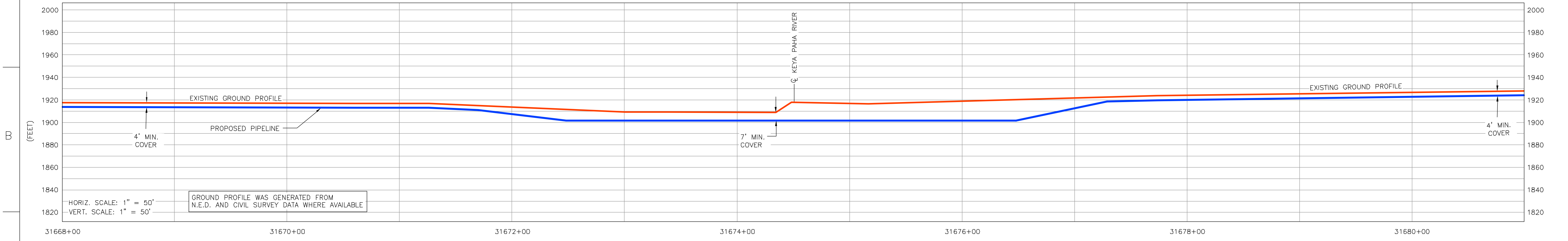
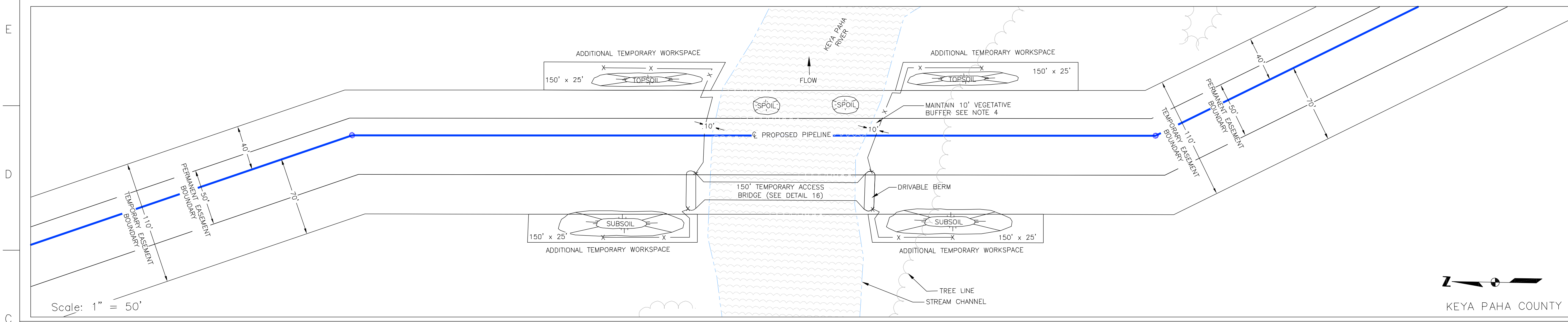


