TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC STORMWATER MANAGEMENT PLAN

SOUTHEAST SUPPLY ENHANCEMENT PROJECT EDEN-MLV-02

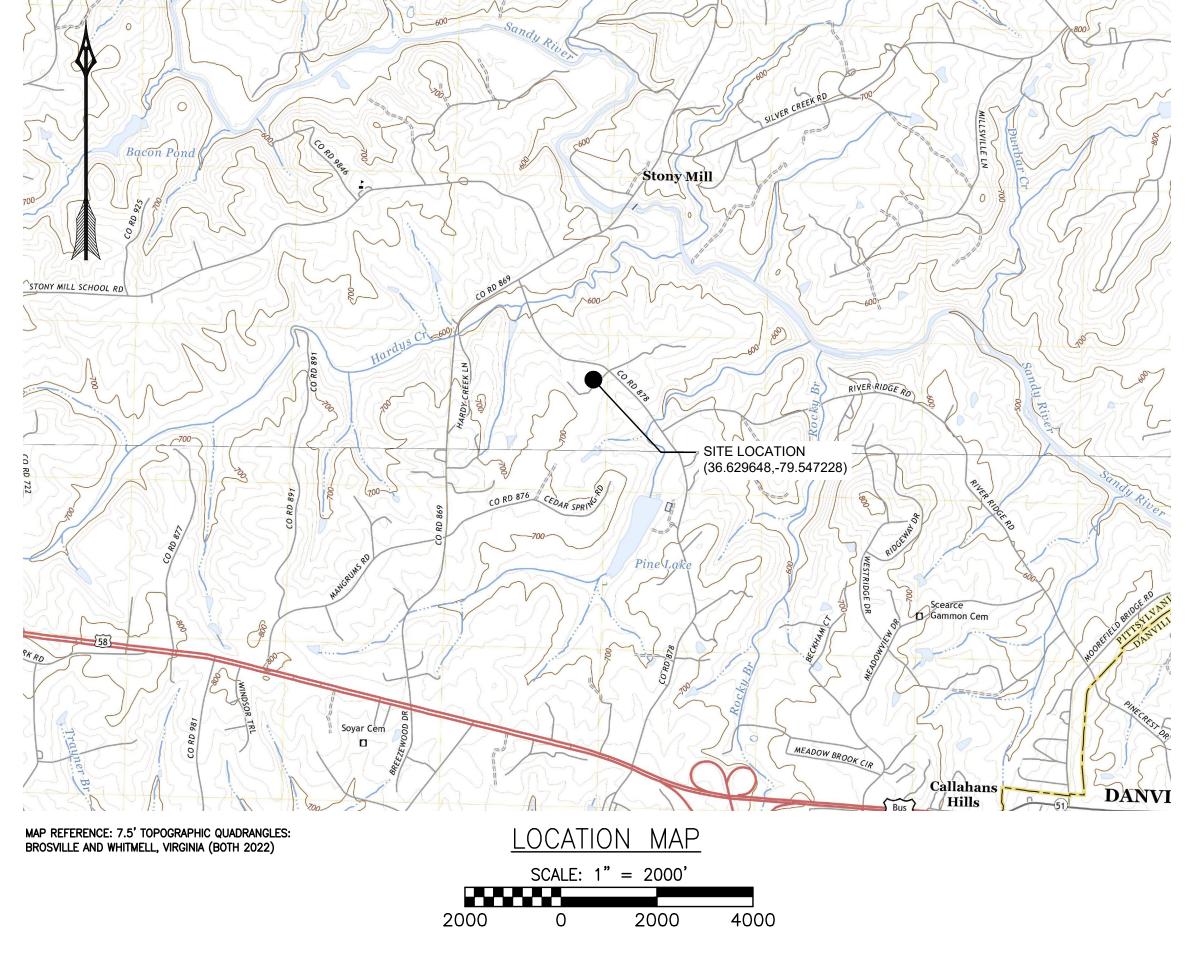
PITTSYLVANIA COUNTY, VIRGINIA **JUNE 2025**

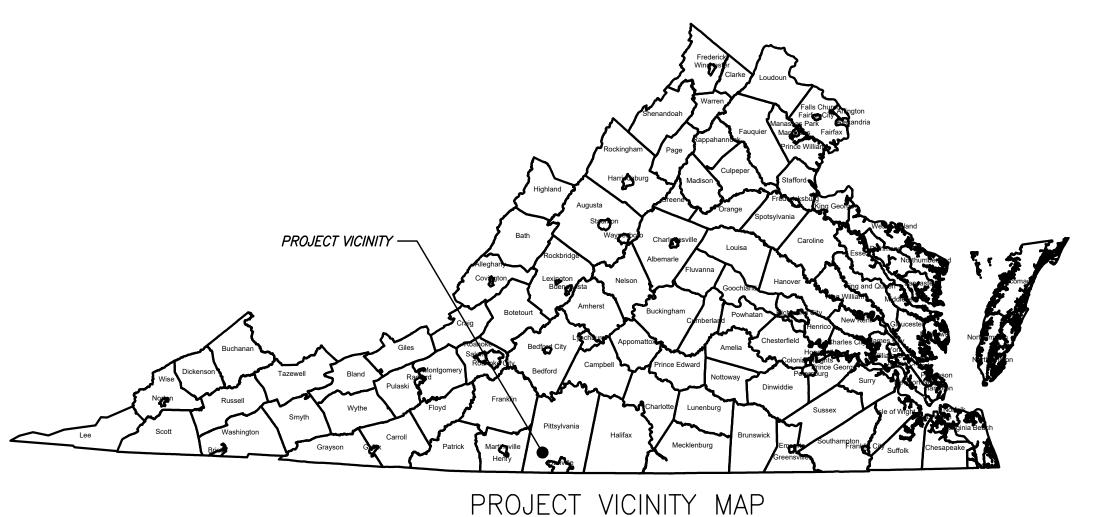
PROJECT OWNER/APPLICANT

TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC 2800 POST OAK BLVD, LEVEL 11 HOUSTON, TX 77056 CONTACT: JOSEPH DEAN, MANAGER PERMITTING

PLAN PREPARER/ENGINEER

GAI CONSULTANTS, INC. 4701 COX ROAD, SUITE 125 GLEN ALLEN, VA 23030 PH: (804)270-9357 CONTACT: R. CRAIG MURPHY, P.E.





