



DEPARTMENT OF THE ARMY
CHARLESTON DISTRICT, CORPS OF ENGINEERS
1949 INDUSTRIAL PARK ROAD, ROOM 140
CONWAY, SOUTH CAROLINA 29526

RECEIVED

MAY 13 2016

BUREAU OF WATER
WATER QUALITY DIVISION

MAY 11 2016

COPY

Regulatory Division

Mr. Larry Neal
AECOM
10 Patewood Drive
Greenville, South Carolina 29615

Dear Mr. Neal:

This letter is in response to a Pre-Construction Notification (PCN) (SAC-2016-00408) dated March 2016, which was considered complete on April 8, 2016. By submittal of the PCN, you requested verification that the proposed project is authorized by a Department of the Army (DA) Nationwide Permit (NWP).

The PCN contains the following identifying information for this project. The work affecting waters of the United States is part of an overall project known as Dominion Carolina Gas Transmission, LLC – Dillon Natural Gas Pipeline. The project involves impacts to not more than 0.0018 acres of waters of the United States and/or 10 linear feet of intermittent/perennial streams, including wetlands. The project is located within a 300 foot wide, 5 mile long corridor in Dillon County, South Carolina. The corridor originates near the intersection of Centerville Road and Reedy Creek Road and traverses a cross country route in a northeasterly direction, terminating at the Caldwell Drive Metering and Regulating Station (Latitude: 34.4247 °N, Longitude: -79.4160 °W). The PCN also includes the following supplemental information:

- a. Drawing sheets 1-12 of 12 titled "SAC 2016-00408 / Dominion Carolina Gas Transmission, LLC / Dillon Pipeline / Dillon County, SC" and dated March 24, 2016;
- b. A delineation of wetlands, other special aquatic sites, and other waters (SAC 2016-00408).

Based on a review of the PCN, including the supplemental information indicated above, it has been determined that the proposed activity will result in minimal individual and cumulative adverse environmental effects and is not contrary to the public interest. Furthermore, the activity meets the terms and conditions of Department of the Army Nationwide Permit # 12.

For this authorization to remain valid, the project must comply with the enclosed Nationwide Permit General Conditions, Charleston District Regional Conditions, and the following special conditions:

1. That prior to beginning the authorized work the permittee must obtain and provide the Corps with a copy of all appropriate state certifications and/or authorizations (i.e. 401 Water Quality Certification, Coastal Zone Management Consistency Determination, State Navigable Waters Permit). If the permittee fails to obtain the

necessary state certifications and/or authorizations prior to beginning work, this will be considered a willful and knowing violation of the Clean Water Act and appropriate enforcement action will be taken.

2. That impacts to aquatic areas do not exceed those specified in the above mentioned PCN, including any supplemental information or revised permit drawings that were submitted to the Corps by the permittee;
3. That the construction, use, and maintenance of the authorized activity is in accordance with the information given in the PCN, including the supplemental information listed above, and is subject to any conditions or restrictions imposed by this letter;
4. That the permittee shall submit the attached signed compliance certification to the Corps within 30 days following completion of the authorized work.

This verification is valid until March 18, 2017, unless the district engineer modifies, suspends, or revokes the nationwide permit authorization in accordance with 33 CFR 330.5(d). If prior to this date, the NWP authorization is reissued without modification or the activity complies with any subsequent modification of the NWP authorization, the verification continues to remain valid until March 18, 2017. If you commence, or are under contract to commence, this activity before the nationwide permit expires, or the nationwide permit is modified, suspended, or revoked by the Chief of Engineers or division engineer in accordance with 33 CFR 330.5(b) or (c), respectively, so that the activity would no longer comply with the terms and conditions of the nationwide permit, you will have 12 months after the date the nationwide permit expires or is modified, suspended, or revoked, to complete the activity under the present terms and conditions of this nationwide permit.

This Nationwide permit is being verified based on the information you have provided. It is your responsibility to read the attached Nationwide Permits(s) along with the General, Regional, and Special Conditions before you begin work. If you determine that your project will not be able to meet the Nationwide Permit and the conditions, you must contact the Corps before you proceed.

Your cooperation in the protection and preservation of our navigable waters and natural resources is appreciated. In all future correspondence concerning this matter, please refer to our file number SAC-2016-00408. A copy of this letter is being forwarded to certain State and/or Federal agencies for their information. If you have any questions concerning this matter, please contact Erica L. Stone, Project Manager, at 843-365-0583.

Sincerely,



Tommy Fennel
Chief, Northeast Branch

Enclosures:

Permit Drawings
Nationwide Permit General Conditions
Nationwide Permit Regional Conditions
Compliance Certification Form
Notification of Appeal Options

Copies Furnished:

Keith Windle
Dominion Carolina Gas Transmission, LLC
220 Operation Way
Cayce, South Carolina 29033

Mr. Richard Kopec
Environmental Consultant
Dominion Carolina Gas Transmission, LLC
220 Operation Way
Cayce, South Carolina 29033

Mr. Chuck Hightower
South Carolina Department of
Health and Environmental Control
Bureau of Water
2600 Bull Street
Columbia, South Carolina 29201

**Joint Federal and State Application Form
For Activities Affecting Waters of the United States
Or Critical Areas of the State of South Carolina**

This Space for Official Use Only

Application No. _____
Date Received _____
Project Manager _____
Watershed # _____

COPY

Authorities: 33 USC 401, 33 USC 403, 33 USC 407, 33 USC 408, 33 USC 1341, 33 USC 1344, 33 USC 1413 and Section 48-39-10 et. Seq of the South Carolina Code of Laws. These laws require permits for activities in, or affecting, navigable waters of the United States, the discharge of dredged or fill material into waters of the United States, and the transportation of dredged material for the purpose of dumping it into ocean waters. The Corps of Engineers and the State of South Carolina have established a joint application process for activities requiring both Federal and State review or approval. Under this joint process, you may use this form, together with the required drawings and supporting information, to apply for both the Federal and/or State permit(s).

Drawings and Supplemental Information Requirements: In addition to the information on this form, you must submit a set of drawings and, in some cases, additional information. A completed application form together with all required drawings and supplemental information is required before an application can be considered complete. See the attached instruction sheets for details regarding these requirements. You may attach additional sheets if necessary to provide complete information.

1. Applicant Last Name: Bomar		11. Agent Last Name (agent is not required): Neal	
2. Applicant First Name: Anne		12. Agent First Name: Larry	
3. Applicant Company Name: Dominion Resources Services, Inc.		13. Agent Company Name: AECOM	
4. Applicant Mailing Address: 707 East Main Street, 19th Floor		14. Agent Mailing Address: 10 Patewood Drive Bldg 6, Suite 500	
5. Applicant City: Richmond		15. Agent City: Greenville	
6. Applicant State: Virginia	7. Applicant Zip: 23219	16. Agent State: South Carolina	17. Agent Zip: 29615
8. Applicant Area Code and Phone No.: 804-771-6962		18. Agent Area Code and Phone No.: 864-234-3000	
9. Applicant Fax No.:		19. Agent Fax No.: 864-234-3069	
10. Applicant E-mail: Anne.E.Bomar@dom.com		20. Agent E-mail: larry.w.neal@aecom.com	
21. Project Name: Dillon Pipeline Project		22. Project Street Address: No official address	
23. Project City: Dillon	24. Project County: Dillon County	25. Project Zip Code: N/A	26. Nearest Waterbody: See Attached
27. Tax Parcel ID: Various. See attached.		28. Property Size (acres): 40.1	
29. Latitude: Start: 34.392991N End: 34.424708N		30. Longitude: Start: -79.491997W End: -79.415973W	
31. Directions to Project Site (Include Street Numbers, Street Names, and Landmarks and attach additional sheet if necessary): See attached sheet.			
32. Description of the Overall Project and of Each Activity in or Affecting U.S. Waters or State Critical Areas (attach additional sheets if needed) See attached sheet.			
33. Overall Project Purpose and the Basic Purpose of Each Activity In or Affecting U.S. Waters (attach additional sheets if needed): See attached sheet.			
34. Type and quantity of Materials to Be Discharged		35. Type and Quantity of Impacts to U.S. Waters (including wetlands).	
Dirt or Topsoil: 0 _____ <input type="checkbox"/> cubic yards		Filling: _____ acres sq.ft. _____ cubic yards	
Clean Sand: 0 _____ <input type="checkbox"/> cubic yards		Backfill & Bedding: _____ acres sq.ft. _____ cubic yards	
Mud: 0 _____ <input type="checkbox"/> cubic yards		Landclearing: _____ acres sq.ft. _____ cubic yards	
Clay: 0 _____ <input type="checkbox"/> cubic yards		Dredging: _____ acres sq.ft. _____ cubic yards	
Gravel, Rock, or Stone: 0 _____ <input type="checkbox"/> cubic yards		Flooding: _____ acres sq.ft. _____ cubic yards	
Concrete: 0 _____ <input type="checkbox"/> cubic yards		Draining/Excavation: _____ acres sq.ft. _____ cubic yards	
Other (describe): 0 _____ <input type="checkbox"/> cubic yards		Shading: _____ acres sq.ft. _____ cubic yards	
TOTAL: 0 _____ cubic yards		TOTALS: <u>See attached sheet.</u> acres _____ sq.ft. _____ cubic yards	

36. Individually list wetland impacts including mechanized clearing, fill, excavation, flooding, draining, shading, etc. and attach a site map with location of each impact (attach additional sheets if needed).

