

# COLUMBIA GULF TRANSMISSION

## TC ENERGY STATE ROUTE 32 RELOCATION OF LINES 30" LINE 100, 30" LINE 200, AND 36" LINE 300

FACILITY IDENTIFICATION No.: 41189, 41395 AND 41500  
 PROJECT ID: E.032696  
 ENGINEERING FIRM: MOTT MACDONALD  
 ROWAN COUNTY, KENTUCKY



PROJECT LOCATION:  
ROWAN COUNTY, KENTUCKY

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BASIS OF SURVEY:  
 PERFORMED BY MOTT MACDONALD  
 DATE: OCTOBER 2022

HORIZONTAL DATUM:  
 UTM, NAD83, ZONE 17  
 (US FT)

VERTICAL DATUM:  
 NAVD88

PACKAGE REDLINED BY: STEVE SHEARER/CHRIS ROSADO  
 NAME (PRINTED): STEVE SHEARER  
 POSITION TITLE: PRINCIPAL SPECIALIST  
 TELEPHONE NO.: 1 859 932 3317  
 COMPANY NAME: MOTT MACDONALD  
 INITIALS: SFS  
 SIGNATURE: \_\_\_\_\_

REDLINE VERIFICATION:  
 CHANGES REQUIRED: Y \_\_\_ N \_\_\_ VERIFIED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

REFERENCE DRAWINGS	
DRAWING No	TITLE

REVISION			APPROVAL						
REV No	DATE	DESCRIPTION	PROJECT CODE	DRAFTER	DRAFTING CHECKER	DESIGNER	DESIGN CHECKER	PROJECT MANAGER	COMPANY
00	2024-06-14	ISSUED FOR CONSTRUCTION	E.032696	BAG	SFS	RLR	BT	JPM	MM
01	2024-10-06	RE-ISSUED FOR CONSTRUCTION	E.032696	BAG	SFS	RLR	BT	JHG	MM

PROFESSIONAL ENGINEER/RPT	PERMIT/ ENG. APPROVAL
REV. NO.	DATE
	PERMIT NUMBER:

FROM V109-1 TO V110-1

FACILITY # 41189	ENG STATION:	DISC # 03
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COVER SHEET

TC ENERGY STATE ROUTE 32 RELOCATION OF LINES 30" LINE 100, 30" LINE 200, AND 36" LINE 300  
ROWAN COUNTY, KENTUCKY

SCALE N.T.S.	DRAWING # E.032696-COVER	REV 01
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C:\\_ACC\MACDOCS\MOTT\_MACDONALD\507109631 - P\_TCE HWY. 32 EXPANSION - T&M\PROJECT FILES\PIPELINE\DRAWINGS\COVERINDEX\COVERINDEX\032696-COVER.DWG - Layout1 - PLOT TIME: 10/2/2024 11:57 AM

GENERAL NOTES	
ALL DISCIPLINES	
1	VERIFY DIMENSIONS AND ELEVATIONS BEFORE CONSTRUCTION. IF DEVIATIONS ARE ENCOUNTERED, NOTIFY ENGINEER BEFORE PROCEEDING.
CIVIL NOTES	
GENERAL GRADING NOTES	
A	APPLICABLE CODES AND STANDARDS:
1	ASSOCIATION OF STATE HIGHWAY TRANSPORTATION OFFICIALS (AASHTO)
2	AMERICAN CONCRETE INSTITUTE - "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE", (ACI-318-02).
B	MATERIALS
1	AASHTO #57 STONE
2	GEOTEXTILE FABRIC, WEED BARRIER, TYPE AR 3201 OR APPROVED EQUAL (IF APPLICABLE TO BE DETERMINED BY ENGINEER)
C	INSTALLATION
1	EXCAVATE TO PROPER ELEVATION AND GRADE.
2	AFTER SUBGRADE GRADING HAS BEEN COMPLETED A GEOTEXTILE FABRIC FOR WEED CONTROL SHALL BE INSTALLED.
3	AFTER THE INSTALLATION OF THE GEOTEXTILE HAS BEEN COMPLETED, BACKFILL AND COMPACT STONE IN SIX-INCH LIFTS.
GENERAL CONSTRUCTION NOTES:	
1	CONTRACTOR IS TO CONFORM AND COMPLY WITH ALL TRANSITION PIECES FOR THE PROJECT WITH TC ENERGY STANDARDS FOR WELDING DIFFERENT W.T. OF PIPE. REFER TO TC ENERGY SPECIFICATION TES-ME-STRTN-GL.
2	CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL CP AND INSTALLATION INCLUDING BUT NOT LIMITED TO FOREIGN PIPELINE CROSSING TEST STATIONS.
3	CONTRACTOR TO LOCATE AND MARK ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
4	CONTRACTOR SHALL REMOVE AND RESET ALL EXISTING FENCING CROSSED BY THE PROJECT IN ACCORDANCE WITH THE SPECIAL UNDERTAKINGS DOCUMENT.
5	CONTRACTOR SHALL PROVIDE A MINIMUM 2 FT CLEARANCE BETWEEN EXISTING AND PROPOSED FOREIGN UTILITIES AND PROPOSED PIPELINE.
6	PARCEL DATA SHOULD NOT BE RELIED ON AS AN ACCURATE LOCATION OF PROPERTY LINES. IT IS PROVIDED FOR INFORMATIONAL PURPOSES ONLY. IT WAS GENERATED UTILIZING GIS TAX MAP DATA, RECORD INFORMATION, AND LIMITED FIELD LOCATIONS OF PROPERTY EVIDENCE. IT DOES NOT REPRESENT THE RESULTS OF A BOUNDARY SURVEY.
7	CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS IN THIS DRAWING PACKAGE.
8	ALL PIPELINE CROSSINGS SHALL INCLUDE AN AIR GAP/TIMBER MAT OR AS OTHERWISE REQUIRED BY UTILITY OWNERS.
9	THE MAXIMUM ALLOWABLE OPERATING PRESSURE FOR LINE 100 WILL BE 935 PSIG, AND LINES 200 AND 300 WILL BE 1007 PSIG.
10	PIPELINE TO BE INSTALLED AND MAINTAINED PER 49 CFR 192.
11	ANY SURFACE DISTURBANCE DUE TO TEST PIT/POTHOLE OF EXISTING UTILITIES SHALL BE REPAIRED IN ACCORDANCE WITH LOCAL STATE/COUNTY/TOWNSHIP AUTHORITIES.
12	UNDERGROUND UTILITY INFORMATION DEPICTED ON THESE DRAWINGS IS PRELIMINARY AND LIMITED TO THE PRELIMINARY SURVEY WORK COMPLETED. CONTRACTOR IS RESPONSIBLE FOR ALL EXISTING UTILITIES AND SHALL LOCATE AND MARK PRIOR TO CONSTRUCTION. THIS SHALL INCLUDE COMPLETING A LINE SWEEP SURVEY PRIOR TO CONSTRUCTION COMMENCEMENT. MOTT MACDONALD CANNOT GUARANTEE THAT THE UNDERGROUND UTILITY INFORMATION ON THESE DRAWINGS IS COMPLETE.
13	ALL WELDING SHALL BE PERFORMED BY WELDERS QUALIFIED AND TESTED THROUGH TC ENERGY AND API 1104 STANDARDS
14	CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL WHEREVER CONSTRUCTION ACTIVITIES INTERFACE WITH PUBLIC ROADWAYS, ENSURING PUBLIC SAFETY IN THE FORM OF PERSONNEL BARRIERS AND FENCES, WARNING SIGNS, FLASHING LIGHTS, FLAG PERSONS, ETC. ALL CONSTRUCTION AND DETOUR SIGNING SHALL BE IN STRICT ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
15	MATERIAL TEST REPORTS ARE REQUIRED FOR ALL PRESSURE CONTAINING PIPE, FITTINGS, AND REINFORCEMENTS.
16	CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL PROPERTY CORNER MONUMENTATION. ALL PROPERTY CORNER MONUMENTATION THAT IS DAMAGED/REMOVED WILL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
17	ALL FIELD TILES AND DRAINS ENCOUNTERED SHALL BE PROTECTED OR REPLACED.
18	CONTRACTOR SHALL COORDINATE WITH TOWNSHIP FOR ROAD CLOSURES, TRAFFIC CONTROL AND DETOURS.
19	ALL CONSTRUCTION ACTIVITIES SHALL FOLLOW THE TC ENERGY SPECIFICATION TES-CT-GEN-P PIPELINE CONSTRUCTION SPECIFICATION.
20	CONTRACTOR SHALL PERFORM HYDROTEST IN COMPLIANCE WITH TC ENERGY SPECIFICATION TEP-ME-PRES-GL PRESSURE TESTING PROCEDURE.
21	CONTRACTOR SHALL FIELD BEND ALL PIPELINE BENDS LESS THAN 10 DEGREES FOR THE NPS 36 PIPELINE AND 12 DEGREES FOR THE NPS 30 PIPELINE UNLESS OTHERWISE SPECIFIED IN THE PROJECT CONSTRUCTION DRAWINGS OR BY THE TC ENERGY CONSTRUCTION MANAGER.
22	CONTRACTOR SHALL GROUND PIPE THAT IS STORED AT STAGING AREAS.
23	CUT AND ABANDONMENT PER TC ENERGY SPECIFICATIONS.

PROJECT SEQUENCE AND SCHEDULE	
PRE-CONSTRUCTION:	
1	SUBMIT A COPY OF THE E&S PLAN AND APPLICATION TO THE APPROPRIATE REGULATORY AGENCIES FOR APPROVAL.
2	CONDUCT A PRE-CONSTRUCTION MEETING. TC ENERGY WILL INVITE AND NOTIFY ALL APPROPRIATE AGENCIES TO ATTEND AND PROVIDE AT LEAST SEVEN DAYS NOTICE. TC ENERGY, THE EI, AND LICENSED PROFESSIONALS OR DESIGNEES RESPONSIBLE FOR EARTH-DISTURBANCE ACTIVITY, INCLUDING IMPLEMENTATION OF THE E&S PLAN, WILL ATTEND.
3	PRIOR TO CLEARING, SURVEY CREWS WILL MARK THE CENTERLINE AT FREQUENT INTERVALS, AS WELL AS AT KNOWN CROSSINGS OF FOREIGN LINES AND UTILITIES, AT ROAD CROSSINGS, AT POINTS OF INFLECTION, AND AT AVOIDANCE AREAS INCLUDING WETLAND BOUNDARIES, CULTURAL RESOURCE SITES, AND RARE SPECIES HABITAT, AS APPLICABLE. AVOIDANCE AREAS WILL BE MARKED WITH APPROPRIATE FENCING, SIGNAGE, AND/OR FLAGGING BASED ON ENVIRONMENTAL SURVEYS AND PERMIT CONDITIONS.
4	INSTALL ROCK CONSTRUCTION ENTRANCES WHERE VEHICLES WILL ENTER CONSTRUCTION AREAS AT THE DISCRETION OF THE EI BASED ON THE SITE CONDITIONS AND CLEARING ACCESS NEEDS. INSTALL WASH RACKS (TYPICAL WS) WHERE ROCK CONSTRUCTION ENTRANCES ARE DETERMINED TO BE NEEDED AND ACCORDING TO APPROVED PROJECT PLAN. WASH RACKS TO BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
5	INSTALL SILT FENCE, OR COMPOST FILTER SOCK PERIMETER CONTROLS WHERE INDICATED ON E&S DRAWINGS IN THE VICINITY OF CLEARING OPERATIONS. PLACEMENT PRIOR TO CLEARING WILL BE AT THE DISCRETION OF THE EI BASED ON THE ROW AND WORKSPACES FOR USE AS MULCH FOR STABILIZATION AFTER CONSTRUCTION ACTIVITIES ARE COMPLETED.
6	INSTALL TEMPORARY BRIDGES AT STREAM CROSSINGS AS NECESSARY FOR ACCESS BY CLEARING EQUIPMENT.
7	INSTALL WETLAND MATS AT WETLAND CROSSINGS AS NECESSARY FOR ACCESS BY CLEARING EQUIPMENT.
SITE CLEARING (TREE CUTTING) & GRUBBING:	
1	WOODY VEGETATION CLEARING OF THE ROW, ATWS AND STAGING AREAS WILL TAKE PLACE IN A SINGLE PASS. NO GRADING OR GRUBBING WILL OCCUR DURING CLEARING OPERATIONS.
2	CHIP CLEARED VEGETATION AND REMOVE FROM ROW AND HAULED OFFSITE OR STOCKPILED AT STAGING AREAS. STOCKPILE WOOD CHIPS IN APPROVED TEMPORARY WORKSPACE OR STAGING AREAS FOR DISTRIBUTION AS NEEDED ON THE ROW AND WORKSPACES FOR USE AS MULCH FOR STABILIZATION AFTER CONSTRUCTION ACTIVITIES ARE COMPLETED.
3	GRUB TREE STUMPS IN CLEARED ROW. GRIND STUMPS AND REMOVE FROM ROW AND HAUL OFF SITE OR STOCKPILED AT STAGING AREAS FOR USE AS MULCH STABILIZATION AFTER EARTH DISTURBING ACTIVITIES ARE COMPLETED.
OVERALL CONSTRUCTION:	
1	CONSTRUCTION WILL TAKE PLACE IN A SINGLE SPREAD. PIPELINE CONSTRUCTION CREWS WILL BE IN CLOSE PROXIMITY TO EACH OTHER AND WILL BE ABLE TO EFFICIENTLY COMMUNICATE DURING THE ENTIRE CONSTRUCTION PHASE OF THE PROJECT. THE MINIMAL LENGTH OF EACH CONSTRUCTION SPREAD WILL NOT REQUIRE CONSTRUCTION CREWS TO BE SEPARATED BY SIGNIFICANT DISTANCES DURING PIPELINE CONSTRUCTION.
SITE GRADING:	
1	RE-STAKE THE ROW TO REPLACE ANY SIGNAGE OR FLAGGING THAT WAS REMOVED OR DAMAGED DURING CLEARING ACTIVITIES.
2	INSTALL ROCK CONSTRUCTION ENTRANCES WHERE VEHICLES WILL ENTER CONSTRUCTION AREAS FROM ACCESS ROADS. INSTALL WASH RACKS AS DIRECTED BY TC ENERGY IF ROCK CONSTRUCTION ENTRANCES ARE NOT FUNCTIONING AS INTENDED.
3	CLEAR, GRADE AND IMPROVE ACCESS ROAD AS NEEDED AS THEIR USE BECOMES REQUIRED.
4	ROUGH GRADE SITE, REMOVE AND STOCKPILE TOPSOIL AS APPROPRIATE. INSTALL SILT FENCE, OR COMPOST FILTER SOCK AROUND STOCKPILED TOPSOIL AS SHOWN ON E&S DRAWINGS.
5	THE MIXING OF TOPSOIL WITH SUBSOIL SHALL BE PREVENTED BY STRIPPING TOPSOIL FROM THE WORK AREA WITHIN DESIGNATED AREAS AND IN COORDINATION WITH THE APPLICABLE ACCESS AGREEMENTS.
6	INSTALL TEMPORARY SLOPE BREAKERS AS SHOWN ON E&S DRAWINGS.
7	INSTALL TEMPORARY FLOW DIVERSION, FLUME STRUCTURES AND TEMPORARY BRIDGES AT STREAM CROSSINGS AS STREAM CROSSINGS ARE ENCOUNTERED.
8	INSTALL APPROPRIATE TRENCH DEWATERING FILTER AND SURROUNDING SEDIMENT BARRIERS (STRAW BALES, SILT FENCE AND/OR COMPOST FILTER SOCKS AS DETERMINED IN THE FIELD) IN PREPARATION OF DEWATERING ACTIVITIES. THIS SHALL BE COMPLETED PRIOR TO PERFORMING EXCAVATION ACROSS WATERBODIES.
9	INSTALL TIMBER MATS FOR EQUIPMENT ACCESS AS SHOWN ON E&S DRAWINGS AS WETLANDS / STREAMS ARE ENCOUNTERED.
PIPELINE CONSTRUCTION:	
1	EXCAVATE PIPELINE TRENCH.
2	CONDUCT TRENCH DEWATERING AS NECESSARY.
3	STRING THE PIPE, BEND PIPE TO FIT NATURAL GRADE CHANGES, WELD PIPE SECTIONS TOGETHER, XRAY WELDS AND COAT WITH EPOXY.
4	LOWER PIPE SECTIONS INTO TRENCH, UTILIZING BEDDING AND PADDING WHERE NECESSARY TO PROTECT THE PIPE COATING. TOPSOIL SHALL NOT BE USED AS PADDING MATERIAL. CONDUCT AS-BUILT SURVEY.
5	INSTALL PERMANENT TRENCH BREAKERS.
6	BACKFILL TRENCH, PLACING SUBSOIL MIXED WITH SEDIMENT REMOVED FROM MAINTAINED E&S BMPS WITHIN THE TRENCH FIRST, THEN SPREAD TOPSOIL, COMPACTION TO 95% WITHIN EXPANDED KY DOT EASEMENT.
7	REPLACE TOPSOIL WHERE TOPSOIL SEGREGATION IS REQUIRED.
8	CONVERT TEMPORARY SLOPE BREAKERS TO PERMANENT SLOPE BREAKERS.
9	REMOVE TEMPORARY FLOW DIVERSION AND/OR FLUME STRUCTURES AT STREAM CROSSINGS.
10	INSTALL EROSION CONTROL BLANKETS OR MATTING WITHIN 50-FEET OF SURFACE WATERS AND WETLANDS.
11	PERFORM HYDROSTATIC OR AIR TESTING ON ALL PIPELINE COMPONENTS AND FINAL PIPE TIE-IN.
12	REMOVE TRENCH DEWATERING FILTERS AND SURROUNDING SEDIMENT BARRIERS.
13	WHEN THE USE OF EQUIPMENT IS NO LONGER REQUIRED IN WETLAND AND STREAM AREAS, REMOVE WETLAND MATS AND TEMPORARY STREAM CROSSINGS.