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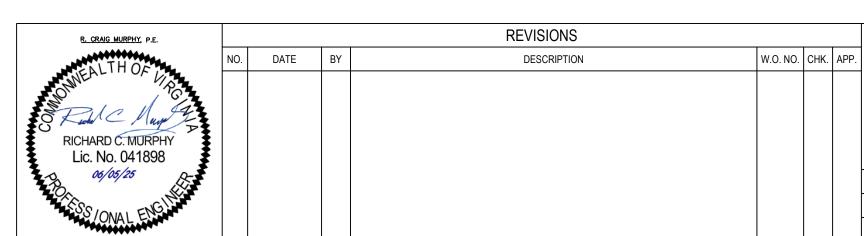
- . EXISTING CONTOURS PROVIDED BY TRANSCO FEBRUARY 19, 2024.
- AERIAL IMAGERY PROVIDED BY TRANSCO FEBRUARY 13, 2024.
- HORIZONTAL DATUM BASED ON VIRGINIA STATE PLANE, SOUTH FEET, NAD83.
- 4. VERTICAL DATUM BASED ON NORTH AMERICAN DATUM OF 1988, NAVD88. 5. ENVIRONMENTAL DELINEATIONS PERFORMED BY WETLAND STUDIES AND SOLUTIONS, INC. APRIL 22, 2024.

- 1. E&S CONTROLS SHOWN ON THIS DRAWING PACKAGE ARE IN ACCORDANCE WITH THE VADEQ REQUIREMENTS AND ARE BASED ON THE VIRGINIA STORMWATER MANAGEMENT HANDBOOK, VERSION 1.1 TO SATISFY THE MINIMUM REQUIREMENTS OF E&S CONTROL. THE DRAWINGS ARE NOT INTENDED TO ACT AS CONSTRUCTION DRAWINGS, PROVIDE INSTALLATION INSTRUCTION, OR WARRANT THE SITE CONDITIONS. ADJUSTMENTS
- (INCLUDING LOCATION) AND/OR ADDITIONS TO PROPOSED CONTROLS MAY BE REQUIRED DURING CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR ALL MEANS, METHODS, PROCEDURES, SEQUENCING, AND TECHNIQUES INVOLVED WITH ALL CONSTRUCTION ACTIVITIES. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR MAINTAINING AND PRESERVING THE INTEGRITY OF ALL ENVIRONMENTAL FEATURES AS DESCRIBED ELSEWHERE AND/OR ALL AREAS THAT ARE NOT SUPPOSED TO BE DISTURBED (E.G. WORK OUTSIDE THE LIMITS OF DISTURBANCE).
- 3. PRIOR TO ANY EARTH DISTURBANCE ACTIVITIES, CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING THAT CONDITIONS MATCH THOSE DEPICTED ON THE PLANS AND NOTIFYING TRANSCONTINETAL GAS PIPE LINE COMPANY, LLC (TRANSCO'S) DESIGNATED REPRESENTATIVE OF ANY DISCREPANCIES (E.G. TOPOGRAPHY, DELINEATED WETLANDS/WATERBODIES, ACCESS ROADS, AND POINTS OF INGRESS AND EGRESS.)
- 4. THESE DRAWINGS HAVE BEEN PREPARED BASED ON GAI'S SCOPE OF SERVICES FOR SUBMISSION TO PERMITTING AGENCIES ONLY. GAI'S SCOPE OF SERVICES DID NOT INCLUDE UTILITY LOCATING SERVICES NOR COORDINATION WITH UTILITY LOCATING SOURCES, SUCH AS THE VIRGINIA ONE CALL, THAT MAY HAVE INFORMATION AVAILABLE ON THE LOCATION OF UTILITIES, PIPELINES OR OTHER BURIED STRUCTURES.
- ANY UTILITIES IDENTIFIED ARE FOR INFORMATIONAL PURPOSES ONLY AND SHALL BE VERIFIED BY THE CONTRACTOR. 5. ALL REFUELING, REPAIR, AND CHANGING OF EQUIPMENT AND VEHICLE FLUIDS SHALL BE CONDUCTED IN A MANNER TO REDUCE THE POTENTIAL FOR CONTAMINATION OF RESOURCES.



CALL 811 BEFORE YOU DIG!

