

KEYSTONE XL PIPELINE PROJECT

0514-SD-P4-362.0-362.6-S

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 type="text"/> 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="Butte/Perkins"/> Quad Map: <input type="text" value="N/A"/> Township: <input type="text" value="014N"/> Range: <input type="text" value="(009E), 010E"/> Aerial Map: <input type="text" value="See attached map sheet"/> Section: <input type="text" value="(13), 18"/> Centerline: <input type="text" value="11/18/2012"/> MP: <input type="text" value="362.03"/> to <input type="text" value="362.59"/>			
3	REASON FOR ROUTE VARIATION (Please include reason for route variation): The primary reason for this route variation is to avoid impacting eligible prehistoric cultural site (SN # 39PE0481 or C710PE001) by shifting the CL/workspaces southwest, thus avoiding the need for treatment/mitigation. This reroute is requested by Environmental and has been verified by field reconnaissance (civil survey).			
	DETAIL ROUTE VARIATION (Please describe route variation in detail): The proposed route variation begins near MP 362.0 and deviates ~8° to the west from the current CL for 40 ft. before shifting ~9° to the west and continuing for 446 ft. The proposed reroute, then shifts east for 40 ft, then shifts easterly and continues in this direction for ~583 ft. before rounding into an ~1,872 ft. stretch that reconnects to the CL near MP 362.6. 2 Tracts impacted: ML-SD-BU-00120.000 (Dennis Hathaway) ML-SD-PE-00010.000 (Dee Wilcox)			
	ADDITIONAL IMPACTS (Please include any additional impacts which may affect cost; crossings, induction bends, etc.): Additional costs are associated with environmental survey. Additionally, this proposed RV will impact CAR-234 (to be extended towards new proposed CL). Miscellaneous cost savings include: Treatment/mitigation (includes: Mitigation plan and approval by agencies, field work and report, etc) ~\$200,000-\$250,000 The reroute increases pipe length by 114 ft.			
	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:	114 ft.	\$ 40,913.57	\$ 360/ft
	Additional length of side-hill construction:	<input type="text"/> ft.	\$ -	\$ 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="0.00"/> mile	\$ -	\$ 5,000/mile
	Cultural:	<input type="text" value="0.48"/> mile	\$ 1,205.63	\$ 2,500/mile
	Biological:	<input type="text" value="0.48"/> mile	\$ 1,350.30	\$ 2,800/mile
	Miscellaneous costs saved or added due to route variation from ADDITIONAL IMPACTS listed above:			\$ (250,000)
	Overall estimated costs of the route variation:			\$ (206,530.50) (See "Additional Impacts" above)