GENERAL PIPING CORROSION NOTES	
1	FIELD COATING AND ASSOCIATED SURFACE PREPARATION SHALL BE APPLIED PER TC ENERGY PROCEDURES TES-CO-EPU-GL, TES-CO-PAINT-GL, AND TES-CO-CAD-GL FOR ABOVE GROUND COATING AND FOR STANDARD PAINT COLORS.
2	THE BELOW TO ABOVE GROUND TRANSITION PIPING SHALL BE COATED AS DETAILED IN TC ENERGY PROCEDURE TES-CO-EPU-GL. ALL FBE OR TWO-PART EPOXY REMAINING ABOVE GRADE, INCLUDING 18" BELOW GROUND, WILL NEED COATED PER TC ENERGY PROCEDURE TES-CO-PAINT-GL.
3	ALL STUD BOLTS AND NUTS FOR FLANGES ARE TO BE TEFLON OR ZINC-COATED PER TES-ME-FBT-GL FLANGE BOLT TIGHTENING SPECIFICATION.
4	ALL FLANGES ARE TO BE FILLED WITH APPROVED DIELECTRIC FLANGE FILLER AND THE FLANGES COVERED WITH AN APPROVED FLANGE PROTECTOR PER TC ENERGY PROCEDURE TES-CO-PET-GL. OMIT ON WELL HEADS.
5	STEEL PIPE CLAMPS SHALL COME WITH A 1/8" THICK VIBRALON LINER ATTACHED TO THE PIPE CLAMP. THE SHIM BLOCKS MAY BE OF THE EPOXY TYPE OR THE STEEL TYPE WITH A 1/8" PVC LINER. ALTERNATIVES TO THE STEEL PIPE CLAMP ARE CABLES OR U-BOLTS. A VIBRALON SHEATH MAYBE ORDERED FOR EITHER THE CABLES OR U-BOLTS AS REQUIRED.
6	COATED U-BOLTS ARE REQUIRED FOR ALL HOLD DOWN U-BOLTS.
7	ALL INSTALLATIONS SHALL BE PER THE APPLICABLE CORROSION CONTROL PLAN OR SPECIFICATION. TEN-CP-DELVR-GL CORROSION PREVENTION EXECUTION & DELIVERABLES STANDARD.
8	DURING INSTALLATION ANY BARE PIPE SHALL BE ABRASIVE BLASTED AND COATING SHALL BE DONE IN ACCORDANCE WITH TC ENERGY PROCEDURE TES-CO-PAINT-GL. NEW CONSTRUCTION & SYSTEM REHABILITATION COATING REGARDLESS OF WHETHER THE PIPE WAS SHOP OR FIELD FABRICATED.
9	ALL ABRASIVE BLASTING AND COATING SHALL BE APPLIED IN ACCORDANCE WITH THE APPROPRIATE PROCEDURE AND TIN THE PRESENCE OF THE CORROSION CONTROL INSPECTOR.
10	ALL BELOW GRADE PIPING SHALL BE THOROUGHLY JEEPED; 1) TO LOCATE HOLIDAYS 2) AFTER HOLIDAYS ARE PATCHED, AND 3) JUST BEFORE BACK FILLING BEGINS.
11	HOT-TAP FULL ENCCIRCLEMENT REINFORCING SLEEVES MUST BE GREASED AND COATED AS PER TC ENERGY DOCUMENT #1012267019 CORROSION PROTECTION UNDER ENCCIRCLEMENT TYPE REINFORCING SLEEVES
12	THE ABOVE GROUND PIPE SUPPORTS WILL BE CONSTRUCTED OF ALUMINUM OR STEEL WITH MINIMUM 1/8" FRP PAD OR OTHER APPROVED DIELECTRIC MATERIAL BONDED TO THE SUPPORT DEVICE. STEEL PIPE STRAPS WILL HAVE MINIMUM 1/8" FRP PAD OR OTHER APPROVED DIELECTRIC MATERIAL BONDED TO THE SURFACE FACING THE PIPE. DIELECTRIC PADS SHOULD NEVER BE BONDED TO THE PIPELINE.
13	ABOVE OR BELOW GRADE PIPING RESTING ON CONCRETE SUPPORTS OR PIPE SUPPORTS SHALL BE COATED PER TC ENERGY PROCEDURE TES-CO-EPU-GL. DRY FILM THICKNESS (DFT) OF CURED COATING PER TABLE 2-1. IF THE PIPE WAS MILL COATED WITH FBE SEE TC ENERGY PROCEDURE TES-CO-CAD-GL. ABOVE GRADE PIPING SHALL BE PAINTED PER TC ENERGY PROCEDURE TES-CO-PAINT-GL.

NO CHANGE

REFERENCE DRAWINGS	
DRAWING No	TITLE
E.032696-COVER	COVER SHEET

REVISION		
REV No	DATE	DESCRIPTION
00	2024-06-14	ISSUED FOR CONSTRUCTION
01	2024-10-06	RE-ISSUED FOR CONSTRUCTION (REVISED MAOP)

APPROVAL						
PROJECT CODE	DRAFTER	DRAFTING CHECKER	DESIGNER	DESIGN CHECKER	PROJECT MANAGER	COMPANY
E.032696	BAG	SFS	RLR	BT	JPM	MM
E.032696	BAG	SFS	RLR	BT	JHG	MM

PROFESSIONAL ENGINEER/RPT		PERMIT/ ENG. APPROVAL	
REV. NO.	DATE	PERMIT NUMBER:	DATE

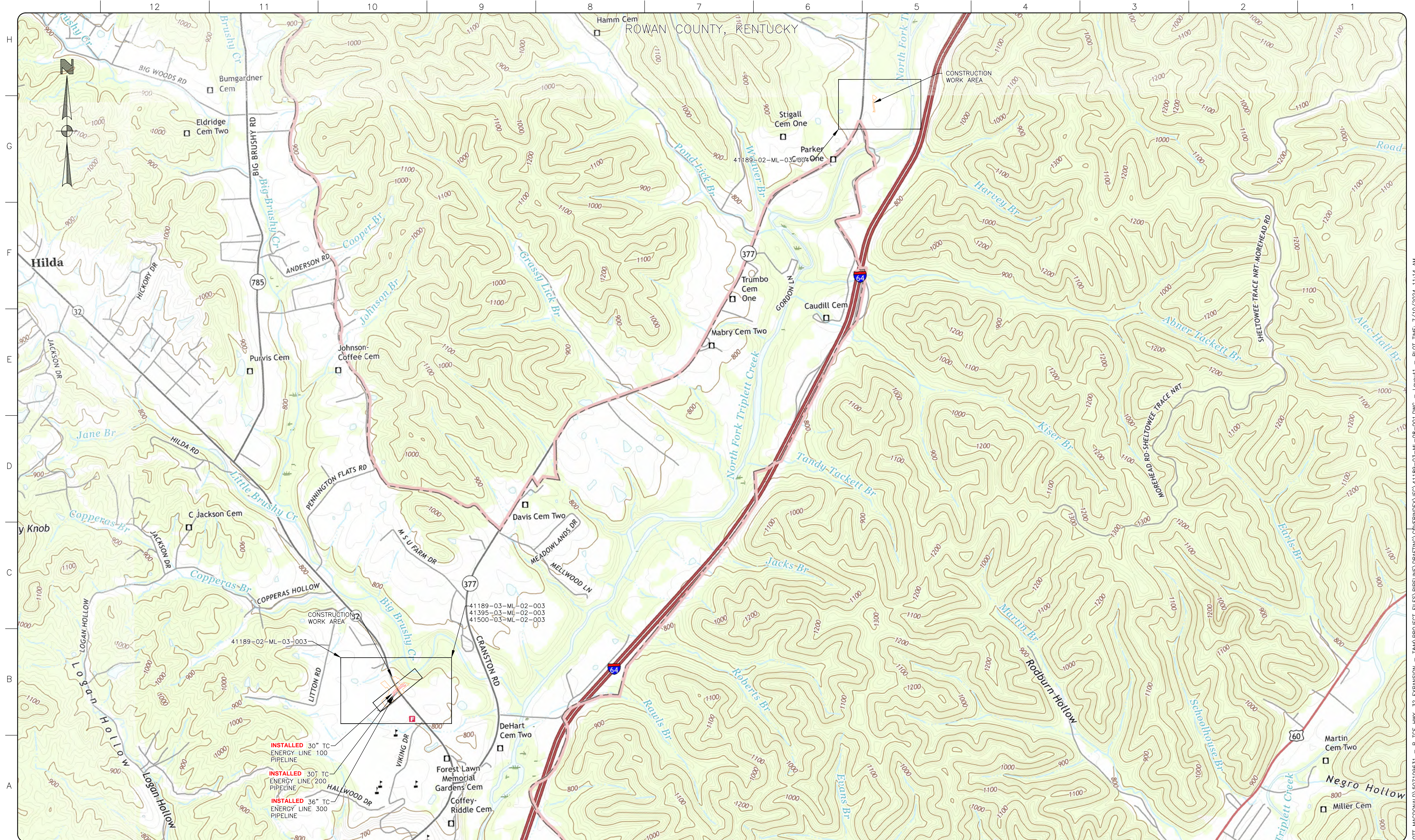
**TC Energy** **MOTT MACDONALD**

FROM V109-1 TO V110-1

FACILITY # 41189 | ENG STATION: | DISC # 03

GENERAL NOTES  
TC ENERGY STATE ROUTE 32 RELOCATION OF LINES 30" LINE 100, 30" LINE 200, AND 36" LINE 300  
ROWAN COUNTY, KENTUCKY

SCALE N.T.S. | DRAWING # 41189-03-ML-00-001 | REV 01





REFERENCE DRAWINGS	
DRAWING No	TITLE
E.032696-COVER	COVER SHEET
41189-03-ML-00-001	GENERAL NOTES
41189-03-ML-02-003	ALIGNMENT SHEET - LINE 100
41395-03-ML-02-003	ALIGNMENT SHEET - LINE 200
41500-03-ML-02-003	ALIGNMENT SHEET - LINE 300
41189-02-ML-03-003	WORKSPACE LAYOUT

REVISION		
REV No	DATE	DESCRIPTION
00	2024-06-14	ISSUED FOR CONSTRUCTION

APPROVAL						
PROJECT CODE	DRAFTER	DRAFTING CHECKER	DESIGNER	DESIGN CHECKER	PROJECT MANAGER	COMPANY
E.032696	BAG	SFS	RLR	BT	JPM	MM

