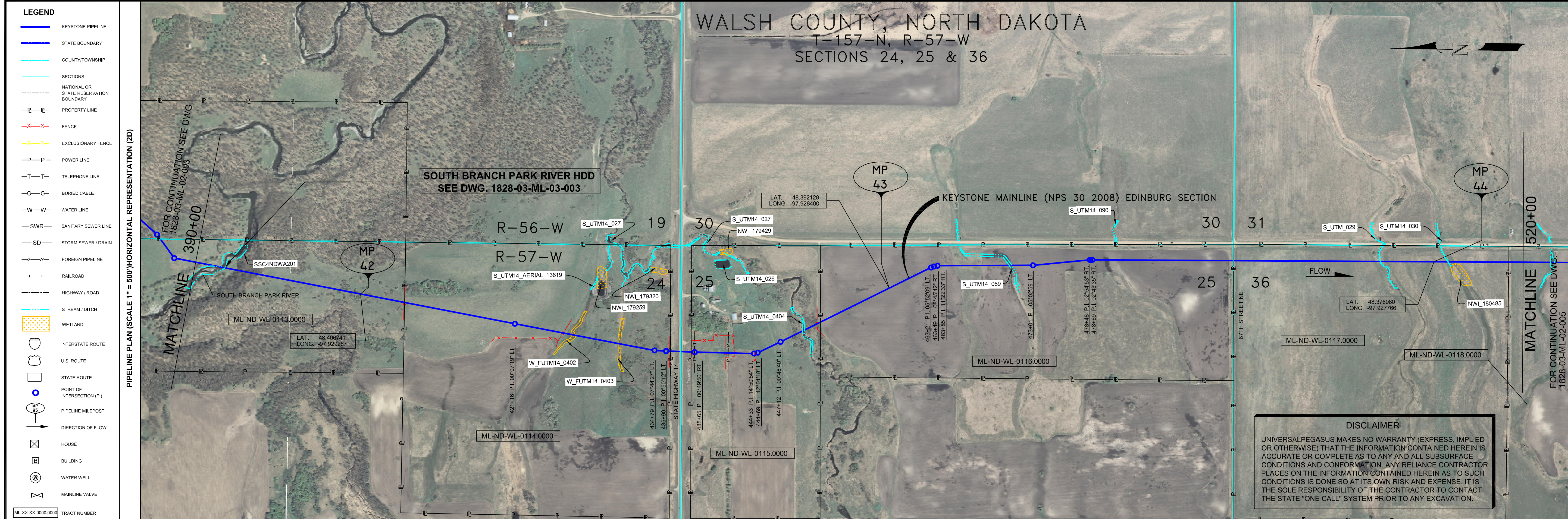


- GENERAL NOTES**
- 1) ALL CHAINAGES ARE IN FEET UNLESS OTHERWISE SPECIFIED.
  - 2) DATUM ELEVATION AND PROJECTION ARE BASED ON MEAN SEA LEVEL AND NAD 83.
  - 3) FIELD PIPE LOCATING REQUIRED TO DETERMINE PLACEMENT OF PIPELINE WITHIN PERMANENT EASEMENT.
  - 4) UNLESS OTHERWISE NOTED, 48 INCHES MINIMUM COVER EXCEPT 36 INCHES IN AREAS OF CONSOLIDATED ROCK.
  - 5) NO ACTUAL AS-BUILT GROUND SHOTS WERE TAKEN AT THIS LOCATION. THE PROFILE REPRESENTS A PROJECTION FROM SHOTS TAKEN AT 150' TO 250' INTERVALS.
  - 6) THE TYPE OF COATING APPLIED TO THE FIELD WELDS DURING THE ORIGINAL CONSTRUCTION WAS TWO COMPONENT LIQUID EPOXY. THE COATING PRODUCTS USED WERE DENSO 7200 OR SPC SP-2888.
  - 7) THE SUBSTANTIAL CONSTRUCTION COMPLETION DATE, BASED ON CALIPER PIG RUN, WAS AUGUST 12, 2009 FOR M.P. 31.03 TO M.P. 66.93 AND AUGUST 16, 2009 FOR M.P. 66.90 TO M.P. 88.54.
  - 8) ORIGINAL IN-SERVICE DATE OF THE KEYSTONE PIPELINE (PHASE 1): JUNE 30, 2010.
  - 9) CPS CALCULATION DATE: MAY 2010.
  - 10) ORION STATION SERIES NUMBER: 1182700.
  - 11) TO DETERMINE THE MILE POST AT A GIVEN LOCATION, ADD THE 3D STATION NUMBER FROM THIS SEGMENT TO STATION NUMBER 1810+69 AND DIVIDE BY 5280.



