GRADING, STORMWATER, AND EROSION CONTROL DESIGN PLAN SET FOR

COMPRESSOR STATION 165
NATURAL GAS COMPRESSOR FACILITY
PITTSLYVANIA COUNTY, VIRGINIA

Williams®
TRANSCONTINENTAL
GAS PIPE LINE CO.

Know what's at stake™
Call 811
BEFORE YOU DIG

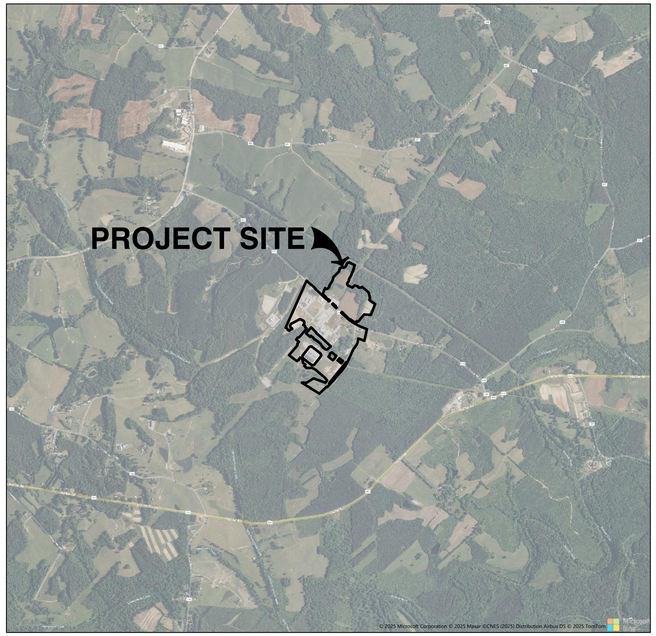
NOTES

1. CONTRACTOR SHALL REFER TO OTHER PLANS WITHIN THIS CONSTRUCTION SET FOR OTHER PERTINENT INFORMATION. IT IS NOT THE ENGINEER'S INTENT THAT ANY SINGLE PLAN SHEET IN THIS SET OF DOCUMENTS FULLY DEPICT ALL WORK ASSOCIATED WITH THE PROJECT.
2. VA 811 WEB TICKET NUMBER B416601089, A416600494-00A, B416601137, DATED JUNE, 2024.

REFERENCES

1. EXISTING CONTOURS ARE A COMBINATION OF TOPOGRAPHY DERIVED FROM UNMANNED AERIAL LIDAR DATA AND SUPPLEMENTAL FIELD SURVEY DATA COLLECTED BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC. (CEC) IN JUNE AND DECEMBER 2024 WITH SUPPLEMENTED CONTOURS DERIVED FROM FROM VIRGINIA GIS CLEARINGHOUSE REST SERVICES – VIRGINIA GEOGRAPHIC INFORMATION NETWORK (VGIN), DATED 2018.
2. AERIAL IMAGERY IS A COMBINATION OF IMAGERY DERIVED FROM UNMANNED AERIAL PHOTOGRAMMETRIC DATA AND SUPPLEMENTAL FIELD SURVEY DATA COLLECTED BY CEC ON DECEMBER 4, 2024 AND PHOTOGRAPHY FROM GOOGLE EARTH ACCESSED THROUGH PLEX EARTH, DATE OF PHOTOGRAPHY APRIL 2021.
3. EXISTING INFORMATION WITHIN THE PROJECT AREA IS A COMBINATION OF INFORMATION PROVIDED BY TRANSCO IN MARCH, APRIL, OCTOBER AND NOVEMBER 2024 AND TRADITIONAL SURVEY PERFORMED BY CEC IN JUNE AND DECEMBER 2024.
4. AQUATIC RESOURCES ARE BASED ON STREAM AND WETLAND DELINEATIONS COMPLETED BY WETLAND STUDIES AND SOLUTIONS, INC. (WSSI), DATA WHICH WAS PROVIDED BY WSSI ON MARCH 10, 2025.
5. EXISTING PROPERTY LINES ARE A COMBINATION OF INFORMATION DERIVED FROM ALTA SURVEY FILE TITLED "MAIN-D_1413_06-1413_70_ALTA_EMAILED041024.DWG" PROVIDED BY TRANSCO ON APRIL 11, 2024 AND INFORMATION DERIVED FROM FILE TITLED "EDEN_CY_PROPERTIES_20250219.DWG" PROVIDED BY TRANSCO ON FEBRUARY 19, 2024.
6. EXISTING PARCEL LINES DERIVED FROM PUBLICLY AVAILABLE PITTSYLVANIA COUNTY OPEN DATA, ACCESSED APRIL 2024.

PROJECT DEVELOPER/OWNER
TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC
2800 POST OAK BLVD
HOUSTON, TX 77056
PH: (281) 433-8046
CONTACT: JOSEPH DEAN



VICINITY MAP
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SCALE IN FEET
0 2000 4000

THIS PLAN HAS BEEN CREATED ON A 24" X 36" SHEET.
FOR REPRODUCTIONS, REFER TO GRAPHIC SCALE.

SHEET INDEX

SHEET NO.	DRAWING NO.	SHEET TITLE
1	C000	COVER SHEET
2	C001	GENERAL NOTES SHEET
3	C002	VADEQ CHECKLIST
4	C100	OVERALL EXISTING CONDITIONS PLAN
5	C300	OVERALL PHASE 1 GRADING PLAN
6	C301	PHASE 1 GRADING PLAN
7	C302	PHASE 1 GRADING PLAN
8	C303	OVERALL PHASE 2 GRADING PLAN
9	C304	PHASE 2 GRADING PLAN
10	C305	PHASE 2 GRADING PLAN
11	C306	ACCESS ROAD PROFILES
12	C400	OVERALL STORMWATER MANAGEMENT PLAN
13	C401	STORMWATER MANAGEMENT PLAN
14	C402	STORMWATER MANAGEMENT PLAN
15	C403	PRE-DEVELOPMENT DRAINAGE AREA MAP (HUC12 030101050203)
16	C404	POST-DEVELOPMENT DRAINAGE AREA MAP (HUC12 030101050203)
17	C405	PRE-DEVELOPMENT WATER QUALITY MAP (HUC12 030101050203)
18	C406	POST-DEVELOPMENT WATER QUALITY MAP (HUC12 030101050203)
19	C407	PRE-DEVELOPMENT DRAINAGE AREA MAP (HUC12 030101050104)
20	C408	POST-DEVELOPMENT DRAINAGE AREA MAP (HUC12 030101050104)
21	C409	PRE-DEVELOPMENT WATER QUALITY MAP (HUC12 030101050104)
22	C410	POST-DEVELOPMENT WATER QUALITY MAP (HUC12 030101050104)
23	C411	STORM PIPE PROFILES
24	C412	STORM PIPE PROFILES
25	C413	STORM PIPE PROFILES
26	C414	CHANNEL PROFILES
27	C415	CHANNEL PROFILES
28	C416	EXTENDED DETENTION POND NO. 1 DETAILS
29	C417	EXTENDED DETENTION POND NO. 2 DETAILS
30	C418	EXTENDED DETENTION POND NO. 3 DETAILS
31	C419	SWM NARRATIVE
32	C420	DISCHARGE POINT ANALYSIS
33	C421	DISCHARGE POINT ANALYSIS CROSS SECTIONS
34	C700	OVERALL LANDSCAPING PLAN
35	C701	LANDSCAPING PLAN
36	C702	LANDSCAPING PLAN
37	C703	LANDSCAPING NOTES AND DETAILS
38	C800	CONSTRUCTION DETAILS
39	C801	CONSTRUCTION DETAILS
40	C802	CONSTRUCTION DETAILS
41	C803	CONSTRUCTION DETAILS
42	C804	CONSTRUCTION DETAILS
43	C900	OVERALL PHASE 1 EROSION AND SEDIMENTATION CONTROL PLAN
44	C901	PHASE 1 EROSION AND SEDIMENTATION CONTROL PLAN
45	C902	PHASE 1 EROSION AND SEDIMENTATION CONTROL PLAN
46	C903	PHASE 1 EROSION AND SEDIMENTATION CONTROL PLAN
47	C904	PHASE 1 EROSION AND SEDIMENTATION CONTROL PLAN
48	C905	PHASE 1 EROSION AND SEDIMENTATION CONTROL PLAN
49	C906	PHASE 1 EROSION AND SEDIMENTATION CONTROL PLAN
50	C907	OVERALL PHASE 2 EROSION AND SEDIMENTATION CONTROL PLAN
51	C908	PHASE 2 EROSION AND SEDIMENTATION CONTROL PLAN
52	C909	PHASE 2 EROSION AND SEDIMENTATION CONTROL PLAN
53	C910	EROSION AND SEDIMENTATION CONTROL GENERAL NOTES
54	C911	EROSION AND SEDIMENTATION CONTROL GENERAL NOTES
55	C912	EROSION AND SEDIMENTATION CONTROL DETAILS
56	C913	EROSION AND SEDIMENTATION CONTROL DETAILS
57	C914	EROSION AND SEDIMENTATION CONTROL DETAILS
58	C915	EROSION AND SEDIMENTATION CONTROL DETAILS
59	C916	EROSION AND SEDIMENTATION CONTROL DETAILS
60	C917	EROSION AND SEDIMENTATION CONTROL DETAILS
61	C918	SEDIMENT BASIN A DETAIL

RECEIVING WATERS

AQUATIC RESOURCE NAME	WATERSHED	HUC12
UNTs TO BANISTER RIVER	BANISTER RIVER-SHOCKOE CREEK	030101050203
UNTs TO LITTLE CHERRYSTONE CREEK	CHERRYSTONE CREEK	030101050104

STORMWATER MANAGEMENT FACILITIES CERTIFICATION

PURSUANT TO 9VAC25-875-535. I HEREBY CERTIFY THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE STORMWATER MANAGEMENT FACILITIES SHOWN ON THESE RECORD DRAWINGS. HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS.

NAME _____ SIGNATURE _____

VIRGINIA LICENSE _____ DATE _____

"CERTIFY" MEANS TO STATE OR DECLARE A PROFESSIONAL OPINION BASED ON SUFFICIENT AND APPROPRIATE ONSITE INSPECTIONS. MATERIAL TESTS. AS-BUILT SURVEY DATA, AND INFORMATION PROVIDED BY OTHER PROFESSIONALS AND THE CONTRACTOR, CONDUCTED DURING OR AFTER CONSTRUCTION

MAY 2025

PLOT DATE: 6/3/2025 8:57:47 AM FILENAME: P:\340-000\341-132\-C400\DWG\CV01\341132-CV01-C000-COVER.DWG

CONTRACTOR NOTES

1. ALL EXISTING UTILITY DATA IS PROVIDED FOR INFORMATIONAL USE ONLY. ALTHOUGH THE DATA IS SHOWN AS ACCURATELY AS POSSIBLE, THE CONTRACTOR IS CAUTIONED THAT THE OWNER AND THE ENGINEER NEITHER ASSUME NOR IMPLY ANY RESPONSIBILITY FOR THE ACCURACY OF THIS DATA.

2. THE CONTRACTOR IS TO VERIFY LOCATION AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.

3. ALL CONTRACTORS/SUBCONTRACTORS PERFORMING WORK ON THIS PROJECT SHALL FAMILIARIZE THEMSELVES WITH THE SITE AND SHALL BE SOLELY RESPONSIBLE FOR ANY DAMAGE TO EXISTING FACILITIES RESULTING DIRECTLY OR INDIRECTLY FROM THEIR OPERATIONS. ANY REMOVAL OR DAMAGE TO EXISTING IMPROVEMENTS SHALL BE REPLACED OR REPAIRED BY THE CONTRACTORS AT THEIR EXPENSE AND SHALL BE APPROVED BY THE OWNER/REP. SAID EXISTING IMPROVEMENTS SHALL INCLUDE BUT NOT BE LIMITED TO BERMS, DITCHES, FENCES AND PLANTS.

4. ALL CONSTRUCTION, TESTING AND MATERIALS SHALL MEET OR EXCEED ALL REQUIREMENTS OF THE VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY (VADEQ) AND VIRGINA DEPARTMENT OF TRANSPORTATION (VDOT).

5. ALL TESTING SHALL BE DONE BY AN APPROVED LABORATORY AT THE EXPENSE OF THE CONTRACTOR.

6. PRIOR TO CONSTRUCTION, ALL CONTRACTORS SHALL FAMILIARIZE THEMSELVES WITH THE CONTRACT DOCUMENTS AND SPECIFICATIONS, THE PLANS INCLUDING ALL NOTES, THE VADEQ AND VDOT SPECIFICATIONS, AND ANY OTHER APPLICABLE STANDARDS OR SPECIFICATIONS RELEVANT TO THE PROPER COMPLETION OF THE WORK SPECIFIED. FAILURE ON THE PART OF THE CONTRACTORS TO FAMILIARIZE THEMSELVES WITH ALL STANDARDS OR SPECIFICATIONS PERTAINING TO THIS WORK SHALL IN NO WAY RELIEVE THE CONTRACTORS OF RESPONSIBILITY FOR PERFORMING THE WORK IN ACCORDANCE WITH ALL SUCH APPLICABLE STANDARDS AND SPECIFICATIONS.

7. CONTRACTORS SHALL HAVE IN THEIR POSSESSION, PRIOR TO CONSTRUCTION, ALL NECESSARY PERMITS, LICENSES, BONDS, INSURANCE, ETC. CONTRACTORS SHALL EACH HAVE AT LEAST ONE SET OF APPROVED ENGINEERING PLANS AND SPECIFICATIONS ON-SITE AT ALL TIMES.

8. IN THE EVENT THAT AN ITEM IS NOT COVERED IN THE VADEQ OR VDOT CONSTRUCTION STANDARDS, SPECIFICATIONS, AND DETAILS, THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION SHALL APPLY WITH CONCURRING NOTIFICATION TO THE OWNER/REP AND PROJECT ENGINEER. THE OWNER/REP SHALL HAVE THE FINAL DECISION ON ALL CONSTRUCTION MATERIALS, METHODS AND PROCEDURES.

9. CONTRACTORS MUST CONFINE THEIR ACTIVITIES TO THE WORK AREA. NO ENCROACHMENTS ONTO DEVELOPED AREAS WILL BE ALLOWED. ANY DAMAGE RESULTING THEREFROM SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR.

10. IT WILL BE THE RESPONSIBILITY OF EACH CONTRACTOR TO PROTECT ALL EXISTING PUBLIC AND PRIVATE UTILITIES THROUGHOUT THE CONSTRUCTION OF THIS PROJECT. CONTRACTORS SHALL CONTACT THE APPROPRIATE UTILITY COMPANIES FOR LINE LOCATES PRIOR TO COMMENCEMENT OF CONSTRUCTION AND SHALL ASSUME FULL LIABILITY FOR ANY DAMAGES CAUSED TO THOSE COMPANIES' FACILITIES.

11. TRENCHES WHICH LIE OUTSIDE EXISTING OR FUTURE PAVEMENTS SHALL BE BACKFILLED ABOVE THE TOP OF THE EMBEDMENT AND COMPACTED TO 95% STANDARD PROCTOR DENSITY.

12. PIPE EMBEDMENT SHALL BE AS PER VDOT STANDARD DETAILS.

13. ALL WETLANDS MUST BE DELINEATED AND PROTECTED WITH ORANGE SAFETY FENCE OR SIGNAGE PRIOR TO THE COMMENCEMENT OF EARTH MOVING ACTIVITIES IN THE VICINITY OF OR UPSLOPE OF THE RESOURCE.

14. THE CONTRACTOR SHALL REMOVE FROM THE SITE, RECYCLE, OR DISPOSE OF ALL BUILDING MATERIALS AND WASTES IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL LAW. THE CONTRACTOR SHALL NOT ILLEGALLY BURY, DUMP, OR DISCHARGE ANY BUILDING MATERIAL OR WASTES AT THE SITE.

15. THE LOCATION OF EXISTING UTILITIES AND UNDERGROUND STRUCTURES SHOWN ARE APPROXIMATE AND THOSE SHOWN ARE NOT NECESSARILY ALL THE EXISTING UTILITIES AND STRUCTURES. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXACT LOCATION OF ALL ABOVE AND BELOW GROUND UTILITIES AND STRUCTURES PRIOR TO INITIATING CONSTRUCTION ACTIVITIES.

16. THE CONTRACTOR SHALL CONSTRUCT A BERM AROUND AREAS WHERE HYDRAULIC FLUID AND DIESEL FUEL WILL BE STORED DURING CONSTRUCTION TO SERVE AS A CONTAINMENT AREA FOR THE CONTROL OF POSSIBLE SPILLS. ANY SPILL WITHIN THE CONTAINMENT AREA SHALL BE IMMEDIATELY CLEANED. TELEPHONE NUMBERS OF EMERGENCY RESPONSE TEAMS ARE TO BE KEPT ON SITE, AND THEY ARE TO BE NOTIFIED IN THE CASE OF A SPILL.

17. THE LOCATION OF PIPELINE AND EQUIPMENT TIE POINTS SHOWN ON THESE PLANS ARE FOR REPRESENTATION PURPOSES ONLY AS THE DEFINED LOCATIONS ARE UNKNOWN AT THIS TIME. ADJUSTMENTS TO THE EXACT LOCATION OF THESE TIE POINTS MAY OCCUR, BUT WILL REMAIN WITHIN THE FACILITY BOUNDARY AND THE PROVIDED LIMITS OF DISTURBANCE AT ALL TIMES. ADJUSTMENTS TO THESE LOCATIONS OF THESE LINES THAT WOULD RENDER THEM OUTSIDE THE PERMITTED BOUNDARY IS PROHIBITED.

18. THE FINISHED GRADE ELEVATIONS FOR THE PROPOSED SUBSTATION DEPICTS THE TOP OF GRAVEL (6-INCHES) AS SHOWN ON DETAIL 8, SHEET C802.

19. A LIMITED PORTION OF THE PROPOSED COMPRESSOR PAD WILL BE GRAVELED DURING PHASE 1 CONSTRUCTION. THE FINISHED GRADE ELEVATIONS PRESENTED ON THE PLAN DEPICT TOP OF GRAVEL (9-INCHES) AS SHOWN ON DETAIL 9, SHEET C802. THE CONTRACTOR SHALL NOT REFER TO THE PROPOSED FINISHED GRADE SURFACE AS SUBGRADE CONDITIONS.

ENVIRONMENTAL NOTES

1. PLEASE REFER TO THE COMPRESSOR STATION 165 WETLAND AND STREAM DELINEATION REPORT AND VADEQ AND USACE PERMITS COMPELTED BY OTHERS FOR INFORMATION ON ADDITIONAL PROJECT SPECIFIC ENVIRONMENTAL CONSTRAINTS AND SPECIFICATIONS.

COMMONWEALTH OF VIRGINIA
MICHAEL EDWARD ARCHER
Lic. No. 043994
PROFESSIONAL ENGINEER
6-2-2025

REVISION RECORD

NO	DATE	DESCRIPTION

700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com

CEC
Civil & Environmental Consultants, Inc.

TRANSCONTINENTAL GAS PIPE LINE, LLC
COMPRESSOR STATION 165
PITTSLYVANIA COUNTY, VIRGINIA

GENERAL NOTES SHEET

DATE:	MAY 2025
DRAWN BY:	JMP
DWG SCALE:	N/A
CHECKED BY:	MEA
PROJECT NO.	341-132
APPROVED BY:	LCW

DRAWING NO.:
C001
SHEET 2 OF 61

P:\340-0001\341-132\-0400\Dwg\C001\341132-C001-C001.dwg[C001] LS(6/3/2025 - Unsaved) - LP, 6/3/2025 8:57 AM

PLAN SUBMISSION CHECKLIST

A. APPLICATION TYPE

_X_ INITIAL SUBMISSION
____ RESUBMISSION DEQ PLAN # :_____
____ MODIFICATION with ACREAGE INCREASE DEQ PLAN # :_____
____ MODIFICATION without ACREAGE INCREASE DEQ PLAN # :_____

B. DESIGN PROFESSIONAL

CONTACT NAME: MIKE ARCHER
MAILING ADDRESS: 700 CHERRINGTON PARKWAY, MOON TOWNSHIP, PA 15108
TELEPHONE NO: (724) 991-2325
EMAIL ADDRESS: MARCHER@CECINC.COM

C. PROJECT DEVELOPER

PROJECT DEVELOPER: TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC
CONTACT NAME: JOSEPH DEAN
MAILING ADDRESS: 2800 POST OAK BLVD HOUSTON, TX 77056
TELEPHONE NO: (281) 433-8046
EMAIL ADDRESS: JOSEPH.DEAN@WILLIAMS.COM

D. PROPERTY OWNER

PROPERTY OWNER: TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC
CONTACT NAME: JOSEPH DEAN
MAILING ADDRESS: 2800 POST OAK BLVD HOUSTON, TX 77056
TELEPHONE NO: (281) 433-8046
EMAIL ADDRESS: JOSEPH.DEAN@WILLIAMS.COM

E. PROJECT INFORMATION

PROJECT NAME: COMPRESSOR STATION 165
ADDRESS (911 ADDRESS IF AVAILABLE): 945 TRANSCO ROAD CHATHAM, VA 24531
COUNTY (IF NOT LOCATED WITHIN A CITY): PITTSLYVANIA COUNTY
TAX MAP NO. (OR GPIN): 2436-95-5098, 2436-73-3459, 2436-72-5208
LATITUDE (6 DIGITS, DECIMAL DEGREES): N 36.833103
LONGITUDE (6 DIGITS, DECIMAL DEGREES): W 79.336868
TOTAL LAND AREA OF DEVELOPMENT: 16.75 ACRES (TAX PARCEL 2436-95-5098), 70.7 ACRES (TAX PARCEL 2436-73-3459), 29.2 ACRES (TAX PARCEL 2436-72-5208)
ESTIMATED AREA TO BE DISTURBED: 97.86 ACRES (TOTAL), 27.33 ACRES (NORTH OF TRANSCO ROAD), 70.53 (SOUTH OF TRANSCO ROAD)
PROJECT STATUS: ____ FEDERAL ____ STATE ____ PUBLIC _X_ PRIVATE
PART OF A LARGER COMMON PLAN OF DEVELOPMENT? ____ YES _X_ NO
OFFSITE IMPROVEMENTS PROPOSED? ____ YES _X_ NO

F. OFFSITE SUPPORT ACTIVITY INFORMATION

OFFSITE SUPPORT ACTIVITY NAME: N/A
ADDRESS (911 ADDRESS IF AVAILABLE): N/A
COUNTY (IF NOT LOCATED WITHIN A CITY): N/A
TAX MAP NO. (OR GPIN): N/A
LATITUDE (6 DIGITS, DECIMAL DEGREES): N/A
LONGITUDE (6 DIGITS, DECIMAL DEGREES): N/A
ESTIMATED AREA TO BE DISTURBED: N/A

G. PLAN INFORMATION

GENERAL PLAN INFORMATION	DRAWING NO.
1. VICINITY MAP	C000
2. NORTH SCALE	C000, C100–C305, C400–C410, C416–C418, C420, C700–C702, C900–C909, C918
3. PLAN LEGEND	C100–C305, C400–C410, C416–C418, C420–C421, C700–C702, C900–C909, C918
4. PLAN SCALE	C000, C100–C305, C400–C410, C416–C418, C420–C702, C900–C909, C918
5. SHEET INDEX	C000

PRE-DEVELOPMENT SITE INFORMATION	DRAWING NO.
6. NARRATIVE OF PRE-DEVELOPMENT SITE CONDITIONS	C419
7. EXISTING PROPERTY BOUNDARIES (INC. LEASE BOUNDARIES)	C100–C410, C420, C700–C702, C900–C909
8. EXISTING TOPOGRAPHY (EXISTING CONTOURS)	C100–C410, C416–C418, C420, C700–C702, C900–C909
9. EXISTING STREAMS, PONDS, DITCHES, WETLANDS & OTHER WATERS	C100–C409, C416–C418, C700–C702, C900–C909, C918
10. EXISTING KARST FEATURES	N/A
11. EXISTING 100-YEAR FEMA FLOODPLAIN	N/A
12. RESOURCE PROTECTION AREAS	N/A
13. EXISTING IMPROVEMENTS (BUILDINGS, ROADS, PARKING & UTILITIES)	C100
14. EXISTING VEGETATIVE AREAS (FOREST, OPEN SPACE & TURF)	C405 & C409
15. EXISTING LAND COVER / USE TABULATION	C403 & C407
16. EXISTING EASEMENTS (DEED BOOK/PAGE REF. OR INSTRUMENT #)	C100
17. PRE-DEV. DRAINAGE AREAS (ACREAGE, DIVIDES & FLOW PATHS)	C403 & C407

POST-DEVELOPMENT SITE INFORMATION	DRAWING NO.
18. NARRATIVE OF POST-DEVELOPMENT SITE CONDITIONS	C419
19. PROPOSED PROPERTY BOUNDARIES (INC. LEASE BOUNDARIES)	N/A
20. PROPOSED LIMITS OF LAND DISTURBANCE (CLEARING & GRADING)	C100–C410, C416–C418, C420–C421, C700–C702, C900–909, C918
21. PROPOSED GRADING (PROPOSED CONTOURS INC. SWM PRACTICES)	C300–C408, C416–C418, C420–C421, C700–C702, C900–909, C918
22. PROPOSED 100-YEAR FLOODPLAIN	N/A
23. PROPOSED IMPROVEMENTS (BLDGS, ROAD, PARKING, & UTILITIES)	C300–C408, C416–C418, C420–C421, C700–C702, C900–909, C918
24. PROPOSED VEGETATIVE AREAS (FOREST, OPEN SPACE & TURF)	C406 & C410
25. PROPOSED LAND COVER / USE TABULATION	C404 & C408
26. PROPOSED EASEMENTS	N/A
27. POST-DEV. DRAINAGE AREAS (ACREAGE, DIVIDES & FLOW PATHS)	C404 & C408

G. PLAN INFORMATION (CONT.)

EROSION & SEDIMENT CONTROL INFORMATION	DRAWING NO.
28. NARRATIVE OF PROP. EROSION & SEDIMENT CONTROLS	C910–C911
29. MINIMUM STANDARDS (9VAC25-840-40)	C910–C911
30. CRITICAL EROSION AREAS (VESCH, CHAPTER 6)	ES & PCSM NARRATIVES
31. PROP. EROSION & SEDIMENT CONTROLS (VESCH, CHAPTER 3)	C900–C918
32. EROSION & SEDIMENT CONTROL DRAWINGS	C900–C918
33. HYDROLOGIC & HYDRAULIC COMPUTATIONS	ES & PCSM NARRATIVES
34. INSPECTION, OPERATION & MAINTENANCE REQUIREMENTS	C912–C918, ES & PCSM NARRATIVES

POST-DEVELOPMENT WATER QUALITY & WATER QUALITY INFO.	DRAWING NO.
35. NARRATIVE OF PROP. SWM FACILITIES / PRACTICES	C419
36. PROP. SWM FACILITIES / PRACTICES	C400–C402, 416–418
37. HYDROLOGIC & HYDRAULIC COMPUTATIONS	ES & PCSM NARRATIVES
38. LONG-TERM INSP., OPERATION & MAINTENANCE REQUIREMENTS	C416–C418
39. OUTFALL SUMMARY TABLE WITH PRE, POST, AND ALLOWABLE DISCHARGE RATES USED FOR QUANTITY ASSESSMENT; IDENTIFY THE TYPE OF CONVEYANCE SYSTEM AT EACH POINT OF DISCHARGE	ES & PCSM NARRATIVES

SOILS & GEOTECHNICAL INFORMATION	DRAWING NO.
40. SOIL MAP (INC. NRCS SOIL TYPES)	C901–C902, C908–C909, PCSM NARRATIVE
41. SOILS TABULATION	C419
42. GEOTECHNICAL INVESTIGATION / REPORT	AVAILABLE UPON REQUEST

OTHER SUPPORTING INFORMATION	DRAWING NO.
43. BOUNDARY SURVEY (18VAC10-20-370)	C100
44. PHYSICAL IMPROVEMENT SURVEY (18VAC10-20-380)	C100
45. TOPOGRAPHIC SURVEY (18VAC10-20-382)	C100

H. LAND COVER TABULATION

HUC12 030101050203 BANISTER RIVER – SHOCKOE CREEK

EXISTING LAND COVER / USE	ACRES
1. IMPERVIOUS COVER	1.01
IMPERVIOUS COVER (% OF TOTAL LAND AREA OF DEVELOPMENT)	4%
2. MANAGED TURF	0.00
3. OPEN SPACE	18.76
4. FOREST COVER	7.56
5. PRIME FARMLAND (NRCS FARMLAND CLASSIFICATION)	0.00

PROPOSED LAND COVER / USE ("SITE" TAB OF VRRM SPREADSHEET)	ACRES
1. IMPERVIOUS COVER	12.96
IMPERVIOUS COVER (% OF TOTAL LAND AREA OF DEVELOPMENT)	47%
2. MANAGED TURF	0.23
3. OPEN SPACE	14.14
4. FOREST COVER	0.00
5. PRIME FARMLAND (NRCS FARMLAND CLASSIFICATION)	0.00

HUC12 03010105104 CHERRYSTONE CREEK

EXISTING LAND COVER / USE	ACRES
1. IMPERVIOUS COVER	0.00
IMPERVIOUS COVER (% OF TOTAL LAND AREA OF DEVELOPMENT)	0%
2. MANAGED TURF	0.00
3. OPEN SPACE	0.15
4. FOREST COVER	0.00
5. PRIME FARMLAND (NRCS FARMLAND CLASSIFICATION)	0.00

PROPOSED LAND COVER / USE ("SITE" TAB OF VRRM SPREADSHEET)	ACRES
1. IMPERVIOUS COVER	0.15
IMPERVIOUS COVER (% OF TOTAL LAND AREA OF DEVELOPMENT)	100%
2. MANAGED TURF	0.00
3. OPEN SPACE	0.00
4. FOREST COVER	0.00
5. PRIME FARMLAND (NRCS FARMLAND CLASSIFICATION)	0.00

I. SOILS TABULATION

MAP UNIT SYMBOL	MAP UNIT NAME	HSG	K FACTOR	ERODIBILITY	ACRES IN LOD	% OF LOD
9B	LACKSTOWN FINE SANDY LOAM, 2 TO 7 PERCENT SLOPES	D	0.37	CLASS 1	8.02	8.2%
23B	CLOVER FINE SANDY LOAM, 2 TO 7 PERCENT SLOPES	B	0.28	CLASS 1	80.30	82.0%
23C	CLOVER FINE SANDY LOAM, 7 TO 15 PERCENT SLOPES	B	0.28	CLASS 1	9.54	9.8%

J. EROSION & SEDIMENT CONTROL

ESC PLAN VARIANCE REQUEST: ____ YES _X_ NO

IF "YES", PLEASE PROVIDE JUSTIFICATION FOR THE VARIANCE REQUEST:

K. STORMWATER MANAGEMENT

APPLICABLE DESIGN CRITERIA:
_X_ PART II B
____ PART II C (GRANDFATHERING)
____ PART II C (TIME LIMITS ON APPLICABILITY)
____ "SAFE HARBOR"

OFFSITE COMPLIANCE OPTION(S)? ____ YES _X_ NO

IF "YES", PLEASE DESCRIBE THE OFFSITE COMPLIANCE OPTION(S):

DISCHARGE TO A KARST FEATURE(S)? ____ YES _X_ NO

IF "YES", PLEASE DESCRIBE THE KARST FEATURE(S):

IF "YES", PLEASE DESCRIBE ANY KNOWN NATURAL HERITAGE RESOURCES IN THE KARST FEATURE(S):

SWM PLAN EXCEPTION REQUEST? ____ YES _X_ NO

IF "YES", PLEASE PROVIDE THE JUSTIFICATION FOR THE EXCEPTION REQUEST:

L. STORMWATER MANAGEMENT FACILITIES / PRACTICES

FACILITY NO.	FACILITY TYPE	LAT.	LONG.	REC. WATER	TOT. ACRES TREATED	IMP. ACRES TREATED	PLAN SHEET NO.	CONFORMANCE TYPE
1	EXTENDED DETENTION POND	N 36.834199	W 79.334485	UNTs TO BANISTER RIVER	13.80	7.71	C400–C401, C416	ENERGY BALANCE MET, SHEET FLOW
2	EXTENDED DETENTION POND	N 36.836157	W 79.335669	UNTs TO BANISTER RIVER	4.25	3.11	C400, C402, C417	ENERGY BALANCE MET, SHEET FLOW
3	EXTENDED DETENTION POND	N 36.834348	W 79.337496	UNTs TO BANISTER RIVER	3.34	2.31	C400, C402, C418	ENERGY BALANCE MET, SHEET FLOW
4	N/A	N 36.830028	W 79.338621	CHERRYSTONE CREEK	0.00	0.00	C905	ENERGY BALANCE MET, SHEET FLOW

M. OWNER / DEVELOPER CERTIFICATION

I HEREBY CERTIFY THAT COVERAGE UNDER THE GENERAL VPDES PERMIT FOR DISCHARGES OF STORMWATER FROM CONSTRUCTION ACTIVITIES WILL BE OBTAINED, IF REQUIRED, PRIOR TO COMMENCING LAND-DISTURBING ACTIVITIES.

I HEREBY CERTIFY THAT ALL WETLANDS PERMITS REQUIRED BY LAW WILL BE OBTAINED, IF REQUIRED, PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES.

I HEREBY CERTIFY THAT PERMISSION TO CONSTRUCT ANY OFFSITE IMPROVEMENTS, IF PROPOSED, WILL BE OBTAINED PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES.

I HEREBY CERTIFY THAT ALL OFFSITE NONPOINT SOURCE NUTRIENT CREDITS WILL BE OBTAINED, IF PROPOSED, PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES.

I HEREBY CERTIFY THAT CONSTRUCTION RECORD DRAWINGS (AS-BUILT DRAWINGS) FOR ALL PERMANENT STORMWATER MANAGEMENT FACILITIES/PRACTICES WILL BE PREPARED AND SUBMITTED TO DEQ PRIOR TO PROJECT CLOSEOUT. THE CONSTRUCTION RECORD DRAWINGS WILL BE APPROPRIATELY SEALED AND BY A PROFESSIONAL REGISTERED IN THE COMMONWEALTH OF VIRGINIA, CERTIFYING THAT THE STORMWATER MANAGEMENT FACILITIES/PRACTICES HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PLAN(S).

I HEREBY CERTIFY THAT A LONG-TERM MAINTENANCE AGREEMENT(S) FOR ALL PERMANENT STORMWATER MANAGEMENT FACILITIES/PRACTICES AND OTHER TECHNIQUES SPECIFIED TO MANAGE THE QUALITY AND QUANTITY OF RUNOFF WILL BE SUBMITTED TO DEQ, IF REQUIRED, PRIOR TO PROJECT CLOSEOUT. THE LONG-TERM MAINTENANCE AGREEMENT(S) WILL BE RECORDED IN THE LOCAL LAND RECORDS PRIOR TO TERMINATION OF COVERAGE UNDER THE GENERAL VPDES PERMIT FOR DISCHARGES OF STORMWATER FROM CONSTRUCTION ACTIVITIES.

OWNER / DEVELOPER NAME: JOSEPH DEAN WITH TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC
OWNER / DEVELOPER TITLE: MANAGER, PERMITTING
SIGNATURE:

DATE: 5/30/2025

N. DESIGN PROFESSIONAL CERTIFICATION

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

I HEREBY CERTIFY THAT THE PLANS AND HYDROLOGIC & HYDRAULIC COMPUTATIONS HEREIN ARE IN COMPLIANCE WITH THE STORMWATER MANAGEMENT ACT AND ATTENDANT REGULATIONS, THE EROSION AND SEDIMENT CONTROL LAW AND ATTENDANT REGULATIONS, AND APPLICABLE DEQ GUIDANCE.

DESIGN PROFESSIONAL NAME: LAURA WIBLE (PROVISIONALLY CERTIFIED VADEQ SWM PLAN REVIEWER)
LICENSE NO.: 0402058135
SIGNATURE:

DATE: 5/30/2025

DEQ PLAN # 20__-0____

COMMONWEALTH OF VIRGINIA
MICHAEL EDWARD ARCHER
Lic. No. 043994
PROFESSIONAL ENGINEER
6-2-2025

REVISION RECORD

NO	DATE	DESCRIPTION

700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com
Civil & Environmental Consultants, Inc.

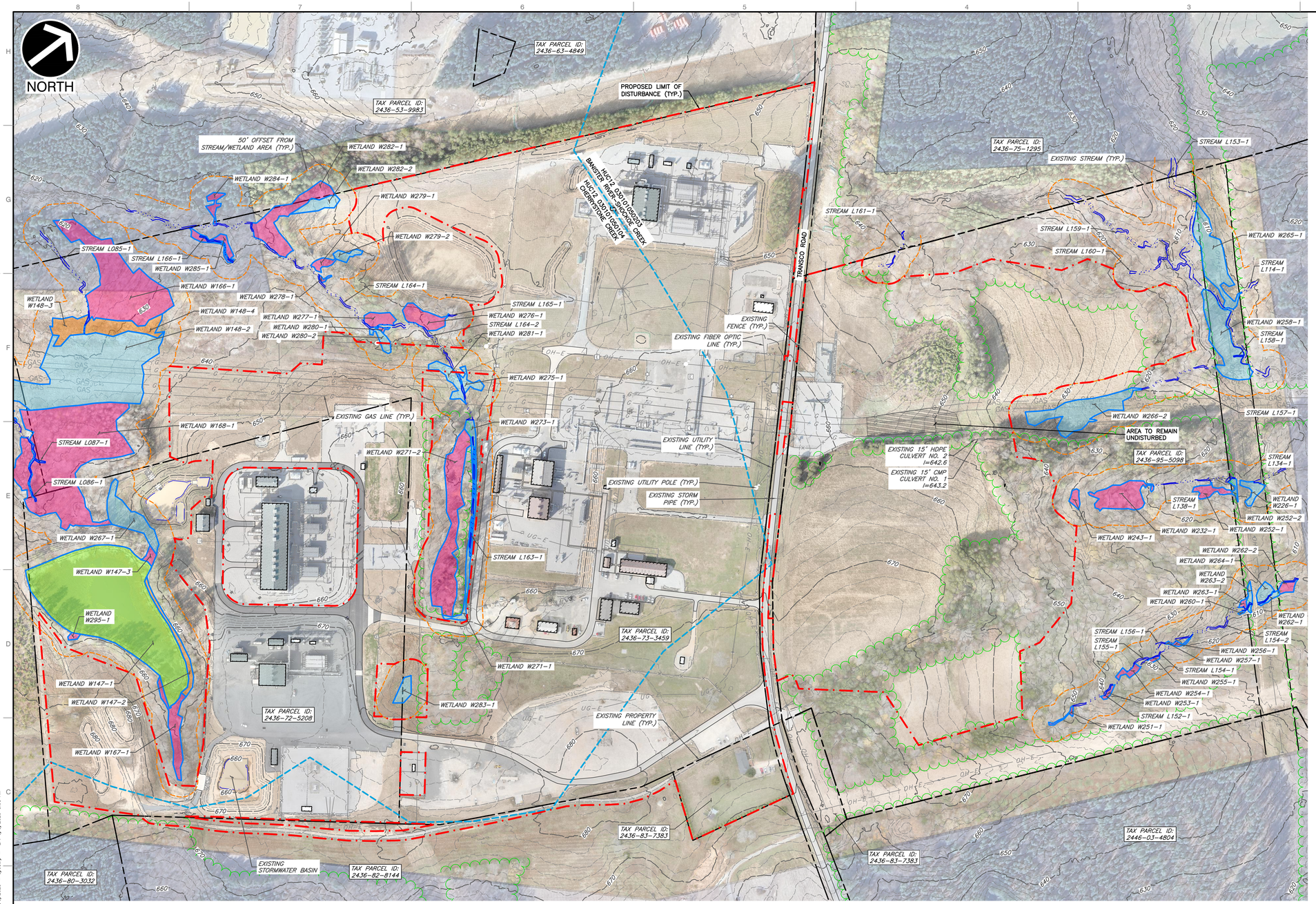
TRANSCONTINENTAL GAS PIPE LINE, LLC
COMPRESSOR STATION 165
PITTSLYVANIA COUNTY, VIRGINIA

VADEQ CHECKLIST

DATE: MAY 2025 | DRAWN BY: JMP
DWG SCALE: N/A | CHECKED BY: MEA
PROJECT NO: 341-132 | APPROVED BY: LCW

DRAWING NO.: C002
SHEET 3 OF 61

P:\340-000\341-132_CADD\dwg\Civil\341-132-Civil-C001.dwg[C002] LS(6/3/2025 - khaynes) - LM 6/3/2025 8:57 AM



REFERENCES

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6. EXISTING PARCEL LINES DERIVED FROM PUBLICLY AVAILABLE PITTSYLVANIA COUNTY OPEN DATA, ACCESSED APRIL 2024.

LEGEND

- EXISTING INDEX CONTOUR
- EXISTING INTERMEDIATE CONTOUR
- EXISTING SUBJECT PROPERTY LINE
- EXISTING PROPERTY LINE
- EXISTING TRANSCO ROAD RIGHT-OF-WAY
- EXISTING RIGHT-OF-WAY
- EXISTING FENCE LINE
- EXISTING EDGE OF PAVEMENT
- EXISTING PAVEMENT LIMITS
- EXISTING EDGE OF GRAVEL
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- EXISTING WATER LINE
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- EXISTING GAS LINE (BY OTHERS)
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- EXISTING TREE LINE
- EXISTING RIPRAP
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- EXISTING PEM WETLAND (BY OTHERS)
- EXISTING PFO WETLAND (BY OTHERS)
- EXISTING POW WETLAND (BY OTHERS)
- EXISTING PSS WETLAND (BY OTHERS)
- 50' OFFSET FROM STREAM/WETLAND
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED AREA TO REMAIN UNDISTURBED

SCALE IN FEET
0 150 300

COMMONWEALTH OF VIRGINIA
MICHAEL EDWARD ARCHER
Lic. No. 043994
PROFESSIONAL ENGINEER
6-2-2025

REVISION RECORD

NO	DATE	DESCRIPTION

700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com
Civil & Environmental Consultants, Inc.

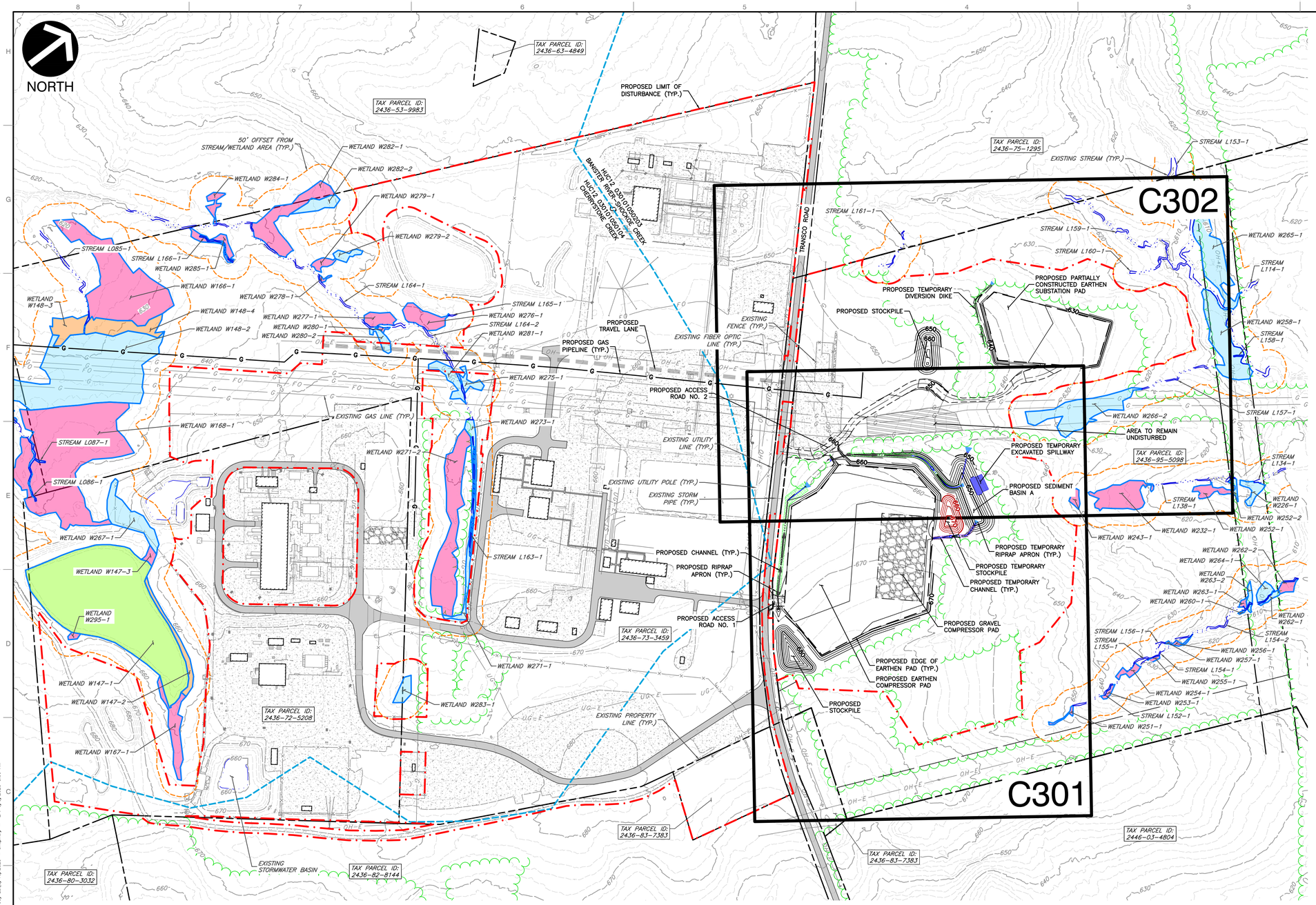
TRANSCONTINENTAL GAS PIPE LINE, LLC
COMPRESSOR STATION 165
PITTSLYVANIA COUNTY, VIRGINIA

OVERALL EXISTING CONDITIONS PLAN

DATE:	MAY 2025
DWG SCALE:	1" = 150'
DRAWN BY:	JMP
CHECKED BY:	MEA
PROJECT NO:	341-132
APPROVED BY:	LCW

DRAWING NO.: C100
SHEET 4 OF 61

P:\340-2001\341-132\-CADD\Dwg\C101\341132-CV01-C100 Existing Overall.dwg[C100] 6/5/2025 - 9:26am - LP, 6/3/2025 8:58 AM



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6. EXISTING PARCEL LINES DERIVED FROM PUBLICLY AVAILABLE PITTSYLVANIA COUNTY OPEN DATA, ACCESSED APRIL 2024.

SCALE IN FEET
0 150 300

COMMONWEALTH OF VIRGINIA
MICHAEL EDWARD ARCHER
Lic. No. 043994
PROFESSIONAL ENGINEER
6-2-2025

LEGEND

- EXISTING INDEX CONTOUR
- EXISTING INTERMEDIATE CONTOUR
- EXISTING SUBJECT PROPERTY LINE
- EXISTING PROPERTY LINE
- EXISTING TRANSCO ROAD RIGHT-OF-WAY
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- PROPOSED S150 CHANNEL LINER
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REVISION RECORD

NO	DATE	DESCRIPTION

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COMPRESSOR STATION 165
PITTSLVYANIA COUNTY, VIRGINIA

OVERALL PHASE 1 GRADING PLAN

DATE:	MAY 2025
DWG SCALE:	1" = 150'
DRAWN BY:	JMP
CHECKED BY:	MEA
PROJECT NO:	341-132
APPROVED BY:	LCW

DRAWING NO.: C300
SHEET 5 OF 61

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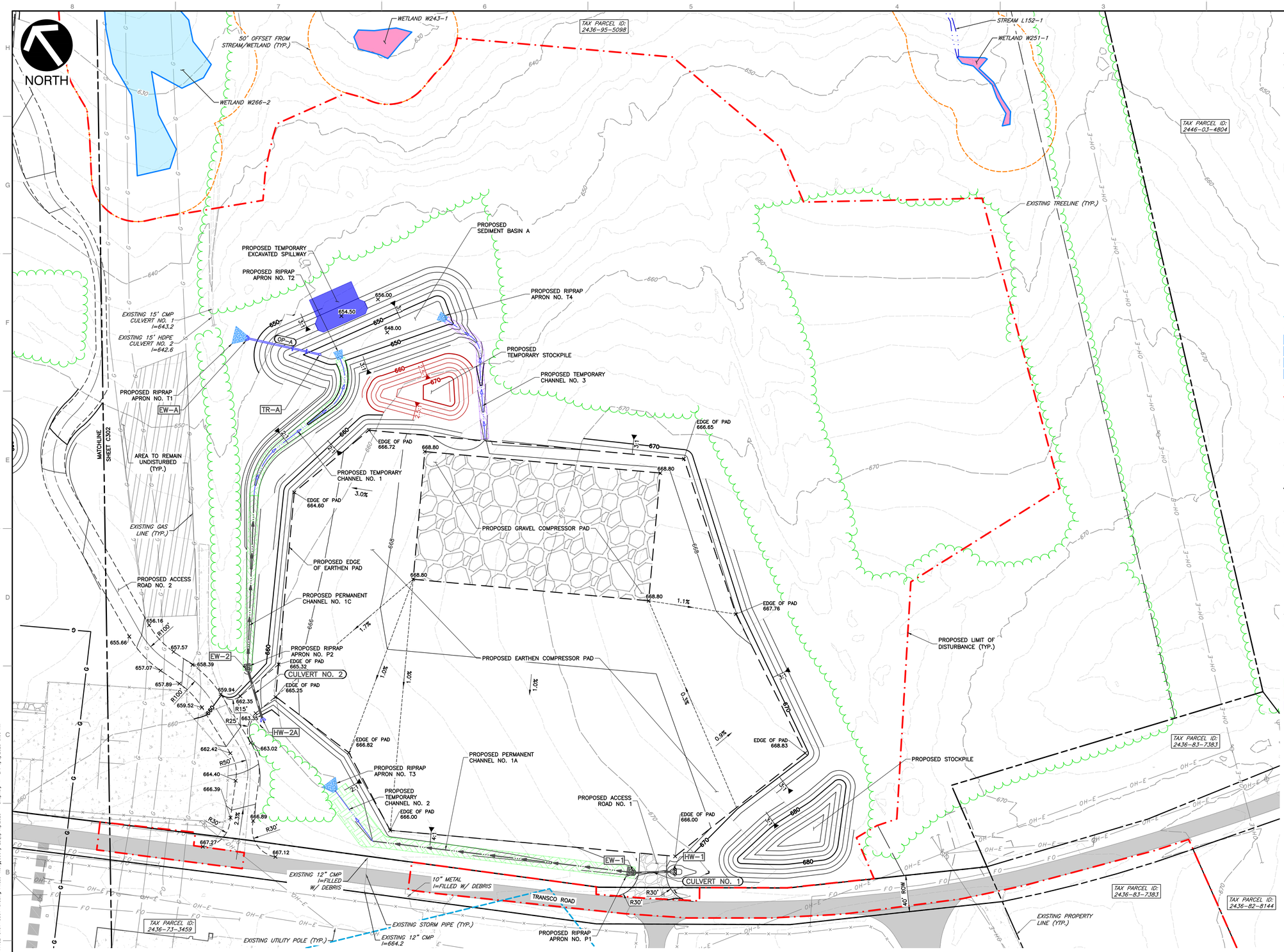

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- PROPOSED STRUCTURE LABEL
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SCALE IN FEET
0 50 100

COMMONWEALTH OF VIRGINIA
MICHAEL EDWARD ARCHER
Lic. No. 043994
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6-2-2025

REVISION RECORD

NO	DATE	DESCRIPTION

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Ph: 412.429.2324 · 800.365.2324
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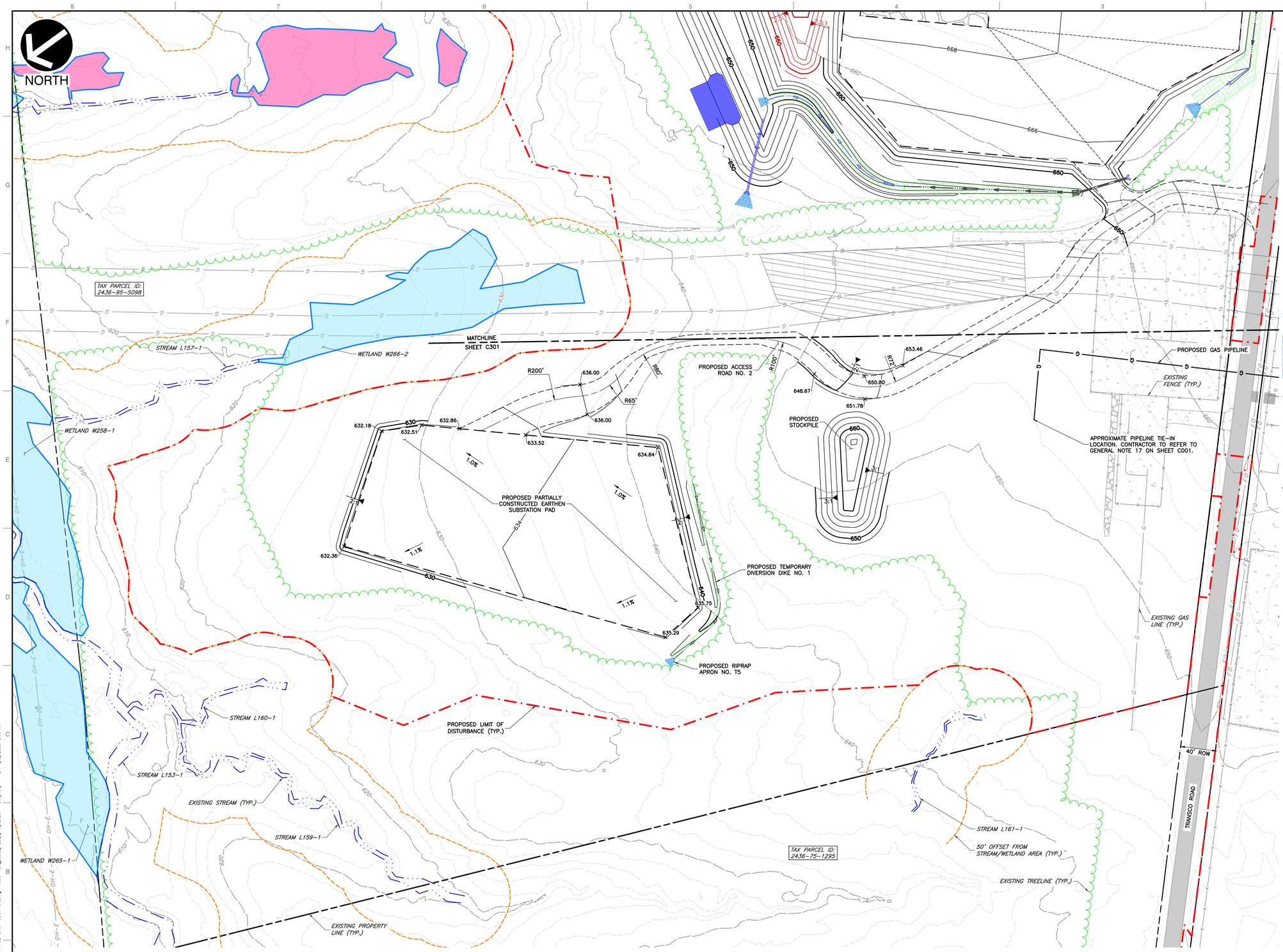
COMPRESSOR STATION 165
PITTSLYVANIA COUNTY, VIRGINIA

PHASE 1 GRADING PLAN

DATE:	MAY 2025
DWG SCALE:	1"=50'
PROJECT NO:	341-132
DRAWN BY:	JMP
CHECKED BY:	MEA
APPROVED BY:	LCW

DRAWING NO.: C301
SHEET 6 OF 61

P:\340-005\341-132\1-0400\dwg\C301\341132-C301-Grading Phase 1.dwg[C301] | 6/3/2025 - 8:49am (shannel) - LP: 6/3/2025 9:00 AM



LEGEND

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SCALE IN FEET
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COMMONWEALTH OF VIRGINIA
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PHASE 1 GRADING PLAN

DATE:	MAY 2025
DWG SCALE:	1" = 50'
PROJECT NO:	341-132
DRAWN BY:	JMP
CHECKED BY:	MEA
APPROVED BY:	LCW

DRAWING NO.: C302
SHEET 7 OF 61

P:\340-000\341-132\-CAD\[dwg]\C01\[341132-C101-C301-Grading Phase 1.dwg]C302 | 5/15/2025 - khapman - LP: 6/3/2025 9:00 AM

NORTH

C305

C304

TAX PARCEL ID: 2436-63-4849

TAX PARCEL ID: 2436-53-9983

TAX PARCEL ID: 2436-75-1295

TAX PARCEL ID: 2436-95-5098

TAX PARCEL ID: 2436-73-3459

TAX PARCEL ID: 2436-72-5208

TAX PARCEL ID: 2436-80-3032

TAX PARCEL ID: 2436-62-8144

TAX PARCEL ID: 2436-83-7383

TAX PARCEL ID: 2446-03-4804

PROPOSED LIMIT OF DISTURBANCE (TYP.)

50' OFFSET FROM STREAM/WETLAND AREA (TYP.)

BANISTER RIVER-SHOOFLY CREEK HUC12: 030101050203
HUC10: 0301010501
CHEROKEE CREEK

TRANSCO ROAD

PROPOSED ACCESS ROAD NO. 3

PROPOSED SEDIMENT BASIN NO. 3

PROPOSED STOCKPILE

PROPOSED EXTENDED DETENTION POND NO. 2

PROPOSED RIPRAP APRON (TYP.)

PROPOSED GRAVEL SUBSTATION PAD

PROPOSED LEVEL SPREADER (TYP.)

EXISTING FIBER OPTIC LINE (TYP.)

EXISTING FENCE (TYP.)

PROPOSED TRAVEL LANE

PROPOSED GAS PIPELINE (TYP.)

PROPOSED ACCESS ROAD NO. 2

PROPOSED GRAVEL LAUNCHER PAD

PROPOSED MANAGED TURF POND ACCESS ROAD

AREA TO REMAIN UNDISTURBED

EXISTING GAS LINE (TYP.)

EXISTING UTILITY LINE (TYP.)

EXISTING UTILITY POLE (TYP.)

EXISTING STORM PIPE (TYP.)

PROPOSED CHANNEL (TYP.)

PROPOSED ACCESS ROAD NO. 1

PROPOSED GRAVEL COMPRESSOR PAD

PROPOSED SEDIMENT BASIN NO. 1

PROPOSED PERMANENT EXCAVATED SPILLWAY (TYP.)

PROPOSED STORM PIPE (TYP.)

EXISTING PROPERTY LINE (TYP.)

EXISTING STORMWATER BASIN

STREAM L085-1
STREAM L166-1
STREAM L087-1
STREAM L086-1
STREAM L164-1
STREAM L165-1
STREAM L163-1
STREAM L161-1
STREAM L159-1
STREAM L160-1
STREAM L153-1
STREAM L114-1
STREAM L158-1
STREAM L157-1
STREAM L134-1
STREAM L139-1
STREAM L156-1
STREAM L155-1
STREAM L154-1
STREAM L152-1

WETLAND W282-1
WETLAND W282-2
WETLAND W284-1
WETLAND W279-1
WETLAND W279-2
WETLAND W285-1
WETLAND W166-1
WETLAND W278-1
WETLAND W148-3
WETLAND W148-4
WETLAND W148-2
WETLAND W277-1
WETLAND W280-1
WETLAND W280-2
WETLAND W276-1
WETLAND W281-1
WETLAND W275-1
WETLAND W168-1
WETLAND W273-1
WETLAND W271-2
WETLAND W267-1
WETLAND W147-3
WETLAND W295-1
WETLAND W147-1
WETLAND W147-2
WETLAND W167-1
WETLAND W271-1
WETLAND W283-1
WETLAND W265-1
WETLAND W258-1
WETLAND W266-2
WETLAND W226-1
WETLAND W252-2
WETLAND W252-1
WETLAND W243-1
WETLAND W232-1
WETLAND W262-2
WETLAND W264-1
WETLAND W263-2
WETLAND W263-1
WETLAND W260-1
WETLAND W262-1
WETLAND W256-1
WETLAND W257-1
WETLAND W255-1
WETLAND W254-1
WETLAND W253-1
WETLAND W251-1

REFERENCES

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LEGEND

- EXISTING INDEX CONTOUR
- EXISTING INTERMEDIATE CONTOUR
- EXISTING SUBJECT PROPERTY LINE
- EXISTING PROPERTY LINE
- EXISTING TRANSCO ROAD RIGHT-OF-WAY
- EXISTING RIGHT-OF-WAY
- EXISTING FENCE LINE
- EXISTING EDGE OF PAVEMENT
- EXISTING PAVEMENT LIMITS
- EXISTING EDGE OF GRAVEL
- EXISTING GRAVEL LIMITS
- EXISTING GUIDE RAIL
- EXISTING BUILDING
- EXISTING STRUCTURE
- EXISTING STORM PIPE
- EXISTING WATER LINE
- EXISTING GAS LINE
- EXISTING GAS LINE (BY OTHERS)
- EXISTING OVERHEAD WIRE
- EXISTING UTILITY POLE
- EXISTING FIBER OPTIC LINE
- EXISTING UNDERGROUND ELECTRIC LINE
- EXISTING FENCE
- EXISTING TREE LINE
- EXISTING RIPRAP
- EXISTING HUC12 BOUNDARY
- EXISTING STREAM (BY OTHERS)
- EXISTING PEM WETLAND (BY OTHERS)
- EXISTING PFO WETLAND (BY OTHERS)
- EXISTING POW WETLAND (BY OTHERS)
- EXISTING PSS WETLAND (BY OTHERS)
- 50' OFFSET FROM STREAM/WETLAND
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED AREA TO REMAIN UNDISTURBED
- PROPOSED PHASE 1 INDEX CONTOUR
- PROPOSED PHASE 1 INTERMEDIATE CONTOUR
- PROPOSED INDEX CONTOUR
- PROPOSED INTERMEDIATE CONTOUR
- PROPOSED EDGE OF GRAVEL PAD
- PROPOSED FLAT PAD LIMITS
- PROPOSED BERM
- PROPOSED EDGE OF UNPAVED GRAVEL ROAD
- PROPOSED EDGE OF PAVED ROAD
- PROPOSED GAS PIPELINE
- PROPOSED FENCE
- PROPOSED MANAGED TURF ACCESS PATH
- PROPOSED CHANNEL
- PROPOSED STORM PIPE
- PROPOSED RIPRAP APRON
- PROPOSED PERMANENT EXCAVATED SPILLWAY
- PROPOSED S150 CHANNEL LINER
- PROPOSED P300 CHANNEL LINER
- PROPOSED P550 CHANNEL LINER

SCALE IN FEET
0 150 300

COMMONWEALTH OF VIRGINIA
MICHAEL EDWARD ARCHER
Lic. No. 043994
PROFESSIONAL ENGINEER
6-2-2025

REVISION RECORD

NO	DATE	DESCRIPTION

700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com

Civil & Environmental Consultants, Inc.

TRANSCONTINENTAL GAS PIPE LINE, LLC
COMPRESSOR STATION 165
PITTSLYVANIA COUNTY, VIRGINIA

OVERALL PHASE 2 GRADING PLAN

DATE:	MAY 2025
DWG SCALE:	1" = 150'
PROJECT NO.:	341-132
DRAWN BY:	JMP
CHECKED BY:	MEA
APPROVED BY:	LCW

DRAWING NO.: C303

SHEET 8 OF 61

P:\340-0001\341-132\-C400\[Dwg]\C00\[341132-C101-C303 Grading Overall Phase 2.dwg]C303 | 6/5/2025 - jhuck - LP: 6/3/2025 9:01 AM

NORTH

WETLAND W266-2
50' OFFSET FROM STREAM/WETLAND (TYP.)
WETLAND W243-1
PROPOSED ANTI-SEEP COLLAR (TYP.)
PROPOSED LEVEL SPREADER NO. 1
PROPOSED RIPRAP APRON NO. P3
TAX PARCEL ID: 2436-95-5098
20 C915 PROPOSED PERMANENT EXCAVATED SPILLWAY (TYP.)
STREAM L152-1
WETLAND W251-1
PROPOSED RIPRAP APRON NO. P5
PROPOSED RIPRAP APRON NO. P11
PROPOSED FOREBAY
16 C915 PROPOSED SEDIMENT BASIN NO. 1
PROPOSED FOREBAY
PROPOSED RIPRAP APRON NO. P4
TAX PARCEL ID: 2446-03-4804
1 C800 PROPOSED PERMANENT CHANNEL NO. 2
EXISTING TREELINE (TYP.)
CULVERT NO. 3
PROPOSED MANAGED TURF POND ACCESS ROAD (TYP.)
TOP OF BERM 664.41
EDGE OF PAD 663.41
TOP OF BERM 665.18
EDGE OF PAD 664.18
EXISTING 15" CMP CULVERT NO. 1 l=643.2
EXISTING 15" HDPE CULVERT NO. 2 l=642.6
PROPOSED PERMANENT CHANNEL NO. 1D 1 C800
PROPOSED INLET (TYP.) 4 C801
TOP OF BERM 665.48
PROPOSED 7 C802 PAD BERM
PROPOSED EDGE OF GRAVEL PAD (TYP.)
PROPOSED STOCKPILE
MATCHLINE SHEET C305
AREA TO REMAIN UNDISTURBED (TYP.)
EXISTING GAS LINE (TYP.)
PROPOSED PERMANENT CHANNEL NO. 1C 1 C800
PROPOSED ACCESS ROAD NO. 2
9 C802 PROPOSED GRAVEL COMPRESSOR PAD
PROPOSED FENCE (TYP.)
EDGE OF PAD 665.03
PROPOSED LIMIT OF DISTURBANCE (TYP.)
TOP OF BERM 666.29
PROPOSED RIPRAP APRON NO. P2
EDGE OF PAD 665.49
TOP OF BERM 666.58
PROPOSED HEAD/ENDWALL (TYP.)
CULVERT NO. 2 EXT
PROPOSED PERMANENT CHANNEL NO. 1A
PROPOSED ACCESS ROAD NO. 1
EDGE OF PAD 665.79
PROPOSED STOCKPILE
PROPOSED 25' WIDE ACCESS ROAD 9 C802
TOP OF BERM 667.00
EDGE OF PAD 666.00
CULVERT NO. 1
EXISTING 12" CMP l=FILLED W/ DEBRIS
10" METAL l=FILLED W/ DEBRIS
TRANSCO ROAD
40' ROW
TAX PARCEL ID: 2436-83-7383
TAX PARCEL ID: 2436-82-8144
TAX PARCEL ID: 2436-73-3459
EXISTING UTILITY POLE (TYP.)
EXISTING STORM PIPE (TYP.)
EXISTING 12" CMP l=664.2
PROPOSED RIPRAP APRON NO. P1
EXISTING PROPERTY LINE (YTP.)

LEGEND

- EXISTING INDEX CONTOUR
- EXISTING INTERMEDIATE CONTOUR
- EXISTING SUBJECT PROPERTY LINE
- EXISTING PROPERTY LINE
- EXISTING TRANSCO ROAD RIGHT-OF-WAY
- EXISTING RIGHT-OF-WAY
- EXISTING FENCE LINE
- EXISTING EDGE OF PAVEMENT
- EXISTING PAVEMENT LIMITS
- EXISTING EDGE OF GRAVEL
- EXISTING GRAVEL LIMITS
- EXISTING GUIDE RAIL
- EXISTING BUILDING
- EXISTING STRUCTURE
- EXISTING STORM PIPE
- EXISTING WATER LINE
- EXISTING GAS LINE
- EXISTING GAS LINE (BY OTHERS)
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- EXISTING FIBER OPTIC LINE
- EXISTING UNDERGROUND ELECTRIC LINE
- EXISTING FENCE
- EXISTING TREE LINE
- EXISTING RIPRAP
- EXISTING HUC12 BOUNDARY
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- EXISTING PFO WETLAND (BY OTHERS)
- EXISTING POW WETLAND (BY OTHERS)
- EXISTING PSS WETLAND (BY OTHERS)
- 50' OFFSET FROM STREAM/WETLAND
- PROPOSED LIMIT OF DISTURBANCE
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- PROPOSED PHASE 1 INDEX CONTOUR
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- PROPOSED INTERMEDIATE CONTOUR
- PROPOSED EDGE OF GRAVEL PAD
- PROPOSED FLAT PAD LIMITS
- PROPOSED BERM
- PROPOSED EDGE OF UNPAVED DIRT ROAD
- PROPOSED EDGE OF UNPAVED GRAVEL ROAD
- PROPOSED EDGE OF PAVED ROAD
- PROPOSED GAS PIPELINE
- PROPOSED FENCE
- PROPOSED TEMPORARY EXCAVATED SPILLWAY
- PROPOSED CHANNEL
- PROPOSED STORM PIPE
- PROPOSED RIPRAP APRON
- PROPOSED HEAD/ENDWALL (HW/EW)
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- PROPOSED MANHOLE (MH)
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- PROPOSED CONCRETE PIPE ANCHOR
- PROPOSED ANTI-SEEP COLLAR
- PROPOSED PERMANENT EXCAVATED SPILLWAY
- PROPOSED STORM PIPE LABEL
- PROPOSED STRUCTURE LABEL
- PROPOSED S150 CHANNEL LINER
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- PROPOSED P550 CHANNEL LINER

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SCALE IN FEET
0 50 100

COMMONWEALTH OF VIRGINIA
MICHAEL EDWARD ARCHER
Lic. No. 043994
PROFESSIONAL ENGINEER
6-2-2025

REVISION RECORD

NO	DATE	DESCRIPTION

700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com
Civil & Environmental Consultants, Inc.

TRANSCONTINENTAL GAS PIPE LINE, LLC
COMPRESSOR STATION 165
PITTSLVANIA COUNTY, VIRGINIA

PHASE 2 GRADING PLAN

DRAWN BY:	JMP
CHECKED BY:	MEA
PROJECT NO:	341-132
APPROVED BY:	LCW
DATE:	MAY 2025
DWG SCALE:	1" = 50'

DRAWING NO.: C304
SHEET 9 OF 61

P:\340-000\341-132\-CADD\[Dwg]CVG\134132-CV01-C304-Grading Phase 2.dwg[C304] LS:(6/18/2025 - Arapner) - LP: 6/3/2025 9:02 AM

NORTH

TAX PARCEL ID: 2436-95-5098

STREAM L157-1

WETLAND W266-2

WETLAND W258-1

MATCHLINE SHEET C304

20 C915 PROPOSED PERMANENT EXCAVATED SPILLWAY (TYP.)

1 C800 PROPOSED CHANNEL NO. 3

PROPOSED 25' WIDE ACCESS ROAD 9 C802

PROPOSED 12' WIDE PULL OFF

PROPOSED STOCKPILE

4 C801 PROPOSED INLET (TYP.)

PROPOSED ACCESS ROAD NO. 2

PROPOSED GAS PIPELINE

PROPOSED GRAVEL LAUNCHER PAD

APPROXIMATE PIPELINE TIE-IN LOCATION. CONTRACTOR TO REFER TO GENERAL NOTE 17 ON SHEET C001.