- GENERAL NOTES**
- THE CONTRACTOR SHALL ACCESS THE WORK AREA USING ONLY PUBLIC ROADS AND APPROVED PRIVATE ACCESS ROADS.
 - THE BOUNDARIES OF ALL WORK AREAS WILL BE CLEARLY MARKED IN THE FIELD AND ALL WORK SHALL REMAIN WITHIN THE APPROVED WORK AREA. EXTRA WORKSPACES FOR MAKEUP SECTIONS AND ADDITIONAL SPOIL STORAGE SHALL BE LOCATED A MINIMUM OF 10 FEET FROM WETLAND AND WATERS EDGE.
 - WETLAND, STREAM, AND RECLAMATION DATA TO BE FIELD VERIFIED.
 - A 10-FOOT VEGETATIVE BUFFER STRIP BETWEEN DISTURBED AREAS AND THE WATER BODY TOP OF BANK SHALL BE MAINTAINED TO THE EXTENT POSSIBLE. ALL CLEARING SHALL BE MINIMIZED TO THE EXTENT POSSIBLE AND TO ONLY THAT NECESSARY FOR CONSTRUCTION. WOODY VEGETATION SHALL BE CUT AT GROUND LEVEL AND THE STUMPS/ROOTS LEFT IN PLACE TO THE EXTENT POSSIBLE.
 - TOPSOIL SHALL BE STRIPPED FROM THE DITCH LINE AND ANY LOCATIONS WHERE GRADING IS NEEDED. TOPSOIL SHALL BE KEPT SEPARATE FROM SUBSOIL AND WILL BE HANDLED IN ACCORDANCE WITH THE CONSTRUCTION MITIGATION AND RECLAMATION PLAN (CMRP).
 - CONTRACTOR SHALL INSTALL SIGNS A MINIMUM OF 100 FEET FROM EACH WATER BODY AND WETLAND BOUNDARY TO IDENTIFY THE HAZARDOUS MATERIALS EXCLUSION AREA. PUMPS USED WITHIN 100 FEET OF ANY WATER BODY OR WETLAND SHALL BE OPERATED IN ACCORDANCE WITH THE CMRP. REFUELING OF CONSTRUCTION EQUIPMENT AND STORAGE OF HAZARDOUS MATERIALS, FUELS, ETC. SHALL BE CONDUCTED AT LEAST 100 FEET FROM WATER BODIES AND WETLANDS. EACH CONSTRUCTION CREW SHALL HAVE ON HAND SUFFICIENT TOOLS AND MATERIALS TO STOP LEAKS AND SUPPLIES OF ABSORBENT AND BARRIER MATERIALS TO ALLOW RAPID CONTAINMENT AND RECOVERY OF SPILLED MATERIALS.
 - EROSION AND SEDIMENT CONTROL
 - CONTRACTOR SHALL SUPPLY AND INSTALL EROSION AND SEDIMENT CONTROL DEVICES BEFORE OR IMMEDIATELY AFTER INITIAL DISTURBANCE AS DEPICTED OR AS DIRECTED BY THE ENVIRONMENTAL INSPECTOR. CONTRACTOR SHALL MAINTAIN DEVICES UNTIL SUCCESSFUL REVEGETATION AND STABILIZATION IS ACHIEVED.
 - CONTRACTOR SHALL PLACE TRENCH SPOIL ONLY IN APPROVED WORK SPACE. SPOIL SHALL BE CONTAINED IN THE WORKSPACE USING APPROPRIATE SEDIMENT BARRIERS WHERE NECESSARY.
 - IN SITUATIONS WHERE SPOIL IS TEMPORARILY STORED IN-STREAM DURING TRENCH EXCAVATION AND PIPE INSTALLATION, CAPS SHALL BE ADEQUATE TO ENSURE RIVER FLOW IS MAINTAINED.
 - SEDIMENT LADEN WATER FROM TRENCH DEWATERING SHALL BE DISCHARGED TO A WELL VEGETATED UPLAND AREA AND/OR INTO A STRAW BALE DEWATERING STRUCTURE OR GEOTEXTILE FILTER BAG.
 - CONTRACTOR SHALL COMPLETE ALL IN-STREAM ACTIVITIES AS EXPEDITIOUSLY AS POSSIBLE. THE RIVER CROSSING SECTION SHALL BE WELDED, X-RAYED, AND COATED BEFORE IN-STREAM ACTIVITIES ARE INITIATED.
 - TRENCH BREAKERS ARE TO BE INSTALLED AT THE SAME SPACING AND IMMEDIATELY UPSLOPE OF PERMANENT SLOPE BREAKERS, OR AS DIRECTED BY THE COMPANY.
 - CONTRACTOR SHALL RESTORE THE WATER BODY BED AND BANKS TO APPROXIMATE PRECONSTRUCTION CONDITIONS IMMEDIATELY AFTER PIPE INSTALLATION AND BACKFILL, UNLESS OTHERWISE APPROVED BY THE COMPANY. THE CONTRACTOR SHALL TO THE EXTENT PRACTICAL IMPLEMENT PERMANENT EROSION AND SEDIMENT CONTROL AND RECLAMATION PROCEDURES ON DISTURBED LAND, INCLUDING WATER BODY BANKS, IMMEDIATELY FOLLOWING COMPLETION OF PIPE INSTALLATION AND BACKFILLING.
 - VEHICLE CROSSING SHALL BE CONSTRUCTED AS DETAILED IN CMRP. VEHICLE CROSSING MAY REMAIN IN PLACE UNTIL HYDROSTATIC TESTING AND CLEAN-UP ACTIVITIES HAVE BEEN COMPLETED.
 - REFERENCE SPECIFICATIONS - REFER TO THE KEYSTONE CMRP.
 - THE CROSSING SHALL BE INSTALLED IN ACCORDANCE WITH THE KEYSTONE CMRP MINIMUM DEPTH OF COVER AT A MINIMUM DEPTH OF 5 FEET BELOW THE CREEK AND MAINTAINED OVER A DISTANCE OF 15 FEET ON EACH SIDE OF THE WATERBODY MEASURED FROM THE TOP OF THE DEFINED STREAM CHANNEL.