Impact No.	Wetland Type	Distance to Receiving Water body (LF)	Purpose of Impact (road crossing, impoundment, flooding, etc)	Impact Size (acres)
None.				
Total Wetland Impacts (acres)				

37. Individually list all seasonal and perennial stream impacts and attach a site map with location of each impact (attach additional sheets)

Impact No.	Seasonal or Perennial Flow	Average Stream Width (LF)	Impact Type (road crossing, impoundment, flooding, etc)	Impact Length (LF)
See attached sheet.				
Total Stream Impacts (Linear Feet)				

38. Have you commenced work on the project site? YES NO If yes, describe all work that has occurred and provide dates.

39. Describe measures taken to avoid and minimize impacts to Waters of the United States:

See attached sheet.

40. Provide a brief description of the proposed mitigation plan to compensate for impacts to aquatic resources or provide justification as to why mitigation should not be required (Attach a copy of the proposed mitigation plan for review).

Permanent impact will not exceed mitigation threshold.

41. See the attached sheet to list the names and addresses of adjacent property owners.



42. List all Corps Permit Authorizations and other Federal, State, or Local Certifications, Approvals, Denials received for work described in this application.

No permit authorizations, certifications, approvals, or denials have been received.

43. Authorization of Agent. I hereby authorize the agent whose name is given on page one of this application to act in my behalf in the processing of this application and to furnish supplemental information in support of this application.

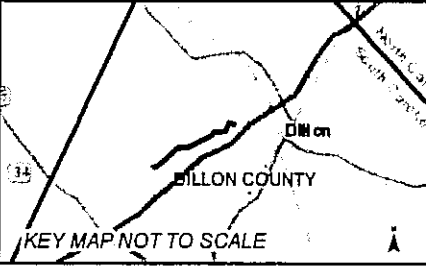
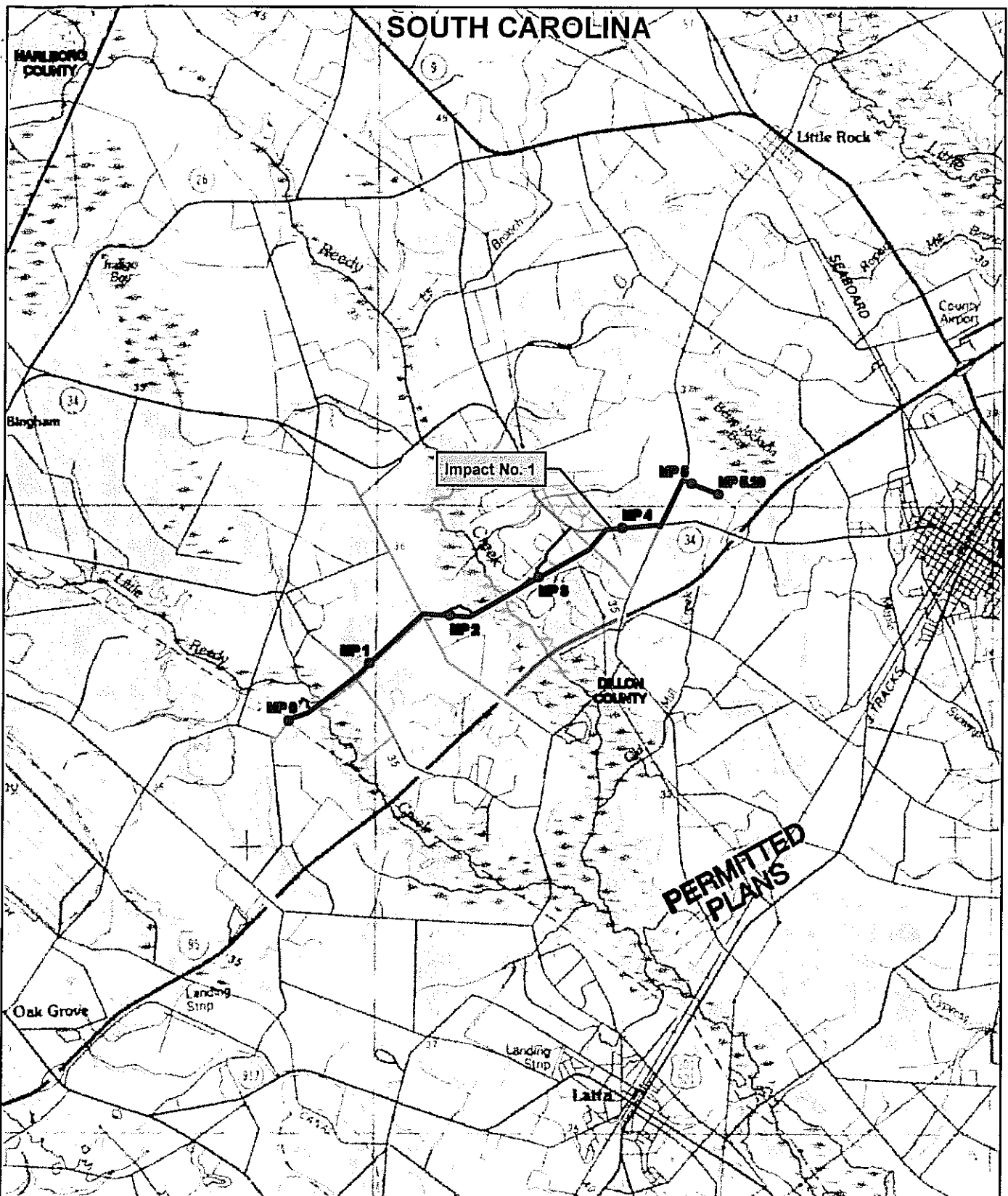

4-7-16
 Applicant's Signature Date

44. Certification. Application is hereby made for a permit or permits to authorize the work and uses of the work as described in this application. I certify that the information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent for the applicant.


4-7-16
 Applicant's Signature Date

4-7-16
 Agent's Signature Date

¹The application must be signed by the person who desires to undertake the proposed activity or it may be signed by a duly authorized agent if the authorization statement in blocks 11 and 43 have been completed and signed. 18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than \$10,000 or imprisoned not more than five years or both.

Path: O:\PE\Projects\SCANACCT160420377\Pipeline\Dsnt01_Mapping\06_GIS\02_MXD\90_PERCENT_USACE\IMPACT MAP COVER - DILLON.mxd




LEGEND:

- MILE POINT
- PROPOSED PIPELINE
- ▭ SITE PERMANENT IMPACT
- ▭ SITE TEMPORARY IMPACT
- PERMANENT ACCESS ROAD
- TEMPORARY ACCESS ROAD
- ▭ COUNTY BOUNDARY

SCALE:

0 5,000 10,000 Feet

N.T.S.



TTDC

SAC 2016-00408
 Dominion Carolina Gas Transmission, LLC
 Dillon Pipeline
 Dillon County, SC

