 38th Street  
Mandan, ND 58554

Dear Mr. Beehler:

Montana-Dakota Utilities Co. (Montana-Dakota) has proposed the Heskett Station Natural Gas Pipeline Project to supply the natural gas requirements for the proposed 88 megawatt Simple Cycle Combustion Turbine generating facility which is to be located adjacent to the existing Montana-Dakota Heskett Generating Station power plant, approximately two miles north of Mandan. The proposed Heskett Station Natural Gas Pipeline will traverse south to north, approximately 24 miles, through Morton County, connecting the proposed Heskett Station facilities with the Northern Border interstate transmission pipeline at a point approximately four miles northwest of the City of St. Anthony. The proposed route is depicted on the attached map.

In accordance with Section 49-22-05.1 of the North Dakota Century Code (NDCC) and Chapter 69-06-08-02(2)(e) of the North Dakota Administrative Code (NDAC), residences or businesses within five hundred feet of the proposed pipeline are designated as "avoidance areas" and should be avoided unless there is no reasonable alternative. However, the five hundred foot avoidance area criteria may be waived by the owner of the residence or business.

Although the proposed pipeline does not cross your property, the proposed Heskett Station Natural Gas Pipeline will be located within five hundred feet of your home.

By signing below, you confirm that you have no objection to the installation of Montana-Dakota's proposed pipeline and hereby agree to waive the five hundred foot avoidance criteria as set forth in NDCC Section 49-22-05.1 and Chapter 69-06-08-02(2)(e) of the NDAC. **Please return this signed letter in the enclosed self-addressed, stamped envelope on or before March 18, 2013 and keep the enclosed copy for your files.**

**I have no objection to the proposed Heskett pipeline as shown on the accompanying map:**

Date: 3-2-13 Printed Name: Dean Beehler

Signed: Dean Beehler

If you have any questions, please feel free to contact me at 763-248-9430. Your timely response and cordial cooperation is much appreciated.

Sincerely,

Minneapolis, MN  
Cedar Rapids, IA  
Grand Rapids, MN

  
Wayne Brooks, Authorized Agent for Montana-Dakota  
ProSource Technologies, LLC

Enclosure:  
Project Location Map

February 27, 2013

ProSource Technologies, LLC  
9219 East River Road NW  
Minneapolis, MN 55433  
Phone 763-786-1445  
Fax 763-786-1030

**VIA HAND DELIVERY**

Morton County Parcel Number: 41-0306080 (Home)  
Jesse and Marcia Gifford  
3797 Highway 1806  
Mandan, ND 58554

Dear Mr. and Mrs. Gifford:

Montana-Dakota Utilities Co. (Montana-Dakota) has proposed the Heskett Station Natural Gas Pipeline Project to supply the natural gas requirements for the proposed 88 megawatt Simple Cycle Combustion Turbine generating facility which is to be located adjacent to the existing Montana-Dakota Heskett Generating Station power plant, approximately two miles north of Mandan. The proposed Heskett Station Natural Gas Pipeline will traverse south to north, approximately 24 miles, through Morton County, connecting the proposed Heskett Station facilities with the Northern Border interstate transmission pipeline at a point approximately four miles northwest of the City of St. Anthony. The proposed route is depicted on the attached map.

In accordance with Section 49-22-05.1 of the North Dakota Century Code (NDCC) and Chapter 69-06-08-02(2)(e) of the North Dakota Administrative Code (NDAC), residences or businesses within five hundred feet of the proposed pipeline are designated as "avoidance areas" and should be avoided unless there is no reasonable alternative. However, the five hundred foot avoidance area criteria may be waived by the owner of the residence or business.

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**I have no objection to the proposed Heskett pipeline as shown on the accompanying map:**

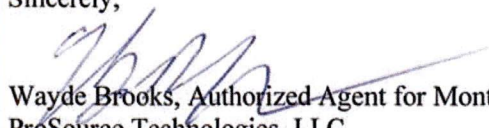
Date: 3-4-13 Printed Name: Jesse GIFFORD Marcia Gifford

Signed: Jesse Gifford Marcia Gifford

If you have any questions, please feel free to contact me at 763-248-9430. Your timely response and cordial cooperation is much appreciated.

Sincerely,

Minneapolis, MN  
Cedar Rapids, IA  
Grand Rapids, MN

  
Wayne Brooks, Authorized Agent for Montana-Dakota  
ProSource Technologies, LLC

Enclosure:  
Project Location Map

Right of Way • Environmental • Appraisal

February 27, 2013

ProSource Technologies, LLC  
9219 East River Road NW  
Minneapolis, MN 55433  
Phone 763-786-1445  
Fax 763-786-1030

**VIA HAND DELIVERY**

Morton County Parcel Number: 41-0043000 (Home)  
Karen M Lang  
2073 38th Street  
Mandan, ND 58554

Dear Ms. Lang:

Montana-Dakota Utilities Co. (Montana-Dakota) has proposed the Heskett Station Natural Gas Pipeline Project to supply the natural gas requirements for the proposed 88 megawatt Simple Cycle Combustion Turbine generating facility which is to be located adjacent to the existing Montana-Dakota Heskett Generating Station power plant, approximately two miles north of Mandan. The proposed Heskett Station Natural Gas Pipeline will traverse south to north, approximately 24 miles, through Morton County, connecting the proposed Heskett Station facilities with the Northern Border interstate transmission pipeline at a point approximately four miles northwest of the City of St. Anthony. The proposed route is depicted on the attached map.

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Although the proposed pipeline does not cross your property, the proposed Heskett Station Natural Gas Pipeline will be located within five hundred feet of your home.

By signing below, you confirm that you have no objection to the installation of Montana-Dakota's proposed pipeline and hereby agree to waive the five hundred foot avoidance criteria as set forth in NDCC Section 49-22-05.1 and Chapter 69-06-08-02(2)(e) of the NDAC. **Please return this signed letter in the enclosed self-addressed, stamped envelope on or before March 18, 2013 and keep the enclosed copy for your files.**

**I have no objection to the proposed Heskett pipeline as shown on the accompanying map:**

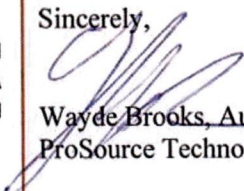
Date: 3-4-13 Printed Name: Karen Lang

Signed: Karen Lang

If you have any questions, please feel free to contact me at 763-248-9430. Your timely response and cordial cooperation is much appreciated.

Sincerely,

Minneapolis, MN  
Cedar Rapids, IA  
Grand Rapids, MN

  
Wayde Brooks, Authorized Agent for Montana-Dakota  
ProSource Technologies, LLC

Enclosure:  
Project Location Map

February 27, 2013

ProSource Technologies, LLC  
9219 East River Road NW  
Minneapolis, MN 55433  
Phone 763-786-1445  
Fax 763-786-1030

**VIA HAND DELIVERY**

Morton County Parcel Number: 41-0059000 (Home)  
Harold Morman  
2089 38th Street  
Mandan, ND 58554

Dear Mr. Morman:

Montana-Dakota Utilities Co. (Montana-Dakota) has proposed the Heskett Station Natural Gas Pipeline Project to supply the natural gas requirements for the proposed 88 megawatt Simple Cycle Combustion Turbine generating facility which is to be located adjacent to the existing Montana-Dakota Heskett Generating Station power plant, approximately two miles north of Mandan. The proposed Heskett Station Natural Gas Pipeline will traverse south to north, approximately 24 miles, through Morton County, connecting the proposed Heskett Station facilities with the Northern Border interstate transmission pipeline at a point approximately four miles northwest of the City of St. Anthony. The proposed route is depicted on the attached map.

In accordance with Section 49-22-05.1 of the North Dakota Century Code (NDCC) and Chapter 69-06-08-02(2)(e) of the North Dakota Administrative Code (NDAC), residences or businesses within five hundred feet of the proposed pipeline are designated as "avoidance areas" and should be avoided unless there is no reasonable alternative. However, the five hundred foot avoidance area criteria may be waived by the owner of the residence or business.

Although the proposed pipeline does not cross your property, the proposed Heskett Station Natural Gas Pipeline will be located within five hundred feet of your home.

By signing below, you confirm that you have no objection to the installation of Montana-Dakota's proposed pipeline and hereby agree to waive the five hundred foot avoidance criteria as set forth in NDCC Section 49-22-05.1 and Chapter 69-06-08-02(2)(e) of the NDAC. **Please return this signed letter in the enclosed self-addressed, stamped envelope on or before March 18, 2013 and keep the enclosed copy for your files.**

**I have no objection to the proposed Heskett pipeline as shown on the accompanying map:**

Date: 2-30-2013 Printed Name: Harold Morman  
3-2-  
Signed: Harold Morman

If you have any questions, please feel free to contact me at 763-248-9430. Your timely response and cordial cooperation is much appreciated.

Sincerely,  
  
Wayne Brooks, Authorized Agent for Montana-Dakota  
ProSource Technologies, LLC

Minneapolis, MN  
Cedar Rapids, IA  
Grand Rapids, MN

Enclosure:  
Project Location Map

February 27, 2013

ProSource Technologies, LLC  
9219 East River Road NW  
Minneapolis, MN 55433  
Phone 763-786-1445  
Fax 763-786-1030

**VIA HAND DELIVERY**

Morton County Parcel Number: 41-0063000 (Home)  
Willard J Perkins  
2081 38th Street  
Mandan, ND 58554

Dear Mr. Perkins:

Montana-Dakota Utilities Co. (Montana-Dakota) has proposed the Heskett Station Natural Gas Pipeline Project to supply the natural gas requirements for the proposed 88 megawatt Simple Cycle Combustion Turbine generating facility which is to be located adjacent to the existing Montana-Dakota Heskett Generating Station power plant, approximately two miles north of Mandan. The proposed Heskett Station Natural Gas Pipeline will traverse south to north, approximately 24 miles, through Morton County, connecting the proposed Heskett Station facilities with the Northern Border interstate transmission pipeline at a point approximately four miles northwest of the City of St. Anthony. The proposed route is depicted on the attached map.


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Although the proposed pipeline does not cross your property, the proposed Heskett Station Natural Gas Pipeline will be located within five hundred feet of your home.

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**I have no objection to the proposed Heskett pipeline as shown on the accompanying map:**

Date: 3-1-2013 Printed Name: William J Perkins

Signed: 

If you have any questions, please feel free to contact me at 763-248-9430. Your timely response and cordial cooperation is much appreciated.

Sincerely,

  
Wayde Brooks, Authorized Agent for Montana-Dakota  
ProSource Technologies, LLC

Minneapolis, MN  
Cedar Rapids, IA  
Grand Rapids, MN

Enclosure:  
Project Location Map

Right of Way • Environmental • Appraisal

An Affirmative Action Equal Opportunity Employer

February 27, 2013

ProSource Technologies, LLC  
9219 East River Road NW  
Minneapolis, MN 55433  
Phone 763-786-1445  
Fax 763-786-1030

**VIA HAND DELIVERY**

Morton County Parcel Number: 41-0042000 (Home)  
Jeffrey B Strange  
2075 38th Street  
Mandan, ND 58554

Dear Mr. Strange:

Montana-Dakota Utilities Co. (Montana-Dakota) has proposed the Heskett Station Natural Gas Pipeline Project to supply the natural gas requirements for the proposed 88 megawatt Simple Cycle Combustion Turbine generating facility which is to be located adjacent to the existing Montana-Dakota Heskett Generating Station power plant, approximately two miles north of Mandan. The proposed Heskett Station Natural Gas Pipeline will traverse south to north, approximately 24 miles, through Morton County, connecting the proposed Heskett Station facilities with the Northern Border interstate transmission pipeline at a point approximately four miles northwest of the City of St. Anthony. The proposed route is depicted on the attached map.

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**I have no objection to the proposed Heskett pipeline as shown on the accompanying map:**

Date: Mar 3, 13 Printed Name: Jeff Strange

Signed: [Signature]

If you have any questions, please feel free to contact me at 763-248-9430. Your timely response and cordial cooperation is much appreciated.

Sincerely,  
[Signature]  
Wayde Brooks, Authorized Agent for Montana-Dakota  
ProSource Technologies, LLC

Minneapolis, MN  
Cedar Rapids, IA  
Grand Rapids, MN

Enclosure:  
Project Location Map

888-422-4449  
www.prosourcetech.com

Right of Way • Environmental • Appraisal

An Affirmative Action Equal Opportunity Employer

February 27, 2013

ProSource Technologies, LLC  
9219 East River Road NW  
Minneapolis, MN 55433  
Phone 763-786-1445  
Fax 763-786-1030

**VIA HAND DELIVERY**

Morton County Parcel Number: 41-0064000 (Home)  
Gustof Voegele and Gertrude Voegele  
2077 38th Street  
Mandan, ND 58554

Dear Mr. and Mrs. Voegele:

Montana-Dakota Utilities Co. (Montana-Dakota) has proposed the Heskett Station Natural Gas Pipeline Project to supply the natural gas requirements for the proposed 88 megawatt Simple Cycle Combustion Turbine generating facility which is to be located adjacent to the existing Montana-Dakota Heskett Generating Station power plant, approximately two miles north of Mandan. The proposed Heskett Station Natural Gas Pipeline will traverse south to north, approximately 24 miles, through Morton County, connecting the proposed Heskett Station facilities with the Northern Border interstate transmission pipeline at a point approximately four miles northwest of the City of St. Anthony. The proposed route is depicted on the attached map.

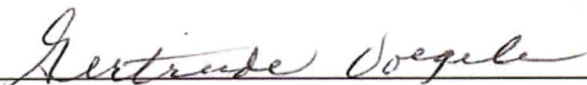
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**I have no objection to the proposed Heskett pipeline as shown on the accompanying map:**

Date: 3-4-13 Printed Name: GERTRUDE VOEGELE

Signed: 

If you have any questions, please feel free to contact me at 763-248-9430. Your timely response and cordial cooperation is much appreciated.