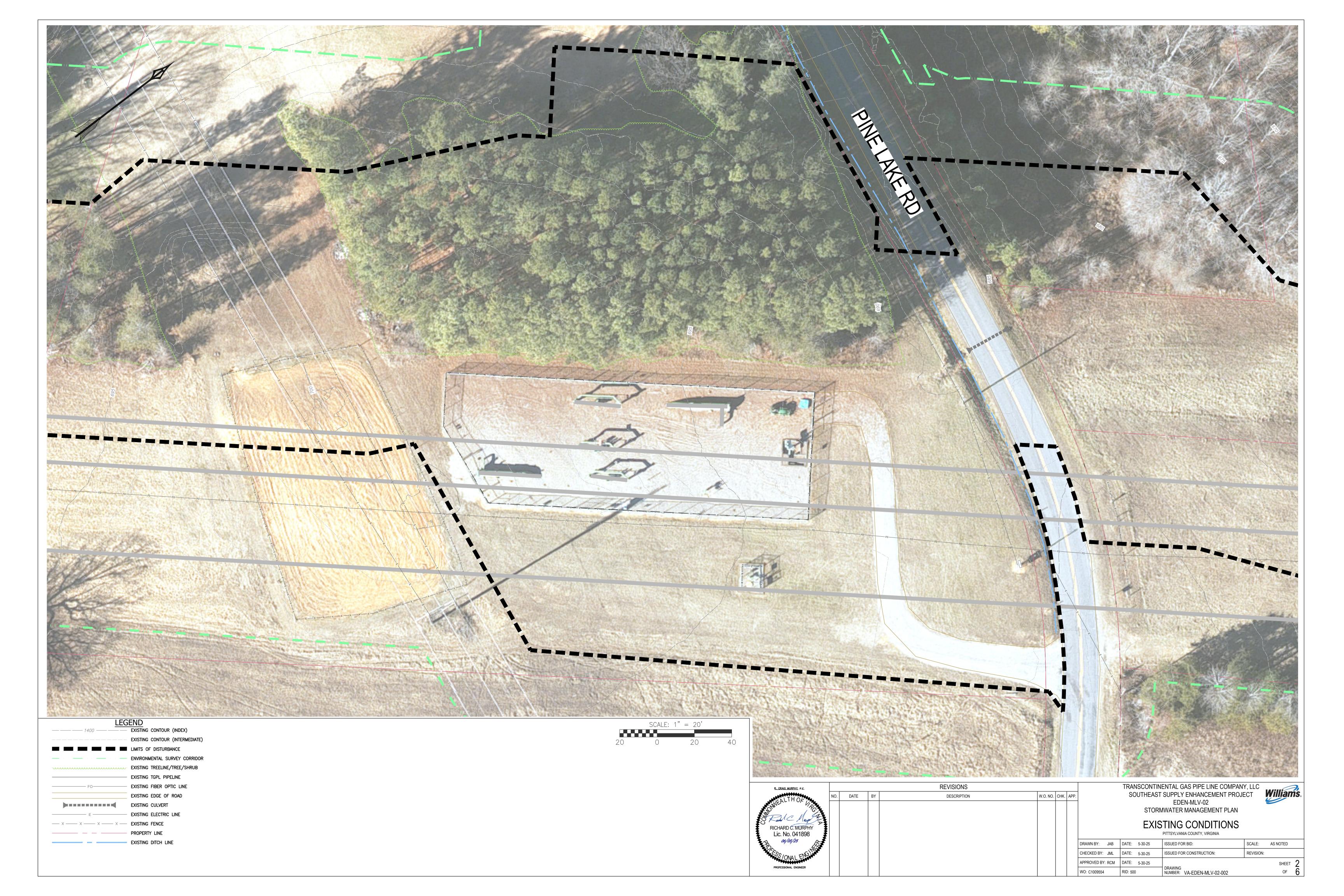
Dial 811 or 800.552-7001 www.va811.com

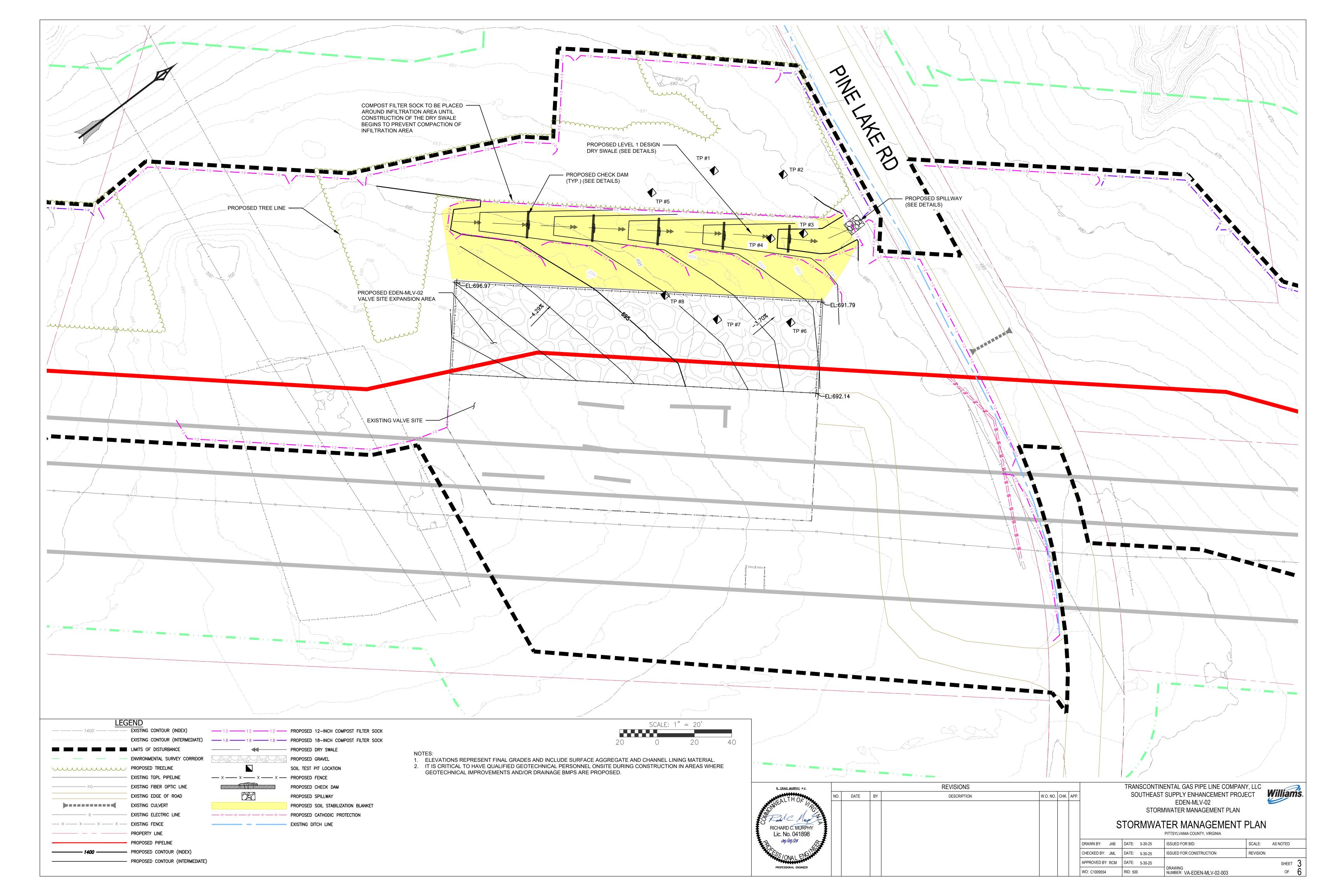


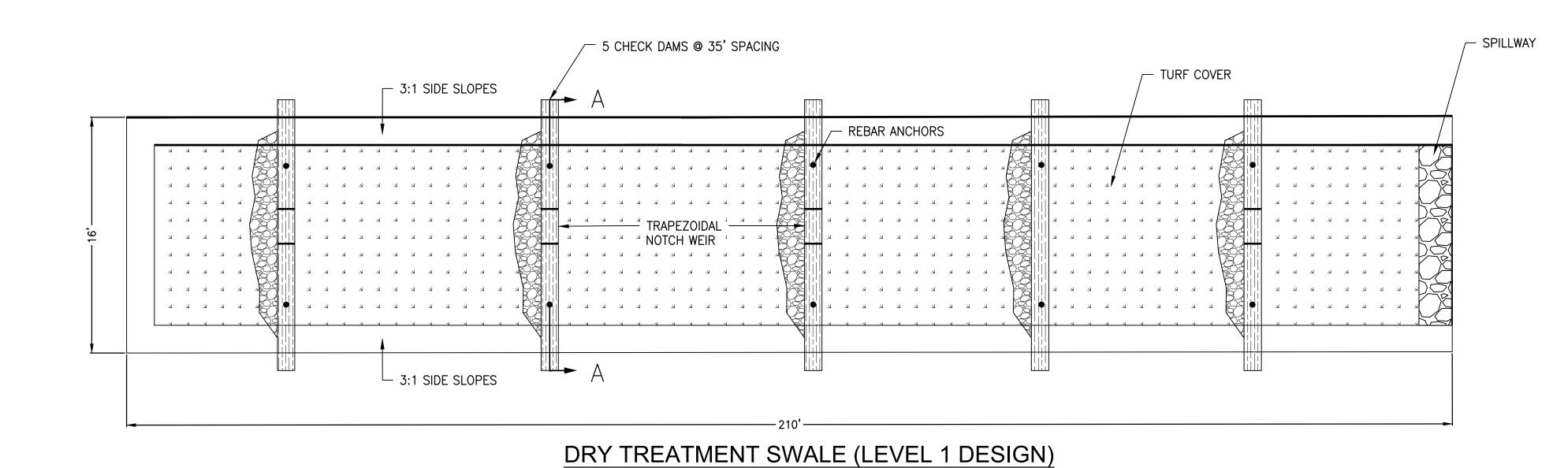
TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC SOUTHEAST SUPPLY ENHANCEMENT PROJECT EDEN-MLV-02 STORMWATER MANAGEMENT PLAN

> **COVER SHEET** PITTSYLVANIA COUNTY, VIRGINIA

	DRAWN BY: JAB	DATE: 5-30-25	ISSUED FOR BID:	SCALE:	AS NOTED
	CHECKED BY: JML	DATE: 5-30-25	ISSUED FOR CONSTRUCTION:	REVISION:	
	APPROVED BY: RCM	DATE: 5-30-25			SHEET 1
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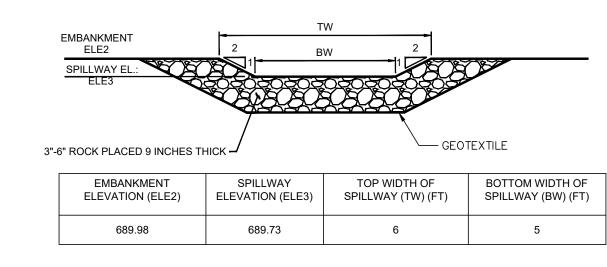