March 24, 2016

COPY

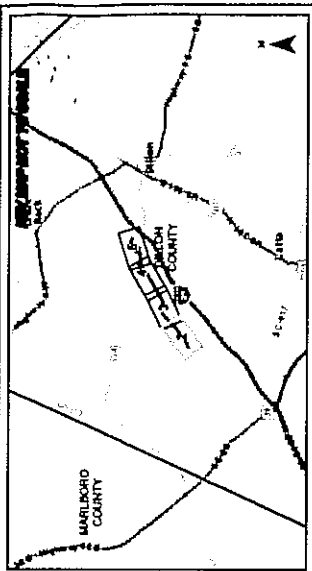
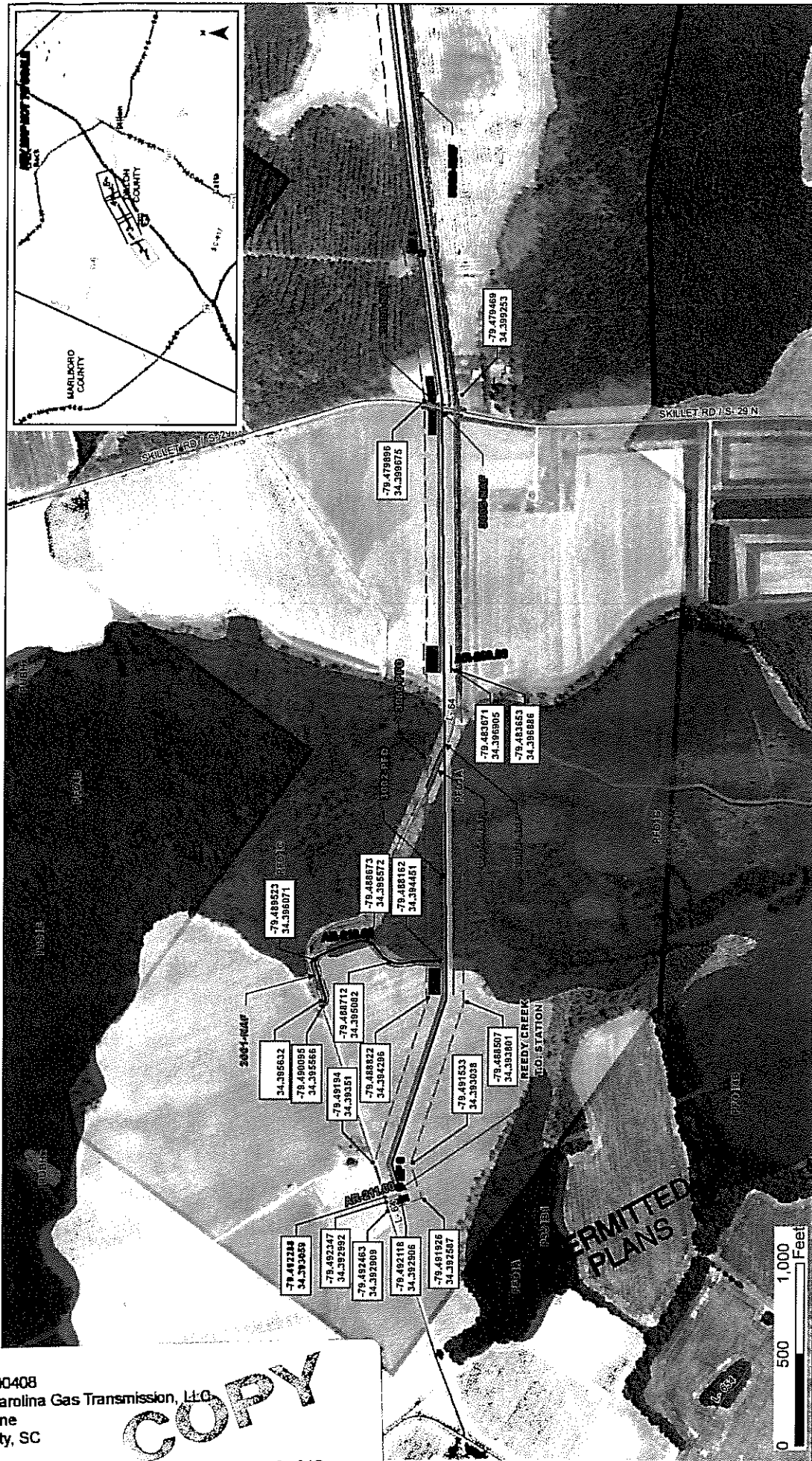
Sheet 1 of 12

SAC 2016-00408
 Dominion Carolina Gas Transmission, LLC
 Dillon Pipeline
 Dillon County, SC

COPY

March 24, 2016

Sheet 2 of 12



URS

URS JOB NO. _____ PROJECT NO. _____

APPROVED DATE _____

PROJECT MANAGER _____

Dominion

APPLICATION FOR SOUTH CAROLINA GAS TRANSMISSION, LLC
 TRAMCO TO CHARLESTON PROJECT
 IMPACT MAPS

DILLON COUNTY, SOUTH CAROLINA

PROJECT NO. _____ SHEET NO. 2 of 3

REVISIONS

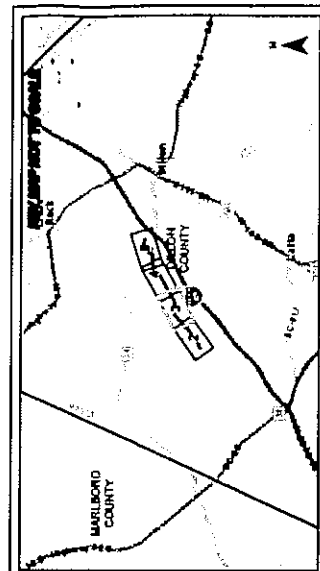
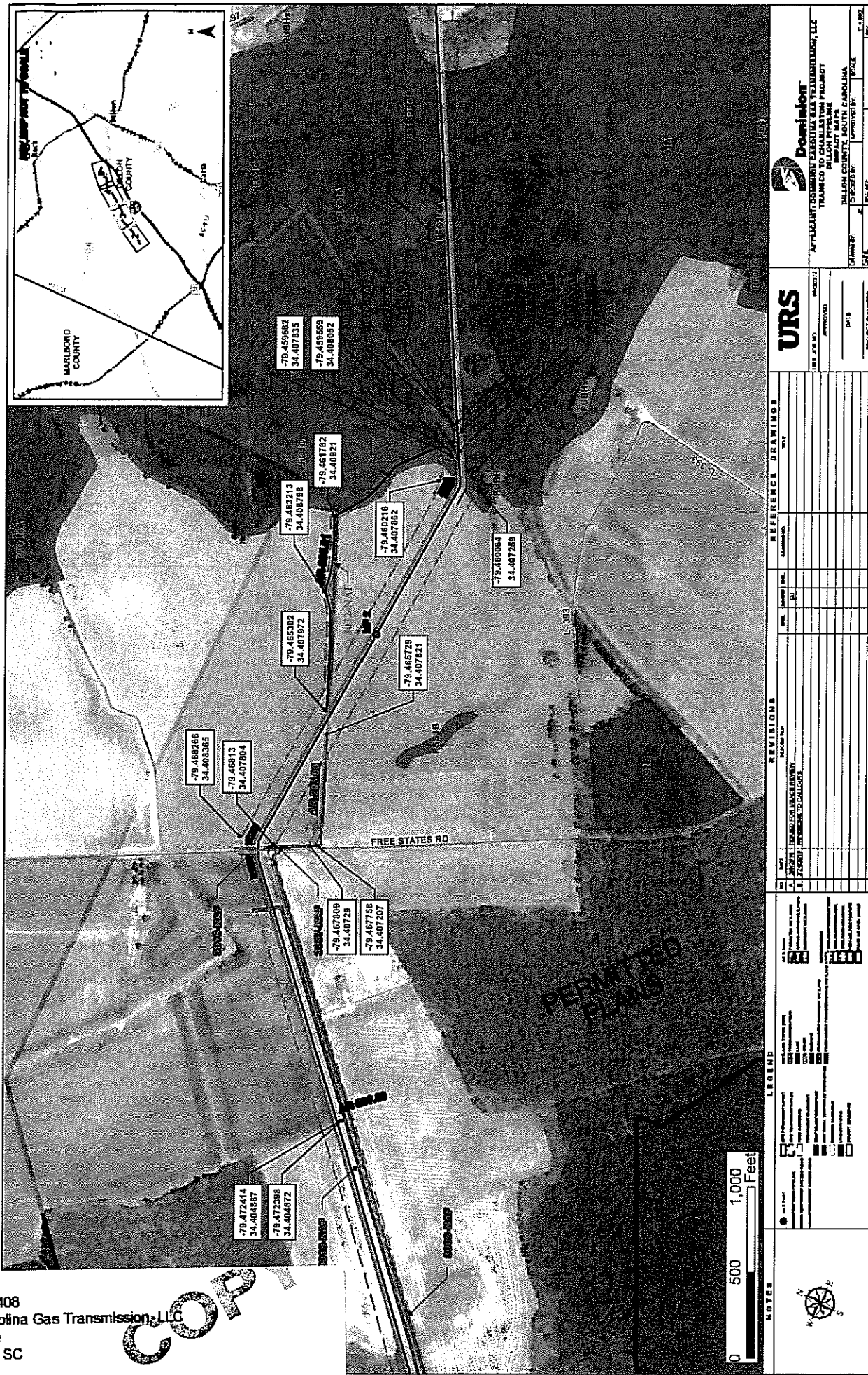
NO.	DATE	DESCRIPTION
1	3/24/16	ISSUED FOR PUBLIC REVIEW
2	3/24/16	ISSUED FOR PUBLIC REVIEW

LEGEND

- PROPOSED PIPELINE
- EXISTING PIPELINE
- PROPOSED RIGHT-OF-WAY
- EXISTING RIGHT-OF-WAY
- PROPERTY BOUNDARIES
- ROADS
- WATER BODIES
- UNDEVELOPED LAND
- DEVELOPED LAND
- WOODLAND
- AGRICULTURE
- RESIDENTIAL
- COMMERCIAL
- INDUSTRIAL
- UTILITY
- RAILROAD
- POWER LINE
- TELEPHONE
- ROADWAY
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- RAILROAD
- UTILITY

NOTES

- SEE SHEET 1 FOR PROJECT LOCATION
- SEE SHEET 2 FOR PROJECT LOCATION
- SEE SHEET 3 FOR PROJECT LOCATION
- SEE SHEET 4 FOR PROJECT LOCATION
- SEE SHEET 5 FOR PROJECT LOCATION
- SEE SHEET 6 FOR PROJECT LOCATION
- SEE SHEET 7 FOR PROJECT LOCATION
- SEE SHEET 8 FOR PROJECT LOCATION
- SEE SHEET 9 FOR PROJECT LOCATION
- SEE SHEET 10 FOR PROJECT LOCATION
- SEE SHEET 11 FOR PROJECT LOCATION
- SEE SHEET 12 FOR PROJECT LOCATION



URS

Dominion
 APPLICANT: DOMINION ENERGY EAST TRANSMISSION, LLC
 TRAINING TO CHARLESTON PROJECT
 DILLON PIPELINE
 DILLON COUNTY, SOUTH CAROLINA

