Florida Gas Transmission Company

An Energy Transfer/Kinder Morgan Affiliate

Via eFiling

November 3, 2022

Ms. Kimberly D. Bose, Secretary
Office of the Secretary
Federal Energy Regulatory Commission
888 First Street, N.W., Room 1A
Washington, D.C. 20426

Re: Florida Gas Transmission Company, LLC
Prior Notice Request for Authorization under the Blanket Certificate
Tampa West Project

Dear Ms. Bose:

Pursuant to 18 C.F.R. §§ 157.205, 157.208, 157.210, and 157.211 of the Federal Energy Regulatory Commission's Regulations and its blanket certificate authority granted at Docket No. CP82-553-000, Florida Gas Transmission Company, LLC ("FGT") hereby submits for filing this Prior Notice Request for Authorization under its blanket certificate to construct/modify, install, own, maintain and operate certain natural gas pipeline facilities (including lateral looping) and appurtenant facilities in Pinellas and Hillsborough Counties, Florida, (collectively referred to as the "Tampa West Project" or "Project"), all as more fully set forth herein.

FGT respectfully requests that only the information submitted behind the Public tab (**Volume I**) be placed on the internet as "**Public Information**".

In addition, FGT respectfully requests that the information submitted behind the Privileged tab (**Volume II**) and identified as "**CUI/Contains Privileged Information – Do Not Release**", and behind the CEII tab (**Volume III**) and identified as "**CUI/Critical Energy Infrastructure Information ("CEII") – Do Not Release**", be accorded special treatment pursuant to 18 CFR § 388.112.

This filing is being submitted electronically to the Commission's eFiling website pursuant to the Commission's Order No. 703, Filing via the Internet Guidelines, issued on November 15, 2007 in Docket No. RM07-16-000. In addition, FGT is providing two copies of this application to the Commission's Office of Energy Projects. Any questions concerning this filing may be addressed to the undersigned at (713) 989-2605.

Respectfully submitted,

FLORIDA GAS TRANSMISSION COMPANY, LLC

/s/ Blair Lichtenwalter

Blair Lichtenwalter,
Senior Director, Certificates

CC: FERC – OEP Room 62-46 (Two Copies)
Enclosure

PUBLIC

FLORIDA GAS TRANSMISSION COMPANY, LLC

TAMPA WEST PROJECT

VOLUME I

PRIOR NOTICE REQUEST

NOTICE

ATTACHMENT A

GENERAL LOCATION MAP

ATTACHMENT B

CONCISE ENVIRONMENTAL REPORT

ATTACHMENT C

FLOW DIAGRAM INFORMATION

UNITED STATES OF AMERICA

BEFORE THE

FEDERAL ENERGY REGULATORY COMMISSION

In the Matter of	§	
Florida Gas Transmission Company, LLC	§	**Docket No. CP23-___-000**
Applicant	§	

REQUEST FOR PRIOR NOTICE AUTHORIZATION PURSUANT TO BLANKET CERTIFICATE

Florida Gas Transmission Company

An Energy Transfer/Kinder Morgan Affiliate

TAMPA WEST PROJECT

Date Filed: November 3, 2022

UNITED STATES OF AMERICA

BEFORE THE

FEDERAL ENERGY REGULATORY COMMISSION

In the Matter of	§	
Florida Gas Transmission Company, LLC	§	Docket No. CP23-___-000
Applicant	§	

REQUEST FOR PRIOR NOTICE AUTHORIZATION
PURSUANT TO BLANKET CERTIFICATE

Pursuant to Sections 157.205, 157.208, and 157.211 of the Federal Energy Regulatory Commission's ("Commission") regulations, and Part 157, Subpart F blanket certificate issued to Florida Gas Transmission Company, LLC ("FGT") in Docket No. CP82-553-000, FGT hereby files this Prior Notice Request for Authorization ("Request") to construct/modify, install, own, maintain and operate, certain natural gas pipeline facilities (including lateral looping) and appurtenant facilities in Pinellas County, Florida, and modify and install appurtenant facilities on the existing FGT Tampa West Lateral in Hillsborough County, Florida, to support the proposed Tampa West Project ("Tampa West Project" or "Project"), all as more fully described herein.

The proposed Tampa West Project will enable FGT to decrease certain existing Peoples Gas System ("PGS") delivery point capacity by 10,000 MMbtu/d in PGS' St. Petersburg Division on FGT's system in Pinellas County, Florida, and increase delivery point capacity by 10,000 MMbtu/d to PGS Tampa West in PGS' Tampa Division on the FGT system in Hillsborough County, Florida. This will allow the peak hourly flow rights to the PGS Tampa West delivery point to be increased from 360 MMBtu/hr to 667 MMBtu/hr, in Hillsborough County, Florida. There will be no change in the daily capacity of FGT's mainline system.

In support of this request, pursuant to the currently effective regulations under the Natural Gas Act, and Rules of Practice and Procedure of the Commission, FGT respectfully states and shows the following:

I
CORRESPONDENCE AND COMMUNICATIONS

The names, titles, and mailing addresses of the persons to whom correspondence and communications concerning this Prior Notice Request for Authorization are to be addressed are as follows:

Blair Lichtenwalter [1/2]
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[1] Designated to receive service pursuant to Rule 2010 of the Commission's Rules of Practice and Procedure, and, FGT respectfully requests that the Commission waive Rule 203(b)(3), 18 C.F.R. § 385.203(b)(3), in order to allow FGT to include four representatives on the official service list for this proceeding.

[2] Service via eMail ("eService") is requested in lieu of paper copy.

II
GENERAL INFORMATION

The exact legal name of applicant is Florida Gas Transmission Company, LLC ("FGT"). FGT is a limited liability company formed under the laws of the state of Delaware having its principal place of business at 1300 Main St., Houston, Texas 77002.

FGT is a wholly-owned subsidiary of Citrus, LLC ("Citrus"). Citrus is owned 50% by El Paso Citrus Holdings, Inc., a wholly-owned indirect subsidiary of Kinder Morgan, Inc. ("Kinder Morgan"), and 50% by CrossCountry Citrus, LLC, a wholly-owned subsidiary of CrossCountry Energy, LLC ("CrossCountry"). CrossCountry is a wholly-owned indirect subsidiary of Energy Transfer Operating, L.P.

III
DESCRIPTION OF EXISTING OPERATIONS

FGT is a natural gas company within the meaning of the Natural Gas Act ("NGA"), engaged in, among other things, the transportation of natural gas in interstate commerce and the delivery of natural gas for ultimate public consumption for domestic, commercial, and industrial uses. FGT receives natural gas from suppliers and pipeline interconnects in the Gulf Coast areas of Texas, Louisiana, Mississippi, Alabama, Florida, and the Offshore Federal Domain, and by means of its transmission system transports and delivers such gas along its transmission line(s) either for consumption or for further transportation. FGT's pipeline system was authorized initially in Docket Nos. G-9262, et al.[3]

[3] For a more detailed description of FGT's operations, reference is made to the Applications for certificates, as amended, filed in the names of Houston Texas Gas and Oil Corporation and Coastal Transmission Corporation (Coastal), respectively, in Docket Nos. G-9262 and G-9960; to the Application in Docket No. CP62-232, wherein authorization was granted for the merger of Coastal with and into FGT; and to the Applications as supplemented in Docket Nos. CP65-165, CP65-393, CP68-179, CP74-192, CP86-704, CP89-555, CP91-65, CP92-182, CP99-94, CP00-04, CP00-40, CP02-27, CP05-64, CP06-1, CP07-82, CP09-17, CP09-455, CP11-16, CP11-145, and CP14-21, CP15-144, CP17-8, CP17-23, CP18-530, CP19-12,CP19-474, CP20-505, CP22-12, CP22-13, and CP22-19.

IV
INTRODUCTION

Pursuant to the requirements of Sections 157.205, 157.208, and 157.211 of the Commission's Regulations, FGT submits the following information in support of this Prior Notice Request to install lateral looping, reallocate lateral delivery capacities, and to remove and replace auxiliary facilities for the proposed Tampa West Project. The auxiliary installation/replacement activities will be performed under Section 2.55(a) of the Commission's Regulations:

(1) Description of the purpose of the proposed facilities including their relationship to other existing or planned facilities:

The proposed Project is being designed to meet the demand for 10,000 MMBtu/d of existing natural gas transportation service to be reallocated for delivery for PGS[4], in FGT's Market Area in Florida's natural gas market.

On May 19, 2022, FGT and Tampa Electric Company, ("TECO or Shipper"), and PGS (a division of TECO) entered into a Precedent Agreement ("Precedent Agreement"), to provide the change in hourly service and increase delivery point capacity under certain contracts, and to recover the cost of service associated with the Project. The level of service contemplated by the Precedent Agreement is dependent upon the facilities proposed herein meeting a contractual in-service date of **April 1, 2023**, for all necessary, final, and non-appealable approvals related to the Project proposed herein. The Precedent Agreement provides for FGT and Shipper to amend and increase the rate under an existing Negotiated Rate Agreement service agreement after the satisfaction of all Precedent Agreement conditions, and to reallocate certain firm transportation service under FGT's Rate Schedule FTS-3 from FGT's St. Petersburg North-PGS (39871) delivery point at approximate Mile Post ("MP") 101.5 (LLV 24-103C) on FGT's existing 10-inch St.

[4] Peoples Gas System (PGS) operates as the Peoples Gas System division of Tampa Electric Company. PGS is engaged in the purchase, distribution, and sale of natural gas for residential, commercial, industrial and electric power generation customers in the State of Florida.

Petersburg Loop, and from FGT's St. Petersburg-PGS (39895) delivery point at approximate MP 107.6 (LLV 24-102B) on FGT's existing 10-inch St. Petersburg Loop in Pinellas County, Florida, and to increase delivery point capacity by 10,000 MMbtu/d to the PGS Tampa West (39938) delivery point at the terminus of FGT's existing Tampa West Lateral in Hillsborough County, Florida. This will allow the peak hourly flow rights to the PGS Tampa West delivery point (39938) to be increased from approximately 360 MMBtu/hr to approximately 667 MMBtu/hr. The revised negotiated rate will be fixed throughout the term of the service agreement. No modifications are proposed or required at the St. Petersburg North-PGS, St. Petersburg-PGS, or PGS Tampa West delivery points.

The proposed Tampa West Project will include the construction of approximately 1.26 miles of 8-inch lateral loop pipeline and appurtenances (FLBWD) starting from MP 0.0 (LLV 24-16 / Vault 1) on FGT's existing 4 and 8-inch Tampa West Lateral (FLBXX) at approximate MP 111.5 on FGT's existing 8-inch St. Petersburg Lateral, heading east and generally parallel to the existing 4-inch section of the Tampa West Lateral, connecting back to the existing 8-inch Tampa West Lateral (FLBXX) at approximate MP 1.26 (New LLV 24-16F/17C / Vault 2). FGT will replace the existing vault (Vault 1) and modify the existing Tampa West Lateral take-off from the 8-inch St. Petersburg Lateral, and install a new hairpin pipe assembly and appurtenances at approximate MP 0.0, and install a hairpin assembly and appurtenances in the new Vault 2 at approximate MP 1.26, in Pinellas County, Florida. In addition, FGT will replace the existing Vault 3 and modify the 4-inch National Gypsum Lateral (FLBXZ) take-off, install a new hairpin pipe assembly and appurtenances, at approximate MP 4.58 (LLV 24-112B) in Hillsborough County, Florida. FGT's minimum required delivery pressure to the PGS Tampa West delivery point will remain unchanged at a minimum of 300 pounds per square inch gauge ("psig").

Pursuant to the Precedent Agreement, Shipper will enter into a Revised Negotiated Rate Agreement under FGT's Rate Schedule FTS-3 with negotiated rates for the firm transportation

service, for a primary term of thirteen (13) years, commencing on **April 1, 2023**. The level of service contemplated by the Precedent Agreement is dependent upon the Project facilities proposed herein being completed, and meeting a contractual in-service date of **April 1, 2023**.

TECO is an existing natural gas transportation customer of FGT, and *not an affiliate* of FGT. This Project is supported by an executed Precedent Agreement to provide the reallocated natural gas transportation service at revised negotiated rates under FGT's existing Rate Schedule FTS-3, which is designed to recover the cost of service associated with the Project.

FGT held an Open Season 9:00 AM Central Time ("CT") on June 2, 2022 and ending at 5:00 PM CT on June 22, 2022, pursuant to Section 21.D of its NGA Gas Tariff, to solicit additional interest in the proposed expansion of existing primary firm delivery daily and hourly flow rights in the Tampa-St. Petersburg, Florida market area. No other parties responded to the Open Season posting. FGT solicited turnback capacity requests from its existing Shippers and no requests for turnback capacity were received.

The Project activities proposed for the Tampa West Project will allow FGT to meet the demand for existing natural gas capacity to be reallocated from existing PGS delivery points in Pinellas County, Florida, and delivered to the existing PGS Tampa West (39938) delivery point in Hillsborough County, Florida, as described herein. No new incremental gas supplies, and no compressor station work is required or proposed for this Project. In addition, the proposed Project has the lowest environmental impact and is the most economically viable option, to provide the service contracted with the Shipper.

(2) Detailed description of the proposed facilities:

FGT proposes to construct/modify, install, own, maintain, and operate the following facilities:

Pipeline Looping and Appurtenant Facilities

- **Pinellas County, Florida:**
    - Modify the Tampa West Lateral (FLBXX) take-off from the 8-inch St. Petersburg Lateral (FLBVA) in Vault 1, and add approximately 1.26 miles of 8-inch lateral loop (FLBWD) pipe and appurtenances, starting from MP 0.0 on the west end of FGT's existing 4 and 8-inch Tampa West Lateral (FLBXX), heading generally east and parallel to the existing 4 and 8-inch Tampa West Lateral, within FGT's existing maintained permanent ROW easement, terminating in Vault 2 at approximate MP 1.26 on the existing 8-inch section of the Tampa West Lateral (FLBXX).
    - *Appurtenant Facilities*
        - Replace existing Vault 1, and install a new hairpin pipe assembly and appurtenances, at approximate MP 0.0 (LLV 24-16).
        - Install new Vault 2 with hairpin pipe assembly and appurtenances, at approximate MP 1.26 (New LLV 24-16F/17C).
- **Hillsborough County, Florida:**
    - Modify the National Gypsum Lateral (FLBXZ) take-off and appurtenances in Vault 3, at approximate MP 4.58 (LLV 24-112B) on the existing 8-inch section of the Tampa West Lateral (FLBXX).
    - *Appurtenant Facilities*
        - Replace existing Vault 3 and install a new hairpin pipe assembly and appurtenances, at approximate MP 4.58 (LLV 24-112B).

FGT will limit daily Project construction activities to sections that can be trenched, installed, backfilled, and stabilized by the end of each construction work day.

The proposed 8-inch Tampa West Lateral Loop will have a maximum allowable operating pressure ("MAOP") of 975 psig, and the hairpin assembly installations will reduce future costs, while enhancing the hydrotesting process for the Tampa West Lateral and Loop.

FGT plans to commence Project activities on or about **February 1, 2023**, and the construction activities associated with the Project are anticipated to last approximately eight (8) weeks. Upon completion of the Project proposed herein, FGT will be able to provide the requested and reallocated firm transportation service on a generally west to east path from Pinellas County to the Shipper's delivery point in Hillsborough County, Florida (**Attachment C**).

(3) A USGS 7 1⁄2 minute series (scale 1:24000) topographic map:

Included herein, is a Topographic Map showing the location of the proposed Tampa West Project facilities, and appurtenances; see *Appendix A-1* to **Attachment B**.

(4) A map showing the relationship of the proposed facilities to the applicant's existing facilities:

A general Location Map showing FGT's existing lateral system in relationship to the proposed Tampa West Project is included herewith as **Attachment A**.

(5) A flow diagram or comparative study showing daily design capacity, daily maximum capacity and operating pressures with and without the proposed facilities for that portion of the certificate holder's system affected by the proposal:

The flow diagram information showing daily system design capacity, daily system maximum capacity and operating pressures with and without the proposed facilities for the portion of FGT's system affected by the proposal is submitted herewith, and FGT requests the Flow Diagram information being submitted concurrently as **Attachment C** under separate cover herewith, and identified as "**CUI/CRITICAL ENERGY INFRASTRUCTURE INFORMATION – DO NOT RELEASE**" ("**CEII**"), be accorded special treatment pursuant to

18 CFR § 388.112 of the Commission's regulations. In addition, the Flow Diagram Information submitted herein contains privileged and proprietary business information and is also marked as "**CUI/PRIVILEGED & PROPRIETARY BUSINESS INFORMATION - DO NOT RELEASE**".

(6) The estimated cost and method of financing the proposed facilities:

The estimated cost of the proposed Tampa West Project is approximately $4,126,095, which will be financed by internally generated funds.

(7) A statement explaining how the public convenience and necessity requires the approval of the project:

In compliance with Section 157.205(b)(4) of the Commission's regulations, FGT states that the proposed activity for which authority is requested herein complies with the requirements of Subpart F of Part 157. FGT also states that the proposed activity described herein is not prohibited by its existing tariff, and that the Project proposed by this request is required to provide the services contemplated therein, and is without detriment or disadvantage to FGT's other customers. The proposed reallocation and delivery of firm transportation service to the PGS Tampa West delivery point is primarily for Shipper's incremental delivery requirements.

The Tampa West Project proposed herein is in the public interest because it will provide a reallocation of capacity of up to 10,000 MMBtu/d of existing natural gas transportation capacity that will be utilized as described herein, and in accordance with the referenced Precedent Agreement. Thus, based on the foregoing information, FGT submits that this proposal is required by the public convenience and necessity, and requests that the Commission make such a finding and grant the authorization requested herein.

(8) For acquisitions of facilities:

Not applicable, as FGT is not proposing any facility acquisitions for the proposed Project.

(9) A concise analysis discussing the relevant issues outlined in § 380.12:

Pursuant to Section 157.208(c) of the Commission's regulations, a concise analysis of the environmental impacts for the Tampa West Project is included in the Concise Environmental Report ("CER") submitted herewith as **Attachment B**. FGT has engaged in consultations with the affected federal, state, and local government agencies concerning the proposed construction activities associated with its proposed Tampa West Project. A listing of the current status of the environmental permits, approvals, and consultations from these agencies is included in the CER, in **Table 1.6-1** in Resource Report 1. In addition, agency consultations and correspondence are included in the attached CER, and FGT will comply with the Landowner Notification requirements in accordance with the Commission's regulations pursuant to Section 157.203(d)(2), within at least three business days following the date a docket number is assigned by FERC. FGT requests the Landowner information submitted herewith in *Appendix D* to the attached Concise Environmental Report (**Attachment B**) be accorded **Privileged** treatment pursuant to 18 CFR §388.112.

The proposed Tampa West Project will be constructed in accordance with FERC's *Upland Erosion Control, Revegetation and Maintenance Plan* (2013) and *Wetland and Waterbody Construction and Mitigation Procedures* (2013). FGT will comply with all mitigation requirements stated in the environmental clearances received from federal, state, and local agencies for the proposed Project. The proposed Tampa West Project will incorporate proven construction techniques and mitigation procedures, and is not expected to have a significant adverse impact on the quality of human health, the environment, or affected landowners. It is FGT's intent to work with all affected stakeholders and address their concerns to minimize environmental impacts caused by the proposed Project.

(10) A commitment to having the Environmental Inspector's report filed every week:

Pursuant to Section 157.208(c)(10) of the Commission's regulations, FGT commits to filing an Environmental Inspector's report on a weekly basis with the Commission until Project

completion, and reporting the completed project pursuant to Section 157.208(e) of the Commission's regulations.

V
CERTIFICATION

In accordance with the Natural Gas Pipeline Safety Act of 1968, Section 7, 82 Stat. 725 (1968), FGT certifies that the Tampa West Project proposed herein will be designed, constructed, inspected, tested, operated, and maintained in accordance with the requirements of Title 49, Part 192, of the Code of Federal Regulations, or any superseding state or federal safety code applicable to natural gas transmission pipelines.

VI
PUBLIC CONVENIENCE AND NECESSITY

In compliance with Section 157.205(b)(4) of the Commission's regulations, FGT states that the proposed Project activity for which authority is requested herein complies with the requirements of Subpart F of Part 157. FGT also states that the proposed activity described herein is not prohibited by its existing tariff, and that the Project construction and modifications proposed by this request are required to provide the requested firm transportation service, and the proposed Project is without detriment or disadvantage to FGT's other customers.

The Tampa West Project proposed herein is in the public interest because it will provide an increase in hourly flow rights to the PGS Tampa West delivery point from approximately 360 MMBtu/hr to approximately 667 MMBtu/hr, in Hillsborough County, Florida, utilizing firm transportation in accordance with the Precedent Agreement referenced herein, for Shipper's incremental delivery requirements. Thus, based on the foregoing information, FGT submits that this proposal is required by the public convenience and necessity, and requests that the Commission make such a finding and grant the authorization requested herein.

VII
ADDITIONAL INFORMATION

This is a request for authorization pursuant to Sections 157.205, 157.208, and 157.211 of the Commission's regulations, 18 C.F.R. §§ 157.205, 157.208, and 157.211 (2021). In compliance with the Commission's regulations, FGT hereby provides the following additional information and makes such information a part of this request:

NOTICE OF REQUEST: Attached hereto.

ATTACHMENT A: Project Location Map.

ATTACHMENT B: Concise Environmental Report.

Appendix D (*Landowner Information*) and *Appendix G* (*Cultural Information*) are submitted herewith under separate cover in Volume II and marked "**CUI/PRIVILEGED INFORMATION – DO NOT RELEASE**" pursuant to Section 388.112 of the Commission's regulations.

ATTACHMENT C: Flow Diagram Information

Flow Diagrams are submitted herewith under separate cover in Volume III and marked "**CUI/CRITICAL ENERGY INFRASTRUCTURE INFORMATION – DO NOT RELEASE**" pursuant to Section 388.112 of the Commission's regulations. In addition, the Flow Diagram Information submitted herein contains proprietary business information and is marked "**PROPRIETARY BUSINESS/PRIVILEGED INFORMATION - DO NOT RELEASE**".

VIII
CONCLUSION

WHEREFORE, for the reasons set forth herein, FGT respectfully requests that the Commission:

1. Pursuant to Sections 157.205, 157.208, and 157.211 of the Commission's Regulations, grant FGT the authority to construct/modify, install, own, maintain, and operate approximately 1.26 miles of 8-inch Tampa West Lateral Loop and appurtenances, all in Pinellas and Hillsborough Counties, Florida, under FGT's Blanket Certificate, all as more fully described herein.
2. Allow the proposal to be authorized in accordance with Section 157.205 of the Commission's Regulations, effective 60 days after the issuance date of the Commission's Notice if no valid protests are timely filed or if such valid protests are withdrawn.

Respectfully submitted,
FLORIDA GAS TRANSMISSION COMPANY, LLC

/s/ Blair Lichtenwalter

Blair Lichtenwalter,
Senior Director, Certificates

November 3, 2022

VERIFICATION
OF
FLORIDA GAS TRANSMISSION COMPANY, LLC

STATE OF TEXAS §

COUNTY OF HARRIS §

In compliance with Section 157.205(b)(4) of the Commission's Regulations, 18 CFR § 157.205(b)(4), **BLAIR LICHTENWALTER**, being duly sworn on his oath, states that he is Senior Director of Certificates for Florida Gas Transmission Company, LLC, that he is authorized to execute this Verification, that he has read the above and foregoing Prior Notice Request for Authorization and is familiar with the content thereof, and that all allegations and facts contained therein are true and correct to the best of his knowledge, information, and belief, and that the activities proposed therein comply with the requirements of Subpart F of Part 157 of the Regulations under the Natural Gas Act.

/s/ Blair Lichtenwalter

Blair Lichtenwalter,
Senior Director, Certificates

SUBSCRIBED AND SWORN TO before me on the 3rd day of November, 2022.

/s/ Suzanne Samano

Notary Public in and for the State of Texas

My Commission expires: April 10, 2026

NOTICE OF REQUEST

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Florida Gas Transmission Company, LLC) Docket No. CP23-___-000

NOTICE OF REQUEST UNDER BLANKET AUTHORIZATION

(November ___, 2022)

Take notice that on November 3, 2022, Florida Gas Transmission Company, LLC ("FGT"), 1300 Main St., Houston, Texas 77002, filed in Docket No. CP23-___-000, a prior notice request pursuant to Sections 157.205, 157.208, and 157.211 of the Commission's regulations under the Natural Gas Act, as amended, and FGT's blanket certificate issued in Docket No. CP82-553-000 for authorization to reallocate certain delivery capacities, and to construct/modify, install, own, maintain and operate, certain natural gas lateral loop pipeline facilities and appurtenances, in Pinellas and Hillsborough Counties, Florida, to support the proposed Tampa West Project (or "Project"). This Project will enable FGT to reallocate existing gas from PGS delivery points on FGT's system in Pinellas County, Florida, and increase firm transportation service hourly flow rights to FGT's existing PGS Tampa West delivery point, from approximately 360 MMBtu/hr to approximately 667 MMBtu/hr, in Hillsborough County, Florida, for Shipper's incremental delivery requirements, all as more fully set forth in the request which is on file with the Commission and open to public inspection.

The filing may also be viewed on the web at http://www.ferc.gov using the "eLibrary" link. Enter the docket number excluding the last three digits in the docket number field to access the document. For assistance, contact FERC at FERCOnlineSupport@ferc.gov or call toll-free, (886) 208-3676 or TYY, (202) 502-8659.

Any questions regarding this Prior Notice Request for Authorization should be directed to Blair Lichtenwalter, Senior Director of Certificates, Florida Gas Transmission Company, LLC, 1300 Main St., Houston, Texas, 77002, or call (713) 989-2605, or fax (713) 989-1205, or via eMail to blair.lichtenwalter@energytransfer.com.

Any person or the Commission's Staff may, within 60 days after the issuance of the instant notice by the Commission, file pursuant to Rule 214 of the Commission's Procedural Rules (18 C.F.R. 385.214) a motion to intervene or notice of intervention and, pursuant to Section 157.205 of the Commission's Regulations under the Natural Gas Act (NGA) 18 C.F.R. 157.205) a protest to the request. If no protest is filed within the time allowed, the proposed activity shall be deemed to be authorized effective the day after the time allowed for protest. If a protest is filed and not withdrawn within 30 days after the time allowed for filing a protest, the instant request shall be treated as an Application for authorization pursuant to Section 7 of the NGA.

The Commission strongly encourages electronic filings of comments, protests, and interventions via the internet in lieu of paper. See 18 C.F.R. 385.2001(a) (1) (iii) and the instructions on the Commission's web site (www.ferc.gov) under the "e-Filing" link.

Kimberly D. Bose
Secretary

FLORIDA GAS TRANSMISSION COMPANY, LLC

TAMPA WEST PROJECT

ATTACHMENT A

GENERAL LOCATION MAP

Florida Gas Transmission Company

An Energy Transfer/Kinder Morgan Affiliate

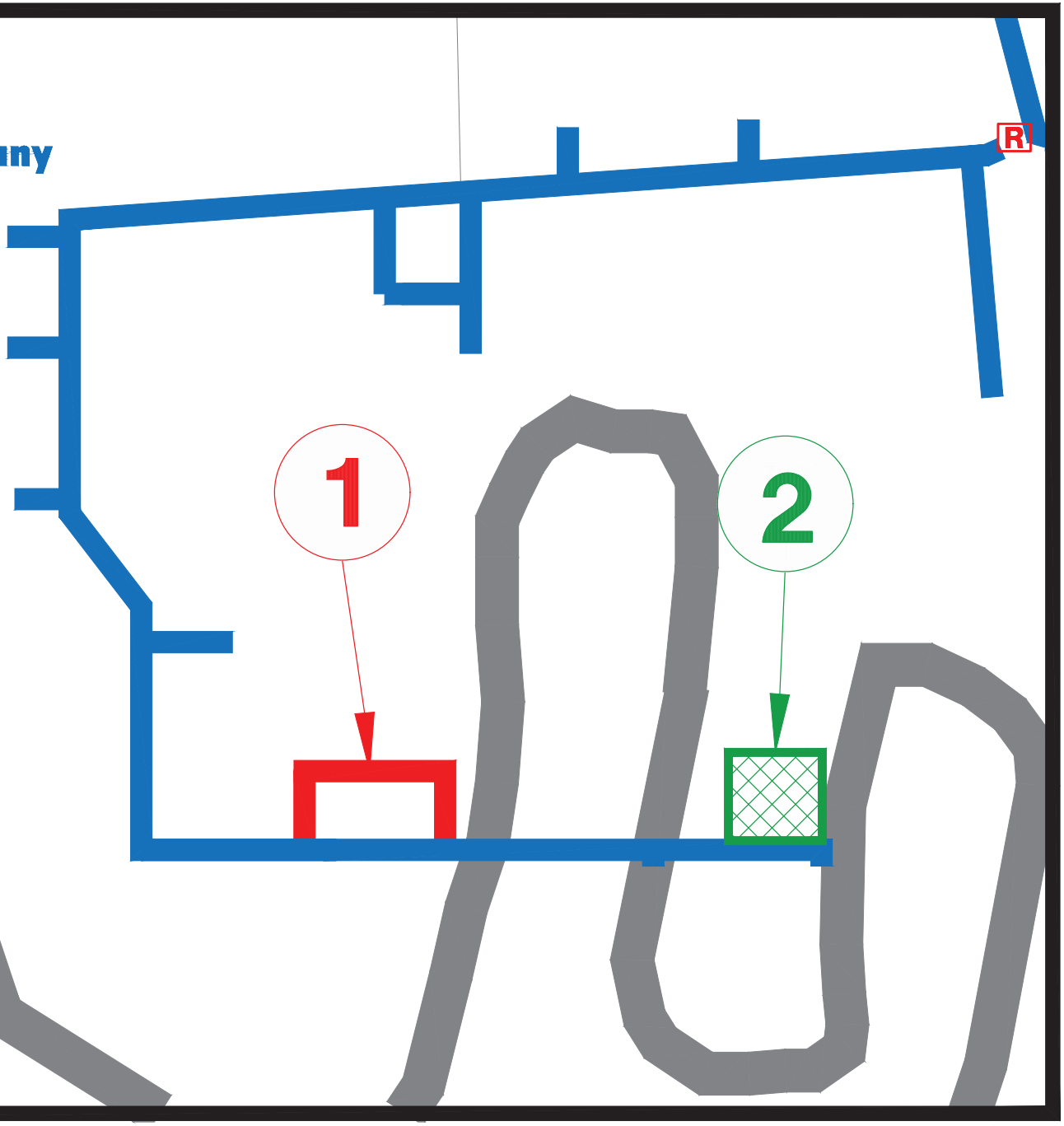
Tampa West Project

1

St. Petersburg Lateral
Install 1.3 Miles of 8" Loop
Pinellas County, Florida
[St. Petersburg Division]

2

Tampa West M&R Station
(*No Construction Required*)
Hillsborough County, Florida
[Tampa Division]



FLORIDA GAS TRANSMISSION COMPANY, LLC

TAMPA WEST PROJECT

ATTACHMENT B

CONCISE ENVIRONMENTAL REPORT

FLORIDA GAS TRANSMISSION COMPANY, LLC

Tampa West Project

CONCISE ENVIRONMENTAL REPORT

November 2022

RESOURCE REPORT NO. 1 GENERAL PROJECT DESCRIPTION MINIMUM FILING REQUIREMENTS	
Information	**Section Reference**
1. Provide a detailed description and location map of the project facilities (§ 380.12(c)(1))	Section 1.0 Appendix A-1
2. Describe any non-jurisdictional facilities that would be built in association with the project (§ 380.12(c)(2))	Section 1.8
3. Provide current, original United States Geological Survey (USGS) 7.5-minute series topographic maps with mileposts showing the project facilities (§ 380.12(c)(3))	Appendix A-1
4. Provide aerial images or photographs or alignment sheets based on these sources with mileposts showing the project facilities. (§ 380.12(c)(3))	Appendix A-2
5. Provide plot/site plans of compressor stations showing the location of the nearest noise-sensitive areas (NSA) within 1 mile. (§ 380.12(c)(3,4))	Not Required No new compressor stations or modifications proposed.
6. Describe construction and restoration methods. (§ 380.12(c)(6))	Section 1.2.3
7. Identify the permits required for construction across surface waters. (§ 380.12(c)(9))	Section 1.6 Table 1.6-1
8. Provide the names and addresses of all affected landowners as required and certify that all affected landowners will be notified.	Appendix D (Submitted as *CUI/PRIVILEGED INFORMATION – DO NOT RELEASE*)
Additional Information Often Missing and Resulting in Data Requests	
Describe all authorizations required to complete the proposed action and the status of applications for such authorizations.	Section 1.6 Table 1.6-1
Provide plot/site plans of all other aboveground facilities that are not completely within the right-of-way.	Not Applicable No aboveground facilities proposed.
Provide detailed typical construction right-of-way cross-section diagrams showing information such as widths and relative locations of existing rights-of-way, new permanent rights-of-way, and temporary construction rights-of-way. See Resource Report 8 – Land Use, Recreation, and Aesthetics.	Appendix B-1
Summarize the total acreage of land affected by construction and operation of the project.	Section 1.2 Table 1.2-1
Describe the cathodic protection system; include associated land requirements as appropriate.	Section 1.2.3.8
If Resource Report 5 - Socioeconomics is not provided, provide the start and end dates of construction, the number of pipeline spreads that would be used, and the workforce per spread.	Section 1.3
RESOURCE REPORT NO. 2 WATER USE AND QUALITY MINIMUM FILING REQUIREMENTS	
Information	**Section Reference**
1. Identify all perennial surface waterbodies crossed by the Project and their water quality classification. (§380.12(d)(1)).	Section 2.2 No waterbody crossings proposed.
2. Identify all waterbody crossings that may have contaminated waters or sediments. (§380.12(d)(1)).	Section 2.2.1 No waterbody crossings proposed

3. Identify watershed areas, designated surface water protection areas, and sensitive waterbodies crossed by the Project. (§380.12(d)(1)).	Section 2.2.2
4. Provide a table (based on NWI maps if delineations have not been done) identifying all wetlands, by milepost and length, crossed by the Project (including abandoned pipeline), and the total acreage and acreage of each wetland type that would be affected by construction. (§380.12(d) (1 & 4)).	Section 2.3 No wetland crossings proposed.
5. Discuss construction and restoration methods proposed for crossing wetlands, and compare them to staff's Wetland and Waterbody Construction and Mitigation Procedures. (§380.12(d)(2)).	Section 1.2.3.11 Section 2.3.2 No wetland crossings proposed.
6. Describe the proposed waterbody construction, impact mitigation, and restoration methods to be used to cross surface waters and compare to the staff's Wetland and Waterbody Construction and Mitigation Procedures. (§380.12(d)(2)).	Section 1.2.3.12 Section 2.2.7 No waterbody crossings proposed.
7. Provide original National Wetlands Inventory (NWI) maps or the appropriate state wetland maps, if NWI maps are not available, that show all proposed facilities and include milepost locations for proposed pipeline routes. (§ 380.12(d)(4)).	Appendix A-5
8. Identify all U.S. Environmental Protection Agency (EPA) or state-designated aquifers crossed. (§ 380.12(d)(9)).	Section 2.1
Additional Information Often Missing and Resulting in Data Requests	
Identify proposed mitigation for impacts on groundwater resources.	Section 2.1.2
Discuss the potential for blasting to affect water wells, springs, and wetlands, and associated mitigation.	Section 2.1.2 Section 6.2 No Blasting Proposed
Identify all sources of water required for construction (e.g., hydrostatic testing, dust suppression, horizontal directional drills [HDD]), the quantity of water required, and methods for withdrawal. Identify the treatment of discharge, discharge volumes, rates, and locations, and any waste products generated.	Section 1.2.3.7 Section 2.2.4
Identify operating water requirements for proposed liquefied natural gas facilities, including the water use, source(s), and volumes.	N/A No LNG facilities are proposed.
If underground storage of natural gas is proposed, identify how water produced from the storage field will be disposed.	N/A No underground storage proposed.
If salt caverns are proposed for storage of natural gas, identify the source locations, the quantity required, the method and rate of water withdrawal, and disposal methods.	N/A No underground storage proposed.
Provide a site-specific construction plan for each proposed HDD crossing in accordance with section V.B.6.d of the Federal Energy Regulatory Commission's Wetland and Waterbody Construction and Mitigation Procedures.	N/A No HDDs proposed.
Provide a site-specific construction plan for crossing each waterbody greater than 100 feet wide. Include a discussion on the feasibility of a trenchless crossing method.	N/A No major waterbodies crossed.
Identify mitigation measures to avoid impacts on springs; especially those used for drinking water or livestock.	Section 2.1.2

Identify mitigation measures to ensure that public or private water supplies are returned to their former capacity or replaced in the event of damage resulting from construction.	Section 2.1.1
In addition to identifying perennial surface waterbodies crossed or affected by the project, also identify intermittent and ephemeral waterbodies.	Section 2.2 No waterbodies will be crossed or affected by the project.
Show the locations of wetlands and waterbodies relative to the construction and permanent rights-of-way and additional temporary workspaces on mile posted alignment sheets or aerial photography.	Appendix A-2
If wetlands would be filled or permanently lost or altered, describe proposed measures to compensate for permanent wetland losses. Include copies of any compensatory mitigation plans and discuss the status of agency consultations/approvals.	Section 2.3.2 No wetland impacts proposed.
Describe measures to avoid or minimize impacts on forested wetlands. If impacts are unavoidable, describe proposed measures to restore forested wetlands following construction.	Section 2.3.2 No wetland impacts proposed.
Describe techniques to be used to minimize turbidity and sedimentation impacts associated with offshore trenching, if applicable.	N/A No offshore trenching proposed.
Describe typical staging area requirements at waterbody and wetland crossings.	N/A No waterbody or wetland crossings proposed.

