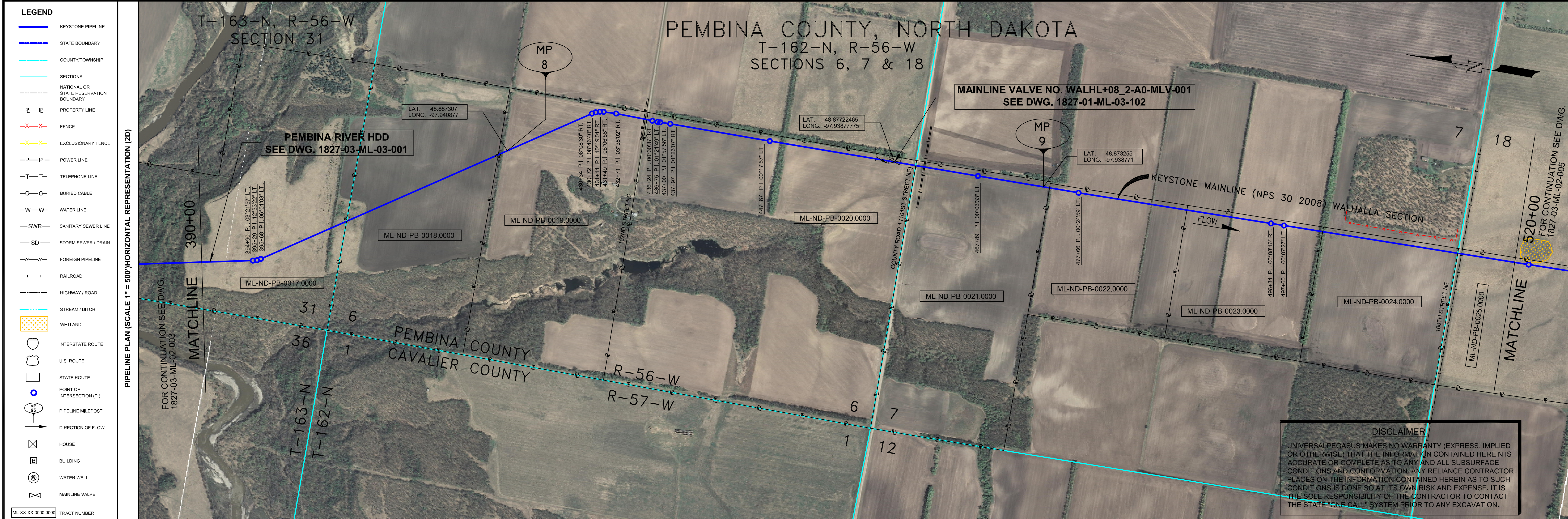


- GENERAL NOTES**
- 1) ALL CHAINAGES ARE IN FEET UNLESS OTHERWISE SPECIFIED.
 - 2) DATUM ELEVATION AND PROJECTION ARE BASED ON MEAN SEA LEVEL AND NAD 83.
 - 3) FIELD PIPE LOCATING REQUIRED TO DETERMINE PLACEMENT OF PIPELINE WITHIN PERMANENT EASEMENT.
 - 4) UNLESS OTHERWISE NOTED, 48 INCHES MINIMUM COVER 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 11, 2009 FOR M.P. 0.30 TO M.P. 31.03 AND AUGUST 12, 2009 FOR M.P. 31.03 TO M.P. 66.93.
 - 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 0+00 AND DIVIDE BY 5280.



- OPERATING AND TEST PRESSURE**
1. THE MAXIMUM OPERATING PRESSURE (MOP) IS 140 PSIG.
 2. THE MINIMUM TEST PRESSURE WAS 180 PSIG.

BILL OF MATERIALS (3D)

ITEM NO.	DESCRIPTION	QUANTITY
1	30" O.D. X 0.438" W.T., API 5LX-70 W/FBE COATING	12,107'
3	30" O.D. X 0.516" W.T., API 5LX-70 W/FBE COATING & ABRASION RESISTANT OVERCOAT	399'
4	30" O.D. X 0.622" W.T., API 5LX-70 W/FBE COATING & ABRASION RESISTANT OVERCOAT	470'
401	MAINLINE VALVE ASSEMBLY WALHL+08_2-A0-MLV-001 (+32')	1 EA

REFERENCE DRAWINGS

REF. NO.	DRAWING NO.	REV. NO.	DRAWING TITLE
HDD	1827-03-ML-03-001	09	PEMBINA RIVER HDD
401	1827-01-ML-03-102	04	MAINLINE VALVE WALHL+08_2-A0-MLV-001
	1827-01-ML-03-103	00	MAINLINE VALVE WALHL+08_2-A0-MLV-001

REVISIONS

NO.	DATE	REV. BY	CHKD. APPR. BY	ENV. APPR. BY	DESCRIPTION
1	5/17/08	UEI	RDG	LAG	ISSUED FOR CONSTRUCTION
2	9/11/11	UEI			ISSUED FOR AS-BUILT 1827-03-ML-02-005 REPLACES COVERAGE OF IFC DRAWINGS 1827-03-ML-02-005, 1827-03-ML-02-006, 1827-03-ML-02-009

ENGINEERING RECORDS

DRAWN BY	INITIAL	DATE	ENV. APPR. BY	INITIAL	DATE
UEI		09/12/21			

PROFESSIONAL ENGINEER

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

SCALE: 0 125 250 500 Feet

TransCanada
In business to deliver

KEYSTONE MAINLINE (NPS 30 2008) WALHALLA SECTION

FR# 1827 SPREAD 1A DISCIPLINE 03

AS-BUILT ALIGNMENT

M.P. 7.40 TO M.P. 9.87
SHEET 4 OF 14 SHEETS
STA. 390+88 TO STA. 520+96 (3D)

DRAWING NO. 1827-03-ML-02-004 REV. 2

PIPELINE SCHEMATIC

STATIONING	DESCRIPTION
390+00	MATCHLINE 390+00
395+22	HDD EXIT WELD TIE-IN
395+26	395+22 HDD EXIT WELD TIE-IN
395+28	395+26 P.I. 08'21.57' L.L.
395+29	395+28 P.I. 12'33.22' L.L.
395+37	395+37 P.I. 06'01.03' L.L.
395+48	395+48 P.I. 08'01.03' L.L.
430+34	430+34 P.I. 08'08.92' RT.
430+72	430+72 P.I. 08'46.26' RT.
431+11	431+11 P.I. 10'19.01' RT.
431+49	431+49 P.I. 08'08.92' RT.
432+41	432+41 P.I. 08'08.92' RT.
432+80	432+80 P.I. 08'08.92' RT.
432+81	432+81 P.I. 08'08.92' RT.
432+82	432+82 P.I. 08'08.92' RT.
432+83	432+83 P.I. 08'08.92' RT.
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434+81	43