

1.0 SITE RESTORATION DESIGN SUMMARY

1.1 INTRODUCTION

THE FOLLOWING METHODOLOGY AND CALCULATIONS WERE DEVELOPED TO ENSURE COMPLIANCE WITH VADEQ REGULATIONS (9VAC-25-875 PART V, ARTICLE 3) FOR WATER QUALITY AND WATER QUANTITY FOR THE LINEAR PIPELINE PORTIONS OF THE PROJECT. THE EDEN-MLV-02 AND EDEN-MLV-03 SITES DRAINAGE AREAS ARE NOT INCORPORATED IN THE FOLLOWING CALCULATIONS AND ARE INCLUDED IN A SEPARATE CALCULATION PACKAGE; HOWEVER, THE WATER QUALITY COMPONENTS OF THE MLVs HAVE BEEN INCLUDED IN THE NUTRIENT CREDIT SUMMARY ON THIS SHEET.

1.2 TYPICAL PIPELINE CORRIDOR POST-CONSTRUCTION CONDITIONS

THE PIPELINE CONSTRUCTION CORRIDOR WILL BE RESTORED FOLLOWING CONSTRUCTION IN THE MANNER DESCRIBED BELOW. THE DISTINCTION BETWEEN TEMPORARY AND PERMANENT RIGHT-OF-WAY (ROW)

- PRACTICES CONSIDERS THE DEVELOPER'S OPERATIONAL CONTROL OVER AREAS WITHIN ITS EASEMENT.

 THE PERMANENT ROW WILL BE SEEDED AND RESTORED IN THE FOLLOWING MANNER.
- •• PRE-CONSTRUCTION AGRICULTURAL LAND USE WILL RETURN TO AGRICULTURAL LAND USE POST-CONSTRUCTION.
- •• PRE-CONSTRUCTION IMPERVIOUS COVER WILL REMAIN IMPERVIOUS POST-CONSTRUCTION.
- •• PRE-CONSTRUCTION FORESTED COVER WITHIN THE PERMANENT ROW, WILL BE CONVERTED TO MEADOW IN POST-CONSTRUCTION.
- PALUSTRINE FORESTED (PFO) AND PALUSTRINE SCRUB SHRUB (PSS) WETLANDS WILL BE CONVERTED POST-CONSTRUCTION IN THE FOLLOWING MANNER:
 10-FOOT MAINTENANCE CORRIDOR CENTERED ON THE PIPELINE: ONLY PEM WETLANDS ARE RESTORED TO INITIAL CONDITIONS. PFO AND PSS WETLANDS WILL BE PERMANENTLY CONVERTED TO
- ••• 10-FOOT TO 30-FOOT TREE MAINTENANCE CORRIDOR CENTERED ON THE PIPELINE: PEM AND PSS WETLANDS ARE RESTORED TO INITIAL CONDITIONS. PFO WILL BE PERMANETLY CONVERTED TO
- ••• OUTSIDE OF 30-FOOT CORRIDOR CENTERED ON THE PIPELINE: ALL WETLANDS RESTORED TO INITIAL CONDITIONS. PFO WILL BE ALLOWED TO GROW BACK THUS CONSIDERED TEMPORARY BUT VOLUNTARILY MITIGATED AS PERMANENT CONVERSION AND FOR TEMPORAL LOSS WHILE PFO REGROWS.
- •• OTHER PRE-CONSTRUCTION CONDITIONS SUCH AS RESIDENTIAL LAWNS, MEADOW, AND PALUSTRINE EMERGMENT (PEM) WETLANDS WILL BE RESTORED TO PRE-CONSTRUCTION CONDITIONS.
- THE TEMPORARY CONSTRUCTION ROW WILL BE RESTORED IN THE FOLLOWING MANNER.

THAT WILL RETURN THE AREA TO FORESTED COVER THROUGH NATURAL SUCCESSION.

- •• IF PRE-CONSTRUCTION LAND USE IS AGRICULTURAL LAND, POST-CONSTRUCTION CONDITION WILL RETURN TO AGRICULTURAL USE.
- IF PRE-CONSTRUCTION LAND USE IS IMPERVIOUS COVER, THESE IMPERVIOUS SURFACES WILL REMAIN IN THE POST-CONSTRUCTION CONDITION.
 IF PRE-CONSTRUCTION LAND USE IS FORESTED COVER, POST-CONSTRUCTION CONDITION WILL RETURN TO FORESTED COVER UTILIZING A BRUSH SEED MIX SUPPLEMENTED WITH TREE SEEDLINGS
- ••• IN SELECT INSTANCES, EXISTING FORESTED COVER WITHIN THIS PROJECT'S TEMPORARY CONSTRUCTION ROW THAT IS CO-LOCATED WITHIN THE EXISTING TRANSCO PERMANENT ROW (E.G. WITHIN 25 FEET OF TRANSCO'S EXISTING LINES) WILL RETURN TO MEADOW.
- •• OTHER PRE-CONSTRUCTION CONDITIONS SUCH AS RESIDENTIAL LAWNS, BRUSH, MEADOW, WETLANDS, ETC. WILL BE RESTORED TO PRE-CONSTRUCTION CONDITIONS.