DATE: 2/20/16
 SHEET NO.: 3 OF 3

REVISIONS

NO.	DATE	DESCRIPTION
1	02/20/16	ISSUED FOR LANDS BURNING
2	02/20/16	ISSUED FOR LANDS BURNING
3	02/20/16	ISSUED FOR LANDS BURNING
4	02/20/16	ISSUED FOR LANDS BURNING
5	02/20/16	ISSUED FOR LANDS BURNING
6	02/20/16	ISSUED FOR LANDS BURNING
7	02/20/16	ISSUED FOR LANDS BURNING
8	02/20/16	ISSUED FOR LANDS BURNING
9	02/20/16	ISSUED FOR LANDS BURNING
10	02/20/16	ISSUED FOR LANDS BURNING

LEGEND

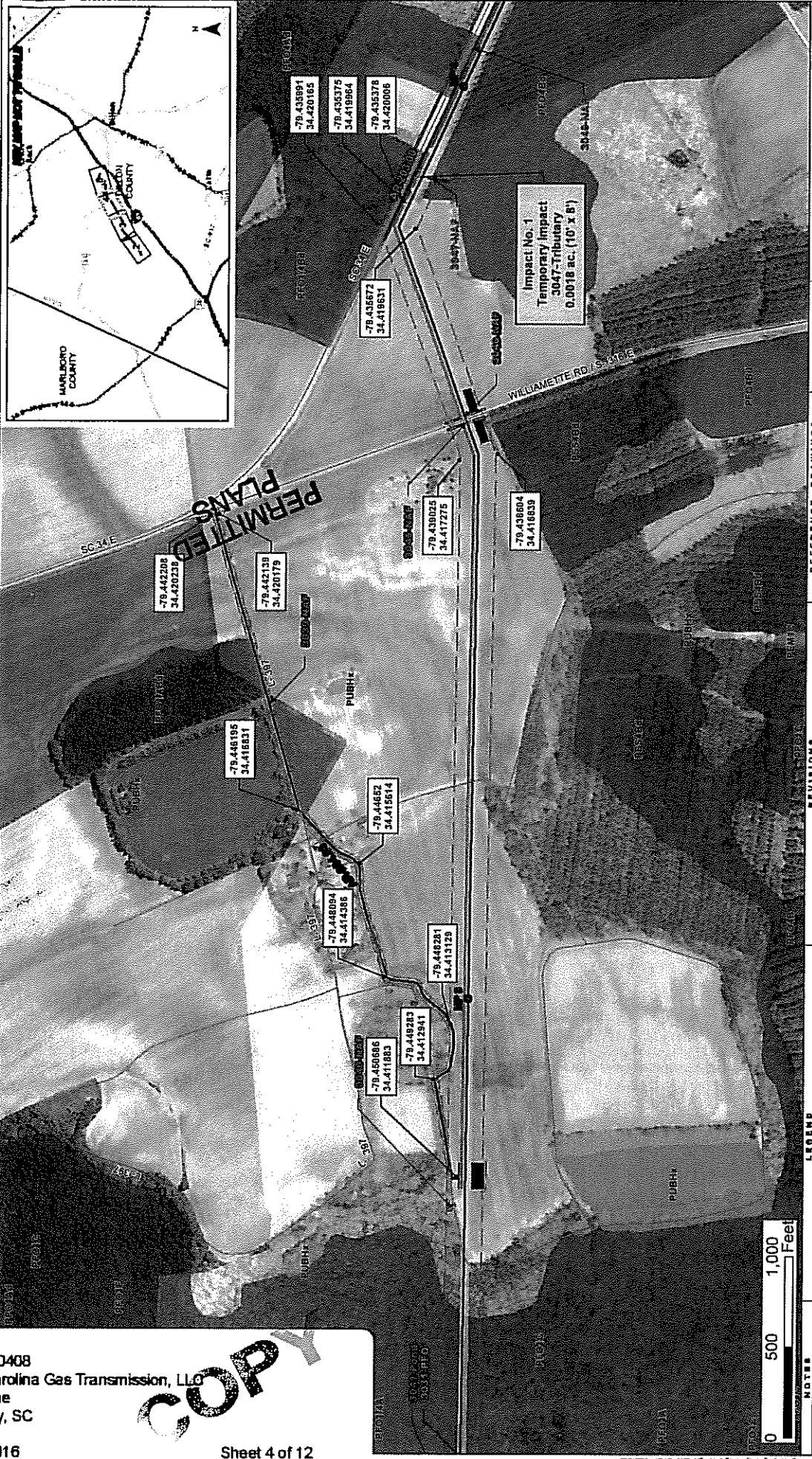
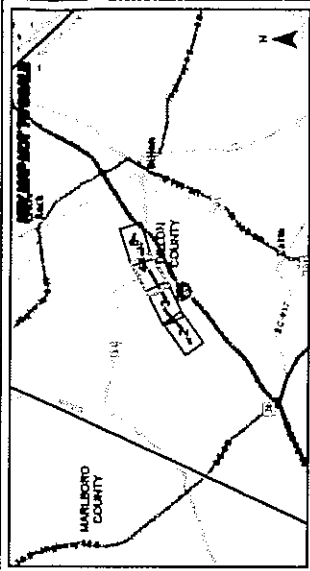
- 1" = 100' Scale
- 1" = 200' Scale
- 1" = 400' Scale
- 1" = 800' Scale
- 1" = 1,000' Scale

NOTES

1. All work shall be in accordance with the latest edition of the South Carolina Code of Laws.
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3. All work shall be in accordance with the latest edition of the South Carolina Code of Laws.
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10. All work shall be in accordance with the latest edition of the South Carolina Code of Laws.

SAC 2016-00408
 Dominion Carolina Gas Transmission, LLC
 Dillon Pipeline
 Dillon County, SC

CORP



Impact No. 1
Temporary Impact
3047-Tributary
0.0018 ac. (10' x 8')

PERMITTED
PLANS

URS

URS CORP. APPROVED: _____ DATE: _____ PROJECT NUMBER: _____

Dominion

APPLICATION FOR NORTH CAROLINA GAS TRANSMISSION, L.L.C.
TRAILING TO CHARLESTON PROJECT
DILLON PIPELINE
DILLON COUNTY, NORTH CAROLINA

DRAWN BY: _____ CHECKED BY: _____ SCALE: _____ SHEET NO.: _____ OF _____

REVISIONS		REFERENCE DRAWINGS	
NO.	DATE	DESCRIPTION	BY
1		ISSUE FOR PERMITTING	
2		ISSUE FOR PERMITTING	
3		ISSUE FOR PERMITTING	
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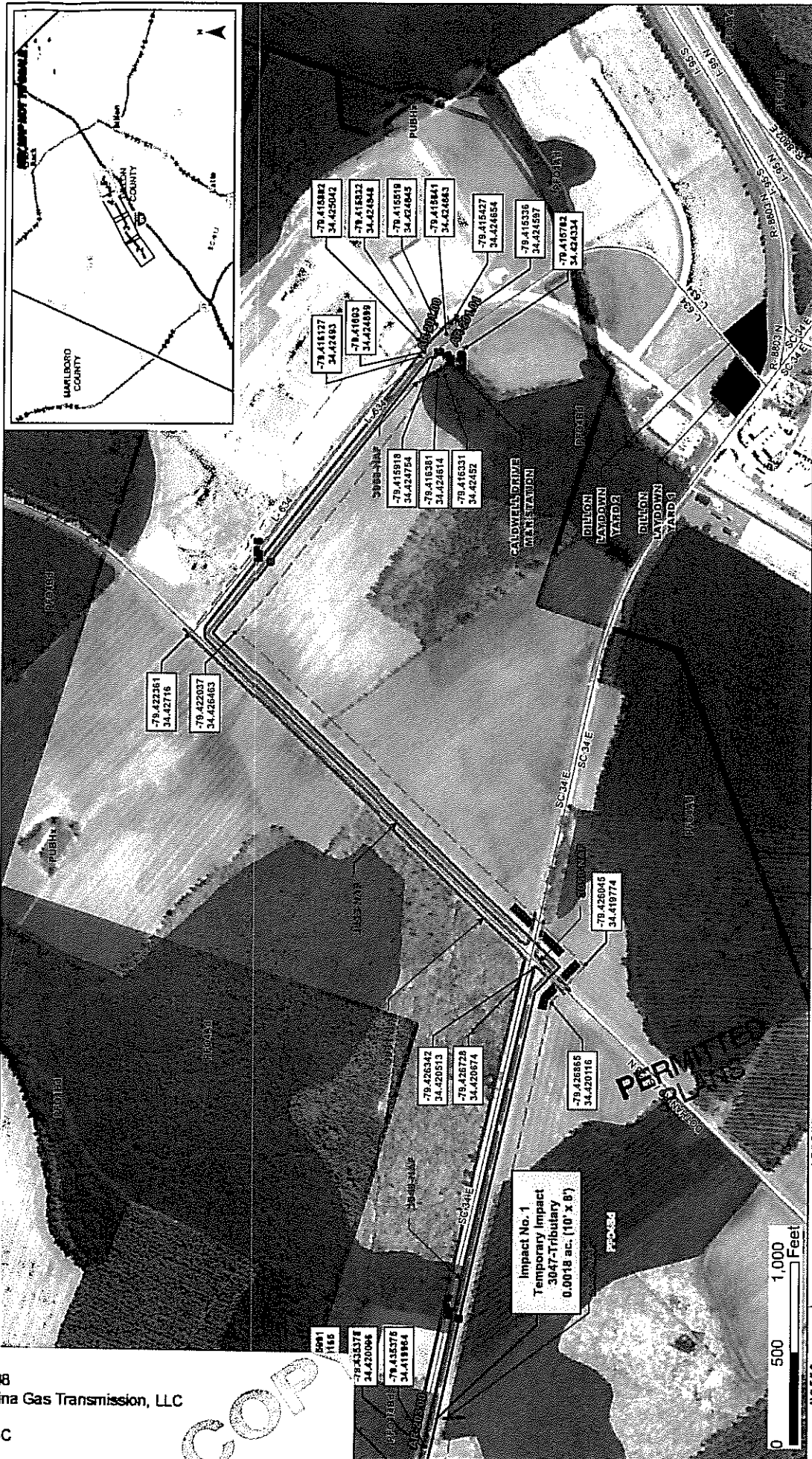
LEGEND

