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ENVIRONMENTAL CONSULTANTS

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## **Daily Environmental Inspection Reports of Construction of the Laurel Interconnect Pipeline, Cass County, North Dakota**

Prepared for

**NuStar Pipeline Operating Partnership L.P.**

Prepared by

**SWCA Environmental Consultants**

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Environmental Inspection Reports of Construction

SWCA Environmental Consultants

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## Summary

SWCA Environmental Consultants (SWCA) monitored clearing and topsoil removal activities and inspected installation of stormwater erosion and sediment controls along the construction right-of-way (ROW) for the Laurel Interconnect Pipeline during August 23 – 26, 2016, in accordance with the Certification Relating to Order Provisions – Transmission Facility Siting, dated January 20, 2016. As detailed in the following daily reports, SWCA inspected the entire cleared ROW and measured topsoil excavation depths at 18 locations, representing approximately 4.2 miles of the ROW, where the topsoil had been stripped and segregated. The average topsoil excavation depth was 12.4 inches.

## Daily Reports

### August 23, 2016

Work started with a tailgate safety meeting at 7:00 am, followed by construction until 5:00 pm.

Weather:

- Temperature – 69-91 degrees Fahrenheit (°F)
- Wind-17 miles per hour (mph) average from the south
- Precipitation – 0 inches
- Cloud cover: 20%

Crops were mowed from Station 1+00 to Station 223+00 and from Station 340+00 to Station 362+00.

Topsoil scraped and separated from Station 1+00 to Station 65+00. The topsoil was windrowed on top of the mowed and cleared corn field. Topsoil excavation depths along the right-of-way (ROW) were checked at Station 4+00, Station 17+00, Station 26+00, Station 36+00, Station 48+00, and Station 64+00, as summarized in Table 1. Silt fence was installed around stormwater Outfall 1, Outfall 002, and Outfall 003 prior to the topsoil being removed. The outfalls included drainage area from the proposed Prosper Junction site (Outfall 001), the Lower Branch Rush River (Outfall 002), and a roadside ditch wetland (Outfall 003), as indicated on the BMP Location Maps included in Appendix B of the Stormwater Pollution Prevention Plan (SWPPP) for the project. Impacts to the wetlands and river were avoided.

For Outfall 001, silt fence was installed on the north side of the ROW from approximately Station 2+40 to Station 4+40, on the south side of the ROW from Station 4+00, and on the west side of the ROW at Station 12+00 to Station 13+20, as shown in Figure 1, Figure 2, and Figure 3. For Outfall 002, silt fence was installed across the ROW at the northern and southern locations for the horizontal directional drilling (HDD) bore pits (Station 29+00 and Station 31+00, respectively) for the Lower Branch Rush River crossing, as shown in Figure 4 and Figure 5. For Outfall 003, silt fence was installed on the northern and southern sides of the ROW at the HDD bore locations (Station 57+20 and Station 60+40, respectively) for the wetland crossing along County Road 20, as shown in Figure 6 and Figure 7.

## August 24, 2016

Work started with a tailgate safety meeting at 7:00 am, followed by construction until 5:00 pm.

### Weather:

- Temperature- 55-78 °F
- Wind-12 mph average from the west
- Precipitation- trace amount
- Cloud Cover- 20%

The remainder of the ROW was mowed from Station 224+00 through Station 339+00.

Topsoil was scraped and segregated from Station 65+00 to Station 92+00 and was windrowed on top of the mowed and cleared corn field. Topsoil removal depths along the ROW were checked at Station 72+00, Station 85+00, and Station 91+00, as summarized in Table 1. Silt fence was installed ahead of the scraping equipment to help avoid impacts to wetlands or streams. Outfall 004 and Outfall 005 (a drainage ditch and the Maple River, respectively) were crossed and avoided today. Silt fence was installed ahead of the scraping equipment at Station 141+00 through Station 144+00, and at Outfall 006. Impacts to the river were avoided.

