

KEYSTONE XL PIPELINE PROJECT

0382-SD-P4-321.0-321.5-1

KEYSTONE XL PIPELINE PROJECT PIPELINE ROUTE VARIATION FORM			
1	VARIATION TYPE: Refinement: <input type="text"/> Reroute: <input checked="" type="checkbox"/> Footprint: <input type="text"/> Design: <input type="text"/> Centerline: <input checked="" type="checkbox"/> Pump Station: <input type="text"/> Valve Site: <input type="text"/> CAR: <input type="text"/>		
2	LOCATION: Sketch: <input type="text" value="Attached"/> Pictures: <input type="text" value="N/A"/> State: <input type="text" value="SD"/> County: <input type="text" value="Harding"/> Quad Map: <input type="text" value="N/A"/> Township: <input type="text" value="19N"/> Range: <input type="text" value="05E"/> Aerial Map: <input type="text" value="See attached map sheet"/> Section: <input type="text" value="28"/> Centerline: <input type="text" value="8/15/2012"/> MP: <input type="text" value="321.02"/> to <input type="text" value="321.48"/>		
3	REASON FOR ROUTE VARIATION (Please include reason for route variation): The primary reason for this route variation is to avoid having the temporary workspaces impacting tract ML-SD-HA-11792. This proposed reroute is requested by Land and is proposed based on the recommendations from the CPMS 60% Design Review. The proposed reroute was drawn based on a combination of aerial imagery, Pictometry, and LIDAR data.		
DETAIL ROUTE VARIATION (Please describe route variation in detail): The proposed route variation starts near MP 321.0 and deviates ~2° east of the current centerline. The reroute extends in this direction for ~530 ft. Then, the reroute turns slightly southeast and continues for ~1,925 ft to rejoin the current CL near MP 321.5.			
ADDITIONAL IMPACTS (Please include any additional impacts which may affect cost; crossings, induction bends, etc.): 3 Tracts are impacted by this centerline reroute: ML-SD-HA-01790.000 (Estate of Dorothy E Gottshalk and James C. Peterson and Linda (Peterson) Jackson) ML-SD-HA-11792.000 (Doolittle Wagner Ranch LLC) - To be offline ML-SD-HA-01795.000 (Doolittle Wagner Ranch LLC) The proposed route variation falls within the current environmental surveyed corridor, so no additional costs associated with environmental surveys will be incurred.			
Is there an increase/decrease in the number of crossings? Yes <input type="text"/> No <input checked="" type="checkbox"/>			
If yes, please list: <input type="text"/> <input type="text"/>			
COST ANALYSIS (costs incurred or saved from the route variation)			
Additional length of route realignment:	<input type="text" value="0"/> ft.	\$ <input type="text" value="97.50"/>	\$ 360/ft
Additional length of side-hill construction:	<input type="text" value="0"/> ft.	\$ <input type="text" value="-"/>	\$ 19/ft
Additional length of wetland construction:	<input type="text" value="0"/> ft.	\$ <input type="text" value="-"/>	\$ 195/ft
Additional bore length (Road, RR):	<input type="text"/> ft.	\$ <input type="text" value="-"/>	\$ 540/ft
Additional foreign line/pipeline crossings:	<input type="text"/> EA	\$ <input type="text" value="-"/>	\$ 30,000/EA
Additional water body crossing (streams, ponds, etc.):			
35 - 65' +	<input type="text" value="0"/> EA	\$ <input type="text" value="-"/>	\$ 185,000/EA
10' - 19'	<input type="text" value="0"/> EA	\$ <input type="text" value="-"/>	\$ 77,250/EA
Less than 10'	<input type="text" value="0"/> EA	\$ <input type="text" value="-"/>	\$ 32,500/EA
Additional survey required:			
Civil:	<input type="text" value="0.46"/> mile	\$ <input type="text" value="2,324.58"/>	\$ 5,000/mile
Cultural:	<input type="text" value="0.00"/> mile	\$ <input type="text" value="-"/>	\$ 2,500/mile
Biological:	<input type="text" value="0.00"/> mile	\$ <input type="text" value="-"/>	\$ 2,800/mile
Miscellaneous costs saved or added due to route variation from ADDITIONAL IMPACTS listed above: <input type="text"/>			
Overall estimated costs of the route variation: <input type="text" value="\$ 2,422.08"/> (See "Additional Impacts" above)			