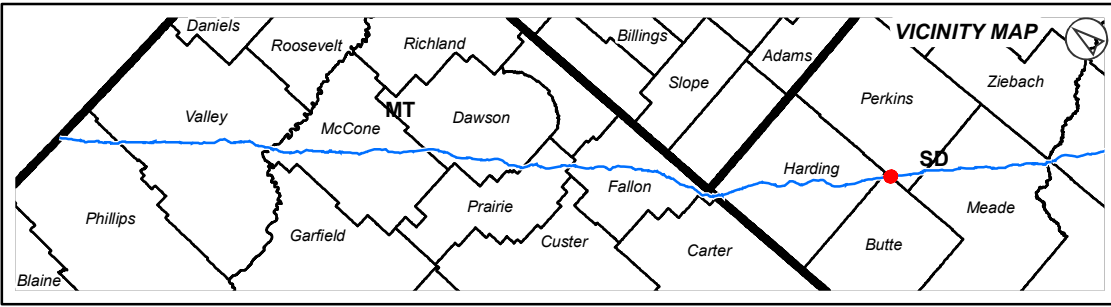
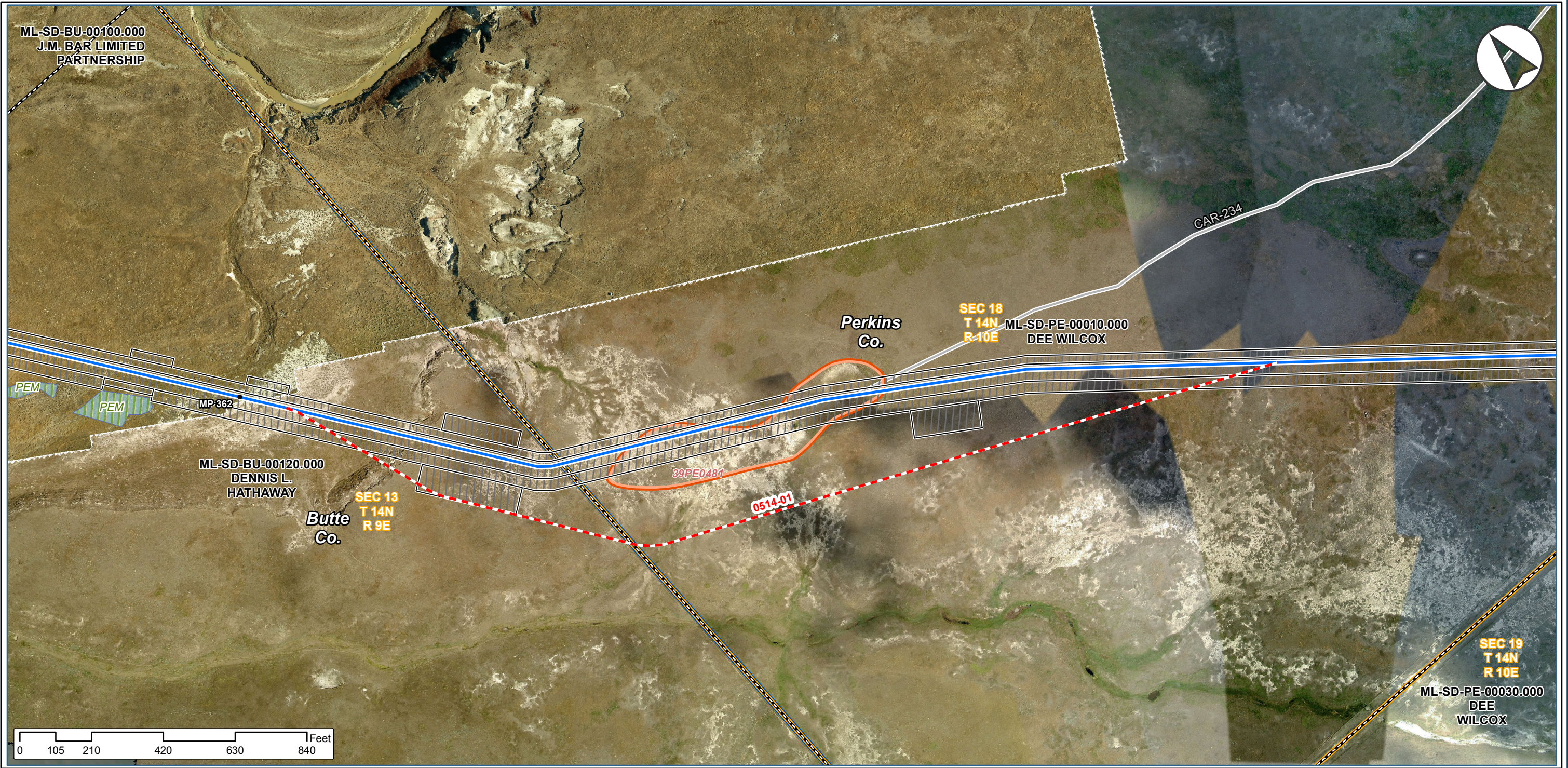
4 LAND / TransCanada <i>Tina Hall</i>	
a) Is a new landowner affected by the proposed variation?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
b) Is the affected landowner/tract a possible condemnation?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
c) Does proposed route variation impact Tribal Lands?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
d) Does proposed route variation impact any Federal/State Lands?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
-If yes, name type (i.e. USFWS, BLM, etc.): <input type="text"/>	
e) Is proposed realignment outside the easement/workspace?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
f) Is realignment proposed to satisfy landowner request?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
-If yes, name of landowner(s)/track number(s): <input type="text"/>	
g) Has all the evaluation criteria been examined/provided for this specific discipline?	
If no, please explain why: <input type="text"/>	
5 ENGINEERING/CONSTRUCTION - TransCanada <i>Meera Kothari</i>	
a) Maximum deviation perpendicular to proposed alignment:	<input type="text" value="301"/> ft.
b) Does variation (CL) (including workspaces) falls within 500 ft. MDEQ Corridor?	Yes <input type="text" value="N/A"/> No <input type="checkbox"/>
c) Has the centerline been staked for construction?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
d) Does route variation affect HDD crossing alignment?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
e) Is realignment proposed for engineering/construction reasons?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
f) Will the route variation require the relocation of a pump station?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
g) Has all the evaluation criteria been examined/provided for this specific discipline?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
If no, please explain why: <input type="text"/>	
6 ENVIRONMENTAL / TransCanada <i>Sandra Barnett</i>	
a) Has the corridor been environmentally surveyed?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
b) Has the proposed variation been environmentally surveyed?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
c) Does proposed route variation impact Sage Grouse areas?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
d) Does route variation impact ABB areas?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
e) Was variation proposed to satisfy environmental issues?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
f) Was realignment proposed to satisfy agency request?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
-If yes, name of agency(s): <input type="text"/>	
g) Environmental features:	
Added (+): <input type="text"/>	Subtracted (-): <input type="text"/>
Wetland ID # for newly impacted wetlands: <input type="text"/>	
h) Has all the evaluation criteria been examined/provided for this specific discipline?	
If no, please explain why: <input type="text"/>	
7 ENGINEERING / FACILITIES AND HYDRAULICS (if applicable) <i>Sandra Gigovic</i>	
a) Will the route variation require the relocation of a pump station?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
b) Will route variation impact hydraulics?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
c) Are additional valves required at HCA's or water crossing?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
d) Has all the evaluation criteria been examined/provided for this specific discipline?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
If no, please explain why: <input type="text"/>	
8 STAKEHOLDER RELATIONS / TCPL (if applicable) <i>Bud Andersen</i>	
a) Does the variation result in any new stakeholders?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
b) Does the variation require follow-up with specific stakeholder groups?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
c) Was the variation proposed to satisfy stakeholder request?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
-If yes, please specify issue type (as it aligns to stakeholder database): <input type="text"/>	
d) Has all the evaluation criteria been examined/provided for this specific discipline?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
If no, please explain why: <input type="text"/>	
9 Originator: <input type="text" value="Environmental"/>	10 Received by: <input type="text"/>
Date: <input type="text" value="7/10/2013"/>	Date: <input type="text"/>
Fax to: ?	
11 Assigned Tracking Number: <input type="text" value="0514-SD-P4-362.0-362.6-S"/>	12 Filed by: <input type="text"/>
Date: <input type="text"/>	
Fax to: ?	