Sincerely,

  
Wayne Brooks, Authorized Agent for Montana-Dakota  
ProSource Technologies, LLC

Minneapolis, MN  
Cedar Rapids, IA  
Grand Rapids, MN

Enclosure:  
Project Location Map

Right of Way • Environmental • Appraisal

February 27, 2013

ProSource Technologies, LLC  
9219 East River Road NW  
Minneapolis, MN 55433  
Phone 763-786-1445  
Fax 763-786-1030

**VIA HAND DELIVERY**

Morton County Parcel Number: 23-0107200 (Home)  
Nick and Bonnie Tomac  
5225 County Road 82  
St. Anthony, ND 58566

Dear Mr. and Mrs. Tomac:

Montana-Dakota Utilities Co. (Montana-Dakota) has proposed the Heskett Station Natural Gas Pipeline Project to supply the natural gas requirements for the proposed 88 megawatt Simple Cycle Combustion Turbine generating facility which is to be located adjacent to the existing Montana-Dakota Heskett Generating Station power plant, approximately two miles north of Mandan. The proposed Heskett Station Natural Gas Pipeline will traverse south to north, approximately 24 miles, through Morton County, connecting the proposed Heskett Station facilities with the Northern Border interstate transmission pipeline at a point approximately four miles northwest of the City of St. Anthony. The proposed route is depicted on the attached map.

In accordance with Section 49-22-05.1 of the North Dakota Century Code (NDCC) and Chapter 69-06-08-02(2)(e) of the North Dakota Administrative Code (NDAC), residences or businesses within five hundred feet of the proposed pipeline are designated as "avoidance areas" and should be avoided unless there is no reasonable alternative. However, the five hundred foot avoidance area criteria may be waived by the owner of the residence or business.

Although the proposed pipeline does not cross your property, the proposed Heskett Station Natural Gas Pipeline will be located within five hundred feet of your home.

By signing below, you confirm that you have no objection to the installation of Montana-Dakota's proposed pipeline and hereby agree to waive the five hundred foot avoidance criteria as set forth in NDCC Section 49-22-05.1 and Chapter 69-06-08-02(2)(e) of the NDAC. **Please return this signed letter in the enclosed self-addressed, stamped envelope on or before March 18, 2013 and keep the enclosed copy for your files.**

**I have no objection to the proposed Heskett pipeline as shown on the accompanying map:**

Date: 3.7.13 Printed Name: Bonnie Tomac

Signed: Bonnie Tomac

If you have any questions, please feel free to contact me at 763-248-9430. Your timely response and cordial cooperation is much appreciated.

Sincerely,

  
Wayde Brooks, Authorized Agent for Montana-Dakota  
ProSource Technologies, LLC

Enclosure:  
Project Location Map

Minneapolis, MN  
Cedar Rapids, IA  
Grand Rapids, MN

ProSource Technologies, LLC  
9219 East River Road NW  
Minneapolis, MN 55433  
Phone 763-786-1445  
Fax 763-786-1030

February 27, 2013

**VIA HAND DELIVERY**

Morton County Parcel Number: 41-0085000 (Home)  
Charles R Glasser  
2093 38th Street  
Mandan, ND 58554

Dear Mr. Glasser:

Montana-Dakota Utilities Co. (Montana-Dakota) has proposed the Heskett Station Natural Gas Pipeline Project to supply the natural gas requirements for the proposed 88 megawatt Simple Cycle Combustion Turbine generating facility which is to be located adjacent to the existing Montana-Dakota Heskett Generating Station power plant, approximately two miles north of Mandan. The proposed Heskett Station Natural Gas Pipeline will traverse south to north, approximately 24 miles, through Morton County, connecting the proposed Heskett Station facilities with the Northern Border interstate transmission pipeline at a point approximately four miles northwest of the City of St. Anthony. The proposed route is depicted on the attached map.


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**I have no objection to the proposed Heskett pipeline as shown on the accompanying map:**


Date: 3-14-13 Printed Name: CHARLES R. GLASSER

Signed: 

If you have any questions, please feel free to contact me at 763-248-9430. Your timely response and cordial cooperation is much appreciated.

Sincerely,

Minneapolis, MN  
Cedar Rapids, IA  
Grand Rapids, MN

  
Wayde Brooks, Authorized Agent for Montana-Dakota  
ProSource Technologies, LLC

Enclosure:  
Project Location Map

888-422-4449  
www.prosourcetech.com

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An Affirmative Action Equal Opportunity Employer

February 27, 2013

ProSource Technologies, LLC  
9219 East River Road NW  
Minneapolis, MN 55433  
Phone 763-786-1445  
Fax 763-786-1030

**VIA HAND DELIVERY**

Morton County Parcel Number: 41-0591000 (Home)  
Joseph August Vogel  
2065 38th Street  
Mandan, ND 58554

Dear Mr. Vogel:

Montana-Dakota Utilities Co. (Montana-Dakota) has proposed the Heskett Station Natural Gas Pipeline Project to supply the natural gas requirements for the proposed 88 megawatt Simple Cycle Combustion Turbine generating facility which is to be located adjacent to the existing Montana-Dakota Heskett Generating Station power plant, approximately two miles north of Mandan. The proposed Heskett Station Natural Gas Pipeline will traverse south to north, approximately 24 miles, through Morton County, connecting the proposed Heskett Station facilities with the Northern Border interstate transmission pipeline at a point approximately four miles northwest of the City of St. Anthony. The proposed route is depicted on the attached map.

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**I have no objection to the proposed Heskett pipeline as shown on the accompanying map:**

Date: 2-27-13 Printed Name: Joe Vogel

Signed: 

If you have any questions, please feel free to contact me at 763-248-9430. Your timely response and cordial cooperation is much appreciated.

Sincerely,

  
Wayne Brooks, Authorized Agent for Montana-Dakota  
ProSource Technologies, LLC

Enclosure:  
Project Location Map

Minneapolis, MN  
Cedar Rapids, IA  
Grand Rapids, MN

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February 27, 2013

ProSource Technologies, LLC  
9219 East River Road NW  
Minneapolis, MN 55433  
Phone 763-786-1445  
Fax 763-786-1030

**VIA HAND DELIVERY**

Morton County Parcel Number: 41-0590000 (Home)  
Eugene and Edna Ruth Vogel  
2063 38th Street  
Mandan, ND 58554

Dear Mr. and Mrs. Vogel:

Montana-Dakota Utilities Co. (Montana-Dakota) has proposed the Heskett Station Natural Gas Pipeline Project to supply the natural gas requirements for the proposed 88 megawatt Simple Cycle Combustion Turbine generating facility which is to be located adjacent to the existing Montana-Dakota Heskett Generating Station power plant, approximately two miles north of Mandan. The proposed Heskett Station Natural Gas Pipeline will traverse south to north, approximately 24 miles, through Morton County, connecting the proposed Heskett Station facilities with the Northern Border interstate transmission pipeline at a point approximately four miles northwest of the City of St. Anthony. The proposed route is depicted on the attached map.

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**I have no objection to the proposed Heskett pipeline as shown on the accompanying map:**

Date: 3-2-2013 Printed Name: EUGENE VOGEL

Signed: Eugene Vogel

If you have any questions, please feel free to contact me at 763-248-9430. Your timely response and cordial cooperation is much appreciated.

Sincerely,

  
Wayne Brooks, Authorized Agent for Montana-Dakota  
ProSource Technologies, LLC

Enclosure:  
Project Location Map

Minneapolis, MN  
Cedar Rapids, IA  
Grand Rapids, MN

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February 27, 2013

ProSource Technologies, LLC  
9219 East River Road NW  
Minneapolis, MN 55433  
Phone 763-786-1445  
Fax 763-786-1030

**VIA HAND DELIVERY**

Morton County Parcel Number: 41-0062000 (Home)  
Kathleen Bonner  
2083 38th Street  
Mandan, ND 58554

Dear Ms. Bonner:

Montana-Dakota Utilities Co. (Montana-Dakota) has proposed the Heskett Station Natural Gas Pipeline Project to supply the natural gas requirements for the proposed 88 megawatt Simple Cycle Combustion Turbine generating facility which is to be located adjacent to the existing Montana-Dakota Heskett Generating Station power plant, approximately two miles north of Mandan. The proposed Heskett Station Natural Gas Pipeline will traverse south to north, approximately 24 miles, through Morton County, connecting the proposed Heskett Station facilities with the Northern Border interstate transmission pipeline at a point approximately four miles northwest of the City of St. Anthony. The proposed route is depicted on the attached map.

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**I have no objection to the proposed Heskett pipeline as shown on the accompanying map:**

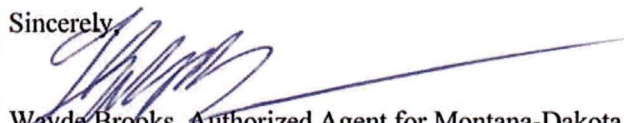
Date: 3-3-13 Printed Name: Kathleen Bonner

Signed: Kathleen Bonner

If you have any questions, please feel free to contact me at 763-248-9430. Your timely response and cordial cooperation is much appreciated.

Sincerely,

Minneapolis, MN  
Cedar Rapids, IA  
Grand Rapids, MN

  
Wayde Brooks, Authorized Agent for Montana-Dakota  
ProSource Technologies, LLC

Enclosure:  
Project Location Map

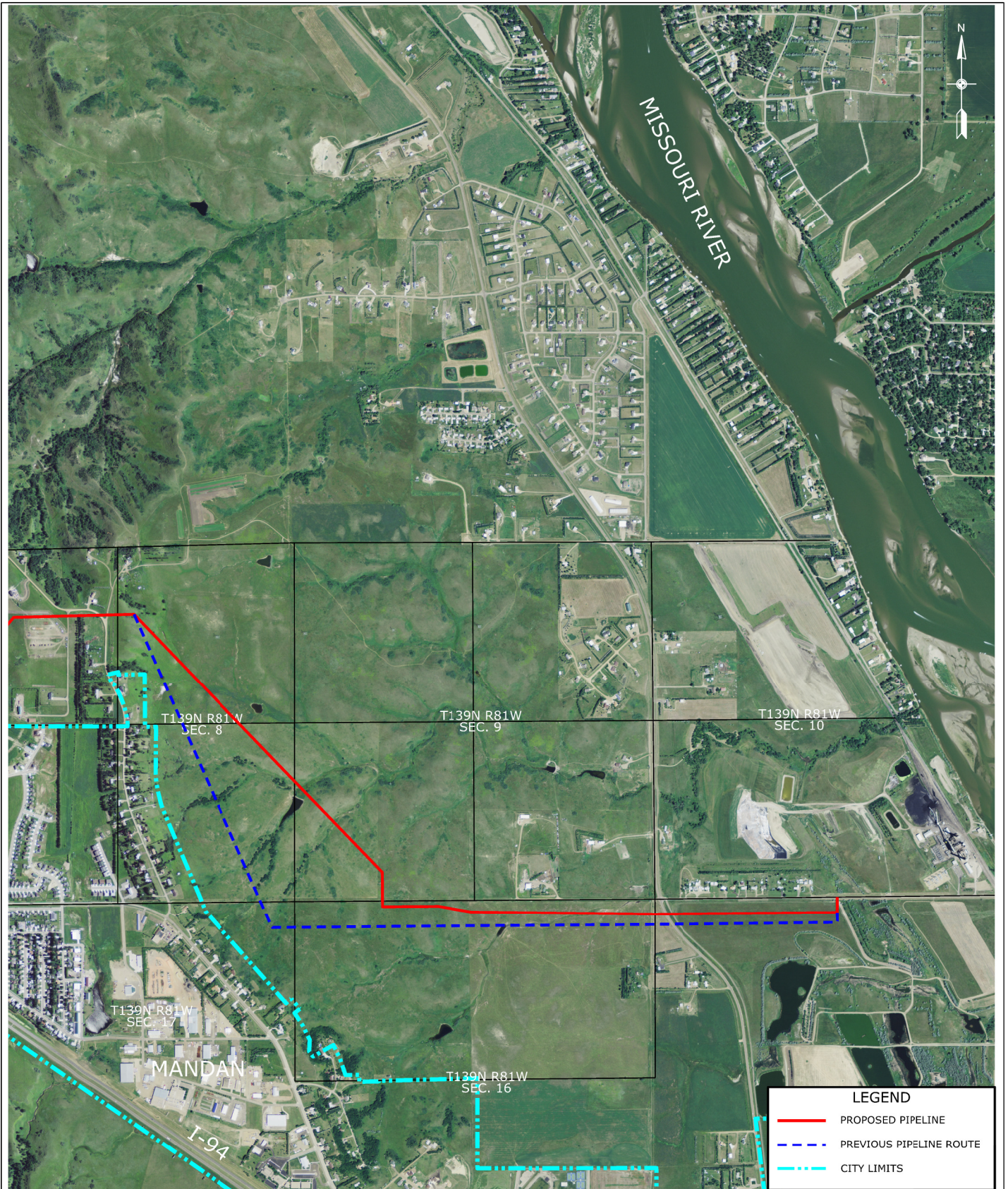
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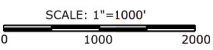
## **Appendix C**

### **Proposed northern Re-route Map**



**LEGEND**

- PROPOSED PIPELINE
- - - PREVIOUS PIPELINE ROUTE
- - - CITY LIMITS



MDU - HESKETT STATION  
 NORTHERN RE-ROUTE  
 10" NATURAL GAS PIPELINE  
 MANDAN, ND

**MONTANA-DAKOTA**  
 UTILITIES CO.  
 A Division of MDU Resources Group, Inc.  
*In the Community to Serve®*

**ProSource**  
 THE MOUNTAIN CONNECTION

## **Appendix D**

### **Contractor's Well Logs**



STATE OF NORTH DAKOTA  
 BOARD OF WATER WELL CONTRACTORS  
 900 E. BOULEVARD • BISMARCK, NORTH DAKOTA 58501

WELL DRILLER'S REPORT

State law requires that this report be filed with the State Board of Water Well Contractors within 30 days after completion or abandonment of the well.

1. WELL OWNER  
 Name Peter Paul  
 Address St. Anthony's Rd.

2. WELL LOCATION RR 1 BOX 28 ST. ANTHONY  
 Sketch map location must agree with written location. 58560

County Morton  
 NW 1/4 NW 1/4 NW 1/4, Sec. 24 Twp. 137 N. Rg. 82 W.

