

0178-SD-P2-593.3-594.6-S

KEYSTONE PIPELINE PROJECT - U.S. PHASE IV (STEELE CITY SEGMENT) PIPELINE ROUTE VARIATION FORM				
1	VARIATION TYPE:	Refinement: <input type="text"/>	Reroute: <input checked="" type="checkbox"/>	
	Centerline: <input checked="" type="checkbox"/>	Valve Site: <input type="text"/>	Pump Station: <input type="text"/>	
2	LOCATION:	Sketch: <input type="text" value="Attached"/>	Pictures: <input type="text" value="See attached."/>	
	State: <input type="text" value="SD"/>	County: <input type="text" value="Tripp"/>	Quad Map: <input type="text" value="N/A"/>	
	Township: <input type="text" value="95N"/>	Range: <input type="text" value="74W"/>	Aerial Map: <input type="text" value="See attached map sheet"/>	
	Section: <input type="text" value="15, 22, 23"/>	Centerline: <input type="text" value="3/26/2010"/>	MP: <input type="text" value="593.25"/> to <input type="text" value="594.58"/>	
3	REASON FOR ROUTE VARIATION (Please include reason for route variation):			
	This reroute is proposed to avoid any construction impacts to a cultural feature near MP 593.7.			
	DETAIL ROUTE VARIATION (Please describe route variation in detail):			
	The proposed reroute starts at MP 593.2 and deviates slightly (~8°) towards the southeast. It continues in this direction for ~3,720 ft until it avoids the side slope of a small hill near MP 594, along its path the proposed reroute keeps away (~300 ft to avoid any impacts) from the cultural resource feature near MP 593.7. The proposed reroute then turns towards the east and continues for 3,310 ft to rejoin the current centerline at near MP 594.6.			
	ADDITIONAL IMPACTS (Please include any additional impacts which may affect cost; crossings, induction bends, etc.):			
	The proposed reroute is ~53 ft longer than the current route.			
	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"/>			
	COST ANALYSIS (costs incurred or saved from the route variation)			
	Additional length of route realignment:	<input type="text" value="53"/> ft.	\$ 19,080.00	\$ 360/ft
	Additional length of side-hill construction:	<input type="text" value="-700"/> ft.	\$ (13,300.00)	\$ 19/ft
	Additional length of wetland construction:	<input type="text"/> ft.	\$ -	\$ 195/ft
	Additional bore length (Road, RR):	<input type="text"/> ft.	\$ -	\$ 540/ft
	Additional foreign line/pipeline crossings:	<input type="text"/> EA	\$ -	\$ 30,000/EA
	Additional water body crossing (streams, ponds, etc.):			
	35 - 65' +	<input type="text"/> EA	\$ -	\$ 185,000/EA
	10' - 19'	<input type="text"/> EA	\$ -	\$ 77,250/EA
	Less than 10'	<input type="text"/> EA	\$ -	\$ 32,500/EA
	Additional survey required:			
	Civil:	<input type="text" value="1.33"/> mile	\$ 6,650.00	\$ 5,000/mile
	Cultural:	<input type="text" value="1.33"/> mile	\$ 3,325.00	\$ 2,500/mile
	Biological:	<input type="text" value="1.33"/> mile	\$ 3,724.00	\$ 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="\$ 19,479"/>	(See "Additional Impacts" above)	

4
LAND / UNIVERSAL FIELD *Doug Reichley*

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

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

c) Is realignment proposed to satisfy landowner request? Yes No

-If yes, name of landowner(s)/track number(s): _____

d) Has all the evaluation criteria been examined/provided for this specific discipline? Yes No

If no, please explain why: _____

5
ENGINEERING/CONSTRUCTION / STATE PM *David Guien*

a) Maximum deviation perpendicular to proposed alignment: _____ 470 ft.