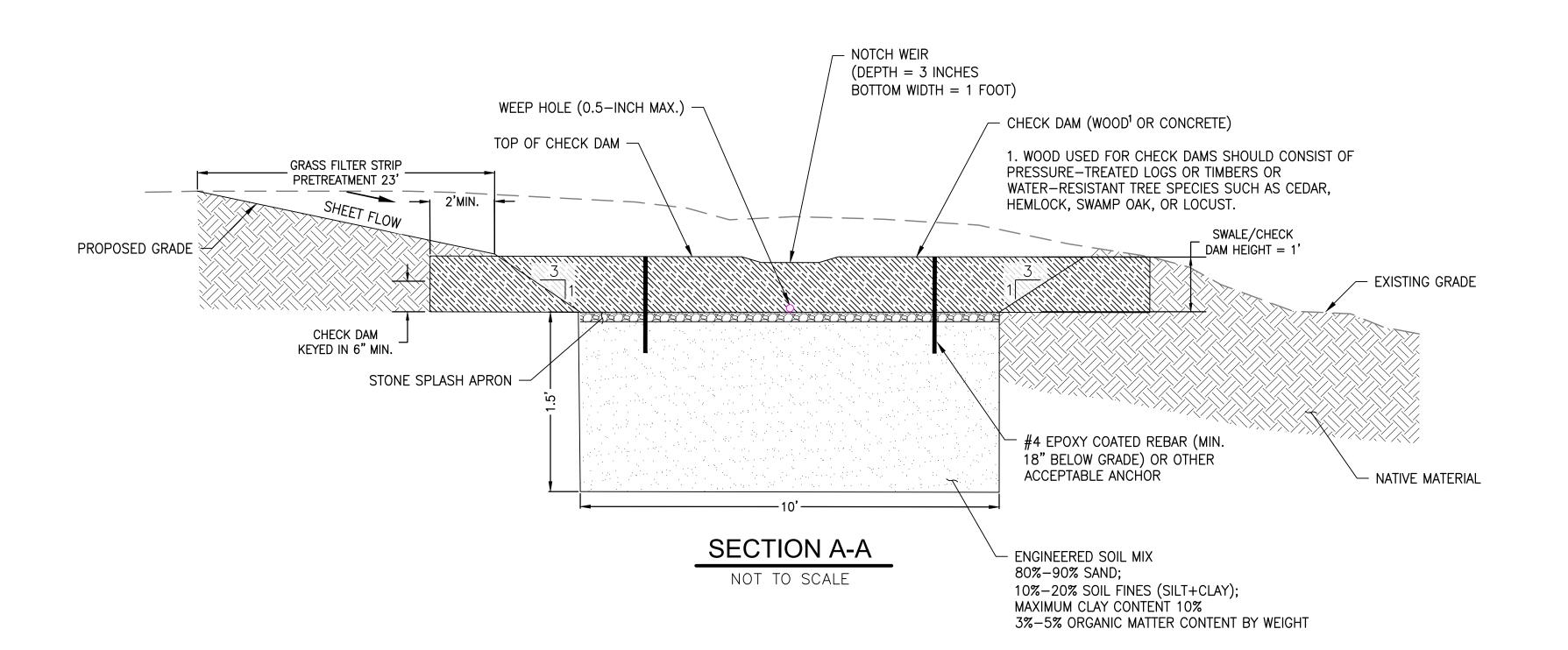


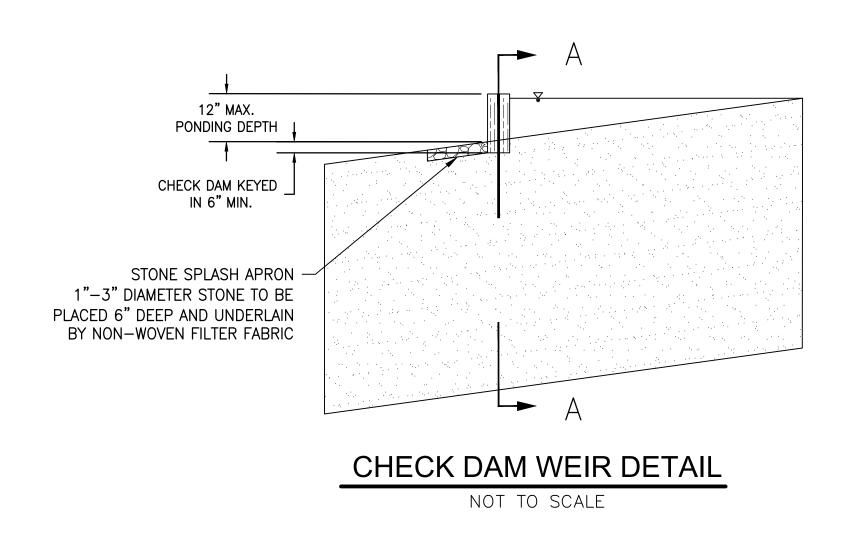
PLAN VIEW

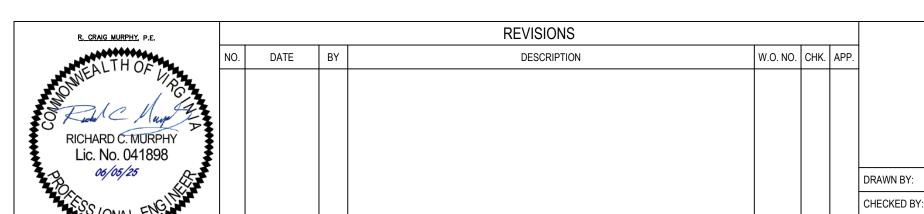
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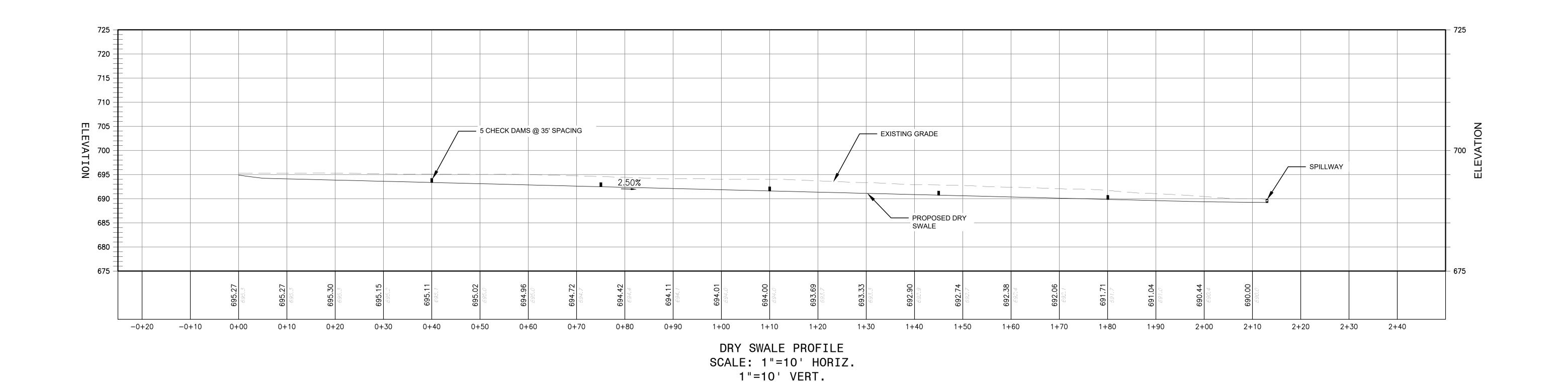


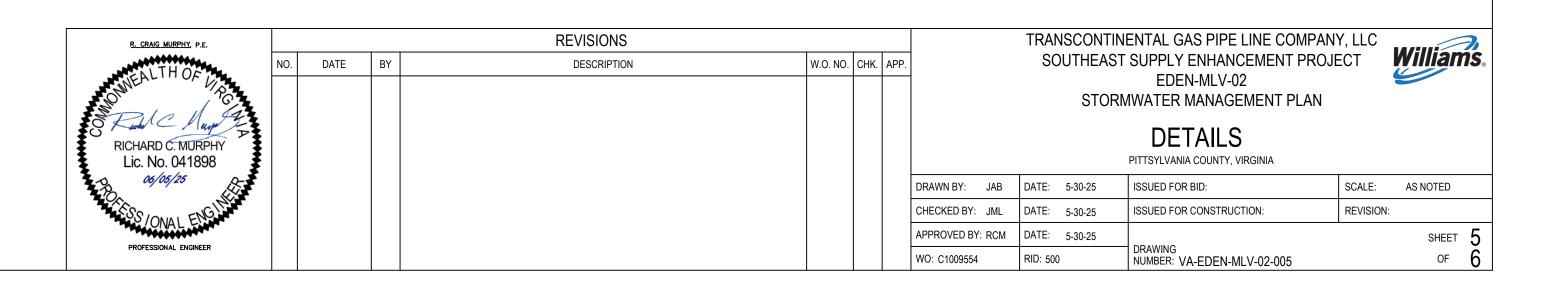


TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC
SOUTHEAST SUPPLY ENHANCEMENT PROJECT
EDEN-MLV-02
STORMWATER MANAGEMENT PLAN

DETAILS

		PITTSYLVANIA COUNTY, VIRGINIA			
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STORMWATER MANAGEMENT STANDARD NOTES

1.1.1. AFTER THE FACILITY HAS BEEN CONSTRUCTED, THE DEVELOPER SHALL HAVE AN AS-BUILT CERTIFICATION CONDUCTED BY A LICENSED LAND SURVEYOR OR PROFESSIONAL ENGINEER REGISTERED IN VIRGINIA.

NON-STRUCTURAL STORMWATER MANAGEMENT STRATEGIES

- 1.2.1. ONE NON-STRUCTURAL STORMWATER MANAGEMENT STRATEGY IS TO MINIMIZE IMPERVIOUS SURFACES. IMPERVIOUS SURFACES WERE MINIMIZED AND LIMITED TO THE SMALLEST AREA NECESSARY FOR SAFE AND PRUDENT OPERATION OF THE PROPOSED SITE. WHEREVER POSSIBLE, GRAVEL AREAS WERE INCORPORATED IN THE SITE DESIGN RATHER THAN IMPERVIOUS PAVEMENT. ADDITIONALLY, AS MUCH OF THE SITE AS POSSIBLE WILL BE REVEGETATED TO A MEADOW COVER TYPE, POST-CONSTRUCTION.