3. PROPOSED USE  Geothermal  Monitoring  
 Domestic  Irrigation  Industrial  
 Stock  Municipal  Test Hole

4. METHOD DRILLED  
 Cable  Reverse Rotary  Bored  
 Forward Rotary  Jetted  Auger  
 If other, specify \_\_\_\_\_

5. WATER QUALITY  
 Was a water sample collected for chemical analysis?  
 Yes  No  
 If so, to what laboratory was it sent \_\_\_\_\_

6. WELL CONSTRUCTION  
 Diameter of hole 8 1/2 inches. Depth 260 feet.  
 Casing:  Steel  Plastic  Concrete  
 Threaded  Welded  Other  
 If other, specify \_\_\_\_\_  
 Pipe Weight: \_\_\_\_\_ Diameter: \_\_\_\_\_ From: \_\_\_\_\_ To: \_\_\_\_\_  
 \_\_\_\_\_ lb/ft. \_\_\_\_\_ inches \_\_\_\_\_ feet \_\_\_\_\_ feet  
 \_\_\_\_\_ lb/ft. \_\_\_\_\_ inches \_\_\_\_\_ feet \_\_\_\_\_ feet  
 \_\_\_\_\_ lb/ft. \_\_\_\_\_ inches \_\_\_\_\_ feet \_\_\_\_\_ feet  
 Was perforated pipe used? 241  Yes 249  No  
 Perforated pipe set from 231 ft to 249 ft  
 Was casing left open end?  Yes  No  
 Was a well screened installed?  Yes  No  
 Material: \_\_\_\_\_ Diameter: \_\_\_\_\_ inches  
 (stainless steel, bronze, etc.)  
 Slot size \_\_\_\_\_ set from \_\_\_\_\_ feet to \_\_\_\_\_ feet  
 Slot size \_\_\_\_\_ set from \_\_\_\_\_ feet to \_\_\_\_\_ feet  
 Was a packer or seal used?  Yes  No  
 If so, what material \_\_\_\_\_ Depth \_\_\_\_\_ Ft.  
 Type of well: Straight screen  Gravel packed   
 Depth grouted: From 20 To surf  
 Grouting Material: Cement \_\_\_\_\_ Other \_\_\_\_\_  
 If other explain: \_\_\_\_\_  
 Well head completion: Pitless unit \_\_\_\_\_  
 12" above grade  Other \_\_\_\_\_  
 If other, specify \_\_\_\_\_  
 Was pump installed:  Yes  No  
 Was well disinfected upon completion?  Yes  No

7. WATER LEVEL  
 Static water level 215 feet below land surface  
 If flowing: closed-in pressure \_\_\_\_\_ psi  
 GPM flow \_\_\_\_\_ through \_\_\_\_\_ inch pipe  
 Controlled by:  Valve  Reducers  Other  
 If other, specify \_\_\_\_\_

8. WELL TEST DATA  
 Pump  Bailer  Other  
 Pumping level below land surface:  
240 ft. after 3 hrs. pumping 1 gpm  
 \_\_\_\_\_ ft. after \_\_\_\_\_ hrs. pumping \_\_\_\_\_ gpm

9. WELL LOG

Formation	Depth (ft.)	
	From	To
Sand	0	8
clay	8	45
gravel	45	48
dark clay	48	141
red sand	141	147
sand	147	160
clay	160	230
granite clay slab	230	260

(Use separate sheet if necessary.)

10. DATE COMPLETED 5-10-88

11. WAS WELL PLUGGED OR ABANDONED?  
 Yes  No  
 If so, how \_\_\_\_\_

12. REMARKS:  
By old windmill

13. DRILLER'S CERTIFICATION  
 This well was drilled under my jurisdiction and this report is true to the best of my knowledge.  
Nolan Paulsen 198  
 Driller's or Firm's Name \_\_\_\_\_ Certificate No. \_\_\_\_\_  
Morton  
 Address \_\_\_\_\_  
 Signed by \_\_\_\_\_ Date \_\_\_\_\_





## **Appendix E**

### **Environmental Mitigation Plan**

# **ENVIRONMENTAL MITIGATION PLAN**

## **Heskett Station Natural Gas Pipeline Project Morton County, North Dakota**

**Prepared for**



**Prepared by**



**March 2013**

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**APPENDICES**

APPENDIX A..... Detail Drawings - Erosion and Sediment Controls Devices

## **INTRODUCTION**

Montana-Dakota Utilities Co. (Montana-Dakota), a Division of MDU Resource Group, Inc., is planning to construct, own, and operate an 88 megawatt (MW) Simple Cycle Combustion Turbine (SCCT) and associated facilities necessary to interconnect with Montana-Dakota's existing electric system. The SCCT will also include a 10-inch diameter natural gas pipeline, approximately 24 miles in length (Project), interconnecting with Northern Border Pipeline Company's pipeline system (Northern Border), to supply the gas requirements for the SCCT. The SCCT will be located near Mandan, North Dakota adjacent to Montana-Dakota's Heskett Station. The SCCT and the natural gas pipeline require a Certificate of Site Compatibility and Route Permit respectively under North Dakota Century Code (NDCC) Chapter 49-22.

In connection with its submission of a consolidated application for a Certificate of Site Compatibility and Route Permit for an approximately 24-mile-long, 10-inch diameter natural gas pipeline to be located in Morton County, North Dakota, Montana-Dakota has prepared this Environmental Mitigation Plan (EMP). The EMP identifies measures to be implemented during construction to control erosion and minimize sediment loss from areas of ground disturbance as a result of construction activities.

Montana-Dakota will employ at least one Environmental Inspector to monitor construction activities and ensure environmental compliance throughout the duration of the Project. Environmental inspection activities will include monitoring compliance with permit requirements, inspection of erosion and sedimentation control methods, inspection of topsoil segregation procedures, compliance with stream and wetland construction and mitigation procedures and permits, spill response activities, inspection of water appropriation and dewatering activities, and implementation of restoration plans. The Environmental Inspector(s) will be given the authority to issue stop-activity orders and corrective actions to maintain environmental compliance with the measures in this EMP, landowner agreements, or environmental permit requirements. The Environmental Inspector(s) will have peer status with all other activity inspectors. The Project contract documents will specifically address environmental compliance requirements and the construction contractor will be held responsible for mitigating any adverse impacts as identified by Montana-Dakota, Environmental Inspector, applicable agencies, or landowners.

### **1. GENERAL MITIGATION MEASURES**

#### **1.1 TEMPORARY EROSION AND SEDIMENT CONTROL**

Temporary erosion and sediment controls will be installed immediately after the soil has been disturbed initially. The controls will be properly inspected and maintained on a regular basis throughout construction and reinstalled as necessary until replaced by permanent erosion controls or stabilization is complete.

Construction of the pipeline is expected to proceed at an appropriate rate, as quickly as is reasonable and safe, thereby ensuring that as little soil as possible is exposed for as short a time as possible. The Best Management Practices (BMPs) discussed below address the

need for erosion control measures required for the Project area. General erosion and sediment controls will include filter fabric fencing, fiber rolls, straw bale dikes, sand bags, silt fencing, or combinations of these to prevent run-on and uncontrolled run-off from the work area. Montana-Dakota has prepared detail drawings for the installation of typically used erosion and sediment control devices. The installation of these devices may vary. The following typical detail drawings of erosion and sediment controls devices are included in Appendix A:

- Silt Fence Installation
- Typical Straw Bale Installation
- Permanent Slope Breaker
- Typical Straw Bale Dewatering Structure
- Typical Dewatering Filter Bag
- Trench Breaker

#### Temporary Sediment Barriers

Montana-Dakota will install temporary sediment barriers (silt fences and/or staked hay bales, etc.) at the base of slopes adjacent and parallel to surface waters and in other areas as needed to control runoff on the right-of-way (ROW) and to prevent the flow of sediment off the ROW (see Appendix A). Temporary sediment barriers will be maintained and will not be removed until permanent revegetation measures have been judged successful or the potential for a sediment release has been minimized.

#### Temporary Slope Breakers

Montana-Dakota will construct slope breakers, where necessary, across the pipeline ROW to slow the velocity of runoff and divert water from the ROW (see Appendix A). Temporary slope breakers may be installed during construction to shorten slope lengths along the ROW and to prevent soil from entering streams and wetlands. Temporary slope breakers may be constructed with biorolls or other material as directed by Montana-Dakota and the permit requirements and may be installed across the construction ROW as directed by the Environmental Inspector. Whenever possible, the outfall of each temporary slope breaker will be positioned to minimize sediment discharge into wetlands or waterbodies.

## **1.2 RIGHT-OF-WAY ACCESS**

The Project will use existing public roads to access the ROW or will construct temporary approaches as required. Locations of access points will be identified at the beginning of construction activities and access signs will be installed at all approved access points. Montana-Dakota does not expect to modify existing roads or construct new permanent access roads. Permanent approaches, if constructed, may be constructed per landowner requests and inspector approval. All approaches will be constructed in a location and manner as to minimize vegetation and land owner disturbances.

Public roads that provide access to the pipeline ROW will be regularly monitored for any tracking of sediments (e.g., mud, dust, etc.) from the site onto the roads. Sediment will be

cleaned from roads. Employees and contractors will receive training on use of designated access roads and minimization of sediment tracking.

### **1.3 RIGHT-OF-WAY REQUIREMENTS**

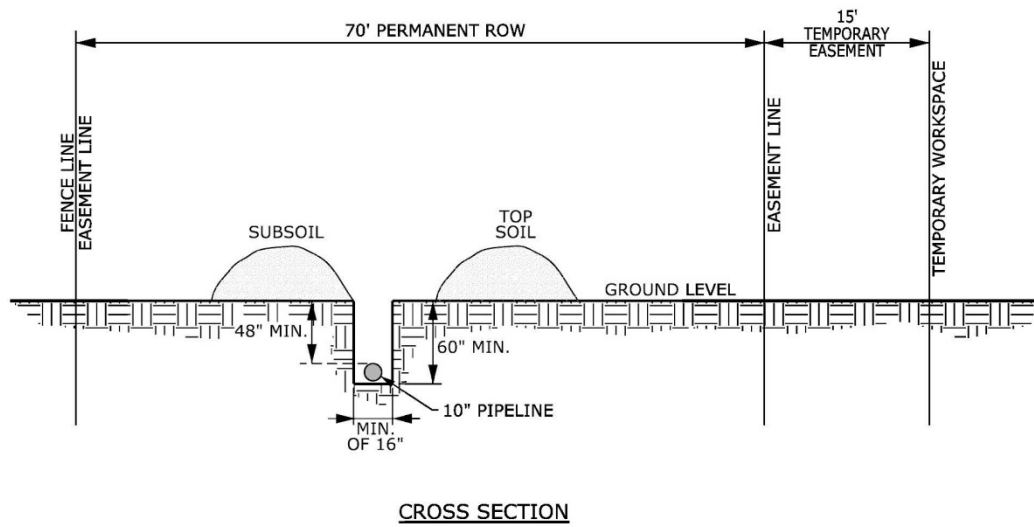
Montana-Dakota will conduct a centerline land survey to accurately depict the location and layout of the pipeline, followed by staking of the pipeline centerline. This survey will also identify the extent of approved work areas and all work will take place between those limits. The width of the majority of the Project ROW is proposed to be 85 feet. This ROW includes a 15-foot temporary workspace to be used during construction for material staging, work equipment and workspace and a 70-foot-wide permanent ROW. A portion of the route will have a 75-foot ROW, with 60-foot-wide permanent and 15 foot-wide temporary workspace. Figure 1 provides a typical proposed pipeline ROW cross section and Figure 2 provides a typical plan and elevation view of pipeline construction. As noted above, the Project will use existing public roads to access the ROW, and Montana-Dakota does not expect to modify existing roads or construct new permanent access roads.

The proposed Project will require the use of additional temporary workspace for staging areas, turn-around areas, and to facilitate construction activities at crossings such as roadways, railroads, streams, rivers, and wetlands. The workspace is necessary for site specific conditions which could include staging equipment such as horizontal drilling equipment where needed, storage of temporary spoil, storage and staging of supplies and equipment for protecting sensitive habitats during construction, and to ensure safe work areas. The dimensions of the extra workspaces may vary based on site-specific conditions.

### **1.4 CONSTRUCTION STIPULATION REPORT AND PERMITS**

Montana-Dakota will prepare a Construction Stipulation Report that details special requirements (e.g., topsoil segregation, restoration measures, fencing requirements, etc.) as agreed upon with landowners. The Construction Stipulation Report reflects requirements and comments provided by landowners; however, it is not a comprehensive list of construction requirements. Montana-Dakota will provide the Construction Stipulation Report to the contractor, and the contractor must comply with these stipulations in conjunction with other Project documents and permit conditions.

Prior to the initiation of its construction activities, Montana-Dakota will obtain all required permits for construction of the pipeline. Permit requirements may be more stringent than the requirements of this EMP. In all cases, the more restrictive requirements will be enforced.