EXISTING FENCE (TYP.)

PROPOSED RIPRAP APRON NO. P6

PROPOSED LEVEL SPREADER NO. 2

PROPOSED ANTI-SEEP COLLAR (TYP.)

PROPOSED TEMPORARY RISER PIPE (TYP.)

PROPOSED RIPRAP APRON NO. P8

16 C915 PROPOSED SEDIMENT BASIN NO. 2

PROPOSED RIPRAP APRON NO. P9

8 C802 PROPOSED GRAVEL SUBSTATION PAD

PROPOSED RIPRAP APRON NO. P10

7 C802 PROPOSED PAD BERM (TYP.)

PROPOSED ACCESS ROAD NO. 3

16 C915 PROPOSED SEDIMENT BASIN NO. 3

PROPOSED HEAD/ENDWALL (TYP.)

PROPOSED RIPRAP APRON NO. P7

PROPOSED LEVEL SPREADER NO. 3

PROPOSED LIMIT OF DISTURBANCE (TYP.)

EXISTING GAS LINE (TYP.)

40' ROW

TRANSCO ROAD

STREAM L160-1

STREAM L153-1

EXISTING STREAM (TYP.)

STREAM L159-1

WETLAND W265-1

TAX PARCEL ID: 2436-75-1295

STREAM L161-1

50' OFFSET FROM STREAM/WETLAND AREA (TYP.)

EXISTING TREELINE (TYP.)

EXISTING PROPERTY LINE (TYP.)

LEGEND

- EXISTING INDEX CONTOUR
- EXISTING INTERMEDIATE CONTOUR
- EXISTING SUBJECT PROPERTY LINE
- EXISTING PROPERTY LINE
- EXISTING TRANSCO ROAD RIGHT-OF-WAY
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SCALE IN FEET
0 50 100

COMMONWEALTH OF VIRGINIA
MICHAEL EDWARD ARCHER
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PROFESSIONAL ENGINEER
6-2-2025

REVISION RECORD

NO	DATE	DESCRIPTION

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www.cecinc.com

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TRANSCONTINENTAL GAS PIPE LINE, LLC
COMPRESSOR STATION 165
PITTSLVYANIA COUNTY, VIRGINIA

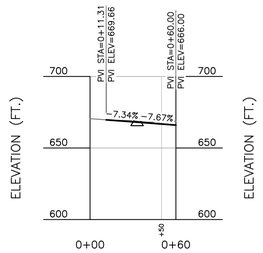
PHASE 2 GRADING PLAN

DRAWN BY:	JMP
CHECKED BY:	MEA
PROJECT NO:	341-132
APPROVED BY:	LCW
DATE:	MAY 2025
DWG SCALE:	1"=50'

DRAWING NO.: C305

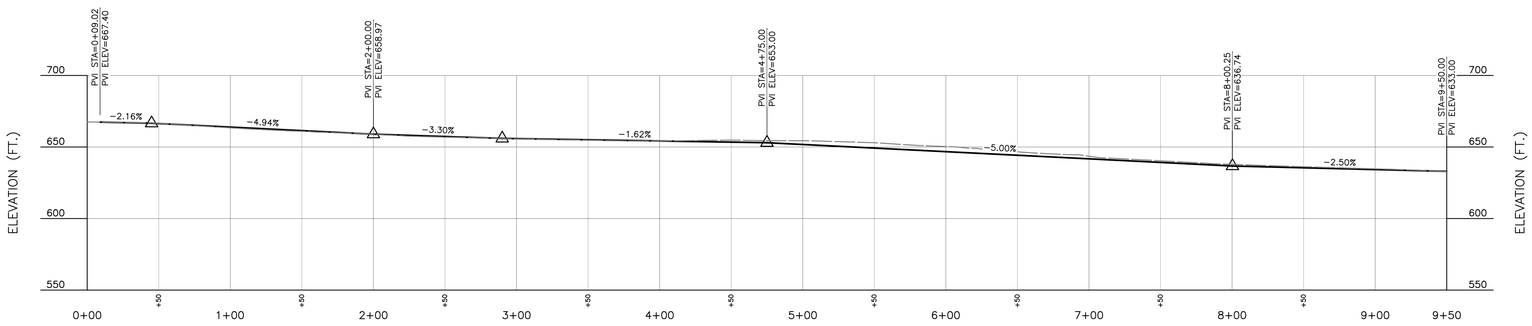
SHEET 10 OF 61

P:\340-001\341-132\-CAD\Dwg\C101\341132-C101-C304-Grading Phase 2.dwg[C305] LS(5/16/2025 - khamm) - LP: 6/3/2025 9:03 AM



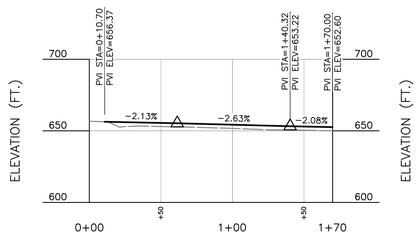
ACCESS ROAD 1 PROFILE

SCALE H:1"=50'; V:1"=50'



ACCESS ROAD 2 PROFILE

SCALE H:1"=50'; V:1"=50'



ACCESS ROAD 3 PROFILE

SCALE H:1"=50'; V:1"=50'

SCALE IN FEET

0 50 100

COMMONWEALTH OF VIRGINIA
MICHAEL EDWARD ARCHER
Lic. No. 043994
PROFESSIONAL ENGINEER
6-2-2025

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TRANSCONTINENTAL GAS PIPE LINE, LLC
COMPRESSOR STATION 165
PITTSLVYANIA COUNTY, VIRGINIA

ACCESS ROAD PROFILES

DATE:	MAY 2025	DRAWN BY:	JMP
DWG SCALE:	1"=50'	CHECKED BY:	MEA
PROJECT NO.:			341-132
APPROVED BY:			LCW

DRAWING NO.:

C306

SHEET 11 OF 61

P:\340-000\341-121\-DWG\Dwg\C101\341132-C101-C306-Access Road Profiles.dwg[C306] LS:(5/28/2025 - kkearney) — LP: 6/2/2025 9:03 AM

NORTH

C402

C401

TAX PARCEL ID: 2436-63-4849

TAX PARCEL ID: 2436-53-9983

TAX PARCEL ID: 2436-75-1295

TAX PARCEL ID: 2436-95-5098

TAX PARCEL ID: 2436-73-3459

TAX PARCEL ID: 2436-72-5208

TAX PARCEL ID: 2436-83-7393

TAX PARCEL ID: 2436-82-8144

TAX PARCEL ID: 2436-80-3032

TAX PARCEL ID: 2446-03-4804

PROPOSED LIMIT OF DISTURBANCE (TYP.)

50' OFFSET FROM STREAM/WETLAND AREA (TYP.)

BANISTER RIVER-SHOUSE CREEK HUC12: 050102050203 HUC12: 050102050104 CHERRYSTONE CREEK

TRANSCO ROAD

EXISTING STREAM (TYP.)

PROPOSED STOCKPILE

PROPOSED EXTENDED DETENTION POND NO. 3

PROPOSED ACCESS ROAD NO. 3

PROPOSED GRAVEL SUBSTATION PAD

PROPOSED EXTENDED DETENTION POND NO. 2

PROPOSED RIPRAP APRON (TYP.)

PROPOSED LEVEL SPREADER (TYP.)

EXISTING FENCE (TYP.)

EXISTING FIBER OPTIC LINE (TYP.)

PROPOSED TRAVEL LANE

PROPOSED GAS PIPELINE (TYP.)

PROPOSED ACCESS ROAD NO. 2

PROPOSED GRAVEL LAUNCHER PAD

EXISTING GAS LINE (TYP.)

EXISTING UTILITY LINE (TYP.)

EXISTING UTILITY POLE (TYP.)

EXISTING STORM PIPE (TYP.)

PROPOSED MANAGED TURF POND ACCESS ROAD

AREA TO REMAIN UNDISTURBED

PROPOSED GRAVEL COMPRESSOR PAD

PROPOSED EXTENDED DETENTION POND NO. 1

PROPOSED PERMANENT SPILLWAY (TYP.)

PROPOSED STORM PIPE (TYP.)

PROPOSED CHANNEL (TYP.)

PROPOSED CULVERT (TYP.)

PROPOSED ACCESS ROAD NO. 1

EXISTING PROPERTY LINE (TYP.)

EXISTING STORMWATER BASIN

STREAM L085-1, STREAM L166-1, STREAM L087-1, STREAM L086-1, STREAM L163-1, STREAM L164-1, STREAM L165-1, STREAM L161-1, STREAM L159-1, STREAM L160-1, STREAM L153-1, STREAM L114-1, STREAM L158-1, STREAM L157-1, STREAM L134-1, STREAM L139-1, STREAM L156-1, STREAM L155-1, STREAM L154-1, STREAM L154-2, STREAM L152-1

WETLAND W282-1, WETLAND W282-2, WETLAND W284-1, WETLAND W279-1, WETLAND W279-2, WETLAND W285-1, WETLAND W166-1, WETLAND W278-1, WETLAND W148-3, WETLAND W148-4, WETLAND W148-2, WETLAND W277-1, WETLAND W280-1, WETLAND W280-2, WETLAND W276-1, WETLAND W281-1, WETLAND W275-1, WETLAND W168-1, WETLAND W273-1, WETLAND W271-2, WETLAND W267-1, WETLAND W147-3, WETLAND W295-1, WETLAND W147-1, WETLAND W147-2, WETLAND W167-1, WETLAND W271-1, WETLAND W283-1, WETLAND W265-1, WETLAND W258-1, WETLAND W266-2, WETLAND W226-1, WETLAND W252-2, WETLAND W252-1, WETLAND W243-1, WETLAND W232-1, WETLAND W262-2, WETLAND W264-1, WETLAND W263-2, WETLAND W263-1, WETLAND W260-1, WETLAND W262-1, WETLAND W256-1, WETLAND W257-1, WETLAND W255-1, WETLAND W254-1, WETLAND W253-1, WETLAND W251-1

REFERENCES

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6. EXISTING PARCEL LINES DERIVED FROM PUBLICLY AVAILABLE PITTSYLVANIA COUNTY OPEN DATA, ACCESSED APRIL 2024.

SCALE IN FEET
0 150 300

LEGEND

- EXISTING INDEX CONTOUR
- EXISTING INTERMEDIATE CONTOUR
- EXISTING SUBJECT PROPERTY LINE
- EXISTING PROPERTY LINE
- EXISTING TRANSCO ROAD RIGHT–OF–WAY
- EXISTING RIGHT–OF–WAY
- EXISTING FENCE LINE
- EXISTING EDGE OF PAVEMENT
- EXISTING PAVEMENT LIMITS
- EXISTING EDGE OF GRAVEL
- EXISTING GRAVEL LIMITS
- EXISTING GUIDE RAIL
- EXISTING BUILDING
- EXISTING STRUCTURE
- EXISTING STORM PIPE
- EXISTING WATER LINE
- EXISTING GAS LINE
- EXISTING GAS LINE (BY OTHERS)
- EXISTING OVERHEAD WIRE
- EXISTING UTILITY POLE
- EXISTING FIBER OPTIC LINE
- EXISTING UNDERGROUND ELECTRIC LINE
- EXISTING FENCE
- EXISTING TREE LINE
- EXISTING RIPRAP
- EXISTING HUC12 BOUNDARY
- EXISTING STREAM (BY OTHERS)
- EXISTING PEM WETLAND (BY OTHERS)
- EXISTING PFO WETLAND (BY OTHERS)
- EXISTING POW WETLAND (BY OTHERS)
- EXISTING PSS WETLAND (BY OTHERS)
- 50' OFFSET FROM STREAM/WETLAND
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED AREA TO REMAIN UNDISTURBED
- PROPOSED INDEX CONTOUR
- PROPOSED INTERMEDIATE CONTOUR
- PROPOSED EDGE OF GRAVEL PAD
- PROPOSED FLAT PAD LIMITS
- PROPOSED BERM
- PROPOSED EDGE OF UNPAVED GRAVEL ROAD
- PROPOSED EDGE OF PAVED ROAD
- PROPOSED GAS PIPELINE
- PROPOSED FENCE
- PROPOSED CHANNEL
- PROPOSED STORM PIPE
- PROPOSED RIPRAP APRON
- PROPOSED HEAD/ENDWALL (HW/EW)
- PROPOSED INLET (IN)
- PROPOSED MANHOLE (MH)
- PROPOSED OUTLET STRUCTURE
- PROPOSED CONCRETE PIPE ANCHOR
- PROPOSED ANTI–SEEP COLLAR
- PROPOSED UNDERDRAIN
- PROPOSED SOIL MEDIA
- PROPOSED PERMANENT EXCAVATED SPILLWAY
- PROPOSED S150 CHANNEL LINER
- PROPOSED P300 CHANNEL LINER
- PROPOSED P550 CHANNEL LINER

REVISION RECORD

NO	DATE	DESCRIPTION

Civil & Environmental Consultants, Inc.
700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com

TRANSCONTINENTAL GAS PIPE LINE, LLC
COMPRESSOR STATION 165
PITTSLVYANIA COUNTY, VIRGINIA

OVERALL STORMWATER MANAGEMENT PLAN

DATE:	MAY 2025
DWG SCALE:	1"=150'
PROJECT NO:	341-132
DRAWN BY:	JMP
CHECKED BY:	MEA
APPROVED BY:	LCW

COMMONWEALTH OF VIRGINIA
MICHAEL EDWARD ARCHER
Lic. No. 043994
PROFESSIONAL ENGINEER
6-2-2025

DRAWING NO.: C400
SHEET 12 OF 61

P:\341-001\341-1321-DA01\Dwg\CIVIL\341132-C401-C402-SWM Overall.dwg[C400] LS:5/9/2025 - Vtischer - LP: 6/3/2025 9:04 AM

NORTH

50' OFFSET FROM STREAM/WETLAND (TYP.)

WETLAND W243-1

WETLAND W266-2

STREAM L152-1

WETLAND W251-1

OUTLET NO. 1
LAT: N 36.834623
LON: W 79.334572

OUTLET STRUCTURE OS-1
RIM=645.00
INV. IN (18"S)=636.70
INV. IN (6"E)=637.00
INV. OUT (18"N)=636.70

ENDWALL EW-3
INV. (18")=636.00

ENDWALL EW-4
INV. (30")=642.00

ENDWALL EW-11
INV. (15")=642.00

ENDWALL EW-2
INV. (18")=656.40

ENDWALL EW-1
INV. (15")=664.90

CULVERT NO. 3
45.0 LF 15" HDPE @ 10.0%
HEADWALL HW-3
INV. (15")=646.50

CULVERT NO. 2
55.0 LF 18" HDPE @ 3.0%

CULVERT NO. 2 EXT
30.0 LF 18" HDPE @ 3.0%

CULVERT NO. 1
HEADWALL HW-1
INV. (15")=665.50
40.0 LF 15" HDPE @ 1.5%

PROPOSED RIPRAP APRON NO. P3 (2 C800)

PROPOSED ANTI-SEEP COLLAR (TYP.) (21 C915)

PROPOSED PERMANENT EXCAVATED SPILLWAY (TYP.) (20 C915)

PROPOSED RIPRAP APRON NO. P5 (2 C800)

PROPOSED LEVEL SPREADER NO. 1 (3 C800)

PROPOSED RIPRAP APRON NO. P11 (2 C800)

PROPOSED FOREBAY

PROPOSED EXTENDED DETENTION POND NO. 1 (1 C416)

PROPOSED FOREBAY

PROPOSED RIPRAP APRON NO. P4 (2 C800)

PROPOSED PERMANENT CHANNEL NO. 2 (1 C800)

70.0 LF 18" HDPE @ 1.0%
UD
UD

40.0 LF 30" HDPE @ 2.5%

40.0 LF 30" HDPE @ 27.1%

PROPOSED CONCRETE PIPE ANCHOR (TYP.) (15 C914)

PROPOSED UNDERDRAIN (TYP.) (17 C803)

PROPOSED MANHOLE (19 C803)

MANHOLE MH-1
RIM=651.49
INV. IN (30"S)=645.70
INV. OUT (30"N)=643.00

PROPOSED MANAGED TURF POND ACCESS ROAD (TYP.)

EXISTING 15" CMP CULVERT NO. 1 I=643.2

EXISTING 15" HDPE CULVERT NO. 2 I=642.6

PROPOSED STORM PIPE (TYP.) (6 C801)

PROPOSED PERMANENT CHANNEL NO. 1D (1 C800)

AREA TO REMAIN UNDISTURBED (TYP.)

EXISTING GAS LINE (TYP.)

PROPOSED PERMANENT CHANNEL NO. 1C (1 C800)

PROPOSED ACCESS ROAD NO. 2

PROPOSED 25' WIDE ACCESS ROAD (9 C802)

PROPOSED PERMANENT CHANNEL NO. 1B (1 C800)

PROPOSED HEAD/ENDWALL (TYP.) (5 C801)

PROPOSED PERMANENT CHANNEL NO. 1A (1 C800)

PROPOSED ACCESS ROAD NO. 1

PROPOSED PAVMENT (10 C802)

PROPOSED GRAVEL COMPRESSOR PAD (9 C802)

PROPOSED FENCE (TYP.) (21 C804)

PROPOSED RIPRAP APRON NO. P2 (2 C800)

PROPOSED RIPRAP APRON NO. P1 (2 C800)

PROPOSED INLET (TYP.) (4 C801)

INLET IN-13
RIM=663.47
INV. IN (30"W)=656.54
INV. IN (30"SE)=656.72
INV. OUT (30"N)=656.54

INLET IN-12
RIM=663.78
INV. IN (24"SE)=657.33
INV. OUT (30"NW)=657.33

INLET IN-11
RIM=664.24
INV. IN (24"S)=658.23
INV. OUT (24"NW)=658.23

INLET IN-10
RIM=664.69
INV. IN (18"S)=659.01
INV. OUT (24"N)=659.01

INLET IN-9
RIM=665.08
INV. IN (18"SW)=659.91
INV. OUT (18"N)=659.91

INLET IN-8
RIM=665.53
INV. IN (18"W)=660.84
INV. OUT (18"NE)=660.84

INLET IN-7
RIM=666.09
INV. OUT (18"E)=661.82

INLET IN-6
RIM=664.07
INV. IN (30"SW)=657.28
INV. OUT (30"E)=657.28

INLET IN-5
RIM=664.82
INV. IN (24"SW)=658.74
INV. OUT (30"NE)=658.24

INLET IN-4A
RIM=665.36
INV. IN (24"SW)=659.45
INV. OUT (24"NE)=659.45

INLET IN-4
RIM=665.66
INV. IN (24"S)=659.84
INV. OUT (24"NE)=659.84

INLET IN-3
RIM=665.65
INV. IN (24"SE)=660.34
INV. OUT (24"N)=660.34

INLET IN-2
RIM=665.59
INV. IN (18"SE)=661.10
INV. OUT (24"NW)=661.10

INLET IN-1
RIM=665.59
INV. OUT (18"NW)=662.00

PD-1 180.0 LF 18" HDPE @ 0.5%
PD-2 152.8 LF 24" HDPE @ 0.5%
PD-3 192.3 LF 30" HDPE @ 0.5%
PD-4 78.2 LF 24" HDPE @ 0.5%
PD-4A 140.0 LF 24" HDPE @ 0.5%
PD-5 148.2 LF 30" HDPE @ 0.5%
PD-6 180.0 LF 24" HDPE @ 0.5%
PD-7 190.2 LF 18" HDPE @ 0.5%
PD-8 185.0 LF 18" HDPE @ 0.5%
PD-9 180.0 LF 18" HDPE @ 0.5%
PD-10 155.1 LF 24" HDPE @ 0.5%
PD-11 180.0 LF 24" HDPE @ 0.5%
PD-12 121.8 LF 30" HDPE @ 0.5%
PD-13 40.0 LF 30" HDPE @ 27.1%
PD-13A

PROPOSED PERMANENT CHANNEL NO. 1 (1 C800)

PROPOSED STOCKPILE

PROPOSED LIMIT OF DISTURBANCE (TYP.)

PROPOSED EDGE OF PAVEMENT (TYP.)

TRANSCO ROAD

40' ROW

R30'

10" METAL I=FILLED W/ DEBRIS

EXISTING 12" CMP I=FILLED W/ DEBRIS

EXISTING STORM PIPE (TYP.)

EXISTING 12" CMP I=664.2

EXISTING UTILITY POLE (TYP.)

EXISTING PROPERTY LINE (YTP.)

EXISTING TREELINE (TYP.)

TAX PARCEL ID: 2436-95-5098

TAX PARCEL ID: 2446-03-4804

TAX PARCEL ID: 2436-83-7383

TAX PARCEL ID: 2436-83-7383

TAX PARCEL ID: 2436-82-8144

TAX PARCEL ID: 2436-73-3459

MATCHLINE SHEET C402

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- PROPOSED SOIL MEDIA
- PROPOSED S150 CHANNEL LINER
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- PROPOSED P550 CHANNEL LINER

SCALE IN FEET
0 50 100

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COMMONWEALTH OF VIRGINIA
MICHAEL EDWARD ARCHER
Lic. No. 043994
PROFESSIONAL ENGINEER
6-2-2025

REVISION RECORD

NO	DATE	DESCRIPTION

700 Cherrington Parkway
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Ph: 412.429.2324 · 800.365.2324
www.cecinc.com

Civil & Environmental Consultants, Inc.

TRANSCONTINENTAL GAS PIPE LINE, LLC
COMPRESSOR STATION 165
PITTSLVYANIA COUNTY, VIRGINIA

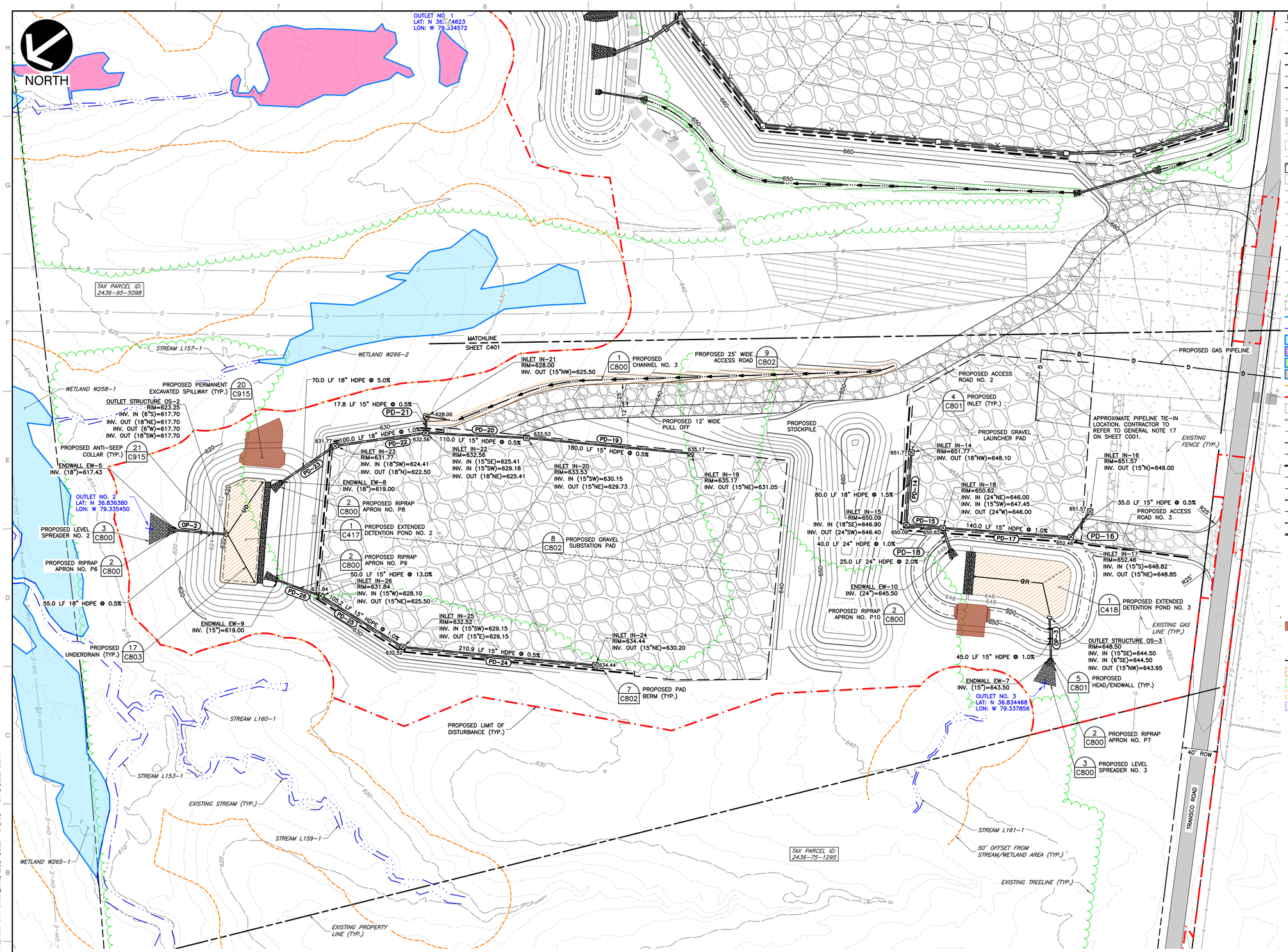
STORMWATER MANAGEMENT PLAN

DATE:	MAY 2025
DWG SCALE:	1"=50'
PROJECT NO:	341-132
DRAWN BY:	JMP
CHECKED BY:	MEA
APPROVED BY:	LCW

DRAWING NO.: C401

SHEET 13 OF 61

P:\340-000\341-132\-DATA\Dwg\C401\341132-CIVIL-SWM.dwg[C401] LS:5/19/2025 - Shaw(ac) - LP: 6/3/2025 8:05 AM



LEGEND

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- EXISTING PROPERTY LINE
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- EXISTING RIGHT-OF-WAY
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- EXISTING PAVEMENT LIMITS
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- PROPOSED OUTLET STRUCTURE
- PROPOSED CONCRETE PIPE ANCHOR
- PROPOSED ANTI-SEEP COLLAR
- PROPOSED PERMANENT EXCAVATED SPILLWAY
- PD-1 PROPOSED STORM PIPE LABEL
- IN-1 PROPOSED STRUCTURE LABEL
- UD PROPOSED UNDERDRAIN
- PROPOSED SOIL MEDIA
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SCALE IN FEET
0 50 100

COMMONWEALTH OF VIRGINIA
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Lic. No. 043994
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6-2-2025

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NO	DATE	DESCRIPTION

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COMPRESSOR STATION 165
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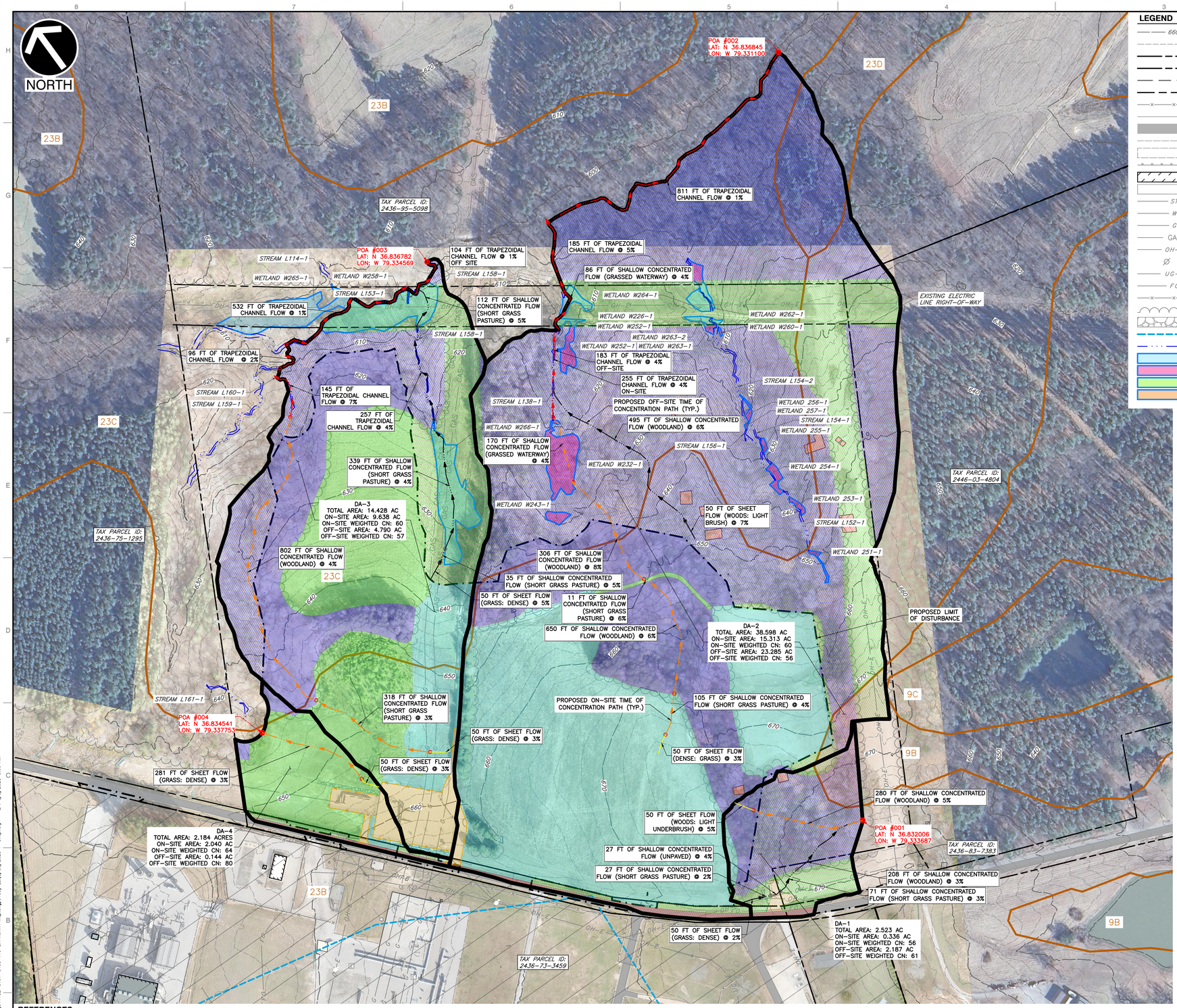
STORMWATER MANAGEMENT PLAN

DATE:	MAY 2025
DWG SCALE:	1"=50'
PROJECT NO:	341-132
DRAWN BY:	JMP
CHECKED BY:	MEA
APPROVED BY:	LCW

DRAWING NO.: C402
SHEET 14 OF 61

P:\340-0001\341-132\-CADD\Dwg\C001\341132-C001-SWM.dwg[C402] LS:5/19/2025 - bhapner - LP: 6/3/2025 8:55 AM



LEGEND

- EXISTING INDEX CONTOUR
- EXISTING INTERMEDIATE CONTOUR
- EXISTING SUBJECT PROPERTY LINE
- EXISTING PROPERTY LINE
- EXISTING TRANSCO ROAD RIGHT-OF-WAY
- EXISTING RIGHT-OF-WAY
- EXISTING FENCE LINE
- EXISTING EDGE OF PAVEMENT
- EXISTING PAVEMENT LIMITS
- EXISTING EDGE OF GRAVEL
- EXISTING GRAVEL LIMITS
- EXISTING GUIDE RAIL
- EXISTING BUILDING
- EXISTING STRUCTURE
- EXISTING STORM PIPE
- EXISTING WATER LINE
- EXISTING GAS LINE
- EXISTING GAS LINE (BY OTHERS)
- EXISTING OVERHEAD WIRE
- EXISTING UTILITY POLE
- EXISTING FIBER OPTIC LINE
- EXISTING UNDERGROUND ELECTRIC LINE
- EXISTING FENCE
- EXISTING TREE LINE
- EXISTING RIPRAP
- EXISTING HUC12 BOUNDARY
- EXISTING STREAM (BY OTHERS)
- EXISTING PEM WETLAND (BY OTHERS)
- EXISTING PFO WETLAND (BY OTHERS)
- EXISTING POW WETLAND (BY OTHERS)
- EXISTING PSS WETLAND (BY OTHERS)
- PROPOSED LIMIT OF DISTURBANCE
- SOIL BOUNDARY
- SOIL ID
- WOODS LAND COVER (B, ON-SITE)
- WOODS LAND COVER (D, ON-SITE)
- WOODS LAND COVER (B, OFF-SITE)
- WOODS LAND COVER (D, OFF-SITE)
- MEADOW LAND COVER (B, ON-SITE)
- MEADOW LAND COVER (B, OFF-SITE)
- MEADOW LAND COVER (D, OFF-SITE)
- PASTURE LAND COVER (B, ON-SITE)
- PASTURE LAND COVER (D, ON-SITE)
- PASTURE LAND COVER (B, OFF-SITE)
- GRAVEL LAND COVER (B, ON-SITE)
- GRAVEL LAND COVER (B, ON-SITE)
- IMPERVIOUS LAND COVER (ON-SITE)
- IMPERVIOUS LAND COVER (OFF-SITE)
- DRAINAGE AREA BOUNDARY
- TC PATH (OFF-SITE)
- TC PATH (ON-SITE SHEET FLOW)
- TC PATH (ON-SITE CONCENTRATED FLOW)
- TC PATH (ON-SITE CHANNEL FLOW)
- POINT OF ANALYSIS

PRE-DEVELOPMENT DRAINAGE AREAS

DRAINAGE AREA	LAND USE	HSG	CN	AREA (AC)
DA-1 (ON-SITE)	WOODS	B	55	0.265
	PASTURE	B	61	0.071
DA-1 (OFF-SITE)	WOODS	B	55	1.234
	WOODS	D	77	0.256
	MEADOW	B	58	0.515
	MEADOW	D	78	0.042
	GRAVEL ROADS	B	98	0.069
	IMPERVIOUS	N/A	98	0.071
DA-2 (ON-SITE)	WOODS	B	55	4.355
	MEADOW	B	58	0.070
	PASTURE	B	61	10.742
	PASTURE	D	80	0.020
	GRAVEL ROADS	B	98	0.077
	IMPERVIOUS	N/A	98	0.049
DA-2 (OFF-SITE)	WOODS	B	55	18.151
	WOODS	D	77	0.115
	MEADOW	B	58	4.483
	MEADOW	D	78	0.219
	IMPERVIOUS	N/A	98	0.317
DA-3 (ON-SITE)	WOODS	B	55	2.838
	MEADOW	B	58	4.772
	PASTURE	B	61	1.455
	GRAVEL ROADS	B	98	0.573
DA-3 (OFF-SITE)	WOODS	B	55	2.234
	MEADOW	B	58	2.556
DA-4 (ON-SITE)	WOODS	B	55	0.101
	MEADOW	B	58	1.562
	PASTURE	B	61	0.061
	GRAVEL ROADS	B	98	0.290
	IMPERVIOUS	N/A	98	0.026
DA-4 (OFF-SITE)	MEADOW	B	58	0.066
	IMPERVIOUS	N/A	98	0.078

WOODS AND PASTURE LAND COVER ARE MODELED IN GOOD CONDITION.
MEADOW LAND COVER IS MODELED AS NON-GRAZED.

REFERENCES

1. EXISTING CONTOURS ARE A COMBINATION OF TOPOGRAPHY DERIVED FROM UNMANNED AERIAL LIDAR DATA AND SUPPLEMENTAL FIELD SURVEY DATA COLLECTED BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC. (CEC) IN JUNE AND DECEMBER 2024 WITH SUPPLEMENTED CONTOURS DERIVED FROM FROM VIRGINIA GIS CLEARINGHOUSE REST SERVICES – VIRGINIA GEOGRAPHIC INFORMATION NETWORK (VGIN), DATED 2018.
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4. AQUATIC RESOURCES ARE BASED ON STREAM AND WETLAND DELINEATIONS COMPLETED BY WETLAND STUDIES AND SOLUTIONS, INC. (WSSI), DATA WHICH WAS PROVIDED BY WSSI ON MARCH 10, 2025.
5. EXISTING PROPERTY LINES ARE A COMBINATION OF INFORMATION DERIVED FROM ALTA SURVEY FILE TITLED "MAIN-D_1413_06-1413_70_ALTA_EMAILED041024.DWG" PROVIDED BY TRANSCO ON APRIL 11, 2024 AND INFORMATION DERIVED FROM FILE TITLED "EDEN_CY_PROPERTIES_20250219.DWG" PROVIDED BY TRANSCO ON FEBRUARY 19, 2024.
6. EXISTING PARCEL LINES DERIVED FROM PUBLICLY AVAILABLE PITTSYLVANIA COUNTY OPEN DATA, ACCESSED APRIL 2024.

SCALE IN FEET
0 120 240

COMMONWEALTH OF VIRGINIA
MICHAEL EDWARD ARCHER
Lic. No. 043994
PROFESSIONAL ENGINEER
6-2-2025

REVISION RECORD

NO	DATE	DESCRIPTION

700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com
Civil & Environmental Consultants, Inc.

TRANSCONTINENTAL GAS PIPE LINE, LLC
COMPRESSOR STATION 165
PITTSLYVANIA COUNTY, VIRGINIA

PRE-DEVELOPMENT DRAINAGE AREA MAP (HUC12 030101050203)

DRAWN BY:	JMP
DATE:	MAY 2025
CHECKED BY:	MEA
DWG SCALE:	1" = 80'
PROJECT NO.:	341-132
APPROVED BY:	LCW

DRAWING NO.: C403
SHEET 15 OF 61

P:\340-0001\341-132\-CAD\Dwg\C101\341132-C101-C403-Pre-DA NORTH Map.dwg[C403] 5/30/2025 - bhayman - LM 6/3/2025 9:05 AM

NORTH

POA #002
LAT: N 36.836845
LON: W 79.331100

POA #003
LAT: N 36.836782
LON: W 79.334569

POA #004
LAT: N 36.834533
LON: W 79.337881

POA #001
LAT: N 36.832006
LON: W 79.333687

811 FT OF TRAPEZOIDAL CHANNEL FLOW @ 1%

185 FT OF TRAPEZOIDAL CHANNEL FLOW @ 5%

86 FT OF SHALLOW CONCENTRATED FLOW (GRASSED WATERWAY) @ 4%

112 FT OF SHALLOW CONCENTRATED FLOW (SHORT GRASS PASTURE) @ 5%

532 FT OF TRAPEZOIDAL CHANNEL FLOW @ 1%

96 FT OF FLOW TRAPEZOIDAL CHANNEL FLOW @ 2%

DA-3 (UNDETAINED)
TOTAL AREA: 8.317 ACRES
ON-SITE AREA: 3.535
ON-SITE WEIGHTED CN: 59
OFF-SITE AREA: 4.782 AC
OFF-SITE WEIGHTED CN: 57

145 FT OF TRAPEZOIDAL CHANNEL FLOW @ 7%

EXTENDED DETENTION POND NO. 2

51 FT OF SHALLOW CONCENTRATED FLOW @ 2% (WOODLAND)

158 FT OF SHALLOW CONCENTRATED FLOW @ 4% SHORT GRASS PASTURE)

DA-3 (DETAINED)
TOTAL AREA (ON-SITE): 4.253 AC
WEIGHTED CN: 88

374 FT OF SHALLOW CONCENTRATED FLOW @ 3% (WOODLAND)

257 FT OF TRAPEZOIDAL CHANNEL FLOW @ 4%

100 FT OF PIPE CHANNEL FLOW (PD-23) @ 5%

183 FT OF TRAPEZOIDAL CHANNEL FLOW @ 4% OFF-SITE

255 FT OF TRAPEZOIDAL CHANNEL FLOW @ 4% ON-SITE

PROPOSED OFF-SITE TIME OF CONCENTRATION PATH (TYP.)

495 FT OF SHALLOW CONCENTRATED FLOW (WOODLAND) @ 6%

100 FT OF PIPE CHANNEL FLOW (PD-22) @ 1%

110 FT OF PIPE CHANNEL FLOW (PD-20) @ .5%

170 FT OF SHALLOW CONCENTRATED FLOW (WOODLAND) @ 4%

339 FT OF SHALLOW CONCENTRATED FLOW (SHORT GRASS PASTURE) @ 4%

35 FT OF SHALLOW CONCENTRATED FLOW (SHORT GRASS PASTURE) @ 5%

240 FT OF SHALLOW CONCENTRATED FLOW (WOODLAND) @ 8%

88 FT OF SHALLOW CONCENTRATED FLOW (WOODLAND) @ 6%

50 FT OF SHEET FLOW (WOODLAND) @ 7%

50 FT OF SHEET FLOW (GRASS: DENSE) @ 10%

263 FT OF SHALLOW CONCENTRATED FLOW (UNPAVED) @ 1%

EXTENDED DETENTION POND NO. 1

40 FT OF PIPE CHANNEL FLOW (PD-13) @ 27%

40 FT OF PIPE CHANNEL FLOW (PD-13A) @ 2.5%

50 FT OF SHEET FLOW (GRASS: DENSE) @ 5%

50 FT OF SHEET FLOW (UNPAVED) @ 1%

50 FT OF SHEET FLOW (GRASS: DENSE) @ 4%

205 FT OF SHALLOW CONCENTRATED FLOW @ 4% (SHORT GRASS PASTURE)

90 FT OF PIPE CHANNEL FLOW (PD-15) @ .5%

20 FT OF PIPE CHANNEL FLOW (PD-18) @ .5%

148 FT OF PIPE CHANNEL FLOW (PD-6) @ .5%

192 FT OF PIPE CHANNEL FLOW (PD-5) @ .5%

DA-2 (DETAINED)
TOTAL AREA: 13.797 AC
ON-SITE AREA: 13.307 AC
ON-SITE WEIGHTED CN: 83
OFF-SITE AREA: 0.490 AC
OFF-SITE WEIGHTED CN: 76

272 FT OF SHALLOW CONCENTRATED FLOW (UNPAVED) @ 2%

192 FT OF PIPE CHANNEL FLOW (PD-4) @ .5%

30 FT OF SHALLOW CONCENTRATED FLOW (SHORT GRASS PASTURE) @ 3%

50 FT OF SHEET FLOW (GRASS: DENSE) @ 2%

50 FT OF SHEET FLOW (SMOOTH SURFACES) @ .5%

380 FT OF SHALLOW CONCENTRATED FLOW (UNPAVED) @ 1%

127 FT OF PIPE CHANNEL FLOW (PD-3) @ .5%

50 FT OF SHEET FLOW (BRUSH) @ 4%

27 FT OF SHALLOW CONCENTRATED FLOW (UNPAVED) @ 4%

27 FT OF SHALLOW CONCENTRATED FLOW (SHORT GRASS PASTURE) @ 2%

153 FT OF PIPE CHANNEL FLOW (PD-2) @ .5%

DA-2 (UNDETAINED)
TOTAL AREA: 24.690 ACRES
ON-SITE AREA: 1.898 AC
ON-SITE WEIGHTED CN: 57
OFF-SITE AREA: 22.792 AC
OFF-SITE WEIGHTED CN: 56

DA-4 (UNDETAINED)
TOTAL AREA: 0.852 ACRES
ON-SITE AREA: 0.802 AC
ON-SITE WEIGHTED CN: 57
OFF-SITE AREA: 0.050 AC
OFF-SITE WEIGHTED CN: 77

179 FT OF SHALLOW CONCENTRATED FLOW (SHORT GRASS PASTURE) @ 4%

50 FT OF SHEET FLOW (GRASS: DENSE) @ 4%

DA-4 (DETAINED)
TOTAL AREA: 3.340 ACRES
ON-SITE AREA: 3.235 AC
ON-SITE WEIGHTED CN: 87
OFF-SITE AREA: 0.105 AC
OFF-SITE WEIGHTED CN: 80

50 FT OF SHEET FLOW (GRASS: DENSE) @ 3%

DA-1
TOTAL AREA: 2.484 ACRES
ON-SITE AREA: 0.297 AC
ON-SITE WEIGHTED CN: 55
OFF-SITE AREA: 2.187 AC
OFF-SITE WEIGHTED CN: 61

62 FT OF SHALLOW CONCENTRATED FLOW (SHORT GRASS PASTURE) @ 7%

205 FT OF SHALLOW CONCENTRATED FLOW (WOODLAND) @ 4%

208 FT OF SHALLOW CONCENTRATED FLOW (WOODLAND) @ 3%

71 FT OF SHALLOW CONCENTRATED FLOW SHORT GRASS PASTURE) @ 3%

PROPOSED LIMIT OF DISTURBANCE

EXISTING ELECTRIC LINE RIGHT-OF-WAY

TAX PARCEL ID: 2436-95-5098

TAX PARCEL ID: 2436-75-1295

TAX PARCEL ID: 2436-73-3459

TAX PARCEL ID: 2445-03-4804

TAX PARCEL ID: 2436-83-7383

STREAM L114–1
STREAM L153–1
STREAM L158–1
STREAM L160–1
STREAM L159–1
STREAM L138–1
STREAM L156–1
STREAM L154–2
STREAM L154–1
STREAM L152–1
STREAM L161–1

WETLAND W265–1
WETLAND W258–1
WETLAND W264–1
WETLAND W226–1
WETLAND W252–1
WETLAND W263–2
WETLAND W252–1
WETLAND W263–1
WETLAND W262–1
WETLAND W260–1
WETLAND W266–1
WETLAND W232–1
WETLAND W243–1
WETLAND 256–1
WETLAND 257–1
WETLAND 255–1
WETLAND 254–1
WETLAND 253–1
WETLAND 251–1

23B
23C
23D
9B
9C

LEGEND

- EXISTING INDEX CONTOUR
- EXISTING INTERMEDIATE CONTOUR
- EXISTING SUBJECT PROPERTY LINE
- EXISTING PROPERTY LINE
- EXISTING TRANSCO ROAD RIGHT–OF–WAY
- EXISTING RIGHT–OF–WAY
- EXISTING FENCE LINE
- EXISTING EDGE OF PAVEMENT
- EXISTING PAVEMENT LIMITS
- EXISTING EDGE OF GRAVEL
- EXISTING GRAVEL LIMITS
- EXISTING GUIDE RAIL
- EXISTING BUILDING
- EXISTING STRUCTURE
- EXISTING STORM PIPE
- EXISTING WATER LINE
- EXISTING GAS LINE
- EXISTING GAS LINE (BY OTHERS)
- EXISTING OVERHEAD WIRE
- EXISTING UTILITY POLE
- EXISTING FIBER OPTIC LINE
- EXISTING UNDERGROUND ELECTRIC LINE
- EXISTING FENCE
- EXISTING TREE LINE
- EXISTING RIPRAP
- EXISTING HUC12 BOUNDARY
- EXISTING STREAM (BY OTHERS)
- EXISTING PEM WETLAND (BY OTHERS)
- EXISTING PFO WETLAND (BY OTHERS)
- EXISTING POW WETLAND (BY OTHERS)
- EXISTING PSS WETLAND (BY OTHERS)
- PROPOSED LIMIT OF DISTURBANCE
- SOIL BOUNDARY
- SOIL ID
- PROPOSED INDEX CONTOUR
- PROPOSED INTERMEDIATE CONTOUR
- PROPOSED EDGE OF GRAVEL PAD
- PROPOSED FLAT PAD LIMITS
- PROPOSED BERM
- PROPOSED EDGE OF UNPAVED DIRT ROAD
- PROPOSED EDGE OF UNPAVED GRAVEL ROAD
- PROPOSED EDGE OF PAVED ROAD
- PROPOSED CHANNEL
- PROPOSED STORM PIPE
- PROPOSED RIPRAP APRON
- WOODS LAND COVER (ON–SITE, B SOIL)
- WOODS LAND COVER (OFF–SITE, B SOIL)
- WOODS LAND COVER (OFF–SITE, D SOIL)
- GRASS LAND COVER (ON–SITE, B SOIL)
- GRASS LAND COVER (ON–SITE, C SOIL)
- GRASS LAND COVER (ON–SITE, D SOIL)
- GRASS LAND COVER (OFF–SITE, B SOIL)
- GRASS LAND COVER (OFF–SITE, D SOIL)
- TURF LAND COVER (ON–SITE, C SOIL)
- BRUSH LAND COVER (ON–SITE, B SOIL)
- BRUSH LAND COVER (ON–SITE, B SOIL, DECOMPACTED)
- BRUSH LAND COVER (ON–SITE, C SOIL)
- BRUSH LAND COVER (ON–SITE, D SOIL)
- GRAVEL LAND COVER (ON–SITE, B SOIL)
- GRAVEL LAND COVER (ON–SITE, C SOIL)
- GRAVEL LAND COVER (OFF–SITE, B SOIL)
- IMPERVIOUS LAND COVER (ON–SITE)
- IMPERVIOUS LAND COVER (OFF–SITE)
- DRAINAGE AREA BOUNDARY
- TC PATH (OFF–SITE)
- TC PATH (ON–SITE SHEET FLOW)
- TC PATH (ON–SITE CONCENTRATED FLOW)
- TC PATH (ON–SITE CHANNEL FLOW)
- POINT OF ANALYSIS

POST–DEVELOPMENT DRAINAGE AREAS

DRAINAGE AREA	LAND USE	HSG	CN	AREA (AC)
DA–1 DETAINED (ON–SITE)	BRUSH*	B**	55	0.297
DA–1 UNDETAINED (OFF–SITE)	WOOD	B	55	1.234
	WOOD	D	77	0.256
	MEADOW	B	58	0.515
	MEADOW	D	78	0.042
	GRAVEL ROADS	B	98	0.069
	IMPERVIOUS	N/A	98	0.071
DA–2 DETAINED (ON–SITE)	BRUSH*	B	55	1.116
	BRUSH*	C	70	1.362
	BRUSH*	D	77	0.020
	MEADOW	B	58	2.398
	MEADOW	C	71	0.775
	LAWN (TURF)	C	74	0.092
	GRAVEL ROADS	B	98	3.439
	GRAVEL ROADS	C	98	4.026
	IMPERVIOUS	N/A	98	0.079
DA–2 DETAINED (OFF–SITE)	WOODS	B	55	0.019
	WOODS	D	77	0.066
	MEADOW	B	58	0.198
	MEADOW	D	78	0.041
	IMPERVIOUS	N/A	98	0.166
DA–2 UNDETAINED (ON–SITE)	BRUSH*	B	55	1.037
	BRUSH*	B**	55	0.306
	MEADOW	B	58	0.476
	MEADOW	C	71	0.028
	LAWN (TURF)	C	74	0.042
	GRAVEL ROADS	C	98	0.009
DA–2 UNDETAINED (OFF–SITE)	WOODS	B	55	18.132
	WOODS	D	77	0.049
	MEADOW	B	58	4.286
	MEADOW	D	78	0.178
	IMPERVIOUS	N/A	98	0.147

* – BRUSH LAND COVER IS MODELED WITH A CN CONSISTENT WITH THAT OF WOODS IN GOOD CONDITION.
** – FILL AREAS SHALL BE DECOMPACTED AND HAVE BEEN ANALYZED ASSUMING NO CHANGE TO CN FROM PRE– TO POST–DEVELOPMENT CONDITIONS.
WOODS LAND COVER ARE MODELED IN GOOD CONDITION.
MEADOW LAND COVER IS MODELED AS NON–GRAZED.

POST–DEVELOPMENT DRAINAGE AREAS

DRAINAGE AREA	LAND USE	HSG	CN	AREA (AC)
DA–3 DETAINED (ON–SITE)	BRUSH*	B**	55	0.118
	MEADOW	B	58	0.799
	MEADOW	C	71	0.231
	GRAVEL ROADS	B	98	1.777
	GRAVEL ROADS	C	98	1.328
DA–3 UNDETAINED (ON–SITE)	BRUSH*	B**	55	0.516
	BRUSH*	C	70	0.343
	MEADOW	B	58	2.556
	LAWN (TURF)	B	61	0.079
	GAVEL ROADS	C	98	0.041
DA–3 UNDETAINED (OFF–SITE)	WOODS	B	55	2.234
	MEADOW	B	58	2.548
DA–4 DETAINED (OFF–SITE)	MEADOW	B	58	0.585
	MEADOW	C	71	0.382
	TURF (LAWN)	B	61	0.017
	GRAVEL ROADS	B	98	0.917
	GRAVEL ROADS	C	98	1.308
	IMPERVIOUS	N/A	98	0.026
DA–4 DETAINED (OFF–SITE)	MEADOW	B	58	0.047
	IMPERVIOUS	N/A	98	0.058
DA–4 UNDETAINED (ON–SITE)	BRUSH*	B	55	0.252
	BRUSH*	B**	55	0.140
	MEADOW	B	58	0.400
	GRAVEL ROADS	C	98	0.010
DA–4 UNDETAINED (OFF–SITE)	MEADOW	B	58	0.026
	IMPERVIOUS	N/A	98	0.024

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WOODS LAND COVER ARE MODELED IN GOOD CONDITION.
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SCALE IN FEET
0 120 240

COMMONWEALTH OF VIRGINIA
MICHAEL EDWARD ARCHER
Lic. No. 043994
PROFESSIONAL ENGINEER
6-2-2025

REVISION RECORD

NO	DATE	DESCRIPTION

700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com

Civil & Environmental Consultants, Inc.

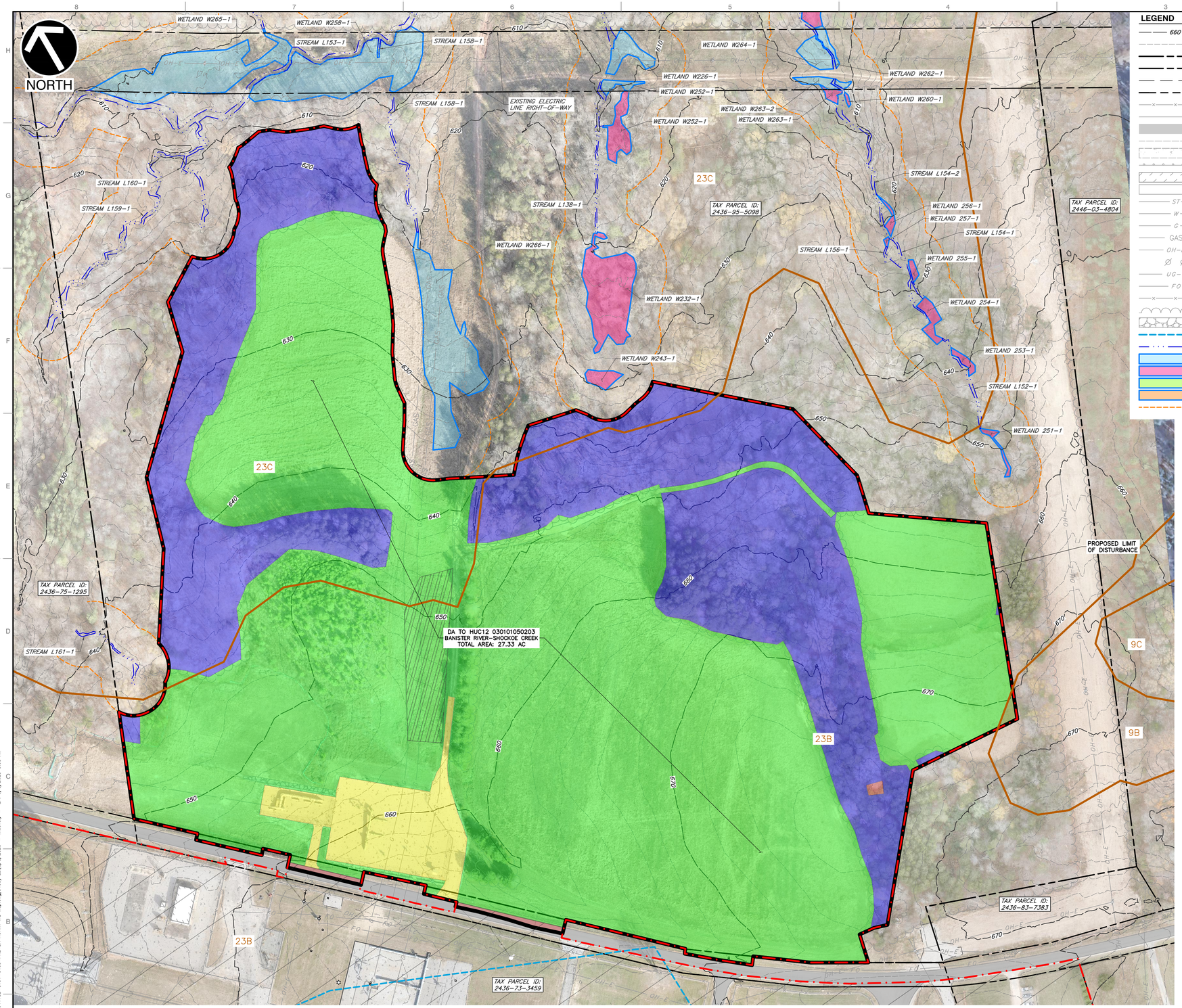
TRANSCONTINENTAL GAS PIPE LINE, LLC
COMPRESSOR STATION 165
PITTSLVYANIA COUNTY, VIRGINIA

POST-DEVELOPMENT DRAINAGE AERA MAP (HUC12 030101050203)

DRAWN BY:	JMP
CHECKED BY:	MEA
PROJECT NO:	341-132
APPROVED BY:	LCW
DATE:	MAY 2025
DWG SCALE:	1"=120'

DRAWING NO.: C404
SHEET 16 OF 61

P:\340-001\341-132\-04\01\Dwg\C401\341132-C401-C404-Post-04 NORTH Abs.dwg[C404] LS(5/30/2025 – bhamm) – LP: 6/2/2025 8:07 AM



LEGEND

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- EXISTING UTILITY POLE
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- EXISTING UNDERGROUND ELECTRIC LINE
- EXISTING FENCE
- EXISTING TREE LINE
- EXISTING RIPRAP
- EXISTING HUC12 BOUNDARY
- EXISTING STREAM (BY OTHERS)
- EXISTING PEM WETLAND (BY OTHERS)
- EXISTING PFO WETLAND (BY OTHERS)
- EXISTING POW WETLAND (BY OTHERS)
- EXISTING PSS WETLAND (BY OTHERS)
- 50' OFFSET FROM STREAM/WETLAND
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED AREA TO REMAIN UNDISTURBED
- PREVIOUSLY DISTURBED AREA
- FOREST LAND COVER (B)
- FOREST LAND COVER (D)
- MIXED OPEN LAND COVER (B)
- MIXED OPEN LAND COVER (D)
- IMPERVIOUS (GRAVEL) LAND COVER (B)
- IMPERVIOUS LAND COVER
- DRAINAGE AREA BOUNDARY

PRE–DEVELOPMENT LAND COVER (ACRES)

	A SOILS	B SOILS	C SOILS	D SOILS	TOTALS
FOREST (ACRES) –– UNDISTURBED, PROTECTED FOREST OR REFORESTED LAND		7.56			7.56
MIXED OPEN (ACRES) –– UNDISTURBED/INFREQUENTLY MAINTAINED GRASS OR SHRUB LAND		18.74		0.02	18.76
MANAGED TURF (ACRES) –– DISTURBED, GRADED FOR YARDS OR OTHER TURF TO BE MOWED/MANAGED					
IMPERVIOUS COVER (ACRES)		1.01			1.01
				TOTAL LAND COVER	27.33

REFERENCES

1. EXISTING CONTOURS ARE A COMBINATION OF TOPOGRAPHY DERIVED FROM UNMANNED AERIAL LIDAR DATA AND SUPPLEMENTAL FIELD SURVEY DATA COLLECTED BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC. (CEC) IN JUNE AND DECEMBER 2024 WITH SUPPLEMENTED CONTOURS DERIVED FROM FROM VIRGINIA GIS CLEARINGHOUSE REST SERVICES – VIRGINIA GEOGRAPHIC INFORMATION NETWORK (VGIN), DATED 2018.
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SCALE IN FEET
0 80 160

COMMONWEALTH OF VIRGINIA
MICHAEL EDWARD ARCHER
Lic. No. 043994
PROFESSIONAL ENGINEER
6-2-2025

REVISION RECORD

NO	DATE	DESCRIPTION

700 Cherrington Parkway
Moon Township, PA 15108
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www.cecinc.com
Civil & Environmental Consultants, Inc.

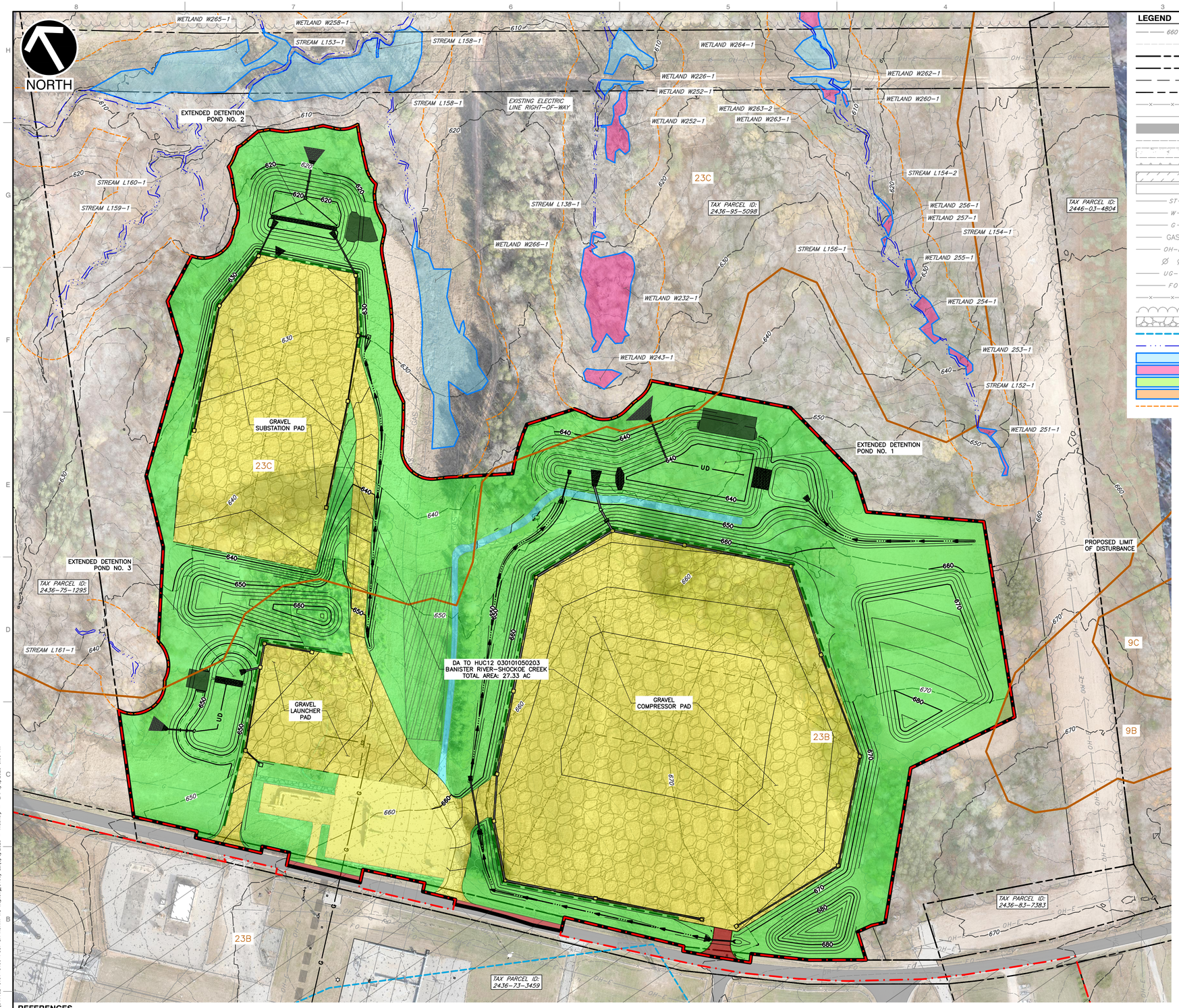
TRANSCONTINENTAL GAS PIPE LINE, LLC
COMPRESSOR STATION 165
PITTSLYVANIA COUNTY, VIRGINIA

PRE-DEVELOPMENT
WATER QUALITY MAP
(HUC12 030101050203)

DATE:	MAY 2025
DRAWN BY:	JMP
DWG SCALE:	1"=80'
CHECKED BY:	MEA
PROJECT NO:	341-132
APPROVED BY:	LCW

DRAWING NO.: C405
SHEET 17 OF 61

P:\340-0001\341-132\-0400\Dwg\Civil\341132-CIVIL-C405-PRE-DA NORTH WQ Map.dwg[C405] LS:6/6/2025 - vfarmer) - LP: 6/3/2025 9:08 AM



LEGEND

- EXISTING INDEX CONTOUR
- EXISTING INTERMEDIATE CONTOUR
- EXISTING SUBJECT PROPERTY LINE
- EXISTING PROPERTY LINE
- EXISTING TRANSCO ROAD RIGHT-OF-WAY
- EXISTING RIGHT-OF-WAY
- EXISTING FENCE LINE
- EXISTING EDGE OF PAVEMENT
- EXISTING PAVEMENT LIMITS
- EXISTING EDGE OF GRAVEL
- EXISTING GRAVEL LIMITS
- EXISTING GUIDE RAIL
- EXISTING BUILDING
- EXISTING STRUCTURE
- EXISTING STORM PIPE
- EXISTING WATER LINE
- EXISTING GAS LINE
- EXISTING GAS LINE (BY OTHERS)
- EXISTING OVERHEAD WIRE
- EXISTING UTILITY POLE
- EXISTING FIBER OPTIC LINE
- EXISTING UNDERGROUND ELECTRIC LINE
- EXISTING FENCE
- EXISTING TREE LINE
- EXISTING RIPRAP
- EXISTING HUC12 BOUNDARY
- EXISTING STREAM (BY OTHERS)
- EXISTING PEM WETLAND (BY OTHERS)
- EXISTING PFO WETLAND (BY OTHERS)
- EXISTING POW WETLAND (BY OTHERS)
- EXISTING PSS WETLAND (BY OTHERS)
- 50' OFFSET FROM STREAM/WETLAND
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED INDEX CONTOUR
- PROPOSED INTERMEDIATE CONTOUR
- PROPOSED EDGE OF GRAVEL PAD
- PROPOSED FLAT PAD LIMITS
- PROPOSED BERM
- PROPOSED EDGE OF UNPAVED DIRT ROAD
- PROPOSED EDGE OF UNPAVED GRAVEL ROAD
- PROPOSED EDGE OF PAVED ROAD
- PROPOSED TEMPORARY EXCAVATED SPILLWAY
- PROPOSED CHANNEL
- PROPOSED STORM PIPE
- PROPOSED RIPRAP APRON
- MIXED OPEN LAND COVER (B SOIL)
- MIXED OPEN LAND COVER (D SOIL)
- MANAGED TURF LAND COVER (B SOIL)
- IMPERVIOUS (GRAVEL) LAND COVER (B SOIL)
- IMPERVIOUS LAND COVER
- DRAINAGE AREA BOUNDARY

POST-DEVELOPMENT LAND COVER (ACRES)

	A SOILS	B SOILS	C SOILS	D SOILS	TOTALS
FOREST (ACRES) -- UNDISTURBED, PROTECTED FOREST OR REFORESTED LAND					
MIXED OPEN (ACRES) -- UNDISTURBED/INFREQUENTLY MAINTAINED GRASS OR SHRUB LAND		14.12		0.02	14.14
MANAGED TURF (ACRES) -- DISTURBED, GRADED FOR YARDS OR OTHER TURF TO BE MOWED/MANAGED		0.23			0.23
IMPERVIOUS COVER (ACRES)		12.96			12.96
				TOTAL LAND COVER	27.33

REFERENCES

1. EXISTING CONTOURS ARE A COMBINATION OF TOPOGRAPHY DERIVED FROM UNMANNED AERIAL LIDAR DATA AND SUPPLEMENTAL FIELD SURVEY DATA COLLECTED BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC. (CEC) IN JUNE AND DECEMBER 2024 WITH SUPPLEMENTED CONTOURS DERIVED FROM FROM VIRGINIA GIS CLEARINGHOUSE REST SERVICES – VIRGINIA GEOGRAPHIC INFORMATION NETWORK (VGIN), DATED 2018.
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SCALE IN FEET
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COMMONWEALTH OF VIRGINIA
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6-2-2025

REVISION RECORD

NO	DATE	DESCRIPTION

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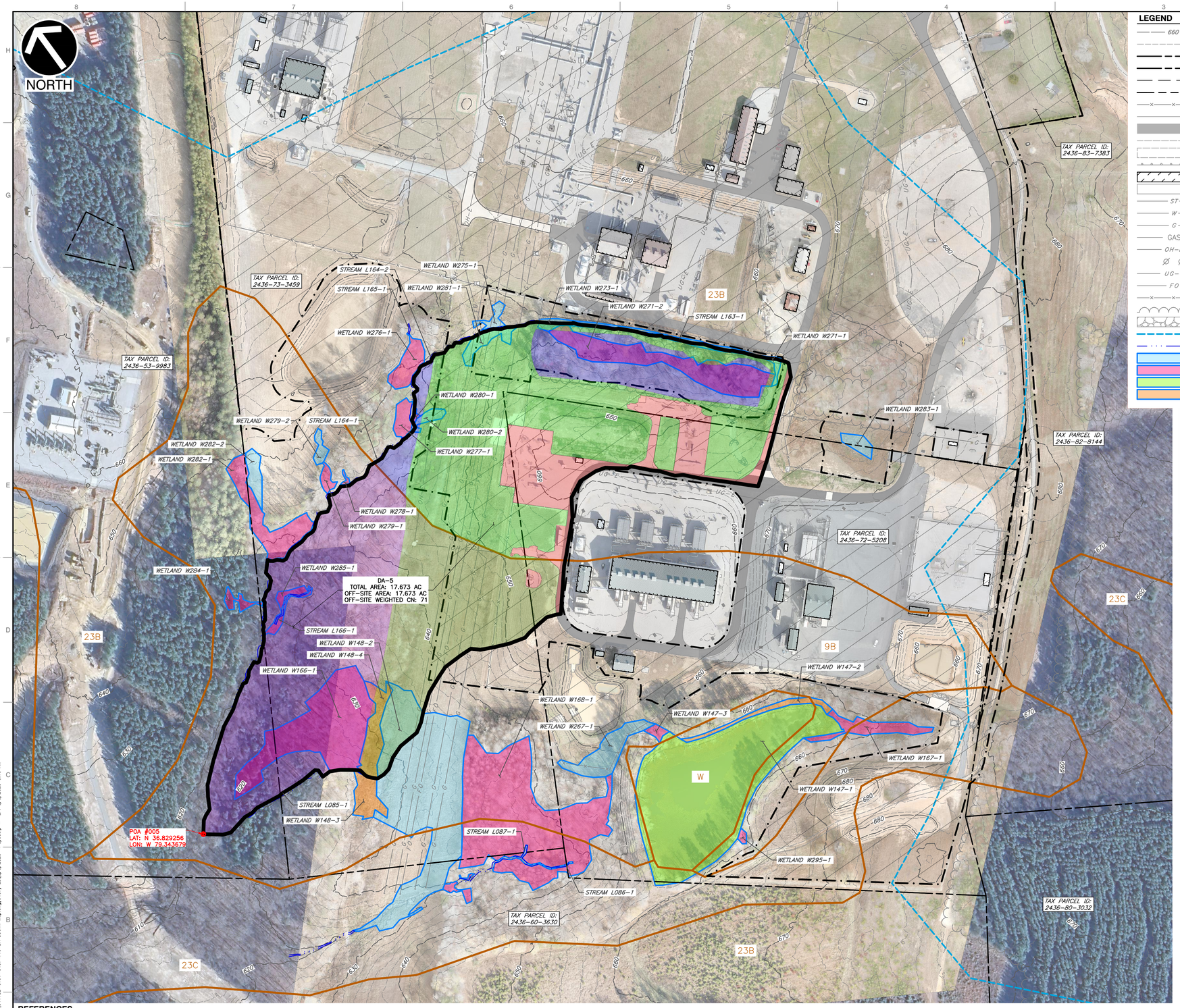
TRANSCONTINENTAL GAS PIPE LINE, LLC
COMPRESSOR STATION 165
PITTSLYVANIA COUNTY, VIRGINIA

POST-DEVELOPMENT
WATER QUALITY MAP
(HUC12 030101050203)

DATE:	MAY 2025
DWG SCALE:	1"=80'
PROJECT NO:	341-132
DRAWN BY:	JMP
CHECKED BY:	MEA
APPROVED BY:	LCW

DRAWING NO.: C406
SHEET 18 OF 61

P:\140-000\341-132\1-CAD\1wg\CIVIL\341-132-CVL-C406-POST-04 WORTH MD Map.mxd[2406] 15/5/8/2025 - vfischer - LP: 6/3/2025 8:59 AM



LEGEND

- EXISTING INDEX CONTOUR
- EXISTING INTERMEDIATE CONTOUR
- EXISTING SUBJECT PROPERTY LINE
- EXISTING PROPERTY LINE
- EXISTING TRANSCO ROAD RIGHT-OF-WAY
- EXISTING RIGHT-OF-WAY
- EXISTING FENCE LINE
- EXISTING EDGE OF PAVEMENT
- EXISTING PAVEMENT LIMITS
- EXISTING EDGE OF GRAVEL
- EXISTING GRAVEL LIMITS
- EXISTING GUIDE RAIL
- EXISTING BUILDING
- EXISTING STRUCTURE
- EXISTING STORM PIPE
- EXISTING WATER LINE
- EXISTING GAS LINE
- EXISTING GAS LINE (BY OTHERS)
- EXISTING OVERHEAD WIRE
- EXISTING UTILITY POLE
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- EXISTING FENCE
- EXISTING TREE LINE
- EXISTING RIPRAP
- EXISTING HUC12 BOUNDARY
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- EXISTING PEM WETLAND (BY OTHERS)
- EXISTING PFO WETLAND (BY OTHERS)
- EXISTING POW WETLAND (BY OTHERS)
- EXISTING PSS WETLAND (BY OTHERS)
- PROPOSED LIMIT OF DISTURBANCE
- SOIL BOUNDARY
- 23B SOIL ID
- WOODS LAND COVER (B)
- WOODS LAND COVER (D)
- MEADOW LAND COVER (B)
- MEADOW LAND COVER (D)
- IMPERVIOUS LAND COVER
- DRAINAGE AREA BOUNDARY
- POINT OF ANALYSIS

POST-DEVELOPMENT DRAINAGE AREAS				
DRAINAGE AREA	LAND USE	HSG	CN	AREA (AC)
DA-5 (OFF-SITE)	WOODS	B	55	1.802
	WOODS	D	77	5.548
	MEADOW	B	58	5.500
	MEADOW	D	78	3.208
	GRAVEL	N/A	98	1.615

WOODS AND PASTURE LAND COVER ARE MODELED IN GOOD CONDITION.
MEADOW LAND COVER IS MODELED AS NON-GRAZED.