4 **LAND / TransCanada** Tina Hall

a) Is a new landowner affected by the proposed variation? Yes No

b) Is the affected landowner/tract a possible condemnation? Yes No

c) Does proposed route variation impact Tribal Lands? Yes No

d) Does proposed route variation impact any Federal/State Lands? Yes No
 -If yes, name type (i.e. USFWS, BLM, etc.):

e) Is proposed realignment outside the easement/workspace? Yes No

f) Is realignment proposed to satisfy landowner request? Yes No
 -If yes, name of landowner(s)/track number(s):

g) Has all the evaluation criteria been examined/provided for this specific discipline? Yes No
 If no, please explain why:

5 **ENGINEERING/CONSTRUCTION - TransCanada** Meera Kothari

a) Maximum deviation perpendicular to proposed alignment: ft.

b) Does variation (CL) (including workspaces) falls within 500 ft. MDEQ Corridor? Yes No

c) Has the centerline been staked for construction? Yes No

d) Does route variation affect HDD crossing alignment? Yes No

e) Is realignment proposed for engineering/construction reasons? Yes No

f) Will the route variation require the relocation of a pump station? Yes No

g) Has all the evaluation criteria been examined/provided for this specific discipline? Yes No
 If no, please explain why:

6 **ENVIRONMENTAL - TransCanada** Sandra Barnett

a) Has the corridor been environmentally surveyed? Yes No

b) Has the proposed variation been environmentally surveyed? Yes No

c) Does proposed route variation impact Sage Grouse areas? Yes No

d) Does route variation impact ABB areas? Yes No

e) Was variation proposed to satisfy environmental issues? Yes No

f) Was realignment proposed to satisfy agency request? Yes No
 -If yes, name of agency(s):

g) Environmental features:
 Added (+): Subtracted (-):
 Wetland ID # for newly impacted wetlands:

h) Has all the evaluation criteria been examined/provided for this specific discipline? Yes No
 If no, please explain why:

7 **ENGINEERING / FACILITIES AND HYDRAULICS (if applicable)** Sandra Gigovic

a) Will the route variation require the relocation of a pump station? Yes No

b) Will route variation impact hydraulics? Yes No

c) Are additional valves required at HCA's or water crossing? Yes No

d) Has all the evaluation criteria been examined/provided for this specific discipline? Yes No
 If no, please explain why:

8 **STAKEHOLDER RELATIONS / TCPL (if applicable)** Bud Andersen

a) Does the variation result in any new stakeholders? Yes No

b) Does the variation require follow-up with specific stakeholder groups? Yes No

c) Was the variation proposed to satisfy stakeholder request? Yes No
 -If yes, please specify issue type (as it aligns to stakeholder database):

d) Has all the evaluation criteria been examined/provided for this specific discipline? Yes No
 If no, please explain why:

9 Originator:
 Date:

10 Received by:
 Date:
 Fax to: ?

11 Assigned Tracking Number:

12 Filed by:
 Date:
 Fax to: ?

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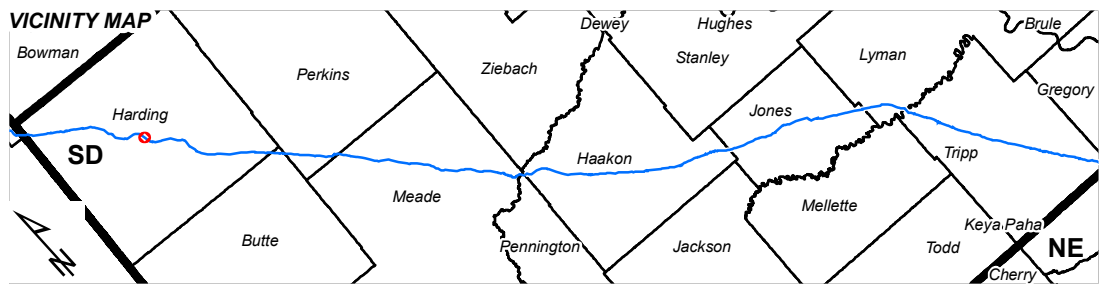
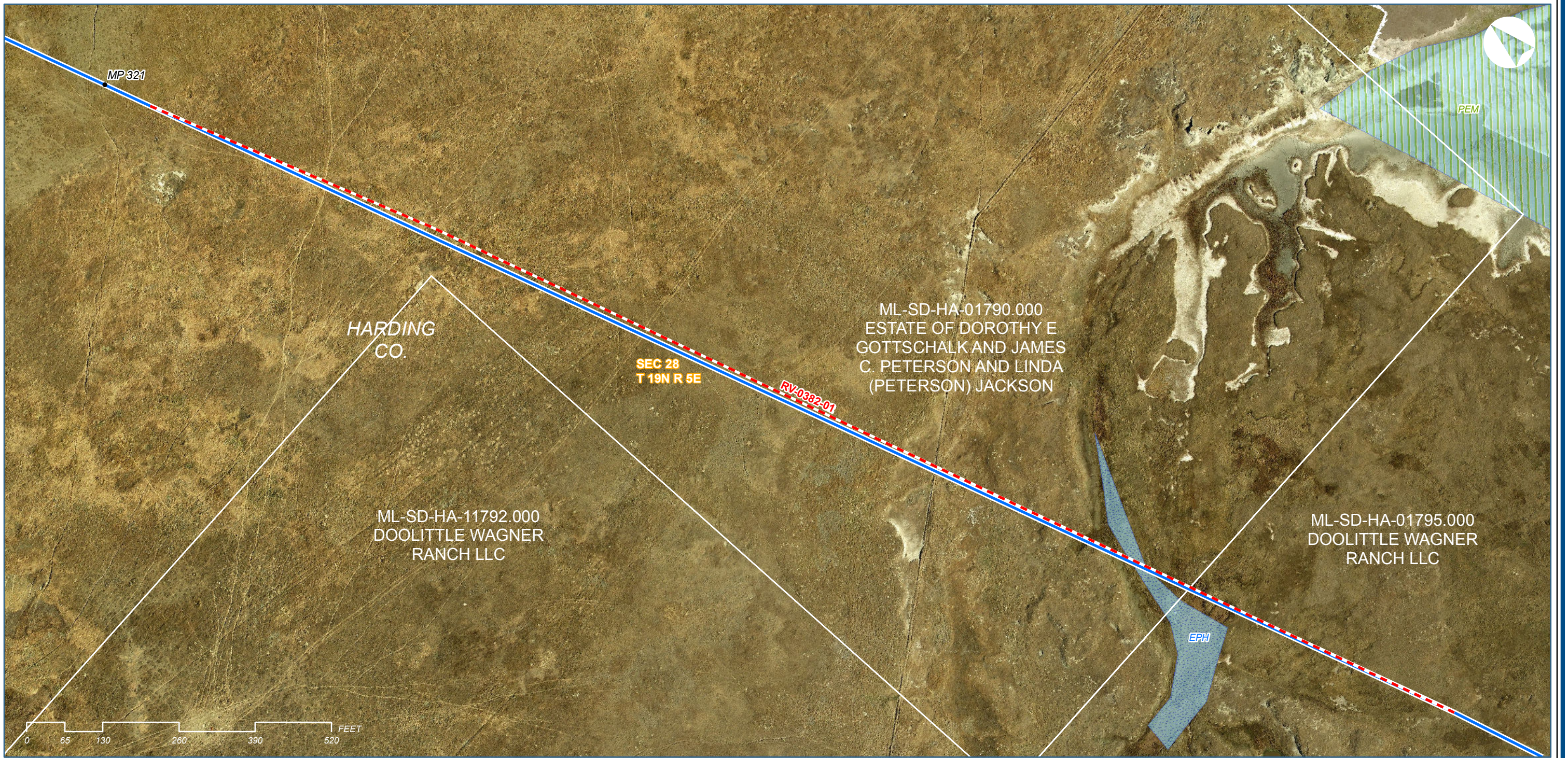
KEYSTONE XL PIPELINE PROJECT ROUTE VARIATION AUTHORIZATION FORM			
Date: <u>10/29/2012</u>	Tracking Number: <u>0382-SD-P4-321.0-321.5-1</u>		
Description: <u>The primary reason for this route variation is to avoid having the temporary workspaces impacting tract ML-SD-HA-11792.</u>	MP: <u>321.0</u> to <u>321.5</u>		
	Originated By: <u>Land</u>		
	Variation Form Attached: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
<u>TransCanada - Land</u> Tina Hall	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>		
Comments:	<u>Tina Hall</u> Date: <u>11-5-12</u>		
	If Rejected Why?		
<u>TransCanada - Engineering</u> Meera Kothari	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>		
Comments:	<u>Meera</u> Date: <u>11/02/12</u>		
	If Rejected Why?		
<u>Exp - Engineering</u> Kevin McGlynn	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>		
Comments:	<u>Kevin</u> Date: <u>12/10/12</u>		
	If Rejected Why?		
<u>TransCanada - Environmental</u> Sandra Barnett	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>		
Comments:	Date: _____		
	If Rejected Why?		
<u>Stantec - Risk Assessment</u> Heidi Tillquist	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>		
Comments: <u>N/A.</u>	Date: _____		
	If Rejected Why?		
<u>TransCanada - Facilities</u> Sandra Gigovic	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>		
Comments: <u>N/A. Does not affect facilities</u>	Date: _____		
	If Rejected Why?		
<u>TransCanada - PM (Montana)</u> Alan Lietz	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>		
Comments:	Date: _____		
	If Rejected Why?		
<u>TransCanada - PM (South Dakota)</u> James Odom	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>		
Comments:	<u>James</u> Date: <u>12/10/12</u>		
	If Rejected Why?		
<u>TransCanada - PM (Nebraska)</u> Robert Bradley	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>		
Comments:	Date: _____		
	If Rejected Why?		
<u>TransCanada - Area Manager</u> Steve Marr	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>		
Comments:	Date: _____		
	If Rejected Why?		
Forward to:	Tina Hall <input type="checkbox"/>	Sandra Barnett <input type="checkbox"/>	James Odom <input type="checkbox"/>
	Meera Kothari <input type="checkbox"/>	Heidi Tillquist <input type="checkbox"/>	Robert Bradley <input type="checkbox"/>
	Kevin McGlynn <input type="checkbox"/>	Sandra Gigovic <input type="checkbox"/>	Steve Marr <input type="checkbox"/>
		Alan Lietz <input type="checkbox"/>	

