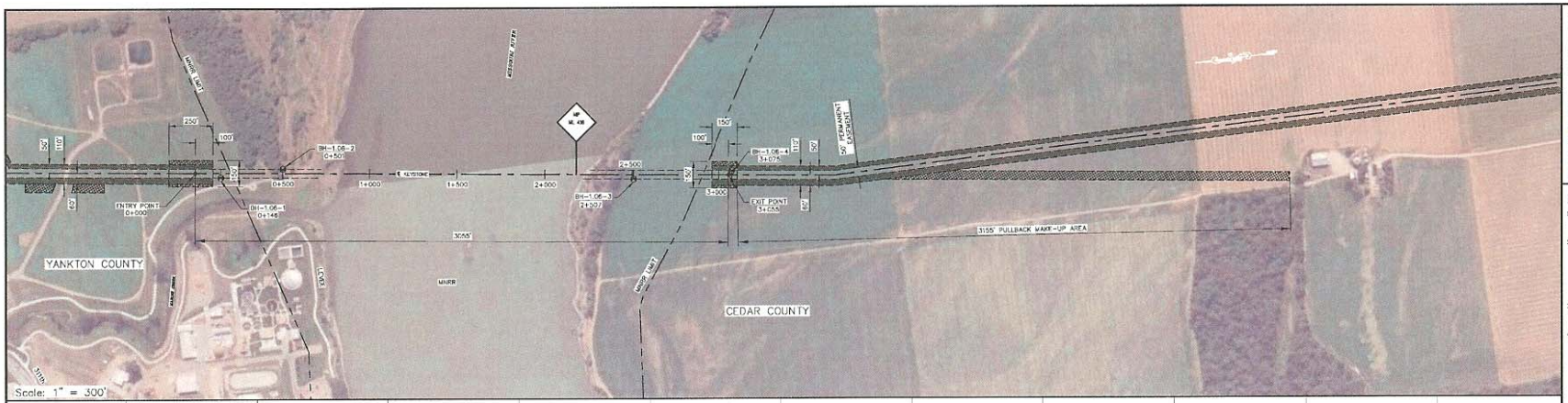
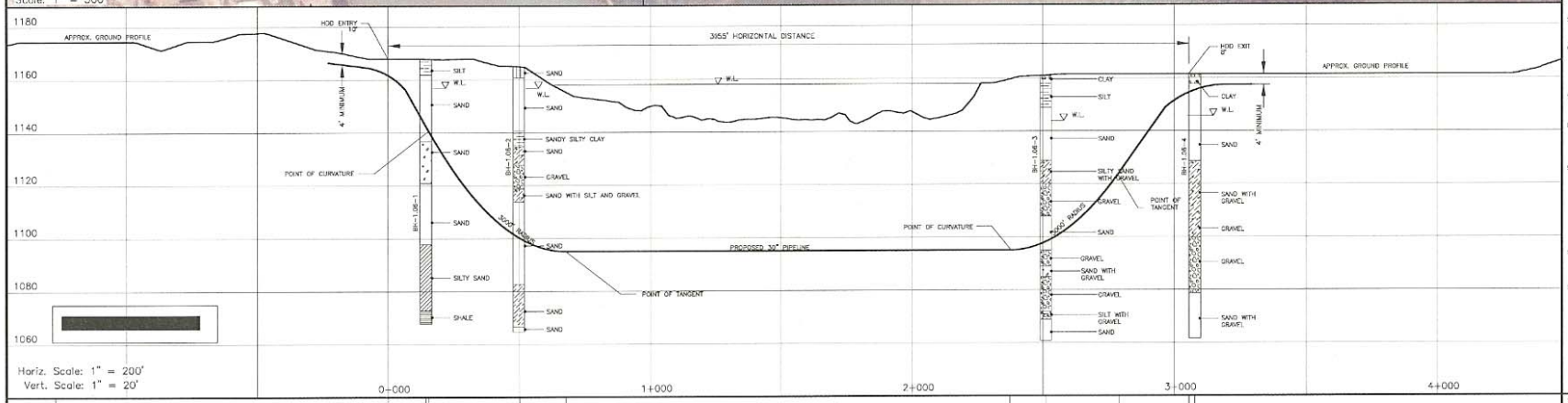
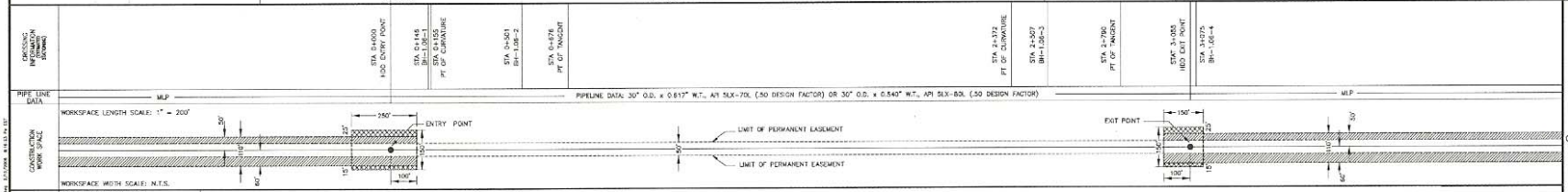
CONFIDENTIAL