NOTE: CURVE NUMBERS ARE CONSISTENT BETWEEN PRE-DEVELOPMENT AND POST-DEVELOPMENT. THEREFORE, STORMWATER CALCULATIONS BEYOND THIS ANALYSIS ARE NOT NECESSARY AS THE GRAVEL AREA ADDED TO THIS DRAINAGE AREA WILL HAVE MINIMAL IMPACT ON THE OVERALL DRAINAGE AREA.

REFERENCES

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SCALE IN FEET
0 120 240

COMMONWEALTH OF VIRGINIA
MICHAEL EDWARD ARCHER
Lic. No. 043994
PROFESSIONAL ENGINEER
6-2-2025

REVISION RECORD

NO	DATE	DESCRIPTION

700 Cherrington Parkway
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Ph: 412.429.2324 · 800.365.2324
www.cecinc.com
Civil & Environmental Consultants, Inc.

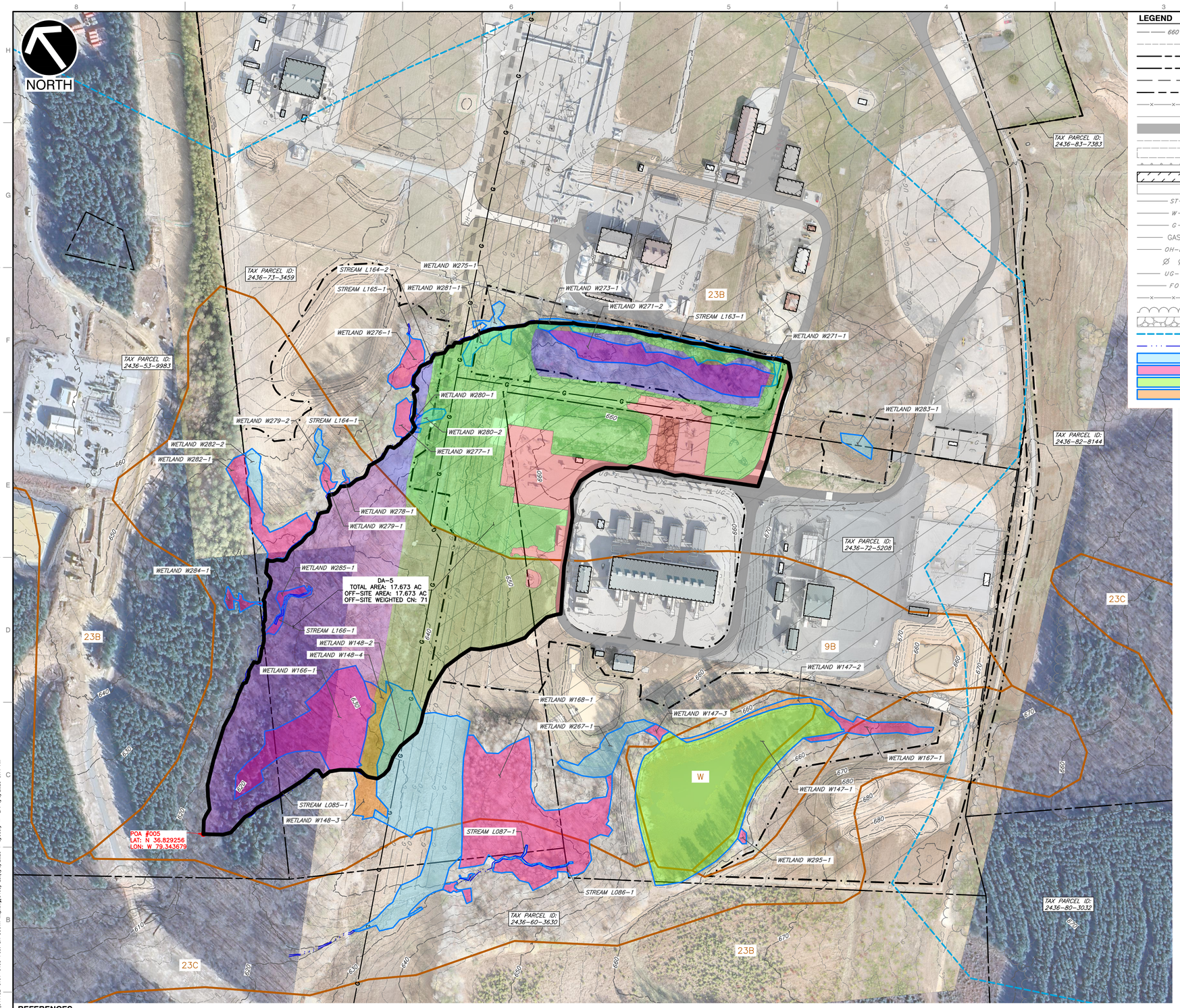
TRANSCONTINENTAL GAS PIPE LINE, LLC
COMPRESSOR STATION 165
PITTSLVYANIA COUNTY, VIRGINIA

PRE-DEVELOPMENT DRAINAGE AREA MAP (HUC12 030101050104)

DATE:	MAY 2025
DRAWN BY:	JMP
DWG SCALE:	1"=80'
CHECKED BY:	MEA
PROJECT NO:	341-132
APPROVED BY:	LCW

DRAWING NO.: C407
SHEET 19 OF 61

P:\340-001\341-132\-CAD\Dwg\CIVIL\341132-CIV01-C407-Pre-DA SOUTH Map.dwg[C407] LS(5/9/2025 - byeder) - LPL 6/3/2025 9:10 AM



LEGEND

- EXISTING INDEX CONTOUR
- EXISTING INTERMEDIATE CONTOUR
- EXISTING SUBJECT PROPERTY LINE
- EXISTING PROPERTY LINE
- EXISTING TRANSCO ROAD RIGHT-OF-WAY
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- EXISTING BUILDING
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- EXISTING POW WETLAND (BY OTHERS)
- EXISTING PSS WETLAND (BY OTHERS)
- PROPOSED LIMIT OF DISTURBANCE
- SOIL BOUNDARY
- SOIL ID
- PROPOSED GAS PIPELINE
- WOODS LAND COVER (B)
- WOODS LAND COVER (D)
- MEADOW LAND COVER (B)
- MEADOW LAND COVER (D)
- IMPERVIOUS LAND COVER
- DRAINAGE AREA BOUNDARY
- POINT OF ANALYSIS

POST-DEVELOPMENT DRAINAGE AREAS

DRAINAGE AREA	LAND USE	HSG	CN	AREA (AC)
DA-5 (OFF-SITE)	WOODS	B	55	1.802
	WOODS	D	77	5.548
	MEADOW	B	58	5.352
	MEADOW	D	78	3.208
	GRAVEL	N/A	98	1.763

ANALYZED ASSUMING NO CHANGE TO CN FROM PRE- TO POST-DEVELOPMENT CONDITIONS.
WOODS LAND COVER ARE MODELED IN GOOD CONDITION.
MEADOW LAND COVER IS MODELED AS NON-GRAZED.

NOTE: CURVE NUMBERS ARE CONSISTENT BETWEEN PRE-DEVELOPMENT AND POST-DEVELOPMENT. THEREFORE, STORMWATER CALCULATIONS BEYOND THIS ANALYSIS ARE NOT NECESSARY AS THE GRAVEL AREA ADDED TO THIS DRAINAGE AREA WILL HAVE MINIMAL IMPACT ON THE OVERALL DRAINAGE AREA.

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SCALE IN FEET
0 120 240

COMMONWEALTH OF VIRGINIA
MICHAEL EDWARD ARCHER
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6-2-2025

REVISION RECORD

NO	DATE	DESCRIPTION

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CEC
Civil & Environmental Consultants, Inc.

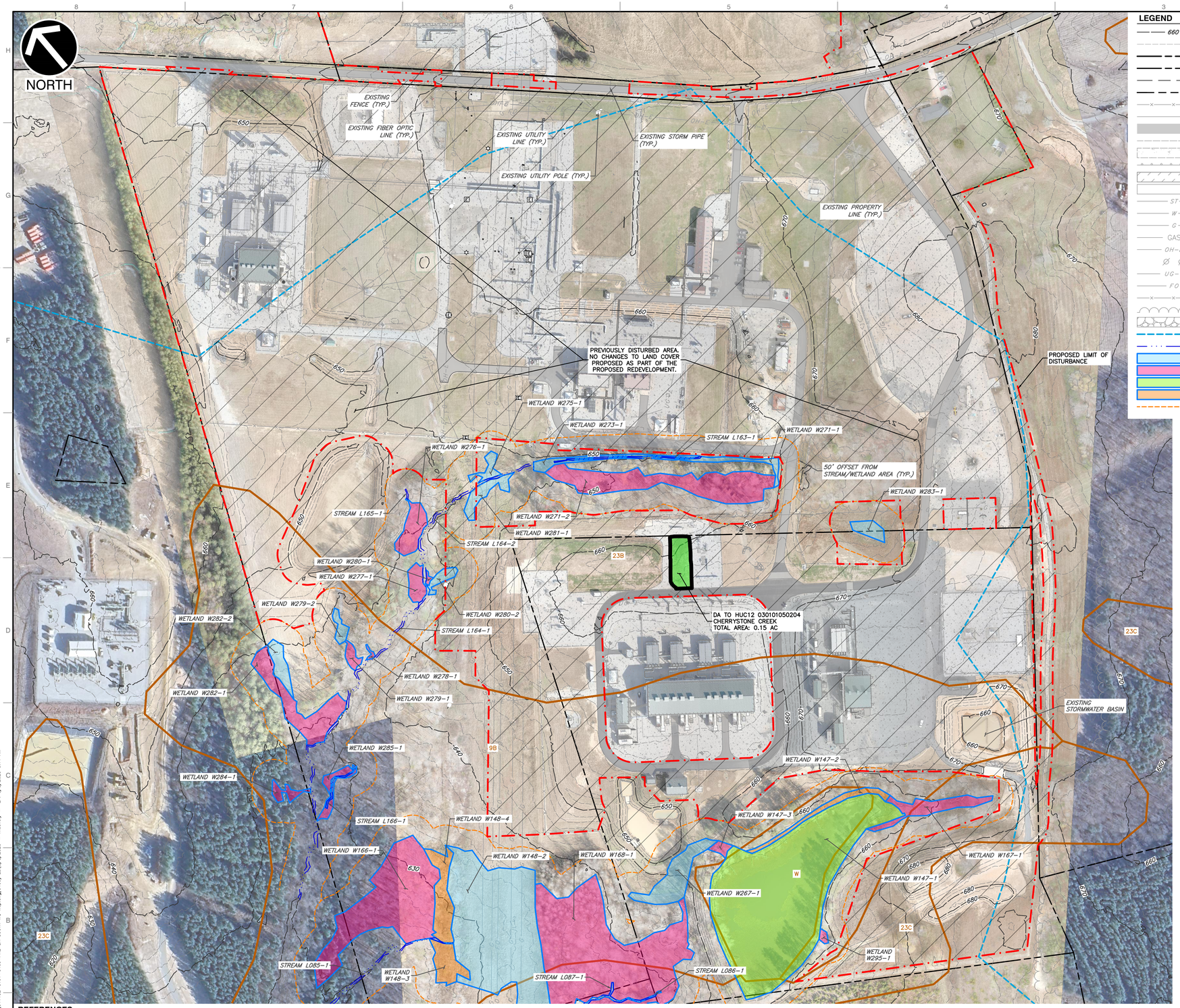
TRANSCONTINENTAL GAS PIPE LINE, LLC
COMPRESSOR STATION 165
PITTSLVYANIA COUNTY, VIRGINIA

POST-DEVELOPMENT DRAINAGE AREA MAP (HUC12 030101050104)

DATE:	MAY 2025
DRAWN BY:	JMP
CHECKED BY:	MEA
DWG SCALE:	1"=120'
PROJECT NO:	341-132
APPROVED BY:	LCW

DRAWING NO.: C408
SHEET 20 OF 61

P:\340-001\341-132\-CAD\Dwg\C101\341132-C101-C408-Post-04 SOUTH.dwg(C408) LS(5/9/2025 - tjoslin) - LP: 6/3/2025 9:11 AM



LEGEND

- EXISTING INDEX CONTOUR (660)
- EXISTING INTERMEDIATE CONTOUR
- EXISTING SUBJECT PROPERTY LINE
- EXISTING PROPERTY LINE
- EXISTING TRANSCO ROAD RIGHT-OF-WAY
- EXISTING RIGHT-OF-WAY
- EXISTING FENCE LINE
- EXISTING EDGE OF PAVEMENT
- EXISTING PAVEMENT LIMITS
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- EXISTING GRAVEL LIMITS
- EXISTING GUIDE RAIL
- EXISTING BUILDING
- EXISTING STRUCTURE
- EXISTING STORM PIPE (ST)
- EXISTING WATER LINE (W)
- EXISTING GAS LINE (G)
- EXISTING GAS LINE (BY OTHERS) (GAS)
- EXISTING OVERHEAD WIRE (OH-E)
- EXISTING UTILITY POLE
- EXISTING FIBER OPTIC LINE (UG-E)
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- PROPOSED AREA TO REMAIN UNDISTURBED
- PREVIOUSLY DISTURBED AREA
- SOIL BOUNDARY
- 23B SOIL ID
- MEADOW LAND COVER (B SOIL)
- DRAINAGE AREA BOUNDARY

PRE-DEVELOPMENT LAND COVER (ACRES)

	A SOILS	B SOILS	C SOILS	D SOILS	TOTALS
FOREST (ACRES) -- UNDISTURBED, PROTECTED FOREST OR REFORESTED LAND					
MIXED OPEN (ACRES) -- UNDISTURBED/INFREQUENTLY MAINTAINED GRASS OR SHRUB LAND		0.15			0.15
MANAGED TURF (ACRES) -- DISTURBED, GRADED FOR YARDS OR OTHER TURF TO BE MOWED/MANAGED					
IMPERVIOUS COVER (ACRES)					
				TOTAL LAND COVER	0.15

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SCALE IN FEET
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Lic. No. 043994
PROFESSIONAL ENGINEER
6-2-2025

REVISION RECORD

NO	DATE	DESCRIPTION

700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com
Civil & Environmental Consultants, Inc.

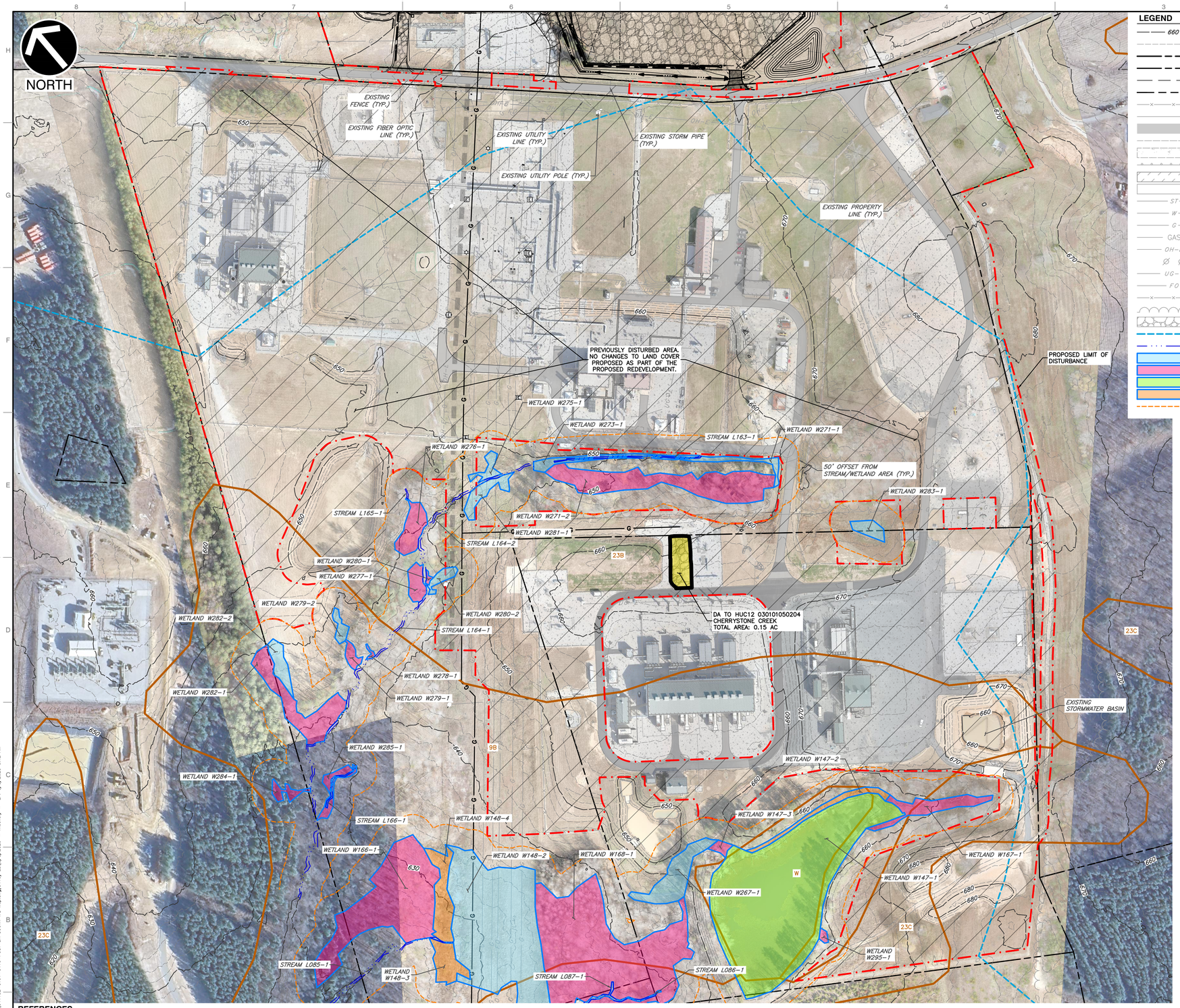
TRANSCONTINENTAL GAS PIPE LINE, LLC
COMPRESSOR STATION 165
PITTSLYVANIA COUNTY, VIRGINIA

PRE-DEVELOPMENT
WATER QUALITY MAP
(HUC12 030101050104)

DATE:	MAY 2025
DWG SCALE:	1"=120'
PROJECT NO:	341-132
DRAWN BY:	JMP
CHECKED BY:	MEA
APPROVED BY:	LCW

DRAWING NO.: C409
SHEET 21 OF 61

P:\340-060\341-132\-CAD\Dwg\C401\341132-C401-C409-PRE-04 SOUTH WQ Map.dwg(C409) LS:(5/9/2025 - vfischer) - LP: 6/3/2025 9:11 AM



LEGEND

- EXISTING INDEX CONTOUR
- EXISTING INTERMEDIATE CONTOUR
- EXISTING SUBJECT PROPERTY LINE
- EXISTING PROPERTY LINE
- EXISTING TRANSCO ROAD RIGHT-OF-WAY
- EXISTING RIGHT-OF-WAY
- EXISTING FENCE LINE
- EXISTING EDGE OF PAVEMENT
- EXISTING PAVEMENT LIMITS
- EXISTING EDGE OF GRAVEL
- EXISTING GRAVEL LIMITS
- EXISTING GUIDE RAIL
- EXISTING BUILDING
- EXISTING STRUCTURE
- EXISTING STORM PIPE
- EXISTING WATER LINE
- EXISTING GAS LINE
- EXISTING GAS LINE (BY OTHERS)
- EXISTING OVERHEAD WIRE
- EXISTING UTILITY POLE
- EXISTING FIBER OPTIC LINE
- EXISTING UNDERGROUND ELECTRIC LINE
- EXISTING FENCE
- EXISTING TREE LINE
- EXISTING RIPRAP
- EXISTING HUC12 BOUNDARY
- EXISTING STREAM (BY OTHERS)
- EXISTING PEM WETLAND (BY OTHERS)
- EXISTING PFO WETLAND (BY OTHERS)
- EXISTING POW WETLAND (BY OTHERS)
- EXISTING PSS WETLAND (BY OTHERS)
- 50' OFFSET FROM STREAM/WETLAND
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED AREA TO REMAIN UNDISTURBED
- PREVIOUSLY DISTURBED AREA
- SOIL BOUNDARY
- 23B SOIL ID
- GRAVEL LAND COVER (B SOIL)
- DRAINAGE AREA BOUNDARY

POST-DEVELOPMENT LAND COVER (ACRES)

	A SOILS	B SOILS	C SOILS	D SOILS	TOTALS
FOREST (ACRES) -- UNDISTURBED, PROTECTED FOREST OR REFORESTED LAND					
MIXED OPEN (ACRES) -- UNDISTURBED/INFREQUENTLY MAINTAINED GRASS OR SHRUB LAND					
MANAGED TURF (ACRES) -- DISTURBED, GRADED FOR YARDS OR OTHER TURF TO BE MOWED/MANAGED					
IMPERVIOUS COVER (ACRES)		0.15			0.15
TOTAL LAND COVER					0.15

REFERENCES

1. EXISTING CONTOURS ARE A COMBINATION OF TOPOGRAPHY DERIVED FROM UNMANNED AERIAL LIDAR DATA AND SUPPLEMENTAL FIELD SURVEY DATA COLLECTED BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC. (CEC) IN JUNE AND DECEMBER 2024 WITH SUPPLEMENTED CONTOURS DERIVED FROM FROM VIRGINIA GIS CLEARINGHOUSE REST SERVICES – VIRGINIA GEOGRAPHIC INFORMATION NETWORK (VGIN), DATED 2018.
2. AERIAL IMAGERY IS A COMBINATION OF IMAGERY DERIVED FROM UNMANNED AERIAL PHOTOGRAMMETRIC DATA AND SUPPLEMENTAL FIELD SURVEY DATA COLLECTED BY CEC ON DECEMBER 4, 2024 AND PHOTOGRAPHY FROM GOOGLE EARTH ACCESSED THROUGH PLEX EARTH, DATE OF PHOTOGRAPHY APRIL 2021.
3. EXISTING INFORMATION WITHIN THE PROJECT AREA IS A COMBINATION OF INFORMATION PROVIDED BY TRANSCO IN MARCH, APRIL, OCTOBER AND NOVEMBER 2024 AND TRADITIONAL SURVEY PERFORMED BY CEC IN JUNE AND DECEMBER 2024.
4. AQUATIC RESOURCES ARE BASED ON STREAM AND WETLAND DELINEATIONS COMPLETED BY WETLAND STUDIES AND SOLUTIONS, INC. (WSSI), DATA WHICH WAS PROVIDED BY WSSI ON MARCH 10, 2025.
5. EXISTING PROPERTY LINES ARE A COMBINATION OF INFORMATION DERIVED FROM ALTA SURVEY FILE TITLED "MAIN-D_1413_06-1413_70_ALTA_EMAILED041024.DWG" PROVIDED BY TRANSCO ON APRIL 11, 2024 AND INFORMATION DERIVED FROM FILE TITLED "EDEN_CY_PROPERTIES_20250219.DWG" PROVIDED BY TRANSCO ON FEBRUARY 19, 2024.
6. EXISTING PARCEL LINES DERIVED FROM PUBLICLY AVAILABLE PITTSLYVANIA COUNTY OPEN DATA, ACCESSED APRIL 2024.

SCALE IN FEET
0 120 240

COMMONWEALTH OF VIRGINIA
MICHAEL EDWARD ARCHER
Lic. No. 043994
PROFESSIONAL ENGINEER
6-2-2025

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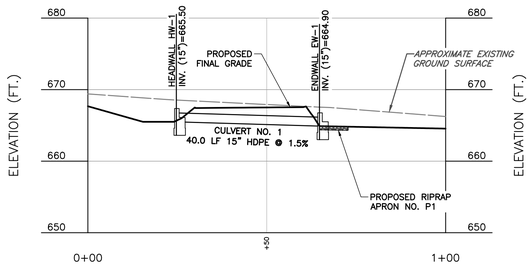
PITTSLYVANIA COUNTY, VIRGINIA

POST-DEVELOPMENT WATER QUALITY MAP (HUC12 030101050104)

DATE:	MAY 2025
DWG SCALE:	1"=120'
PROJECT NO:	341-132
DRAWN BY:	JMP
CHECKED BY:	MEA
APPROVED BY:	LCW

DRAWING NO.: C410
SHEET 22 OF 61

P:\340-060\341-132\-CAD\Dwg\C410\341132-C401-C410-POST-DA SOUTH WQ Map.dwg[C410] LS(8/8/2025 - vfischer) - LP: 6/3/2025 8:12 AM



CULVERT 1 PROFILE

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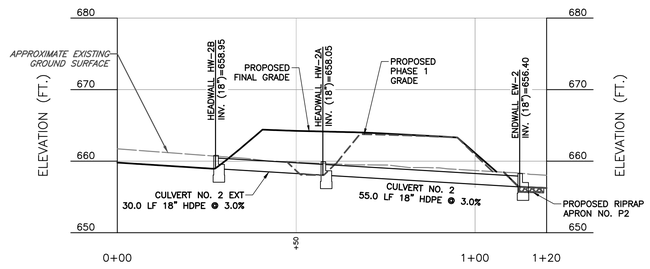

CULVERT 2 PROFILE

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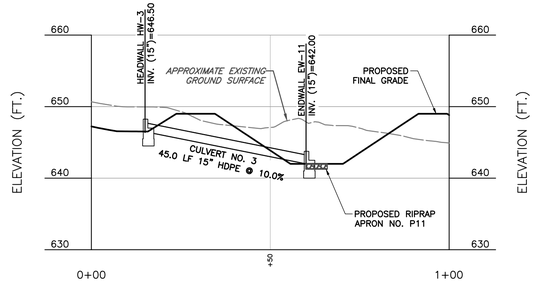

CULVERT 3 PROFILE

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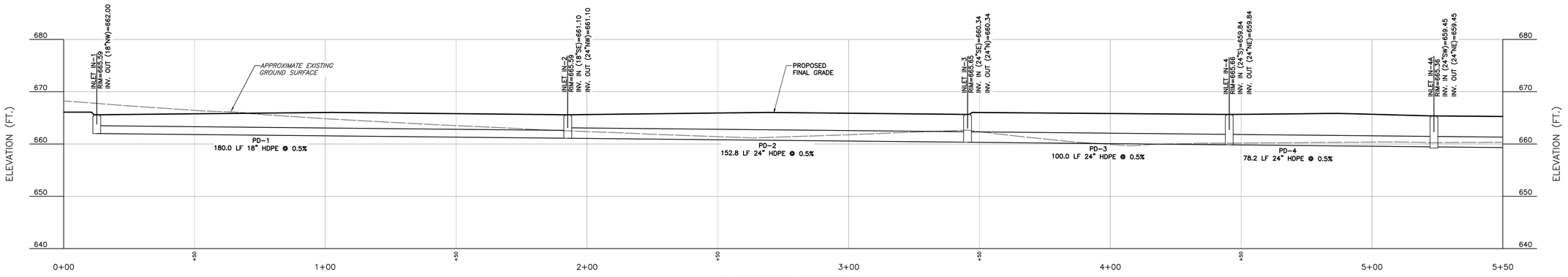
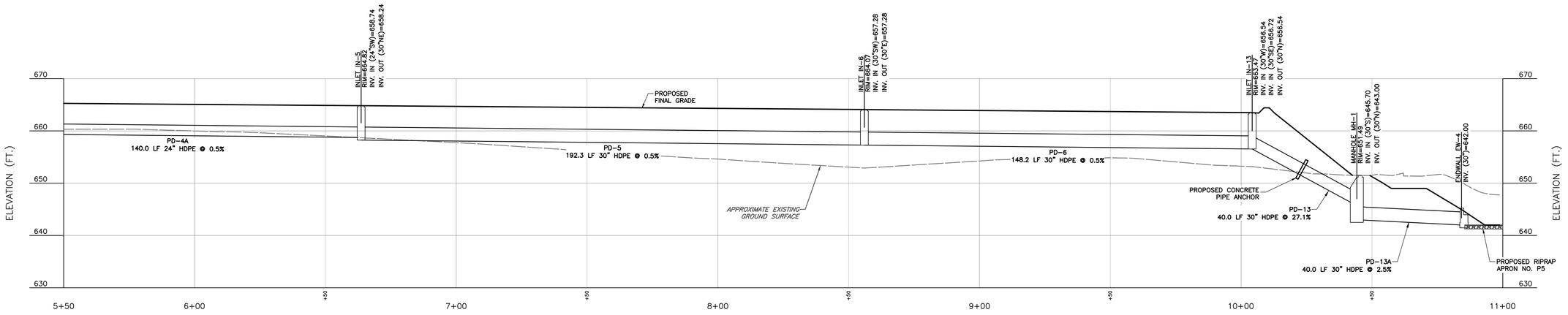


IN-1 TO EW-4 PROFILE

SCALE H:1"=20'; V:1"=10'



IN-1 TO EW-4 PROFILE

SCALE H:1"=20'; V:1"=10'

SCALE IN FEET (HORIZONTAL)
0 20 40

SCALE IN FEET (VERTICAL)
0 10 20

COMMONWEALTH OF VIRGINIA
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PROFESSIONAL ENGINEER
6-2-2025

REVISION RECORD

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TRANSCONTINENTAL GAS PIPE LINE, LLC
COMPRESSOR STATION 165
PITTSLYVANIA COUNTY, VIRGINIA

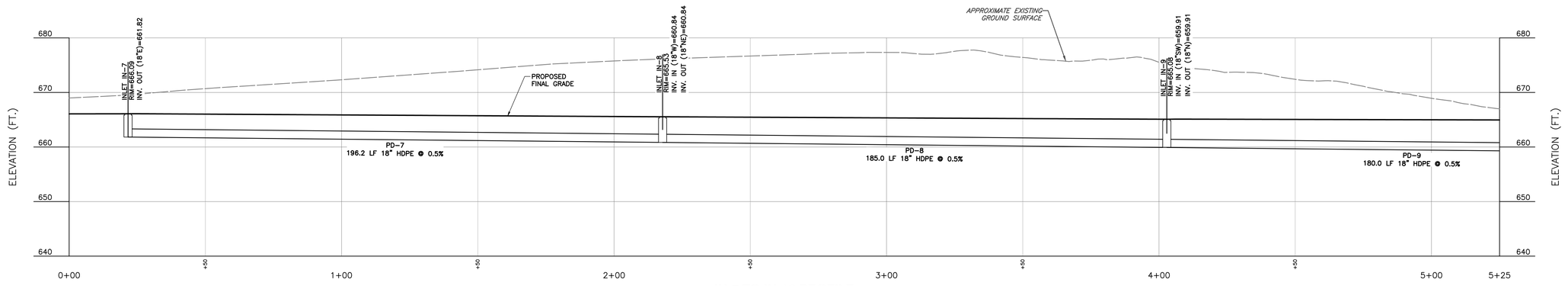
STORM PIPE PROFILES

DATE:	MAY 2025
DWG SCALE:	AS SHOWN
PROJECT NO:	341-132
DRAWN BY:	JMP
CHECKED BY:	MEA
APPROVED BY:	LCW

DRAWING NO.: C411

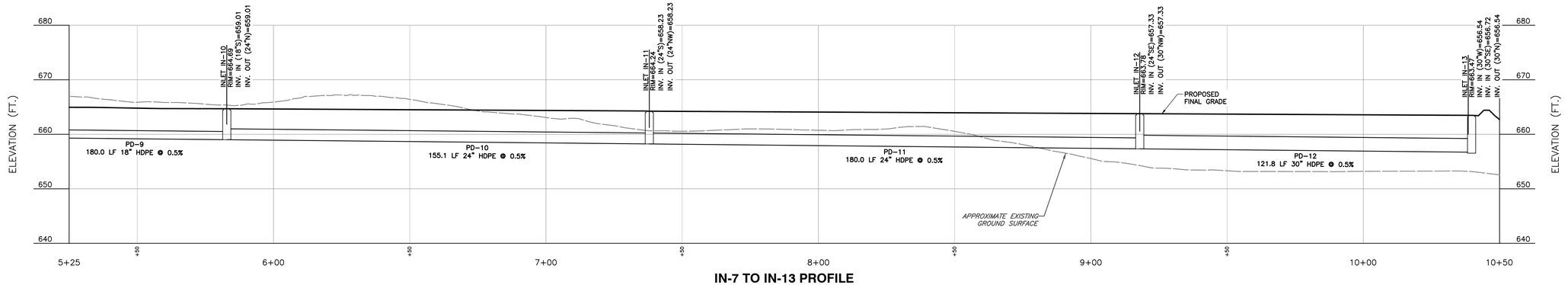
SHEET 23 OF 61

P:\340-0001\341-132\-04001\Dwg\C401\341132-C401-2409-Pipe Profiles.dwg[C411] LS:8/8/2025 - Jhuck - LP: 6/2/2025 8:13 AM



IN-7 TO IN-13 PROFILE

SCALE H:1"=20'; V:1"=10'



IN-7 TO IN-13 PROFILE

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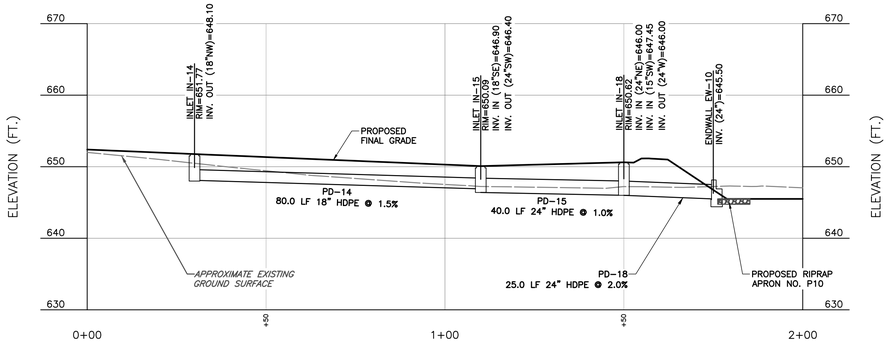

IN-14 TO EW-10 PROFILE

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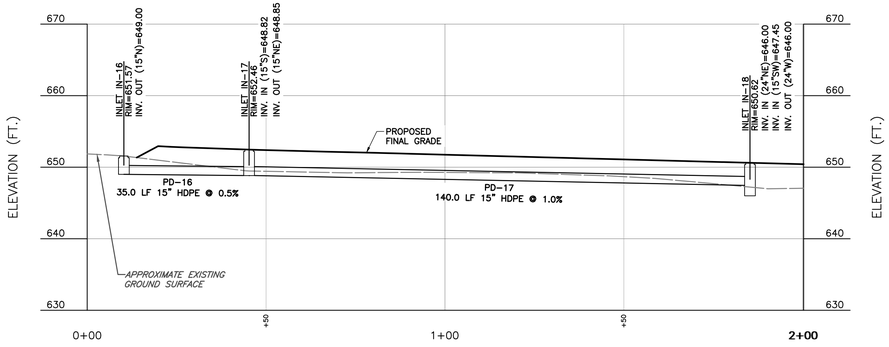

IN-16 TO IN-18 PROFILE

SCALE H:1"=20'; V:1"=10'

SCALE IN FEET (HORIZONTAL)
0 20 40

SCALE IN FEET (VERTICAL)
0 10 20

COMMONWEALTH OF VIRGINIA
MICHAEL EDWARD ARCHER
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PROFESSIONAL ENGINEER
6-2-2025

REVISION RECORD

NO	DATE	DESCRIPTION

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TRANSCONTINENTAL GAS PIPE LINE, LLC
COMPRESSOR STATION 165
PITTSLYVANIA COUNTY, VIRGINIA

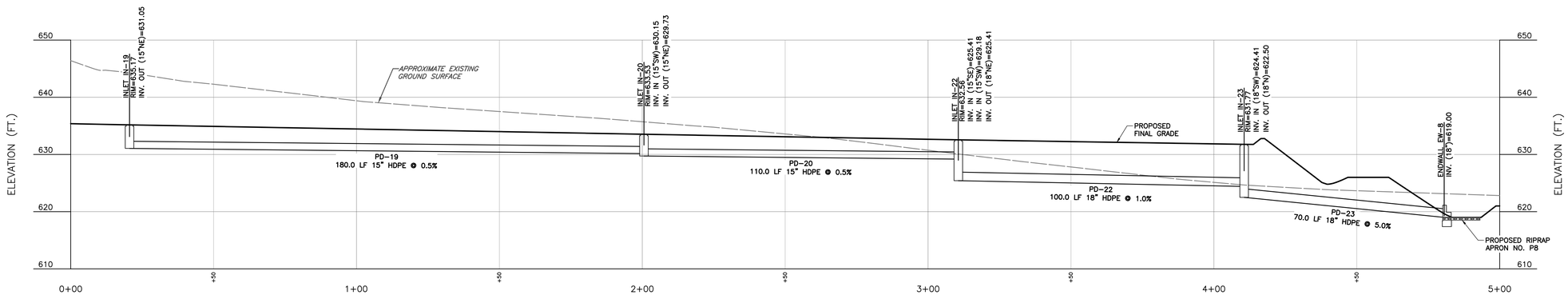
STORM PIPE PROFILES

DATE:	MAY 2025
DWG SCALE:	AS SHOWN
PROJECT NO:	341-132
DRAWN BY:	JMP
CHECKED BY:	MEA
APPROVED BY:	LCW

DRAWING NO.: C412

SHEET 24 OF 61

P:\340-0001\341-132\-2400\Dwg\C401\341132-C401-C409-Pipe Profiles.dwg[C412] LS(8/8/2025 - jhuck) - LP: 6/3/2025 9:13 AM



IN-19 TO EW-8 PROFILE

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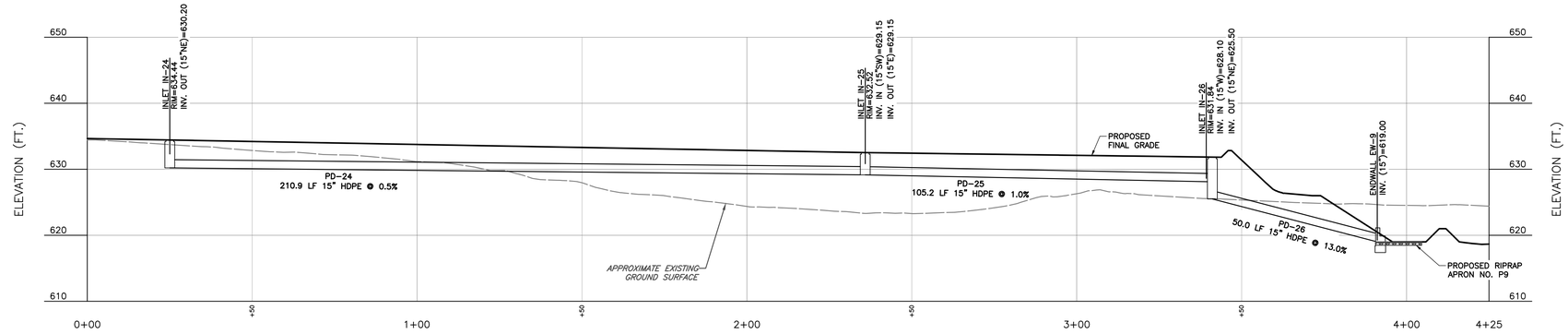

IN-24 TO EW-9 PROFILE

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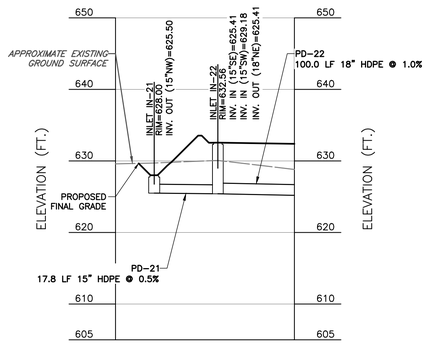

IN-21 TO IN-22 PROFILE

SCALE H:1"=20'; V:1"=10'

SCALE IN FEET (HORIZONTAL)
0 20 40

SCALE IN FEET (VERTICAL)
0 10 20

COMMONWEALTH OF VIRGINIA
MICHAEL EDWARD ARCHER
Lic. No. 043994
PROFESSIONAL ENGINEER
6-2-2025

REVISION RECORD

NO	DATE	DESCRIPTION

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TRANSCONTINENTAL GAS PIPE LINE, LLC
COMPRESSOR STATION 165
PITTSLYVANIA COUNTY, VIRGINIA

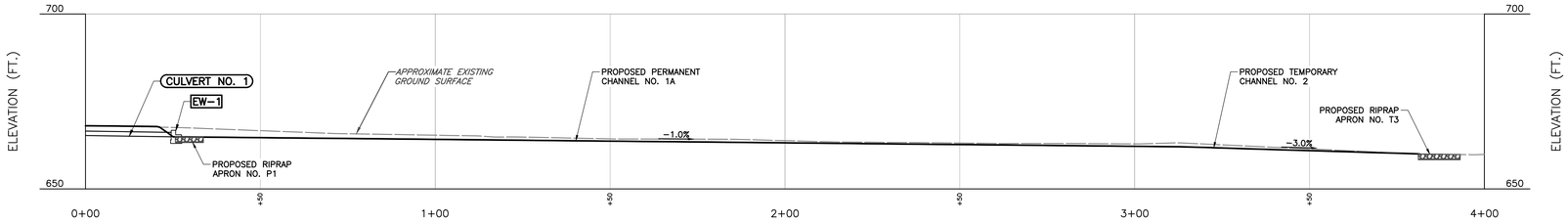
STORMWATER PROFILES

DATE:	MAY 2025	DRAWN BY:	JMP
DWG SCALE:	AS SHOWN	CHECKED BY:	MEA
PROJECT NO:			341-132
APPROVED BY:			LCW

DRAWING NO.: C413

SHEET 25 OF 61

P:\340-0001\341-132\-0200\Dwg\C101\341132-C101-C409-Pipe Profiles.dwg[C413] LS:8/8/2025 - jhuck - LP: 6/3/2025 9:13 AM



PHASE 1 - PERMANENT CHANNEL 1A & TEMPORARY CHANNEL 2 PROFILE

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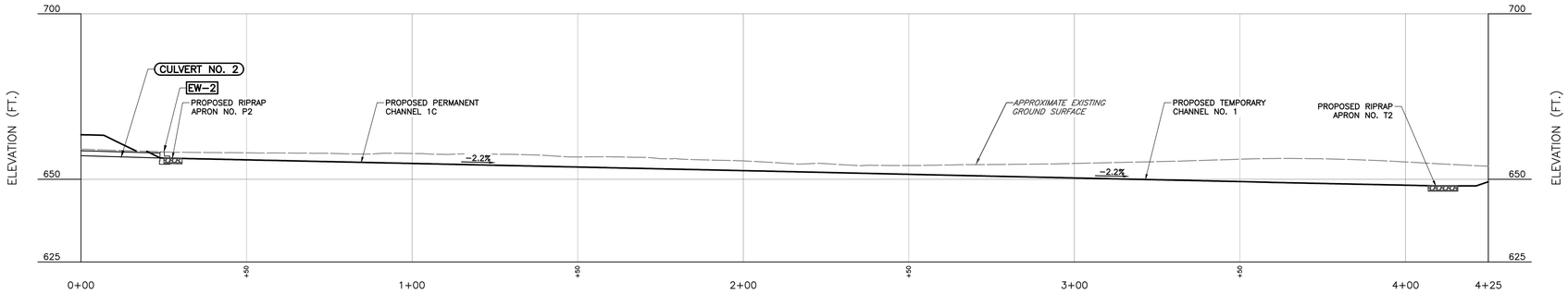
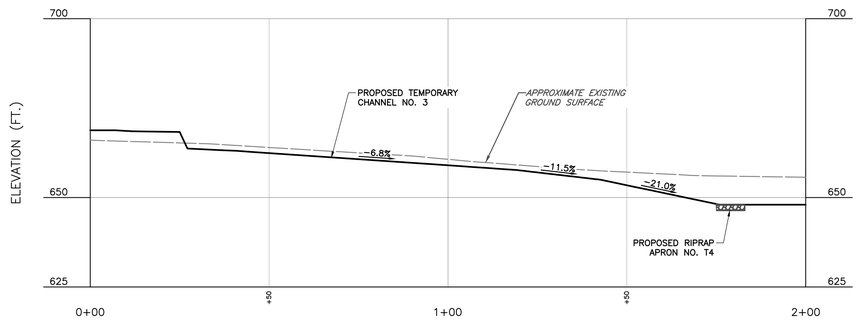


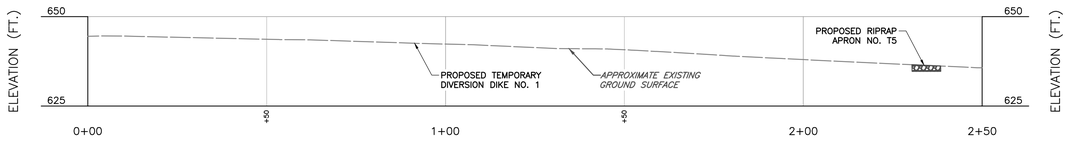
PHASE 1 - PERMANENT CHANNEL 1C AND TEMPORARY CHANNEL NO. 1 PROFILE

SCALE H:1"=20'; V:1"=20'



PHASE 1 - TEMPORARY CHANNEL NO. 3 PROFILE

SCALE H:1"=20'; V:1"=20'



PHASE 1 - TEMPORARY DIVERSION DIKE NO. 1 PROFILE

SCALE H:1"=20'; V:1"=20'

SCALE IN FEET
0 20 40

COMMONWEALTH OF VIRGINIA
MICHAEL EDWARD ARCHER
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PROFESSIONAL ENGINEER
6-2-2025

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COMPRESSOR STATION 165
PITTSLYVANIA COUNTY, VIRGINIA

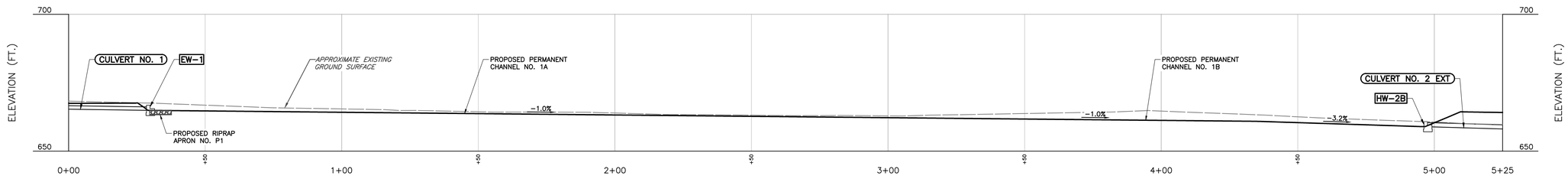
CHANNEL PROFILES

DATE:	MAY 2025
DWG SCALE:	1"=20'
PROJECT NO.	341-132
DRAWN BY:	JMP
CHECKED BY:	MEA
APPROVED BY:	LCW

DRAWING NO.: C414

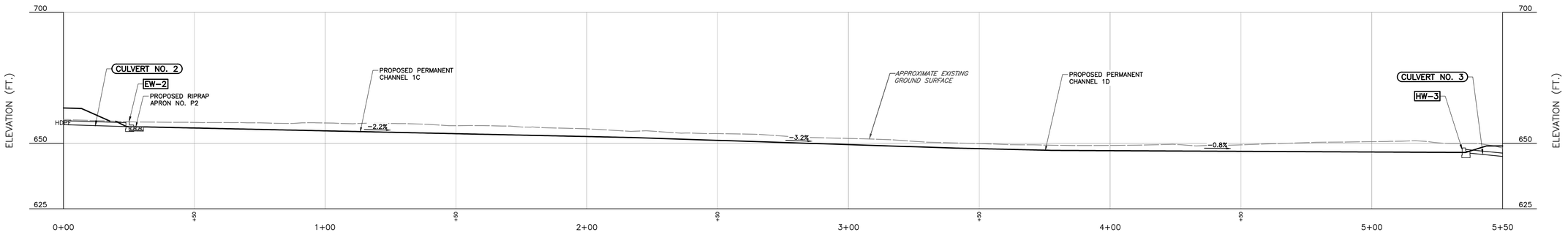
SHEET 26 OF 61

P:\340-000\341-132\-04DB\Dwg\Civil\341132-Civil-C412-Channel Profiles.dwg[C414] LS(6/3/2025 - khapner) - LP: 6/3/2025 9:24 AM



PHASE 2 - PERMANENT CHANNEL 1A & PERMANENT CHANNEL 1B PROFILE

SCALE H:1"=20'; V:1"=20'



PHASE 2 - PERMANENT CHANNEL 1C AND PERMANENT CHANNEL 1D PROFILE

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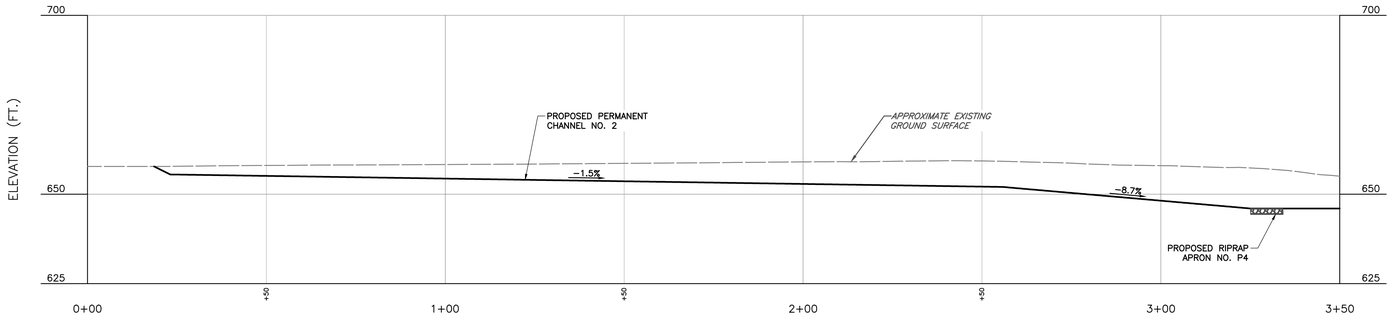
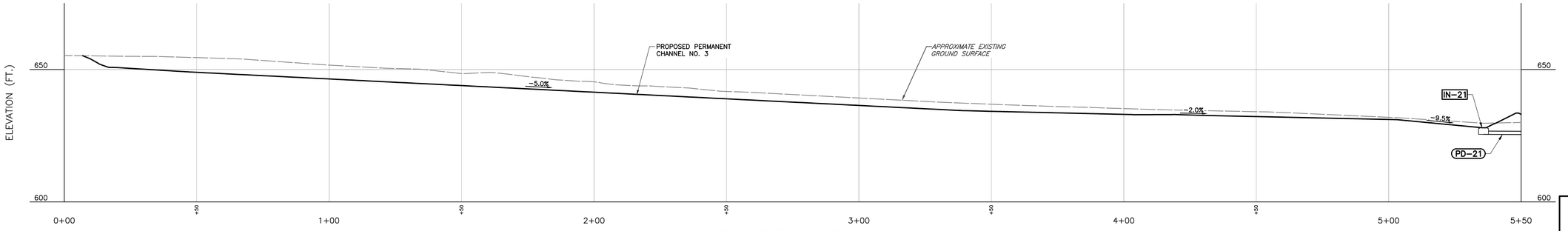


PHASE 2 - PERMANENT CHANNEL NO. 2 PROFILE

SCALE H:1"=20'; V:1"=20'



PHASE 2 - PERMANENT CHANNEL NO. 3 PROFILE

SCALE H:1"=20'; V:1"=20'

SCALE IN FEET

0 20 40

COMMONWEALTH OF VIRGINIA
MICHAEL EDWARD ARCHER
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PITTSLYVANIA COUNTY, VIRGINIA

CHANNEL PROFILES

DATE:	MAY 2025
DRAWN BY:	JMP
CHECKED BY:	MEA
DWG SCALE:	1"=20'
PROJECT NO.	341-132
APPROVED BY:	LCW

DRAWING NO.:

C415

SHEET 27 OF 61

P:\340-0001\341-132\-0400\Dwg\C401\341132-C401-C412-Channel Profiles.dwg[C415] LS(30/30)2025 - Manner) - JP, 6/3/2025 9:53 AM

NORTH

50' OFFSET FROM STREAM/WETLAND AREA (TYP.)

WETLAND W243-1

PROPOSED NAG SC250. AREA DOWNSLOPE OF LEVEL SPREADER TO REMAIN UNDISTURBED.

PROPOSED LEVEL SPREADER NO. 1 (3 C800)

PROPOSED LIMIT OF DISTURBANCE (TYP.)

PROPOSED RIPRAP APRON NO. P3 (2 C800)

PROPOSED ANTI-SEEP COLLAR (TYP.) (21 C915)

PROPOSED PERMANENT EXCAVATED SPILLWAY (20 C915)

ENDWALL EW-3
INV. (18")=636.00

PROPOSED RIPRAP APRON NO. P11 (2 C800)

PROPOSED RIPRAP APRON NO. P5 (2 C800)

PROPOSED R-5 RIPRAP FOREBAY SPILLWAY

OP-1
70.0 LF 18" HDPE @ 1.0%

PROPOSED FOREBAY

PROPOSED POND LINER

PROPOSED UNDERDRAIN AT 0.0% (17 C803)

PROPOSED CLEANOUT (TYP.) (18 C803)

PROPOSED R-5 RIPRAP FOREBAY SPILLWAY

PROPOSED FOREBAY

OUTLET STRUCTURE OS-1
RIM=645.00
INV. IN (18"S)=636.70
INV. IN (6"E)=637.00
INV. OUT (18"N)=636.70

ENDWALL EW-11
INV. (15")=642.00

CULVERT NO. 3
45.0 LF 15" HDPE @ 10.0%

HEADWALL HW-3
INV. (15")=646.50

PROPOSED PERMANENT CHANNEL NO. 1D (1 C800)

PROPOSED MANAGED TURF POND ACCESS ROAD

ENDWALL EW-4
INV. (30")=642.00

PD-13A
40.0 LF 30" HDPE @ 2.5%

MANHOLE MH-1
RIM=651.49
INV. IN (30"S)=645.70
INV. OUT (30"N)=643.00

PROPOSED RIPRAP APRON NO. P4 (2 C800)

PROPOSED PERMANENT CHANNEL NO. 2 (1 C800)

PD-13
40.0 LF 30" HDPE @ 27.1%

PROPOSED CONCRETE PIPE ANCHOR (15 C914)

INLET IN-13
RIM=663.47
INV. IN (30"W)=656.54
INV. IN (30"SE)=656.72
INV. OUT (30"N)=656.54

INLET IN-12
RIM=663.78
INV. IN (24"SE)=657.33
INV. OUT (30"NW)=657.33

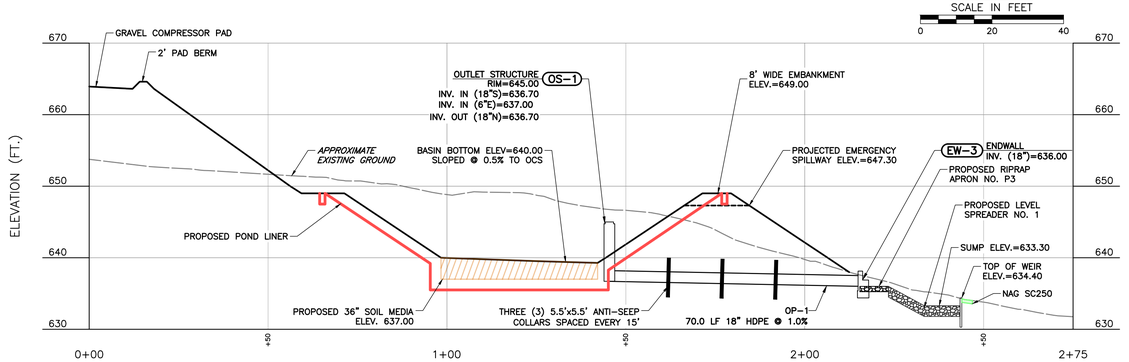
PD-12

PD-11

PD-9

EXTENDED DETENTION POND NO. 1
PLAN VIEW

SCALE IN FEET
0 20 40

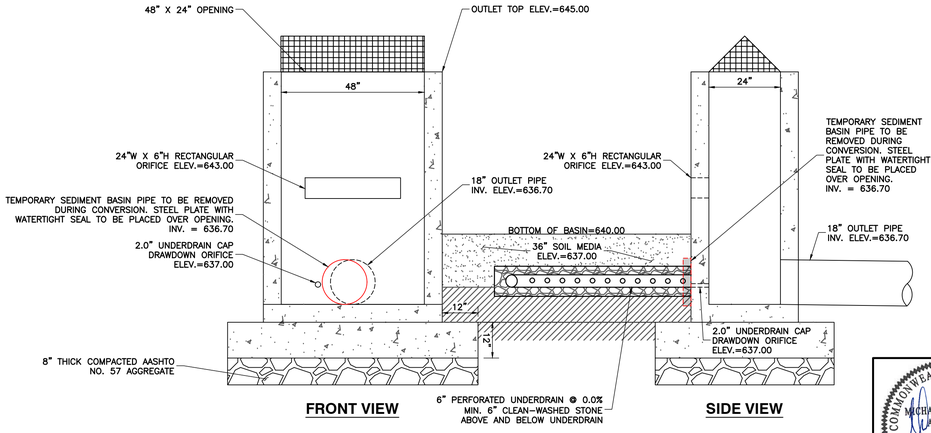


EXTENDED DETENTION POND NO. 1 PROFILE

SCALE H:1"=20'; V:1"=10'
SCALE IN FEET (HORIZONTAL)
0 20 40
SCALE IN FEET (VERTICAL)
0 10 20

EXTENDED DETENTION POND INSPECTION AND MAINTENANCE NOTES:

- MEASURE SEDIMENT ACCUMULATION IN LEVELS IN FOREBAY.
- MONITOR THE GROWTH OF WETLANDS, TREES, AND SHRUBS PLANTED. RECORD THE SPECIES AND THEIR APPROXIMATE COVERAGE AND NOTE THE PRESENCE OF ANY INVASIVE PLANT SPECIES.
- INSPECT THE CONDITION OF STORMWATER INLETS TO THE POND FOR MATERIAL DAMAGE, EROSION OR UNDERCUTTING, AND SUBSIDENCE/SINKHOLE FORMATION.
- INSPECT THE BANKS OF UPSTREAM AND DOWNSTREAM CHANNELS FOR EVIDENCE OF SLOUGHING, ANIMAL BURROWS, BOGGY AREAS, WOODY GROWTH, GULLY EROSION, OR SUBSIDENCE/SINKHOLE FORMATION THAT MAY UNDERMINE EMBANKMENT INTEGRITY.
- INSPECT POND OUTFALL CHANNEL FOR EROSION, UNDERCUTTING, RIPRAP DISPLACEMENT, WOODY GROWTH, SUBSIDENCE/SINKHOLE FORMATION, AND OTHER ISSUES.
- INSPECT CONDITION OF PRINCIPAL SPILLWAY AND RISER FOR EVIDENCE OF SPALLING, JOINT FAILURE, LEAKAGE, CORROSION, SUBSIDENCE/SINKHOLE FORMATION, AND OTHER ISSUES.
- INSPECT CONDITION OF ALL TRASH RACKS, ORIFICES, AND UNDERDRAINS FOR EVIDENCE OF CLOGGING, LEAKAGE, DEBRIS ACCUMULATION, AND OTHER ISSUES.
- INSPECT MAINTENANCE ACCESS TO ENSURE IT IS FREE OF WOODY VEGETATION AND CHECK TO SEE WHETHER VALVES, MANHOLES, AND LOCKS CAN BE OPENED AND OPERATED.
- INSPECT INTERNAL AND EXTERNAL SIDE SLOPES OF THE POND FOR EVIDENCE OF SPARSE VEGETATIVE COVER, EROSION, SLUMPING, OR SUBSIDENCE/SINKHOLE FORMATION, AND MAKE NEEDED REPAIRS IMMEDIATELY.
- INSPECT LOW-FLOW ORIFICES TWO TIMES PER YEAR.
- REMOVE TRASH AND FLOATABLES THAT TEND TO ACCUMULATE THE FOREBAY, MICRO-POOL, AND BOTTOM OF BASIN ANNUALLY.
- CLEANOUT THE POND EVERY 5 TO 7 YEARS OR WHEN INSPECTIONS INDICATE THAT 50% OF THE FOREBAY CAPACITY HAS BEEN FILLED.



OUTLET CONTROL STRUCTURE NO. 1

LEGEND

- EXISTING INDEX CONTOUR (660)
- EXISTING INTERMEDIATE CONTOUR
- EXISTING SUBJECT PROPERTY LINE
- EXISTING PROPERTY LINE
- EXISTING TRANSCO ROAD RIGHT-OF-WAY
- EXISTING RIGHT-OF-WAY
- EXISTING FENCE LINE
- EXISTING EDGE OF PAVEMENT
- EXISTING PAVEMENT LIMITS
- EXISTING EDGE OF GRAVEL
- EXISTING GRAVEL LIMITS
- EXISTING GUIDE RAIL
- EXISTING BUILDING
- EXISTING STRUCTURE
- EXISTING STORM PIPE (ST)
- EXISTING WATER LINE (W)
- EXISTING GAS LINE (G)
- EXISTING GAS LINE (BY OTHERS) (G)
- EXISTING OVERHEAD WIRE (OH-E)
- EXISTING UTILITY POLE
- EXISTING FIBER OPTIC LINE (UG-E)
- EXISTING UNDERGROUND ELECTRIC LINE (FO)
- EXISTING FENCE
- EXISTING TREE LINE
- EXISTING RIPRAP
- EXISTING HUC12 BOUNDARY
- EXISTING STREAM (BY OTHERS)
- EXISTING PEM WETLAND (BY OTHERS)
- EXISTING PFO WETLAND (BY OTHERS)
- EXISTING POW WETLAND (BY OTHERS)
- EXISTING PSS WETLAND (BY OTHERS)
- 50' OFFSET FROM STREAM/WETLAND
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED INDEX CONTOUR (660)
- PROPOSED INTERMEDIATE CONTOUR
- PROPOSED EDGE OF GRAVEL PAD
- PROPOSED FLAT PAD LIMITS
- PROPOSED BERM
- PROPOSED CHANNEL
- PROPOSED STORM PIPE
- PROPOSED RIPRAP APRON
- PROPOSED HEAD/ENDWALL (HW/EW)
- PROPOSED INLET (IN)
- PROPOSED MANHOLE (MH)
- PROPOSED OUTLET STRUCTURE
- PROPOSED CONCRETE PIPE ANCHOR
- PROPOSED ANTI-SEEP COLLAR
- PROPOSED PERMANENT EXCAVATED SPILLWAY
- PROPOSED STORM PIPE LABEL (PD-1)
- PROPOSED STRUCTURE LABEL (IN-1)
- PROPOSED UNDERDRAIN (UD)
- PROPOSED SOIL MEDIA
- PROPOSED S150 CHANNEL LINER
- PROPOSED P300 CHANNEL LINER
- PROPOSED P550 CHANNEL LINER
- PROPOSED POND LINER
- PROPOSED NAG SC250

REVISION RECORD

NO	DATE	DESCRIPTION

700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com

CEC Civil & Environmental Consultants, Inc.

TRANSCONTINENTAL GAS PIPE LINE, LLC
COMPRESSOR STATION 165
PITTSLYVANIA COUNTY, VIRGINIA

EXTENDED DETENTION POND NO. 1 DETAILS

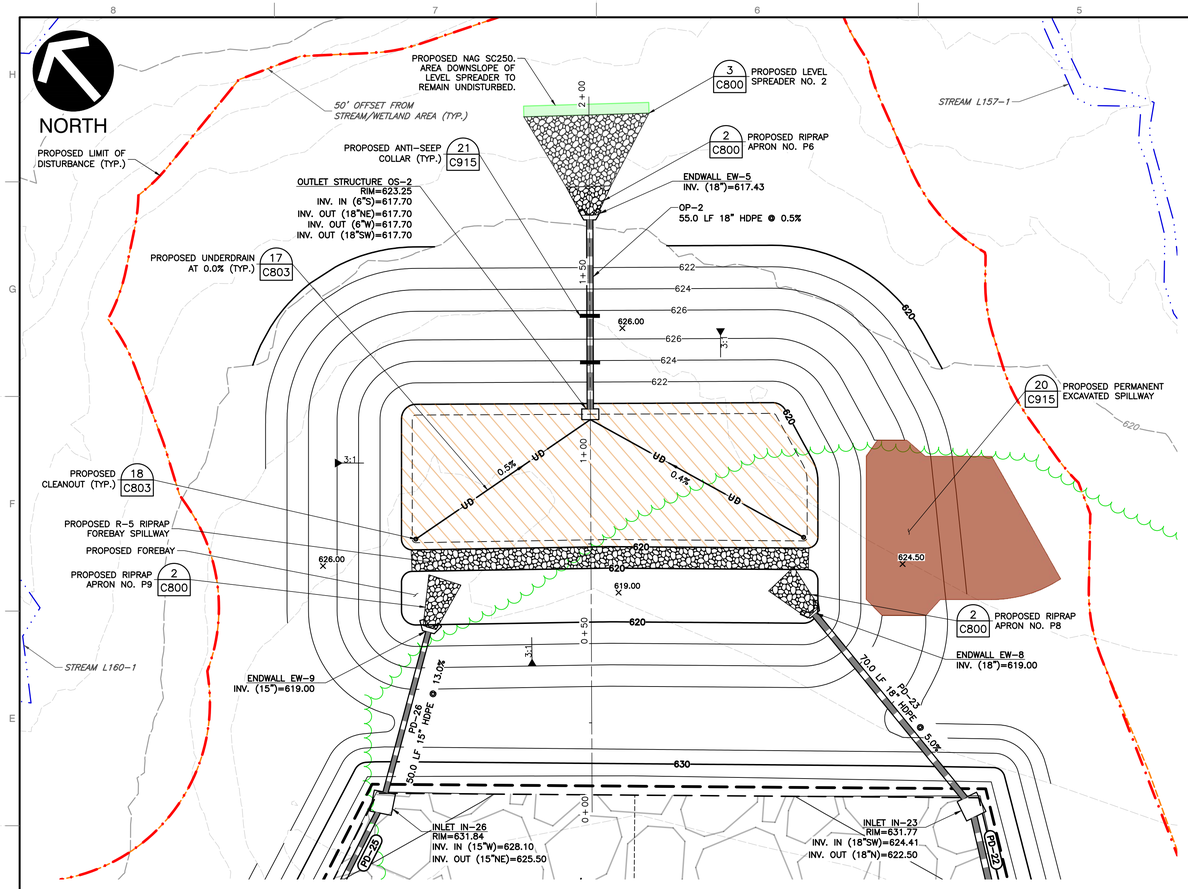
DRAWN BY:	JMP
CHECKED BY:	MEA
PROJECT NO:	341-132
APPROVED BY:	LCW
DATE:	MAY 2025
DWG SCALE:	1"=20'

COMMONWEALTH OF VIRGINIA
MICHAEL EDWARD ARCHER
Lic. No. 043994
PROFESSIONAL ENGINEER
6-2-2025

DRAWING NO.: **C416**

SHEET 28 OF 61

P:\340-000\341-132\-000\Dwg\000\341132-D01-C414-Pond Profiles.dwg[0416] LS(6/2/2025 - Interior) - JS, 6/3/2025 9:14 AM



EXTENDED DETENTION POND NO. 2
PLAN VIEW

SCALE IN FEET
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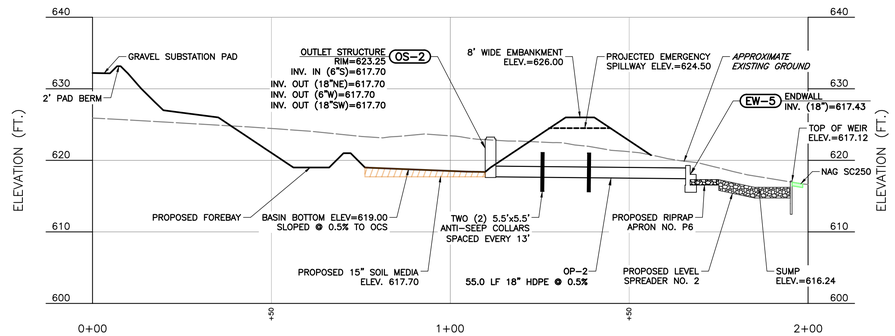

EXTENDED DETENTION POND NO. 2 PROFILE

SCALE H:1"=20'; V:1"=10'

SCALE IN FEET (HORIZONTAL)
0 20 40

SCALE IN FEET (VERTICAL)
0 10 20

EXTENDED DETENTION POND INSPECTION AND MAINTENANCE NOTES:

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LEGEND

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- EXISTING INTERMEDIATE CONTOUR
- EXISTING SUBJECT PROPERTY LINE
- EXISTING PROPERTY LINE
- EXISTING TRANSCO ROAD RIGHT-OF-WAY
- EXISTING RIGHT-OF-WAY
- EXISTING FENCE LINE
- EXISTING EDGE OF PAVEMENT
- EXISTING PAVEMENT LIMITS
- EXISTING EDGE OF GRAVEL
- EXISTING GRAVEL LIMITS
- EXISTING GUIDE RAIL
- EXISTING BUILDING
- EXISTING STRUCTURE
- EXISTING STORM PIPE
- EXISTING WATER LINE
- EXISTING GAS LINE
- EXISTING GAS LINE (BY OTHERS)
- EXISTING OVERHEAD WIRE
- EXISTING UTILITY POLE
- EXISTING FIBER OPTIC LINE
- EXISTING UNDERGROUND ELECTRIC LINE
- EXISTING FENCE
- EXISTING TREE LINE
- EXISTING RIPRAP
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- EXISTING STREAM (BY OTHERS)
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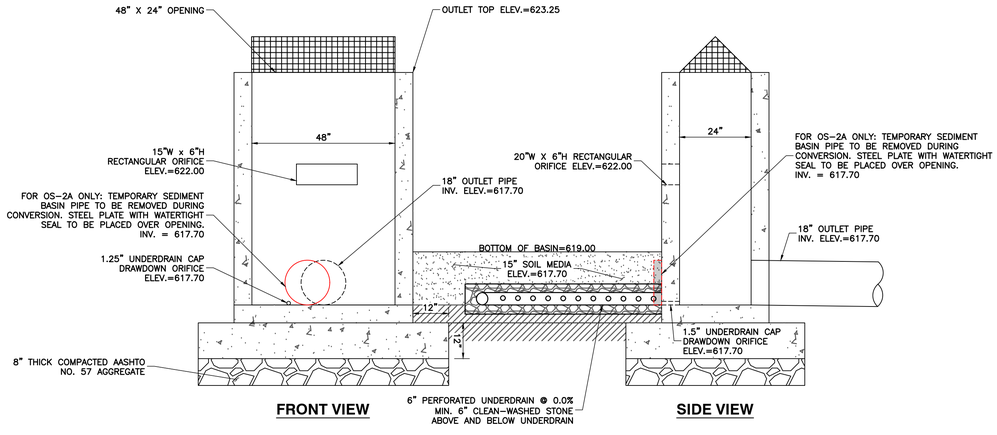
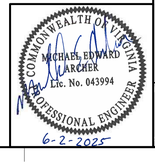
- EXISTING POW WETLAND (BY OTHERS)
- EXISTING PSS WETLAND (BY OTHERS)
- 50' OFFSET FROM STREAM/WETLAND
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED INDEX CONTOUR
- PROPOSED INTERMEDIATE CONTOUR
- PROPOSED EDGE OF GRAVEL PAD
- PROPOSED FLAT PAD LIMITS
- PROPOSED BERM
- PROPOSED CHANNEL
- PROPOSED STORM PIPE
- PROPOSED RIPRAP APRON
- PROPOSED HEAD/ENDWALL (HW/EW)
- PROPOSED INLET (IN)
- PROPOSED MANHOLE (MH)
- PROPOSED OUTLET STRUCTURE
- PROPOSED CONCRETE PIPE ANCHOR
- PROPOSED ANTI-SEEP COLLAR
- PROPOSED PERMANENT EXCAVATED SPILLWAY
- PROPOSED STORM PIPE LABEL
- PROPOSED STRUCTURE LABEL
- PROPOSED UNDERDRAIN
- PROPOSED SOIL MEDIA
- PROPOSED NAG SC250



OUTLET CONTROL STRUCTURE NO. 2



REVISION RECORD

NO	DATE	DESCRIPTION

700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com
Civil & Environmental Consultants, Inc.