THE FOLLOWING PRACTICES WILL APPLY TO THE AREAS OF PERMANENT ROW THAT WILL BE SEEDED AND RESTORED TO MEADOW CONDITIONS:

- MOWING AND GENERAL MAINTENANCE WILL BE CONSISTENT WITH THE MIXED OPEN PRACTICES LISTED IN THE VIRGINIA RUNOFF REDUCTION METHOD (VRRM) V.4.1 COVER MEMO AND VRRM V.4.1 USER GUIDE (JANUARY 2024), TABLE 1.
- THE FULL WIDTH OF PERMANENT ROW WILL NOT BE MOWED ANY MORE FREQUENTLY THAN ONCE EVERY THREE YEARS.
- A CORRIDOR NOT EXCEEDING 10 FEET IN WIDTH LOCATED DIRECTLY OVER THE PIPELINE WILL BE MOWED ANNUALLY FOR INSPECTION PURPOSES IN ACCORDANCE WITH FEDERAL ENERGY REGULATORY COMMISSION (FERC) PLAN AND PROCEDURES.

1.3 STORMWATER METHODOLOGY

AS DESCRIBED ABOVE, THE TEMPORARY ROW WILL RETURN TO PRE-DEVELOPMENT OR BETTER HYDROLOGIC CONDITIONS BASED ON TR-55 CURVE NUMBER CLASSIFICATIONS. DUE TO THE MAJORITY OF THE PROJECT BEING CO-LOCATED ALONG EXISTING ROW, PERMANENT LAND COVER WILL ONLY CHANGE PRE- TO POST-DEVELOPMENT IN THE PERMANENT ROW FOR THE TREE CLEARING AREAS, MLV SITES, AND COMPRESSOR STATION. STORMWATER CALCULATIONS FOR THE MLV SITES AND COMPRESSOR STATION ARE PROVIDED UNDER SEPARATE COVERS.

PRE-CONSTRUCTED FORESTED COVER

THE VRRM NEW DEVELOPMENT SPREADSHEET WAS USED FOR AREAS WHERE THE LANDCOVER WILL CHANGE FROM FORESTED TO MIXED OPEN IN THE PROPOSED OR EXISTING PERMANENT ROW. A SEPARATE SPREADSHEET HAS BEEN PREPARED FOR EACH HUC-12 WATERSHED TO DETERMINE THE NUTRIENT CREDITS REQUIRED TO BE PURCHASED TO MEET WATER QUALITY STANDARDS. THE RESULTS ARE SHOWN IN THE TABLE BELOW.

WATERSHED	TP LOAD REDUCTION REQUIRED (LB/YR) FOR PIPELINE CONSTRUCTION TREE CLEARING	TP LOAD REDUCTION REQUIRED (LB/YR) FOR EDEN-MLV-02 VALVE SITE	TP LOAD REDUCTION REQUIRED (LB/YR) FOR EDEN-MLV-03 VALVE SITE	TP LOAD REDUCTION REQUIRED (LB/YR) FOR COMPRESSOR STATION 165	TOTAL TP LOAD REDUCTION REQUIRED (LB/YR)	
TROTTERS CREEK - DAN RIVER (030101030903)	1.45	-	-	-	1.45	
LOWER SANDY RIVER (030101031003)	0.44	0.05	-	-	0.49	
SANDY CREEK (WEST) - DAN RIVER (030101031004)	0.67	-	-	-	0.67	
WHITE OAK CREEK - BANISTER RIVER (030101050103)	1.18	-	TARGET TP REDUCTION EXCEEDED BY 0.12 LB/YR	-	1.18	
CHERRYSTONE CREEK (030101050104)	0.64	-	-	0.09	0.73	
SHOCKOE CREEK-BANISTER RIVER (030101050203)	-	-	-	8.41	8.41	
					12.93	

1.4 STORMWATER MANAGEMENT WAIVER REQUEST

TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC (TRANSCO), IS REQUESTING A WAIVER FOR ALL AREAS RETURNING TO PRE-DEVELOPMENT CONDITIONS AND LAND COVERS. THE WAIVER AREAS ENCOMPASS THE ENTIRETY OF THE PROJECT AREA EXCEPT FOR AREAS CONVERTED FROM FOREST TO MIXED OPEN, THE MLV SITES, AND THE COMPRESSOR STATION.

AFFIDAVIT OF PHOSPHORUS CREDIT SALE

Eco-Cap, LLC, a Virginia limited liability company (the "Company"), hereby certifies the following:

- 1. Pursuant to that certain Nutrient Credit Purchase and Sale Agreement dated April 4, 2025 (the "Agreement"), between the Company ("Seller") and TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC ("Buyer"), the Company, for the benefit of the Buyer, agreed to sell from its Birch Creek Nutrient Bank in Halifax County, Virginia, 19.75 pounds of nonpoint source phosphorus credits to Buyer and retire the associated ratio of nonpoint source nitrogen credits at the credit generating facility in the amount of 152.15 pounds of nitrogen credits;
- 2. The Company and the Buyer, as of April 14 , 2025, have closed the transaction contemplated by the Agreement and the Company has sold to Buyer the 19.75 pounds of phosphorus credits.

WITNESS the following signature:

Eco-Cap, LLC, a Virginia limited liability company

By: Casey Jensen, President

Date: 414125

Commonwealth of Virginia

County of Cheste field, to-wit

Sworn to and subscribed before me this 14 day of ARTC, 2025, Casey Jensen, President, on behalf of Eco-Cap, LLC, a Virginia limited liability company.

My commission expires: 9/30/27

Alla

Project Name: Transcontinental Gas Pipe Line Company, LLC
Permittee: TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC
Phosphorus Credits: 19.75 lbs.
Associated Nitrogen Credit: 152.15 lbs.

