COMMONWEALTH OF VIRGINIA

STATE CORPORATION COMMISSION

APPLICATION OF	)	
	)	
VIRGINIA NATURAL GAS, INC.	)	Case No. PUR-2020-00283
	)	
For approval and certification of natural gas facilities, the Virginia Natural Gas Interconnect, and for approval of Rate Schedules and Terms and Conditions for Pipeline Transportation Service	)	

APPLICATION, APPENDIX, DIRECT TESTIMONY, VDEQ SUPPLEMENT, AND EXHIBITS

Filed: December 14, 2020

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Case No. PUR-2020-00283

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Application

COMMONWEALTH OF VIRGINIA

STATE CORPORATION COMMISSION

APPLICATION OF	)	
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APPLICATION OF
VIRGINIA NATURAL GAS, INC.

Pursuant to the Utility Facilities Act, §§ 56-265.1 *et seq.* of the Code of Virginia ("Va. Code" or "Code"), and Va. Code § 56-235.9, Virginia Natural Gas, Inc. ("VNG" or the "Company"), by counsel, files with the Virginia State Corporation Commission (the "Commission") this application (the "Application") for approval and certification of natural gas facilities (the "Project," as defined below). Additionally, pursuant to Va. Code § 56-236 and Rule 80 A of the Commission's Rules of Practice and Procedure, 5 VAC 5-20-80 A, the Company seeks approval to implement Rate Schedules VI-TRFT, VI-LFT and VI-IT, and Terms and Conditions for Pipeline Transportation Service ("Terms and Conditions"). The proposed rate schedules and Terms and Conditions are designed to offer new services that are being made possible by the Project. In support of its Application, VNG respectfully states as follows:

1. VNG is a public service company organized and existing under the laws of the Commonwealth of Virginia that provides natural gas service to approximately 300,000 customers in central and southeastern Virginia, including the communities of Norfolk, Virginia Beach, and portions of Chesapeake and Suffolk in southside Hampton Roads, and to Newport News, Hampton, Poquoson, York, James City, Williamsburg, New Kent, and Charles City on the

Peninsula, as well as to King William and Hanover Counties.

2. In order to perform its legal duty to furnish adequate and reliable service, the Company must, from time to time, update and expand its gas delivery capabilities through additional facilities to meet customer demand and to serve the public interest of the Commonwealth. In this instance, the incremental natural gas transportation is required to meet the needs of VNG utility and transportation customers.

3. In this Application, in order to provide incremental transportation capacity to existing customers, and to help maintain reliable service to the area, VNG proposes the following:

(i) Transco Interconnect Pipeline – construct approximately 6.2 miles of 30" diameter steel pipeline in new right-of-way extending north from the Company's existing natural gas transmission system located near Quantico, Virginia and interconnecting with the Transcontinental Gas Pipe Line ("Transco") pipeline via an interconnect station located near Catlett, Virginia.

(ii) Transco Interconnect Compressor Station – construct a compressor station to be located in Prince William County, Virginia.

(iii) Quantico Parallel Pipe – construct approximately 3.5 miles of 30" diameter steel pipeline in new right-of-way that runs parallel and adjacent to the Company's existing Joint Use Pipeline ("JUP") located in Fauquier County, Virginia.

(iv) Mechanicsville Metering and Regulation ("M&R") Station Upgrade – install additional metering and regulating equipment to accommodate the increased capacity at the existing Mechanicsville M&R Station within existing Company-owned property in Hanover County, Virginia.

Taken together, the Transco Interconnect Pipeline, Transco Interconnect Compressor Station, Quantico Parallel Pipe, and Mechanicsville M&R Station Upgrade are referred to as the Virginia Natural Gas Interconnect ("VNG Interconnect" or the "Project").

4. The proposed Project is necessary in order for VNG to provide incremental transportation capacity to existing VNG customers, including Columbia Gas of Virginia ("CVA") and Virginia Power Services Energy ("VPSE"). The Project will also help VNG maintain reliable service to the Company's service area by providing access to natural gas

supplies received from the Transco pipeline and delivered through the JUP and VNG Lateral to serve customers in VNG's service territory. Specifically, the Project will provide 245,000 dekatherms ("Dth") per day of incremental natural gas transportation capacity to VNG's utility and transportation customers, where utility customers are those residential, commercial, and industrial customers that VNG serves from its natural gas distribution system, and transportation customers include the local distribution companies and power generation facilities served directly from VNG's high pressure natural gas transmission system. See the precedent agreements, as amended, ("Amended PAs"), provided as Extraordinarily Sensitive Attachment 1 (CVA) and Extraordinarily Sensitive Attachment 2 (VPSE) to this Application. Section I of the Appendix provides a description of the components, as well as support for the need for the Project.

5. VNG has a desired in-service date for the Project of December 31, 2023, which accommodates the requested in-service dates of the Project customers. The Company's current construction schedule requires 30 months for survey, design, permitting, obtaining easements and materials, construction, clearing, testing and commissioning. Accordingly, to support this estimated construction timeline and construction plan, the Company respectfully requests a final order by June 30, 2021.

6. The total estimated cost for the proposed Project is approximately $205.6 million, which includes approximately $103.6 million in pipeline-related costs and approximately $102.0 million in compressor station-related costs. Approximately 86% of the capital cost of the Project will be attributable to CVA and VPSE through new rate schedules that are designed to recover the actual, as-built costs to construct, operate, and maintain the assets. Each of these customer's rates will be based on their allocated share of the costs for the Project components that are used to provide their specific service. The remainder 14% of the capital cost will be attributable to

VNG's customers. The service provided to VNG utility customers will be recovered through base rates, as VNG's allocated share of the costs for the applicable Project components are rolled into the utility's rate base.

7. The Company recognizes that the Commission has imposed cost caps on prior generation and infrastructure projects proposed by VNG and other public utilities. In this proceeding, the Company reasonably expects Project investments of $205.6 million, as detailed in Appendix Section I.J. The accuracy of this estimate has been refined to -20% / +30% level, which equates to a contingency estimate of $41.1 million below and $61.7 million above the total cost figure, as is typical and necessary for a construction project of this magnitude, in order to allow for changes in costs which are unanticipated at this time. Of the total Project costs, VNG's customers are expected to be responsible for approximately 14%.

8. The Company is fully committed to constructing the Project in a manner which is reasonable and prudent and within these cost parameters, and believes that it would be reasonable for the Commission to not impose, in advance, a Project cost cap in light of other customer protections already proposed by the Company. However, should the Commission find that some limitation on Project costs recoverable from VNG's customers should be a condition of any approval herein, a cost cap of $37.4 million, which includes the 30% high-end contingency, relative to VNG's allocated share of Project costs should be approved. If Project costs exceed that amount, the Company would return to the Commission in order to demonstrate the reasonableness and prudence of any cost increases beyond the cap before such costs would be approved as part of the Project. The Company would further agree, in the interests of transparency, to provide Commission Staff with copies of regular reports on the Project construction status and costs throughout the construction timeline.

9. In Case No. PUR-2019-00207, the Commission also addressed the amortization

schedule for the depreciation of proposed natural gas pipeline and compression assets, finding that this schedule should match the initial term of the Precedent Agreement with one of that project's merchant generator customers. In this proceeding, the Company proposes that the Project assets be depreciated, in the ordinary course and consistent with the Company's approved depreciation schedules and prior practices, over the assets' anticipated service lives. Doing so aligns cost recovery over the period the assets will provide benefits, avoids any subsidization of future benefits by current customers, and reduces the near term negative customer rate impact of a shorter depreciation term. With respect to this issue, the Company further notes the VNG Interconnect includes anticipated service only to regulated utility customers.

10. In particular, the Company seeks to put into effect three new rate schedules – Rate Schedules VI-TRFT, VI-LFT, and VI-IT – to offer new services that are being made possible by the VNG Interconnect, as well as the Terms and Conditions related thereto. An overview of the rate schedules and design methodology are provided in Section I.J of the Appendix, including copies of the proposed rate schedules and Terms and Conditions.

11. For Rate Schedules VI-TRFT and VI-LFT, the rates are based on estimated costs of the individual Project components. After the final costs of the Project are determined, the rates will be recomputed on the basis of actual cost and may be adjusted from time to time in the context of general rate cases. VPSE's and CVA's bills based on the estimated costs will be recomputed and re-billed. VPSE and CVA acknowledged that the final costs associated with the Project are not likely to be known at the date service commences, and that VNG will commence billing on an estimated rate basis, subject to true-up when final costs and improved estimates of actual operating expenses for the Project are known or available. To effectuate the updating of the revenue requirement responsibilities and resulting rates, the Company suggests that following an order approving this Application on the VNG Interconnect and granting the Company a

certificate of convenience and public necessity for the Project, the Commission could hold the docket open and direct the Company to file updated construction cost and indicative rate estimates approximately six months prior to the in-service date.[1] Alternatively, the Commission could close the docket and direct the Company to submit such update to the Commission Staff as is common with other compliance-type filings.

12. Rate Schedule VI-IT will be provided at the incremental operating cost associated with providing the service. A forward-looking estimated operating expense will be submitted to the Commission prior to the commencement of service of the Project. All customers taking service under Rate Schedules VI-TRFT or VI-LFT will be eligible for interruptible service under this rate schedules.

13. The Company has identified a proposed route for the construction of the approximately 6.2-mile Transco Interconnect Pipeline primarily collocated with an existing electric and natural gas transmission right-of-way, and also identified a route for the Quantico Parallel Pipe along the existing JUP right-of-way. However, because the existing right-of-way is not adequate to construct the proposed Project, the Company is seeking new permanent rights-of-way, as well as temporary workspace easements during construction. Section II of the Appendix provides a description of the right-of-way and the Company's route selection process for the proposed Project.

14. The Transco Interconnect Pipeline and Quantico Parallel Pipe will consist of 30" diameter steel pipelines, with a throughput capacity of 245 million standard cubic feet per day of

[1] The Company currently has a rate case pending before the Commission in Case No. PUR-2020-00095. It is likely that Commission decisions in that matter will impact cost components relevant to Project revenue requirements (i.e., ROE, depreciation rates, etc.). Accordingly, the update filed prior to Project in-service would incorporate those updated cost components. *See Application of Virginia Natural Gas, Inc., For a general rate increase and for authority to revise the terms and conditions applicable to natural gas service*, Case No. PUR-2020-00095 (filed June 1, 2020).

natural gas and a maximum allowable operating pressure of 1250 pounds per square inch gauge. Section III of the Appendix provides additional design and operational characteristics of the proposed Project.

15. Code § 56-265.2:1 requires the Commission to consider the effect of a proposed pipeline on the environment, public safety, and economic development in the Commonwealth, and allows the Commission to establish such reasonably practical conditions as may be necessary to minimize any adverse environmental or public safety impact. Additionally, recently-enacted House Bill 704 and Senate Bill 406 set forth the policy of the Commonwealth to promote environmental justice ("EJ") and ensure it is carried out throughout Virginia, with a focus on EJ and fenceline communities.[2] Section IV of the Appendix describes the existing area, as well as environmental, EJ, public safety and economic development considerations. Additionally, to facilitate the coordinated agency review of the Project by the Virginia Department of Environmental Quality ("VDEQ"), the Company has developed a VDEQ Supplement attached to this Application.

16. Section V of the Appendix provides a proposed route description for public notice purposes and a list of federal, state, and local agencies and officials that may reasonably be expected to have an interest in the proposed construction.

17. In addition to the information provided in the Appendix and VDEQ Supplement, this Application is supported by the prefiled direct testimony of Company Witnesses Kenneth Yagelski, Patrick Winnubst, and John Cogburn.

18. Because VNG's Application contains, at points so designated, Confidential and Extraordinarily Sensitive information, in compliance with Rule 170 of the Commission's Rules of Practice and Procedure, 5 VAC 5-20-170, it is being filed under seal and subject to the

[2] 2020 Va. Acts of Assembly Ch. 1212 and 1257 (effective July 1, 2020).

Company's Motion for Entry of a Protective Order and Additional Protective Treatment, including a form Proposed Protective Order, filed contemporaneously with this Application.

WHEREFORE, Virginia Natural Gas respectfully requests that the Commission:

(a) direct that notice of this Application be given as required by §§ 56-237 and 56-265.2:1 of the Code of Virginia;

(b) approve pursuant to § 56-265.2:1 of the Code of Virginia the construction of the Project;

(c) grant a certificate of public convenience and necessity for the Project under the Utility Facilities Act, §§ 56-265.1 *et seq.* of the Code of Virginia;

(d) approve Rate Schedules VI-TRFT, VI-LFT, and VI-IT, and Terms and Conditions for Pipeline Transportation Service; and,

(e) grant such other relief as deemed necessary and appropriate.

The Company respectfully requests that the Commission issue its final order by no later than June 30, 2021.

Respectfully submitted,

VIRGINIA NATURAL GAS, INC.

By:_____

Elizabeth B. Wade*
Southern Company Gas
Ten Peachtree Place
Atlanta, Georgia 30309
(404) 584-3160 (telephone)
(404) 584-3599 (facsimile)
ewade@southernco.com
*Not admitted to practice in Virginia

Joseph K. Reid, III
Lisa R. Crabtree
Jennifer D. Valaika
McGuireWoods LLP

Gateway Plaza
800 East Canal Street
Richmond, Virginia 23219
(804) 775-1198 (JKR phone)
(804) 775-1327 (LRC phone)
(804) 775-1051 (JDV phone)
(804) 698-2222 (facsimile)
jreid@mcguirewoods.com
lcrabtree@mcguriewoods.com
jvalaika@mcguirewoods.com

Counsel for Virginia Natural Gas, Inc.

December 14, 2020

Application Attachment 1

PUBLIC VERSION
Extraordinarily Sensitive Information Redacted - All Pages

VIRGINIA NATURAL GAS
COLUMBIA GAS OF VIRGINIA

VNG INTERCONNECT

AMENDED PRECEDENT AGREEMENT

Application Attachment 2

PUBLIC VERSION
Extraordinarily Sensitive Information Redacted - All Pages

VIRGINIA NATURAL GAS
VIRGINIA POWER SERVICES ENERGY CORP., INC.

VNG INTERCONNECT

AMENDED PRECEDENT AGREEMENT

Appendix

COMMONWEALTH OF VIRGINIA
BEFORE THE
STATE CORPORATION COMMISSION

APPLICATION OF

VIRGINIA NATURAL GAS

FOR APPROVAL AND CERTIFICATION
OF NATURAL GAS FACILITIES

VNG INTERCONNECT

Appendix

Case No. PUR-2020-00283

Filed: December 14, 2020

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List of Acronyms

CCB	Center for Conservation Biology
CFR	Code of Federal Regulations
CO	carbon monoxide
Commission	Virginia State Corporation Commission
Company	Virginia Natural Gas, Inc.
CPCN	Certificate of Public Convenience and Necessity
CVA	Columbia Gas of Virginia
DETI	Dominion Energy Transmission, Inc.
DMME	Virginia Department of Mines, Minerals and Energy
Dth	Dekatherms
GIS	geographic information system
HP	Horsepower
IPaC	Information, Planning, and Consultation System
JUP	Joint Use Pipeline
M&R	Metering and Regulation
MAOP	maximum allowable operating pressure
MMscfd	million standard cubic feet per day
MP	Milepost
MW	megawatt or megawatts
NCED	National Conservation Easement Database
NHD	National Hydrography Dataset
NLEB	Northern Long-eared Bat
NOx	nitrogen oxides
NPS	National Park Service
NRHP	National Register of Historic Places
NWI	National Wetland Inventory
Part 192	Title 49 of the Code of Federal Regulations Part 192
Psig	pounds per square inch gauge
SCR	Selective Catalyst Reduction
Solar	Solar Turbines, Inc.
TIMP	Transmission Pipeline Integrity Management Plan
TNC	The Nature Conservancy
Transco	Transcontinental Gas Pipe Line Company, LLC
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
VAFWIS	Virginia Fish and Wildlife Information Service
VCRIS	Virginia Cultural Resource Information
VDCR	Virginia Department of Conservation and Recreation
VDEQ	Virginia Department of Environmental Quality
VDHR	Virginia Department of Historic Resources
VDOT	Virginia Department of Transportation
VDWR	Virginia Department of Wildlife Resources
VITA	Virginia Information Technologies Agency

VNG	Virginia Natural Gas, Inc.
VNG Lateral	VNG Lateral Pipeline
VOCs	volatile organic compounds
VPSE	Virginia Power Services Energy Corp., Inc.
WGL	Washington Gas Light

Executive Summary

In order to provide requested incremental transportation capacity to existing customers, and to help maintain reliable service to the area, Virginia Natural Gas, Inc. ("VNG" or the "Company") proposes the following:

(i) Transco Interconnect Pipeline – construct approximately 6.2 miles of 30" diameter steel pipeline in new right-of-way extending north from the Company's existing natural gas transmission system located near Quantico, Virginia and interconnecting with the Transcontinental Gas Pipe Line Company, LLC ("Transco") pipeline via an interconnect station located near Catlett, Virginia.

(ii) Transco Interconnect Compressor Station – construct a compressor station to be located in Prince William County, Virginia.

(iii) Quantico Parallel Pipe – construct approximately 3.5 miles of 30" diameter steel pipeline in new right-of-way that runs parallel and adjacent to the Company's existing Joint Use Pipeline ("JUP") located in Fauquier County, Virginia.

(iv) Mechanicsville Metering and Regulation ("M&R") Station Upgrade – install additional metering and regulating equipment to accommodate the increased capacity at the existing Mechanicsville M&R Station within existing Company-owned property in Hanover County, Virginia**.**

Taken together, the Transco Interconnect Pipeline, Transco Interconnect Compressor Station, Quantico Parallel Pipe, and Mechanicsville M&R Station Upgrade are referred to as the Virginia Natural Gas Interconnect ("VNG Interconnect" or the "Project").

The Company is proposing the Project in order to perform its legal duty to furnish adequate and reliable service to VNG utility and transportation customers, where utility customers are those residential, commercial, and industrial customers that VNG serves from its natural gas distribution system, and transportation customers include the local distribution companies and power generation facilities served directly from VNG's high pressure natural gas transmission system. The service is to be provided under new transportation service tariffs and rate schedules.

The Company has identified a proposed route for the construction of the 6.2-mile Transco Interconnect Pipeline primarily collocated with an existing electric and natural gas transmission right-of-way, and also identified a route for the Quantico Parallel Pipe along the existing JUP right-of-way. However, because the existing right-of-way is not adequate to construct the proposed Project, the Company is seeking new permanent rights-of-way, as well as temporary rights-of-way during construction.

The total estimated cost for the proposed Project is approximately $205.6 million, which includes approximately $103.6 million in pipeline-related costs and approximately $102.0 million in compressor station-related costs.

The Company's current construction schedule requires 30 months, which assumes Virginia State Corporation Commission (the "Commission") approval by June 30, 2021, in order to have the Project in service by December 31, 2023. This includes time for survey, design, permitting, obtaining easements and materials, construction, clearing, testing and commissioning.

I. Need for the Proposed Project

A. Primary justification for the proposed pipeline

The proposed Project is necessary in order for VNG to provide requested incremental transportation capacity to existing VNG customers, including Columbia Gas of Virginia ("CVA") and Virginia Power Services Energy Corp., Inc. ("VPSE"). The Project will also help VNG maintain reliable service to the Company's service area. The Project will allow VNG to provide access to natural gas supplies received from the Transcontinental Gas Pipe Line Company, LLC ("Transco") pipeline and delivered through the Joint Use Pipeline ("JUP") and VNG Lateral to serve customers in VNG's service territory.

Specifically, the Project will provide 245,000 Dth per day (or MMscfd) of incremental natural gas transportation capacity, as summarized below and as set forth in the precedent agreements, as amended, ("Amended PAs") provided as Extraordinarily Sensitive Attachments 1 (CVA) and 2 (VPSE) to the Application:

- CVA requires **[BEGIN EXTRAORDINARILY SENSITIVE]** [redacted] **[END EXTRAORDINARILY SENSITIVE]**

- VPSE requires the following:
  - **[BEGIN EXTRAORDINARILY SENSITIVE]** [redacted] **[END EXTRAORDINARILY SENSITIVE]**
  - **[BEGIN EXTRAORDINARILY SENSITIVE]** [redacted] **[END EXTRAORDINARILY SENSITIVE]** and
  - **[BEGIN EXTRAORDINARILY SENSITIVE]** [redacted] **[END EXTRAORDINARILY SENSITIVE]**

- VNG requires **[BEGIN EXTRAORDINARILY SENSITIVE]** [redacted] **[END EXTRAORDINARILY SENSITIVE]** with a receipt point of Transco and a delivery

point of the JUP as a new upstream source to its existing JUP capacity.

Need for the Project

In order to perform its legal duty to furnish adequate and reliable service, the Company must, from time to time, update and expand its gas delivery capabilities through additional facilities to meet customer demand and to serve the public interest of the Commonwealth. In this instance, the incremental natural gas transportation is required to meet the needs of VNG utility and transportation customers.

Existing VNG utility and transportation customers are currently entitled to receive 633,225 Dth per day of firm natural gas supply into the JUP from Berkshire Hathaway Energy's Eastern Gas Transmission and Storage, Inc.—formerly known as Dominion Energy Transmission, Inc. ("DETI")[1]—with a pipeline interconnection at Quantico, Virginia. The JUP is currently fully contracted and operating at capacity. The design of the existing JUP, and available operating pressure, limit the VNG system's ability to provide the required 245,000 Dth per day of incremental capacity. This approximate 39% increase in capacity results in the need for the expansion as defined in the scope of work for the Project.

CVA and VPSE first executed precedent agreements in November and December 2019 that confirmed their need for incremental transportation capacity, and re-confirmed that need through amendments executed on September 29, 2020. See Extraordinarily Sensitive Application Attachments 1 and 2. The Amended PAs affirm the customers' need for the incremental capacity recognizing recent societal and legislative impacts. While the COVID pandemic created a short-lived disruption in the global energy sector, low natural gas prices are expected to stimulate the region's economic recovery resulting in continued growth in energy demand. CVA is presumed to use this incremental transportation capacity to meet natural gas demand in regions of its service territory served by delivery points along the JUP; including but not limited to, the fast-growing communities of Stafford, Fredericksburg, and Spotsylvania, Virginia. Similarly, VPSE is presumed to use this transportation capacity to meet natural gas demand for Dominion Energy Virginia electric power generation facilities served by the JUP; including delivery points at the Ladysmith Power Station and the Virginia Power Lateral in Mechanicsville, Virginia. Dominion Energy Virginia's most recent integrated resource plan ("IRP") was filed on May 1, 2020, after the Virginia Clean Economy Act was signed into law on April 12, 2020, by Virginia Governor Ralph Northam. The Dominion IRP recognizes that natural-gas fired generation will continue to play a critical, low emission role in their system for decades to come and includes the planned continued use of natural gas-fired power generation facilities to supplement the intermittent nature of renewable energy sources and to support the retirement of the region's less efficient coal and oil-fueled power plants.

VNG is currently directly connected to two interstate pipelines that provide access to upstream sources of natural gas supply. Columbia Gas Transmission connects to VNG in the Suffolk and Chesapeake areas to provide service primarily to the southern portion of the Company's service territory, and the northern portion is primarily served by a connection to DETI. Transportation,

[1] While there has been an ownership change, for ease of reference, the Appendix will continue to refer to the entity as DETI.

reservoir storage, and peak shaving contractual capacity delivered to the DETI connection provide more than one-half of the Company's total contractual capacity used to meet customers' peak winter demand. Unplanned and unexpected operational events on the DETI pipeline have threatened the continuity of service for VNG's firm customers. Planning to avoid a loss of service is part of the Company's legal duty to furnish adequate and reliable service. A loss of natural gas service from one of the Company's two major upstream sources could be a detrimental event for more than one-half of the Company's customers, resulting in the potential loss of natural gas service for many days or possibly weeks during the coldest days of the winter. A service disruption would impact a great number of residential customers and many of Hampton Roads largest employers who depend on natural gas for critical operations. These important employment sectors include large military installations, the shipbuilding and ship repair industries, seaport related companies, and major industrial employers. A loss of natural gas service for many days or possibly weeks would have serious consequences for the region and beyond.

These reliability and resiliency concerns have only become more serious with the cancellation of the Atlantic Coast Pipeline ("ACP") project. VNG planned to take service from ACP with a delivery point in Chesapeake, Virginia, providing a third interstate pipeline connection with additional optionality for service. However, with the cancellation of the ACP project, the Company remains connected to just the two existing and constrained upstream sources. The connection to Transco provided by the Project will allow VNG to have an upstream source alternative to DETI. The Company would use this connection to Transco to purchase market area supply at the interconnection should the service from DETI be interrupted or limited due to an upstream contingency.

The CVA and VPSE requirements for access to 245,000 Dth per day of incremental capacity from a new interconnection with Transco result in the need for the expansion as defined in the scope of work for the Project. The VPSE service as described above presents a unique opportunity for VNG to economically obtain a complementary service. Instead of VNG addressing this matter independently with pipeline transportation capacity dedicated to the exclusive use of the Company, it has used a creative contractual provision that permits VPSE to have primary use of the pipeline assets when temperatures are warmer and for VNG customers to have primary use of the pipeline assets when temperatures are colder. This eliminates either company from holding redundant pipeline capacity and optimizes the use of the natural gas transportation system, helping to mitigate customer costs and other adverse impacts. The VNG limited firm transportation service does not include any upstream capacity on Transco. This service is intended to improve the reliability and resiliency of service to VNG customers.

Description of the Project

The VNG Interconnect consists of the following major components:

Transco Interconnect Pipeline

The 6.2-mile Transco Interconnect Pipeline will connect the existing JUP to the existing Transco pipeline near milepost ("MP") 1575.70 via an interconnect station in Prince William County, Virginia. Through an interconnect agreement with Transco, VNG will design, construct, own,

operate and maintain all facilities downstream of the tie-in to Transco's system. Per the interconnect agreement, Transco will tap its mainline pipe in order to deliver up to 245 million standard cubic feet per day ("MMscfd") of natural gas. VNG will be responsible for securing the land for this tap and will be required to give by easement sufficient land for Transco to tie into their pipelines.

Transco Interconnect Compressor Station

The Transco Interconnect Compressor Station is a critical component to this Project because the operating pressure of the Transco pipeline is less than the operating pressure of the JUP. The compressor station must be located along the approximately 6.2-mile Transco Interconnect Pipeline to increase the pressure so that it will be able to enter the existing JUP. The Company has identified a proposed site (36.8 acres, of which a maximum of 15 acres will be cleared for the station) for the Transco Interconnect Compressor Station along the Transco Interconnect Pipeline, which is described in greater detail in Sections II and III of this Appendix.

Together, the Transco Interconnect Pipeline and Transco Interconnect Compressor Station will provide VNG customers access to a third source of gas supply. See Attachment I.E.2 for a map of the existing system including the proposed Project.

Quantico Parallel Pipe

The addition of the Quantico Parallel Pipe extending approximately 3.5 miles along the existing JUP at Quantico with 30" diameter steel pipeline will provide the necessary capacity to enable the system to flow the additional volumes of gas requested by customers. Otherwise, the additional flow of 245 MMscfd would result in the Company's inability to serve existing customers.

Mechanicsville M&R Station Upgrade

VNG's existing Mechanicsville M&R Station is located on a 0.27-acre parcel in Hanover County, Virginia, that the Company has owned since 1991. The current M&R station is inadequate to meet the increased volume of gas that VPSE requires as part of the Project. Installation of additional M&R equipment at the existing M&R station will allow the Company to meter the increased flow rates within the existing footprint.

I. Need for the Proposed Project

B. Reliability standards or service obligations requiring construction of the proposed pipeline

VNG is a public service corporation organized under the laws of the Commonwealth of Virginia, and is a local gas distribution company furnishing natural gas service to the public within its Virginia certificated service territory. VNG provides natural gas service to approximately 300,000 residential, commercial and industrial customers in Southeastern Virginia.

The Company is proposing the Project in order to perform its legal duty to furnish adequate and reliable service to VNG utility and transportation customers, as discussed in more detail in Section I.A. Construction of the Project is necessary in order for the Company to fulfill its responsibility of delivering adequate natural gas service and resilient facilities at just and reasonable rates established by the Commission to any person, firm or corporation along its lines desiring service.

The service is to be provided under new transportation service tariffs and rate schedules, as discussed in Section I.J.

I. Need for the Proposed Project

C. Future projects that require the proposed pipeline to be built

The VNG Interconnect is being built for the immediate need identified by VPSE and CVA. VNG does not currently have any planned projects, which are dependent upon the proposed Project. However, the proposed Project provides VNG with access to a new, alternate upstream source at a lower cost than if VNG were to construct the interconnection alone, without the benefit of financial contributions from other Project participants.

I. Need for the Proposed Project

D. Benefits of the proposed pipeline

The proposed Project is part of an overall design to provide VNG utility and transportation customers with incremental natural gas transportation capacity on VNG's high-pressure, large diameter system and the necessary access to new upstream sources of natural gas.

As discussed in Section I.A, VNG is currently directly connected to two interstate pipelines that provide access to upstream sources of natural gas supply—Columbia Gas Transmission and DETI. A loss of natural gas service from one of the Company's two major upstream sources could be a detrimental event for more than one-half of the Company's customers, resulting in the potential loss of natural gas service for many days or possibly weeks during the coldest days of the winter. These reliability and resiliency concerns have only become more serious with the cancellation of the ACP project. The connection to Transco provided by the Project will allow VNG to have an upstream source alternative to DETI beginning in the winter of 2023. The Company would use this connection to Transco to purchase market area supply at the interconnection should the service from DETI be interrupted or limited due to an upstream contingency. Having this alternate source available as soon as possible would help mitigate a potential large-scale loss of service event from a disruption on the DETI system, protecting natural gas service not only to residential customers, but to the region's large military installations, the shipbuilding and ship repair industries, seaport related companies, and major industrial employers.

I. Need for the Proposed Project

E. Description of the utility's present system and how the proposed pipeline will connect

The existing VNG high-pressure, large diameter system is a long lateral originating from an interconnection with DETI near Quantico, Virginia, and extending south and east approximately 170 miles to Chesapeake, Virginia. See Attachment I.E.1 for a map of the existing system.

As part of the Project, the Company proposes to add the approximately 6.2-mile Transco Interconnect Pipeline, which would interconnect the Transco pipeline via an interconnect station located near Catlett, Virginia, to the existing VNG system located near Quantico, Virginia with a 30-inch diameter steel pipe. In addition, the proposed Transco Interconnect Compressor Station, which will be located along the Transco Interconnect Pipeline, will increase the pressure so that the incremental new capacity will be able to enter the existing JUP. This new interconnection will provide access to a new upstream source with capability to provide incremental natural gas supply.

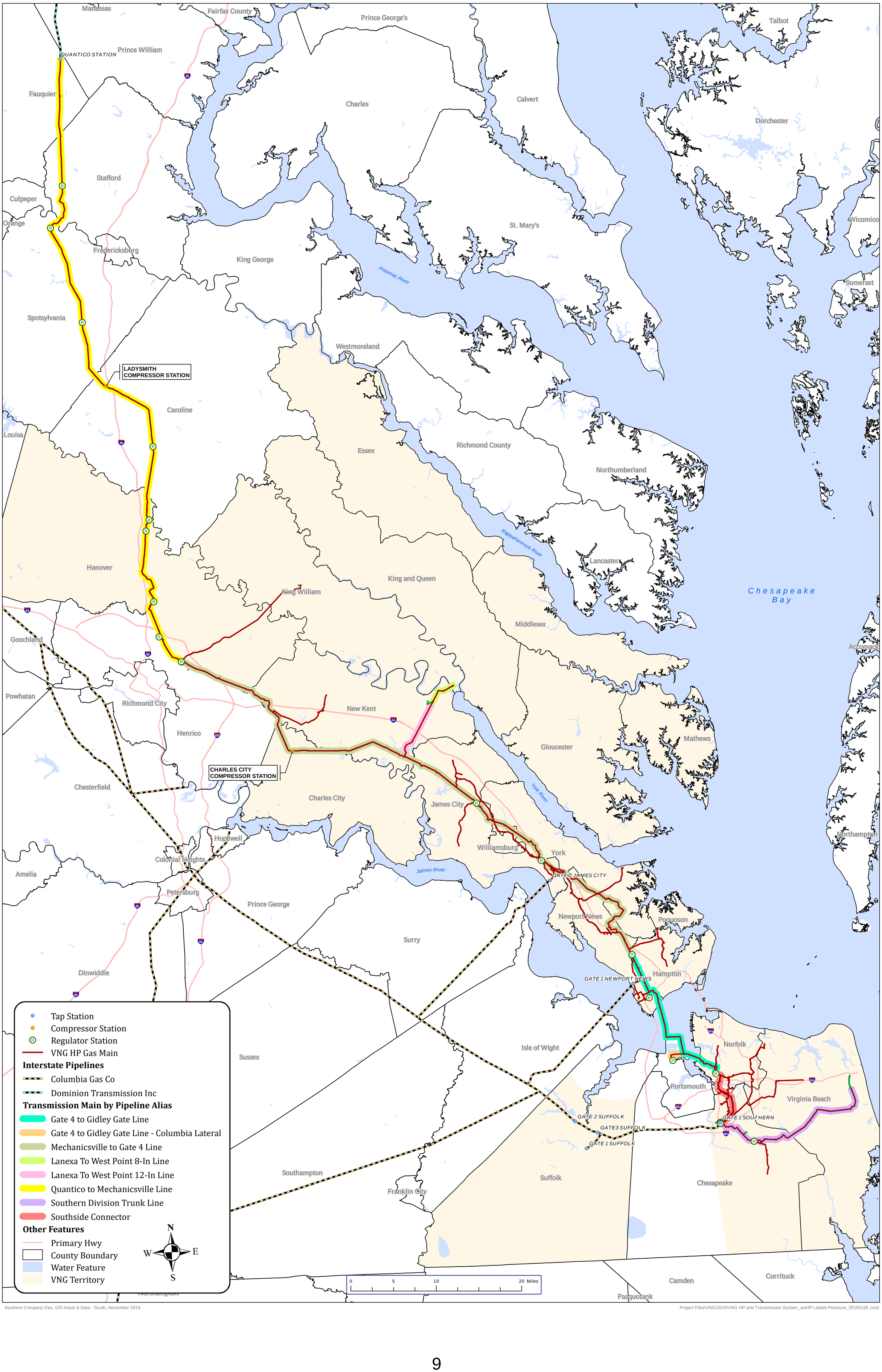
The Company is also proposing construction of the Quantico Parallel Pipe as part of the Project, which would include installation of 30" diameter steel pipeline that would parallel VNG's existing 24" JUP for approximately 3.5 miles. The Quantico Parallel Pipe would tie into the existing system and give VNG the additional capacity needed to serve the customers' request for incremental capacity.