PROFESSIONAL ENGINEER/RPT		PERMIT/ ENG. APPROVAL	
REV. NO.	DATE	PERMIT NUMBER:	DATE

FROM V109-1 TO V110-1

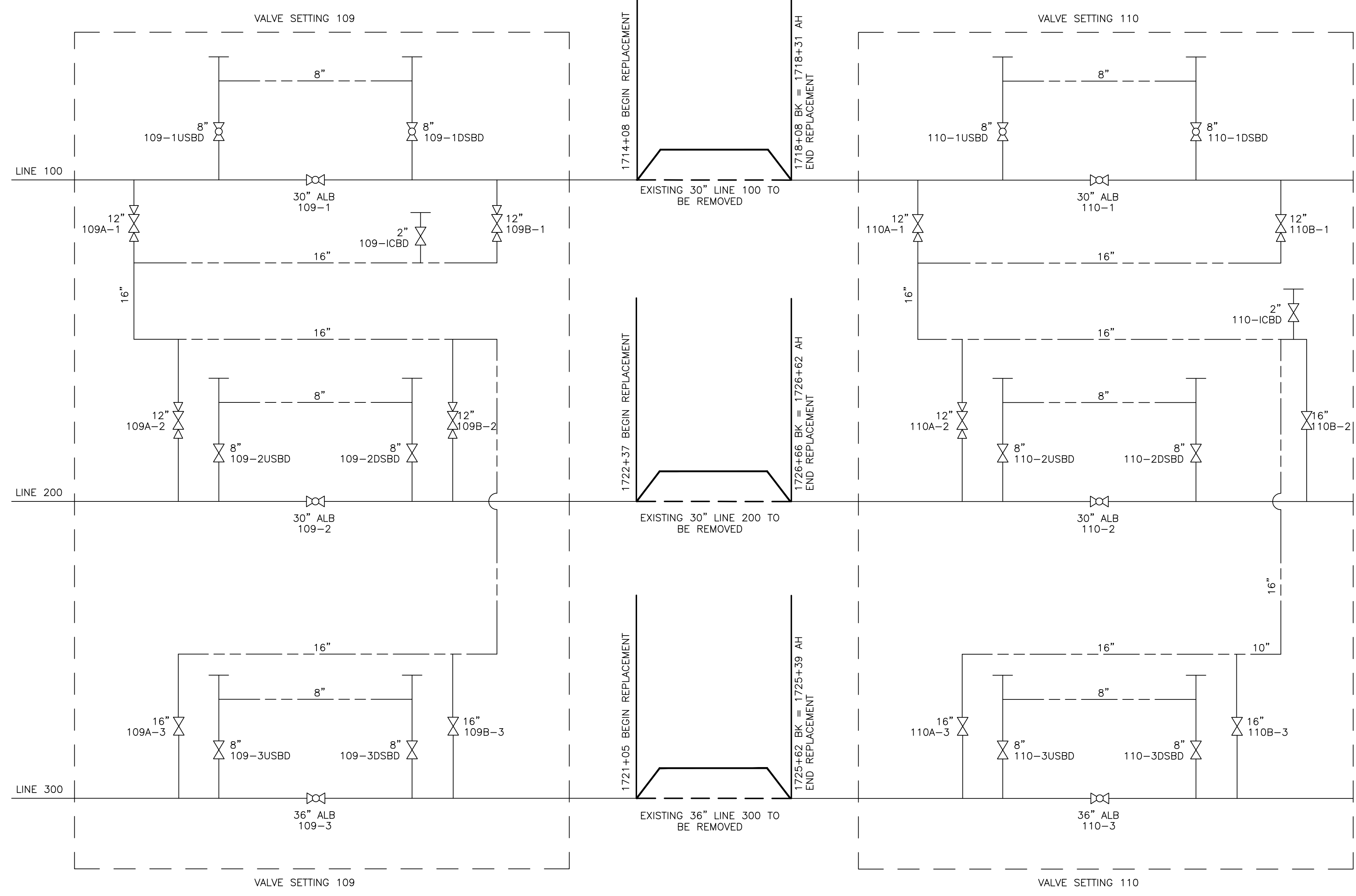
FACTORY # 41189	ENG STATION:	DISC # 03
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**OVERALL MAP**  
TC ENERGY STATE ROUTE 32 RELOCATION OF LINES 30" LINE 100, 30" LINE 200, AND 36" LINE 300  
ROWAN COUNTY, KENTUCKY

SCALE 1" = 1000'	DRAWING # 41189-03-ML-08-001	REV 00
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H  
G  
F  
E  
D  
C  
B  
A

SECTION 1



REFERENCE DRAWINGS	
DRAWING No	TITLE
E.032696-COVER	COVER SHEET
41189-03-ML-00-001	GENERAL NOTES
FD-GC21-1002-1	MOREHEAD COMPRESSOR STATION - P&ID VALVE SWITCHING AREA

REVISION		
REV No	DATE	DESCRIPTION
00	2024-06-14	ISSUED FOR CONSTRUCTION
01	2024-12-13	ISSUED FOR AS-BUILT

APPROVAL						
PROJECT CODE	DRAFTER	DRAFTING CHECKER	DESIGNER	DESIGN CHECKER	PROJECT MANAGER	COMPANY
E.032696	BAG	SFS	RLR	BT	JPM	MM
E.032696	BAG	SFS	RLR	BT	JPM	MM

PROFESSIONAL ENGINEER/RPT	PERMIT/ ENG. APPROVAL

**TC Energy**

FROM V109-1 TO V110-1

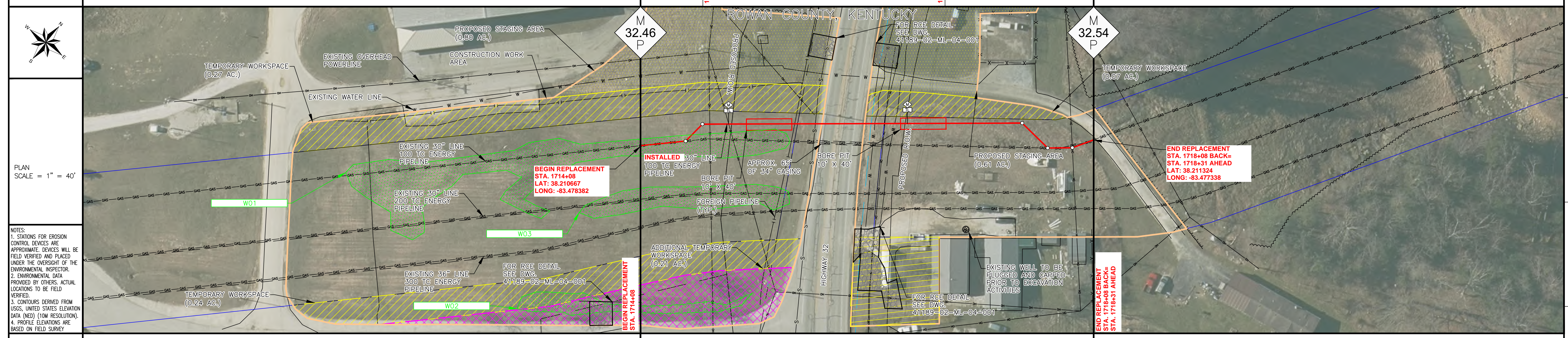
FACILITY # 41189	ENG STATION:	DISC # 01
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PROCESS FLOW DIAGRAM - OUTAGE SECTION 1  
TC ENERGY STATE ROUTE 32 RELOCATION OF LINES 30" LINE 100, 30" LINE 200, AND 36" LINE 300  
ROWAN COUNTY, KENTUCKY

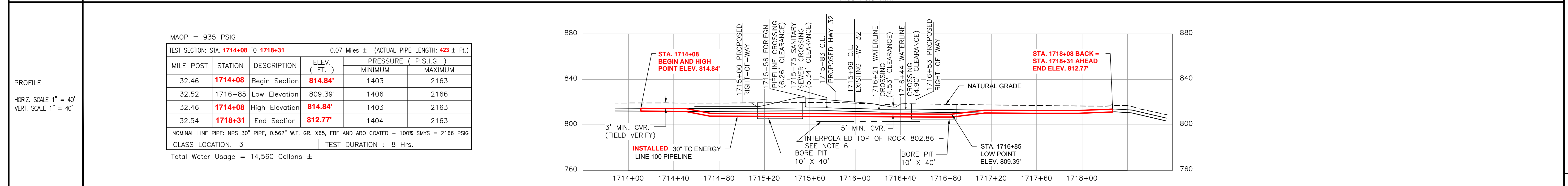
SCALE N.T.S.	DRAWING # 41189-01-ML-01-002	REV 01
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C:\USERS\G0R76468\DC\ACCDGCS\W0TT MACDONALD\PROJECT FILES\PIPELINE\_DRAFTING\ALIGNMENTS\PRELIMINARY\FC\_41189-03-ML-02-003.DWG  
 5/7/2018 12:35:30 PM BRUCE GORDON

OWNERSHIP	XXXXXX	XXXXXX	XXXXXX
STATIONING	STA. 1714+47 P.I. 45'00"00" LT STA. 1714+71 P.I. 45'00"00" RT STA. 1714+78 OVERHEAD POWER STA. 1714+95 OVERHEAD POWER	STA. 1715+00 PROPOSED R.O.W. STA. 1715+56 FOREIGN PIPELINE STA. 1715+75 SANITARY SEWER STA. 1715+99 C.L. EXISTING HWY. 32 STA. 1716+20 CULVERT STA. 1716+32 OVERHEAD POWER STA. 1716+44 WATERLINE STA. 1716+53 PROPOSED R.O.W.	STA. 1717+36 P.I. 45'00"00" RT STA. 1717+85 P.I. 45'00"00" LT STA. 1718+07 OVERHEAD POWER
ENVIRONMENTAL	SEE ENVIRONMENTAL MANAGEMENT CONTROL PLAN (EMCP)		
DEPTH OF COVER	TRANSITION TO EXISTING COVER	5' MINIMUM COVER	TRANSITION TO EXISTING COVER



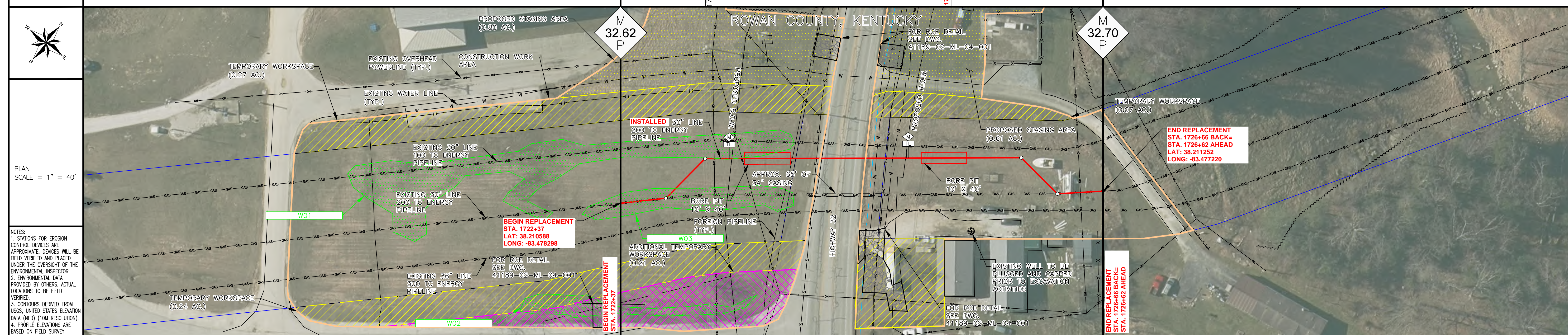
MATERIAL	TIE-IN TO EXISTING 30" O.D., 0.562" W.T., GR X60. PIPE (SEE NOTE 2)	423'	423'	TIE-IN TO EXISTING 30" O.D., 0.562" W.T., GR X60. PIPE (SEE NOTE 2)	REMOVE 423' OF 30" O.D. STEEL PIPE
CLASS LOCATION	CLASS 3				
DESIGN FACTOR	0.5				
HYDROTEST	1403 PSIG MIN.				