- ANOTHER NON-STRUCTURAL STORMWATER MANAGEMENT STRATEGY IS TO MINIMIZE THE DECREASE IN THE TIME OF CONCENTRATION. IN GENERAL, MUCH OF THE SITE WAS MODERATELY FLATTENED COMPARED TO PRE-CONSTRUCTION CONDITIONS. THE FLATTER SLOPES HELP MITIGATE SOME OF THE TIME OF CONCENTRATION REDUCTION ASSOCIATED WITH CHANGING MUCH OF THE COVER TYPE FROM THE EXISTING FORESTED AREA AND MEADOW TO SEMI-IMPERVIOUS AND IMPERVIOUS AREAS. ADDITIONALLY, THE DRY SWALE IS WIDE WITH SHALLOW LONGITUDINAL SLOPES.
- MINIMIZING LAND DISTURBANCE AND SOIL COMPACTION ARE ALSO STRATEGIES THAT CAN BE USED AS A NON-STRUCTURAL STORMWATER MANAGEMENT STRATEGY. CLEARING AND GRADING WERE MINIMIZED TO THE MAXIMUM EXTENT POSSIBLE IN THE SCOPE OF THIS PROJECT. ONLY AREAS OF THE PROPERTY THAT WERE REQUIRED FOR STAGING, STOCKPILES, OR CONSTRUCTION WILL BE DISTURBED.
- 1.2.4. DUE TO THE TYPE OF CONSTRUCTION, SOIL MUST BE COMPACTED FOR THE AREA WITHIN THE VALVE SITE IN ORDER TO ENSURE STABLE GRADES. FILL AREAS WILL HAVE TO MEET COMPACTION REQUIREMENTS, BUT THE SLOPES WILL BE VERTICALLY TRACKED BEFORE SEEDING AND INSTALLATION OF THE EROSION CONTROL BLANKETS, LIGHTWEIGHT, LOW IMPACT EARTHMOVING EQUIPMENT WILL BE USED TO PERFORM FINAL GRADING IN AREAS TO BE VEGETATED.
- THE DRY SWALE WILL BE LINED WITH VEGETATION. VEGETATED CHANNELS PROVIDE A MODEST AMOUNT OF RUNOFF FILTERING AND VOLUME ATTENUATION IN THE STORMWATER CONVEYANCE SYSTEM, RESULTING IN THE DELIVERY OF LESS RUNOFF AND POLLUTANTS THAN A TRADITIONAL SYSTEM OF CURBS, GUTTERS, STORM DRAIN INLETS, AND PIPES.