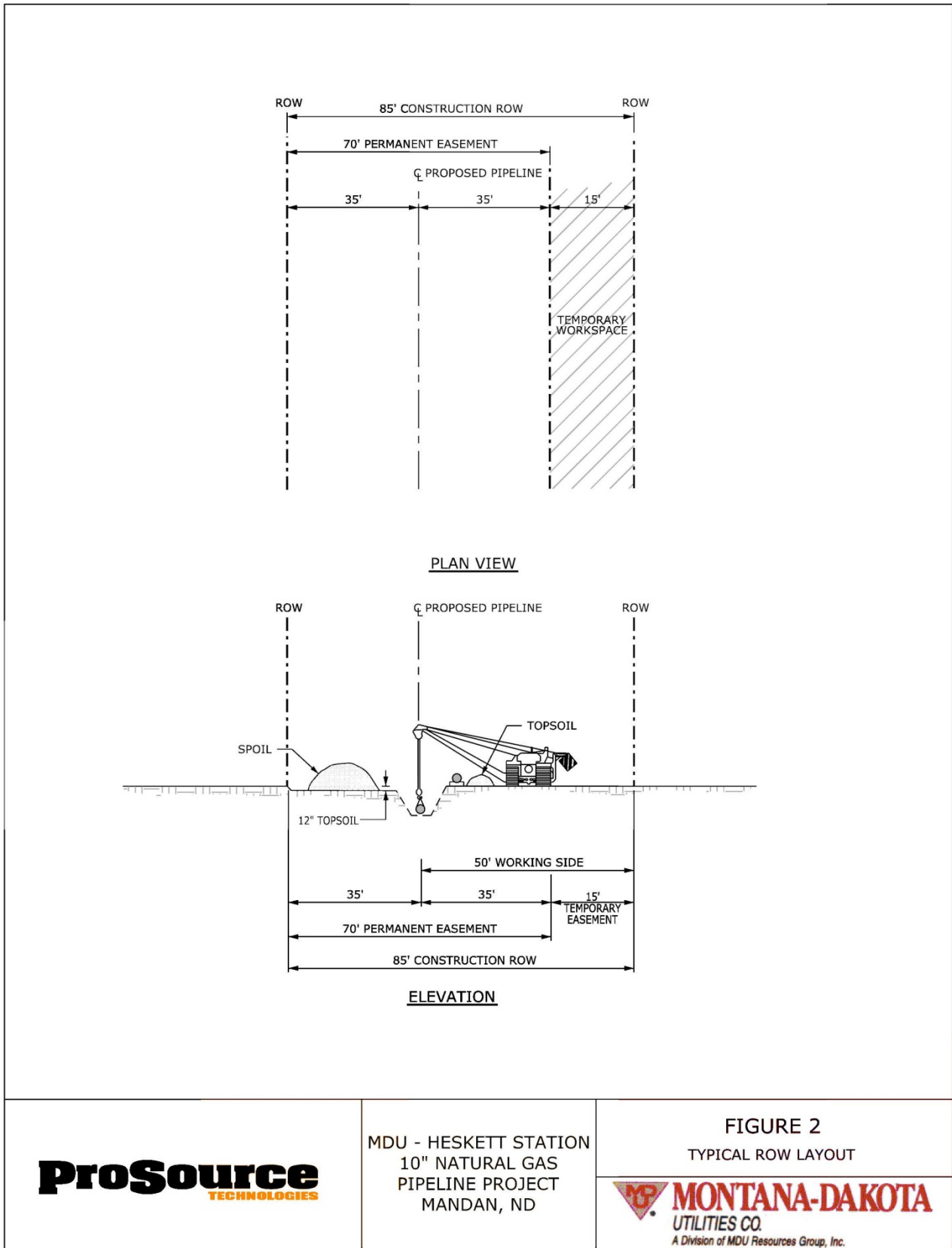


**ProSource**  
TECHNOLOGIES

MDU - HESKETT STATION  
10" NATURAL GAS  
PIPELINE PROJECT  
MANDAN, ND

**FIGURE 1**  
TYPICAL RIGHT OF WAY  
CROSS SECTION

**MONTANA-DAKOTA**  
UTILITIES CO.  
A Division of MDU Resources Group, Inc.



## **1.5 CLEARING AND TOPSOIL SEPARATION**

Preparation of the ROW is the initial step in the construction of the Project. After surveying and staking the proposed line, the construction ROW will be cleared of any surface obstructions. Following clearing, topsoil will be removed and segregated from the underlying subsoil. Topsoil will be stored separately from subsoil and protected from construction-related activities. Montana-Dakota may use the double ditch method, which means that the topsoil is placed on one side of the trench and the subsoil is placed on the other side of the trench to prevent the mixing of topsoil and subsoil. If necessary, in areas of unstable working conditions, topsoil may also be separated over the working side and/or the subsoil storage areas to promote safe working conditions.

Fences encountered along the proposed route will be cut and braced on each side of the ROW to prevent damage to the remaining fence, unless the landowner requests otherwise. Temporary gates will be installed where needed to contain livestock or prohibit public access to the ROW during construction. All fencing disturbed during construction will be restored to their pre-construction condition upon completion of construction activities.

## **1.6 PIPE STRINGING, BENDING AND WELDING**

Pipe stringing activities will involve the transportation to, and placement of coated pipe along the ROW. Pipe will be loaded onto trucks, transported to the ROW and unloaded by cranes or other equipment. The pipe will be strung along the trench in preparation for subsequent bending and welding operations.

After the sections of pipe are strung along the trench and before the sections of pipe are welded together, individual joints are bent to allow a uniform fit of the pipeline with the varying contours of the trench and terrain. Sections of pipe that require multiple or complex bends may be pre-fabricated off-site.

Installation of the pipe commences after the pipe ends are sufficiently cleaned. Next, the pipe is lined up, held in place, and welded until it is securely joined. Welding is one of the most important activities associated with pipeline construction. Each weld must exhibit the same structural integrity with respect to strength and ductility. Each weld will be inspected by qualified welding inspectors to determine the quality of the weld. In addition, all welds will be radiographically inspected.

## **1.7 UPLAND TRENCHING**

Prior to any trenching activities, notification will be provided to the North Dakota One Call as required to ensure all utilities are properly identified. Trenching involves excavating a trench for the pipe and is typically accomplished using a crawler-mounted, wheel-type ditch digging machine or backhoe. Installation depth of the pipeline will be 48 inches below grade along the proposed route, except where the depth will be greater as deemed necessary by the authorizing agency or landowner.

## **1.8 PIPE INSTALLATION**

After the pipe is strung and bent to conform to the pipeline alignment and ground contours, the pipe will be lifted by cranes or other equipment to move the pipe over the open trench. Inspection of the pipe coating will be completed prior to being lowered into the trench and any necessary repairs made to unsatisfactory or damaged areas.

## **1.9 TRENCH BREAKERS**

Trench breakers will be installed as necessary in the sloped areas, to prevent subsurface erosion along the pipe; and will be installed in wetlands, as needed, to maintain original wetland hydrology. Trench breakers are sacks of soil placed from the bottom of the ditch to the natural ground surface, completely surrounding the pipe. Trench breakers help to prevent erosion of the backfill from both surface flow and subsurface flow of water.

## **1.10 DRAIN TILE REPAIR**

Montana-Dakota will utilize a local drain tile contractor who is familiar with the locations and conditions of drain tile in the Project area, as well as effective procedures to repair any damaged drain tile. The pipeline will be installed to allow at least 12 inches of clearance between the pipeline and the drain tile if repairs to the drain tiles are necessary. Montana-Dakota will mark any underground drain tile that is damaged, cut, or removed by placing a highly visible flag in the trench spoil bank directly over or opposite such tile.

Montana-Dakota will repair disturbed or damaged tile to its pre-construction condition or better. Permanent repairs will be completed as soon as is practical after the pipeline is installed in the trench and prior to backfilling of the trench over the tile line. Montana-Dakota will remove and replace all damaged, broken, or cracked tile and will only use unobstructed tile for replacement. Any replacement tile will be of a quality, size, and flow capacity at least to that of the tile being replaced. Montana-Dakota will replace tile so that its original gradient and alignment are restored, except where relocation or rerouting is required for angled crossings.

## **1.11 BACKFILLING**

After the pipe has been lowered in, the trench will be backfilled. Precautions will be taken during backfilling to protect the pipe and pipe coating from damage from rocks and other debris. Large rocks will be removed from the backfill and taken off the property to avoid interference with land use. Careful attention will be paid during backfilling to avoid the mixing of topsoil and subsoil.

## **1.12 WET WEATHER SHUTDOWN**

Construction in wet soil conditions will not occur at times when or where the passage of heavy construction equipment may cause rutting to the extent that it results in the mixing of topsoil and subsoil, or if underground drainage structures may be damaged. However,

to facilitate construction in soft soils, Montana-Dakota may elect to remove and stockpile the topsoil from the working side (traveled side) of the trench and install mats or padding or other methods acceptable to the Environmental Inspector to minimize rutting.

## **2. STREAM AND RIVER CROSSING GENERAL REQUIREMENTS**

### **2.1 TIME WINDOW FOR CONSTRUCTION**

All construction activities will be conducted during periods permitted by the appropriate regulatory agencies and applicable permits.

### **2.2 PRE-CONSTRUCTION CONSIDERATIONS**

As a requirement of Montana-Dakota's North Dakota Pollutant Discharge Elimination System General Permit associated with stormwater discharges from construction activity, NDR10-0000, Montana-Dakota will prepare a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP will identify measures to be implemented during construction to control erosion and minimize sediment loss from areas of ground disturbance as a result of construction activities. The SWPPP and revisions are subject to review by the North Dakota Department of Health. This SWPPP applies only to those stormwater discharges authorized under the NDR10-0000.

A copy of the SWPPP must be available in the field on each construction spread. The SWPPP shall contain Spill Prevention and Response Procedures that meet the requirements of state and Federal agencies. It shall be the responsibility of Montana-Dakota and its contractors to structure their operations in a manner that reduces the risk of spills or the accidental exposure of fuels or hazardous materials to waterbodies or wetlands.

Montana-Dakota prohibits fuel and lubrication storage and equipment refueling in or within close proximity to streams, waterbodies, and wetlands. Montana-Dakota requires that the storage of petroleum products, refueling and lubricating operations take place in upland areas that are: (1) outside municipal watershed areas, (2) more than 100 feet from wetlands and water bodies, and (3) at least 200 feet from private water supply wells (400 feet from community wells). Equipment yards are best suited for these activities.

### **2.3 CLEARING**

Prior to any clearing, silt fencing and/or erosion control measures will be installed as necessary along the edges of streams, rivers, and wetlands to prevent erosion of disturbed soil. Clearing of vegetation and obstacles will be limited to the extent necessary to allow safe and effective use of construction equipment. Clearing of the ROW will take place in accordance with all regulatory permit conditions, as well as agreed upon landowner considerations. Vegetation adjacent to stream and rivers, including their banks, will not be removed or disturbed during initial clearing. If grading is needed to create a safe,

level, working area, topsoil will be stripped from the full construction ROW prior to cut fill or grading operations.

## **2.4 EXTRA WORKSPACE**

Montana-Dakota may utilize staging areas/extra workspaces at each waterbody crossing to facilitate construction activities. The dimensions of the extra workspaces will vary based on site specific conditions, but will be limited to what is reasonably needed to construct the waterbody crossing. Generally, Montana-Dakota will use an additional 200 foot wide by 200 foot long area to facilitate safe working conditions at crossing locations. This extra workspace will be used to provide additional area for equipment mobilization, operation and temporary storage. Montana-Dakota will locate all extra work areas (such as staging areas and additional spoil storage areas) at least 50 feet away from water's edge, except where the adjacent upland consists of actively cultivated or rotated cropland or other disturbed land. Montana-Dakota will limit the clearing of vegetation between extra work areas and the edge of the waterbody to the approved construction ROW.

## **2.5 EQUIPMENT BRIDGES**

Equipment bridges are not anticipated at this time. If equipment bridges are required for pipeline installation, bridges will be constructed to maintain unrestricted flow and to prevent soil from entering the waterbody. Montana-Dakota will not use soil to construct or stabilize equipment bridges and will design and maintain each equipment bridge to withstand and pass the highest flow expected to occur while the bridge is in place. Equipment bridges will be removed as soon as possible after permanent seeding.

## **2.6 STREAM AND RIVER CROSSING CONSTRUCTION METHODS**

Montana-Dakota is proposing to utilize horizontal directional drilling construction techniques to cross the Heart River and the Little Heart River. The purpose of using directional drill construction methods is to minimize impacts associated with typical open-cut construction methods, by drilling the pipeline under the river channel. Montana-Dakota will develop a Spill Prevention Containment and Countermeasure (SPCC) Plan which will include information regarding storage of fuels and lubricants and restrictions for refueling near streams and wetlands.

### **Directional Drill**

Directional drilling construction methods will be utilized by Montana-Dakota to minimize impacts to river bed and banks during pipeline installation. Figure 3 provides a general diagram of a directional drill operation beneath waterways and Figure 4 provides a general diagram of a directional drilling site plan and profile for waterway crossings. Potential impacts to rivers during directional drilling include inadvertent release of drilling mud. The directional drilling process involves a drilling fluid primarily made up of clay bentonite and water. The purposes of this fluid include lubrication and stabilization of the borehole. A release of drilling mud can occur when the pressure of

the drilling fluid causes the fluid to migrate from the borehole to the surface, following subterranean fractures. The extent of a release can be limited by careful monitoring and having appropriate equipment and response plans. Montana-Dakota will develop a directional drill contingency plan which will include procedures regarding clean-up of inadvertent release of bentonite material.

In areas where there are slopes adjacent to rivers or streams, Montana-Dakota may also install sediment barriers at the base of the slope with materials such as silt fence, staked hay or straw bales, or sand bags. The sediment barriers help prevent siltation from entering the stream. The sediment barriers will also be inspected and maintained until permanent revegetation measures are successful. Slope breakers may also be installed as necessary to minimize runoff into a stream. Slope breakers are positioned at an angle across the ROW in order to direct runoff to adjacent vegetated areas. The purpose of slope breakers is to reduce runoff velocity and divert water off the construction ROW. Following installation of the pipeline, construction debris will be removed and work areas graded as near as possible to pre-construction conditions. As necessary, Montana-Dakota may also apply mulch, consisting of straw, hay, erosion control fabric and/or some other functional equivalent, in order to stabilize the soil.