See Attachment I.E.2 for a map of the system including the proposed VNG Interconnect.

VNG Transmission System

HP Gas Mains, Measuring & Regulator Stations & Tap Stations

Virginia Natural Gas



Southern Company Gas, GIS Asset & Data - South, November 2019

Project Files\VNG\2019\VNG HP and Transmission System_woHP Labels-Pressure_20191118..mxd

VNG Interconnect

Attachment I.E.2
Virginia Natural Gas

Transco Interconnect Compressor Station

Transco Interconnect
6.2 Miles

Quantico Parallel Pipe
3.5 Miles

Existing Pipeline

Existing Mechanicsville Meter & Regulator Station

Existing Pipeline

- M&R Station
- **Interstate Pipeline**
  - Columbia Gas Co
  - Transcontinental Gas Pipeline
- **Existing VNG Gas Main**
  - VNG Lateral
  - Joint Use Pipeline (JUP)
- **Proposed VNG Interconnect**
  - Transco Interconnect Pipeline
  - Quantico Parallel Pipeline
- **Other Features**
  - Limited Access Highway
  - Secondary Hwy
  - Local Road
  - County Boundary
  - Water Feature
  - VNG Service Territory

N W E S

Prince William

Fauquier

Stafford

King William

Caroline

Hanover

Richmond City

Chesterfield

Henrico

New Kent

Charles City

0 0.5 1 2 Miles

I. Need for the Proposed Project

F. Description of feasible alternatives to the project, if any

The Company has not identified any feasible alternatives to the proposed Project. The Company considered construction of a new greenfield pipeline (as opposed to the Project, which maximizes the use of collocation with existing utility corridors to the extent possible) to provide the required incremental natural gas transportation capacity with the necessary access to an interstate pipeline for an upstream source of supply. However, any route for a new greenfield pipeline that would lead to existing interstate pipeline locations from the transportation customer delivery points would be hindered by major water crossings or densely populated areas, and would require long distances of large diameter, high pressure pipeline and compression construction through areas where no such facilities already exist. In addition, costs would likely be higher for a new greenfield pipeline when compared to the proposed Project.

I. Need for the Proposed Project

G. Description of any facilities that will be removed or taken out of service once the proposed pipeline is constructed

Other than the existing meters that will be retired to accommodate new additional metering at the Mechanicsville M&R Station, there are no facilities that will be retired from service as a result of the VNG Interconnect.

I. Need for the Proposed Project

H. Desired in-service date

VNG has a desired in-service date for the Project of December 31, 2023, which accommodates the requested service dates of the Project customers, as well as provides VNG distribution customers an upstream source alternative to DETI beginning in the winter of 2023, as discussed in Section I.D. See Extraordinarily Sensitive Application Attachments 1 and 2.

I. Need for the Proposed Project

I. Construction timeline and methods

The Company's current construction schedule requires 30 months, which assumes Commission approval by June 30, 2021 in order to have the Project in service by December 31, 2023. This includes time for survey, design, permitting, obtaining easements and materials, construction, clearing, testing and commissioning, some of which the Company has already started. Refer to Attachment I.I.1 for a detailed timeline for the Project, some of which VNG has begun.

The construction methods utilized to install pipe on all portions of the Project will be both open cut and trenchless methods, including horizontal directional drilling and auger boring. The primary method will be to open cut a trench at a depth to meet or exceed Title 49 of the Code of Federal Regulations ("CFR") Part 192 ("49 CFR Part 192" or "Part 192") requirements and lay the welded pipe segments in the trench. Construction methods in streams, wetlands, and sensitive environmental areas will be determined following detailed surveying and coordination with the applicable environmental agencies. Rock may be present in the Project area, which will be determined during the engineering and design phase through geotechnical investigation. At that time, the Company will determine the appropriate construction method to address any such geological conditions. After a preliminary review of the Virginia Department of Mines, Minerals and Energy ("DMME") mapping available on the DMME website, the Company does not anticipate encountering karst formations in the Project area.

VNG INTERCONNECT - TIMELINE

	2020	2021												2022												2023									
	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct
CPCN Submittal/ Approval	Submit						Approval	FTSA																											
Transco Interconnect Pipeline								Survey		Plat			Easement Acquisition																						
												Material Acquisition																							
									Design																Construction								Tie-in		
										Enviro Permits (includes Prep.)																									
Quantico Parallel Pipe								Survey		Plat			Easement Acquisition																						
												Material Acquisition																							
									Design																Construction								Tie-in		
										Enviro Permits (includes Prep.)																									
Mechanicsville M&R Station Upgrade								Survey		Plat			Easement Acquisition																						
												Material Acquisition																							
									Design																										
										Enviro Permits (includes Prep.)																									
Transco Interconnect Compressor Station							Design/ IFCs																												
									Land														Fabricated Piping											
									Material Acquisition													Sitework												
			Prep Application				Air Permit																		Construction										Startup

I. Need for the Proposed Project

J. Estimated cost and plan for cost recovery

The total estimated cost for the proposed Project is approximately $205.6 million, which includes approximately $103.6 million in pipeline-related costs and approximately $102.0 million in compressor station-related costs. The accuracy of this estimate has been refined to -20%/+30% consistent with Stage 2 estimates based on the known scope of the compressor projects at the time the estimate was generated. This includes the following major Project components:

- Transco Interconnect Pipeline: $66.1 million
- Transco Interconnect Compressor Station: $102.0 million
- Quantico Parallel Pipe: $30.2 million
- Mechanicsville M&R Station Upgrade: $7.2 million

Summary of Cost Recovery

Approximately 86% of the capital cost of the Project will be attributable to CVA and VPSE through new rate schedules that are designed to recover the actual, as-built costs to construct, operate, and maintain the assets. A form Firm and Interruptible Transportation Service Agreement is provided as Attachment I.J.1. Each of these customer's rates will be based on their allocated share of the costs for the Project components that are used to provide their specific service. The proposed VNG Interconnect General Terms and Conditions for Services are provided as Attachment I.J.2, and the proposed Rates Schedules are provided as described below.

- VI-TRFT (VNG Interconnect – Transco Firm Transportation Service) – Allows for transportation on the Transco Interconnect Pipeline from the new interconnection point with the Transco pipeline to the interconnection with the existing JUP. This rate schedule is designed for recovery of costs associated with the Transco Interconnect Pipeline and Transco Interconnect Compressor Station components, which are applicable to CVA and VPSE. See Attachment I.J.3 for the proposed Rate Schedule VI-TRFT Transco Lateral Firm Transportation Service.

- VI-LFT (VNG Interconnect – Limited Firm Transportation) – Allows for transportation using all of the Project facilities along with existing facilities from the new interconnection point with the Transco pipeline or the DETI pipeline to the point at which natural gas is delivered to the customer. The VI-LFT is limited by the service agreement with the customer with regard to both capacity available at each receipt point and by seasonal availability of capacity. This rate schedule is designed for recovery of costs associated with the Transco Interconnect Pipeline, Transco Interconnect Compressor Station, and Quantico Parallel Pipe, which are applicable to VPSE. See Attachment I.J.4 for the proposed Rate Schedule VI-LFT Limited Firm Transportation Service.

Additionally, a Rate Schedule VI-IT will be provided at the incremental operating cost associated with providing the service. A forward-looking estimated operating expense will be submitted to the Commission prior to the commencement of service of the Project. All customers taking service

under Rate Schedules VI-TRFT or VI-LFT will be eligible for interruptible service under this rate schedule. See Attachment I.J.5 for the proposed Rate Schedule VI-IT Interruptible Transportation Service.

The remainder (14%) of the capital cost will be attributable to VNG's customers. The service provided to VNG utility customers will be recovered through base rates, as VNG's allocated share of the costs for the applicable Project components are rolled into the utility's rate base. These Project components include the Transco Interconnect Pipeline and Transco Interconnect Compressor Station. Cost considerations related to customer protections are discussed in Application paragraphs (7)-(9).

Total Cost of Service

The cost of service for the Project must be calculated at the Project component level first and then allocated to each customer based on the cost causation and usage rights that customers have related to the specific Project component. The cost of service for each Project component is the sum of the return on rate base, depreciation expense, estimated operating and maintenance expense, property taxes, and where applicable, an allocation of existing facilities.

The return on rate base is calculated by applying the Company's authorized rate of return as approved by the Commission in Case No. PUR-2018-00143 of 8.47% to the estimated rate base for each Project component in the initial year of operation. Depreciation expense is calculated by applying the Company's Commission-approved depreciation rates for the type of facilities comprising the Project component. The operating and maintenance expense for each Project component is initially estimated to be 2% of the initial capital cost of the Project component, and property taxes are estimated to be 0.65% of rate base annually.

Figure 1 below shows the initial annual cost of service for each Project component. See Attachment I.J.6 for a more detailed calculation.

Figure 1

Project Component	**Cost of Service**
Transco Interconnect Pipeline & Compressor Station	$24,179,256
Quantico Parallel Pipe	$3,971,487
Mechanicsville M&R Station Upgrade	$1,047,361
Existing Facilities	$358,302
Total Project	**$29,556,406**

Costs are allocated among the customers of the Project at the Project component level based on the cost causation principle of design day demand and the customer's capacity access rights to each Project component.

The design day for a natural gas facility is the maximum usage in a 24-hour period that the facility is being designed to accommodate. It is typical that the design day of a facility for a natural gas

distribution utility is coincident with the coldest day expected in the utility's service territory, but that is not always the case. The design day for each Project component is defined by the manner in which it will be used.

A customer's access rights to a facility are defined by the service agreement it has entered into with the Company. The VNG Interconnect service agreements and tariffs are generally either year-round firm transportation agreements or for services that have a seasonal component. The seasonal nature of certain services will be discussed in more detail below, but the seasonal rate structure allows a customer to access certain facilities during certain times of the year defined by the number of Heating Degree Days ("HDDs") on a given day.

Capacity Allocations

The Transco Interconnect Pipeline and Transco Interconnect Compressor Station must be able to deliver the full contract capacity of its customers on any day of the year. Because it will serve both power plants and local distribution gas companies, which have very different seasonal load characteristics, VNG cannot presume that demand is more likely to approach design conditions in the heating season rather than the non-heating season. Given that design conditions could prevail in the summer or winter, VNG will allocate the total cost of the capacity on daily basis to the party with control of the capacity. Current capacity allocations along this Project component are:

- VPSE will have **[BEGIN EXTRAORDINARILY SENSITIVE]** [redacted] **[END EXTRAORDINARILY SENSITIVE]** Dth/day of year-round capacity on the VI-TRFT rate schedule.

- VPSE will have **[BEGIN EXTRAORDINARILY SENSITIVE]** [redacted] **[END EXTRAORDINARILY SENSITIVE]** on the VI-LFT rate schedule.

- CVA will have **[BEGIN EXTRAORDINARILY SENSITIVE]** [redacted] **[END EXTRAORDINARILY SENSITIVE]** Dth/day of year-round capacity on the VI-TRFT rate schedule.

- VNG will have full access and control of VPSE's capacity under the VI-LFT rate schedule when VPSE does not have contractual access to it because of cold weather.

The Quantico Parallel Pipe is designed to ensure that the Company can deliver required volumes of gas down the JUP once the Transco Interconnect Pipeline is completed. The JUP is currently capable of meeting the full winter needs of existing customers and has some additional capacity that is discussed below regarding the allocation of existing facility costs. This parallel pipe segment is being built to ensure that the capacity needs and pressure requirements of the new customers are met in the warm weather months, thus it is the incremental usage of the JUP during the summer that is causing these costs. During the summer months, the incremental capacity requirements along the path of the current JUP are:

- VPSE will have **[BEGIN EXTRAORDINARILY SENSITIVE]** [redacted] **[END EXTRAORDINARILY SENSITIVE]** Dth/day of seasonally available capacity on the VI-LFT rate schedule.

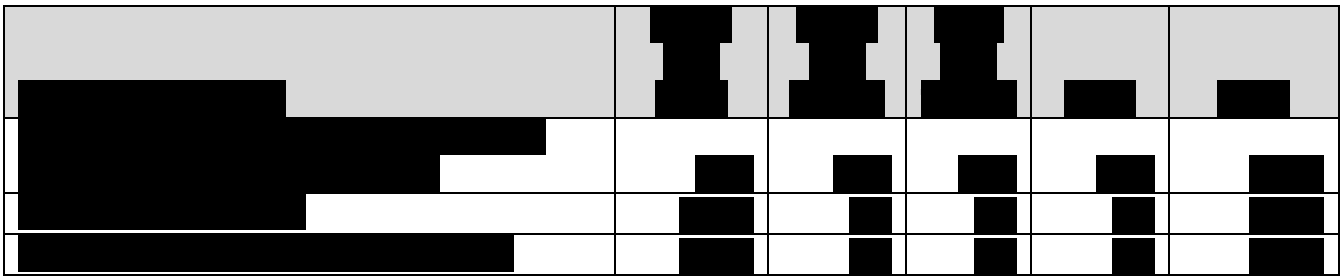
Rate Calculation Analysis

The VI-LFT service relies on the existing facilities of the JUP in order to meet the total winter demand of VPSE. If those existing facilities were not available, the new facilities required to meet VPSE's demand would have been significantly more expensive. The JUP facilities are only available to VPSE under the weather restrictions of the VI-LFT service, so the annual revenue requirement associated with the facility is split proportionally based on capacity availability to VPSE. Additional details regarding these allocations are included in the rate calculation detail of Extraordinarily Sensitive Attachment I.J.7.

As discussed above, costs are then allocated among the customers of the Project at the Project component level based on the cost causation principle of design day demand and the customer's capacity access rights to each Project component. Using the capacity and access rights described above, the cost of service allocation is calculated for each customer for each Project component as shown below in Figure 2. A more detailed derivation of these allocation factors can be found in Extraordinarily Sensitive Attachment I.J.8.

Figure 2

[BEGIN EXTRAORDINARILY SENSITIVE]

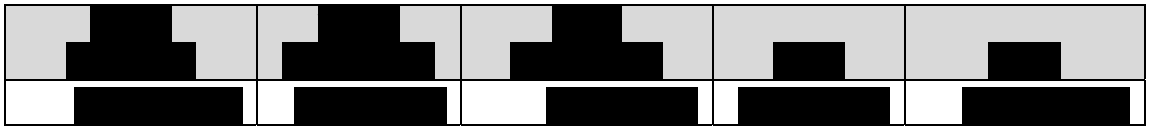


[END EXTRAORDINARILY SENSITIVE]

Applying the allocation factors shown in Figure 2 to the Project component revenue requirements shown in Figure 1 provides the annual revenue requirement for each customer shown in Figure 3 below.

Figure 3

[BEGIN EXTRAORDINARILY SENSITIVE]



[END EXTRAORDINARILY SENSITIVE]

The resulting rates for all of these services are expressed in dollars per Dth per day and are the result of dividing the annual billing units by the allocated cost of service. The total annual billing units and resulting rates are shown below for each rate schedule. These rates are billed as demand rates and thus will be charged to the customer regardless of the actual level of utilization in any given time period. See Extraordinarily Sensitive Attachment I.J.7 for detailed calculations.

VI-LFT

VPSE has **[BEGIN EXTRAORDINARILY SENSITIVE]** **[END EXTRAORDINARILY SENSITIVE]**.

VI-LFT Rate: **[BEGIN EXTRAORDINARILY SENSITIVE]** **[END EXTRAORDINARILY SENSITIVE]** = $0.23 Dth/day.

VI-TRFT

The revenue requirements and annual billing units for each customer served under VI-TRFT are combined to calculate the rate. As can be seen in Extraordinarily Sensitive Attachment I.J.7, whether the customers are combined or calculated individually, there is no impact on the rate calculation. CVA has **[BEGIN EXTRAORDINARILY SENSITIVE]** **[END EXTRAORDINARILY SENSITIVE]** and VPSE has **[BEGIN EXTRAORDINARILY SENSITIVE]** **[END EXTRAORDINARILY SENSITIVE]**.

VI-TRFT Rate: **[BEGIN EXTRAORDINARILY SENSITIVE]** **[END EXTRAORDINARILY SENSITIVE]** = $0.27 Dth/day.

VNG's Distribution Customers

When the Company files its first rate case following placing the Project in service, the revenue requirement associated with the Company's allocated portion of the cost of service will be included in the general cost of service. This is conceptually similar to the way in which the JUP is treated with a portion of the cost of service of the JUP recovered through PT-1 rates and a portion

recovered through the Company's general base rates.

As shown in Extraordinarily Sensitive Attachment I.J.7, approximately $4.2 million of the first year revenue requirement is attributable to VNG distribution customers, so the Company's approximately 300,000 customers will pay on average about $1.17 per month for access to this capacity. Alternatively, considering the expected revenue requirement of the new facilities over the life of facilities, assuming constant operating and maintenance expense and no additional capital investment, the net present value of the total revenue requirement is approximately $285.5 million and VNG distribution customers would be responsible for approximately $40.5 million of that total. Attachment I.J.9 provides the detailed calculation of these figures. The rates proposed in connection with the Project are very similar to PT-2 and CGV-TS in terms of the way costs are allocated and in terms of the way rates are periodically reviewed in the context of a rate case.

Retainage

Retainage is defined in the general terms and conditions of service for all of the rates schedules associated with the Project, and it is the volume of natural gas required for Company-use gas for activities like operating the compressors, the volume of lost-and-unaccounted for gas, and volume required to offset the cost of electricity used to operate compressors associated with the Project. The Retainage Factor is the actual Retainage volume divided by the total volumes within an annual period. Each customer must deliver gas equivalent to its desired volume plus the Retainage Factor. For example, if the Retainage Factor is 1% and a customer wants to consume 100 Dth, the customer will be required to deliver 101 Dth (or 100 Dth + (100 Dth X 1%)) to the VNG system.

The Company will estimate at Retainage Factor for the upcoming contract year using actual historic Retainage requirements and any difference in the prior year's Retainage requirements and Retainage recovered volumes. The Retainage Factor will be submitted to the Commission annually.

Process for Updating Rates

After the final costs of the Project are determined, the rates will be recomputed on the basis of actual cost and may be adjusted from time to time in the context of general rate cases. VPSE's and CVA's bills based on the estimated costs will be recomputed and re-billed.

All customers executed Amended PAs that include an acknowledgement that the final costs associated with the VNG Interconnect are not likely to be known at the date service commences and that VNG will commence billing on an estimated rate basis. When final costs and improved estimates of actual operating expenses for the Project are known or available, the customers will be notified, the rates will be recomputed and submitted to the Commission, and any previously rendered bills from the commencement of service until the date of the establishment of the final rates will be adjusted.

To effectuate this updating of the revenue requirement responsibilities and resulting rates, the Company suggests that following an order approving this Application on the VNG Interconnect and granting VNG a certificate of public convenience and necessity ("CPCN") for the Project, the

Commission could hold the docket open and direct the Company to file updated construction cost and indicative rate estimates approximately six months prior to the in-service date.[2] Alternatively, the Commission could close the docket and direct the Company to submit such update to the Commission Staff as is common with other compliance-type filings.

[2] The Company currently has a rate case pending before the Commission in Case No. PUR-2020-00095. It is likely that Commission decisions in that matter will impact cost components relevant to Project revenue requirements (i.e., ROE, depreciation rates, etc.). Accordingly, the update filed prior to Project in-service would incorporate those updated cost components. *See Application of Virginia Natural Gas, Inc., For a general rate increase and for authority to revise the terms and conditions applicable to natural gas service*, Case No. PUR-2020-00095 (filed June 1, 2020).

FIRM AND INTERRUPTIBLE TRANSPORTATION SERVICE AGREEMENT

Between

VIRGINIA NATURAL GAS, INC.

As Transporter

And

[_____]

As Customer

Pursuant to VNG Rate Schedule [VI-LFT / TRFT]

This **FIRM AND INTERRUPTIBLE TRANSPORTATION SERVICE AGREEMENT** ("**FTSA**" or "**Agreement**") is made as of this [____] day of [_____], 20[_] by and between **VIRGINIA NATURAL GAS, INC**., a Virginia corporation, hereinafter referred to as "**VNG**" or "**Company**", and [_____], a [_____] corporation, hereinafter referred to as "[_____]" or "**Customer**". VNG and Customer shall be referred to herein individually as a "**Party**" and together as the "**Parties**".

ARTICLE I
RATE SCHEDULES / DEFINITIONS

1.01 Rate Schedules.

Rate Schedule [VI-LFT / TRFT], Rate Schedule VI-IT, and the VNG Interconnect General Terms and Conditions, as amended from time to time and on file with the Commission, are incorporated into this Agreement by reference.

1.02 Definitions

The capitalized terms used but not defined herein have the meanings set forth in the VNG Interconnect General Terms and Conditions or Rate Schedules [VI-LFT / TRFT] or VI-IT, as applicable.

1.03 Appendices

The appendices listed on the signature page hereof are hereby incorporated into this Agreement.

ARTICLE II
TRANSPORTATION SERVICE

2.01 Firm Transportation Service.

VNG's provision of [VI-LFT / TRFT] Service to Customer shall be subject to the terms and conditions in this Agreement, including the Rate Schedules (as defined in the VNG Interconnect General Terms and Conditions) and the VNG Interconnect General Terms and Conditions incorporated herein by reference.

2.02 Interruptible Transportation Service

VNG's provision of VI-IT Service shall be subject to the terms and conditions of this Agreement, including the Rate Schedules and the VNG Interconnect General Terms and Conditions incorporated herein by reference.

2.03 Maximum Daily Contract Quantity.

The maximum quantity of Gas VNG shall be obligated to deliver under this Agreement on a firm basis to the Customer's Delivery Point(s) on any one Gas Day is [_____] Dth

(the "**Maximum Daily Contract Quantity**" or "**MDCQ**"). The maximum quantity of Gas VNG shall be obligated to receive at each Receipt Point under this Agreement shall be the MDCQ plus the applicable Retainage volume.

ARTICLE III
CHARGES

3.01 Charges.

All charges related to service under this Agreement shall be set forth in Rate Schedule [VI-LFT / TRFT] and Rate Schedule VI-IT, as amended from time to time, and Customer shall pay all such charges pursuant to the payment terms set forth in the VNG Interconnect General Terms and Conditions.

ARTICLE IV
RECEIPTS AND DELIVERIES

4.01 Receipt Point(s).

The Customer's primary and secondary Receipt Points shall be the points identified on Appendix A attached hereto. VNG may accept, but is not obligated to accept, (i) Gas at any primary Receipt Point(s) on any one Gas Day in excess of the Customer's MDCQ applicable to each primary Receipt Point (plus the applicable Retainage volume) and (ii) Gas at a secondary Receipt Point, in each case subject to VNG's determination, in its sole discretion, of available capacity.

4.02 Delivery Point(s).

The Customer's Delivery Point(s) shall be the point or points identified on Appendix A attached hereto. VNG is not obligated to deliver Gas to any points other than the Delivery Point(s) set forth in Appendix A; provided, however, Customer shall have secondary rights to schedule delivery of Gas to additional Delivery Points on the path between each primary Receipt Point and the corresponding primary Delivery Point identified on Appendix A, subject to VNG's reasonable discretion and the nomination and confirmation procedures set forth in the VNG Interconnect General Terms and Conditions. Once VNG has confirmed a Confirmed Volume for delivery to such a secondary point on a specific Gas Day, that point shall be considered a Delivery Point for that Confirmed Volume for that Gas Day for purposes of this Agreement.

4.03 Limitation on Use.

Customer hereby covenants that all volumes of Gas transported under this Agreement shall be burned or otherwise used by Customer within the Commonwealth of Virginia. Customer acknowledges and agrees that such covenant is a material inducement to VNG

entering into this Agreement and that any breach of such agreement will entitle VNG to immediately terminate this Agreement for cause without any cure right.

4.04 Pressure at Receipt and Delivery Point(s).

Gas shall be delivered to VNG at the Receipt Point(s) at pressures sufficient to allow the Gas to enter the VNG Interconnect Pipeline without exceeding the maximum allowable operating pressure of the VNG Interconnect Pipeline or interrupting or reducing the deliveries of Gas tendered by other customers receiving service on the VNG Interconnect Pipeline. Gas shall be delivered by VNG subject to the pressure specifications, if any, set forth in Appendix A attached hereto; provided, however, that any obligation of VNG to deliver Gas at a minimum delivery pressure is subject to adequate pressure being available at the Receipt Point(s).

ARTICLE V
TERM OF CONTRACT AND TERMINATION

5.01 Initial Term.

Unless this Agreement is earlier terminated as permitted herein or in the Precedent Agreement, dated [_____], 20[_], between VNG and Customer (the "**Precedent Agreement**"), transportation service hereunder will commence on the In-Service Date and will continue for an initial term ending on the twentieth (20^{th}) anniversary of the In-Service Date (the "**Initial Term**"). When this Agreement becomes effective and the In-Service Date occurs, this Agreement shall supersede and cancel the Precedent Agreement [and agreement(s) for transportation service listed in Appendix C (Appendix C to be added if applicable)].

5.02 Renewal Term(s).

Upon expiration of the Initial Term, this FTSA shall continue in effect for successive renewal terms of five (5) years (the "Renewal Term") unless terminated by Customer following its provision of written notice to VNG not less than two (2) years prior to the expiration of the Initial Term or any Renewal Term thereafter.

5.03 Termination for Breach.

A. Breach by Customer. If Customer breaches any of its material obligations under this Agreement and, if such breach is reasonably susceptible of being cured, Customer fails to cure such breach to VNG's reasonable satisfaction within thirty (30) days after VNG delivers written notice of such breach, then VNG may immediately terminate this Agreement (with no liability on the part of VNG to Customer whatsoever) by providing written notice to Customer, which termination shall be effective immediately upon VNG's provision of written notice of same to Customer. Whether or not VNG exercises such

termination right, VNG shall be entitled to all rights and remedies it may have, at law or in equity, for Customer's failure to perform its obligations hereunder. The Parties acknowledge and agree that Customer's obligations in Article III (Charges), Section 4.03 (Limitation on Use), and Article VI (Credit Support) are material obligations and further agree that any breach of the Customer's material obligations in Section 4.03 (Limitation on Use) and Article VI (Credit Support) are not reasonably susceptible of being cured.

B. Breach by VNG. If VNG breaches any of its material obligations under this Agreement and, if such breach is reasonably susceptible of being cured, VNG fails to cure such breach to Customer's reasonable satisfaction within thirty (30) days after Customer delivers written notice of such breach, then Customer may immediately terminate this Agreement (with no liability on the part of Customer to VNG whatsoever) by providing written notice to Customer, which termination shall be effective immediately upon Customer's provision of written notice of same to VNG. Whether or not Customer exercises such termination right, Customer shall be entitled to all rights and remedies it may have, at law or in equity, for VNG's failure to perform its obligations hereunder.

5.04 Termination Due to a Force Majeure Event.

If at any time after the In-Service Date, due to a Force Majeure Event, VNG is unable to perform its obligations under this Agreement, after exercising due diligence to remove the cause of such event or lessen its effect, for a continuous period of eighteen (18) months, unless VNG is continuing to act in good faith and with due diligence to correct such non-performance and can reasonably be expected to correct such non-performance within an additional six (6) month period, Customer shall be entitled to terminate this Agreement in which case neither Party shall have any liability to the other whatsoever other than payments due prior to the termination, provided that Customer shall provide not less than thirty (30) days' prior notice of termination of this Agreement and if, prior to the expiration of such thirty (30) day notice period, the cause of VNG's inability to perform its obligations is removed and VNG resumes performance of its obligations hereunder, then the termination notice shall be deemed null and void and this Agreement shall continue in full force and effect.

ARTICLE VI
CREDIT SUPPORT

6.01 The Credit Support Addendum between Company and Customer, dated as of the date of the Precedent Agreement, is incorporated herein by reference. At all times during the term of this FTSA, Customer shall fully comply with its obligations under the Credit Support Addendum and any uncured breach of its obligations thereunder shall be deemed a material breach of this FTSA.

ARTICLE VII
MISCELLANEOUS

7.01 Successors, Assigns and Assignment.

(a) Any person that succeeds by purchase, merger, or consolidation of title to the properties of VNG or Customer, shall be entitled to the rights and shall be subject to the obligations of its predecessor in interest under this Agreement. This Agreement shall be binding upon and inure to the benefit of the permitted successors and permitted assigns of the Parties.

(b) Neither Party shall assign this Agreement or any of its rights or obligations hereunder, unless it first shall have obtained the written consent thereto of the other Party, and such consent shall not be unreasonably withheld, conditioned or delayed as long as, in the event of assignment by Customer, (i) the assignee satisfies the creditworthiness requirements set forth in the Credit Support Addendum or (ii) Customer or its guarantor remains liable for any and all financial obligations arising under this Agreement. The foregoing notwithstanding, without the consent of the non-assigning Party, either Party or its respective successors or permitted assignees may assign any or all of its rights, titles, and interests hereunder to (A) an affiliate or (B) an entity that purchases all or substantially all of the assigning Party's assets; provided, however, in the event of a permitted assignment by Customer in accordance with the foregoing, (X) the assignee satisfies the creditworthiness requirements set forth in the Credit Support Addendum or (Y) Customer or its guarantor remains liable for any and all financial obligations arising under this Precedent Agreement. In addition, this Agreement may be assigned by Customer without VNG's consent to Customer's lender(s) as collateral security to such lenders, and VNG agrees to enter into an agreement directly with Customer's lenders under which VNG shall further evidence the consent to such assignment and will agree to other customary and reasonable provisions for the benefit of Customer's lenders.

(c) Customer shall provide VNG with thirty (30) days' advance written notice prior to Customer undergoing any Change of Control. For the purposes of this Section 7.01(c), "**Change of Control**" means any change in the ownership of more than fifty percent (50%) of the voting equity interests of Customer in one or more related transactions, whether direct or indirect, and whether by merger, consolidation, acquisition or other transaction.

7.02 No Third-Party Beneficiary.

This Agreement shall not create any rights in third parties, and no provision hereof shall be construed as creating any obligations for the benefit of, or rights in favor of, any person or entity other than VNG and Customer.

7.03 Waiver of Consequential Damages.

In no event shall either Party or their respective affiliates, or their respective officers, directors, employees or representatives, be liable hereunder at any time for exemplary, punitive, special, indirect, consequential, remote or speculative damages of the other Party, including loss of profit, loss of revenue or any other special or incidental damages, whether in contract, tort (including negligence), strict liability or otherwise, including any penalties or damages associated with PJM, other exchanges, or off-take of hedge contracts.

7.04 Notices.

Except as herein otherwise provided, any notice, request, or demand provided for in this Agreement, or any notice that either Party may desire to give to the other shall be in writing and shall be sufficiently given if delivered by overnight mail, overnight courier, hand delivered against written receipt, in each case to the address set forth below or to such other address as such Party may designate for itself by prior notice given in accordance with this Section 7.04. A notice shall be effective on the business day when received if received during 7:30 am to 5:30 pm Eastern Time on a business day; otherwise, the notice shall be deemed to have been received on the following business day. All references to a notice in this Agreement, including "notice," "notification," or "notify," means a formal notice provided pursuant to this Section 7.04. Either Party may change the address for notice by providing formal written notice to the other Party. Electronic mail, by itself, shall not be sufficient to constitute a formal notice for purposes of this Section 7.04.