NOTARY PUBLIC AND COMMISSION EXPIRES 9/30/2027

Eco-Cap, LLC

BILL OF SALE

WHEREAS, Seller and Buyer have entered into that certain Nutrient Credit Sale Agreement as of April 4, 2025 (the "Agreement") for the sale by the Seller and purchase by the Buyer of nonpoint source phosphorus credits generated within the Birch Creek Nutrient Bank in Halifax County, Virginia (the "Bank").

NOW, THEREFORE, for and in consideration of the payment of the Purchase Price (as defined in the Agreement) and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Seller hereby sells, transfers, assigns, conveys, delivers and sets over to Buyer, its successors and assigns, 19.75 pounds of phosphorus credits and retires 152.15 pounds of nitrogen credits associated with the phosphorous credits generated at the Bank as such are described in the Agreement.

TO HAVE AND TO HOLD all such phosphorus credits hereby sold and transferred to Buyer and its successors and assigns forever.

IN WITNESS WHEREOF, Seller has caused this Bill of Sale to be executed by its duly authorized representative as of the date first above written.

By:

Casey Jensen, President

Project Name: Transcontinental Gas Pipe Line Company, LLC
Permittee: TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC
Phosphorus Credits: 19.75 lbs.
Associated Nitrogen Credit: 152.15 lbs.

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NOTE:
AN ANALYSIS OF THE RECEIVING WATERS HAS DETERMINED THAT THE PROJECT DOES NOT DRAIN DIRECTLY TO IMPAIRED WATERS THAT WOULD PRECLUDE THE EXCHANGE OF NUTRIENT CREDITS TO SATISFY THE WATER QUALITY REQUIREMENTS.

R. CRAIG MURPHY, P.E.			REVISIONS									
ALTHOR THE	NO.	DATE	BY	DESCRIPTION	W.O. NO.	CHK.	APP.					
RICHARD C. MURPHY Lic. No. 041898												

TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC SOUTHEAST SUPPLY ENHANCEMENT PROJECT EDEN LOOP

WATER QUALITY LAND COVER DETAILS

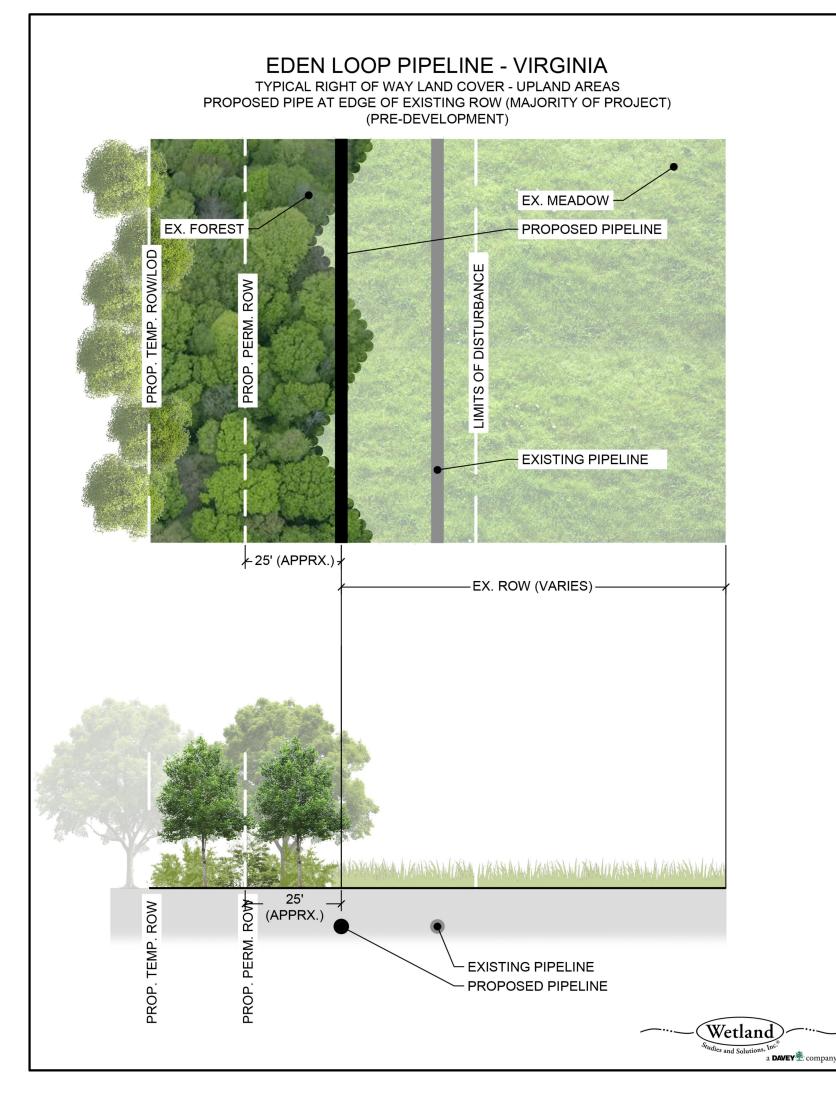
PITTSYLVANIA COUNTY, VIRGINIA

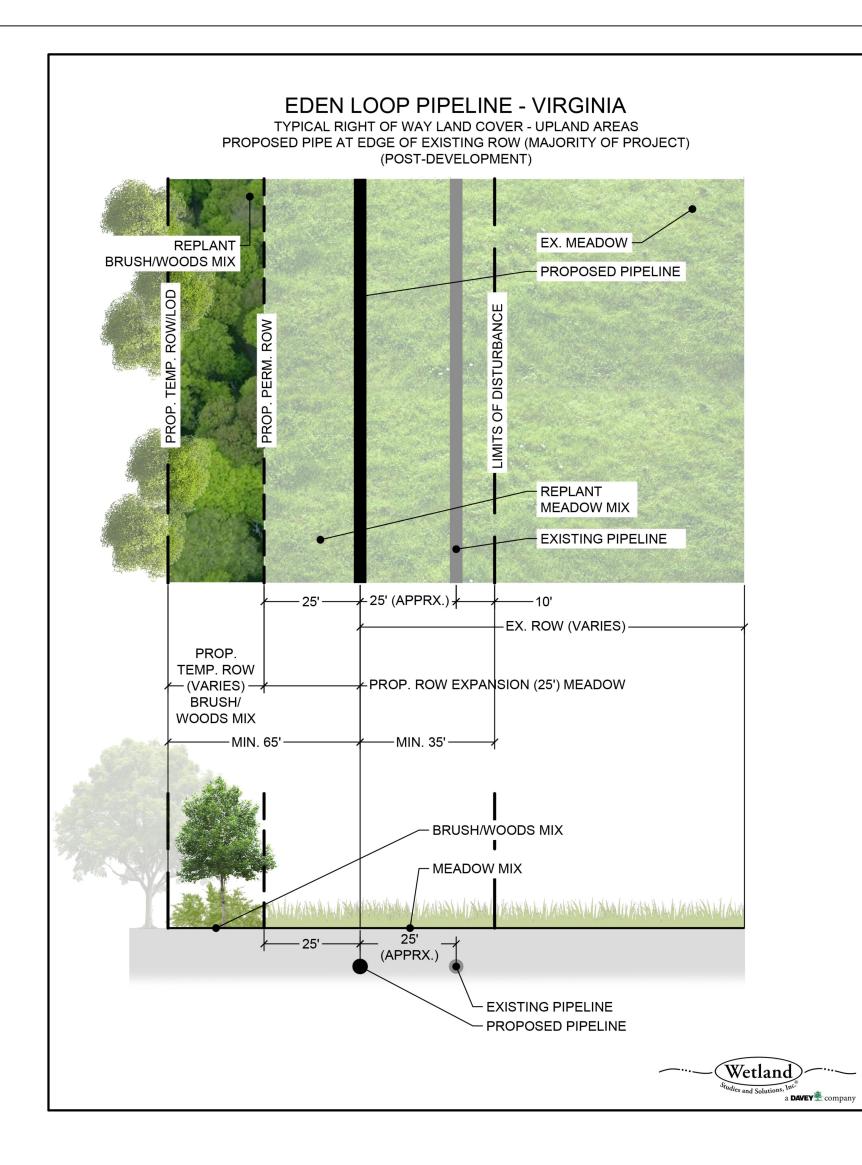
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 5-30-25
 ISSUED FOR BID:
 SCALE:
 AS NOTED