PIPE INVENTORY				MISCELLANEOUS MATERIALS				REFERENCE DRAWINGS				LEGEND				GENERAL NOTES				REVISIONS				APPROVALS																
ITEM No.	QTY	UOM	REO'N NUMBER	MATERIAL NUMBER	DESCRIPTION	QTY	UOM	REO'N NUMBER	MATERIAL NUMBER	DESCRIPTION	DWG/Field Book No.	TITLE	EXISTING PIPELINE	PROPOSED PIPELINE	CONSTRUCTION WORK AREA	UNDERGROUND CABLE	POWER LINE	WATERLINE	PROPOSED PERMANENT EASEMENT	TEMPORARY WORKSPACE	ADDITIONAL TEMPORARY WORKSPACE	ACCESS ROAD	EXISTING PERMANENT EASEMENT	CONTRACTOR / PIPE YARD	WETLAND	WATERBODY	NO.	DESCRIPTION	DATE	REV BY	CHK BY	APP BY	DRAWN BY	CHECKED BY	CONSTRUCTION PERMIT No.	MAINTENANCE OPERATION REGION	MIN. TEST PRESSURE	PSI	DESIGN PRESSURE	PSI
1	423	FT			NPS 30 PIPE, 0.562" W.T., GR. X65, FBE AND ARO COATED	4		2		SEGMENTABLE ELBOW, 3R, 45 DEGREE, NPS 30, 0.562" W.T., X65	E.032896-COVER	COVER SHEET	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	00	ISSUED FOR CONSTRUCTION	2024-06-14	BAG	BT	JPM	BAG						

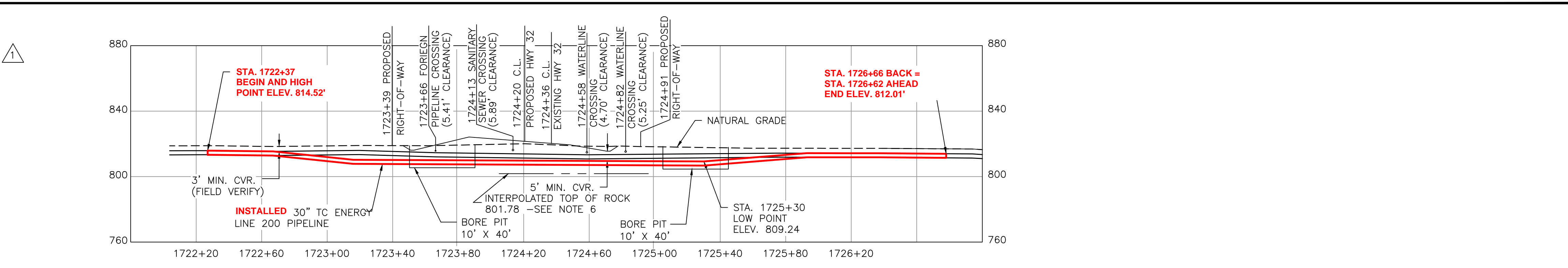
C:\ACC\ACCD005\WOTT MACDONALD\507109631 - P\_TCE HWY. 32 EXPANSION - T&M\PROJECT FILES\PIPELINE\DRAWINGS\ALIGNMENTS\PRELIMINARY\FC 41395-03-ML-02-003.DWG  
5/7/2018 12:35:30 PM BRUCE GORDON

OWNERSHIP	XXXXXX XXXXXX 102'	XXXXXX STATE ROUTE 32 152'	XXXXXX XXXXXX 175'
STATIONING	BEGIN REPLACEMENT STA. 1722+37 STA. 1722+65 P.I. 45'00"00" LT STA. 1723+16 P.I. 45'00"00" RT STA. 1723+17 OVERHEAD POWER STA. 1723+39 PROPOSED R.O.W. STA. 1723+48 OVERHEAD POWER	STA. 1723+66 FOREIGN PIPELINE STA. 1724+13 SANITARY SEWER STA. 1724+36 C.L. EXISTING HWY. 32 STA. 1723+63 CULVERT STA. 1724+58 WATERLINE STA. 1724+66 OVERHEAD POWER STA. 1724+82 WATERLINE STA. 1724+91 PROPOSED R.O.W.	END REPLACEMENT STA. 1726+66 STA. 1726+82 AHEAD STA. 1725+94 P.I. 45'00"00" RT STA. 1726+40 P.I. 45'00"00" LT STA. 1726+58 OVERHEAD POWER
ENVIRONMENTAL	SEE ENVIRONMENTAL MANAGEMENT CONTROL PLAN (EMCP)		
DEPTH OF COVER	TRANSITION TO EXISTING COVER	5' MINIMUM COVER	TRANSITION TO EXISTING COVER



MATERIAL	<p>RETIREMENT LEGEND</p> <ul style="list-style-type: none"> <li>PROPOSED PIPING</li> <li>RETIRED IN PLACE</li> <li>REMOVED</li> <li>CUT, GROUTED AND CAPPED</li> <li>REMAIN IN SERVICE</li> <li>REMOVED TAP</li> </ul>	<p>TIE-IN TO EXISTING 30" O.D., 0.562" W.T., GR X60. PIPE (SEE NOTE 1)</p> <p>65' OF 34" CASING TO BE GROUTED IN PLACE (SEE NOTE 7)</p> <p>REMOVE 445' OF 30" O.D. STEEL PIPE</p>
CLASS LOCATION	CLASS 3	
DESIGN FACTOR	0.5	
HYDROTEST	1403 PSIG MIN.	

MAOP = 1007 PSIG					
TEST SECTION: STA. 1722+37 TO 1722+66 0.08 Miles ± (ACTUAL PIPE LENGTH: 429 ± Ft.)					
MILE POST	STATION	DESCRIPTION	ELEV. (FT.)	PRESSURE (P.S.I.G.)	
32.62	1722+37	Begin Section	814.52'	MINIMUM	MAXIMUM
32.68	1725+30	Low Elevation	809.24'	1511	2217
32.61	1722+21	High Elevation	814.71'	1511	2217
32.70	1726+66	End Section	812.01'	1517	2222
NOMINAL LINE PIPE: NPS 30" PIPE, 0.562" W.T., GR. X65, FBE AND ARO COATED - 100% SMYS = 2166 PSIG					
CLASS LOCATION: 3			TEST DURATION: 8 Hrs.		
Total Water Usage = 15,785 Gallons ±					



PIPE INVENTORY				MISCELLANEOUS MATERIALS			
ITEM No.	QTY	UOM	DESCRIPTION	QTY	UOM	DESCRIPTION	DESCRIPTION
1	445	FT	NPS 30 PIPE, 0.562" W.T., GR. X65, FBE AND ARO COATED	4		SEGMENTABLE ELBOW, 3R, 45 DEGREE, NPS 30, 0.562" W.T., X65	

REFERENCE DRAWINGS		LEGEND	
DWG/Field Book No.	TITLE	SYMBOL	DESCRIPTION
E.032696-COVER	COVER SHEET	---	EXISTING PIPELINE
41189-03-ML-00-001	GENERAL NOTES	---	FOREIGN PIPELINE
41189-02-ML-03-003	WORKSPACE LAYOUT	---	COUNTY BOUNDARY
41189-11-ML-04-001	CATHODIC PROTECTION DETAILS	---	FENCE
41189-02-ML-04-001	GENERAL DETAILS	---	PROPOSED PIPELINE
41189-02-ML-04-002	GENERAL DETAILS	---	CONSTRUCTION WORK AREA

GENERAL NOTES	
1.	NO TRANSITION.
2.	BACK BEVEL PER TES-ME-STRTN-CL.
3.	COUNTER BORE AND TAPER PER TES-ME-STRTN-CL.
4.	EXISTING PIPELINE(S) TO BE REMOVED FROM CASING(S). CASING(S) TO BE CAPPED, GROUT FILLED AND RETIRED IN PLACE.
5.	TEST LEADS AND LINE MARKER LOCATIONS TO BE DETERMINED IN THE FIELD, BUT LOCATED AT LEAST 2' OUTSIDE THE PROPOSED HIGHWAY RIGHT OF WAY.
6.	TOP OF ROCK INTERPOLATED FROM GEOTECHNICAL EXPLORATION DATA REPORT BY PROFESSIONAL SERVICES INDUSTRIES, INC., DATED MAY 3RD, 2024.
7.	EXISTING PIPELINE TO BE REMOVED AND CASING TO BE GROUT FILLED AND CAPPED WITH A 1/4" STEEL PLATE. IF UNABLE TO REMOVE THE PIPELINE, THE PIPELINE WILL BE GROUT FILLED AND CAPPED WITH A 1/4" STEEL PLATE.

REVISIONS				APPROVALS			
NO.	DESCRIPTION	DATE	REV BY	CHK BY	APP BY	DRAWN BY	CHECKED BY
00	ISSUED FOR CONSTRUCTION	2024-06-14	BAG	BT	JPM	BAG	BAG
01	RE-ISSUED FOR CONSTRUCTION (REVISED MAOP AND TEST CHART)	2024-10-06	BAG	BT	JHG	BAG	BAG

**TC Energy** MOTT MACDONALD

PL-200 -- FROM V109-2 TO V110-2

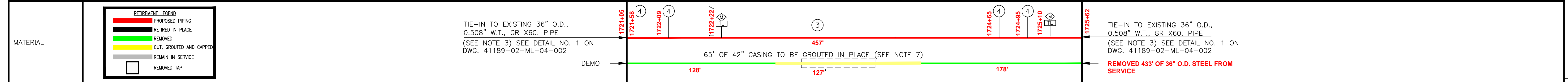
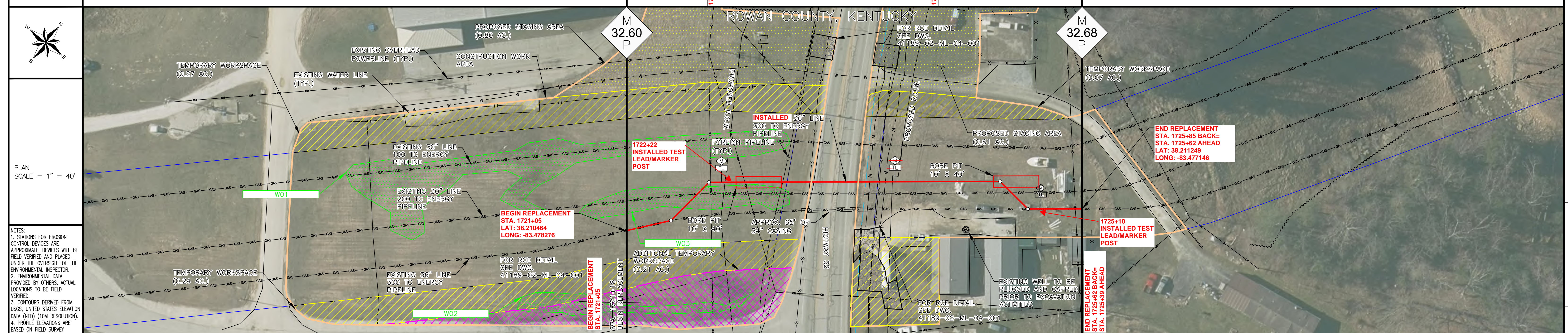
FIA # 41395 MP/STA. 1722+37 TO 1726+66 DISCIPLINE # 03

ALIGNMENT SHEET - LINE 200 STA. 1722+37 TO 1726+66  
TC ENERGY STATE ROUTE 32 RELOCATION OF LINES 30" LINE 100, 30" LINE 200, AND 36" LINE 300  
ROWAN COUNTY, KENTUCKY

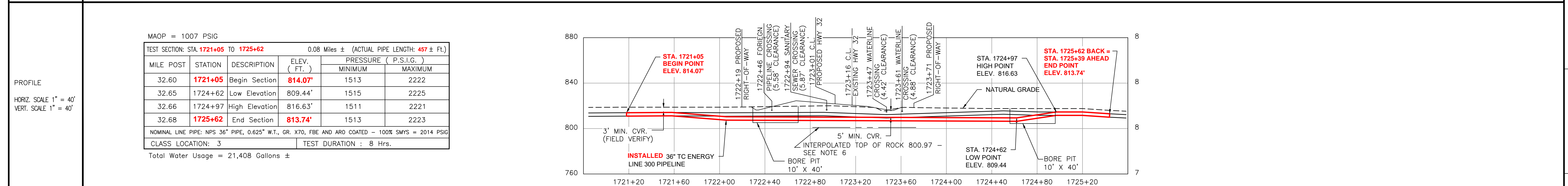
SCALE 1" = 40' DRAWING No. 41395-03-ML-02-003 REV 01

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 5/7/2018 12:35:30 PM BRUCE GORDON

OWNERSHIP	XXXXXX	XXXXXX	XXXXXX
STATIONING	1721+05	1722+19	1725+62
ENVIRONMENTAL	SEE ENVIRONMENTAL MANAGEMENT CONTROL PLAN (EMCP)		
DEPTH OF COVER	TRANSITION TO EXISTING COVER	4' - 7.7'	TRANSITION TO EXISTING COVER



CLASS LOCATION	CLASS 3
DESIGN FACTOR	0.5
HYDROTEST	1511 PSIG MIN.



MAOP = 1007 PSIG

TEST SECTION: STA. 1721+05 TO 1725+62 0.08 Miles ± (ACTUAL PIPE LENGTH: 457 ± FT.)

MILE POST	STATION	DESCRIPTION	ELEV. (FT.)	MINIMUM PRESSURE (P.S.I.G.)	MAXIMUM PRESSURE (P.S.I.G.)
32.60	1721+05	Begin Section	814.07'	1513	2222
32.65	1724+62	Low Elevation	809.44'	1515	2225
32.66	1724+97	High Elevation	816.63'	1511	2221
32.68	1725+62	End Section	813.74'	1513	2223

NOMINAL LINE PIPE: NPS 36" PIPE, 0.625" W.T., GR. X70, FBE AND ARO COATED - 100% SMYS = 2014 PSIG  
 CLASS LOCATION: 3 TEST DURATION: 8 Hrs.  
 Total Water Usage = 21,408 Gallons ±

PIPE INVENTORY				MISCELLANEOUS MATERIALS				REFERENCE DRAWINGS				LEGEND				GENERAL NOTES				REVISIONS				APPROVALS				
ITEM No.	QTY	UOM	REQ'D NUMBER	MATERIAL NUMBER	DESCRIPTION	QTY	UOM	REQ'D NUMBER	MATERIAL NUMBER	DESCRIPTION	DWG/Field Book No.	TITLE	SYMBOL	DESCRIPTION	NO.	DESCRIPTION	DATE	REV BY	CHK BY	APP BY	DRAWN BY	CHECKED BY	CONSTRUCTION PERMIT No.	MAINTENANCE OPERATION REGION	MIN. TEST PRESSURE	PSI	DESIGN PRESSURE	PSI
3	457	FT			NPS 36 PIPE, 0.625" W.T., GR. X70, FBE AND ARO COATED	4		4		SEGMENTABLE ELBOW, 3R, 45 DEGREE, NPS 36, 0.625" W.T., Y70	E.032696-COVER	COVER SHEET	---	PROPERTY TRACT NUMBER	1	NO TRANSITION.	2024-06-14	BAG	BT	JPM	BAG		PL-300 -- FROM V109-3 TO V110-3					

**TC Energy**  
 MOTT MACDONALD

ALIGNMENT SHEET - LINE 300 STA. 1721+05 TO 1725+62  
 TC ENERGY STATE ROUTE 32 RELOCATION OF LINES 30" LINE 100, 30" LINE 200, AND 36" LINE 300 ROWAN COUNTY, KENTUCKY