RESOURCE REPORT NO. 3 FISH, WILDLIFE, AND VEGETATION MINIMUM FILING REQUIREMENTS	
Information	**Section Reference**
1. Classify the fishery type of each surface waterbody that would be crossed, including fisheries of special concern. – Title 18 Code of Federal Regulations (CFR) part (§) 380.12(e)(1)	Section 3.1.1 No waterbody crossings proposed.
2. Describe terrestrial and wetland wildlife and habitats that would be affected by the project – 18 CFR § 380.12(e)(2)	Section 3.2.1
3. Describe the major vegetative cover types that would be crossed and provide the acreage of each vegetative cover type that would be affected by construction – 18 CFR § 380.12(e)(3)	Section 3.3 Table 3.3-1
4. Describe the effects of construction and operation procedures on the fishery resources and proposed mitigation measures – 18 CFR § 380.12(e)(4)	Section 3.1.3 No impacts to fisheries or essential fish habitat proposed.
5. Evaluate the potential for short-term, long-term, and permanent impact on the wildlife resources and state-listed endangered or threatened species caused by construction and operation of the project and proposed mitigation measures – 18 CFR § 380.12(e)(4)	Section 3.4.2 Table 3.4-1
6. Identify all federally listed or proposed endangered or threatened species that potentially occur in the vicinity of the project and discuss the results of the consultations with other agencies. Include survey reports as specified in 18 CFR § 380.12(e)(5)	Section 3.4 Table 3.4-1 Appendix E-1 Appendix F-1
7. Identify all federally listed essential fish habitat that potentially occurs in the vicinity of the project and the results of abbreviated consultations with the National Oceanic and Atmospheric Administration's National Marine Fisheries Service, and any resulting essential fish habitat assessment – 18 CFR § 380.12(e)(6)	Section 3.1.1

8. Describe any significant biological resources that would be affected. Describe impact and any mitigation proposed to avoid or minimize that impact – 18 CFR § 380.12(e) (4,7)	Section 3.2.3
Additional Information Often Missing and Resulting in Data Requests	
Provide copies of correspondence from federal and state fish and wildlife agencies along withresponses to their recommendations to avoid or minimize impacts on fisheries, wildlife, and vegetation.	Appendix E-1
Provide a list of significant wildlife habitats crossed by the project. Specify locations by milepost, and include length and width of crossing at each significant wildlife habitat.	Section 3.2.3
Provide a description of project-specific measures that would be implemented during construction and operation of the project to avoid or minimize impacts on migratory birds.Include comments from the U.S. Fish and Wildlife Service on the proposed measures.	Section 3.2.4
For aquatic and marine species, be sure to include effects of sedimentation, changes to substrate, effects of blasting, etc. This information may be needed on a location-specific (i.e., milepost) basis and may require geophysical and other surveys. Results of such surveysand analyses should be included in the application.	Section 3.1.3 No Blasting Proposed
RESOURCE REPORT NO. 4 CULTURAL RESOURCES MINIMUM FILING REQUIREMENTS	
Information	**Section Reference**
1. Initial cultural resources consultation and documentation, and documentation of consultation with Native Americans – Title 18 Code of Federal Regulations (CFR) part (§) 380.12(f)(1)(i) & (2)	Section 4.3 Appendix E-3 Appendix G (Submitted as *CUI/PRIVILEGED INFORMATION – DO NOT RELEASE*)
2. Overview/Survey Report(s) – 18 CFR § 380.12(f)(1)(ii) & (2)	Section 4.0 Appendix G (Submitted as *CUI/PRIVILEGED INFORMATION – DO NOT RELEASE*)
Additional Information Often Missing and Resulting in Data Requests	
Identify the project area and the project's impacts in terms of direct and indirect effects on cultural resources.	Section 4.1.1
Provide a project map with mileposts clearly showing boundaries of all survey areas (right-of- way, extra work areas, access roads, etc.). Ensure that you mark mileposts, clearly specify survey corridor widths, and clearly indicate where you have not completed surveys.	Appendix G (Submitted as *CUI/PRIVILEGED INFORMATION – DO NOT RELEASE*)
Provide documentation of consultation with applicable State Historic Preservation Offices (SHPO), Tribal Historic Preservation Offices (THPO), and land-managing agencies regarding the need for and required extent of cultural resource surveys.	Section 4.3 Appendix E-3 Appendix G (Submitted as *CUI/PRIVILEGED INFORMATION – DO NOT RELEASE*)

Provide a narrative summary of overview results, cultural resource surveys completed, identified cultural resources and any cultural resource issues.	Section 4.1.3
Provide a project specific Ethnographic Analysis (can be part of Overview/Survey Report).	Appendix G (Submitted as *CUI/PRIVILEGED INFORMATION – DO NOT RELEASE*)
Identify by mileposts any areas requiring survey where the landowner denied access.	Section 4.0 No areas where access was denied.
Provide written comments on the Overview and Survey Reports from the applicable SHPOs, THPOs, and land-managing agencies, if available.	Section 4.3
Provide a Summary Table of completion status of cultural resource surveys, and applicable SHPO or THPO and land-managing agency comments on the reports.	Table 4.1-1
Provide a Summary Table of identified cultural resources, and applicable SHPO or THPO and land-managing agency comments on the eligibility recommendations for those resources.	Appendix G (Submitted as *CUI/PRIVILEGED INFORMATION – DO NOT RELEASE*)
Provide a brief summary of the status of contact with federally recognized Indian tribes, including copies of all related correspondence and records of verbal communications.	Section 4.3.1
Provide a brief summary of comments received from stakeholders regarding cultural resources.	Section 4.3
Provide a schedule for completing any outstanding cultural resource studies.	Section 4.2 Section 4.3 Cultural resource surveys 100% complete.
Provide an Unanticipated Discoveries Plan for the project area, referencing appropriate state statutes.	Appendix C-4 Appendix G (Submitted as *CUI/PRIVILEGED INFORMATION – DO NOT RELEASE*)
RESOURCE REPORT NO. 5 SOCIOECONOMICS MINIMUM FILING REQUIREMENTS	
Information	**Section Reference**
1. For major aboveground facilities and major pipeline projects that require an environmental impact statement, describe existing socioeconomic conditions within the project area – Title 18 Code of Federal Regulations (CFR) part (§) 380.12 (g)(1)	Section 5.0 Not Applicable
2. For major aboveground facilities, quantify impact on employment, housing, local government services, local tax revenues, transportation, and other relevant factors within the project area – 18 CFR § 380.12 (g) (2-6)	Section 5.0 Not Applicable
RESOURCE REPORT NO. 6 GEOLOGICAL RESOURCES MINIMUM FILING REQUIREMENTS	
Information	**Section Reference**

1. Identify the location (by milepost) of mineral resources and any planned or active surface mines crossed by the proposed facilities – Title 18 Code of Federal Regulations (CFR) part (§) 380.12 (h) (1 & 2)	Section 6.3
2. Identify any geologic hazards to the proposed facilities – 18 CFR § 380.12 (h)(2)	Section 6.4
3. Discuss the need for and locations where blasting may be necessary in order to construct the proposed facilities – 18 CFR § 380.12 (h)(3)	Section 6.2 No Blasting Proposed
4. For liquefied natural gas (LNG) projects in seismic areas, the materials required by "Data Requirements for the Seismic Review of LNG Facilities," National Bureau of Standards Information Report 84-2833 – 18 CFR § 380.12 (h)(5)	N/A No LNG facilities proposed.
5. For underground storage facilities, how drilling activity by others within or adjacent to the facilities would be monitored, and how old wells would be located and monitored within the facility boundaries – 18 CFR § 380.12 (h)(6)	N/A No underground storage facilities proposed.
Additional Information Often Missing and Resulting in Data Requests	
Identify any sensitive paleontological resource areas crossed by the proposed facilities. (Usually only if raised in scoping or if the project affects federal lands.)	Section 6.6
Briefly summarize the physiography and bedrock geology of the project.	Section 6.4
If proposed pipeline crosses active drilling areas, describe plan for coordinating with drillers to ensure early identification of other companies planned new wells, gathering lines, and aboveground facilities.	Section 6.3 No active drilling areas crossed by the project.
If the application is for underground storage facilities: Describe monitoring of potential effects of the operation of adjacent storage or production facilities on the proposed facility, and vice versa; Describe measures taken to locate and determine the condition of old wells within the field and buffer zone and how the applicant would reduce risk from failure of known and undiscovered wells; and Identify and discuss safety and environmental safeguards required by state and federal drilling regulations.	N/A No underground storage facilities proposed.
RESOURCE REPORT NO. 7 SOILS MINIMUM FILING REQUIREMENTS	
Information	**Section Reference**
1. Identify, describe, and group by milepost the soils affected by the proposed pipeline andaboveground facilities – Title 18 Code of Federal Regulations (CFR) part (§) 380.12(I)(1)	Section 7.0 Table 7.1-1 Table 7.3-1 Table 7.3-2
2. For aboveground facilities that would occupy sites over 5 acres, determine the acreage ofprime farmland soils that would be affected by construction and operation – 18 CFR § 380.12(I)(2)	N/A No aboveground facilities proposed.
3. Describe by milepost potential impacts on soils – 18 CFR § 380.12(I)(3,4)	Section 7.3 Table 7.3-1
4. Identify proposed mitigation to minimize impact on soils and compare with the staff's Upland Erosion Control, Revegetation, and Maintenance Plan – 18 CFR § 380.12(I)(5)	Section 7.3
Additional Information Often Missing and Resulting in Data Requests	

If the applicant generally proposes to adopt the Federal Energy Regulatory Commission Staff's *Upland Erosion Control, Revegetation, and Maintenance Plan* except at certain locations, identify on a site-specific basis locations where alternative measures are proposed,and describe the alternative measures that will ensure an equal or greater level of protection.	Section 7.3.8 FGT will adopt the FERC Plan
Identify invasive species and/or noxious weeds that occur in the area and measure to preventthe introduction and/or spread of these species (if not addressed in Resource Report 3).	Section 3.3.3
Provide documentation of consultation with the U.S. Department of Agriculture's Natural Resources Conservation Service or other applicable agencies regarding seed mixes, erosion control, and invasive species/noxious weeds.	Appendix C-7

RESOURCE REPORT NO. 8 LAND USE, RECREATION, AND AESTHETICS MINIMUM FILING REQUIREMENTS	
Information	**Section Reference**
1. Classify and quantify land use affected by: Title 18 Code of Federal Regulations (CFR) part (§) 380.12 (j) (1) a. Pipeline construction and permanent rights-of-way; b. Extra work/staging areas; c. Access roads; d. Pipe and contractor yards; and e. Aboveground facilities.	Section 8.1 Table 8.1-1 Table 8.1-2 Table 8.1-3
2. Identify by milepost all locations where the pipeline right-of-way would at least partially coincide with existing right-of-way, where it would be adjacent to existing rights-of-way, andwhere it would be outside of existing right-of-way – 18 CFR § 380.12 (j) (1)	Section 1.2.1.1 Section 1.2.1.2 Section 8.1.1.1 Table 1.2-2 Table 8.1-3
3. Provide detailed typical construction right-of-way cross section diagrams showing information such as widths and relative locations of existing rights-of-way, new permanent right-of-way and temporary construction right-of-way – 18 CFR – § 380.12 (j) (1)	Appendix B-1
4. Summarize the total acreage of land affected by construction and operation of the project –18 CFR § 380.12 (j) (1)	Table 1.2-1 Table 8.1-2
5. Identify by milepost all planned residential or commercial/business development and the timeframe for construction – 19 CFR § 380.12 (j) (4)	Section 8.2.1
6. Identify by milepost special land uses (e.g., maple sugar stands, specialty crops, natural areas, national and state forests, conservation land, etc.) – 18 CFR § 380.12 (j) (4)	Section 8.3
7. Identify by beginning milepost and length of crossing all land administered by federal, state, or local agencies, or private conservation organizations – 18 CFR § 380.12 (j) (4)	Section 8.3.1
8. Identify by milepost all natural, recreational, or scenic areas, and all registered natural landmarks crossed by the project – 18 CFR § 380.12 (j) (4 & 6)	Section 8.3.2
9. Identify all facilities that would be within designated coastal zone management areas – 18 CFR § 380.12 (j) (4))	Section 8.5

10. Identify by milepost all residences that would be within 50 feet of the construction right- of-way or extra work area – 18 CFR § 380.12 (j) (5)	Section 8.2.2 No residences within 50 feet of the project.
11. Identify all designated or proposed candidate National or State Wild and Scenic Rivers crossed by the project – 18 CFR – § 380.12 (j) (6)	Section 8.3.2
12. Describe any measures to visually screen aboveground facilities, such as compressor stations – 18 CFR § 380.12 (j) (11)	Section 8.6
13. Demonstrate that applications for rights-of-way or other proposed land use have been or soon will be filed with federal land-managing agencies with jurisdiction over land that would be affected by the project – 18 CFR § 380.12 (j) (12)	Section 8.7
Additional Information Often Missing and Resulting in Data Requests	
Identify all buildings within 50 feet of the construction right-of-way or extra work areas.	Section 8.2.2 No buildings withing 50 feet of the project.
Describe the management and use of all public lands that would be crossed.	Section 8.3
Provide a list of landowners by milepost or tract number that corresponds to information onalignment sheets	Appendix D
Provide a site-specific construction plan for residences within 25 feet of construction or as requested by Federal Energy Regulatory Commission Staff	N/A No residences within 25 feet of the project.
RESOURCE REPORT NO. 9 AIR AND NOISE QUALITY MINIMUM FILING REQUIREMENTS	
Information	**Section Reference**
1. Describe existing air quality in the vicinity of the project – Title 18 Code of Federal Regulations (CFR) part (§) 380.12 (k) (1).	Section 9.1.1
2. Quantify the existing noise levels (day-night sound level (Ldn) and other applicable noise parameters) at noise sensitive areas and at other areas covered by relevant state and local noise ordinances – 18 CFR § 380.12 (k) (2)	Section 9.2
3. Quantify existing and proposed emissions of compressor equipment, plus construction emissions, including nitrogen oxides (NOx) and carbon monoxide (CO), and the basis for these calculations. Summarize anticipated air quality impacts for the project – 18 CFR §380.12 (k) (3)	Section 9.1.3 No compressor equipment proposed.
4. Describe the existing compressor units at each station where new, additional, or modified compression units are proposed, including the manufacturer, model number, and horsepower of the compressor units. For proposed, new, additional, or modified compressor units, include horsepower, type, and energy source – 18 CFR § 380.12 (k) (4)	No new compressor units or modifications to existing compressor units proposed.
5. Identify any nearby noise-sensitive area by distance and direction from the proposed compressor unit building/enclosure – 18 CFR § 380.12 (k) (4)	No new compressor units or modifications to existing compressor units proposed.
6. Identify any applicable state or local noise regulations – 18 CFR § 380.12 (k) (4).	Section 9.2
7. Calculate the noise impact at noise-sensitive areas of the proposed compressor unit modifications or additions, specifying how the impact was calculated, including manufacturer's data and proposed noise control equipment – 18 CFR § 380.12 (k) (4)	Section 9.2 No compressor unit modifications or additions proposed.

Additional Information Often Missing and Resulting in Data Requests	
Air Quality Information	
Include climate information as part of the air quality information provided for the project area.	Section 9.1.1 Table 9.1-1
Identify potentially applicable federal and state air quality regulations.	Section 9.1.2.1
Provide construction emissions (criteria pollutants, hazardous air pollutants, greenhouse gases) for proposed pipelines and aboveground facilities.	Section 9.1.3 Table 9.1-5 Appendix F-2
Provide copies of state and federal applications for air permits.	N/A No state or federal air permitting required.
Provide operation and fugitive emissions (criteria pollutants, hazardous air pollutants, greenhouse gases) for pipelines and aboveground facilities.	Section 9.1.3.2 Table 9.1-6 Appendix F-2
Provide air quality modeling for entire compressor stations.	Not applicable. No new compressor units or modifications to existing compressor units proposed.
Identify temporary and permanent emissions sources that may have cumulative air quality effects in addition to those resulting from the project.	Section 1. 9
Noise and Vibration	
Describe the existing noise environment and ambient noise surveys for compressor stations, liquefied natural gas facilities, meter and regulation facilities, and drilling locations.	Section 9.2.1
Identify any state or local noise regulations applicable to construction and operation of the project.	Section 9.2.1
Indicate whether construction activities would occur over 24-hour periods.	Section 9.2.1
Discuss construction noise impacts and quantify construction noise impacts from drilling, pile driving, dredging, etc.	Section 9.2.2.4
Quantify operation noise from aboveground facilities, including blowdowns.	Section 9.2.1
Describe the potential for the operation of the proposed facilities to result in an increase in perceptible vibration and how this would be prevented.	Section 9.2.1
Identify temporary and permanent noise sources that may have cumulative noise effects in addition to those resulting from the project.	Section 1.9
RESOURCE REPORT NO. 10 ALTERNATIVES MINIMUM FILING REQUIREMENTS	
Information	**Section Reference**
1. Address the "no action" alternative – Title 18 Code of Federal Regulations (CFR) part (§) 380.12(1)(1)	Section 10.1
2. For large projects, address the effect of energy conservation or energy alternatives to the project – 18 CFR § 380.12(1)(1)	Section 10.2
3. Identify system alternatives considered during the identification of the project and provide the rationale for rejecting each alternative – 18 CFR § 380.12(1)(1)	Section 10.4

4. Identify major and minor route alternatives considered to avoid impact on sensitive environmental areas (e.g., wetlands, parks, or residences) and provide sufficient comparative data to justify the selection of the proposed route – 18 CFR § 380.12(1)(2)(ii)	Section 10.6 Appendix A-9
5. Identify alternative sites considered for the location of major new aboveground facilities and provide sufficient comparative data to justify the selection of the proposed site – 18 CFR § 380.12(1)(2)(ii)	Section 10.7 No aboveground facilities proposed.
Additional Information Often Missing and Resulting in Data Requests	
Ensure that project objectives that serve as the basis for evaluating alternatives are consistent with the purpose and need discussion in Resource Report 1.	Section 1.1.1 Section 10
Identify and evaluate alternatives identified by stakeholders.	N/A No alternatives identified by stakeholders.
Clearly identify and compare the corresponding segments of route alternatives and route variations with the segments of the proposed route that they would replace if adopted.	Section 10.6
RESOURCE REPORT NO. 11 RELIABILITY AND SAFETY MINIMUM FILING REQUIREMENTS	
Information	**Section Reference**
1. Describe how the project facilities would be designed, constructed, operated, and maintained to minimize potential hazard to the public from the failure of project components as a result of accidents or natural catastrophes – Title 18 Code of Federal Regulations part 380.12 (m).	N/A No LNG facilities proposed.
Additional Information Often Missing and Resulting in Data Requests	
RESOURCE REPORT NO. 12 POLYCHLORINATED BIPHENYL (PCB) CONTAMINATION MINIMUM FILING REQUIREMENTS	
Information	**Section Reference**
1. For projects involving the replacement or abandonment of facilities determined to have polychlorinated biphenyls (PCBs), provide a statement that activities would comply with an approved U.S. Environmental Protection Agency disposal permit or with the requirements of the Toxic Substances Control Act – Title 18 Code of Federal Regulations (CFR) part (§) 380.12 (n)(1)	Section 12 No Replacement or Abandonment Proposed
2. For compressor station modification on sites that have been determined to have soils contaminated with PCBs, describe the status of remediation efforts completed to date – 18 CFR § 380.12 (n)(2)	Not Applicable No compressor station modifications proposed.
RESOURCE REPORT NO. 13 ADDITIONAL INFORMATION RELATED TO LIQUIFIED NATURAL GAS (LNG) PLANTS MIMIMUM FILING REQUIREMENTS	
Information	**Section Reference**
1. Provide all the listed detailed engineering materials – Title 18 Code of Federal Regulations (CFR) Part 380.12(o))	N/A No LNG facilities proposed.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF ENVIRONMENTAL REPORT APPENDICES

ABBREVIATIONS AND ACRONYMS

ACHP	Advisory Council on Historic Preservation
APE	Area of Potential Effects
ATWS	Additional Temporary Workspace
BCR	Bird Conservation Region
BMP	Best Management Plan
CAA	Clean Air Act
CEII	Critical Energy Infrastructure Information
CFR	Code of Federal Regulation
cm	Centimeter or centimeters
Commission	Federal Energy Regulatory Commission
CRAS	Phase I Cultural Resource Survey Report
CUI	Controlled Unclassified Information
dB	Decibel
dBA	A-weighted decibels
DHR	Florida Department of State Division of Historical Resources
EI	Environmental Inspector
EPA	Environmental Protection Agency
ERP	Environmental Resource Permit
F	Fahrenheit
FAC	Florida Administrative Code
FDEP	Florida Department of Environmental Protection
FDHR	Florida Division of Historical Resources
FDOT	Florida Department of Transportation
FEMA	Federal Emergency Management Agency
FERC	Federal Energy Regulatory Commission
FGT	Florida Gas Transmission Company, LLC
FL	Florida
FLUCCS	Florida Land Use Cover and Forms Classification System
FMSF	Florida Master Site File
FNAI	Florida Natural Areas Inventory
ft	Foe or feet
FWC	Florida Fish and Wildlife Conservation Commission
GHG	Greenhouse Gas
GIS	Geographic Information system
HAPs	Hazardous Air Pollutants
HAT	Highest Astronomical Tide
HP	Horsepower
HTL	High Tide Line
HUC	Hydrologic Unit Code
in	Inch or inches
IPaC	Information for Planning and Consultation

ABBREVIATIONS AND ACRONYMS

K Factor	Erosion Factor
L_d	Day Sound Level in decibels
L_{dn}	Day-night Sound Level in decibels
L_n	Night Sound Level in decibels
LNG	Liquified Natural Gas
m	Meter or meters
M&R	Meter and Regulator station
MAOP	Maximum Allowable Operating Pressure
mi	Miles
MHHW	Mean Higher High Water
MHW	Mean High Water
MMBtu/d	Million British Thermal Units per Day
MMBtu/h	Million British Thermal Units per Hour
MP	Milepost
NAAQS	National Ambient Air Quality Standards
NABCI	North American Bird Conservation Initiative
NCED	National Conservation Easement Database
NCSS	National Cooperative Soil Survey
NEPA	National Environmental Policy Act
NESHAP	National Emission Standards for Hazardous Air Pollutants
NHPA	National Historic Preservation Act
NOAA	National Oceanic and Atmospheric Administration
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
NRCS	Natural Resource Conservation Service
NSA	Noise Sensitive Area
NSPS	New Source Performance Standards
NSR	New Source Review
NWI	National Wetlands Inventory
OFW	Outstanding Florida Water
PCB	Polychlorinated Biphenyls
PGS	People Gas
PHMSA	Pipeline and Hazardous Materials Safety Administration
Plan	Federal Energy Regulatory Commission Upland Erosion Control Revegetation and Maintenance Plan
ppb	Parts per billion
ppm	Parts per million
Procedures	Federal Energy Regulatory Commission Wetland and Waterbody Construction and Mitigation Procedures
Project	FGT Tampa West Project
PSD	Prevention of Significant Deterioration
psig	Pounds per square inch

ABBREVIATIONS AND ACRONYMS

PTE	Potential to emit
ROW	Right-of-way
Shipper	Tampa Electric Company
SHPO	State Historic Preservation Office
SPAR	Spill Prevention and Response Plan
SSL	Sovereign Submerged Lands
SSURGO	USDA Soil Survey Geographic Database
SWFWMD	Southwest Florida Water Management District
TAR	Temporary Access Road
TECO	Tampa Electric Company
tpy	Tons per year
TWS	Temporary Workspace
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USDOT	United States Department of Transportation
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
VOC	Volatile organic compound
$\mu g/m^3$	Micrograms per cubic meter
WEGs	Wind Erodibility Group
Zone A	100-YR Floodplain, 1% Annual Flood Hazard
Zone VE	100-YR Floodplain, Coastal Areas with a 1% or Greater Chance of Flooding

1.0 General Project Description

Florida Gas Transmission Company LLC (FGT) submitted a Prior Notice Request for Authorization under its Blanket Certificate to the Federal Energy Regulatory Commission (Commission or FERC) for the proposed Tampa West Project (Project), pursuant to Sections 157.205, 157.208, and 157.211 of the Commission's Regulations, for authorization under FGT's blanket certificate issued in Docket No. CP82-553-000 to construct, own, operate, and maintain approximately 1.26 miles of 8-inch lateral loop (FLBWD) pipeline and appurtenant facilities from approximate Mile Post (MP) 111.50 on FGT's existing 8-inch St. Petersburg Lateral (FLBVA) and MP 0.0 on FGT's existing 4-Inch Tampa West Lateral (FLBXX) to MP 1.26 on FGT's existing 4-Inch Tampa West Lateral (FLBXX) and FGT's existing 8-Inch Tampa Bay Crossing (FLBXX), in Pinellas County, Florida. At MP 0.0 on the west end of the 1.26-mile loop, FGT will modify the take-off from FGT's existing 8-inch St. Petersburg Lateral (FLBVA), replace the existing below ground vault (Vault 1) with a new below ground vault, install below ground pigging and appurtenant facilities for the proposed 8-inch lateral loop, and install a new hair pin assembly and appurtenant facilities on the existing 4-inch Tampa West Lateral. At MP 1.26 on the east end of the proposed 1.26-mile loop, FGT will install a new below ground valve vault (Vault 2) with a new hair pin assembly and appurtenant facilities on the existing 4-inch Tampa West Lateral and a new 8-inch below ground valve with appurtenant facilities on the proposed 8-inch loop. In addition, FGT will modify the National Gypsum Lateral (FLBXZ) take-off at approximate MP 4.58 on FGT's 8-inch Tampa West Lateral (FLBXX) in Hillsborough County, Florida, by replacing the existing below ground vault (Vault 3) with a new below ground vault, installing below ground pigging and appurtenant facilities on the existing 8-inch Tampa West Lateral, and reconfiguring the below ground piping for both the 4-inch National Gypsum Lateral and the 4-inch Tampa West Lateral.

1.1 Proposed Facilities

1.1.1 Purpose and Need

On May 19, 2022, FGT and Tampa Electric Company, ("TECO or Shipper"), and PGS (a division of TECO) entered into a Precedent Agreement ("Precedent Agreement"), to provide the change in hourly service and increase delivery point capacity under certain contracts, and to recover the cost of service associated with the Project.

FGT is proposing to construct a lateral loop pipeline on its existing Tampa West Lateral pipeline system in Pinellas County, Florida. This Project is designed to enable FGT to reallocate existing gas volumes by decreasing certain existing PGS delivery point capacity by 10,000 MMbtu/d in PGS' St. Petersburg division in Pinellas County, Florida, and increase delivery point capacity by 10,000 MMbtu/d through the Tampa West Lateral and proposed Tampa West Loop to PGS Tampa West in PGS' Tampa division in Hillsborough County, Florida. This will allow the peak hourly flow rights to the PGS Tampa West delivery point to be increased from 360 MMBtu/hr to 667 MMBtu/hr, in Hillsborough County, Florida. There will be no change in the daily capacity of FGT's mainline system. The proposed delivery reallocation to the PGS Tampa West delivery point is primarily for Shipper's incremental delivery requirements. FGT's minimum required delivery pressure to the PGS Tampa West Plant will remain unchanged at a minimum of 300 pounds per square inch gauge (psig), and no modifications are proposed or required at the St. Petersburg North-PGS, St. Petersburg-PGS, or PGS Tampa West delivery points.

1.1.2 Location and Description of Facilities

1.1.2.1 Pipeline Facilities

FGT proposes to construct approximately 1.26 miles of 8-inch lateral loop in Pinellas County, Florida. The proposed 8-inch lateral loop pipeline is downstream from FGT's existing CS 26 and will be installed generally parallel to and approximately 24 feet south of FGT's existing 4-inch Tampa West Lateral within Florida Department of Transportation (FDOT) right-of-way (ROW) for Gandy Boulevard (US92/SR600).

The proposed lateral loop will originate at MP 0.0 on the existing 4-inch Tampa West Lateral and terminate with a tie-in to the existing 4-inch Tampa West Lateral at MP 1.26. The proposed lateral loop pipe will have a maximum allowable operating pressure (MAOP) of 975 pounds per square inch (psig). The proposed lateral loop pipeline components for the Tampa West Lateral Project are detailed in **Table 1.1-1**.

TABLE 1.1-1 Pipeline Facilities

Facility	County, State	Mileposts		Description
		Begin	End	
Tampa West Lateral Loop	Pinellas, FL	0.0	1.26	Install approximately 1.26 miles of new 8-inch lateral loop parallel and adjacent to FGT's existing 4-inch Tampa West Lateral pipeline within FDOT ROW for US92/SR600

1.1.2.2 Aboveground Facilities

FGT does not propose to install or modify any aboveground facilities as part of this Project. All proposed appurtenances will be installed in underground vaults.

1.1.2.3 Vault 1, Vault 2, Vault 3

TABLE 1.1-2 Appurtenant Facilities in Vaults

Facility	Milepost	County, State	Description
Vault 1	0.00	Pinellas, FL	Replace existing below ground vault with a new below ground vault; Install below ground 8-inch / 3-inch pigging valves and appurtenant facilities on the new 8-inch lateral loop; Install 4-inch hair pin and appurtenant facilities on the existing 4-inch Tampa West Lateral all within FDOT ROW for US92/SR600
Vault 2	1.26	Pinellas, FL	Install new below ground vault; Install below ground 8-inch valve and appurtenant facilities on the new 8-inch lateral loop; Install 4-inch hair pin and appurtenant facilities on the existing 4-inch Tampa West Lateral all within FDOT ROW for US92/SR600
Vault 3	4.58	Hillsborough, FL	Replace existing below ground vault with a new below ground vault; Install below ground 8-inch / 3-inch pigging valves and appurtenant facilities on the existing 8-inch Tampa West Lateral; Reconfigure 4-inch below ground piping for the 4-inch National Gypsum Lateral and the 4-inch Tampa West Lateral all within the existing FGT easement

[a] Vault 1 and Vault 2 will be installed and operated within FDOT ROW for US92 / SR600 by permit.
[b] Vault 3 will be installed within FGT's existing permanent ROW for the Tampa West Lateral

1.1.3 Location Maps, Detailed Route Maps, and Plot/Site Plans

Appendix A includes the Project Location map (**Appendix A-1**), United States Geological Survey (USGS) maps (**Appendix A-1**) and aerial photo-based construction alignment sheets (**Appendix A-2**) depicting the location of the Project facilities.

1.2 Land Requirements

Table 1.2-1 summarizes land requirements for construction and operation of the Project. Typical and detailed site-specific drawings of the Project facilities are provided in **Appendix B**. FGT's proposed new 8-inch Tampa West Lateral Loop will be 100 percent collocated with FGT's existing 4-inch Tampa West Lateral and installed entirely within the FDOT ROW for US92/SR600, by FDOT permit.

TABLE 1.2-1 Summary of Land Requirements for Pipeline Facilities

Facility	County, State	Land Affected During Construction (acres)	Land Affected During Operation (acres)
Pipeline			
Tampa West Lateral Loop [a]	Pinellas, FL	10.43 [a]	0 [b]
Vault 1	Pinellas, FL	0 [c]	0 [b]
Vault 2	Pinellas, FL	0 [c]	0 [b]
Vault 3	Hillsborough, FL	0.38	0 [d]
Other Work Areas			
Temp Access Roads [e]	Pinellas, FL		0
TAR-001	Pinellas, FL	0.49	0
TAR-002	Hillsborough, FL	0.21	0
Contractor Yard	Pinellas, FL	8.60	0
Total Land Requirements for Pipeline Facilities		**20.11**	**0**

[a] Acres affected during construction are based on a 75-foot-wide or less construction ROW consisting entirely of temporary workspace (TWS) within FDOT ROW for US92/SR600. Vault 1 and Vault 2 will be installed entirely within the TWS utilized to construct the proposed pipeline loop.

[b] FGT's proposed loop, Vault 1 and Vault 2 will be entirely within the FDOT ROW by permit. As such, FGT will not obtain or maintain any new permanent ROW for operation of these facilities.

[c] Vault 1 and Vault 2 will be installed entirely within the TWS utilized to construct the proposed lateral loop. No additional workspace is required.

[d] FGT will install and operate Vault 3 entirely within its existing permanent ROW for the Tampa West Lateral. No new permanent ROW is proposed. The area of the new vault within the permanent ROW will be 0.003 ac.

[e] FGT will use existing public access points along US92/SR600 for construction and operation access to the proposed lateral loop facilities. TAR-001 is required to access the proposed Contractor Yard. TAR-002 is required to access Vault 3 from the end of West Prescott Street. The public road ends approximately 450 feet east of the proposed workspace and becomes a private road.

1.2.1 Pipeline Facilities

1.2.1.1 Permanent ROW

FGT will install the proposed 8-inch lateral loop, along with Vault 1 and Vault 2, entirely within FDOT's existing permanent maintained ROW for US92/SR600. As such, FGT will not acquire or maintain any new permanent ROW for the proposed 8-inch Tampa West Lateral Loop.

Vault 3 will be installed and operated entirely within FGT's existing permanent ROW for its Tampa West Lateral. No new permanent ROW is proposed.

1.2.1.2 Temporary Construction ROW

FGT will use a maximum 75-foot-wide temporary construction ROW to construct the new 8-inch Tampa West Lateral Loop. The construction ROW will consist of TWS entirely within FDOT ROW for US92/SR600 under permit from FDOT. Dimensions of TWS vary due to physical constraints in the Project area. For the majority of the Project, FGT will generally install the new 8-inch Tampa West Lateral Loop approximately 24 feet south of the existing 4-inch Tampa West Lateral from MP 0.0 to approximately MP 0.95, where the proposed lateral loop will shift to the north at MP 0.95 to avoid topographic features and physical constraints, crossing FGT's existing 4-inch Tampa West Lateral at approximately MP 1.0, and the remaining 0.26 mile will be installed on the north side of FGT's existing Tampa West Lateral. The exact distance between FGT's existing Tampa West Lateral and the proposed lateral loop from MP 0.95 to MP 1.26 will vary depending on physical constraints such as existing utilities and topographic features. Construction workspace limits for the proposed pipeline loop are shown on aerial alignment sheets in **Appendix A**. **Appendix B** includes typical ROW cross-section drawings for the proposed pipeline loop. **Table 1.2-2** shows each ROW configuration by MP location.

TABLE 1.2-2 Collocation and Overlap of Proposed Pipeline Facilities with Existing ROW

Milepost		Pipeline Length (miles)	Cross Section Diagram Dwg. No.	Existing ROW Width (Type/ feet)	Amount of Overlap with Existing ROW	
Begin	End				Feet	Acres
Tampa West Lateral Loop, Vault 1, Vault 2 [a]						
0.0	1.26	1.26	FLBXX-TEMP-023	FDOT / 700	75 [b]	10.43
Vault 3 [c]						
MP	MP	N/A [d]	N/A	FGT / 20	20	0.06
4.58						
Total Miles of Overlap		1.26		Total Acres of Overlap		10.49

[a] These facilities will be installed and operated entirely with FDOT's existing ROW for US92/SR600
[b] FGT will utilize a maximum 75-foot0wide temporary construction ROW for construction of the proposed lateral loop and two vaults. The width of the construction ROW varies by location based on physical constraints.
[c] Vault 3 will be installed and operated entirely within FGT's existing permanent ROW for the Tampa West Lateral
[d] No new pipeline is proposed at Vault 3.

1.2.1.3 Access Roads

FGT will utilize existing public access points for access from US91/ SR600 to the construction ROW during Project construction. FGT will use one private access road (TAR-001) for access to the proposed Contractor Yard and one private access road (TAR-002) for access to Vault 3. FGT does not propose to make any improvements to these access roads for Project use. FGT will restore the access roads to pre-construction condition or better at the conclusion of Project construction activities, should restoration be required. Land requirements for temporary access roads are shown in **Table 1.2-3**.

TABLE 1.2-3 Proposed Access Roads						
Facility	Access Road No.	Location (County, State)	Type	Length (feet)	Acres	Planned Improvements
Contractor Yard	TAR-001	Pinellas, FL	Existing, paved	404	0.49	No improvements proposed
Vault 3	TAR-002	Hillsborough, FL	Existing, paved	450	0.21	No improvements proposed

1.2.1.4 Contractor Yard

FGT will utilize one contractor yard located in Pinellas County, Florida, for storage and staging of pipe, equipment, materials, and temporary office trailers during construction of the proposed facilities. The location of the proposed contractor yard is shown on Project mapping included in **Appendix A** and **Appendix B**. Land requirements for the proposed pipe and contractor yard are summarized in **Table 1.2-1**. The proposed Contractor Yard consists entirely of an existing paved parking lot. FGT previously used part of this parking lot for temporary workspace during construction of its *12-inch Saint Petersburg Lateral Relocation Project* under *Docket No. Docket No. CP16-2-000 (Accession No. 20151007-5176).* The proposed pipe and contractor yard will be restored as needed and returned to pre-construction conditions following completion of Project construction, in accordance with permit conditions and landowner agreements.