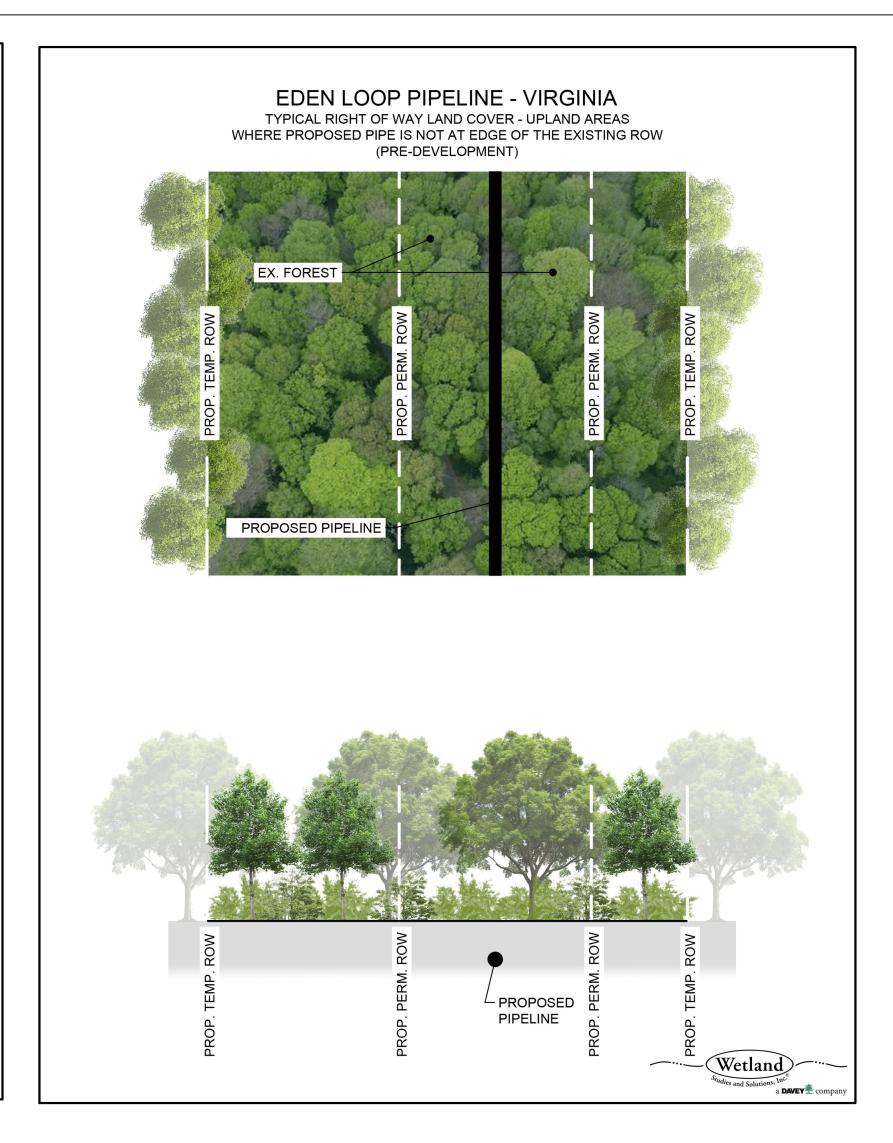
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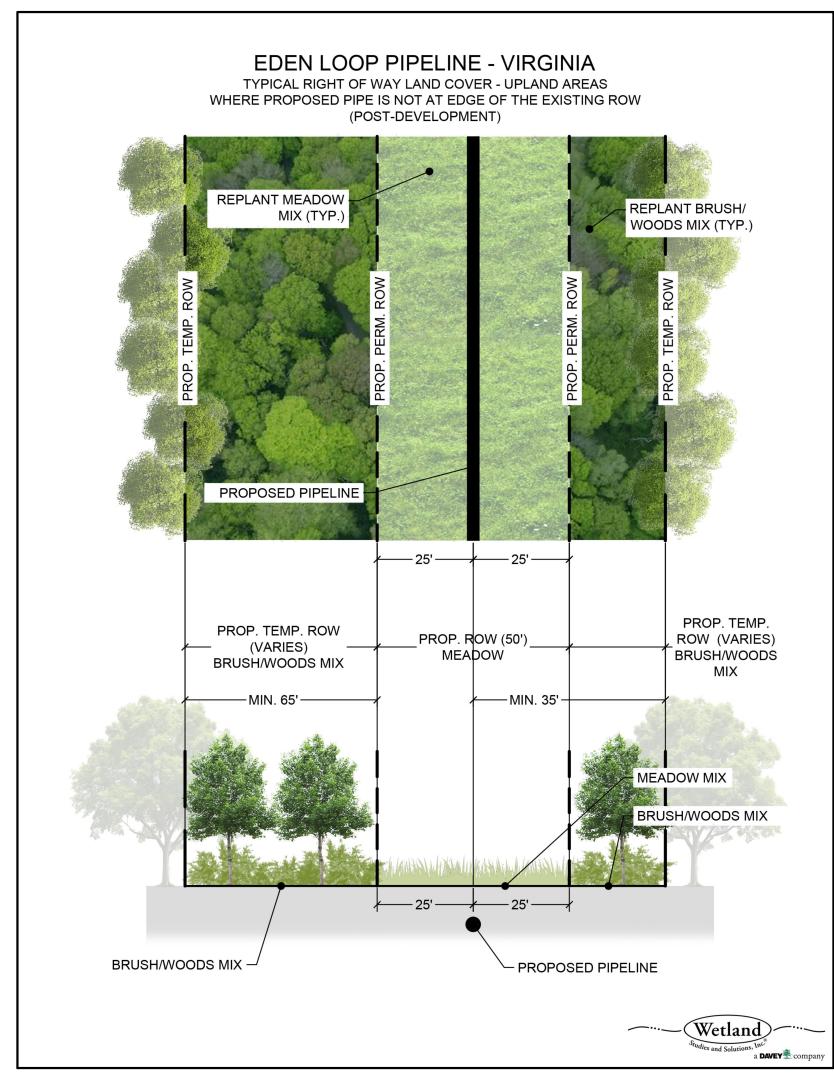
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 RCM
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 5-30-25
 SHEET