TRANSCONTINENTAL GAS PIPE LINE, LLC
COMPRESSOR STATION 165
PITTSLYVANIA COUNTY, VIRGINIA

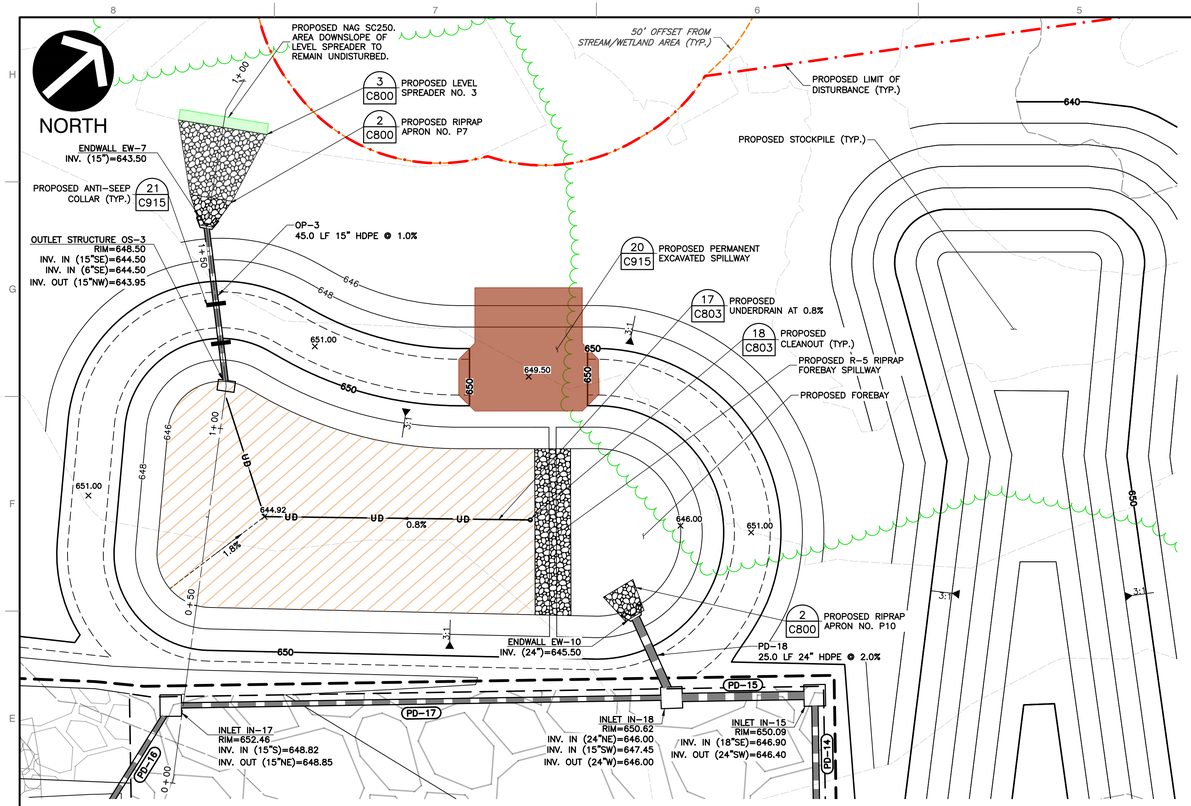
EXTENDED DETENTION POND NO. 2 DETAILS

DATE:	MAY 2025
DRAWN BY:	JMP
CHECKED BY:	MEA
DWG SCALE:	1"=20'
PROJECT NO:	341-132
APPROVED BY:	LCW

DRAWING NO.: **C417**

SHEET 29 OF 61

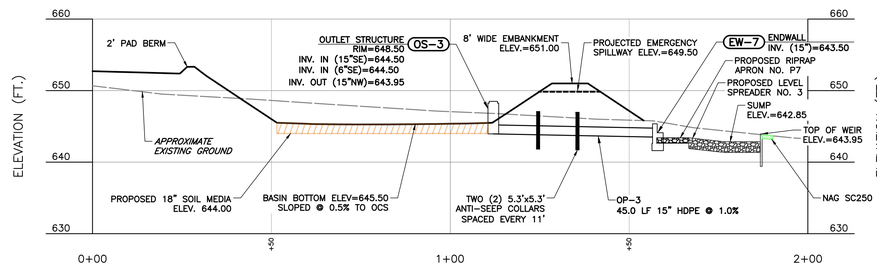
A:\340-000\341-132\-0400\Dwg\C101\341132-0101-0414-Pond Profiles.dwg[C417] 15:16 6/2/2025 - bhamm - LA 6/2/2025 8:13 AM



EXTENDED DETENTION POND NO. 3
PLAN VIEW

SCALE IN FEET

0 20 40



EXTENDED DETENTION POND NO. 3 PROFILE

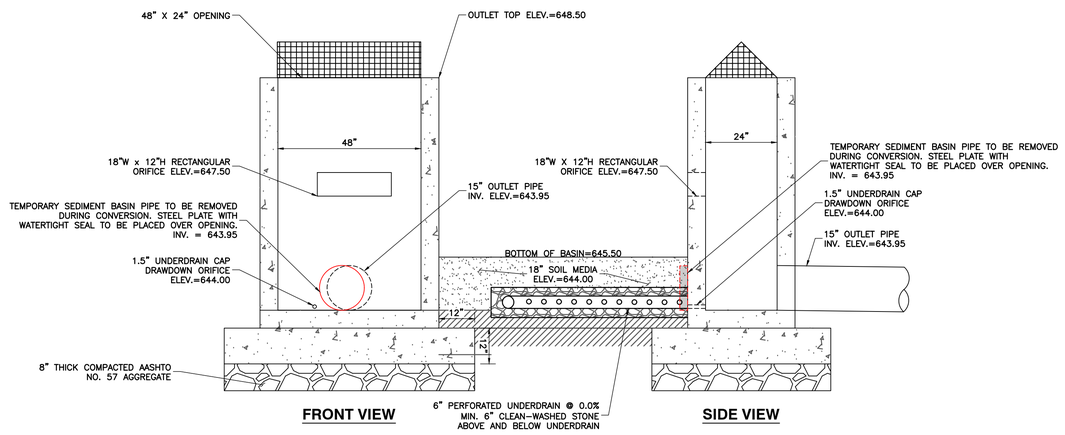
SCALE H:1"=20'; V:1"=10'

SCALE IN FEET (HORIZONTAL)

0 20 40

SCALE IN FEET (VERTICAL)

0 10 20



OUTLET CONTROL STRUCTURE NO. 3

EXTENDED DETENTION POND INSPECTION AND MAINTENANCE NOTES:

- MEASURE SEDIMENT ACCUMULATION IN LEVELS IN FOREBAY.
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LEGEND

- EXISTING INDEX CONTOUR (660)
- EXISTING INTERMEDIATE CONTOUR
- EXISTING SUBJECT PROPERTY LINE
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- EXISTING TRANSCO ROAD RIGHT-OF-WAY
- EXISTING RIGHT-OF-WAY
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- EXISTING EDGE OF PAVEMENT
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- 50' OFFSET FROM STREAM/WETLAND
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED INDEX CONTOUR (660)
- PROPOSED INTERMEDIATE CONTOUR
- PROPOSED EDGE OF GRAVEL PAD
- PROPOSED FLAT PAD LIMITS
- PROPOSED BERM
- PROPOSED EDGE OF UNPAVED DIRT ROAD
- PROPOSED EDGE OF UNPAVED GRAVEL ROAD
- PROPOSED EDGE OF PAVED ROAD
- PROPOSED GAS PIPELINE (G)
- PROPOSED FENCE
- PROPOSED TEMPORARY EXCAVATED SPILLWAY
- PROPOSED CHANNEL
- PROPOSED STORM PIPE
- PROPOSED RIPRAP APRON
- PROPOSED HEAD/ENDWALL (HW/EW)
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- PROPOSED UNDERDRAIN (UD)
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- PROPOSED NAG SC250

COMMONWEALTH OF VIRGINIA
MICHAEL EDWARD ARCHER
Lic. No. 043994
PROFESSIONAL ENGINEER
6-2-2025

REVISION RECORD

NO	DATE	DESCRIPTION

700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com
Civil & Environmental Consultants, Inc.

TRANSCONTINENTAL GAS PIPE LINE, LLC
COMPRESSOR STATION 165
PITTSLYVANIA COUNTY, VIRGINIA

EXTENDED DETENTION POND NO. 3 DETAILS

DRAWN BY:	JMP
CHECKED BY:	MEA
PROJECT NO:	341-132
APPROVED BY:	LCW
DATE:	MAY 2025
DWG SCALE:	1"=20'

DRAWING NO.: C418

SHEET 30 OF 61

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WILLIAMS COMPRESSOR STATION 165 SWM NARRATIVE

I. TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC (TRANSCO) IS PROPOSING THE CONSTRUCTION OF THE COMPRESSOR STATION 165 PROJECT LOCATED IN PITTSYLVANIA COUNTY, VIRGINIA. THE PROJECT BOUNDARY IS DIVIDED BY STATE ROUTE (S.R.) 692 (TRANSCO ROAD). THE OVERALL LIMIT OF DISTURBANCE (LOD) FOR THIS PROJECT IS 97.86 ACRES.

THE MAJORITY OF THE PROPOSED DEVELOPMENT WILL OCCUR NORTH OF TRANSCO ROAD. THIS PORTION OF THE PROJECT INCLUDES A PROPOSED COMPRESSOR STATION PAD, ELECTRICAL SUBSTATION PAD, LAUNCHER PAD, PERMANENT ACCESS ROADS, UTILITIES, AND STORMWATER BEST MANAGEMENT PRACTICES (BMPS). THE EXISTING GROUND COVER WITHIN THIS PORTION OF THE PROJECT IS PRIMARILY FOREST. THERE IS MINIMAL EXISTING DEVELOPMENT WITHIN THIS PORTION OF THE SITE AND IT IS LIMITED TO A GRAVEL DRIVEWAY, A DIRT TRAIL, AND AN ABANDONED HOUSE. SOILS WITHIN THIS PORTION OF THE PROJECT ARE MOSTLY HYDROLOGIC SOIL GROUP (HSG) B EXCEPT A SMALL AREA TO THE SOUTHEAST WHICH IS MADE UP OF HSG D SOILS. ACCORDING TO SOIL CLASSIFICATION INFORMATION COMPILED FROM USDA WEB SOIL SURVEY, THERE ARE TWO TYPES OF SOILS IN THIS PORTION OF THE PROJECT. A COPY OF THE USDA WEB SOIL SURVEY REPORT CAN BE FOUND IN ATTACHMENT 1. SLOPES WITHIN THE NORTHERN PORTION OF THE PROJECT ARE GENERALLY BETWEEN 2% AND 15%, AND THERE ARE NO STREAMS OR WETLANDS WITHIN THE CONFINES OF THE LOD. THESE AREAS HAVE BEEN PROTECTED FROM DEVELOPMENT AND THE APPROPRIATE 50' BOUNDARY OFFSET WAS USED WHEN DETERMINING THE LOD CORRIDOR ADJACENT TO AQUATIC RESOURCES. THE NORTHERN PORTION OF THE SITE DRAINS TO THE BANISTER RIVER–SHOCKOE CREEK WATERSHED (HUC 030101050203). THIS AREA OF THE SITE MAKES UP 27.33 ACRES OF THE TOTAL LOD.

THE AREA OF THE PROJECT SOUTH OF TRANSCO ROAD IS PRIMARILY MADE UP OF AN EXISTING TRANSCO FACILITY AND MAKES UP THE REMAINING 70.53 ACRES OF LOD. THE LAND COVER IN THIS PORTION OF THE SITE IS PRIMARILY EXISTING GRAVEL AND MAINTAINED GRASS, ALL OF WHICH IS TO REMAIN THE SAME THROUGHOUT THE DURATION OF CONSTRUCTION EXCEPT THE CONVERSION OF A 0.15–ACRE GRASS AREA WHICH WILL BE CONVERTED TO GRAVEL. THE SOUTHERN PORTION OF THE SITE DRAINS TO CHERRYSTONE CREEK WATERSHED (HUC 030101050104). DUE TO THE MINIMAL AMOUNT OF GRAVEL BEING ADDED TO THIS PORTION OF THE SITE, AND THE FACT THAT RUNOFF FROM THE LIMITED IMPROVED AREA WILL RESULT IN NO CHANGE IN OVERALL CURVE NUMBER, AND THE FLOW WILL LEAVE THE SITE AS SHEET FLOW, NO STORMWATER BMPS ARE PROPOSED WITHIN THIS WATERSHED AS A RESULT OF THIS PROJECT. ADDITIONALLY, WATER QUALITY CALCULATIONS HAVE BEEN COMPLETED FOR THIS AREA AS A RE–DEVELOPMENT ANALYSIS, AND ARE INCLUDED WITHIN THIS REPORT, BUT ONLY TAKES INTO ACCOUNT THE CHANGES WITHIN THIS WATERSHED AND DOES NOT ANALYZE THE EXISTING SITE FOR COMPLIANCE WITH WATER QUALITY CALCULATIONS AS THIS IS AN ALREADY BUILT AND IN–SERVICE FACILITY. CONFIRMING CALCULATIONS FOR WATER QUANTITY RELATIVE TO THE 0.15–ACRE CONVERSION AREA CAN BE FOUND IN ATTACHMENT 2. THERE ARE STREAMS AND WETLANDS LOCATED WITHIN THE LOD SOUTH OF TRANSCO ROAD.

THE PROPOSED PROJECT WILL HAVE PHASED LEVELS OF CONSTRUCTION IN ORDER TO ALLOW FOR TREE CLEARING TO OCCUR WITHIN THE TREE CLEARING WINDOW. THIS LIMITS THE DEVELOPMENT OF THE PROJECT IN PHASE 1 TO THE AREAS OF THE SITE WHICH ARE NOT CURRENTLY WOODED. THIS PORTION OF THE SITE DEVELOPMENT WILL BE TEMPORARY AND WILL ONLY EXIST UNTIL TREE CLEARING OCCURS AND CONSTRUCTION PROGRESSES TO PHASE 2. THE SECOND PHASE INCLUDES THE FULL DEVELOPMENT OF THE REMAINDER OF THE PROJECT. PHASE 1 INCLUDES THE DEVELOPMENT OF THE ENTIRE LAUNCHER PAD AND A PORTION OF THE COMPRESSOR AND SUBSTATION PADS. THE PADS WILL REMAIN EARTHEN IN PHASE 1 EXCEPT FOR THE AREAS EXPLICITLY SPECIFIED TO BE GRAVEL IN THE PLANS. IN PHASE 2, TREES WILL BE CLEARED, AND THE REMAINDER OF THE SUBSTATION AND COMPRESSOR PADS WILL BE BUILT. THE REMAINING AREAS OF THE PADS FOR PHASE 2, WHICH WERE PREVIOUSLY EARTHEN, WILL THEN BE STABILIZED WITH GRAVEL AND BROUGHT TO FINAL GRADE AND CONDITION.

II. STORMWATER ANALYSIS

THIS NARRATIVE PROVIDES DETAILED INFORMATION ON HOW THE PROPOSED STORMWATER MANAGEMENT METHODOLOGY FOR POST–CONSTRUCTION CONDITION IS IN FULL COMPLIANCE WITH THE VIRGINIA STATE REGULATIONS.

A. WATER QUALITY

THE SITE CONTAINS EXISTING IMPERVIOUS COVER, MOST OF WHICH WILL BE MODIFIED IN THE POST–CONSTRUCTION CONDITION AND THEREFORE CAN BE CLASSIFIED AS RE–DEVELOPMENT ACTIVITY. THE PROJECT SITE CROSSES TWO 6TH ORDER HYDROLOGIC UNIT CODE (HUC) 12 BOUNDARIES AS OUTLINED BELOW. THE PRE–DEVELOPMENT AND POST–DEVELOPMENT LAND COVER TOTAL ACREAGE FOR EACH 6TH ORDER BOUNDARY IS AS FOLLOWS:

HUC12 030101050203 (BANISTER RIVER–SHOCKOE CREEK WATERSHED)

PRE–REDEVELOPMENT LAND COVER					
	A SOILS	B SOILS	C SOILS	D SOILS	TOTALS
FOREST (ACRES)	–	7.56	–	–	7.56
MIXED OPEN (ACRES)	–	18.74	–	0.02	18.76
MANAGED TURF (ACRES)	–	–	–	–	0.00
IMPERVIOUS COVER (ACRES)	–	1.01	–	–	1.01
TOTALS	–	27.31	–	0.02	27.33

POST–DEVELOPMENT LAND COVER					
	A SOILS	B SOILS	C SOILS	D SOILS	TOTALS
FOREST (ACRES)	–	–	–	–	0.00
MIXED OPEN (ACRES)	–	14.12	–	0.02	14.14
MANAGED TURF (ACRES)	–	0.23	–	–	0.23
IMPERVIOUS COVER (ACRES)	–	12.96	–	–	12.96
TOTALS	–	27.31	–	0.02	27.33

HUC12 030101050204 (CHERRYSTONE CREEK WATERSHED)

PRE–REDEVELOPMENT LAND COVER					
	A SOILS	B SOILS	C SOILS	D SOILS	TOTALS
FOREST (ACRES)	–	–	–	–	0.00
MIXED OPEN (ACRES)	–	0.15	–	–	0.15
MANAGED TURF (ACRES)	–	–	–	–	0.00
IMPERVIOUS COVER (ACRES)	–	–	–	–	0.00
TOTALS	0.00	0.15	0.00	0.00	0.15

POST–DEVELOPMENT LAND COVER					
	A SOILS	B SOILS	C SOILS	D SOILS	TOTALS
FOREST (ACRES)	–	–	–	–	0.00
MIXED OPEN (ACRES)	–	–	–	–	0.00
MANAGED TURF (ACRES)	–	–	–	–	0.00
IMPERVIOUS COVER (ACRES)	–	0.15	–	–	0.15
TOTALS	0.00	0.15	0.00	0.00	0.15

WATER QUALITY RESULTS SUMMARY	
WATERSHED	TOTAL PHOSPHORUS (TP) LOAD REDUCTION REQUIRED (LB/YR)
030101050203 BANISTER RIVER–SHOCKOE CREEK	8.41
030101050204 CHERRYSTONE CREEK	0.09

DUE TO THE COMPLEXITY OF THE PROJECT, ITS CLASSIFICATION AS A HOT SPOT, AND THE FACT THAT RE–DEVELOPMENT AND SOIL TESTING HAS CONFIRMED THAT INFILTRATION ON SITE IS EITHER UNDESIRABLE OR NOT POSSIBLE, MITIGATION CREDITS WILL BE PURCHASED TO OFFSET THE INCREASE IN PHOSPHOROUS LOADING FOR THE PROJECT.

B. WATER QUANTITY

STORMWATER ANALYSIS AND BMP DESIGNS WERE PERFORMED TO ENSURE THAT VIRGINIA STATE REGULATION 9VAC25–875–600 HAS BEEN SATISFIED, SPECIFICALLY:

1. CONCENTRATED STORMWATER DISCHARGES THAT ARE RELEASED INTO A NATURAL OR MANMADE STORMWATER CONVEYANCE SYSTEM WILL BE IN COMPLIANCE WITH 9VAC25–875–600.B (CHANNEL PROTECTION) AND 9VAC25–875–600.C (FLOOD PROTECTION).
2. IF THERE IS NOT A DEFINED RECEIVING CHANNEL, IT WILL BE DEMONSTRATED THAT EITHER EXISTING SHEET FLOW CONDITIONS ARE MAINTAINED FOLLOWING CONSTRUCTION OR THAT THE PROPOSED OUTLET STRUCTURE RE–DISTRIBUTES DISCHARGE FOR THE 10–YEAR STORM AS SHEET FLOW; A SHEET FLOW DISCHARGE CONDITION FOR A PROPOSED OUTLET STRUCTURE (I.E. SPILLWAY, LEVEL SPREADER, PLUNGE POOL, RIPRAP APRON, ETC.) IS DEFINED AS LESS THAN OR EQUAL TO 0.1–FT OF HEAD ON THE OUTLET STRUCTURE. INCREASED VOLUMES OF SHEET FLOW WILL BE EVALUATED IN ACCORDANCE WITH 9VAC25–875–600.D.

SITE RUNOFF ANALYSIS

THE HYDROLOGY AND HYDRAULICS (H&H) ANALYSIS WAS PERFORMED IN ACCORDANCE WITH TR–55, URBAN HYDROLOGY FOR SMALL WATERSHEDS. THE TR–55 CALCULATIONS WERE MODELED USING HYDROCAD.

THE PROJECT SITE IS LOCATED IN THE HUC (12) 030101050203 (BANISTER RIVER–SHOCKOE CREEK WATERSHED) AND THE HUC (12) 030101050104 (CHERRYSTONE CREEK WATERSHED). RUNOFF FROM THE SITE IS EITHER CONCENTRATED RUNOFF TO MANMADE STORMWATER CONVEYANCE SYSTEM, NATURAL STORMWATER CONVEYANCE SYSTEM, OR SHEET FLOW. THE PROJECT SITE WAS SUB–DIVIDED INTO FIVE (5) SUB–DRAINAGE AREAS: POA 001, 002, 003, 004, AND 005. POA 001 – P01 004 ARE LOCATED IN THE BASINSTER–RIVER–SHOCKOE CREEK WATERSHED. POA 005 IS LOCATED IN THE CHERRYSTONE CREEK WATERSHED. THE CHERRYSTONE CREEK WATERSHED DRAINAGE WAS NOT DESIGNED FOR WATER QUANTITY INCREASES, AS A QUANTITATIVE INCREASE WILL NOT OCCUR BASED ON THE CALCULATION OF THE WEIGHTED CURVE NUMBER FROM PRE–DEVELOPMENT TO POST–DEVELOPMENT AND A LACK OF CHANGE IN THE TIME OF CONCENTRATION WITHIN THIS DRAINAGE AREA. REFER TO THE SWPPP PACKAGE CALCULATIONS FOR DRAINAGE AREA MAPS AND MORE INFORMATION PERTAINING TO THE STORMWATER ANALYSIS SUMMARIZED IN THE FOLLOWING SECTIONS.

DISCHARGE POINT	WATERSHED	DISCHARGE TO
001	030101050203	N/A – SHEET FLOW
002	030101050203	SHEET FLOW VIA LEVEL SPREADER TO E2–L138–VA
003	030101050203	SHEET FLOW VIA LEVEL SPREADER TO E2–L158–VA & E2–L159–VA
004	030101050203	SHEET FLOW VIA LEVEL SPREADER TO E2–L161–VA
005	030101050104	N/A – SHEET FLOW

POA 001 AND P005 ARE CONSIDERED SHEET FLOW WHEN FLOW LEAVES THE PROJECT SITE. PER TR–55 1986, FLOW WITH VERY SHALLOW DEPTH OF ABOUT 0.1–FT IS CONSIDERED AS SHEET FLOW.

FOR THE DRAINAGE AREAS THAT DISCHARGE TO NATURAL STORMWATER CONVEYANCE SYSTEMS, ENERGY BALANCE EQUATION IS USED FOR CHANNEL PROTECTION ANALYSIS (1–YEAR STORM). BASED ON THE ANALYSIS, STORMWATER BMPS ARE IMPLEMENTED FOR PEAK FLOW RATE CONTROL TO MEET 9VAC25–875–600.B AND C REQUIREMENTS.

FOR THE DRAINAGE AREA DISCHARGES FROM THE SITE OCCURS AS SHEET FLOW, THE RESULT INDICATES THAT FOR THE 2– AND 10–YEAR STORM EVENTS, THERE ARE NO INCREASE IN PEAK FLOW RATES OR VOLUMES IN THE WATERSHED. THEREFORE, THERE ARE NO INCREASED VOLUMES OF SHEET FLOW THAT WILL CAUSE OR CONTRIBUTE TO EROSION, SEDIMENTATION, OR FLOODING OF DOWN GRADIENT PROPERTIES OR RESOURCES, AND THE REQUIREMENTS OF 9VAC25–875–600.D ARE MET.

WATER QUANTITY RESULT SUMMARIES

BASED ON THE RESULTS PRESENTED IN THE SUMMARY TABLE BELOW, THE PROJECT SATISFIES THE APPLICABLE VIRGINIA STATE STORMWATER QUANTITY REGULATIONS.

POINT OF ANALYSIS	q1 POST (CFS)	q1 PRE–SITE (CFS)	q1 pre–offsite (CFS)	Rv1pre,site (CF)	Rv1post,site (CF)
001	0.47	0.02	0.46	197	151
002	1.35	1.72	1.05	14,339	62,687
003	0.71	1.05	0.45	9,025	28,046
004	0.23	0.83	0.23	2,786	18,719

POINT OF ANALYSIS	Q1–YR DEVELOPED (CFS)	Q1–YR FOREST (CFS)	Q1–YR PRE–DEVELOPED (CFS)	Rv1–YR DEVELOPED (CF)	Rv1–YR FOREST (CF)
001	0.01	0.02	0.01	151	171
002	0.38	1.72	0.42	62,687	7,796
003	0.43	1.05	0.26	28,046	4,907
004	0.16	0.83	0.06	18,719	1,039

COMMONWEALTH OF VIRGINIA
MICHAEL EDWARD ARCHER
Lic. No. 043994
PROFESSIONAL ENGINEER
6-2-2025

REVISION RECORD

NO	DATE	DESCRIPTION

700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com
Civil & Environmental Consultants, Inc.

TRANSCONTINENTAL GAS PIPE LINE, LLC
COMPRESSOR STATION 165
PITTSLYVANIA COUNTY, VIRGINIA

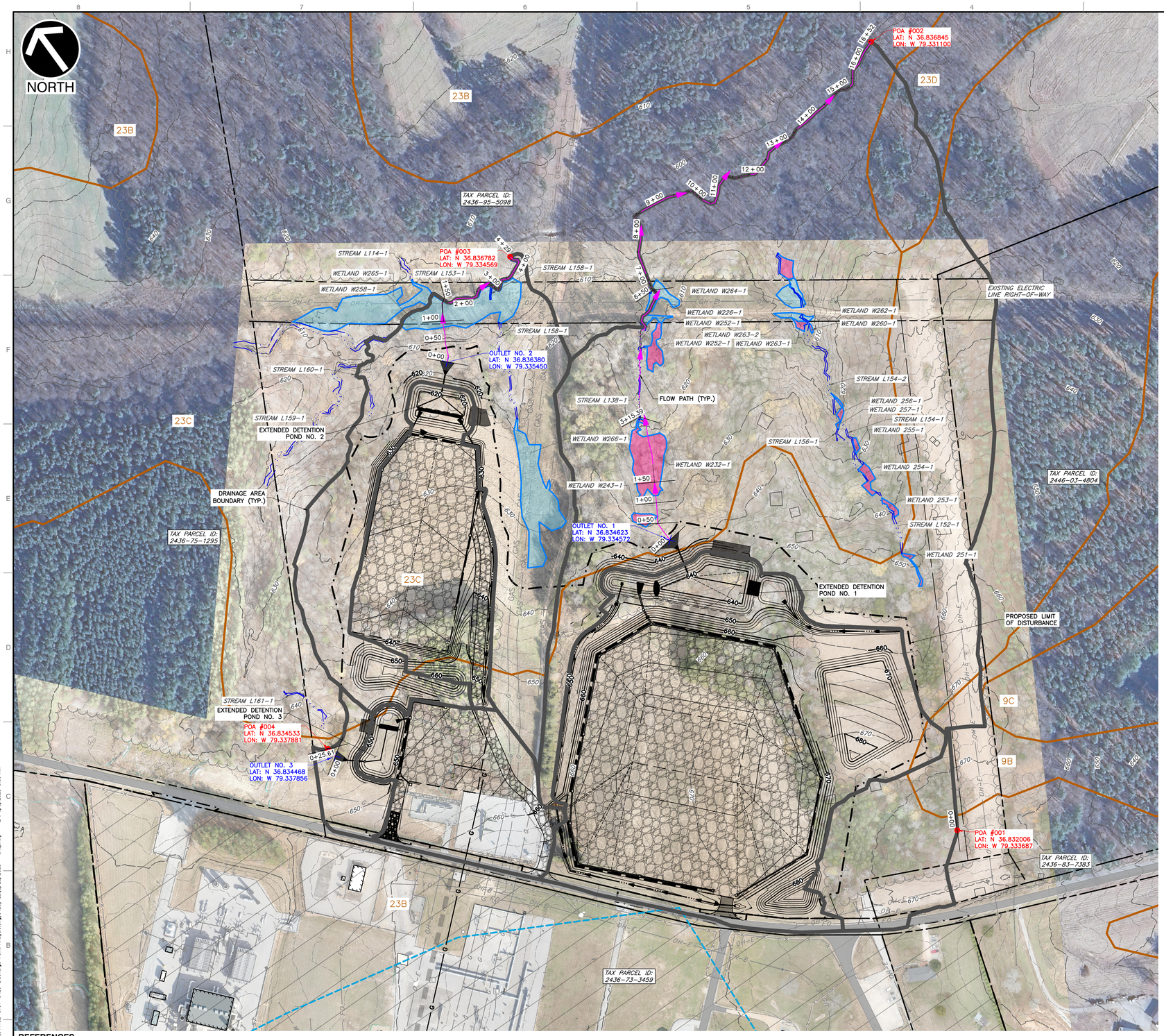
SWM NARRATIVE

DRAWN BY:	JMP
CHECKED BY:	MEA
DATE:	MAY 2025
DWG SCALE:	N/A
PROJECT NO:	341-132
APPROVED BY:	LCW

DRAWING NO.: C419

SHEET 31 OF 61

P:\340-000\341-132\-00CAD\Dwg\C419\341132-C419-SWM Narrative.dwg(C419) LS(6/2/2025 - Unplotted) - LP: 6/2/2025 8:15 AM



REFERENCES

1. EXISTING CONTOURS ARE A COMBINATION OF TOPOGRAPHY DERIVED FROM UNMANNED AERIAL LIDAR DATA AND SUPPLEMENTAL FIELD SURVEY DATA COLLECTED BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC. (CEC) IN JUNE AND DECEMBER 2024 WITH SUPPLEMENTED CONTOURS DERIVED FROM FROM VIRGINIA GIS CLEARINGHOUSE REST SERVICES – VIRGINIA GEOGRAPHIC INFORMATION NETWORK (VGIN), DATED 2018.
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6. EXISTING PARCEL LINES DERIVED FROM PUBLICLY AVAILABLE PITTSYLVANIA COUNTY OPEN DATA, ACCESSED APRIL 2024.

LEGEND

- EXISTING INDEX CONTOUR
- EXISTING INTERMEDIATE CONTOUR
- EXISTING SUBJECT PROPERTY LINE
- EXISTING PROPERTY LINE
- EXISTING TRANSCO ROAD RIGHT–OF–WAY
- EXISTING RIGHT–OF–WAY
- EXISTING FENCE LINE
- EXISTING EDGE OF PAVEMENT
- EXISTING PAVEMENT LIMITS
- EXISTING EDGE OF GRAVEL
- EXISTING GRAVEL LIMITS
- EXISTING GUIDE RAIL
- EXISTING BUILDING
- EXISTING STRUCTURE
- EXISTING STORM PIPE
- EXISTING WATER LINE
- EXISTING GAS LINE
- EXISTING GAS LINE (BY OTHERS)
- EXISTING OVERHEAD WIRE
- EXISTING UTILITY POLE
- EXISTING FIBER OPTIC LINE
- EXISTING UNDERGROUND ELECTRIC LINE
- EXISTING FENCE
- EXISTING TREE LINE
- EXISTING RIPRAP
- EXISTING HUC12 BOUNDARY
- EXISTING STREAM (BY OTHERS)
- EXISTING PEM WETLAND (BY OTHERS)
- EXISTING PFO WETLAND (BY OTHERS)
- EXISTING POW WETLAND (BY OTHERS)
- EXISTING PSS WETLAND (BY OTHERS)
- PROPOSED LIMIT OF DISTURBANCE
- SOIL BOUNDARY
- 23B SOIL ID
- PROPOSED INDEX CONTOUR
- PROPOSED INTERMEDIATE CONTOUR
- PROPOSED EDGE OF GRAVEL PAD
- PROPOSED FLAT PAD LIMITS
- PROPOSED BERM
- PROPOSED EDGE OF UNPAVED DIRT ROAD
- PROPOSED EDGE OF UNPAVED GRAVEL ROAD
- PROPOSED EDGE OF PAVED ROAD
- PROPOSED CHANNEL
- PROPOSED STORM PIPE
- PROPOSED RIPRAP APRON
- DRAINAGE AREA BOUNDARY
- POINT OF ANALYSIS
- FLOW PATH

SCALE IN FEET
0 120 240

COMMONWEALTH OF VIRGINIA
MICHAEL EDWARD ARCHER
Lic. No. 043994
PROFESSIONAL ENGINEER
6-2-2025

REVISION RECORD

NO	DATE	DESCRIPTION

700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com
Civil & Environmental Consultants, Inc.

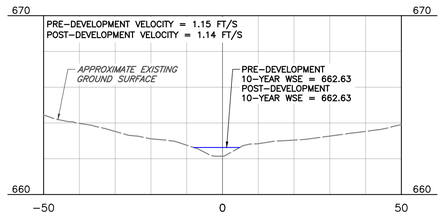
TRANSCONTINENTAL GAS PIPE LINE, LLC
COMPRESSOR STATION 165
PITTSLYVANIA COUNTY, VIRGINIA

DISCHARGE POINT ANALYSIS

DATE:	MAY 2025
DWG SCALE:	1"=120'
PROJECT NO:	341-132
DRAWN BY:	JMP
CHECKED BY:	MEA
APPROVED BY:	LCW

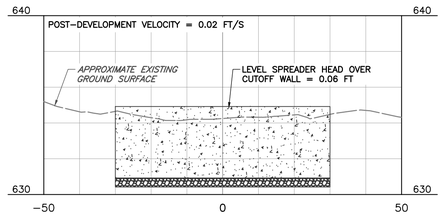
DRAWING NO.: C420
SHEET 32 OF 61

P:\340-005\341-132\-CAD\Dwg\C101\341132-C101-C420-Discharge Point Analysis.dwg(C420) LS:5/28/2025 - kheaver - LP: 6/3/2025 8:39 AM



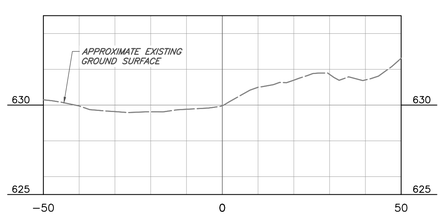
POA 001
STA 0+00

NOTE: THERE IS NO INCREASE IN NORMAL DEPTH BETWEEN THE PRE-DEVELOPMENT AND POST-DEVELOPMENT CONDITIONS. VELOCITY IS REDUCED FROM PRE TO POST DEVELOPMENT.

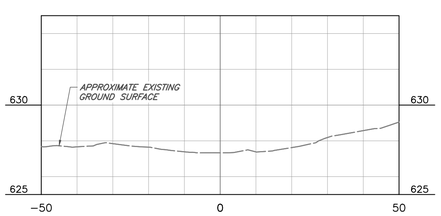


POA 002
STA 0+00

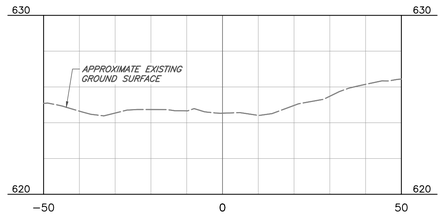
NOTE: LEVEL SPREADER HEAD OVER CUTOFF WALL IS LESS THAN 0.1 FT AS REQUIRED BY THE VIRGINIA STORMWATER MANAGEMENT HANDBOOK. VELOCITY OVER CUTOFF WALL IS MINIMAL AND WILL BE PROTECTED DOWN SLOPE WITH NORTH AMERICAN GREEN SC250.



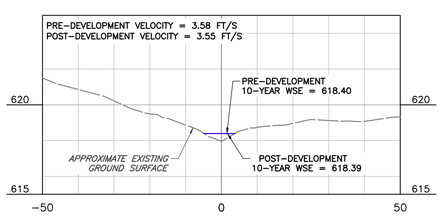
POA 002
STA 0+50



POA 002
STA 1+00

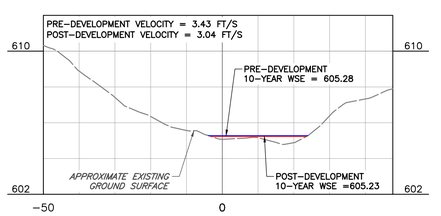


POA 002
STA 1+50



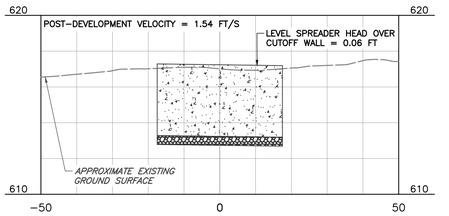
POA 002
STA 3+15.39 (L138-1 HEADWATER)

NOTE: NORMAL DEPTH AND VELOCITY ARE REDUCED FROM PRE-DEVELOPMENT TO POST-DEVELOPMENT CONDITIONS. NORMAL DEPTH IS CONTAINED WITHIN EXISTING CHANNEL.



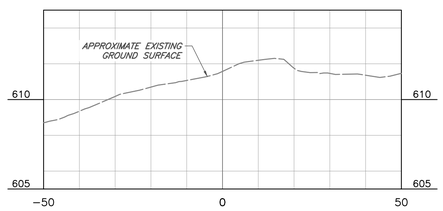
POA 002
STA 6+50 (L134-1 HEADWATER)

NOTE: NORMAL DEPTH AND VELOCITY ARE REDUCED FROM PRE-DEVELOPMENT TO POST-DEVELOPMENT CONDITIONS.

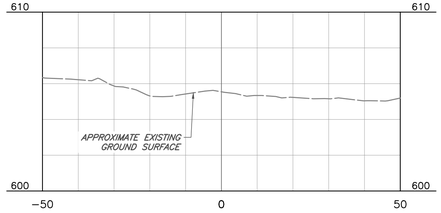


POA 003
STA 0+00

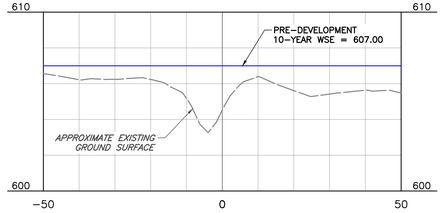
NOTE: LEVEL SPREADER HEAD OVER CUTOFF WALL IS LESS THAN 0.1 FT AS REQUIRED BY THE VIRGINIA STORMWATER MANAGEMENT HANDBOOK., VELOCITY OVER CUTOFF WALL IS MINIMAL AND WILL BE PROTECTED WITH THE AMERICAN GREEN SC250.



POA 003
STA 0+50

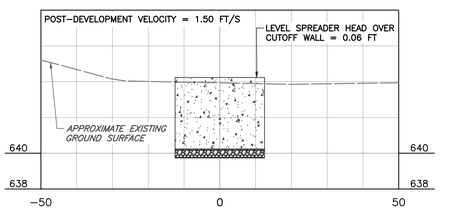


POA 003
STA 1+00



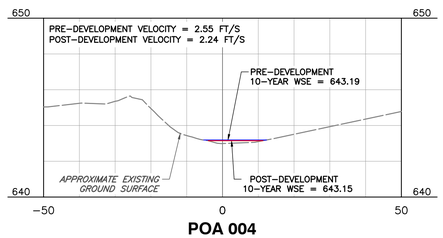
POA 003
STA 1+50

NOTE: EXISTING CHANNEL FLOW EXCEEDS BANK FULL ELEVATION.



POA 004
STA 0+00

NOTE: LEVEL SPREADER HEAD OVER CUTOFF WALL IS LESS THAN 0.1 FT AS REQUIRED BY THE VIRGINIA STORMWATER MANAGEMENT HANDBOOK., VELOCITY OVER CUTOFF WALL IS MINIMAL AND WILL BE PROTECTED WITH THE AMERICAN GREEN SC250.



POA 004
STA 0+25.61

NOTE: NORMAL DEPTH AND VELOCITY ARE REDUCED FROM PRE-DEVELOPMENT TO POST-DEVELOPMENT CONDITIONS.

LEGEND

- APPROXIMATE EXISTING GROUND SURFACE
- PRE-DEVELOPMENT 10-YEAR WATER SURFACE ELEVATION (WSE)
- POST-DEVELOPMENT 10-YEAR WATER SURFACE ELEVATION (WSE)
- PROPOSED LEVEL SPREADER

REFERENCES

1. EXISTING CONTOURS ARE A COMBINATION OF TOPOGRAPHY DERIVED FROM UNMANNED AERIAL LIDAR DATA AND SUPPLEMENTAL FIELD SURVEY DATA COLLECTED BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC. (CEC) IN JUNE AND DECEMBER 2024 WITH SUPPLEMENTED CONTOURS DERIVED FROM FROM VIRGINIA GIS CLEARINGHOUSE REST SERVICES – VIRGINIA GEOGRAPHIC INFORMATION NETWORK (VGIN), DATED 2018.
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6. EXISTING PARCEL LINES DERIVED FROM PUBLICLY AVAILABLE PITTSYLVANIA COUNTY OPEN DATA, ACCESSED APRIL 2024.

SCALE IN FEET (HORIZONTAL)
0 20 40

SCALE IN FEET (VERTICAL)
0 4 8

COMMONWEALTH OF VIRGINIA
MICHAEL EDWARD ARCHER
Lic. No. 043994
PROFESSIONAL ENGINEER
6-2-2025

REVISION RECORD

NO	DATE	DESCRIPTION

700 Cherrington Parkway
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www.cecinc.com

Civil & Environmental Consultants, Inc.

TRANSCONTINENTAL GAS PIPE LINE, LLC
COMPRESSOR STATION 165
PITTSLYVANIA COUNTY, VIRGINIA

DISCHARGE POINT
ANALYSIS CROSS SECTIONS

DATE:	MAY 2025
DRAWN BY:	JMP
CHECKED BY:	MEA
DWG SCALE:	AS SHOWN
PROJECT NO:	341-132
APPROVED BY:	LCW

DRAWING NO.: C421

SHEET 33 OF 61

P:\340-005\341-132\340D\Dwg\DSY\341132-DSY-C420-Discharge Point Analysis.dwg[C421] LS(5/28/2025 - khayes) - LP: 6/3/2025 8:17 AM

NORTH

C702

C701

TAX PARCEL ID: 2436-63-4849

TAX PARCEL ID: 2436-53-9983

TAX PARCEL ID: 2436-75-1295

TAX PARCEL ID: 2436-95-5098

TAX PARCEL ID: 2436-73-3459

TAX PARCEL ID: 2436-72-5208

TAX PARCEL ID: 2436-83-7393

TAX PARCEL ID: 2436-82-8144

TAX PARCEL ID: 2436-80-3032

TAX PARCEL ID: 2446-03-4804

PROPOSED LIMIT OF DISTURBANCE (TYP.)

50' OFFSET FROM STREAM/WETLAND AREA (TYP.)

HUC12: 050102060203 BANISTER RIVER-SHOUSE CREEK

HUC12: 050102060104 CHERRYSTONE CREEK

TRANSCO ROAD

PROPOSED TRAVEL LANE

PROPOSED GAS PIPELINE (TYP.)

EXISTING FIBER OPTIC LINE (TYP.)

EXISTING FENCE (TYP.)

EXISTING UTILITY LINE (TYP.)

EXISTING UTILITY POLE (TYP.)

EXISTING STORM PIPE (TYP.)

EXISTING PROPERTY LINE (TYP.)

EXISTING STREAM (TYP.)

EXISTING GAS LINE (TYP.)

PROPOSED ACCESS ROAD NO. 3

PROPOSED EXTENDED DETENTION POND NO. 3

PROPOSED STOCKPILE

PROPOSED GRAVEL SUBSTATION PAD

PROPOSED EXTENDED DETENTION POND NO. 2

PROPOSED LEVEL SPREADER (TYP.)

PROPOSED RIPRAP APRON (TYP.)

PROPOSED GRAVEL LAUNCHER PAD

PROPOSED RIPRAP APRON (TYP.)

PROPOSED ACCESS ROAD NO. 2

PROPOSED MANAGED TURF POND ACCESS ROAD

PROPOSED GRAVEL COMPRESSOR PAD

PROPOSED EXTENDED DETENTION POND NO. 1

PROPOSED PERMANENT EXCAVATED SPILLWAY (TYP.)

PROPOSED STORM PIPE (TYP.)

PROPOSED CHANNEL (TYP.)

PROPOSED CULVERT (TYP.)

PROPOSED ACCESS ROAD NO. 1

PROPOSED STOCKPILE

PROPOSED BRUSH (TYP.)

EXISTING STORMWATER BASIN

STREAM L085-1
STREAM L166-1
STREAM L086-1
STREAM L087-1
STREAM L164-1
STREAM L165-1
STREAM L163-1
STREAM L161-1
STREAM L159-1
STREAM L160-1
STREAM L153-1
STREAM L114-1
STREAM L158-1
STREAM L157-1
STREAM L134-1
STREAM L139-1
STREAM L156-1
STREAM L155-1
STREAM L154-1
STREAM L154-2
STREAM L152-1

WETLAND W282-1
WETLAND W282-2
WETLAND W284-1
WETLAND W279-1
WETLAND W279-2
WETLAND W285-1
WETLAND W166-1
WETLAND W278-1
WETLAND W148-3
WETLAND W148-4
WETLAND W148-2
WETLAND W277-1
WETLAND W280-1
WETLAND W280-2
WETLAND W276-1
WETLAND W164-2
WETLAND W281-1
WETLAND W275-1
WETLAND W168-1
WETLAND W270-1
WETLAND W273-1
WETLAND W271-2
WETLAND W267-1
WETLAND W147-3
WETLAND W295-1
WETLAND W147-1
WETLAND W147-2
WETLAND W167-1
WETLAND W271-1
WETLAND W283-1
WETLAND W265-1
WETLAND W266-2
WETLAND W226-1
WETLAND W252-2
WETLAND W252-1
WETLAND W243-1
WETLAND W232-1
WETLAND W262-2
WETLAND W264-1
WETLAND W263-2
WETLAND W263-1
WETLAND W260-1
WETLAND W262-1
WETLAND W256-1
WETLAND W257-1
WETLAND W255-1
WETLAND W254-1
WETLAND W253-1
WETLAND W251-1

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SCALE IN FEET
0 150 300

LEGEND

- EXISTING INDEX CONTOUR (660)
- EXISTING INTERMEDIATE CONTOUR
- EXISTING SUBJECT PROPERTY LINE
- EXISTING PROPERTY LINE
- EXISTING TRANSCO ROAD RIGHT–OF–WAY
- EXISTING RIGHT–OF–WAY
- EXISTING FENCE LINE
- EXISTING EDGE OF PAVEMENT
- EXISTING PAVEMENT LIMITS
- EXISTING EDGE OF GRAVEL
- EXISTING GRAVEL LIMITS
- EXISTING GUIDE RAIL
- EXISTING BUILDING
- EXISTING STRUCTURE
- EXISTING STORM PIPE (ST)
- EXISTING WATER LINE (W)
- EXISTING GAS LINE (G)
- EXISTING GAS LINE (BY OTHERS) (G)
- EXISTING OVERHEAD WIRE (OH–E)
- EXISTING UTILITY POLE
- EXISTING FIBER OPTIC LINE (UG–E)
- EXISTING UNDERGROUND ELECTRIC LINE (FO)
- EXISTING FENCE
- EXISTING TREE LINE
- EXISTING RIPRAP
- EXISTING HUC12 BOUNDARY
- EXISTING STREAM (BY OTHERS)
- EXISTING PEM WETLAND (BY OTHERS)
- EXISTING PFO WETLAND (BY OTHERS)
- EXISTING POW WETLAND (BY OTHERS)
- EXISTING PSS WETLAND (BY OTHERS)
- 50' OFFSET FROM STREAM/WETLAND
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED INDEX CONTOUR (660)
- PROPOSED INTERMEDIATE CONTOUR
- PROPOSED EDGE OF GRAVEL PAD
- PROPOSED FLAT PAD LIMITS
- PROPOSED BERM
- PROPOSED EDGE OF UNPAVED GRAVEL ROAD
- PROPOSED EDGE OF PAVED ROAD
- PROPOSED GAS PIPELINE (G)
- PROPOSED FENCE
- PROPOSED PERMANENT EXCAVATED SPILLWAY
- PROPOSED CHANNEL
- PROPOSED STORM PIPE
- PROPOSED RIPRAP APRON
- PROPOSED UNDERDRAIN (UD)
- PROPOSED SOIL MEDIA
- PROPOSED S150 CHANNEL LINER
- PROPOSED P300 CHANNEL LINER
- PROPOSED P550 CHANNEL LINER
- BRUSH LAND COVER (ANALYZED AS WOODS, GOOD)
- BRUSH LAND COVER (DECOMPACTED, ANALYZED AS WOODS, GOOD)

REVISION RECORD

NO	DATE	DESCRIPTION

Civil & Environmental Consultants, Inc.
700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com

TRANSCONTINENTAL GAS PIPE LINE, LLC
COMPRESSOR STATION 165
PITTSLVYANIA COUNTY, VIRGINIA

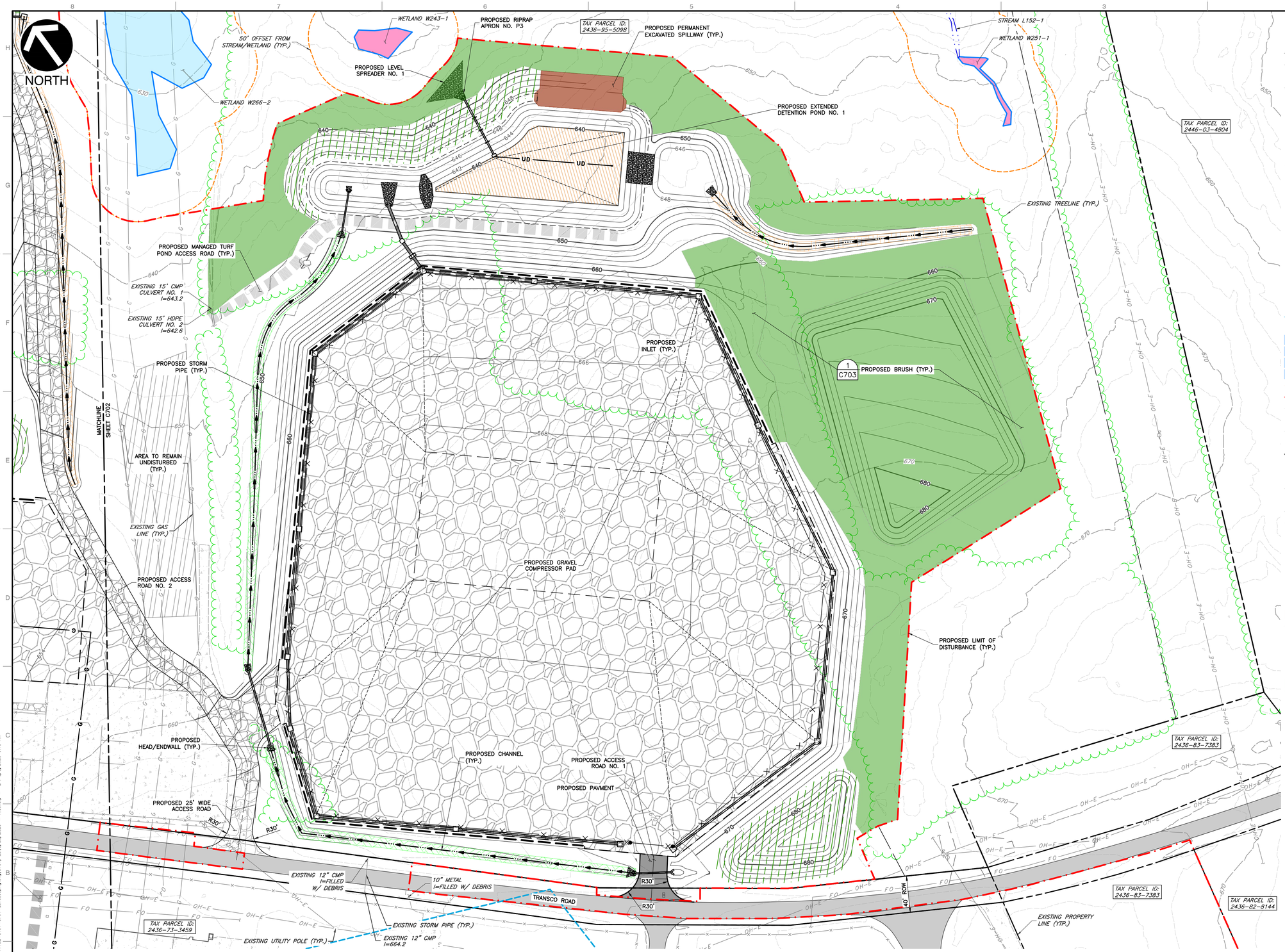
OVERALL LANDSCAPING PLAN

DATE:	MAY 2025
DWG SCALE:	1"=150'
PROJECT NO:	341-132
DRAWN BY:	JMP
CHECKED BY:	MEA
APPROVED BY:	LCW

COMMONWEALTH OF VIRGINIA
MICHAEL EDWARD ARCHER
Lic. No. 043994
PROFESSIONAL ENGINEER
6-2-2025

DRAWING NO.: C700
SHEET 34 OF 61

P:\341-001\341-1321-DA01\dwg\CIVIL\341132-CIV01-C700-Landscaping Overall.dwg[C700] LS(5/28/2025 - Spyder) - LP: 6/3/2025 9:18 AM



LEGEND

- EXISTING INDEX CONTOUR
- EXISTING INTERMEDIATE CONTOUR
- EXISTING SUBJECT PROPERTY LINE
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SCALE IN FEET
0 50 100

COMMONWEALTH OF VIRGINIA
MICHAEL EDWARD ARCHER
Lic. No. 043994
PROFESSIONAL ENGINEER
6-2-2025

REVISION RECORD

NO	DATE	DESCRIPTION

700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com
Civil & Environmental Consultants, Inc.

TRANSCONTINENTAL GAS PIPE LINE, LLC
COMPRESSOR STATION 165
PITTSLVYANIA COUNTY, VIRGINIA

LANDSCAPING PLAN

DATE:	MAY 2025
DWG SCALE:	1"=50'
PROJECT NO.	341-132
DRAWN BY:	JMP
CHECKED BY:	MEA
APPROVED BY:	LCW

DRAWING NO.: C701

SHEET 35 OF 61

P:\340-000\341-132\-04001\Dwg\C701\341132-C701-C701-Landscaping.dwg[C701] LS(36)(2025 - Wscher) - JP, 6/3/2025 9:19 AM

NORTH

TAX PARCEL ID: 2436-95-5098

STREAM L157-1

WETLAND W266-2

WETLAND W258-1

MATCHLINE SHEET C701

PROPOSED PERMANENT EXCAVATED SPILLWAY (TYP.)

PROPOSED CHANNEL (TYP.)

PROPOSED 25' WIDE ACCESS ROAD

PROPOSED ACCESS ROAD NO. 2

PROPOSED GAS PIPELINE

PROPOSED INLET (TYP.)

PROPOSED STOCKPILE

PROPOSED GRAVEL LAUNCHER PAD

APPROXIMATE PIPELINE TIE-IN LOCATION. CONTRACTOR TO REFER TO GENERAL NOTE 17 ON SHEET C001.

EXISTING FENCE (TYP.)

PROPOSED ACCESS ROAD NO. 3

PROPOSED LEVEL SPREADER (TYP.)

PROPOSED EXTENDED DETENTION POND NO. 2

PROPOSED RIPRAP APRON (TYP.)

PROPOSED GRAVEL SUBSTATION PAD

PROPOSED EXTENDED DETENTION POND NO. 3

EXISTING GAS LINE (TYP.)

PROPOSED HEAD/ENDWALL (TYP.)

PROPOSED BRUSH (TYP.)

1 C703

PROPOSED LIMIT OF DISTURBANCE (TYP.)

STREAM L160-1

STREAM L153-1

EXISTING STREAM (TYP.)

STREAM L159-1

WETLAND W265-1

STREAM L161-1

50' OFFSET FROM STREAM/WETLAND AREA (TYP.)

EXISTING TREELINE (TYP.)

TAX PARCEL ID: 2436-75-1295

EXISTING PROPERTY LINE (TYP.)

40' ROW

TRANSCO ROAD

LEGEND

- EXISTING INDEX CONTOUR
- EXISTING INTERMEDIATE CONTOUR
- EXISTING SUBJECT PROPERTY LINE
- EXISTING PROPERTY LINE
- EXISTING TRANSCO ROAD RIGHT-OF-WAY
- EXISTING RIGHT-OF-WAY
- EXISTING FENCE LINE
- EXISTING EDGE OF PAVEMENT
- EXISTING PAVEMENT LIMITS
- EXISTING EDGE OF GRAVEL
- EXISTING GRAVEL LIMITS
- EXISTING GUIDE RAIL
- EXISTING BUILDING
- EXISTING STRUCTURE
- ST — EXISTING STORM PIPE
- W — EXISTING WATER LINE
- G — EXISTING GAS LINE
- G — EXISTING GAS LINE (BY OTHERS)
- OH-E — EXISTING OVERHEAD WIRE
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SCALE IN FEET
0 50 100

COMMONWEALTH OF VIRGINIA
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Lic. No. 043994
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6-2-2025

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COMPRESSOR STATION 165
PITTSLYVANIA COUNTY, VIRGINIA

LANDSCAPING PLAN

DATE:	MAY 2025
DWG SCALE:	1" = 50'
PROJECT NO.:	341-132
DRAWN BY:	JMP
CHECKED BY:	MEA
APPROVED BY:	LCW

DRAWING NO.: C702

SHEET 36 OF 61

A:\341-000\341-132\-CAD\Dwg\CIVIL\341132-C001-C701-Landscaping.dwg[C702] 6/5/2025 8:19 AM — LP: 6/3/2025 — vfischer

TABLE 4: BRUSH SEED MIX						
SCIENTIFIC NAME	COMMON NAME	SIZE CATEGORY OF MATURE BRUSH	IDEAL QUANTITY PER ACRE	ESTIMATED SIZE OF BRUSH AFTER 3 YEARS (SF)	APPROXIMATE SEEDS/LB. (USDA)	POTENTIAL SEED SUPPLIER**
GAYLUSSACIA BACCATA	BLACK HUCKLEBERRY	SMALL	201+	7.07	354,000	A
CEANOTHUS AMERICANUS	NEW JERSEY TEA	SMALL	201+	7.07	112,000	A,S
EUONYMUS AMERICANUS	STRAWBERRY BUSH	SMALL	201+	15.91	35,100	S
HYDRANGEA ARBORESCENS	SMOOTH HYDRANGEA	SMALL	201+	19.62	3,690,680	A
VACCINIUM STAMINEUM	DEERBERRY	SMALL	201+	15.91	372,280	A,S
ROSA CAROLINA	PASTURE ROSE	SMALL	201+	15.91	50,000	S
RHUS AROMATICA	FRAGRANT SUMAC	SMALL	201+	7.07	49,000	A,S
RUBUS ALLEGHENIENSIS	COMMON BLACKBERRY	MEDIUM	51 TO 200	63.62	262,200	E,S
VIBURNUM DENTATUM	ARROWWOOD VIBURNUM*	MEDIUM	51 TO 200	15.91	576,827	A,E,S
RHODODENDRON PERICLYMENOIDES	DWARF AZALEA	MEDIUM	51 TO 200	15.91	4,500	S
VIBURNUM ACERIFOLIUM	MAPLELEAF VIBURNUM	MEDIUM	51 TO 200	7.07	13,100	A,S
SAMBUCUS CANADENSIS	ELDERBERRY	MEDIUM	51 TO 200	28.27	291,590	E,S
ARONIA ARBUTIFOLIA	RED CHOKEBERRY*	LARGE	6 TO 50	15.91	256,500	A,S
LINDERA BENZOIN	SPICEBUSH	LARGE	6 TO 50	7.07	4,500	E,S
CORYLUS AMERICANA	AMERICAN HAZELNUT	LARGE	6 TO 50	15.941	491	A,E,S
HAMAMELIS VIRGINIANA	WITCHHAZEL	LARGE	6 TO 50	7.07	11,000	A,E,S
PARTHENOCISSUS QUINQUEFOLIA	VIRGINIA CREEPER	VERY LARGE	1 TO 5	78.5	18,367	E,S
*PLANTS SHOULD NOT BE SEEDED WHERE BRUSH HOGGING IS ANTICIPATED						

BRUSH SEED MIXTURE INSTRUCTIONAL NARRATIVE:

1. CONTACT SEED SUPPLIERS (SEE SEED SUPPLIER LEGEND AT RIGHT) TO INQUIRE ABOUT SPECIES AND QUANTITIES AVAILABLE.
2. CHOOSE A MINIMUM OF 10 SPECIES FOR BIODIVERSITY. MAXIMIZE BIODIVERSITY BY SELECTING AS MANY SPECIES AS POSSIBLE. USE INFORMATION PROVIDED IN COLUMNS E, F, AND G TO INFORM SELECTIONS. LARGER QUANTITIES SHOULD BE SELECTED FOR THE SMALLER PLANT SPECIES ON THE TOP OF THE LIST AND SMALLER QUANTITIES SHOULD BE SELECTED FOR THE LARGER PLANT SPECIES AND VINE AT THE BOTTOM OF THE LIST. TOTAL SF OF SELECTED PLANTS MUST EXCEED 24,289.06 SF PER ACRE. USE THE SPREADSHEET PROVIDED TO CALCULATE SEEDS REQUIRED PER ACRE TO MEET THE REQUIREMENTS. NOTE: PLANTS WITH AN ASTERISKS SHOULD NOT BE SEEDED WHERE BRUSH HOGGING IS ANTICIPATED.
3. CONTACT SEED SUPPLIER WELL IN ADVANCE TO ENSURE AVAILAILITY AT TIME OF PLANTING. IF NECESSARY, STORE INDOORS IN A COOL AND DRY PLACE. FOLLOW SCARIFICATION, STRATIFICATION, AND SEED BED PREPARATION RECOMMENDATIONS FOR OPTIMUM GERMINATION FROM THE SEED SUPPLIER PRIOR TO SEEDING.
4. PREPARE THE SITE ACCORDING TO GUIDANCE DOCUMENTS LISTED IN THE MEADOW NARRATIVE. FOLLOW GUIDANCE TOOLS-AND-SEEDING-METHODS_PG.PDF FOUND AT WWW.ERNSTSEED.COM FOR SEEDING METHODS.
5. APPLY THE BRUSH SEEDS SEPARATELY FROM THE MEADOW SEED MIX. APPLY SEEDS AT THE RATE OF TOTAL BRUSH SEEDS/ACRE OR TOTAL LBS./AC AS CALCULATED IN THE SPREADSHEET.
6. SELECT A MEADOW SEED MIX AND APPLY ACCORDING TO THE MEADOW SEED MIX INSTRUCTIONAL NARRATIVE.
7. DO NOT BRUSH HOG UNTIL THE FOURTH YEAR TO ALLOW FOR ADEQUATE ESTABLISHMENT. BRUSH HOGGING SHOULD OCCUR IN LATE WINTER (APPROXIMATELY FEBRUARY 25TH) AFTER GROUND-DWELLING BIRD NESTING SEASON AND TO ALLOW SEED AND FRUIT SET AND SEED COLD TREATMENT.

SEED SUPPLIER LEGEND:

S: HTTPS://SHEFFIELDS.COM/

E: HTTPS://WWW.ERNSTSEED.COM/SEED-FINDER-TOOL/?_PRODUCT_TYPE=INDIVIDUAL-SPECIES

A: HTTPS://ARCHEWILD.COM/NATIVE-PLANT-NURSERIES/CUSTOM-GROWING/

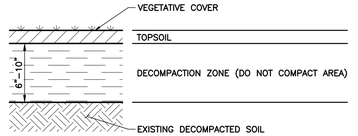
**SUPPLIER OF THIS SEED AS OF 4/25/2025

DETAIL 1
BRUSH PLANTING

N.T.S.

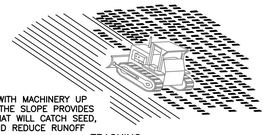
DECOMPACTION DEPTH AND METHOD				
PARAMETER	CONTRIBUTING IMPERVIOUS COVER TO DECOMPACTION AREA RATIO [1]			
	IC/ SA = 0[2]	IC/SA = 0.5	IC/SA = 0.75	IC/SA=1.0[3]
DECOMPACTION DEPTH (INCHES)	6 TO 10[4]	8 TO 12[4]	15 TO 18[4]	18 TO 24[4]
DECOMPACTION METHOD	ROTOTILLER	TILLER	SUBSOILER	SUBSOILER

NOTES:
1. IC = CONTRIBUTING IMPERVIOUS COVER (SQUARE FEET) AND SA = SURFACE AREA OF DECOMPACTION (SQUARE FEET).
2. FOR AMENDMENT OF COMPACTED LAWNS THAT DO NOT RECEIVE OFFSITE RUNOFF.
3. IN GENERAL, IC/SA RATIOS GREATER THAN 1 SHOULD BE AVOIDED.
4. LOWER END FOR HSG B SOILS, HIGHER END FOR HSG C/D.



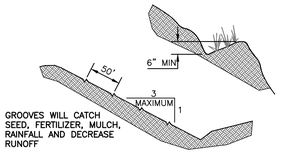
SOIL DECOMPACTION DETAIL

N.T.S.



'TRACKING' WITH MACHINERY UP AND DOWN THE SLOPE PROVIDES GROOVES THAT WILL CATCH SEED, RAINFALL AND REDUCE RUNOFF

TRACKING

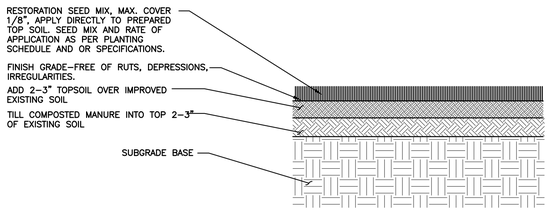


GROOVES WILL CATCH SEED, FERTILIZER, MULCH, RAINFALL AND DECREASE RUNOFF

CONTOUR FURROWS

EQUIPMENT TRACKING DETAIL

N.T.S.