1.2.2 Aboveground Facilities

FGT does not propose to install or modify any aboveground facilities as part of this Project. All proposed appurtenances will be installed in three underground vaults.

1.2.2.1 Vault 1, Vault 2, Vault 3

Vault 1 – MP 0.0 Pinellas County, Florida

FGT will replace its existing below ground vault with a new below ground vault and install below ground 8-inch / 3-inch pigging valves and appurtenant facilities on the new 8-inch lateral loop. FGT will also install a 4-inch hair pin and appurtenant facilities on the existing 4-inch Tampa West Lateral. Vault 1 will be installed entirely within FDOT's ROW for US92/SR600.

Vault 2 – MP 1.26 Pinellas County, Florida

FGT will install a new below ground vault with a below ground 8-inch valve and appurtenant facilities on the new 8-inch lateral loop. FGT will also install a 4-inch hair pin and appurtenant facilities on the existing 4-inch Tampa West Lateral. Vault 2 will be installed entirely within FDOT's ROW for US92/SR600.

Vault 3 – MP 4.58 Hillsborough County, Florida

FGT will replace its existing below ground vault with a new below ground vault in install below ground 8-inch / 3-inch pigging valves and appurtenant facilities on the existing 8-inch Tampa West Lateral. FGT will also reconfigure 4-inch below ground piping for the 4-inch National Gypsum Lateral and the 4-inch Tampa West Lateral. FGT will install Vault 3 entirely its existing permanent easement for the 8-inch Tampa West Lateral.

1.2.3 Pipeline Construction Procedures

The Project will be constructed in compliance with applicable federal and state regulations and guidelines, and the specific requirements of the necessary permits (**Section 1.6**, Permits and Approvals). Key federal requirements and guidelines include:

18 Code of Federal Regulations (CFR) Part 380 –*FERC Regulations Implementing the National Environmental Policy Act* (NEPA) (including Section 380.15 - *Siting and Maintenance Requirements*); and

49 CFR Part 192 – *Transportation of Natural Gas and Other Gas by Pipeline: Minimum Federal Safety Standards*.

In addition to the key federal requirements and guidelines listed above, FGT will implement the following plans (included in **Appendix C**) to ensure adequate protection of environmental and cultural resources during construction:

- FERC *Upland Erosion Control, Revegetation, and Maintenance Plan* (2013) (Plan) provided **Appendix C-1**;
- FERC *Wetland and Waterbody Construction and Mitigation Procedures* (2013) (Procedures) with requested deviations (see **Table 2.4-1** in **Section 2** of this report) provided in **Appendix C-2**;
- FGT's *Spill Prevention and Response Plan* (SPAR Plan) provided in **Appendix C-3**; and,
- FGT's *Unanticipated Discovery Plan* (i.e., cultural resources, human remains, contaminated media and paleontological resources) provided in **Appendix C-4**;
- FGT's *Fugitive Dust Control Plan* is provided in **Appendix C-5**.

The following sections identify the general construction procedures for conventional pipeline construction for the Project. The construction process will be coordinated to minimize the total time a tract of land is impacted, reducing erosion potential, and loss of normal land use.

1.2.3.1 Pipeline Installation Procedures

Conventional pipeline installation, also referred to as open-cut construction, generally occurs in a linear sequence defined by clearing, grading, trenching, stringing, welding, lowering in, backfilling, testing, clean-up, and restoration of the Project area. FGT will limit daily construction activities to sections that can be trenched, installed, backfilled, and stabilized by the end of each construction work day.

A brief description of each of the main activities is presented in the following sections.

1.2.3.2 Clearing and Grading

Prior to construction activities, FGT will survey and stake the limits of the approved workspace to clearly identify Project limits. No work or ground disturbing activities will take place outside of the FERC authorized and approved Project footprint without prior approval(s) from FERC, permitting agencies, and landowners, as required. FGT's proposed Project activities will not impact the wetlands adjacent to the proposed work areas, which are comprised mainly of mangroves. Project construction activities will begin with clearing and grading of the construction workspace areas in FDOT ROW. Due to the proposed facilities being located entirely within existing maintained ROW, clearing and grading requirements will be minimal. No clearing of trees is proposed but limited mowing of herbaceous vegetation may be required in FDOT ROW. Any vegetative debris requiring disposal will be disposed of at approved offsite disposal areas in compliance with applicable regulations.

Existing fences will be cut and braced as needed along the ROW and TWS areas. Temporary fencing, safety fencing, and/or gates will be erected/relocated/restored as needed and in accordance with permits and landowner agreements. The ROW will be graded as necessary to create a level working surface allowing safe passage and operation of equipment. Temporary erosion and sediment controls will be installed in accordance with the FERC Plan and Procedures, and any permit conditions.

1.2.3.3 Pipeline Trenching and Dewatering

Following clearing and grading, a trench will be excavated for installation of the pipe. FGT will limit trenching to sections that can be trenched, installed, backfilled, and stabilized by the end of each

construction work day. The trench will be excavated to a sufficient depth to allow a minimum of three feet of soil cover between the top of the pipe and the final land surface after backfilling. Depth of cover may be greater based on land use, permit conditions, or other physical requirements at specific locations. Trench dewatering will be performed in accordance with the FERC Plan and Procedures, and applicable permit requirements. Best Management Practices (BMPs) such as filter bags or silt fence/hay bale structures will be used to control erosion and sedimentation at the point of discharge as required. FGT does not propose any blasting for the Project.

1.2.3.4 Pipe Stringing and Lowering

FGT will fabricate sections of pipe ahead of ditching to facilitate expedited installation and backfilling. The pipe segments will be temporarily placed or strung alongside the trench, typically on skids, where they will be modified as necessary, welded together, x-rayed, inspected, and coated in preparation for lowering into the trench. The prepared sections of pipe will be lifted off temporary supports and lowered into the trench. Prior to lowering the pipe, the trench will be inspected to ensure that it is free of rocks and any other debris that could damage the pipe or the pipe-coating. Before lowering the pipe into the trench, the pipe and trench configurations will be inspected to ensure compatibility.

1.2.3.5 Pipeline Padding and Backfilling

After the pipe is lowered into the trench, the trench will be backfilled. FGT will backfill all excavated trenches by the end of each construction work day. Previously-excavated materials will be placed back into the trench using bladed equipment or backhoes. Where the previously-excavated material contains large rocks or other materials that could damage the pipe or coating, clean fill or a protective coating will be placed around the pipe prior to backfilling. Following backfilling, a small crown may be left to account for soil settling that may occur.

1.2.3.6 Fugitive Dust Control

FGT will implement measures to minimize the effects of fugitive dust as required. Typical practices to minimize fugitive dust include watering exposed soil surfaces, applying temporary mulch, and expediting restoration and revegetation activities. FGT's *Fugitive Dust Control Plan* is included in **Appendix C**.

1.2.3.7 Hydrostatic Testing and Final Tie-in

The pipeline and associated appurtenances will be hydrostatically tested to ensure they are capable of operating at the design pressure. Hydrostatic testing will be conducted in accordance with the requirements of U.S. Department of Transportation (USDOT) pipeline safety regulations, 49 CFR Part 192, FGT testing specifications, and applicable permits. The water in the pipe will be pressurized and held for a minimum of eight hours. Any loss of pressure that cannot be attributed to other factors, such as temperature changes, will be investigated. Any leaks detected will be repaired and the segment retested.

Hydrostatic test water requirements for the proposed Project facilities are provided in **Section 2** of this report. Hydrostatic test-water will be obtained from municipal or commercial water sources and will be trucked to the site. Test water will contact only new pipe and no chemicals or biocides will be added.

After testing, hydrostatic test water will be discharged in accordance with the FERC Plan and Procedures as well as any permit requirements. This includes discharging test water into a well vegetated upland area and filtering the water through a filter bag and/or erosion control barrier. FGT will obtain and comply with all applicable state permits prior to the discharge of test water. Once a segment of pipe has been successfully tested and dried, the test cap and manifold will be removed, and the pipe will be connected to the remainder of the pipeline.

1.2.3.8 Cathodic Protection

Piping installed below grade will be coated for corrosion protection prior to backfilling, and a cathodic protection system will be installed to protect FGT's underground piping as required. The cathodic protection system will not require any land beyond that required for construction and operation of the proposed 8-inch lateral loop.

1.2.3.9 Cleanup, Restoration and Revegetation

While FGT will generally restore disturbed areas daily, final cleanup and revegetation will commence in the construction work area immediately following construction completion in accordance with the FERC Plan and Procedures. Every reasonable effort will be made to complete final cleanup (including final grading and installation of permanent erosion control devices) within timeframes required by permits, in accordance with landowner agreements, or in compliance with the FERC Plan and Procedures. If seasonal or other weather conditions prevent compliance with the recommended time frames, FGT will maintain temporary erosion controls until conditions allow completion of cleanup and restoration.

All disturbed areas will be finish-graded and any remaining construction debris will be collected and properly disposed of in compliance with applicable regulations. Contours will be restored to pre-existing conditions as closely as possible. Any segregated topsoil will be spread over the surface of the construction work area and permanent erosion controls will be installed. Cleanup, restoration and revegetation measures will be implemented sequentially and immediately following backfill operations, in accordance with the FERC Plan and Procedures, Natural Resource Conservation Service (NRCS) *Florida NRCS Post-Construction Vegetative Restoration Recommendations for Utility Pipelines* (**Appendix C**), and FDOT permit requirements. Periodic inspections of the ROW will be conducted throughout restoration in accordance with the FERC Plan.

1.2.3.10 Post-Construction Monitoring

FGT will monitor all areas disturbed by Project construction activities to ensure successful revegetation of the ROW and to identify any problem areas as required by the FERC Plan and Procedures, and in compliance with all applicable permit requirements. Beginning with the proposed Project Environmental tailgate training, FGT commits to filing an Environmental Inspector's report on a weekly basis with the Commission until Project completion and all FGT Project related personnel have demobbed from the Project areas, pursuant to Section 157.208(c)(10) of the Commission's regulations. In addition, FGT commits to reporting the completed project in its next *Section 157.207 Annual Report of Activities*, pursuant to Section 157.208(e) of the Commission's regulations.

1.2.3.11 Wetland Construction Methods

No wetland crossings or impacts to wetlands are proposed during construction or operation of the Project.

1.2.3.12 Waterbody Construction Methods

No waterbody crossings or impacts to waterbodies are proposed during construction or operation of the Project.

1.2.3.13 Road Crossings

No road crossings are proposed as part of this Project. FGT will install the proposed lateral loop entirely within FDOT ROW for US92 / SR600. FGT will adhere to all FDOT permit conditions and requirements during installation and operation of the proposed facilities.

1.2.3.14 Agricultural Construction

No agricultural areas will be crossed or affected by construction or operation of the Project.

1.2.3.15 Residential Construction

No residential areas will be crossed or affected by construction or operation of the Project.

1.2.4 Aboveground Facilities

FGT does not propose to install or modify any aboveground facilities as part of this Project. All proposed appurtenances will be installed in underground vaults.

1.2.4.1 Vault 1, Vault 2, Vault 3

The proposed facilities will be constructed in compliance with the same federal regulations and guidelines as the pipeline facilities, and in accordance with the specific requirements of applicable federal and state approvals. FGT will conduct these construction activities in accordance with the FERC Plan and Procedures and all other applicable permits and approvals.

FGT will install the proposed vault facilities in upland areas. Vault 1 and Vault 2 will be installed and operated within FDOT ROW for US92/SR600 by FDOT permit. Vault 3 will be installed and operated entirely within FGT's existing permanent ROW for its Tampa West Lateral

All welders and welding procedures will be qualified in accordance with American Petroleum Institute standards. All welds in gas piping systems will be examined using x-ray in accordance with applicable codes.

Piping installed below grade will be coated for corrosion protection prior to backfilling, and an auxiliary cathodic protection system will be installed to protect FGT's underground piping as required. The cathodic protection system will not require any land beyond that required for construction and operation of the proposed 8-inch lateral loop.

Prior to placing the proposed vault facilities in-service, the completed gas piping systems will be hydrostatically tested in accordance with the requirements of USDOT pipeline safety regulations, 49 CFR Part 192, FGT testing specifications, and applicable permits. This testing will assure that the gas piping systems are free from leaks and will provide the required margin of safety for operation at the anticipated operating pressures.

1.3 Construction Schedule and Workforce

FGT anticipates commencing construction **February 1, 2023**, subject to FERC authorization. FGT also anticipates that all facilities will be placed in-service on or before **April 1, 2023**. FGT anticipates construction of the Project will be accomplished using one construction spread with a peak temporary workforce of approximately 20 workers. It is anticipated that FGT will not need to hire any permanent workers for operation of the pipeline facilities.

Prior to construction, FGT will provide its contractors with copies of specifications, an "*approved for construction*" Construction Drawing Package, and all required environmental permits and/or clearances so that construction of the proposed facilities will comply with the measures identified in this Environmental Report and all applicable FERC regulations, and permitting agencies. Additionally, FGT will conduct environmental training for its field construction personnel and construction contractor's personnel prior to and during construction of the Project. This training will focus on implementation of the FERC Plan and Procedures, and other Project-specific regulations, permit conditions and mitigation measures, and Project activity/site safety, as appropriate.

In accordance with the FERC Plan, FGT will employ at least one Environmental Inspector (EI) during construction. The EI's duties will include, but not be limited to, ensuring compliance with all environmental conditions. The EI will have peer status with any/all other inspectors; will be present throughout the Project construction and restoration activities; and will have the authority to enforce permit and FERC

environmental conditions, to issue stop-activity orders, and impose corrective actions to maintain environmental compliance.

1.4 Operation and Maintenance

FGT will continue to operate and maintain its facilities in compliance with USDOT regulations, 49 CFR Part 192, and the maintenance provisions of the FERC Plan as applicable to ensure the integrity and safe operation of the facilities. Cathodic protection systems have been installed at various points along the FGT pipeline system and within compressor stations to mitigate corrosion of the pipeline facilities. These systems will be modified as needed to accommodate the proposed Project facilities. No additional land requirements will be required for cathodic protection systems for the Project.

Operations and maintenance activities include vegetation management; pipeline inspections; cleaning and pipeline repairs. FGT's personnel will continue to perform routine checks of the facilities, including calibration, inspection, and scheduled/preventative maintenance of equipment. Corrective actions will be taken for any identified problem.

1.5 Future Plans and Abandonment

FGT currently has no plans for future expansion or abandonment of the Project facilities described in this application, and there are no other applications related to the proposed Tampa West Project. At the end of the useful life of the pipeline facilities, FGT will obtain all required authorizations/permits for any future construction or abandonment related activities.

1.6 Permits and Approvals

Table 1.6-1 lists the required permits and approvals, dates for submittal of applications, and anticipated date of receipt for the Project. FGT will obtain all necessary permits, licenses, clearances, and approvals related to construction and operation of the Project. Agency and stakeholder correspondence is included in **Appendix E**.

TABLE 1.6-1 Environmental Permits and Approvals

Agency	Permit/Approval/Consultation	Submittal Date (Anticipated)	Approval Date (Anticipated)
Federal			
Federal Energy Regulatory Commission	Authorization under Blanket Certificate pursuant to Sections 157.205, 157.208 and 157.210	Prior Notice Request filed herewith	Pending Authorization
U.S. Fish and Wildlife Service (FWS) Jacksonville, Florida	Consultations under Section 7 of the Endangered Species Act, the Migratory Bird Treaty Act, and the Fish and Wildlife Coordination Act	Dec 2, 2020	June 9, 2021
State			
Florida Department of Environmental Protection (FDEP) Southwest District Submerged Lands and Environmental Resources	Notice of Intent to Use an Environmental Resource and/or State 404 Program General Permit in accordance with 62-330.453, F.A.C.	(Dec 1. 2022)	(Jan 1, 2023)
FDEP, Southwest District Division of Water Resource Management	Confirmation of exemption from permitting for discharge of hydrostatic test water	60 days prior to discharge	30 days prior to discharge

TABLE 1.6-1 Environmental Permits and Approvals			
Agency	Permit/Approval/Consultation	Submittal Date (Anticipated)	Approval Date (Anticipated)
FDEP, Southwest District Division of Water Resource Management	NPDES General Permit, Stormwater Discharges Clean Water Act Section 402(l)(2) and Section 323 of the Energy Policy Act of 205 exempt natural gas pipeline projects from Environmental Protection Agency - NPDES requirements	Exempt	Exempt
FDEP, Florida State Clearinghouse Office of Intergovernmental Programs	Determination of Consistency with Florida Coastal Management Program (FCMP) in accordance with Presidential Executive Order 12372; § 403.061(42), Florida Statutes; the Coastal Zone Management Act, 16 U.S.C. §§ 1451-1464, as amended; and the National Environmental Policy Act, 42 U.S.C. §§ 4321-4347, as amended	Oct 20, 2022	Oct 25, 2022
Florida Fish and Wildlife Conservation Commission	Statewide Operational and Maintenance Agreement	July 2021	Oct 8, 2021
Florida Division of Historical Resources	Consultation for cultural resources under Section 106 of the National Historic Preservation Act	Oct 19, 2022	Oct 24, 2022
Southwest Florida Water Management District (SWFWMD)	Short-term construction dewatering under Rule 40C-2.042(9), F.A.C.	N/A	General Permit by Rule

1.7 Landowners, Governments and Agencies

FGT will comply with 18 CFR Section 157.203(d)(2) regarding notification to landowners, local governments and regulatory agencies pursuant to Order 686 that became effective on January 2, 2007. A list of landowner names and addresses along with agency contact names and addresses is included as Privileged Information in **Appendix D**.

1.8 Non-Jurisdictional Facilities

There are no non-jurisdictional facilities associated with the Project.

1.9 Cumulative Impacts

Given the limited scope of the proposed Project, the Project will not contribute to any significant cumulative impacts. The proposed Project activities will occur either within or adjoining existing ROWs and facility sites. As discussed in this Concise Environmental Report, the Project will not result in any significant direct effects on waterbodies; wetlands; threatened, endangered, or candidate species; fisheries; soils; vegetation; cultural resources; geology; land use and aesthetics; or air and noise emissions.

2.0 Water Use and Quality

2.1 Groundwater Resources

This section describes the existing hydrology, water quality, and use of the regional aquifers underlying the Project, the potential for impacts on these aquifers, and measures to mitigate any identified impacts.

The Project is located in the Floridan aquifer system and is separated into two principal hydrostratigraphic zones consisting of the fresh potable water of the Upper Floridan aquifer and the highly mineralized water of the Lower Florida aquifer. The Upper Florida aquifer is the principal source of water in the Southwest Florida Water Management District (SWFWMD) and is used for major industrial, mining, public supply, domestic use, irrigation, and brackish water desalination in coastal communities (SWFWMD, 2009).

The Project is located in United States Environmental Protection Agency (EPA) Region 4. The EPA has designated three Sole Source Aquifers that are entirely or partially within Region 4; however, the Project is not located within a Sole Source Aquifer.

FGT reviewed publicly available database files (https://ca.dep.state.fl.us/mapdirect/) to identify the presence of contaminated or solid waste sites within 500 feet of proposed work areas. The nearest contaminated site is approximately 979 feet to the southwest of MP 0.0 in Pinellas County. No contaminated or solid waste sites with a potential to affect, or be affected by, the Project, were identified. Maps showing the 500-foot radius around Project work areas are included in **Appendix A**.

2.1.1 Water Supply Wells

According to publicly available information and site reconnaissance, no public wells are within 150 feet of the Project or Contractor Yard. FGT conducted a search using the EPA's Drinking Water Mapping Application to Protect Source Waters and found that there are no wellhead or surface water protection areas within 0.5-mile of the Project area.

2.1.2 Groundwater Impacts and Mitigation

FGT's proposed facilities will be shallow in depth and are not likely to impact any water-bearing units used for water supply. No blasting is proposed for the Project. Impacts to groundwater resources will be avoided or minimized by constructing the Project in accordance with the FERC Plan and Procedures, federal and state water quality standards (e.g., Clean Water Act Sections 401, 402, and 404, and the Safe Drinking Water Act), and implementation of FGT's Spill Prevention and Response Plan (SPAR Plan), included in **Appendix C**.

Shallow aquifers could sustain minor impacts from changes in overland water flow and recharge caused by clearing and grading of the ROW. Soil compaction caused by operation of heavy construction equipment could reduce the soil's ability to absorb water. These minor impacts will be temporary and will not significantly affect groundwater resources or change groundwater flow patterns.

Dewatering of the pipeline trench, which may be necessary in areas where the water table is high, is the only construction activity which is anticipated to require pumping of groundwater. Pipeline construction activities within any one location will typically be completed within several days, and any potential localized lowering of groundwater is expected to be temporary and minor. To recharge the aquifer and prevent silt laden waters from flowing into waterbodies and wetlands, FGT proposes to discharge all water from dewatering activities into an adjacent upland area within approved workspace and through sediment control filter bags or silt fence/hay bale structures as required.

Construction of the Project will require trenching and backfilling to a typical depth of approximately five to seven feet below the ground surface. Trenching and backfilling could potentially cause minor localized fluctuations in groundwater levels, and/or increase turbidity within the zone of shallow groundwater

adjacent to the trench. Any potential shallow groundwater disturbance will be temporary in nature and localized to the immediate area of the trenching and backfilling activity and will not affect the overall quality of groundwater in the Project area.

Spills or leaks of hazardous liquids have the potential for impacts on groundwater resources. Spill-related impacts from construction are mainly associated with fuel storage, equipment refueling, and equipment maintenance. These potential impacts will be avoided or minimized by regulating fuel storage and refueling activities, and by requiring immediate cleanup should a spill or leak occur. FGT's SPAR Plan (**Appendix C**) describes measures to avoid spills and leaks, as well as the measures utilized to minimize potential impacts should a spill or leak occur.

Based on data from FDEP Map Direct, there are no permitted drinking water supplies or springs located within 150 feet of the proposed pipeline loop where trenching will occur or at the contractor yard.

2.1.3 Operation Impacts and Mitigation

Project operations are not anticipated to adversely impact either groundwater quality or supply. The Project does not include any new permanent aboveground facilities that will generate long-term groundwater use.

During operations, potential impacts to groundwater resources will be avoided or minimized with the use of BMPs and protective measures in accordance with the FERC Plan, FERC Procedures, and FGT's SPAR Plan.

2.2 Surface Water Resources

There are no surface waters within the proposed Project workspace. FGT conducted field surveys to determine the presence of wetlands and/or waterbodies within the Project area during September 2022. The surveys were conducted in accordance with Chapter 62-340 of the Florida Administrative Code (FAC), *Delineation of the Landward Extent of Wetland and Surface Water*; and the *1987 Corps of Engineers Wetland Delineation Manual*; and the *2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region* (Version 2.0). FGT's biologists surveyed all proposed workspace, the contractor yard, and access roads. A copy of the field survey report is provided in **Appendix F**.

The nearest waterbody is Tampa Bay, which is approximately 80 feet south of the lateral loop workspace at its closest point along US92/SR600 in Pinellas County and approximately 20 feet north of the Vault 3 workspace in Hillsborough County. FGT has limited all workspace and proposed construction activities to upland areas above the High Tide Line (HTL), Mean Higher High Water (MHHW), and Mean High Water (MHW) line. The HTL was determined by the Highest Astronomical Tide (HAT) utilizing tidal datum elevations based on the NOAA Tide Station at Old Port Tampa which is on the east side of the Gandy Bridge. Tide lines were determined in accordance with Chapter 177, Part II, Florida Statutes and the procedure published by the FDEP and in accordance with 33 CFR Part 328 *Definition of Waters of the United States*.

2.2.1 Contaminated Sediments

As there are no waterbodies within the Project area, there will not be any effects to contaminated sediments.

2.2.2 Public Watershed Areas

The Project is not located within or adjacent to any municipal watershed area, associated reservoirs, or surface water protection areas. The Project will not have adverse impacts on any public watershed areas.

2.2.3 Floodplains

According to the most recent published Federal Emergency Management Agency (FEMA) floodplain maps, FGT's Project is entirely located in the 100-YR Floodplain, 1% Annual Flood Hazard (Zone A) as shown in **Table 2.2-1**. FEMA flood zone maps are included in **Appendix A**.

TABLE 2.2-1 FEMA Floodplain Designations by Milepost

Facility	Milepost		FEMA Floodplain Designation [a]
	Begin	End	
Tampa West Lateral Loop, Vault 1, Vault 2 / Pinellas County, Florida	0.00	1.26	100-Year Floodplain (Zone VE)
Vault 3 / Hillsborough County, Florida	4.58	N/A	100-Year Floodplain (Zone VE)
Contractor Yard / Pinellas County, Florida			
Pinellas, Florida	Offline	Offline	100-Year Floodplain (Zone AE)

[a] Source FEMA, 2017

2.2.4 Hydrostatic Test Water and Water for Dust Suppression

FGT will hydrostatically test its proposed facilities to demonstrate they are capable of operating at the design pressure. FGT will fill the pipe with water from municipal/commercial sources. FGT will utilize approximately 8,000 gallons of water for testing of the proposed facilities. Test water will contact only new pipe and no chemicals will be added. No permits will be required for acquisition of test water from municipal/commercial sources. Permits will be obtained from the FDEP Industrial Wastewater permitting section as necessary for discharges of hydrostatic test water. Permitting agencies are identified in **Table 1.6-1**. If required, FGT will acquire water for dust suppression from municipal/commercial sources or utilize groundwater from construction excavations.

2.2.5 Construction Permits

FGT's Project is entirely within upland areas inside of FDOT's existing ROW for US92/SR600. No waterbody crossings are proposed. While Tampa Bay is adjacent to the Project, no impacts are proposed to Tampa Bay. As no impacts to Tampa Bay are proposed, and all activities will take place above the HTL, no impacts to Waters of the United States, in accordance with 33 CFR Part 328, are proposed and 404 permitting by the USACE is not required. As all proposed activities will be in upland areas above the HTL and the MHW, FGT will obtain 401 authorization from FDEP under a General Permit in accordance with 62-330.453, F.A.C.

2.2.6 Sensitive Surface Waters

As no impacts to waterbodies are proposed, the Project will not affect:

- Waters that do not meet water quality standards associated with the respective designated use;
- Waterbodies that contain threatened or endangered species;
- Waterbodies that are crossed less than 3 miles upstream of potable water intake structures;
- Outstanding or exceptional quality waterbodies;
- Waters of particular ecological and recreational importance;
- Waterbodies located in sensitive and protected watershed areas;

- Waterbodies and intermittent drainages that have steep banks, potentially unstable soils, high volume flows, and actively eroding banks;
- Surface waters that have important riparian areas; or
- Rivers on or designated to be added to the Nationwide Rivers Inventory or a state river inventory.

2.2.7 Waterbody Construction and Mitigation Procedures

No waterbody impacts are proposed during construction or operation of the Project. During construction, FGT will conduct all activities in accordance with the FERC Plan and Procedures and environmental permit requirements to prevent impacts to Tampa Bay.

2.3 Wetlands

2.3.1 Existing Resources

FGT conducted field surveys of the Project area in March 2022 to determine the presence of wetlands and/or waterbodies. Surveys were conducted in accordance with Chapter 62-340 of the FAC, *Delineation of the Landward Extent of Wetland and Surface Water*; and the *1987 Corps of Engineers Wetland Delineation Manual*; and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plan Region* (Version 2.0) (November 2010). FGT's biologists surveyed all proposed workspace, the contractor yard, and access roads.

No wetlands were identified within the construction workspace, contractor yard, or access roads. A copy of the field survey report is provided in **Appendix F**. NWI maps are provided in **Appendix A**. Tampa Bay is approximately 80 feet south of the lateral loop workspace along US92/SR600 in Pinellas County and approximately 20 feet north of the Vault 3 workspace in Hillsborough County. Wetlands adjacent to the proposed work areas are comprised mainly of mangroves, which will not be impacted be FGT's proposed Project.

2.3.2 Construction and Operation Impacts

No impacts to wetlands are proposed during construction or operation of the Project. FGT will conduct all construction activities in accordance with the FERC Plan and Procedures to prevent impacts to adjacent wetland areas.

3.0 Fish, Wildlife, and Vegetation

3.1 Fisheries and Other Aquatic Resources

3.1.1 Fishery Classifications

While Tampa Bay is adjacent to the Project area, no impacts to the bay or associated tidal wetlands are proposed. No fisheries or essential fish habitat will be impacted by construction or operation of the Project. No fisheries resource mitigation measures are proposed.

3.1.2 Fisheries of Special Concern

FGT's Project will not impact any fisheries of special concern.

3.1.3 Construction and Operation Impacts

No fisheries or essential fish habitat will be impacted by construction or operation of the Project. No fisheries resources mitigation measures are proposed.

3.2 Wildlife

3.2.1 Existing Resources - Habitat

FGT's conducted a desktop review using the Southwest Florida Water Management District's Land use codes to identify current land use categories and vegetation types in the project area. FLUCCS maps are included in **Appendix A**. FGT's biologists conducted field surveys in September 2022 to verify land use and vegetative communities. Vegetative cover types, FLUCCS codes, and dominant vegetation are summarized in **Table 3.2-1**.

TABLE 3.2-1 FLUCCS and Plant Species

FLUCCS Code/ Description	Dominant Vegetation per FLUCCS Code	Survey Data	FLUCCS Verified / Corrected
Tampa West Lateral Loop, Vault 1, Vault 2 – Pinellas County, Florida			
8100: Transportation	Characterized by a highways and limited access rights-of-way and service facilities. Vegetation may include ornamental landscaping and grassy areas.	Dominant vegetation included Bahia grass (*Panicum notatum*), Bermuda grass (*Cynodon dactylon*), goose grass (*Eleusine indica*), bayhops (*Ipomea pes-caprae*), common wireweed (*Sida acuta*), common beggartick (*Bidens alba*), Egyptian grass (*Dactyloctenium aegyptium*), hairy crabgrass (*Digitaria sanguinalis*), and torpedo grass (*Panicum repens*).	Verified
Vault 3 – Hillsborough County, Florida			
1400: Commercial and Services	Predominately associated with the distribution of products and services. Vegetation may include ornamental landscaping and grassy areas.	Dominant vegetation included Bermuda grass, common beggartick, poor-man's pepperweed (*Lepidium virginicum*), creeping woodsorrel (*Oxalis*	Verified

TABLE 3.2-1 FLUCCS and Plant Species			
FLUCCS Code/ Description	Dominant Vegetation per FLUCCS Code	Survey Data	FLUCCS Verified / Corrected
		corniculata), common wireweed, Bahiagrass, false buttonweed (*Spermacoce spp.*), switchgrass (*Panicum rigidulum*), and cogon grass (*Imperata cylindrica*).	
Contractor Yard – Pinellas County, Florida			
1800: Recreational	Predominately associated with areas whose physical structure indicates that active user-oriented recreation is or could be occurring. This could include picnic areas, service stands, and large parking lots adjacent to the recreation area.	The Contractor Yard is a large parking lot located behind a commercial business. No vegetation was observed within paved areas.	Verified

Based on field-verified FLUCCS classifications and vegetative cover, there are three dominant habitat types within the Project area as discussed below. Vegetative community structures in each habitat type are discussed in **Section 3** of this report.

3.2.1.1 Transportation (Tampa West Lateral Loop, Vault 1, Vault 2 – Pinellas County, Florida)

This habitat type consists mainly of the maintained ROW for US92/SR600 (Gandy Bridge). Tampa Bay is located south of the ROW. These areas provide low quality wildlife habitat with little protection for larger species. There is moderate browsing for herbivorous species, however, little foraging space for birds and bats, and some seasonal flowering plants for pollinators. Due to the constant vehicular traffic north of the workspace, the area could not be utilized as a travel corridor. Mammals that may utilize the vegetative community type include the eastern cottontail rabbit (*Sylvilagus floridanus*) and Florida mouse (*Podomys floridanus*). Many bird species forage along the beach adjacent to the ROW for US92/SR600 and include sanderling (*Calidris alba*), willet (*Tringa semipalmata*), spotted sandpiper (*Actitis macularia*), ruddy turnstone (Are*naria interpres*), black-bellied plover (P*luvialis squatarola*), royal tern (*Thalasseus maximus)*, laughing gull (*Leucophaeus atricilla*), ring-billed bull (*Larus delawarensis*), and black skimmer (Rynchops niger). Amphibians and reptiles may include the green anole (*Anolis carolinensis*) and black racer (*Coluber constrictor*).

3.2.1.2 Commercial and Services (Vault 3 – Hillsborough County, Florida)

This habitat type includes the grassy area adjacent to the parking lot of the American Legion. This area provides poor-to-moderate quality wildlife habitat and serves as a transition zone to and from Tampa Bay and the adjacent shrub scrub wetlands. Protection is minimal and food sources may be scarce. Mammals may forage in these areas or may travel through these areas from one habitat to another. Mammalian species that may utilize the area includes the eastern cottontail rabbit, or the Florida mouse. Birds include fish crow (*Corvus ossifragu*s), great blue heron, and limpkin (*Aramus guarauna*). Amphibians and reptiles may include the green anole and black racer.

3.2.1.3 Recreational (Contractor Yard – Pinellas County, Florida)

This habitat type consists of an 8.6-acre parking lot located behind a commercial business in Pinellas County, Florida. This area provides low quality wildlife habitat with little to no protection for most species.

No foraging habitat exists due to lack of vegetation. Small mammals, including the Florida mouse, may use the area for a travel corridor to and from adjacent habitats. Birds that may utilize the area included monk parakeets (*Myiopsitta monachus*), osprey (*Pandion haliaetus*), laughing gull, fish crow, and northern mockingbird (*Mimus polyglottos*). Amphibians and reptiles may include the green anole and box turtle (*Terrapense carolina*).

3.2.2 Construction and Operation Impacts

Project impacts on wildlife habitats will vary by species and habitat. Construction activities, including clearing of the ROW, will temporarily reduce feeding, nesting, and cover habitat until vegetation is re-established. Mobile species may be disturbed or displaced temporarily. Indirect wildlife impacts associated with construction noise and increased human activity will be temporary and could include abandoned reproductive efforts, displacement, and avoidance of work areas. Impacts on wildlife along the construction ROW, and other work areas, will be of short duration and limited to the period of construction activities. Following construction, FGT will allow the ROW to revert to pre-construction conditions. These areas are expected to recover quickly.

3.2.3 Unique and Sensitive Wildlife and Habitat

The proposed Project does not cross any significant or sensitive habitat (e.g., conservation areas, parks, preserves, state or federal lands), but it is adjacent to the Pinellas County Aquatic Preserve, located within Tampa Bay. The Pinellas County Aquatic Preserve is discussed in further detail in **Section 8** of this report. As all construction activities will be limited to upland areas above the HTL and MHW, no impacts to the preserve are proposed or anticipated.

3.2.4 Migratory Birds

A variety of migratory birds may occur seasonally in the Project area. The Project is located in Bird Conservation Region (BCR) 31 (Peninsular Florida). Highest priority land birds are shown in **Table 3.2-2**. Priority species are considered regionally important based on uniformly applied biological criteria, but may also include federally listed and other species that may merit consideration in regional conservation planning. No known colonially nesting waterbird colonies are within one mile of the Project area (FWC 2020).

TABLE 3.2-2 Birds of Conservation Concern Potentially Occurring in the Vicinity of the Project

Common Name	Scientific Name	Breeding	Non-Breeding or Wintering	Migrant or Transient	Endangered
Bird Conservation Region 31					
Great White Heron	*Ardea alba*	X	X		
Ivory-Billed Woodpecker	*Campephilus principalis*	X	X		X
Florida Scrub Jay	*Aphelocoma coerulescens*	X	X		
Bachman's Warbler	*Vermivora bachmanii*			X	
Kirtland's Warbler	*Setophaga kirtlandii*			X	
Reddish Egret	*Egretta rufescens*	X	X		
Red-cockaded Woodpecker	*Leuconotopicus borealis*	X	X		
Wood Stork	*Mycteria americana*	X	X		
Florida Prairie Warbler	*Setophaga discolor*	X			
Snail Kite	*Rostrhamus sociabilis*	X			X
Short-tailed Hawk	*Buteo brachyurus*	X	X		

TABLE 3.2-2 Birds of Conservation Concern Potentially Occurring in the Vicinity of the Project

Common Name	Scientific Name	Breeding	Non-Breeding or Wintering	Migrant or Transient	Endangered
Bird Conservation Region 31					
Limpkin	*Aramus guarauna*	X	X		
Loggerhead Shrike	*Lanius ludovicianus*	X	X		
Painted Bunting	*Passerina ciris*		X		
Crested Caracara	*Caracara cheriway*	X	X		
White-tailed Kite	*Elanus leucurus*	X			
Swallow-tailed Kite	*Elanoides forficatus*	X		X	
White-breasted Nuthatch	*Sitta carolinensis*	X	X		
Brown-headed Nuthatch	*Sitta pusilla*	X	X		
Grasshopper Sparrow	*Ammodramus savannarum*	X			
Mottled Duck	*Anas fulvigula*	X	X		
Southeastern American Kestrel	*Falco sparverius paulus*	X			

No clearing of trees or forested areas are proposed. Potential impacts to migratory birds would be mainly limited to the species that utilize the beach areas (Gandy Beach) adjacent to US92/SR600. Gandy Beach is publicly accessible from US92/SR600 and is regularly subject to pedestrian and vehicular traffic. Birds utilizing the area are habituated to vehicular traffic, noise, and human activity. FGT's proposed construction is scheduled to take place between February and April 2023; outside of the nesting season for the species likely to be present during construction activities. Some bird species may be using the beach for wintering and foraging grounds however, construction would not disrupt any nesting activities. While construction activities may result in short-term disturbance of birds, causing birds in the Project area to relocate during periods of active construction, impacts would likely be minimal due the temporary and short-term nature of disturbance. Any temporarily displaced individuals could readily utilize abundant similar habitats available throughout the area and immediately outside of the construction ROW.