- 1. PROPOSED PIPELINE
- 2. EXISTING PIPELINE
- 3. EXISTING ROAD
- 4. EXISTING FENCE
- 5. EXISTING UTILITY
- 6. EXISTING EASEMENT
- 7. EXISTING RIGHT-OF-WAY
- 8. EXISTING PROPERTY LINE
- 9. EXISTING SURVEY POINT
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- 100. EXISTING ADJACENT ADJACENT ADJACENT ADJACENT ADJACENT ADJACENT ADJACENT ADJACENT ADJACENT ADJACENT CORNER

NOTES

1. SEE SHEET 001 FOR PROJECT LOCATION
2. SEE SHEET 002 FOR PROJECT LOCATION
3. SEE SHEET 003 FOR PROJECT LOCATION
4. SEE SHEET 004 FOR PROJECT LOCATION
5. SEE SHEET 005 FOR PROJECT LOCATION
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99. SEE SHEET 099 FOR PROJECT LOCATION
100. SEE SHEET 100 FOR PROJECT LOCATION

Scale: 1" = 1,000 Feet



SAC 2016-00408
 Dominion Carolina Gas Transmission, LLC
 Dilton Pipeline
 Dilton County, SC

March 24, 2016

COPY

Sheet 5 of 12

URS

Dominion
 APPLICANT: DOMINION CAROLINA GAS TRANSMISSION, LLC
 TRACK: TO CHARLTON PROJECT
 DILTON PIPELINE
 DILTON COUNTY, SOUTH CAROLINA

PROJECT NUMBER: _____ DATE: 3/24/16 SCALE: 1" = 200'

DRAWN BY: _____ CHECKED BY: _____

PROJECT APPROVED BY: _____

NO.	DATE	BY	REVISIONS
A.	03/24/16	URS	ISSUED FOR PERMITS
B.	03/24/16	URS	FOR CALCULATION

LEGEND

- Proposed Pipeline
- Proposed Right-of-Way
- Proposed Easements
- Proposed Access Drives
- Proposed Structures
- Proposed Utility Lines
- Proposed Wetlands
- Proposed Wetland Buffers
- Proposed Wetland Mitigation
- Proposed Wetland Restoration
- Proposed Wetland Creation
- Proposed Wetland Preservation
- Proposed Wetland Reliance
- Proposed Wetland Avoidance
- Proposed Wetland Minimization
- Proposed Wetland Compensation

NOTES

1. See sheet SAC 2016-00408-01 for project overview.

2. See sheet SAC 2016-00408-02 for project details.

3. See sheet SAC 2016-00408-03 for project details.

4. See sheet SAC 2016-00408-04 for project details.

5. See sheet SAC 2016-00408-05 for project details.

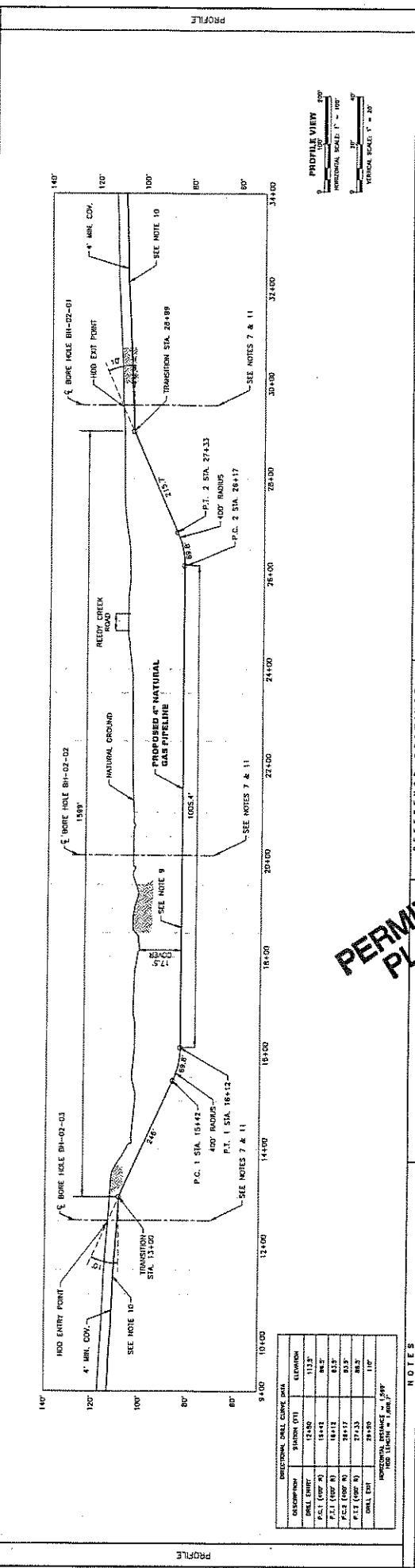
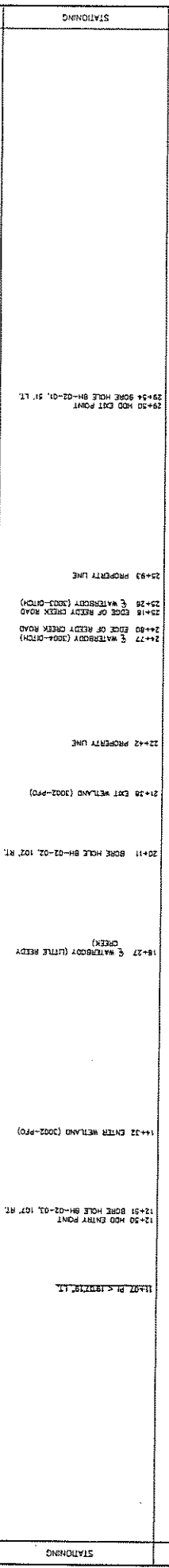
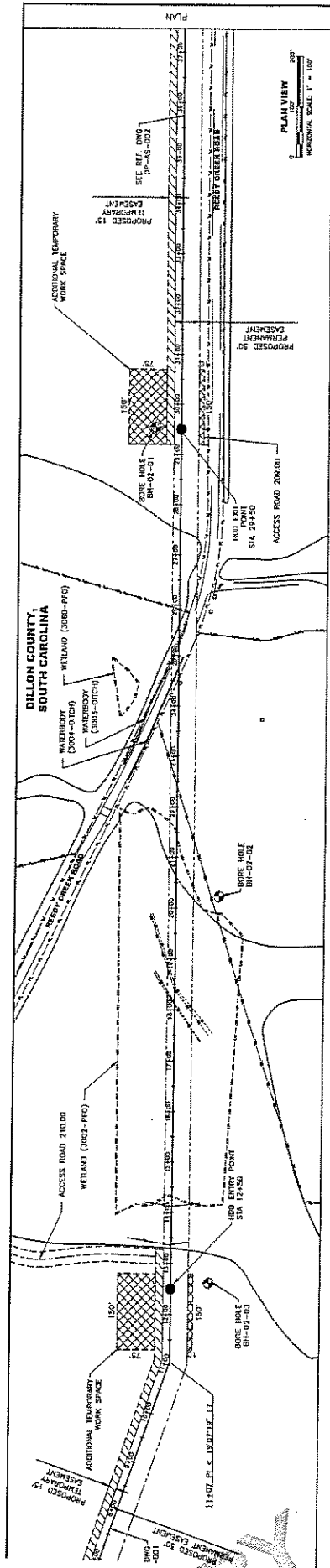
6. See sheet SAC 2016-00408-06 for project details.