SCALE: 1" = 40'  
 DRAWING No: 41500-03-ML-02-003  
 REV: 00



**LEGEND**

PROPOSED PIPELINE	— X — X — X — X —	FENCE	— T — T — T — T —	TELEPHONE LINE
FOREIGN PIPELINE	— T — T — T — T —	STRUCTURE	TOP OF BANK	TOE OF BANK
EXISTING TC PIPELINE	— P — P — P — P —	POWER LINES	TREE LINE / BRUSH	CONSTRUCTION WORK AREA
WETLAND	— W — W — W — W —	PROPERTY LINE	PROPOSED PERM. EASEMENT	LAKE/POND
STORAGE YARD/ STAGING	— S — S — S — S —	WATER	ACCESS ROADS	PERM. EASEMENT
TEMPORARY WORKSPACE	— W — W — W — W —	WATER	PERM. EASEMENT	CENTER OF ROAD
ADDITIONAL TEMPORARY WORKSPACE	— A — A — A — A —	WATER	PERM. EASEMENT	COUNTY BOUNDARY LINE

**SYMBOLS**

TREE	WETLAND / MARSH	CLY WRE / ANDER	WELL	LINE MARKER
TAP	METER	VALVE	POWER POLE	LIGHT POLE
STORM SEWER	SANITARY SEWER	FIRE HYDRANT	TEST LEAD	WELL LOCATION

REFERENCE DRAWINGS		REVISION		APPROVAL						PROFESSIONAL ENGINEER/RPT	PERMIT/ ENG. APPROVAL	
DRAWING No	TITLE	REV No	DATE	DESCRIPTION	PROJECT CODE	DRAFTER	DRAFTING CHECKER	DESIGNER	DESIGN CHECKER	PROJECT MANAGER	COMPANY	DATE
E.032696-COVER	COVER SHEET	00	2024-06-14	ISSUED FOR CONSTRUCTION	E.032696	BAG	SFS	RLR	BT	JPM	MM	
41189-03-ML-00-001	GENERAL NOTES											
41189-03-ML-02-003	ALIGNMENT SHEET - LINE 100											
41395-03-ML-02-003	ALIGNMENT SHEET - LINE 200											
41500-03-ML-02-003	ALIGNMENT SHEET - LINE 300											

REV. NO.	DATE	PERMIT NUMBER:

**TC Energy**

**MOTT MACDONALD**

FROM V109-1 TO V110-1

FACTORY # 41189 | ENG STATION: | DISC # 02

**WORKSPACE LAYOUT**  
 TC ENERGY STATE ROUTE 32 RELOCATION OF LINES 30" LINE 100, 30" LINE 200, AND 36" LINE 300  
 ROWAN COUNTY, KENTUCKY

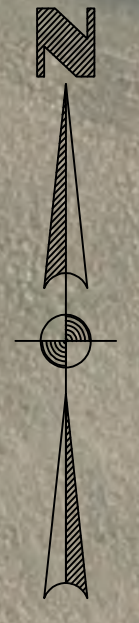
SCALE 1" = 80' | DRAWING # 41189-02-ML-03-003 | REV 00

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ROWAN COUNTY, KENTUCKY

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EXISTING 135' TC ENERGY EASEMENT  
 EXISTING 30" TC ENERGY LINE 100 PIPELINE  
 EXISTING 30" TC ENERGY LINE 200 PIPELINE  
 EXISTING 36" TC ENERGY LINE 300 PIPELINE

TAR-001  
 387'  
 LAT: 38.249008°  
 LONG: -83.438259°

LEGEND	
— X — X — X — X —	FENCE
— T — T — T — T —	TELEPHONE LINE
— GAS — GAS — GAS — GAS —	STRUCTURE
—	TOP OF BANK
—	TOE OF BANK
— P — P — P — P —	POWER LINES
—	TREE LINE / BRUSH
—	CONSTRUCTION WORK AREA
—	PROPERTY LINE
—	PROPOSED PERM. EASEMENT
—	LAKE / POND
—	STORM SEWER
—	SANITARY SEWER
—	FIRE HYDRANT
—	TEST LEAD
—	WELL LOCATION
—	WETLAND / MARSH
—	TAP
—	METER
—	VALVE
—	POWER POLE
—	LIGHT POLE
—	WELL
—	WELL LOCATION
—	LINE MARKER

REFERENCE DRAWINGS	
DRAWING No	TITLE
E.032696-COVER	COVER SHEET
41189-03-ML-00-001	GENERAL NOTES
41189-03-ML-02-003	ALIGNMENT SHEET - LINE 100
41395-03-ML-02-003	ALIGNMENT SHEET - LINE 200
41500-03-ML-02-003	ALIGNMENT SHEET - LINE 300

REVISION		
REV No	DATE	DESCRIPTION
00	2024-06-14	ISSUED FOR CONSTRUCTION

APPROVAL						
PROJECT CODE	DRAFTER	DRAFTING CHECKER	DESIGNER	DESIGN CHECKER	PROJECT MANAGER	COMPANY
E.032696	BAG	SFS	RLR	BT	JPM	MM

PROFESSIONAL ENGINEER/RPT		PERMIT / ENG. APPROVAL	
REV. NO.	DATE	PERMIT NUMBER:	DATE

**TC Energy**

**MOTT MACDONALD**

FROM V109-1 TO V110-1

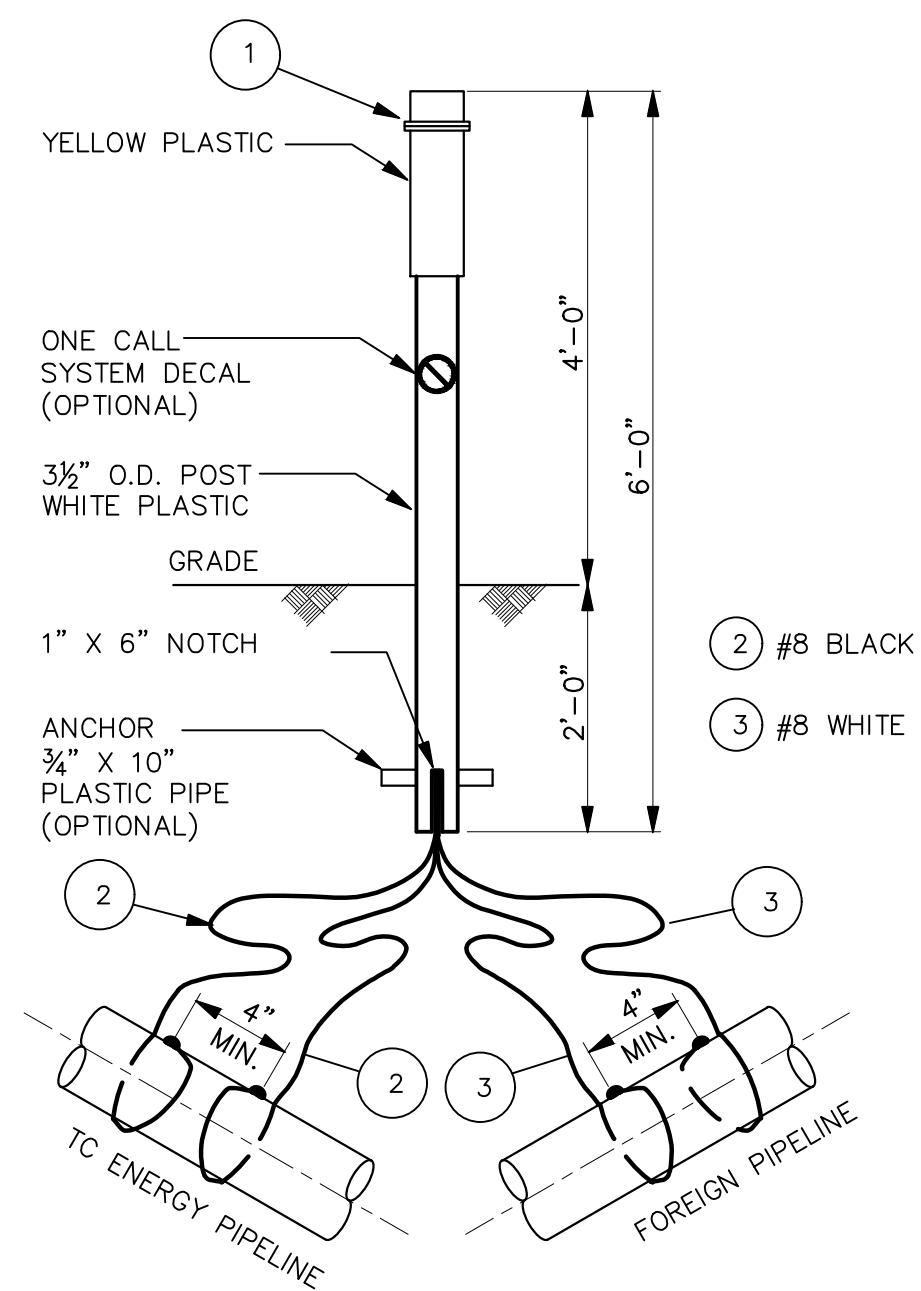
FACILITY # 41189 | ENG STATION: | DISC # 02

**WORKSPACE LAYOUT**  
 TC ENERGY STATE ROUTE 32 RELOCATION OF LINES 30" LINE 100, 30" LINE 200, AND 36" LINE 300  
 ROWAN COUNTY, KENTUCKY

SCALE 1" = 80' | DRAWING # 41189-02-ML-03-004 | REV 00

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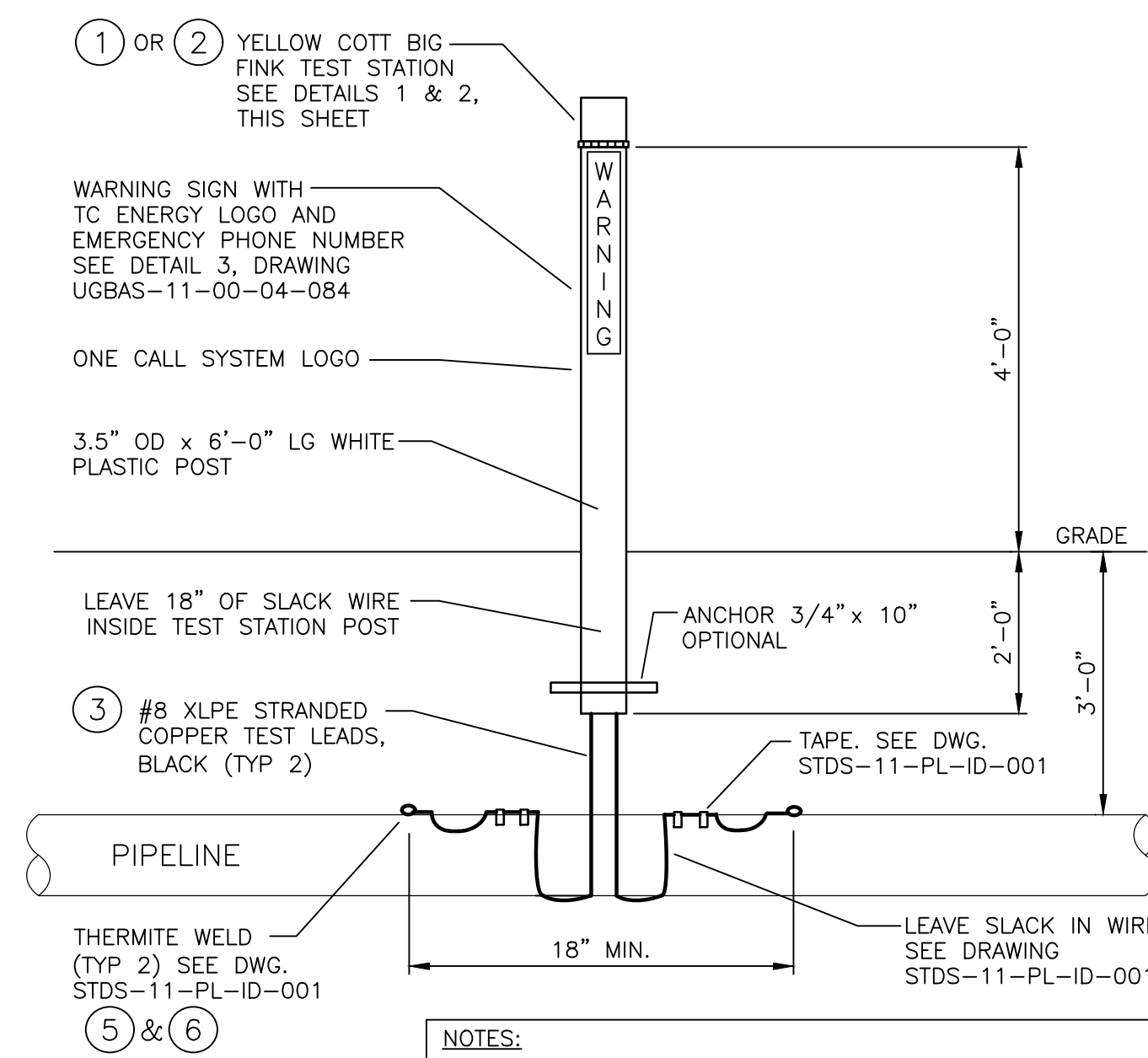
MK.	QUAN.	UNIT	S.S.NO.	DESCRIPTION	NOTES
1	1	EA.	42-77514	ORANGE BIG FINK TEST STATION AND ONE COTTMARK WARNING SIGN MOUNTED ON ONE 3.5" OD X .125 W.T. WHITE HIGH DENSITY POLYETHYLENE PIPE SUPPORT COMPLETE WITH ONE PLASTIC FROST ANCHOR. COTT MODEL 503-3B8-00W. EACH UNIT IS SIX FEET LONG. TELEPHONE NUMBER 1-800-835-7191.	
1	1	EA.	42-32061	GEROME TESTOX TEST STATION, MODEL #107 SINGLE SLIP FIT HUB, 5 LEAD, 2 BONDS, WITH 6 FT. OF 3" CONDUIT (RIGID GALVANIZED) OR PIPE (PLASTIC OR STEEL).	SINGLE BOX
1	1	EA.	42-32069	GEROME TESTOX TEST STATION, MODEL #2007 SINGLE SLIP FIT HUB, 8 LEAD, 2 BONDS, WITH 6 FT. OF 3" CONDUIT (RIGID GALVANIZED) OR PIPE (PLASTIC OR STEEL).	DOUBLE BOX
2	FD	FT.	74-47650	#8 WIRE, STRANDED COPPER CONDUCTORS, THW. MOISTURE RESISTANT PLASTIC INSULATION, COLOR - BLACK.	
3	FD	FT.	74-47655	#8 WIRE, STRANDED COPPER CONDUCTORS, THW. MOISTURE RESISTANT PLASTIC INSULATION, COLOR - WHITE.	