All disturbed areas will be restored to pre-construction conditions immediately following construction. All areas to be disturbed during construction of the proposed pipeline facilities within FDOT ROW are currently subject to routine maintenance by FDOT and public use including vehicular and pedestrian traffic. Construction of the proposed facilities at Vault 3 will occur entirely within existing FGT ROW and adjacent parking areas for the American Legion. No aboveground facilities are proposed. Based on the current uses of proposed Project workspace and the temporary and short-term nature of potential impacts, no substantial changes in habitat availability or suitability are anticipated as a result of the proposed Project. Construction will not likely result in long-term or cumulative impacts to migratory bird populations.

FGT maintains statewide blanket clearances with FWS and the Florida Fish and Wildlife Conservation Commission (FWC) for minor construction projects conducted under FERC Blanket Certificate Program. The proposed Project is consistent with the conditions of these clearances. As such, FGT's Project will not negatively affect migratory birds. Copies of the FWS and FWC authorizations are included in **Appendix E**.

3.3 Vegetation

3.3.1 Existing Resources

FGT conducted a desktop review using the Southwest Florida Water Management District's Land use codes to identify current land use categories and vegetation types in the project area. FLUCCS maps are included

in **Appendix A**. FGT's biologists conducted pedestrian surveys in September 2022 to verify land use and vegetative communities. Vegetative cover types, FLUCCS codes, and dominant vegetation are summarized in **Table 3.2-1**. Based on the FLUCCS codes and field observations, there are two primary vegetative cover types in the Project area as described below.

3.3.1.1 Transportation (Tampa West Lateral Loop, Vault 1, Vault 2 – Pinellas County, Florida)

This vegetative cover type consists mainly of the maintained ROW US92/SR600 (Gandy Bridge). The ROW is subject to regular maintenance mowing. Dominant vegetation includes Bahia grass (*Panicum notatum*), Bermuda grass (*Cynodon dactylon*), goose grass (*Eleusine indica*), bayhops (*Ipomea pes-caprae*), common wireweed (*Sida acuta*), common beggartick (*Bidens alba*), Egyptian grass (*Dactyloctenium aegyptium*), hairy crabgrass (*Digitaria sanguinalis*), and torpedo grass (*Panicum repens*).

3.3.1.2 Commercial and Services (Vault 3 – Hillsborough County, Florida)

This vegetative cover type consists of a parking lot and the surrounding herbaceous areas. Dominant vegetation includes Bermuda grass, common beggartick, poor-man's pepperweed (*Lepidium virginicum*), creeping woodsorrel (*Oxalis corniculata*), common wireweed, Bahiagrass, false buttonweed (*Spermacoce spp.*), and switchgrass (*Panicum rigidulum*).

3.3.1.3 Recreational (Contractor Yard – Pinellas County, Florida)

The proposed contractor yard is located in the parking lot behind a commercial business. It is a paved 8.6-acre parking lot. No vegetation exists at this site.

3.3.2 Construction and Operation Impacts

Table 3.3-1 shows the acreage of vegetation cover types affected by construction and operation of the proposed Project. Construction impacts on vegetation will include cutting, clearing, and/or removal of existing vegetation within the construction ROW.

TABLE 3.3-1 Vegetative Communities Affected by Construction and Operation of the Project

	Transportation (acres)		Commercial and Services (acres)		Recreational (acres)		Total (acres)	
Facility / County, State	Con [a]	Opr [a]	Con	Opr	Con	Opr	Con	Opr
Tampa West Lateral Loop, Vault 1, Vault 2 / Pinellas, Florida								
Pipeline ROW	10.43	0	0	0	0	0	10.43	0
Vault Facilities								
Vault 3 / Hillsborough	0	0	0.38	0	0	0	0.38	0
Contractor Yard / Pinellas, Florida								
Contractor Yard [b]	0	0	0	0	8.60	0	8.60	0
Project Total	10.43		0.38		8.60		19.41	

[a] Con = Construction; Opr = Operation. Areas affected by operation of the Project are those areas within FGT's proposed permanent ROW. Operational impacts include periodic mowing and maintenance clearing activities.

[b] The proposed contractor yard will be entirely within an existing paved parking lot. No impacts to vegetative communities are proposed or anticipated. Vegetative cover data is based on FLUCCS cover classification.

FGT will require limited and minimal vegetation clearing from the construction ROW. All proposed work areas are within existing maintained ROW or in existing paved and/or landscaped areas. Following installation of the pipeline, FGT will restore all disturbed areas to pre-existing contours. FGT will revegetate all disturbed upland areas in accordance with the FERC Plan, FDOT permit requirements, and landowner requirements. FGT anticipates that herbaceous vegetation will return to pre-construction conditions within one growing season.

Following construction, FGT will perform annual monitoring and maintenance within areas impacted by the Project per the FERC Plan and Procedures, as well as any permit conditions, until restoration requirements have been met and disturbed areas have been successfully restored. Revegetation will be considered successful when the vegetative cover returns to at least 80 percent of the type, density, and distribution of the vegetation in adjacent undisturbed areas.

FGT's pipeline facilities installed within FDOT ROW for US92/SR600 will be subject to ROW maintenance, including routine mowing, by FDOT. Operation and routine maintenance of FGT's pipeline facilities outside of FDOT ROW will adhere to the FERC Plan and Procedures and FGT's SPAR Plan.

3.3.3 Noxious Weeds and Invasive Species

Noxious weeds and invasive species are usually most prevalent in areas of prior surface disturbance, such as roadsides. FGT identified one species of noxious and/or invasive species in the survey area (**Table 3.3-2**).

TABLE 3.3-2 Invasive Species Observed in the Project Area

Common Name	Scientific Name	Description	Location/Prevalence
Torpedo grass	*Panicum repens*	Perennial grass that can grow up to 40 inches tall from creeping rhizomes and stolons. Primarily spreads vegetatively by rhizomes and stem fragments, which can form new plants. This occurs from mowers or other heavy equipment as well as boats and aquatic equipment.	Torpedo grass was not dominant anywhere within the survey area, but was observed in small quantities in the ROW of US92/SR600.

While nuisance species were recorded within the survey area, species composition and concentrations are consistent with those typically observed throughout Florida; especially within maintained road ROW. FGT will adhere to any specific requirements in permit conditions, landowner stipulations, or as required by land managing agencies with regard to management and control of these species.

3.4 Endangered, Threatened, and Special Status Species

3.4.1 Existing Resources

In September 2022, FGT reviewed the United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) threatened and endangered species database and the Florida Natural Areas Inventory (FNAI) for Pinellas and Hillsborough Counties to identify species of concern with potential to occur in the Project area. **Table 3.4-1** lists the federally and state-listed endangered and threatened species with potential to occur in the Project area.

TABLE 3.4-1 Federally and State-listed Species with Potential to Occur in the Project Area [a]				
Common Name *Scientific Name*	Federal [b] Status	State [c] Status	Habitat Assessment	Determination of Effect
Tampa West Lateral Loop, Vault 1, Vault 2, Contractor Yard - Pinellas County, Florida				
Birds				
Eastern Black Rail (*Laterallus jamaicensis ssp. jamaicensis*)	T	Not Listed	No tidally or non-tidally influenced brackish or salt marshes present.	No effect
Wood Stork (*Mycteria americana*)	T	FT	No freshwater or estuarine habitats used for nesting present. Some estuarine foraging habitat present. Not observed during field surveys.	Not likely to adversely affect
Audubon's Crested Caracara (*Polyborus plancus audubonii*)	T	FT	No wet prairies with cabbage palms present within or adjacent to Project.	No effect
Piping Plover (*Charadrius melodus*)	T	FT	Sandy beach habitat areas present within a portion of the Project area. Not observed during field surveys.	Not likely to adversely affect
Red knot (*Calidris canutus rufa*)	T	FT	No coastal marine or estuarine habitats with large areas of exposed intertidal sediments. Not observed during field surveys.	Not likely to adversely affect
Florida Burrowing Owl (*Athene cunicularia floridana*)	Not Listed	ST	No dry prairies or pasture areas present. Some ruderal areas present, however no species or their burrows were observed. Only known colony in the area is on MacDill airfield, in Hillsborough County (Hastings, 2022).	No effect
Snowy plover (*Charadrius nivosus*)	Not Listed	ST	Sandy beach habitat near vegetation or debris present within and adjacent to Project workspace. Not observed during field surveys.	Not likely to adversely affect
Reddish egret (*Egretta refusecens*)	Not Listed	ST	No coastal mangrove islands or Brazilian pepper on manmade dredge spoil islands for nesting habitat present. Foraging areas including shorelines with little vegetation present adjacent. Not observed during field surveys.	Not likely to adversely affect
Tricolored heron (*Egretta tricolor*)	Not Listed	ST	No coastal mangrove islands or willow thickets in freshwater used for nesting present. Some flooded wetlands and tidal creeks in general Project area. Not observed during field surveys.	Not likely to adversely affect

TABLE 3.4-1 Federally and State-listed Species with Potential to Occur in the Project Area [a]				
Common Name *Scientific Name*	Federal [b] Status	State [c] Status	Habitat Assessment	Determination of Effect
American oystercatcher (*Haematopus palliatus*)	Not Listed	ST	No large beach sites used for nesting within or adjacent to the Project site. May have foraging shellfish beds adjacent to Project workspace. Species observed during survey outside of proposed workspace.	Not likely to adversely affect
Roseate spoonbill (*Platalea ajaja*)	Not Listed	ST	No coastal mangrove islands or Brazilian pepper man-made dredge spoil island present. Some mangrove-dominated inlets and shallow coastal pools used for foraging present. No species observed during surveys.	Not likely to adversely affect
Black skimmer (*Rynchops niger*)	Not Listed	ST	Beaches adjacent and within Project workspace. Species were observed during surveys but outside of the proposed Project workspace.	Not likely to adversely affect
Least tern (*Sternula antillarum*)	Not Listed	ST	Some beaches adjacent to and within Project workspace. Causeway adjacent to Project workspace. Not observed during field surveys.	Not likely to adversely affect
Mammals				
West Indian Manatee (*Trichechus manatus*)	T	FT	No marine habitat within Project workspace.	No effect.
Reptiles/Amphibians				
Eastern Indigo Snake (*Drymarchon corais couperi*)	T	FT	No pine flatwoods, scrubby flatwoods, high pine, dry prairie, or freshwater marsh habitat present.	No effect.
American Crocodile (*Crocodylus acutus*)	T	FT	Brackish and/or saltwater areas present adjacent to Project. No ponds, coves, or creeks in mangrove swamps present.	No effect.
Gopher Tortoise (*Gopherus polyphemus*)	C	ST	No upland habitats present including sandhills or dry pine flatwoods. No burrows identified during survey.	No effect.
Green Sea Turtle (*Chelonia mydas*)	T	FT	Project is located above the MHW line and away from nesting areas on the beach.	No effect.
Hawksbill Sea Turtle (*Eretmochelys imbricata*)	E	FE	Project is located above the MHW line and away from nesting areas on the beach.	No effect.
Leatherback Sea Turtle (*Dermochelys coriacea*)	E	FE	Project is located above the MHW line and away from nesting areas on the beach.	No effect.
Loggerhead Sea Turtle (*Caretta caretta*)	T	FT	Project is located above the MHW line and away from nesting areas on the beach.	No effect.

TABLE 3.4-1 Federally and State-listed Species with Potential to Occur in the Project Area [a]				
Common Name *Scientific Name*	Federal [b] Status	State [c] Status	Habitat Assessment	Determination of Effect
Short-tailed Snake (*Lampropeltis extenuata*)	Not Listed	ST	No dry upland habitats, principally sandhill xeric hammocks, and sand pine scrub.	No effect
Insects				
Monarch Butterfly (*Danaus plexippus*)	Not Listed	C	No open fields, meadows, agricultural fields, pasture land, or residential areas present. Roadside habitat is adjacent to Project workspace.	Not likely to jeopardize.
Plants				
Florida golden aster (*Chrysopsis floridana*)	E	SE	Occurs in sand pine scrub, scrubby flatwoods, and xeric hammock with bare sand openings in full sun; also, along roadsides and clearings in these habitats.	No effect
Golden leather fern (*Acrostichum aureum*)	Not Listed	ST	No brackish or freshwater marshes present.	No effect.
Brittle maidenhair fern (*Adiantum tenerum*)	Not Listed	SE	No moist, shaded, limestone ledges or grottoes present.	No effect.
Nuttall's rayless goldenrod (*Bigelow nuttallii*)	Not Listed	ST	No sand pine scrub habitat or disturbed mixtures of sand pine and slash pine habitat present.	No effect.
Many-flowered grass-pink (*Calopogon multiflorus*)	Not Listed	ST	No dry to moist flatwoods with longleaf pine, wiregrass, and saw palmetto habitat present.	No effect.
Sand butterfly pea (*Centrosema arenicola*)	Not Listed	SE	No slash pine-turkey oak sandhills or scrubby flatwood habitat present.	No effect.
Sanibel lovegrass (*Eragrostis pectinacean var. tracyi*)	Not Listed	SE	No beach dunes, maritime hammocks, old fields, or coastal grassland habitat present.	No effect.
Tampa vervain (*Glandularia tampensis*)	Not Listed	SE	No sandy coastal hammocks, dunes, well-drained live oak-slash or longleaf pine-saw palmetto flats habitat present.	No effect.
Gulf coast Florida lantana (*Lantana depressa var. sanibelensis*)	Not Listed	SE	Project is not located on a barrier island and no limestone coastal prairie habitat present.	No effect.
Nodding pinweed (*Lechea cernua*)	Not Listed	ST	No ancient dune, mature scattered pine or oak habitat present.	No effect.
Pine pinweed (*Lechea divaricata*)	Not Listed	SE	No sand pine scrub, ancient dune, scrub oak, or moist dune swale habitat present.	No effect.
Narrowleaf naiad (*Najas filifolia*)	Not Listed	ST	No freshwater habitats with dark water characteristics present.	No effect.

TABLE 3.4-1 Federally and State-listed Species with Potential to Occur in the Project Area [a]				
Common Name *Scientific Name*	Federal [b] Status	State [c] Status	Habitat Assessment	Determination of Effect
Comb polybody (*Pecluma ptilota var. bourgeauana*)	Not Listed	SE	No roadside ditches or badly eroded pastures present.	No effect.
Giant orchid (*Pteroglossaspis ecristata*)	Not Listed	ST	No scrub oak habitat, pine rocklands, pine-palmetto flatwoods, fields, dry grassy clearings, or dry-mesic pine savannah present.	No effect.
Ray fern (*Schizaea pennula*)	Not Listed	SE	No saw palmetto or gallberry habitat present. No litter of red by and dahoon islands present.	No effect.
Small ladies' tresses (*Spiranthes brevilabris*)	Not Listed	SE	No moist prairies, pine-hardwood forest, open pinelands, wetland pine savannahs/flatwoods, meadows or dry to moist fields present.	No effect.
Redmargin zephrylily (*Zephryanthes simpsonii*)	Not Listed	ST	No wet flatwoods or meadows present.	No effect.
Vault 3 - Hillsborough County, Florida				
Birds				
Eastern Black Rail (*Laterallus jamaicensis ssp. jamaicensis*)	T	Not Listed	No tidally or non-tidally influenced brackish or salt marshes present within Project workspace.	No effect
Wood Stork (*Mycteria americana*)	T	FT	No freshwater or estuarine habitats used for nesting present. Some estuarine foraging habitat present.	Not likely to adversely affect
Audubon's Crested Caracara (*Polyborus plancus audubonii*)	T	FT	No wet prairies with cabbage palms present within or adjacent to Project.	No effect
Red Knot (*Calidris canutus rufa*)	T	FT	Workspace is not located within coastal marine or estuarine habitats with large areas of exposed intertidal sediments.	Not likely to adversely affect
Florida scrub-jay (*Aphelocoma* coerulescens)	T	FT	No fire-dominated, low-growing oak scrub habitat present.	No effect.
Florida Sandhill Crane (*Antigone canadensis pratensis*)	Not Listed	ST	No marshy areas or low-lying pastures or scattered wooded hammock habitat present.	No effect
Florida Burrowing Owl (*Athene cunicularia floridana*)	Not Listed	ST	No dry prairies or pasture areas present. Some ruderal areas present, however no species or their burrows were observed. Only known colony in the area is on MacDill airfield, in Hillsborough County (Hastings, 2022).	No effect

TABLE 3.4-1 Federally and State-listed Species with Potential to Occur in the Project Area [a]				
Common Name *Scientific Name*	Federal [b] Status	State [c] Status	Habitat Assessment	Determination of Effect
Snowy plover (*Charadrius nivosus*)	Not Listed	ST	No sandy beach habitat near vegetation or debris used for nesting present within or adjacent to Project workspace. Tidal wetlands used for foraging adjacent to Project workspace. No species observed during surveys.	No effect.
Reddish egret (*Egretta refusecens*)	Not Listed	ST	No coastal mangrove islands or Brazilian pepper on manmade dredge spoil islands for nesting habitat present. No species observed during surveys.	No effect.
Little blue heron (*Egretta caerulea*)	Not Listed	ST	Saltwater habitats present adjacent to Project workspace, however no freshwater habitat used for foraging present within Project workspace. No species observed during survey.	Not likely to adversely affect
Tricolored heron (*Egretta tricolor*)	Not Listed	ST	No coastal mangrove islands or willow thickets in freshwater used for nesting present. Some flooded wetlands and tidal creeks adjacent to Project workspace. No species observed during survey.	Not likely to adversely affect
Roseate spoonbill (*Platalea ajaja*)	Not Listed	ST	No coastal mangrove islands or Brazilian pepper man-made dredge spoil island present. Some mangrove-dominated inlets and shallow marine pools used for foraging present adjacent. No species observed during survey.	Not likely to adversely affect
Black skimmer (*Rynchops niger*)	Not Listed	ST	No beaches within or adjacent to the Project workspace. No species observed during survey.	No effect.
Least tern (*Sternula antillarum*)	Not Listed	ST	No beaches within or adjacent to Project workspace. Project will be an active construction site. No species were observed during survey.	No effect.
Mammals				
West Indian Manatee (*Trichechus manatus*)	T	FT	No marine habitat within Project workspace.	No effect.
Reptiles/Amphibians				
Eastern Indigo Snake (*Drymarchon corais couperi*)	T	FT	No pine flatwoods, scrubby flatwoods, high pine, dry prairie, or freshwater marsh habitat present.	No effect
American Crocodile (*Crocodylus acutus*)	T	FT	Brackish and/or saltwater areas present adjacent to Project. No ponds, coves, or creeks in mangrove swamps present.	No effect.

TABLE 3.4-1 Federally and State-listed Species with Potential to Occur in the Project Area [a]				
Common Name *Scientific Name*	Federal [b] Status	State [c] Status	Habitat Assessment	Determination of Effect
Gopher Tortoise (*Gopherus polyphemus*)	C	ST	No dry upland habitats present including sandhills and dry pine flatwoods, also disturbed habitats such as pastures and road shoulders. No species observed during survey.	No effect.
Hawksbill Sea Turtle (*Eretmochelys imbricata*)	E	FE	Project workspace is located within an upland area. No marine habitat or suitable sandy beach habitat for nesting present.	No effect.
Leatherback Sea Turtle (*Dermochelys coriacea*)	E	FE	Project workspace is located within an upland area. No marine habitat or suitable sandy beach habitat for nesting present.	No effect.
Loggerhead Sea Turtle (*Caretta caretta*)	T	FT	Project workspace is located within an upland area. No marine habitat or suitable sandy beach habitat for nesting present.	No effect.
Florida Pine Snake (*Pituophis melanoleucus*)	Not Listed	ST	No pine-dominated, pine-oak habitat, and old fields and pastures present.	No effect.
Short-tailed Snake (*Lampropeltis extenuata*)	Not Listed	ST	No dry upland habitats, principally sandhill xeric hammocks, and sand pine scrub.	No effect
Plants				
Florida Golden Aster (*Chrysopsis floridana*)	E	FE	Occurs in sand pine scrub, scrubby flatwoods, and xeric hammock with bare sand openings in full sun; also, along roadsides and clearings in these habitats.	No effect
Florida Bonamia (*Bonamia grandiflora*)	T	FT	Habitat includes deep, white, dry sands of ancient dunes and sandy ridges in clearings or openings of scrub habitat on the Central Ridge of Florida.	No effect
Pygmy Fringe-tree (*Chionanthus pygmaeus*)	E	FE	No scrub, sandhill, and xeric hammock habitat present. Species primarily on the Lake Wales Ridge.	No effect
Golden leather fern (*Acrostichum aureum*)	Not Listed	ST	No brackish or freshwater marshes present.	No effect.
Brittle maidenhair fern (*Adiantum tenerum*)	Not Listed	SE	No moist, shaded, limestone ledges or grottoes present.	No effect.
Incised groove-bur (*Agrimonia incisa*)	Not Listed	ST	No longleaf pine-deciduous scrub oak, open pine woods, mixed pine-oak woods, bluffs, small clearings and old road habitats present.	No effect.

TABLE 3.4-1 Federally and State-listed Species with Potential to Occur in the Project Area [a]				
Common Name *Scientific Name*	Federal [b] Status	State [c] Status	Habitat Assessment	Determination of Effect
Pinewoods bluestem (*Andropogon arctatus*)	Not Listed	ST	No wet pine flatwoods or seepage wetlands and wet pine savanna habitat present.	No effect.
Auricled spleenwort (*Asplenium erosum*)	Not Listed	SE	No tree trunks or logs in swamps and hammocks present.	No effect.
Many-flowered grass-pink (*Calopogon multiflorus*)	Not Listed	ST	No dry to moist flatwoods with longleaf pine, wiregrass, and saw palmetto habitat present.	No effect.
Chapman's sedge (*Carex chapmannii*)	Not Listed	ST	No well-drained hammock woodlands, sandy hammocks, or floodplains of blackwater streams present.	No effect.
Sand butterfly pea (*Centrosema arenicola*)	Not Listed	SE	No slash pine-turkey oak sandhills or scrubby flatwoods habitat present.	No effect.
Tampa vervain (*Glandularia tampensis*)	Not Listed	SE	No sandy coastal hammocks, dunes, well-drained live oak-slash or longleaf pine-saw palmetto flats habitat present.	No effect.
Nodding pinweed (*Lechea cernua*)	Not Listed	ST	No ancient dune, mature scattered pine or oak habitat present.	No effect.
Pine pinweed (*Lechea divaricata*)	Not Listed	SE	No sand pine scrub, ancient dune, scrub oak, or moist dune swale habitat present.	No effect.
Lowland loosestrife (*Lythrum flagellare*)	Not Listed	SE	No wet prairie, floodplain marshes, pineland sloughs, edge of cypress domes, or roadside ditch habitat present.	No effect.
Florida spiny-pod (*Matelea floridana*)	Not Listed	SE	No upland hardwood forests, limesink areas, oak-hickory, or oak-hickory-pine upland forest habitat present.	No effect.
Hand fern (*Ophioglossum palmatum*)	Not Listed	SE	No sabal palmetto in moist hammock habitat present.	No effect.
Widespread polypody (*Pecluma dispersa*)	Not Listed	SE	No limestone outcrops or hammock habitat present.	No effect.
Plume polybody (*Pecluma plumula*)	Not Listed	SE	No rocklands, wet flatwood, river bank, hammocks, or limesink habitats present.	No effect.
Comb polypody (*Pecluma ptilota var. bourgeauana*)	Not Listed	SE	No roadside ditches or badly eroded pastures present.	No effect.
Giant orchid (*Pteroglossaspis ecristata*)	Not Listed	ST	No scrub oak habitat, pine rocklands, pine-palmetto flatwoods, fields, dry grassy clearings, or dry-mesic pine savannah present.	No effect.

TABLE 3.4-1 Federally and State-listed Species with Potential to Occur in the Project Area [a]				
Common Name *Scientific Name*	Federal [b] Status	State [c] Status	Habitat Assessment	Determination of Effect
Large-plumed beaksedge (*Rhynchospora megaplumosa*)	Not Listed	SE	No scrubby flatwood habitat present.	No effect.
Scrub bluestem (*Schizachyrium niveum*)	Not Listed	SE	No sandhill scrub communities, rosemary scrub, sand pine scrub, or oak scrub habitat present.	No effect.
Chaffseed (*Schwalbea americana*)	Not Listed	SE	No open pine flatwoods, seepage bogs, palustrine pine savannahs, or peaty wetlands present.	No effect.
Rockland hoary-pea (*Tephrosia angustissima var. corallicola*)	Not Listed	SE	No open pine rocklands present.	No effect.
Coastal hoary-pea (*Tephrosia angustissima var. curtissii*)	Not Listed	SE	No coastal scrub present.	No effect.
Toothed maiden fern (*Thelypteris serrata*)	Not Listed	SE	No freshwater swamps, cypress sloughs, and boggy ponds present.	No effect.
Broad-leaved nodding-caps (*Triphora amazonica*)	Not Listed	SE	No well-drained, moist humus of upland hardwood hammocks present.	No effect.
Poponax (*Vachellia tortuosa*)	Not Listed	SE	No pine rocklands or buttonwood hammocks present.	No effect.
Redmargin zephyrlily (*Zephyranthes ssimpsonii*)	Not Listed	ST	No wet flatwoods or meadows present.	No effect.
[a] Source - FNAI, 2020-2022; FWS, 2022 [b] E – Endangered; T – Threatened; C – Candidate species for listing [c] FE – Florida listed Federally Endangered; FT – Florida listed Federally Threatened; ST – Florida State Threatened; E – Endangered; T – Threatened; PT – Proposed Threatened				
[d] Source - FNAI, 2020-2021; FWS, 2022 [e] E – Endangered; T – Threatened; C – Candidate species for listing [f] FE – Florida listed Federally Endangered; FT – Florida listed Federally Threatened; ST – Florida State Threatened; E – Endangered; T – Threatened; PT – Proposed Threatened				

3.4.2 Construction and Operation Impacts

Biologists conducted field surveys in September 2022. No listed species were observed within the Project work areas. Two listed shorebird species, American oystercatchers and black skimmers, were observed utilizing the beach south of the proposed work areas between vehicles and beachgoers and in proximity to FDOT construction activities. No other federally or state-listed species were observed. FGT determined that the Project will have no effect on listed reptiles, amphibians, mammals, or plant species and is not likely to adversely affect listed bird species that may utilize beach areas near the Project. Gandy Beach is publicly accessible from US92/SR600 and is regularly subject to pedestrian traffic, vehicular traffic, and parking on the beach. Birds utilizing the area are habituated to vehicular traffic, noise, and human activity.

FGT's proposed construction is scheduled to take place between February and April 2023; outside of the nesting season for the species likely to be present during construction activities. Some bird species may be using the beach for wintering and foraging grounds however, construction would not disrupt any nesting activities. While construction activities may result in short-term disturbance of birds, causing birds in the Project area to relocate during periods of active construction, impacts would likely be minimal due the temporary and short-term nature of disturbance. Any temporarily displaced individuals could readily utilize abundant similar habitats available throughout the area.

All disturbed areas will be restored to pre-construction conditions immediately following construction. All areas to be disturbed during construction of the proposed pipeline facilities within FDOT ROW are currently subject to routine maintenance by FDOT and public use including vehicular and pedestrian traffic and parking. Construction of the proposed facilities at Vault 3 will occur entirely within existing FGT ROW and adjacent parking areas for the American Legion. No aboveground facilities are proposed. Based on the current daily uses of proposed Project workspace and the temporary and short-term nature of potential impacts, no substantial changes in habitat availability or suitability are anticipated as a result of the proposed Project. Construction will not result in long-term or cumulative impacts to shorebird populations.

FGT maintains statewide blanket clearances with FWS and the FWC for minor construction projects conducted under FERC Blanket Certificate Program. The proposed Project is consistent with the conditions of these clearances. As such, FGT's Project is not likely to adversely affect listed species. Copies of the FWS and FWC authorizations are included in **Appendix E**. FGT will conduct all construction activities in accordance with the conditions in these authorizations including: temporarily ceasing construction activities if listed species are encountered in the workspace until the individual(s) leave the area and consulting with FWS and/or FWC as required if listed species are encountered during construction.

4.0 Cultural Resources

Work was conducted to obtain information to support compliance with Public Law 113-287 (Title 54 U.S.C.) which incorporates the provisions of Section 106 of the National Historic Preservation Act (NHPA) of 1979, as amended, and its implementing regulations at 36 Code of Federal Regulations Part 800, Protection of Historic Properties, as well as the National Environmental Policy Act (NEPA) of 1969. Section 106 requires federal agencies, including the FERC, to take into account the effect of that undertaking on cultural resources listed or eligible for listing in the NRHP and afford the Advisory Council on Historic Preservation (ACHP) an opportunity to comment on the undertaking. The Section 106 compliance process is coordinated at the state level by the State Historic Preservation Office (SHPO), represented in Florida by the Florida Department of State, Division of Historical Resources (DHR).

In addition to complying with Section 106, this Phase I Cultural Resource Survey Report (CRAS) was conducted in accordance with FERC's Regulations Implementing NEPA (including Sections 380.3-Environmental Information to be Supplied by an Applicant and 380.14-Compliance with the NHPA); the FERC Guidelines for Reporting on Cultural Resources Investigations for Pipeline Projects and regulations at 18 CFR Part 380.12, 380.14, Appendix A to Part 380, and 385.2201 (2002); the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation (48 Federal Register 44716-42, Sept. 29, 1983); Chapter 267, Florida Statutes (Florida Historic Resources Act); Florida Administrative Code (FAC) Rule 1A-46, Archaeological and Historical Report Standards and Guidelines; and the DHR's Cultural Resource Management Standards and Operations Manual, Module Three: Guidelines for Use by Historic Preservation Professionals (2003). All work was overseen by archaeologists meeting the Secretary of Interior's professional qualifications standards.

Archaeologists conducted field surveys over 100% the proposed Project areas in Pinellas and Hillsborough Counties, Florida on September 22 and September 23, 2022 The cultural resource review and fieldwork were conducted in consideration of the 2020 Blanket Clearance between FGT and the Florida Division of Historical Resources (FDHR) that stipulates conditions for consultation between FGT and FDHR for routine activities including minor construction projects. The assessment included background research and a field survey with pedestrian inspection and judgmental shovel tests. An architectural historian also reviewed the Project.

FGT's CRAS is provided in **Appendix G**. Aerial maps depicting the cultural resources survey areas, shovel test locations, and identified cultural resources are also provided in **Appendix G**.

4.1 General Methodology

4.1.1 Area of Potential Effects (APE)

The APE is the geographic area within which the Project may cause direct or indirect effects (including physical, visual, vibratory, or audible effects) to the character or use of historic properties. This includes all areas of construction, such as rights-of-way, staging areas, storage yards, communication sites, access roads, and other ancillary facilities.

The survey was conducted to identify cultural resources (e.g., archaeological sites, cemeteries, or historic structures, bridges, districts, landscapes, or linear resources) potentially affected by the Project that may be listed or eligible for listing in the NRHP. The direct APE for this Project consists of the workspaces where Project activities will occur plus a nominal buffer. FGT's archaeologists used a 30.5-meter (m) (100.0 ft) buffer around each APE to assess indirect effects (indirect APE).

4.1.1.1 Pipeline Facilities – Pinellas County, Florida

The direct pipeline APE for archaeology is generally a 40-m (130-ft) wide survey area, between the south edge of US92/SR600 and the MHW to the south. The indirect APE for architectural resources is the direct APE plus a 30-m (100- ft) buffer on adjacent parcels in all directions.

4.1.1.2 Contractor Yard – Pinellas County, Florida

The direct APE included approximately 8.6 acres of existing parking lot associated with an existing commercial business between US92/SR600 and San Martin Boulevard NE. The indirect APE for architectural resources is the direct APE plus a 30-m (100- ft) buffer on adjacent parcels in all directions.

4.1.1.3 Pipeline Facilities – Hillsborough County, Florida

The direct APE included approximately 1.5 acres of existing FGT ROW and parking area associated with the American Legion at the western terminus of West Prescott Street. The indirect APE for architectural resources is the direct APE plus a 30-m (100- ft) buffer on adjacent parcels in all directions.

4.1.2 Previous Surveys

Before conducting the fieldwork, a literature and document search was performed to gather background information about the Project area and its surroundings. The literature and document search included examination of historic maps and aerial photographs to identify past land uses and potential historic properties within the APE as well as a review of the Florida Master Site Files (FMSF) to identify previous cultural resource surveys within one mile of the Project area.

A review of the Florida Master Site File (FMSF) database, undated July 2022, identified 43 previous surveys with one mile of the Project survey areas. These previous surveys include eight that overlap portions of the FGT Project survey area. Overlapping surveys were conducted from 1987 through 2020 and are discussed in the CRAS report in **Appendix G**. Collectively, previous surveys recorded 151 historic structures, 28 archaeological sites, two bridges, four resource groups, and two resources listed in the National Register of Historic Places (NHRP) within one mile of the survey area. These findings are discussed in the attached CRAS report in **Appendix G**.

4.1.3 Archaeological and Architectural History Surveys

Archaeological fieldwork consisted of pedestrian inspection and three negative shovel tests placed judgmentally where conditions indicated the greatest potential for intact deposits. Shovel tests 50 centimeters (cm; 19.7 in) in diameter were excavated by natural strata in 10 cm (3.9 in) levels.

The architectural survey for the Project used standard procedures for the location, investigation, and recording of historic properties. In addition to a search of the FMSF database for previously recorded historic resources in the survey areas, USGS quadrangle maps were reviewed for structures constructed prior to 1972. The field survey inventoried existing buildings, structures, and other aspects of the built environment within and adjacent to the survey areas. Each historic resource was plotted on USGS quadrangle maps and on Project aerials. All identified historic resources were photographed with a digital camera, and pertinent information regarding the architectural style, distinguishing characteristics, and condition was recorded on FMSF structure forms. Upon completion of fieldwork, forms and photographs were returned to the SEARCH offices for analysis. Date of construction, design, architectural features, condition, and integrity of the structure, as well as how the resources relate to the surrounding landscape, were carefully considered. The resources were evaluated regarding their eligibility for listing in the NRHP and then recommended eligible, potentially eligible, or not eligible. Surveys are summarized in Table 4.1-1 below.

TABLE 4.1-1 Cultural Resource Survey Status		
Facility / County	Survey Completed (Date)	Filed with DHR for Consultation (Date)
8-inch Tampa West Lateral Loop, Vault 1, Vault 2 / Pinellas, Florida		
MP 0.0 – MP 1.26	Sept 22-23, 2022	Oct 19, 2022 Concurrence Received Oct 24, 2022
Vault 3 / Hillsborough, Florida		
MP 4.58	Sept 22-23, 2022	Oct 19, 2022 Concurrence Received Oct 24, 2022
Contractor Yard / Pinellas, Florida		
Offline	Sept 22-23, 2022	Oct 19, 2022 Concurrence Received Oct 24, 2022

4.2 Survey Results

4.2.1 Archaeological Surveys

4.2.1.1 Pipeline Facilities – Pinellas County, Florida

The Gandy Bridge Causeway is a four-lane divided highway with existing buried fiber optic cables, gas pipelines, and water lines running east to west throughout the survey area. This section of the Project area has been built-up in support of US92/SR600, and a berm is present throughout most of this section of the Project that continues along the southern edge of Old Tampa Bay. Shovel testing was not possible due to the presence of buried utilities. One negative shovel test was excavated on the eastern portion of the area. This shovel test contained disturbed soils throughout. ST003 contained three strata: Stratum I, a very dark gray (10YR 3/1) sandy loam 0–20 cm (0–7.9 in) bs; Stratum II, a light brownish gray (10YR 6/2) mottled with light yellowish brown (10YR 6/4) sandy loam 20–55 cm (7.9–21.6 in) bs; and Stratum III, a grayish brown (10YR 5/2) sandy loam 55–70 cm (21.6–27.5 in) bs. The shovel test terminated at 70 cm (27.5 in) bs due to gravel and fill compaction impasse. Survey mapping, photographs, and additional descriptions are included in the CRAS in **Appendix G**. No artifacts were recovered from the shovel test or observed during a pedestrian survey of this area.