MITIGATION/RECLAMATION

CLEAR AND GRADE METHOD	
TOPSOIL SALVAGE METHOD	
WATER CROSSING	STREAMS
	WETLANDS
STATIONS	
TEMPORARY EROSION CONTROL	EROSION CONTROL CODE
	SLOPE BREAKER CODE
PERMANENT EROSION CONTROL	EROSION CONTROL CODE
	SLOPE BREAKER CODE
RECLAMATION	
TIMING CONSTRAINTS	

TO BE DETERMINED

MATERIAL SUMMARY

NO.	DESCRIPTION	QTY.

REFERENCE DRAWINGS

NO.	DESCRIPTION	DWG NO.

REVISIONS

NO.	DATE	DESCRIPTION	BY	CHKD	APPR
2	MAR 18 '27	ISSUED FOR DOS MARCH 2007 SUPPLEMENTAL FILING	HF	JG	RG

INSTALLATION NOTES:

1. ACCESS: ALL EQUIPMENT MUST ACCESS THE SITE ALONG THE CONSTRUCTION RIGHT-OF-WAY OR FROM APPROVED ROADS.
2. WORK SPACE: WORK SPACE LIMITS ARE DEPICTED. CLEARING WILL BE RESTRICTED TO THE WORK SPACES INDICATED AT THE ENTRY AND EXIT POINTS AND PULLBACK MAKE-UP AREA ALONG THE RIGHT-OF-WAY. CLEARING BETWEEN THE ENTRY AND EXIT POINTS IS LIMITED TO THE AMOUNT NECESSARY TO STRING LOCATION WIRES AND INSTALL PUMPS AND PIPING TO OBTAIN WATER (WHERE APPROVED).
3. WATER SOURCE: DRILL WATER AND PRE-INSTALLATION HYDROSTATIC TEST WATER SHALL BE OBTAINED FROM AN APPROVED SOURCE.
4. HYDROSTATIC TEST: PRE-INSTALLATION HYDROSTATIC TEST SHALL BE CONDUCTED IN ACCORDANCE WITH PERMIT REQUIREMENTS. THE TEST WATER SHALL BE DISCHARGED IN AN UPLAND AREA INTO AN EROSION CONTROL STRUCTURE OF STRAW BALES AND/OR SILT FENCES. GEOTEXTILE FILTER BAG OR COLLECTED IN A TRUCK AND HAULED TO AN APPROVED DISPOSAL SITE. UPON COMPLETION OF DEWATERING, A SIZING PIG SURVEY SHALL BE COMPLETED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
5. SPILL PREVENTION: REFUELING OF ALL EQUIPMENT SHALL BE COMPLETED IN ACCORDANCE WITH THE SPCC PLAN AND THE CONSTRUCTION MITIGATION AND RECLAMATION PLAN.
6. EROSION AND SEDIMENT CONTROL: CONTRACTOR SHALL SUPPLY, INSTALL AND MAINTAIN SEDIMENT CONTROL STRUCTURES IN ACCORDANCE WITH CONTRACT DOCUMENTS. CONTRACTOR SHALL INSTALL ADDITIONAL EROSION CONTROL STRUCTURES AS DIRECTED BY THE ENVIRONMENTAL INSPECTOR.
7. PRIOR TO PIPE PULLBACK, CONTRACTOR'S ACTUAL DRILL PROFILE SHALL BE SUBMITTED TO KEYSTONE FOR APPROVAL.