7. See sheet SAC 2016-00408-07 for project details.

8. See sheet SAC 2016-00408-08 for project details.

9. See sheet SAC 2016-00408-09 for project details.

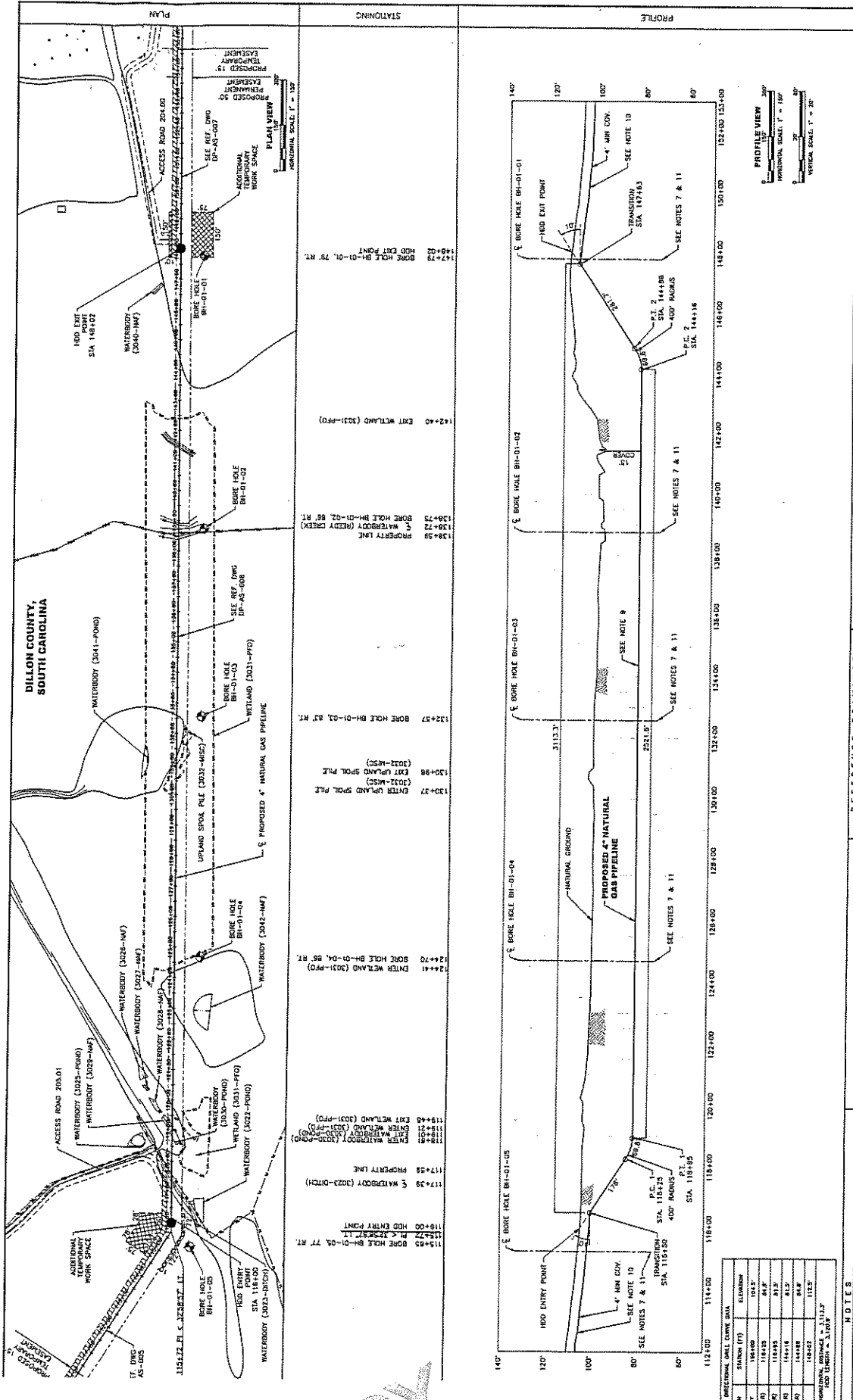
10. See sheet SAC 2016-00408-10 for project details.




URS
 URS Corporation - South Carolina
 5000 North Carolina University Center
 Charlotte, NC 28226
 URS JOB NO. 0040033
 CLIENT JOB NO. 03/09/2015
 DATE 03/09/2015
 PROJECT ENGINEER ROBERT WASSERMAN
 SCALE AS NOTED
 SHEET 6 OF 12

Dominion
 TRANSMISSION TO CHARLESTON PROJECT
 HDD CROSSING WETLANDS
 STA. 16+00 TO STA. 29+00
 DILLON COUNTY, SOUTH CAROLINA
 DRAWN BY: [Name]
 CHECKED BY: [Name]
 APPROVED BY: [Name]

COPY





Dominion
 TRANSCO TO CHARLESTON PROJECT
 HULLS HILLON PIPELINE
 STA 118+00 TO STA 148+00
 DILLON COUNTY, SOUTH CAROLINA

DATE	BY	REVISIONS
03/09/2016	RSB/ET	ISSUED FOR PERMITTING
03/09/2016	RSB/ET	ISSUED FOR PERMITTING
03/09/2016	RSB/ET	ISSUED FOR PERMITTING

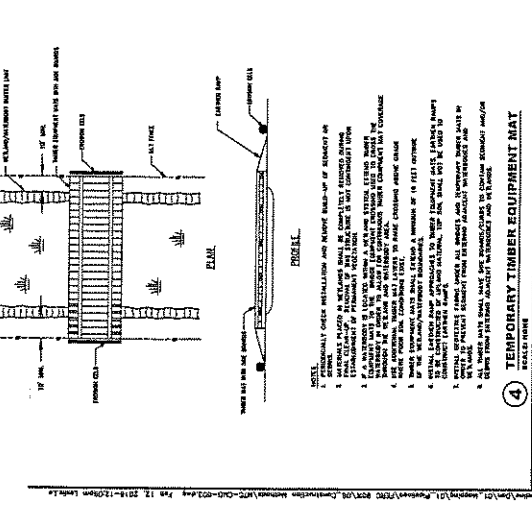
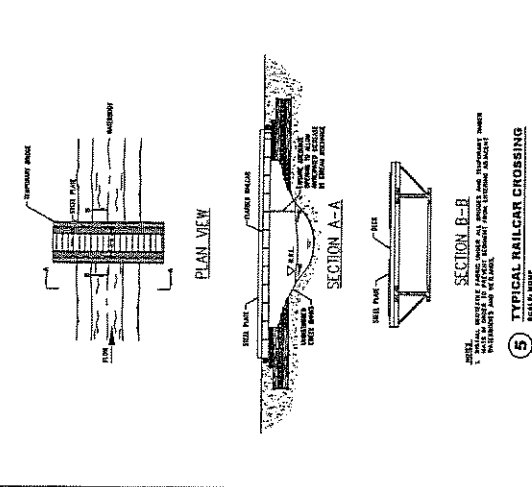
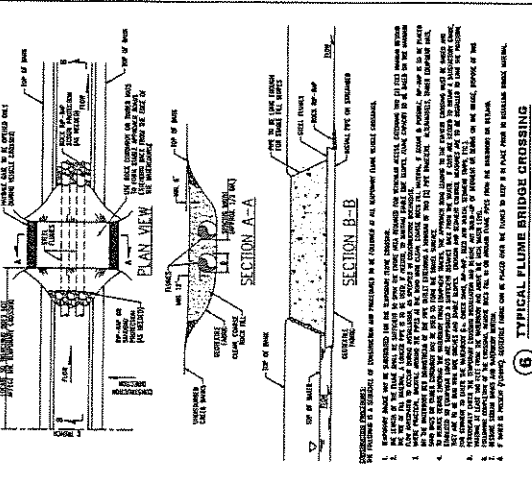
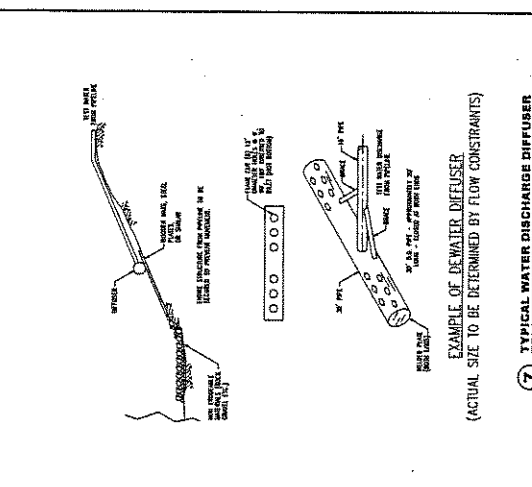
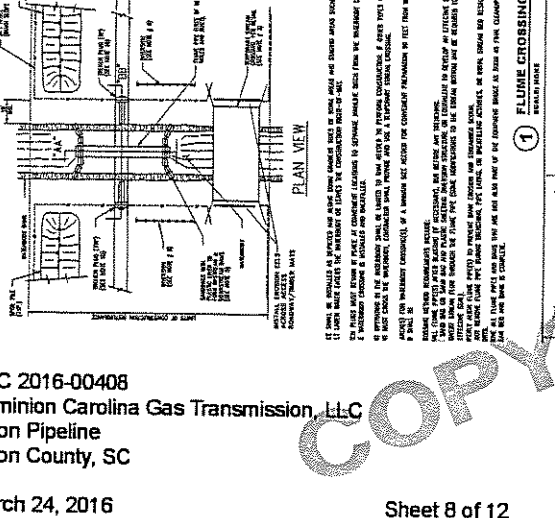
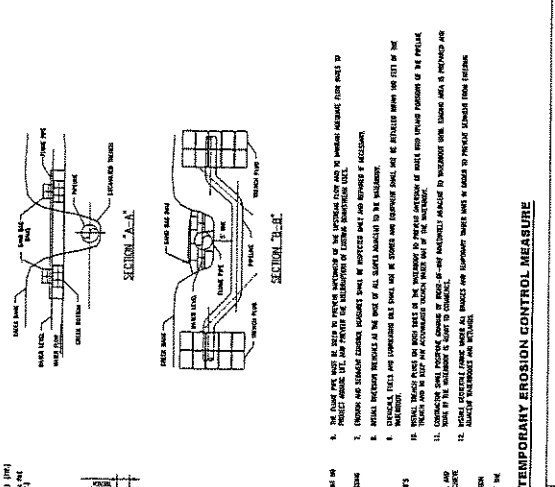
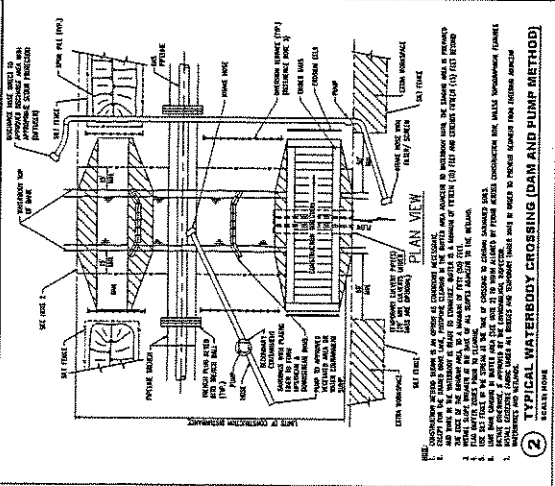
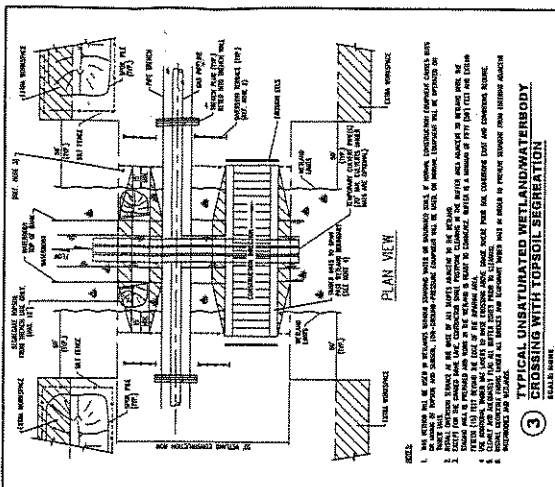
PROJECT ENGINEER: ROBERT MARZALOWSKI
 DATE: 03/09/2016
 SHEET: 7 OF 12