VNG: Gas Supply
Virginia Natural Gas
544 S. Independence Blvd
Virginia Beach, VA 23452
Attn: Kenneth Yagelski
Email: kyagelsk@southernco.com

and to:

Office of General Counsel
Southern Company Gas
Ten Peachtree Place, NW
19th Floor
Atlanta, Georgia 30309
Attn: David Slovensky

Customer: [Department]
[Company]
[Address]
[City, State Zip]
Attn: [Name]

7.05 GOVERNING LAW.

THIS AGREEMENT SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH, AND ITS VALIDITY DETERMINED PURSUANT TO, THE LAWS OF THE COMMONWEALTH OF VIRGINIA, WITHOUT REGARD TO ITS CONFLICTS OF LAWS PRINCIPLES.

7.06 Confidentiality.

The terms of this Agreement shall be kept confidential by the Parties, except to the extent that any information must be disclosed to a third party as may be required by law or regulatory proceeding or for the purpose of effectuating service; provided, however, that in the event of such disclosure, the disclosing Party shall attempt to obtain a protective order or enter into a protective agreement to preserve the confidentiality of this Agreement to the greatest extent reasonably possible; provided that each Party may disclose the terms to officers, agents, lenders and other advisors of the Party (or its affiliates), including prospective purchasers of a Party or all, or substantially all, of a Party's assets or of any rights under this Agreement, that have a bona fide need to have such information and have agreed to use the information only for the purpose intended herein and to keep such information confidential.

7.07 Representations and Warranties.

Each Party represents and warrants to the other Party, as of the date of this Agreement, that (a) it is duly organized and validly existing under the laws of its state of formation and has all requisite legal power and authority to execute this Agreement and carry out the terms, conditions and provisions hereof; (b) this Agreement constitutes the valid, legal and binding obligation of the Party, enforceable in accordance with the terms hereof; (c) other than the governmental and regulatory authorizations contemplated in the Precedent Agreement, there are no actions, suits or proceedings pending or, to the Party's knowledge, threatened against or affecting the Party before any Governmental Authority that are reasonably expected to materially adversely affect the ability of the Party to meet and carry out its obligations hereunder; and (d) the execution and delivery by the Party of this Agreement has been duly authorized by all requisite corporate action.

7.08 Forward Contract Merchants

The Parties acknowledge and agree that this Agreement constitutes a "forward contract" and the Parties agree that both Parties are "forward contract merchants" within the meaning of the United States Bankruptcy Code.

7.09 Provisions Severable.

If any provision of this Agreement is found by a Governmental Authority to be unenforceable or invalid, such unenforceability or invalidity will not render this Agreement unenforceable or invalid as a whole; rather, this Agreement will be construed as if not containing the particular invalid or unenforceable provision or portion thereof, and the rights and obligations of the Parties hereto will be construed and enforced accordingly. In such event, the Parties will negotiate in good faith a replacement provision that would best accomplish the objectives of such unenforceable or invalid provision within the limits of applicable law or applicable court order.

7.10 Survival.

Any and all rights and obligations contained herein, which by their nature or effect are required or intended to be observed, kept or performed after termination of this Agreement, will survive the termination of this Agreement and remain binding upon and for the benefit of the Parties hereto, including, without limitation, the obligations in Article III (Charges), Section 4.03 (Limitation on Use), and Article VI (Credit Support).

7.11 Entire Agreement.

This Agreement (including all of its appendices and Rate Schedules [VI-LFT / TRFT] and VI-IT and the VNG Interconnect General Terms and Conditions, each of which are incorporated herein and made part hereof), together with any surviving provisions of the Precedent Agreement executed by VNG and Customer, contains the entire agreement between the Parties with respect to the subject matter hereof and, except as stated herein and therein; there are no other oral promises, agreements or warranties affecting the subject matter hereof.

7.12 Amendments / Waivers.

No modification, amendment, extension or waiver of or under this Agreement will be valid unless made in writing and signed by an authorized representative of each Party, in the case of an amendment, and the waiving Party, in the case of a waiver. Any waiver by either Party of any breach or failure to require strict performance of the terms and conditions of this Agreement shall in no way affect, limit, or waive such Party's right thereafter to enforce and compel strict compliance with this Agreement, shall in no way be construed as a waiver of any prior breach or failure not identified in such written waiver, and shall in

no way be construed as a waiver of any continuing or subsequent breach or failure to perform in strict compliance with this Agreement.

7.13 Headings

All headings appearing herein are for convenience and reference purposes only, and shall not be considered a part of this Agreement for the purpose of interpreting, construing, varying, altering, or modifying this Agreement or any of its provisions.

7.14 Multiple Counterparts.

This Agreement may be executed by the Parties in multiple counterparts, each of which will be deemed an original instrument, but all of which will constitute one and the same Agreement.

[Signature page follows]

IN WITNESS THEREOF, the Parties hereto have caused this Agreement to be executed by their proper officers thereunto duly authorized as of the day and year first above written.

VIRGINIA NATURAL GAS, INC.	**[CUSTOMER]**
By: _____	By: _____
Name: _____	Name: _____
Title: _____	Title: _____

APPENDICES

Appendix A: Receipt Point(s) and Delivery Point(s)

Appendix B: Rate Calculation Methodology

APPENDIX A
RECEIPT POINT(S) AND DELIVERY POINT(S)

Primary/Secondary Receipt Point	Primary/Secondary Delivery Point	MDCQ
Total MDCQ		

APPENDIX B
RATE CALCULATION METHODOLOGY

Line 1:	Rate Base (Add Gas Plant in Service (including AFUDC), Less Reserve for Depreciation, Add Working Capital, Less Deferred Income Taxes)	$ ___
Line 2:	Return (Line 1 x [8.47%])	$ ___
Line 3:	Expenses and Taxes (O&M and Depreciation Expense, Taxes Other than Income Taxes)	$ ___
Line 4:	Total Cost of Service (Add Lines 2 and 3)	$ ___
Line 5:	Daily Contract Quantity (Dth)	_____
Line 6:	Billing Determinant (Dth) (Line 5 x 365 days)	_____
Line 7:	FT Capacity Charge ($/Dth/day) (Line 4 / Line 6)	$ ___

Note: All items above, including dollar amounts, rate of return (used in Line 2), and quantities (Lines 5 and 6), are estimates as of [_____], 20[_] are for the Rate Schedule [VI-LFT / TRFT] project as a whole, not any particular customer's share, and will be adjusted based on final, actual information. Dollar amounts in Lines 1 through 4 are shown in millions.

VNG INTERCONNECT GENERAL TERMS AND CONDITIONS FOR SERVICE UNDER RATE SCHEDULES VI-LFT, VI-TRFT, AND VI-IT

I. DEFINITION OF TERMS; INTERPRETATIONS

A. Definitions. The capitalized terms used in the Rate Schedules and the FTSA, have the meanings set forth below, unless otherwise defined therein. The capitalized terms used but not defined herein have the meanings set forth in the FTSA or Rate Schedules, as applicable.

British Thermal Unit ("Btu"). The amount of heat required to raise the temperature of one (1) pound of water from fifty-nine degrees (59°) Fahrenheit to sixty degrees (60°) Fahrenheit at a constant pressure of 14.73 Psia.

Commission. The Virginia State Corporation Commission.

Customer. The party identified as the customer in the applicable FTSA who is receiving VI-LFT Service or VI-TRFT Service, as applicable, and such party's permitted successors and assigns.

Confirmed Volume. The quantity of Gas (in Dekatherms) that is confirmed by VNG for delivery to Customer on any Gas Day pursuant to the FTSA and the nomination and confirmation procedures set forth in these VNG Interconnect General Terms and Conditions.

Contract Year. The 365-day period (or 366-day period in the case of a year that includes February 29th) beginning on the first Gas Day of the In-Service Date and each subsequent anniversary of such day.

Dekatherm ("Dth"). One Dth shall mean one million (1,000,000) Btu.

Delivery Point(s). The point(s) identified on Appendix A of the applicable FTSA where VNG will deliver Gas to Customer under such FTSA.

Eligible Interruptible Customers. Each customer eligible to receive interruptible service pursuant to a firm transportation service agreement with VNG entered into in connection with Rate Schedules VI-TRFT, VI-LFT, PT-1, PT-2 and/or CGV-TS.

Firm Transportation Service Agreement ("FTSA"). The service agreement entered into by VNG and Customer regarding the provision of VI-TRFT Service, VI-LFT Service, and VI-IT Service.

Force Majeure Event. Any event that prevents or delays performance, in whole or in part, by either Party of its obligations under the Agreement and is beyond the reasonable control and without the fault or negligence of the Party claiming such event, including but not limited to accidents, acts of God, strikes, lockouts, acts of the public enemy, wars, blockades, insurrections, riots, epidemics, landslides, lightning, inclement weather, earthquakes, volcanoes, fires, storms, floods, washouts, major restrictions on use or breakdown of VNG's equipment (including pipe or related equipment), a binding order issued by a Governmental Authority and any other cause, whether of the kind herein enumerated or otherwise, existing or

future, foreseen or unforeseen; provided, however, that an interruption in the transportation of Customer's Gas upstream of VNG's system or maintenance activities on VNG's system or Customer's facilities do not constitute a Force Majeure Event under this Agreement.

FT Capacity Charges. FT capacity Charges are defined Section III.C (Rate Change) and the applicable Rate Schedule.

Gas. Natural gas that satisfies the gas quality specifications set forth herein.

Gas Day. The period of twenty-four (24) consecutive hours beginning and ending at 9:00 a.m. Central Time.

Governmental Authority. Any court, governmental or quasi-governmental agency, commission or bureau having jurisdiction over VNG, the Customer or any transactions contemplated by the FTSA.

Gross Heating Value. The number of Btu's determined on a dry basis which would be produced by the combustion, in a recording calorimeter at a constant pressure, of the amount of such Gas which would occupy a volume of one cubic foot at a temperature of sixty degrees (60°) Fahrenheit and under a pressure of 14.73 Psia with air of the same temperature and pressure as the Gas, when the products of combustion are cooled to the initial temperature of the Gas and air and when the water vapor formed by combustion is condensed to the liquid state.

VI-IT Service. The interruptible service provided on the VNG Interconnect Pipeline pursuant to Rate Schedule VI-IT.

VI-LFT Service. The limited firm transportation service provided on the VNG Interconnect Pipeline pursuant to Rate Schedule VI-LFT.

VI-TRFT Service. The firm transportation service provided on the Transco Interconnect pursuant to Rate Schedule VI-TRFT.

VNG Interconnect Pipeline. Those portions of the natural gas pipeline facilities constructed, owned and operated by VNG that permit the firm transportation of Gas volumes in excess of the Subscribed JUP Capacity from certain supply interconnects on VNG's high-pressure transmission system to the Delivery Points between Quantico, Virginia and Mechanicsville, Virginia; provided, however, that the VNG Interconnect Pipeline does not include the pipeline facilities utilized by VNG to deliver Subscribed JUP Capacity under Rate Schedules PT-1, PT-2 and CGV-TS.

In-Service Date. The date when all of the VNG Interconnect Pipeline facilities have been constructed and placed into service such that VNG is physically capable and legally authorized to provide service pursuant to and in accordance with the FTSA between VNG and each Customer entitled to receive service under Rate Schedules VI-TRFT or VI-LFT.

Joint Use Pipeline or JUP. The Joint Use Pipeline as defined in PT1 and PT2.

JUP Confirmed Volume. The quantity of Gas that is confirmed by VNG for delivery to Customer on any Gas Day pursuant to Rate Schedules PT-1, PT-2 and/or CGV-TS.

JUP MDCQ. The maximum daily contract quantity of Gas specified in the transportation service agreement between VNG and each customer receiving service under Rate Schedules PT-1, PT-2 or CGV-TS.

Mcf. The volume of Gas occupying one thousand (1,000) cubic feet at a temperature of sixty degrees (60°) Fahrenheit at a base pressure of 14.73 Psia.

MDCQ. The maximum daily contract quantity of Gas (in Dekatherms) specified in the FTSA between VNG and the Customer.

Prime Rate. The prime rate announced from time to time by JP Morgan Chase, or its successor, at its principal office in the City of New York as its prime commercial lending rate.

Psia. Pounds per square inch absolute.

Rate Schedules. The VI-TRFT Rate Schedule, the VI-LFT Rate Schedule, and the VI-IT Rate Schedule, as applicable.

Receipt Point(s). The primary and/or secondary points identified on Appendix A of the applicable FTSA where VNG shall accept Gas on behalf of Customer for transportation under such FTSA.

Received Volume. That portion of Customer's Confirmed Volume of Gas that is actually delivered to and received by VNG at the applicable Receipt Point(s), which Received Volume shall not exceed the Confirmed Volume.

Retainage. The sum of (i) company-use Gas, including Gas burned or otherwise used by VNG to operate the compressors and other facilities relating to the VNG Interconnect Pipeline, (ii) lost-and-unaccounted for Gas, and (iii) any Gas withheld by VNG to offset the costs of electricity used to operate compressors and other facilities relating to the VNG Interconnect Pipeline.

Retainage Factor. A percentage determined by dividing the annual Retainage volume by the total annual volume of Gas received by VNG at all Receipt Points on the VNG Interconnect Pipeline, which estimated and actual volumes will be determined annually by VNG as set forth in these General Terms and Conditions.

Subscribed JUP Capacity. The quantity of Gas that, as of the In-Service Date of the VNG Interconnect Pipeline, VNG is obligated to deliver on a firm basis to customers receiving transportation service under Rate Schedules PT-1, PT-2 and CGV-TS.

Transco Interconnect. Those portions of the VNG Interconnect Pipeline connecting the Transco Gas Pipeline, as a new supply interconnect, to VNG's high-pressure transmission system near Quantico, Virginia.

Unauthorized Use Charge. The charge for Unauthorized Use Gas set forth in the applicable Rate Schedule.

Unauthorized Use Gas. The total quantity of Gas taken by Customer at the Delivery Point(s) in any Gas Day in excess of the Customer's Confirmed Volume for such Gas Day.

VNG. Virginia Natural Gas, Inc., a Virginia public service corporation.

B. Interpretations.

(a) The singular shall include the plural, and the masculine shall include the feminine and neuter, as the context requires.

(b) The terms "includes" or "including" means "including, but not limited to."

(c) Any term not defined herein or elsewhere in the FTSA or Rate Schedules (including in any amendment, appendix, or change order) that is used herein (or in the FTSA or Rate Schedules, as applicable), shall have its plain meaning in common English usage provided that words and abbreviations having well-known meaning in the United States natural gas industry shall have those meanings.

(d) Reference to an agreement, contract, or document shall include any subsequent amendments to such agreement, contract, or document unless otherwise stated herein.

(e) Reference to a Party includes that Party's successors and permitted assigns.

(f) Reference to a governmental authority shall include an entity succeeding to its functions.

(g) All documents required to be provided as set forth herein (or in the FTSA or Rate Schedules, as applicable) shall be in English.

(h) All monetary amounts contained herein (or in the FTSA or Rate Schedules, as applicable) refer to the currency of the United States.

(i) All references herein (or in the FTSA or Rate Schedules, as applicable) to time shall mean "Central Prevailing Time." Central Prevailing Time means either Central Standard Time or Central Daylight Savings Time, as in effect, from time to time.

II. LIMITATION ON USE

The volume of Gas transported under the FTSA shall be solely for use by Customer within the Commonwealth of Virginia.

III. PAYMENT TERMS

A. Monthly Invoice. VNG shall, on or before the tenth (10th) day of each month, render to Customer a statement and invoice for the Customer's prior month charges determined in accordance with the applicable Rate Schedules. Such invoice shall also show the total volume in Mcf, the Gross Heating Value and the total quantity in Dths of Gas that was delivered to Customer by VNG during such prior month.

B. Payment. Customer shall pay VNG all invoices by wire transfer or ACH to the account number specified by VNG by the later of the fifteenth (15th) day of the month or ten (10) days following the date of the invoice. Should Customer fail to pay the entire amount of any invoice rendered as herein provided when such amount is due, interest on the unpaid

portion of the invoice shall accrue at an annual rate equal to one hundred (100) basis points above the Prime Rate from the due date until the date of payment, but not to exceed one and one-half (1½) percent per month simple interest. Any late payments made by Customer shall be applied first to the invoice first outstanding and applied to subsequent invoices only as prior invoices are fully paid.

C. Rate Change. The FT Capacity Charges set forth in Rate Schedules VI-TRFT and VI-LFT have been calculated in accordance with the methodology shown on Appendix B to the FTSA between VNG and Customer and is based on VNG's good faith estimate of the costs related to construction of the VNG Interconnect Pipeline. As soon as practicable after the In-Service Date, VNG shall file with the Commission revisions to Rate Schedules VI-TRFT and VI-LFT based on actual costs incurred to construct the VNG Interconnect Pipeline and the total MDCQ of the VNG Interconnect Pipeline in effect as of such filing date. VNG shall, on or around the beginning of each Contract Year, adjust the operations & maintenance expenses that VNG has incurred or expects to incur in connection with the VNG Interconnect Pipeline and adjust the FT Capacity Charge applicable to the upcoming Contract Year(s) to reflect such adjustment. If VNG over or under collected for operations and maintenance expenses in the prior Contract Year, the adjustment for the upcoming Contract Year shall include a true-up of the over or under collection from the prior Contract Year. VNG further reserves the right at all times and in any manner permitted by law and the applicable rules and regulations of the Commission to change or modify by revision, amendment, supplement, or otherwise, Rate Schedules VI-TRFT, VI-LFT, and VI-IT and these VNG Interconnect General Terms and Conditions. Customer shall not be prohibited from formally or informally objecting to any filing made by VNG before the Commission, including not limited to, any filing to change the FT Capacity Charges applicable to Customer's service received pursuant to Rate Schedule VI-TRFT and VI-LFT.

D. Disputes and Adjustments for Billing Errors. All statements, invoices, and payments shall be final unless disputed in writing within twelve (12) months from the date of invoice or payment. If Customer in good faith disputes the amount of any invoice rendered or part thereof, it shall pay to VNG the full amount of the invoice and give notice to VNG in writing that it is paying that portion of the invoice it believes is incorrect under protest. VNG and Customer shall use their commercially reasonable efforts to informally resolve, by mutual agreement, any such dispute promptly, equitably, and in good faith and shall provide each other in a timely manner reasonable documentation of, and relating to, such dispute. If any dispute is not resolved within sixty (60) days of its initial documentation, the parties may pursue any remedy available to them under law or equity. Any amount ultimately determined to have been billed to Customer in error shall be refunded, including interest at the Prime Rate on such amount, from the date of payment by Customer to the date of refund by VNG; provided, however, that VNG may, at its option, credit such refund amount to reduce the amount owed by Customer on subsequent invoices.

E. Tax Reimbursement. In addition to the other charges set forth in the FTSA, Customer agrees to reimburse VNG for all taxes, other than state and federal income taxes, that may be assessed, levied upon and/or be paid by VNG, in connection with the transportation service provided by VNG under the FTSA.

IV. RETAINAGE

On or around the beginning of each Contract Year, VNG shall estimate, in its reasonable discretion, the Retainage Factor to be applied in the upcoming Contract Year for each Rate

Schedule, which estimate will account for any differences between the estimated and actual Retainage volumes for the prior Contract Year. VNG shall retain from the daily volume of Gas that Customer delivers to VNG at the Receipt Point(s) a percentage of such Gas equal to the applicable Retainage Factor. If VNG becomes aware of a material difference between the estimated and actual Retainage volumes at any time, then VNG may promptly adjust the Retainage Factor in effect for the remainder of the Contract Year and/or assess a Retainage charge in addition to the other charges set forth in the FTSA.

V. NOMINATIONS / BALANCING

A. For each Gas Day on which Customer desires VI-TRFT Service, VI-LFT Service, and/or VI-IT Service, Customer shall submit a nomination in the Southern Company Gas nomination system for the quantities of Gas it desires to deliver to VNG at the Receipt Point(s). Customer shall also submit a corresponding nomination to the applicable upstream interstate pipeline from which the Gas will be delivered to VNG. VNG shall confirm or modify Customer's nominations based on (i) VNG's consultations with the applicable interstate pipeline regarding upstream deliveries into the VNG system on behalf of Customer and (ii) if Customer's nomination includes VI-IT Service for volumes in excess of Customer's MDCQ, VNG's determination of whether capacity is available, on an interruptible basis, to accommodate Customer's request. Any discrepancies between Customer's nominations in the Southern Company Gas nomination system and the nomination confirmed by the applicable upstream interstate pipeline will be resolved by Southern Company Gas confirming the lower of the two nominations. VNG shall post on the Southern Company Gas nomination system the Customer's quantity of Gas scheduled for delivery, which shall be referred to as Customer's Confirmed Volume. Nomination and confirmation deadlines shall conform to the North American Energy Standards Board time schedules in effect at the time of each nomination and confirmation.

B. Customer shall be solely responsible for managing and scheduling deliveries to VNG at the Receipt Point(s) in an amount equal to the Confirmed Volume.

C. Customer shall provide VNG daily and hourly usage forecasts for VI-LFT Service as requested by VNG.

VI. INTERACTION WITH OTHER RATE SCHEDULES

A. If, on any Gas Day, Customer is eligible to receive interruptible service on both (i) the VNG Interconnect Pipeline under Rate Schedule VI-IT and (ii) the Joint Use Pipeline under and as defined in Rate Schedules PT-1, PT-2 and/or CGV-TS, then any interruptible volumes of Gas nominated, confirmed and delivered on behalf of such Customer for such Gas Day shall be deemed interruptible volumes delivered under Rate Schedule VI-IT.

B. If, on any Gas Day, Customer is eligible to receive firm service on both (i) the VNG Interconnect Pipeline under Rate Schedules VI-TRFT or VI-LFT and (ii) the Joint Use Pipeline under and as defined in Rate Schedules PT-1, PT-2 and/or CGV-TS, then any volumes of Gas taken by Customer in excess of the sum of Customer's Confirmed Volume and JUP Confirmed Volume shall be deemed Unauthorized Use Gas assessed the Unauthorized Use Charge set forth in the applicable Rate Schedule

VII. RESPONSIBILITY FOR GAS

As between Customer and VNG:

A. VNG shall be responsible for all Gas delivered to it by Customer between the time such Gas is received by it from Customer at any Receipt Point and the time Gas is redelivered to Customer by VNG at any Delivery Point.

B. Customer shall be responsible for all Gas prior to its delivery by Customer to VNG at the Receipt Point and after its redelivery by VNG to Customer at the Delivery Point.

C. VNG shall be deemed to be in control and possession of Customer's Gas from the time the Gas is received by VNG for Customer at the Receipt Point until such Gas is redelivered by VNG for Customer at the Delivery Point, and VNG shall assume all risk of loss for such Gas (except for lost-and-unaccounted for Gas that is part of Retainage) and shall be responsible for and hold Customer harmless of and from any damage or injury caused thereby, except to the extent such damage or injury is caused by the negligence or willful misconduct of Customer or Customer's upstream suppliers or transporters.

D. Customer shall be deemed to be in control and possession of Customer's Gas prior to its delivery to VNG at the Receipt Point and after VNG's delivery to Customer at the Delivery Point, and Customer shall assume all risk of loss for such Gas and shall be responsible for and hold VNG harmless of and from any damage or injury caused thereby, except to the extent such damage or injury is caused by the negligence of VNG.

VIII. QUALITY OF GAS

Customer is solely responsible for ensuring that all Gas received by VNG at the Receipt Points meets or exceeds the Gas quality specifications applicable to the connecting interstate pipelines upstream of the Receipt Points, including the specifications set forth in the tariffs governing such pipelines and the rules and regulations issued by the United States Federal Energy Regulatory Commission and the United States Department of Transportation Pipeline and Hazardous Materials. VNG disclaims any liability and makes no warranty or representation with respect to the quality or constituents of the Gas received by VNG at the Receipt Point.

IX. DETERMINATION OF VOLUMES

A. The volume of Gas deemed to be delivered to Customer shall be the volume of Gas that is metered at Customer's Delivery Point(s), corrected to 14.73 Psia and sixty degrees (60°) Fahrenheit.

B. The volume of Gas deemed to be received by VNG from Customer at Customer's Receipt Point(s) shall be the volume of Gas determined by the applicable interstate pipeline.

X. MEASURING EQUIPMENT

A. VNG's measuring equipment:

i) At each Receipt Point and for each Delivery Point, VNG shall cause to be furnished, installed, maintained, and operated all equipment, devices and material

necessary to determine the quantities of Gas received or delivered. All such equipment, devices or material shall be consistent with the approved standards and general use in the industry and approved for use by VNG. Unless otherwise agreed by VNG and Customer, the initial cost of such equipment, devices, and materials shall be borne by Customer, but such equipment, devices, and materials shall be owned by VNG.

ii) Any type of meter (i.e. orifice, rotary, turbine, ultra-sonic, etc.) used in providing services under the FTSA shall meet all current American Gas Association ("AGA") standards and requirements as well as any specific requirement of VNG.

iii) Measuring equipment shall be of a type acceptable to VNG and consistent with the approved standards of VNG as well as those in general use in the industry. Such meters may be equipped with a device for recording flow rates and/or a device for integrating the product of the volume of Gas measured multiplied by pressure and temperature corrections and indicating the volume of Gas received or delivered, which device must meet the approved standards of VNG.

iv) Recording chromatographs shall be of a standard type acceptable to VNG and consistent with the approved standards in general use in the industry.

v) Recording specific gravity instruments shall be of a standard manufacture acceptable to VNG and consistent with the approved standards in general use in the industry and shall be installed so as to properly record the specific gravity of the Gas by the use of an Edwards balance or by any other method acceptable to VNG and consistent with the approved standards in general use in the industry.

B. At each Receipt Point and each Delivery Point, Customer at its own expense may cause to be furnished, installed, maintained and operated check measuring equipment; provided, however, that such equipment does not interfere with the operations of the measuring equipment installed by VNG and that such equipment shall not be used for billing purposes.

C. Access to measuring equipment, installation, and accuracy:

i) VNG and Customer, in the presence of each other, shall have visual access to the other's measuring equipment at all reasonable times, but the reading, calibrating and adjusting thereof and the changing of charts shall be done only by the Party that installed such equipment and shall be done in accordance with the approved methods in general use in the industry unless otherwise agreed upon. Both VNG and Customer shall have the right to be present at the time of any installing, reading, cleaning, changing, repairing, inspecting, testing, calibrating, or adjusting done in connection with the other's equipment. The records from such measuring equipment shall remain the property of the Party installing such equipment, but, upon request, each Party shall submit to the other its records and charts, together with calculations therefrom, for inspection, subject to return within thirty (30) days after receipt thereof.

ii) VNG shall exercise reasonable care in the installation, maintenance and operation of its measuring equipment so as to avoid any inaccuracy in the determination of the volume and other attributes of Gas received and delivered.

iii) The accuracy of VNG's measuring equipment shall be verified by VNG at least every four months and, if requested, in the presence of an Authorized Customer Representative. If, after notice, Customer fails to have an Authorized Customer Representative present and VNG determines the results of the test are accurate, then Customer forfeits its right to dispute the accuracy of such test. All required measuring equipment tests shall be made at the expense of VNG. Customer may request additional measuring equipment tests as often as desired, at the Customer's expense; provided however, if the variance in the accuracy of such a test is found to exceed two percent (2%) at a reading corresponding to the average hourly rate of flow, the cost of such test shall be at VNG's expense.

iv) A meter shall be considered operationally accurate when it tests within the accuracy limit of 98% (2% error slow) to 102% (2% error fast). Meters or measurement equipment tested and found to be within this accuracy limit shall be considered accurate and no corrective action shall be taken. If a meter is tested and found to be outside of this accuracy limit, corrective action shall be taken by VNG to bring the measurement back within the accuracy limit, and the flow rate since the preceding test will be adjusted to correct for the percentage error found outside the accuracy limit. Any recording equipment found to be registering inaccurately shall be immediately adjusted to register accurately.

v) If VNG's measuring equipment at any Receipt Point or Delivery Point is out of service or is found to be registering inaccurately by more than two percent (2%) and the duration of the error is not determinable by test, then previous recordings from or deliveries through such equipment since the preceding test shall be estimated (i) by using the data recorded by any check measuring equipment accurately registering, or (ii), if such check measuring equipment is not registering accurately but the percentage of error is ascertainable by a calibration test, by using the data recorded and corrected to zero error, or (iii), if neither of the methods provided in clauses (i) and (ii) above can be used, by estimating the necessary determinants by reference to receipts or deliveries under similar conditions. These estimated readings shall be used in determining the volume of Gas delivered at such Receipt Point or Delivery Point since the preceding test.

XI. MEASUREMENTS

A. Base. The volumetric measurement base of all volumes of Gas shall be one (1) cubic foot of Gas at a pressure base of 14.73 Psia, at a temperature of sixty degrees (60°) Fahrenheit and without adjustment for water vapor content.

B. Computation of Volume from Meter Readings. Gas volumes shall be computed in accordance with industry standards for the applicable measurement device.

C. Temperature. The flowing temperatures of the Gas shall be determined by the use of standard continuously recording thermometers. The flowing temperatures used in determining the flowing temperature factor for each meter chart shall be the arithmetical

average of the temperatures at each hour shown by the recording thermometer during the period of time covered by the meter chart.

D. Specific Gravity. The specific gravity of the Gas shall be determined by a recording specific gravity instrument as specified in Section X.A hereof. The arithmetical average of the hourly specific gravity recording each day shall be deemed to be the specific gravity of the Gas that day.

E. Correction. Measured Gas volumes shall be corrected for supercompressibility (deviation of the Gas from the laws of ideal gasses) at the pressures and temperatures at which the Gas is measured. Except as otherwise agreed by VNG and Customer, the factors for such corrections shall be obtained from data contained in the AGA Report No. 8, Compressibility Factor of Natural Gas and Related Hydrocarbon Gases (1994) or any subsequent revision or replacement thereof.

F. Heating Value. The Gross Heating Value of the Gas shall be determined by use of a recording chromatograph as specified in Section X.A hereof. The arithmetical average of hourly gross heating values shall be deemed to be the Gross Heating Value of the Gas for such day.

G. Measurement on VNG Equipment. Subject to the provisions of Articles X and XI hereof, measurement of Gas volumes and Gross Heating Values shall be as recorded on or computed from the measuring equipment and devices installed and operated by VNG.

XII. WARRANTY

A. Customer Warranty. Customer warrants that it will have at the time of delivery to VNG at the Receipt Point good title to the Gas and the right and authority to deliver the Gas to VNG for transportation hereunder and that such Gas will be free and clear of all liens, encumbrances and adverse claims whatsoever.

B. VNG Warranty. VNG warrants that title to the Gas at the time of delivery to Customer at the Delivery Point shall not have been impaired by VNG and VNG shall have the right and authority to deliver such Gas to the Delivery Point.

XIII. GOVERNMENTAL AUTHORITY

A. Compliance with Laws. In performance of the applicable FTSA, Customer and VNG shall comply with all applicable laws, rules, regulations and ordinances of any Governmental Authority.

XIV. ASSET MANAGEMENT

A. Asset Manager. Customer may notify VNG that it is using a third party to manage its firm transportation service ("Asset Manager") under Rate Schedules VI-TRFT and VI-LFT. Such Asset Manager shall be permitted to make nominations and schedule services on behalf of Customer and receive service on behalf of Asset Manager when Customer is not using its firm transportation capacity.

XV. MAINTENANCE

A. Maintenance. Each Party will use commercially reasonable efforts to provide the other Party prior notification of any scheduled maintenance activities that will impact service under this Agreement.

RATE SCHEDULE VI-TRFT
TRANSCO LATERAL FIRM TRANSPORTATION SERVICE

I. APPLICABILITY

This Rate Schedule VI-TRFT shall be applicable to any Customer that has entered into a Firm Transportation Service Agreement ("FTSA") with VNG for pipeline transportation service solely on the Transco Interconnect and no other portion of the VNG Interconnect Pipeline, which service is referred to herein as VI-TRFT Service.

II. CHARACTER OF SERVICE

A. On any one Gas Day, VNG shall accept Gas on behalf of Customer at the primary Receipt Point(s), up to the Customer's total MDCQ applicable to each primary Receipt Point (plus the applicable Retainage volume), and shall transport and deliver such Gas, less the Retainage as allocated to Customer by application of the Retainage Factor, on a firm basis to the Delivery Point(s), subject to the terms and conditions of this Rate Schedule VI-TRFT, the FTSA and the VNG Interconnect General Terms and Conditions.

B. In no event shall VNG be obligated to deliver, on an hourly basis, a volume of Gas greater than five (5) percent of Customer's MDCQ.

C. In no event shall VNG be obligated to deliver, on a daily or hourly basis, a volume of Gas greater than the Customer's Received Volume delivered to the applicable Receipt Point(s) less the Retainage allocated to Customer by application of the Retainage Factor.