STRUCTURAL STORMWATER MANAGEMENT PRACTICES

- CULVERTS CULVERTS WILL BE INSTALLED AS SHOWN ON DRAWINGS. CIRCULAR CULVERTS WILL BE INSTALLED TO CONVEY STORMWATER RUNOFF.
- DRY SWALE DRY SWALES ARE SHALLOW CHANNELS WITH A SERIES OF CHECK DAMS THAT PROVIDE TEMPORARY STORAGE TO ALLOW INFILTRATION OF THE TREATMENT VOLUME. DRY SWALES USE AN ENGINEERED SOIL MEDIA AS THE CHANNEL BED. DRY SWALES ARE VEGETATED WITH TURF OR OTHER SURFACE MATERIAL (INCLUDING LARGE COBBLES AND ORNAMENTAL PLANTS).

CONSTRUCTION SEQUENCE

- 1. FLAG THE LIMITS OF DISTURBANCE SHOWN ON THE EROSION AND SEDIMENT CONTROL PLAN PRIOR TO A PRE-CONSTRUCTION MEETING WITH CERTIFIED PERSONNEL AS IT PERTAINS TO THE VIRGINIA STORMWATER MANAGEMENT PROGRAM (VSMP) REGULATIONS. A PRE—CONSTRUCTION MEETING WITH THE CONTRACTOR, PROJECT MANAGER, AND CERTIFIED EROSION AND SEDIMENT CONTROL INSPECTOR WILL BE SCHEDULED BY WILLIAMS.
- 3. INSTALL EROSION AND SEDIMENT CONTROLS PER THE APPROVED EROSION AND SEDIMENT CONTROL PLAN. COMPOST FILTER SOCK SHALL BE PLACED AROUND THE DRY SWALE PRIOR TO STARTING
- CONSTRUCTION OF THE DRY SWALE TO PREVENT COMPACTION OF THE INFILTRATION AREA DURING OTHER STAGES OF CONSTRUCTION OF THE PROJECT.
- 4. CLEAR. GRUB AND REMOVE VEGETATION AS INDICATED IN THE EROSION AND SEDIMENT CONTROL PLAN ONCE ALL EROSION CONTROL DEVICES ARE FUNCTIONING AND IN PLACE.

2. DURING THE PRE-CONSTRUCTION MEETING, THE CERTIFIED EROSION AND SEDIMENT CONTROL INSPECTOR SHALL CHECK THE FLAGGING DESIGNATING THE LIMITS OF DISTURBANCE.

- 5. PLACE AS NEEDED TEMPORARY TOPSOIL STOCKPILE AND PROTECT WITH COMPOST FILTER SOCK AND TEMPORARY SEEDING.
- 6. FILL THE SITE PER THE GRADING SHOWN ON THE STORMWATER MANAGEMENT PLAN. ENSURE SURFACE ROUGHENING IS APPLIED TO 3:1 AND GREATER FILL SLOPES.
- APPLY TEMPORARY SEEDING TO ANY DISTURBED AREAS THAT REMAIN DORMONT FOR MORE THAN SEVEN (7) DAYS.
- 8. PERFORM FINAL SITE GRADING AS SHOWN ON PLANS.
- 9. ONCE UPSLOPE AREAS ARE STABILIZED, THE DRY SWALE SHOULD BE INSTALLED ACCORDING TO THE CONSTRUCTION SEQUENCE.
- 10. PLACE GEOTEXTILE ON THE VALVE SITE SUBGRADE AND INSTALL BASE LAYER OF AGGREGATE.
- 11. NO EROSION AND SEDIMENT CONTROL DEVICES SHALL BE REMOVED UNTIL THE SITE IS DEEMED STABILIZED AND PER THE APPROVAL OF THE CERTIFIED EROSION AND SEDIMENT CONTROL INSPECTOR.