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

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

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

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

f) Has all the evaluation criteria been examined/provided for this specific discipline? Yes No

If no, please explain why: _____

6
ENVIRONMENTAL / TROW *Jonathan Minton*

a) Has the corridor been environmentally surveyed? Yes No

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

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

d) Was realignment proposed to satisfy agency request? Yes No

-If yes, name of agency(s): _____

e) Environmental features:

Added (+): NA Subtracted (-): Eligible cultural feature S-SB-1

Wetland ID # for newly impacted wetlands: _____

f) Has all the evaluation criteria been examined/provided for this specific discipline? Yes No

If no, please explain why: _____

7
ENGINEERING / FACILITIES AND HYDRAULICS *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 *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: _____

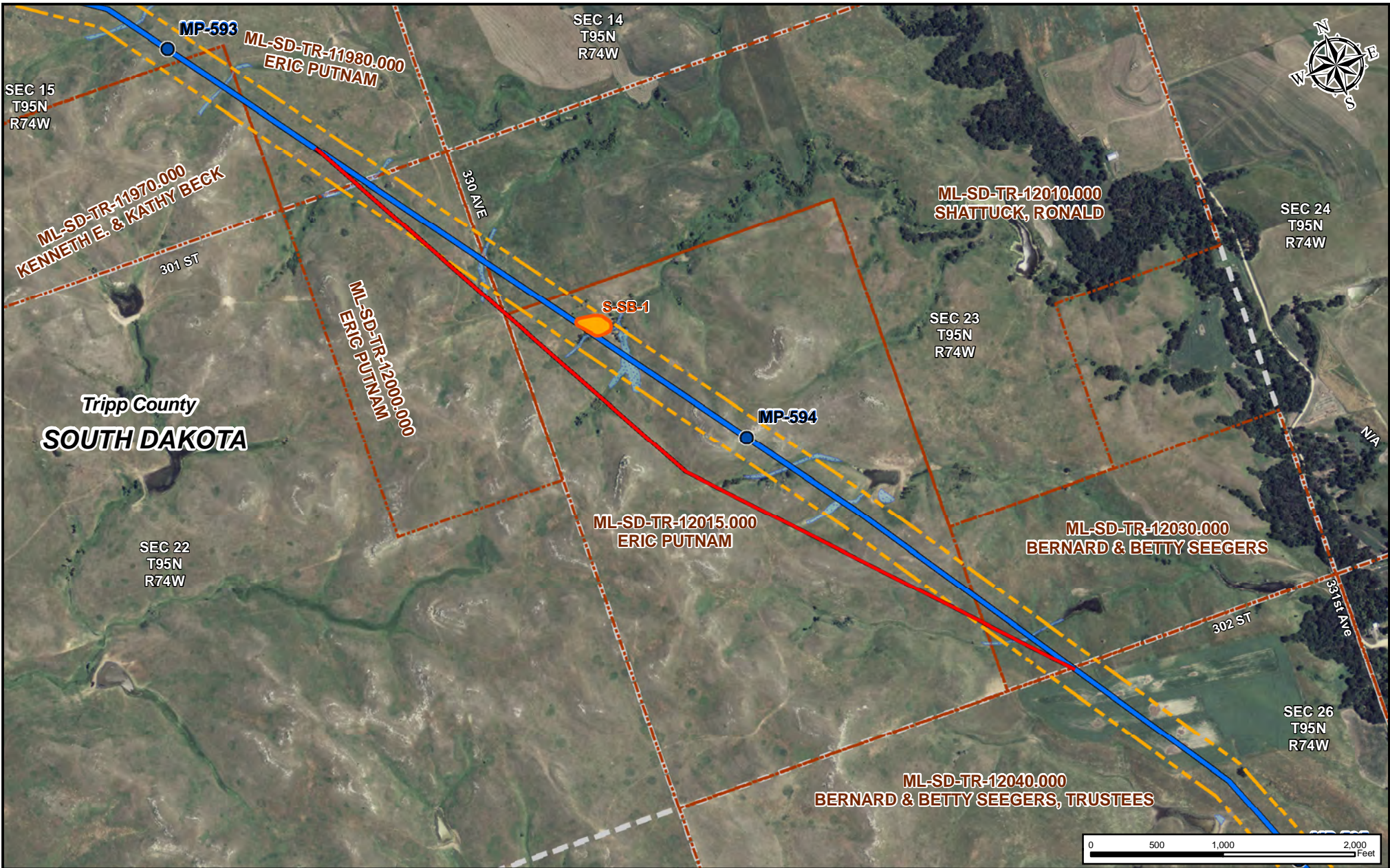
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KEYSTONE PIPELINE PROJECT - U.S. PHASE IV (STEELE CITY SEGMENT)