III. CHARGES

VNG shall establish accounting procedures and accounts separate from its distribution operations to identify and record VI-TRFT capital costs and operation and maintenance expenses incurred by VNG. VNG shall not assign to such accounts any capital costs or operation and maintenance expenses unrelated to VI-TRFT service. The following charges for VI-TRFT Service shall apply during the term of the FTSA between VNG and Customer:

A. The FT Capacity Charge, which shall be calculated as the product of:
   i) the monthly rate of $[___], and
   ii) Customer's MDCQ specified in the FTSA between VNG and Customer.

B. An Unauthorized Use Charge, if applicable, which shall be calculated as the product of:
   i) the daily rate of the sum of 1.5 times the Transco Zone 5 North index price published in Platt's Gas Daily and $30 per MMBtu, and
   ii) the total quantity of Unauthorized Use Gas taken by Customer in any Gas Day.

C. Any penalty charges imposed on VNG from upstream interstate pipelines resulting from acts or omissions of Customer in relation to the service provided under this Rate Schedule VI-TRFT, including, without limitation, any imbalance charges.

D. Any late payment charge or retainage charge due pursuant to the VNG Interconnect General Terms and Conditions.

E. Any other charge or amount agreed upon in the FTSA between VNG and Customer.

F. During a Force Majeure Event, as that term is defined in the VNG Interconnect General Terms and Conditions, lasting longer than ten (10) consecutive days, Customer will not be responsible for any FT Capacity Charges during the period after the first ten (10) consecutive days of such event ("Reservation Charge Credit"); provided, however, the Initial Term of the FTSA shall be extended day-for-day for each day that Customer receives a Reservation Charge Credit during the Initial Term of the FTSA.

IV. GENERAL TERMS AND CONDITIONS

This Rate Schedule VI-TRFT incorporates by reference the VNG Interconnect General Terms and Conditions on file with the Commission, as amended from time to time.

V. DEFINITION OF TERMS

All capitalized terms used but not defined herein have the meanings set forth in the VNG Interconnect General Terms and Conditions or the FTSA, as applicable.

RATE SCHEDULE VI-LFT
LIMITED FIRM TRANSPORTATION SERVICE

I. APPLICABILITY

This Rate Schedule VI-LFT shall be applicable to any Customer that has entered into a Firm Transportation Service Agreement ("FTSA") with VNG for limited firm pipeline transportation service on the VNG Interconnect Pipeline, which service is referred to herein as VI-LFT Service.

II. CHARACTER OF SERVICE

Service under this Rate Schedule VI-LFT shall be available on the following schedule:

A. On any Gas Day for which the average daily temperature at the Richmond, Richmond International Airport (RIC) is forecasted by the National Weather Service to be warmer than 55° Fahrenheit as shown in the forecast immediately preceding 9:00 a.m. Eastern Standard Time of the day prior to the Gas Day ("Available Gas Day"), the MDCQ will be limited to 220,000 Dth.

B. On any Gas Day for which the average daily temperature at the Richmond, Richmond International Airport (RIC) is forecasted by the National Weather Service to be between 45° Fahrenheit and 54° Fahrenheit as shown in the forecast immediately preceding 9:00 a.m. Eastern Standard Time of the day prior to the Gas Day ("Available Gas Day"), the MDCQ will be limited to 128,000 Dth.

C. On any Gas Day for which the average daily temperature at the Richmond, Richmond International Airport (RIC) is forecasted by the National Weather Service to be colder than 45° Fahrenheit as shown in the forecast immediately preceding 9:00 a.m. Eastern Standard Time of the day prior to the Gas Day ("Available Gas Day"), the MDCQ will be limited to 42,500 Dth.

D. On any one Available Gas Day, VNG shall accept Gas on behalf of Customer at the primary Receipt Point(s), up to the Customer's total MDCQ applicable to each primary Receipt Point (plus the applicable Retainage volume), and shall transport and deliver such Gas, less the Retainage as allocated to Customer by application of the Retainage Factor, on a firm basis to the Delivery Point(s), subject to the terms and conditions of this Rate Schedule VI-LFT, the FTSA and the VNG Interconnect General Terms and Conditions.

E. In no event shall VNG be obligated to deliver, on an hourly basis, a volume of Gas greater than five (5) percent of Customer's MDCQ.

F. In no event shall VNG be obligated to deliver, on a daily or hourly basis, a volume of Gas greater than the Customer's Received Volume delivered to the applicable Receipt Point(s) less the Retainage allocated to Customer by application of the Retainage Factor.

III. CHARGES

VNG shall establish accounting procedures and accounts separate from its distribution operations to identify and record VI-LFT capital costs and operation and maintenance expenses

incurred by VNG. VNG shall not assign to such accounts any capital costs or operation and maintenance expenses unrelated to VI-LFT service. The following charges for VI-LFT Service shall apply during the term of the FTSA between VNG and Customer:

A. The FT Capacity Charge, which shall be calculated as the product of:
   i) the daily rate of $[___], and
   ii) Customer's MDCQ specified in the FTSA between VNG and Customer.

B. An Unauthorized Use Charge, if applicable, which shall be calculated as the product of:
   i) a daily rate of the sum of 1.5 times the Transco Zone 5 North index price published in Platt's Gas Daily and $30 per MMBtu, and
   ii) the total quantity of Unauthorized Use Gas taken by Customer in any Gas Day.

C. Any penalty charges imposed on VNG from upstream interstate pipelines resulting from acts or omissions of Customer in relation to the service provided under this Rate Schedule VI-LFT, including, without limitation, any imbalance charges.

D. Any late payment charge or retainage charge due pursuant to the VNG Interconnect General Terms and Conditions.

E. Any other charge or amount agreed upon in the FTSA between VNG and Customer.

F. During a Force Majeure Event, as that term is defined in the VNG Interconnect Terms and Conditions, lasting longer than ten (10) consecutive days, Customer will not be responsible for any FT Capacity Charges during the period after the first ten (10) consecutive days of such event ("Reservation Charge Credit"); provided, however, the Initial Term of the FTSA shall be extended day-for-day for each day that Customer receives a Reservation Charge Credit during the Initial Term of the FTSA.

IV. GENERAL TERMS AND CONDITIONS

This Rate Schedule VI-LFT incorporates by reference the VNG Interconnect General Terms and Conditions on file with the Commission, as amended from time to time.

V. DEFINITION OF TERMS

All capitalized terms used but not defined herein have the meanings set forth in the VNG Interconnect General Terms and Conditions or the FTSA, as applicable.

RATE SCHEDULE VI-IT
INTERRUPTIBLE TRANSPORTATION SERVICE

I. APPLICABILITY

This Rate Schedule VI-IT shall be applicable to any Customer that has entered into a Firm Transportation Service Agreement ("FTSA") with VNG for pipeline transportation service on the Virginia Interconnect Pipeline pursuant to Rate Schedule VI-LFT or VI-TRFT which service is referred to herein as VI-IT Service.

II. CHARACTER OF SERVICE

A. On an interruptible basis and subject to available capacity (in VNG's determination in its sole discretion as to such availability) and the terms of this Rate Schedule VI-IT, the FTSA and the Virginia Interconnect General Terms and Conditions, VNG will accept a quantity of Gas from Customer at the Receipt Point(s) in excess of Customer's total MDCQ (to the extent such Gas is nominated, confirmed and delivered) on any one Gas Day, and shall transport such Gas, less the Retainage allocated to Customer by application of the Retainage Factor, to the Delivery Point(s).

B. If, for any Gas Day, VNG receives requests for VI-IT Service that exceed available capacity at a specific Receipt Point, then VNG shall allocate the available interruptible capacity at such Receipt Point among all Eligible Interruptible Customers requesting interruptible service from such Receipt Point on a pro rata basis determined by multiplying (i) the total available interruptible capacity at such Receipt Point for such Gas Day by (ii) a fraction where the numerator is the Eligible Interruptible Customer's MDCQ and/or JUP MDCQ (as applicable) and the denominator is the sum of the MDCQs and JUP MDCQs for all Eligible Interruptible Customers requesting interruptible service from such Receipt Point for such Gas Day.

C. In no event shall VNG be obligated to deliver, on a daily or hourly basis, a volume of Gas greater than the Customer's Received Volume delivered to the applicable Receipt Point(s) less Retainage allocated to Customer by application of the Retainage Factor.

III. CHARGES

The following charges for VI-IT Service shall apply during the term of the FTSA between VNG and Customer:

A. The Volumetric Charge which shall be calculated as the product of:
   i) the daily rate of $[___], and
   ii) the positive difference calculated by subtracting the Customer's applicable MDCQ (in Dekatherms) from the Customer's Received Volume (in Dekatherms) less the Retainage allocated to Customer by application of the Retainage Factor.

B. Any penalty charges imposed on VNG from upstream interstate pipelines resulting from acts or omissions of Customer in relation to the service provided under this Rate Schedule VI-IT, including, without limitation, any imbalance charges.

C. Any late payment charge or retainage charge due pursuant to the Virginia Interconnect General Terms and Conditions

IV. GENERAL TERMS AND CONDITIONS

This Rate Schedule VI-IT incorporates by reference the Virginia Interconnect General Terms and Conditions on file with the Commission, as amended from time to time.

V. DEFINITION OF TERMS

All capitalized terms used but not defined herein have the meanings set forth in the Virginia Interconnect General Terms and Conditions or the FTSA, as applicable.

DETAILED COST OF SERVICE - VNG INTERCONNECT

Line		(A) Transco Interconnect Pipeline & Compressor Station	(B) Quantico Parallel Pipe	(C) Mechanicsville M&R Station Upgrade
1	Rate Base	$ 173,331,501	$ 30,829,949	$ 7,323,912
2	Return on Rate Base	$ 14,674,910	$ 2,610,182	$ 632,878
3	Depreciation and Amrortizations	$ 5,063,813	$ 562,542	$ 224,326
4	Operating and Maintenance Expense	$ 3,363,000	$ 604,163	$ 144,045
5	Property Tax	$ 1,077,533	$ 194,600	$ 46,112
6	First Year Revenue Requirement	$24,179,256	$3,971,487	$1,047,361
	Note: (1) - Total does not include allocation of existing facilities.			

PUBLIC VERSION
Extraordinarily Sensitive Information Redacted

RATE CALCULATION DETAIL - VNG INTERCONNECT
Extraordinarily Sensitive Information Redacted

Line		(A)	(B)	(C)	(D)	(E)
1	**Cost of Service Allocation Factor (Figure 2)**	[redacted]				
3						
4						
6	**Project Revenue Requirement (Figure 1)**		[redacted]			
8						
9						
11						
12						
13					[redacted]	
15						
16						
18						
19						
20						
21						

COST ALLOCATION ANALYSIS - VNG INTERCONNECT

Extraordinarily Sensitive Information Redacted

Line		(B)	(C)	(D)	(E)	(F)
	10 HDD or less - Volumes in Dth					
1	[redacted]					
2						
3						-
	11 - 20 HDD - Volumes in Dth					
4	[redacted]					
5						
6						
	More than 20 HDD - Volumes in Dth					
7	[redacted]					
8						
9						
	Proportion of Year in each tier of HP-LFT service					
10	[redacted]					
11						
12						
	Cost of Service Allocation Factor (Figure 2) (1)					
13	[redacted]					
14						
15						

COST OF SERVICE OVER TIME - VNG INTERCONNECT

Line		(A) Transco Interconnect Pipeline	(B) Transco Interconnect Compressor Station	(C) Quantico Parallel Pipe	(D) Mechanicsville M&R Station Upgrade	(E) Project Total	(F) VNG Distribution Customers
1	NPV @ Yr 20	$ 77,549,819	$ 127,939,554	$ 34,832,428	$8,890,506	$ 249,212,307	$ 35,388,147.61
2	NPV @ full life	$ 93,667,963	$ 139,759,484	$ 42,062,439	$10,019,887	$ 285,509,773	$ 40,542,387.71

I. Need for the Proposed Project

K. Other approvals obtained or required

The proposed Project will require standard and customary construction, siting, and operating permits from local, state and federal entities, which may include:

- Virginia Department of Transportation ("VDOT")
- Norfolk Southern Railroad
- Fauquier County
- Prince William County
- Hanover County
- Virginia Marine Resources Commission
- U.S. Army Corps of Engineers ("USACE") Nationwide Permit 12
- Virginia Department of Environmental Quality ("VDEQ")
- Virginia Department of Historic Resources ("VDHR")

The Company agrees that Commission's approval of the Project should be conditioned upon obtaining all necessary and applicable approvals and permitting. The Company has allotted time in its detailed timeline for the Project to allow for applicable environmental and local government approval and permitting processes, as shown in Attachment I.I.1

I. Need for the Proposed Project

L. Description of facilities to be served by proposed pipeline

The proposed Project is part of an overall design to provide VNG utility and transportation customers with incremental natural gas transportation capacity on VNG's high-pressure, large diameter system and the necessary access to new upstream sources of natural gas. See Sections I.A and I.J.

II. Description of Right-of-Way

A. Length of proposed right-of-way

The Project components will utilize the following approximate rights-of-way:

Transco Interconnect Pipeline – 6.2 miles

Transco Interconnect Compressor Station – 36.8-acre site, of which approximately 15 acres will be developed for the station

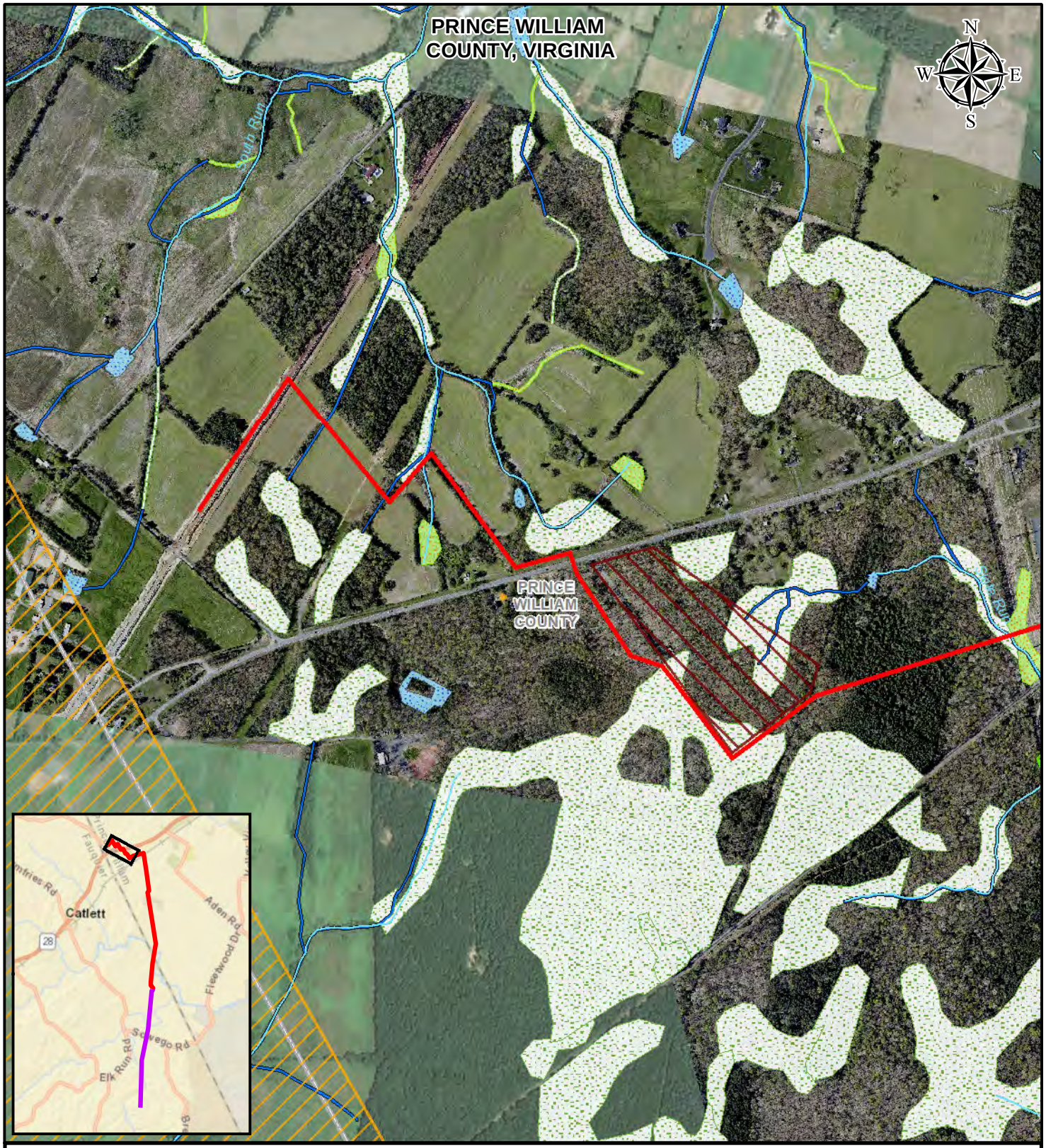
Quantico Parallel Pipe – 3.5 miles

Mechanicsville M&R Station Upgrade – permanent installation within existing 0.27-acre site

II. Description of Right-of-Way

B. Map of route, including GIS constraints

See Attachment II.B.1 for a map identifying potential environmental and cultural constraints in the area of the proposed Project, and Attachment II.B.2 for a map showing the Project area by land use.



Legend

- Transco Interconnect
- Quantico Parallel
- NHD River and Streams
- Architectual Resource
- Archaeological Resource
- Conservation Lands/Easements
- DHR Easements
- County
- **NWI Wetlands**
- Riverine Wetland
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Feet
0 500 1,000 1,500 2,000
1 inch = 1,000 feet

NOTES:1. COORDINATE SYSTEM IS BASED ON NAD83, UTM ZONE 18 NORTH, U.S. FEET;2. GULF CANNOT GUARANTEE THE ACCURACY OF THE G.I.S. DATA OBTAINED FROM THIRD PARTIES.

NO.	REVISION - DESCRIPTION	BY	DATE	CHK'D	APP'D
A	PRELIMINARY	GULF	12/04/20	GULF	GULF

Virginia Natural Gas

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VNG INTERCONNECT

Environmental and Cultural Resources Map

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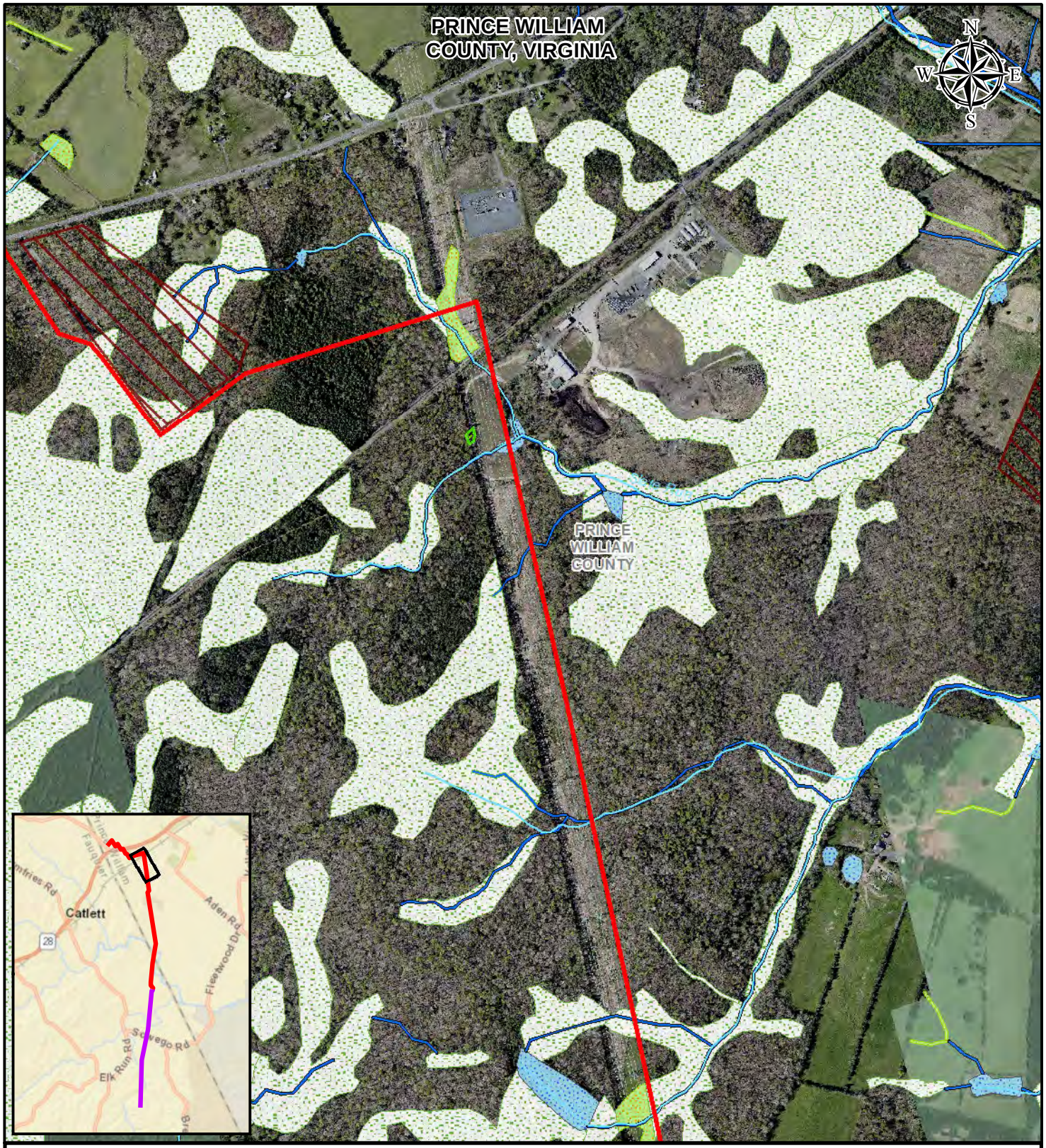

Gulf Interstate Engineering Company (Gulf) accepts no liability or responsibility whatsoever for: (i) any use of or reliance upon this document for anything other than its intended use on the Project; (ii) its use by any third party; and, (iii) for any unauthorized changes to this document or its attachments. Copying this document without the permission of the Customer and GULF is not permitted.

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VNG INTERCONNECT

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Environmental and Cultural Resources Map

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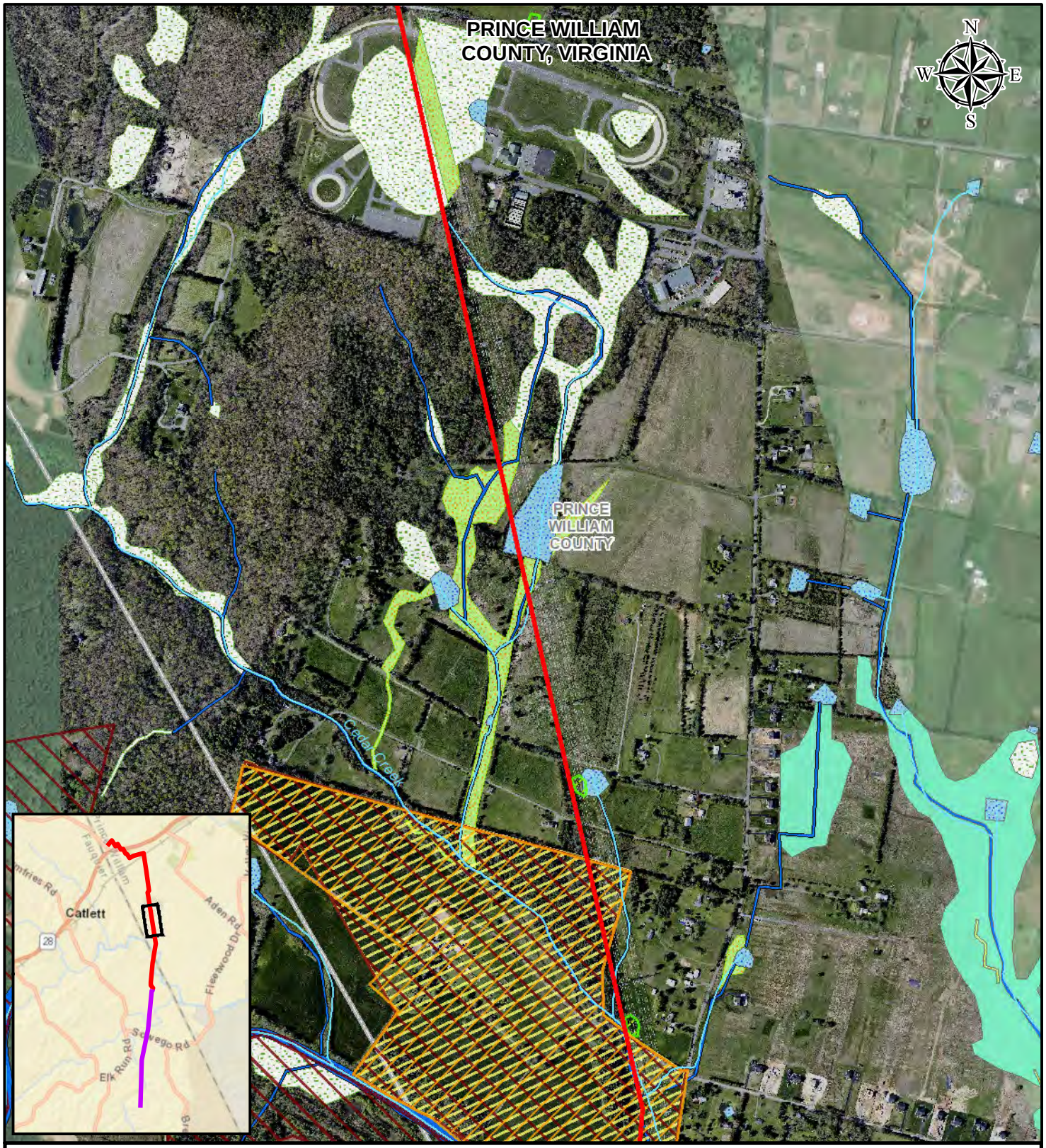

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Virginia Natural Gas

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VNG INTERCONNECT

Environmental and Cultural Resources Map

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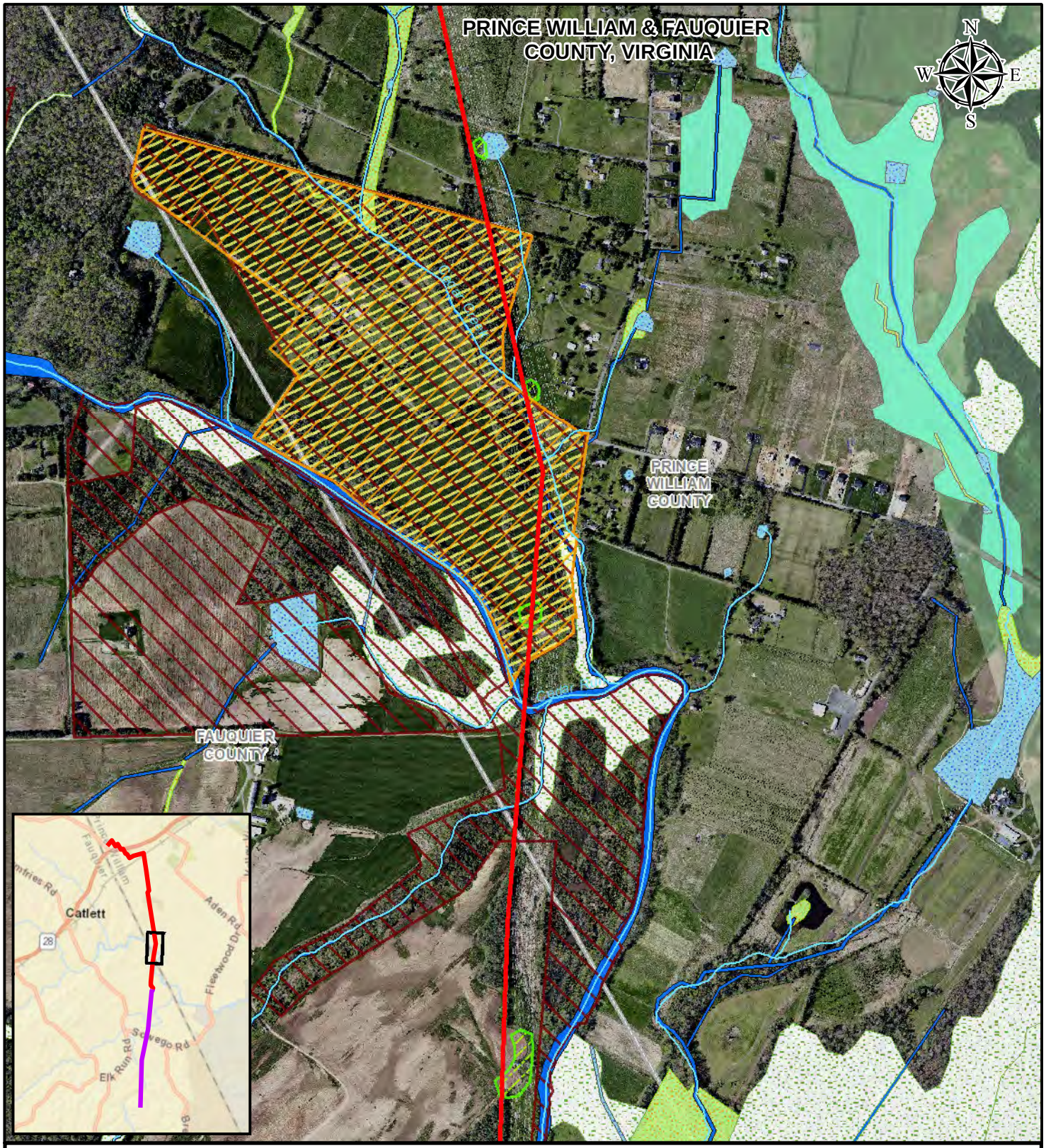

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Virginia Natural Gas

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VNG INTERCONNECT

Environmental and Cultural Resources Map

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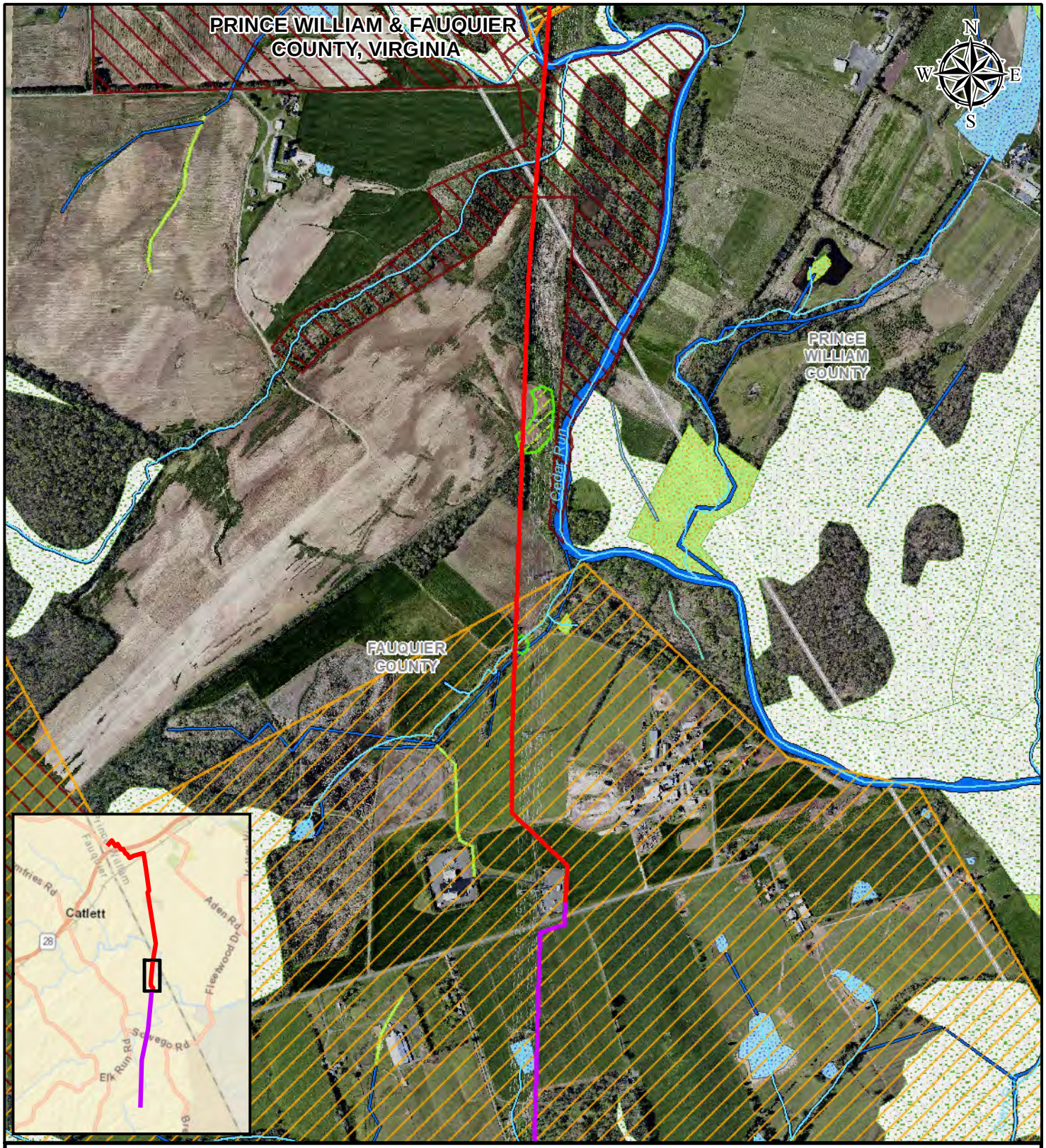