8. INSTALLATION: THE PIPE SECTION FOR THE DRILLED CROSSING SHALL BE MADE UP WITHIN THE RIGHT-OF-WAY AT THE DRILL EXIT POINT AS SHOWN. CONTRACTOR SHALL ASSESS THE NEED FOR AND SUPPLY APPROPRIATE BALLAST DURING PULL BACK.
9. MUD DISPOSAL: CONTRACTOR SHALL DISPOSE OF EXCESS DRILLING MUD AS DIRECTED BY THE COMPANY REPRESENTATIVE IN ACCORDANCE WITH PERMIT CONDITIONS. UNDER NO CIRCUMSTANCES SHALL DRILLING FLUID BE DISPOSED OF IN WATER BODIES OR WETLANDS. ANY DRILLING MUD WHICH INADVERTENTLY EXITS AT POINTS OTHER THAN THE ENTRY AND EXIT POINTS SHALL BE CONTAINED AND COLLECTED TO THE EXTENT PRACTICAL AND DISPOSED OF AS DIRECTED BY THE COMPANY REPRESENTATIVE IN ACCORDANCE WITH PERMIT CONDITIONS.
10. CLEAN-UP/STABILIZATION/RESTORATION: ALL DISTURBED AREAS SHALL BE RETURNED TO THE ORIGINAL CONTOURS. DISTURBED AREAS SHALL BE SEEDED AS SPECIFIED IN THE CONSTRUCTION SPECIFICATIONS.
11. GEOTECHNICAL DATA: BOREHOLES ARE OFFSET FROM THE PIPELINE CENTERLINE AS SHOWN ON THE PLAN VIEW. THE GEOTECHNICAL INFORMATION PROVIDED ON THIS DRAWING IS A GENERAL SUMMARY AND IS BASED ON PRELIMINARY BOREHOLE LOGS. CONTRACTOR SHALL UTILIZE IT'S OWN INTERPRETATION OF THIS FACTUAL BOREHOLE DATA OR DECIDE ON IT'S OWN INVESTIGATION OF SUBSURFACE CONDITIONS.

LEGEND:

- ENTRY OR EXIT POINT
- GEOTECHNICAL BOREHOLE
- MLP — MAINLINE PIPE
- 3005-C-24.1000 — TYPICAL PROPERTY TRACT NO.
- ---------- TYPICAL PROPERTY LINES

EASEMENT/WORKSPACE:

- PERMANENT EASEMENT
- TEMPORARY WORK SPACE
- ADDITIONAL TEMPORARY WORK SPACE

TROW PROJ. No.:	THES0503886
DATE:	OCT.09.06
DESIGNED:	HF
DRAWN:	BK
CHECKED:	JG
APPROVED:	RG

TransCanada
In business to deliver
KEYSTONE PIPELINE PROJECT

Trow Engineering Consultants Inc.
1300 Metropolitan Blvd. Suite 200
Tallahassee, Florida 32308
Phone: 1-850-385-5441
Fax: 1-850-385-5523
Trow

MISSOURI RIVER AT YANKTON HDD INSTALLATION

30" KEYSTONE PIPELINE

YANKTON COUNTY, SOUTH DAKOTA T93N-R55W
CEDAR COUNTY, NEBRASKA T33N-R1W
MP 435.9

SCALE	DRAWING No.:	REV.
AS NOTED	K-31-P-6001-A-1.06	2