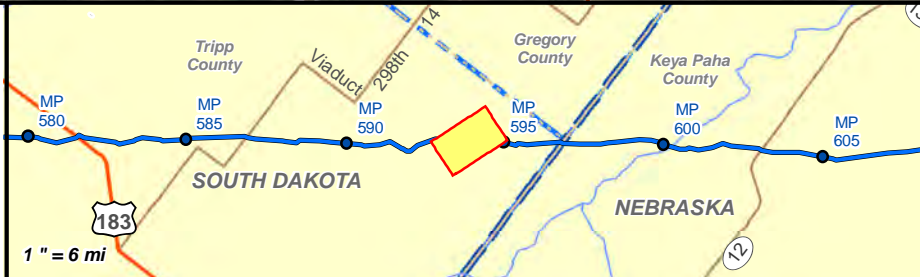
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KEYSTONE PIPELINE PROJECT - U.S. PHASE IV (STEELE CITY SEGMENT) ROUTE VARIATION AUTHORIZATION FORM			
Date: <input style="width: 100%;" type="text" value="9/14/2010"/>	Tracking Number: <input style="width: 100%;" type="text" value="0178-SD-P2-593.3-594.6-S"/>		
Description: <input style="width: 100%;" type="text" value="Reroute to avoid Cultural features."/>	MP: <input style="width: 20%;" type="text" value="593.3"/> to <input style="width: 20%;" type="text" value="594.6"/>		
Originated By: <input style="width: 100%;" type="text" value="Environmental"/>		Variation Form Attached: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Universal Field - Land Doug Reichley	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>		
Comments: <input style="width: 100%; height: 40px;" type="text"/>	<input style="width: 100%;" type="text" value="Doug Reichley"/> Date: <input style="width: 100%;" type="text" value="9/14/2010"/>		
If Rejected Why? <input style="width: 100%; height: 40px;" type="text"/>			
State PM - Construction / Eng. David Guien	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>		
Comments: <input style="width: 100%; height: 40px;" type="text"/>	<input style="width: 100%;" type="text" value="David Guien"/> Date: <input style="width: 100%;" type="text" value="9/18/2010"/>		
If Rejected Why? <input style="width: 100%; height: 40px;" type="text"/>			
Trow - Environmental Jonathan Minton	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>		
Comments: <input style="width: 100%; height: 40px;" type="text" value="Biological and cultural surveys will need to be completed."/>	<input style="width: 100%;" type="text" value="Jonathan Minton"/> Date: <input style="width: 100%;" type="text" value="9/14/2010"/>		
If Rejected Why? <input style="width: 100%; height: 40px;" type="text"/>			
Project Management Butch Wallace	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>		
Comments: <input style="width: 100%; height: 40px;" type="text"/>	<input style="width: 100%;" type="text" value="R.E. Wallace"/> Date: <input style="width: 100%;" type="text" value="9/20/2010"/>		
If Rejected Why? <input style="width: 100%; height: 40px;" type="text"/>			
Stakeholder Relations Bud Andersen	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>		
Comments: <input style="width: 100%; height: 40px;" type="text"/>	<input style="width: 100%;" type="text"/> Date: <input style="width: 100%;" type="text"/>		
If Rejected Why? <input style="width: 100%; height: 40px;" type="text"/>			
Facilities: Sandra Gigovic	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>		
Comments: <input style="width: 100%; height: 40px;" type="text"/>	<input style="width: 100%;" type="text"/> Date: <input style="width: 100%;" type="text"/>		
If Rejected Why? <input style="width: 100%; height: 40px;" type="text"/>			
TransCanada: Alan Lietz	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>		
Comments: <input style="width: 100%; height: 40px;" type="text"/>	<input style="width: 100%;" type="text" value="Alan Lietz"/> Date: <input style="width: 100%;" type="text" value="10/1/2010"/>		
If Rejected Why? <input style="width: 100%; height: 40px;" type="text"/>			
Forward to: Butch Wallace <input checked="" type="checkbox"/> Jonathan Minton <input checked="" type="checkbox"/> Alan Lietz <input checked="" type="checkbox"/>			
David Guien <input checked="" type="checkbox"/> Bud Andersen <input checked="" type="checkbox"/>			
Doug Reichley <input checked="" type="checkbox"/> Sandra Gigovic <input checked="" type="checkbox"/>			
Dispute Resolution, if Required: Yes <input type="checkbox"/> No <input type="checkbox"/>			
Comments: <input style="width: 100%; height: 40px;" type="text"/>		Teleconference Required: Yes <input type="checkbox"/> No <input type="checkbox"/>	
Decision: <input style="width: 100%; height: 40px;" type="text"/>			
Database - <input style="width: 100%;" type="text"/>		Database - <input style="width: 100%;" type="text"/>	
Filed By: <input style="width: 100%;" type="text"/>		Filed By: <input style="width: 100%;" type="text"/>	
Date: <input style="width: 100%;" type="text"/>		Date: <input style="width: 100%;" type="text"/>	
Fax to: ? <input style="width: 100%;" type="text"/>		Fax to: ? <input style="width: 100%;" type="text"/>	