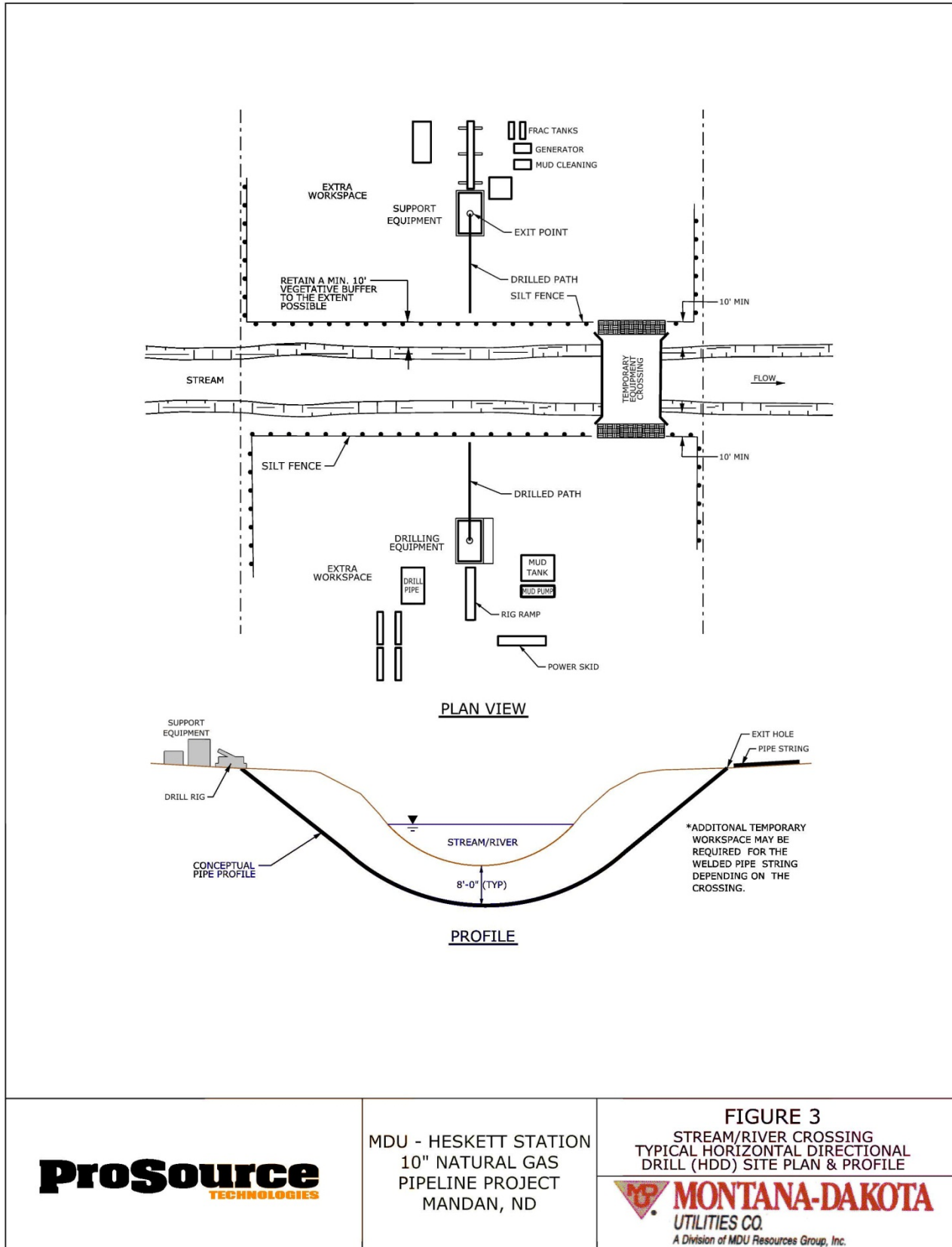
## **2.7 DRAINAGE DITCHES AND INTERMITTENT STREAMS**

Montana-Dakota may cross drainage ditches and intermittent streams by either directional drill method or open-cut construction techniques. Intermittent streams and drainage ditches where water is present and flowing may be crossed using the open-cut construction technique or horizontal directional drilling.

For dry intermittent streams and agricultural drainage ditches, standard upland construction procedures will be used, which involve stringing, welding, excavating the trench with backhoes, installing the pipe in the trench, and backfilling the trench with native material.

### **Open-Cut Crossing**

The open-cut construction method, which may be utilized to cross drainage ditches and intermittent streams, will require in-stream trenching, backfilling and stream bank restoration. At the open-cut streams, banks and approaches may be graded during construction to provide a safe and level work area. Furthermore, temporary bridges may be needed to allow equipment to cross the streams. Areas affected by construction will be restored to original contours to the extent possible and revegetated according to the permit conditions and recommendations of landowners or land management agencies. No long-term effects to surface water resources are anticipated.

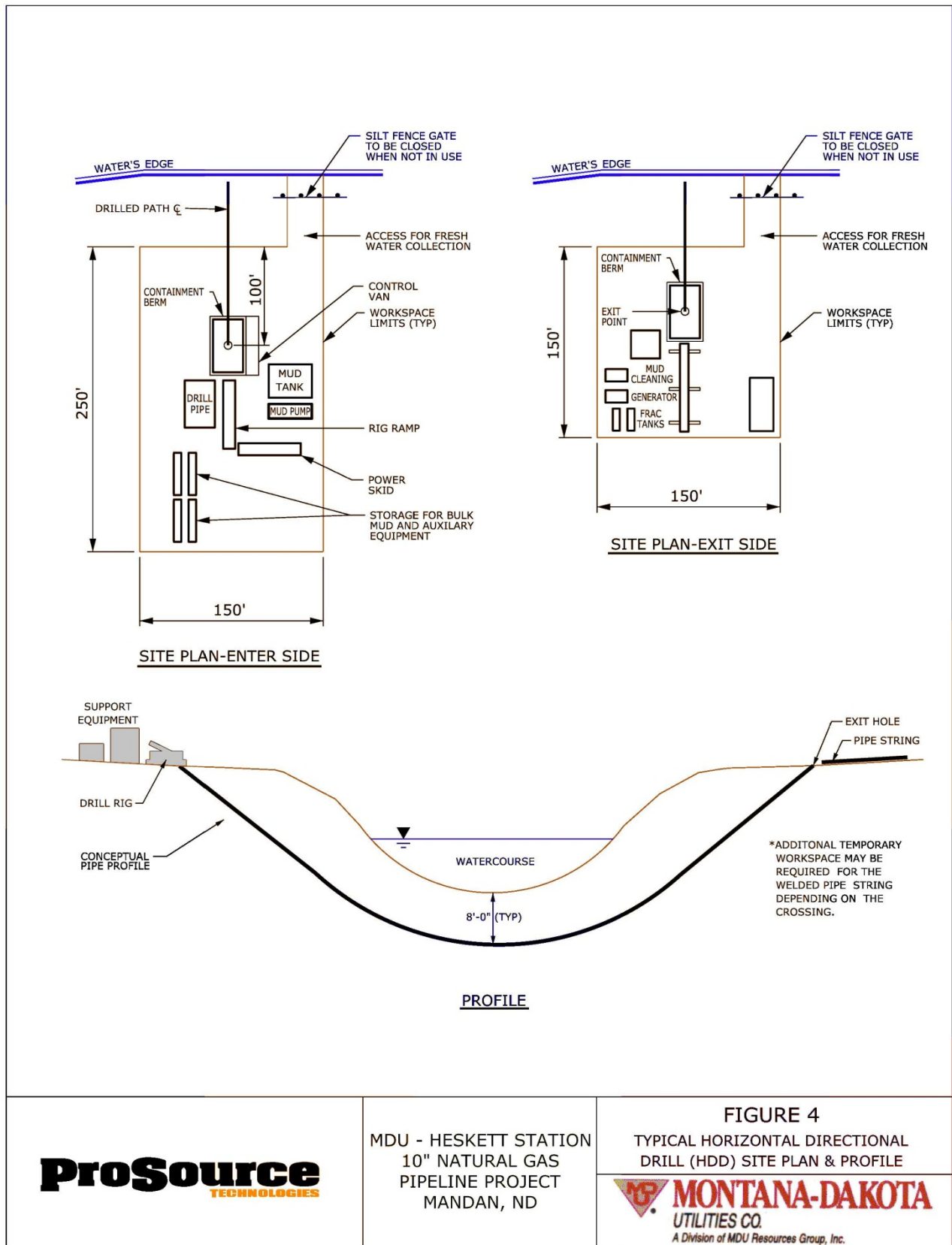


**FIGURE 3**  
 STREAM/RIVER CROSSING  
 TYPICAL HORIZONTAL DIRECTIONAL  
 DRILL (HDD) SITE PLAN & PROFILE

**ProSource**  
 TECHNOLOGIES

MDU - HESKETT STATION  
 10" NATURAL GAS  
 PIPELINE PROJECT  
 MANDAN, ND

**MONTANA-DAKOTA**  
 UTILITIES CO.  
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Erosion control measures, including silt fencing and/or straw bales, will be utilized as necessary to minimize disturbed sediment from the trench impacting the waterbodies. The erosion control measures will be inspected regularly to evaluate their effectiveness and repaired or replaced as needed. Montana-Dakota will install sediment barriers across the entire construction ROW where necessary at waterbody crossings, to prevent the flow of sediments into the waterbody.

After backfilling of the trench is complete, the disturbed areas will be re-graded as close as possible to pre-construction contours. Disturbed stream banks will be stabilized with erosion control methods such as geotextile fabric, erosion control blankets or comparable materials as necessary.

### **3. WETLAND CROSSING GENERAL REQUIREMENTS**

Wetlands will not be drained or permanently filled during construction/restoration of the proposed Project. Montana-Dakota will restore the impacted wetlands to pre-construction conditions to the extent possible. Construction of the proposed pipeline may result in minor short-term disturbances to wetlands including the following: temporary loss of wetland vegetation, wildlife habitat and aesthetics associated with clearing and other construction activities; soil disturbance associated with trenching, equipment traffic and the limited pulling of stumps; and temporary increases in turbidity and fluctuations in wetland hydrology associated with trenching, equipment traffic and spoil storage. The duration of impacts to forested and scrub-shrub wetlands will be longer than other wetland types due to the additional time required for re-establishment of woody vegetation. These impacts will be temporary because the wetland hydrology will be restored, the hydric topsoil will be replaced, and the wetlands will be allowed to naturally revegetate.

#### **3.1 WETLAND ACCESS**

Montana-Dakota and its contractors will use the construction right-of-way and approved roads to access wetland areas.

#### **3.2 SPILL PREVENTION**

Montana-Dakota will utilize a SPCC Plan for the Heskett Station Natural Gas Pipeline Project. This SPCC Plan will describe the preventative and mitigative measures to be implemented to minimize environmental impacts associated with accidental discharges of a hazardous or controlled substance that might occur with construction equipment or fueling operations. Construction personnel will follow procedures to prevent, contain, clean-up and report spills that may occur during the course of construction, as outlined in Montana-Dakota's SPCC Plan.

#### **3.3 CLEARING**

In preparation for construction, clearing crews will cut existing wetland vegetation off at ground level and remove it from the wetland. Montana-Dakota will limit the pulling of stumps in wetlands to the trench line unless safety concerns warrant otherwise.

Excavated stumps will be removed from the wetland. After clearing activities are complete, timber riprap and/or timber mats may be utilized as necessary to minimize construction impacts to the wetlands and create a safe, stable working surface. In addition, temporary sediment controls will be installed to contain soil within the construction ROW.

### **3.4 RIGHT-OF-WAY STABILIZATION**

Construction in wetlands may be facilitated by the use of timber construction mats or low ground pressure equipment to minimize disturbance to the wetland. In areas where traditional trenching will take place in wetlands, trench dewatering may be necessary to facilitate construction. If possible, discharge from trench dewatering will be directed to vegetated upland areas to minimize the potential of trench water flowing into waterbodies and wetlands. If standing water or saturated soils are present, low ground-weight construction equipment will be used or normal equipment will be operated on prefabricated equipment mats or geotextile fabric overlain with gravel. Geotextile fabric used for this purpose will be strong enough to allow removal of all gravel and fabric from the wetland. All timber mats, construction debris, and larger vegetative debris will be removed during cleanup of wetlands.

### **3.5 TRENCHING**

Construction in and around wetland communities would be similar to that described in Section 1.7. If standing water is present, soil segregation is not practical and will not be performed unless specifically required by Project-specific permits or licenses. No permanent losses of wetlands are anticipated as a result of this Project and all required permits will be obtained prior to any construction in wetland communities that may be considered jurisdictional "Waters of the United States". Figure 5 provides a typical plan and profile of open trenching in wetland areas.

### **3.6 PIPELINE INSTALLATION**

Pipeline installation in dryer wetlands would be similar to that described in Section 1.8. Construction in wetlands may be facilitated by the use of timber construction mats or low ground pressure equipment to minimize disturbance to the wetland. Once construction is completed, all timber construction mats.

### **3.7 BACKFILLING**

Backfilling of the excavated wetland material will take place after pipeline installation is complete. Montana-Dakota may weigh the pipe down in wetlands to secure the position of the pipeline. In areas where trench dewatering is necessary, Montana-Dakota will utilize construction methods designed to prevent heavily silt-laden water from entering a waterbody or undisturbed portion of a wetland, such as filtering the water through geotextile filterbags in well vegetated upland areas.

### **3.8 ROUGH GRADING, CLEANUP, AND TEMPORARY RESTORATION**

Restoration and revegetation will be conducted in accordance with permit requirements and landowner arrangements. This restoration will help restore existing groundwater and surface water flow patterns within the wetlands.

After construction is completed in wetland areas, the permanently maintained ROW will re-establish as emergent wetlands. In non-maintained areas, wetlands will be allowed to naturally revert to pre-construction conditions. The purpose of this restoration is to restore existing groundwater and surface water flow patterns within the wetlands. No loss of wetland acreage is expected from construction and operation of the proposed pipeline Project.