4.2.1.2 Contractor Yard – Pinellas County, Florida

Archaeologists conducted a pedestrian survey at the proposed location of the yard. No shovel testing was required at this location due to it being an existing paved parking lot that will not be impacted by the Project. No archaeological sites, artifacts, or features were documented during the survey. No further archaeological work was recommended.

4.2.1.3 Pipeline Facilities – Hillsborough County, Florida

The survey area is an open maintained parking area and associated landscaped areas including existing buried utilities, overhead electric lines, and paved surfaces. Two shovel tests were placed at judgmental intervals to avoid buried utilities, both of which were negative for cultural material. A typical shovel test at this location contained three strata: Stratum I, a very dark gray (10YR 3/1) sandy loam 0–10 cm (0–3.9 in) bs; Stratum II, alight brownish gray (10YR 6/2) mottled with a light yellowish brown (10YR 6/4) sandy loam 10–20 cm (3.9–7.9 in) bs; Stratum III, a grayish brown (10YR 5/2) sandy loam 20–40 cm (7.9–15.7 in) bs. The soil was very compacted due to gravel and shell fill found throughout the shovel test. ST001 was terminated at 40 cm (15.7 in) bs due to gravel impasse. No artifacts were recovered from the shovel tests or observed during a pedestrian survey of this area.

4.2.2 Architectural Surveys

The architectural survey resulted in the identification of six historic resources within the direct and indirect APE, three of which were previously recorded and three of which are newly recorded. The three previously

recorded resources consist of one historic district, one resource group, and one structure. The three newly recorded resources consist of one linear resource, one resource group, and one building.

Detailed survey results, including maps, imagery, and data forms are included in the attached CRAS in **Appendix G**.

4.3 Consultations

4.3.1 Florida Division of Historical Resources, State Historic Preservation Office

The FDHR fulfills the duties of the State Historical Preservation Office (SHPO) in Florida. FGT provided the FDHR with a copy of the Survey Report and requested concurrence with the findings in the report on October 19, 2022. On October 24, 2022, FGT received FDHR concurrence that "the proposed project will have no effect on historic properties listed, or eligible for listing, in the NRHP, or otherwise of historical, archaeological, or architectural value within the surveyed APE". A copy of FDHR's concurrence is included in **Appendix E**.

4.3.2 Stakeholder Comments

As of the filing date of this application, FGT has not receive any other comments from stakeholders regarding cultural resources. FGT will file any Project related cultural resource correspondence with the FERC, as it is received.

4.4 Unanticipated Discovery Plan

There are no known cultural sites or historic properties eligible for registry within the Project area and it is unlikely that construction activities will disturb any previously unrecorded cultural resources. Therefore, no impacts to cultural resources are anticipated. However, should such a discovery occur, FGT would utilize and operate in accordance with its *Unanticipated Discovery Plan* (**Appendix C**) and all state and federal regulations which define the procedures to be followed if unanticipated cultural resources are encountered during construction.

5.0 Socioeconomics

This section is required if the applicant proposes significant aboveground facilities, such as conditioning or LNG facilities or large new compressor stations. This resource report is not required under section 380.12(g) for projects that only involve pipeline(s), expansion or modifications to existing compressor stations, or other associated facilities.

6.0 Geological Resources

This section identifies potential impacts of the Project on geologic resources, geologic hazards that may potentially affect construction and operation of the facilities, and geologic hazards that may place the facilities and/or public at risk. Where appropriate, mitigation measures are included that are intended to reduce the impact of the Project on geological resources and/or reduce the impact of geological hazards on the facilities. Information contained in this section was obtained from desktop analysis and review of available literature.

6.1 Geologic Setting

FGT's Project overlies the Shelly Sediments of Plio-Pleistocene Age in Pinellas County and the Hawthorn Group, Arcadia Formation, Tampa Member in Hillsborough County.

6.1.1 Shelly Sediments of Plio-Pleistocene Age

Mollusk bearing sediments of southern Florida contain some of the most abundant diverse fossil faunas in the world. The origin of these accumulations of fossil mollusks is imprecisely known (Allmon, 1992). The shell beds have attracted much attention due to the abundance and preservation of the fossils but the biostratigraphy and lithostratigraphy of the units has not been well defined (Scott, 1992). Lithologically, these sediments are complex and vary from unconsolidated, variably calcareous and fossiliferous quartz sands to well indurated, sandy fossiliferous limestones (both marine and freshwater). Clayey sands and sandy clays are present. These sediments form part of the surficial aquifer system.

6.1.2 Hawthorn Group, Arcadia Formation, Tampa Member

The Tampa Member consists predominately of limestone with subordinate dolostone, sand, and clay (Scott 1988). The lithology of the Tampa Member is very similar to that of the subsurface limestone part of the Arcadia Formation except that the Tampa Member contains noticeably less phosphate (Scott, 1988). The limestone is white to yellowish gray, fossiliferous and very sandy and clayey mudstone, wackestone, and packstone with minor to no phosphate grains. Sand and clay beds are like those in the undifferentiated Arcadia Formation. Mollusks and corals are common in the Tampa Member as molds and casts, silicified pseudomorphs and original shell material. The Tampa Member and the lower part of the Arcadia Formation form the upper part of the Floridan aquifer system in parts of southern Florida (Miller, 1986; Scott 1991).

6.2 Blasting

FGT does not propose any blasting as part of this Project.

6.3 Mineral Resources

According to FDEP's Map Direct, no mineral resource mines are located within 0.25 mile of the Project. The nearest mineral resource mining facility (Parkway Center Mine) is approximately 10.5 miles east of the workspace located in Hillsborough County and approximately 14.7 miles east, across Tampa Bay, of the workspace located in Pinellas County (MapDirect, 2022).

6.4 Geologic and Other Natural Hazards

Geologic hazards are conditions or phenomena, either naturally occurring or human-made, that present a risk to life and/or property. Geologic hazards are discussed below and include earthquakes, soil liquefaction, landslide susceptibility, karst topography, and land subsidence.

The Project is not located in proximity to any seismic hazards including fault areas and fault lines. According to the USGS and Colorado Geological Survey, quaternary fault and fold database for the United States, the nearest fault/seismic area is approximately 373 miles to the northwest (Gulf Marginal Faults – Alabama and Florida).

Due to the lack of seismic activity within the vicinity of the Project, there is low risk of soil liquefaction occurring in the Project area. Vibrations from heavy machinery or explosions are examples of non-seismic events that may cause soil liquefaction, but the likelihood of this occurring in the Project area is extremely small. Soil liquefaction is considered to be of low risk for the Project.

6.4.1 Landslides

In Florida, a state generally characterized by low topographic relief, landslides are very rare. Based on USGS mapping of landslide incidences in the United States, the Project is located in an area of low incidence (less than 1.5 percent of the area involved) (USGS, 1978). Due to the low incidence of landslides, flat topography, and minimal threat of seismic activity, the likelihood of a landslide to occur in the proposed Project area is low.

6.4.2 Karst

The Project is located in regions classified as "Area I" and "Area III" for sinkholes (FDEP Map Direct, accessed August 2022).

6.4.2.1 Pinellas County

The Project area in Pinellas County is in a region classified as "Area I". It is described as a region where sinkholes are few, generally shallow and broad and develop gradually. Dissolution sinkholes, in which rainfall and surface water percolate through joints in limestone and dissolve the underlying rock, dominate. In dissolution sinkholes, dissolved carbonate rock is carried away from the surface and a small depression gradually forms. On exposed carbonate surfaces, a depression may focus surface drainage, accelerating the dissolution process. Debris carried into the developing sinkhole may plug the outflow, ponding water and creating wetlands. Gently rolling hills and shallow depressions caused by solution sinkholes are common topographic features throughout much of Florida. The nearest sinkhole location is approximately 2.10 miles to the northwest of the Pinellas County portion of the Project area and was verified in 2021 (FDEP Map Direct, accessed August 2022).

6.4.2.2 Hillsborough County

The Project area in Hillsborough County is in a region classified as "Area III". It is described as a region consisting mainly of cohesive sediments of low permeability. Sinkholes are not uncommon in the Project area, are of varying size and can develop abruptly. Cover-collapse sinkholes are the dominant form. Collapse sinkholes form quickly and tend to develop in areas with clayey sediments overlying the bedrock. They typically are the result of an underground cavity enlarging to the point where it's ceiling no longer supports the weight of the overlying sediments (FGS, 2004). The nearest sinkhole location is approximately 2.91 miles to the north of the Hillsborough County Project area and was verified in 2005 (FDEP Map Direct, accessed August 2022).

6.5 Flooding and Scour

According to the most recent published Federal Emergency Management Agency (FEMA) floodplain maps, FGT's proposed Project is entirely located in the 100-YR Floodplain, 1% Annual Flood Hazard (Zone A) as shown in **Table 2.2-2**. FEMA flood zone maps are included in **Appendix A**.

6.6 Paleontology

The Project is not in an area known to contain sensitive paleontological resources and does not cross any federal or state lands. The Florida Museum identifies one scientifically-significant vertebrate fossil sites nearby in Pinellas County. The closest recorded site (Seminole Field) is approximately 7.4 miles southwest of the Project.

Although the Project is not located within an area of known significance for paleontological resources, there is potential for encountering fossils. As part of FGT's *Unanticipated Discoveries Plan* (**Appendix C**), the

Florida Museum of Natural History will be contacted for guidance should a vertebrate fossil, or suspected vertebrate fossil, be uncovered during Project activities.

6.7 Geotechnical Investigations

FGT does not propose horizontal directional drills, storage facilities, or compressor stations with significant geologic hazards. As such, geotechnical investigations were not required or conducted.

7.0 Soils

Soil characterization information is based on the United States Department of Agriculture (USDA), Natural Resource Conservation Service (NRCS), USDA Soil Survey Geographic Database (SSURGO), which was obtained from the NRCS Soil Data Mart and the National Cooperative Soil Survey (NCSS) Web Soil Survey.

7.1 Pipeline

Project facilities are located in the Southern Coastal Plain (75) ecoregion (USEPA, 2021). The most extensive soils are Aquults. Paleaquults and Umbraquults are on lower, wetter areas. Hapludults and Paleudults are on higher areas with better drainage. Soils in this region have a thermic temperature regime and an aquic moisture regime. Soils are deep, medium textured, and have adequate to excessive water supplies for use by vegetation. Generally, soils are poorly drained, deep, and moderately textured (USDA, 1996).

Soils were mapped and described based on the Pinellas County, Florida (FL103) and Hillsborough County, Florida (FL057) Soil Survey Areas (USDA NRCS, 2021). The soil associations crossed by the Project are described below and summarized in **Table 7.1-1**. Soil maps are included in **Appendix A**.

7.1.1 Pinellas County Soils (FL103)

16 – Matlacha, St. Augustine soils, and Urban Land - The major components of this soil type are Matlacha and similar soils (33%), St. Augustine and similar soils (32%), and Urban land (31%), and minor components (4%); slopes are 0 to 2 percent. It is found on ridges on marine terraces. The parent material consists of sandy mine spoil or earthy fill. Depth to a root restrictive layer is greater than 80 inches. The natural drainage class is somewhat poorly drained. Water movement in the most restrictive layer is high. This soil does not frequently flood or pond and does not meet hydric criteria.

FGT's proposed pipeline facilities in Pinellas County will be installed entirely withing FDOT's existing ROW for US92/SR600 along the Gandy Causeway. The Gandy Bridge was originally constructed in the early 1920's, and has been modified in subsequent years. Soils along the causeway portion of the bridge are comprised mostly of fill material imported for construction of US92/SR600. Many areas include rock and concrete riprap.

7.1.2 Hillsborough County Soils (FL057)

30 – Myakka fine sand, frequently flooded – The major components of this soil type are Myakka, frequently flooded, and similar soils (90%), and minor components (10%); slopes are 0 to 1 percent. It is found in tidal marshes on marine terraces. The parent material consists of sandy marine deposits. Depth to a root restrictive layer is greater than 80 inches. The natural drainage class is very poorly drained. Water movement in the most restrictive layer is moderately high to high. This soil frequently floods, but does not frequently pond and does meet hydric criteria.

While the soils at this location are described as Myakka fine sands, the entire area within FGT's proposed workspace currently consists of upland fill material overlain with maintained grass and existing paved parking for the American Legion Post which was built in the 1930's. Access and parking areas have been added and improved in subsequent years.

7.1.3 Contractor Yard

Soils at this location are mapped and described based on the Pinellas County, Florida (FL103) Soil Survey Area (USDA NRCS, 2021). While the description below is for underlying soils, the entire proposed contractor yard is currently a paved parking lot constructed in the mid-1990's.

17 – Myakka soils and Urban land - The major components of this soil type are Myakka and similar soils (50%), Urban land (45%), and the minor components are Adamsville (3%) and Pomello (2%); slopes are 0 to 2 percent. It is found in flatwoods on marine terraces. The parent material consists of sandy marine deposits. Depth to a root restrictive layer is greater than 80 inches. The natural drainage class is poorly drained. Water movement in the moderately high to high. This soil does not frequently flood or pond and does not meet hydric criteria.

30 – Urban land, 0 to 2 percent slopes - The major components of this soil type are Urban land (85%) and the minor components are Matlacha (3%), St. Augustine (3%), Cypress lake (1%), Eaugallie (1%), Brynwood (1%), Myakka (1%), Immokalee (1%), Pomello (1%), Paola (1%), Adamsville (1%) and Apopka (1%); slopes are 0 to 2 percent. It is found on hills on marine terraces, ridges on marine terraces, knolls on marine terraces, rises on marine terraces, and flatwoods on marine terraces. It does not have a parent material.

7.2 Aboveground Facilities

FGT does not propose any aboveground facilities as part of this Project.

TABLE 7.1-1 Selected Physical and Interpretive Characteristics of the Soil Map Units Within the Project Area

County / Map Unit Symbol	Map Unit Name	Component Name	Component Percent	Percent Slope		Surface Texture [a]	Drainage Class [b]	Permeability	Taxonomic Classification	Parent Material	Landforms
				Low	High						
Tampa West Lateral Loop, Vault 1, Vault 2 – Pinellas County, Florida											
16	Matlacha St. Augustine soils, and Urban Land	Matlacha St. Augustine Urban Land	33% 32% 31%	0	2	Sand	SP	High	Sandy, siliceous, hyperthermic Anthroportic Udorthents	Sandy mine spoil or earthy fill	Ridges on marine terraces
Vault 3 [b] – Hillsborough County, Florida											
30	Myakka fine sand, frequently flooded	Myakka, frequently flooded	90%	0	1	Fine sand	VP	Moderately high to high	Sandy, siliceous, hyperthermic Aeric Alaquods	Sandy marine deposits	Tidal marshes on marine terraces
Contractor Yard [c] – Pinellas County, Florida											
17	Myakka soils and Urban land	Myakka Urban land	50% 45%	0	2	Fine sand	P	Moderately high to high	Sandy, siliceous, hyperthermic Aeric Alaquods	Sandy marine deposits	Flatwoods on marine terraces
30	Urban land	Urban land	85%	0	2	N/A	N/A	N/A	N/A	N/A	Hills, ridges, knolls, rises, and flatwoods on marine terraces

[a] Drainage classes include: very poorly (VP), poorly (P), somewhat poorly (SP), moderately well (MW), well (W), somewhat excessively (SE), and excessively (E) drained.

[b] While the soils at Vault 3 are described as Myakka fine sands, the entire area within FGT's proposed workspace currently consists of upland fill material overlain with maintained grass and existing paved parking for the American Legion Post which was built in the 1930's. Access and parking areas have been added and improved in subsequent years.

[c] Soil descriptions at the proposed contractor yard are for underlying soils. The entire proposed contractor yard is currently a paved parking lot constructed in the mid-1990's. FGT does not propose or anticipate any impacts to soils at this location.

7.3 Impacts of Project Construction and Operation

Construction activities that have the potential to adversely affect soils and revegetation potential include clearing and grading of the ROW and other workspaces, trenching, backfilling, and restoration. Potential soil impacts include loss of topsoil due to water or wind erosion, and soil compaction due to construction traffic which can hamper root development.

The location and acreage of each soil type that the Project will impact and the identification of soils presenting characteristics of potential concern were based on data contained in local county soil surveys and the SSURGO database. **Table 7.3-1** provides soil limitations of the mapping units crossed by the Project. No significant impacts on soils are anticipated as a result of construction and operation of the Project. **Table 7.3-2** summarizes acres of soil impact types by facility and county.

7.3.1 Soil Erosion Potential

Construction of the Project will require temporary removal of existing ground cover and temporary soil disturbance. This increases the potential for soil erosion. Water erosion is related to the permeability of a soil and to the cohesion of the soil particles that comprise it. Water erosion also is associated with other soil properties, such as texture, percent organic matter, structure, and infiltration capacity. Soils containing high portions of silt and very fine sand are the most susceptible to erosion. Well-drained and well-graded gravels and gravel-sand mixtures with little or no silt are the least erodible soils. Other soil properties that influence erosion include slope length and gradient; the frequency, intensity, and duration of rainfall; and the amount of time bare soils are exposed. Erosion factor (K Factor) indicates the susceptibility of a soil to sheet and rill erosion by water. K Factor is based primarily on percentage of silt, sand, and organic matter and on soil structure and saturated hydraulic conductivity.

Wind Erodibility Groups (WEGs) are a set of classes given to soils based on compositional properties of the surface horizon such as texture, organic matter, content, and aggregate stability that are considered particularly susceptible to wind erosion. WEGs group 1 or 2, out of 8 total groups denote the most severe erosion potential from wind. The values for the Project area were obtained from the NRCS Web Soil Survey.

The K Factor and WEGs are provided in **Table 7.3-1**. None of the soils affected by the Project have a high erosion potential from water. Lack of erosion potential from water can largely be attributed to the very gently sloping terrain encountered within the Project area.

The potential for severe wind erosion is higher than that for water erosion. The Project area has soils with a WEG of 2 as described in **Table 7.3-1.** FGT will utilize dust-control measures, including routine wetting of the construction workspace as necessary where soils are exposed.

FGT will minimize construction impacts by adhering to the protective measures in the FERC Plan, which specifies the use of terraces, mulch (e.g., hay and straw), or mats in areas where a high erosion potential exists.

TABLE 7.3-1 Soil Characteristics by Milepost Segment for Each Soil Map Unit Along the Proposed Pipeline Route

Milepost(s)		Map Unit Symbol	Component Name	Component Percent	Crossing Length (miles)	Prime Farmland (Y/N) [a]	Hydric Soils (Y/N) [a]	Compaction Prone (Y/N) [b]	Highly Erodible		Revegetation Concerns (Y/N) [e]	Stony Rocky (Y/N) [f]	Shallow to Bedrock (Y/N) [g]
Begin	End								Water (Y/N) [c]	Wind (Y/N) [d]			
Pipeline, Vault 1, Vault 2 / Pinellas County, Florida													
0.0	1.26	16	Matlacha St. Augustine Urban land	33% 32% 31%	1.26	N	N	N	N (0.10)	Y (2)	N	N	N
Vault 3 [h] / Hillsborough County, Florida													
4.58		30	Myakka fine sand	90%	0	N	Y	N	N (0.10-0.15)	Y (2)	N	N	N
Contractor Yard [i] / Pinellas County, Florida													
Offline		17	Myakka soils and Urban land	50% 45%	0	N	N	N	N (0.10-0.15)	Y (1)	N	N	N
Offline		30	Urban land	85%	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

[a] As designated by the Natural Resource Conservation Service
[b] Includes soils that have clay loam or finer textures in somewhat poor, poor, and very poor drainage classes.
[c] Includes land in capability subclasses 4E through 8E and soils with an average slope greater than or equal to 9 percent.
[d] Includes soils with Wind Erodibility Group (WEG) classification
[e] Includes coarse-textured soils (sandy loams and coarser) that are moderately well to excessively drained and soils with an average slope greater than or equal to 9 percent
[f] Includes soils that have either: 1) a very gravelly, extremely gravelly, cobbley, stony, boulder, flaggy, or channery modifier to the textural class, or 2) have >5 percent (weight basis) of rock fragments larger than 3 inches in any layer within the profile.
[g] Includes soils that have bedrock within 60 inches of the soil surface. Paralithic refers to "soft" bedrock that will not likely require blasting during construction. Lithic refers to "hard" bedrock that may require blasting or other special construction techniques during installation of the proposed pipeline segments.
[h] While the soils at Vault 3 are described as Myakka fine sands, the entire area within FGT's proposed workspace currently consists of upland fill material overlain with maintained grass and existing paved parking for the American Legion Post which was built in the 1930's. Access and parking areas have been added and improved in subsequent years.
[i] Soil descriptions at the proposed contractor yard are for underlying soils. The entire proposed contractor yard is currently a paved parking lot constructed in the mid-1990's. FGT does not propose or anticipate any impacts to soils at this location.

Note: Y = Yes; N = No

TABLE 7.3-2 Acres of Soil Characteristics Affected by the Project [a, b, c]

Facility/County	Total Acres in County	Prime Farmland [d] (acres)	Hydric Soils [d] (acres)	Compaction Prone [e] (acres)	Highly Erodible		Revegetation Concerns [h] (acres)	Stony / Rocky [i] (acres)	Shallow to Bedrock [j] (acres)
					Water [f] (acres)	Wind [g] (acres)			
Tampa West Lateral Loop, Vault 1, Vault 2/ Pinellas	10.43	0	0	10.43	0	10.43	0	0	0
Vault 3 [k] / Hillsborough	0.38	0	0.38	0.38	0	0.38	0	0	0
Contractor Yard [l] / Pinellas	8.60	0	0	5.51	0	5.51	0	0	0

[a] The area affected includes the permanent pipeline right-of-way, temporary pipeline ROW, temporary pipeline ROW, and additional temporary workspace. The soils data in the table does not include areas of open water.
[b] The numbers in this table have been rounded for presentation purposes.
[c] The values in each row do not add up to the total acreage for each county because soils may occur in more than one characteristic class or may not occur in any class listed in the table.
[d] As designated by the NRCS.
[e] Includes soils in somewhat poor to very poor drainage classes with surface textures of sandy clay loam and finer.
[f] Land in capability subclasses 4E through 8E and soils with an average slope greater than or equal to 9 percent.
[g] Soils with a WEG classification of 1 or 2.
[h] Soils with a surface texture of sandy loam or coarser that are moderately well to excessively drained, and soils with an average slope greater than or equal to 9 percent.
[i] This group includes soils with a cobbley, stony, bouldery, shaly, very gravelly, or extremely gravelly modifier to the textural class of the surface layer, with a surface layer that contains greater than 5 percent by weight stones larger than 3 inches, and/or with a layer in the subsoil that meets one of the preceding criteria.
[j] Soils identified as containing bedrock at a depth of 5 feet or less from the surface, all of which is paralithic and rippable with standard construction equipment.
[k] While the soils at Vault 3 are described as Myakka fine sands, the entire area within FGT's proposed workspace currently consists of upland fill material overlain with maintained grass and existing paved parking for the American Legion Post which was built in the 1930's. Access and parking areas have been added and improved in subsequent years.
[l] Soil descriptions at the proposed contractor yard are for underlying soils. The entire proposed contractor yard is currently a paved parking lot constructed in the mid-1990's. FGT does not propose or anticipate any impacts to soils at this location

7.3.2 Rutting Potential and Compaction

All of the soils crossed by the proposed Project have a low rutting and compaction potential. Measures to mitigate for rutting and compaction include the use of mats during construction and/or decompaction ripping of soil during restoration. FGT will implement mitigation measures for rutting and compaction if required.

7.3.3 Hydric Soils

"Hydric soils" are defined by the USDA NRCS as soils that are sufficiently wet in the upper part to develop anaerobic conditions during the growing season (USDA NRCS, 2017). **Table 7.3-1** lists the soils that have been identified as hydric, or partially hydric, and are located within the proposed Project construction area. Hydric soils can be more susceptible to compaction and rutting than non-hydric soils. As discussed above, the hydric soils indicated at Vault 3 have been filled as part of the American Legion Post which was originally constructed in the 1930's. All areas within FGT's proposed workspace currently consist of fill material overlain with maintained grass and paved parking areas. No impacts to hydric soils are proposed.

7.3.4 Introduction of Rock into Topsoil

All soils affected by the Project have a low probability of introducing rock or coarse fragments into the topsoil. The FERC's Plan will be followed such that the size and density of rocks post construction will be similar to adjacent undisturbed conditions.

7.3.5 Soil Contamination

FGT searched publicly available databases for registered contaminated sites. There are no known sites with contaminated soils within 500 feet of the Project area. Mapping of known contaminated sites is included in **Appendix A**. Implementing FGT's SPAR Plan (**Appendix C**) minimizes potential contamination of soil resources from spills of hazardous materials.

7.3.6 Revegetation Potential

Soil properties that affect the growth of grasses, sedges and other non-woody vegetation include the topsoil thickness for the root zone, texture of the surface layer, available water capacity, wetness, surface stoniness, flood hazard, soil temperature, and slope. As shown in **Table 7.3-1**, none of the soil types in the Project area indicate concerns where revegetation potential may be low in the Project area.

Upon completing construction, FGT will prepare the seedbed and utilize seed mix and fertilizer/lime application rates as specified by the FERC Plan, agency recommendations, FDOT permit conditions, or landowner request. Monitoring and necessary maintenance activities will be conducted in accordance with the FERC Plan and other agency requirements.

7.3.7 Prime Farmland

No soils are designated as Prime Farmland. No impacts to Prime Farmland are proposed.

7.3.8 Mitigation

FGT will adopt the measures contained in the FERC Plan and Procedures. No additional mitigation for soil impacts is proposed.

8.0 Land Use, Recreation and Aesthetics

Land use data was compiled from USGS 7.5-minute topographic quadrangle maps, aerial photographs, available GIS databases, and field reconnaissance surveys conducted in September 2022.

8.1 Land Use

FGT reviewed the Southwest Florida Water Management District's Land use codes to identify current land use categories and vegetation types in the project area. FLUCCS maps are included in **Appendix A**. FLUCCS codes were verified via field surveys in September,2022. Vegetative cover types, FLUCCS codes, and dominant vegetation are discussed in **Section 3** of this report. For Land Use analyses, FLUCCS land use designations include three land use types as shown in **Table 8.1-1**.

TABLE 8.1-1 Land Use Types

Land Use Type	FLUCCS Designation	FLUCCS Code
Commercial and Services	Commercial and Services	1400
Recreational	Recreational	1800
Transportation	Transportation	8100

8.1.1 Pipeline Facilities

Current land uses for areas crossed by the proposed 8-inch lateral loop are shown by mileage in **Table 8.1-2**. Land use acreages affected by the Project are shown in **Table 8.1-3**. Land use maps are included in **Appendix A**.

Land affected by construction and operation of the proposed pipeline facilities will be allowed to revert to pre-construction conditions and uses after construction is completed. The proposed lateral loop, along with Vaults 1 and 2, will be installed and operated entirely within FDOT ROW for US92/SR600 under permit from FDOT. Vault 3 will be installed and operated entirely within FGT's existing permanent ROW. FGT does not propose any new permanent ROW as part of this Project.

TABLE 8.1-2 Land Uses Crossed by the Pipeline

	Commercial and Services		Recreational		Transportation		Total	
Facility/County, State	(mi)	(%)	(mi)	(%)	(mi)	(%)	(mi)	(%)
8-inch Tampa West Lateral Loop / Pinellas, FL								
	0	0	0	0	1.26	100	1.26	100

TABLE 8.1-3 Land Uses Affected by Construction and Operation of Project (in acres)

	Commercial and Services		Recreational		Transportation		Total	
Facility/County, State	Con	Opr	Con	Opr	Con	Opr	Con	Opr
Tampa West Lateral Loop, Vault 1[b], Vault 2[b] / Pinellas, FL	0	0	0	0	10.43	0	10.43	0
Vault 3[c] / Hillsborough, FL	0.38	0	0	0	0	0	0.38	0
Contractor Yard / Pinellas, FL	0	0	8.60	0	0	0	8.60	0

TABLE 8.1-3 Land Uses Affected by Construction and Operation of Project (in acres)								
	Commercial and Services		Recreational		Transportation		Total	
Project Total	0.38	0	8.60	0	10.43	0	19.41	0

[a] Con – Construction; Opr – Operation
[b] Vault 1 and Vault 2 will be installed entirely within the TWS utilized to construct the proposed lateral loop. No additional workspace is required. These facilities will be installed and operated entirely within FDOT ROW for SR92/SR600 by permit. No permanent ROW will be acquired or maintained.
[c] FGT will install and operate Vault 3 entirely within its existing permanent ROW for the Tampa West Lateral. No new permanent ROW is proposed. The area of the new vault within the permanent ROW will be 0.003 ac.

8.1.1.1 Existing Rights-of-Way and New Permanent Easement

FGT will install the proposed 8-inch lateral loop entirely within FDOT's existing maintained ROW for US92/SR600 under permit from FDOT. Under the conditions of the FDOT permit, FGT will obtain TWS within FDOT ROW for construction of the lateral loop and appurtenant vaulted facilities. At the conclusion of construction and restoration, all TWS will revert to FDOT control and maintenance. While FGT will have limited rights to operate the pipeline facilities within FDOT ROW, FGT will not acquire or maintain any new permanent ROW for the proposed 8-inch Tampa West Lateral Loop.

FGT will install Vault 3 within its existing permanent ROW for the existing Tampa West Lateral. FGT will not acquire or maintain any new permanent ROW for these facilities. FGT's existing permanent ROW, along with its location, orientation, and dimensions, is specifically identified on the aerial alignment sheets provided in **Appendix A** and typical cross section drawings provided in **Appendix B**. Collocation and overlap of proposed ROW with existing ROW are summarized in **Table 8.1-4** and **Table 8.1-5**.

TABLE 8.1-4 Existing Rights-of-Way Adjacent to the Pipeline						
Begin MP	End MP	Type of ROW	Position Related to Proposed Pipeline	Width of Existing ROW (feet)	Width Used for Construction ROW (feet)	Width Used for Permanent ROW (feet)
Tampa West Lateral, Vault 1, Vault 2 / Pinellas County, Florida						
0.00	1.26	FDOT US92/SR600	Pipeline entirely within FDOT ROW	700	75	0 [a]
Vault 3 / Hillsborough County, Florida						
4.58		FGT 8-inch Tampa West Lateral	Vault entirely within FGT ROW	20	20	20 [b]

[a] Vault 1 and Vault 2 will be installed entirely within the TWS utilized to construct the proposed lateral loop. No additional workspace is required. These facilities will be installed and operated entirely within FDOT ROW for SR92/SR600 by permit. No permanent ROW will be acquired or maintained.
[b] FGT will install and operate Vault 3 entirely within its existing permanent ROW for the Tampa West Lateral. No new permanent ROW is proposed.

TABLE 8.1-5 Locations Where Loop Would Be More or Less than 25 Feet from the Existing Pipeline				
Begin MP	End MP	Total Length (feet)	Maximum Distance Between Existing Pipeline and Loop (feet)	Explanation
Tampa West Lateral Loop / Pinellas, Florida				
0.00	1.26	6,652	24	The proposed lateral loop will be installed entirely within FDOT ROW for US92/SR600. The distance between FGT's existing 4-inch Tampa West Lateral and the proposed 8-inch Tampa West Lateral Loop varies by location due to the presence of other utilities and other physical constraints.

8.1.1.2 ATWS and Staging Areas

Table 8.1-6 describes proposed ATWS, staging areas and land use by facility and MP location.

TABLE 8.1-6 Additional Temporary Workspace				
Facility / County, State	Reason Needed	Dimensions (feet)	Area (acres)	Existing Land Use
Tampa West Lateral Loop, Vault 1, Vault 2 – Pinellas County, Florida				
No ATWS proposed. All construction will take place in TWS within FDOT ROW for SR92/SR600 under permit by FDOT.				FDOT ROW
Vault 3 / Hillsborough County, Florida				
	Temporary staging of equipment and materials, and parking during vault installation	Approx. 130 X 190 (Irregular)	0.32	Parking area
Contractor Yard / Pinellas County, Florida				
	Temporary staging of equipment, materials, and temporary office facilities.	Approx. 600 X 760 (Irregular)	8.6	Paved Parking Lot
		Total	8.92	

8.1.1.3 Access Roads

FGT will utilize public roads for access to the construction ROW along US92/SR600. FGT will utilize one temporary access road for access to the Contractor Yard in Pinellas County and one temporary access road for access to Vault 3 in Hillsborough County. Land uses affected by proposed access roads are summarized in Table **8.1-7**.

TABLE 8.1-7 Access Roads							
MP or Facility	Access Road Number	County, State	Existing Land Use	Width X Length (feet)	Proposed Modification	Construction Requirements (acres)	Operation Requirements (acres)
Tampa West Lateral Loop, Vault 2, Vault 3 – Pinellas, Florida							
No access roads are proposed. FGT will utilize existing public access points within FDOT ROW from US92/SR600 to the construction ROW.							
Vault 3 – Hillsborough County, Florida							
4.58	TAR-002	Hillsborough, FL	Existing paved road	450 X 20	None	0.21	0
Contractor Yard – Pinellas County, Florida							
Offline	TAR-001	Pinellas, FL	Existing paved road	400 X 20	None	0.49	0

8.1.1.4 Pipe and Contractor Yard

FGT will utilize one contractor yard located in Pinellas County to facilitate construction of the proposed pipeline lateral and vault installations. The location, size, and existing land use of the proposed pipe and contractor yard is described in **Table 8.1-3**. The location of the proposed pipe storage and contractor yard is shown on Project mapping included in **Appendix A**. FLUCCS data classifies this property as "8100 Recreational", however, the parking lots on the property are currently being used for commercial/industrial purposes such as equipment, and material staging and storage. The proposed pipe and contractor yard will be restored and returned to pre-construction conditions, as needed, following construction in accordance with permit conditions and landowner agreements.

8.1.2 Aboveground Facilities

FGT does not propose any aboveground facilities as part of the Project.

8.1.3 Facility Abandonment/Replacement

FGT does not propose to abandon any Tampa West Lateral facilities. FGT will replace two existing Vaults (Vault 1 & Vault 3), and install one new Vault 2, as detailed in Section 1 of this report.

8.2 Residential Areas

8.2.1 Planned Residential and Commercial Areas

FGT reviewed publicly available data from Pinellas County and Hillsborough County Planning and Development websites, to determine information about recently completed, ongoing, and planned future residential, commercial, and industrial developments in the vicinity of the Project.

8.2.1.1 8-inch Lateral Loop, Vault 1, Vault 2 and Contractor Yard (Pinellas County, Florida)

Based on FGT's review of Pinellas County's Zoning and Land Use website, which included comprehensive land use plans, there is not any planned development in the Project vicinity (Pinellas County, 2022).

8.2.1.2 Vault 3 (Hillsborough County, Florida)

Based on FGT's review, which included comprehensive land use plans, the nearest planned residential development area is located on West Prescott Street, approximately 0.50 miles east of the proposed vault replacement (Hillsborough County, 2022).

8.2.2 Existing Residences and Buildings

There are no structures within 50 feet of any proposed workspaces.

8.3 Public Land, Recreation, and Other Designated Areas

8.3.1 Public or Conservation Land

To identify public and conservation lands, FGT reviewed databases and maps from public sources including: National Park Service (NPS), Florida Division of Recreation and Parks, FWC, NRCS, National Conservation Easement Database (NCED), USGS, and a variety of county and municipal databases. No areas associated with the Project are within any federal, state, county, local or private conservation agency's land boundaries.

8.3.2 Natural, Recreational, or Scenic Areas

No areas associated with the Project are included in or within 0.25 miles of any river in the National Wild and Scenic Rivers System, the National Trails System, or wilderness area (designated under the Wilderness Act) No special use areas, such as old growth forests, state or national forests, or registered natural landmarks are within 0.25 miles of the proposed Project.

FGT's proposed lateral loop is adjacent to the Pinellas County Aquatic Preserve along the causeway for US92/SR600. The preserve was established in 1972 and designated an Outstanding Florida Water (OFW) in 1979. Despite the heavy urbanization of Pinellas County, the aquatic preserve supports access to Tampa Bay for recreation such as sport fishing, boating, canoeing, kayaking, and swimming. The preserve includes nearshore habitats along sandy beaches and mangrove-dominated shorelines. Submerged habitats include oyster bars, seagrass beds, coral communities and spring-fed caves. Abundant islands, including those formed from dredge spoil material, also are part of the preserve. About one-third of Florida's coral species can be found in the Pinellas County Aquatic Preserve.

The Pinellas County Aquatic Preserve encompasses all of the Sovereign Submerged Lands (SSL) surrounding Pinellas County outside of the Boca Ciega Bay Aquatic Preserve. SSL are those lands including but not limited to, tidal lands, islands, sand bars, shallow banks, and lands waterward of the ordinary or mean high water line, beneath navigable fresh water or beneath tidally-influenced waters, which the State of Florida acquired title to on March 3, 1845, by virtue of statehood, and which have not been heretofore conveyed or alienated. (18-21.003, Florida Administrative Code).

8.3.3 Agency and Landowner Consultation

Agency and landowner contacts are documented in **Appendix D and Appendix E**.