FD - INDICATES FIELD DETERMINE

NOTES:

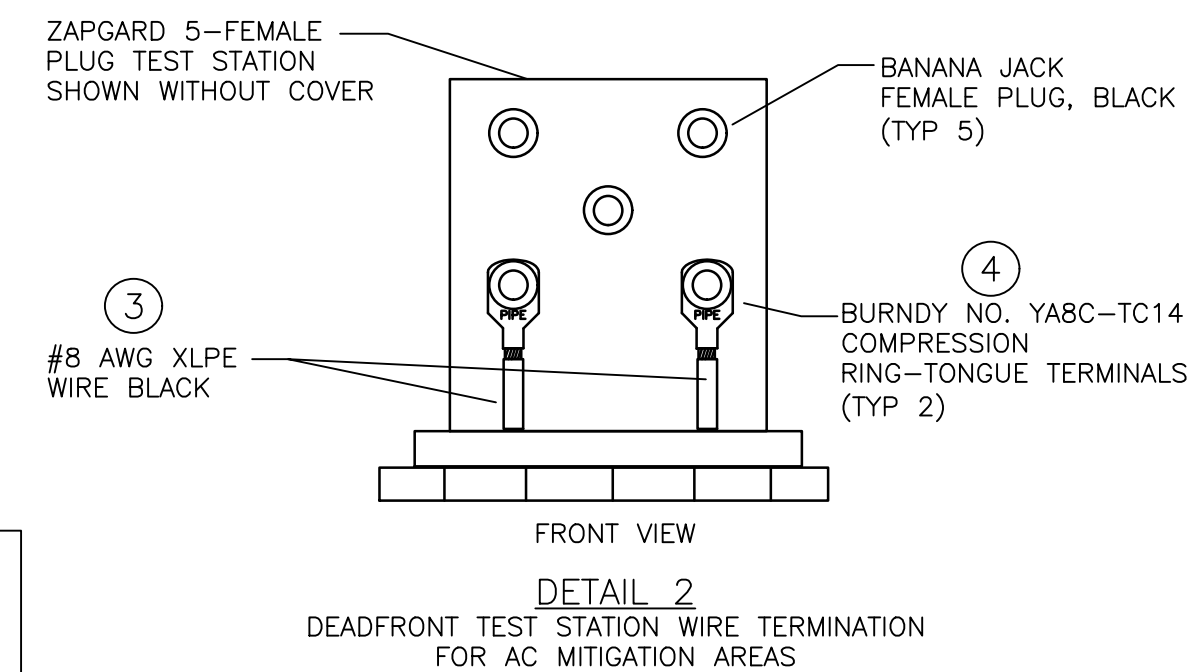
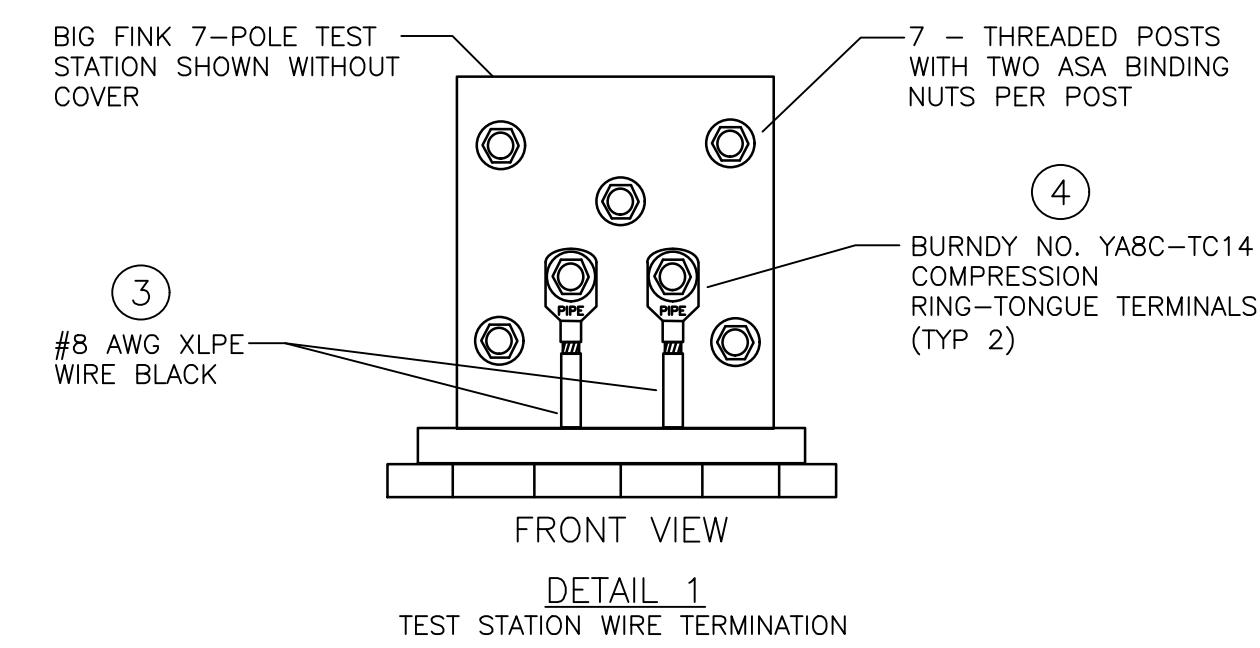
- CONNECT WIRES TO PIPE USING THERMITE WELD METHOD.
- WIRES SHOULD BE LOOPED SNUGLY AROUND PIPE.
- INVENTORY MAP SYMBOL.

FORIEGN LINE CROSSING TEST STATION  
TCE: UGBAS-11-00-04-017  
SCALE: NTS



- NOTES:
- ALL BURNDY CRIMPS MUST BE MADE USING THE CORRECT DIES AND CRIMPING TOOL.
  - CONTRACTOR TO SUPPLY THERMITE WELD MATERIALS, THERMITE WELD AREA REPAIR COATING, AND WIRE TAPE.

SINGLE TEST STATION  
TCE: UGBAS-11-00-04-083  
SCALE: NTS



NO CHANGE

REFERENCE DRAWINGS	
DRAWING No	TITLE
E.032696-COVER	COVER SHEET
41189-03-ML-00-001	GENERAL NOTES
41189-03-ML-02-003	ALIGNMENT SHEET - LINE 100
41395-03-ML-02-003	ALIGNMENT SHEET - LINE 200
41500-03-ML-02-003	ALIGNMENT SHEET - LINE 300

REVISION			APPROVAL						
REV No	DATE	DESCRIPTION	PROJECT CODE	DRAFTER	DRAFTING CHECKER	DESIGNER	DESIGN CHECKER	PROJECT MANAGER	COMPANY
00	2024-06-14	ISSUED FOR CONSTRUCTION	E.032696	BAG	SFS	RLR	BT	JPM	MM

PROFESSIONAL ENGINEER/RPT	PERMIT/ ENG. APPROVAL

REV. NO.	DATE	PERMIT NUMBER:

**TC Energy** **MOTT MACDONALD**

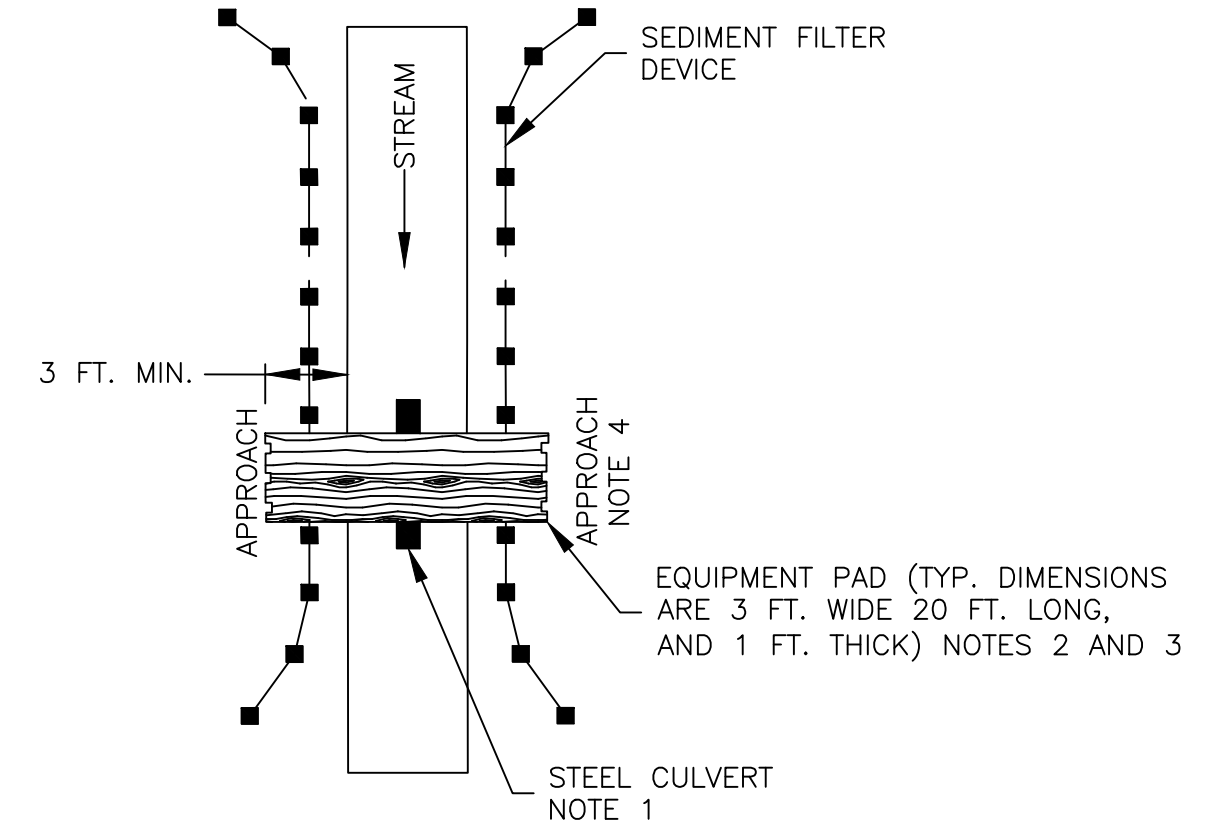
FROM V109-1 TO V110-1

FACILITY # 41189 | ENG STATION: | DISC # 11

CATHODIC PROTECTION DETAILS  
TC ENERGY STATE ROUTE 32 RELOCATION OF LINES 30" LINE 100, 30" LINE 200, AND 36" LINE 300  
ROWAN COUNTY, KENTUCKY

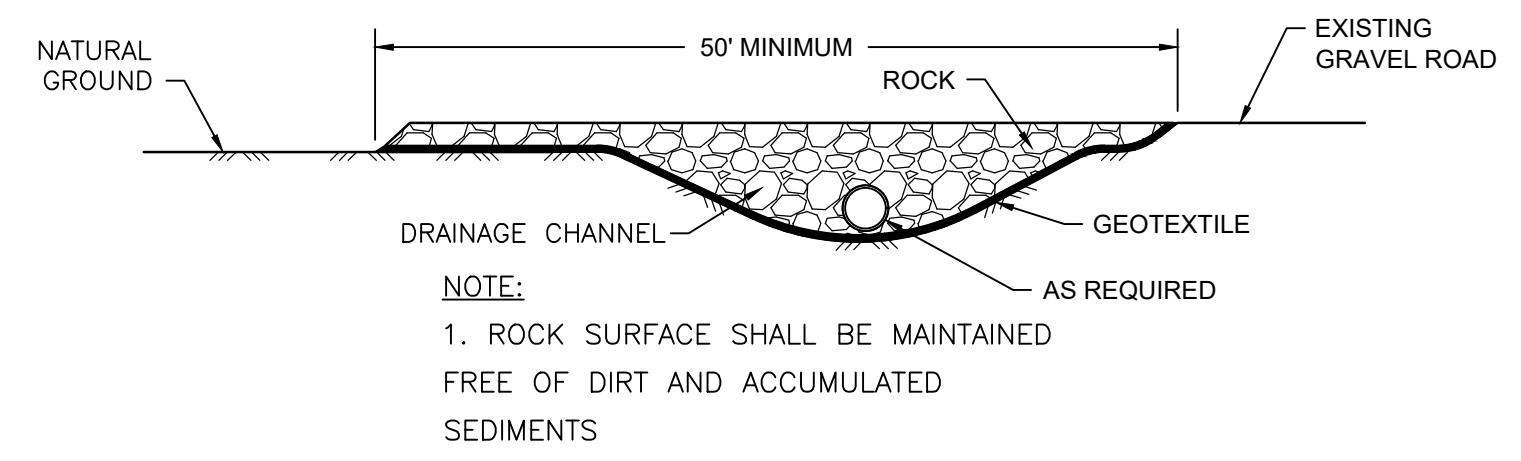
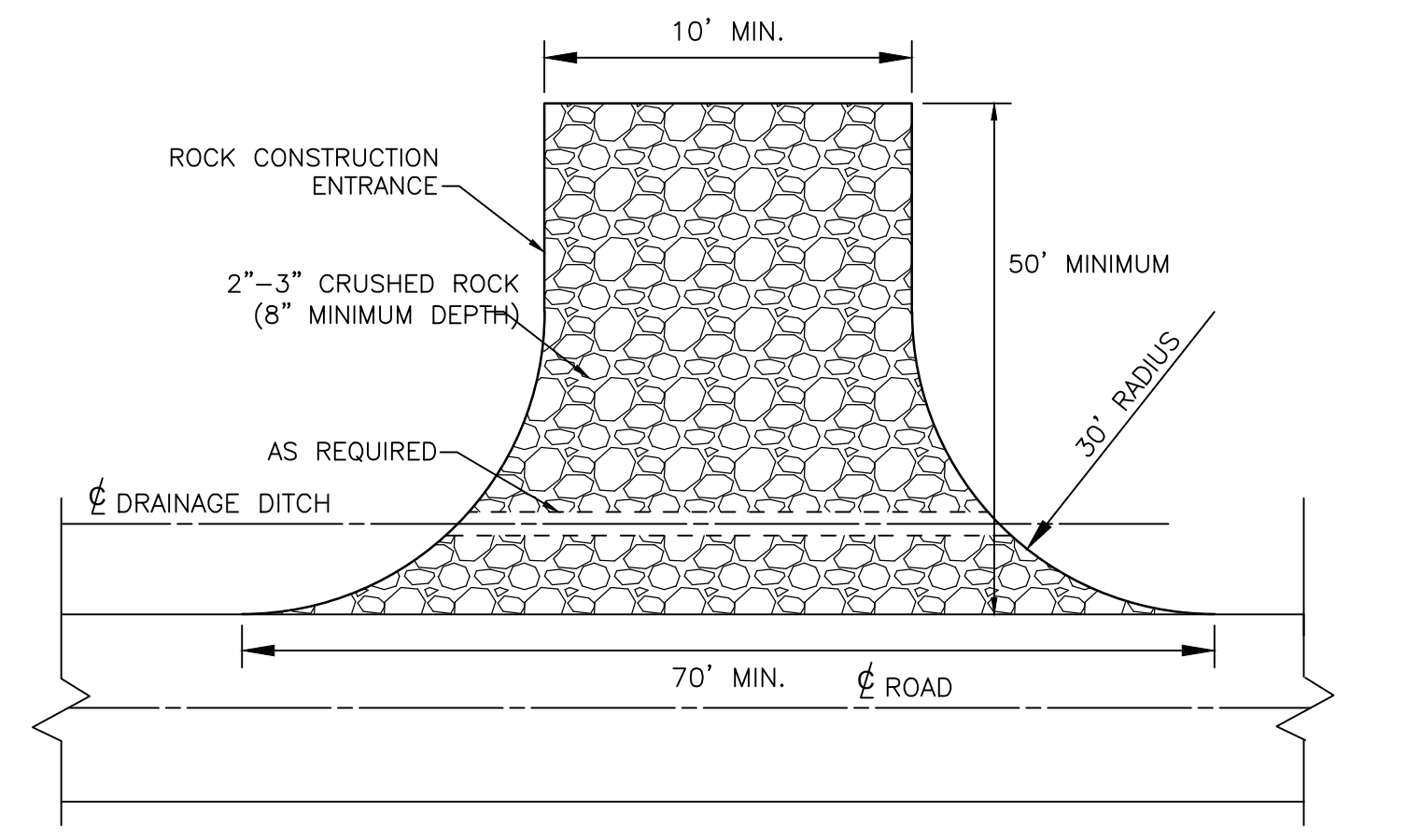
SCALE N.T.S. | DRAWING # 41189-11-ML-04-004 | REV 00