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KEYSTONE XL PIPELINE PROJECT

KEYSTONE XL PIPELINE PROJECT ROUTE VARIATION AUTHORIZATION FORM	
Date: 10/29/2012	Tracking Number: 0382-SD-P4-321.0-321.5
Description: The primary reason for this route variation is to avoid having the temporary workspaces impacting tract M1-SD-HA-11782.	MP: 321.0 to 321.5
	Originated By: Land
	Variation Form Attached: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
TransCanada - Land Tina Hall	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>
Comments:	Date:
	If Rejected Why?
TransCanada - Engineering Meera Kothari	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>
Comments:	Date:
	If Rejected Why?
Exp - Engineering Kevin McGlynn	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>
Comments:	Date:
	If Rejected Why?
TransCanada - Environmental Sandra Barnett	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>
Comments:	Date:
	If Rejected Why?
Slantco - Risk Assessment Heidi Takquist	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>
Comments: N/A	Date:
	If Rejected Why?
TransCanada - Facilities Sandra Glogovc	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>
Comments: N/A. Does not affect facilities	Signature: [Signature] Date: Dec 5, 2012
	If Rejected Why?
TransCanada - PM (Montana) Alan Uetz	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>
Comments:	Date:
	If Rejected Why?
TransCanada - PM (South Dakota) James Odom	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>
Comments:	Date:
	If Rejected Why?
TransCanada - PM (Nebraska) Robert Bradley	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>
Comments:	Date:
	If Rejected Why?
TransCanada - Area Manager Steve Marr	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>
Comments:	Date:
	If Rejected Why?
Forward to: Tina Hall <input type="checkbox"/> Sandra Barnett <input type="checkbox"/> James Odom <input type="checkbox"/> Meera Kothari <input type="checkbox"/> Heidi Takquist <input type="checkbox"/> Robert Bradley <input type="checkbox"/> Kevin McGlynn <input type="checkbox"/> Sandra Glogovc <input type="checkbox"/> Steve Marr <input type="checkbox"/> Alan Uetz <input type="checkbox"/>	

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LEGEND

- MILEPOST
- KEYSTONE XL CL (2012-08-15)
- - - PROPOSED ROUTE VARIATION
- ▭ SECTION LINE
- ACCESS ROAD
- ▭ PUMP STATION
- ⊗ VALVE
- ▭ PROPERTY PARCEL
- ▭ CULTURAL SITE
- ▨ WETLAND
- ▨ WATERBODY

KEYSTONE XL PROJECT

Proposed Route Variation 0382-01

COUNTY:	HARDING	DRAWN BY:	CR
STATE:	SOUTH DAKOTA	CHECKED BY:	JP
REV. NO.:	0	REVISION	ISSUED FOR REVIEW.
		DATE	2012-10-26
PRELIMINARY			
DATE:	2012-10-26	PROJECTION:	NAD83 UTM13 N

PREPARED BY:

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