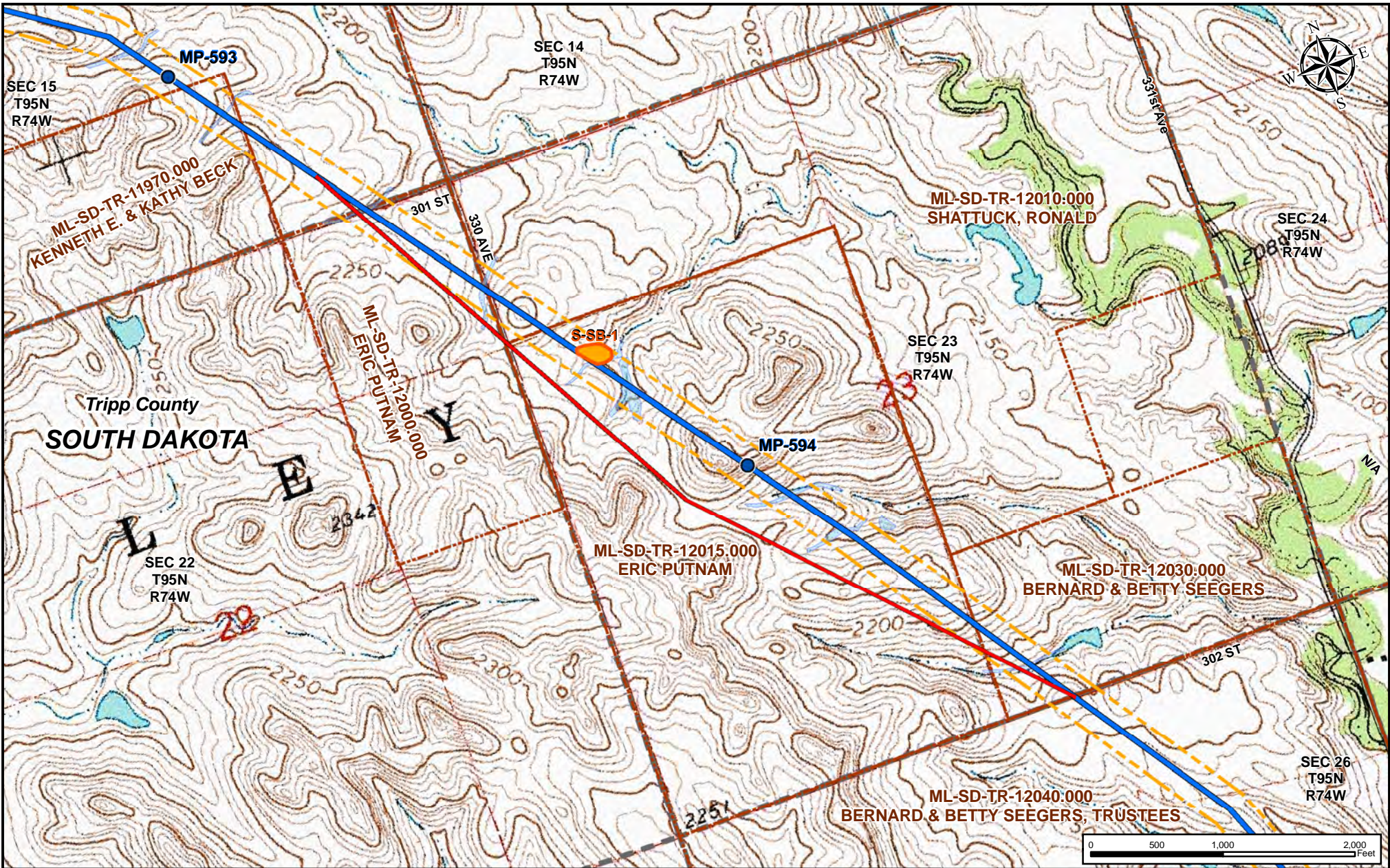
Tripp County
SOUTH DAKOTA

- Legend**
- Milepost
 - Centerline (2010-03-26)
 - Proposed Route Variation
 - ▭ 300ft Corridor
 - Cultural Feature
 - ▭ Waterbody
 - ▭ Wetland
 - ▭ Parcel Boundary
 - ▭ Section Line
 - ▭ County Boundary
 - ▭ State Boundary



KEYSTONE XL PROJECT - STEELE CITY SEGMENT
PROPOSED ROUTE VARIATION 0178
TRIPP COUNTY, SD

	DATE	PROJECT	MAP PARAMETERS		
	Sept. 7, 2010	50388X	PROJECTION: UTM 14, NAD83, US FT SCALE: 1" = 1,000', 1:12,000		
DRAWN BY	CHECKED BY	APPROVED BY	ROUTE VARIATION NUMBER	SHEET	REV.
ACB	NJA	ALS	0178-SD-P2-593.3-594.6-S	001	0



Legend

- Milepost
- Centerline (2010-03-26)
- Proposed Route Variation
- 300ft Corridor
- Cultural Feature
- Waterbody
- Wetland
- Parcel Boundary
- Section Line
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KEYSTONE XL PROJECT - STEELE CITY SEGMENT PROPOSED ROUTE VARIATION 0178 TRIPP COUNTY, SD					
 Trow	DATE	PROJECT	MAP PARAMETERS		
	Sept. 7, 2010	50388X	PROJECTION: UTM 14, NAD83, US FT SCALE: 1" = 1,000', 1:12,000		
DRAWN BY	CHECKED BY	APPROVED BY	ROUTE VARIATION NUMBER	SHEET	REV.
ACB	NJA	ALS	0178-SD-P2-593.3-594.6-S	001	0