For Outfall 004, silt fence was installed on the east and west sides of the ROW, between Station 84+00 and Station 85+00, as shown in Figure 8 and Figure 9. For Outfall 005, silt fence was installed on the south side of the ROW at Station 98+50, as shown in Figure 10. On the north side of Outfall 005, mowing of the corn had stopped where the HDD bore pit would be located, but had not been installed as of this date. Silt fence was installed between Station 141+10 and Station 143+75, as shown in Figure 11. For Outfall 006, silt fence was installed across the ROW and temporary work space at Station 193+90, Station 195+10, and Station 196+00, as shown in Figure 12 and Figure 13.

## August 25, 2016

Work started with a tailgate meeting at 7:00 am, followed by construction until 5:00 pm.

### Weather:

- Temperature- 55-71 °F
- Wind-10 mph average from the west
- Precipitation- trace amount
- Cloud Cover- 70%

Topsoil was stripped and windrowed on top of the mowed and cleared corn field between Station 100+00 and Station 164+00. Topsoil removal depths along the ROW were checked at Station 105+00, Station 113+00, Station 136+00, Station 145+00, and Station 156+00, as summarized in Table 1. Silt fence was installed ahead of scraping equipment at Outfall 007 and Outfall 008, to prevent impacts to the identified road ditch wetlands.

For Outfall 007, silt fence was installed at/near Station 221+00, Station 224+00, Station 225+00, and Station 226+00, as shown in Figure 14, Figure 15, Figure 16, and Figure 17. For Outfall 008, silt fence was installed at Station 233+50 and Station 235+60, as shown in Figure 18 and Figure 19.

### **August 26, 2016**

Work started with a tailgate safety meeting at 7:00 am, followed by construction until 5:00 pm.

Weather:

- Temperature –50 -77°F
- Wind- 8.5 mph average from the southwest
- Precipitation – Trace amount
- Cloud cover: 30%

Topsoil was stripped and windrowed on top of the mowed and cleared corn field up to Station 194+00 and the topsoil excavation depths were checked at Station 185+00, Station 253+00, and Station 260+00, as summarized in Table 1. Topsoil stripping was planned to occur from Station 197+00 to Station 263+00, but was not completed before the end of the day. Construction activity was focused around Outfall 007 and Outfall 008, where silt fences had been installed the previous day. Ditch wetlands were avoided. For Outfall 009, silt fence was installed ahead of the scrapers at Station 288+50, as shown in Figure 20, while for Outfall 010, silt fence was installed across the ROW at Station 304+40. For Outfall 011, silt fence was installed at station 343+10, as shown in Figure 21.

### **August 27, 2016**

Work delayed a day due to rainy weather.

Weather (as of 1:00 pm):

- Temperature –59-72 °F
- Wind- 10 mph average from the south
- Precipitation – 0.10"
- Cloud cover: 100%

**Table 1. Topsoil Excavation Depths**

<b>Station Number</b>	<b>Soil depth</b>	<b>Side of ROW w/ topsoil windrow</b>
<b>004+00</b>	11	North
<b>017+00</b>	14	East
<b>026+00</b>	12	East
<b>036+00</b>	12	East
<b>048+00</b>	13	East
<b>064+00</b>	11	South
<b>072+00</b>	12	East
<b>085+00</b>	14	East
<b>091+00</b>	12 ½	East
<b>105+00</b>	12	East
<b>113+00</b>	11 ½	East
<b>136+00</b>	12	East
<b>145+00</b>	12 ½	South
<b>156+00</b>	13	South
<b>168+00</b>	12	South
<b>185+00</b>	11 ½	South
<b>253+00</b>	14	West
<b>260+00</b>	13	West

**Appendix A**  
**Selected BMP and Topsoil Excavation Photographs**



**Figure 1.** Outfall 001– Silt fence installed on the north side of the ROW at Station 002+40 to Station 004+40, looking northwest.