NOTES:
1. MINIMUM TOPSOIL DEPTH IS 4-6 INCHES.
2. TOPSOIL SHOULD HAVE A GOOD HUMUS CONTENT. THIS CAN BE 20 TONS OF COMPOSTED MANURE PER ACRE OR 170 BALES OF PEAT PER ACRE.
3. TOPSOIL WITH A PH OF 6 OR LESS WILL NEED A LIME AMENDMENT. EVENLY APPLY HYDRATED LIME OR GROUND LIMESTONE TO TOP SOIL UNTIL PH IS ADJUSTED TO BETWEEN 6-7. PH BELOW 5.5 OR ABOVE 7.5 IS UNACCEPTABLE FOR LAWNS.
4. 650 LBS OF SLOW RELEASE WELL BALANCED FERTILIZER 10-10-10 PER ACRE SHOULD BE HARROWED INTO THE TOPSOIL PRIOR TO SEEDING.
5. SEEDING IS BEST IN THE LATE SUMMER-EARLY AUTUMN. A HARROW MAY BE USED TO OBTAIN AN EVEN SURFACE THAT IS FIRM, THE SEED MAY BE MECHANICALLY SPREAD INTO THE SURFACE AS PER THE PLANTING SCHEDULE AND OR SPECIFICATIONS.
6. SEE SPECIFICATIONS FOR ADDITIONAL NOTES.

RESTORATION SEED MIX INSTALLATION DETAIL

N.T.S.

COMMONWEALTH OF VIRGINIA
MICHAEL EDWARD ARCHER
Lic. No. 043994
PROFESSIONAL ENGINEER
6-2-2025

REVISION RECORD

NO	DATE	DESCRIPTION

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TRANSCONTINENTAL GAS PIPE LINE, LLC
COMPRESSOR STATION 165
PITTSLYVANIA COUNTY, VIRGINIA

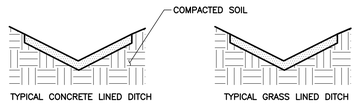
LANDSCAPING NOTES AND DETAILS

DATE:	MAY 2025
DWG SCALE:	N.T.S
PROJECT NO.:	341-132
DRAWN BY:	JMP
CHECKED BY:	MEA
APPROVED BY:	LCW

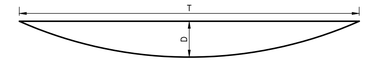
DRAWING NO.: C703

SHEET 37 OF 61

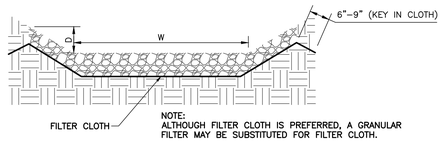
P:\340-200\341-121\-DGD\Dwg\Civil\341132-Civil-C703-Landscaping Notes and Details.dwg[C703] 15:59:28/2025 - khapner) - LP: 6/3/2025 9:19 AM



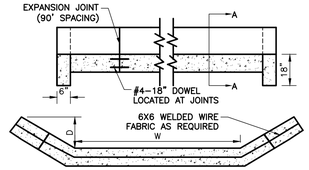
TYPICAL VEE CROSS-SECTION



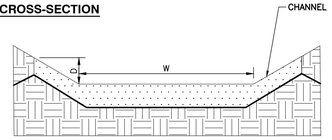
PARABOLIC WATERWAY CROSS-SECTION



TYPICAL RIRRAP CHANNEL



TYPICAL CONCRETE CHANNEL

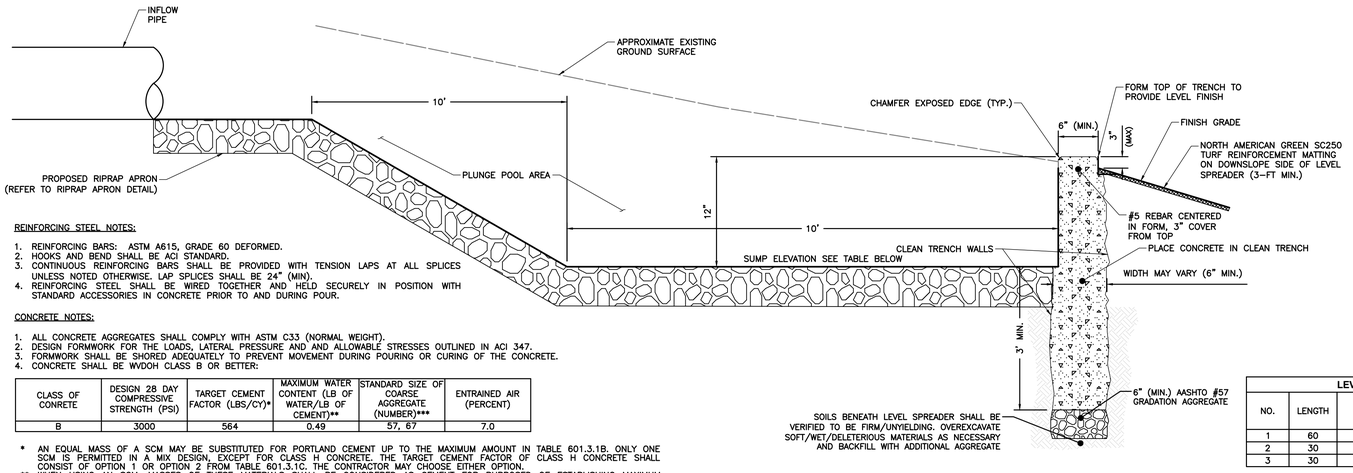


VEGETATED CHANNEL

CHANNEL ID	CHANNEL GEOMETRY					PROTECTIVE LINING								CHANNEL CAPACITY	
	CHANNEL SLOPE (%)	CHANNEL BOTTOM WIDTH, B (FT)	CHANNEL SIDE SLOPES LEFT, Z1 (H:V)	CHANNELS SIDE SLOPES RIGHT, Z2 (H:V)	CHANNEL DEPTH, D (FT)	2–YR DESIGN FLOW (CFS)	VEGETATED LINING	LINING TYPE	MANNING'S N	ALLOWABLE SHEAR (LB/SF)	ALLOWABLE VELOCITY (FPS)	CALCULATED SHEAR (LB/SF)	CALCULATED VELOCITY (FPS)	10–YEAR DESIGN FLOW (CFS)	CALCULATED FLOW DEPTH (FT)
TEMPORARY CHANNEL 1	2.0	2	2	2	2	–	VEGETATED	S150	0.051	1.75	6.0	1.31	3.06	13.21	1.05
TEMPORARY CHANNEL 2	3.0	2	2	15	1.5	–	VEGETATED	S150	0.057	1.75	6.0	1.05	2.13	8.13	0.56
TEMPORARY CHANNEL 3 (MIN SLOPE)	7.0	2	2	2	1.5	–	VEGETATED	P550	0.041	4.0	12.5	1.90	4.42	5.52	0.44
TEMPORARY CHANNEL 3 (MAX SLOPE)	21.0	2	2	2	1.5	–	VEGETATED	P550	0.031	4.0	12.5	3.59	7.92	5.52	0.27
PERMANENT CHANNEL 1A (PHASE 1)	1.0	2	2	4	1.8	6.18	VEGETATED	S150	0.072	1.75	6.0	–	1.41	8.13	1.03
PERMANENT CHANNEL 1A (PHASE 2)	1.0	2	2	3	1.8	1.78	VEGETATED	S150	0.084	1.75	6.0	–	0.93	2.34	0.63
PERMANENT CHANNEL 1B (MIN SLOPE)	1.0	2	2	3	2	2.32	VEGETATED	S150	0.081	1.75	6.0	–	1.03	3.05	0.71
PERMANENT CHANNEL 1B (MAX SLOPE)	3.0	2	2	3	2	2.32	VEGETATED	S150	0.060	1.75	6.0	–	1.85	3.05	0.46
PERMANENT CHANNEL 1C (PHASE 1)	2.0	2	2	2	1.5	8.76	VEGETATED	S150	0.054	1.75	6.0	–	2.63	11.56	1.00
PERMANENT CHANNEL 1C (PHASE 2)	2.0	2	2	2	1.5	2.57	VEGETATED	S150	0.065	1.75	6.0	–	1.65	3.38	0.58
PERMANENT CHANNEL 1D (MIN SLOPE)	1.0	2	2	2	1.5	3.10	VEGETATED	SC150	0.076	1.75	6.0	–	1.21	4.09	0.83
PERMANENT CHANNEL 1D (MAX SLOPE)	3.0	2	2	2	1.5	3.10	VEGETATED	SC150	0.056	1.75	6.0	–	2.22	4.09	0.54
PERMANENT CHANNEL 2 (MIN SLOPE)	1.5	2	2	2	2	3.00	VEGETATED	P300	0.068	3.00	9.0	–	1.50	3.99	0.70
PERMANENT CHANNEL 2 (MAX SLOPE)	9.0	2	2	2	2	3.00	VEGETATED	P300	0.042	3.00	9.0	–	3.94	3.99	0.72
PERMANENT CHANNEL 3 (MIN SLOPE)	2.0	2	2	2	2	1.59	VEGETATED	P300	0.069	3.00	9.0	–	1.37	2.10	0.47
PERMANENT CHANNEL 3 (MAX SLOPE)	9.5	2	2	2	2	1.59	VEGETATED	P300	0.046	3.00	9.0	–	3.09	2.10	0.24

MAINTENANCE: ONCE GRASS HAS BEEN ESTABLISHED IN A CHANNEL, INSPECT THE CHANNEL PERIODICALLY TO DETERMINE IF THE GRASS IS WITHSTANDING VELOCITIES FROM FLOW WITHOUT DAMAGE. IMMEDIATELY REPAIR CHANNEL AND RESEED BARE SPOTS AND AREAS NOT ESTABLISHING GROUND COVER.

DETAIL 1
CHANNEL
N.T.S.



REINFORCING STEEL NOTES:

1. REINFORCING BARS: ASTM A615, GRADE 60 DEFORMED.
2. HOOKS AND BEND SHALL BE ACI STANDARD.
3. CONTINUOUS REINFORCING BARS SHALL BE PROVIDED WITH TENSION LAPS AT ALL SPLICES UNLESS NOTED OTHERWISE. LAP SPLICES SHALL BE 24" (MIN).
4. REINFORCING STEEL SHALL BE WIRED TOGETHER AND HELD SECURELY IN POSITION WITH STANDARD ACCESSORIES IN CONCRETE PRIOR TO AND DURING POUR.

CONCRETE NOTES:

1. ALL CONCRETE AGGREGATES SHALL COMPLY WITH ASTM C33 (NORMAL WEIGHT).
2. DESIGN FORMWORK FOR THE LOADS, LATERAL PRESSURE AND AND ALLOWABLE STRESSES OUTLINED IN ACI 347.
3. FORMWORK SHALL BE SHORED ADEQUATELY TO PREVENT MOVEMENT DURING POURING OR CURING OF THE CONCRETE.
4. CONCRETE SHALL BE WVDOH CLASS B OR BETTER:

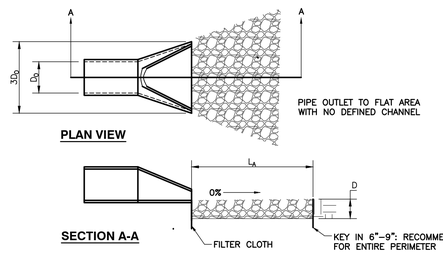
CLASS OF CONRETE	DESIGN 28 DAY COMPRESSIVE STRENGTH (PSI)	TARGET CEMENT FACTOR (LBS/CY)*	MAXIMUM WATER CONTENT (LB OF WATER/LB OF CEMENT)**	STANDARD SIZE OF COARSE AGGREGATE (NUMBER)***	ENTRAINED AIR (PERCENT)
B	3000	564	0.49	57, 67	7.0

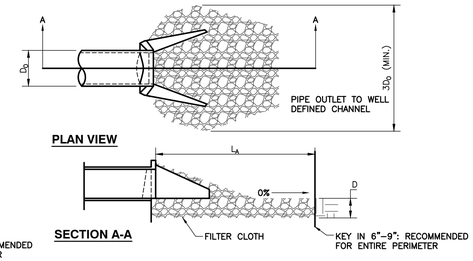
* AN EQUAL MASS OF A SCM MAY BE SUBSTITUTED FOR PORTLAND CEMENT UP TO THE MAXIMUM AMOUNT IN TABLE 601.3.1B. ONLY ONE SCM IS PERMITTED IN A MIX DESIGN, EXCEPT FOR CLASS H CONCRETE. THE TARGET CEMENT FACTOR OF CLASS H CONCRETE SHALL CONSIST OF OPTION 1 OR OPTION 2 FROM TABLE 601.3.1C. THE CONTRACTOR MAY CHOOSE EITHER OPTION.
** WHEN USING AN SCM, MASSES OF THESE MATERIALS SHALL BE CONSIDERED AS CEMENT FOR PURPOSED OF ESTABLISHING MAXIMUM WATER CONTENT.
*** A NUMBER 67 COARSE AGGREGATE MAY BE USED IN CLASS DC CONCRETE, PROVIDED THE ENGINEER APPROVES THE USE OF THAT SIZE AGGREGATE FOR THE SPECIFIC PROJECT ON WHICH IT IS TO BE USED. THAT APPROVAL WILL DEPEND ON THE MINIMUM SPACING OF THE REINFORCING STEEL IN THE DRILLED SHAFT FOUNDATION.

LEVEL SPREADER DIMENSIONS				
NO.	LENGTH	TOP OF WEIR ELEVATION	SUMP ELEVATION	HEAD OVER CUTOFF WALL (FT.)
1	60	634.40	633.3	0.06
2	30	618.10	617.1	0.06
3	30	643.95	642.9	0.06

DETAIL 3
LEVEL SPREADER
N.T.S.

[1]DESIGNED IN ACCORDANCE WITH VSMH VERSION 1.1



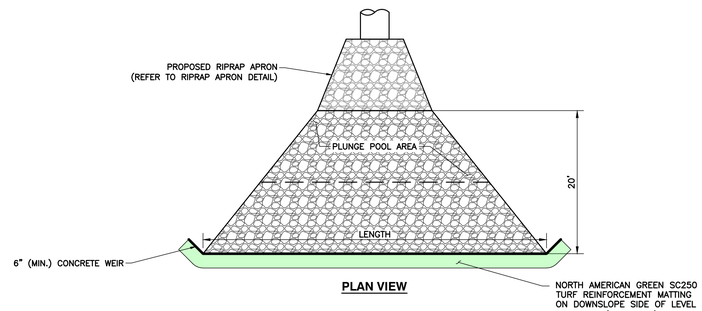


NOTES:
1. APRON LINING MAY BE RIPRAP, GROUTED RIPRAP, GABION BASKET, OR CONCRETE.
2. LA IS THE LENGTH OF THE RIPRAP APRON.
3. D = 1.5 TIMES THE MAXIMUM STONE DIAMETER, BUT NOT LESS THAN 6 INCHES.

RIPRAP APRON NO.	OUTLET	CULVERT DESIGN			[1]RIPRAP APRON OUTLET PROTECTION DESIGN					
		CULVERT DIAMETER, D_0 (IN)	PIPE SLOPE (%)	Q (CFS)	D_{50} RIPRAP SIZE, D_{50} (IN)	AASHTO RIPRAP CLASS	PLACEMENT THICKNESS PER AASHTO RIPRAP GRADATION, D (IN)	APRON LENGTH L_A(FT)	APRON INITAL WIDTH, W_i (FT)	APRON TERMINAL WIDTH, W (FT)
T1	OUTLET PIPE A	15	1.0	15.20	9	AI	18	16	3.8	19.8
$T2_1$	TEMP. CHANNEL 1	24	2.0	13.21	6	AI	9	9	6	9.6
$T3_1$	TEMP. CHANNEL 2	24	3.0	8.72	6	AI	9	12	6	18
$T4_1$	TEMP. CHANNEL 3	24	7.0	5.52	6	AI	9	9	6	9.6
$T5_2$	TEMP. DIKE 1	12	3.0	1.09	6	AI	9	8	3	11
T6	COMPOST FILTER SOCK DIVERSION BERM NO. 1	24	3.0	2.37	6	AI	9	12	6	18
P1	CULVERT 1	15	1.5	1.36	6	AI	9	8	3.8	11.8
P2	CULVERT 2	18	3.0	8.80	9	AI	18	7	4.5	7.3
P3	OUTLET PIPE 1	18	4.0	5.95	6	AI	9	8	4.5	12.5
$P4_1$	PERM. CHANNEL 2	24	1.5	3.99	6	AI	9	9	6	9.6
P5	PD–13A	30	2.5	46.19	6	AI	9	26	7.5	17.9
P6	OUTLET PIPE 2	18	0.5	3.46	9	AI	18	8	4.5	12.5
P7	OUTLET PIPE 3	15	2.2	3.02	6	AI	9	8	3.8	11.8
P8	PD–23	18	5.0	11.86	6	AI	9	13	4.5	9.7
P9	PD–26	15	13.0	8.29	6	AI	9	14	3.8	9.4
P10	PD–18	24	0.5	15.19	6	AI	9	9	6	9.6
P11	CULVERT NO. 3	15	10.0	4.01	6	AI	9	6	3.75	6.2

MAINTENANCE:
1.RIPRAP APRONS SHOULD BE INSPECTED WEEKLY AND AFTER SIGNIFICANT RAINFALL (0.5 INCHES OR GREATER). REMOVE ACCUMULATED SEDIMENT AS NECESSARY.
2.PLACE ADDITIONAL AND/OR LARGER STONE AS NECESSARY TO PREVENT OR CORRECT EROSION OR SCOUR.

DETAIL 2
RIPRAP APRON
N.T.S.



PLAN VIEW

GENERAL CONSTRUCTION SEQUENCE:

1. EXCAVATE TRENCH A MINIMUM 42–IN BELOW FINISHED GRADE. VERIFY SOILS BENEATH LEVEL SPREADER ARE FIRM/UNYIELDING.
2. PLACE A MINIMUM 6" OF AASHTO NO. 57 AGGREGATE AND COMPACT TO VISUAL NONMOVEMENT.
3. FORM TOP OF TRENCH IN ORDER TO MAINTAIN A SMOOTH, LEVEL EDGE ON LEVEL SPREADER.
4. INSTALL REINFORCEMENT STEEL AT THE LOCATION SHOWN ON THE DETAIL. MAINTAIN A MINIMUM 3–IN COVER AROUND ALL SIDES OF REINFORCING STEEL.
5. POUR CONCRETE.
6. ONCE CONCRETE HAS CURED, EXCAVATE PLUNGE POOL AREA UPSLOPE OF LEVEL SPREADER.
7. INSTALL TURF REINFORCEMENT MATTING ON DOWNLSOPE SIDE OF LEVEL SPREADER.

MAINTENANCE:
1. INSPECT LEVEL SPREADERS AT LEAST ONCE A YEAR AND AFTER EVERY MEASURABLE RAINFALL EVENT (0.1 INCH PER 24 HOURS). IMMEDIATE REPAIRS SHOULD BE MADE IF, LOW POINTS, SAGS, OR DAMAGE TO THE LEVEL SPREADER ARE OBSERVED THAT COULD RESULT IN CONCENTRATED FLOW. ANY IDENTIFIED ALTERATIONS TO THE GRADE OF THE LEVEL SPREADER MUST BE REPAIRED IMMEDIATELY.
2. CONSTRUCTION ACCESS ACROSS LEVEL SPREADERS SHOULD BE AVOIDED.

COMMONWEALTH OF VIRGINIA
MICHAEL EDWARD LARCHER
Lic. No. 043994
PROFESSIONAL ENGINEER
6-2-2025

REVISION RECORD

NO	DATE	DESCRIPTION

700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
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Civil & Environmental Consultants, Inc.

TRANSCONTINENTAL GAS PIPE LINE, LLC
COMPRESSOR STATION 165
PITTSLYVANIA COUNTY, VIRGINIA

CONSTRUCTION DETAILS

DRAWN BY:	JMP
CHECKED BY:	MEA
DATE:	MAY 2025
DWG SCALE:	N.T.S
PROJECT NO:	341-132
APPROVED BY:	LCW

DRAWING NO.: C800

SHEET 38 OF 61

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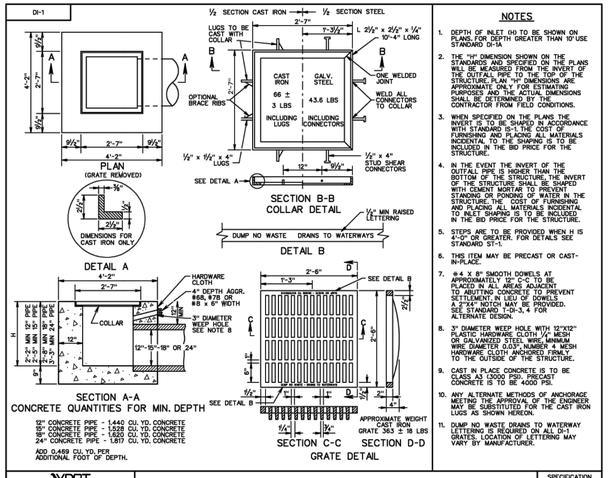
2016 ROAD & BRIDGE STANDARDS

DI-1



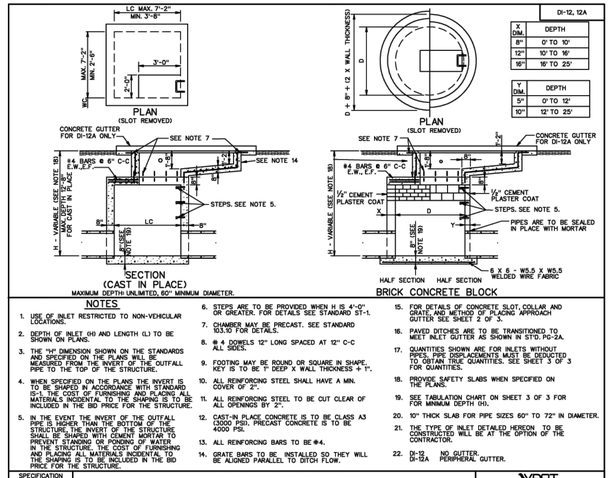
NOTES

1. DEPTH OF INLET (H) TO BE SHOWN ON PLANS. FOR DEPTH GREATER THAN 10' USE STANDARD DI-1A.
2. THE "H" DIMENSION SHOWN ON THE STANDARDS AND SPECIFIED ON THE PLANS WILL BE MEASURED FROM THE INVERT OF THE OUTFALL PIPE TO THE TOP OF THE STRUCTURE. PLAN DIMENSIONS ARE APPROXIMATE ONLY FOR ESTIMATING PURPOSES AND THE ACTUAL DIMENSIONS SHALL BE DETERMINED BY THE CONTRACTOR FROM FIELD CONDITIONS.
3. WHEN SPECIFIED ON THE PLANS THE INVERT IS TO BE SHAPED IN ACCORDANCE WITH STD. DI-12. THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTAL TO THE SHAPING IS TO BE INCLUDED IN THE BID PRICE FOR THE STRUCTURE.
4. IN THE EVENT THE INVERT OF THE OUTFALL PIPE IS HIGHER THAN THE BOTTOM OF THE STRUCTURE, THE INVERT OF THE STRUCTURE SHALL BE SHAPED WITH CEMENT MORTAR TO PREVENT STANDING OR PONDING OF WATER IN THE STRUCTURE. THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTAL TO INLET SHAPING IS TO BE INCLUDED IN THE BID PRICE FOR THE STRUCTURE.
5. STEPS ARE TO BE PROVIDED WHEN H IS 4'-0" OR GREATER. FOR DETAILS SEE STANDARD ST-1.
6. THIS ITEM MAY BE PRECAST OR CAST-IN-PLACE.
7. #4 X 8" SMOOTH DOWELS AT APPROXIMATELY 12"-C-C, TO BE PLACED IN ALL AREAS ADJACENT TO ABUTTING CONCRETE TO PREVENT SETTLEMENT. IN LIEU OF DOWELS A 3" X 4" NOTCH MAY BE PROVIDED. SEE STANDARD T-10-3, 4 FOR ALTERNATE DESIGN.
8. 3" DIAMETER WEEP HOLE WITH 12"X12" PLASTIC HARDWARE CLOTH/ ¼" MESH OR GALVANIZED STEEL WIRE MESH HARDWARE CLOTH ANCHORED FIRMLY TO THE OUTSIDE OF THE STRUCTURE.
9. CAST IN PLACE CONCRETE IS TO BE CLASS A3 (3000 PSI). PRECAST CONCRETE IS TO BE 4000 PSI.
10. ANY ALTERNATE METHODS OR ANCHORAGE MEETING THE APPROVAL OF THE ENGINEER MAY BE SUBSTITUTED FOR THE CAST IRON LUGS AS SHOWN HEREON.
11. DUMP NO WASTE DRAINS TO WATERWAY LETTERING IS REQUIRED ON ALL DI-1 GRATES. LOCATION OF LETTERING MAY VARY BY MANUFACTURER.

SPECIFICATION REFERENCE		VDOT ROAD AND BRIDGE STANDARDS	
	STANDARD DROP INLET 12" - 24" PIPE: MAXIMUM DEPTH (H) = 10' VIRGINIA DEPARTMENT OF TRANSPORTATION	SHEET 1 OF 1	REVISION DATE
233 302		104.01	

2016 ROAD & BRIDGE STANDARDS

DI-12, 12A



X DIM.	DEPTH
8"	0' TO 10'
12"	10' TO 16'
16"	16' TO 25'

Y DIM.	DEPTH
5"	0' TO 12'
10"	10' TO 25'

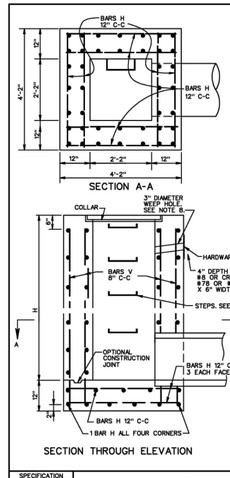
NOTES

1. USE OF INLET RESTRICTED TO NON-VEHICULAR LOCATIONS.
2. DEPTH OF INLET (H) AND LENGTH (L) TO BE SHOWN ON PLANS.
3. THE "H" DIMENSION SHOWN ON THE STANDARDS AND SPECIFIED ON THE PLANS WILL BE MEASURED FROM THE INVERT OF THE OUTFALL PIPE TO THE TOP OF THE STRUCTURE.
4. WHEN SPECIFIED ON THE PLANS THE INVERT IS TO BE SHAPED IN ACCORDANCE WITH STD. DI-12. THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTAL TO THE SHAPING IS TO BE INCLUDED IN THE BID PRICE FOR THE STRUCTURE.
5. IN THE EVENT THE INVERT OF THE OUTFALL PIPE IS HIGHER THAN THE BOTTOM OF THE STRUCTURE, THE INVERT OF THE STRUCTURE SHALL BE SHAPED WITH CEMENT MORTAR TO PREVENT STANDING OR PONDING OF WATER IN THE STRUCTURE. THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTAL TO THE SHAPING IS TO BE INCLUDED IN THE BID PRICE FOR THE STRUCTURE.
6. STEPS ARE TO BE PROVIDED WHEN H IS 4'-0" OR GREATER. FOR DETAILS SEE STANDARD ST-1.
7. CHAMFER MAY BE PRECAST. SEE STANDARD 303.10 FOR DETAILS.
8. #4 DOWELS 12" LONG SPACED AT 12" C-C ALL SIDES.
9. FOOTING MAY BE ROUND OR SQUARE IN SHAPE. KEY IS TO BE 1' DEEP X WALL THICKNESS + 1".
10. ALL REINFORCING STEEL SHALL HAVE A MIN. COVER OF 2".
11. ALL REINFORCING STEEL TO BE CUT CLEAR OF ALL OPENINGS BY 2".
12. CAST-IN PLACE CONCRETE IS TO BE CLASS A3 (3000 PSI). PRECAST CONCRETE IS TO BE 4000 PSI.
13. ALL REINFORCING BARS TO BE #4.
14. GRATE BARS TO BE INSTALLED SO THEY WILL BE ALIGNED PARALLEL TO DITCH FLOW.
15. FOR DETAILS OF CONCRETE SLOT, COLLAR AND GRATE, AND METHOD OF PLACING APPROACH GUTTER SEE SHEET 2 OF 3.
16. PAVED DITCHES ARE TO BE TRANSITIONED TO MEET INLET GUTTER AS SHOWN IN STD. PG-2A.
17. QUANTITIES SHOWN ARE FOR INLETS WITHOUT PIPES. PIPE DISPLACEMENTS MUST BE DEDUCTED TO OBTAIN TRUE QUANTITIES. SEE SHEET 3 OF 3 FOR QUANTITIES.
18. PROVIDE SAFETY SLABS WHEN SPECIFIED ON THE PLANS.
19. SEE TABULATION CHART ON SHEET 3 OF 3 FOR MINIMUM DEPTH (H).
20. 10" THICK SLAB FOR PIPE SIZES 60" TO 72" IN DIAMETER.
21. THE TYPE OF INLET DETAILED HEREON TO BE CONSTRUCTED WILL BE AT THE OPTION OF THE CONTRACTOR.
22. DI-12 NO GUTTER.
DI-12A PERIPHERAL GUTTER.

SPECIFICATION REFERENCE		VDOT ROAD AND BRIDGE STANDARDS	
	MULTIGRATE DROP INLET FOR PIPE SIZES 12" TO 72" VIRGINIA DEPARTMENT OF TRANSPORTATION	REVISION DATE	SHEET 1 OF 3
233 302			104.30

2016 ROAD & BRIDGE STANDARDS

DI-1A



NOTES

1. DEPTH OF INLET (H) TO BE SHOWN ON PLANS. MAXIMUM DEPTH (H) TO BE 20'. FOR DEPTHS LESS THAN 10' USE STANDARD DI-1.
2. THE "H" DIMENSION SHOWN ON THE STANDARDS AND SPECIFIED ON THE PLANS WILL BE MEASURED FROM THE INVERT OF THE OUTFALL PIPE TO THE TOP OF THE STRUCTURE. PLAN DIMENSIONS ARE APPROXIMATE ONLY FOR ESTIMATING PURPOSES AND THE ACTUAL DIMENSIONS SHALL BE DETERMINED BY THE CONTRACTOR FROM FIELD CONDITIONS.
3. WHEN SPECIFIED ON THE PLANS THE INVERT IS TO BE SHAPED IN ACCORDANCE WITH STANDARD DI-1. THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTAL TO THE SHAPING IS TO BE INCLUDED IN THE BID PRICE FOR THE STRUCTURE.
4. IN THE EVENT THE INVERT OF THE OUTFALL PIPE IS HIGHER THAN THE BOTTOM OF THE STRUCTURE, THE INVERT OF THE STRUCTURE SHALL BE SHAPED WITH CEMENT MORTAR TO PREVENT STANDING OR PONDING OF WATER IN THE STRUCTURE. THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTAL TO THE SHAPING IS TO BE INCLUDED IN THE BID PRICE FOR THE STRUCTURE.
5. STEPS ARE REQUIRED. FOR DETAILS SEE ST'D. ST-1.
6. THIS ITEM MAY BE PRECAST OR CAST-IN-PLACE.
7. #4 X 8" SMOOTH DOWELS AT APPROXIMATELY 12"-C-C, TO BE PLACED IN ALL AREAS ADJACENT TO ABUTTING CONCRETE TO PREVENT SETTLEMENT. IN LIEU OF DOWELS A 3" X 4" NOTCH MAY BE PROVIDED. SEE STANDARD T-10-3, 4 FOR ALTERNATE DESIGN.
8. 3" DIAMETER WEEP HOLE WITH 12"X12" PLASTIC HARDWARE CLOTH/ ¼" MESH OR GALVANIZED STEEL WIRE MESH HARDWARE CLOTH ANCHORED FIRMLY TO THE OUTSIDE OF THE STRUCTURE.
9. ALL REINFORCING STEEL SHALL HAVE A MIN. COVER OF 2".
10. ALL REINFORCING STEEL TO BE CUT CLEAR OF ALL OPENINGS BY 2".
11. CAST-IN PLACE CONCRETE IS TO BE CLASS A3 (3000 PSI). PRECAST CONCRETE IS TO BE 4000 PSI.
12. ALL SPLICES IN BARS V TO BE A MINIMUM OF 40 DIAMETERS (20").
13. IF OPTIONAL CONSTRUCTION JOINT IS USED, IT IS TO BE KEYED.
14. FOR DETAILS AND DIMENSIONS, ETC. OF GRATE AND STEEL OR CAST IRON COLLAR SEE STANDARD DI-1.

REINFORCING STEEL SCHEDULE			
MARK	SIZE	NO REQ'D	LENGTH
BARS H	#5	8x(H + 2')	3'-10"
BARS V	#4	40	H + 4"

APPROXIMATE QUANTITIES FOR MINIMUM (10') DEPTH		
CONCRETE PIPE DIAMETER	CONCRETE CU. YDS.	REINF. STEEL Lbs.
12"	5.218	655
15"	5.193	651
18"	5.163	647
24"	5.089	639

INCREMENTS TO BE ADDED FOR EACH ADDITIONAL FOOT OF DEPTH (H):
0.465 CU. YDS. OF CONCRETE
58.7 LBS. OF REINFORCING STEEL

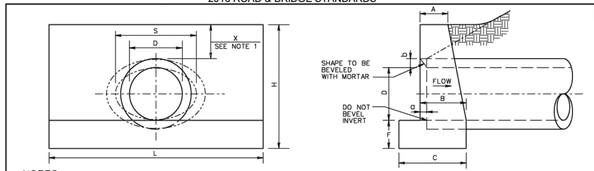
SPECIFICATION REFERENCE		VDOT ROAD AND BRIDGE STANDARDS	
	STANDARD DROP INLET 12" - 24" PIPE: DEPTH (H) 10' TO 20' VIRGINIA DEPARTMENT OF TRANSPORTATION	REVISION DATE	SHEET 1 OF 1
233 302			104.02

INLET TABLE			
STRUCTURE NAME	RIM E.	INVERT IN	INVERT OUT
IN-1	665.59		PD-1 = 662.00
IN-2	665.59	PD-1 = 661.10	PD-2 = 661.10
IN-3	665.65	PD-2 = 660.34	PD-3 = 660.34
IN-4	665.66	PD-3 = 659.84	PD-4 = 659.84
IN-4A	665.36	PD-4 = 659.45	PD-4A = 659.45
IN-5	664.82	PD-4A = 658.74	PD-5 = 658.24
IN-6	664.07	PD-5 = 657.28	PD-6 = 657.28
IN-7	666.09		PD-7 = 661.82
IN-8	665.53	PD-7 = 660.84	PD-8 = 660.84
IN-9	665.08	PD-8 = 659.91	PD-9 = 659.91
IN-10	664.69	PD-9 = 659.01	PD-10 = 659.01
IN-11	664.24	PD-10 = 658.23	PD-11 = 658.23
IN-12	663.78	PD-11 = 657.33	PD-12 = 657.33
IN-13	663.47	PD-6 = 656.54 PD-12 = 656.72	PD-13 = 656.54
IN-14	651.77		PD-14 = 648.10
IN-15	650.09	PD-14 = 646.90	PD-15 = 646.40
IN-16	651.57		PD-16 = 649.00
IN-17	652.46	PD-16 = 648.82	PD-17 = 648.85
IN-18	650.62	PD-15 = 646.00 PD-17 = 647.45	PD-18 = 646.00
IN-19	635.17		PD-19 = 631.05
IN-20	633.53	PD-19 = 630.15	PD-20 = 629.73
IN-21	628.00		PD-21 = 625.50
IN-22	632.56	PD-21 = 625.41 PD-20 = 629.18	PD-22 = 625.41
IN-23	631.77	PD-22 = 624.41	PD-23 = 622.50
IN-24	634.44		PD-24 = 630.20
IN-25	632.52	PD-24 = 629.15	PD-25 = 629.15
IN-26	631.84	PD-25 = 628.10	PD-26 = 625.50

DETAIL 4
INLET
N.T.S.

2016 ROAD & BRIDGE STANDARDS

EW-1,1A



NOTES:

1. "H" MAY BE REDUCED UNTIL "X" REACHES A MINIMUM OF 4" WHERE ENDWALL WOULD PROTRUDE ABOVE SHOULDER LINE. IN NO CASE SHALL TOP OF ENDWALL PROJECT ABOVE FILL SLOPE, DITCH SLOPE, OR SHOULDER.
2. THIS ITEM MAY BE PRECAST OR CAST IN PLACE.
3. ALL CAST IN PLACE CONCRETE TO BE CLASS A3. FOR PRECAST SEE SHEET 101.02.
4. THIS STANDARD TO BE USED WITH STRAIGHT CROSSINGS AND ALL SKEWS UP TO 45°).
5. HEADWALL TO BE BEVELED IN ALL AREAS EXCEPT WHERE A CONFLICT WITH INVERT.
6. BEVEL EDGE IS REQUIRED ON THE HEADWALL AT THE INLET END OF THE CULVERT TWHERE THE FLOW ENTERS THE CULVERT).
7. HEADWALL AT THE OUTLET END OF THE CULVERT MAY BE EITHER SQUARE EDGE OR BEVEL EDGE.
8. ON SHALLOW FILLS, WHERE ENDWALLS ARE 1'-0" LESS BELOW SHOULDER LINE, THE TOP OF THE ENDWALL SHALL BE CONSTRUCTED PARALLEL TO THE GRADE OF THE ROAD.
9. ¾" CHAMFER MAY BE PROVIDED ON ALL EDGES AT MANUFACTURER'S OPTION.

EW-1

ENDWALL FOR CIRCULAR PIPE						
	DIAMETER OF PIPE CULVERT					
	12"	15"	18"	21" OR 24"	27" OR 30"	33" OR 36"
A	0'-6"	0'-8"	0'-9"	0'-11"	1'-0"	1'-0"
B	0'-11"	1'-1"	1'-3"	1'-6"	1'-9"	2'-0"
C	1'-4"	1'-7"	1'-9"	2'-2"	2'-6"	2'-9"
D	1'-0"	1'-3"	1'-6"	2'-0"	2'-6"	3'-0"
F	0'-6"	0'-8"	0'-8"	0'-9"	0'-9"	0'-9"
H	2'-3"	2'-11"	3'-2"	3'-9"	4'-3"	4'-9"
L	4'-0"	5'-0"	6'-0"	8'-0"	10'-0"	12'-0"
a	0'-1¼"	0'-1¾"	0'-2"	0'-2½"	0'-3¼"	0'-3¾"
b	0'-1"	0'-1¼"	0'-1½"	0'-2"	0'-2½"	0'-3"
CUBIC YARDS OF CONCRETE						
CONC. PIPE	0.241	0.492	0.697	1.319	2.067	2.947
C.M. PIPE	0.257	0.521	0.739	1.398	2.198	3.145

EW-1A

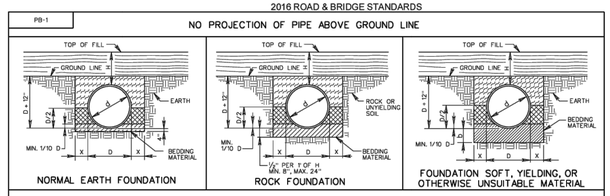
ENDWALL FOR ELLIPTICAL PIPE						
	SIZE OF ELLIPTICAL PIPE CULVERT (SPAN x RISE)					
	23"x14"	30"x19"	34"x22"	38"x24"	42"x27"	45"x29"	49"x32"	53"x34"
A	0'-8"	0'-9"	0'-10"	0'-11"	0'-11"	1'-0"	1'-0"	1'-0"
B	1'-2"	1'-5"	1'-6"	1'-8"	1'-9"	1'-10"	1'-11"	1'-11"
C	1'-8"	1'-11"	2'-1"	2'-4"	2'-5"	2'-7"	2'-8"	2'-9"
D	1'-2"	1'-7"	1'-10"	2'-0"	2'-3"	2'-5"	2'-8"	2'-10"
F	0'-8"	0'-8"	0'-9"	0'-9"	0'-9"	0'-9"	0'-9"	0'-9"
H	2'-10"	3'-3"	3'-7"	3'-9"	4'-0"	4'-2"	4'-5"	4'-7"
L	5'-5"	7'-2"	8'-6"	9'-2"	10'-2"	10'-11"	12'-1"	12'-11"
S	1'-11"	2'-6"	2'-10"	3'-2"	3'-6"	3'-9"	4'-1"	4'-5"
a	0'-2½"	0'-3¼"	0'-3½"	0'-4"	0'-4½"	0'-4¾"	0'-5"	0'-5½"
b	0'-2"	0'-2½"	0'-2¾"	0'-3"	0'-3½"	0'-3¾"	0'-4"	0'-4½"
CUBIC YARDS OF CONCRETE								
CONC.PIPE	0.502	0.855	1.236	1.500	1.811	2.101	2.512	2.801

SPECIFICATION REFERENCE		VDOT ROAD AND BRIDGE STANDARDS	
	A COPY OF THE ORIGINAL SEALED AND SIGNED DRAWING IS ON FILE IN THE CENTRAL OFFICE. STANDARD ENDWALL FOR PIPE CULVERTS 12" - 36" CIRCULAR AND 23" x 14" - 53" x 34" ELLIPTICAL PIPES VIRGINIA DEPARTMENT OF TRANSPORTATION	REVISION DATE	SHEET 1 OF 1
105 302		04/19	101.01

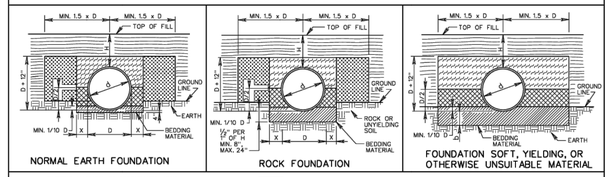
2016 ROAD & BRIDGE STANDARDS

PB-1

NO PROJECTION OF PIPE ABOVE GROUND LINE



PIPE PROJECTION ABOVE GROUND LINE



BEDDING MATERIAL IN ACCORDANCE WITH SECTION 302 OF THE ROAD AND BRIDGE SPECIFICATIONS.

CLASS I BACKFILL MATERIAL IN ACCORDANCE WITH SECTION 302 OF THE ROAD AND BRIDGE SPECIFICATIONS.

FOR PLASTIC PIPE : 6" MINIMUM CLASS I BACKFILL MATERIAL PLACED DIRECTLY OVER PIPE AND 6" REGULAR BACKFILL MATERIAL; OR 12" OF CLASS I BACK FILL MATERIAL, IN ACCORDANCE WITH SECTION 302 OF THE ROAD AND BRIDGE SPECIFICATIONS.

EMBANKMENT

REGULAR BACKFILL MATERIAL IN ACCORDANCE WITH SECTION 302 OF THE ROAD AND BRIDGE SPECIFICATIONS.

FOR ALL OTHER PIPE REGULAR BACKFILL MATERIAL IN ACCORDANCE WITH SECTION 302 OF THE ROAD AND BRIDGE SPECIFICATIONS.

NOTES:

FOR GENERAL NOTES ON PIPE BEDDING, SEE INSTALLATION OF PIPE CULVERTS AND STORM SEWERS GENERAL NOTES ON SHEET 107.00.

CRUSHED GLASS CONFORMING TO THE SIZE REQUIREMENTS FOR CRUSHER RUN AGGREGATE SIZE 25 AND 26 MAY BE USED IN PLACE OF CLASS 2 BACKFILL.

VDOT ROAD AND BRIDGE STANDARDS			
A COPY OF THE ORIGINAL SEALED AND SIGNED DRAWING IS ON FILE IN THE CENTRAL OFFICE. INSTALL. OF PIPE CULVERTS AND STORM SEWERS CIRC. PIPE BEDDING AND BACKFILL - METHOD "A" VIRGINIA DEPARTMENT OF TRANSPORTATION	SHEET 1 OF 4	REVISION DATE	SPECIFICATION REFERENCE
	107.01	07/19	302 303

DETAIL 5
HEAD/ENDWALL
N.T.S.

HEAD/ENDWALL TABLE				
STRUCTURE NAME	INVERT IN	INVERT OUT	PIPE DIAMETER (IN)	DESCRIPTION
EW-1	CULVERT NO. 1 = 664.90		15	ENDWALL
EW-2	CULVERT NO. 2 = 656.40		18	ENDWALL
EW-3	OP-1 = 636.00		18	ENDWALL
EW-4	PD-13A = 642.00		30	ENDWALL
EW-5	OP-2 = 617.43		18	ENDWALL
EW-7	OP-3 = 643.50		15	ENDWALL
EW-8	PD-23 = 619.00		18	ENDWALL
EW-9	PD-26 = 619.00		15	ENDWALL
EW-10	PD-18 = 645.50		24	ENDWALL
EW-11	CULVERT NO. 3 = 642.00		15	ENDWALL
EW-A	OP-A = 646.20		15	ENDWALL
HW-1		CULVERT NO. 1 = 665.50	15	HEADWALL
HW-2A		CULVERT NO. 2 = 658.05	18	HEADWALL
HW-2B		CULVERT NO. 2 EXT = 658.95	18	HEADWALL
HW-3		CULVERT NO. 3 = 646.50	15	HEADWALL

2016 ROAD & BRIDGE STANDARDS

PB-1

GENERAL

1. METHOD "A" PIPE BEDDING SHALL BE USED FOR ALL TYPES OF PIPE CULVERTS WITHIN THE APPLICABLE HEIGHT OF COVER RANGE NOTED IN THE STANDARD PC-1 TABLES UNLESS OTHERWISE NOTED ON THE PLANS.
2. H = HEIGHT OF COVER MEASURED FROM TOP OF CULVERT TO FINISHED GRADE.
3. b = EXCAVATION DEPTH AS SHOWN ON PLANS OR TO FIRM BEARING SOIL.

CIRCULAR PIPE

1. D = OUTSIDE DIAMETER OF PIPE.
2. d = INSIDE DIAMETER OF PIPE.
3. X = WIDTH OF CLASS I BACKFILL MATERIAL BEYOND THE EXTREMITY OF THE PIPE.
   X = 12" WHERE d IS LESS THAN 36".
   X = 18" WHERE d IS 36" AND GREATER.
4. WHERE DIRECTED BY THE ENGINEER BEDDING MATERIAL MAY BE ELIMINATED FOR NORMAL EARTH FOUNDATIONS UNDER ROUTINE ENTRANCE PIPE (EXCEPT PLASTIC PIPE) 30" AND LESS IN DIAMETER WITH HEIGHT OF COVER 15' OR LESS.
5. REGULAR BACKFILL MATERIAL MAY BE USED IN LIEU OF CLASS I BACKFILL MATERIAL FOR ALL FOUNDATION TYPES FOR ROUTINE ENTRANCE PIPE (EXCEPT PLASTIC PIPE) 30" AND LESS IN DIAMETER WITH HEIGHT OF COVER 15' OR LESS.
6. BEDDING MATERIAL AND CLASS I BACKFILL MATERIAL MAY BE ELIMINATED FOR SHOULDER SLOT INLET (DI-13) OUTLET PIPES INSTALLATIONS.

ELLIPTICAL PIPE

1. S_1 = OUTSIDE SPAN DIMENSION OF PIPE.
2. S_2 = INSIDE SPAN DIMENSION OF PIPE.
3. R = OUTSIDE RISE DIMENSION OF PIPE.
4. X = WIDTH OF CLASS I BACKFILL MATERIAL BEYOND THE EXTREMITY OF THE PIPE.
   X = 12" WHERE S_2 IS LESS THAN 36".
   X = 18" WHERE S_2 IS 36" AND GREATER
5. WHERE DIRECTED BY THE ENGINEER BEDDING MATERIAL MAY BE ELIMINATED FOR NORMAL EARTH FOUNDATIONS UNDER ROUTINE ENTRANCE PIPE WHERE S_2 IS 38" OR LESS AND HEIGHT OF COVER 15' OR LESS.
6. REGULAR BACKFILL MATERIAL MAY BE USED IN LIEU OF CLASS I BACKFILL MATERIAL FOR ALL FOUNDATION TYPES FOR ROUTINE ENTRANCE PIPE WHERE S_2 IS 38" OR LESS AND HEIGHT OF COVER 15' OR LESS.

PIPE ARCH

1. S = SPAN DIMENSION OF PIPE.
2. R = RISE DIMENSION OF PIPE.
3. B = SEE PC-1 TABLE FOR APPLICABLE PIPE MATERIAL
4. x = WIDTH OF CLASS I BACKFILL MATERIAL BEYOND THE EXTREMITY OF THE PIPE.
   x = 12" WHERE S_2 IS LESS THAN 36".
   x = 18" WHERE S_2 IS 36" AND GREATER
5. WHERE DIRECTED BY THE ENGINEER BEDDING MATERIAL MAY BE ELIMINATED FOR NORMAL EARTH FOUNDATIONS UNDER ROUTINE ENTRANCE PIPE WHERE S_2 IS 35" OR LESS AND HEIGHT OF COVER 15' OR LESS.
6. REGULAR BACKFILL MATERIAL MAY BE USED IN LIEU OF CLASS I BACKFILL MATERIAL FOR ALL FOUNDATION TYPES FOR ROUTINE ENTRANCE PIPE WHERE S_2 IS 35" OR LESS AND HEIGHT OF COVER 15' OR LESS.

SPECIFICATION REFERENCE		VDOT ROAD AND BRIDGE STANDARDS	
	INSTALLATION OF PIPE CULVERTS & STORM SEWERS GENERAL NOTES VIRGINIA DEPARTMENT OF TRANSPORTATION	REVISION DATE	SHEET 1 OF 1
302 303			107.00

DETAIL 6
STORM PIPE
N.T.S.

PIPE TABLE						
PIPE NAME	SIZE (IN)	LENGTH (FT)	SLOPE	MATERIAL	INV. UP	INV. DOWN
CULVERT NO. 1	15	40.0	1.50%	HDPE	665.50	664.90
CULVERT NO. 2	18	55.0	3.00%	HDPE	658.05	656.40
CULVERT NO. 2 EXT	18	30.0	3.00%	HDPE	658.95	658.05
CULVERT NO. 3	15	45.0	10.00%	HDPE	646.50	642.00
OP-1	18	70.0	1.00%	HDPE	636.70	636.00
OP-2	18	55.0	0.49%	HDPE	617.70	617.43
OP-3	15	45.0	1.00%	HDPE	643.95	643.50
OP-4A	15	80.0	1.00%	HDPE	647.00	646.20
PD-1	18	180.0	0.50%	HDPE	662.00	661.10
PD-2	24	152.8	0.50%	HDPE	661.10	660.34
PD-3	24	100.0	0.50%	HDPE	660.34	659.84
PD-4	24	78.2	0.50%	HDPE	659.84	659.45
PD-4A	24	140.0	0.51%	HDPE	659.45	658.74
PD-5	30	192.3	0.50%	HDPE	658.24	657.28
PD-6	30	148.2	0.50%	HDPE	657.28	656.54
PD-7	18	196.2	0.50%	HDPE	661.82	660.84
PD-8	18	185.0	0.50%	HDPE	660.84	659.91
PD-9	18	180.0	0.50%	HDPE	659.91	659.01
PD-10	24	155.1	0.50%	HDPE	659.01	658.23
PD-11	24	180.0	0.50%	HDPE	658.23	657.33
PD-12	30	121.8	0.50%	HDPE	657.33	656.72
PD-13	30	40.0	27.10%	HDPE	656.54	645.70
PD-13A	30	40.0	2.50%	HDPE	643.00	642.00
PD-14	18	80.0	1.50%	HDPE	648.10	646.90
PD-15	24	40.0	1.00%	HDPE	646.40	646.00
PD-16	15	35.0	0.50%	HDPE	649.00	648.82
PD-17	15	140.0	1.00%	HDPE	648.85	647.45
PD-18	24	25.0	2.00%	HDPE	646.00	645.50
PD-19	15	180.0	0.50%	HDPE	631.05	630.15
PD-20	15	110.0	0.50%	HDPE	629.73	629.18
PD-21	15	17.8	0.50%	HDPE	625.50	625.41
PD-22	18	100.0	1.00%	HDPE	625.41	624.41
PD-23	18	70.0	5.00%	HDPE	622.50	619.00
PD-24	15	210.9	0.50%	HDPE	630.20	629.15
PD-25	15	105.2	1.00%	HDPE	629.15	628.10
PD-26	15	50.0	13.00%	HDPE	625.50	619.00
SP-1	18	10.0	0.00%	HDPE	636.70	636.70
SP-2	18	10.0	0.00%	HDPE	617.70	617.70
SP-3	15	11.9	0.00%	HDPE	644.50	644.50

REVISION RECORD

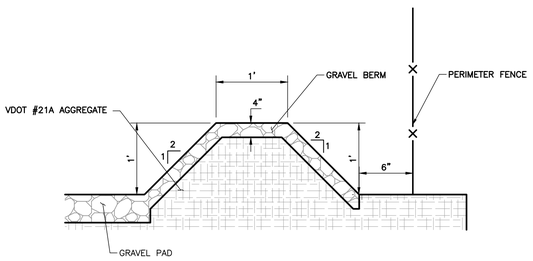
NO	DATE	DESCRIPTION

CEC
Civil & Environmental Consultants, Inc.
700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com

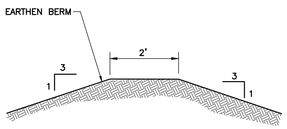
TRANSCONTINENTAL GAS PIPE LINE, LLC
COMPRESSOR STATION 165
PITTSLVYANIA COUNTY, VIRGINIA

CONSTRUCTION DETAILS

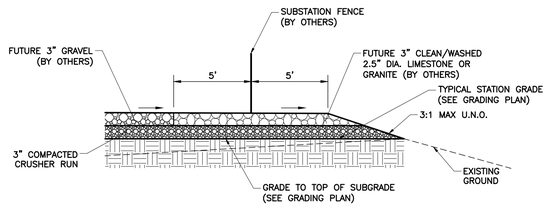
DATE:	MAY 2025	DRAWN BY:	JMP
DWG SCALE:	N.T.S	CHECKED BY:	MEA
PROJECT NO:



DETAIL 7
GRAVEL PAD BERM
N.T.S.



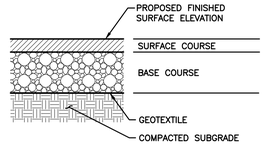
DETAIL 7A
EARTHEN BERM
N.T.S.



NOTES:

THE 3" COMPACTED CRUSHER RUN IS USED FOR E&S CONTROL IF THERE WILL BE AN EXTENDED PERIOD OF TIME BETWEEN FINAL GRADING AND CONSTRUCTION. IF CONSTRUCTION IS TO START IMMEDIATELY AFTER SITE WORK IS FINISHED, COORDINATION BETWEEN CIVIL DESIGNER AND CONSTRUCTION CONTRACTOR MAY BE REQUIRED TO IMPLEMENT THE BEST E&S CONTROLS. SEEDING, STRAWING, SOD OR OTHER PLANTING ON THE GRADED SUBSTATION PAD IS NOT ALLOWED.

DETAIL 8
SUBSTATION SECTION
N.T.S.

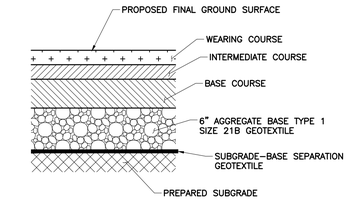


DESCRIPTION	ITEM
SURFACE COURSE	3" VDOT 21A AGGREGATE
BASE COURSE	6" AASHTO NO. 1
GEOTEXTILE	MIRAFI RS380i GEOTEXTILE

NOTES:

1. PRIOR TO PLACEMENT OF AGGREGATE, THE PAVEMENT SUBGRADE SHALL BE PREPARED AS FOLLOWS:
   A. SUBGRADE SHALL BE PROOFROLLED AND COMPACTED TO AT LEAST 95% OF ITS MAXIMUM DRY DENSITY AND WITHIN ± 3% OF ITS OPTIMUM MOISTURE CONTENT, AS DETERMINED BY ASTM D1557 (MODIFIED PROCTOR). ANY SOFT AREAS SHALL BE OVEREXCAVATED TO A FIRM AND COMPETENT MATERIAL AND BACKFILLED AS DESCRIBED IN 1B.
   B. ALL APPROVED FILL SHALL BE PLACED IN MAXIMUM 8" THICK, LOOSE LIFTS AND COMPACTED TO 95% OF ITS MAXIMUM DRY DENSITY AND WITHIN ±3% OF ITS OPTIMUM MOISTURE CONTENT. THE FILL MATERIAL'S MAXIMUM DRY DENSITY AND OPTIMUM MOISTURE CONTENT SHALL BE DETERMINED BY ASTM D1557 (MODIFIED PROCTOR).
   C. AFTER COMPACTION, THE SUBGRADE SHALL PROVIDE A FIRM UNYIELDING FOUNDATION WITH NO SUDDEN, SHARP OR ABRUPT CHANGES OR BREAKS IN GRADES. NO STANDING WATER OR EXCESS MOISTURE SHALL BE PRESENT. ALL SOFT AND YIELDING AREAS SHALL BE REWORKED BY OVEREXCAVATING TO A FIRM AND COMPETENT MATERIAL, AND BACKFILLED AS DESCRIBED IN 1B.

DETAIL 9
GRAVEL SECTION
N.T.S.



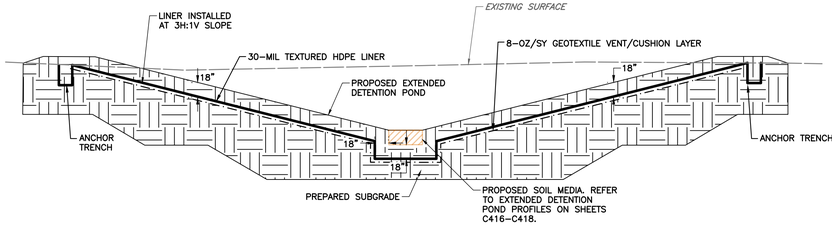
PAVEMENT SECTIONS

ITEM	LAYER THICKNESS
WEARING COURSE	2"
INTERMEDIATE COURSE	2"
BASE COURSE	4"
GEOTEXTILE	6"

NOTE:

1. PREPARED SUBGRADE SHALL BE FREE OF DELITERIOUS MATERIAL AND COMPACTED TO VISUAL NON-MOVEMENT USING A DOUBLE DRUM WALK-BEHIND COMPACTOR WITH A MINIMUM STATIC WEIGHT OF 1,000 LBS. UNSUITABLE SUBGRADE SHALL BE REMOVED AND REPLACED WITH COMPACTED AASHTO NO. 1 STONE.

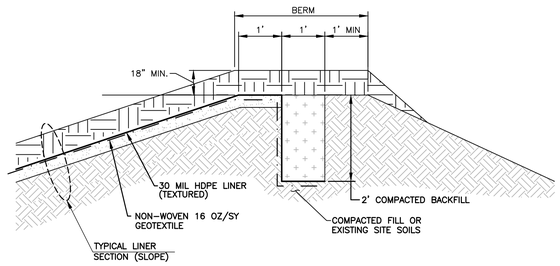
DETAIL 10
PAVEMENT SECTION
N.T.S.



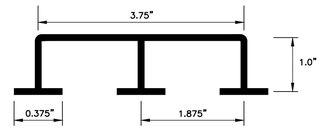
LINED EXTENDED DETENTION POND NOTES:

1. ED POND SUBGRADE SHALL BE FREE OF VEGETATION, ROOTS, LARGE ROCKS, AND PROTRUDING OBJECTS GREATER THAN 1/2" IN SIZE. SUBGRADE PREPARATION SHALL BE ACHIEVED UTILIZING A SMOOTH DRUM ROLLER, PROVIDED THAT HAND REMOVAL OF THE ITEMS LISTED ABOVE IS PERFORMED.
2. ANCHOR TRENCH BACKFILL MATERIAL SHALL BE FREE OF LARGE ROCKS, ROOTS, AND OTHER DELETERIOUS MATERIALS. BACKFILL MATERIAL SHALL BE COMPACTED USING A MECHANICAL TAMPER TO VISUAL NON-MOVEMENT.
3. THE GEOMEMBRANE PANELS SHALL BE FIELD FIT TO MINIMIZE WRINKLES AND AIR VOIDS. ALL GEOMEMBRANE SEAMS SHALL BE WELDED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
4. LINER SYSTEM SHALL BE INSTALLED BY A QUALIFIED CONTRACTOR.
5. CONSTRUCTION QUALITY ASSURANCE TESTING SHALL BE CONDUCTED DURING INSTALLATION TO A STANDARD COMMENSURATE WITH CURRENT INDUSTRY PRACTICE. RECORDS OF CQA TESTING MUST BE MAINTAINED BY THE OWNER OR ITS REPRESENTATIVE.

DETAIL 11
EXTENDED DETENTION POND LINER
N.T.S.



DETAIL 12
LINER ANCHOR TRENCH
N.T.S.



DETAIL 13
HDPE EMBEDMENT ANCHOR
N.T.S.

COMMONWEALTH OF VIRGINIA
MICHAEL EDWARD ARCHER
Lic. No. 043994
PROFESSIONAL ENGINEER
6-2-2025

REVISION RECORD

NO	DATE	DESCRIPTION

700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
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Civil & Environmental Consultants, Inc.

TRANSCONTINENTAL GAS PIPE LINE, LLC
COMPRESSOR STATION 165
PITTSLYVANIA COUNTY, VIRGINIA

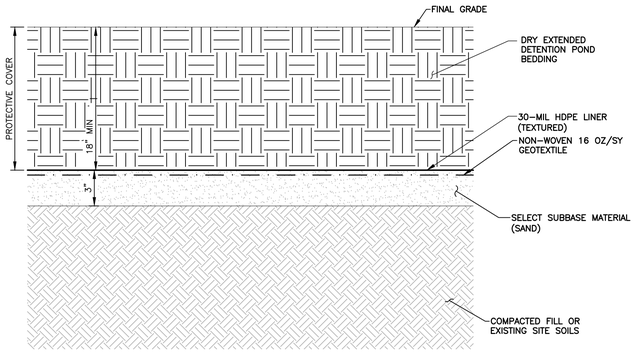
CONSTRUCTION DETAILS

DATE:	MAY 2025
DWG SCALE:	N.T.S
PROJECT NO:	
DRAWN BY:	JMP
CHECKED BY:	MEA
	341-132
APPROVED BY:	LCW

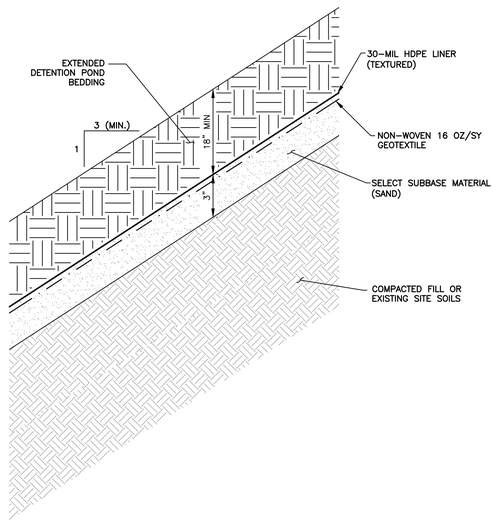
DRAWING NO.: C802

SHEET 40 OF 61

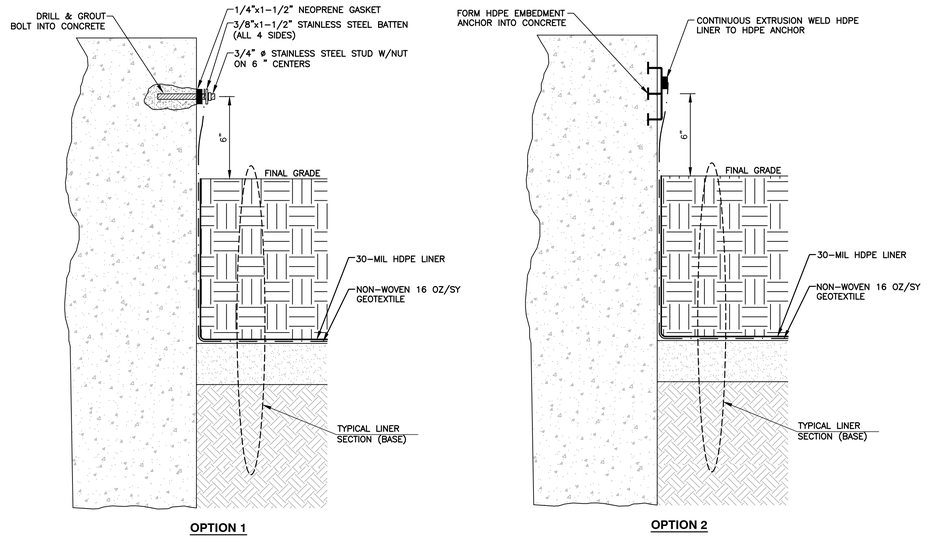
P:\340-000\341-132\-04DB\Dwg\C801\341132-CV01-C800-Construction Details.dwg[C802] 12/13/2025 - khagner - LP: 6/3/2025 9:20 AM



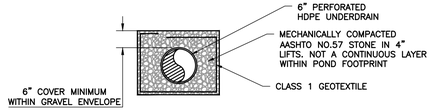
DETAIL 14
TYPICAL LINER SECTION (BASE)
N.T.S.



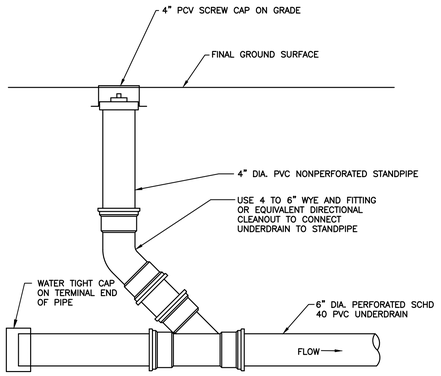
DETAIL 15
TYPICAL LINER SECTION (SLOPE)
N.T.S.



DETAIL 16
LINER/CONCRETE CONNECTION
N.T.S.



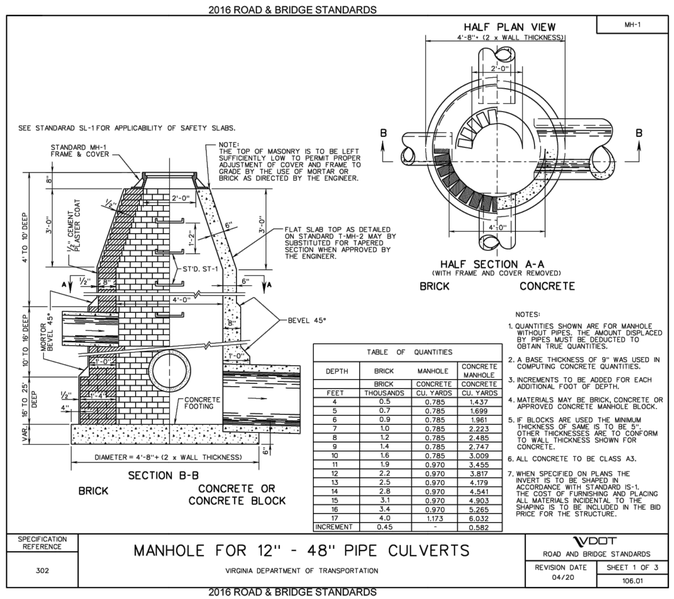
DETAIL 17
UNDERDRAIN
N.T.S.



NOTES:

1. ALL PVC PIPE AND FITTINGS SHALL BE SDR 35 WITH RUBBER GASKETED JOINTS.

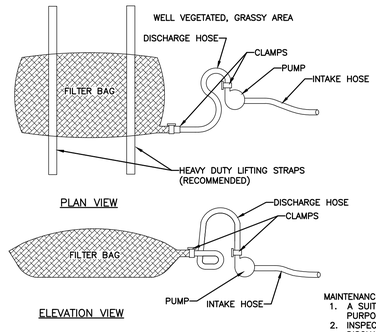
DETAIL 18
STORM SEWER CLEANOUT
N.T.S.



MANHOLE TABLE

STRUCTURE NAME	RIM E.	INVERT IN	INVERT OUT
MH-1	651.49	PD-13 = 645.70	PD-13A = 643.00

DETAIL 19
MANHOLE
N.T.S.



NOTES:

1. LOW VOLUME FILTER BAGS SHALL BE MADE FROM NON-WOVEN GEOTEXTILE MATERIAL SEWN WITH HIGH STRENGTH, DOUBLE STITCHED "J" TYPE SEAMS. THEY SHALL BE CAPABLE OF TRAPPING PARTICLES LARGER THAN 150 MICRONS. HIGH VOLUME FILTER BAGS SHALL BE MADE FROM WOVEN GEOTEXTILES THAT MEET THE FOLLOWING STANDARDS:

PROPERTY	TEST METHOD	MINIMUM STANDARD
AVG. WIDE WIDTH STRENGTH	ASTM D-4884	60 LB/IN
GRAB TENSILE	ASTM D-4632	205 LB
PUNCTURE	ASTM D-4833	110 LB
MULLEN BURST	ASTM D-3786	350 PSI
UV RESISTANCE	ASTM D-4355	70%
AOS % RETAINED	ASTM D-4751	80 SIEVE

2. BAGS SHALL BE LOCATED IN WELL-VEGETATED (GRASSY) AREA, AND DISCHARGE ONTO STABLE, EROSION RESISTANT AREAS. WHERE THIS IS NOT POSSIBLE, A GEOTEXTILE UNDERLAYMENT AND FLOW PATH SHALL BE PROVIDED. BAGS MAY BE PLACED ON FILTER STONE TO INCREASE DISCHARGE CAPACITY. BAGS SHALL NOT BE PLACED ON SLOPES GREATER THAN 5%. FOR SLOPES EXCEEDING 5%, CLEAN ROCK OR OTHER NON-ERODIBLE AND NON-POLLUTING MATERIAL MAY BE PLACED UNDER THE BAG TO REDUCE SLOPE STEEPNESS.
3. THE PUMP DISCHARGE HOSE SHALL BE INSERTED INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED. A PIECE OF PVC PIPE IS RECOMMENDED FOR THIS PURPOSE.
4. THE PUMPING RATE SHALL BE NO GREATER THAN 750 GPM OR 1/2 THE MAXIMUM SPECIFIED BY THE MANUFACTURER, WHICHEVER IS LESS. PUMP INTAKES SHALL BE FLOATING AND SCREENED.

MAINTENANCE:

1. A SUITABLE MEANS OF ACCESSING THE BAG WITH MACHINERY REQUIRED FOR DISPOSAL PURPOSES SHALL BE PROVIDED.
2. INSPECT THE WATER FILTER BAGS DAILY. MONITOR THE DEVICE TO ENSURE THAT THE DISCHARGE IS NOT CAUSING EROSION. PROVIDE SOIL STABILIZATION BLANKETS OR COMPOST FILTER SOCK AS NECESSARY TO MAINTAIN STABILIZATION.
3. REPLACE FILTER BAGS WHEN THEY BECOME HALF FULL OF SEDIMENT, OR THE BUILDUP PREVENTS THE BAG FROM FUNCTIONING.
4. SPARE BAGS SHALL BE AVAILABLE ON SITE FOR REPLACEMENT OF FILLED OR FAILED BAGS.
5. PLACE BAGS ON STRAPS TO FACILITATE REMOVAL UNLESS NAGS COME WITH LIFTING STRAPS ALREADY ATTACHED.
6. BAGS SHALL BE PLACED ON STABLE, EROSION-RESISTANT AREAS. INSTALL COMPOST FILTER SOCK BELOW BAGS LOCATED WITHIN 50 FEET OF RECEIVING WATER OR WHERE A STABLE AREA IS NOT AVAILABLE.

DETAIL 20
PUMPED WATER FILTER BAG
N.T.S.