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KEYSTONE XL PIPELINE PROJECT ROUTE VARIATION AUTHORIZATION FORM		
Date: <u>7/10/2013</u>	Tracking Number: <u>0514-SD-P4-362.0-362.6-S</u>	
Description: <u>The primary reason for this route variation is to avoid impacting eligible prehistoric cultural site (SN # 39PE0481 or C710PE001) by shifting the CL/workspaces southwest, thus avoiding the need for treatment/mitigation.</u>	MP: <u>362.0</u> to <u>362.6</u>	Originated By: <u>Environmental</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"/>	Date: <u>8-21-13</u>
Comments: <input type="text"/>	If Rejected Why? <input type="text"/>	
<u>TransCanada - Engineering</u> Meera Kothari	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>	Date: <input type="text"/>
Comments: <input type="text"/>	If Rejected Why? <input type="text"/>	
<u>Exp - Engineering</u> Kevin McGlynn	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>	Date: <u>8-21-13</u>
Comments: <input type="text"/>	If Rejected Why? <input type="text"/>	
<u>TransCanada - Environmental</u> Sandra Barnett	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>	Date: <u>8/21/13</u>
Comments: <input type="text"/>	If Rejected Why? <u>Pending Survey</u>	
<u>Stantec - Risk Assessment</u> Heidi Tillquist	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>	Date: <input type="text"/>
Comments: <input type="text"/>	If Rejected Why? <input type="text"/>	
<u>TransCanada - Facilities</u> Sandra Gigovic	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>	Date: <input type="text"/>
Comments: <input type="text"/>	If Rejected Why? <input type="text"/>	
<u>TransCanada - PM (Montana)</u> Alan Lietz	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>	Date: <input type="text"/>
Comments: <input type="text"/>	If Rejected Why? <input type="text"/>	
<u>TransCanada - PM (South Dakota)</u> James Odom	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>	Date: <u>21-Aug-13</u>
Comments: <input type="text"/>	If Rejected Why? <input type="text"/>	
<u>TransCanada - PM (Nebraska)</u> Robert Bradley	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>	Date: <input type="text"/>
Comments: <input type="text"/>	If Rejected Why? <input type="text"/>	
<u>TransCanada - Area Manager</u> Steve Marr	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>	Date: <input type="text"/>
Comments: <input type="text"/>	If Rejected Why? <input type="text"/>	
Forward to: Tina Hall <input type="checkbox"/> Meera Kothari <input type="checkbox"/> Kevin McGlynn <input type="checkbox"/>	Sandra Barnett <input type="checkbox"/> Heidi Tillquist <input type="checkbox"/> Sandra Gigovic <input type="checkbox"/> Alan Lietz <input type="checkbox"/>	James Odom <input type="checkbox"/> Robert Bradley <input type="checkbox"/> Steve Marr <input type="checkbox"/>



LEGEND

- Milepost
- Valve
- Power Pole
- Centerline (2012-11-18)
- Route Variation
- Access Road
- Overhead Power Line
- Cultural Site
- Workspace
- Wash Station
- Property Parcel
- Section Line
- County Line
- Waterbody
- Wetland
- MDEQ Corridor

KEYSTONE XL PROJECT
PROPOSED ROUTE VARIATION

COUNTY:	PERKINS	DRAWN BY:	RJM
STATE:	SOUTH DAKOTA	CHECKED BY:	JP
REV. NO.:	REVISION	DATE	
0	ISSUED FOR REVIEW.	2013-06-27	
PRELIMINARY			
DATE:	2013-06-27	PROJECTION:	NAD83 UTM13 N

PREPARED BY:
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• INDUSTRIAL • INFRASTRUCTURE • SUSTAINABILITY •

DWG: XL-30-P-9299-A-CLRV SHEET: 1 of 1