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Virginia Natural Gas

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VNG INTERCONNECT

Environmental and Cultural Resources Map

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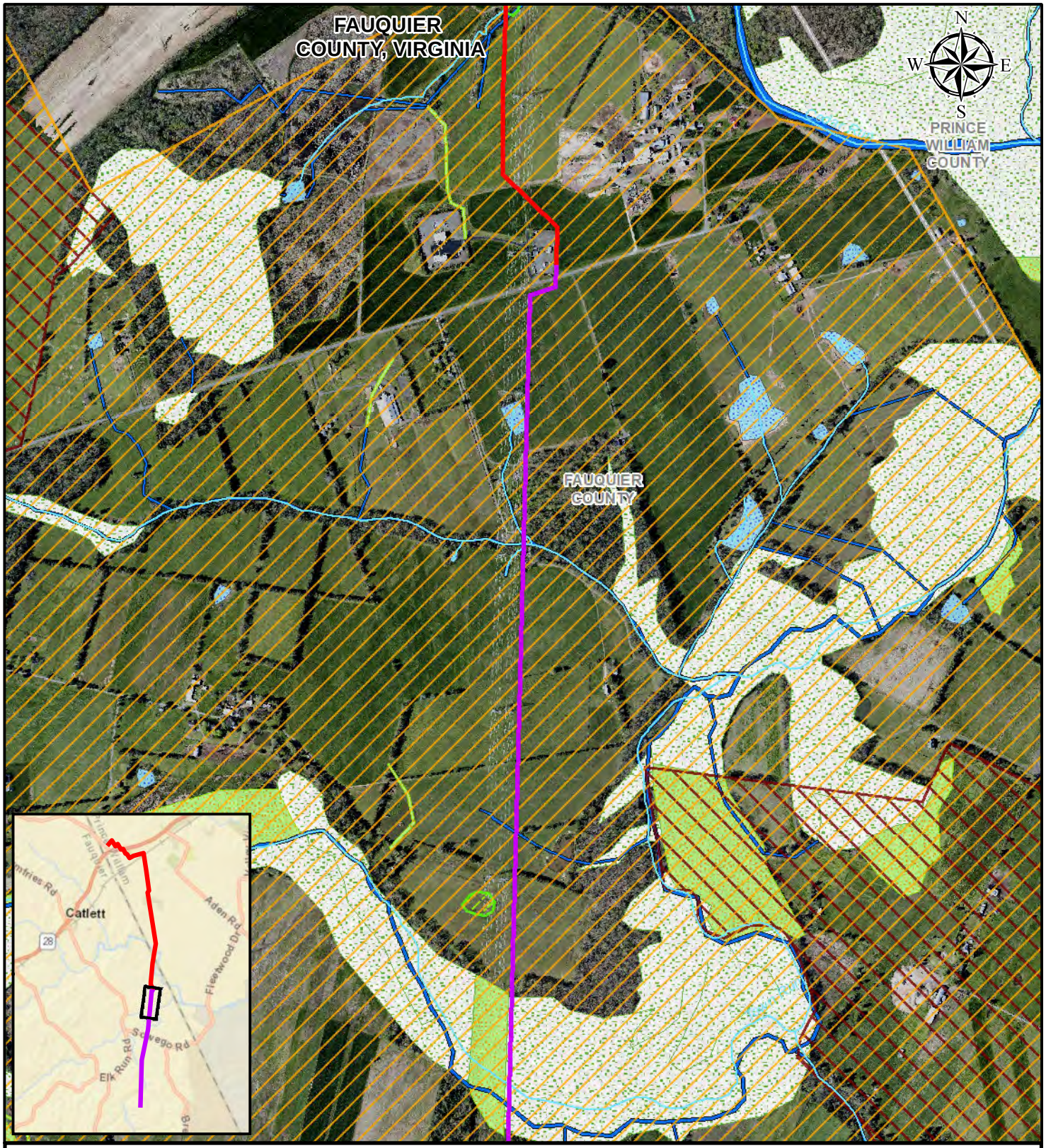

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NO.	REVISION - DESCRIPTION	BY	DATE	CHK'D	APP'D
A	PRELIMINARY	GULF	12/04/20	GULF	GULF

Virginia Natural Gas

GULF

VNG INTERCONNECT

Environmental and Cultural Resources Map

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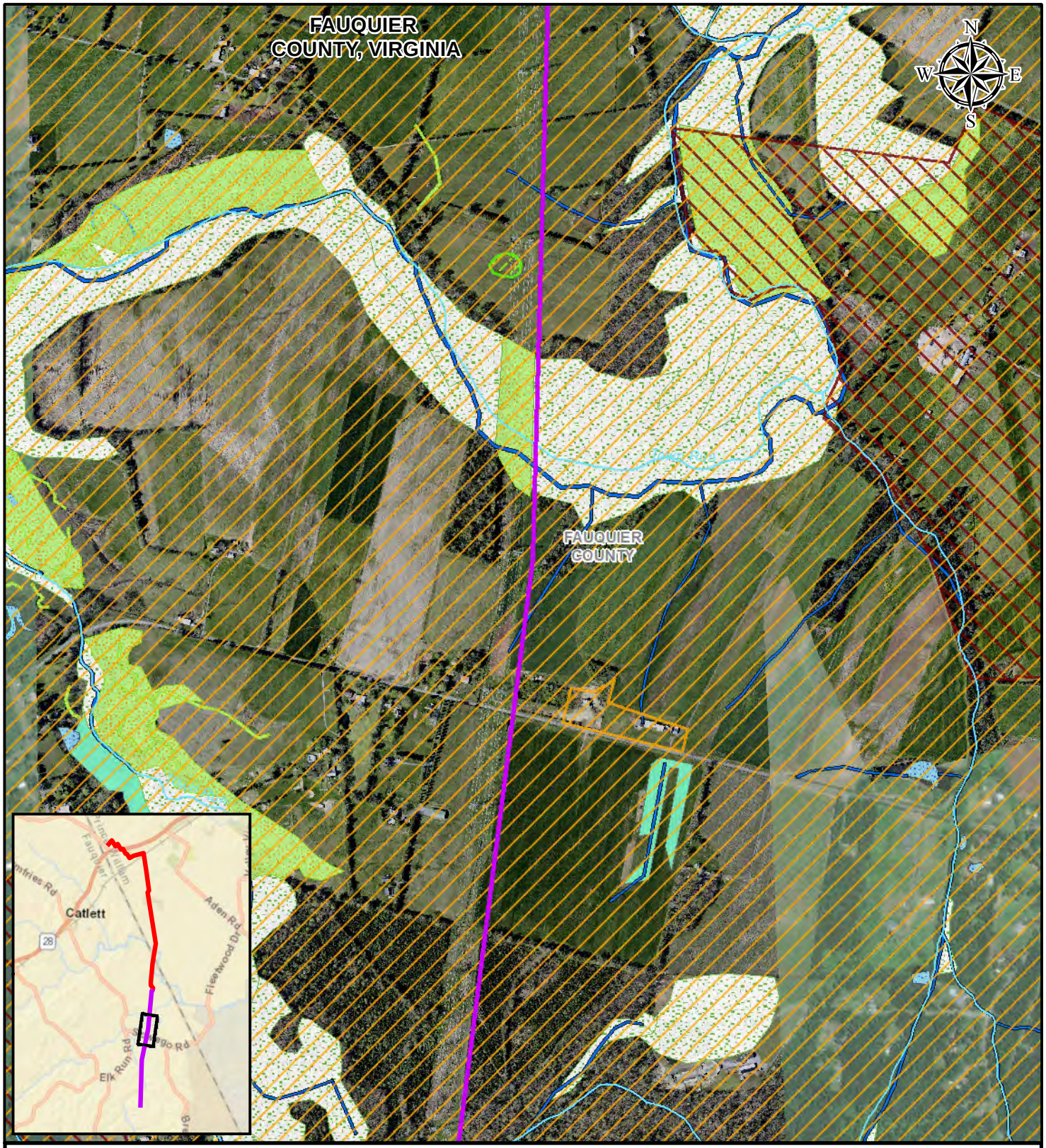

Legend

- Transco Interconnect
- Quantico Parallel
- NHD River and Streams
- Architectual Resource
- Archaeological Resource
- Conservation Lands/Easements
- DHR Easements
- County
- **NWI Wetlands**
- Riverine Wetland
- Freshwater Pond
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Other Wetland

Feet
0 500 1,000 1,500 2,000
1 inch = 1,000 feet

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Virginia Natural Gas

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VNG INTERCONNECT

Environmental and Cultural Resources Map

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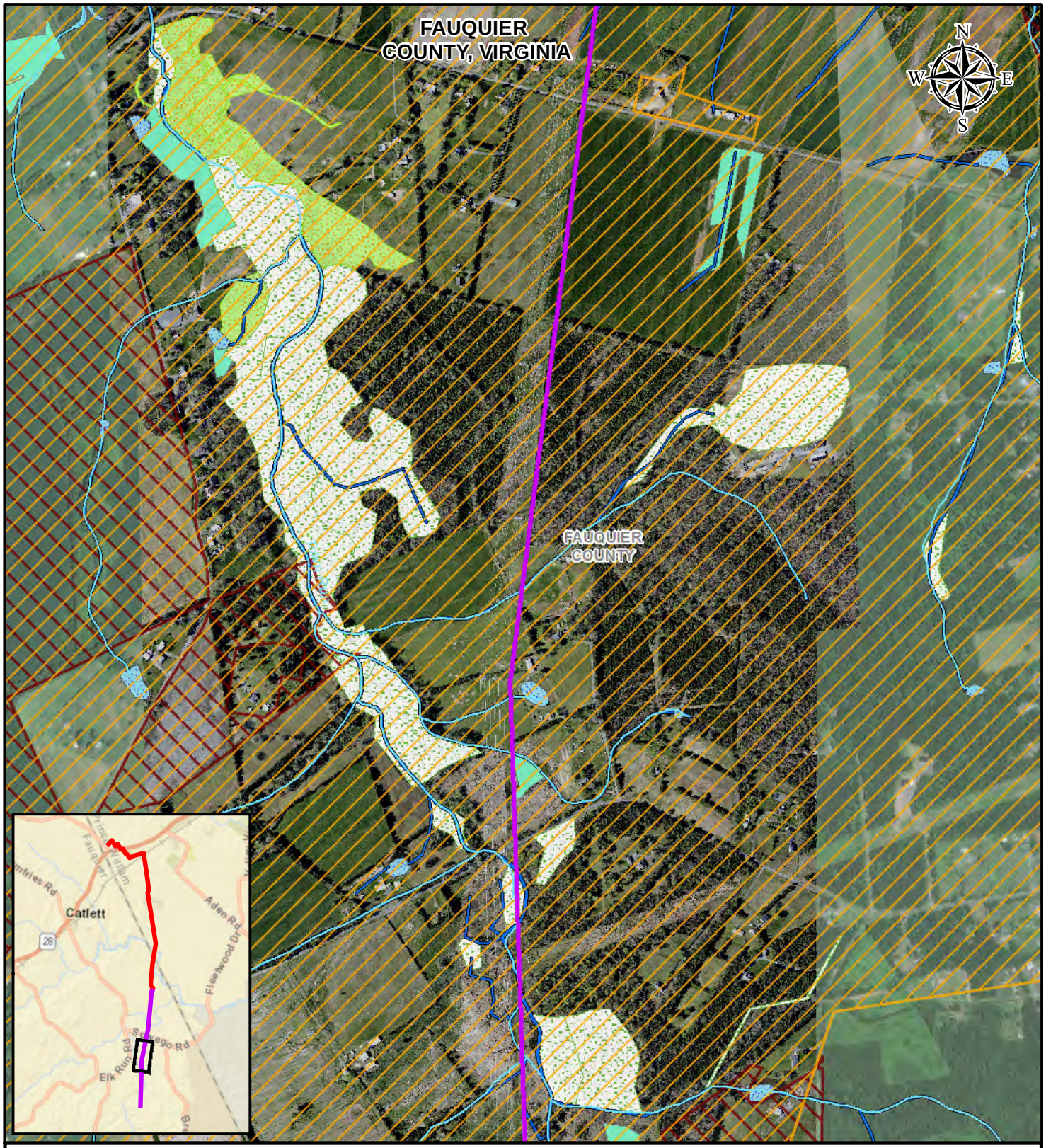

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Virginia Natural Gas

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VNG INTERCONNECT

Environmental and Cultural Resources Map

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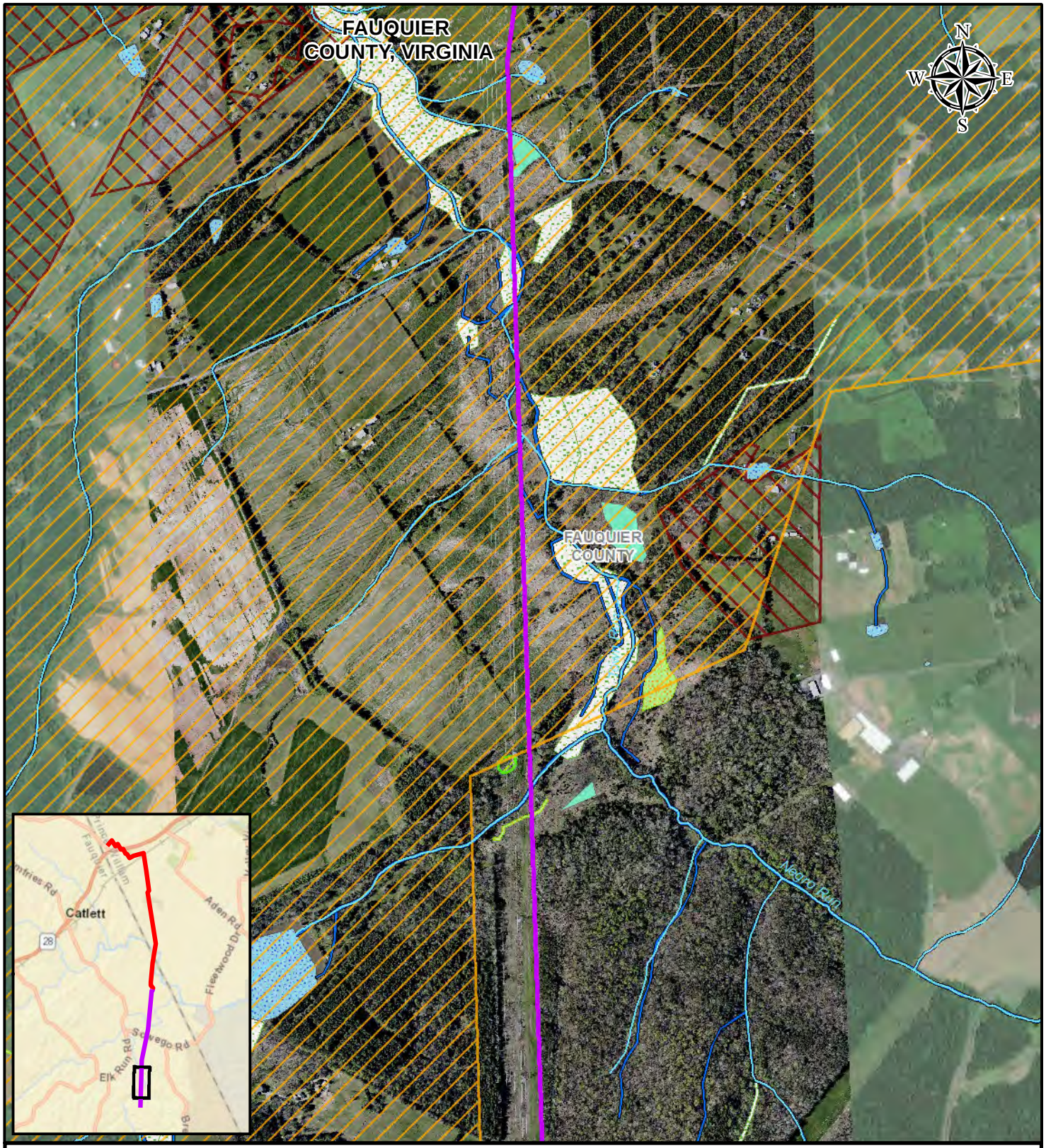

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Virginia Natural Gas

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VNG INTERCONNECT

Environmental and Cultural Resources Map

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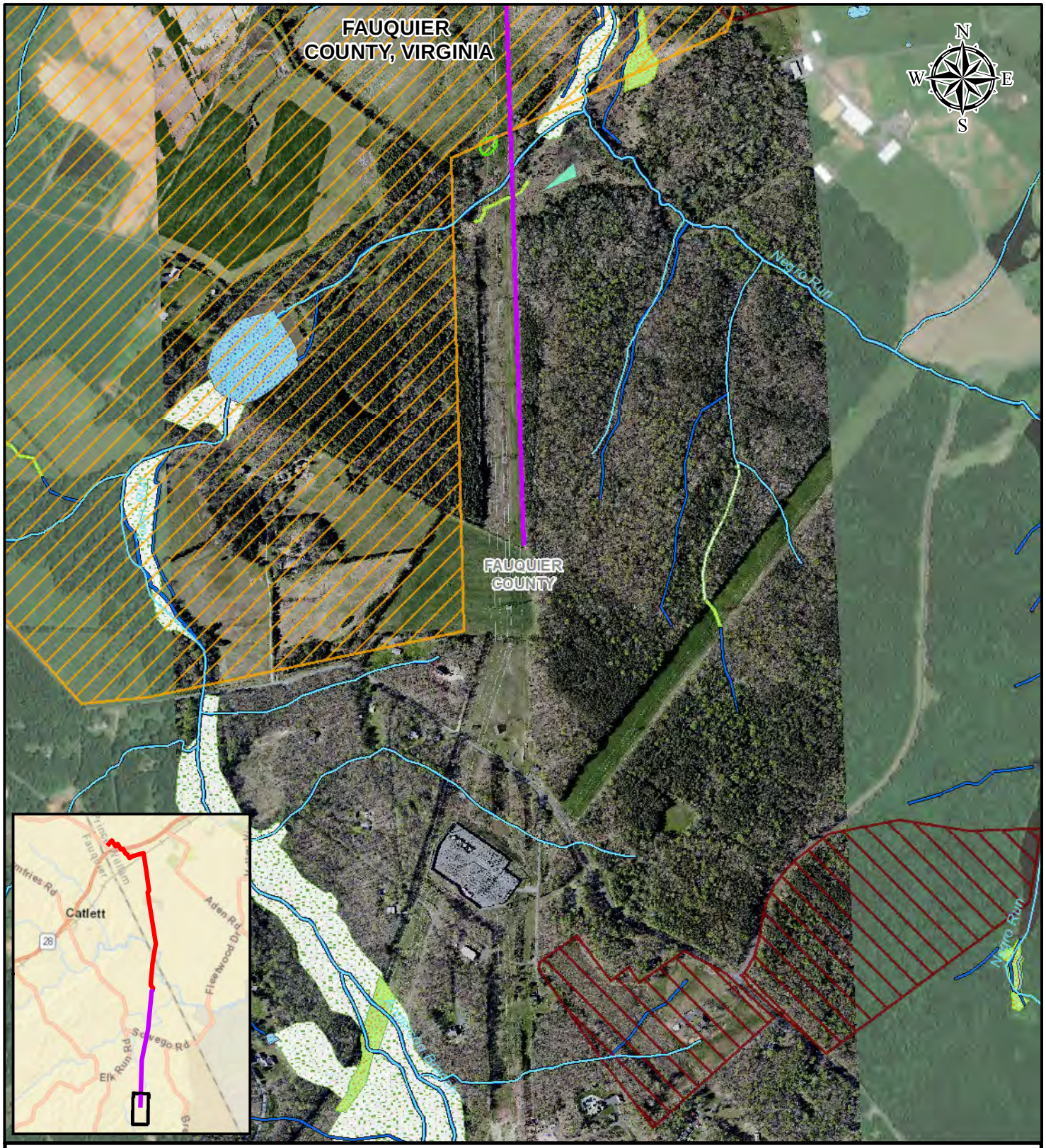

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Virginia Natural Gas

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VNG INTERCONNECT

Environmental and Cultural Resources Map

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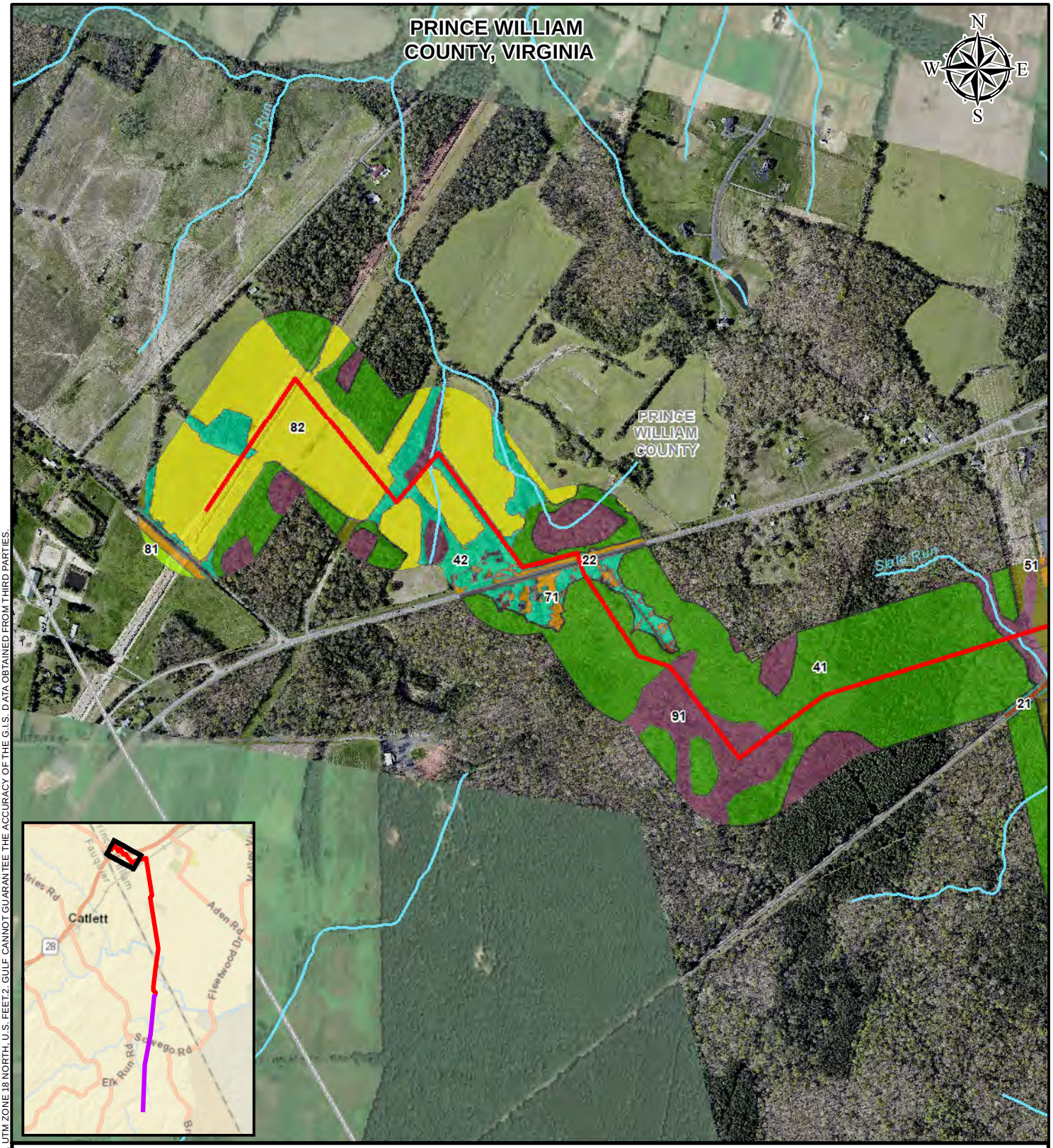

Legend

- Transco Interconnect
- Quantico Parallel
- NHD River and Streams
- County

Landuse

- 11 - Hydro
- 81 - Pasture
- 82 - Cropland
- 61 - Harvested/Disturbed
- 71 - TurfGrass
- 51 - Scrub/Shrub
- 41 - Forest
- 42 - Tree
- 31 - Barren
- 21 - Impervious (extracted)
- 22 - Impervious (Local datasets)
- 91 - NWI/Other

Feet
0 500 1,000 1,500 2,000
1 inch = 1,000 feet

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NO.	REVISION - DESCRIPTION	BY	DATE	CHK'D	APP'D
A	PRELIMINARY	GULF	12/03/20	GULF	GULF

Virginia Natural Gas

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VNG INTERCONNECT

Land Use Map

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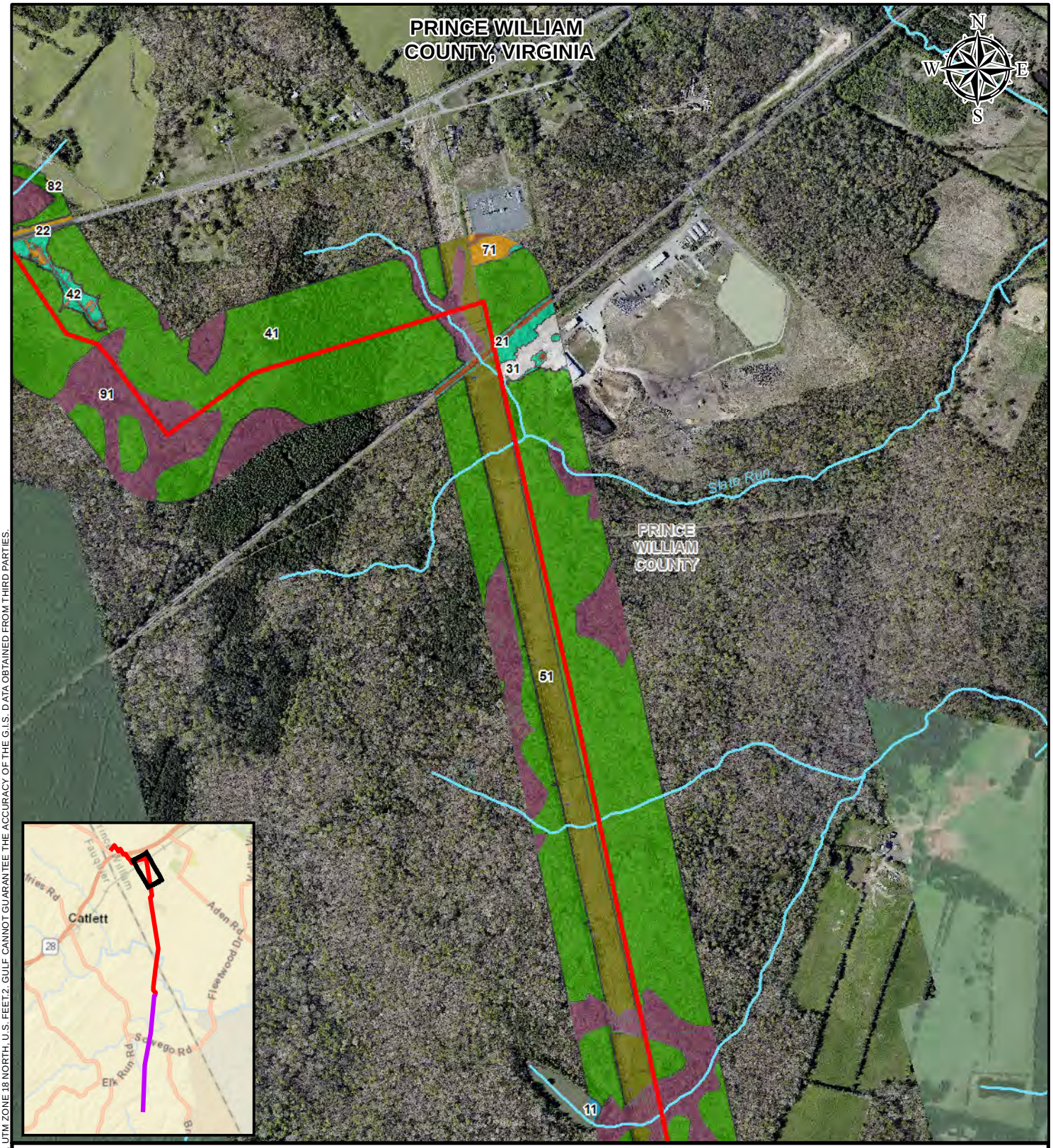

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Virginia Natural Gas

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VNG INTERCONNECT

Land Use Map

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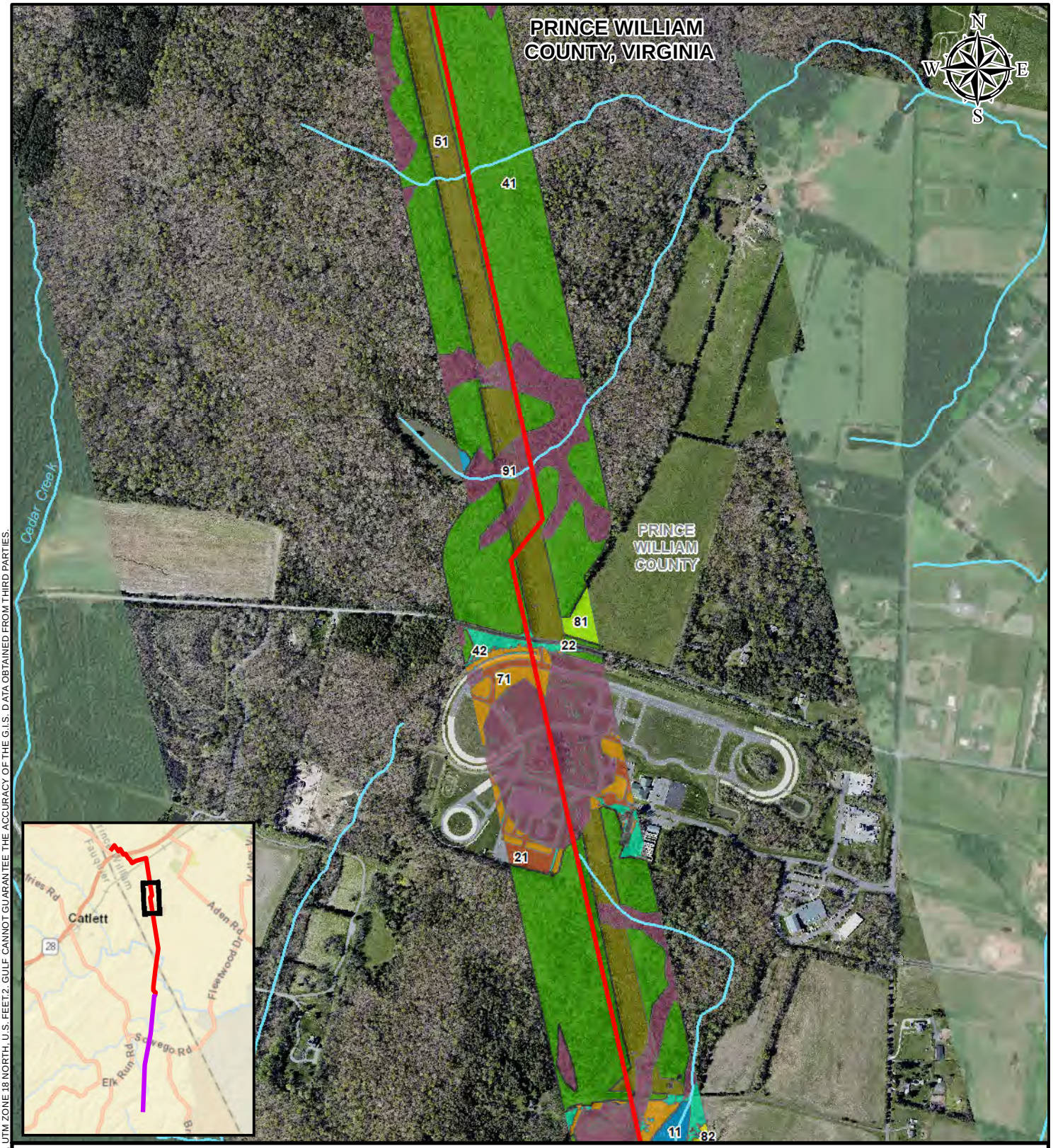