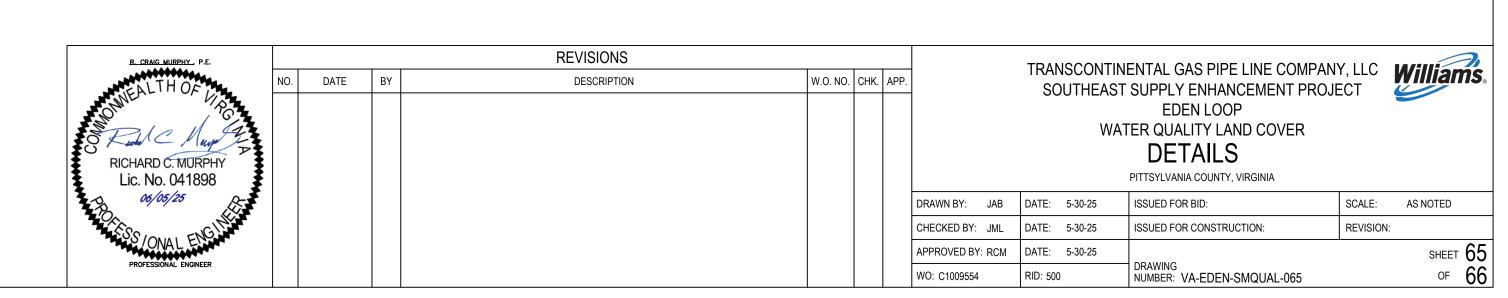
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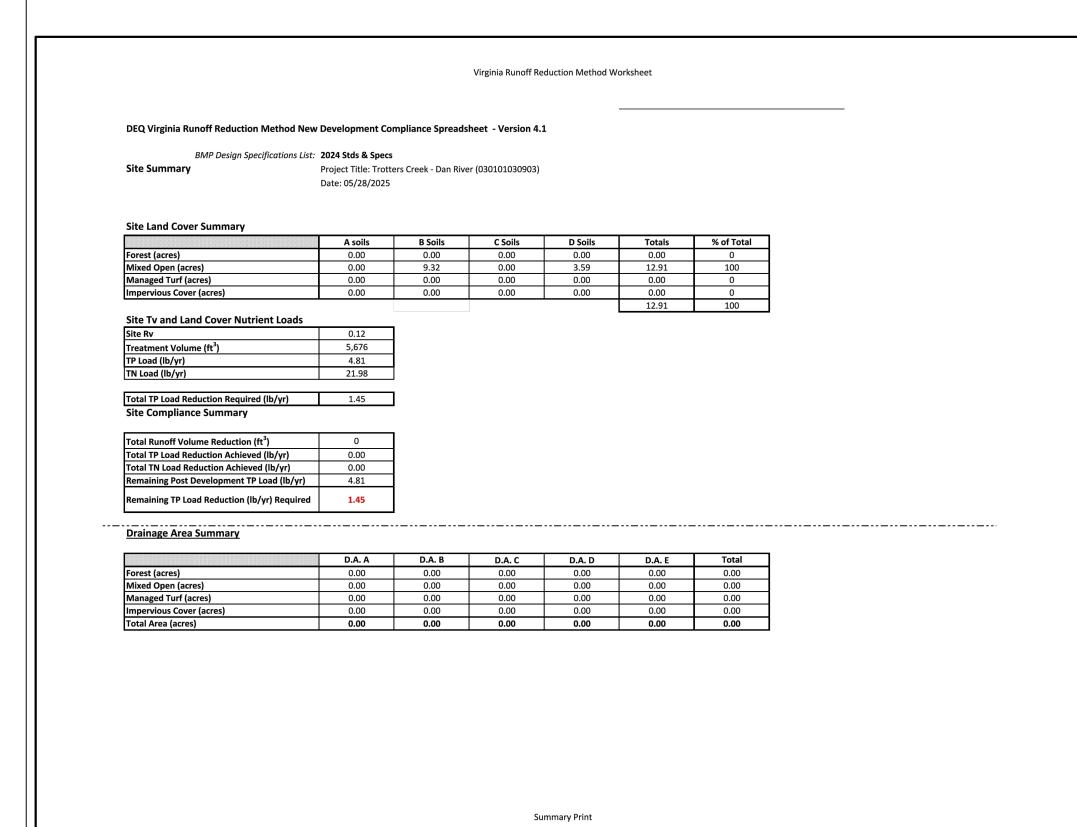