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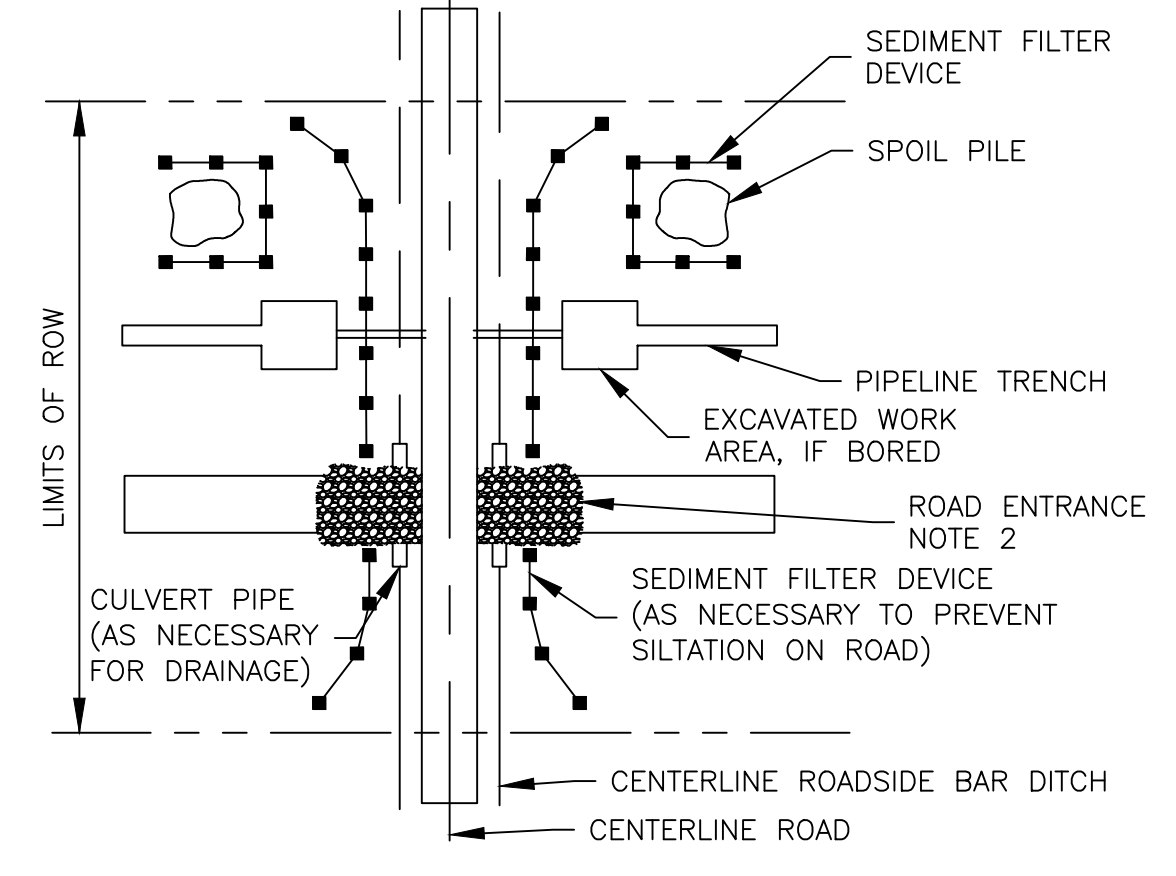


- NOTES:**
1. CULVERT PIPE UTILIZED IF ADDITIONAL SUPPORT IS REQUIRED
  2. ADDITIONAL PADS CAN BE PUT SIDE BY SIDE IF EXTRA WIDTH IS REQUIRED
  3. EQUIPMENT PAD TYPICALLY CONSTRUCTED OF HARDWOOD; MUST ACCOMMODATE THE LARGEST EQUIPMENT USED.
  4. RAMP APPROACHED CAN EITHER BE GRADED OR DUG INTO GROUND. IF NECESSARY, CRUSHED STONE WILL BE USED TO RAMP UP TO THE EQUIPMENT PADS.
  5. MINIMUM CULVERT DIAMETER 20 INCHES.
  6. MAINTAIN PADS SO AS NOT TO ALLOW MUD TO ENTER THE STREAM

**DETAIL – TEMPORARY EQUIPMENT CROSSING  
EQUIPMENT PADS**  
TC ENERGY DETAIL FIGURE 18  
SCALE: N.T.S.

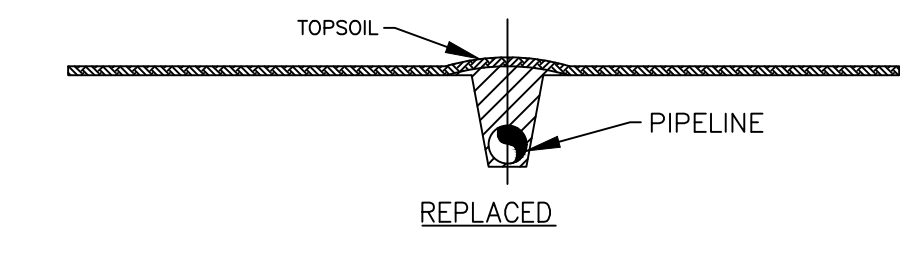
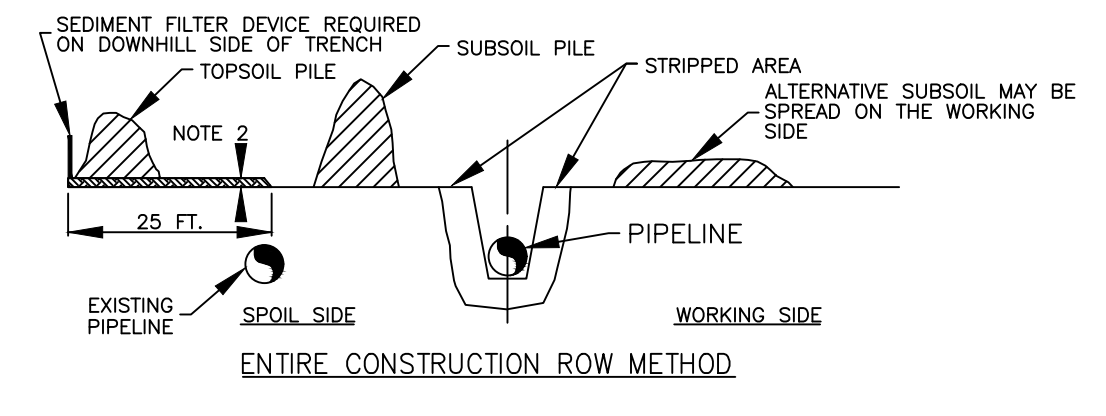
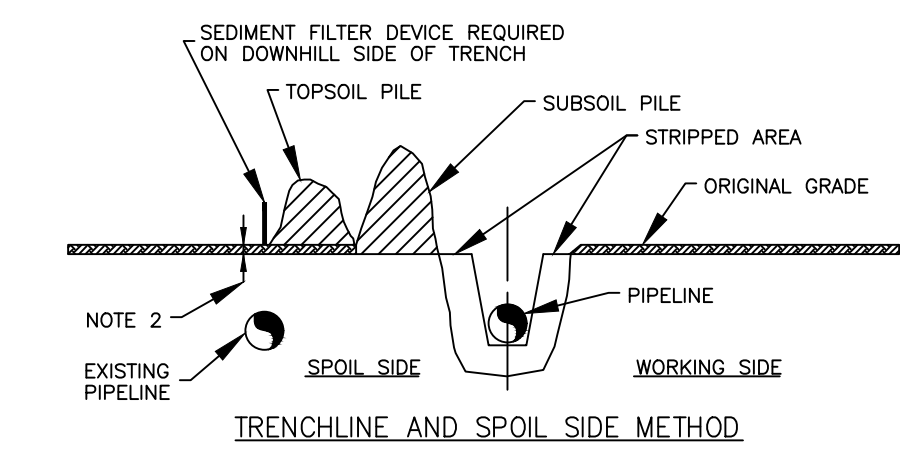


**DETAIL – ROCK CONSTRUCTION ENTRANCE TYPE 1**  
SCALE : N.T.S.



- NOTES:**
1. SIMILAR PROCEDURES WILL BE USED AT RAILROAD CROSSINGS.
  2. REFER TO FIGURE 8.

**DETAIL – TYPICAL EROSION CONTROL MEASURES  
AT ROAD CROSSINGS**  
TC ENERGY DETAIL FIGURE 9  
SCALE: N.T.S.



- NOTES:**
1. OTHER CONFIGURATIONS OF TOPSOIL AND SUBSOIL ARE ACCEPTABLE PROVIDED THEY ARE KEPT SEPARATE.
  2. UP TO 12 INCHES OF TOPSOIL REMOVED.
  3. TOPSOIL AND SUBSOIL PILES WILL BE ADEQUATELY PROTECTED FROM EROSION AND SEDIMENTATION BY USE OF SEDIMENT FILTER DEVICE OR MULCH.

**DETAIL – TYPICAL TOPSOIL CONSERVATION  
RIGHT-OF-WAY**  
TC ENERGY DETAIL FIGURE 5  
SCALE: N.T.S.

**NO CHANGE**

REFERENCE DRAWINGS	
DRAWING No	TITLE
E.032696-COVER	COVER SHEET
41189-03-ML-00-001	GENERAL NOTES
41189-03-ML-02-003	ALIGNMENT SHEET - LINE 100
41395-03-ML-02-003	ALIGNMENT SHEET - LINE 200
41500-03-ML-02-003	ALIGNMENT SHEET - LINE 300

REVISION		
REV No	DATE	DESCRIPTION
00	2024-06-14	ISSUED FOR CONSTRUCTION

APPROVAL						
PROJECT CODE	DRAFTER	DRAFTING CHECKER	DESIGNER	DESIGN CHECKER	PROJECT MANAGER	COMPANY
E.032696	BAG	SFS	RLR	BT	JPM	MM