Legend

- Transco Interconnect
- Quantico Parallel
- NHD River and Streams
- County

Landuse

- 11 - Hydro
- 81 - Pasture
- 82 - Cropland
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Feet
0 500 1,000 1,500 2,000
1 inch = 1,000 feet

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NO.	REVISION - DESCRIPTION	BY	DATE	CHK'D	APP'D
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Virginia Natural Gas

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VNG INTERCONNECT

Land Use Map

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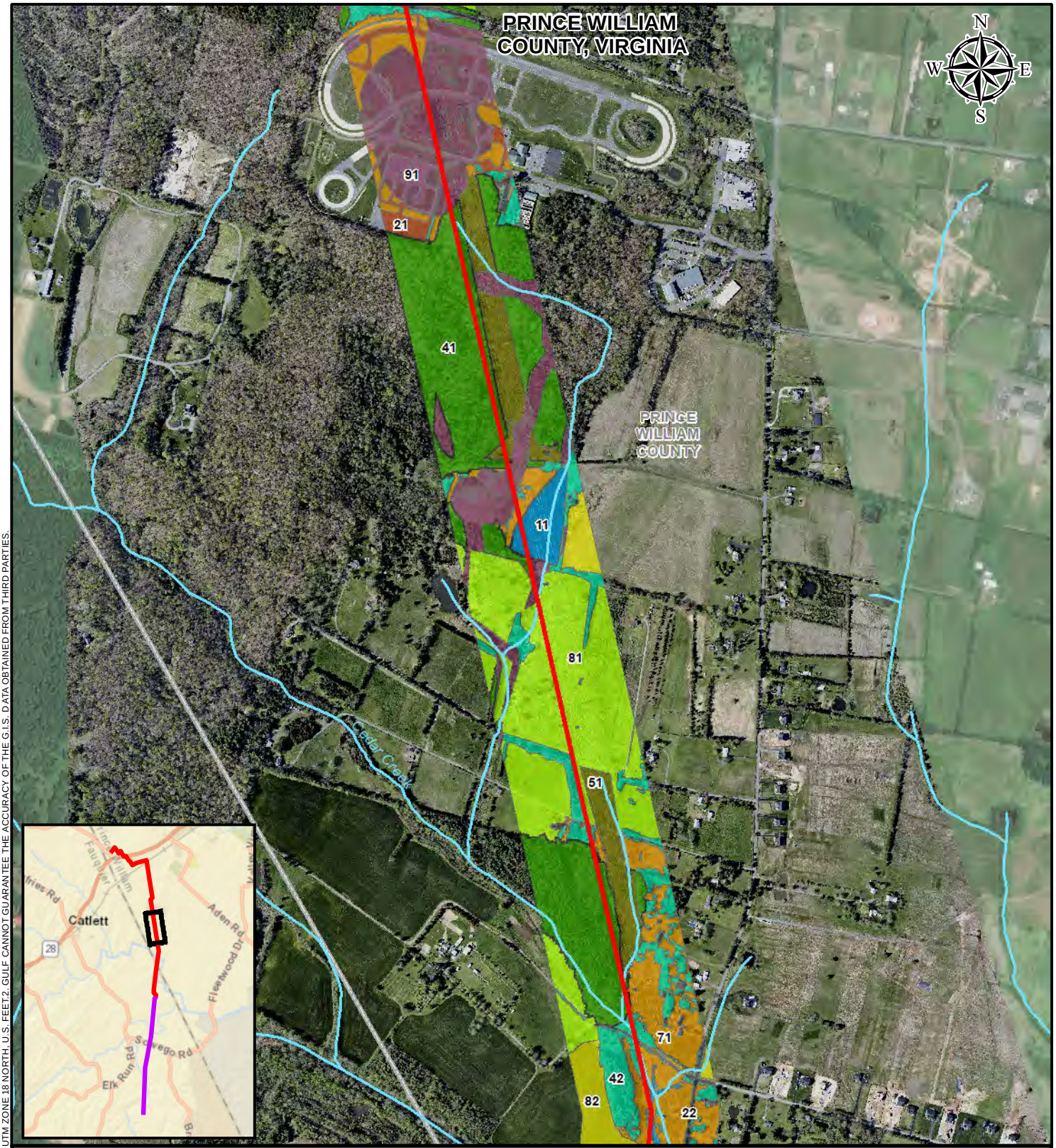

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NO.	REVISION - DESCRIPTION	BY	DATE	CHK'D	APP'D
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Virginia Natural Gas

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VNG INTERCONNECT

Land Use Map

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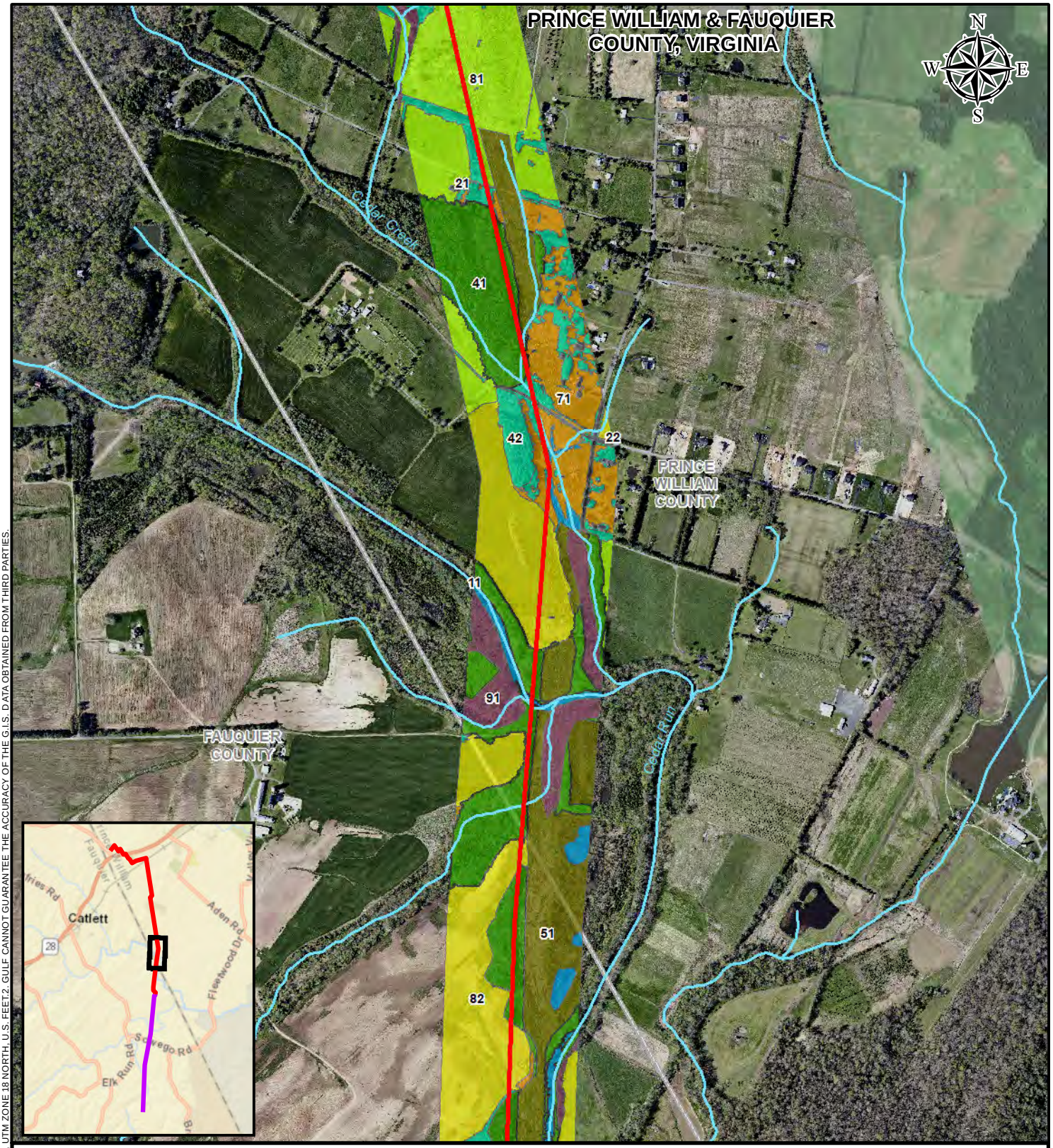

Legend

- Transco Interconnect
- Quantico Parallel
- NHD River and Streams
- County

Landuse

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Feet
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Virginia Natural Gas

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VNG INTERCONNECT

Land Use Map

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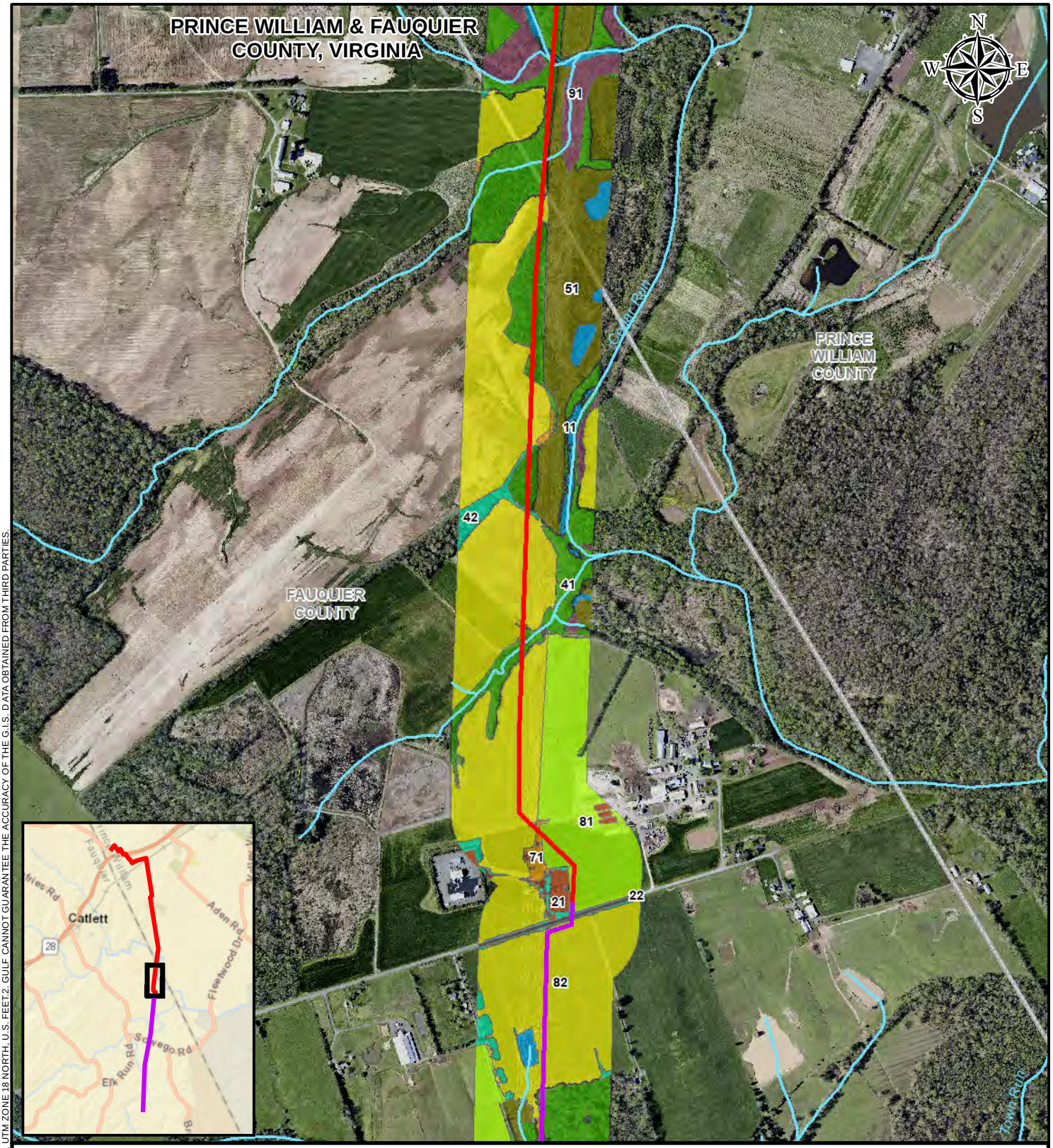

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Virginia Natural Gas

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VNG INTERCONNECT

Land Use Map

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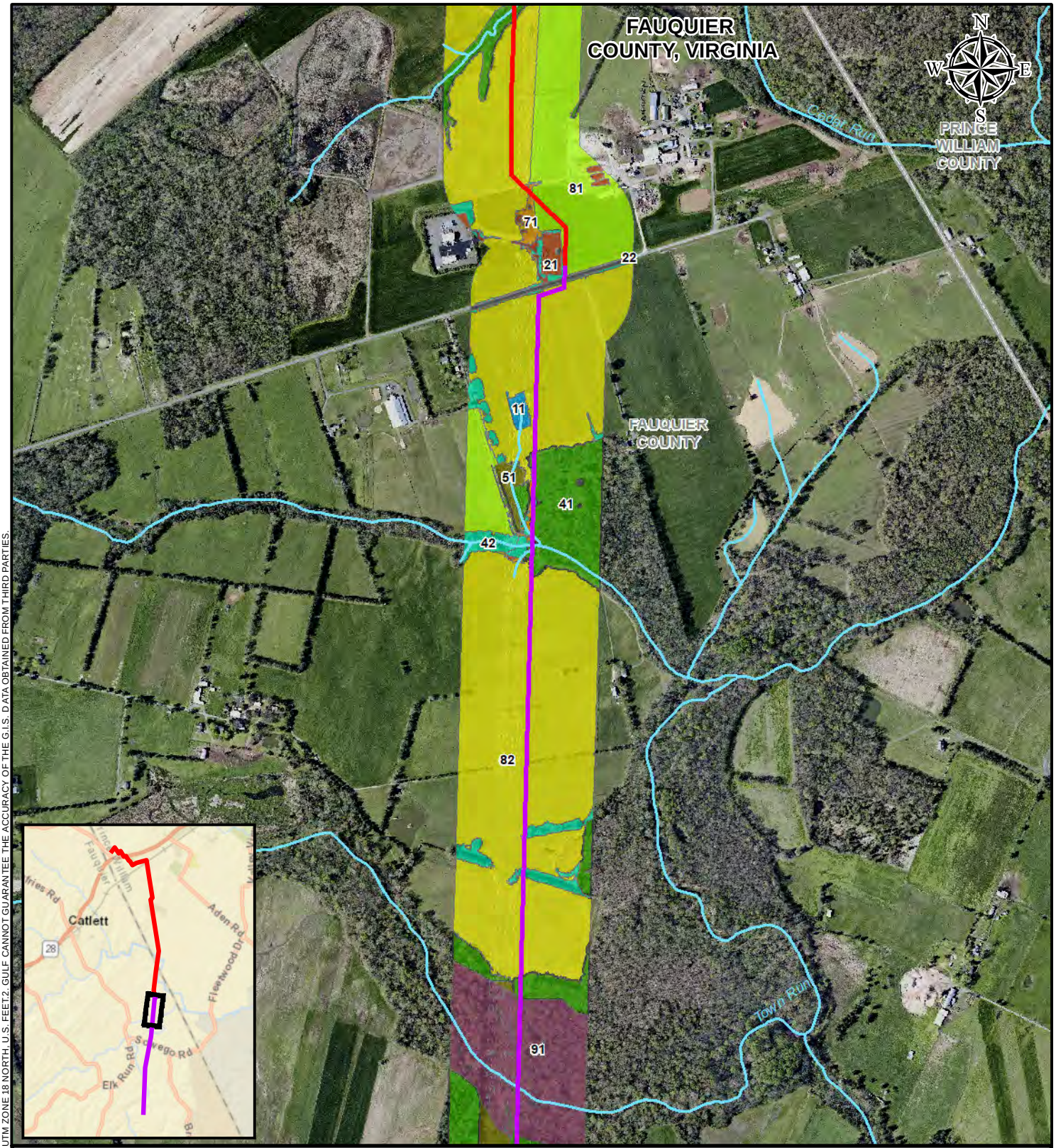

Legend

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- County

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0 500 1,000 1,500 2,000 Feet

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Virginia Natural Gas

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VNG INTERCONNECT

Land Use Map

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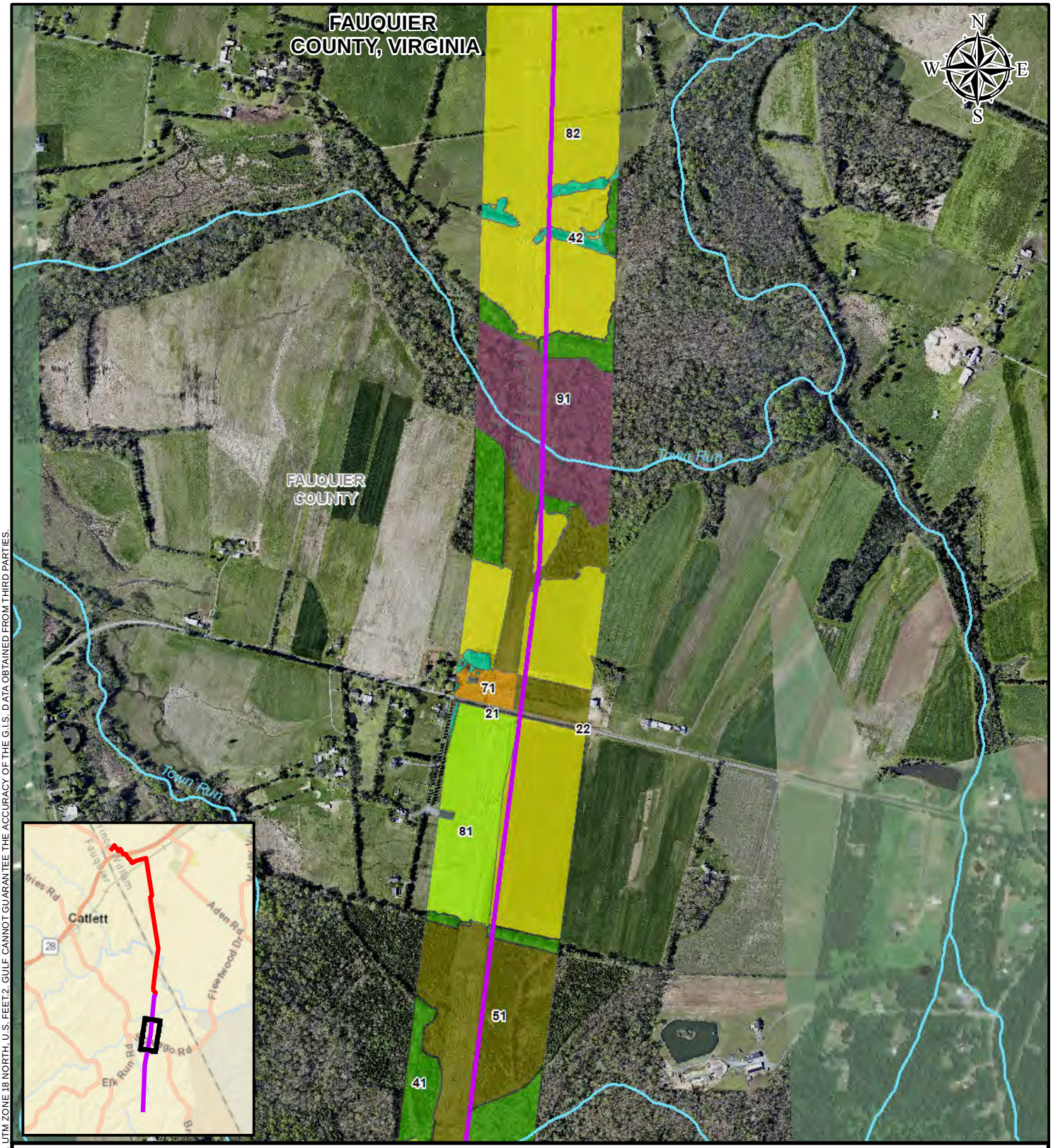

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Virginia Natural Gas

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VNG INTERCONNECT

Land Use Map

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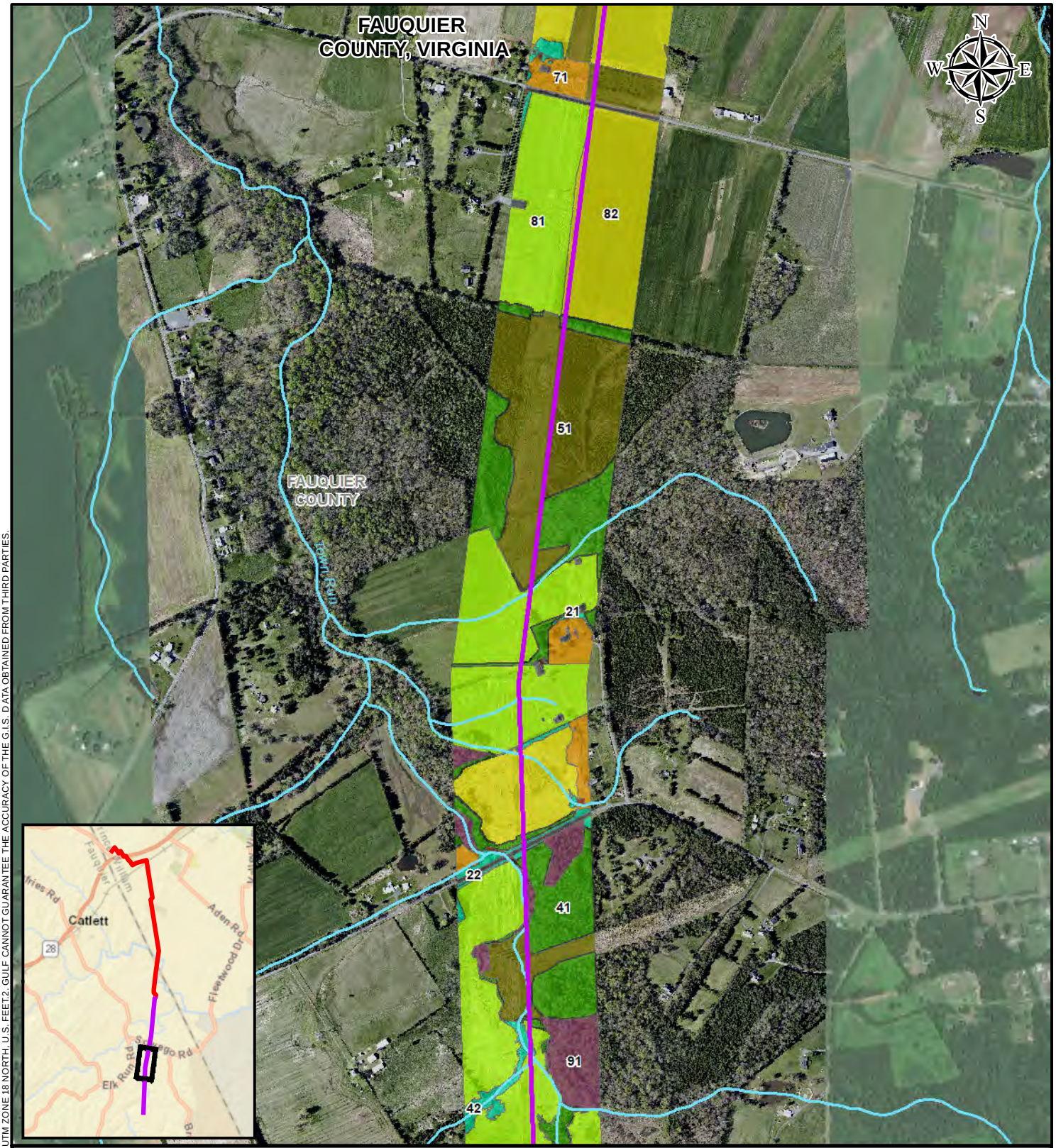

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Virginia Natural Gas

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VNG INTERCONNECT

Land Use Map

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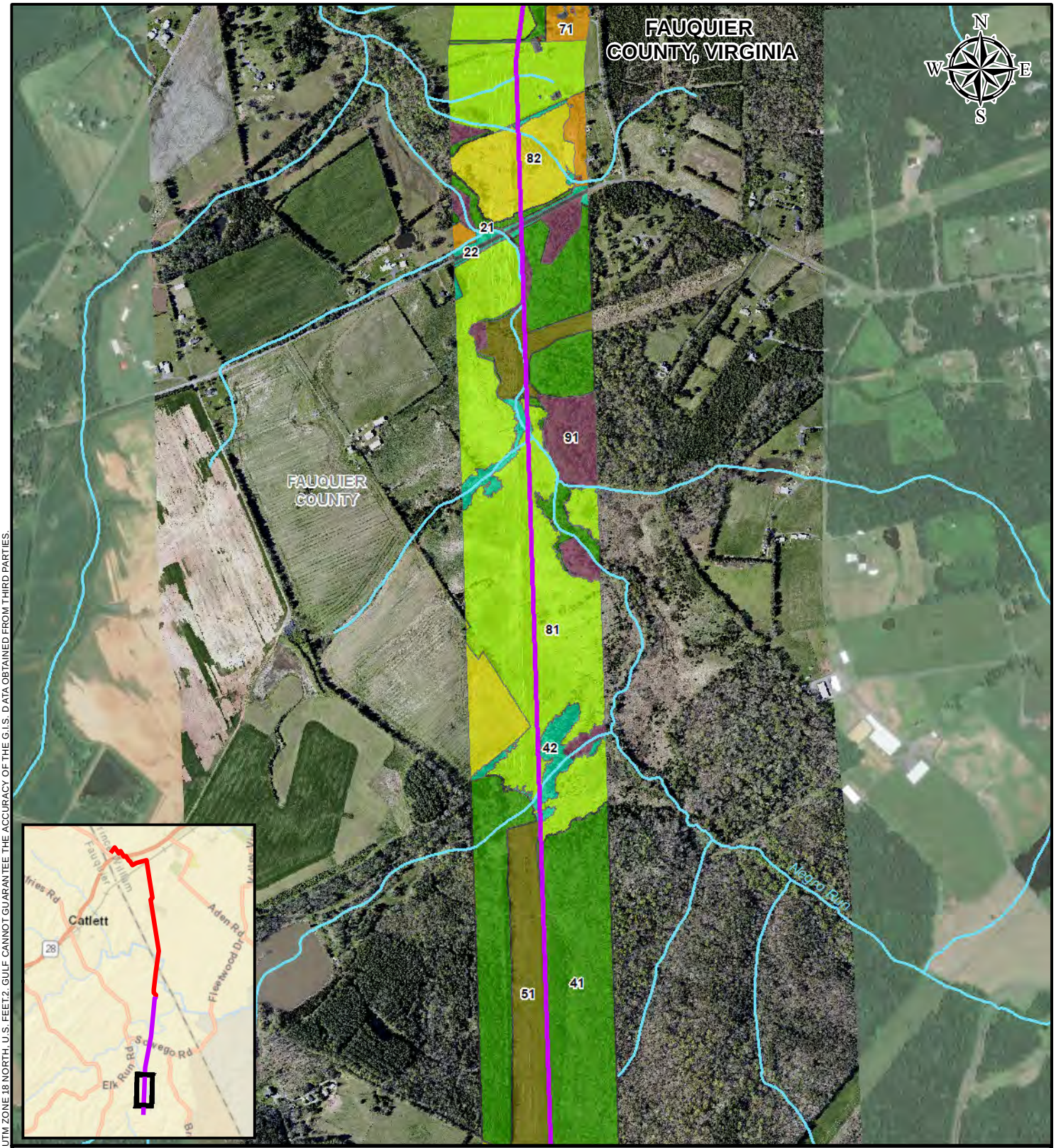

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Virginia Natural Gas

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VNG INTERCONNECT

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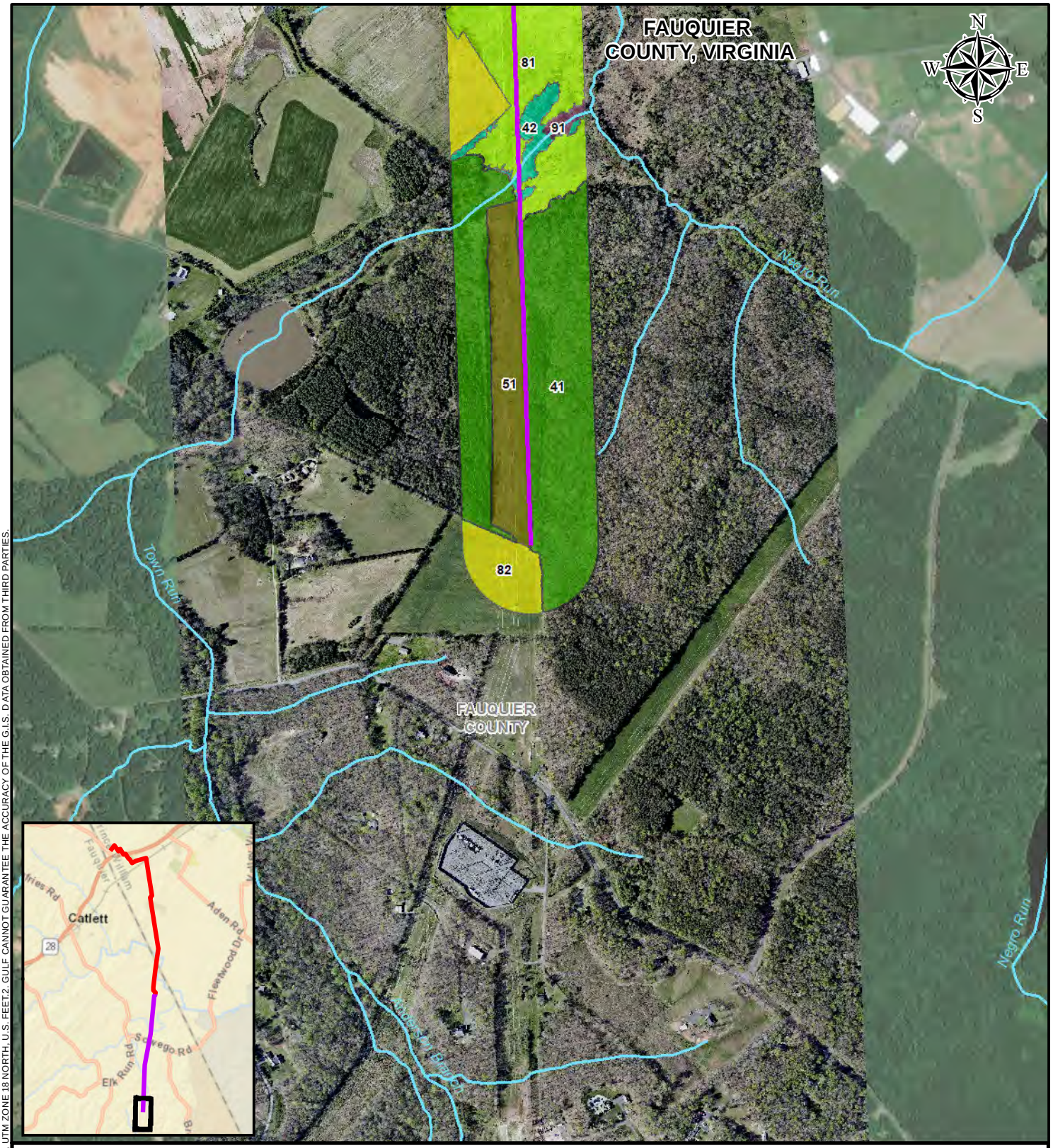

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Virginia Natural Gas

GULF

VNG INTERCONNECT

Land Use Map

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II. Description of Right-of-Way

C. Evaluation of existing right-of-way

VNG's route selection for new natural gas pipeline construction begins with a review of the existing right-of-way, consistent with § 56-259 of the Code of Virginia, which promotes the use of existing easements of rights-of-way. The Company determined the varying widths of the existing rights-of-way were not adequate to accommodate the proposed pipeline construction and maintenance. However, as noted in Section I.A, the Company proposes to collocate the Project with existing electric and natural gas transmission corridors, as well as VNG's existing JUP where practicable.

II. Description of Right-of-Way

D. Description of clearing and/or maintenance for right-of-way

The proposed route for the Transco Interconnect Pipeline contemplates construction directly adjacent to an existing electric transmission right-of-way easement, where practicable. If installed adjacent to the existing right-of-way easement, approximately 125 feet of new right-of-way will be required, with an approximately 50-foot-wide permanent right-of-way and an additional approximately 75-foot-wide temporary workspace easement required to complete construction, with additional temporary workspace required at areas such as points of intersection ("PIs"), road crossings, and horizontal directional drill sites or jack-and-bore sites. This new right-of-way will be cleared of vegetation to accommodate construction. At the completion of construction of the Transco Interconnect Pipeline, the disturbed area will be revegetated in accordance with the VDEQ-approved Annual Standards and Specifications and, within wetlands, the requirements of federal and state permits. The approximately 50-foot-wide permanent right-of-way will be maintained by regular mowing and trimming, while the temporary right-of-way will be allowed to return to its preconstruction state.