8.3.4 Impact and Mitigation

FGT has limited all workspace, proposed construction and operations activities to upland areas above the HTL, MHHW, and MHW line as discussed in **Section 2** of this report. As no impacts are proposed below the MHW line, the defining boundary of the Pinellas County Aquatic Preserve, no impacts to the preserve are proposed or anticipated. All proposed construction and operations activities along the Gandy Causeway will occur entirely within FDOT's existing ROW for US92/SR600. No other impacts to natural, recreational, scenic or special use areas are proposed or anticipated as a result of the Project.

8.4 Contaminated or Hazardous Waste Sites

No hazardous waste sites or facilities were identified within or near the Project facilities. Mapping of known contaminated areas within 0.25 mile of the Project is included in **Appendix A**.

8.5 Coastal Zone Management Areas

FGT maintains a *Blanket Clearance Concurrence for Activities Deemed Consistent with the Florida Coastal Management Program* from FDEP's Clearinghouse Office of Intergovernmental Program. FGT's proposed Project is consistent with the conditions of this clearance.

This clearance was issued in 2022 and is valid for five years. A copy of the blanket clearance is included in **Appendix E**.

8.6 Visual Resources

FGT's Project does not cross scenic highways, designated scenic rivers, or trails, nor are there any in the vicinity of the Project. There will not be any changes to the viewshed of any recreational or scenic areas and minimal, if any, changes to the viewshed of existing residences. No aboveground facilities are proposed

8.7 Applications for Rights-of-Way and Other Land Use

No rights-of-way or other land use authorizations are required from federal land-managing agencies.

9.0 Air Quality and Noise

9.1 Air Quality

9.1.1 Existing Air Quality

9.1.1.1 Climate

Monthly climatology data for the Project is referenced from the Tampa International Airport Station. This meteorological station is located approximately eight miles from the center of the project which runs east to west and has a similar base elevation and surrounding topography. Meteorological data for the surface weather station was obtained from the National Climatic Data Center for the period of January 1991 to December 2020. The annual average temperatures and precipitation data is presented in **Table 9.1-1**.

This area has a humid subtropical climate with hot, humid summers and short, warm winters marked by drier weather.

TABLE 9.1-1 Climate Parameters for the Project

Station	ID	Avg Daily Min Temp January (°F)	Avg Daily Max Temp July (°F)	Avg Annual Precipitation Rainfall (inches)	Avg Annual Snowfall (inches)
Tampa International Airport, FL	GHCND: USW00012842	62.1	83.8	49.5	0

Source: https://www.ncdc.noaa.gov/cdo-web/datatools/normals

9.1.1.2 Existing Air Quality

Table 9.1-2 summarizes the current National Ambient Air Quality Standards (NAAQS) for "criteria pollutants" in terms of parts per million dry volume basis (ppm), parts per billion dry volume basis (ppb) and micrograms per cubic meter (µg/m3). Primary standards are the most stringent and are used to protect public health. Less stringent secondary standards are used to protect plants, animals, and area visibility. Any area with measured concentrations above the NAAQS for the corresponding pollutant is known as a non-attainment area. The Tampa West Lateral Loop, Vault 1 and Vault 2 are located in Pinellas County, and Vault 3 is located in Hillsborough County, Florida which are considered to be in attainment for all NAAQS.

TABLE 9.1-2 National Ambient Air Quality Standards for Criteria Pollutants

Pollutant	Primary Standard	Averaging Times	Secondary Standards	Form of Standard
Carbon Monoxide (CO)	9 ppm (10,000 µg/m3)	8-hour	None	Not to be exceeded more than once per year
	35 ppm (40,000 µg/m3)	1-hour	None	
Lead (Pb)	0.15 µg/m3	Rolling 3-month Average	Same as Primary	Not to be exceeded
Nitrogen Dioxide	53 ppb (100 µg/m3)	Annual	Same as Primary	Annual Mean

TABLE 9.1-2 National Ambient Air Quality Standards for Criteria Pollutants				
Pollutant	Primary Standard	Averaging Times	Secondary Standards	Form of Standard
(NO_2)	100 ppb (188 µg/m3)	1-hour	None	98th percentile of 1-hour daily maximum concentrations, averaged over 3 years
Particulate Matter (PM10)	150 µg/m3	24-hour	Same as Primary	Not to be exceeded more than once per year on average over 3 years
Particulate Matter (PM2.5)	12 µg/m3	Annual	15 µg/m3	Annual mean, averaged over 3 years
	35 µg/m3	24-hour	Same as Primary	98th percentile, averaged over 3 years
Ozone	0.070 ppm	8-hour	Same as Primary	Annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years
Sulfur Dioxide (SO_2)	None	3-hour	0.5 ppm (1,300 µg/m3)	Not to be exceeded more than once per year
	75 ppb (196 µg/m3)	1-hour	None	99th percentile of 1-hour daily maximum concentrations, averaged over 3 years
Source: http//www.epa.gov/criteria-air-pollutants/naaqs-table				

9.1.1.3 Monitoring Data

Ambient air quality monitoring data is collected by state and federal agencies to determine ambient air quality for a regional area. This data is then used by the regulatory agencies to compare an area's air quality to the NAAQS. Information summarizing the background monitoring data within the geographic area of the Project in Pinellas and Hillsborough Counties is presented in **Table 9.1-3**.

TABLE 9.1-3 Available Ambient Monitoring Data					
Pollutant (units)	Averaging Period	Measured Ambient Concentration	CBSA Location	Monitor	Primary NAAQS
CO (ppm)	8-hr	1.1	Tampa-St. Petersburg-Clearwater, FL	Munro Street	9 ppm
	1-hr	1.4	Tampa-St. Petersburg-Clearwater, FL	Munro Street	35 ppm
Pb (ug/m3)	3-month	1.44E-03	Tampa-St. Petersburg-Clearwater, FL	Sydney	0.15 ug/m3
NO_2 (ppm)	Annual	9.0	Tampa-St. Petersburg-Clearwater, FL	Munro Street	53 ppb
	1-hr	36.6	Tampa-St. Petersburg-Clearwater, FL	Munro Street	100 ppb
PM2.5 (ug/m3)	Annual	8.1	Tampa-St. Petersburg-Clearwater, FL	Munro Street	12 ug/m3
	24-hr	17.8	Tampa-St. Petersburg-Clearwater, FL	Munro Street	35 ug/m3
PM10 (ug/m3)	24-hr	63.0	Tampa-St. Petersburg-Clearwater, FL	Woodlawn	150 ug/m3
Ozone (ppm)	8-hr	6.60E-02	Tampa-St. Petersburg-Clearwater, FL	USMC Reserve Center	0.070 ppm
SO_2 (ppb)	1-hr	7.4	Tampa-St. Petersburg-Clearwater, FL	Derby Lane	75 ppb

9.1.2 Regulatory Requirements - Air

The air quality regulations associated with the Project as well as any air quality permitting requirements are discussed in this section.

9.1.2.1 Regulatory Applicability

Authorization to begin construction activities and initially operate a new or modified source must be obtained by complying with key regulatory elements. This section of the report addresses the various potentially applicable programs and requirements.

Relevant State and Federal Standards

Major Stationary Source Preconstruction Review

Florida's preconstruction review program for "major stationary sources" applies to new major stationary sources and "major modifications" to existing major stationary sources. Florida's Prevention of Significant Deterioration (PSD) Program (Rule 62-212.400 F.A.C.) applies to major stationary sources and major modifications in areas designated attainment or unclassifiable for NAAQS. Florida's Nonattainment NSR (NNSR) (Rule 62-212.500 F.A.C.) applies to major stationary sources located in or proposed to be located in any nonattainment area for one or more NAAQS. The proposed facilities will be located in attainment counties and are therefore not subject to NNSR permitting requirements. The proposed facilities are not "major stationary sources;" therefore, they are not subject to PSD requirements.

Title V Operating Permit Program

Florida's Title V Operating Permit program (Rule 62-213 F.A.C.) consolidates state and federal requirements applicable to major sources into a single comprehensive operating permit for the purposes of facilitating ongoing compliance. "Title V Sources" are "major sources" with a potential to emit (PTE) exceeding major source thresholds for criteria pollutants (100 tons per year (tpy) or more in an area designated attainment for all NAAQS), 25 tpy or more for total hazardous air pollutants (HAPs), or 10 tpy or more for individual HAPs are considered major sources for which applicants must obtain a Title V Operating Permit. PTE for each criteria pollutant and total and individual HAPs will be less than major source thresholds. The proposed facilities are not Title V Sources and will not be required to obtain Title V Operating Permits.

Minor Source Construction Permits and Non-Title V Operation Permits

Unless exempted from permitting as provided by Rule 62-210.300 or 62-4.040 F.A.C., the owner or operator of any facility or emissions unit which emits or can reasonably be expected to emit any air pollutant shall obtain appropriate authorization from the Department prior to undertaking any activity at the facility or emissions unit for which such authorization is required (Rule 62-210.300 F.A.C.). The proposed stationary facilities meet all of the criteria in 62-210.300(3)(a), F.A.C. for generic exemptions from permitting. Construction activities are not subject to permitting.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

Federal NESHAP have been established for seven HAP compounds in Part 61 of Title 40 of the Code of Federal Regulations (40 CFR Part 61). The Part 61 NESHAP subparts regulate HAP emissions from certain new and existing sources on a pollutant-by-pollutant basis.

NESHAP for source categories, codified in 40 CFR Part 63, establish technology-based emission standards that apply to certain source categories that are "major sources" and "area sources" of HAP. Major source means any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the "potential to emit" considering controls, in the aggregate, 10 tpy or more of any HAP or 25 tpy or more of any combination of HAPs. Any stationary source of HAP that is not

a "major source" is classified as an "area source" of HAP. The proposed facilities will be classified as area sources of HAP.

EPA has delegated Part 61 and Part 63 NESHAP standards (subparts) to the FDEP.

There are no stationary surface facilities proposed by the project other than pipeline components that may have the potential for equipment leaks (fugitive emissions). Depressurization of the pipeline would also result in emissions of natural gas. The natural gas is primarily composed of methane and would contain only trace amounts, if any, of HAPs. There are no pollutant-specific NESHAP under 40 CFR Part 61 that are relevant to the proposed facilities and there are no NESHAP for source categories in 40 CFR Part 63 that are relevant to the proposed area source facilities.

New Source Performance Standards (NSPS)

Federal NSPS, found in 40 CFR Part 60, provide technology-based standards which apply to specific categories of stationary sources. The NSPS requirements are categorized by type of emission unit and establish requirements for those "affected facilities" newly constructed, reconstructed, or modified on or after the initial proposal date of the rule, as those terms are defined in 40 CFR §60.2. NSPS do not regulate "existing facilities" for which construction, reconstruction or modification commenced on or before the proposal date of the relevant NSPS.

There are no NSPS standards (subparts) relevant to the proposed facilities. EPA has promulgated a suite of NSPS standards that regulate volatile organic compounds (VOC) and methane from certain affected facilities in the crude oil and natural gas production source category, which includes natural gas production and processing. The VOC and methane standards are currently set out in NSPS Subpart OOOOa and rulemaking is underway that will establish methane standards in Subpart OOOOb. The production and processing segment includes the well and extends to, but does not include, the point of custody transfer to the natural gas transmission and storage segment. The standards do not apply to natural gas transmission and are not relevant to the project.

Relevant State of Florida Standards

Florida regulations contained in the Florida Administrative Code (F.A.C.) potentially applicable to the Project are detailed below.

General Pollutant Emission Limiting Standards for stationary sources are set out in 62-296.320 F.A.C., including:

(1) Volatile organic compounds emissions or organic solvents emissions – No person shall store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds or organic solvents without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department. Not applicable – the proposed facilities will not handle VOC or organic solvents.

(2) Objectionable Odor Prohibited – No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor. The proposed facilities will conform to this prohibition.

(3) Permitted Open Burning. Open burning in connection with industrial, commercial, institutional, or governmental operations is allowed only as provided at chapter 62-256, F.A.C., or under prescribed circumstances. Not applicable – the proposed facilities will not conduct open burning.

(4) General Particulate Emission Limiting Standards. Not applicable – the proposed facilities will not emit particulate.

Standards for specific stationary sources are set out in 62-296.401 through 62-296.712 F.A.C. The proposed stationary sources are not listed in the cited standards.

9.1.2.2 Class I areas

Federal Class I areas are certain areas established by Congress, such as wilderness areas and national parks, that are afforded special protections under the CAA. Once designated as a Class I area, that area cannot be re-designated to another (lower) classification. Class I areas are allowed the smallest degree of air quality deterioration through NSR/PSD permitting, and special considerations must be made in the NSR permitting process when a Class I area is located close to a proposed site. The nearest Class I area is shown in **Table 9.1-4**. However, since the Project does not include any facilities subject to a construction or operating permit, Class I modeling is not required regardless of the distance from the Class I areas.

TABLE 9.1-4 Federal Class I Areas Closest to the Project

Class I Area	Managing Agency	Direction from Project	Approximate Distance to Project (miles)
Chassahowitzka Wilderness	U.S. Fish and Wildlife Service	North	50

Source: https://floridadep.gov/air/air-business-planning/content/class-i-areas-map

9.1.2.3 General Conformity

Under the CAA, a General Conformity analysis is required for any project that requires federal action. General Conformity applies to those emissions generating activities resulting from the Project that are not already covered by permitting and located in an area that is designated as nonattainment or a maintenance area (40 CFR §93.153(b)). The Project is not located in a nonattainment or maintenance area; therefore, a General Conformity analysis is not required for the construction activities associated with the Project.

9.1.3 Air Quality Impacts

Project environmental impacts are required to be addressed through avoidance and minimization or offset through mitigation measures. Upon identifying these impacts, measures will be proposed to avoid, minimize, or mitigate any potential adverse impacts from air emissions, or other potential environmental impacts. The impacts of the construction and operation of the Project on air quality are summarized below.

9.1.3.1 Construction Emissions

The use of equipment to construct the Project will result in temporary, short-term emissions of air pollutants that will be restricted to the proposed construction period. Construction is expected to take place in 2023. These emissions will not result in significant adverse impacts to air quality.

Construction activities can generally be categorized into the following activities:

- Construction Equipment Engines – Combustion pollutant emissions from air compressors, backhoes, cranes, and other construction equipment;
- On-Road Vehicle Travel – Combustion pollutant emissions from commuter buses, delivery vehicles, passenger vehicles, and diesel or gasoline trucks;
- Off-Road Vehicle Travel – Combustion pollutant emissions from dump trucks, light/medium duty trucks, and water/fuel trucks; and

- Earthmoving Fugitives – Fugitive dust emissions resulting from bulldozing, grading, and land disturbance activities.

Emissions from these source categories were calculated using emission factors and USEPA models from the following sources:

- EPA MOVES 2014a
- WRAP Fugitive Dust Handbook.
- AP-42 Chapter 3

Construction emissions for criteria pollutants, HAP, and greenhouse gases (GHGs) from the Project were estimated for the construction period. Complete calculations are included in **Appendix F**. The results of these calculations are summarized in **Table 9.1-5**.

TABLE 9.1-5: Emissions from Project Construction Activities

Source	2023 Construction Emissions (tpy)							
	CO	NO_X	SO_2	VOC	Total HAPs	PM_{10}	$PM_{2.5}$	CO_2e
Construction Equipment Engines	1.89	2.07	0	0.23	0	0.15	0.15	523
On-Road Vehicle including Commuter Transit	0.11	0.16	0	0.01	0	0.01	0.01	59.75
Fugitive Dust	-	-	-	-	-	4.71	0.56	-
Total	2.00	2.23	0	0.24	0	4.87	0.72	582.75

It is not anticipated that the construction equipment combustion nor fugitive dust emissions will significantly impact air quality because they are short-term in nature. No long-term construction or fugitive dust emission sources are associated with this Project.

9.1.3.2 Operational Emissions

Operation of the proposed facilities will not result in a significant increase to emissions that would require submission of air construction permits. As there is no increase in significant emissions with these upgrades and it is demonstrated that this is not a major modification, there is no impact to the NAAQs.

The increase in operational emissions from the facilities in Vault 1, Vault 2, and Vault 3 includes emissions from the proposed pig launcher and receiver facilities and fugitive emissions from valving and piping. These emissions are presented in **Table 9.1-6** below. Calculations for operational and fugitive emissions are included in **Appendix F**. Pipeline quality natural gas was assumed to have the same speciation as laid out in the North American Energy Standard Board.

TABLE 9.1-6 Annual Operating Fugitive Emissions & Pigging Emissions

Emissions			
VOC (tons)	CH_4 (tons)	CO_2 (tons)	CO_2e (tons)
0.38	39.5	0.80	989
GWP of 25 for CH_4 and 298 for N_2O used. Source: 40 CFR Part 98 Subpart A			

9.1.4 Mitigation Measures

9.1.4.1 Construction Emissions

As demonstrated above, the conservatively estimated construction emissions associated with the Project will have minimal impact on the air quality in the surrounding area. However, FGT will implement mitigation measures to minimize construction emissions. These include:

- Unnecessary idling of construction equipment will be minimized.
- FGT will follow manufacturer's operating recommendations regarding good combustion practices to ensure that fuel efficiency is maximized and engines are operated such that emissions are minimized.
- Fugitive dust emissions will be reduced by using standard construction practices such as the watering of exposed soil, use of storage piles and restoration and revegetation activities.

9.1.4.2 Operational Emissions

As demonstrated above, the conservatively estimated operational emissions associated with the Project will have minimal impact on the air quality in the surrounding area. However, FGT will implement various mitigation measures to minimize operational emissions. These include:

- Pigging operations will be performed only when required (approximately once every three years).

9.1.4.3 Greenhouse Gas Impact analysis

To ensure that the project's reasonably foreseeable Green House Gas (GHG) emissions do not significantly contribute to climate change, the project's GHG emissions are compared to the total GHG emissions of the United States as a whole. This comparison evaluates the project's contribution to GHG emissions at the national level, which provides context to the project's emissions and their potential impact on climate change. The total GHGs from construction are estimated at 597 metric tons of CO2e. The ongoing increase in operational emissions is estimated at 20,764 tons of CO2e. According to the EPA, 6.558 billion tons of CO2e were emitted at a national level in 2019. Based on this assessment, this project would increase CO2e emissions based on the 2019 levels by 0.000047% on a short-term basis, and 0.00032% from expected increase to ongoing GHG emissions. In this context the project's reasonably foreseeable contribution to climate change would not be significant.

9.2 Noise Quality

FGT does not propose to construct any new, or modify any existing, compression, metering, or regulation facilities as part of this Project. Noise quality impacts associated with the construction of the Project are presented in the following sections. The purpose of the acoustical assessments was to estimate the sound contribution of the proposed facilities during construction and operation at the nearby noise sensitive areas (NSAs), examples of which include residences, hospitals, churches, and schools.

9.2.1 Construction Noise

Potential impacts near the proposed facilities could include short-term increases in sound levels during construction. Only standard construction equipment will be used to construct the Project, with no dynamic compaction or pile driving expected. In order to assess the potential noise impact of construction noise, a construction noise model was developed.

Construction activities are estimated to occur for ten hours a day between the daytime hours of 7:00 am to 10:00 pm. The highest sound levels during construction are expected during the early earthmoving phase at the proposed vault locations. Equipment that may be used during this phase would include excavators, a bulldozer, dump trucks, generators, etc.

Based on the equipment utilization estimates for the project, a sound level calculation was performed using the Federal Highway Administration's Roadway Construction Noise Model version 1.1 (FHWA, 2006). Typical construction equipment likely to be used during construction, along with the estimated sound level of each piece of equipment at 50 feet, is presented in **Table 9.2-3.**

Sound levels have been evaluated at the closest residence to the Vault 1 and Vault 3 construction areas. For Vault 1, this is a group of residences located about 2,500 feet to the west. For Vault 3, this is a group of residences located about 1,800 feet to the east of the work area. Construction sound levels during the 10-hour shift were calculated at

TABLE 9.2-3 Summary of Construction Equipment

Equipment Description	Utilization Factor	Sound Level at 50 Feet (dBA)	Quantity of equipment in use for Tampa West Lateral Loop	
			Vault 1 and Vault 2	Vault 3
Bulldozer, D8 LGP Dozer or equivalent	0.82	80.7	1	0
Track Hoe, 345 or equivalent	0.82	79.7	3	2
289D Skid Steer	0.82	75.1	1	0
Welding Machines	0.82	73.0	4	2
FBE Coating equipment	0.87	80.1	1	0
375 Air compressors	0.87	77.2	1	1
Water Pumps	0.55	79.4	4	2
Light Towers	0.69	53.0	2	0

9.2.1.1 Construction Noise Impact Assessment

Table 9.2-4 shows a summary of the predicted short-term daytime and L_{dn} construction sound levels at the NSAs near the proposed facilities with the construction equipment listed above in operation.

TABLE 9.2-4 Predicted Increase in Sound Levels Due to Construction, Daytime Activities

NSA	Distance	Direction to NSA	Estimated Existing Ambient Sound Levels (dBA)			Const. Sound Levels 10-hour average	Predicted Sound Level - Single 10-Hour Daytime Shift (dBA)			Const. Plus Ambient (dBA)		Temp Increase in Sound Level (dB)	
			Day (L_d)	Night (L_n)	L_{dn}	L_{eq} (10-hour)	Day (L_d)	Night (L_n)	L_{dn}	Day (L_d)	L_{dn}	ΔL_d	ΔL_{dn}
Vault 1 Closest Residence													
	2,500	West	55	45	55	50.7	48.9	n/a	46.9	56.0	55.6	1.0	0.6
Vault 3 Closest Residence													
	1,800	East	55	45	55	46.6	44.8	n/a	42.8	55.4	55.3	0.4	0.3

The predicted noise impacts from construction activities at the Vault locations closest to residential areas are not significant, with temporary sound level increases during construction of 1.0 dBA or less at the closest residences. The daytime construction sound levels are typical for construction activities. They are not expected to cause any significant noise impact due to their temporary and variable nature, and the existing ambient levels at all locations. All construction activities are planned to take place within the daytime hours of 7:00 am to 10:00 pm and are, therefore, compliant with the FERC construction noise criteria.

10.0 Alternatives

Possible alternatives to the Project include the No Action alternative, energy conservation, energy alternatives, system alternatives, design alternatives, and route or site alternatives. The Project will enable FGT to decrease certain existing PGS delivery point capacity by 10,000 MMbtu/d in PGS' St. Petersburg division in Pinellas County, Florida, and increase delivery point capacity by 10,000 MMbtu/d to PGS Tampa West in PGS' Tampa division in Hillsborough County, Florida. This will allow the peak hourly flow rights to the PGS Tampa West delivery point to be increased from 360 MMBtu/hr to 667 MMBtu/hr, in Hillsborough County, Florida, for Shipper's incremental delivery requirements, all as more fully set forth in the Prior Notice Request which is on file with the Commission and open to public inspection. The proposed Project will not result in a change in the daily capacity of FGT's mainline system.

Any viable alternative would need to meet the Project's purpose and need. To be a preferred alternative it would also need to provide a significant environmental advantage over the proposed Project with consideration of the landowner(s), technical feasibility, schedule, and cost.

10.1 No-Action Alternative

Under the No Action alternative, the proposed Project would not be constructed and all impacts associated with construction and operation of the Project would not occur. However, the purpose and need of the Project would not be fulfilled. Under the No-Action alternative, FGT would not be able to meet customer requirements for the contracted natural gas services proposed herein. The proposed Project will leverage the existing FGT pipeline system to result in minimal footprint and environmental impacts. Any other means of meeting the Project's purpose and need would not provide a significant environmental advantage.

10.2 Energy Conservation

Energy conservation would not provide viable alternatives to the proposed Project.

10.3 Energy Alternatives

There are no viable energy alternatives applicable to the proposed Project.

10.4 System Alternatives

System alternatives to the proposed Project would make use of existing, modified, or already proposed natural gas pipeline systems to meet the objectives of the proposed Project. A system alternative may make it unnecessary to construct all or part of the Project, although some modifications or additions to other existing pipeline systems may be required to increase respective capability, or another entirely new system may need to be constructed. Such modifications or additions would result in environmental impacts that could be less than, similar to, or greater than those associated with the proposed Project.

Providing the described modifications to delivery capabilities by using another system would require additional miles of pipeline and/or aboveground facility modification/construction and would therefore not provide a significant environmental advantage over the Project. As a result, no alternative pipeline systems were considered.

10.5 Design Alternatives

Alternative designs for the pipeline loop were evaluated during the planning and design phase of the Project. To achieve the Project requirements, FGT evaluated the lengths that will be required for constructing the loop. The preferred length was determined by performing steady state and transient analysis to quantify the appropriate pressure drop and frictional affect that will allow FGT to maintain current operating conditions on the system. The Project design proposed herein maximizes the existing Tampa West Lateral facilities, with the addition of minimal construction required to enable FGT to provide the reallocated and contracted

capacity to be delivered to the existing PGS Tampa West delivery point for the Shipper's use, with the least environmental impact.

The proposed Project provides the best combination of additional pipeline mileage and overall construction and operations/maintenance costs. Further, the ability to co-locate with existing facilities minimizes impacts to environmental resources.

10.6 Route or Site Alternatives

FGT's existing 5.9-mile Tampa Bay Lateral crosses Tampa Bay between MP 0.0 (Vault 1) and MP 4.6 (Vault 3). The lowest environmental impact and most economically viable option to provide the service contracted with the Shipper, is to install the approximately 1.3 miles of 8-inch lateral pipe looping and appurtenances as proposed in this proceeding.

Due to the existing Tampa Bay Lateral pipeline route crossing Tampa Bay, any alternative route would have a much greater negative environmental impact, either with Option 1) by installing approximately 4.6 miles of new additional 8-inch lateral line and appurtenances sited generally parallel to the existing 4 and 8-inch Tampa Bay Lateral between MP 0.0 (Vault 1) and MP 4.58 (Vault 3) alongside W. Gandy Blvd. and across Tampa Bay, or with Option 2) by installing approximately 8 miles of new additional 8-inch lateral line running east from MP 0.0 along/beside W. Gandy Blvd. and US 92 (Selmon Expressway), through a recreational Park, and local government, commercial, and Residential areas to the existing MP 4.58 (Vault 3). Both of these alternate options would have a much greater negative environmental impact, and were not considered. In addition, due to the increased cost of materials and related Landowner/Commercial/Residential cost of new ROW in Florida, neither alternate option was considered feasible nor entertained as an "Alternative" route, as both of these scenarios would not be economically viable.

10.7 Alternative Aboveground Facility Sites

No aboveground facilities are proposed.

11.0 Reliability and Safety

The Project does not involve new or recommissioned liquefied natural gas facilities (LNG). No significant safety concerns are anticipated and none have been raised to date. Section 11 is not applicable.

12.0 Polychlorinated Biphenyls (PCB) Contamination

This section is required for projects involving the replacement, abandonment by removal, or abandonment in place of facilities determined to have PCBs in excess of 50 parts per million in pipeline liquids; none of which applies to this Project.

13.0 Engineering and Design Material

This section is required for applications involving new or recommissioned LNG facilities. This Project does not include any new or recommissioned LNG facilities; therefore, Section 13 is not required.

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FLORIDA GAS TRANSMISSION COMPANY, LLC

TAMPA WEST PROJECT

APPENDICES

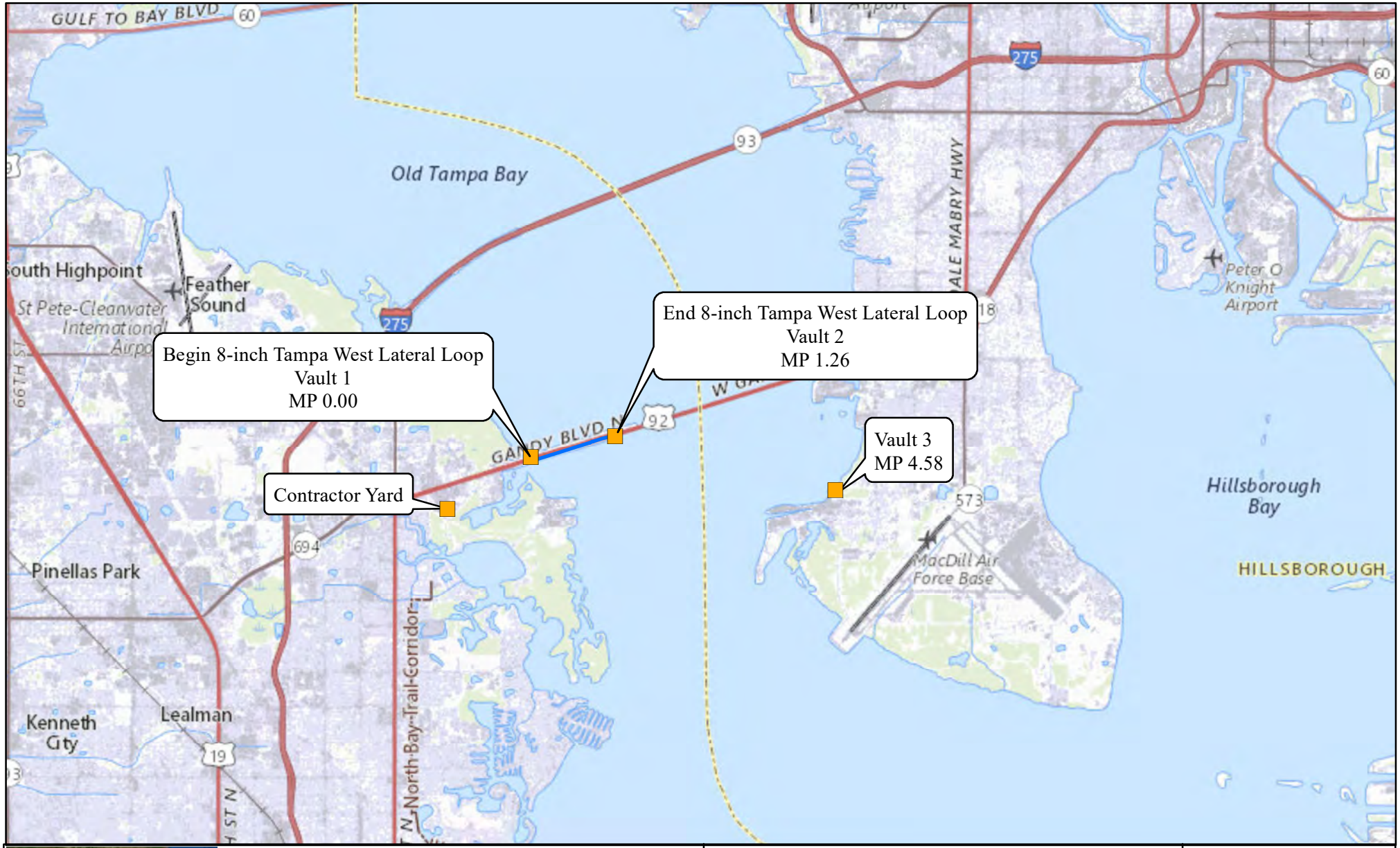
TO THE

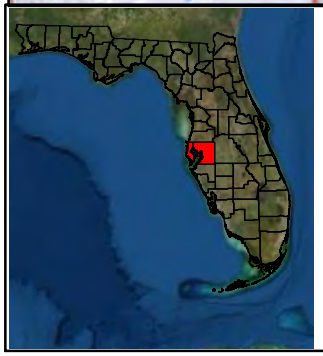
CONCISE ENVIRONMENTAL REPORT

Appendix A Tampa West Project Maps and Drawings

Appendix A-1

Project Location Maps





Proposed 8" Tampa West Loop

Florida Gas Transmission Company, LLC
Tampa West Project
Appendix A-1
Project Location Map
Pinellas and Hillsborough County, Florida

Source: USGS

Appendix A-1
Project Location

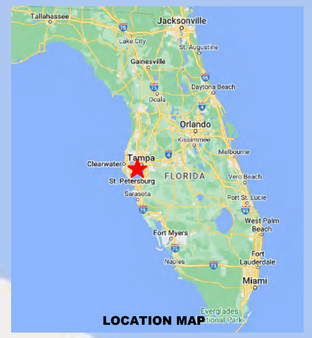
1 inch = 10,000 feet

N

Appendix A-2

Project Construction Alignment Sheets

FLBWD - 8" TAMPA WEST LOOP
FLBXX - 4" TAMPA WEST LATERAL LOOP, PINELLAS/HILLSBOROUGH COUNTIES, FLORIDA
C-22075-GL-94300153



LOCATION MAP

PROPOSED BELOW GROUND VAULT 2 (22' 4 1/8" X 17' 6 1/8") TIE-IN
FLBWD – PROPOSED 8" TAMPA WEST LOOP TO
FLBXX – EXISTING 8" TAMPA BAY CROSSING &
FLBXX – EXISTING 4" TAMPA WEST LATERAL

FLBXX – EXISTING 4" TAMPA WEST LATERAL

PROPOSED BELOW GROUND VAULT 1 (23' X 17'2") TIE-IN
FLBWD – PROPOSED 8" TAMPA WEST LOOP TO
FLBVA–EXISTING 8" SAINT PETERSBURG LATERAL &
FLBXX – EXISTING 4" TAMPA WEST LATERAL

FLBWD – PROPOSED 8" TAMPA WEST LOOP

FLBVA–EXISTING 8" SAINT PETERSBURG LATERAL

FLBXX – EXISTING 8" TAMPA BAY CROSSING

EXISTING VAULT 3 REPLACEMENT OF VAULT (25' X 17' 6")
INCLUDING VALVES & TIE-IN
FLBXX – EXISTING 8" TAMPA BAY CROSSING &
FLBXX – EXISTING 4" TAMPA WEST LATERAL TO PGS
FLBXZ – EXISTING 4" TO NATIONAL GYPSUM

STORAGE YARD

PINELLAS COUNTY

HILLSBOROUGH COUNTY

Old Tampa Bay
Gandy Bridge
Gandy Blvd N
W Gandy Blvd
S West Shore Blvd
GANDY
Riviera Bay
Weedon Island State Preserve
Picnic Island Park
CAYA COSTA
92

SCALE: (1 Inch = 1000 Feet)
0 1000 2000

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B	FERC ISSUE REV 1	MWC	10/07/22	HRL	MLK
A	FERC ISSUE	MWC	09/30/22	HRL	MLK

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CONSTRUCTION YEAR		
	BY	DATE
DESIGN	MWC	09/30/22
DRAWN	MWC	09/30/22
ASBUILT		
FILE NO.		
SCALE: 1" = 1000'		

Florida Gas Transmission Company
An Energy Transfer/Kinder Morgan Affiliate
FLORIDA GAS TRANSMISSION CO
MAITLAND, FLORIDA

FLBWD – 8" TAMPA WEST LOOP
FLBXX – 4" TAMPA WEST LATERAL
LOOP COVER SHEET
PINELLAS/HILLSBOROUGH COUNTIES, FLORIDA

PROJECT NO. C-22075-GL-94300153
PREVIOUS DWG. NO.
SHEET OF
DWG. NO. FLBXX-TEMP-003 C
SHEET 1 OF 10

PINELLAS COUNTY, FLORIDA
T-30-S, R-17-E, S-16

N

0 250 500
SCALE: (1 Inch = 500 Feet)

PROPOSED BELOW GROUND VAULT 1 (23' x 17' 2")
TIE-IN
FLBWD – PROPOSED 8" TAMPA WEST LOOP TO
FLBVA–EXISTING 8" SAINT PETERSBURG LATERAL &
FLBXX – EXISTING 4" TAMPA WEST LATERAL

PUBLIC ACCESS POINT

FLBXX – EXISTING 4" TAMPA WEST LATERAL

PUBLIC ACCESS POINT

PUBLIC ACCESS POINT

PROPOSED BELOW GROUND VAULT 2 (22' 4 1/8" X 17' 6 1/8")
TIE-IN
FLBWD – PROPOSED 8" TAMPA WEST LOOP TO
FLBXX – EXISTING 8" TAMPA BAY CROSSING &
FLBXX – EXISTING 4" TAMPA WEST LATERAL

PUBLIC ACCESS POINT

US HIGHWAY 92
(STATE ROAD 600/GANDY BOULEVARD)

FLBWD – PROPOSED 8" TAMPA WEST LOOP

FLBVA–EXISTING 8" SAINT PETERSBURG LATERAL

FLBXX – EXISTING 8" TAMPA BAY CROSSING

TAMPA BAY

STORAGE YARD

SAN MARTIN BLVD NE

ACCESS ROAD
TAR–001

GATE

LEGEND

- EXISTING PIPELINE
- PROPOSED PIPELINE
- PROPERTY LINE (FOR LEASE SPACE OWNESHIP)

NO.	REVISION – DESCRIPTION	BY	DATE	CHK'D	APP'D
D	FERC ISSUE REV 2	SDS	10/26/22	HRL	MLK
C	FERC ISSUE REV 1	MWC	10/07/22	HRL	MLK
B	FERC ISSUE	MWC	09/30/22	HRL	MLK
A	ISSUED FOR REVIEW	MWC	09/22/22	HRL	MLK

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ASBUILT			
FILE NO.			
SCALE: 1" = 500'			

Florida Gas Transmission Company
An Energy Transfer/Kinder Morgan Affiliate

FLORIDA GAS TRANSMISSION CO
MAITLAND, FLORIDA

FLBWD – 8" TAMPA WEST LOOP
FLBXX – 4" TAMPA WEST LATERAL
LOOP COVER SHEET
PINELLAS COUNTY,
FLORIDA

PROJECT NO.
C–22075–GL–94300153
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SHEET OF
DWG. NO.
FLBXX–TEMP–004
SHEET 2 OF 10

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PINELLAS COUNTY, FLORIDA
T-30-S, R-17-E, S-16

HILLSBOROUGH COUNTY, FLORIDA
T-30-S, R-18-E, S-18

US HIGHWAY 92
(STATE ROAD 600/GANDY BOULEVARD)

PINELLAS COUNTY

HILLSBOROUGH COUNTY

TAMPA BAY

0 250 500
SCALE: (1 Inch = 500 Feet)

FLBXX – EXISTING 8" TAMPA BAY CROSSING

EXISTING VAULT 3 REPLACEMENT OF VAULT INCLUDING VALVES & TIE–IN
FLBXX – EXISTING 8" TAMPA BAY CROSSING &
FLBXX – EXISTING 4" TAMPA WEST LATERAL TO PGS
FLBXZ – EXISTING 4" TO NATIONAL GYPSUM

HUGH GILBERT STRICKLAND
POST #138 AMER LEGION

PUBLIC ROW ENDS

ACCESS ROAD
TAR–002

FLBXX–TEMP–010

SECTION 18

SECTION 17

WEST PRESCOTT ST.