PERMITTED PLANS

STATION	ELEVATION
118+00	100.00
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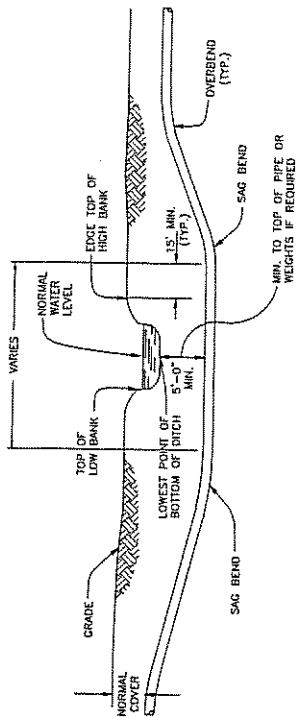
NOTES:
 1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM ALL AFFECTED AGENCIES AND LOCAL GOVERNMENTS.
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COPY



7 TYPICAL WATER DISCHARGE DIFFUSER		7 TYPICAL WATER DISCHARGE DIFFUSER	
SCALE: NONE		SCALE: NONE	
<p>URS URS CORPORATION 10000 WEST HURON AVENUE SOUTH PLAINS, COLORADO 80901-3377</p>		<p>Dominion TRANSMISSION TO CHARLESTON PROJECT MOORE TO CHAPPELLE PIPELINE TYPICAL WORKSPACE CONSTRUCTION METHOD 4 OPEN-CUT TRENCHING METHODS SOUTH CAROLINA</p>	
<p>CLIENT JOB NO. 60420377 CLIENT JOB NO. 60420377 CLIENT JOB NO. 60420377</p>		<p>DATE: 12/13/15 SHEET: 8 OF 23 PROJECT ENGINEER: [Name]</p>	
MATERIAL SUMMARY			
NO.	DESCRIPTION	QTY (YDS)	REMARKS
1	CONCRETE SLAB		
2	GEOTEXTILE FABRIC		
3	TOP SOIL		
4	CONCRETE SLAB		
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98	CONCRETE SLAB		
99	GEOTEXTILE FABRIC		
100	CONCRETE SLAB		

PERMITTED PLANS



NOTES:

1. THIS DRAWING APPLICABLE TO ALL STREAM OR DITCH CROSSINGS NOT SPECIFICALLY INDICATED ON OTHER CONSTRUCTION DRAWINGS.
2. BEARING COMPENSATION MEASURES TO BE INSTALLED AS DIRECTED BY COMPANY, IF NOT SPECIFICALLY ENTERED ON ALIGNMENT.
3. ALL NEW CONSTRUCTION TO BE DONE BY CONTRACTOR.

8

TYPICAL STREAM UNDERCROSSING

SCALE: NONE

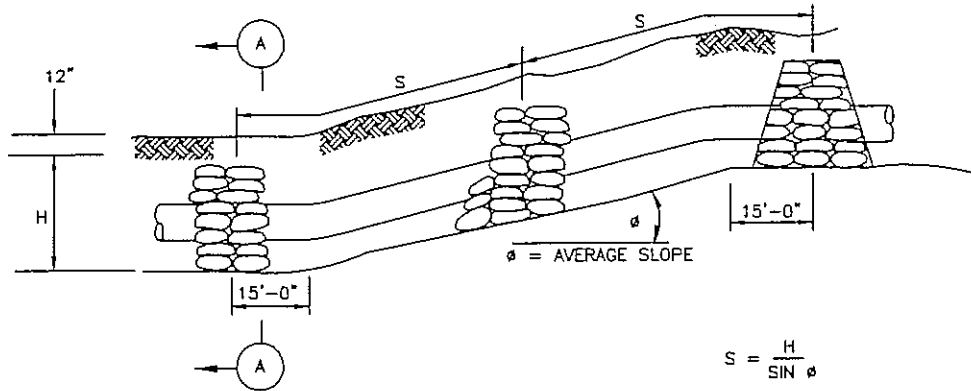
PERMITTED
PLANS

COPY

SAC 2016-00408
Dominion Carolina Gas Transmission, LLC
Dillon Pipeline
Dillon County, SC

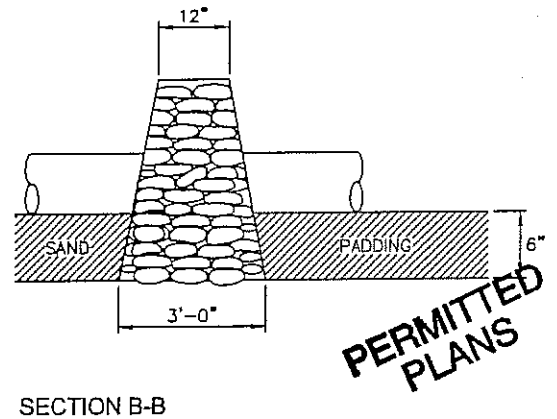
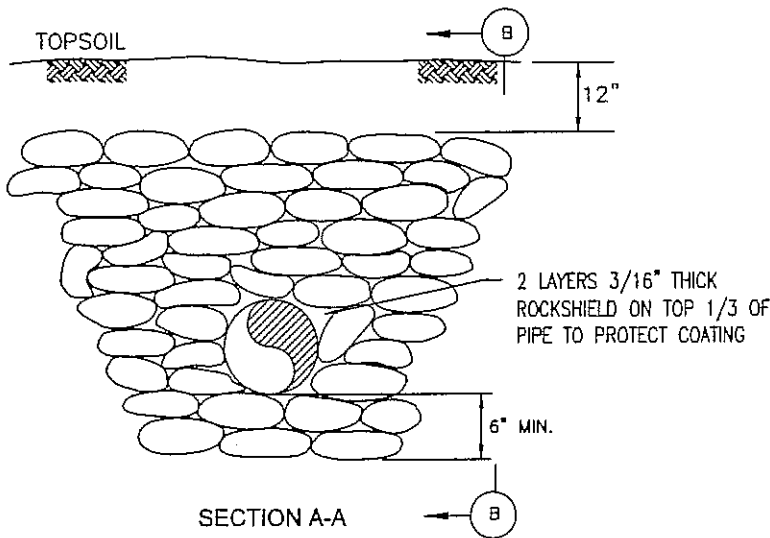
March 24, 2016

Sheet 9 of 12



$$S = \frac{H}{\sin \phi}$$

EXAMPLE: 20 SLOPE WOULD REQUIRE SPACING OF 18' IF HEIGHT OF BREAKERS IS 6'.