**Figure 2.** Outfall 001, silt fence on south side of Station 004+50, looking south.



**Figure 3. Outfall 001, silt fence on west side of ROW at Station 012+00.**



**Figure 4. Outfall 002, silt fence on the north side (foreground) of the Lower Branch Rush River, looking south.**



**Figure 5.** Outfall 002, silt fence on the south side (foreground) of the Lower Branch Rush River, looking north.



**Figure 6.** Outfall 003, silt fence on the north side of County Road 20, looking south.



**Figure 7.** Outfall 003, silt fence on the north side of County Road 20, looking south.



**Figure 8.** Outfall 004, silt fence on the west side of the ROW at Station 084+00 and Station 085+00.



**Figure 9.** Outfall 004, silt fence on the east side of the ROW at Station 084+00 and Station 085+00.



**Figure 10.** Outfall 005, silt fence installed on the south side of the Maple River at Station 098+00, looking north.



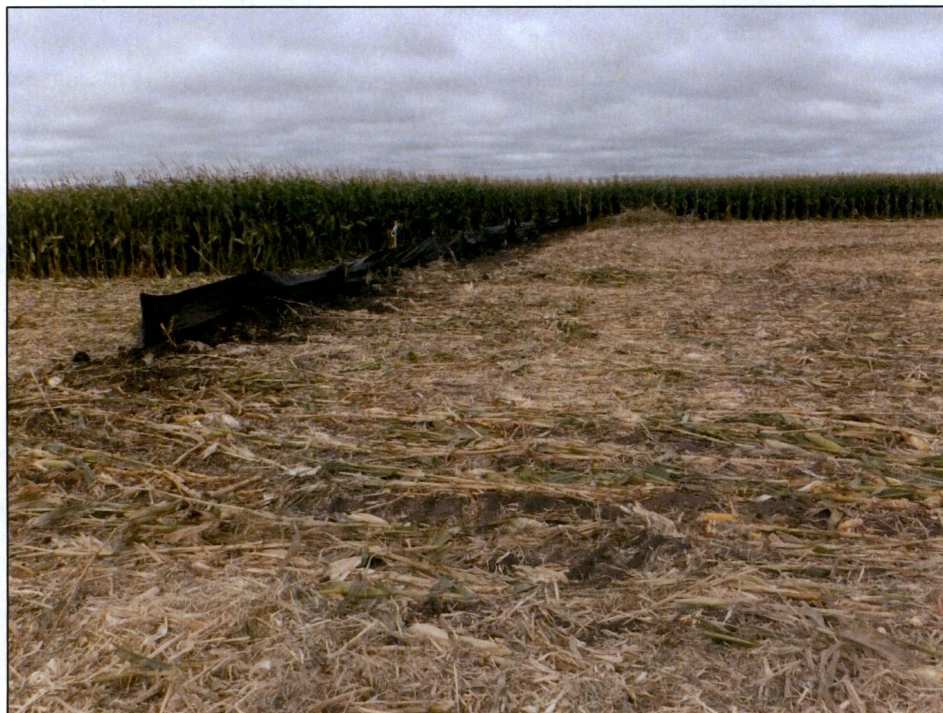
**Figure 11.** Silt fence installed from Station 141+00 to Station 144+00, looking southwest.



**Figure 12.** Outfall 006, silt fence installed on the east side of 165th Ave. SE, between Station 194+00 and Station 196+00, looking west.



**Figure 13.** Outfall 006, silt fence installed on the west side of 165th Ave. SE. between Station 194+00 and Station 196+00, looking northwest.



**Figure 14.** Outfall 7, silt fence at 221 looking west.



**Figure 15.** Outfall 007, silt fence installed at Station 225+00, looking south.



**Figure 16.** Outfall 007, silt fence installed at Station 224+00, looking south.



**Figure 17.** Outfall 007, silt fence installed at Station 224+00, looking northwest.



**Figure 18.** Outfall 008, silt fence installed at Station 233+00 (foreground), looking south.



**Figure 19.** Outfall 008, silt fence installed at Station 236+00 (foreground), looking north.



**Figure 20.** Outfall 009, silt fence installed at Station 289+00, looking southeast.



**Figure 21.** Silt fence installed at Station 337+00, looking north.