COMMONWEALTH OF VIRGINIA
MICHAEL EDWARD ARCHER
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6-2-2025

REVISION RECORD

NO	DATE	DESCRIPTION

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Civil & Environmental Consultants, Inc.

TRANSCONTINENTAL GAS PIPE LINE, LLC
COMPRESSOR STATION 165
PITTSLYVANIA COUNTY, VIRGINIA

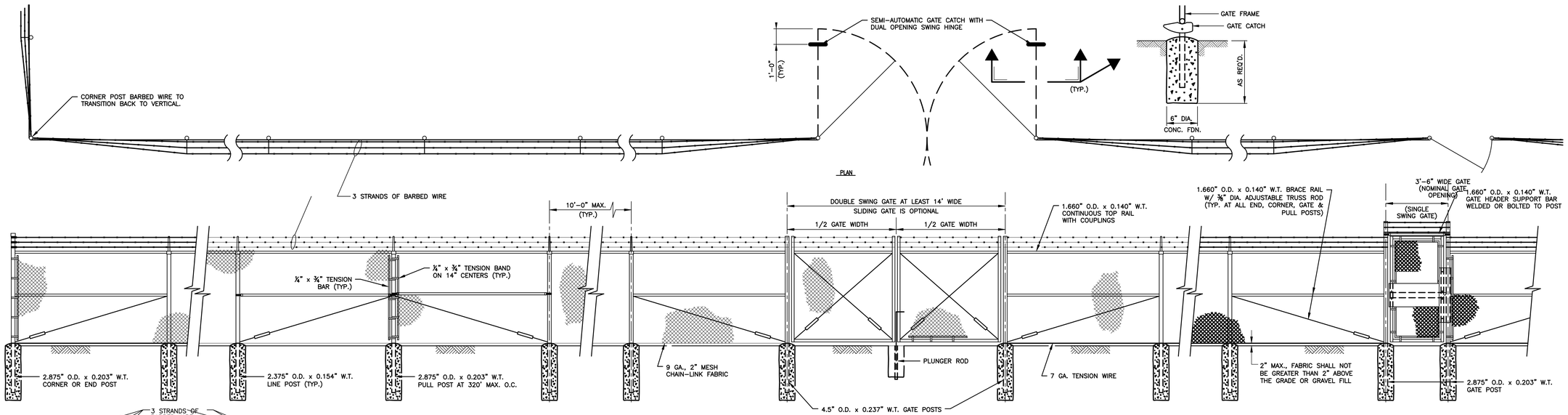
CONSTRUCTION DETAILS

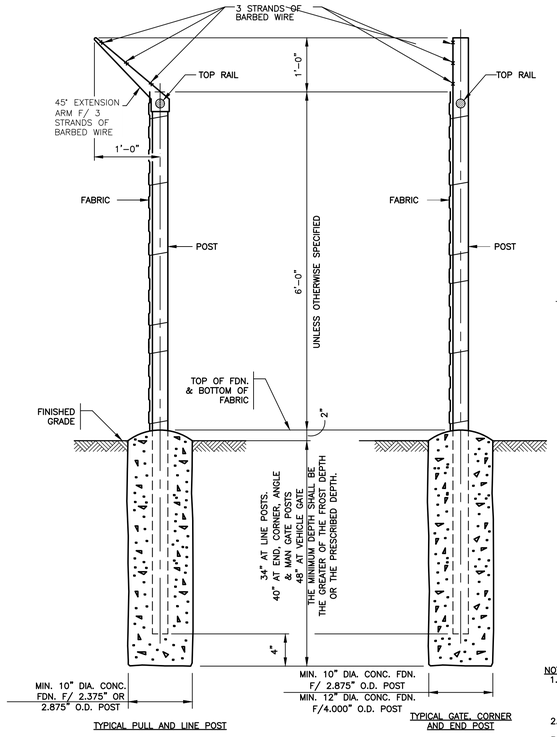
DATE:	MAY 2025
DWG SCALE:	N.T.S
PROJECT NO:	341-132
DRAWN BY:	JMP
CHECKED BY:	MEA
APPROVED BY:	LCW

DRAWING NO.: C803

SHEET 41 OF 61

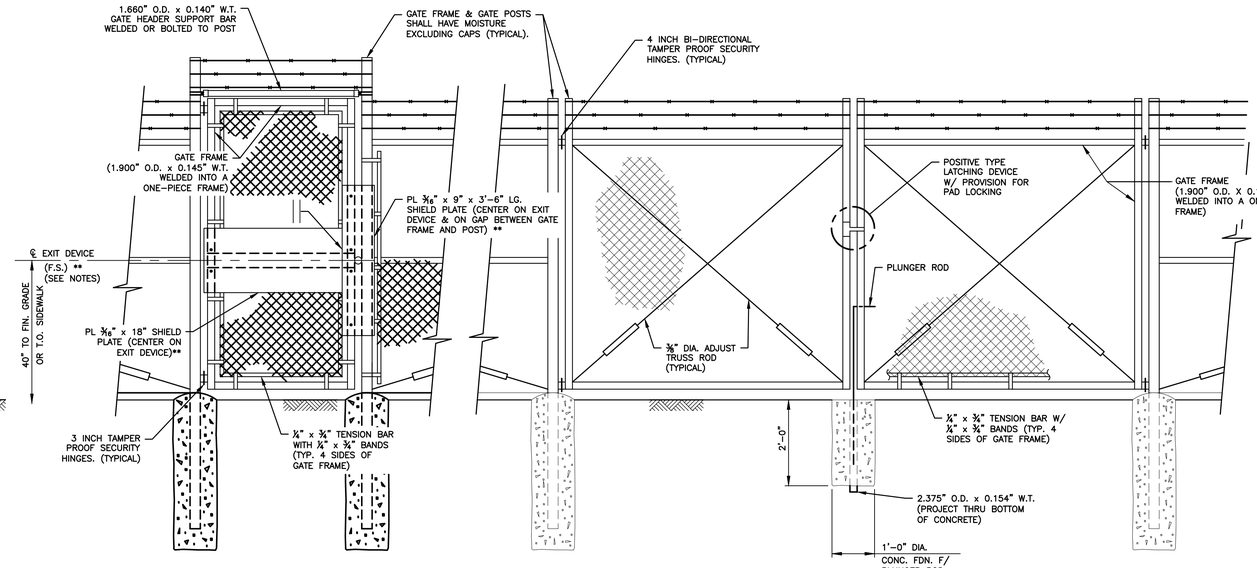
P:\340-000\341-132\-DATA\Dwg\CIVIL\341-132-CIVIL-C800-Construction Details.dwg[C803] LS:(5/30/2025 - Enlarge) - LP: 6/3/2025 9:29 AM





TYPICAL PULL AND LINE POST

TYPICAL GATE, CORNER AND END POST



TYPICAL SINGLE SWING GATE

** DENOTES EXIT DEVICE AND RELATED MATERIALS REQUIRED UNLESS OTHERWISE SPECIFIED.

TYPICAL DOUBLE SWING GATE

NOTES:
1. SINGLE SWING GATE TO BE FURNISHED WITH UL APPROVED PUSH BAR EXIT DEVICE AND LOCKSET CAPABLE OF RECEIVING COMPANY-FURNISHED RIM LOCK CYLINDER AND EXPANSION RING. EXIT DEVICE TO BE MOUNTED TO INTERIOR OF GATE BY MEANS OF A 3/16" THICK x 18" WIDE PLATE.
2. SHIELD PLATE AND EXIT DEVICE MOUNTING PLATE TO BE ATTACHED TO GATE WITH 3/8" DIA. MACHINE BOLTS MOUNTED THROUGH GATE FRAME.
3. REFER TO WILLIAMS STANDARD DRAWING WSSD-01-SE-CV07-00001-001 FOR ADDITIONAL INFORMATION.

GENERAL NOTES:
1. USE CLASS 3000 (3000 PSI) CONCRETE.
2. CONDUCT CONCRETE COMPRESSIVE STRENGTH TESTS.
3. MISCELLANEOUS MATERIALS ARE TO BE GALVANIZED AS SPECIFIED IN ASTM A123, F626, A153 OR EQUIVALENT.
4. USE SCH 40 PIPE OR THICKER FOR STRUCTURAL PIPE.
5. USE GALVANIZED MESH ASSEMBLED AND SPECIFIED PER ASTM A392 CLASS 2.
6. USE NO. 9 GAGE MESH WIRE OR LARGER WOVEN IN A 2" CHAIN LINK DIAMOND MESH. IT MUST HAVE AT LEAST 0.1% SILICON CONTENT. IT MUST HAVE TWISTED AND BARBED TOP AND BOTTOM SELVAGES.
7. ALL POSTS AND BRACES MADE FROM PIPE MUST BE GALVANIZED, COLD-ROLLED, TUBING CONFORMING TO ASTM F1043, F1083 OR EQUIVALENT.
8. LINE POSTS ARE 2⅜" OR LARGER O.D. PIPE.
9. CORNER POSTS, INTERMEDIATE BRACED POSTS, AND MAN GATE POSTS MUST BE 2⅞" OR LARGER O.D. PIPE.
10. GATE POSTS FOR DOUBLE SWING AND SLIDING VEHICLE GATES: 4 INCH OR LARGER OD PIPE.
11. INSTALL MOISTURE-PROOF CAPS ON ALL POSTS.
12. SPECIFY HORIZONTAL BRACES AS FOLLOWS: USE 1⅝" OR LARGER O.D. GALVANIZED PIPE AT POSTS REQUIRING BRACING. USE ⅜" OR LARGER DIAMETER RODS COMPLETE WITH TURNBUCKLE OR TRUSS TIGHTENER. USE ONE BRACE ASSEMBLY FOR EACH TERMINAL OR GATE POST. USE TWO BRACE ASSEMBLIES FOR EACH CORNER POST OR PULL POST. LOCATE MIDWAY BETWEEN THE TOP AND BOTTOM OF THE FABRIC, AND SECURE TO POSTS WITH SUITABLE STEEL OR MALLEABLE IRON FITTINGS. EXTEND FROM THE TERMINAL POST TO THE FIRST ADJACENT LINE POST AND TRUSS BACK TO THE BASE OF THE TERMINAL POST.
13. SPECIFY NO. 7 GAUGE GALVANIZED TYPE I, CLASS 5 COATING STEEL WIRE PER ASTM A824 FOR TENSION WIRE BETWEEN POSTS AT THE TOP AND BOTTOM OF ALL FENCE FABRIC.
14. INSTALL PANIC BARS ON ALL GATES USED FOR PERSONNEL ESCAPE. THE GATE MUST OPEN OUTWARDS AND BE OPERABLE WITHOUT A KEY. INSTALL GUARDS THAT PREVENT A PERSON ON THE EXTERIOR OF THE FENCE FROM ACTUATING THE PANIC BAR. MAKE THE GATE FRAMES AND BRACES OUT OF 1⅝" O.D. OR LARGER GALVANIZED PIPE CONFORMING TO ASTM F1043, F1083 OR EQUIVALENT. INCLUDE A TOP TO THE GATE FRAME TO KEEP THE POSTS FROM SETTLING OR THE GATE BEING PRIED APART. USE AT LEAST TWO STEEL OR MALLEABLE IRON HINGES, OF A 3 INCH WIDTH OR WIDER. INSTALL THE GATE TO SWING AT LEAST 180 DEGREES. SPECIFY LATCHES, STOPS, CENTER RESTS, AND LOCKING DEVICES TO BE MADE OF SUITABLE MALLEABLE IRON OR PRESSED STEEL.
15. MAKE VEHICLE GATES AT LEAST 14 FT WIDE FROM FENCE POST TO FENCE POST. USE 1⅝" OR LARGER OD GALVANIZED PIPE FOR FRAME CONFORMING TO ASTM F1043, F1083 OR EQUIVALENT. BRACE WITH ⅜" INCH OR LARGER DIAMETER TRUSS RODS WITH TIGHTENERS AND 1⅝" OR LARGER O.D. CENTER VERTICAL BRACE.
16. USE BARBED WIRE WITH TWO TWISTED STRANDS OF 12 ½" GAUGE WIRE, WITH TWO OR FOUR POINT BARBS, SPACED ON APPROXIMATELY 5 INCH CENTERS. DO NOT USE LESS THAN #14 ASH GAGE STEEL WIRE FOR THE BARBS. SELECT HOT-DIP GALVANIZED WIRE ACCORDING TO ASTM A121. MAKE THE TOP GUARD EXTENSION AT LEAST 12 INCH HIGH 45 DEGREE OUTWARD FACING OUTRIGGER WITH THREE SLOTS FOR BARBED WIRE.
17. USE HEAVY GALVANIZED STEEL METAL BANDS OR WIRE OF AT LEAST NO. 9 GAUGE TO FASTEN THE FABRIC TO THE POSTS.
18. USE CHAINS TO SECURE PEDESTRIAN AND VEHICLE GATES THAT CONFORM TO THE NATIONAL ASSOCIATION OF CHAIN MANUFACTURERS (NACM) AND FEDERAL SPECIFICATION RR-C-271F STEEL CHAIN SPECIFICATIONS.
19. FINISHED GRADE SHALL BE MARKED BY SURVEY AT SUFFICIENT NUMBERS OF LOCATIONS TO ASSURE MAINTAINED 2" GAP WHEN THE SITE IS COMPLETED AS PERMITTED.
20. MANUFACTURER RECOMMENDED SAFETY COVERS SHALL BE INSTALLED OVER ALL EXPOSED ROLLERS OF AUTOMATED VEHICLE GATES.

DETAIL 21
CHAIN LINK FENCE AND GATES
N.T.S.

REVISION RECORD

NO	DATE	DESCRIPTION

CEC
Civil & Environmental Consultants, Inc.
700 Cherrington Parkway
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TRANSCONTINENTAL GAS PIPE LINE, LLC
COMPRESSOR STATION 165
PITTSLYVANIA COUNTY, VIRGINIA

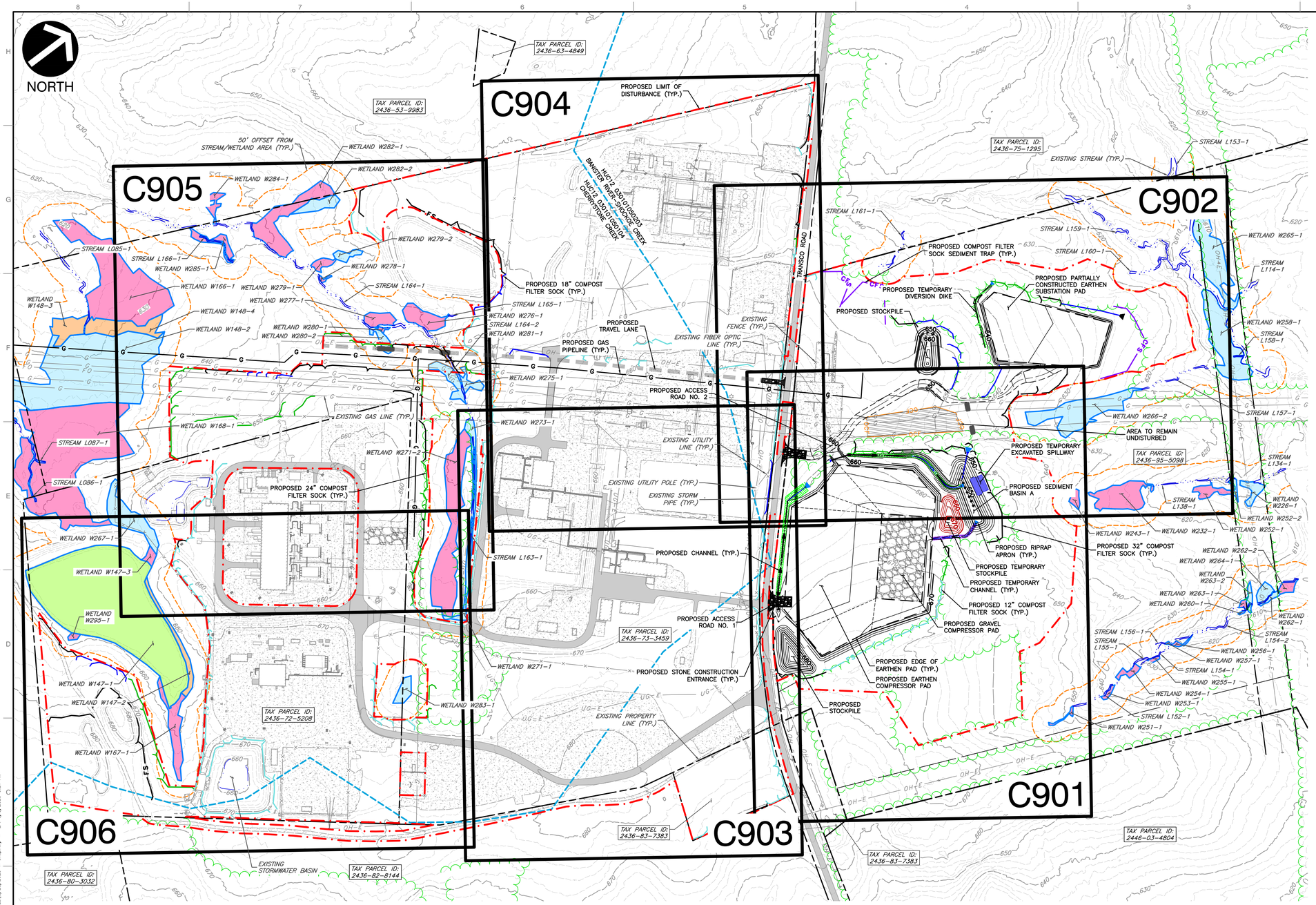
CONSTRUCTION DETAILS

DATE:	MAY 2025	DRAWN BY:	JMP
DWG SCALE:	N.T.S	CHECKED BY:	MEA
PROJECT NO:			341-132
APPROVED BY:			LCW

COMMONWEALTH OF VIRGINIA
MICHAEL EDWARD ARCHER
Lic. No. 043994
PROFESSIONAL ENGINEER
6-2-2025

DRAWING NO.: C804
SHEET 42 OF 61

P:\340-005\341-132\-0401\dwg\CIVIL\341132-C801-Construction Details.dwg[C804] LS:(5/30/2025 - Shaner) - LP: 6/3/2025 9:20 AM



LEGEND

- EXISTING INDEX CONTOUR
- EXISTING INTERMEDIATE CONTOUR
- EXISTING SUBJECT PROPERTY LINE
- EXISTING PROPERTY LINE
- EXISTING TRANSCO ROAD RIGHT-OF-WAY
- EXISTING RIGHT-OF-WAY
- EXISTING FENCE LINE
- EXISTING EDGE OF PAVEMENT
- EXISTING PAVEMENT LIMITS
- EXISTING EDGE OF GRAVEL
- EXISTING GRAVEL LIMITS
- EXISTING GUIDE RAIL
- EXISTING BUILDING
- EXISTING STRUCTURE
- ST EXISTING STORM PIPE
- W EXISTING WATER LINE
- G EXISTING GAS LINE
- G EXISTING GAS LINE (BY OTHERS)
- OH-E EXISTING OVERHEAD WIRE
- EXISTING UTILITY POLE
- UG-E EXISTING FIBER OPTIC LINE
- FO EXISTING UNDERGROUND ELECTRIC LINE
- EXISTING FENCE
- EXISTING TREE LINE
- EXISTING RIPRAP
- EXISTING HUC12 BOUNDARY
- EXISTING STREAM (BY OTHERS)
- EXISTING PEM WETLAND (BY OTHERS)
- EXISTING PFO WETLAND (BY OTHERS)
- EXISTING POW WETLAND (BY OTHERS)
- EXISTING PSS WETLAND (BY OTHERS)
- 50' OFFSET FROM STREAM/WETLAND
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED AREA TO REMAIN UNDISTURBED
- PROPOSED ROCK CONSTRUCTION ENTRANCE
- OCF PROPOSED ORANGE CONSTRUCTION FENCE
- FS PROPOSED 12" COMPOST FILTER SOCK
- FS PROPOSED 18" COMPOST FILTER SOCK
- FS PROPOSED 24" COMPOST FILTER SOCK
- FS PROPOSED 32" COMPOST FILTER SOCK
- CFS PROPOSED COMPOST FILTER SOCK SEDIMENT TRAP
- PROPOSED BAFFLE
- 660 PROPOSED TEMPORARY INDEX CONTOUR
- PROPOSED TEMPORARY INTERMEDIATE CONTOUR
- 660 PROPOSED INDEX CONTOUR
- PROPOSED INTERMEDIATE CONTOUR
- PROPOSED EDGE OF GRAVEL PAD
- PROPOSED FLAT PAD LIMITS
- PROPOSED BERM
- PROPOSED EDGE OF UNPAVED DIRT ROAD
- PROPOSED TEMPORARY DIVERSION DIKE
- PROPOSED TEMPORARY CHANNEL
- PROPOSED TEMPORARY STORM PIPE
- PROPOSED TEMPORARY OUTLET STRUCTURE
- PROPOSED TEMPORARY RIPRAP APRON
- PROPOSED TEMPORARY ANTI-SEEP COLLAR
- PROPOSED TEMPORARY HEAD/ENDWALL
- PROPOSED TEMPORARY EXCAVATED SPILLWAY
- PROPOSED CHANNEL
- PROPOSED STORM PIPE
- PROPOSED RIPRAP APRON
- PROPOSED S150 CHANNEL LINER
- PROPOSED P300 CHANNEL LINER
- PROPOSED P550 CHANNEL LINER

REFERENCES

1. EXISTING CONTOURS ARE A COMBINATION OF TOPOGRAPHY DERIVED FROM UNMANNED AERIAL LIDAR DATA AND SUPPLEMENTAL FIELD SURVEY DATA COLLECTED BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC. (CEC) IN JUNE AND DECEMBER 2024 WITH SUPPLEMENTED CONTOURS DERIVED FROM FROM VIRGINIA GIS CLEARINGHOUSE REST SERVICES – VIRGINIA GEOGRAPHIC INFORMATION NETWORK (VGIN), DATED 2018.
2. AERIAL IMAGERY IS A COMBINATION OF IMAGERY DERIVED FROM UNMANNED AERIAL PHOTOGRAMMETRIC DATA AND SUPPLEMENTAL FIELD SURVEY DATA COLLECTED BY CEC ON DECEMBER 4, 2024 AND PHOTOGRAPHY FROM GOOGLE EARTH ACCESSED THROUGH PLEX EARTH, DATE OF PHOTOGRAPHY APRIL 2021.
3. EXISTING INFORMATION WITHIN THE PROJECT AREA IS A COMBINATION OF INFORMATION PROVIDED BY TRANSCO IN MARCH, APRIL, OCTOBER AND NOVEMBER 2024 AND TRADITIONAL SURVEY PERFORMED BY CEC IN JUNE AND DECEMBER 2024.
4. AQUATIC RESOURCES ARE BASED ON STREAM AND WETLAND DELINEATIONS COMPLETED BY WETLAND STUDIES AND SOLUTIONS, INC. (WSSI), DATA WHICH WAS PROVIDED BY WSSI ON MARCH 10, 2025.
5. EXISTING PROPERTY LINES ARE A COMBINATION OF INFORMATION DERIVED FROM ALTA SURVEY FILE TITLED "MAIN-D_1413_06-1413_70_ALTA_EMAILED041024.DWG" PROVIDED BY TRANSCO ON APRIL 11, 2024 AND INFORMATION DERIVED FROM FILE TITLED "EDEN_CY_PROPERTIES_20250219.DWG" PROVIDED BY TRANSCO ON FEBRUARY 19, 2024.
6. EXISTING PARCEL LINES DERIVED FROM PUBLICLY AVAILABLE PITTSYLVANIA COUNTY OPEN DATA, ACCESSED APRIL 2024.

SCALE IN FEET
0 150 300

COMMONWEALTH OF VIRGINIA
MICHAEL EDWARD ARCHER
Lic. No. 043994
PROFESSIONAL ENGINEER
6-2-2025

REVISION RECORD

NO	DATE	DESCRIPTION

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www.cecinc.com
Civil & Environmental Consultants, Inc.

TRANSCONTINENTAL GAS PIPE LINE, LLC
COMPRESSOR STATION 165
PITTSLVYANIA COUNTY, VIRGINIA

OVERALL PHASE 1 EROSION AND SEDIMENTATION CONTROL PLAN

DATE:	MAY 2025
DWG SCALE:	1" = 150'
PROJECT NO:	341-132
DRAWN BY:	JMP
CHECKED BY:	MEA
APPROVED BY:	LCW

DRAWING NO.: C900
SHEET 43 OF 61

P:\340-0001\341-132\1-CAD\1-Dwg\CIVIL\341-132-CVR1-C900-ES Overall Phase 1.dwg[C900] LS(8/28/2025 - Xrefonly) - LP, 6/3/2025 9:21 AM

NORTH

WETLAND W243–1

50' OFFSET FROM STREAM/WETLAND (TYP.)

WETLAND W266–2

TAX PARCEL ID: 2436–95–5098

STREAM L152–1

WETLAND W251–1

TAX PARCEL ID: 2446–03–4804

CONTRACTOR SHALL NOT STAKE WITHIN THE LIMITS OF THE EXISTING GAS LINES AND SHALL PROVIDE ADDITIONAL CHINKING WITHIN THESE LIMITS

EXISTING 15" CMP CULVERT NO. 1 I=643.2

EXISTING 15" HDPE CULVERT NO. 2 I=642.6

PROPOSED AIR BRIDGE (TYP.) 24 C917

PROPOSED RIPRAP APRON NO. T2 2 C800

PROPOSED SEDIMENT BASIN A

3 C912 PROPOSED 32" COMPOST FILTER SOCK (TYP.)

20 C915 PROPOSED TEMPORARY EXCAVATED SPILLWAY

2 C800 PROPOSED RIPRAP APRON NO. T4

80 LF 15" HDPE @ 1.00%

OP–A

PROPOSED TEMPORARY STOCKPILE

1 C800 PROPOSED TEMPORARY CHANNEL NO. 3

3 C912 PROPOSED 12" COMPOST FILTER SOCK (TYP.)

PROPOSED RIPRAP APRON NO. T1 2 C800

EW–A

TEMPORARY RISER PIPE A TR–A RIM=653.00 INV. OUT (15"NW)=647.00

MATCHLINE SHEET C902

PROPOSED BAFFLE 19 C915

AREA TO REMAIN UNDISTURBED (TYP.)

1 C800 PROPOSED TEMPORARY CHANNEL NO. 1

2 C912 PROPOSED ORANGE CONSTRUCTION FENCE (TYP.)

EXISTING GAS LINE (TYP.)

PROPOSED GRAVEL COMPRESSOR PAD

PROPOSED EDGE OF EARTHEN PAD

PROPOSED ACCESS ROAD NO. 2

1 C800 PROPOSED PERMANENT CHANNEL NO. 1C

8 C913 PROPOSED SOIL STABILIZATION BLANKET (TYP.)

PROPOSED 24" COMPOST FILTER SOCK (TYP.) 3 C912

PROPOSED RIPRAP APRON NO. P2

PROPOSED EARTHEN COMPRESSOR PAD

PROPOSED LIMIT OF DISTURBANCE (TYP.)

EW–2

CULVERT NO. 2

HW–2A

PROPOSED STONE CONSTRUCTION ENTRANCE (TYP.) 1 C912

2 C800 PROPOSED RIPRAP APRON NO. T3

1 C800 PROPOSED TEMPORARY CHANNEL NO. 2

1 C800 PROPOSED PERMANENT CHANNEL NO. 1A

PROPOSED CULVERT INLET PROTECTION (TYP.) 10 C914

PROPOSED STOCKPILE

TAX PARCEL ID: 2436–83–7383

EW–1

HW–1

MATCHLINE SHEET C903

EXISTING 12" CMP I=FILLED W/ DEBRIS

10" METAL I=FILLED W/ DEBRIS

TRANSCO ROAD

CULVERT NO. 1

TAX PARCEL ID: 2436–83–7393

TAX PARCEL ID: 2436–82–8144

CONTRACTOR SHALL NOT STAKE WITHIN THE LIMITS OF THE EXISTING UTILITIES AND SHALL PROVIDE ADDITIONAL CHINKING WITHIN THESE LIMITS

TAX PARCEL ID: 2436–73–3459

EXISTING STORM PIPE (TYP.)

EXISTING UTILITY POLE (TYP.)

EXISTING 12" CMP I=664.2

PROPOSED RIPRAP APRON NO. P1 2 C800

EXISTING PROPERTY LINE (TYP.)

EXISTING TREELINE (TYP.)

23C

23B

9B

9C

LEGEND

- EXISTING INDEX CONTOUR
- EXISTING INTERMEDIATE CONTOUR
- EXISTING SUBJECT PROPERTY LINE
- EXISTING PROPERTY LINE
- EXISTING TRANSCO ROAD RIGHT–OF–WAY
- EXISTING RIGHT–OF–WAY
- EXISTING FENCE LINE
- EXISTING EDGE OF PAVEMENT
- EXISTING PAVEMENT LIMITS
- EXISTING EDGE OF GRAVEL
- EXISTING GRAVEL LIMITS
- EXISTING GUIDE RAIL
- EXISTING BUILDING
- EXISTING STRUCTURE
- EXISTING STORM PIPE
- EXISTING WATER LINE
- EXISTING GAS LINE
- EXISTING GAS LINE (BY OTHERS)
- EXISTING OVERHEAD WIRE
- EXISTING UTILITY POLE
- EXISTING FIBER OPTIC LINE
- EXISTING UNDERGROUND ELECTRIC LINE
- EXISTING FENCE
- EXISTING TREE LINE
- EXISTING RIPRAP
- EXISTING HUC12 BOUNDARY
- EXISTING STREAM (BY OTHERS)
- EXISTING PEM WETLAND (BY OTHERS)
- EXISTING PFO WETLAND (BY OTHERS)
- EXISTING POW WETLAND (BY OTHERS)
- EXISTING PSS WETLAND (BY OTHERS)
- 50' OFFSET FROM STREAM/WETLAND
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED AREA TO REMAIN UNDISTURBED
- SOIL BOUNDARY
- 23B SOIL ID
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- OCF PROPOSED ORANGE CONSTRUCTION FENCE
- FS PROPOSED 12" COMPOST FILTER SOCK
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- FS PROPOSED 32" COMPOST FILTER SOCK
- CFS PROPOSED COMPOST FILTER SOCK SEDIMENT TRAP
- PROPOSED BAFFLE
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- 660 PROPOSED TEMPORARY INDEX CONTOUR
- PROPOSED TEMPORARY INTERMEDIATE CONTOUR
- PROPOSED PHASE 1 INTERMEDIATE CONTOUR
- 660 PROPOSED INDEX CONTOUR
- PROPOSED INTERMEDIATE CONTOUR
- PROPOSED EDGE OF GRAVEL PAD
- PROPOSED FLAT PAD LIMITS
- PROPOSED BERM
- PROPOSED EDGE OF UNPAVED DIRT ROAD
- G PROPOSED GAS PIPELINE
- PROPOSED TEMPORARY DIVERSION DIKE
- PROPOSED TEMPORARY CHANNEL
- PROPOSED TEMPORARY STORM PIPE
- PROPOSED TEMPORARY OUTLET STRUCTURE
- PROPOSED TEMPORARY RIPRAP APRON
- PROPOSED TEMPORARY ANTI–SEEP COLLAR
- PROPOSED TEMPORARY HEAD/ENDWALL
- PROPOSED TEMPORARY EXCAVATED SPILLWAY
- PROPOSED CHANNEL
- PROPOSED STORM PIPE
- PROPOSED RIPRAP APRON
- PROPOSED HEAD/ENDWALL (HW/EW)
- PD–1 PROPOSED STORM PIPE LABEL
- IN–1 PROPOSED STRUCTURE LABEL
- PROPOSED S150 CHANNEL LINER
- PROPOSED P300 CHANNEL LINER
- PROPOSED P550 CHANNEL LINER

REFERENCES

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SCALE IN FEET
0 50 100

COMMONWEALTH OF VIRGINIA
MICHAEL EDWARD ARCHER
Lic. No. 043994
PROFESSIONAL ENGINEER
6-2-2025

REVISION RECORD

NO	DATE	DESCRIPTION

700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
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Civil & Environmental Consultants, Inc.

TRANSCONTINENTAL GAS PIPE LINE, LLC
COMPRESSOR STATION 165
PITTSLVYANIA COUNTY, VIRGINIA

PHASE 1 EROSION AND SEDIMENTATION CONTROL PLAN

DRAWN BY:	JMP
CHECKED BY:	MEA
DATE:	MAY 2025
DWG SCALE:	1" = 50'
PROJECT NO:	341-132
APPROVED BY:	LCW

DRAWING NO.: C901

SHEET 44 OF 61

P:\340–000\341–132\1–0400\Dwg\C901\341132–C901–ESPhase 1 North.dwg[C901] 6/3/2025 – shepner – LY: 6/3/2025 9:22 AM

NORTH

TAX PARCEL ID: 2436-95-5098

STREAM L157-1

WETLAND W266-2

WETLAND W258-1

MATCHLINE SHEET C901

PROPOSED 32" COMPOST FILTER SOCK (TYP.) 3 C912

PROPOSED ACCESS ROAD NO. 2

PROPOSED STOCKPILE

PROPOSED PARTIALLY CONSTRUCTED EARTHEN SUBSTATION PAD

PROPOSED RIPRAP APRON NO. T6 2 C800

PROPOSED COMPOST FILTER SOCK SEDIMENT TRAP (TYP.) 4 C912

PROPOSED 18" COMPOST FILTER SOCK DIVERSION BERM (TYP.) 25 C917

PROPOSED SOIL STABILIZATION BLANKET (TYP.) 8 C913

PROPOSED TEMPORARY DIVERSION DIKE NO. 1 5 C912

PROPOSED 18" COMPOST FILTER SOCK (TYP.) 3 C912

PROPOSED RIPRAP APRON NO. T5 2 C800

PROPOSED LIMIT OF DISTURBANCE (TYP.)

STREAM L160-1

STREAM L153-1

EXISTING STREAM (TYP.)

STREAM L159-1

WETLAND W265-1

EXISTING PROPERTY LINE (TYP.)

23B

23C

PROPOSED GAS PIPELINE

EXISTING FENCE (TYP.)

APPROXIMATE PIPELINE TIE-IN LOCATION. CONTRACTOR TO REFER TO GENERAL NOTE 17 ON SHEET C001.

EXISTING GAS LINE (TYP.)

CONTRACTOR SHALL NOT STAKE WITHIN THE LIMITS OF THE EXISTING GAS LINES AND SHALL PROVIDE ADDITIONAL CHINKING WITHIN THESE LIMITS

PROPOSED 12" COMPOST FILTER SOCK (TYP.) 3 C912

MATCHLINE SHEET C904

40' ROW

TRANSCO ROAD

STREAM L161-1

50' OFFSET FROM STREAM/WETLAND AREA (TYP.)

EXISTING TREELINE (TYP.)

TAX PARCEL ID: 2436-75-1295

LEGEND

- EXISTING INDEX CONTOUR
- EXISTING INTERMEDIATE CONTOUR
- EXISTING SUBJECT PROPERTY LINE
- EXISTING PROPERTY LINE
- EXISTING TRANSCO ROAD RIGHT-OF-WAY
- EXISTING RIGHT-OF-WAY
- EXISTING FENCE LINE
- EXISTING EDGE OF PAVEMENT
- EXISTING PAVEMENT LIMITS
- EXISTING EDGE OF GRAVEL
- EXISTING GRAVEL LIMITS
- EXISTING GUIDE RAIL
- EXISTING BUILDING
- EXISTING STRUCTURE
- EXISTING STORM PIPE
- EXISTING WATER LINE
- EXISTING GAS LINE
- EXISTING GAS LINE (BY OTHERS)
- EXISTING OVERHEAD WIRE
- EXISTING UTILITY POLE
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- EXISTING FENCE
- EXISTING TREE LINE
- EXISTING RIPRAP
- EXISTING HUC12 BOUNDARY
- EXISTING STREAM (BY OTHERS)
- EXISTING PEM WETLAND (BY OTHERS)
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- EXISTING POW WETLAND (BY OTHERS)
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SCALE IN FEET
0 50 100

COMMONWEALTH OF VIRGINIA
MICHAEL EDWARD ARCHER
Lic. No. 043994
PROFESSIONAL ENGINEER
6-2-2025

REVISION RECORD

NO	DESCRIPTION	DATE

700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
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Civil & Environmental Consultants, Inc.

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COMPRESSOR STATION 165
PITTSLYVANIA COUNTY, VIRGINIA

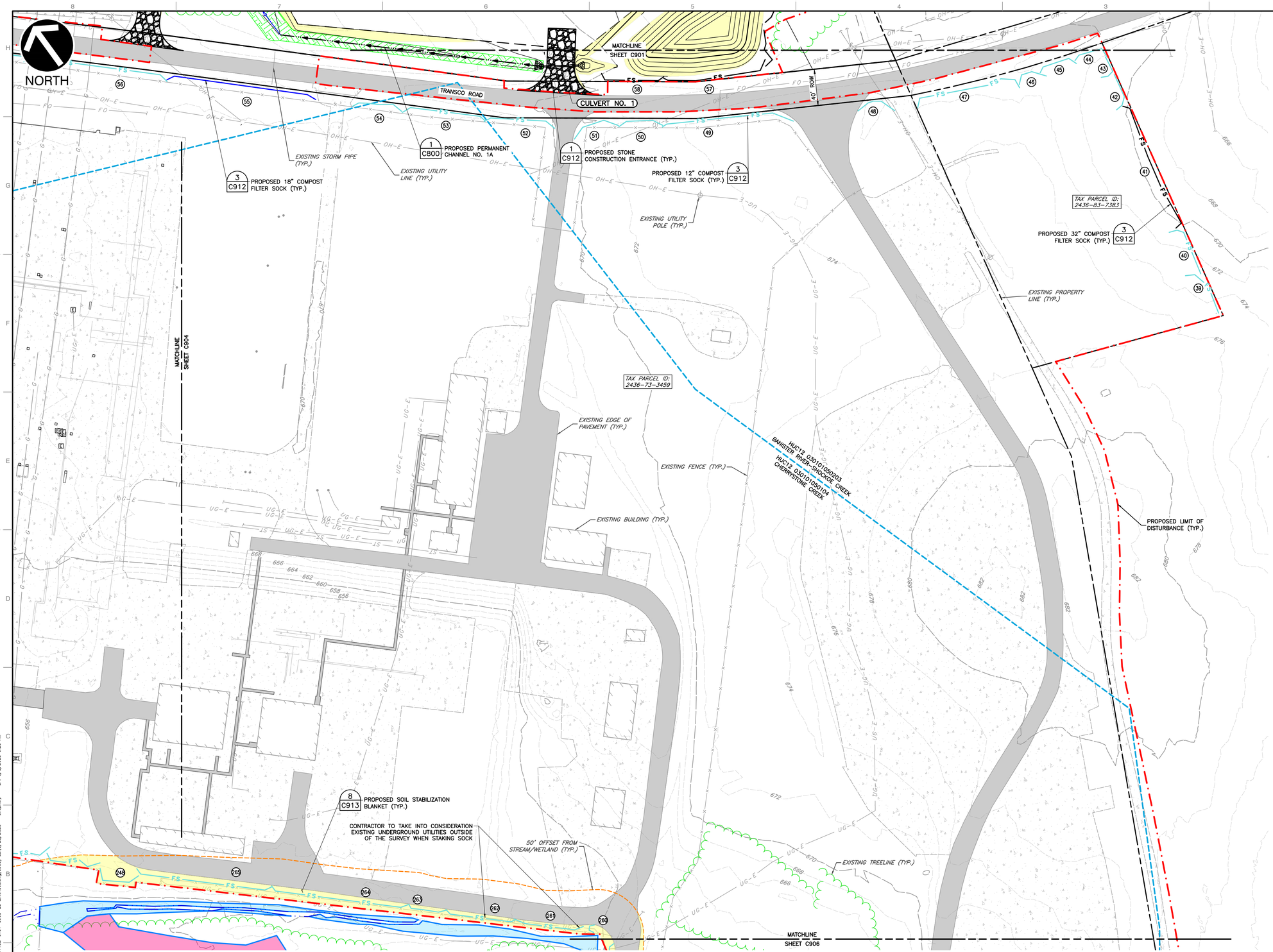
PHASE 1 EROSION AND SEDIMENTATION CONTROL PLAN

DATE:	MAY 2025
DWG SCALE:	1"=50'
PROJECT NO:	341-132
APPROVED BY:	LCW
DRAWN BY:	JMP
CHECKED BY:	MEA

DRAWING NO.: C902

SHEET 45 OF 61

P:\340-0001\341-132\-0400\Dwg\C901\341132-C901-C901-ES Phase 1 North.dwg[3902] LS(5/28/2025 - Shayne) - LP 6/3/2025 9:22 AM



LEGEND

- EXISTING INDEX CONTOUR
- EXISTING INTERMEDIATE CONTOUR
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- EXISTING RIGHT-OF-WAY
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- EXISTING EDGE OF PAVEMENT
- EXISTING PAVEMENT LIMITS
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- EXISTING GRAVEL LIMITS
- EXISTING GUIDE RAIL
- EXISTING BUILDING
- EXISTING STRUCTURE
- EXISTING STORM PIPE
- EXISTING WATER LINE
- EXISTING GAS LINE
- EXISTING GAS LINE (BY OTHERS)
- EXISTING OVERHEAD WIRE
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- 50' OFFSET FROM STREAM/WETLAND
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED ROCK CONSTRUCTION ENTRANCE
- PROPOSED ORANGE CONSTRUCTION FENCE
- PROPOSED 12" COMPOST FILTER SOCK
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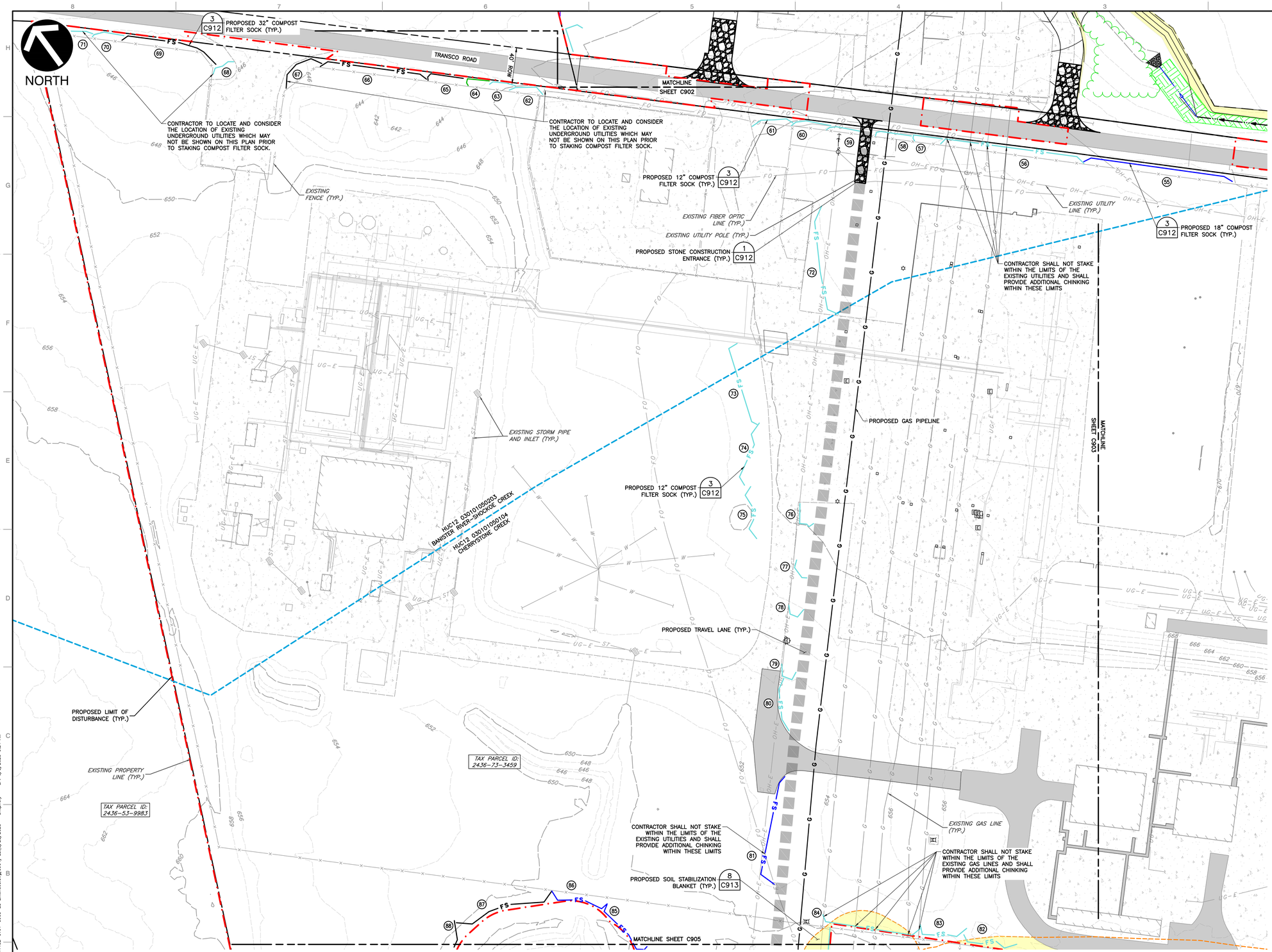
APPROVED BY:	LCW

DRAWING NO.: C903
SHEET 46 OF 61

P:\340-0001\341-132\-0400\dwg\C01\341132-C101-C903-ES Extended.dwg(C903) 15:15:28/2025 - khopman) - LP: 6/3/2025 9:33 AM



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- EXISTING PAVEMENT LIMITS
- EXISTING EDGE OF GRAVEL
- EXISTING GRAVEL LIMITS
- EXISTING GUIDE RAIL
- EXISTING BUILDING
- EXISTING STRUCTURE
- EXISTING STORM PIPE
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- EXISTING HUC12 BOUNDARY
- EXISTING STREAM (BY OTHERS)
- EXISTING PEM WETLAND (BY OTHERS)
- EXISTING PFO WETLAND (BY OTHERS)
- EXISTING POW WETLAND (BY OTHERS)
- EXISTING PSS WETLAND (BY OTHERS)
- 50' OFFSET FROM STREAM/WETLAND
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED ROCK CONSTRUCTION ENTRANCE
- PROPOSED ORANGE CONSTRUCTION FENCE
- PROPOSED 12" COMPOST FILTER SOCK
- PROPOSED 18" COMPOST FILTER SOCK
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- PROPOSED 32" COMPOST FILTER SOCK
- PROPOSED SOIL STABILIZATION BLANKET
- PROPOSED INDEX CONTOUR
- PROPOSED INTERMEDIATE CONTOUR
- PROPOSED EDGE OF GRAVEL PAD
- PROPOSED FLAT PAD LIMITS
- PROPOSED BERM
- PROPOSED EDGE OF UNPAVED DIRT ROAD
- PROPOSED EDGE OF UNPAVED GRAVEL ROAD
- PROPOSED CHANNEL
- PROPOSED STORM PIPE
- PROPOSED RIPRAP APRON

SCALE IN FEET
0 50 100

COMMONWEALTH OF VIRGINIA
MICHAEL EDWARD ARCHER
Lic. No. 043994
PROFESSIONAL ENGINEER
6-2-2025

REVISION RECORD

NO	DATE	DESCRIPTION

700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com
Civil & Environmental Consultants, Inc.

TRANSCONTINENTAL GAS PIPE LINE, LLC
COMPRESSOR STATION 165
PITTSLYVANIA COUNTY, VIRGINIA

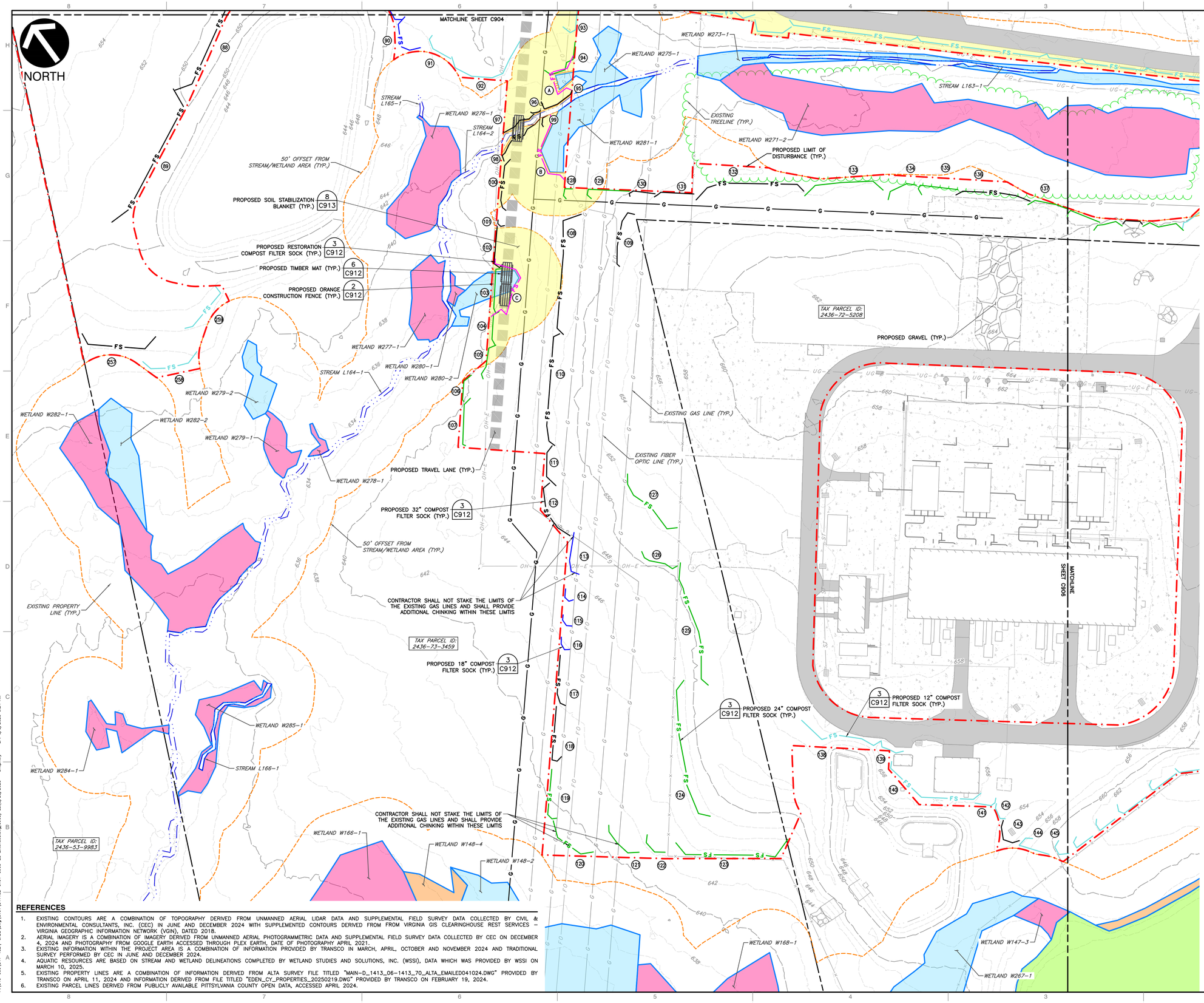
PHASE 1 EROSION AND SEDIMENTATION CONTROL PLAN

DATE:	MAY 2025
DWG SCALE:	1"=50'
PROJECT NO:	341-132
DRAWN BY:	JMP
CHECKED BY:	MEA
APPROVED BY:	LCW

DRAWING NO.: C904

SHEET 47 OF 61

A:\340-0001\341-132\-CAD\Dwg\C001\341132-C001-C903-ES Extended.dwg[3041] LS(28/2025 - Unsaved) - LP, 6/3/2025 9:24 AM



LEGEND

- EXISTING INDEX CONTOUR
- EXISTING INTERMEDIATE CONTOUR
- EXISTING SUBJECT PROPERTY LINE
- EXISTING PROPERTY LINE
- EXISTING TRANSCO ROAD RIGHT-OF-WAY
- EXISTING RIGHT-OF-WAY
- EXISTING FENCE LINE
- EXISTING EDGE OF PAVEMENT
- EXISTING PAVEMENT LIMITS
- EXISTING EDGE OF GRAVEL
- EXISTING GRAVEL LIMITS
- EXISTING GUIDE RAIL
- EXISTING BUILDING
- EXISTING STRUCTURE
- EXISTING STORM PIPE
- EXISTING WATER LINE
- EXISTING GAS LINE
- EXISTING GAS LINE (BY OTHERS)
- EXISTING OVERHEAD WIRE
- EXISTING UTILITY POLE
- EXISTING FIBER OPTIC LINE
- EXISTING UNDERGROUND ELECTRIC LINE
- EXISTING FENCE
- EXISTING TREE LINE
- EXISTING RIPRAP
- EXISTING HUC12 BOUNDARY
- EXISTING STREAM (BY OTHERS)
- EXISTING PEM WETLAND (BY OTHERS)
- EXISTING PFO WETLAND (BY OTHERS)
- EXISTING POW WETLAND (BY OTHERS)
- EXISTING PSS WETLAND (BY OTHERS)
- 50' OFFSET FROM STREAM/WETLAND
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED ROCK CONSTRUCTION ENTRANCE
- PROPOSED ORANGE CONSTRUCTION FENCE
- PROPOSED 12" COMPOST FILTER SOCK
- PROPOSED 18" COMPOST FILTER SOCK
- PROPOSED 24" COMPOST FILTER SOCK
- PROPOSED 32" COMPOST FILTER SOCK
- PROPOSED RESTORATION COMPOST FILTER SOCK
- PROPOSED SOIL STABILIZATION BLANKET

RESTORATION BARRIER ID TABLE

ID	SIZE
B	18" COMPOST FILTER SOCK
C	24" COMPOST FILTER SOCK
A	32" COMPOST FILTER SOCK

REFERENCES

1. EXISTING CONTOURS ARE A COMBINATION OF TOPOGRAPHY DERIVED FROM UNMANNED AERIAL LIDAR DATA AND SUPPLEMENTAL FIELD SURVEY DATA COLLECTED BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC. (CEC) IN JUNE AND DECEMBER 2024 WITH SUPPLEMENTED CONTOURS DERIVED FROM FROM VIRGINIA GIS CLEARINGHOUSE REST SERVICES – VIRGINIA GEOGRAPHIC INFORMATION NETWORK (VGIN), DATED 2018.
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6. EXISTING PARCEL LINES DERIVED FROM PUBLICLY AVAILABLE PITTSYLVANIA COUNTY OPEN DATA, ACCESSED APRIL 2024.

SCALE IN FEET
0 50 100

COMMONWEALTH OF VIRGINIA
MICHAEL EDWARD ARCHER
Lic. No. 043994
PROFESSIONAL ENGINEER
6-2-2025

REVISION RECORD

NO	DATE	DESCRIPTION

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Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com
Civil & Environmental Consultants, Inc.

TRANSCONTINENTAL GAS PIPE LINE, LLC
COMPRESSOR STATION 165
PITTSLYVANIA COUNTY, VIRGINIA

PHASE 1 EROSION AND SEDIMENTATION CONTROL PLAN

DATE:	MAY 2025
DWG SCALE:	1"=50'
PROJECT NO:	341-132
DRAWN BY:	JMP
CHECKED BY:	MEA
APPROVED BY:	LCW

DRAWING NO.: C905
SHEET 48 OF 61

K:\340-2001\341-132\1-CADD\Dwg\C905\341132-C901-C903-ES Extended.dwg(C905) LS(3/28/2025 - Wagner) - LP: 6/3/2025 8:24 AM

NORTH

TAX PARCEL ID: 2436-82-8144

TAX PARCEL ID: 2436-72-5208

EXISTING PROPERTY LINE (TYP.)

EXISTING STORMWATER BASIN

HUC12 030101050203 BANISTER RIVER-SHOCKOE CREEK

HUC12 030101050104 CHERRYSTONE CREEK

EXISTING TREELINE (TYP.)

WETLAND W283-1

WETLAND W271-1

WETLAND W271-2

WETLAND W167-1

WETLAND W147-2

WETLAND W147-1

WETLAND W295-1

PROPOSED LIMIT OF DISTURBANCE (TYP.)

50' OFFSET FROM STREAM/WETLAND AREA (TYP.)

EXISTING RIPRAP APRON (TYP.)

3 912 PROPOSED 12" COMPOST FILTER SOCK (TYP.)

3 912 PROPOSED 24" COMPOST FILTER SOCK (TYP.)

3 912 PROPOSED 18" COMPOST FILTER SOCK (TYP.)

3 912 PROPOSED 32" COMPOST FILTER SOCK (TYP.)

8 913 PROPOSED SOIL STABILIZATION BLANKET (TYP.)

MATCHLINE SHEET C903

MATCHLINE SHEET C905

LEGEND

- EXISTING INDEX CONTOUR
- EXISTING INTERMEDIATE CONTOUR
- EXISTING SUBJECT PROPERTY LINE
- EXISTING PROPERTY LINE
- EXISTING TRANSCO ROAD RIGHT-OF-WAY
- EXISTING RIGHT-OF-WAY
- EXISTING FENCE LINE
- EXISTING EDGE OF PAVEMENT
- EXISTING PAVEMENT LIMITS
- EXISTING EDGE OF GRAVEL
- EXISTING GRAVEL LIMITS
- EXISTING GUIDE RAIL
- EXISTING BUILDING
- EXISTING STRUCTURE
- EXISTING STORM PIPE
- EXISTING WATER LINE
- EXISTING GAS LINE
- EXISTING GAS LINE (BY OTHERS)
- EXISTING OVERHEAD WIRE
- EXISTING UTILITY POLE
- EXISTING FIBER OPTIC LINE
- EXISTING UNDERGROUND ELECTRIC LINE
- EXISTING FENCE
- EXISTING TREE LINE
- EXISTING RIPRAP
- EXISTING HUC12 BOUNDARY
- EXISTING STREAM (BY OTHERS)
- EXISTING PEM WETLAND (BY OTHERS)
- EXISTING PFO WETLAND (BY OTHERS)
- EXISTING POW WETLAND (BY OTHERS)
- EXISTING PSS WETLAND (BY OTHERS)
- 50' OFFSET FROM STREAM/WETLAND
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED ROCK CONSTRUCTION ENTRANCE
- PROPOSED ORANGE CONSTRUCTION FENCE
- PROPOSED 12" COMPOST FILTER SOCK
- PROPOSED 18" COMPOST FILTER SOCK
- PROPOSED 24" COMPOST FILTER SOCK
- PROPOSED 32" COMPOST FILTER SOCK
- PROPOSED SOIL STABILIZATION BLANKET

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SCALE IN FEET
0 50 100

COMMONWEALTH OF VIRGINIA
MICHAEL EDWARD ARCHER
Lic. No. 043994
PROFESSIONAL ENGINEER
6-2-2025

REVISION RECORD

NO	DATE	DESCRIPTION

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COMPRESSOR STATION 165
PITTSLYVANIA COUNTY, VIRGINIA

PHASE 1 EROSION AND SEDIMENTATION CONTROL PLAN

DATE:	MAY 2025
DWG SCALE:	1"=50'
PROJECT NO:	341-132
DRAWN BY:	JMP
CHECKED BY:	MEA
APPROVED BY:	LCW

DRAWING NO.: C906

SHEET 49 OF 61

P:\340-2001\341-132\1-CADD\Dwg\C001\341132-C001-C903-ES Extended.dwg[C906] LS:5/28/2025 - Engineer - LP: 6/2/2025 8:24 AM

NORTH

C909

C908

TAX PARCEL ID: 2436-63-4849

TAX PARCEL ID: 2436-53-9983

TAX PARCEL ID: 2436-75-1295

TAX PARCEL ID: 2436-95-5098

TAX PARCEL ID: 2436-73-3459

TAX PARCEL ID: 2436-72-5208

TAX PARCEL ID: 2436-83-7383

TAX PARCEL ID: 2446-03-4804

TAX PARCEL ID: 2436-80-3032

TAX PARCEL ID: 2436-62-8144

PROPOSED LIMIT OF DISTURBANCE (TYP.)

50' OFFSET FROM STREAM/WETLAND AREA (TYP.)

BANISTER RIVER-SHOCCOE CREEK HUC12 030101050203

HUC12 030101050104 CHERRYSTONE CREEK

TRANSCO ROAD

EXISTING STREAM (TYP.)

WETLAND W282-1

WETLAND W282-2

WETLAND W284-1

STREAM L085-1

STREAM L166-1

WETLAND W285-1

WETLAND W166-1

WETLAND W148-3

WETLAND W148-4

WETLAND W148-2

WETLAND W279-2

WETLAND W278-1

WETLAND W279-1

STREAM L164-1

PROPOSED 18" COMPOST FILTER SOCK (TYP.)

STREAM L165-1

WETLAND W277-1

WETLAND W276-1

WETLAND W280-1

STREAM L164-2

WETLAND W280-2

WETLAND W281-1

PROPOSED GAS PIPELINE (TYP.)

PROPOSED TRAVEL LANE

EXISTING FIBER OPTIC LINE (TYP.)

EXISTING FENCE (TYP.)

WETLAND W275-1

EXISTING GAS LINE (TYP.)

WETLAND W168-1

WETLAND W273-1

STREAM L087-1

STREAM L086-1

WETLAND W271-2

PROPOSED 24" COMPOST FILTER SOCK (TYP.)

WETLAND W267-1

WETLAND W147-3

WETLAND W295-1

WETLAND W147-1

WETLAND W147-2

WETLAND W167-1

STREAM L163-1

WETLAND W271-1

WETLAND W283-1

EXISTING STORMWATER BASIN

PROPOSED CHANNEL (TYP.)

PROPOSED ACCESS ROAD NO. 1

PROPOSED STONE CONSTRUCTION ENTRANCE (TYP.)

EXISTING PROPERTY LINE (TYP.)

PROPOSED ACCESS ROAD NO. 2

EXISTING UTILITY LINE (TYP.)

EXISTING UTILITY POLE (TYP.)

EXISTING STORM PIPE (TYP.)

PROPOSED GRAVEL LAUNCHER PAD

PROPOSED MANAGED TURF POND ACCESS ROAD

PROPOSED GRAVEL COMPRESSOR PAD

PROPOSED SEDIMENT BASIN NO. 1

PROPOSED PERMANENT EXCAVATED SPILLWAY (TYP.)

PROPOSED STORM PIPE (TYP.)

PROPOSED STOCKPILE

PROPOSED 12" COMPOST FILTER SOCK (TYP.)

PROPOSED ACCESS ROAD NO. 3

PROPOSED SEDIMENT BASIN NO. 3

PROPOSED 32" COMPOST FILTER SOCK (TYP.)

PROPOSED STOCKPILE

PROPOSED GRAVEL SUBSTATION PAD

PROPOSED SEDIMENT BASIN NO. 2

PROPOSED LEVEL SPREADER (TYP.)

PROPOSED RIPRAP APRON (TYP.)

AREA TO REMAIN UNDISTURBED

STREAM L153-1

STREAM L161-1

STREAM L159-1

STREAM L160-1

STREAM L114-1

WETLAND W265-1

WETLAND W258-1

STREAM L158-1

STREAM L157-1

WETLAND W266-2

STREAM L134-1

STREAM L138-1

WETLAND W226-1

WETLAND W252-2

WETLAND W252-1

WETLAND W243-1

WETLAND W232-1

WETLAND W262-2

WETLAND W264-1

WETLAND W263-2

WETLAND W263-1

WETLAND W260-1

WETLAND W262-1

STREAM L156-1

STREAM L155-1

WETLAND W256-1

WETLAND W257-1

STREAM L154-1

WETLAND W255-1

WETLAND W254-1

WETLAND W253-1

STREAM L152-1

WETLAND W251-1

STREAM L154-2

LEGEND

- EXISTING INDEX CONTOUR
- EXISTING INTERMEDIATE CONTOUR
- EXISTING SUBJECT PROPERTY LINE
- EXISTING PROPERTY LINE
- EXISTING TRANSCO ROAD RIGHT-OF-WAY
- EXISTING RIGHT-OF-WAY
- EXISTING FENCE LINE
- EXISTING EDGE OF PAVEMENT
- EXISTING PAVEMENT LIMITS
- EXISTING EDGE OF GRAVEL
- EXISTING GRAVEL LIMITS
- EXISTING GUIDE RAIL
- EXISTING BUILDING
- EXISTING STRUCTURE
- EXISTING STORM PIPE
- EXISTING WATER LINE
- EXISTING GAS LINE
- EXISTING GAS LINE (BY OTHERS)
- EXISTING OVERHEAD WIRE
- EXISTING UTILITY POLE
- EXISTING FIBER OPTIC LINE
- EXISTING UNDERGROUND ELECTRIC LINE
- EXISTING FENCE
- EXISTING TREE LINE
- EXISTING RIPRAP
- EXISTING HUC12 BOUNDARY
- EXISTING STREAM (BY OTHERS)
- EXISTING PEM WETLAND (BY OTHERS)
- EXISTING PFO WETLAND (BY OTHERS)
- EXISTING POW WETLAND (BY OTHERS)
- EXISTING PSS WETLAND (BY OTHERS)
- 50' OFFSET FROM STREAM/WETLAND
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED AREA TO REMAIN UNDISTURBED
- PROPOSED TREE CLEARING LIMITS
- PROPOSED ROCK CONSTRUCTION ENTRANCE
- PROPOSED ORANGE CONSTRUCTION FENCE
- PROPOSED 12" COMPOST FILTER SOCK
- PROPOSED 18" COMPOST FILTER SOCK
- PROPOSED 24" COMPOST FILTER SOCK
- PROPOSED 32" COMPOST FILTER SOCK
- PROPOSED COMPOST FILTER SOCK SEDIMENT TRAP
- PROPOSED PHASE 1 INDEX CONTOUR
- PROPOSED PHASE 1 INTERMEDIATE CONTOUR
- PROPOSED INDEX CONTOUR
- PROPOSED INTERMEDIATE CONTOUR
- PROPOSED EDGE OF GRAVEL PAD
- PROPOSED FLAT PAD LIMITS
- PROPOSED BERM
- PROPOSED EDGE OF UNPAVED DIRT ROAD
- PROPOSED EDGE OF UNPAVED GRAVEL ROAD
- PROPOSED EDGE OF PAVED ROAD
- PROPOSED GAS PIPELINE
- PROPOSED FENCE
- PROPOSED CHANNEL
- PROPOSED STORM PIPE
- PROPOSED RIPRAP APRON
- PROPOSED HEAD/ENDWALL (HW/EW)
- PROPOSED INLET (IN)
- PROPOSED MANHOLE (MH)
- PROPOSED OUTLET STRUCTURE
- PROPOSED CONCRETE PIPE ANCHOR
- PROPOSED ANTI-SEEP COLLAR
- PROPOSED PERMANENT EXCAVATED SPILLWAY
- PROPOSED S150 CHANNEL LINER
- PROPOSED P300 CHANNEL LINER
- PROPOSED P550 CHANNEL LINER

REFERENCES

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SCALE IN FEET
0 150 300

COMMONWEALTH OF VIRGINIA
MICHAEL EDWARD ARCHER
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6-2-2025

REVISION RECORD

NO	DATE	DESCRIPTION

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www.cecinc.com

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TRANSCONTINENTAL GAS PIPE LINE, LLC
COMPRESSOR STATION 165
PITTSLYVANIA COUNTY, VIRGINIA

OVERALL PHASE 2 EROSION AND SEDIMENTAION CONTROL PLAN

DRAWN BY:	JMP
CHECKED BY:	MEA
PROJECT NO.:	341-132
APPROVED BY:	LCW
DATE:	MAY 2025
DWG SCALE:	1" = 150'

DRAWING NO.: C907

SHEET 50 OF 61

P:\340-0001\341-132\-0400\Dwg\CIVIL\341132-CIVIL-C907-ES Overall Phase 2.dwg[C907] (6/5/2025 - vfischer) - LP: 6/3/2025 9:25 AM

NORTH

WETLAND W266-2
50' OFFSET FROM STREAM/WETLAND (TYP.)
WETLAND W243-1
PROPOSED LEVEL SPREADER NO. 1 (3 C800)
PROPOSED ANTI-SEEP COLLAR (TYP.) (21 C915)
PROPOSED RIPRAP APRON NO. P5 (2 C800)
PROPOSED RIPRAP APRON NO. P11 (2 C800)
PROPOSED 12" COMPOST FILTER SOCK (TYP.) (3 C912)
EXISTING 15" CMP CULVERT NO. 1 l=643.2
EXISTING 15" HDPE CULVERT NO. 2 l=642.6
PROPOSED AIR BRIDGE (TYP.) (24 C917)
PROPOSED PAD BERM (7 C802)
PROPOSED EDGE OF GRAVEL PAD (TYP.)
AREA TO REMAIN UNDISTURBED (TYP.)
EXISTING GAS LINE (TYP.)
PROPOSED ACCESS ROAD NO. 2
PROPOSED 24" COMPOST FILTER SOCK (TYP.) (3 C912)
PROPOSED ORANGE CONSTRUCTION FENCE (TYP.) (2 C912)
PROPOSED PERMANENT CHANNEL NO. 1C (1 C800)
PROPOSED RIPRAP APRON NO. P2 (2 C800)
PROPOSED HEAD/ENDWALL (TYP.) (5 C801)
PROPOSED PERMANENT CHANNEL NO. 1B (1 C800)
PROPOSED STONE CONSTRUCTION ENTRANCE (TYP.) (1 C912)
PROPOSED 25' WIDE ACCESS ROAD (9 C802)
MATCHLINE SHEET C909
CULVERT NO. 3
CULVERT NO. 2
CULVERT NO. 2 EXT
PROPOSED MANAGED TURF POND ACCESS ROAD (TYP.)
PROPOSED RIPRAP APRON NO. P3 (2 C800)
TAX PARCEL ID: 2436-95-5098
PROPOSED PERMANENT EXCAVATED SPILLWAY (TYP.) (20 C915)
PROPOSED 18" COMPOST FILTER SOCK (TYP.) (3 C912)
PROPOSED TEMPORARY PIPE RISER (TYP.) (18 C915)
PROPOSED SEDIMENT BASIN NO. 1 (16 C915)
OS-1
SP-1
10.0 LF 18" HDPE @ 0.0%
TEMPORARY RISER PIPE 1 TR-1
RIM=643.40
INV. OUT (18"N)=636.70
PROPOSED RIPRAP APRON NO. P4 (2 C800)
PROPOSED PERMANENT CHANNEL NO. 2 (1 C800)
PROPOSED SOIL STABILIZATION BLANKET (TYP.) (8 C913)
PROPOSED PERMANENT CHANNEL NO. 1D (1 C800)
PROPOSED INLET (TYP.) (4 C801)
PROPOSED STOCKPILE
PROPOSED FENCE (TYP.)
PROPOSED GRAVEL COMPRESSOR PAD (9 C802)
PROPOSED ACCESS ROAD NO. 1
PROPOSED PERMANENT CHANNEL NO. 1A (1 C800)
PROPOSED SILT FENCE DROP INLET PROTECTION (TYP.) (11 C914)
PROPOSED LIMIT OF DISTURBANCE (TYP.)
PROPOSED STOCKPILE
PROPOSED CULVERT INLET PROTECTION (TYP.) (10 C914)
PROPOSED 32" COMPOST FILTER SOCK (TYP.) (3 C912)
PROPOSED RIPRAP APRON NO. P1 (2 C800)
EXISTING 12" CMP l=FILLED W/ DEBRIS
10" METAL l=FILLED W/ DEBRIS
EXISTING STORM PIPE (TYP.)
EXISTING UTILITY POLE (TYP.)
EXISTING 12" CMP l=664.2
TRANSCO ROAD
40' ROW
EXISTING PROPERTY LINE (TYP.)
EXISTING TREELINE (TYP.)
STREAM L152-1
WETLAND W251-1
TAX PARCEL ID: 2446-03-4804
TAX PARCEL ID: 2436-83-7383
TAX PARCEL ID: 2436-82-8144
TAX PARCEL ID: 2436-73-3459
23C
23B
9C
9B
IN-1 IN-2 IN-3 IN-4 IN-4A IN-5 IN-6 IN-7 IN-8 IN-9 IN-10 IN-11 IN-12 IN-13
EW-1 EW-2 EW-3 EW-4 EW-11
HW-1 HW-2B HW-3
MH-1
PD-1 PD-2 PD-3 PD-4 PD-5 PD-6 PD-13A PD-13B

LEGEND

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- EXISTING WATER LINE
- EXISTING GAS LINE
- EXISTING GAS LINE (BY OTHERS)
- EXISTING OVERHEAD WIRE
- EXISTING UTILITY POLE
- EXISTING FIBER OPTIC LINE
- EXISTING UNDERGROUND ELECTRIC LINE
- EXISTING FENCE
- EXISTING TREE LINE
- EXISTING RIPRAP
- EXISTING HUC12 BOUNDARY
- EXISTING STREAM (BY OTHERS)
- EXISTING PEM WETLAND (BY OTHERS)
- EXISTING PFO WETLAND (BY OTHERS)
- EXISTING POW WETLAND (BY OTHERS)
- EXISTING PSS WETLAND (BY OTHERS)
- 50' OFFSET FROM STREAM/WETLAND
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED AREA TO REMAIN UNDISTURBED
- SOIL BOUNDARY
- SOIL ID
- PROPOSED TREE CLEARING LIMITS
- PROPOSED ROCK CONSTRUCTION ENTRANCE
- OCF PROPOSED ORANGE CONSTRUCTION FENCE
- FS PROPOSED 12" COMPOST FILTER SOCK
- FS PROPOSED 18" COMPOST FILTER SOCK
- FS PROPOSED 24" COMPOST FILTER SOCK
- FS PROPOSED 32" COMPOST FILTER SOCK
- CFS PROPOSED COMPOST FILTER SOCK SEDIMENT TRAP
- PROPOSED BAFFLE
- PROPOSED SILT FENCE DROP PROTECTION
- PROPOSED CULVERT INLET PROTECTION
- PROPOSED SOIL STABILIZATION BLANKET
- 660 PROPOSED PHASE 1 INDEX CONTOUR
- PROPOSED PHASE 1 INTERMEDIATE CONTOUR
- 660 PROPOSED INDEX CONTOUR
- PROPOSED INTERMEDIATE CONTOUR
- PROPOSED EDGE OF GRAVEL PAD
- PROPOSED FLAT PAD LIMITS
- PROPOSED BERM
- PROPOSED EDGE OF UNPAVED GRAVEL ROAD
- PROPOSED EDGE OF PAVED ROAD
- G PROPOSED GAS PIPELINE
- PROPOSED FENCE
- PROPOSED MANAGED TURF ACCESS PATH
- PROPOSED TEMPORARY STORM PIPE
- PROPOSED TEMPORARY OUTLET STRUCTURE
- PROPOSED CHANNEL
- PROPOSED STORM PIPE
- PROPOSED RIPRAP APRON
- PROPOSED HEAD/ENDWALL (HW/EW)
- PROPOSED INLET (IN)
- PROPOSED MANHOLE (MH)
- PROPOSED OUTLET STRUCTURE
- PROPOSED CONCRETE PIPE ANCHOR
- PROPOSED ANTI-SEEP COLLAR
- PROPOSED PERMANENT EXCAVATED SPILLWAY
- PD-1 PROPOSED STORM PIPE LABEL
- IN-1 PROPOSED STRUCTURE LABEL
- PROPOSED S150 CHANNEL LINER
- PROPOSED P300 CHANNEL LINER
- PROPOSED P550 CHANNEL LINER

REFERENCES

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6. EXISTING PARCEL LINES DERIVED FROM PUBLICLY AVAILABLE PITTSYLVANIA COUNTY OPEN DATA, ACCESSED APRIL 2024.