PERMITTED PLANS

NOTES:

1. BREAKERS SHALL BE INSTALLED AT SHARP CHANGES OF SLOPE WHERE THE NATURAL DRAINAGE PATTERN, PROFILE WILL CAUSE THE TRENCH TO ACT AS A DRAIN.
2. ADJUST SPACING OF BREAKERS SO TOP OF BREAKER IS APPROXIMATELY THE SAME ELEVATION AS BOTTOM OF UPHILL BREAKER, OR AS INDICATED IN TABLE SAME ELEVATION AS BOTTOM OF TO RIGHT (MORE STRINGENT SHALL APPLY)
3. COMPANY MAY SPECIFY POLYURETHANE FOAM BREAKERS OR OTHER MATERIALS AS REQUIRED
4. WHERE PIPELINE TRENCH MAY DRAIN A WETLAND, CONSTRUCT TRENCH BREAKER AND/OR SEAL TRENCH BOTTOM AS NECESSARY TO MAINTAIN ORIGINAL WETLAND HYDROLOGY.
5. FOR EACH WATERBODY CROSSED, INSTALL PERMANENT TRENCH BREAKER AT THE BASE OF SLOPES NEAR THE WATERBODY. LOCATE TRENCH BREAKER UPSLOPE OF THE SLOPE BREAKER.

SLOPE	SPACING
LESS THAN 5%	NO STRUCTURE
5 TO 10%	100 TO 150 FEET
11 TO 15%	80 TO 100 FEET
16 TO 20%	70 TO 80 FEET
21 TO 30%	50 TO 70 FEET
GREATER THAN 30%	25 TO 50 FEET

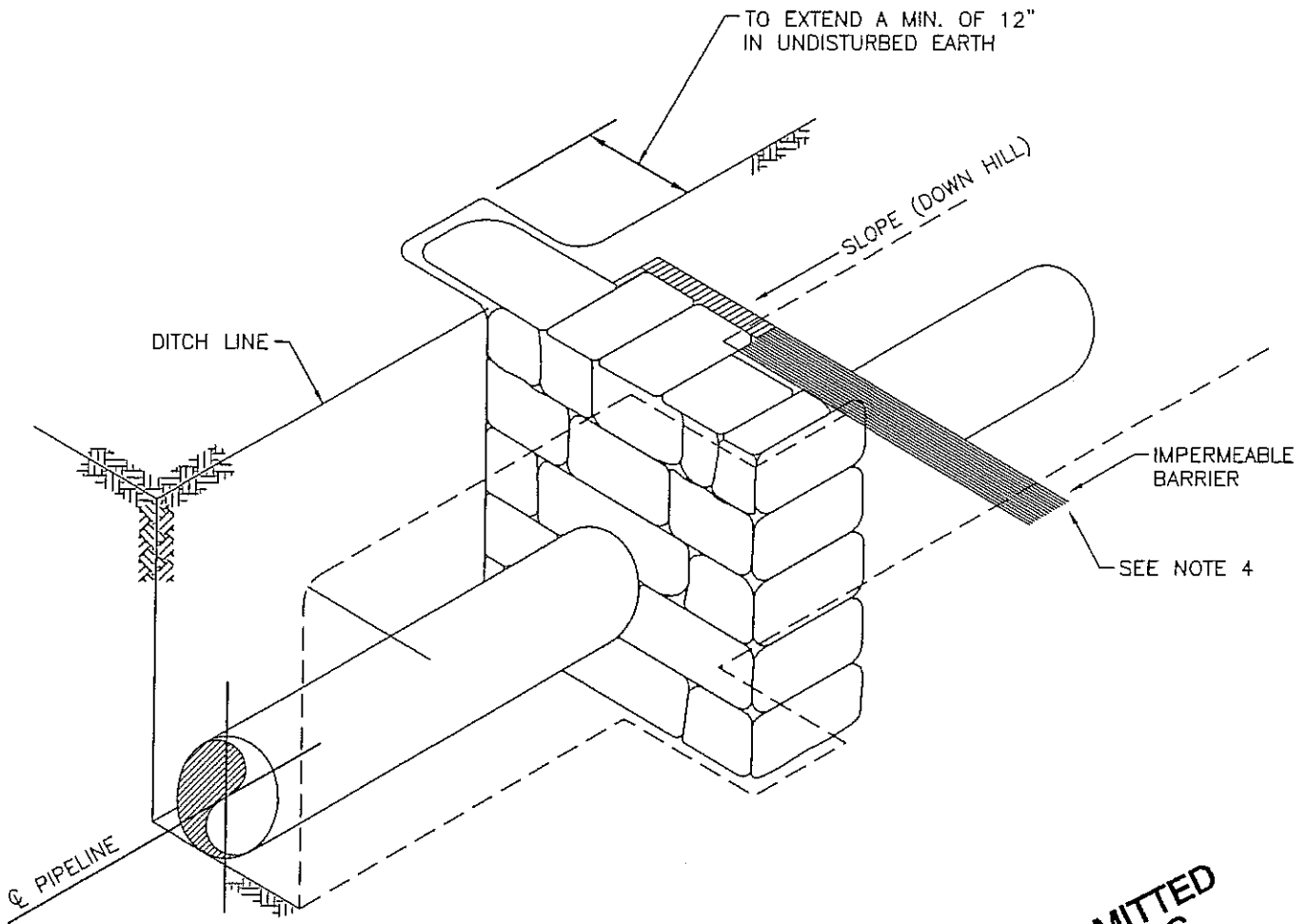
SACK (TRENCH) BREAKERS REQUIREMENT

SAC 2016-00408
 Dominion Carolina Gas Transmission, LLC
 Dillon Pipeline
 Dillon County, SC

March 24, 2016

Sheet 10 of 12

COPY



**PERMITTED
PLANS**

NOTES:

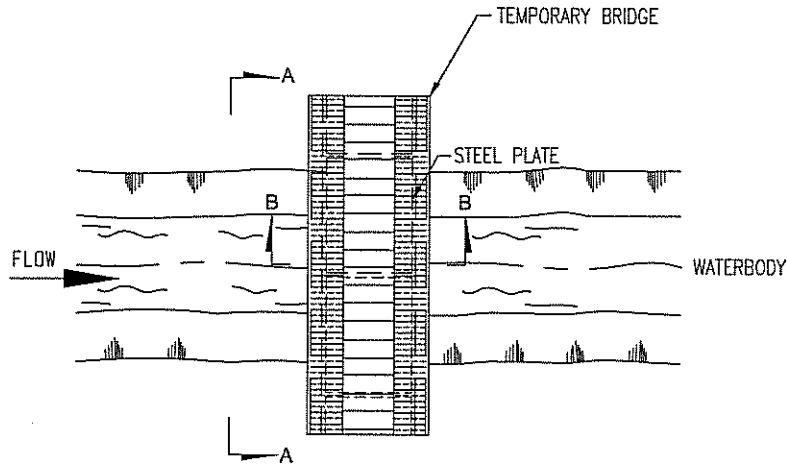
1. FILL BAGS WITH EARTH OR CLAY AND FIT TOGETHER TO FORM WATERTIGHT BARRIER, WITH BREAKER'S LEADING EDGE TAPERED TO FORCE WATER TO SURFACE.
2. INSTALL BREAKER IN AREAS PRONE TO BACKFILL MATERIAL EROSION.
3. CONSTRUCT IMPERMEABLE BARRIER USING 6 MIL POLYETHYLENE SHEET OR MINIMUM 4" THICKNESS OF BENTONITE OR EQUIVALENT.
4. EXTEND IMPERMEABLE BARRIER A MINIMUM 12" BELOW DITCH BOTTOM AND 8" BEYOND DITCH WALLS.

**TYPICAL SACK DITCH
BREAKER**

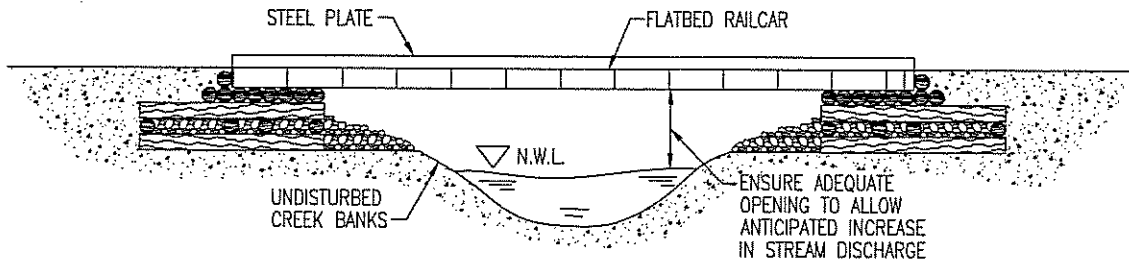
SAC 2016-00408
 Dominion Carolina Gas Transmission, LLC
 Dillon Pipeline
 Dillon County, SC

March 24, 2016

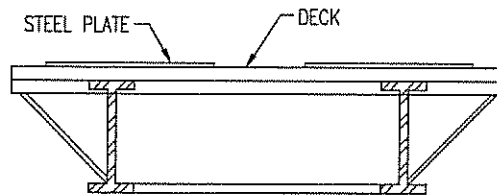
COPY



PLAN VIEW



SECTION A-A



SECTION B-B

NOTES

1. INSTALL GEOTEXTILE FABRIC UNDER ALL BRIDGES AND TEMPORARY TIMBER MATS IN ORDER TO PREVENT SEDIMENT FROM ENTERING ADJACENT WATERBODIES AND WETLANDS.

**PERMITTED
PLANS**

TYPICAL RAILCAR CROSSING

SCALE: NONE

SAC 2016-00408
 Dominion Carolina Gas Transmission, LLC
 Dillon Pipeline
 Dillon County, SC

March 24, 2016

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