**OPERATING AND TEST PRESSURE**

1. THE MAXIMUM OPERATING PRESSURE (MOP) IS 1440 PSIG.
2. THE MINIMUM TEST PRESSURE WAS 1601 PSIG.

**BILL OF MATERIALS (3D)**

ITEM NO.	DESCRIPTION	QUANTITY
2	30" O.D. X 0.388" W.T. API 5L-X70 WFBE COATING	10,635'
3	30" O.D. X 0.516" W.T. API 5L-X70 WFBE COATING & ABRASION RESISTANT OVERCOAT	356'
4	30" O.D. X 0.822" W.T. API 5L-X70 WFBE COATING & ABRASION RESISTANT OVERCOAT	2,046'

**REFERENCE DRAWINGS**

REF. NO.	DRAWING NO.	REV. NO.	DRAWING TITLE
HDD	1828-03-ML-03-003	07	SOUTH BRANCH PARK RIVER HDD

**REVISIONS**

NO.	DATE	REV. BY	CHKD. BY	APPRD. BY	ENY. APPRD.	DESCRIPTION
1	5/17/08	UEI	RDG	LAC	SEC	ISSUED FOR CONSTRUCTION
2	8/27/08	UEI	RDG	LAC	SEC	ADDED CROSSING DETAILS ISSUED FOR AS-BUILT
3	3/10/12	UEI	RDG	LAC	SEC	REPLACES COVERAGE OF IFC DRAWINGS 1828-03-ML-02-005, 1828-03-ML-02-006, 1828-03-ML-02-007

PIPELINE SCHEMATIC	HORIZONTAL STATIONS (2D)	PIPELINE DESCRIPTION	STATION DESCRIPTION	PIPELINE REPRESENTATION (3D)	STATION REPRESENTATION (3D)
HEAVY WALL PIPE	390+00	MATCHLINE	390+00	390+00	390+00
WELD FITTING	391+56	WATER EDGE	391+56	391+56	391+56
TRANSITION PIECE	392+43	CL SOUTH BRANCH	392+43	392+43	392+43
CASING PIPE	393+75	WATER EDGE	393+75	393+75	393+75
CONCRETE COATING	410+34	FENCE (BARBED WIRE)	410+34	410+34	410+34
SET ON WELDS	411+20	FENCE (BARBED WIRE)	411+20	411+20	411+20
PIPELINE WARNING SIGN	411+25	FENCE (BARBED WIRE)	411+25	411+25	411+25
PIPELINE MARKER	411+30	HDD EXT WELD TIE-IN	411+30	411+30	411+30
MATERIAL ITEM	411+46	4.5' CVR.	411+46	411+46	411+46
GROUNDING MAT	422+03	P.L. 00'07'19" LT.	422+03	422+03	422+03
ZINC RIBBON	428+70	FENCE (BARBED WIRE)	428+70	428+70	428+70
AERIAL MARKER	428+97	BEGIN SLOUGH	428+97	428+97	428+97
CATHODIC TEST STATION	428+93	END SLOUGH	428+93	428+93	428+93
MAINLINE VALVE	430+45	6.0' CVR.	430+45	430+45	430+45
CHECK VALVE	431+62	BEGIN ROCK SHIELD	431+62	431+62	431+62
OPEN CUT	432+33	BEGIN SLOUGH	432+33	432+33	432+33
BORER	432+33	END SLOUGH	432+33	432+33	432+33
DRINKING WATER USA	433+50	BEGIN SLOUGH	433+50	433+50	433+50
ECOLOGICAL USA	433+50	END SLOUGH	433+50	433+50	433+50
HIGHLY POPULATED AREA	433+50	BEGIN SLOUGH	433+50	433+50	433+50
OPERATOR (INSTEAD) DEFINED	433+50	END SLOUGH	433+50	433+50	433+50
OTHER POPULATED AREA	433+50	BEGIN SLOUGH	433+50	433+50	433+50
SOURCE WATER PROTECTION AREA	433+50	END SLOUGH	433+50	433+50	433+50
WELLHEAD PROTECTION AREA	433+50	BEGIN SLOUGH	433+50	433+50	433+50
TEST SECTIONS (3D)	433+50	END SLOUGH	433+50	433+50	433+50
TOPSOIL SALVAGE METHOD	433+50	BEGIN SLOUGH	433+50	433+50	433+50
STREAMS	433+50	END SLOUGH	433+50	433+50	433+50
WETLANDS	433+50	BEGIN SLOUGH	433+50	433+50	433+50
TIMING CONSTRAINTS	433+50	END SLOUGH	433+50	433+50	433+50
STATIONS	433+50	BEGIN SLOUGH	433+50	433+50	433+50
MONITORING	433+50	END SLOUGH	433+50	433+50	433+50
RECLAMATION	433+50	BEGIN SLOUGH	433+50	433+50	433+50
SPECIAL CONSIDERATIONS	433+50	END SLOUGH	433+50	433+50	433+50

**ENGINEERING RECORDS**

DRAWN BY	INITIAL	DATE	ENY. APPRD.	INITIAL	DATE
UEI		10/01/04			

**PROFESSIONAL ENGINEER**

NAME	STATE	LIC#	REV#	DATE
LOYS A. GRAY, III	ND	PE5714		

**SCALE:** 0 125 250 500 Feet

**TransCanada**  
In business to deliver

**UNIVERSAL**

KEYSTONE MAINLINE (NPS 30 2008) EDINBURG SECTION

SPREAD 1A DISCIPLINE 03

**AS-BUILT ALIGNMENT**

M.P. 41.69 TO M.P. 44.16

SHEET 4 OF 18 SHEETS

STA. 390+69 TO STA. 521+06 (3D)

DRAWING NO. 1828-03-ML-02-004 REV. 3

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