SCALE IN FEET
0 50 100

COMMONWEALTH OF VIRGINIA
MICHAEL EDWARD ARCHER
Lic. No. 043994
PROFESSIONAL ENGINEER
6-2-2025

REVISION RECORD

NO	DATE	DESCRIPTION

700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com
Civil & Environmental Consultants, Inc.

TRANSCONTINENTAL GAS PIPE LINE, LLC
COMPRESSOR STATION 165
PITTSLYVANIA COUNTY, VIRGINIA

PHASE 2 EROSION AND SEDIMENTATION CONTROL PLAN

DRAWN BY:	JMP
CHECKED BY:	MEA
PROJECT NO:	341-132
APPROVED BY:	LCW
DATE:	MAY 2025
DWG SCALE:	1" = 50'

DRAWING NO.: C908
SHEET 51 OF 61

P:\341-0001\341-132\-0400\Dwg\CIVIL\341132-CIVIL-C908-ES Phase 2 North.dwg[C908] LS:(5/28/2025 - Sheetset) - LP: 6/2/2025 9:27 AM

NORTH

TAX PARCEL ID: 2436-95-5098

STREAM L157-1

WETLAND W258-1

WETLAND W266-2

MATCHLINE SHEET C908

PROPOSED 18" COMPOST FILTER SOCK (TYP.) 3 C912

PROPOSED PERMANENT EXCAVATED SPILLWAY (TYP.) 20 C915

PROPOSED RIPRAP APRON NO. P6 2 C800

PROPOSED LEVEL SPREADER NO. 2 3 C800

PROPOSED ANTI-SEEP COLLAR (TYP.) 21 C915

PROPOSED TEMPORARY RISER PIPE (TYP.) 18 C915

PROPOSED 32" COMPOST FILTER SOCK(TYP.) 3 C912

PROPOSED 24" COMPOST FILTER SOCK (TYP.) 3 C912

REFER TO NOTE 1 AT THE BOTTOM OF THIS SHEET FOR PHASING INFORMATION

PROPOSED RIPRAP APRON NO. P8 2 C800

PROPOSED SEDIMENT BASIN NO. 2 16 C915

PROPOSED RIPRAP APRON NO. P9 2 C800

SP-2
10.0 LF 18" HDPE @ 0.0%
TEMPORARY RISER PIPE 2 TR-2
RIM=622.60
INV. IN (18"NE)=617.70
INV. OUT (18"W)=617.70

PROPOSED CHANNEL NO. 3 1 C800

PROPOSED 25' WIDE ACCESS ROAD 9 C802

PROPOSED 12' WIDE PULL OFF

PROPOSED STOCKPILE

PROPOSED GRAVEL SUBSTATION PAD 8 C802

PROPOSED PAD BERM (TYP.) 7 C802

PROPOSED SOIL STABILIZATION BLANKET 8 C913

PROPOSED LIMIT OF DISTURBANCE (TYP.)

PROPOSED RIPRAP APRON NO. P10 2 C800

PROPOSED ACCESS ROAD NO. 2

PROPOSED INLET (TYP.) 4 C801

PROPOSED GRAVEL LAUNCHER PAD

PROPOSED SILT FENCE DROP INLET PROTECTION (TYP.) 11 C914

APPROXIMATE PIPELINE TIE-IN LOCATION. CONTRACTOR TO REFER TO GENERAL NOTE 17 ON SHEET C001.

PROPOSED GAS PIPELINE

EXISTING FENCE (TYP.)

PROPOSED STONE CONSTRUCTION ENTRANCE(TYP.) 1 C912

PROPOSED ACCESS ROAD NO. 3

TEMPORARY RISE PIPE 3 TR-3
RIM=647.50
INV. OUT (15"NW)=644.50

PROPOSED SEDIMENT BASIN NO. 3 16 C915

EXISTING GAS LINE (TYP.)

SP-3
11.9 LF 15" HDPE @ 0.0%

PROPOSED HEAD/ENDWALL (TYP.) 5 C801

PROPOSED RIPRAP APRON NO. P7 2 C800

PROPOSED LEVEL SPREADER NO. 3 3 C800

PROPOSED 12" COMPOST FILTER SOCK(TYP.) 3 C912

CONTRACTOR SHALL NOT STAKE WITHIN THE LIMITS OF THE EXISTING GAS LINE AND SHALL PROVIDE ADDITIONAL CHINKING WITHIN THESE LIMITS

40' ROW

TRANSCO ROAD

STREAM L160-1

STREAM L153-1

EXISTING STREAM (TYP.)

STREAM L159-1

WETLAND W265-1

STREAM L161-1

50' OFFSET FROM STREAM/WETLAND AREA (TYP.)

EXISTING TREELINE (TYP.)

TAX PARCEL ID: 2436-75-1295

EXISTING PROPERTY LINE (TYP.)

23B

23C

LEGEND

- EXISTING INDEX CONTOUR
- EXISTING INTERMEDIATE CONTOUR
- EXISTING SUBJECT PROPERTY LINE
- EXISTING PROPERTY LINE
- EXISTING TRANSCO ROAD RIGHT-OF-WAY
- EXISTING RIGHT-OF-WAY
- EXISTING FENCE LINE
- EXISTING EDGE OF PAVEMENT
- EXISTING PAVEMENT LIMITS
- EXISTING EDGE OF GRAVEL
- EXISTING GRAVEL LIMITS
- EXISTING GUIDE RAIL
- EXISTING BUILDING
- EXISTING STRUCTURE
- EXISTING STORM PIPE
- EXISTING WATER LINE
- EXISTING GAS LINE
- EXISTING GAS LINE (BY OTHERS)
- EXISTING OVERHEAD WIRE
- EXISTING UTILITY POLE
- EXISTING FIBER OPTIC LINE
- EXISTING UNDERGROUND ELECTRIC LINE
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- PROPOSED CULVERT INLET PROTECTION
- PROPOSED SOIL STABILIZATION BLANKET
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6. EXISTING PARCEL LINES DERIVED FROM PUBLICLY AVAILABLE PITTSYLVANIA COUNTY OPEN DATA, ACCESSED APRIL 2024.

NOTES

1. REFER TO THE CONSTRUCTION SEQUENCE ON SHEET C910 FOR INFORMATION RELATED TO THE ORDER IN WHICH PAD EARTHWORK AND COMPOST FILTER SOCK INSTALLATION SHOULD BE COMPLETED.

SCALE IN FEET
0 50 100

COMMONWEALTH OF VIRGINIA
MICHAEL EDWARD ARCHER
Lic. No. 043994
PROFESSIONAL ENGINEER
6-2-2025

REVISION RECORD

NO	DATE	DESCRIPTION

CEC
Civil & Environmental Consultants, Inc.
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Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com

TRANSCONTINENTAL GAS PIPE LINE, LLC
COMPRESSOR STATION 165
PITTSLYVANIA COUNTY, VIRGINIA

PHASE 2 EROSION AND SEDIMENTATION CONTROL PLAN

DATE:	MAY 2025
DWG SCALE:	1" = 50'
PROJECT NO:	341-132
DRAWN BY:	JMP
CHECKED BY:	MEA
APPROVED BY:	LCW

DRAWING NO.: C909

SHEET 52 OF 61

EROSION AND SEDIMENTATION CONTROL NOTES

1. EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE FULLY IMPLEMENTED AND REGULARLY MAINTAINED IN ACCORDANCE WITH THE LATEST EDITION OF THE VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY' (VADEQ) VIRGINIA STORMWATER MANAGEMENT HANDBOOK (VSMH) AND THE VIRGINIA DEPARTMENT OF TRANSPORTATION "ROAD AND BRIDGE STANDARDS".RECOGNIZED PRACTICE AND EFFECTIVE INDUSTRY STANDARD POLLUTION CONTROL PRACTICES. EFFECTIVE EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE IMPLEMENTED TO THE MAXIMUM EXTENT PRACTICABLE TO PREVENT OFFSITE SEDIMENTATION AND DEPOSITION OF CONSTRUCTION SITE WASTES.

2. ADDITIONAL EROSION AND SEDIMENTATION CONTROL MEASURES MAY BE REQUIRED, AS DEEMED NECESSARY BY THE OWNER OR VADEQ, IN THE EVENT OF ANY UNFORESEEN PROBLEMS ARISING DURING CONSTRUCTION.

3. THE CONTRACTOR SHALL INSTALL EROSION AND SEDIMENTATION CONTROL MEASURES PRIOR TO ANY EARTH DISTURBANCE AND IN THEIR PROPER SEQUENCE. ALL CONTROLS SHALL BE MAINTAINED UNTIL PERMANENT VEGETATIVE STABILIZATION IS ESTABLISHED.

4. THE CONTRACTOR SHALL LANDSCAPE OR VEGETATE DISTURBED AREAS THAT WILL BE LEFT EXPOSED FOR MORE THAN 14 DAYS, AND WHICH ARE NOT SUBJECT TO CONSTRUCTION TRAFFIC. IF THE TIME OF YEAR PREVENTS THE ESTABLISHMENT OF VEGETATIVE TEMPORARY COVER, STRAW MULCH SHALL BE APPLIED AT A RATE OF THREE (3) TONS PER ACRE ON ANY EXPOSED AREAS.

5. PRIOR TO THE COMMENCEMENT OF PERMANENT VEGETATIVE STABILIZATION APPLICATIONS, THE CONTRACTOR SHALL REPLACE ANY SOIL THAT WILL NOT PROVIDE A SUITABLE ENVIRONMENT TO SUPPORT ADEQUATE VEGETATIVE GROUND COVER. ALL UNSUITABLE MATERIAL SHALL BE REMOVED OR TREATED BY THE CONTRACTOR TO PROVIDE ADEQUATE SUPPORT FOR VEGETATIVE GROWTH.

6. THE CONTRACTOR SHALL INSTALL EROSION CONTROL BLANKETS/ STEEP SLOPE EROSION CONTROL APPLICATIONS ON ALL SLOPES STEEPER THAN OR EQUAL TO 3:1 (HORIZONTAL: VERTICAL), AND ON OTHER AREAS AS SHOWN ON THE EROSION AND SEDIMENT CONTROL PLAN.

7. SOIL EROSION AND SEDIMENTATION CONTROL BEST MANAGEMENT PRACTICE (BMP) MEASURES SHALL BE INSTALLED PRIOR TO START OF CONSTRUCTION AND SHALL BE MAINTAINED THROUGHOUT THE DURATION. THIS INCLUDES MAINTENANCE THROUGHOUT THE TIME DURING WHICH PERMANENT VEGETATIVE COVER IS BEING ESTABLISHED AND ALSO INCLUDE THE INSTALLATION OF ANY PERMANENT/SEMI-PERMANENT EROSION AND SEDIMENTATION BMPS. ALL BMP MEASURES SHALL BE INSTALLED TO THE SATISFACTION OF AUTHORITIES HAVING JURISDICTION, THE OWNER, AND THE ENGINEER OF RECORD. THE CONTRACTOR SHALL IMPLEMENT ADDITIONAL BMP MEASURES AS NEEDED THROUGHOUT CONSTRUCTION BASED ON FIELD CONDITIONS.

8. LIMITS OF EARTH DISTURBANCE ACTIVITY ARE INDICATED ON THE E&S PLAN. THE CONTRACTOR SHALL LOCATE CONSTRUCTION VEHICLE FUELING AREAS AWAY FROM STORMWATER DRAINAGE FEATURES AND MARK FUELING AREAS ON THE SITE MAP. THE CONTRACTOR IS REQUIRED TO LEGALLY DISPOSE OF ALL CONSTRUCTION DEBRIS OFF SITE.

9. IF THE ACTION OF VEHICLES TRAVELING OVER THE ROCK CONSTRUCTION ENTRANCES IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF SEDIMENT FROM THE WHEEL WELLS AND TIRES, THEN THE VEHICLE MUST BE WASHED BEFORE IT MAY ENTER A PUBLIC ROAD. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF THE SITE. THE CONTRACTOR MAY ONLY USE THE INGRESS/EGRESS LOCATIONS AS PROVIDED ON THE PLANS. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.

10. SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION THROUGHOUT SITE GRADING IN ORDER TO REDUCE RUNOFF VELOCITIES AND EROSION ALONG SLOPES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION AND SEDIMENT CONTROL MEASURES AS NEEDED TO PREVENT THE POTENTIAL FOR EROSION AND POLLUTANT DISCHARGE.

SEQUENCE OF CONSTRUCTION

PHASE 1

1. THE ENVIRONMENTAL INSPECTOR IS REQUIRED TO MAINTAIN A COPY OF THE SWPPP AT THE PROJECT SITE AT ALL TIMES.

2. AT LEAST THREE (3) DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, ALL CONTRACTORS INVOLVED WILL NOTIFY VIRGINIA ONE CALL BY CALLING 811 OR 1-800-552-7001 OR VISIT VA811.COM.

3. THE EXCAVATION AREA SHALL BE CLEARLY STAKED BY SURVEYORS. ALL EXISTING PIPELINES, UTILITIES, AND/OR DRAIN LINES SHALL BE MARKED BY CALLING MISS UTILITY AT 811.

4. INSTALL CONSTRUCTION ENTRANCES AS SHOWN AT THE LOCATIONS ON THE EROSION AND SEDIMENTATION PLANS AND ALL PERIMETER EROSION CONTROL DEVICES, AS NEEDED AND DESCRIBED BELOW, PRIOR TO ANY EARTH DISTURBANCE.

   4.1 ALL APPLICABLE EROSION CONTROL MEASURES SHALL BE IMPLEMENTED IN ACCORDANCE WITH THE GUIDELINES CONTAINED WITHIN THIS PLAN SET AND IN ACCORDANCE WITH THE MOST RECENT VERSION OF THE VIRGINIA EROSION AND SEDIMENTATION HANDBOOK.

   4.2 WHERE SEDIMENT IS TRANSPORTED ONTO A PUBLIC ROAD SURFACE OR OTHER PAVED AREA BY EQUIPMENT OR VEHICLES ACCESSING THE SITE, SEDIMENT SHALL BE REMOVED IMMEDIATELY FROM THE ROAD BY SWEEPING, SHOVELING, OR SCRAPING, AND SHALL BE TRANSPORTED TO A SEDIMENT-CONTROLLED DISPOSAL AREA. ROAD WASHING IS PERMITTED ONLY AFTER THE SEDIMENT IS REMOVED ENTIRELY FROM THE ROAD. OTHER MEANS OF CLEANING VEHICLES PRIOR TO ENTERING ROADS OR DRIVEWAYS MAY INCLUDE HAND REMOVAL OF MUD AND/OR TIRE WASHING.

5. ALL CLEARED AND/OR GRUBBED BRUSH AND SITE DEBRIS SHALL BE REMOVED FROM THE SITE OR CHIPPED FOR MULCH.

6. CLEAR AND GRUB PERIMETER AREAS OF THE SITE IN ORDER TO INSTALL SILT FENCE AND/OR SUPER SILT FENCE AS INDICATED ON THE E&S PLANS. FOLLOWING INSTALLATION OF PERIMETER CONTROLS, ADDITIONAL CLEARING AND GRUBBING MAY COMMENCE IN ORDER TO INSTALL THE SEDIMENT BASINS AND APPURTENANCES.

7. IN ACCORDANCE WITH MINIMUM STANDARD (MS)-R OF 9VAC25-840-40, INSTALL PERIMETER E&S CONTROLS, SEDIMENT BASIN A, INCLUDING THE TEMPORARY RISER AND OUTLET PIPE, ANTI-SEEP COLLARS, ENDWALL NO. A, RIPRAP APRON T1 AND ANTI-SEEP COLLARS. INSTALL RIPRAP APRON NO. T2, TEMPORARY CHANNEL NO. 1, PERMANENT CHANNEL NO. 1C, RIPRAP APRON NO. P2, ENDWALL NO. 2, CULVERT NO. 2, AND HEADWALL NO. 2A. INSTALL RIPRAP APRON T3, TEMPORARY CHANNEL NO. 2, AND PERMANENT CHANNEL NO. 1A. INSTALL RIPRAP APRON NO. P1, ENDWALL NO. 1, CULVERT NO. 1, AND HEADWALL NO. 1. MEASURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND-DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE ADDITIONAL UPSLOPE LAND DISTURBANCE TAKES PLACE. INSTALL RIPRAP APRON NO. T4 AND TEMPORARY CHANNEL NO. 3.

   7.1 EXTENDED DETENTION (ED) PONDS SHALL SERVE AS SEDIMENT BASINS DURING PROJECT CONSTRUCTION.

   7.2 APPLY TEMPORARY SEEDING AND MULCHING TO ALL EARTHEN PERIMETER CONTROLS INCLUDING SEDIMENT BASIN IMMEDIATELY FOLLOWING INSTALLATION.

8. BEGIN BULK EARTHWORK OPERATIONS TO CONSTRUCT ACCESS ROAD NO. 1, ACCESS ROAD NO. 2, AND COMPRESSOR PAD AS SHOWN ON THE PHASE I E&S PLANS. STOCKPILE MATERIAL IN THE LOCATIONS SHOWN ON THE PLANS.

9. COMMENCE INSTALLATION OF ALL UNDERGROUND UTILITIES, FOUNDATIONS, STRUCTURES, ETC. AS SHOWN ON THE PLAN.

   9.1.ANY ACCUMULATED GROUNDWATER SHALL BE PUMPED OUT OF EXCAVATIONS AND DISCHARGED THROUGH A FILTER BAG OR DEWATERING STRUCTURE THAT IS CONSISTENT WITH THE CRITERIA STATED IN THE VSMH DEWATERING STRUCTURE SPECIFICATION. DISCHARGES SHALL FLOW ONTO WELL-VEGETATED, GRASSY AREAS ADJACENT TO THE WORK SITE AND AWAY FROM WATERWAYS. NO EXCAVATION WATER SHALL BE DISCHARGED DIRECTLY INTO WATERWAYS IN ACCORDANCE WITH MINIMUM STANDARD 19.

10. IN ACCORDANCE WITH MINIMUM STANDARD (MS)-R OF 9VAC25-840-40, INSTALL RIPRAP APRON NO. T5 AND TEMPORARY DIVERSION DIKE NO. 1. INSTALL THE COMPOST FILTER SOCK DIVERSION BERM AND RIPRAP APRON NO. T6. MEASURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND-DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE ADDITIONAL UPSLOPE LAND DISTURBANCE TAKES PLACE.

    10.1 APPLY TEMPORARY SEEDING AND MULCHING TO ALL EARTHEN PERIMETER CONTROLS INCLUDING SEDIMENT BASIN IMMEDIATELY FOLLOWING INSTALLATION.

11. BEGIN BULK EARTHWORK OPERATIONS TO CONSTRUCT THE REMAINDER OF ACCESS NO. 2, ACCESS ROAD NO. 3, EARTHEN M&R PAD, AND EARTHEN SUBSTATION PAD. STOCKPILE MATERIAL IN THE LOCATIONS SHOWN ON THE PLANS.

12. APPLY STABILIZATION PRACTICES IN COMPLIANCE WITH MS-1 THROUGHOUT CONSTRUCTION.

13. THROUGHOUT THE DURATION OF CONSTRUCTION ALL ESC AND SWM MEASURES SHALL BE INSPECTED, MAINTAINED, AND/OR REPAIRED IN ACCORDANCE WITH THE VSMH CRITERIA FOR EACH INDIVIDUAL CONTROL MEASURE, AND TO ASSURE CONTINUED PERFORMANCE OF THEIR INTENDED FUNCTION, UNTIL THE FINAL SITE STABILIZATION IS ACHIEVED PER MS-3.

    13.1 IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE CONTRACTOR SHALL IMPLEMENT APPROPRIATE ESC MEASURES TO MINIMIZE THE POTENTIAL FOR E&S POLLUTION.

    13.2 CONTRACTOR SHALL PERFORM MAINTENANCE TO TEMPORARY ESC MEASURES AS SOON AS POSSIBLE OF NOTIFICATION AS DIRECTED BY THE ENVIRONMENTAL INSPECTOR BASED ON SITE INSPECTIONS.

PHASE 2

1. IN ACCORDANCE WITH MINIMUM STANDARD (MS)-R OF 9VAC25-840-40, INSTALL PERIMETER E&S CONTROLS AS SHOWN ON THE PHASE 2 E&S PLANS. INSTALL SEDIMENT BASIN NO. 1, RIPRAP APRON NO. P3, LEVEL SPREADER NO. 1, OUTLET CONTROL STRUCTURE NO. 1, OUTLET PIPE NO. 1, ANTI-SEEP COLLARS, AND TEMPORARY RISER STRUCTURE AND BARREL. INSTALL RIPRAP APRON P4 AND CHANNEL NO. 2. REMOVE HEADWALL NO. 2A AND INSTALL CULVERT NO. 2 EXTENSION AND HEADWALL NO. 2B. INSTALL CHANNEL NO. 1B, CHANNEL NO. D, HEADWALL NO. 3, CULVERT NO. 3, EDWALL NO. 11, AND RIPRAP APRON P11.

2. BEGIN BULK EARTHWORK OPERATIONS TO CONSTRUCT GRAVEL COMPRESSOR PAD. INLETS AND THE STORMWATER CONVEYANCE SYSTEM AND RIPRAP APRON NO. P5 SHALL BE CONSTRUCTED BEFORE THE PROPOSED GRAVEL PAD COMES TO FINAL GRADE. INSTALL INLET PROTECTION AS SHOWN ON THE PHASE 2 E&S PLANS.

3. INSTALL SEDIMENT BASIN NO. 2, RIPRAP APRON NO. P6, LEVEL SPREADER NO. 2, OUTLET CONTROL STRUCTURE NO. 2, OUTLET PIPE NO. 2, ANTI-SEEP COLLARS, AND TEMPORARY RISER STRUCTURE AND BARREL.

4. INSTALL SEDIMENT BASIN NO. 3, RIPRAP APRON NO. P7, LEVEL SPREADER NO. 3, OUTLET CONTROL STRUCTURE NO. 3, OUTLET PIPE NO. 3, ANTI-SEEP COLLARS, AND TEMPORARY RISER STRUCTURE AND BARREL.

5. BEGIN BULK EARTHWORK OPERATIONS TO CONSTRUCT ACCESS ROAD NO. 2 AND SUBSTATION PAD AS SHOWN ON THE PHASE 2 PLANS. INLETS AND THE STORMWATER CONVEYANCE SYSTEM AND RIPRAP APRON NOS. P8, P9, AND P10 SHALL BE CONSTRUCTED BEFORE THE PROPOSED GRAVEL PADS COME TO FINAL GRADE. INSTALL INLET PROTECTION AS SHOWN ON THE PHASE 2 E&S PLANS.

6. COMMENCE INSTALLATION OF ALL UNDERGROUND UTILITIES, FOUNDATIONS, STRUCTURES, ETC. AS SHOWN ON THE PLAN.

   6.1.ANY ACCUMULATED GROUNDWATER SHALL BE PUMPED OUT OF EXCAVATIONS AND DISCHARGED THROUGH A FILTER BAG OR DEWATERING STRUCTURE THAT IS CONSISTENT WITH THE CRITERIA STATED IN THE VSMH DEWATERING STRUCTURE SPECIFICATION. DISCHARGES SHALL FLOW ONTO WELL-VEGETATED, GRASSY AREAS ADJACENT TO THE WORK SITE AND AWAY FROM WATERWAYS. NO EXCAVATION WATER SHALL BE DISCHARGED DIRECTLY INTO WATERWAYS IN ACCORDANCE WITH MINIMUM STANDARD 19.

7. AFTER COMPLETION OF THE FINAL GRADING, THE DISTURBED AREA WILL BE REVEGETATED, PAVED, OR GRAVELED.

8. AFTER TRIBUTARY AREAS TO THE SEDIMENT BASINS HAVE BEEN STABILIZED, BEGIN THE CONVERSION OF THE SEDIMENT BASINS TO DRY EXTENDED DETENTION PONDS.
   8.1.DETWATER THE SEDIMENT BASINS USING PUMP WATER FILTER BAGS.
   8.2.REMOVE ACCUMULATED SEDIMENT FROM THE SEDIMENT BASIN. PLACE THE MATERIAL UPSLOPE OF AN E&S BMP.
   8.3.REMOVE ALL TEMPORARY BASIN FACILITIES (TEMPORARY RISER, TEMPORARY BARREL DEWATERING FACILITIES, CLEANOUT STAKES, ETC.)
   8.4.INSTALL UNDERDRAIN AND MODIFY THE RISER STRUCTURE TO INCLUDE THE PROPOSED PERMANENT OUTLET STRUCTURE ORIFICE(S) IN ACCORDANCE WITH THE EXTENDED DETENTION POND DETAILS. GROUT THE TEMPORARY BARREL CONNECTION HOLE AS NECESSARY.

   8.5 SEED AND STABILIZE DISTURBED AREA. VEGETATE THE BASIN IN ACCORDANCE WITH THE APPROVED DETAIL.

9. ONCE FINAL SITE STABILIZATION IS ACHIEVED PER MS-3, REMOVE ANY SEDIMENT THAT MAY HAVE ACCUMULATED IN THE STORMWATER BASINS, AND REMOVE ALL TEMPORARY EROSION CONTROL MEASURES PER MS-18.

10. FINAL GRADING AND CONSTRUCTION OF EXTENDED DETENTION POND COMPONENTS CAN BE COMPLETED IN ACCORDANCE WITH THE "P-BAS-03 EXTENDED DETENTION POND" POST-CONSTRUCTION BMP STANDARD AND SPECIFICATION AFTER THE CONTRIBUTING DRAINAGE AREA TO THE POND HAS BEEN STABILIZED.

11. ONCE TEMPORARY EROSION CONTROL MEASURES ARE REMOVED, INSTALL PLANTING WITHIN THE DESIGNATED AREAS AS SHOWN ON THE LANDSCAPING PLAN.

MINIMUM STANDARDS

1. PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO BARE AREAS WITHIN SEVEN DAYS AFTER FINAL GRADE IS ESTABLISHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN DAYS TO BARE AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN 14 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN 14 DAYS.

2. DURING CONSTRUCTION OF THE PROJECT, SOIL STOCKPILES AND BORROW AREAS SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. THE APPLICANT IS RESPONSIBLE FOR THE TEMPORARY PROTECTION AND PERMANENT STABILIZATION OF ALL SOIL STOCKPILES ON SITE AS WELL AS BORROW AREAS AND SOIL INTENTIONALLY TRANSPORTED TO, OR FROM, THE PROJECT SITE.

3. A PERMANENT VEGETATIVE COVER SHALL BE ESTABLISHED ON DENUDED AREAS NOT OTHERWISE PERMANENTLY STABILIZED. PERMANENT VEGETATION SHALL NOT BE CONSIDERED ESTABLISHED UNTIL A GROUND COVER IS ACHIEVED THAT IS UNIFORM, IS MATURE ENOUGH TO SURVIVE, AND WILL INHIBIT EROSION.

4. SEDIMENT BASINS, TEMPORARY DIVERSION DIKES, SEDIMENT BARRIERS AND OTHER MEASURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND-DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UPSLOPE LAND DISTURBANCE TAKES PLACE.

5. STABILIZATION MEASURES SHALL BE APPLIED TO EARTHEN STRUCTURES SUCH AS DAMS, DIKES, AND DIVERSIONS IMMEDIATELY AFTER INSTALLATION.

6. SEDIMENT BASINS SHALL BE DESIGNED AND CONSTRUCTED TO TREAT THE ENTIRE DRAINAGE AREA TO BE SERVED BY THE BASIN.

   6.1.THE MINIMUM STORAGE CAPACITY OF A SEDIMENT BASIN SHALL BE 134 CUBIC YARDS PER ACRE OF DRAINAGE AREA.

   6.2.SURFACE RUNOFF FROM DISTURBED AREAS THAT IS COMPRISED OF FLOW FROM DRAINAGE AREAS GREATER THAN OR EQUAL TO THREE ACRES SHALL BE CONTROLLED BY A SEDIMENT BASIN. THE OUTFALL SYSTEM SHALL, AT A MINIMUM, MAINTAIN THE STRUCTURAL INTEGRITY OF THE BASIN DURING A 25-YEAR STORM OF 24-HOUR DURATION. RUNOFF COEFFICIENTS USED IN RUNOFF CALCULATIONS SHALL CORRESPOND TO A BARE EARTH CONDITION OR THOSE CONDITIONS EXPECTED TO EXIST WHILE THE SEDIMENT BASIN IS FUNCTIONING.

7. CUT AND FILL SLOPES SHALL BE DESIGNED AND CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. SLOPES THAT ARE FOUND TO BE ERODING EXCESSIVELY WITHIN ONE YEAR OF PERMANENT STABILIZATION SHALL BE PROVIDED WITH ADDITIONAL SLOPE STABILIZING MEASURES UNTIL THE PROBLEM IS CORRECTED.

8. CONCENTRATED RUNOFF SHALL NOT FLOW DOWN CUT OR FILL SLOPES UNLESS CONTAINED WITHIN AN ADEQUATE TEMPORARY OR PERMANENT CHANNEL, FLUME, OR SLOPE DRAIN STRUCTURE.

9. WHENEVER WATER SEEPS FROM A SLOPE FACE, ADEQUATE DRAINAGE OR OTHER PROTECTION SHALL BE PROVIDED.

10. ALL STORM SEWER INLETS THAT ARE MADE OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED SO THAT SEDIMENT-LADEN WATER CANNOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT.

11. BEFORE NEWLY CONSTRUCTED STORMWATER CONVEYANCE CHANNELS OR PIPES ARE MADE OPERATIONAL ADEQUATE OUTLET PROTECTION AND ANY REQUIRED TEMPORARY OR PERMANENT CHANNEL LINING SHALL BE INSTALLED IN BOTH THE CONVEYANCE CHANNEL AND RECEIVING CHANNEL.

12. WHEN WORK IN A LIVE WATERCOURSE IS PERFORMED, PRECAUTIONS SHALL BE TAKEN TO MINIMIZE ENCROACHMENT. THE CONTRACTOR SHALL CONTROL SEDIMENT TRANSPORT AND STABILIZE THE WORK AREA TO THE GREATEST EXTENT POSSIBLE DURING CONSTRUCTION. NON-ERODIBLE MATERIAL SHALL BE USED FOR THE CONSTRUCTION OF CAUSEWAYS AND COFFERDAMS. EARTHEN FILL MAY BE USED FOR THESE STRUCTURES IF ARMORED BY NON-ERODIBLE COVER MATERIALS.

13. WHEN A LIVE WATERCOURSE MUST BE CROSSED BY CONSTRUCTION VEHICLES MORE THAN TWICE IN ANY SIX-MONTH PERIOD. A TEMPORARY VEHICULAR STREAM CROSSING CONSTRUCTED OF NONERODIBLE MATERIAL SHALL BE PROVIDED.

14. ALL APPLICABLE FEDERAL, STATE, AND LOCAL REQUIREMENTS PERTAINING TO WORKING IN OR CROSSING LIVE WATERCOURSES SHALL BE MET.

15. THE BED AND BANKS OF A WATERCOURSE SHALL BE STABILIZED IMMEDIATELY AFTER WORK IN THE WATERCOURSE IS COMPLETED.

16. UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS IN ADDITION TO OTHER APPLICABLE CRITERIA:

   16.1 NO MORE THAN 500 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME.

   16.2 EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SLOPE OF TRENCHES.

   16.3 EFFLUENT WATER FROM DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING STREAMS OR OFF-SIRE PROPERTY.

   16.4 MATERIAL USED FOR BACKFILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION.

   16.5 RESTABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH VADEQ REQUIREMENTS.

   16.6 APPLICABLE SAFETY REQUIREMENTS SHALL BE COMPLIED WITH.

17. PROVISIONS WILL BE MADE TO MINIMIZE SEDIMENT TRANSPORT BY VEHICULAR TRACKING ONTO PAVED SURFACES WHERE CONSTRUCTION VEHICLES INTERSECT PAVED OR PUBLIC ROADS.

18. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL STABILIZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED, UNLESS OTHERWISE AUTHORIZED BY THE VESCP OR VESMP AUTHORITY. TRAPPED SEDIMENT AND THE DISTURBED SOIL AREAS RESULTING FROM THE DISPOSITION OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION AND SEDIMENTATION.

19. PROPERTIES AND WATERWAYS DOWNSTREAM FROM DEVELOPMENT SITES SHALL BE PROTECTED FROM SEDIMENT DEPOSITION, EROSION, AND DAMAGE DUE TO INCREASE IN VOLUME, VELOCITY, AND PEAK FLOW RATE OF STORMWATER RUNOFF FOR THE STATED FREQUENCY STORM OF 24-HOUR DURATION IN ACCORDANCE WITH THE FOLLOWING STANDARDS AND CRITERIA. STREAM RESTORATION AND RELOCATION PROJECTS THAT INCORPORATE NATURAL CHANNEL DESIGN CONCEPTS ARE NOT MANMADE CHANNELS AND SHALL BE EXEMPT FROM ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MANMADE CHANNELS.

   19.1 CONCENTRATED STORMWATER RUNOFF LEAVING A DEVELOPMENT SITE SHALL BE DISCHARGED DIRECTLY INTO AN ADEQUATE NATURAL OR MANMADE RECEIVING CHANNEL, PIPE, OR STORM SEWER SYSTEM. FOR THOSE SITES WHERE RUNOFF IS DISCHARGED INTO A PIPE OR PIPE SYSTEM, DOWNSTREAM STABILITY ANALYSES AT THE OUTFALL OF THE PIPE OR PIPE SYSTEM SHALL BE PERFORMED.

   19.2 ADEQUACY OF ALL CHANNELS AND PIPES SHALL BE VERIFIED IN THE FOLLOWING MANNER:

      19.2.1 THE APPLICANT SHALL DEMONSTRATE THAT THE TOTAL DRAINAGE AREA TO THE POINT OF ANALYSIS WITHIN THE CHANNEL IS 100 TIMES GREATER OR;

      19.2.2 (A) NATURAL CHANNELS SHALL BE ANALYZED BY THE USE OF A TWO-YEAR STORM TO VERIFY THAT STORMWATER WILL NOT OVERTOP CHANNEL BANKS NOR CAUSE EROSION OF CHANNEL BED OR BANKS.

      19.2.3 (B) ALL PREVIOUSLY CONSTRUCTED MANMADE CHANNELS SHALL BE ANALYZED BY THE USE OF A 10-YEAR STORM TO VERIFY THAT STORMWATER WILL NOT OVERTOP THE STORMWATER'S BANKS AND BY THE USE OF A TWO-YEAR STORM TO DEMONSTRATE THAT STORMWATER WILL NOT CAUSE EROSION OF CHANNEL BED OR BANKS; AND

      19.2.4 (C) PIPES AND STORM SEWER SYSTEMS SHALL BE ANALYZED BY THE USE OF A 10-YEAR STORM TO VERIFY THAT STORMWATER WILL BE CONTAINED WITHIN THE PIPE OR SYSTEM.

   19.3 IF EXISTING NATURAL RECEIVING CHANNELS TO A CONDITIONS WHERE A 10-YEAR STORM WILL NOT OVERTOP THE BANKS AND A TWO-YEAR STORM WILL NOT CAUSE EROSION TO THE CHANNEL, THE BED, OR THE BANKS;

      19.3.1 IMPROVE THE CHANNELS TO A CONDITION WHERE A 10-YEAR STORM WILL NOT OVERTOP THE BANKS AND A TWO-YEAR STORM WILL NOT CAUSE EROSION TO THE CHANNEL, THE BED, OR THE BANKS;

      19.3.2 IMPROVE THE PIPE OR PIPE SYSTEM TO A CONDITION WHERE THE 10-YEAR STORM IS CONTAINED WITHIN THE APPURTENANCES;

      19.3.3 DEVELOP A SITE DESIGN THAT WILL NOT CAUSE THE PREDEVELOPMENT PEAK RUNOFF RATE FROM A TWO-YEAR STORM TO INCREASE WHEN RUNOFF OUTFALLS INTO A NATURAL CHANNEL OR WILL NOT CAUSE THE PREDEVELOPMENT PEAK RUNOFF RATE FROM A 10-YEAR STORM TO INCREASE WHEN RUNOFF OUTFALLS INTO A MANMADE CHANNEL; OR

   19.4 PROVIDE A COMBINATION OF CHANNEL IMPROVEMENT, STORMWATER DETENTION, OR OTHER MEASURES THAT IS SATISFACTORY TO THE VESCP OR VESMP AUTHORITY TO PREVENT DOWNSTREAM EROSION.

   19.5 THE APPLICANT SHALL PROVIDE EVIDENCE OF PERMISSION TO MAKE THE IMPROVEMENTS.

   19.6 ALL HYDROLOGIC ANALYSES SHALL BE BASED ON THE EXISTING WATERSHED CHARACTERISTICS AND THE ULTIMATE DEVELOPMENT CONDITIONS OF THE SUBJECT PROJECT.

   19.7 IF THE APPLICANT CHOOSES AN OPTION THAT INCLUDES STORMWATER DETENTION, THE APPLICANT SHALL OBTAIN APPROVAL FROM THE VESCP OR VESMP AUTHORITY FOR A PLAN FOR MAINTENANCE OF THE DETENTION FACILITIES. THE PLAN SHALL SET FORTH THE MAINTENANCE REQUIREMENTS OF THE FACILITY AND THE PERSON RESPONSIBLE FOR PERFORMING THE MAINTENANCE.

   19.8 OUTFALL FROM A DETENTION FACILITY SHALL BE DISCHARGED TO A RECEIVING CHANNEL, AND ENERGY DISSIPATORS SHALL BE PLACED AT THE OUTFALL OF ALL DETENTION FACILITIES AS NECESSARY TO PROVIDE A STABILIZED TRANSITION FROM THE FACILITY TO THE RECEIVING CHANNEL.

   19.9 ALL ON-SITE CHANNELS MUST BE VERIFIED TO BE ADEQUATE.

   19.10 INCREASED VOLUMES OF SHEET FLOWS THAT MAY CAUSE EROSION OR SEDIMENTATION ON ADJACENT PROPERTY SHALL BE DIVERTED TO A STABLE OUTLET, ADEQUATE CHANNEL, PIPE, OR PIPE SYSTEM OR TO A DETENTION FACILITY.

   19.11 IN APPLYING THESE STORMWATER MANAGEMENT CRITERIA, INDIVIDUAL LOTS OR PARCELS IN A RESIDENTIAL, COMMERCIAL, OR INDUSTRIAL DEVELOPMENT SHALL NOT BE CONSIDERED TO BE SEPARATE DEVELOPMENT PROJECTS. INSTEAD, THE DEVELOPMENT, AS A WHOLE, SHALL BE CONSIDERED TO BE A SINGLE DEVELOPMENT PROJECT. HYDROLOGIC PARAMETERS THAT REFLECT THE ULTIMATE DEVELOPMENT CONDITION SHALL BE USED IN ALL ENGINEERING CALCULATIONS.

   19.12 ALL MEASURES USED TO PROTECT PROPERTIES AND WATERWAYS SHALL BE EMPLOYED IN A MANNER THAT MINIMIZES IMPACTS ON THE PHYSICAL, CHEMICAL, AND BIOLOGICAL INTEGRITY OF RIVERS, STREAMS, AND OTHER WATERS OF THE STATE.

   19.13 ANY PLAN APPROVED PRIOR TO JULY 1, 2014, THAT PROVIDES FOR STORMWATER MANAGEMENT THAT ADDRESSES ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MANMADE CHANNELS SHALL SATISFY THE FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MANMADE CHANNELS IF THE PRACTICES ARE DESIGNED TO (I) DETAIN THE WATER QUALITY VOLUME AND TO RELEASE IT OVER 48 HOURS; (II) DETAIN AND RELEASE OVER A 24-HOUR PERIOD THE EXPECTED RAINFALL RESULTING FROM THE ONE YEAR, 24-HOUR STORM; AND (III) REDUCE THE ALLOWABLE PEAK FLOW RATE RESULTING FROM THE 1.5-YEAR, 24-HOUR, AND 10-YEAR, 24-HOUR STORMS TO A LEVEL THAT IS LESS THAN OR EQUAL TO THE PEAK FLOW RATE FROM THE SITE ASSUMING THE SITE WAS IN A GOOD FORESTED CONDITION, ACHIEVED THROUGH MULTIPLICATION OF THE FORESTED PEAK FLOW RATE BY A REDUCTION FACTOR THAT IS EQUAL TO THE RUNOFF VOLUME FROM THE SITE IN THE SITE'S PROPOSED CONDITIONS, AND SHALL BE EXEMPT FROM ANY FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS FOR NATURAL OR MANMADE CHANNELS AS DEFINED IN ANY REGULATIONS PROMULGATED PURSUANT TO SECTION 62.1-44.15:28 OF THE CODE OF VIRGINIA (VESMP) OR SECTION 62.1-44.15:54 OR 62.1-44.15:65 OF THE CODE OF VIRGINIA (ESCL).

   19.14 FOR PLANS APPROVED ON AND AFTER JULY 1, 2014, THE FLOW RATE CAPACITY AND VELOCITY REQUIREMENTS OF SECTION 62.1-44.15:52 A OF THE CODE OF VIRGINIA (ESCL) AND THIS SUBDIVISION 19 SHALL BE SATISFIED BY COMPLIANCE WITH WATER QUANTITY REQUIREMENTS IN THE VESMA AND ATTENDANT REGULATIONS, UNLESS SUCH LAND-DISTURBING ACTIVITIES (I) ARE IN ACCORDANCE WITH PROVISIONS FOR TIME LIMITS ON APPLICABILITY OF APPROVED DESIGN CRITERIA IN 9VAC25-875-480 OR GRANDFATHERING IN 9VAC25-875-490, IN WHICH CASE THE FLOW RATE CAPACITY AND VELOCITY REQU

EROSION AND SEDIMENTATION CONTROL NOTES CONTINUED

9.2.3. DRAINAGE AREA 3 POA TO NATURAL STORMWATER CONVEYANCE SYSTEM

9.2.3.1. DEMONSTRATE THAT THE 2–YEAR, 24–HOUR STORM WILL NOT OVERTOP NATURAL CHANNEL BANKS NOR CAUSE EROSION OF NATURAL CHANNEL BED OR BANKS PER 9VAC25–875–600A.

9.2.3.2. DEMONSTRATE MAXIMUM PEAK FLOW RATE FROM THE 1–YEAR, 24–HOUR STORM IS IN COMPLIANCE WITH 9VAC25–875–600.B.3.

9.2.3.3. DEMONSTRATE THAT THE POST–DEVELOPMENT PEAK FLOW RATE FOR THE 10–YEAR, 24–HOUR STORM EVENT IS LESS THAN THE PRE–DEVELOPMENT PEAK FLOW RATE FROM THE 10–YEAR, 24–HOUR STORM EVENT TO SATISFY 9VAC25–875–600.C.

9.2.4. DRAINAGE AREA 4 POA TO NATURAL STORMWATER CONVEYANCE SYSTEM

9.2.4.1. DEMONSTRATE THAT THE 2–YEAR, 24–HOUR STORM WILL NOT OVERTOP NATURAL CHANNEL BANKS NOR CAUSE EROSION OF NATURAL CHANNEL BED OR BANKS PER 9VAC25–875–600A.

9.2.4.2. DEMONSTRATE MAXIMUM PEAK FLOW RATE FROM THE 1–YEAR, 24–HOUR STORM IS IN COMPLIANCE WITH 9VAC25–875–600.B.3.

9.2.4.3. DEMONSTRATE THAT THE POST–DEVELOPMENT PEAK FLOW RATE FOR THE 10–YEAR, 24–HOUR STORM EVENT IS LESS THAN THE PRE–DEVELOPMENT PEAK FLOW RATE FROM THE 10–YEAR, 24–HOUR STORM EVENT TO SATISFY 9VAC25–875–600.C.

10. IN NON–AGRICULTURAL AREAS, THE VISUAL SURVEY SHALL BE COMPARED TO THE DENSITY AND COVER OF ADJACENT UNDISTURBED LANDS. IN AGRICULTURAL AREAS, THE VISUAL SURVEY SHALL BE COMPARED TO THE ADJACENT UNDISTURBED PORTIONS OF THE SAME FIELD, UNLESS THE EASEMENT AGREEMENT SPECIFIES OTHERWISE.

CONDUCTING INSPECTIONS OF TEMPORARY ESC CONTROLS AND SWM BMPS AT LEAST ONCE EVERY BUSINESS DAY.

REPAIR OF ALL INEFFECTIVE TEMPORARY ESC MEASURES SHALL OCCUR WITHIN 24 HOURS OF IDENTIFICATION, OR AS SOON AS CONDITIONS ALLOW IF COMPLIANCE WITH THIS TIME FRAME WOULD RESULT IN GREATER ENVIRONMENTAL IMPACTS.

TEMPORARY BMPS WILL BE REMOVED UPON ACHIEVING VEGETATIVE STABILIZATION. DISTURBED AREAS NOT ATTAINING AN ACCEPTABLE VEGETATIVE COVER SHALL BE RE–SEEDED AS NEEDED UNTIL STABILIZATION IS ACHIEVED.

11. CALCULATIONS

BMP SIZING AND INSTALLATION HAS BEEN BASED ON THE FOLLOWING CRITERIA INCLUDED IN THE VSMH:

C–ECM–04 – TEMPORARY DIVERSION DIKE
C–ECM–09 – STORMWATER CONVEYANCE CHANNEL
C–ECM–14 – LEVEL SPREADER
C–ECM–15 – OUTLET PROTECTION
C–PCM–05 – COMPOST FILTER SOCK
C–SCM–11 – COMPOST FILTER SOCK SEDIMENT TRAP
C–SCM–12 – TEMPORARY SEDIMENT BASIN

12. GENERAL EROSION AND SEDIMENT CONTROL NOTES

ES–1: UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO THE MINIMUM STANDARDS AND SPECIFICATIONS OF THE VSMH.

ES–2: THE PLAN APPROVING AUTHORITY MUST BE NOTIFIED ONE WEEK PRIOR TO TO THE PRE–CONSTRUCTION CONFERENCE, ONE WEEK PRIOR TO THE COMMENCEMENT OF LAND DISTURBING ACTIVITY, AND ONE WEEK PRIOR TO THE FINAL INSPECTION.

ES–3: ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN CLEARING.

ES–4: A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.

ES–5: PRIOR TO COMMENCING LAND–DISTURBING ACTIVITY IN AREAS OTHER THAN INDICATED ON THESE PLANS (INCLUDING, BUT NO LIMITED TO, OFF–SITE BORROW OR WASTE AREAS), THE CONTRACTOR SHALL SUBMIT A SUPPLEMENTARY EROSION CONTROL PLAN TO THE OWNER FOR REVIEW AND APPROVAL BY THE PLAN APPROVING AUTHORITY.

ES–6: THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OR ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE PLAN APPROVING AUTHORITY.

ES–7: ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED.

ES–8: DURING DEWATERING OPERATIONS, WATER WILL BE PUMPED INTO AN APPROVED FILTERING DEVICE.

ES–9: THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES PERIODICALLY AND AFTER EACH RUNOFF–PRODUCING RAINFALL EVENT. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY.

TEMPORARY DEVELOPMENT

FOUR (4) SEDIMENT BASINS WERE DESIGNED TO MANAGE/CONTROL STORMWATER RUNOFF DURING CONSTRUCTION. THE FOLLOWING ASSUMPTIONS WERE MADE WHEN DESIGNING THE SEDIMENT BASIN WHILE PERFORMING COMPUTATIONS TO DETERMINE THE 2– AND 25–YEAR STORM ELEVATIONS PER VSMH STD & SPEC 3.14. IN THIS INSTANCE, THE THE STARTING WATER SURFACE ELEVATION IS AT THE TOP OF THE WET STORAGE ELEVATION AND THE DEWATERING ORIFICE IS CLOGGED.

1. MAINTENANCE

TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL BMPS SHALL BE MAINTAINED AND REPAIRED AS NEEDED TO ASSURE CONTINUED PERFORMANCE OF THEIR INTENDED FUNCTION. MAINTENANCE AND REPAIR SHALL BE CONDUCTED IN ACCORDANCE WITH THE APPROVED PROJECT SPECIFIC STANDARDS AND SPECIFICATIONS.

MS 19 DISCUSSION

A. INTRODUCTION

THE PRIMARY INTENT OF MS–19 IS TO ENSURE THAT DOWN GRADIENT PROPERTIES ARE PROTECTED FROM ADVERSE IMPACTS RESULTING FROM INCREASES IN STORMWATER RUNOFF FOR DEVELOPMENT ACTIVITIES. IN ACCORDANCE WITH 9VAC25–875–560, COMPLIANCE WITH THE WATER QUANTITY REQUIREMENTS CONTAINED IN 9VAC25–875–600 SATISFIES THE REQUIREMENTS OF M.S. 19:

"COMPLIANCE WITH THE WATER QUANTITY MINIMUM STANDARDS SET OUT IN 9VAC25–875–600 OF THE VSMH SHALL BE DEEMED TO SATISFY THE REQUIREMENTS OF THIS SUBDIVISION."

THERE IS ONE PRIMARY FLOW REGIME ASSOCIATED WITH THE CONSTRUCTION OF THE PROJECT THAT WILL NEED TO BE ASSESSED FOR COMPLIANCE WITH MS–19. THIS FLOW REGIME INCLUDES FLOWS GENERATED DIRECTLY WITHIN THE PROJECT LIMIT OF DISTURBANCE (LOD) THAT ARE CONTROLLED BY PERIMETER CONTROLS CONSISTING OF COMPOST FILTER SOCK AS WELL AS FLOWS ROUTED TO SEDIMENT BASINS. REGARDLESS OF THE SPECIFIC LOCATION AND/OR FLOW REGIME, ALL EROSION AND SEDIMENT CONTROL MEASURES INCLUDED IN THE DESIGN PLANS FOR THE PROJECT HAVE BEEN DEVELOPED AND DESIGNED TO BE IN FULL COMPLIANCE WITH STATE REQUIREMENTS, AS CONTAINED IN THE VSMH. AS A RESULT, ALL IMPLEMENTED PRACTICES (COMPOST FILTER SOCK, SOIL STABILIZATION, ETC.) WILL MEET ALL STATE REQUIREMENTS. IN ALL INSTANCES OF OFFSITE STORMWATER FLOW DURING THE CONSTRUCTION PHASE OF THE PROJECT, COMPLIANCE WITH MS–19 IS PROVIDED THROUGH THE PROVISION OF SHEET FLOW BELOW THE RESPECTIVE EROSION AND SEDIMENT CONTROL PRACTICES ALONG THE PERIMETER (COMPOST FILTER SOCK); SITE SPECIFIC ANALYSES WILL BE COMPLETED WHEN SITING SEDIMENT BASINS TO DEMONSTRATE COMPLIANCE WITH MS–19. A DESCRIPTION OF THE FLOW REGIME FOR DIRECT RUNOFF FROM DISTURBED AREAS OF THE PROJECT IS PROVIDED BELOW TO DEMONSTRATE THAT FLOW FROM THE PROPOSED PRACTICES WILL PROVIDE FOR NON–EROSIVE SHEET FLOW AND IS THEREFORE IN FULL COMPLIANCE WITH MS–19.

B. RUNOFF FROM PROJECT SITE

PERIMETER CONTROL

PROPERLY DESIGNED AND IMPLEMENTED EROSION AND SEDIMENT CONTROLS IN THE FORM OF SOIL STABILIZATION AND STAND–ALONE COMPOST FILTER SOCK WILL ENSURE DISTURBED AREAS WITHIN THE PROJECT SITE ARE PROTECTED IN ACCORDANCE WITH VSMH OPERATIONS. PERIMETER CONTROLS (COMPOST FILTER SOCK) WILL FILTER RUNOFF AND PROVIDE SHEET FLOW TO DOWNGRADIENT AREAS IN A NON–EROSIVE MANNER. THIS WILL RESULT IN RUNOFF FROM THE PROJECT SITE MEETING MS–19 REQUIREMENTS.

SEDIMENT BASINS

THE SEDIMENT BASIN IS DESIGNED IN ACCORDANCE WITH THE VSMH. THE SEDIMENT BASINS ARE DESIGNED TO MEET THE WATER QUANTITY STANDARDS SET OUT FOR SHEET FLOW IN 9VAC25–875–600 OF THE VSMH REGULATIONS. REFER TO SWPPP FOR POST–DEVELOPMENT HYDRAULIC CALCULATIONS FOR MORE DETAILS.

FLOODING

AT THE EDGES OF THE PROPOSED LIMITS OF DISTURBANCE COMPLEXES OF AQUATIC RESOURCES AND WETLANDS EXIST AND CAN BE CONSIDERED AS EXISTING FLOODED AREAS. THESE WETLAND AND STREAM COMPLEXES ARE BEING PROTECTED THROUGHOUT DEVELOPMENT. THE CALCULATIONS PROVIDED IN THIS REPORT AFFIRM THAT THE POST–DEVELOPMENT PEAK FLOW RATE FOR THE 10–YEAR 24–HOUR STORM EVENT IS LESS THAN THE PRE–DEVELOPMENT PEAK FLOW RATE FROM THE 10–YEAR 24–HOUR STORM EVENT, AND THEREFORE, NO ADDITIONAL ANALYSIS IS PROVIDED WITH RESPECT TO FLOOD PROTECTION CRITERIA.

FOR DRAINAGE AREAS THAT DISCHARGE TO NATURAL STORMWATER CONVEYANCE SYSTEMS, THE ENERGY BALANCE EQUATION WAS USED FOR CHANNEL PROTECTION ANALYSIS (1–YEAR STORM). BASED ON THE ANALYSIS, STORMWATER BMPs ARE IMPLEMENTED FOR PEAK FLOW RATE CONTROL TO MEET 9VAC–875–600.B AND C REQUIREMENTS.

FOR THE DRAINAGE AREAS THAT DISCHARGE AS SHEET FLOW OR SHEET FLOW VIA LEVEL SPREADERS FROM THE SITE, THE RESULT INDICATES THAT FOR THE 1– AND 10–YEAR STORM EVENTS, THERE ARE NO INCREASES IN PEAK FLOW RATES OR VOLUMES IN THE WATERSHED. THEREFORE, THERE ARE NO INCREASED VOLUMES OF SHEET FLOW THAT WILL CAUSE OR CONTRIBUTE TO EROSION, SEDIMENTATION, OR FLOODING OF DOWN GRADIENT PROPERTIES OR RESOURCES, AND THE REQUIREMENTS OF 9VAC25–875–600.D ARE MET.

SUMMARY

SINCE IT HAS BEEN DEMONSTRATED THAT UNDER THE MOST CONSERVATIVE ASSUMPTIONS THAT SHEET FLOW DOWNGRADIENT OF THE PERIMETER CONTROLS AND SEDIMENT BASIN WILL NOT "CAUSE OR CONTRIBUTE TO EROSION, SEDIMENTATION, OR FLOODING OF DOWN GRADIENT PROPERTIES" DURING AND IMMEDIATELY FOLLOWING CONSTRUCTION, THE CONSTRUCTION PHASE OF THE PROJECT WILL BE IN FULL COMPLIANCE WITH MS–19.

BEST MANAGEMENT PRACTICES INSTALLATION AND REMOVAL NOTES

TEMPORARY AND PERMANENT BMPS WILL BE USED DURING CONSTRUCTION ACTIVITIES TO AVOID AND/OR MINIMIZE ADVERSE ENVIRONMENTAL EFFECTS OF CONSTRUCTION ACTIVITIES.

THE FOLLOWING ARE GENERAL BMP INSTALLATION NOTES FOR SITE AREA CONSTRUCTION ACTIVITIES.

- A STONE CONSTRUCTION ENTRANCE, SHOWN ON DETAIL SHEET C912, SHALL BE PROVIDED AT ALL LOCATIONS WHERE CONSTRUCTION TRAFFIC WILL BE ACCESSING A PAVED ROAD DIRECTLY FROM A DISTURBED AREA.
- TEMPORARY SEDIMENT BARRIERS, INCLUDING APPROPRIATELY SIZED COMPOST FILTER SOCK WILL BE PLACED AROUND SOIL STOCKPILES, AS NEEDED.
- STOCKPILE SLOPES WILL BE 2:1 OR FLATTER, AND STOCKPILES WILL NOT EXCEED 35 FEET IN HEIGHT.
- THE SEDIMENT BASINS, ALONG WITH OTHER PERIMETER CONTROLS WHICH ARE INTENDED TO TRAP SEDIMENT, WILL BE CONSTRUCTED IMMEDIATELY AND WILL BE MADE FUNCTIONAL PRIOR TO UPSLOPE LAND DISTURBANCE. THE SEDIMENT BASINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PLANS AND DETAIL SHEETS.

WETLANDS (IF PRESENT) WILL BE PROTECTED WITH COMPOST FILTER SOCK. IN ADDITION, ORANGE CONSTRUCTION SAFETY FENCE WILL BE INSTALLED TO PROTECT WETLANDS FROM DISTURBANCE.

- DEWATERING, IF NEEDED, WILL BE CONDUCTED USING A PUMP AND HOSE. WATER WILL BE RELEASED INTO A FILTER BAG THAT WILL BE LOCATED IN A WELL–VEGETATED UPLAND AREA.
- FOLLOWING PROJECT USE, SEGREGATED TOPSOIL WILL BE SPREAD OVER THE AREA FROM WHICH IT WAS REMOVED. DISTURBED AREAS WILL BE RESTORED TO THEIR ORIGINAL TOPOGRAPHIC CONTOURS AND LAND COVER WILL BE RETURNED TO PRE–EXISTING CONDITIONS.
- ALL DISTURBED AREAS WILL BE GRADED IN PREPARATION FOR SEEDING AND MULCHING. THE CONSTRUCTION SITE SHOULD BE STABILIZED AS SOON AS POSSIBLE AFTER COMPLETION. ESTABLISHMENT OF FINAL COVER MUST BE INITIATED NO LATER THAN 7 DAYS AFTER REACHING FINAL GRADE. REFER TO TABLES ON DETAIL SHEETS FOR TEMPORARY AND PERMANENT SEEDING SPECIFICATIONS.
- TEMPORARY SEDIMENT BARRIERS WILL BE MAINTAINED UNTIL VEGETATION HAS BECOME ESTABLISHED WITH A GROUND COVER THAT IS UNIFORM, MATURE ENOUGH TO SURVIVE AND WILL INHIBIT EROSION. ONCE THIS COVERAGE HAS BEEN OBTAINED, APPROPRIATE CONTROLS WILL BE REMOVED FROM THE WORK AREA. AREAS DISTURBED DURING THE REMOVAL OF THE EROSION CONTROLS WILL BE STABILIZED IMMEDIATELY.
- ALL WASTE MATERIAL WILL BE TRANSPORTED OFFSITE FOR RECYCLING AND/OR DISPOSAL AT A FACILITY APPROVED TO RECEIVE THE MATERIAL.
- IN NON–AGRICULTURAL AREAS THE VISUAL SURVEY SHALL BE COMPARED TO THE DENSITY AND COVER OF ADJACENT UNDISTURBED LANDS. IN AGRICULTURAL AREAS, THE VISUAL SURVEY SHALL BE COMPARED TO THE ADJACENT UNDISTURBED PORTIONS OF THE SAME FIELD, UNLESS THE EASEMENT AGREEMENT SPECIFIES OTHERWISE.

COMMONWEALTH OF VIRGINIA
MICHAEL EDWARD ARCHER
Lic. No. 043994
PROFESSIONAL ENGINEER
6-2-2025

REVISION RECORD

NO	DATE	DESCRIPTION

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EROSION AND SEDIMENTATION CONTROL
GENERAL NOTES

DATE:	MAY 2025
DWG SCALE:	N/A
PROJECT NO:	341-132
DRAWN BY:	JMP
CHECKED BY:	MEA
APPROVED BY:	LCW

DRAWING NO.: C911

SHEET 54 OF 61

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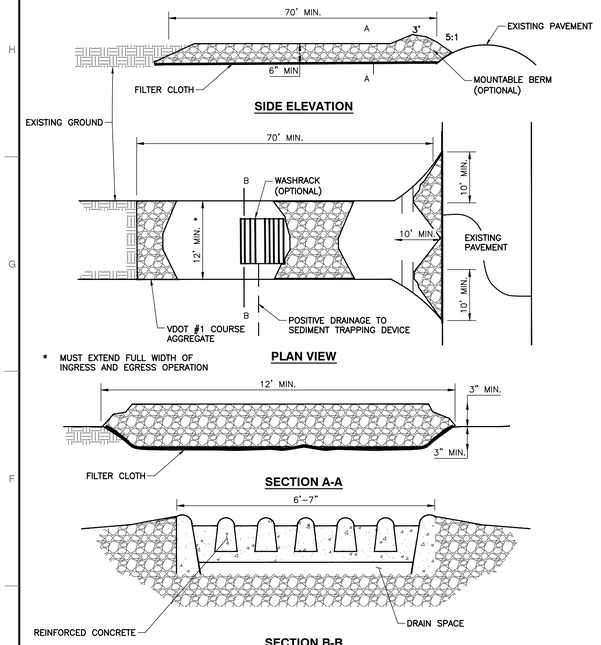
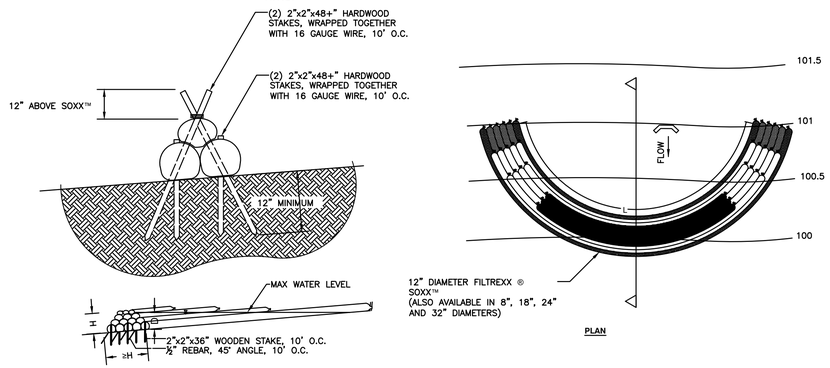


MAINTENANCE:
1. ENTRANCES TO BE INSPECTED ONCE A WEEK AND IMMEDIATELY AFTER EACH RAINFALL.
2. ENTRANCES SHALL BE TOPPED WITH ADDITIONAL STONE AS NECESSARY TO PREVENT THE TRACKING OF MUD/SEDIMENT INTO PUBLIC RIGHT-OF-WAYS. MAINTAIN A ROCK STOCKPILE ON SITE.
3. REPAIR AND CLEANOUT ENTRANCES AS NECESSARY TO REMOVE TRAPPED SEDIMENT.
4. IF MUD AND SOIL CLOG THE VOIDS IN THE STONE AND COMPROMISE THE EFFECTIVENESS OF THE CONSTRUCTION ENTRANCE, TOP DRESS THE ENTRANCE WITH NEW STONE. COMPLETE STONE REPLACEMENT IS NECESSARY WHEN THE ENTRANCE IS FULLY CLOGGED WITH SEDIMENT AND THE TOPDRESSING IS NO LONGER EFFECTIVE AT REMOVING SEDIMENT FROM TIRES.
5. IMMEDIATELY REMOVE ALL MATERIALS WASHED, TRACKED OR SPILLED FROM VEHICLES ONTO ROADWAYS OR STORM DRAINS. DO NOT USE WATER TRUCKS TO REMOVE THESE MATERIAL UNDER ANY CIRCUMSTANCES.
6. THE WASHRACK SHALL REMAIN FREE OF SEDIMENT. REPAIR OR REPLACE THE WASH RACK IF IT BECOMES DAMAGED.

DETAIL 1
STONE CONSTRUCTION ENTRANCE
N.T.S.



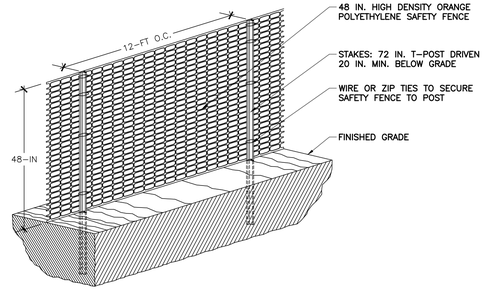
TRAP NO.	BOTTOM ELEVATION (EL)	REQUIRED VOLUME (CF)	TOP OF SOCKS (EL)	SILT SOCKS	LENGTH (FT)	SUMPED
1	622	6874	625.58	3–24", 2–18", 1–12"	346	NO
2	644	4776	647.75	2–32", 1–24"	273	NO
3	645	2388	648.58	3–24", 2–18", 1–12"	212	NO

INSPECTION: TRAPS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT.

MAINTENANCE:
1. SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT.
2. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATION OR REPLACED WITHIN 24 HOURS OF INSPECTION.
3. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES 1/2 THE HEIGHT OF THE BARRIER.
4. PHOTODEGRADABLE AND BIODEGRADABLE FILTER SOCKS SHALL NOT BE USED FOR MORE THAN 1 YEAR/ POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
5. CONTRACTOR TO ONLY CLEAR THE VEGETATION REQUIRED TO PLACE THE SILT SOCKS. ALL OTHER VEGETATION SHALL REMAIN.

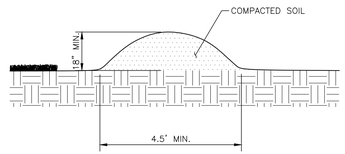
NOTES:
1. CONTRACTOR TO ONLY CLEAR THE VEGETATION REQUIRED TO PLACE THE SILT SOCKS. ALL OTHER VEGETATION TO REMAIN.
2. USE FILTREXX SILT SOXX OR APPROVED EQUAL
3. SEDIMENT TRAP SHALL BE CONSTRUCTED SO THAT THE MINIMUM BASE WIDTH IS EQUIVALENT TO THE HEIGHT (1H:1V).
4. SOCKS SHALL BE A LARGER DIAMETER AT THE BASE OF THE SEDIMENT TRAP AND DECREASE IN DIAMETER FOR SUCCESSIVE LAYERS.
5. ENDS OF THE SEDIMENT TRAP SHALL BE A MINIMUM 1 FT. HIGHER IN ELEVATION THAN THE MID-SECTION, WHICH SHALL BE AT THE LOWEST ELEVATION.

DETAIL 4
COMPOST FILTER SOCK SEDIMENT TRAP
N.T.S.



NOTES:
1. ALL SENSITIVE AREAS SHALL BE PROTECTED AS PER PLAN.
2. SAFETY FENCE SHOULD BE FASTENED SECURELY TO THE T-POSTS.
3. THE FENCING MUST REMAIN IN PLACE DURING ALL PHASES OF CONSTRUCTION; ANY CHANGE OF THE PROTECTIVE FENCING MUST BE APPROVED.