LEGEND

EXISTING PIPELINE
PROPOSED PIPELINE

NO.	REVISION – DESCRIPTION	BY	DATE	CHK'D	APP'D
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B	FERC ISSUE	MWC	09/30/22	HRL	MLK
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P.L./STA. NO.

CONSTRUCTION YEAR

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DRAWN	MWC	09/22/22
ASBUILT		

FILE NO.

SCALE: 1" = 500'

Florida Gas Transmission Company
An Energy Transfer/Kinder Morgan Affiliate

FLORIDA GAS TRANSMISSION CO
MAITLAND, FLORIDA

FLBWD – 8" TAMPA WEST LOOP
FLBXX – 4" TAMPA WEST LATERAL
LOOP COVER SHEET
PINELLAS/HILLSBOROUGH COUNTIES, FLORIDA

PROJECT NO.
C–22075–GL–94300153

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FLBXX–TEMP–005

SHEET 3 OF 10

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PINELLAS COUNTY, FLORIDA
T-30-S, R-17-E, S-16

0 150 300
SCALE: (1 Inch = 300 Feet)

FLBXX – EXISTING 4" TAMPA WEST LATERAL

US HIGHWAY 92 (STATE ROAD 600/GANDY BOULEVARD)

FLBWD – PROPOSED 8" TAMPA WEST LOOP

FLBXX–TEMP–007

FLBXX–TEMP–008

FLBXX–TEMP–009

FLBVA–EXISTING 8" SAINT PETERSBURG LATERAL

FLBXX – EXISTING 8" TAMPA BAY CROSSING

LEGEND
EXISTING PIPELINE
PROPOSED PIPELINE

NO.	REVISION – DESCRIPTION	BY	DATE	CHK'D	APP'D
D	FERC ISSUE REV 2	SDS	10/26/22	HRL	MLK
C	FERC ISSUE REV 1	MWC	10/07/22	HRL	MLK
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A	ISSUED FOR REVIEW	MWC	09/22/22	HRL	MLK

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P.L./STA. NO.

CONSTRUCTION YEAR	BY	DATE
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DRAWN	MWC	09/22/22
ASBUILT		

FILE NO.
SCALE: 1" = 300'

Florida Gas Transmission Company
An Energy Transfer/Kinder Morgan Affiliate

FLORIDA GAS TRANSMISSION CO
MAITLAND, FLORIDA

FLBWD – 8" TAMPA WEST LOOP
FLBXX – 4" TAMPA WEST LATERAL
LOOP ALIGNMENT INDEX
PINELLAS COUNTY,
FLORIDA

PROJECT NO.
C–22075–GL–94300153
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SHEET OF
DWG. NO.
FLBXX–TEMP–006
SHEET 4 OF 10
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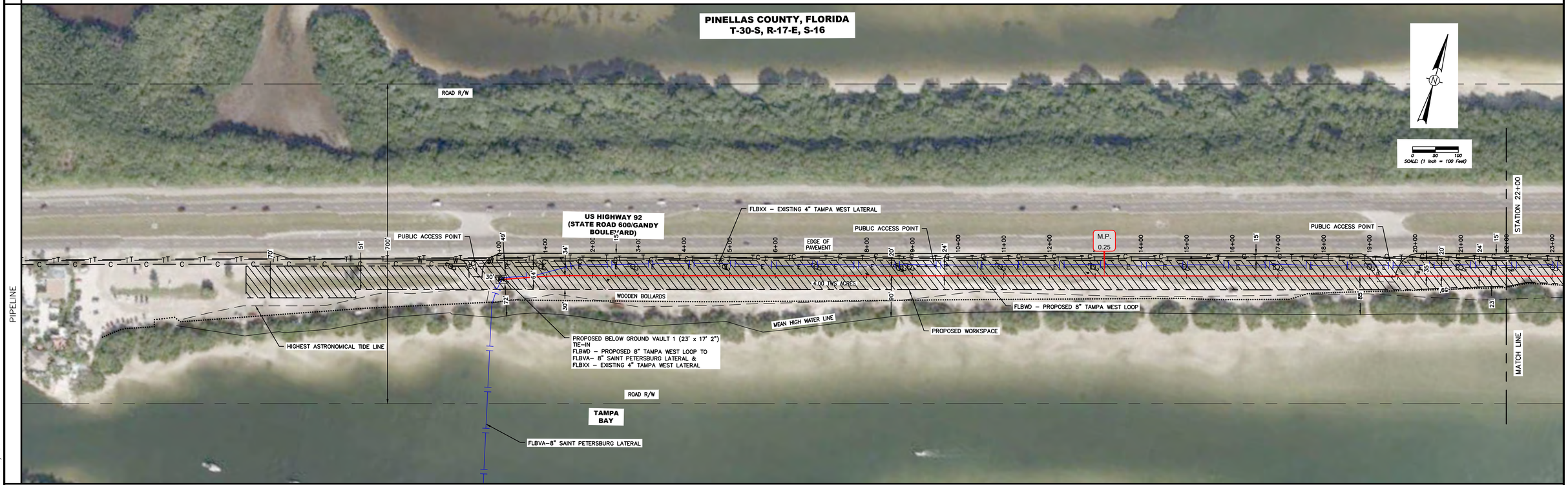
COUNTY & STATE	PINELLAS COUNTY, FLORIDA
TERRAIN	FLAT
OWNERSHIP & TRACT NO.	US HIGHWAY 92 332–PINE–1
RODDAGE	133
EASEMENT	

STATIONING

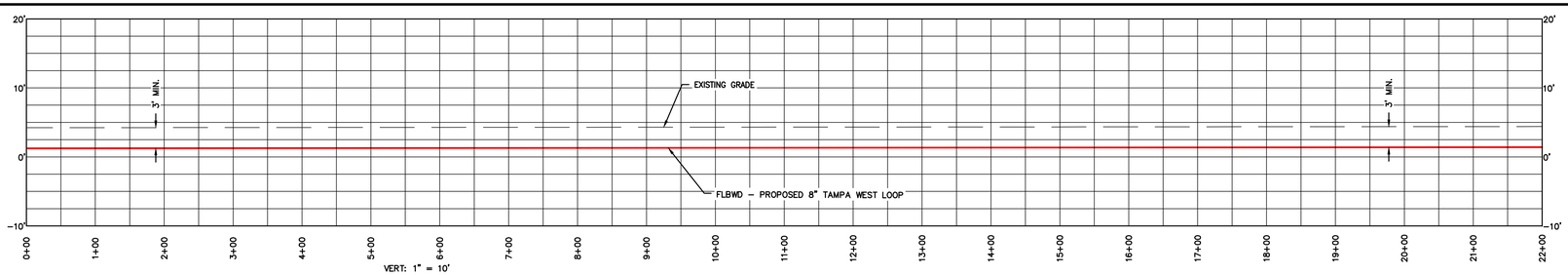
0+00 TIE–IN TO EXISTING FLBVA–6 AT STA. 5808+57, BEGIN NEW 8" PIPELINE
0+89 BEGIN 800' RADIUS RT.
0+89 POWER POLE 22' LT.
1+44 END 800' RADIUS RT.
2+88 POWER POLE 20' LT.
4+89 POWER POLE 20' LT.
6+89 POWER POLE 20' LT.
8+70 POWER POLE METER 17' LT.
8+75 POWER POLE SOLAR 19' LT.
8+89 POWER POLE 25' RT.
8+93 POWER POLE 20' LT.
9+50 PUBLIC ACCESS POINT
10+92 POWER POLE 20' LT.
12+96 POWER POLE 20' LT.
14+95 POWER POLE 20' LT.
16+98 POWER POLE 20' LT.
19+00 POWER POLE 20' LT.
19+22 EDGE OF DRIVEWAY
19+32 PUBLIC ACCESS POINT
19+58 EDGE OF DRIVEWAY
21+00 POWER POLE 19' LT.
22+00 MATCH LINE

PIPELINE



DESIGN FACTOR	0.50
CLASS LOCATION	3
HYDROSTATIC TEST PRESS (P.S.I.G.)	1491
M.A.O.P. (P.S.I.G.)	975

PROFILE



PIPE SPECIFICATION:
2,200' OF 8.625" OD x 0.322" W.T. X52 FBE, 14 TO 16 MIL WITH A MINIMUM BEND RADIUS OF 800'

LEGEND

TEMPORARY WORKSPACE	POWER POLE
EXISTING PIPELINE	POWER LINE
PROPOSED PIPELINE	TELEPHONE LINE
EDGE OF WORKSPACE	FIBER OPTIC LINE
	CABLE
	VALVE
	MILEPOST

NO.	REVISION – DESCRIPTION	BY	DATE	CHK'D	APP'D
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B	FERC ISSUE	MWC	09/30/22	HRL	MLK
A	ISSUED FOR REVIEW	MWC	09/22/22	HRL	MLK

DWG. STATUS	CHECKED BY	CHECKED DATE	APPROVED BY	APPROVED DATE	APPROVED BY	APPROVED DATE
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BID						
CONSTR.						
CADDS	PLOT DATE:					
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P.L./STA. NO.

CONSTRUCTION YEAR

	BY	DATE
DESIGN	MWC	09/21/22
DRAWN	MWC	09/21/22
ASBUILT		

FILE NO.

SCALE: 1" = 100'

Florida Gas Transmission Company
An Energy Transfer/Kinder Morgan Affiliate
FLORIDA GAS TRANSMISSION CO
MAITLAND, FLORIDA

FLBWD – 8" TAMPA WEST LOOP
FLBXX – 4" TAMPA WEST LATERAL
LOOP ALIGNMENT
PINELLAS COUNTY,
FLORIDA

PROJECT NO. C–22075–GL–94300153
PREVIOUS DWG. NO.
SHEET OF
DWG. NO. FLBXX–TEMP–007 C
SHEET 5 OF 10

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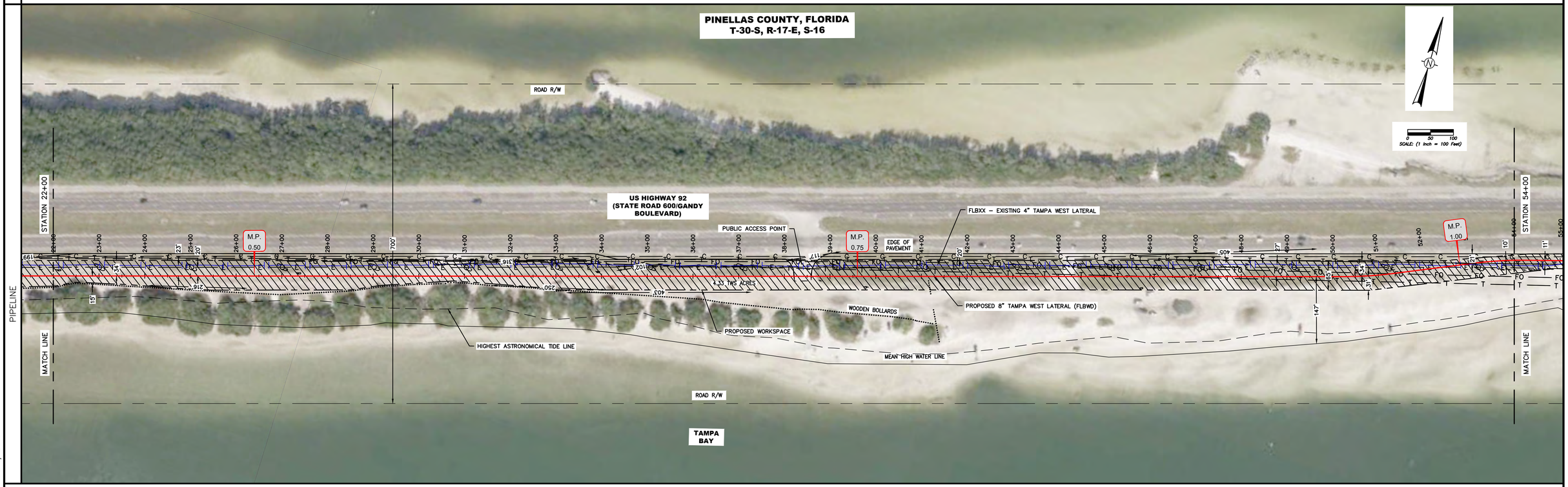
COUNTY & STATE	PINELLAS COUNTY, FLORIDA
TERRAIN	FLAT
OWNERSHIP & TRACT NO.	US HIGHWAY 92 332–PINE–1
RODDAGE	194
EASEMENT	

STATIONING

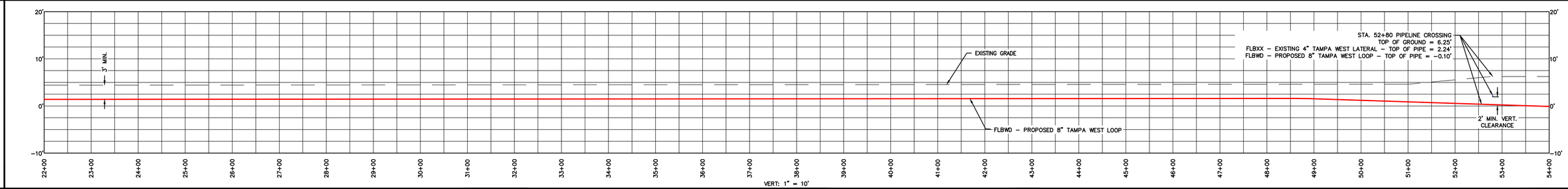
22+00 MATCH LINE | 23+01 POWER POLE 19' LT. | 25+02 POWER POLE 19' LT. | 27+01 POWER POLE 19' LT. | 29+02 POWER POLE 20' LT. | 31+04 POWER POLE 19' LT. | 33+03 POWER POLE 20' LT. | 35+07 POWER POLE 20' LT. | 37+07 POWER POLE 20' LT. | 38+21 EDGE OF DRIVEWAY
38+40 PUBLIC ACCESS POINT
38+59 EDGE OF DRIVEWAY
39+11 POWER POLE 20' LT. | 41+09 POWER POLE 20' LT. | 43+09 POWER POLE 20' LT. | 45+12 POWER POLE 20' LT. | 46+06 ATT TELEPHONE LINE | 47+15 POWER POLE 20' LT. | 49+18 POWER POLE 20' LT. | 50+29 BEGIN 800' RADIUS LT.
51+19 POWER POLE 15' LT. | 51+30 FIBER OPTIC LINE
51+31 END 800' RADIUS LT. | 52+39 OVERHEAD POWER LINE
52+68 TAMPA WEST LATERAL (FLBXX–4)
2' MINIMUM VERTICAL CLEARANCE | 53+11 BEGIN 800' RADIUS RT.
53+20 POWER POLE 10' RT. | 54+00 MATCH LINE

PIPELINE



DESIGN FACTOR	0.50
CLASS LOCATION	3
HYDROSTATIC TEST PRESS (P.S.I.G.)	1491
M.A.O.P. (P.S.I.G.)	975

PROFILE



PIPE SPECIFICATION:
3,200' OF 8.625" OD x 0.322" W.T. X52 FBE, 14 TO 16 MIL
WITH A MINIMUM BEND RADIUS OF 800'

LEGEND

TEMPORARY WORKSPACE	POWER POLE
EXISTING PIPELINE	E POWER LINE
PROPOSED PIPELINE	T TELEPHONE LINE
EDGE OF WORKSPACE	FO FIBER OPTIC LINE
	C CABLE
	VALVE
	M.P. 0.0 MILEPOST

NO.	REVISION – DESCRIPTION	BY	DATE	CHK'D	APP'D
C	FERC ISSUE REV 1	MWC	10/07/22	HRL	MLK
B	FERC ISSUE	MWC	09/30/22	HRL	MLK
A	ISSUED FOR REVIEW	MWC	09/22/22	HRL	MLK

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CONSTR.						
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P.L./STA. NO.

CONSTRUCTION YEAR	BY	DATE
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DRAWN	MWC	09/21/22
ASBUILT		
FILE NO.		
SCALE: 1" = 100'		

Florida Gas Transmission Company
An Energy Transfer/Kinder Morgan Affiliate
FLORIDA GAS TRANSMISSION CO
MAITLAND, FLORIDA

FLBWD – 8" TAMPA WEST LOOP
FLBXX – 4" TAMPA WEST LATERAL
LOOP ALIGNMENT
PINELLAS COUNTY,
FLORIDA

PROJECT NO. C–22075–GL–94300153
PREVIOUS DWG. NO.
SHEET OF
DWG. NO. FLBXX–TEMP–008 C
SHEET 6 OF 10

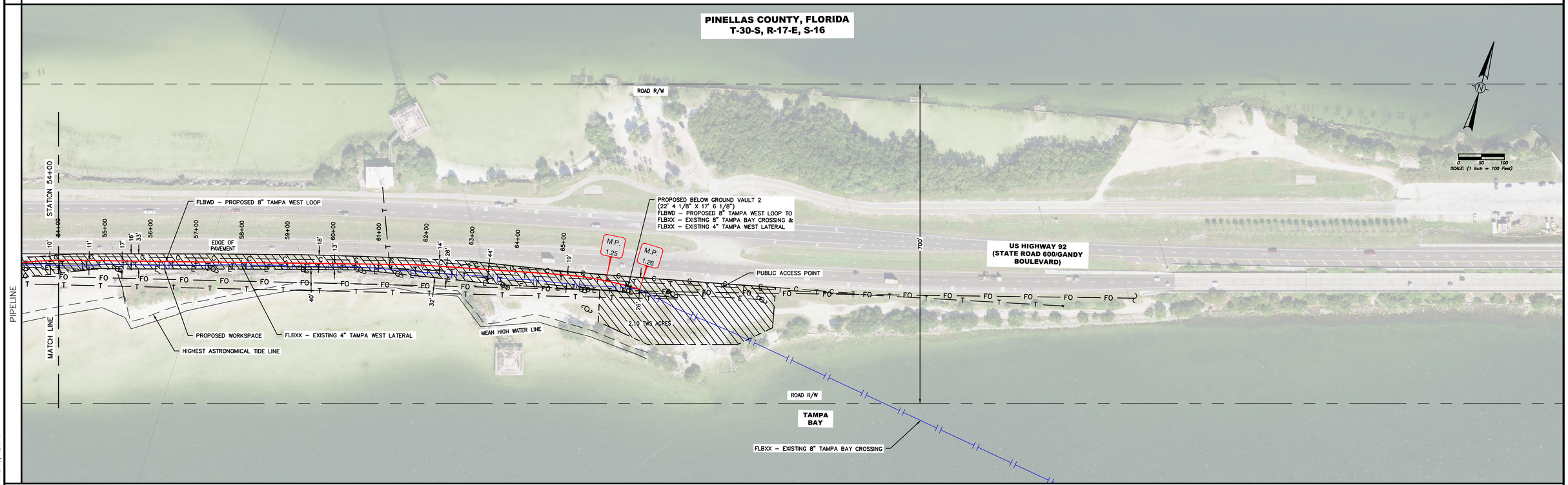
SAVEDBY: SLSHARP 20221025,16:36 | FILEPATH: H:\PROJECT\220804\DWG\ALIGNMENTS\FLBXX–TEMP–008.DWG/ALIGN8

COUNTY & STATE	PINELLAS COUNTY, FLORIDA
TERRAIN	FLAT
OWNERSHIP & TRACT NO.	US HIGHWAY 92 332–PINE–1
RODDAGE	77
EASEMENT	

STATIONING

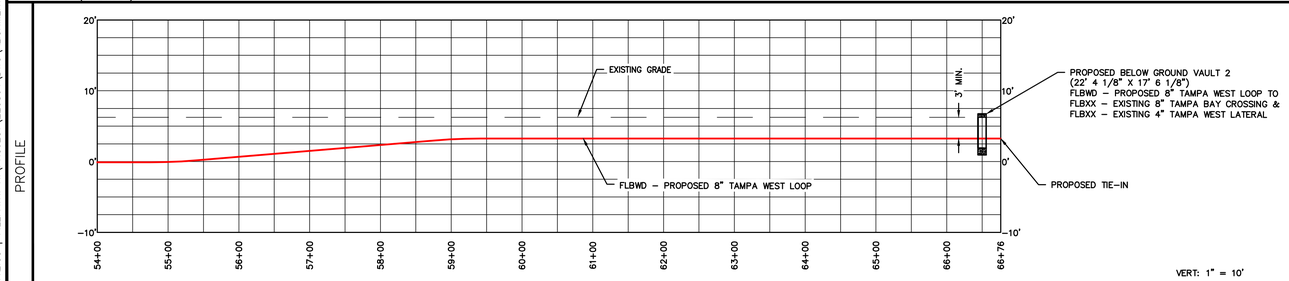
54+00 MATCH LINE
54+24 END 800' RADIUS RT.
55+29 POWER POLE 18' RT.
55+36 PEDESTAL OTE 23' RT.
57+38 POWER POLE 15' RT.
59+36 POWER POLE 13' RT.
60+62 POWER POLE 13' RT.
61+25 MCI TELEPHONE LINE
61+43 POWER POLE 20' RT.
63+75 POWER POLE 31' RT.
64+93 BEGIN 800' RADIUS RT.
65+49 POWER POLE 27' RT.
65+69 POWER POLE 68' RT.
65+90 ATT TELEPHONE LINE
66+50 EXISTING FLBXX AT STA. 66+89, END NEW 8" PIPELINE. END 800' RADIUS RT.

PIPELINE



DESIGN FACTOR	0.50
CLASS LOCATION	3
HYDROSTATIC TEST PRESS (P.S.I.G.)	1491
M.A.O.P. (P.S.I.G.)	975

PROFILE



VERT: 1" = 10'

PIPE SPECIFICATION:
1.276' OF 8.625" OD x 0.322" W.T. X52 FBE, 14 TO 16 MIL
WITH A MINIMUM BEND RADIUS OF 800'

LEGEND

- TEMPORARY WORKSPACE
- EXISTING PIPELINE
- PROPOSED PIPELINE
- EDGE OF WORKSPACE
- POWER POLE
- POWER LINE
- TELEPHONE LINE
- FIBER OPTIC LINE
- CABLE
- VALVE
- MILEPOST (M.P. 0.0)

NO.	REVISION – DESCRIPTION	BY	DATE	CHK'D	APP'D
C	FERC ISSUE REV 1	MWC	10/07/22	HRL	MLK
B	FERC ISSUE	MWC	09/30/22	HRL	MLK
A	ISSUED FOR REVIEW	MWC	09/22/22	HRL	MLK

DWG. STATUS	CHECKED BY	CHECKED DATE	APPROVED BY	APPROVED DATE	APPROVED BY	APPROVED DATE
PREL'Y						
BID						
CONSTR.						
CADDS	PLOT DATE:					
	FILE NAME: FLBXX–TEMP–009					

P.L./STA. NO.			
CONSTRUCTION YEAR	BY	DATE	
DESIGN	MWC	09/21/22	
DRAWN	MWC	09/21/22	
ASBUILT			
FILE NO.			
SCALE: 1" = 100'			

Florida Gas Transmission Company
An Energy Transfer/Kinder Morgan Affiliate
FLORIDA GAS TRANSMISSION CO
MAITLAND, FLORIDA

FLBWD – 8" TAMPA WEST LOOP
FLBXX – 4" TAMPA WEST LATERAL
LOOP ALIGNMENT
PINELLAS COUNTY,
FLORIDA

PROJECT NO. C–22075–GL–94300153
PREVIOUS DWG. NO.
SHEET OF
DWG. NO. FLBXX–TEMP–009 C
SHEET 7 OF 10

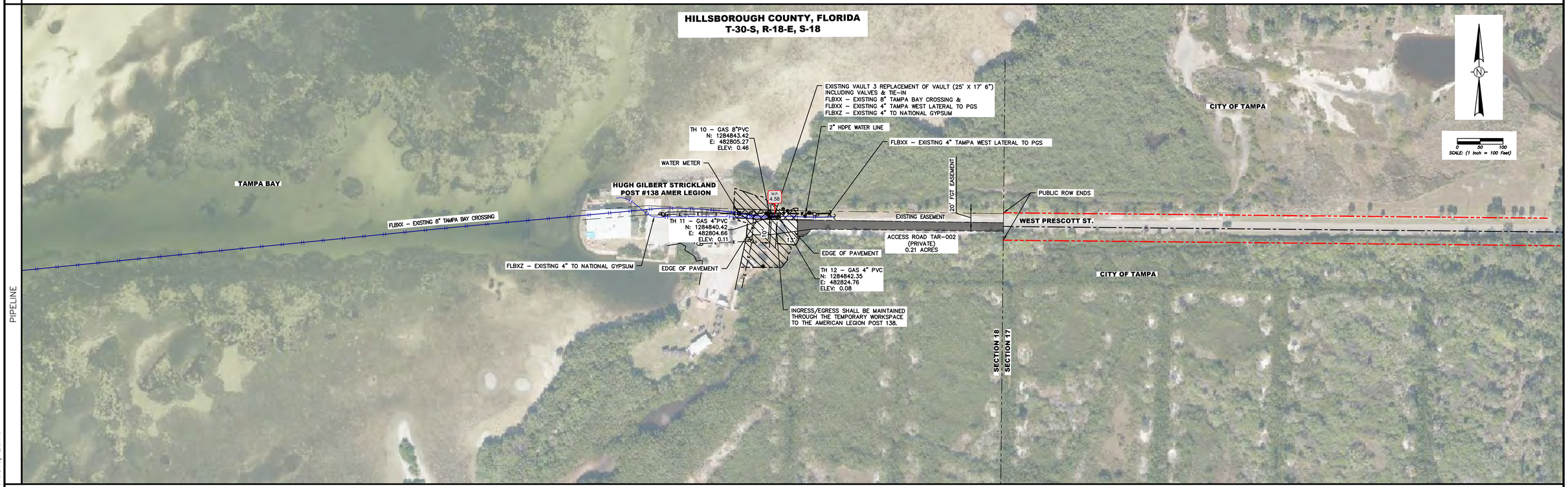
SAVEDBY: SL.SHARP.20221027.12:55 | FILEPATH: H:\PROJECT\220804\DWG\ALIGNMENTS\FLBXX–TEMP–009.DWG/ALIGN9

COUNTY & STATE	HILLSBOROUGH COUNTY, FLORIDA
TERRAIN	FLAT
OWNERSHIP & TRACT NO.	HUGH GILBERT STRICKLAND POST #138 AMER LEGION
RODDAGE	1
EASEMENT	

STATIONING

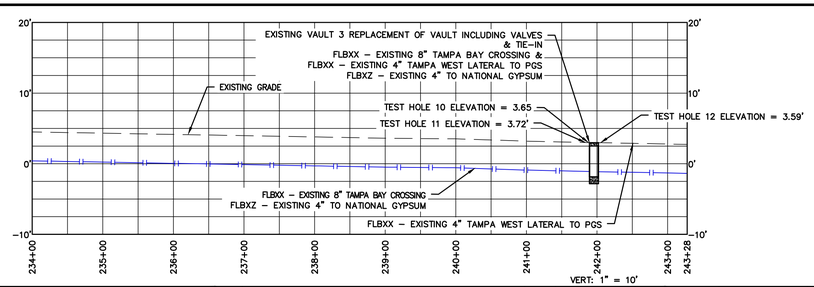
241+85 TEST HOLE 11 4" GAS
241+86 TEST HOLE 10 8" GAS
241+90 BEGIN 10x13 VAULT 3
241+92 BEGIN EXISTING VAULT (TO BE REPLACED)
242+01 END EXISTING VAULT (TO BE REPLACED)
242+03 END 10x13 VAULT 3
242+05 TEST HOLE 12 4" GAS

PIPELINE



DESIGN FACTOR	0.50
CLASS LOCATION	3
HYDROSTATIC TEST PRESS (P.S.I.G.)	1491
M.A.O.P. (P.S.I.G.)	975

PROFILE



NOTE:
STATIONING BASED OFF OF FLBXX – EXISTING 8" TAMPA BAY CROSSING PIPELINE.

LEGEND

TEMPORARY WORKSPACE
EXISTING EASEMENT IN WORKSPACE
EXISTING PIPELINE
POWER POLE
EXISTING EASEMENT
EDGE OF WORKSPACE
POWER LINE
WATER LINE
VALVE

NO.	REVISION – DESCRIPTION	BY	DATE	CHK'D	APP'D
A	FERC ISSUE	MWC	10/07/22	HRL	MLK

DWG. STATUS	CHECKED BY	CHECKED DATE	APPROVED BY	APPROVED DATE	BY	DATE
PREL'Y						
BID						
CONSTR.						
CADDS	PLOT DATE:					
	FILE NAME: FLBXX-TEMP-010					

P.I./STA. NO.
CONSTRUCTION YEAR

	BY	DATE
DESIGN	MWC	10/05/22
DRAWN	MWC	10/05/22
ASBUILT		

FILE NO.
SCALE: 1" = 100'

Florida Gas Transmission Company
An Energy Transfer/Kinder Morgan Affiliate
FLORIDA GAS TRANSMISSION CO
MAITLAND, FLORIDA

TAMPA WEST VAULT 3 REPLACEMENT ALIGNMENT HILLSBOROUGH COUNTY, FLORIDA

PROJECT NO. C-22075-GL-94300153
PREVIOUS DWG. NO.
SHEET OF
DWG. NO. FLBXX-TEMP-010 (A)
SHEET 8 OF 10

SAVEDBY: SL.SHARP 20221027.1:25 | FILEPATH: H:\PROJECT\220804\DWG\ALIGNMENTS\FLBXX-TEMP-010.DWG/ALIGN10

PINELLAS COUNTY, FLORIDA
T-30-S, R-17-E, S-20

ST PETERSBURG KENNEL CLUB INC.
20-30-17-00000-210-0100

STORAGE YARD
8.60 ACRES

ACCESS ROAD TAR-001
(PRIVATE)
0.49 ACRES

GATE

SAN MARTIN BLVD NE

0 50 100
SCALE: (1 Inch = 100 Feet)

LEGEND
- STORAGE YARD
- ACCESS ROAD
- PROPERTY LINE (FOR LEASE SPACE OWNESHIP)

NO.	REVISION – DESCRIPTION	BY	DATE	CHK'D	APP'D
C	FERC ISSUE REV 1	MWC	10/07/22	HRL	MLK
B	FERC ISSUE	MWC	09/30/22	HRL	MLK
A	ISSUED FOR REVIEW	MWC	09/22/22	HRL	MLK

DWG. STATUS	CHECKED BY	CHECKED DATE	APPROVED BY	APPROVED DATE	BY	DATE
PREL'Y						
BID						
CONSTR.						
CADDS	PLOT DATE:					
	FILE NAME: FLBXX-TEMP-011					

P.L./STA. NO.

CONSTRUCTION YEAR	BY	DATE
DESIGN	MWC	09/22/22
DRAWN	MWC	09/22/22
ASBUILT		

FILE NO.
SCALE: 1"=100'

Florida Gas Transmission Company
An Energy Transfer/Kinder Morgan Affiliate
FLORIDA GAS TRANSMISSION CO.
MAITLAND, FLORIDA

FLBWD – 8" TAMPA WEST LOOP
FLBXX – 4" TAMPA WEST LATERAL
LOOP STORAGE YARD
PINELLAS COUNTY,
FLORIDA

PROJECT NO. C-22075-GL-94300153
PREVIOUS DWG. NO.
SHEET OF
DWG. NO. FLBXX-TEMP-011 C
SHEET 9 OF 10

SAVEDBY: MCARROLL,20221007,15:22 | FILEPATH: H:\PROJECT\220804\DWG\ALIGNMENTS\FLBXX-TEMP-011.DWG/S_YARD11

HILLSBOROUGH COUNTY, FLORIDA
T-30-S, R-18-E, S-18

HUGH GILBERT STRICKLAND POST #138 AMER LEGION

A-18-30-18-ZZZ-000005-56090.0

SCALE: (1 Inch = 20 Feet)

EXISTING VAULT 3 REPLACEMENT OF VAULT INCLUDING VALVES & TIE-IN
FLBXX – EXISTING 8" TAMPA BAY CROSSING &
FLBXX – EXISTING 4" TAMPA WEST LATERAL TO PGS
FLBXZ – EXISTING 4" TO NATIONAL GYPSUM

WATER METER

0.06 ACRES

0.002 ACRES

EXISTING VAULT 3

FLBXX – EXISTING 8" TAMPA BAY CROSSING

2" HDPE WATER LINE

EXISTING EASEMENT

FLBXX – EXISTING 4" TAMPA WEST LATERAL TO PGS

0.06 ACRES

FLBXZ – EXISTING 4" TO NATIONAL GYPSUM

EDGE OF PAVEMENT

EXISTING EASEMENT

20' FGT EASEMENT

ACCESS ROAD TAR-002
(PRIVATE)
0.21 ACRES

WEST PRESCOTT ST.

EDGE OF PAVEMENT

0.26 ACRES

INGRESS/EGRESS SHALL BE MAINTAINED THROUGH THE TEMPORARY WORKSPACE TO THE AMERICAN LEGION POST 138.

LEGEND

- TEMPORARY WORKSPACE
- EXISTING EASEMENT IN WORKSPACE
- EXISTING PIPELINE
- PROPOSED PIPELINE
- POWER POLE
- EXISTING EASEMENT
- EDGE OF WORKSPACE
- POWER LINE
- WATER LINE
- VALVE

NO.	REVISION – DESCRIPTION	BY	DATE	CHK'D	APP'D
C	FERC ISSUE REV 1	MWC	10/07/22	HRL	MLK
B	FERC ISSUE	MWC	09/30/22	HRL	MLK
A	ISSUED FOR REVIEW	MWC	09/22/22	HRL	MLK

DWG. STATUS	CHECKED BY	CHECKED DATE	APPROVED BY	APPROVED DATE	APPROVED BY	APPROVED DATE
PREL'Y						
BID						
CONSTR.						
CADDS	PLOT DATE:					
	FILE NAME: FLBXX-TEMP-012					

P.L./STA. NO.

CONSTRUCTION YEAR

	BY	DATE
DESIGN	MWC	09/13/22
DRAWN	MWC	09/20/22
ASBUILT		

FILE NO.