For the proposed Transco Interconnect Compressor Station, the Company anticipates clearing approximately 15 acres of land for the station, a road into the station, a lateral to the pipeline, and any overflow of laydown yard/parking needed during construction. The proposed site for the proposed Transco Interconnect Compressor Station is zoned A-1, and Section 32.201.11(1) of the Prince William County Zoning Ordinance provides that "[p]ublic facilities, except electric substations and solar energy facilities, may be located within any zoning district in Prince William County."

The Quantico Parallel Pipe contemplates construction adjacent to the existing JUP. Based on preliminary investigation of the existing right-of-way, an additional approximately 50-foot-wide permanent right-of-way will be required with an additional approximately 75-foot-wide temporary workspace easement required to complete construction of the parallel pipe, with additional temporary workspace required at areas such as PIs, road crossings, and horizontal directional drill sites or jack-and-bore sites. To the extent the Quantico Parallel Pipe is able to utilize the existing electric transmission right-of-way for temporary construction workspace, that portion of right-of-way is already cleared. Both the permanent and temporary rights-of-way will be cleared to accommodate construction. At the completion of construction of the Quantico Parallel Pipe, the disturbed area will be revegetated in accordance with the VDEQ-approved Annual Standards and Specifications and, within wetlands, the requirements of federal and state permits. The permanent right-of-way will be maintained by regular mowing and trimming, while the temporary right-of-way will be allowed to return to its preconstruction state.

The Mechanicsville M&R Station Upgrade will be installed within the footprint of the existing station parcel. Approximately 1.0 acre of additional temporary workspace will be required during construction. The temporary workspace will utilize already cleared areas.

Upon completion of construction of the entire Project, the width of the VNG right-of-way will be mowed annually at a minimum. In addition, the right-of-way will be side trimmed as needed to

maintain general appearance and visibility for aerial patrols, which are conducted monthly. These activities are consistent with VNG's maintenance of all transmission right-of-way.

II. Description of Right-of-Way

E. List of permitted uses within right-of-way, if any

Any non-pipeline use will be permitted that:

- Is in accordance with the terms of the easement agreement for the right-of-way;
- Is consistent with the safe maintenance and operation of the pipeline;
- Will not restrict future design flexibility; and
- Will not interfere with future construction.

Subject to the terms of the easement and engineering design review and approval, examples of typical permitted uses include:

- Agriculture
- Hiking Trails
- Fences perpendicular to the easement with a 16-foot gate
- Perpendicular Road Crossings
- Perpendicular Utility Crossings
- Residential Driveways
- Wildlife / Pollinator Habitat

II. Description of Right-of-Way

F. Description of route selection process and feasible alternative routes

As noted in Section II.C, VNG's route selection for new natural gas pipeline construction begins with a review of the existing right-of-way, consistent with § 56-259 of the Code of Virginia, which promotes the use of existing easements of rights-of-way. The Company determined the varying widths of the existing rights-of-way were not adequate to accommodate the proposed pipeline construction and maintenance. However, as noted in Section I.A, the Company proposes to collocate the Project with existing electric and natural gas transmission corridors, as well as VNG's existing JUP, as described below. See also Attachment II.F.1 for photographs of existing features.

Transco Interconnect Pipeline

Taking into consideration environmental impacts, feasible tie-in locations, desirability of collocation with existing utility corridors, and mitigation of the potential for future damage to the pipeline, among other considerations, the Company identified a proposed route for the Transco Interconnect Pipeline. The proposed route extends approximately 6.2 miles north from the Company's existing natural gas transmission system located near Quantico, Virginia, to interconnect with the Transco Gas Pipeline located near Catlett, Virginia.

The proposed Transco Interconnect Pipeline will require a new 50-foot-wide permanent right-of-way for the entire approximately 6.2 miles. Additionally, during construction, VNG will require approximately 6.2 miles of varying width temporary workspace until the Transco Interconnect Pipeline is complete. The adjacent electric transmission right-of-way will be evaluated for possible use as temporary workspace during construction; however, it is anticipated that the required temporary construction easement will be acquired outside the electric transmission right-of-way. At the completion of construction of the Transco Interconnect Pipeline, the temporary construction easement areas will be returned to the property owner.

Transco Compressor Station

The operating pressure of the Transco pipeline is less than the operating pressure of VNG's system. The compressor station must be located along the approximately 6.2-miles Transco Interconnect Pipeline to increase the pressure of natural gas received from the Transco pipeline so that it will be able to enter the Company's system. Preliminary criteria the Company used to identify potential sites for the station favored parcels not zoned residential and that were greater than 25 acres.

Specifically, for the Transco Interconnect Compressor Station, VNG will require approximately 15 acres for the footprint of the station and associated construction laydown and workspace areas and will require additional area within the 36.8-acre parcel reserved to provide a buffer from neighboring properties. As discussed in Section I.A, the Company has identified a proposed station location situated in Prince William County for the Transco Interconnect Compressor Station. The location is provided in Section V.A.

Further, the Company considered, and continues to consider, the requirements for environmental

permitting of the compressor station as it might affect siting. This includes the Company's consideration of environmental justice, as discussed more fully in Section III.E.

Quantico Parallel Pipe

Because there is an existing right-of-way that the Quantico Parallel Pipe can be installed adjacent to, the Company did not consider alternative routes for the Quantico Parallel Pipe, which extends approximately 3.5 miles along the JUP.

While the Quantico Parallel Pipe will be located adjacent to the existing 30-foot-wide right-of-way of the JUP, the existing right-of-way is not adequate to accommodate both the original and parallel pipelines. Accordingly, VNG will require a total of approximately 3.5 miles of 50-foot-wide right-of-way for the Quantico Parallel Pipe. During construction, VNG will additionally require a total of approximately 3.5 miles of varying-width temporary construction easement until construction of the Quantico Parallel Pipe is complete. At the completion of construction of the Quantico Parallel Pipe, the temporary construction rights-of-way will be returned to the property owners.

Mechanicsville M&R Station Upgrade

The additional equipment is expected to be installed within the existing Company-owned 0.27-acre parcel. As the work at the Mechanicsville M&R Station consists of upgrades to an existing facility, the Company did not consider alternative locations. During construction, approximately 1.0 acre of temporary workspace will be required. The temporary workspace will be returned to the property owner at the completion of construction.

Transco Interconnect Pipeline

Remarks: Intersection of the Transco Interconnect Pipeline and Quantico Parallel Pipe

Location: Quantico tap station owned and operated by Dominion

Remarks: Prince William County Emergency Response Training Facility

Location: Warrenton Road

Transco Interconnect Pipeline

Remarks: Typical Power Easement Crossing

Location: Fitzwater Drive

Remarks: Prince William County Emergency Response Training Facility

Location: Warrenton Road

Quantico Parallel Pipeline

Remarks: Existing Electric Transmission

Location: Quantico Parallel Pipe

Remarks: Existing overhead electric transmission and below ground natural gas

Location: Quantico Parallel Pipe

Existing Mechanicsville Meter and Regulator Station

- **Remarks:** Existing meter and regulator station equipment and parcel owned and operated by VNG
- **Location:** 8187 Mechanicsville Tpk Mechanicsville VA 23111

II. Description of Right-of-Way

G. Counties and localities through which proposed project will be located

The Transco Interconnect Pipeline will be located in the Counties of Prince William and Fauquier, Virginia.

The Transco Interconnect Compressor Station will be located in Prince William County, Virginia.

The Quantico Parallel Pipe will be located entirely within Fauquier County, Virginia.

The existing Mechanicsville M&R Station is located in Hanover County, Virginia.

II. Description of Right-of-Way

H. Length of proposed pipeline passing outside of the utility's service territory

The approximately 6.2-mile Transco Interconnect Pipeline and Transco Interconnect Compressor Station (at either site) will be located entirely outside of VNG's service territory, in the service territories of CVA and Washington Gas Light ("WGL").

The Quantico Parallel Pipe will be located entirely outside of VNG's service territory, in the service territory of CVA.

The equipment being installed at the existing Mechanicsville M&R Station is located entirely within the existing station's footprint, which is within VNG's existing service territory and on an existing parcel owned and operated by the Company.

III. Design and Operational Characteristics

A. Diameter of proposed pipeline

The Transco Interconnect Pipeline and Quantico Parallel Pipe will consist of 30” diameter steel pipelines.

III. Design and Operational Characteristics

B. Throughput capacity of proposed pipeline

The capacity for the proposed Project is 245 MMscfd.

III. Design and Operational Characteristics

C. Maximum Allowable Operating Pressure

The MAOP for the proposed Project is 1250 psig. This is consistent with the existing JUP.

III. Design and Operational Characteristics

D. Pipeline material and related facilities

The proposed Transco Interconnect Pipeline and Quantico Parallel Pipe will be constructed of carbon steel pipe manufactured in accordance with API 5L and coated with fusion bond epoxy.

The Transco Interconnect Pipeline and Quantico Parallel Pipe will have above ground appurtenances, including metering equipment, valves, odorizers, communications equipment, and in-line inspection tool launchers and receivers at the beginning and end of each pipeline segment and mainline valve sets spaced in accordance with 49 CFR Part 192.

The Mechanicsville M&R Station Upgrade will include upgraded metering equipment and associated both above- and below-ground piping.

III. Design and Operational Characteristics

E. Any new compressor stations or other facilities associated with the proposed pipeline project

The Company is proposing to install the new Transco Interconnect Compressor Station along the Transco Interconnect Pipeline in Prince William County as part of the Project.

Compressor stations are an essential component of gas pipeline engineering, whether for interstate transportation or local distribution purposes. The efficient and effective movement of natural gas from producing regions to consumption regions requires an extensive and elaborate transportation and distribution system, where natural gas flows with the application of pressure. To ensure that the natural gas flowing through a pipeline remains pressurized, compression of natural gas is required at periodic intervals along the pipe. Gas flows by expanding in a given pipeline from the discharge side (high pressure point) of one compressor station to the suction side (low pressure point) of the next. As the name implies, a compressor station compresses the natural gas (usually by a turbine, motor or engine), increasing its pressure, and thereby providing the energy to move gas through the pipe. The Company has selected centrifugal compressors supplied by Solar Turbines, Inc. ("Solar") driven by natural gas-fired turbines due to their high reliability, low operations and maintenance costs, available fuel supply, low nitrogen oxides ("NOx") emission turbine combustion system, and proven performance in continuous duty pipeline operation. In addition to turbine combustion controls, Selective Catalyst Reduction ("SCR") systems will be installed in the turbine exhaust ductwork to further reduce NOx emissions, as well as carbon monoxide ("CO") and volatile organic compounds ("VOCs") emissions. The Company anticipates that the Transco Interconnect Station will require a Minor New Source Review ("NSR") Permit; as such, Prince William County's designation as a marginal non-attainment for 8-hour ozone does not result in any additional requirements for the proposed source. Based upon the Company's review of recent State Air Pollution Control Board decisions, VNG believes that these air pollution control technologies are consistent with the most recently-approved compressor stations in Virginia. The Company has continued to refine its choice of technology at the proposed compressor station site, and will continue to do so consistent with any air permitting requirements ultimately determined by the regulating agencies.

The following list below is an overview of the Transco Interconnect Compressor Station construction based on preliminary design. See Confidential Attachment III.E.1 for the preliminary layout, subject to final engineering and design. While the site layout is preliminary, the Company took efforts to mitigate visual and noise impacts related to the Transco Interconnect Compressor Station by identifying a proposed site large enough to provide for both the footprint of the station as well as natural vegetative buffer. Indeed, of the proposed 36.8-acre site, a maximum of 15 acres will be cleared for the station, reserving the remaining acreage undeveloped to provide a buffer from neighboring properties.

- Compressors: Three centrifugal compressors driven by three Solar Centaur 50 gas-fired turbines rated at 6,130 horsepower ("hp") (ISO standard conditions). One or two compressors, depending on customer demand for natural gas, will run continuously in parallel with the third compressor available as a spare to make certain the Project can

provide the required firm service.

- Compressor Buildings: Conditioned metal buildings, one for each compressor package, designed to minimize ambient noise emissions and to protect the equipment from the weather.
- Fuel Source: Fuel gas for the turbines will be sourced from the station suction header and conditioned through a series of separators and coalescers. Fuel gas will also be heated to prevent condensation from reaching the turbine.
- Gas Conditioning: Natural gas will be conditioned prior to compression by passing through separators designed to remove moisture and particulates that could damage the compressors.
- Aftercoolers: Prior to discharging from the station, natural gas will pass through heat exchangers to remove excess heat added through the compression process.
- Facilities: The station will have an office and maintenance shop to facilitate 24-hour operation and maintenance support. The station will also have a central mechanical equipment building housing a station compressed air system and a common hot water boiler for heating the compressor buildings.

While the list above provides an overview of the Transco Interconnect Compressor Station construction based on preliminary design, other factors, such as Environmental Justice considerations discussed further below, could impact technological or site design as part of future agency review.

Environmental Justice

The Company has considered, and continues to consider, the requirements for environmental permitting of the Project. The Company is committed to environmental justice and will take a comprehensive and proactive approach to satisfy all applicable requirements. Below is an overview of the analyses that the Company expects to undertake in connection with obtaining necessary environmental approvals and permits for the VNG Interconnect. The Company certifies that it will comply with environmental justice requirements imposed by the authorizing agencies.

Legal Requirements

The Commonwealth recently enacted specific legislation regarding environmental justice. This includes the Virginia Environmental Justice Act ("VEJA"). Pursuant to VEJA, it is "the policy of the Commonwealth to promote environmental justice and ensure that it is carried out throughout the Commonwealth, with a focus on environmental justice communities and fenceline communities." Va. Code § 2.2-235. VEJA is applicable to all agencies in the Executive Branch, and will thus apply to environmental permits that the Company must obtain for the VNG Interconnect from state agencies.

Agency Involvement

The Company expects that the VDEQ will serve as the lead environmental permitting agency with respect to the environmental justice review. Along with the DEQ, the Air Pollution Control Board will also be involved in that review.

In VEJA, "environmental justice" is defined as "the fair treatment and meaningful involvement of every person, regardless of race, color, national origin, faith, disability, or income, in the development, implementation, and enforcement of environmental laws, regulations, and policies." *Id*. § 2.2-234. VEJA further defines both "fair treatment" and "meaningful involvement" as follows:

"*Fair treatment*" means the equitable consideration of all people whereby no group of people bears a disproportionate share of any negative environmental consequence resulting from an industrial, governmental, or commercial operation, program, or policy.
"*Meaningful involvement*" means the requirements that (i) affected and vulnerable community residents have access and opportunities to participate in the full cycle of the decision-making process about a proposed activity that will affect their environment or health and (ii) decision makers will seek out and consider such participation, allowing the views and perspectives of community residents to shape and influence the decision.

Overview of Anticipated Environmental Justice Analyses

In connection with obtaining necessary environmental permits and authorizations, the Company will undertake the following steps to ensure that environmental justice is satisfied:

1) Identify whether an environmental justice community is implicated; and if so,

2) Provide enhanced public participation to ensure environmental justice communities have meaningful involvement in the process; and ensure no environmental justice community bears a disproportionate share of any negative environmental impacts, considering any mitigation and enhancement.

To identify environmental justice communities, the Company will apply the definitions of VEJA. Environmental justice communities are those that are "communities of color" or "low-income communities" as also defined in VEJA.

To determine whether the local communities satisfy these definitions, the Company will conduct a demographic survey, both desktop and in the field, and considering other available information, including but not limited to census data. Fieldwork will validate the demographic information. If any environmental justice communities are identified, the Company will promote their meaningful involvement in the permitting processes. In addition to the traditional opportunities for public participation and as appropriate for the specific community, the Company expects this may include active notice, education and discussion by the Company (in addition to agency staff and permit decision-makers).

The Company will also analyze environmental impacts to the communities to ensure that environmental justice communities do not bear disproportionate negative impacts from the permitted activity compared to non-environmental justice communities.

All of this information will be submitted to the respective agencies for evaluation and refinement as necessary. Because those agencies must comply with their governing statutes regarding environmental justice, they may impose conditions on the Company when issuing the environmental permits. The Company certifies that it will comply with those conditions.

PUBLIC VERSION
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Transco Interconnect Compressor Station – Preliminary Layout

IV. Environmental, Public Safety and Economic Development

A. Character of the area to be traversed by the proposed pipeline

A desktop analysis of potential wetland impacts was conducted using U.S. Fish and Wildlife Service ("USFWS") National Wetland Inventory ("NWI") mapping. A summary of wetland areas within the proposed Project pipeline alignments or within the proposed facility footprints is provided in the table below.

The Company has contracted Kimley-Horn and Associates Inc. ("Kimley-Horn") to conduct a biological survey of the VNG Interconnect footprint. Kimley-Horn will survey and collect data to determine the presence of wetlands, streams, and protected species (including habitat). The data collected during the biological field surveys will be used to complete the required state and federal permit applications. VNG plans for surveying to commence following CPCN approval, with additional surveys conducted on an as-needed basis.

Alignment/ Footprint	**HUC8**	**Wetland Impact by Type (acres)**				**Total**
		PFO	**PEM**	**PUB**	**Riverine**	
Transco Interconnect Pipeline	Middle Potomac	8.17	1.86	0.74	2.11	**12.88**
Transco Interconnect Compressor Station*	Middle Potomac	10.17	0.0	0.0	0.0	**10.17**
Quantico Parallel Pipe	Middle Potomac	1.85	0.28	0.0	0.98	**3.11**
Mechanicsville M&R Station Upgrade	Lower James	0.0	0.0	0.0	0.0	**0.0**

Key: HUC8 – U.S. Geological Survey 8Th Order Hydrologic Unit Code; PFO – Palustrine Forested; PEM – Palustrine Emergent; PUB – Palustrine Unconsolidated Bottom Freshwater Pond

* Acreage shown includes a sum to total wetlands located within larger property parcel containing the proposed Transco Interconnect Compressor Station. Actual impacts to be determined once compressor station layout has been established.

A review of the U.S. Geological Survey National Hydrography Dataset ("NHD") resulted in identification of stream crossings as identified below. Also provided are the totals of linear feet of stream channel within the proposed limits of disturbance of the Project pipeline alignments or within the proposed facility footprints.

Alignment/ Footprint	Stream Impacts		
	Stream	# of Crossings	Impact (lin. ft.)
Transco Interconnect Pipeline	Cedar Creek	2	504
	Cedar Run	2	81
	Slate Run	1	622
	Unnamed	9	1,606
Transco Interconnect Compressor Station*	Unnamed	0	0
Quantico Parallel Pipe	Town Run	3	821
	Unnamed	8	698
Mechanicsville M&R Station Upgrade	None	0	0

* Linear feet shown includes a sum to total stream length located within larger property parcel containing the proposed Transco Interconnect Compressor Station. Actual impacts to be determined once compressor station layout has been established.

The USFWS Official Species List, Virginia Department of Wildlife Resources ("VDWR") Virginia Fish and Wildlife Information Service ("VAFWIS"), VDGIF Northern Long-Eared Bat ("NLEB") Winter Habitat and Roost Tree Application, and Center for Conservation Biology ("CCB") Eagle Nest Mapper were reviewed for confirmed sightings of federally and state listed as threatened and endangered species within a 2.0-mile radius of the proposed Project, the standard search radius for protected species.

Scientific Name	Common Name	Legal Status	Potential Presence		Survey Period
			Transco Interconnect Compressor Station	Mechanicsville M&R Station	
Myotis septentrionalis	Northern Long-eared Bat	FT	US	US	May 15 – Aug. 15, Consultation Needed
Ptilimnium nodosum	Harperella	FE	US		July 1 – Sept. 30
Elliptio lanceolata	Yellow Lance	FT	VA		April 1 – Oct. 31
Alasmidonta varicosa	Brook Floater	SE	VA		April 1 – Oct. 31
Lanius ludovicianus	Loggerhead Shrike	ST	VA		Apr. 1 – Oct. 31

Key: FE – Federal Endangered; FT – Federal Threatened; SE – State Endangered; ST – State Threatened; US – Listed in the Information, Planning, and Consultation System ("IPaC") system; VA – Listed in VAFWIS as confirmed present or potentially present

IV. Environmental, Public Safety and Economic Development

B. Number of structures within 500 feet of proposed right-of-way

Based on a review of Lidar aerial survey data, the Company identified the following structures within 500 feet of the edge of the proposed right-of-way, which include but are not limited to dwellings, commercial structures, outbuildings, sheds and barns:

- Transco Interconnect Pipeline – 44 structures, of which 12 preliminarily appear to be dwellings; and
- Quantico Parallel Pipe – 16 structures, of which 7 preliminarily appear to be dwellings.

IV. Environmental, Public Safety and Economic Development

C. Estimated amount of farmland and forestland within right-of-way

The land cover spatial data, maintained by VDEQ and the Virginia Information Technologies Agency ("VITA"), was used to estimate potential impacts to forestlands and farmlands within the proposed limits of disturbance of the Project pipeline alignments or within the proposed facility footprints. The land cover types "pasture," "cropland," and "harvested / disturbed" were included in the Farmland area. Land cover types "forest," "tree" and "shrub/scrub" were included in the Forestland area. The impacts to forestland shown below represent a conservative estimate of impacts inclusive of both the permanent conversion of the 50-foot area within and adjacent to the new pipeline alignment and the temporary construction easement that will be allowed to revert to a forested condition. Farmland impacts will be temporary in nature during construction and will not result in the loss of any farmland area within the corridor.

Alignment/Footprint	Farmland Impact (acres)	Forestland Impact (acres)
Transco Interconnect Pipeline	50.32	30.42
Transco Interconnect Compressor Station	0.0	11.56
Quantico Parallel Pipe	0.0	15
Mechanicsville M&R Station Upgrade	38.29	21.12

IV. Environmental, Public Safety and Economic Development

D. Description of any public outreach that has occurred, including meetings with local officials

VNG conducted public outreach regarding the Project to local officials in Fauquier County, Hanover County, and Prince William County. VNG has coordinated with each locality via in-person and virtual meetings, phone calls and emails on the status of the Project and the anticipated work in their community. To date, at least 25 meetings, phone calls or emails have occurred with local officials in Fauquier County, Hanover County, and Prince William County related to the Project. VNG has also held several calls with the VDHR regarding access to the Pilgrim's Rest property and proposed archeological survey methodology that would be acceptable to the agency for analyzing potential Project impacts to archeological resources on the property and within the adjacent utility corridor.

IV. Environmental, Public Safety and Economic Development

E. Whether any buildings need to be demolished for the proposed pipeline's construction

No buildings will need to be demolished for construction of the Transco Interconnect Pipeline or Quantico Parallel Pipe. However, the Company identified three buildings along the Quantico Parallel Pipe that may require an offset of the pipeline.

The parcel discussed in Section I.A, which has been identified as the proposed location of the Transco Compressor Station site, currently has a residential home situated on the lot. Once the purchase of the property has closed this house will be demolished.

IV. Environmental, Public Safety and Economic Development

F. Identification of districts, sites, buildings, structures, or other objects included in the National Register of Historic Places within or adjacent to right-of-way

The VDHR Virginia Cultural Resources Information System ("VCRIS") database was consulted to determine potential locations of historic districts, sites, buildings, or other related objects within the proposed Project pipeline alignments or within the proposed facility footprints. The results of this review are provided in the table below. To date, VNG has held several calls with the VDHR regarding access to the Pilgrim's Rest property and proposed archeological survey methodology that would be acceptable to them for analyzing potential project impacts to archeological resources on the property and within the adjacent utility corridor.

The Company has contracted Kimley-Horn to conduct a historical, archeological, and architectural survey of the VNG Interconnect footprint. Kimley-Horn will survey and collect data to determine the presence of any such resources. The data collected during the field surveys will be used to complete the required state and federal permit applications. VNG plans for surveying to commence following CPCN approval, with additional surveys conducted on an as-needed basis.

Alignment/Footprint	NRHP ID	Resource	Type
Transco Interconnect Pipeline	89001797	Pilgrim's Rest	18th Century Homesite
	03001434	Pilgrim's Rest (boundary increase)	18th Century Homesite

IV. Environmental, Public Safety and Economic Development

G. Identification of historic architectural, archeological, and cultural resources, such as historic landmarks, battlefields, sites, buildings, structures, districts or objects listed or determined eligible by the Virginia Department of Historic Resources within or adjacent to right-of-way

The Virginia Department of Historic Resources ("VDHR") Virginia Cultural Resource Information System ("VCRIS") was reviewed to determine the location of previously identified archeological and architectural resources within the proposed Project pipeline alignments or within the proposed facility footprints. The VCRIS database includes resources that have been evaluated for listing on the NRHP and eligibility determinations, as well as resources that have not been evaluated.

The Quantico Parallel Pipe alignment intersects the Elk Run-Germantown-Cedar Run Historic District. The Quantico Parallel Pipe alignment does not appear to intersect any other historical or cultural resources identified by the agency databases reviewed.

Property containing Pilgrim's Rest, an 18th Century homesite, is intersected by the Transco Interconnect Pipeline. The Transco Interconnect Pipeline also intersects with the Elk Run-Germantown-Cedar Run Historic District. The Transco Interconnect Compressor Station does not intersect any historic or cultural resources.

Alignment	Resource	Type	Agency/ Database
Transco Interconnect Pipeline	Belmont Grove – Mt. Wesley – Pilgrim's Rest	Historic District/Historic Easement	VDHR/NRHP
	Elk Run-Germantown-Cedar Run	Historic District	VDHR
Quantico Parallel Pipe	Elk Run-Germantown-Cedar Run	Historic District	VDHR

Archaeological resources determined by VDHR to be either eligible or potentially eligible for listing on the NRHP were identified by reviewing the VCRIS database. These are listed below for each proposed alignment or facility footprint, as applicable. These resources were identified to have at least a portion of the resource within the proposed limits of disturbance of the Project pipeline alignments or within the proposed facility footprints. The Transco Interconnect Compressor Station, Transco Interconnect Station, and Mechanicsville M&R Station do not intersect any archaeological resources documented in the VCRIS database.

Alignment	DHR ID	Resource	Type
Transco Interconnect Pipe	44FQ0107	Camp, temporary	Prehistoric/Unknown (15000 B.C. – 1606 A.D) - Eligible
	44FQ0113	Not Data	No Data - Eligible
	44PW0058	Ford	No Data
	44PW0554	No Data	Early Woodland (1200 B.C. – 299 A.D.) Eligible

IV. Environmental, Public Safety and Economic Development

H. Areas or features included in the Virginia Registry of Natural Areas maintained by the Virginia Department of Conservation and Recreation within or adjacent to right-of-way

A review of the National Conservation Easement Database ("NCED") and VDCR's Virginia Conservation Lands Database identified three natural conservation areas directly impacted by the proposed alignment. These are the Lehigh Portland Park, VDHR Easement and Northern Virginia Conservation Trust ("NVCT") Easement. The Quantico Parallel Pipe alignment and Transco Interconnect Compressor Station do not intersect any conservation easements registered in the databases reviewed. Impacts to natural conservation areas within the proposed limits of disturbance of the proposed Project pipeline alignments or within the proposed facility footprints are provided in the tables below.

Alignment	Resource	Type	Agency/ Database
Transco Interconnect Pipeline	Lehigh Portland Park	Local Park / Conserved Land	VDCR
	VDHR Easement	Conservation Easement	VDCR/NCED
	NVCT Easement	Conservation Easement	NVCT/VDCR

In addition to the recorded conservation easements described above, the Transco Interconnect Pipeline alignment will also intersect a USACE-approved mitigation bank. Details of the crossing are shown below.

Alignment	Mitigation Bank	Wetland Type	Potential Impacts
Transco Interconnect Pipeline	Potomac River Wetlands Mitigation Bank - Pandora Farms Site	Palustrine, Not Specified	2.87 acres

IV. Environmental, Public Safety and Economic Development

I. Scenic rivers or byways traversed by right-of-way

There are no National Wild and Scenic Rivers listed within the proposed Project footprint. The proposed Project does not cross any roadways indicated in the National or Virginia Byways Inventory provided by VDOT.

IV. Environmental, Public Safety and Economic Development

J. Applicable safety guidelines the proposed pipeline will meet or exceed

The Company will meet or exceed all applicable federal, state and internal safety guidelines during and following construction of the proposed Project, including but not limited to:

- Installing above-ground markers to indicate the location of certain buried natural gas lines consistent with requirements set forth in 49 CFR 192.707.

- Performing regular walking and aerial inspections and leak surveys to identify potential problems on the system consistent with or exceeding the requirements set forth in 49 CFR 192.705 and 706.

- Odorizing natural gas with mercaptan, which smells similar to rotten eggs, in order to provide an added layer of safety for leak detection consistent with the requirements set forth in 49 CFR 192.625.

- Monitoring pipelines 24/7 via VNG's Gas Control Center, which has the ability to shut off certain pipelines remotely, if needed, consistent with the requirements set forth in 49 CFR 192.613. The Company also follows a detailed Control Room Management plan for operation of the Gas Control Center that is consistent with 49 CFR 192.631.

- To account for collocation of the pipeline within an electric utility corridor and consistent with VNG's existing transmission pipelines, this pipeline will have an AC voltage mitigation system designed and installed to reduce any induced AC voltage to safe levels consistent with the requirements of 49 CFR 192.473.

- Educating the public on the importance of "Calling Before You Dig" to prevent third-party damage to natural gas pipelines consistent with the requirements set forth in 49 CFR 192.614.

- Working closely with local/regional emergency response officials located near VNG's pipeline facilities to ensure a better understanding of the nature of the Company's infrastructure and emergency preparedness pursuant to its RP1162 Plan. This provides for strong collaboration with emergency responders through VNG's local and corporate compliance teams consistent with the requirements set forth in 49 CFR 192.616.

- Following a comprehensive Transmission Pipeline Integrity Management Plan ("TIMP"), which is on file at the Commission and submitted on a yearly basis. The TIMP ensures the safety of the transmission pipelines and continuously evaluates the overall health of the entire transmission system.

- Utilizing pipe with a yield strength and wall thickness that meets or exceeds the requirements of 49 CFR 192.105.

- Adhering to valve station spacing and remote parameters that meet or exceed the requirements set forth in 49 CFR 192.179.

- Utilizing an existing utility corridor, which is an industry best practice that provides a safer environment for the utility to reside.

IV. Environmental, Public Safety and Economic Development

K. Economic benefits of the project

The Project will facilitate economic growth in the Commonwealth by continuing to provide safe, reliable natural gas service to VNG's customers. Additionally, construction of the Project supports investment in local businesses, consistent with the Company's supplier diversity program, and temporary employment opportunities. Estimates for the economic impact to the region around the Project footprint have been derived from a formal economic impact analysis conducted by Mary Washington University's Professor Christopher Garcia. The direct and indirect benefits of the project for Virginia are as follows:

- A total of $157.7 million is expected to go to Project activity within the state.
- The Project is expected to directly create the equivalent of 966 one-year jobs as well as an additional 475 one-year jobs through indirect and induced effects, totaling 1,441 Virginia jobs.
- The Project is expected to result in $73 million paid in direct compensation as well as an additional $30.4 million paid in compensation resulting from indirect and induced effects, totaling $103.4 million in Virginia compensation.
- The Project is expected to generate $249 million in total sales revenue in Virginia over the duration of the Project.
- The Project is expected to result in approximately $75,000 in philanthropic giving within the Project area.
- A minimum of $22.6 million is expected to be invested in diverse supplier sourcing.
- Four new permanent jobs are expected to be created, which will in turn directly generate approximately $3.2 million in annual statewide sales revenue and $547,000 in compensation.
- These permanent jobs are expected to result in a total of 10 permanent positions in the state (including 8 in Northern Virginia), $4 million in annual sales revenue and $845,000 in compensation through the combination of direct, indirect, and induced economic effects.
- The Project is expected to result in $340,165 in annual property tax revenues (in 2020 dollars).

V. Notice

A. Proposed route description to be used for public notice purposes

A written description of the proposed route and locations of the VNG Interconnect components is as follows:

Transco Interconnect Pipeline

For this approximately 6.2 mile route, the natural gas pipeline corridor will begin at the existing Quantico Compressor Station and run north in, or adjacent to, an existing electric transmission line right-of-way for the first 5,000 linear feet where the corridor crosses into Prince William County, Virginia. It continues north in, or adjacent to, the existing electric transmission line right-of-way for another 11,000 linear feet where it intersects Warrenton Road (Route 606). From there, it continues northward almost in its entirety in the existing electric transmission line right-of-way until crossing the Norfolk Southern railroad tracks. Then it turns west and then northwest as it crosses Nokesville Road and ends at the proposed tie-in point with the Transcontinental Gas Pipe Line Company, LLC pipeline.

Transco Interconnect Compressor Station

The proposed site for the Transco Interconnect Compressor Station is located at 13215 Farmview Road in Nokesville, Virginia, which is in Prince William County. The Transco Interconnect Compressor Station will occupy approximately 15 acres of the total 36.8-acre property for the footprint of the station and associated construction laydown and workspace areas and will reserve the remaining acreage undeveloped to provide a buffer from neighboring properties. The property is adjacent to the proposed Transco Interconnect Pipeline on the east side of the proposed alignment and is just south of Route 28.