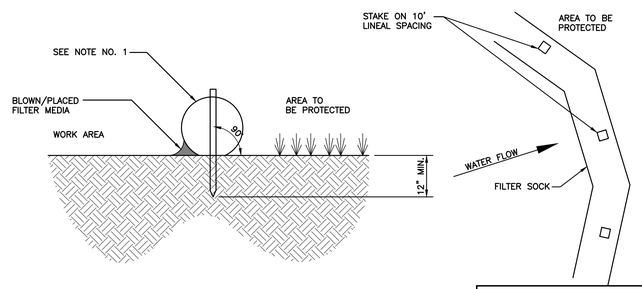
DETAIL 2
ORANGE CONSTRUCTION FENCE
N.T.S.



TEMPORARY DIVERSION DIKE TABLE				
SPILLWAY ID	BOTTOM WIDTH	SIDE SLOPES	DEPTH (IN.)	LINING
1	0	2:1	18.00	NAG S150

MAINTENANCE:
1. TEMPORARY DIVERSION DIKES SHOULD BE INSPECTED AFTER EVERY STORM. REPAIR THE DIKE, OUTLET OR SEDIMENT TRAPPING FACILITY AS NECESSARY. THE CONTROL MEASURE SHOULD BE INSPECTED BI-WEEKLY (WHETHER A STORM EVENT HAS OCCURRED OR NOT).
2. REPAIR DAMAGE RESULTING FROM CONSTRUCTION TRAFFIC BY THE END OF EACH WORKING DAY.
3. TEMPORARY DIVERSION SHOULD HAVE MORE THAN 6 INCHES OF FREEBOARD. IF OVERTOPPING IS OBSERVED, HIGH ADJUSTMENT SHOULD BE MADE.

DETAIL 5
TEMPORARY DIVERSION DIKE
N.T.S.



NOTE:
1. COMPOST FILTER SOCK TO BE FILTREXX SILTSOXX OR APPROVED EQUIVALENT.
2. SEE PLAN SHEET FOR COMPOST FILTER SOCK SIZES AND LOCATIONS.
3. ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISPOSED OF WHEN IT REACHES ½ THE ABOVE GROUND HEIGHT OF THE COMPOST FILTER SOCK.
4. COMPOST FILTER SOCK SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED COMPOST FILTER SOCK SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.

COMPOST STANDARDS	
ORGANIC MATTER CONTENT	25%–100% (DRY WEIGHT BASIS)
ORGANIC PORTION	FIBROUS AND ELONGATED
PH	5.5–8.5
MOISTURE CONTENT	30%–60%
PARTICLE SIZE	30%–50% PASS THROUGH ⅜" SIEVE
SOLUBLE SALT CONCENTRATION	5.0 DS/M (MMHOS/CM) MAXIMUM

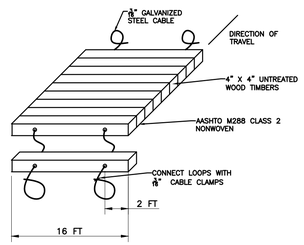
INSPECTION: SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT.

MAINTENANCE:
1. SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT.
2. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATION OR REPLACED WITHIN 24 HOURS OF INSPECTION.
3. ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISPOSED OF WITHIN THE PERMITTED AREA AND UPSTREAM OF FUNCTIONING EROSION AND SEDIMENTATION CONTROL BMPS WHEN IT REACHES ½ THE ABOVE GROUND HEIGHT OF THE COMPOST FILTER SOCKS.
4. BIODEGRADABLE FILTER SOCKS SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
5. UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCK. STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT.

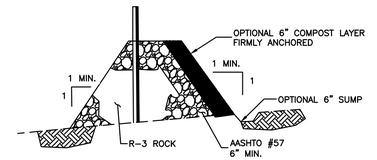
E&S PERIMETER CONTROL EQUIVALENCIES				
FILTER SOCK SIZE	STACKED FILTER SOCK	SILT FENCE	SILTRON SIZE	RETENTION FENCE TYPE
12" FILTER SOCK	–	SILT FENCE	SILTRON®16	PRIORITY 2 BELTED SILT RETENTION FENCE
18" FILTER SOCK	–	SUPER SILT FENCE	SILTRON®16	PRIORITY 2 BELTED SILT RETENTION FENCE
24" FILTER SOCK	2–12", 1–12" STACKED FILTER SOCK	–	SILTRON®21	PRIORITY 1 BELTED SILT RETENTION FENCE
32" FILTER SOCK	2–18", 1–18" STACKED FILTER SOCK	–	SILTRON®28	

NOTES:
1. THE ABOVE TABLES DETAILS ACCEPTABLE ALTERNATIVES TO THE SEDIMENT BARRIER CONTROLS SHOWN ON THE PLANS. THE USE OF ANY OF THESE EQUIVALENTS IS ACCEPTABLE AS LONG AS THE SIZING SHOWN ON THE PLANS MATCHES THE EQUAL ALTERNATIVE DESCRIBED IN THIS TABLE.
2. THE USE OF SWITCH GRASS IS AN ACCEPTABLE ALTERNATIVE TO FILTER SOCK.

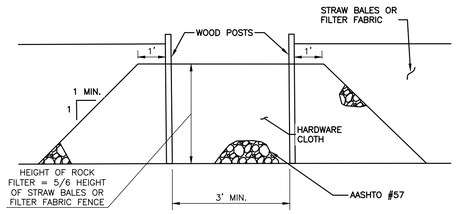
DETAIL 3
COMPOST FILTER SOCK
N.T.S.



DETAIL 6
TEMPORARY EQUIPMENT CROSSING - TIMBER MAT
N.T.S.



OUTLET CROSS-SECTION



UP-SLOPE FACE

DETAIL 7
ROCK FILTER OUTLET
N.T.S.

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PITTSLYVANIA COUNTY, VIRGINIA

EROSION AND SEDIMENTATION CONTROL DETAILS

DATE:	MAY 2025
DWG SCALE:	N.T.S.
PROJECT NO.	341-132
DRAWN BY:	JMP
CHECKED BY:	MEA
APPROVED BY:	LCW

DRAWING NO.: C912

SHEET 55 OF 61

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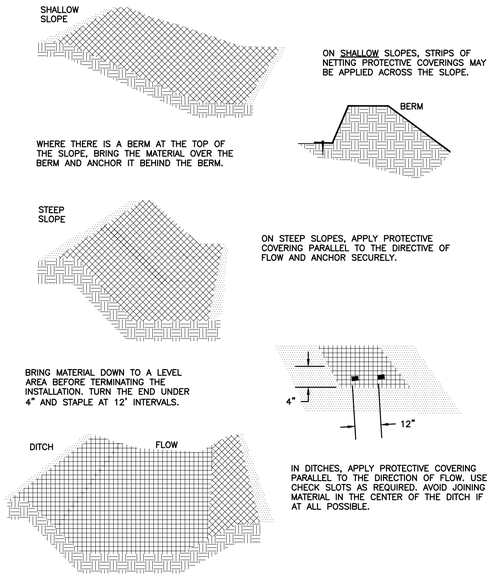
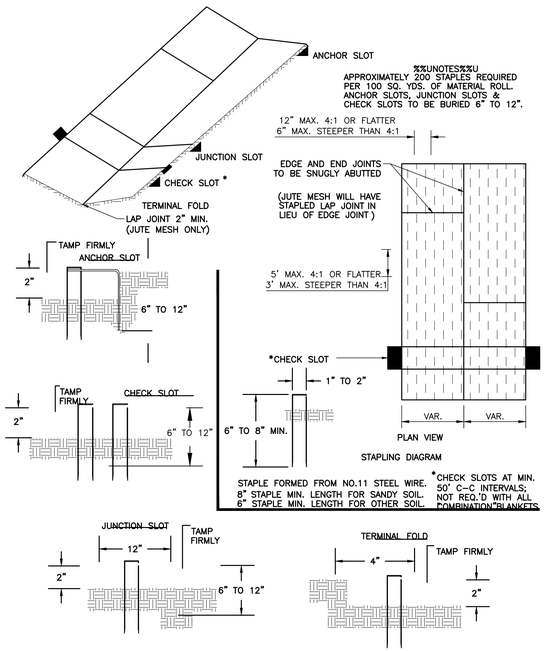


OPTION 1



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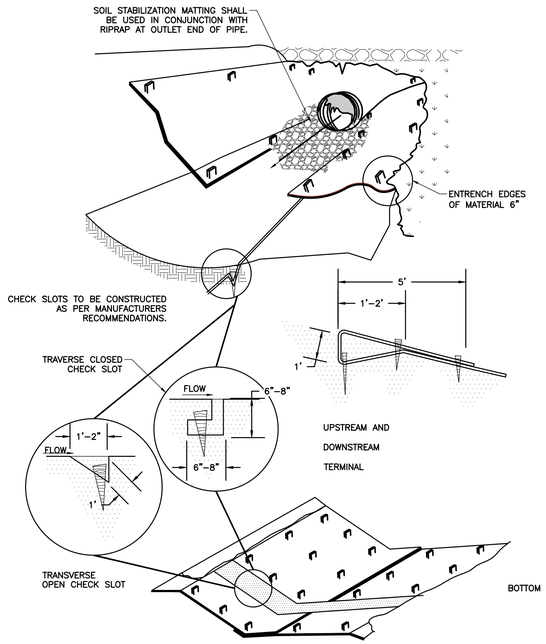

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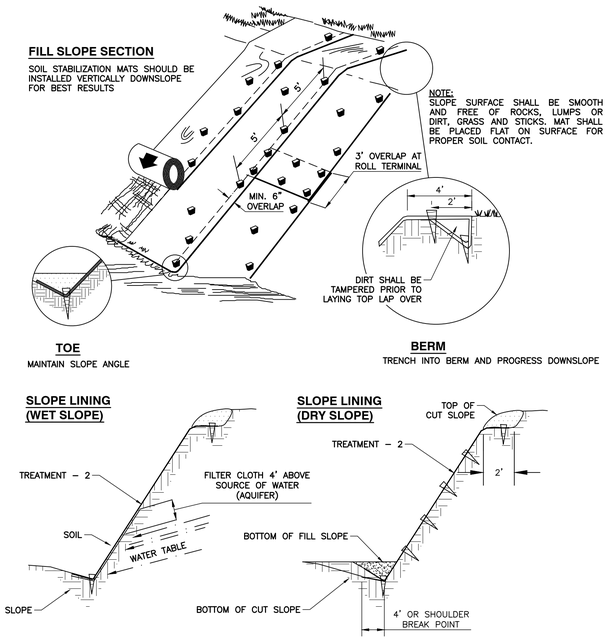

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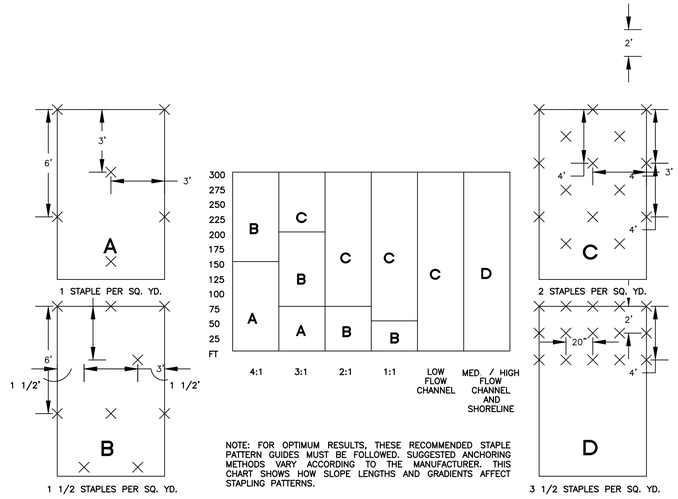

NOTE: FOR OPTIMUM RESULTS, THESE RECOMMENDED STAPLE PATTERN GUIDES MUST BE FOLLOWED. SUGGESTED ANCHORING METHODS VARY ACCORDING TO THE MANUFACTURER. THIS CHART SHOWS HOW SLOPE LENGTHS AND GRADIENTS AFFECT STAPLING PATTERNS.

OPTION 5

MAINTENANCE:

SOIL STABILIZATION BLANKETS SHOULD BE INSPECTED PERIODICALLY FOLLOWING INSTALLATION, PARTICULARLY AFTER RAINSTORMS TO CHECK FOR EROSION AND UNDERMINING. ANY DISLOCATION OR FAILURE SHOULD BE REPAIRED IMMEDIATELY. IF WASHOUTS OR BREAKAGE OCCURS, RE-INSTALL THE MATERIAL AFTER REPAIRING DAMAGE TO THE SLOPE OR DITCH. CONTINUE TO MONITOR THESE AREAS UNTIL WHICH TIME THEY BECOME PERMANENTLY STABILIZED; AT THAT TIME AN ANNUAL INSPECTION SHOULD BE ADEQUATE.

DETAIL 8
SOIL STABILIZATION BLANKET
N.T.S.

TABLE 3.31-C
TEMPORARY SEEDING PLANT MATERIALS, SEEDING RATES, AND DATES

SPECIES	SEEDING RATE		NORTH[A]			SOUTH[B]			PLANT CHARACTERISTICS
	ACRE	1000 FT²	3/1 TO 4/30	5/1 TO 8/15	8/15 TO 11/1	2/15 TO 4/30	5/1 TO 9/1	9/1 TO 11/15	
OATS (AVENA SATIVA)	3 BU. (UP TO 100 LBS., NOT LESS THAN 50 LBS.)	2 LBS.	X	–	–	X	–	–	USE SPRING VARIETIES (E.G., NOBLE).
RYE[D] (SECALE CEREALE)	2BU. (UP TO 110 LBS., NOT LESS THAN 50 LBS.)	2.5 LBS.	X	–	X	X	–	X	USE FOR LATE FALL SEEDINGS, WINTER COVER. TOLERATES COLD AND LOW MOISTURE.
GERMAN MILLET (SETARIA ITALICA)	50 LBS.	APPROX. 1 LB.	–	X	–	–	X	–	WARM-SEASON ANNUAL. DIES AT FIRST FROST. MAY BE ADDED TO SUMMER MIXES.
ANNUAL RYE GRASS[C] (LOLIUM MULTI-FLORUM)	60 LBS.	1 1/2 LBS.	X	–	X	X	–	X	MAY BE ADDED IN MIXES. WILL MOW OUT OF MOST STANDS.
WEEPING LOVEGRASS (ERAGROSTIS CURVULA)	15 LBS.	5 1/2 OZS.	–	X	–	–	X	–	WARM-SEASON PERENNIAL. MAY BUNCH. TOLERATES HOT, DRY SLOPES AND ACID, INFERTILE SOILS. MAY BE ADDED TO MIXES.
KOREAN LESPEDZA[C] (LESPEDEZA STIPULACEA)	25 LBS.	APPROX. 1 1/2 LBS.	X	X	–	X	X	–	WARM SEASON ANNUAL LEGUME. TOLERATES ACID SOILS. MAY BE ADDED TO MIXES.

[A] NORTHERN PIEDMONT AND MOUNTAIN REGION.
[B] SOUTHERN PIEDMONT AND COASTAL PLAIN.
[C] MAY BE USED AS A COVER CROP WITH SPRING SEEDING.
[D] MAY BE USED A S COVER CROP WITH FALL SEEDING
X MAY BE PLANTED IN BETWEEN THESE DATES
– MAY NOT BE PLANTED BETWEEN THESE DATES

DETAIL 9
TEMPORARY SEEDING

COMMONWEALTH OF VIRGINIA
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APPROVED BY:	LCW

DRAWING NO.: C913

SHEET 56 OF 61

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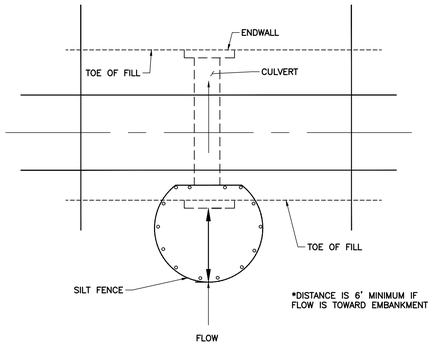

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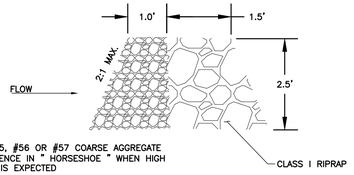
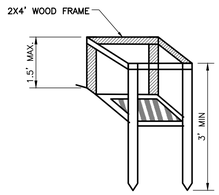


*VDOT #3, #357, #5, #56 OR #57 COARSE AGGREGATE TO REPLACE SILT FENCE IN " HORSESHOE " WHEN HIGH VELOCITY OF FLOW IS EXPECTED

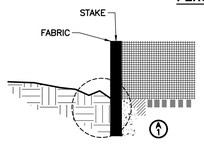
OPTION 2

MAINTENANCE:
1. CULVERT INLET PROTECTION SHOULD BE INSPECTED AFTER EACH RAINFALL. IF CLOGGED VOIDS ARE OBSERVED, REPLACE OR CLEAN AGGREGATE.
2. REMOVE SEDIMENT AND RESTORE STRUCTURE TO ITS ORIGINAL DIMENSIONS WHEN SEDIMENT HAS ACCUMULATED TO ONE HALF THE DESIGN DEPTH.
3. REMOVE INLET PROTECTION ONCE THE UPSLOPE AREA HAS BEEN CONSTRUCTED AND PERMANENTLY STABILIZED.

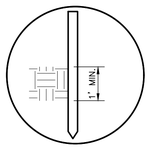
DETAIL 10
CULVERT INLET PROTECTION
N.T.S.



PERSPECTIVE VIEWS



ELEVATION OF STAKE AND FABRIC ORIENTATION

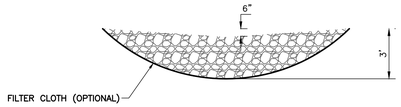


DETAIL A

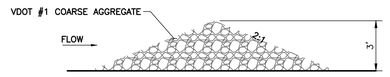
SPECIFIC APPLICATION
THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE THE INLET DRAINS A RELATIVELY FLAT AREA (SLOPE NO GREATER THAN 5%) WHERE THE INLET SHEET OR OVERLAND FLOWS (NOT EXCEEDING 1 CFS) ARE TYPICAL. THE METHOD SHALL NOT APPLY TO INLETS RECEIVING CONCENTRATED FLOWS, SUCH AS IN STREET OR HIGHWAY MEDIANS.

MAINTENANCE:
1. SILT FENCE DROP INLET PROTECTION SHALL BE INSPECTED AT MINIMUM TWICE A WEEK (72 HOURS OR MORE BETWEEN EACH INSPECTION) AND AFTER RAINFALL EVENTS GREATER THAN 0.25 INCHES. DURING EXTENDED RAINFALL EVENTS, INSPECT AT LEAST ONCE A DAY.
2. REPLACE CLOGGED FILTER FABRIC AS NEEDED.
3. AFTER SEVER STORM EVENTS, DOWNSTREAM STORM SYSTEMS SHALL BE INSPECTED.
4. SEDIMENT SHOULD BE REMOVED FROM INLET PROTECTION ONCE IT REACHES A DEPTH OF 2-3 INCHES.
5. INLET PROTECTION SHOULD BE RE4MOVED WITHIN 30 DAYS OF SITE STABILIZATION OR WHEN INLET PROTECTION IS NO LONGER NEEDED.
6. BRING THE DISTURBED AREA TO FINAL GRADE AND STABILIZE AS NECESSARY.
7. STORM DRAINAGE SYSTEMS SHOULD BE CLEARED OF SEDIMENT AND DEBRIS PRIOR TO FINAL INSPECTION.

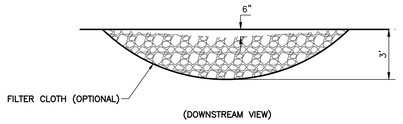
DETAIL 11
SILT FENCE DROP INLET PROTECTION
N.T.S.



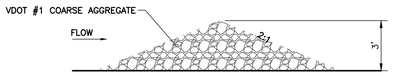
(DOWNSTREAM VIEW)



10 ACRES OF DRAINAGE AREA:

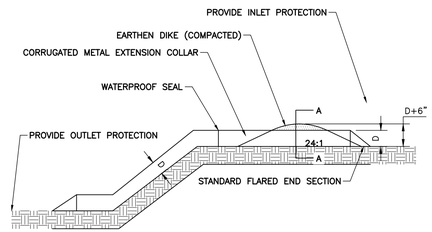


(DOWNSTREAM VIEW)



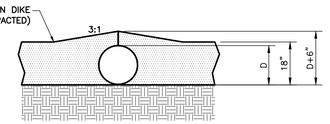
CLASS I RIPRAP

DETAIL 12
ROCK CHECK DAM
N.T.S.



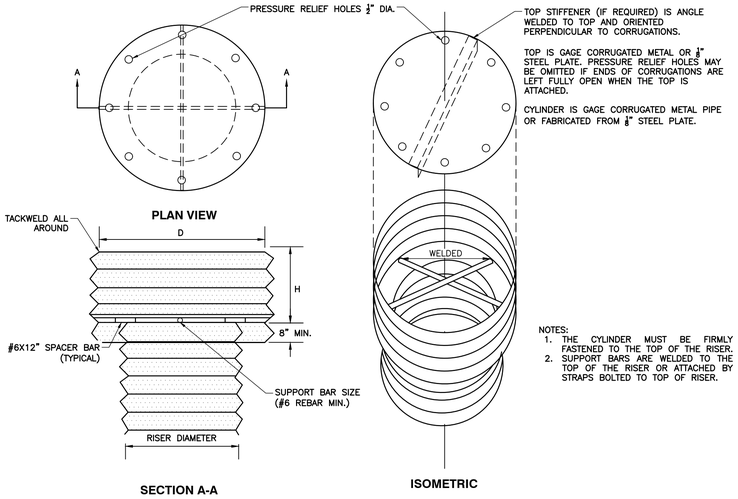
SECTION VIEW

NOTE: SEDIMENT MAY BE CONTROLLED AT OUTLET IF UPLAND PONDING WILL CREATE PROBLEMS



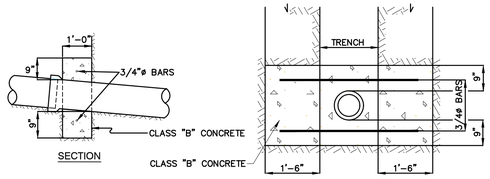
SECTION A - A

DETAIL 13
TEMPORARY SLOPE DRAIN
N.T.S.



NOTES:
1. THE CYLINDER MUST BE FIRMLY FASTENED TO THE TOP OF THE RISER.
2. SUPPORT BARS ARE WELDED TO THE TOP OF THE RISER OR ATTACHED BY STRAPS BOLTED TO TOP OF RISER.

DETAIL 14
ANTI-VORTEX DEVICE DESIGN
N.T.S.



PROVIDE NO ANCHORS ON GRADES LESS THAN 20%.
PROVIDE ANCHORS 36' C.C. ON GRADES BETWEEN 20% AND 34%.
PROVIDE ANCHORS 24' C.C. ON GRADES BETWEEN 34% AND 50%.
PROVIDE ANCHORS 15' C.C. ON GRADES BETWEEN 50% AND 70%.

DETAIL 15
CONCRETE PIPE ANCHOR
N.T.S.

REVISION RECORD

NO	DATE	DESCRIPTION

Civil & Environmental Consultants, Inc.
700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com

TRANSCONTINENTAL GAS PIPE LINE, LLC
COMPRESSOR STATION 165
PITTSLYVANIA COUNTY, VIRGINIA

EROSION AND SEDIMENTATION CONTROL DETAILS

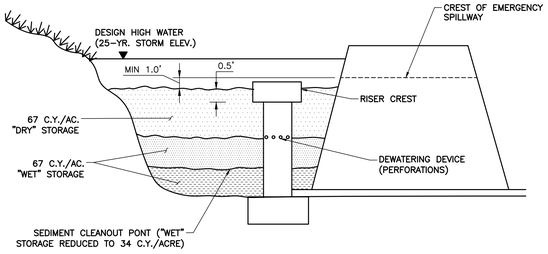
DATE:	MAY 2025
DWG SCALE:	N.T.S.
PROJECT NO:	341-132
DRAWN BY:	JMP
CHECKED BY:	MEA
APPROVED BY:	LCW

DRAWING NO.: C914

SHEET 57 OF 61

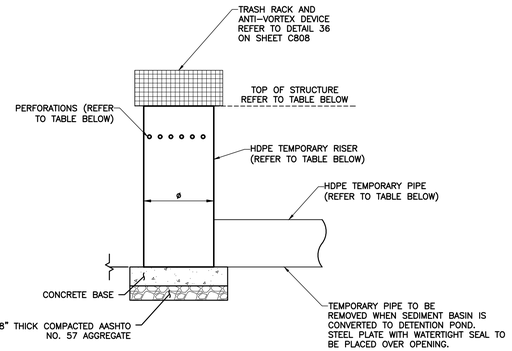
COMMONWEALTH OF VIRGINIA
MICHAEL EDWARD ARCHER
Lic. No. 043994
PROFESSIONAL ENGINEER
6-2-2025

P:\340-000\341-132\-04001\Dwg\C901\341132-C901-GI1-Details.dwg[GI1a] LS(5/30/2025 - khamm) - LP: 6/3/2025 9:28 AM

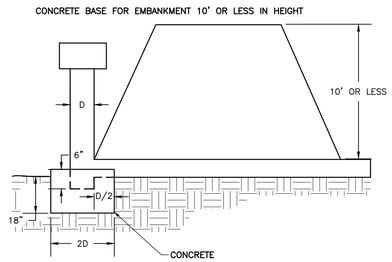


MAINTENANCE:
1. INSPECT THE SEDIMENT BASINS REGULARLY AND AFTER EACH RAINFALL EVENT TO ENSURE IT IS STRUCTURALLY SOUND AND HAS NOT BEEN DAMAGED BY EROSION OR CONSTRUCTION EQUIPMENT. WHEN THE SEDIMENT REACHES THE CLEANOUT ELEVATION, REMOVE AND PROPERLY DISPOSE OF THE SEDIMENT.
2. INSPECT THE EMERGENCY SPILLWAY REGULARLY TO ENSURE THE LINING IS NOT DAMAGED.
3. INSPECT THE OUTLET PIPE AND DEWATERING ORIFICE AFTER EACH RAINFALL EVENT. IF ANY CLOGGING IS OBSERVED, REMOVE THE DEBRIS TO MAINTAIN FREE FLOW OUT OF THE BASIN.
4. INSPECT THE VEGETATIVE STABILIZATION, SOILS STABILIZATION, AND BAFFLES. MAINTAIN OR REPAIR AS NEEDED.

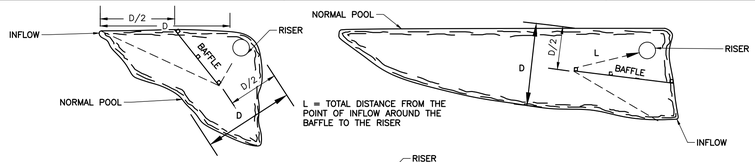
DETAIL 16
SEDIMENT BASIN
N.T.S.

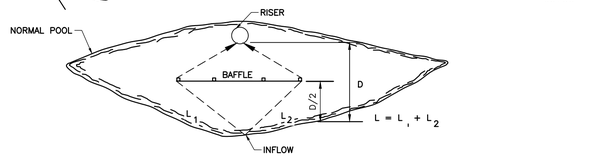


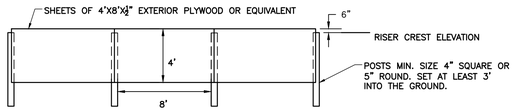
DETAIL 17
SEDIMENT BASIN DEWATERING
N.T.S.



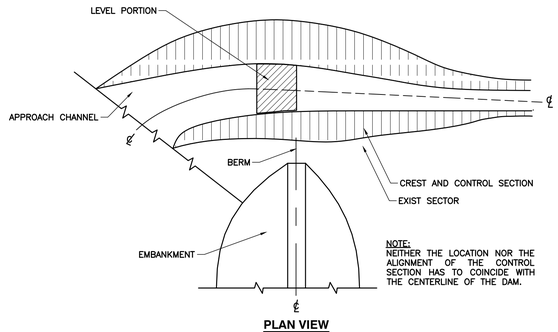
DETAIL 18
TEMPORARY RISER PIPE
N.T.S.



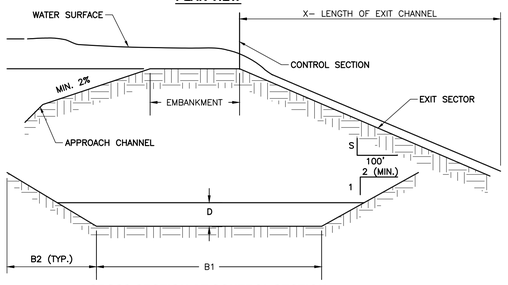




DETAIL 19
BAFFLE
N.T.S.



PLAN VIEW



CROSS-SECTION AT CONTROL SECTION

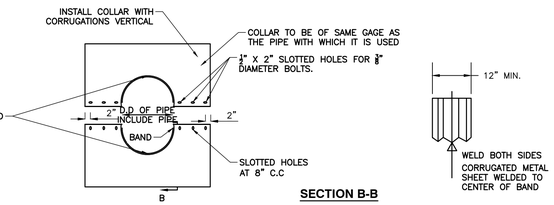
SPILLWAY TABLE

SPILLWAY ID	B1 (FT)	B2 (FT)	TOP OF EMBANKMENT EL.	CREST EL.	SPILLWAY LINER	EMERGENCY CONDITION DESIGN HIGH WATER EL.	FREEBOARD
BASIN A	50	4.5	656.0	654.5	NA GREEN SC250	655.0	1.0
BASIN 1	90	4.8	649.0	647.4	27" THICK RIPRAP D_{50} = 12"	648.0	1.0
BASIN 2	40	4.5	626.0	624.5	18" THICK RIPRAP D_{50} = 9"	625.0	1.0
BASIN 3	30	4.5	651.0	649.5	18" THICK RIPRAP D_{50} = 9"	650.0	1.0

DETAIL 20
EXCAVATED SPILLWAY
N.T.S.

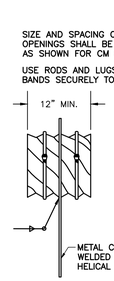
SEDIMENT BASINS

BASIN	DRAINAGE AREA (ACRES)	WET STORAGE		DRY STORAGE		BOTTOM OF BASIN ELEV. (BBE)	TOP OF DRY STORAGE ELEV. (TDSE)	RISER DIA. RD (I.N.)	TOP OF WET STORAGE ELEV. (TWSE)	SEDIMENT CLEAN-OUT ELEVATION (SCOE)	DEWATERING ORIFICE PERFORATION NO. AND DIA. (DOD) (I.N.)	25-YR DESIGN STORM ELEVATION (DSE)	EMERGENCY SPILLWAY ELEV. (ESE)	ANTI-VORTEX DEVICE DIA. (AVDD) (I.N.)	TOP OF EMBANKMENT WIDTH (W) (FT.)	BAFFLE			BARREL			
		VOLUME REQUIRED (CU. YD)	VOLUME PROVIDED (CU. YD.)	VOLUME REQUIRED (CU. YD)	VOLUME PROVIDED (CU. YD.)											FLOW LENGTH TO WIDTH RATIO	BAFFLE LENGTH (FT.)	TOP OF BAFFLE ELEV.	PIPE LENGTH (PL) (FT.)	PIPE DIA. (PD) (IN.)	PIPE INV. IN ELEV. (PIIE)	PIPE OUT ELEV. (PIOE)
A	7.66	513	527	513	577	648.0	653.0	36	651.2	650.0	15 1"ø PERFORATIONS	654.81	654.5	42	8	4:1	100	653.0	80	15	647.00	646.20
1	13.80	924	933	810	1,238	640.0	643.4	36	641.7	640.8	20 1.5"ø PERFORATIONS	647.11	647.4	42	8	N/A	N/A	N/A	70	18	636.70	636.00
2	4.25	285	299	285	673	619.0	622.6	24	620.3	619.6	10 1.5"ø PERFORATIONS	624.25	624.5	36	8	N/A	N/A	N/A	55	18	617.70	617.43
3	3.34	224	231	224	326	645.5	647.5	24	646.3	645.8	10 1.5"ø PERFORATIONS	649.10	649.5	36	10	N/A	N/A	N/A	45	15	643.95	643.50

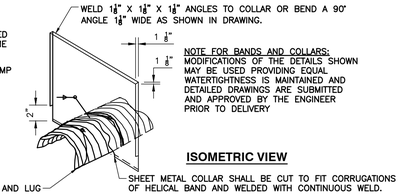


SECTION B-B

ELEVATION OF UNASSEMBLED COLLAR
1. ALL MATERIALS TO BE IN ACCORDANCE WITH CONSTRUCTION AND CONSTRUCTION MATERIAL SPECIFICATIONS.
2. WHEN SPECIFIED ON THE PLANS, COATING OF COLLARS SHALL BE IN ACCORDANCE WITH CONSTRUCTION AND CONSTRUCTION MATERIAL SPECIFICATIONS.
3. UNASSEMBLED COLLARS SHALL BE MARKED BY PAINTING OR TAGGING TO IDENTITY MATCHING PAIRS.
4. THE LAP BETWEEN THE TWO HALF SECTIONS AND BETWEEN THE PIPE AND CONNECTING BAND SHALL BE CAULKED WITH ASPHALT MASTIC AT TIME OF INSTALLATION.
5. EACH COLLAR SHALL BE FURNISHED WITH TWO ½" DIAMETER RODS WITH STANDARD TANK LUGS FOR CONNECTING COLLARS TO PIPE.



PARTIAL ELEVATION
REF: ENGR. FIELD MANUAL

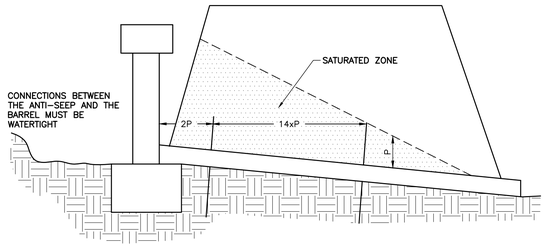


NOTE FOR BANDS AND COLLARS:
MODIFICATIONS OF THE DETAILS SHOWN MAY BE USED PROVIDING EQUAL WATERTIGHTNESS IS MAINTAINED AND DETAILED DRAWINGS ARE SUBMITTED AND APPROVED BY THE ENGINEER PRIOR TO DELIVERY

ISOMETRIC VIEW

NOTE: FOR DETAILS OF FABRICATION DIMENSIONS, MINIMUM GAGES, SLOTTED HOLES, AND NOTES, SEE DETAIL ABOVE.

NOTE: TWO OTHER TYPES OF ANTI-SEEP COLLARS ARE:
1. CORRUGATED METAL, SIMILAR TO UPPER, EXCEPT SHOP WELDED TO A SHORT (4FT.) SECTION OF THE PIPE AND CONNECTED WITH CONNECTING BANDS TO THE PIPE.
2. CONCRETE, SIX INCHES THICK FORMED AROUND THE PIPE WITH #5 REBAR SPACED 15" HORIZONTALLY AND VERTICALLY.



ANTI-SEEP COLLAR TABLE

BASIN	A (FT)	NUMBER OF COLLARS
SEDIMENT BASIN A	5.3	2 – PLACED AT 15 FT FROM RISER
SEDIMENT BASIN/ED POND NO. 1	5.5	3 – PLACED AT 15 FT FROM RISER
SEDIMENT BASIN/ED POND NO. 2	5.5	2 – PLACED AT 13 FT FROM RISER
SEDIMENT BASIN/ED POND NO. 3	5.3	2 – PLACED AT 11 FT FROM RISER

DETAIL 21
ANTI-SEEP COLLAR
N.T.S.

COMMONWEALTH OF VIRGINIA
MICHAEL EDWARD ARCHER
Lic. No. 043994
PROFESSIONAL ENGINEER
6-2-2025

REVISION RECORD

NO	DATE	DESCRIPTION

700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com
Civil & Environmental Consultants, Inc.

TRANSCONTINENTAL GAS PIPE LINE, LLC
COMPRESSOR STATION 165
PITTSLVYANIA COUNTY, VIRGINIA

EROSION AND SEDIMENTATION CONTROL DETAILS

DATE:	MAY 2025	DRAWN BY:	JMP
DWG SCALE:	N.T.S.	CHECKED BY:	MEA
PROJECT NO:			341-132
APPROVED BY:			LCW

DRAWING NO.: C915
SHEET 58 OF 61

P:\340-000\341-132_CADD\Dwg\C915\341132-C915-C911-ES Details.dwg[C915] 5/30/2025 - khayner - LY: 6/3/2025 9:28 AM

TABLE 1: PRIMARY MEADOW SEED MIX		
ERNSMX 866 VIRGINIA SOUTHERN PIEDMONT STEEP SLOPE MIX		
SCIENTIFIC NAME	COMMON NAME	% OF MIX
SORGHASTRUM NUTANS	INDIANGRASS	27.0%
SCHIZACHYRIUM SCOPARIUM	LITTLE BLUESTEM	22.0%
ELYMUS VIRGINICUS	VIRGINIA WILDRYE	18.0%
PANICUM CLANDESTINUM	DEERTONGUE	15.0%
ARGOSTIS HYEMALIS	WINTER BENTGRASS	5.0%
ARGOSTIS PERENNANS	AUTUMN BENTGRASS	5.0%
TRIDENS FLAVUS	PURPLETOP	2.0%
RUDBECKIA HIRTA	BLACKEYED SUSAN	1.2%
COREOPSIS LANCEOLATA	LANCELOAF COREOPSIS	1.0%
ERAGROSTIS HIRSUTA	BIGTOP LOVEGRASS	1.0%
ASCLEPIAS SYRIACA	COMMON MILKWEED	0.5%
EUPATORIUM COELESTINUM	MISTFLOWER	0.5%
LESPEDEZA VIRGINICA	SLENDER LESPEDEZA	0.5%
PENSTEMON LAEVIGATUS	APPALACHIAN BEARDTONGUE	0.5%
CHAMAECRISTA NICTITANS	SENSITIVE PEA	0.2%
LIATRIS SPICATA	MARSH BLAZING STAR	0.2%
SOLIDAGO NEMORALIS	GRAY GOLDENROD	0.2%
LANDSCAPE SETTINGS: POLLINATOR FRIENDLY MIX WILL STABILIZE SLOPES WHILE PROVIDING FOOD AND COVER FOR WILDLIFE.		
SOIL PH TOLERANCE: 4.5–7.8		
SEEDING RATES: APPLY AT A RATE OF 45 LBS./ACRE WITH A COVER CROP. USE ONE OF THE FOLLOWING COVER CROPS: GRAIN OATS (30 LBS/ACRE: 1 JAN TO 30 APR). BROWN TOP MILLET (10 LBS./ACRE; 1 MAY TO 31 AUG), OR GRAIN RYE (30 LBS./ACRE; 1 SEP TO 31 DEC).		

TABLE 2: SECONDARY MEADOW SEED MIX		
ERNSMX 310 NORTH CAROLINA STEEP SLOPE MIX		
SCIENTIFIC NAME	COMMON NAME	% OF MIX
ELYMUS VIRGINICUS	VIRGINIA WILDRYE	22.0%
SORGHASTRUM NUTANS	INDIANGRASS	21.9%
SCHIZACHYRIUM SCOPARIUM	LITTLE BLUESTEM	19.3%
PANICUM VIRGATUM	SWITCHGRASS	18.0%
TRIDENS FLAVUS	PURPLETOP	15.0%
COREOPSIS LANCEOLATA	LANCELEAF COREOPSIS	1.3%
RUDBECKIA HIRTA	BLACKEYED SUSAN	1.3%
BIDENS ARISTOSA	SHOWY TICKSEED SUNFLOWER	1.0%
MONARDA FISTULOSA	WILD BERGAMOT	0.2%
LANDSCAPE SETTINGS: POLLINATOR FRIENDLY MIX WILL STABILIZE SLOPES WHILE PROVIDING FOOD AND COVER FOR WILDLIFE.		
SOIL PH TOLERANCE: 4.5–7.8		
SEEDING RATES: APPLY AT A RATE OF 45 LBS./ACRE WITH A COVER CROP. USE ONE OF THE FOLLOWING COVER CROPS: GRAIN OATS (30 LBS/ACRE: 1 JAN TO 30 APR). BROWN TOP MILLET (10 LBS./ACRE; 1 MAY TO 31 AUG), OR GRAIN RYE (30 LBS./ACRE; 1 SEP TO 31 DEC).		

TABLE 3: TERTIARY MEADOW SEED MIX		
ERNSMX 280 EASTERN WEST VIRGINIA STEEP SLOPE MIX		
SCIENTIFIC NAME	COMMON NAME	% OF MIX
SORGHASTRUM NUTANS	INDIANGRASS	40.0%
ELYMUS VIRGINICUS	VIRGINIA WILDRYE	23.5%
PANICUM CLANDESTINUM	TIOGA DEERTONGUE	17.0%
ANDROPOGON GERADII	BIG BLUESTEM	7.0%
PANICUM VIRGATUM	SWITCHGRASS	4.0%
TRIDENS FLAVUS	PURPLETOP	3.3%
HELIOPSIS HELIANTHOIDES	OXEYE SUNFLOWER	1.8%
RUDBECKIA HIRTA	BLACKEYED SUSAN	1.3%
ASCLEPIAS SYRIACA	COMMON MILKWEED	0.8%
ASTER LAEVIS	SMOOTH BLUE ASTER	0.5%
CHAMAECRISTA NICITANS	SENSITIVE PEA	0.4%
MONARDA FISTULOSA	WILD BERGAMOT	0.2%
SOLIDAGO JUNCEA	EARLY GOLDENROD	0.2%
LANDSCAPE SETTINGS: POLLINATOR FRIENDLY MIX WILL STABILIZE SLOPES WHILE PROVIDING FOOD AND COVER FOR WILDLIFE.		
SOIL PH TOLERANCE: 4.0–8.0		
SEEDING RATES: APPLY AT A RATE OF 45 LBS./ACRE WITH A COVER CROP. USE ONE OF THE FOLLOWING COVER CROPS: GRAIN OATS (30 LBS/ACRE: 1 JAN TO 30 APR). BROWN TOP MILLET (10 LBS./ACRE; 1 MAY TO 31 AUG), OR GRAIN RYE (30 LBS./ACRE; 1 SEP TO 31 DEC).		

MEADOW SEED MIX INSTRUCTIONAL NARRATIVE:

1. MEADOW TO BE ESTABLISHED BY SEEDING THE VIRGINIA SOUTHERN PIEDMONT STEEP SLOPE MIX (ERNSMX 866) IN TABLE 1. IF THE PRIMARY MEADOW MIX IS NOT AVAILABLE OR IS LIMITED IN QUANTITY, THE SECONDARY OR TERTIARY MIXES SHALL BE SELECTED. THE SEED SUPPLIER MAY SUBSTITUTE SPECIES WITHIN ANY OF THE MIXES BASED ON SEED AVAILABILITY. COORDINATE WITH SEED SUPPLIER WELL IN ADVANCE TO ENSURE AVAILABILITY AT TIME OF SEEDING. IF NECESSARY, STORE INDOORS IN A COOL AND DRY PLACE. FOLLOW SCARIFICATION AND STRATIFICATION REQUIREMENTS OF SEED SUPPLIER PRIOR TO SEEDING.
2. TEST SOIL FOR NUTRIENT AND PH LEVELS. APPLY FERTILIZER AND LIME AS RECOMMENDED BY THE SOIL TEST ANALYSIS AND ENSURE FINAL PH LEVELS ARE WIHTIN THE SOIL PH TOLERANCES LISTED WITHIN THE SEED MIXES.
3. FOLLOW GUIDANCE DISTURBED-SITES-STEEP-SLOPES_PG.PDF, UPLAND-MEADOW-SITES_PG.PDF, FALL-VS.-SPRING-SEEDING_PG.PDF, AND OBSTACLES_SUCCESSFUL-MEADOW-ESTABLISHMENT_PG.PDF FOUND AT WWW.ERNSTSEED.COM FOR SITE PREPARATION AND GROWING SEASON MAINTENANCE. FOLLOW GUIDANCE TOOLS-AND-SEEDING-METHODS_PG.PDF FOUND AT WWW.ERNSTSEED.COM FOR SEEDING METHODS. SEE REFORESTATION PLANS FOR ADDITIONAL INFORMATION.

TABLE 4: BRUSH SEED MIX						
SCIENTIFIC NAME	COMMON NAME	SIZE CATEGORY OF MATURE BRUSH	IDEAL QUANTITY PER ACRE	ESTIMATED SIZE OF BRUSH AFTER 3 YEARS (SF)	APPROXIMATE SEEDS/LB. (USDA)	POTENTIAL SEED SUPPLIER**
GAYLUSSACIA BACCATA	BLACK HUCKLEBERRY	SMALL	201+	7.07	354,000	A
CEANOTHUS AMERICANUS	NEW JERSEY TEA	SMALL	201+	7.07	112,000	A,S
EUONYMUS AMERICANUS	STRAWBERRY BUSH	SMALL	201+	15.91	35,100	S
HYDRANGEA ARBORESCENS	SMOOTH HYDRANGEA	SMALL	201+	19.62	3,690,680	A
VACCINIUM STAMINEUM	DEERBERRY	SMALL	201+	15.91	372,280	A,S
ROSA CAROLINA	PASTURE ROSE	SMALL	201+	15.91	50,000	S
RHUS AROMATICA	FRAGRANT SUMAC	SMALL	201+	7.07	49,000	A,S
RUBUS ALLEGHENIENSIS	COMMON BLACKBERRY	MEDIUM	51 TO 200	63.62	262,200	E,S
VIBURNUM DENTATUM	ARROWWOOD VIBURNUM*	MEDIUM	51 TO 200	15.91	576,827	A,E,S
RHODODENDRON PERICLYMENOIDES	DWARF AZALEA	MEDIUM	51 TO 200	15.91	4,500	S
VIBURNUM ACERIFOLIUM	MAPLELEAF VIBURNUM	MEDIUM	51 TO 200	7.07	13,100	A,S
SAMBUCUS CANADENSIS	ELDERBERRY	MEDIUM	51 TO 200	28.27	291,590	E,S
ARONIA ARBUTIFOLIA	RED CHOKEBERRY*	LARGE	6 TO 50	15.91	256,500	A,S
LINDERA BENZOIN	SPICEBUSH	LARGE	6 TO 50	7.07	4,500	E,S
CORYLUS AMERICANA	AMERICAN HAZELNUT	LARGE	6 TO 50	15.941	491	A,E,S
HAMAMELIS VIRGINIANA	WITCHHAZEL	LARGE	6 TO 50	7.07	11,000	A,E,S
PARTHENOCISSUS QUINQUEFOLIA	VIRGINIA CREEPER	VERY LARGE	1 TO 5	78.5	18,367	E,S
*PLANTS SHOULD NOT BE SEEDED WHERE BRUSH HOGGING IS ANTICIPATED						

BRUSH SEED MIXTURE INSTRUCTIONAL NARRATIVE:

1. CONTACT SEED SUPPLIERS (SEE SEED SUPPLIER LEGEND AT RIGHT) TO INQUIRE ABOUT SPECIES AND QUANTITIES AVAILABLE.
2. CHOOSE A MINIMUM OF 10 SPECIES FOR BIODIVERSITY. MAXIMIZE BIODIVERSITY BY SELECTING AS MANY SPECIES AS POSSIBLE. USE INFORMATION PROVIDED IN COLUMNS E, F, AND G TO INFORM SELECTIONS. LARGER QUANTITIES SHOULD BE SELECTED FOR THE SMALLER PLANT SPECIES ON THE TOP OF THE LIST AND SMALLER QUANTITIES SHOULD BE SELECTED FOR THE LARGER PLANT SPECIES AND VINE AT THE BOTTOM OF THE LIST. TOTAL SF OF SELECTED PLANTS MUST EXCEED 24,289.06 SF PER ACRE. USE THE SPREADSHEET PROVIDED TO CALCULATE SEEDS REQUIRED PER ACRE TO MEET THE REQUIREMENTS. NOTE: PLANTS WITH AN ASTERISKS SHOULD NOT BE SEEDED WHERE BRUSH HOGGING IS ANTICIPATED.
3. CONTACT SEED SUPPLIER WELL IN ADVANCE TO ENSURE AVAILAILTY AT TIME OF PLANTING. IF NECESSARY, STORE INDOORS IN A COOL AND DRY PLACE. FOLLOW SCARIFICATION, STRATIFICATION, AND SEED BED PREPARATION RECOMMENDATIONS FOR OPTIMUM GERMINATION FROM THE SEED SUPPLIER PRIOR TO SEEDING.
4. PREPARE THE SITE ACCORDING TO GUIDANCE DOCUMENTS LISTED IN THE MEADOW NARRATIVE. FOLLOW GUIDANCE TOOLS-AND-SEEDING-METHODS_PG.PDF FOUND AT WWW.ERNSTSEED.COM FOR SEEDING METHODS.
5. APPLY THE BRUSH SEEDS SEPARATELY FROM THE MEADOW SEED MIX. APPLY SEEDS AT THE RATE OF TOTAL BRUSH SEEDS/ACRE OR TOTAL LBS./AC AS CALCULATED IN THE SPREADSHEET.
6. SELECT A MEADOW SEED MIX AND APPLY ACCORDING TO THE MEADOW SEED MIX INSTRUCTIONAL NARRATIVE.
7. DO NOT BRUSH HOG UNTIL THE FOURTH YEAR TO ALLOW FOR ADEQUATE ESTABLISHMENT. BRUSH HOGGING SHOULD OCCUR IN LATE WINTER (APPROXIMATELY FEBRUARY 25TH) AFTER GROUND-DWELLING BIRD NESTING SEASON AND TO ALLOW SEED AND FRUIT SET AND SEED COLD TREATMENT.

SEED SUPPLIER LEGEND:

S: HTTPS://SHEFFIELDS.COM/

E: HTTPS://WWW.ERNSTSEED.COM/SEED-FINDER-TOOL/?_PRODUCT_TYPE=INDIVIDUAL-SPECIES

A: HTTPS://ARCHEWILD.COM/NATIVE-PLANT-NURSERIES/CUSTOM-GROWING/

**SUPPLIER OF THIS SEED AS OF 4/25/2025

TABLE 5: WOODS			
SCIENTIFIC NAME	COMMON NAME	CATEGORY	REQUIRED % BY ACRE
QUERCUS ALBA	WHITE OAK	OAK	40%
QUERCUS COCCINEA	SCARLET OAK		
QUERCUS FALCATA	SOUTHERN RED OAK		
QUERCUS MONTANA	CHESTNUT OAK		
QUERCUS RUBRA	NORTHERN RED OAK		
QUERCUS STELLATA	POST OAK		
QUERCUS VELUTINA	BLACK OAK		
CARYA ALBA	PIGNUT HICKORY	HICKORY	30%
CARYA TOMENTOSA	MOCKERNUT HICKORY		
CARYA OVALIS	RED HICKORY		
CARYA OVATA	SHAGBARK HICKORY		
PINUS ECHINATA STROBUS	SHORTLEAF PINE	PINE	15%
PINUS STROBUS	WHITE PINE		
PINUS TAEDA	LOBLOLLY PINE		
PINUS VIRGINIANA	VIRGINIA PINE		
ACER RUBRUM	RED MAPLE	OTHER OVERSTORY	10%
LIRIODENDRON TULIPIFERA	YELLOW POPLAR		
LIQUIDAMBAR STYRCIFLUA	SWEETGUM		
NYSSA SYLVATICA	BLACK GUM		
CERCIS CANADENSIS	EASTERN REDBUD	UNDERSTORY	5%
CORNUS FLORIDA	FLOWERING DOGWOOD		
SASSAFRAS ALBIDUM	SASSAFRAS		
OSTRYA VIRGINIANA	EASTERN HOP-HORNBEAM		
NOTE: PLANT SEEDLINGS 20' APART.			

WOODS INSTRUCTIONAL NARRATIVE:

1. SEEDLINGS SHALL BE APPROXIMATELY 12" TO 36" WOODY STOCK EITHER BARE ROOT, TUBELING, OR CONTAINERIZED. CONTACT SEEDLING SUPPLIERS TO INQUIRE ABOUT SPECIES AND QUANTITIES AVAILABLE.
2. SELECT TREE SPECIES TOTALING 400 SEEDLINGS PER ACRE TO MEET REQUIREMENTS IN 4VAC10-20-20. SELECT A MINIMUM OF 3 SPECIES PER CATEGORY (COLUMN E).
3. MEET THE REQUIRED PERCENTAGES (COLUMN F) FOR EACH CATEGORY (COLUMN E). USE THE SPREADSHEET PROVIDED TO CALCULATE THE PERCENT OF EACH SPECIES REQUIRED TO MEET THE REQUIREMENTS. MAXIMIZE BIODIVERSITY BY SELECTING AS MANY SPECIES AS POSSIBLE.
4. SELECT A MEADOW SEED MIX AND APPLY ACCORDING TO THE MEADOW SEED MIX INSTRUCTIONAL NARRATIVE.
5. APPLY BRUSH SEED MIX ACCORDING TO THE BRUSH SEED MIX INSTRUCTIONAL NARRATIVE.
6. PLANT SEEDLINGS 20' APART AND IN ACCORDANCE WITH LANDSCAPE INDUSTRY STANDARD PRACTICES.
7. BRUSH/WOODS HABITAT SHOULD NOT BE BRUSH HOGGED, BUT ALLOWED TO BECOME FOREST OVER TIME.

DETAIL 22
PERMANENT SEEDING

COMMONWEALTH OF VIRGINIA
MICHAEL EDWARD ARCHER
Lic. No. 043994
PROFESSIONAL ENGINEER
6-2-2025

REVISION RECORD

NO	DATE	DESCRIPTION

700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
www.cecinc.com
Civil & Environmental Consultants, Inc.

TRANSCONTINENTAL GAS PIPE LINE, LLC
COMPRESSOR STATION 165
PITTSLYVANIA COUNTY, VIRGINIA

EROSION AND SEDIMENTATION CONTROL DETAILS

DATE:	MAY 2025
DWG SCALE:	N.T.S.
PROJECT NO:	341-132
DRAWN BY:	JMP
CHECKED BY:	MEA
APPROVED BY:	LCW

DRAWING NO.: C916

SHEET 59 OF 61

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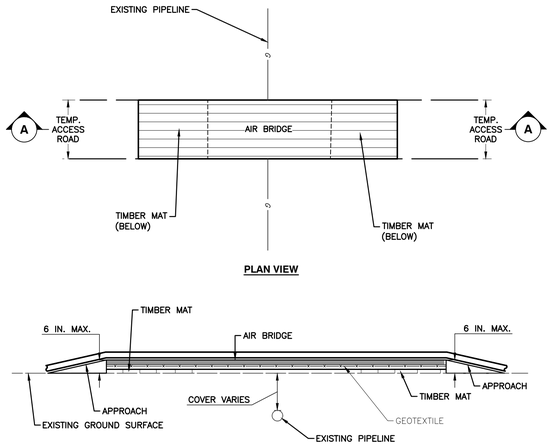
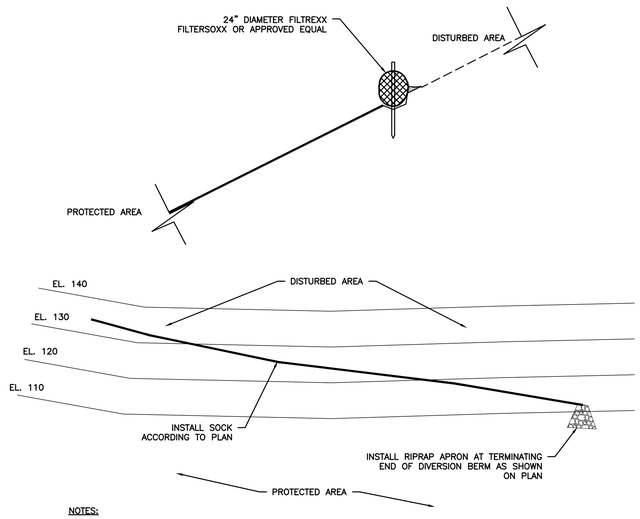
TABLE 3.35-A ORGANIC MULCH MATERIALS AND APPLICATION RATES			
MULCHES	RATES:		NOTES:
	PER ACRE	PER 1000 SQ. FT.	
STRAW OR HAY	1½ – 2 TONES (MINIMUM 2 TONS FOR WINTER COVER)	70 – 90 LBS.	FREE FROM WEEDS AND COARSE MATTER. MUST BE ANCHORED. SPREAD WITH MULCH BLOWER OR BY HAND.
FIBER MULCH	MINIMUM 1500 LBS.	35 LBS.	DO NOT USE AS MULCH FOR WINTER COVER OR DURING HOT, DRY PERIODS.* APPLY AS SLURRY.
CORN STALKS	4 – 6 TONS	185 – 275 LBS.	CUT OR SHREDDED IN 4–6" LENGTHS. AIR–DRIED. DO NOT USE IN FINE TURF AREAS. APPLY WITH MULCH BLOWER OR BY HAND.
WOOD CHIPS	4 – 6 TONS	185 – 275 LBS.	FREE OF COARSE MATTER. AIR–DRIED. TREAT WITH 12 LBS NITROGEN PER TON. DO NOT USE IN FINE TURF AREAS. APPLY WITH MULCH BLOWER, CHIP HANDLER, OR BY HAND.
BARK CHIPS OR SHREDDED BARK	50 – 70 CU. YDS.	1 – 2 CU. YDS.	FREE OF COARSE MATTER. AIR–DRIED. DO NOT USE IN FINE TURF AREAS. APPLY WITH MULCH BLOWER, CHIP HANDLER, OR BY HAND.
*WHEN FIBER MULCH IS THE ONLY AVAILABLE MULCH DURING PERIODS WHEN STRAW SHOULD BE USED, APPLY AT A MINIMUM RATE OF 2000 LBS./AC. OR 45 LBS./1000 SQ. FT.			

DETAIL 23
MULCHING



DETAIL 24
TEMPORARY EQUIPMENT CROSSING - AIR BRIDGE
N.T.S.



NOTES:

1. SEE DETAIL 3 ON SHEET C912 FOR COMPOST FILTER SOCK SPECIFICATIONS AND STAKING REQUIREMENTS.
2. MAINTENANCE SHALL BE IN ACCORDANCE WITH THE COMPOST FILTER SOCK REQUIREMENTS.

DETAIL 25
TEMPORARY COMPOST FILTER SOCK DIVERSION BERM
N.T.S.

COMMONWEALTH OF VIRGINIA
MICHAEL EDWARD ARCHER
Lic. No. 043994
PROFESSIONAL ENGINEER
6-2-2025

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EROSION AND SEDIMENTATION CONTROL DETAILS

DATE:	MAY 2025
DRAWN BY:	JMP
DWG SCALE:	N.T.S.
CHECKED BY:	MEA
PROJECT NO:	341-132
APPROVED BY:	LCW

DRAWING NO.:
C917
SHEET 60 OF 61

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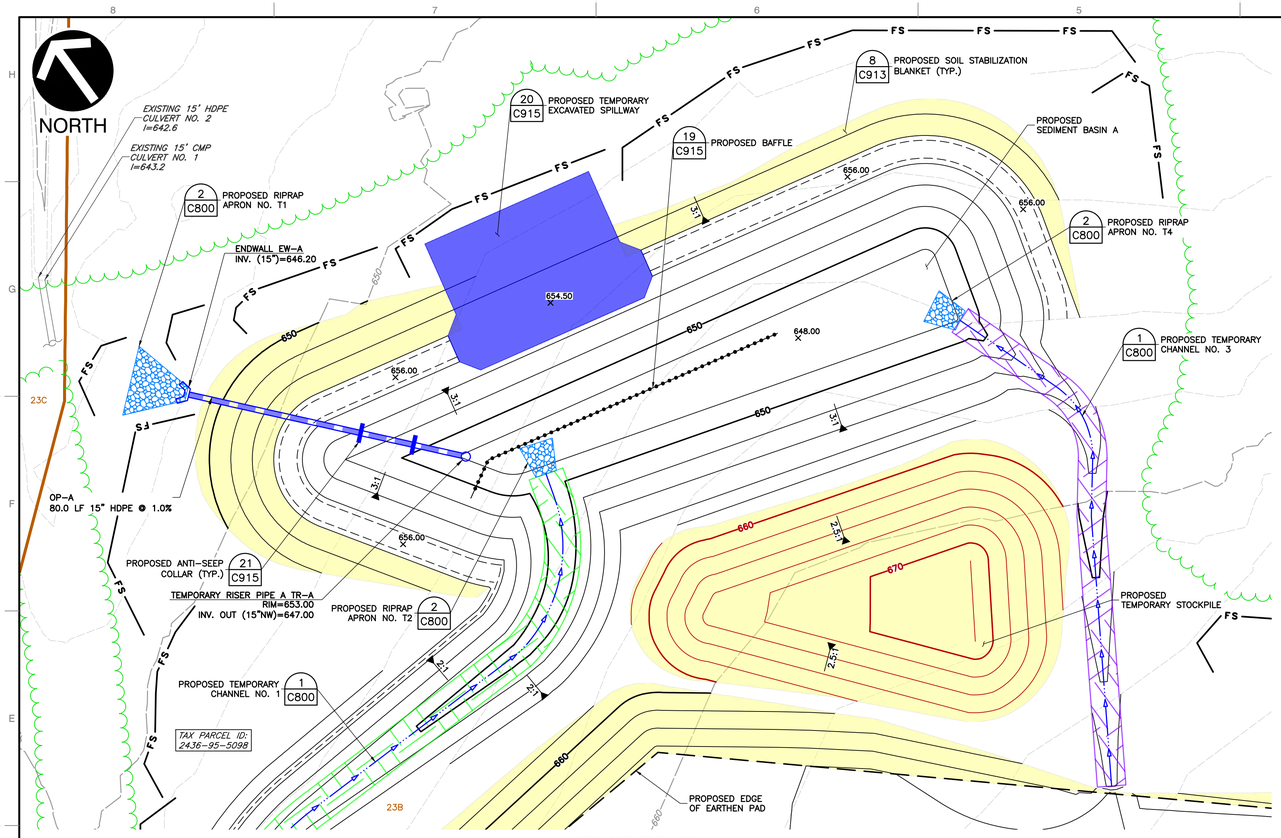
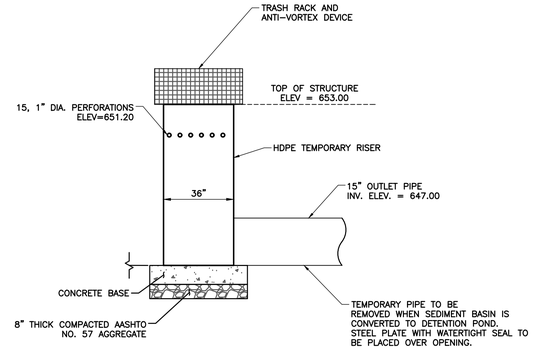


SEDIMENT BASIN A PLAN VIEW

SCALE IN FEET

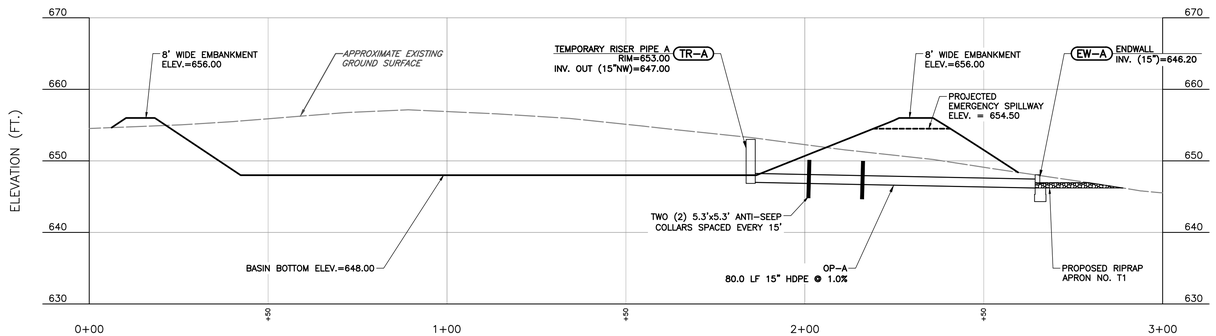
0 20 40



TEMPORARY OUTLET CONTROL STRUCTURE

SEDIMENT BASIN INSPECTION AND MAINTENANCE NOTES:

- MONITOR THE GROWTH OF WETLANDS, TREES, AND SHRUBS PLANTED. RECORD THE SPECIES AND THEIR APPROXIMATE COVERAGE AND NOTE THE PRESENCE OF ANY INVASIVE PLANT SPECIES.
- INSPECT THE CONDITION OF STORMWATER INLETS TO THE BASIN FOR MATERIAL DAMAGE, EROSION OR UNDERCUTTING, AND SUBSIDENCE/SINKHOLE FORMATION.
- INSPECT THE BANKS OF UPSTREAM AND DOWNSTREAM CHANNELS FOR EVIDENCE OF SLOUGHING, ANIMAL BURROWS, BOGGY AREAS, WOODY GROWTH, GULLY EROSION, OR SUBSIDENCE/SINKHOLE FORMATION THAT MAY UNDERMINE EMBANKMENT INTEGRITY.
- INSPECT BASIN OUTFALL CHANNEL FOR EROSION, UNDERCUTTING, RIPRAP DISPLACEMENT, WOODY GROWTH, SUBSIDENCE/SINKHOLE FORMATION, AND OTHER ISSUES.
- INSPECT CONDITION OF PRINCIPAL SPILLWAY AND RISER FOR EVIDENCE OF SPALLING, JOINT FAILURE, LEAKAGE, CORROSION, SUBSIDENCE/SINKHOLE FORMATION, AND OTHER ISSUES.
- INSPECT CONDITION OF ALL TRASH RACKS, ORIFICES, AND UNDERDRAINS FOR EVIDENCE OF CLOGGING, LEAKAGE, DEBRIS ACCUMULATION, AND OTHER ISSUES.
- INSPECT MAINTENANCE ACCESS TO ENSURE IT IS FREE OF WOODY VEGETATION AND CHECK TO SEE WHETHER VALVES, MANHOLES, AND LOCKS CAN BE OPENED AND OPERATED.
- INSPECT INTERNAL AND EXTERNAL SIDE SLOPES OF THE BASIN FOR EVIDENCE OF SPARSE VEGETATIVE COVER, EROSION, SLUMPING, OR SUBSIDENCE/SINKHOLE FORMATION, AND MAKE NEEDED REPAIRS IMMEDIATELY.
- INSPECT LOW-FLOW ORIFICES TWO TIMES PER YEAR.
- REMOVE TRASH THAT TEND TO ACCUMULATE AND BOTTOM OF BASIN ANNUALLY.



SEDIMENT BASIN A PROFILE

SCALE H:1"=20'; V:1"=10'

SCALE IN FEET (HORIZONTAL)

0 20 40

SCALE IN FEET (VERTICAL)

0 10 20

LEGEND

660 EXISTING INDEX CONTOUR	EXISTING RIPRAP	PROPOSED PHASE 1 INTERMEDIATE CONTOUR
EXISTING INTERMEDIATE CONTOUR	EXISTING HUC12 BOUNDARY	660 PROPOSED INDEX CONTOUR
EXISTING SUBJECT PROPERTY LINE	EXISTING STREAM (BY OTHERS)	PROPOSED INTERMEDIATE CONTOUR
EXISTING PROPERTY LINE	EXISTING PEM WETLAND (BY OTHERS)	PROPOSED EDGE OF GRAVEL PAD
EXISTING TRANSCO ROAD RIGHT-OF-WAY	EXISTING PFO WETLAND (BY OTHERS)	PROPOSED FLAT PAD LIMITS
EXISTING RIGHT-OF-WAY	EXISTING POW WETLAND (BY OTHERS)	PROPOSED BERM
EXISTING FENCE LINE	EXISTING PSS WETLAND (BY OTHERS)	PROPOSED EDGE OF UNPAVED DIRT ROAD
EXISTING EDGE OF PAVEMENT	50' OFFSET FROM STREAM/WETLAND	PROPOSED TEMPORARY DIVERSION DIKE
EXISTING PAVEMENT LIMITS	PROPOSED LIMIT OF DISTURBANCE	PROPOSED TEMPORARY CHANNEL
EXISTING EDGE OF GRAVEL	PROPOSED AREA TO REMAIN UNDISTURBED	PROPOSED TEMPORARY STORM PIPE
EXISTING GRAVEL LIMITS	SOIL BOUNDARY	PROPOSED TEMPORARY OUTLET STRUCTURE
EXISTING GUIDE RAIL	23B SOIL ID	PROPOSED TEMPORARY RIPRAP APRON
EXISTING BUILDING	PROPOSED ROCK CONSTRUCTION ENTRANCE	PROPOSED TEMPORARY ANTI-SEEP COLLAR
EXISTING STRUCTURE	OCF PROPOSED ORANGE CONSTRUCTION FENCE	PROPOSED TEMPORARY HEAD/ENDWALL
ST EXISTING STORM PIPE	FS PROPOSED 12" COMPOST FILTER SOCK	PROPOSED TEMPORARY EXCAVATED SPILLWAY
W EXISTING WATER LINE	FS PROPOSED 18" COMPOST FILTER SOCK	PROPOSED CHANNEL
G EXISTING GAS LINE	FS PROPOSED 24" COMPOST FILTER SOCK	PROPOSED STORM PIPE
G EXISTING GAS LINE (BY OTHERS)	FS PROPOSED 32" COMPOST FILTER SOCK	PROPOSED RIPRAP APRON
OH-E EXISTING OVERHEAD WIRE	CFS PROPOSED COMPOST FILTER SOCK	PROPOSED HEAD/ENDWALL (HW/EW)
EXISTING UTILITY POLE	PROPOSED BAFFLE	PD-1 PROPOSED STORM PIPE LABEL
UG-E EXISTING FIBER OPTIC LINE	PROPOSED CULVERT INLET PROTECTION	IN-1 PROPOSED STRUCTURE LABEL
FO EXISTING UNDERGROUND ELECTRIC LINE	PROPOSED SOIL STABILIZATION BLANKET	PROPOSED S150 CHANNEL LINER
EXISTING FENCE	660 PROPOSED TEMPORARY INDEX CONTOUR	PROPOSED P300 CHANNEL LINER
EXISTING TREE LINE	PROPOSED TEMPORARY INTERMEDIATE CONTOUR	PROPOSED P550 CHANNEL LINER

REVISION RECORD

NO	DATE	DESCRIPTION

700 Cherrington Parkway
Moon Township, PA 15108
Ph: 412.429.2324 · 800.365.2324
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Civil & Environmental Consultants, Inc.

TRANSCONTINENTAL GAS PIPE LINE, LLC
COMPRESSOR STATION 165
PITTSLYVANIA COUNTY, VIRGINIA

SEDIMENT BASIN A DETAIL

DRAWN BY:	JMP
CHECKED BY:	MEA
PROJECT NO:	341-132
APPROVED BY:	LCW
DATE:	MAY 2025
DWG SCALE:	AS SHOWN

COMMONWEALTH OF VIRGINIA
MICHAEL EDWARD ARCHER
Lic. No. 043994
PROFESSIONAL ENGINEER
6-2-2025

DRAWING NO.: C918

SHEET 61 OF 61

P:\340-000\341-132\-0400\Dwg\C101\341132-C101-C918-03 Sediment Basin Detail.dwg[C918] (6/3/2025 - khepner) - LH 6/3/2025 9:29 AM