## **4. HIGHWAY, ROAD, AND RAIL CROSSINGS**

### **4.1 ADDITIONAL WORKSPACE**

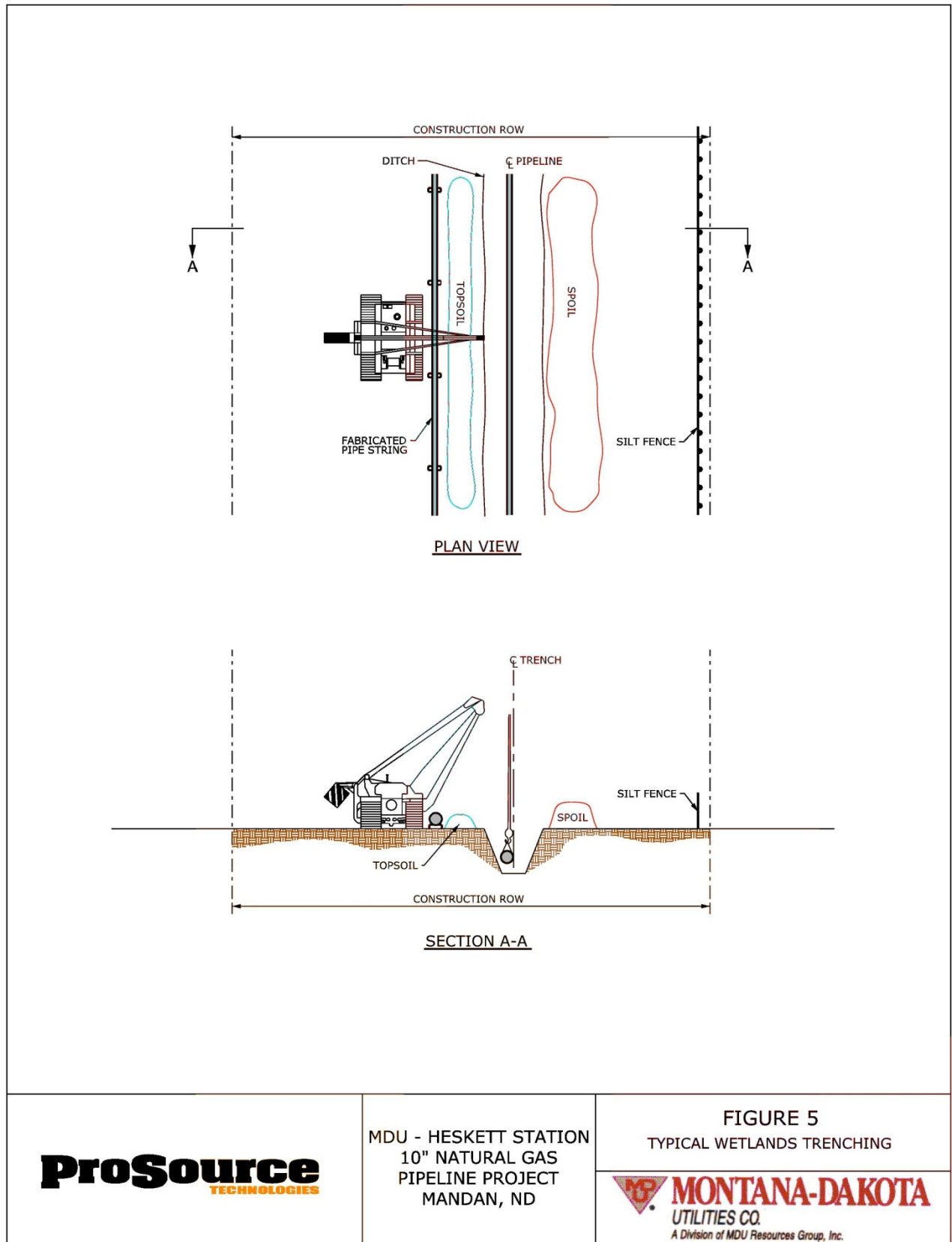
Figure 6 provides a plan of a typical directional drill beneath roadways. Montana-Dakota may utilize extra workspaces to facilitate construction activities at crossings such as roadways and railroads. The dimensions of the extra workspaces will vary based on site specific conditions. Generally, Montana-Dakota may use an additional 200 foot wide by 200 foot long area to facilitate safe working conditions at crossing locations. This extra workspace will be used to provide additional area for equipment mobilization, operation, and temporary storage.

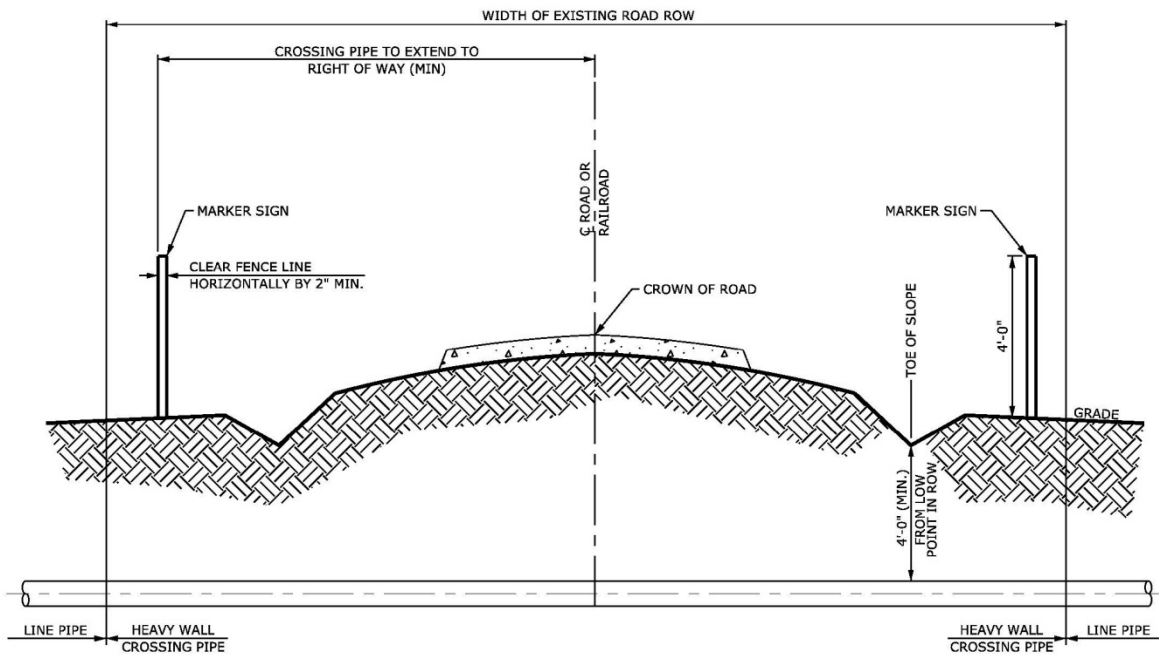
### **4.2 MAINTENANCE**

All construction entrances will be maintained in order to minimize vehicle tracking of sediments onto roads. Off-site soils or mud tracked onto public paved roads will be removed to ensure clean road surfaces. Sediment tracked onto public roads will be removed by sweeping and scraping that will be conducted at minimum on a weekly basis or more frequently if needed.



### **4.3 SEDIMENT BARRIERS**

Temporary sediment barriers will be used as needed to stop or reduce the flow of sediment on sloped approaches to road crossings where vegetation has been disturbed. These will be constructed of materials such as silt fence, staked hay or straw bales, or sand bags. Temporary sediment barriers will be installed at the base of slopes until vegetation has been reestablished.





TYPICAL UNCASSED BORED ROAD CROSSING

	<p>MDU - HESKETT STATION                  10" NATURAL GAS                  PIPELINE PROJECT                  MANDAN, ND</p>	<p>FIGURE 6                  TYPICAL UNCASSED ROAD                  CROSSING BORE METHOD</p>  <p>A Division of MDU Resources Group, Inc.</p>
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## **5. CONSTRUCTION DEWATERING AND HYDROSTATIC TESTING DISCHARGES**

### **5.1 TRENCH DEWATERING**

During construction, dewatering of the trench may be necessary to ensure successful pipeline installation. Trench water appropriation/discharge approvals will be obtained as required by applicable regulations. In areas where trench dewatering is necessary, Montana-Dakota will utilize construction methods designed to prevent heavily silt-laden water from entering a waterbody or undisturbed portion of a wetland, such as filtering the water through geotextile filterbags or hay bale structure in well vegetated areas. If possible, discharge from trench dewatering will be directed to vegetated upland areas to minimize the potential of trenchwater flowing into waterbodies and wetlands.

### **5.2 HYDROSTATIC TEST DISCHARGES**

The pipeline will be pressure tested with water, also referred to as hydrostatic testing, after backfilling is complete to ensure that the system is capable of withstanding the designed operating pressure. Hydrostatic testing procedures will be implemented in accordance with federal regulations 49 CFR Part 192. Authorization to discharge the hydrostatic test water will be obtained from the North Dakota Department of Health, under North Dakota's Pollutant Discharge Elimination System Temporary Dewatering/Hydrostatic Testing Permit NDG07-000, as required. After the test, the water will be discharged into a filter bag and/or a straw bale dewatering structure. At no time will the discharge rate exceed the applicable discharge rates specified in state-issued or other discharge permits.

### **5.3 REGULATORY NOTIFICATION AND REPORTING**

Montana-Dakota will comply with all of the monitoring and reporting requirements as required under the sampling and monitoring requirements associated with the North Dakota's Pollutant Discharge Elimination System Temporary Dewatering/ Hydrostatic Testing Permit NDG07-000. Monitoring results will be summarized and reported on Discharge Monitoring Report forms.

## **6. RESTORATION**

### **6.1 CLEAN-UP AND RESTORATION**

Clean-up and restoration of the ROW will be the final phase of construction and typically begins immediately after backfilling or as soon as weather and soil conditions permit. The ROW will be cleaned up by the removal and disposal of construction debris and surplus materials. Construction debris will be taken to a licensed landfill as necessary. Temporary erosion control measures will be removed after ROW stabilization is complete and revegetation is deemed successful. Montana-Dakota will employ Environmental Inspector(s) to ensure compliance with these requirements.

The purpose of restoration is to return the ROW as close as possible to pre-construction conditions. Restoration efforts may involve smoothing with disc harrows or other equipment, stabilization using erosion control devices, and finally, revegetation activities. Pre-construction contours are restored to the extent possible, except in upland areas where a slight crown is formed over the trench to allow for settling of the backfill. Permanent slope breakers are constructed, and seed, fertilizer and mulch (as needed) are applied in accordance with permit requirements, land management agencies or reasonable landowner requests. Montana-Dakota will work closely with land management agencies as well as landowners to ensure proper and successful revegetation.

Montana-Dakota will install line markers noting pipeline locations in accordance with the U.S. DOT pipeline safety regulations as set forth in 49 CFR Part 192. These markers identify Montana-Dakota as the operator and lists telephone numbers for pipeline emergencies or inquiries relating to the pipeline.

## **6.2 PERMANENT EROSION CONTROL MEASURES**

Pre-construction contours are restored to the extent possible, except in upland areas where a slight crown is formed over the trench to allow for settling of the backfill. Permanent trench breaks and/or slope breakers will be constructed as necessary, and seed, fertilizer and mulch will be applied in accordance with requests of the landowner or permitting agency.

### **6.2.1 Trench Breakers**

- a. To slow the flow of subsurface water along the trench, trench breakers may be installed. Topsoil will not be used in trench breakers.
- b. An engineer or similarly qualified professional shall determine the need for and spacing of trench breakers.

### **6.2.2 Permanent Slope Breakers**

- a. To reduce runoff velocity, divert water off the construction ROW, and prevent sediment deposition into sensitive resources, permanent slope breakers may be installed which may be constructed of materials such as soil, sand bags, or some functional equivalent.
- b. Permanent slope breakers will be constructed and maintained in all areas, except cultivated areas and lawns, using spacing recommendations obtained from the local soil conservation authority or land management agency. In the absence of written recommendations, Montana-Dakota will use the following spacing unless closer spacing is necessary to avoid excessive erosion on the construction ROW:

<u>Slope (%)</u>	<u>Spacing (feet)</u>
5 - 15	300
>15 - 30	200
>30	100

- c. Slope breakers will be constructed to divert surface flow to a stable area without causing water to pool or erode behind the breaker. In the absence of a stable area, appropriate energy-dissipating devices will be constructed at the end of the breaker.
- d. Slope breakers may extend slightly (about 4 feet) beyond the edge of the construction ROW to effectively drain water off the disturbed area. Where slope breakers extend beyond the edge of the construction ROW, they are subject to compliance with all applicable survey requirements.

### **6.3 SOIL COMPACTION TREATMENT**

Montana-Dakota may utilize deep tilling methods in agricultural land to alleviate soil compaction. If the topsoil was removed from the area to be tilled, the tillage will precede replacement of the topsoil. At least three passes with the deep tillage equipment will be made if necessary. Tillage will be at least 18 inches deep in land used for crop production and 12 inches deep on other lands. These activities will be performed under soil moisture conditions, which permit effective working of the soil. The landowners or tenants may elect to perform this tillage using their own equipment.

### **6.4 OFF-ROAD VEHICLE BARRIERS AND FENCES**

If requested by landowners or land management agencies, Montana-Dakota will install vehicle control measures to prohibit public access to the ROW during construction. All fencing disturbed during construction will be restored to their pre-construction condition upon completion of construction activities.

### **6.5 REVEGETATION**

The purpose of revegetation will be to reestablish existing soil contours and to replace vegetation that is removed during construction to the extent possible. By re-establishing vegetation, the potential for soil erosion will be reduced and current land uses may continue. The revegetation process will be applied to the pipeline ROW and interconnect site. The revegetation work will be primarily on rangelands (native pasture) and roadside ditch locations. This revegetation plan does not cover wetlands, intermittent creek banks, or active crop production areas. The revegetation of the wetland areas will be performed in accordance with the U.S. Army Corps of Engineers Section 404 Permit. Crop production areas, which are anticipated to be put back into production, will be stabilized through grading and/or application of temporary erosion controls. It is anticipated that crop production areas will be revegetated by the landowner following construction and

grading. Revegetation on non-cropland areas of private property will comply with landowner specifications.

## **6.6 ROAD REPAIR**

If private roads are damaged during construction activities, Montana-Dakota will repair the road to the satisfaction of the road managing agency or landowner.

## **6.7 REPAIR OF DAMAGED CONSERVATION PRACTICES**

Any existing soil conservation practices (such as terraces, grassed waterways, etc.) or structures damaged by the construction of the pipeline will be restored as near as practical to the pre-construction elevation and grade.

## **6.8 LAND LEVELING FOLLOWING CONSTRUCTION**

After construction of the pipeline has been completed, the slope, contour, grade, and drainage pattern of the disturbed area will be restored as nearly as practical to pre-construction conditions. If necessary, the trench may be crowned to allow for potential settlement of the trench backfill. In areas where land contours are visibly affected, or areas of undesirable altered surface drainage caused by excessive or insufficient settlement of the trench, remediation will take place by means such as regrading, and if necessary, importing of appropriate fill material. Regrading will also take place in disturbed areas in which erosion causes the formation of rills or channels, or areas of heavy sediment deposition. Montana-Dakota will utilize erosion control methods such as sediment barriers, slope breakers, or mulch to minimize erosion as necessary.