- DRAWING NOTES:**
- EQUIPMENT, SPOIL AND ACCESS LAYOUT MAY BE ADJUSTED WITHIN THE APPROVED WORKSPACE AND IN ACCORDANCE WITH RELEVANT PERMITS.
- LEGEND**
- PROPOSED PIPELINE
 - EXISTING PIPELINE
 - WORKSPACE BOUNDARY
 - PROPOSED SILT FENCE
 - EXISTING TREE LINE
 - PROPERTY LINE
 - POINT OF INTERSECTION (P.I.)
 - TEMPORARY EASEMENT
 - ADDITIONAL TEMPORARY WORKSPACE
 - WATER BODY
 - WETLAND BOUNDARY

PIPELINE DATA	36" O.D. X 0.572" W.T. API-5LX-70 W/ 14-20 MILS FBE	36" O.D. X 0.748" W.T. API-5LX-70 W/ 14-20 MILS FBE CONCRETE COATED	36" O.D. X 0.572" W.T. API-5LX-70 W/ 14-20 MILS FBE
CROSSING INFORMATION (ESTIMATED STATIONING)	31670+59 P.I. 19' RT.	31674+51 KEYA PAHA RIVER	31677+73 P.I. 26' LT.
	VERTICAL P.I.	VERTICAL P.I.	VERTICAL P.I.
	31672+48 VERTICAL P.I. BEGIN CONCRETE COATING		31677+49 VERTICAL P.I. END CONCRETE COATING

REFERENCE DRAWINGS	
DRAWING No	TITLE

REVISION		APPROVAL							
REV No	DATE	DESCRIPTION	PROJECT CODE	DRAFTER	DRAFTING CHECKER	DESIGNER	DESIGN CHECKER	PROJECT MANAGER	COMPANY
0	04.21.10	ISSUED FOR DEIS FILING (3.26.10 CL)	2095406	JB	AH	FP	RB	RG	TROW

PROFESSIONAL ENGINEER/RPT	PERMIT/ ENG. APPROVAL

PREPARED BY: TROW ENGINEERING CONSULTANTS INC
 1300 Metropolitan Boulevard, Suite 200
 Tallahassee, Florida, USA 32308
 Phone: 1-850-385-5441
 Fax: 1-850-385-5523

KEYA PAHA SECTION

FIA # 4479 CHAINAGE: 599.9 DISCIPLINE # 03

**KEYA PAHA RIVER OPEN CUT INSTALLATION
 KEYSTONE XL PROJECT
 KEYA PAHA COUNTY, NEBRASKA**

SCALE As Shown DRAWING No 4479-03-ML-03-001 REV 0

PRELIMINARY