Quantico Parallel Pipe

For this approximately 3.5-mile route, which parallels VNG's existing Joint Use Pipeline corridor, the natural gas pipeline corridor will begin at the tie-in point at the existing regulator station along Laws Ford Road. From this point, the corridor runs south, crossing Laws Ford Road and running alongside existing power lines for approximately 8,000 feet through agricultural land. Then the alignment crosses Sowego Road and continues south along the eastern side of the power lines for approximately 5,500 feet where it reaches Courthouse Road. Finally, the corridor continues south past Courthouse Road for approximately 4,000 feet where it terminates.

Mechanicsville M&R Station Upgrade

The Mechanicsville M&R Station Upgrade will be installed within the footprint of the existing 0.27-acre station parcel located in Hanover County at 8187 Mechanicsville Turnpike, Mechanicsville, Virginia 23111.

V. Notice

B. Map of proposed route

See Attachment V.B.1 for a map of the proposed Project suitable for notice purposes.

VNG Interconnect

Transco Interconnect Compressor Station

Transco Interconnect 6.2 Miles

Quantico Parallel Pipe 3.5 Miles

Existing Pipeline

Existing Mechanicsville Meter & Regulator Station

Existing Pipeline

Prince William

Fauquier

Stafford

- M&R Station
- **Interstate Pipeline**
  - Columbia Gas Co
  - Transcontinental Gas Pipeline
- **Existing VNG Gas Main**
  - VNG Lateral
  - Joint Use Pipeline (JUP)
- **Proposed VNG Interconnect**
  - Transco Interconnect Pipeline
  - Quantico Parallel Pipeline
- **Other Features**
  - Limited Access Highway
  - Secondary Hwy
  - Local Road
  - County Boundary
  - Water Feature
  - VNG Service Territory

N W E S

0 0.5 1 2 Miles

V. Notice

C. Identification of offices where members of the public may inspect the application

An overview of the Project and an electronic version of the Application is available at www.virginianaturalgas.com/*interconnect*.

V. Notice

D. List of all federal, state, and local agencies and/or officials that may reasonably be expected to have an interest in the proposed construction

Based on environmental conditions described above, VNG is notifying the following agencies and localities of this filing.

U.S. Army Corps of Engineers
U.S. Fish and Wildlife Service
Virginia Department of Environmental Quality
Virginia Marine Resources Commission
Virginia Department of Conservation and Recreation
Virginia Department of Historic Resources
Virginia Department of Transportation
Prince William County
Fauquier County
Hanover County

Direct Testimony

COMMONWEALTH OF VIRGINIA

STATE CORPORATION COMMISSION

APPLICATION OF	)	
	)	
VIRGINIA NATURAL GAS, INC.	)	Case No. PUR-2020-00283
	)	
For approval and certification of natural gas Facilities: the Virginia Natural Gas Interconnect, and for approval of Rate Schedules and Terms and Conditions for Pipeline Transportation Service	)	

IDENTIFICATION, SUMMARIES AND TESTIMONY OF DIRECT WITNESSES IN SUPPORT OF THE APPLICATION OF VIRGINIA NATURAL GAS, INC.

Kenneth Yagelski
- Witness Direct Testimony Summary
- Direct Testimony
- Appendix A: Background and Qualifications

Patrick Winnubst
- Witness Direct Testimony Summary
- Direct Testimony
- Appendix A: Background and Qualifications

John Cogburn
- Witness Direct Testimony Summary
- Direct Testimony
- Appendix A: Background and Qualifications

WITNESS DIRECT TESTIMONY SUMMARY

Witness: Kenneth W. Yagelski

Title: Director, Gas Supply AGL Services Company

Summary:

Company Witness Kenneth Yagelski sponsors a form Firm and Interruptible Transportation Service Agreement, as well as those portions of the Appendix describing VNG's system and need for, and benefits of, the proposed Project, as follows:

- Section I.A: This section details the primary justifications for the proposed project.
- Section I.B: This section details the reliability standards or service obligations requiring construction of the proposed project.
- Section I.C: This section describes the future projects that require the proposed project be built.
- Section I.D: This section describes the benefits of the proposed project.
- Section I.E: This section describes the utility's present system and how the proposed project will connect.
- Section I.F: This section explains feasible project alternatives.
- Section I.G: This section describes the facilities that will be removed or taken out of service once the project is constructed.
- Section I.H: This section provides the desired in-service date.
- Section I.I: This section provides the construction timeline and methods.
- Section I.L: This section provides the description of the facilities to be served by the proposed project.
- Section II.A: This section provides the length of the proposed right-of-way.
- Section II.D: This section provides a description of clearing and/or maintenance for the right-of-way.
- Section II.E: This section provides a list of permitted uses within the right-of-way.
- Section II.F: This section provides a description of the route selection process and feasible alternative routes.
- Section II.H: This section provides the length of the proposed pipeline passing outside of the utility's service territory.
- Sections III.A-E: These sections provide characteristics of the proposed pipeline and related facilities.
- Section IV.D: This section provides a description of any public outreach that has occurred, including meetings with state and local officials.
- Section IV.E: This section identifies buildings that need to be demolished for the proposed pipeline construction.
- Section IV.J: This section provides applicable safety guidelines the proposed pipeline will meet or exceed.
- Section IV.K: This section provides the economic benefits of the proposed project.
- Section V.A: This section provides a proposed route description to be used for public notice purposes.
- Section V.C: This section provides the identification of offices where members of the

public may inspect the application.

Additionally, Company Witness Yagelski co-sponsors the following portions of the Appendix:

- Section I.J (co-sponsored with Company Witness John Cogburn): This section provides the estimated cost and plan for cost recovery.
- Section I.K (co-sponsored with Company Witness Patrick Winnubst): This section identifies other approvals obtained or required.
- Section II.C (co-sponsored with Company Witness Patrick Winnubst): This section provides evaluation of existing right-of-way.
- Section V.D (co-sponsored with Company Witness Patrick Winnubst): This section identifies all federal, state and local agencies and/or officials that may reasonably be expected to have an interest in the proposed construction.

A statement of Mr. Yagelski's background and qualifications is attached to his testimony as Appendix A.

DIRECT TESTIMONY
OF
KENNETH W. YAGELSKI
ON BEHALF OF
VIRGINIA NATURAL GAS, INC.
BEFORE THE
STATE CORPORATION COMMISSION OF VIRGINIA
CASE NO. PUR-2020-00283

Q. Please state your name, position, and business address.

A. My name is Kenneth W. Yagelski, and I am Director of Gas Supply for AGL Services Company ("AGSC"). I am responsible for gas supply activities for the AGSC distribution operations, which includes Virginia Natural Gas, Inc. ("VNG" or "Company"). In addition, I direct business advocacy in proceedings before the Federal Energy Regulatory Commission ("FERC") on behalf of Southern Company Gas ("GAS"), formerly known as AGL Resources Inc. ("AGLR"), and its four local distribution companies. My business address is 544 S. Independence Boulevard, Virginia Beach, Virginia 23452.

Q. Please describe your professional background and education.

A. I received a Bachelor of Science degree in electrical engineering with an emphasis in power systems from Purdue University in 1985. Since graduation, I have been employed in the natural gas and electric power industry with various management positions and as a consultant to the North American energy industry. I have been responsible for system and resource planning, energy sourcing, asset optimization, business development, engineering, information technology, and local and federal regulatory matters. In 2012, I joined AGLR as Director of Gas Supply Policy, and in September 2014, I assumed my current position. A full statement of my background and qualifications is included in Appendix A.

Q. What is the purpose of your direct testimony?

A. In order to provide incremental transportation capacity to existing customers, and to help maintain reliable service to the area, VNG proposes to construct the (i) Transco Interconnect Pipeline, (ii) Transco Interconnect Compressor Station, (iii) Quantico Parallel Pipe, and (iv) Mechanicsville Metering and Regulation Station Upgrade, which are collectively referred to as the Virginia Natural Gas Interconnect ("VNG Interconnect" or the "Project").

The purpose of my testimony is to describe VNG's system and the need for, and benefits of, the proposed Project. In addition, I provide an overview of the design characteristics and construction of the Project facilities, safety measures, and public outreach conducted regarding the Project. Specifically, I am sponsoring Sections I.A-I.I, I.L, II.A, II.D-II.F, II.H, III.A-III.E, IV.D, IV.E, IV.J, IV.K, V.A, and V.C of the Appendix. Additionally, I also co-sponsor Section I.J with Company Witness Cogburn, and Sections I.J, I.K, II.C and V.D with Company Witness Patrick Winnubst.

Q. Does this conclude your direct testimony?

A. Yes, it does.

APPENDIX A

BACKGROUND AND QUALIFICATIONS OF KENNETH W. YAGELSKI

Kenneth W. Yagelski has served as the Director of Gas Supply for Southern Company Gas (GAS), formerly AGL Resources Inc. (AGLR), since 2014. In this role, Mr. Yagelski is accountable for gas supply activities for GAS' distribution operations. In addition, he directs business advocacy in proceedings before the Federal Energy Regulatory Commission (FERC) on behalf of GAS' four local distribution companies: Atlanta Gas Light (Georgia), Chattanooga Gas (Tennessee), Nicor Gas (Illinois) and Virginia Natural Gas (Virginia).

Mr. Yagelski joined AGLR in 2012 as Director of Gas Supply Policy, where he led gas supply-related FERC activities, and state jurisdictional matters before the Virginia State Corporation Commission.

Prior to joining AGLR, Mr. Yagelski was Manager Midstream Services for UGI Energy Services (2011 – 2012), the marketing, midstream and power generation subsidiary of UGI Corporation. He also provided expert consultant services to the North American energy industry as Assistant Vice President at Concentric Energy Advisors (2008 – 2010). Mr. Yagelski has other direct natural gas experience from management positions at Washington Gas Light, where he served as Director Energy Acquisition (2004 – 2008), Department Head Regulatory Affairs (2000 – 2004), and Area Head Energy Acquisition (1999 – 2000). He also held several different energy-related management positions with Illinois Power, now Ameren – Illinois Power (1985 – 1999).

Throughout his career, Mr. Yagelski has been an expert witness in regulatory proceedings and government hearings, an instructor for energy industry association courses, and a speaker at industry conferences.

Mr. Yagelski is a member of the American Gas Association FERC Regulatory Committee, and has served as vice chairman and chairman of the association's Rates and Regulatory Committee. Mr. Yagelski serves as a board member on the Virginia Oil and Gas Association (VOGA). He is a Gas Technology Institute Registered Gas Distribution Professional, and has held technical committee positions with the North American Energy Standards Board and the Institute of Electrical and Electronics Engineers.

A native of rural northwest Indiana, Mr. Yagelski earned a bachelor's degree from the School of Electrical Engineering at Purdue University in West Lafayette, Indiana where he specialized in the study of power systems. He has also completed coursework at the University of Illinois – Springfield masters of business administration program.

WITNESS DIRECT TESTIMONY SUMMARY

Witness: Patrick Winnubst

Title: Manager, Environmental Programs, Environmental Affairs, Southern Company Gas

Summary:

Company Witness Patrick Winnubst sponsors portions of the Appendix describing the environmental impacts of the Project, as follows:

- Section II.B: This section provides a map of the route, including GIS constraints.
- Section II.G: This section identifies the counties and localities through which the proposed project will be located.
- Section IV.A: This section describes the character of the area to be traversed by the proposed pipeline.
- Section IV.B: This section identifies the number of structures within 500 feet of the proposed right-of-way.
- Section IV.C: This section provides the estimated amount of farmland and forestland within the right-of-way.
- Section IV.F: This section identifies districts, sites, buildings, structures, and other objects included in the National Register of Historic Places within or adjacent to the right-of-way.
- Section IV.G: This section identifies historic architectural, archeological, and cultural resources, such as historic landmarks, battlefields, sites, buildings, structures, districts or objects listed or determined eligible by the Virginia Department of Historic Resources within or adjacent to right-of-way.
- Section IV.H: This section identifies areas or features included in the Virginia Registry of Natural Areas maintained by the Virginia Department of Conservation and Recreation within or adjacent to right-of-way.
- Section IV.I: This section identifies scenic rivers or byways traversed by the right-of-way.
- Section V.B: This section provides a map of the proposed route.

Additionally, Company Witness Winnubst co-sponsors the following portions of the Appendix:

- Section I.K (co-sponsored with Company Witness Kenneth Yagelski): This section identifies other approvals obtained or required.
- Section II.C (co-sponsored with Company Witness Kenneth Yagelski): This section provides evaluation of existing right-of-way.
- Section V.D (co-sponsored with Company Witness Kenneth Yagelski): This section identifies all federal, state and local agencies and/or officials that may reasonably be expected to have an interest in the proposed construction.

Mr. Winnubst also sponsors the VDEQ Supplement provided with this Application. A statement of Mr. Winnubst's background and qualifications is attached to his testimony as Appendix A.

DIRECT TESTIMONY
OF
PATRICK WINNUBST
ON BEHALF OF
VIRGINIA NATURAL GAS, INC.
BEFORE THE
STATE CORPORATION COMMISSION OF VIRGINIA
CASE NO. PUR-2020-00283

Q. Please state your name, position, and business address.

A. My name is Patrick Winnubst, and I am Manager of Environmental Programs, Environment Affairs, for Southern Company Gas. In this role, I have direct environmental oversight for Virginia Natural Gas, Inc. ("VNG" or the "Company"). My business address is Ten Peachtree Place, Atlanta, Georgia 30309.

Q. Please describe your responsibilities as the Manager of Environmental Programs.

A. In this role, I manage environmental compliance efforts in Georgia, Tennessee, and Virginia. A full statement of my background and qualifications is included in Appendix A.

Q. What is the purpose of your direct testimony?

A. In order to provide incremental transportation capacity to existing customers, and to help maintain reliable service to the area, VNG proposes to construct the (i) Transco Interconnect Pipeline, (ii) Transco Interconnect Compressor Station, (iii) Quantico Parallel Pipe, and (iv) Mechanicsville Metering and Regulation Station Upgrade, which are collectively referred to as the Virginia Natural Gas Interconnect ("VNG Interconnect" or the "Project").

The purpose of my testimony is to describe the environmental impacts of the proposed Project. I am sponsoring Sections II.B, II.G, IV.A, IV.B, IV.C, IV.F, IV.G, IV.H, IV.I,

and V.B of the Appendix. Additionally, I also co-sponsor Sections I.K, II.C, and V.D with Company Witness Yagelski. Finally, I sponsor the VDEQ Supplement, which is provided to facilitate the coordinated agency review of the Project by the Virginia Department of Environmental Quality.

Q. Does this conclude your direct testimony?

A. Yes, it does.

APPENDIX A

BACKGROUND AND QUALIFICATIONS
OF
PATRICK WINNUBST

Patrick Winnubst joined Southern Company Gas in 2014 as an Environmental Specialist supporting the company's Southern Operations. In 2020, Mr. Winnubst was promoted to his current position of Manager of Environmental Programs. In this role, Mr. Winnubst manages environmental compliance efforts in Georgia, Tennessee, and Virginia. In addition, he serves as co-chair for Southern Gas Company's Natural Resources Governance Team. Prior to joining Southern Company Gas, Mr. Winnubst spent eight years at AECOM and CH2M HILL, working primarily in the energy sector, as an ecologist and project manager. Mr. Winnubst received his Bachelor of Science in Biology from Georgia Southern University and his Master of Environmental Science from Miami University.

WITNESS DIRECT TESTIMONY SUMMARY

Witness: John Cogburn

Title: Director, Rates and Tariffs and Regulatory Planning for AGL Services Company

Summary:

Company Witness John Cogburn co-sponsors Section I.J. of the Appendix with Company Witness Yagelski, which provides the estimated cost and plan for cost recovery. In addition, Mr. Cogburn supports the Company's request to implement three new rate schedules, Rate Schedules VI-TRFT, VI-LFT, and VI-IT, to offer new services that are being made possible by the VNG Interconnect, as well as the Terms and Conditions for Service related thereto, which are provided in Section I.J. He also describes how the rates will be updated when actual Project costs are known.

A statement of Mr. Cogburn's background and qualifications is attached to his testimony as Appendix A.

DIRECT TESTIMONY
OF
JOHN M. COGBURN
ON BEHALF OF
VIRGINIA NATURAL GAS, INC.
BEFORE THE
STATE CORPORATION COMMISSION OF VIRGINIA
CASE NO. PUR-2020-00283

Q. Please state your name and position and business address.

A. My name is John M. Cogburn, and I am the Director, Rates and Tariffs and Regulatory Planning for AGL Services Company ("AGSC"). In this role, I have rates, tariff, and regulatory planning responsibilities for Virginia Natural Gas, Inc. ("VNG" or the "Company"). My business address is 10 Peachtree Place, Atlanta, Georgia 30309.

Q. Please describe your professional background and education.

A. I assumed my current position of Director of Rate, Tariffs, and Regulatory Planning in September 2018. Immediately prior to this position, I was Director of Regulatory Planning and Reporting. Between 2010 and 2013, I was Director of Regulatory Affairs for VNG. Prior to my role at VNG, I served in several analyst and manager positions with the regulatory and marketing departments of AGSC. Before joining AGL Resources Inc. in 2004, I served as an economist on the Staff of the Georgia Public Service Commission beginning in 2001. I hold a Master's degree in economics from the University of Tennessee and a Bachelor's degree in economics from Elon College. A full statement of my background and qualifications is included in Appendix A.

Q. What is the purpose of your direct testimony?

A. In order to provide incremental transportation capacity to existing customers, and to help maintain reliable service to the area, VNG proposes to construct the (i) Transco

Interconnect Pipeline, (ii) Transco Interconnect Compressor Station, (iii) Quantico Parallel Pipe, and (iv) Mechanicsville Metering and Regulation Station Upgrade, which are collectively referred to as the Virginia Natural Gas Interconnect ("VNG Interconnect" or the "Project").

The purpose of my testimony is to describe the rate design and related cost allocations associated with the proposed VNG Interconnect, as well as support the Company's request to implement new Rate Schedules VI-TRFT, VI-LFT, and VI-IT, and the Terms and Conditions related thereto. I also describe how rates will be updated when the actual Project costs are known. I am co-sponsoring Section I.J. of the Appendix with Company Witness Yagelski.

Q. Does this conclude your direct testimony?

A. Yes, it does.

APPENDIX A

BACKGROUND AND QUALIFICATIONS
OF
JOHN M. COGBURN

Work Experience

Southern Company Gas and AGL Resources
2018 – present – Director, Rates & Tariffs & Regulatory Planning, AGL Services Company
2013 – present – Director, Regulatory Reporting and Strategic Planning, AGL Services Company
2010 – 2013 – Director, Regulatory Affairs, Virginia Natural Gas
2009 – 2010 – Director, Regulatory Planning and Partnerships, AGL Services Company
2006 – 2009 – Manager, Marketer Services, Atlanta Gas Light Company
2005 – 2006 – Manager, Regulatory Planning and Policy, AGL Services Company
2004 – 2005 – Analyst, Regulatory Planning and Policy, AGL Services Company

Georgia Public Service Commission
2001 – 2004 – Economist

Oak Ridge National Laboratory
1998 – 2001 – Research Assistant

Georgia General Assembly, Reapportion Services Office
1995 – 1997 – GIS Specialist

Education

Elon College, BA Economics, 1995
University of Tennessee – Knoxville, MA Economics, 1999

Appearances before Utility Commissions

Virginia State Corporation Commission: Case No. PUR-2019-00207—Filed and live testimony, Virginia Natural Gas ("VNG") Header Improvement Project, revenue requirement, ratemaking, and tariff issues on behalf of VNG (2019-2020).

Virginia State Corporation Commission: Case No. PUR-2018-00194—Filed testimony, Virginia Natural Gas ("VNG") CARE Plan Amendment Case, ratemaking issues on behalf of VNG (2018)

Tennessee Public Utility Commission: Docket No. 18-00017—Filed and live testimony, Chattanooga Natural Gas ("CGC") Rate Case on alternative rate mechanism on behalf of CGC (2018)

Virginia State Corporation Commission: Case No. PUE-2015-00121—Filed testimony, Virginia Natural Gas SAVE Program Phase 2 Plan, revenue requirement and ratemaking issues on behalf of VNG (2015)

Virginia State Corporation Commission: Case No. PUE-2015-00050—Filed testimony, Virginia

Natural Gas SAVE 2015 Reconciliation and Rate Update, revenue requirement and ratemaking issues on behalf of VNG (2015)

Virginia State Corporation Commission: Case No. PUE-2014-00068—Filed testimony, Virginia Natural Gas CARE Plan Amendment Case, ratemaking issues on behalf of VNG (2014)

Virginia State Corporation Commission: Case No. PUE-2014-00037—Filed testimony, Virginia Natural Gas SAVE 2014 Reconciliation and Rate Update, revenue requirement and ratemaking issues on behalf of VNG (2014)

Virginia State Corporation Commission: Case No. PUE-2013-00054—Filed testimony, Virginia Natural Gas SAVE 2013 Reconciliation and Rate Update, revenue requirement and ratemaking issues on behalf of VNG (2013)

Virginia State Corporation Commission: Case No. PUE-2012-00118—Filed and live testimony, Virginia Natural Gas CARE Case, ratemaking issues on behalf of VNG (2013)

Virginia State Corporation Commission: Case No. PUE-2012-00012—Filed and live testimony, Virginia Natural Gas SAVE Case, revenue requirement and ratemaking issues on behalf of VNG (2012)

Virginia State Corporation Commission: Case No. PUE-2010-00142—Filed testimony, Virginia Natural Gas Rate Case, ratemaking issues on behalf of VNG (2011)

Georgia Public Service Commission: Docket 31647-U—Filed and live testimony, Atlanta Gas Light Company ("AGL") Rate Case, marketer services issues on behalf of AGL. (2008)

Georgia Public Service Commission: Docket 28527-U—Filed and live testimony, Marketer Post-Gas volume reconciliation (true-up) on behalf of AGL (2008)

Georgia Public Service Commission: Docket 24690-U—Filed and live testimony, assignment of natural gas interstate capacity assets on behalf of AGL (2007)

Georgia Public Service Commission: Docket 16682-U—Filed and live testimony, assignment of natural gas interstate capacity assets on behalf of GPSC Staff (2003)

Georgia Public Service Commission: Docket 15295-U—Filed and live testimony, daily natural gas demand forecasting on behalf of GPSC Staff. (2002-2003)

VDEQ Supplement

COMMONWEALTH OF VIRGINIA
BEFORE THE
STATE CORPORATION COMMISSION

APPLICATION OF

VIRGINIA NATURAL GAS

FOR APPROVAL AND CERTIFICATION
OF NATURAL GAS FACILITIES

VNG INTERCONNECT

VDEQ SUPPLEMENT

INFORMATION TO FACILITATE VDEQ AGENCY
REVIEW AND ANALYSIS

Case No. PUR-2020-00283

INFORMATION TO FACILITATE VDEQ AGENCY REVIEW AND ANALYSIS
Virginia Natural Gas Interconnect

In addition to the Appendix, Virginia Natural Gas, Inc. ("VNG" or the "Company") has developed this DEQ Supplement to facilitate the review and analysis of the proposed VNG Interconnect by VDEQ and other relevant agencies.

VNG Interconnect

In order to provide requested incremental transportation capacity to existing customers, and to help maintain reliable service to the area, the Company proposes the following:

(i) Transco Interconnect Pipeline – construct approximately 6.2 miles of 30" diameter steel pipeline in new right-of-way extending north from the Company's existing natural gas transmission system located near Quantico, Virginia and interconnecting with the Transcontinental Gas Pipe Line Company, LLC ("Transco") pipeline via an interconnect station located near Catlett, Virginia.

(ii) Transco Interconnect Compressor Station – construct a compressor station to be located in Prince William County, Virginia.

(iii) Quantico Parallel Pipe – construct approximately 3.5 miles of 30" diameter steel pipeline in new right-of-way that runs parallel and adjacent to the Company's existing Joint Use Pipeline ("JUP") located in Fauquier County, Virginia.

(iv) Mechanicsville Metering and Regulation ("M&R") Station Upgrade – install additional metering and regulating equipment to accommodate the increased capacity at the existing Mechanicsville M&R Station within existing Company-owned property in Hanover County, Virginia.

Taken together, the Transco Interconnect Pipeline, Transco Interconnect Compressor Station, Quantico Parallel Pipe, and Mechanicsville M&R Station Upgrade are referred to as the Virginia Natural Gas Interconnect ("VNG Interconnect" or the "Project").

a. Required air permits, expected restrictions, expected emissions, rates of emissions, and any needed emissions offsets or allowances.

An air permit will be required for the natural gas-fired Transco Interconnect Compressor Station. Emissions information and environmental justice analysis regarding the compressor station is addressed in Section III.E of the Appendix. The Company currently anticipates the air permitting process to occur from June 2021 through the end of May 2022, as reflected in Attachment I.I.1 to the Appendix. VNG will meet or exceed all State Air Pollution Control Board requirements regarding the Project.

As to secondary emissions sources, tree clearing will be required as part of this Project, as described in Section II.D of the Appendix. Tree clearing would be on existing, new and temporary right-of-way, and the proposed Transco Interconnect Compressor Station parcel. The Company does not expect to burn cleared material. Equipment and vehicles that are powered by gasoline or

diesel motors will be used during construction of the Project so there will be exhaust from those motors.

b. Required permits for water withdrawals, expected restrictions, the amount of water estimated to be used, the source of such water, identification of a backup source of water, if any, and identification of any facilities that need to be constructed to provide such water.

A water withdrawal permit will not be required for the Project per the exemption set forth in 9 VAC 25-210-310 (Section A.6.B). Water withdrawals will be limited to hydrostatic testing of the pipeline portion of the Project. VNG proposes to use municipal water to conduct the hydrostatic tests; however, surface waters such as ponds or lakes may be investigated if a municipal water source is not available. Whether and to what extent surface water will be needed for hydrostatic testing has not yet been determined, but for context, hydrostatic testing of a new pipeline is a one-time event.

c. Required permits for water discharge and potential impacts on regional water flows.

The Project will require coverage under the VDEQ Virginia Pollutant Discharge Elimination System ("VPDES") General Permit for Hydrostatic Test discharges. Water discharge associated with hydrostatic tests will follow a detailed procedure to prevent erosion. VNG expects no impacts to regional water flows.

d. Required permits related to the wetlands and an identification of any tidal and nontidal wetlands located near the proposed site and how such wetlands will be impacted by applicant's proposed facility.

Please see Section IV.A of the Appendix for information regarding potential wetlands impacts and stream crossings.

It is anticipated that the construction of the Project components will qualify for a Nationwide Permit 12 from the U.S. Army Corps of Engineers under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act; and the Project will receive a Virginia Section 401 of the Clean Water Act water quality certification from the VDEQ either through the conditional certification of Nationwide Permit 12 issued by the VDEQ or through the acquisition of a separate Virginia Water Protection General Permit – WP2 - Facilities and Activities of Utility and Public Service Companies Regulated by the Federal Energy Regulatory Commission or the State Corporation Commission and Other Utility Line Activities. No impacts to tidal wetlands are proposed by the Project. A permit from the Virginia Marine Resources Commission ("VMRC") may be required for any crossing of state-owned submerged lands. Perennial stream and creek channels with upstream drainage areas in excess of 5 square miles at the point of crossing are considered to contain lands regulated by the VMRC. Prior to construction, the Company will file a Joint Permit Application with the VMRC to obtain any necessary permits to impact jurisdictional resources.

e. Impact of solid and hazardous waste on local water resources.

As explained above, VNG's application to the Commission for approval and certification of the Project is for natural gas facilities, not petroleum pipeline or electric generating facilities. As such, the Company does not anticipate generating any solid or hazardous waste, except for excess soil from excavation work.

VNG reviewed VDEQ databases for the presence of registered above and underground petroleum storage tanks, reported petroleum releases, and the U.S. Environmental Protection Agency ("EPA") Facility Registry System ("FRS"). The FRS provides information about facilities, sites, or places subject to environmental regulation or of environmental interest. Although this data set contains all sites subject to environmental regulations by the EPA or other regulatory authorities, including sites that fall under air emissions or wastewater programs, the results reported here include only those sites that fall under the EPA's hazardous waste, solid waste, remediation, and underground storage tank programs (i.e., Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), Resource Conservation and Recovery Act ("RCRA"), or brownfield sites).

The table below indicates the number of sites that fall within 0.5 mile of the Project components as reported in the publicly available databases maintained by the VDEQ and EPA.

Sites Within 0.5 Mile of the VNG Interconnect					
Project Component	VDEQ Petroleum Releases	VDEQ Registered Tanks	EPA FRS RCRA Generators	EPA FRS Brownfield Sites	EPA FRS CERCLA Sites
Transco Interconnect Pipeline	6	1	2	0	0
Transco Compressor Station	1	0	0	0	0
Quantico Parallel Pipe	0	1	1	0	0
Mechanicsville M&R Station Upgrade	5	3	4	0	0

VNG will endeavor to avoid contaminated sites, but if contaminated media is encountered during excavation work, it will provide any required notice to the authorities and have a contingency plan to properly deal with any contaminated soil that it encounters.

f. Impact on natural heritage resources, and on threatened and endangered species.

Please see Section IV.A of the Appendix for information regarding information on threatened and endangered species within a 2.0-mile radius of the proposed Project. The Company will obtain all necessary environmental permits prior to construction such that coordination with the Virginia Department of Wildlife Resources ("VDWR"), the Virginia Department of Conservation and Recreation ("DCR"), and the U.S. Fish and Wildlife Service will take place through the respective permit processes to avoid or minimize impacts to listed species and natural heritage resources. While the Company has reviewed the appropriate databases and there do not appear to be any natural heritage resources impacted by the Project, as part of the wetland permitting process, VNG will submit to the DCR formal review process, which is more granular in nature.

g. Erosion and sediment control measures.

Erosion and sediment control best management practices will be installed and maintained until all disturbed areas have met final stabilization. VNG will develop project specific Stormwater and Erosion and Sediment Control Plans to ensure minimal disturbance to the environmental. Erosion and Sediment Control and Stormwater Management plans will be developed in accordance with the VNG VDEQ approved Annual Standards and Specifications ("AS&S") for Erosion and Sediment Control and Stormwater Management. Upon completion of the proposed Project, the Company will restore the right-of-way in accordance with the AS&S and any regulatory permit conditions imposed by approval authorities.

h. Archaeological, historic, scenic, cultural, or architectural resources in the area.

Please see Sections IV.F and IV.G of the Appendix for information regarding archeological, historic, scenic, cultural, or architectural resources in the Project area.

i. Chesapeake Bay Preservation Areas designated by the locality.

Construction, installation, operation, and maintenance of natural gas pipelines and their appurtenant structures are conditionally exempt from the Chesapeake Bay Preservation Act as stated in the exemption for public utilities, railroads, public roads, and facilities in 9 VAC 25-830-150. Permanent, above ground project features will be located beyond the limits of potential Resource Protection Area ("RPA") features and 100-foot vegetated buffers from these features.

j. Wildlife resources.

Since the proposed Project is primarily collocated with an existing electric and natural gas transmission right-of-way, as well as along VNG's existing JUP rights-of-way, no significant loss of wildlife habitat is anticipated. Detailed environmental surveys of the Project footprint will be conducted prior to submittal of VDEQ, VMRC and USACE permit applications.

k. Agricultural and forest resources and federal, local, state or private parks and recreation areas.

Please see Sections IV.C and IV.H of the Appendix for information regarding agricultural and forest resources and federal, local, state or private parks and recreation areas in the Project area.

l. Use of pesticides and herbicides.

VNG typically maintains natural gas pipeline right-of-way by means of mechanical mowing. Herbicide application is limited to spot application at above ground facilities (e.g. fence lines, meter stations, pipeline markers, etc.) where mowing is not feasible.

m. Geology and mineral resources, caves, and sinkholes.

Rock may be present in the Project area, which will be determined during the engineering and design phase through geotechnical investigation. At that time, the Company will determine the appropriate construction method to address any such geological conditions. After a preliminary review of the Virginia Department of Mines, Minerals and Energy ("DMME") mapping available on the DMME website, the Company does not anticipate encountering Karst formations, active, or abandoned mines in the Project area. Please see Section I.I of the Appendix.

n. Transportation infrastructure.

The proposed Project does not cross any roadways indicated in the National or Virginia Byways Inventory provided by Virginia Department of Transportation ("VDOT"). The proposed Project alignment (*i.e.*, pipeline components) extends a total of approximately 9.7 miles through the Counties of Prince William and Fauquier. There are approximately 11 crossings of public and private roads.

The Company plans to apply for land use permits from VDOT for the crossings of VDOT maintained roads and construction entrances from VDOT right-of-way. These permits will be obtained prior to construction.

In addition, there is approximately 1 railroad crossing by the Project, which will permitted by the rail owners.