DRY SWALE CONSTRUCTION SEQUENCE

- 1. REMOVE PREVIOUSLY INSTALLED COMPOST FILTER SOCK AROUND THE INFILTRATION AREA OF THE DRY SWALE AS SHOWN ON THEE PLANS IN ORDER TO ALLOW WORK TO PROCEED. COMPLETE SITE GRADING AND STABILIZE WITHIN THE LIMITS OF DISTURBANCE EXCEPT IN LOCATION WHERE DRY SWALE WILL BE CONSTRUCTED, AND MAKE EVERY EFFORT TO MINIMIZE THE DISTURBED FOOTPRINT WHILE CONSTRUCTING THE DRY SWALE, INCLUDING THE REMOVAL OF EXISTING VEGETATION AND THE DISTURBANCE OF EMPTY SOIL. EQUIPMENT USE ON THE INFILTRATION AREA SHALL BE MINIMIZED TO THE GREATEST EXTENT PRACTICAL.
- GRADING OF THE DRY SWALE IN PREPARATION OF INSTALLATION OF THE SOIL MEDIA SHOULD BEGIN ONLY AFTER THE ENTIRE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED BY VEGETATION OR RUNOFF HAS BEEN DIVERTED AWAY FROM THE AREA. THE DESIGNER AND THE INSTALLER SHOULD HAVE A PRE-CONSTRUCTION MEETING, CHECKING THE BOUNDARIES OF THE CDA AND THE ACTUAL INLET ELEVATIONS TO ENSURE THEY CONFORM TO ORIGINAL DESIGN.
- 3. EXCAVATORS OR BACKHOES SHOULD WORK FROM THE SIDES TO EXCAVATE THE DRY SWALE AREA TO THE APPROPRIATE DESIGN DEPTH AND DIMENSIONS. EXCAVATING EQUIPMENT SHOULD HAVE SCOOPS WITH ADEQUATE REACH SO THEY DO NOT HAVE TO SIT INSIDE THE FOOTPRINT OF THE DRY SWALE AREA.
- 4. THE BOTTOM OF THE DRY SWALE SHOULD BE RIPPED, ROTO-TILLED, OR OTHERWISE SCARIFIED TO PROMOTE GREATER INFILTRATION.
- 5. OBTAIN THE SOIL MEDIA FROM A QUALIFIED VENDOR AND STORE IT ON AN ADJACENT IMPERVIOUS AREA OR PLASTIC SHEETING. AFTER VERIFYING THAT THE MEDIA MEETS THE SPECIFICATIONS, ADD THE SOIL
- MEDIA IN 12-INCH LIFTS UNTIL THE DESIRED TOP ELEVATION OF THE DRY SWALE IS ACHIEVED. WAIT A FEW DAYS TO CHECK FOR SETTLEMENT AND ADD MEDIA AS NEEDED.
- 6. INSTALL CHECK DAMS AT THE LOCATIONS SHOWN ON THE PLAN. 7. INSTALL EROSION CONTROL FABRIC WHERE NEEDED, SPREAD SEED OR SOD, AND INSTALL ANY TEMPORARY IRRIGATION.

LONG TERM INSPECTIONS AND MAINTENANCE

FOR THE FIRST 6 MONTHS FOLLOWING CONSTRUCTION, THE SITE SHOULD BE INSPECTED AT LEAST TWICE AFTER STORM EVENTS THAT EXCEED 0.5-INCH OF RAINFALL.

INSPECTORS SHOULD LOOK FOR BARE OR ERODING AREAS IN THE CONTRIBUTING DRAINAGE AREA OR AROUND THE DRY SWALE AREA AND MAKE SURE THEY ARE IMMEDIATELY STABILIZED WITH GRASS COVER.

ONE-TIME. SPOT STARTUP FERTILIZATION MAY BE NEEDED FOR INITIAL SEED AND/OR PLANTINGS.

DEPENDING ON THE TIME OF YEAR OF INITIAL PLANTING, WATERING IS NEEDED ONCE A WEEK DURING THE FIRST 2 MONTHS, AND THEN AS NEEDED DURING THE FIRST GROWING SEASON (APRIL THROUGH OCTOBER) DEPENDING ON RAINFALL.

IDEALLY, INSPECTIONS OF DRY SWALES SHOULD BE CONDUCTED IN THE SPRING OF EACH YEAR.

- CHECK TO SEE IF 90 PERCENT TURF COVER OR VEGETATION DENSITY HAS BEEN ACHIEVED IN THE BED AND BANKS OF THE DRY SWALE. CHECK FOR ANY WINTER— OR SALT—KILLED VEGETATION.
- INSPECT DRY SWALE SIDE SLOPES AND GRASS FILTER STRIP FOR EVIDENCE OF ANY RILL OR GULLY EROSION AND REPAIR IT.
- CHECK THE DRY SWALE FOR EVIDENCE OF EXCESSIVE PONDING OR CONCENTRATED FLOWS AND TAKE APPROPRIATE REMEDIAL ACTION.
- WHEN SEDIMENT ACCUMULATION IS NOTED. LOOK FOR ANY BARE SOIL OR SEDIMENT SOURCES IN THE THE CDA AND STABILIZE THEM IMMEDIATELY.
- CHECK FOR CLOGGED OR SLOW-DRAINING SOIL MEDIA, A CRUST FORMED ON THE TOP LAYER, INAPPROPRIATE SOIL MEDIA, OR OTHER CAUSES OF INSUFFICIENT FILTERING TIME AND RESTORE PROPER FILTRATION CONDITIONS.
- INSPECT UPSTREAM OR DOWNSTREAM CHECK DAMS FOR EVIDENCE OF UNDERCUTTING OR EROSION AND REMOVE TRASH OR BLOCKAGES AT WEEP HOLES.

THE AGGREGATE VALVE SITE SHALL BE INSPECTED PERIODICALLY. AGGREGATE WILL BE APPLIED TO THE PERMANENT PAD AS NEEDED TO MAINTAIN AN ADEQUATE THICKNESS.

R. CRAIG MURPHY, P.E.		REVISIONS						TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC				
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RICHARD C. MURPHY Lic. No. 041898										NARRATIVE PITTSYLVANIA COUNTY, VIRGINIA		
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