# **7. POST-CONSTRUCTION ACTIVITIES**

## **7.1 MONITORING AND MAINTENANCE**

- a. Revegetation in non-agricultural areas shall be considered successful if upon visual survey the density and cover of non-nuisance vegetation are similar in density and cover to adjacent undisturbed lands. In agricultural areas, revegetation shall be considered successful if crop yields are similar to adjacent undisturbed portions of the same field. Revegetation efforts will be continued until revegetation is successful.
- b. Montana-Dakota will monitor and correct problems with drainage and irrigation systems resulting from pipeline construction in active agricultural areas until restoration is successful.
- c. Restoration shall be considered successful if the ROW surface condition is similar to adjacent undisturbed lands, construction debris is removed (unless requested otherwise by the land owner or land management agency), revegetation is successful, and proper drainage has been restored.

- d. Efforts to control unauthorized off-road vehicle use, in cooperation with the landowner, shall continue throughout the life of the Project. Montana-Dakota will maintain signs, gates, and vehicle trails as necessary.

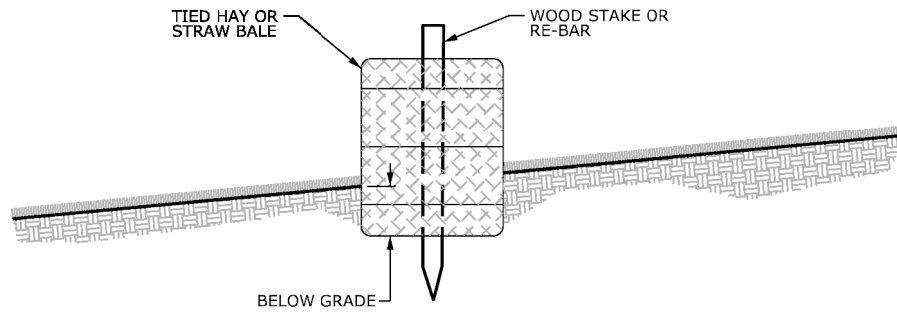
## **7.2 REPORTING**

Montana-Dakota will maintain records that identify by milepost:

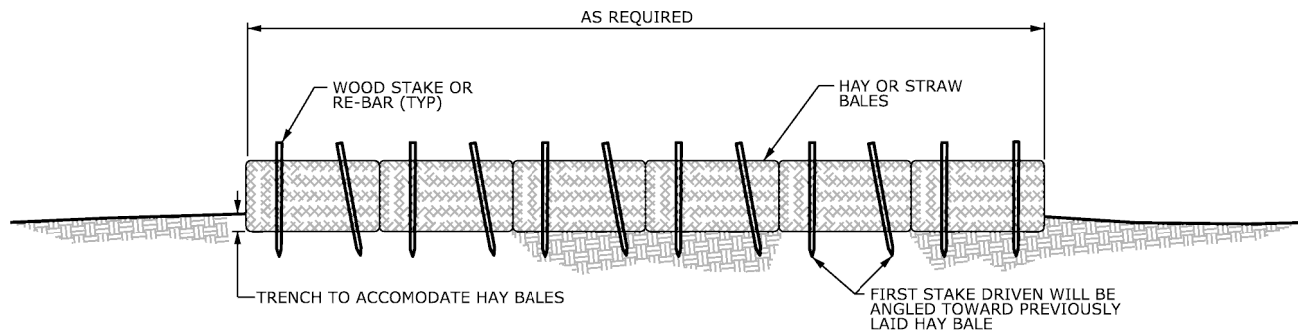
- a. Method of application, application rate, and type of fertilizer, pH modifying agent, seed, and mulch used;
- b. Acreage treated;
- c. Dates of backfilling and seeding;
- d. Names of landowners requesting special seeding treatment and a description of the follow-up actions; and
- e. Any problem areas and how they were addressed.

## **Appendix A**

### **Typical Detail Drawings Erosion and Sediment Controls Devices Route**



SECTION



SECTION

**NOTES:**

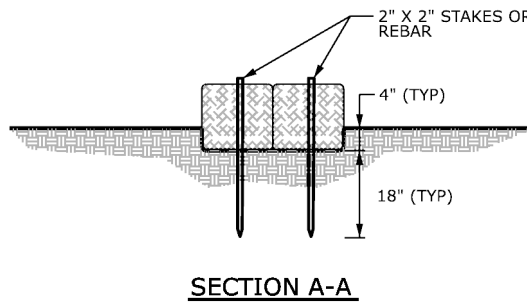
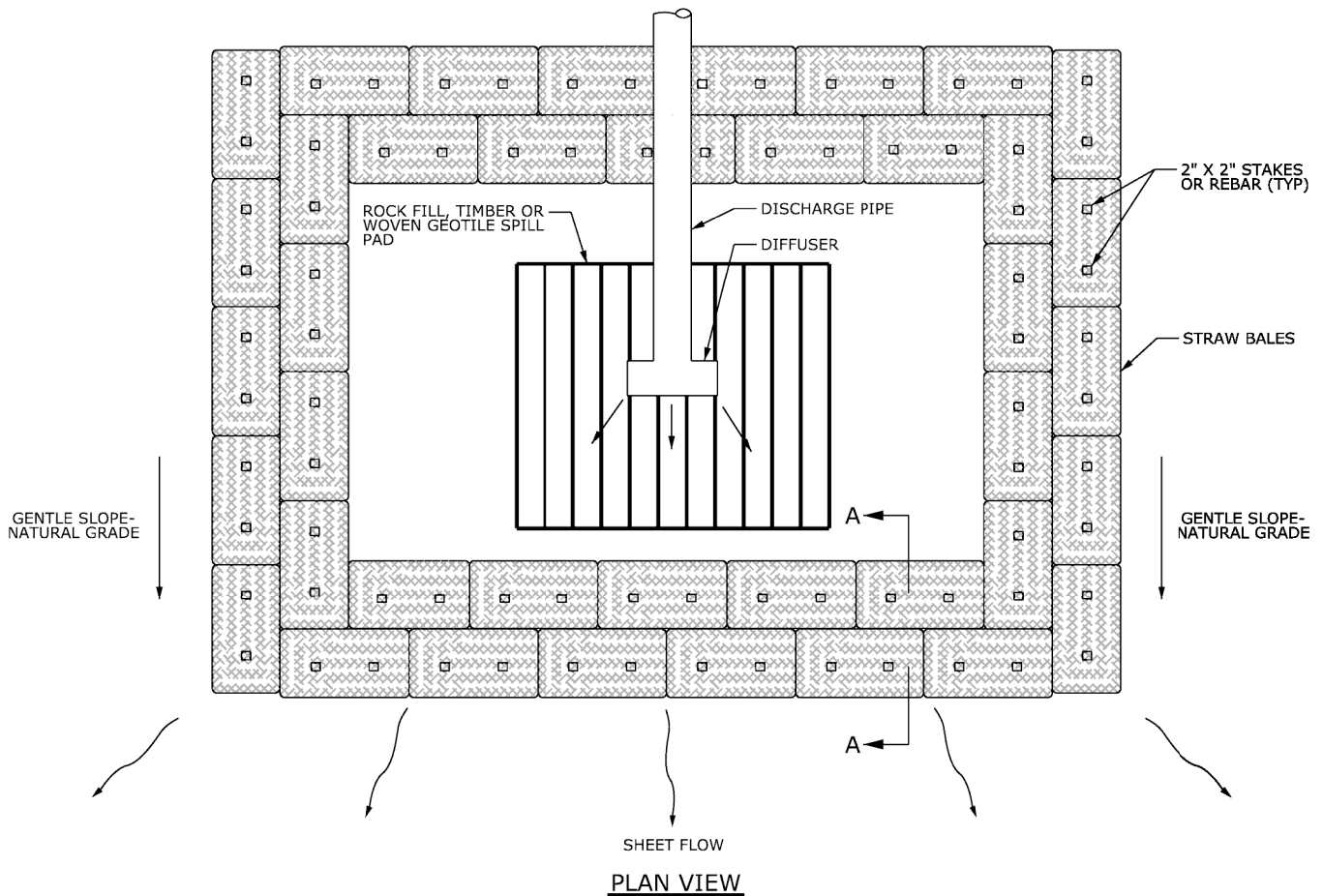
1. To eliminate possible end flow, both ends of the straw bale barrier should be turned and extend upslope.
2. Each bale should be secured by at least 2 stakes. The first take in each bale shall be driven toward the previously laid bale to force the bales together. Any gaps can be filled in by wedging loose straw between the bales. Stakes should be driven. Rebar or standard "T" or "U" posts can be used as stakes, but it should be noted that they may pose a hazard to equipment if the bales disintegrate.
3. Compact the excavated soil against the uphill side of the barrier to prevent piping.
4. Straw or hay bale barriers require continual maintenance to remove collected sediment and replace damaged bales. Pay close attention to the repair of damaged bales, end runs and undercutting beneath bales.
5. To eliminate possible end flow, both ends of straw or hay bale runs should be turned and extended upslope.
6. Installation to be modified as necessary to suit actual site conditions.

**ProSource**  
TECHNOLOGIES

MDU - HESKETT STATION  
10" NATURAL GAS  
PIPELINE PROJECT  
MANDAN, ND

TYPICAL STRAW OR  
HAY BALE BARRIER

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**NOTES:**

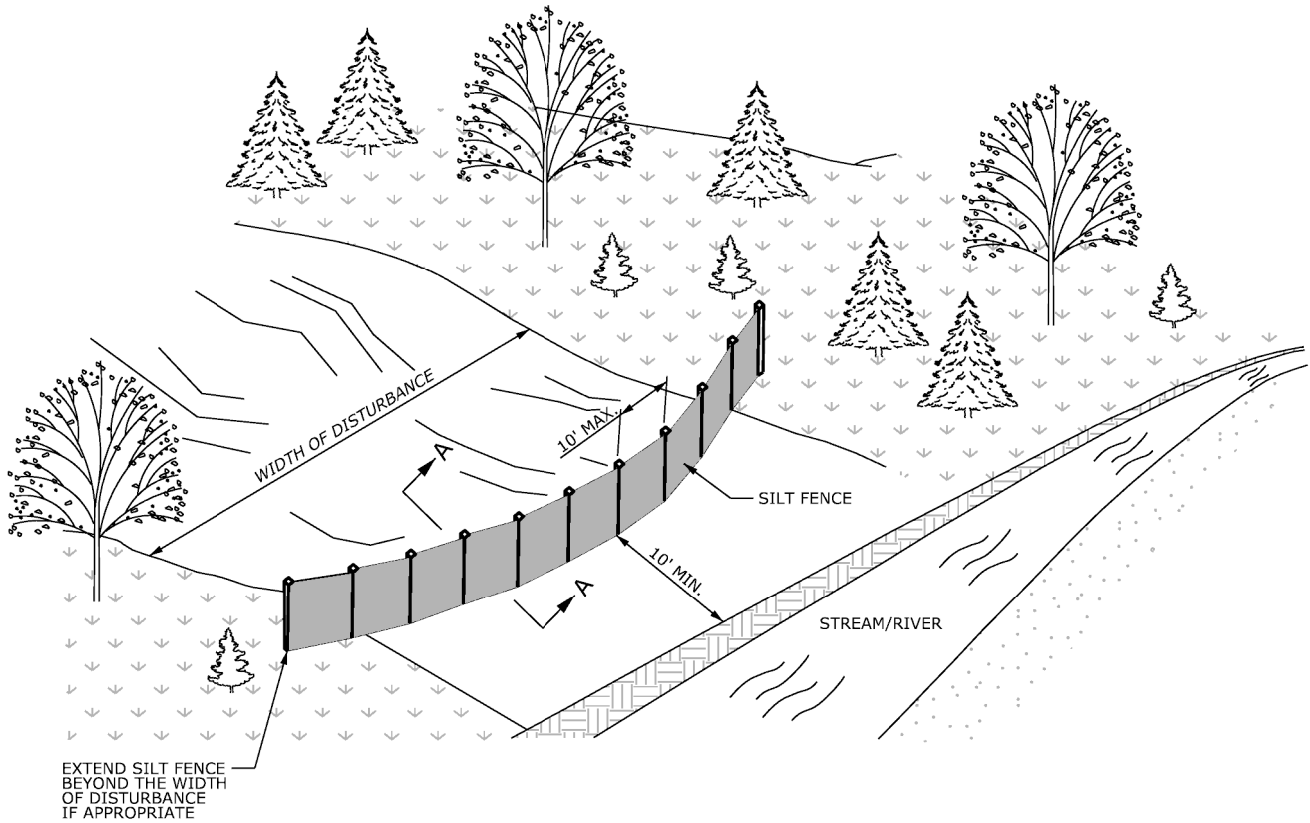
1. Install a straw bale dewatering structure when necessary to prevent the flow of heavily silt laden water into waterbodies or wetlands.
2. Discharge site should be well vegetated and located at least 50 feet away from any waterbody. The topography of the site should be such that water will flow into the dewatering structure and away from any work areas. The area downslope from the dewatering site must be reasonably flat or stabilized by vegetation or other means to allow the filtered water to continue as sheet flow.
3. Direct the pumped water onto a stable spill pad constructed of rockfill, weighted timbers or a woven geotextile staked to the ground surface. Beyond the spill pad force the discharge water into sheet flow using straw bales and the natural topography.
4. Discharge rates should be such that the capacity of the structure will not be exceeded.
5. Discharge water shall be forced into sheet flow immediately beyond the spill pad using a combination of straw bales and the natural topography. Recess straw bales. Drive (2) stakes or rebar into each bale to anchor them in place.
6. Installation specifications to be modified as necessary based on site specific conditions.