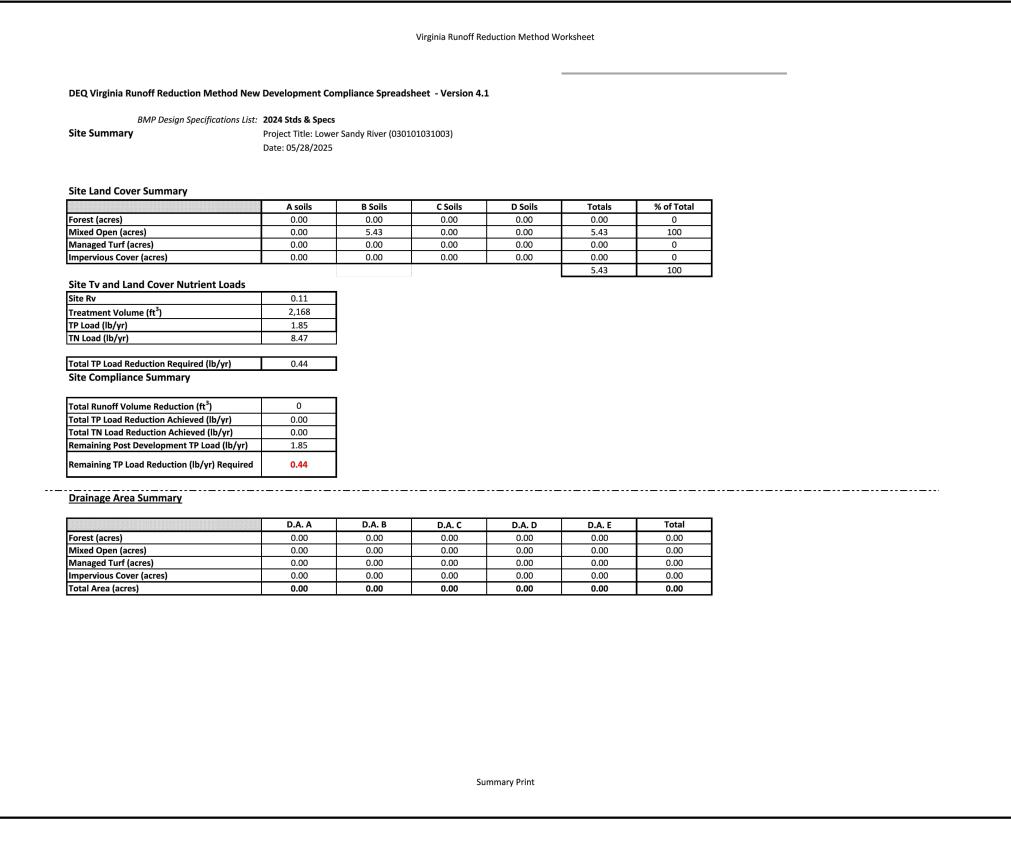


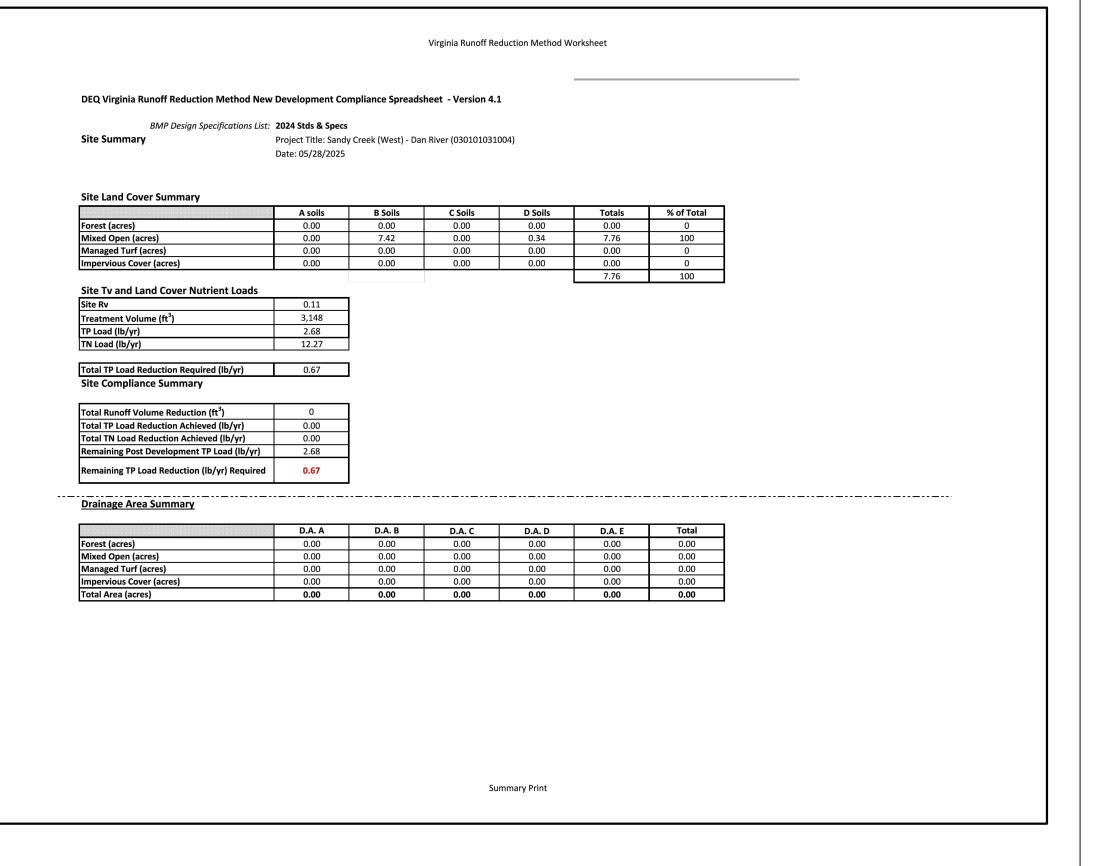


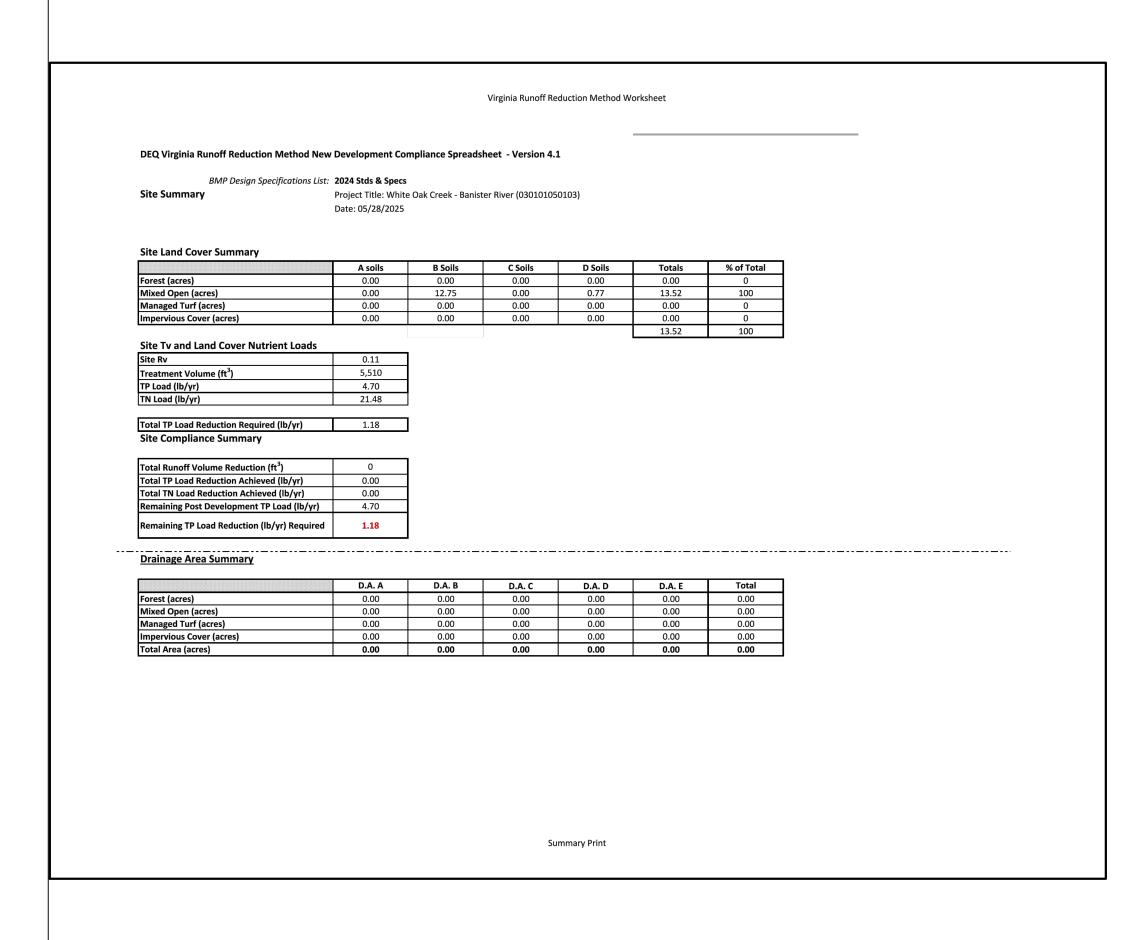


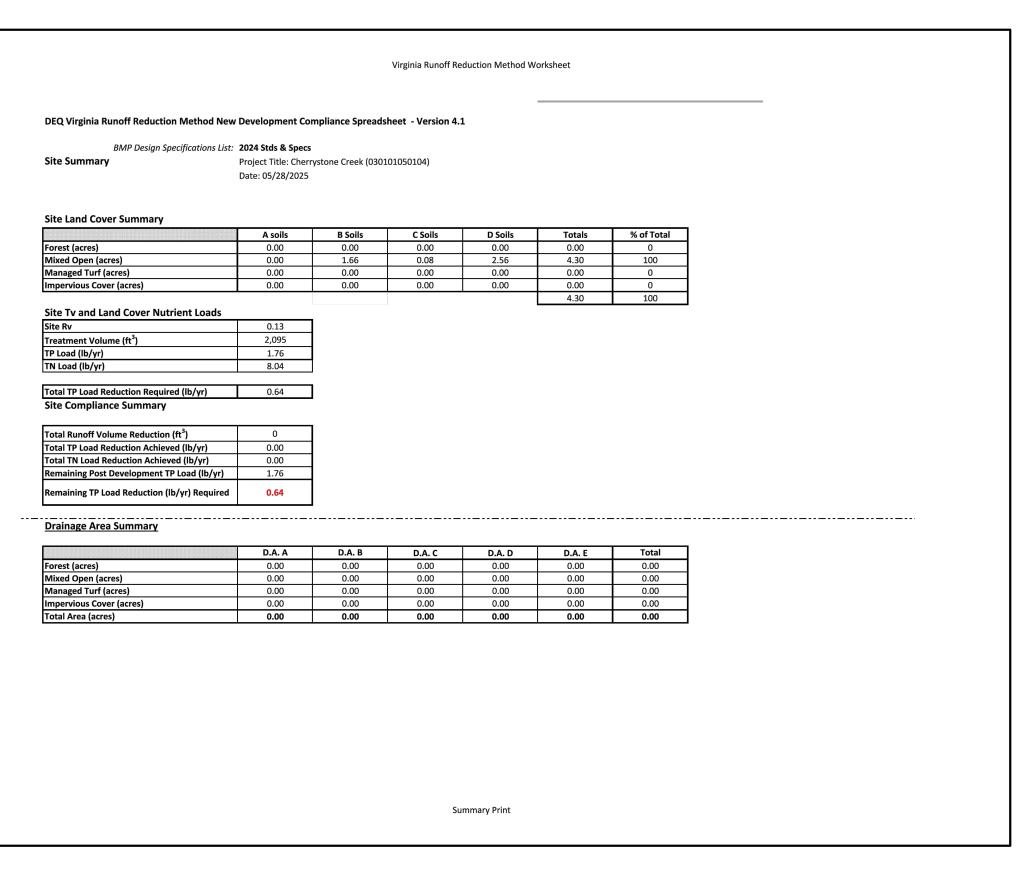












R. CRAIG MURPHY, P.E. RICHARD C. MURPHY Lic. No. 041898		REVISIONS							TRANSCONTINENTAL CAS DIDE LINE COMPANY LLC						
	NO. DATE BY		BY	DESCRIPTION		CHK. AI	APP.	TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC SOUTHEAST SUPPLY ENHANCEMENT PROJECT EDEN LOOP WATER QUALITY LAND COVER DETAILS PITTSYLVANIA COUNTY, VIRGINIA						Williams	
06/05/25							F	DRAWN BY: J	-	DATE:		ISSUED FOR BID: ISSUED FOR CONSTRUCTION:	SCALE:	AS NOTED	
PROFESSIONAL ENGINEER				-	APPROVED BY: F	RCM		5-30-25	DRAWING NUMBER: VA-EDEN-SMQUAL-066		SHEET 66				