PROFESSIONAL ENGINEER/RPT		PERMIT/ ENG. APPROVAL	
REV. NO.	DATE	PERMIT NUMBER:	DATE

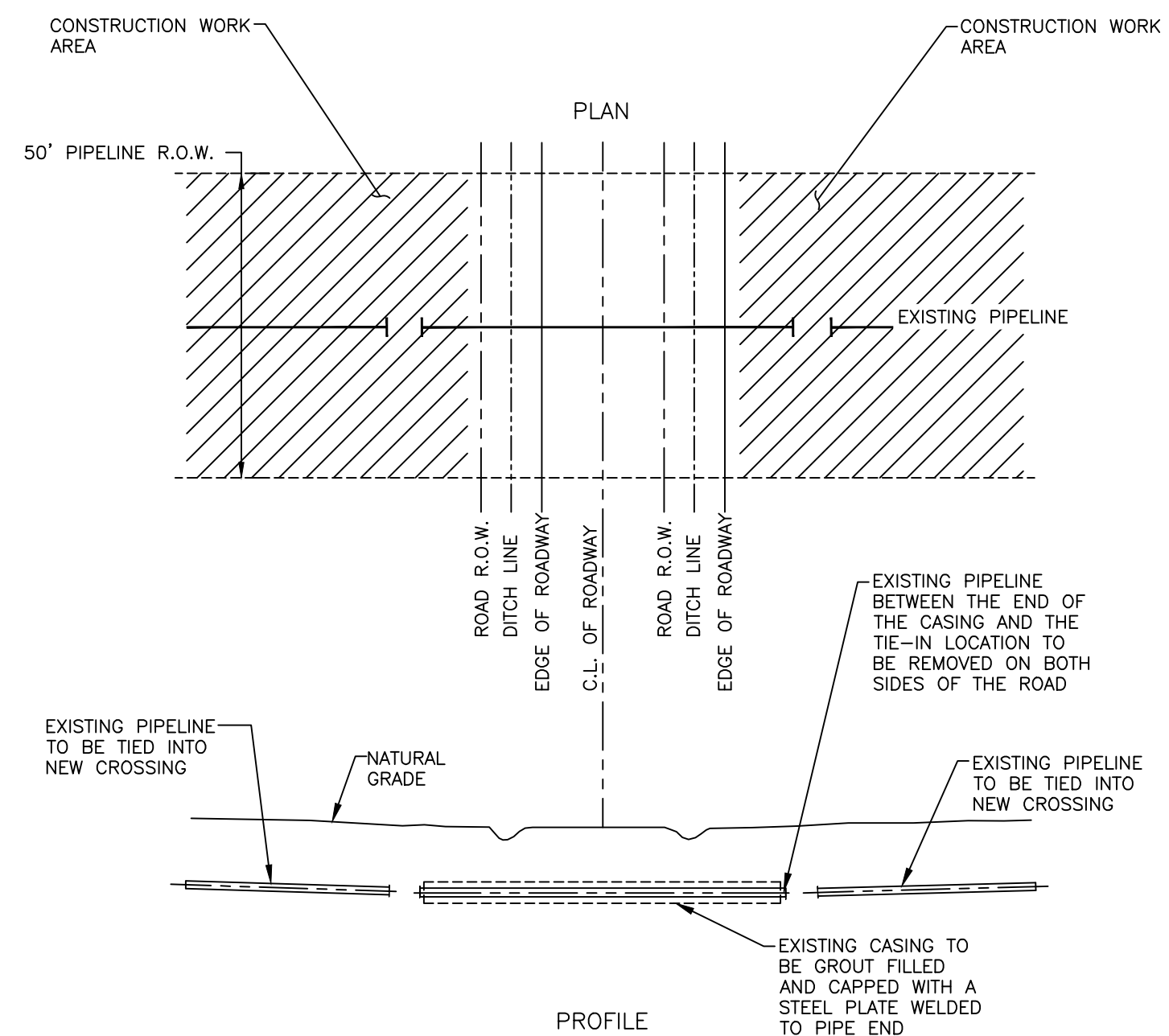
**TC Energy** **M M**  
MOTT MACDONALD

FROM V109-1 TO V110-1

FACILITY # 41189 | ENG STATION: | DISC # 11

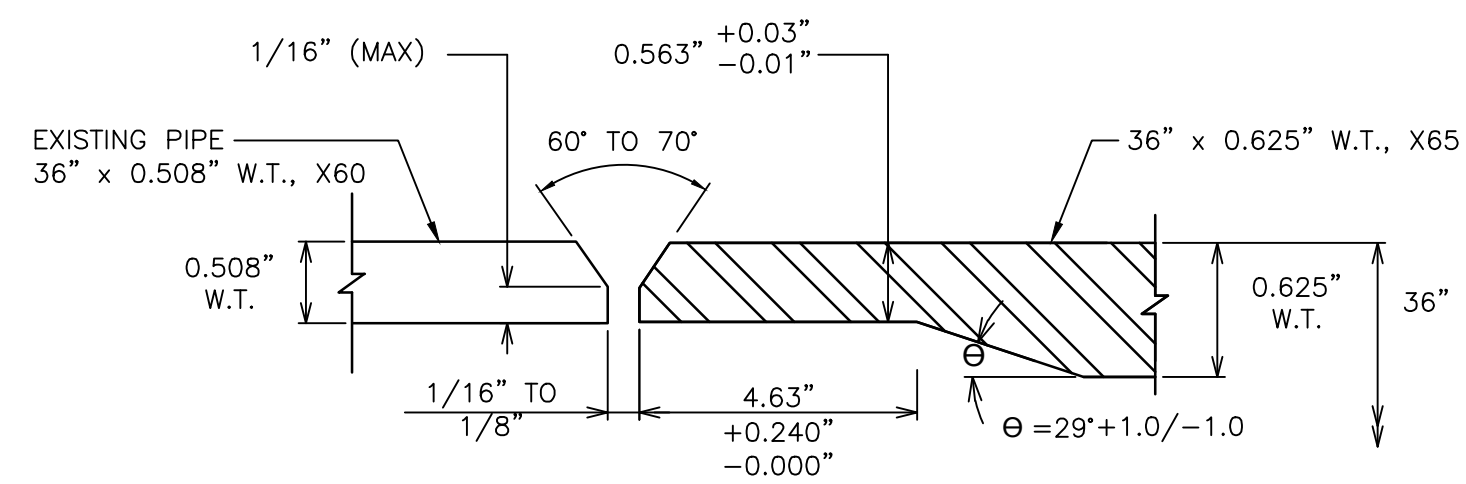
**GENERAL DETAILS**  
TC ENERGY STATE ROUTE 32 RELOCATION OF LINES 30" LINE 100, 30" LINE 200, AND 36" LINE 300  
ROWAN COUNTY, KENTUCKY

SCALE N.T.S. | DRAWING # 41189-02-ML-04-001 | REV 00



**NOTES:**  
 1. CONTRACTOR TO PROVIDE STEEL PLATE FOR CAPPING PIPE ENDS.  
 2. SEE CONSTRUCTION DRAWINGS FOR LOCATION OF CONSTRUCTION WORK AREAS.

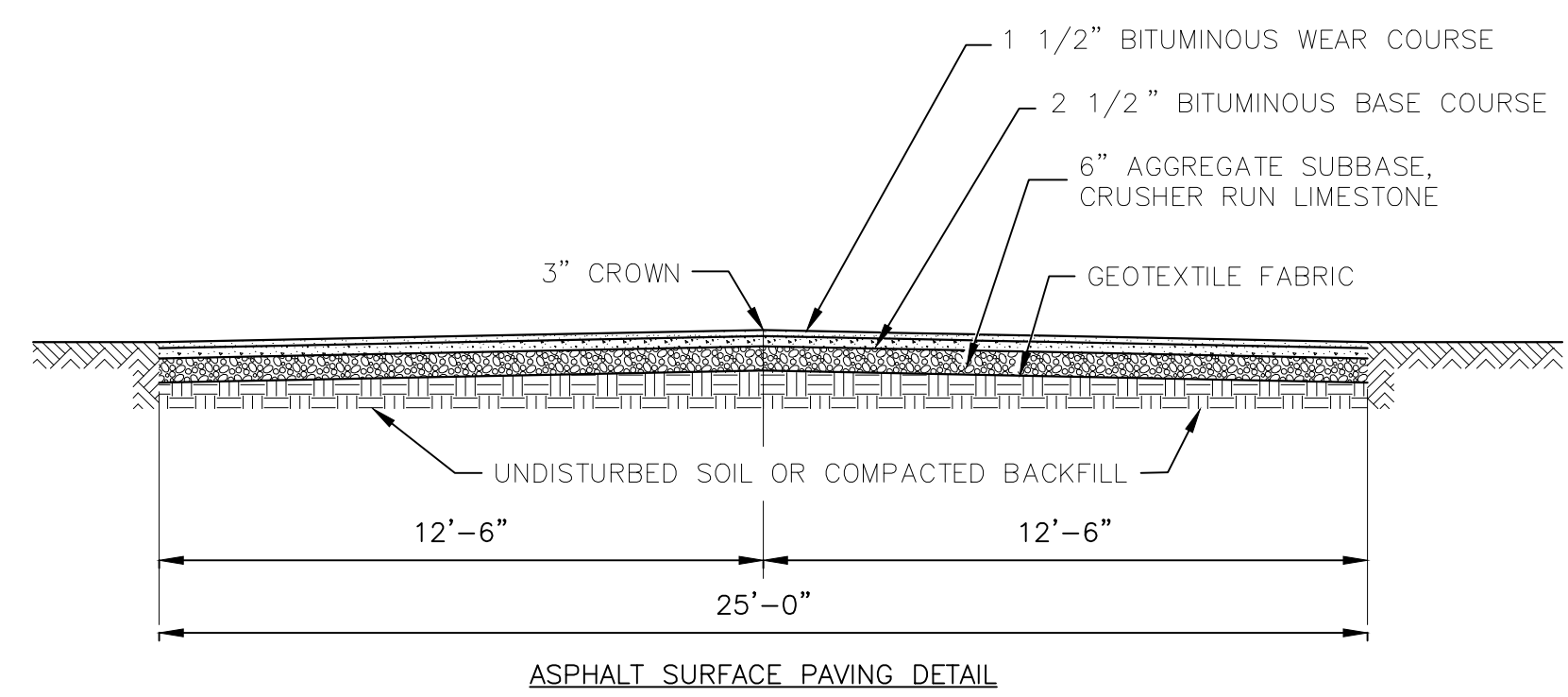
**DETAIL - PIPELINE ABANDONMENT**  
 SCALE: N.T.S.



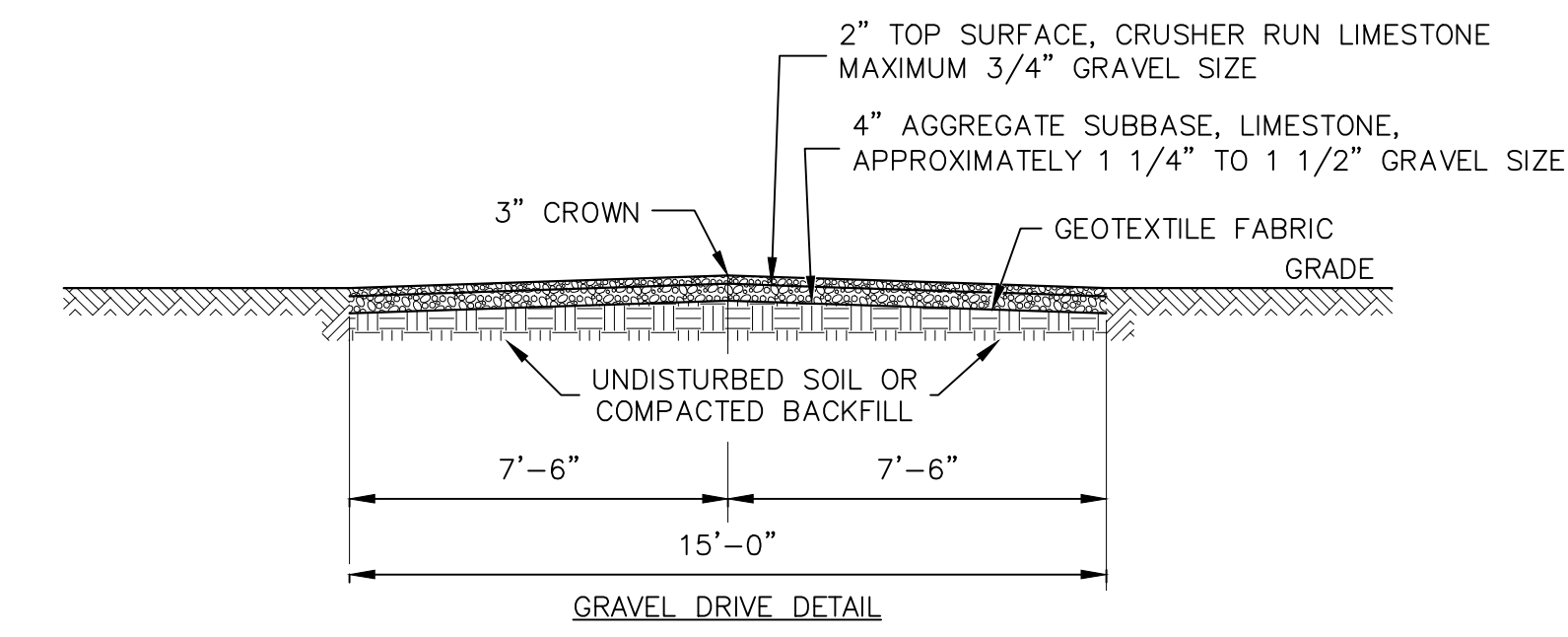
COUNTERBORE AND TAPER JOINT DESIGN FOR TRANSITION WELD JOINING PIPE OF UNEQUAL WALL THICKNESS  
 3.63" COUNTERBORE REQUIRED AT FINAL TIE-IN

**DETAIL 1 - TAPER BORE TRANSITION**  
 SCALE: 2 LOCATIONS REQUIRED

LINE 300 - STA. 1721+18  
 LINE 300 - STA. 1725+44



**ASPHALT SURFACE PAVING DETAIL**



**DETAILS - ACCESS ROAD CONSTRUCTION**  
 TC ENERGY DETAIL FIGURE MI-RW-DT01  
 SCALE: N.T.S.

**NO CHANGE**

REFERENCE DRAWINGS	
DRAWING No	TITLE
E.032696-COVER	COVER SHEET
41189-03-ML-00-001	GENERAL NOTES
41189-03-ML-02-003	ALIGNMENT SHEET - LINE 100
41395-03-ML-02-003	ALIGNMENT SHEET - LINE 200
41500-03-ML-02-003	ALIGNMENT SHEET - LINE 300

REVISION		
REV No	DATE	DESCRIPTION
00	2024-06-14	ISSUED FOR CONSTRUCTION

APPROVAL						
PROJECT CODE	DRAFTER	DRAFTING CHECKER	DESIGNER	DESIGN CHECKER	PROJECT MANAGER	COMPANY
E.032696	BAG	SFS	RLR	BT	JPM	MM

PROFESSIONAL ENGINEER/RPT	PERMIT/ ENG. APPROVAL

**TC Energy**

FROM V109-1 TO V110-1

GENERAL DETAILS

TC ENERGY STATE ROUTE 32 RELOCATION OF LINES 30" LINE 100, 30" LINE 200, AND 36" LINE 300  
 ROWAN COUNTY, KENTUCKY

SCALE: N.T.S.      DRAWING # 41189-02-ML-04-002      REV 00