**ProSource**  
TECHNOLOGIES

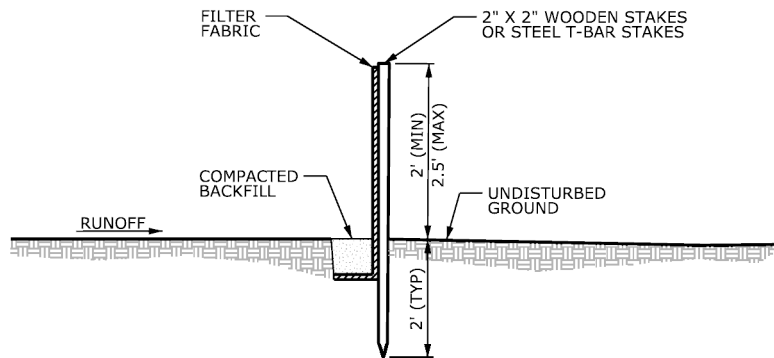
MDU - HESKETT STATION  
10" NATURAL GAS  
PIPELINE PROJECT  
MANDAN, ND

TYPICAL STRAW BALE  
DEWATERING STRUCTURE

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**PLAN VIEW**



**SECTION A-A**

**NOTES:**

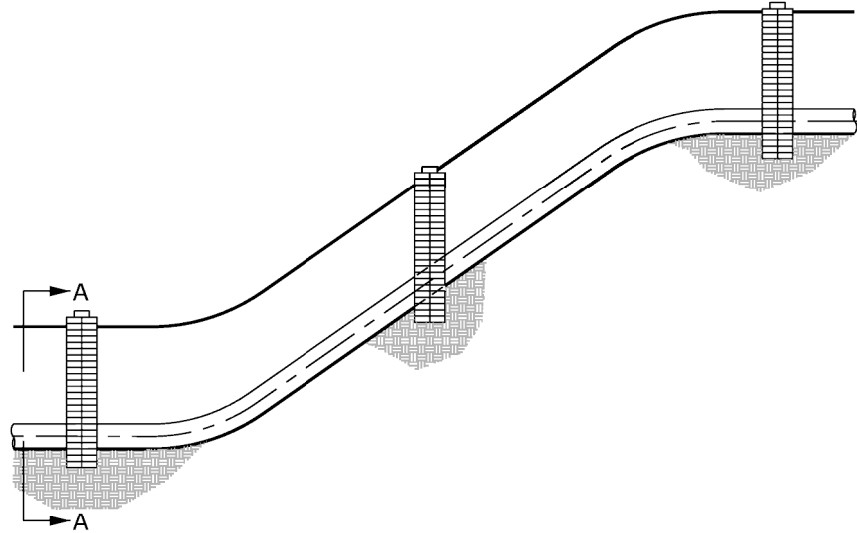
1. Material should be woven geotextile fabric such as Exxon GTF 180 or Mirafi 600X, or an approved equivalent. Secondary reinforcement, such as a construction barrier fence or wire mesh can also be used behind the filter fabric.
2. Silt fence to be reinforced with 2" x 2" wooden stakes or steel T-bar stakes placed every 8' or closer as conditions require.
3. Attach filter fabric at each post at a minimum of 3 locations.
4. The filter fabric minimum length of 1' is to be anchored in a trench with well compacted backfill over the fabric to prevent undermining.
5. To eliminate possible end flow, both ends of the silt fence shall be turned and extended upslope.
6. Silt fences are to be checked and maintained on a regular basis. Remove any build-up of sediment.
7. Where anchoring conditions for the silt fence are poor, place straw bales on downstream side of the silt fence.
8. Installation to be modified by Keystone as necessary to suit actual site conditions.

**ProSource**  
TECHNOLOGIES

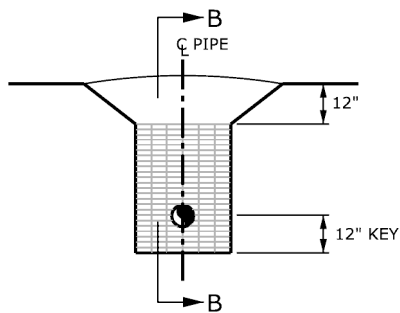
MDU - HESKETT STATION  
10" NATURAL GAS  
PIPELINE PROJECT  
MANDAN, ND

TYPICAL SILT FENCE  
BARRIER

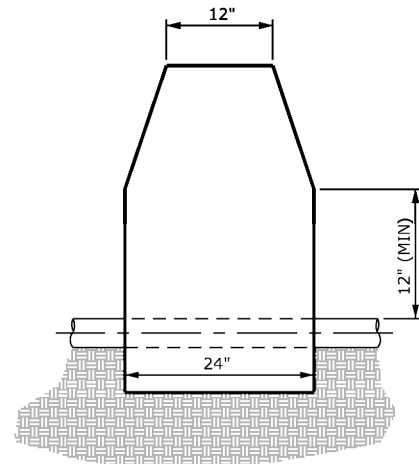
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SECTION



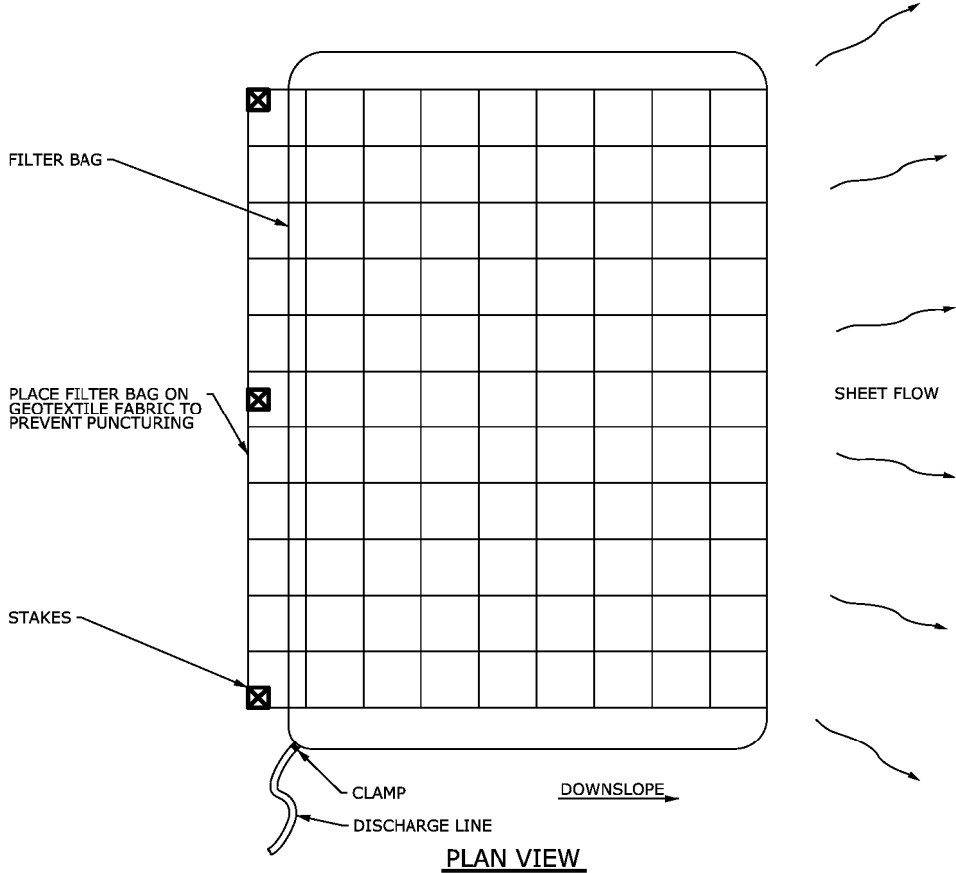
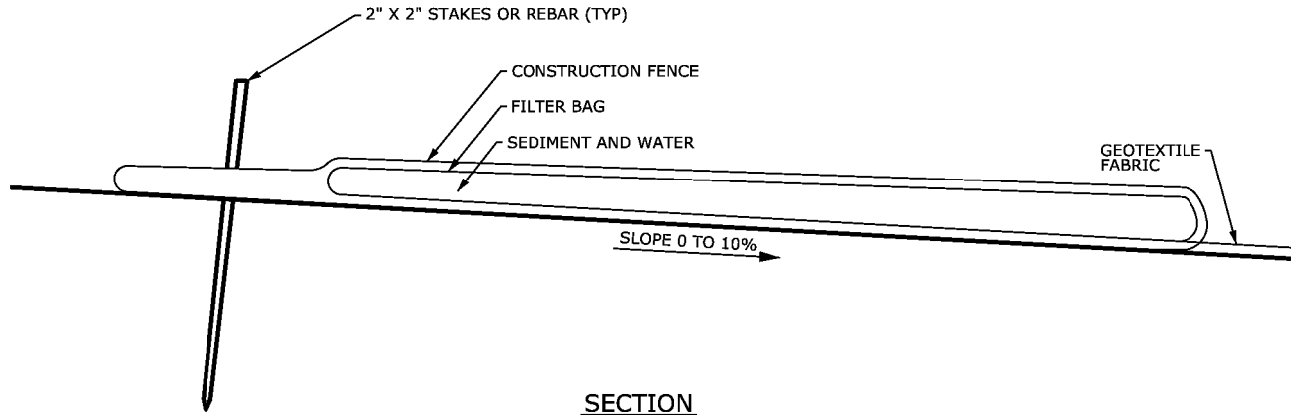
SECTION A-A



SECTION B-B

NOTES:

1. Install trench breakers as directed on the construction drawings.
2. Open weave hemp or jute sacks shall be filled with an average 55 lbs. mixture of:
  - 1) One (1) part cement and six (6) parts sand or subsoil, or
  - 2) One (1) part cement, three (3) parts flyash and five (5) parts sand or subsoil, or
  - 3) Sand.
 Use water to mix and bond sacks. Topsoil is not to be used in sacks.
3. Key each trench breaker a minimum of 1' into bottoms and sides of trench.
4. Foam trench breakers may be used in lieu of sand sack trench breakers.
5. Installation specifications to be modified as necessary based on site specific conditions.



**NOTES:**

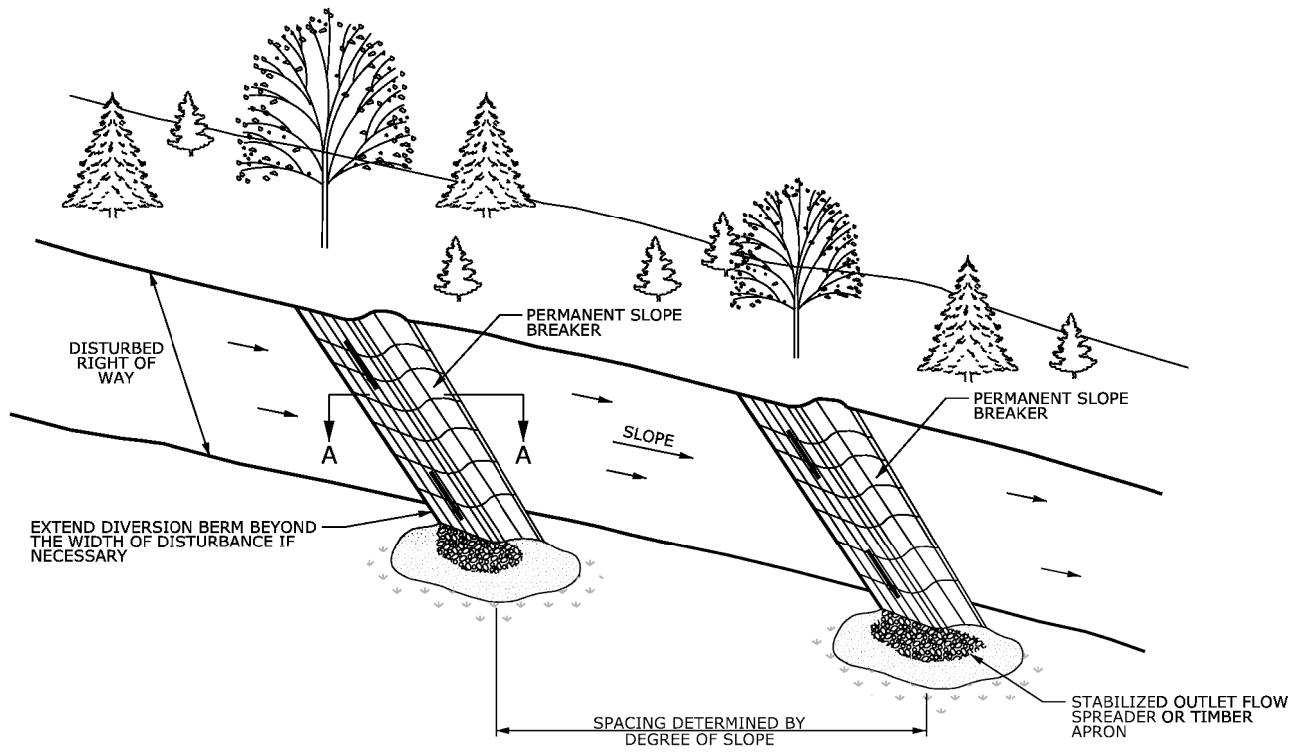
1. Manufactured filter bags are a suitable alternative to straw bale structures for trench dewatering. Filter bags shall be installed as specified by the manufacturer.
2. Installation specifications to be modified by Keystone as necessary to suit actual site conditions.

**ProSource**  
TECHNOLOGIES

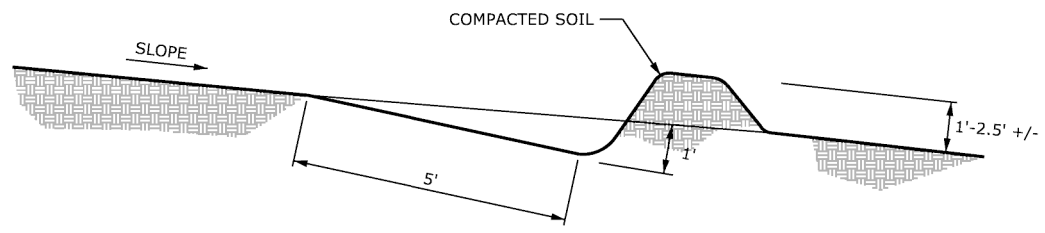
MDU - HESKETT STATION  
10" NATURAL GAS  
PIPELINE PROJECT  
MANDAN, ND

TYPICAL DEWATERING  
FILTER BAG

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**SECTION**



**SECTION A-A**

**NOTES:**

1. Drainage to be directed to adjacent vegetated area.
2. Slope breakers may be modified based on site specific conditions.