SCALE: 1"=20'

Florida Gas Transmission Company
An Energy Transfer/Kinder Morgan Affiliate
FLORIDA GAS TRANSMISSION CO.
MAITLAND, FLORIDA

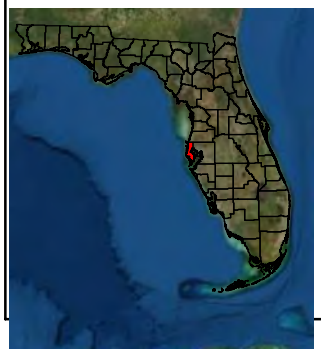
TAMPA WEST LATERAL
VAULT THREE
REPLACEMENT
HILLSBOROUGH COUNTY,
FLORIDA

PROJECT NO. C-22075-GL-94300153
PREVIOUS DWG. NO. FLBXX-HILL-002
SHEET 1 OF 1
DWG. NO. FLBXX-TEMP-012 C
SHEET 10 OF 10

SAVEDBY: MCARROLL.20221007.15:24 | FILEPATH: H:\PROJECT\220804\DWG\ALIGNMENTS\FLBXX-TEMP-012.DWG/X3_SITE12

Appendix A-3

Known Contaminated Sites Within 500 Feet of Project Work Areas



Contamination Sites
500-ft Buffer
Temporary Workspace
Proposed 8" Tampa West Loop
Existing Pipelines
Mean High Water Line

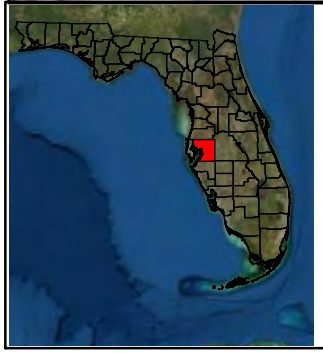
Florida Gas Transmission Company, LLC
Tampa West Project
Appendix A-3
Known Contaminated Sites Within
500 Feet of Work Areas
MP 0.00 to MP 1.26
Pinellas County, Florida

Source: FDEP

Appendix A-3
Contamination Maps

1 inch = 2,000 feet

N



Contamination Sites
500-ft Buffer
Temporary Workspace
Vaults
Existing Pipelines
Access Roads

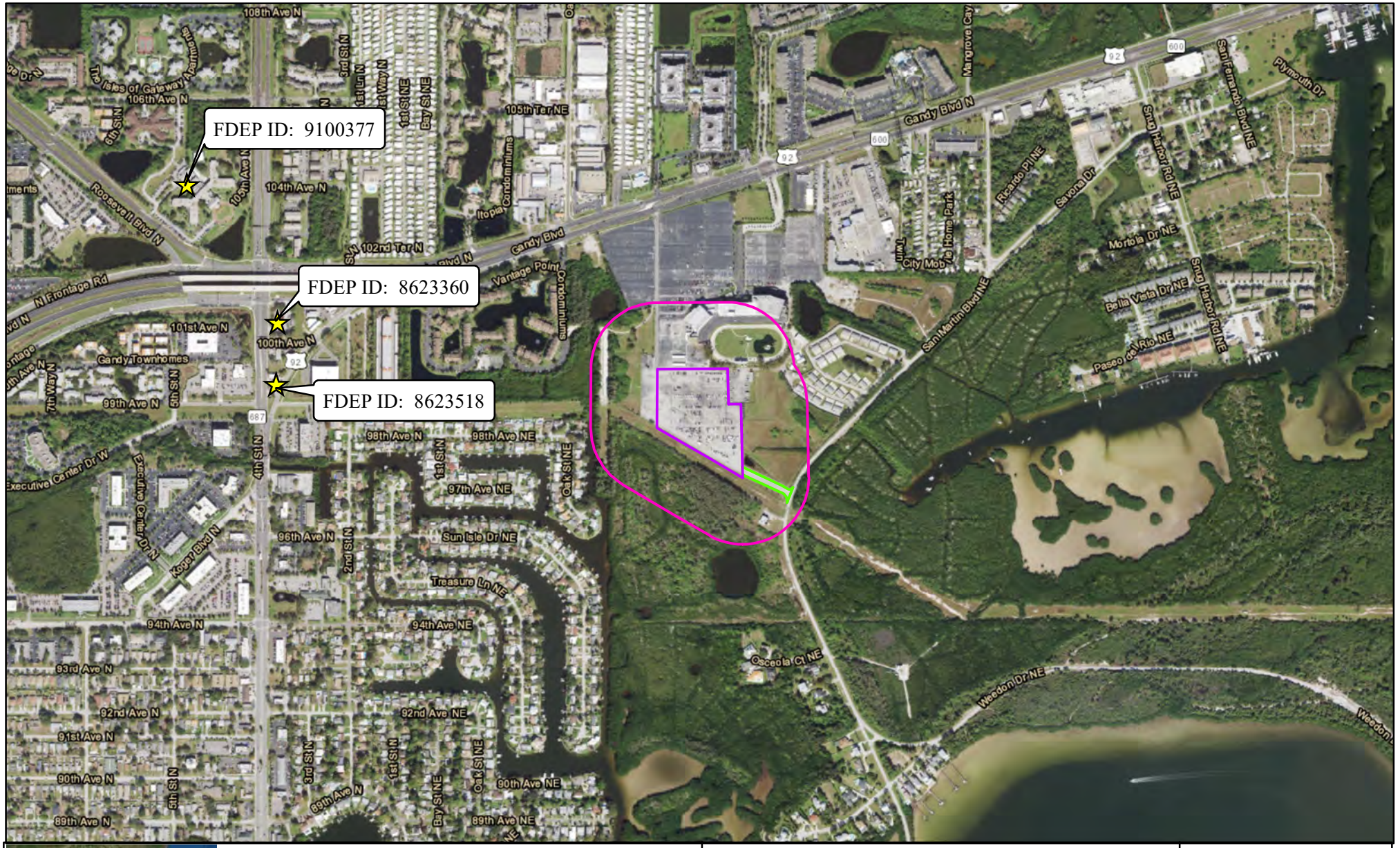
Florida Gas Transmission Company, LLC
Tampa West Project
Appendix A-3
Known Contaminated Sites Within
500 Feet of Work Areas
Vault 3 @ MP 4.58
Hillsborough County, Florida

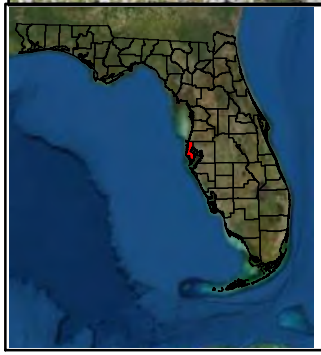
Source: FDEP

Appendix A-3
Contamination Sites

1 inch = 600 feet

N





Contamination Sites

500-ft Buffer

Contractor Yard

Access Roads

Florida Gas Transmission Company, LLC
Tampa West Project
Appendix A-3
Known Contaminated Sites Within
500 Feet of Work Areas
Contractor Yard
Pinellas County, Florida

Source: FDEP

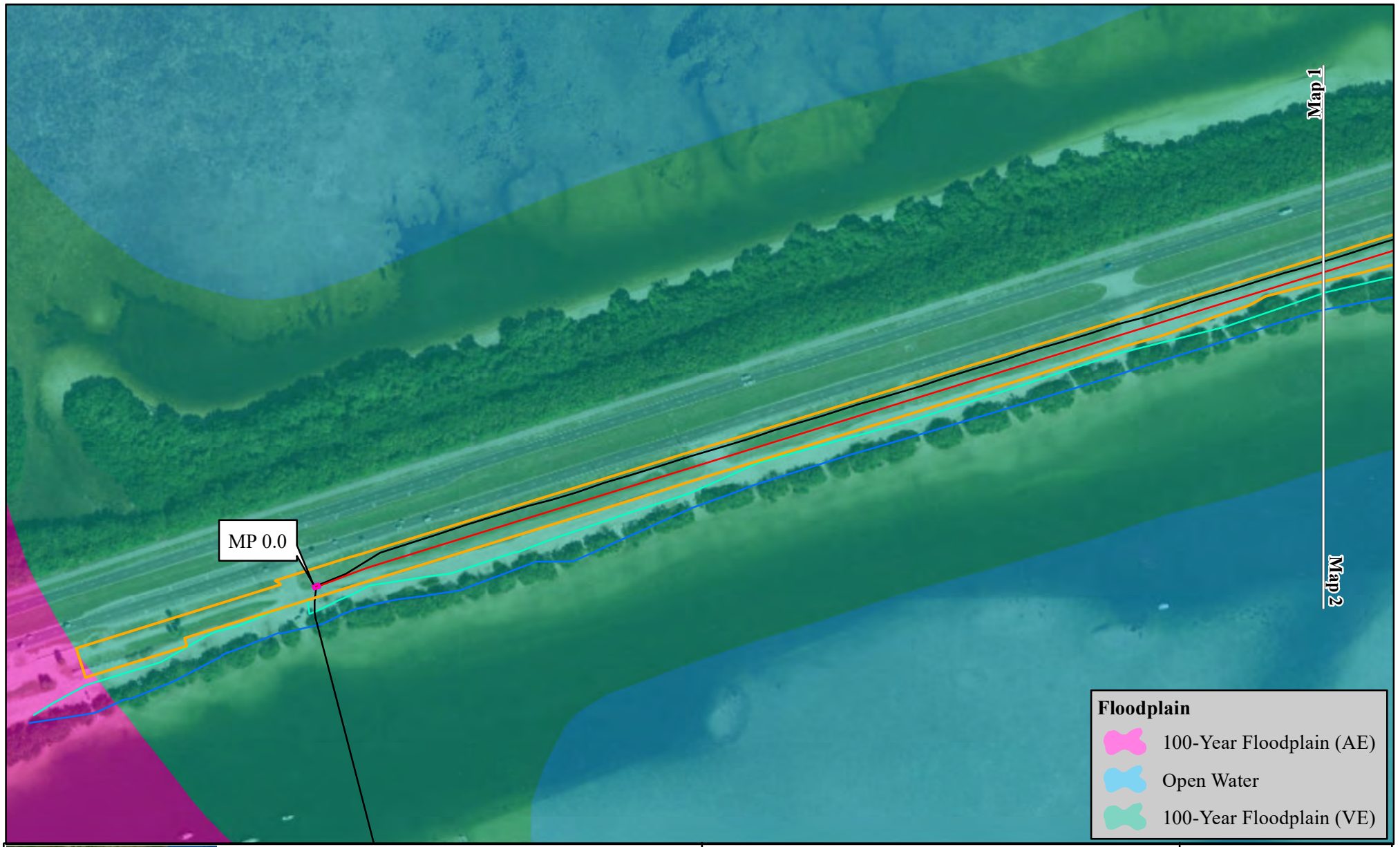
Appendix A-3
Contamination Maps

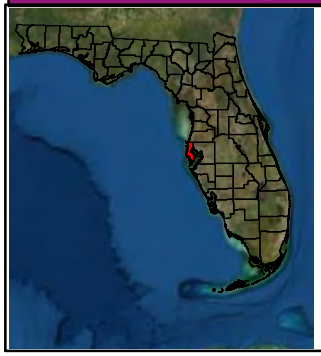
1 inch = 1,000 feet

N

Appendix A-4

Federal Emergency Management Agency (FEMA) Flood Plain Mapping





Temporary Workspace
Vaults
Proposed 8" Tampa West Loop
Existing Pipelines
Mean High Water Line
Astronomical High Tide Line

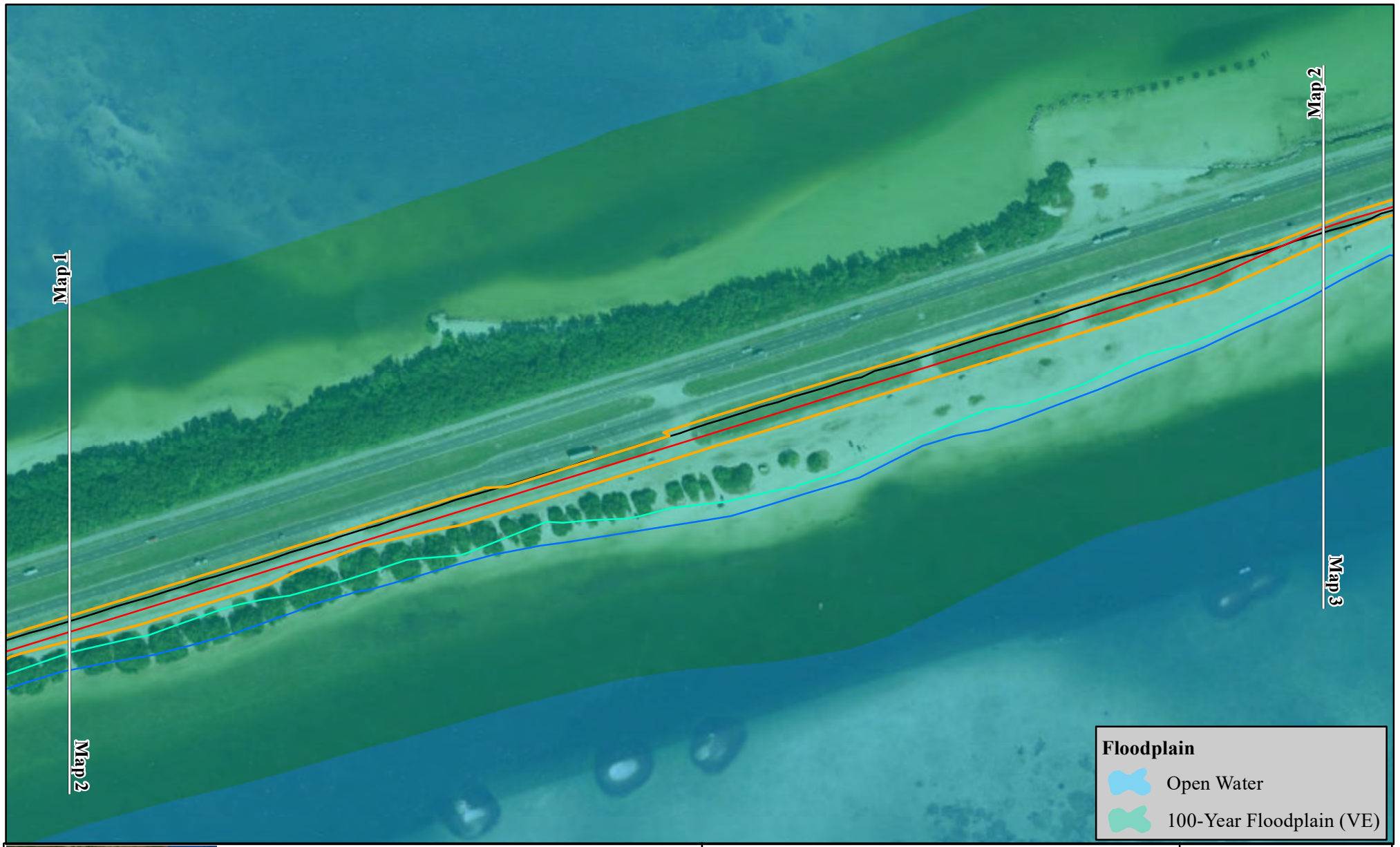
Florida Gas Transmission Company, LLC
Tampa West Project
Appendix A-3
Federal Emergency Management Agency
(FEMA) Floodplain Maps
Map 1 of 4
Pinellas County, Florida

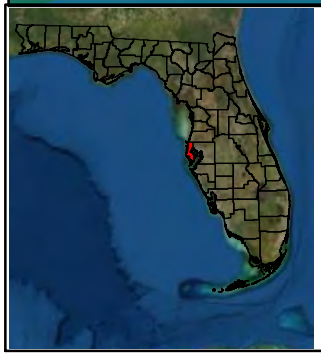
Source: FEMA

Appendix A-4
Floodplain Maps

1 inch = 300 feet

N





Temporary Workspace

Proposed 8" Tampa West Loop

Existing Pipelines

Mean High Water Line

Astronomical High Tide Line

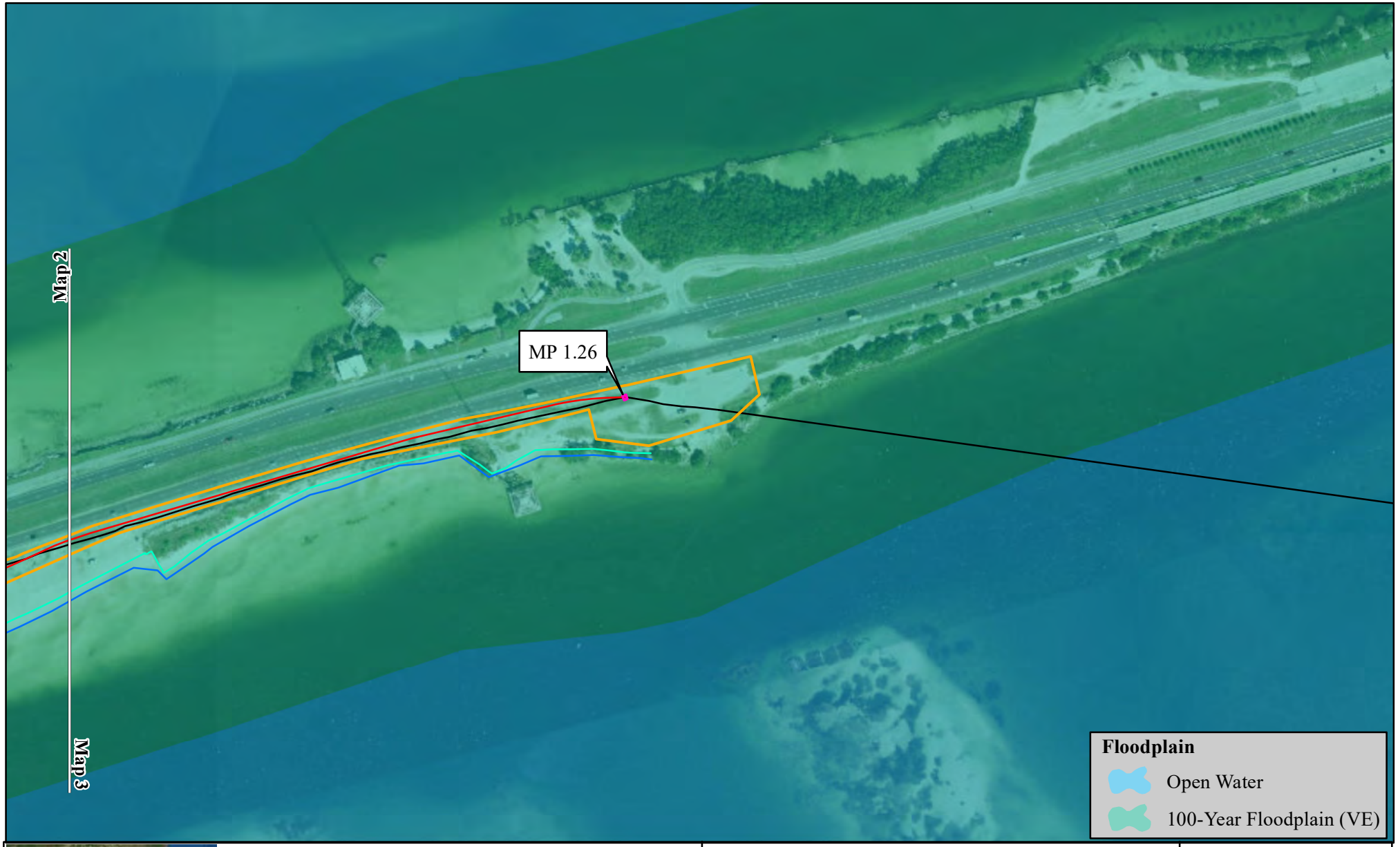
Florida Gas Transmission Company, LLC
Tampa West Project
Appendix A-3
Federal Emergency Management Agency
(FEMA) Floodplain Maps
Map 2 of 4
Pinellas County, Florida

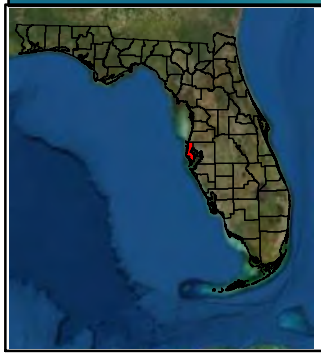
Source: FEMA

Appendix A-4
Floodplain Maps

1 inch = 300 feet

N





Temporary Workspace
Vaults
Proposed 8" Tampa West Loop
Existing Pipelines
Mean High Water Line
Astronomical High Tide Line

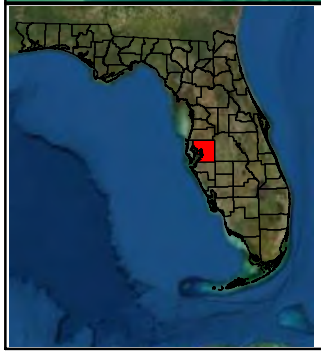
Florida Gas Transmission Company, LLC
Tampa West Project
Appendix A-3
Federal Emergency Management Agency
(FEMA) Floodplain Maps
Map 3 of 4
Pinellas County, Florida

Source: FEMA

Appendix A-4
Floodplain Maps

1 inch = 300 feet

N



Temporary Workspace
Vaults
Existing Pipelines
Access Roads

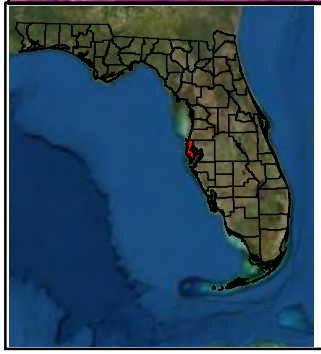
Florida Gas Transmission Company, LLC
Tampa West Project
Appendix A-3
Federal Emergency Management Agency
(FEMA) Floodplain Maps
Map 4 of 4
Hillsborough County, Florida

Source: FEMA

Appendix A-4
Floodplain Maps

1 inch = 100 feet

N



Contractor Yard

Access Roads

Florida Gas Transmission Company, LLC
Tampa West Project
Appendix A-3
Federal Emergency Management Agency
(FEMA) Floodplain Maps
Contractor Yard
Pinellas County, Florida

Source: FEMA

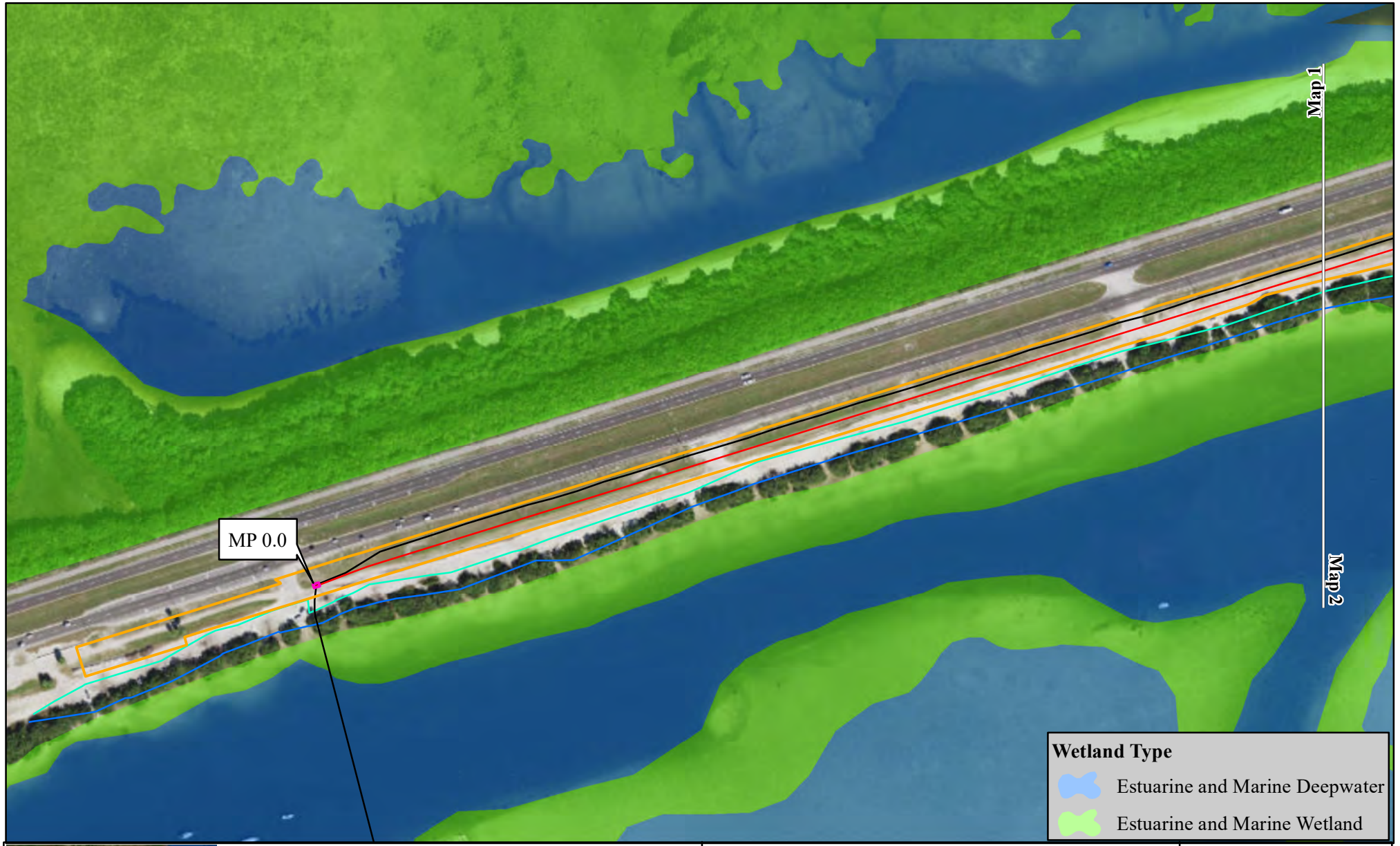
Appendix A-4
Floodplain Maps

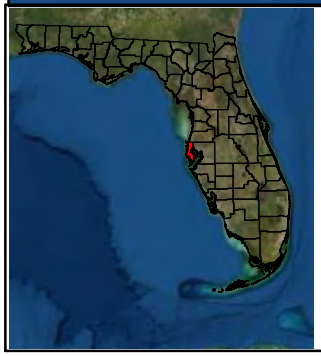
1 inch = 200 feet

N

Appendix A-5

U.S. Fish and Wildlife Service National Wetlands Inventory Mapping





Temporary Workspace
Vaults
Proposed 8" Tampa West Loop
Existing Pipelines
Mean High Water Line
Astronomical High Tide Line

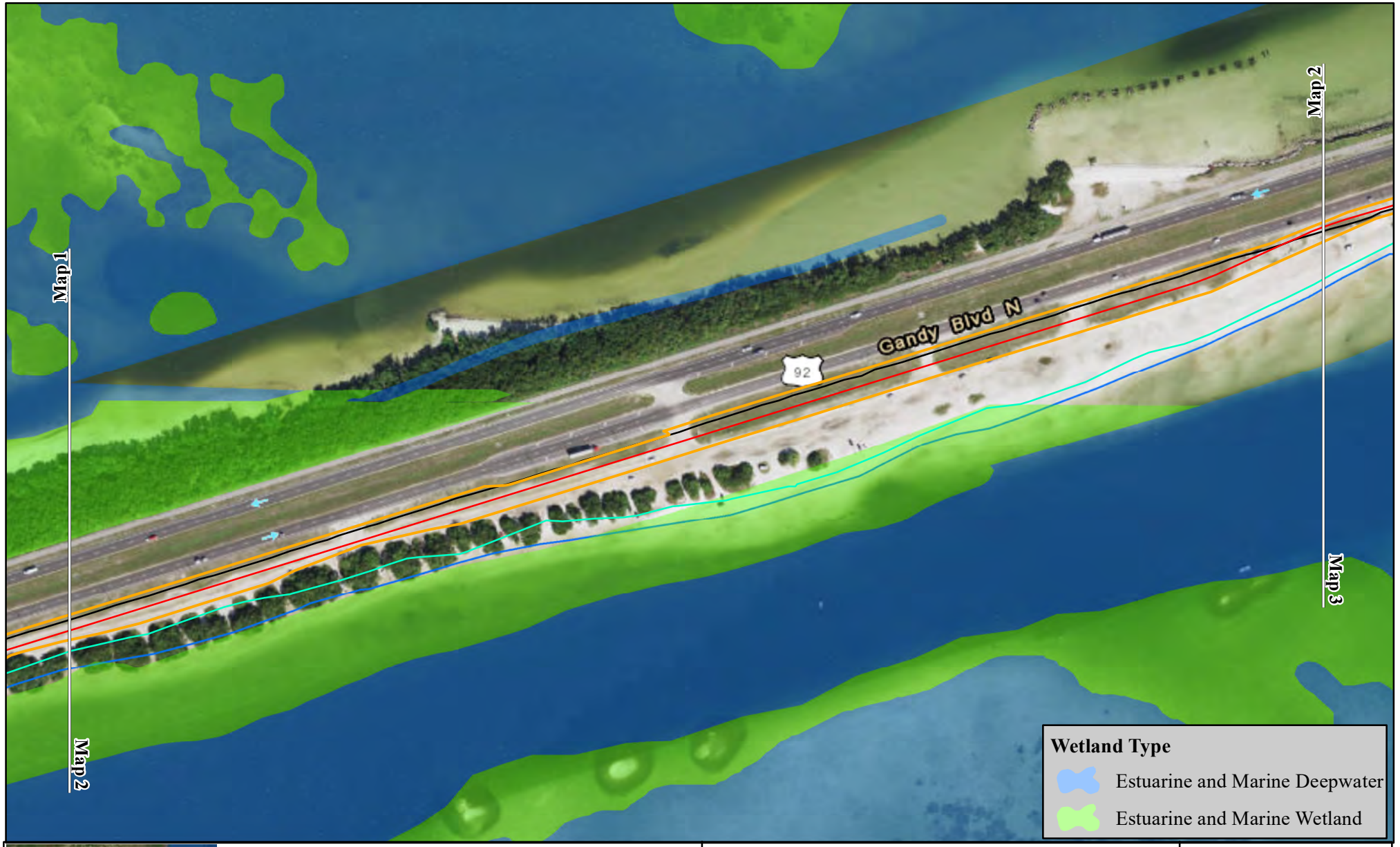
Florida Gas Transmission Company, LLC
Tampa West Project
Appendix A-5
USFWS National Wetlands Inventory
(NWI) Wetland Map
Map 1 of 4
Pinellas County, Florida

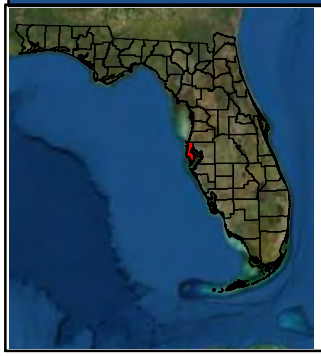
Source: USFWS NWI

Appendix A- 5
USFWS NWI Maps

1 inch = 300 feet

N





Temporary Workspace

Proposed 8" Tampa West Loop

Existing Pipelines

Astronomical High Tide Line

Mean High Water Line

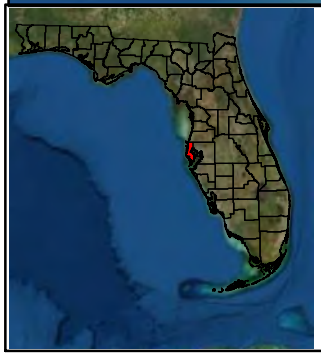
Florida Gas Transmission Company, LLC
Tampa West Project
Appendix A-5
USFWS National Wetlands Inventory
(NWI) Wetland Map
Map 2 of 4
Pinellas County, Florida

Source: USFWS NWI

Appendix A- 5
USFWS NWI Maps

1 inch = 300 feet

N



- Temporary Workspace
- Vaults
- Proposed 8" Tampa West Loop
- Existing Pipelines
- Mean High Water Line
- Astronomical High Tide Line

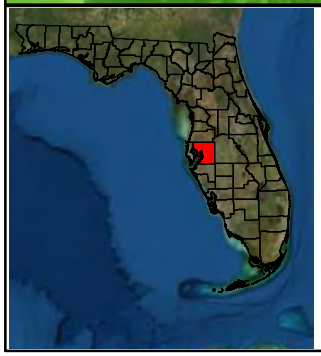
Florida Gas Transmission Company, LLC
Tampa West Project
Appendix A-5
USFWS National Wetlands Inventory
(NWI) Wetland Map
Map 3 of 4
Pinellas County, Florida

Source: USFWS NWI

Appendix A- 5
USFWS NWI Maps

1 inch = 300 feet

N



Temporary Workspace
Vaults
Existing Pipelines
Access Roads

Florida Gas Transmission Company, LLC
Tampa West Project

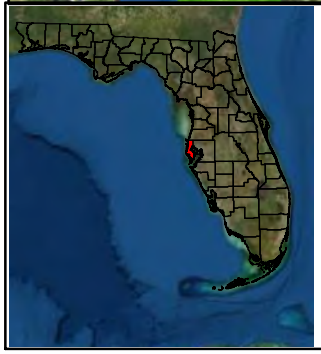
Appendix A-5
USFWS National Wetlands Inventory
(NWI) Wetland Map
Map 4 of 4
Hillsborough County, Florida

Source: USFWS NWI

Appendix A- 5
USFWS NWI Maps

1 inch = 100 feet

N



Contractor Yard

Access Roads

Florida Gas Transmission Company, LLC
Tampa West Project

Appendix A-5
USFWS National Wetlands Inventory
(NWI) Wetland Maps
Contractor Yard
Pinellas County, Florida

Source: USFWS NWI

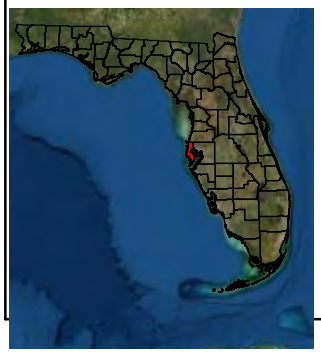
Appendix A- 5
USFWS NWI Maps

1 inch = 200 feet

N

Appendix A-6

Vegetative Cover Type Mapping



Temporary Workspace

Vaults

Proposed 8" Tampa West Loop

Existing Pipelines

Astronomical High Tide Line

Mean High Water Line

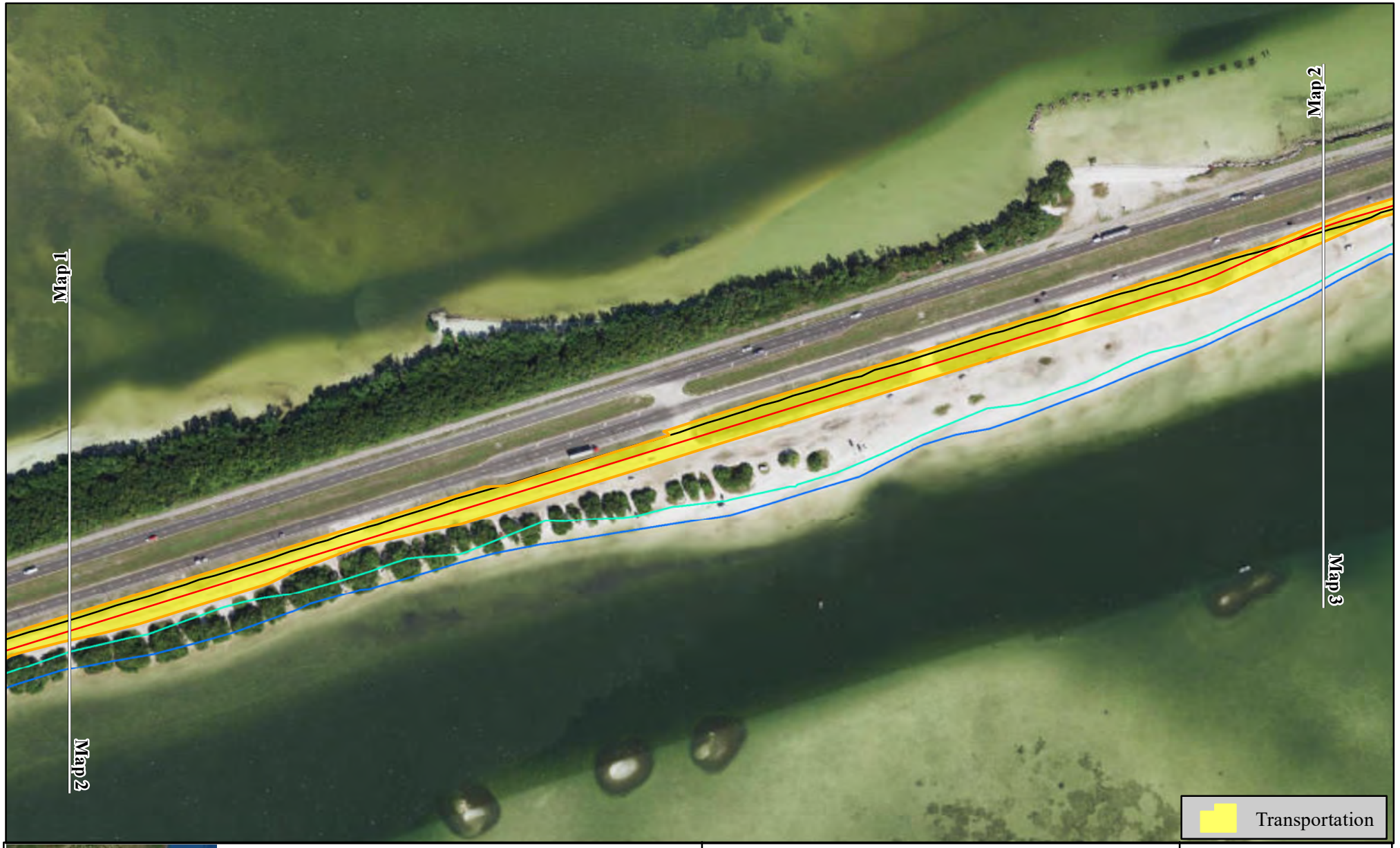
Florida Gas Transmission Company, LLC
Tampa West Project

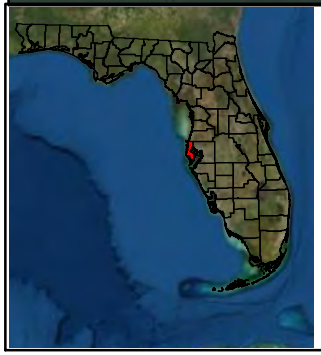
Appendix A-6
Vegetative Cover Type Maps
Map 1 of 4
Pinellas County, Florida

Appendix A-6
Vegetative Cover
Type Maps

1 inch = 300 feet

N





Temporary Workspace

Proposed 8" Tampa West Loop

Existing Pipelines

Mean High Water Line

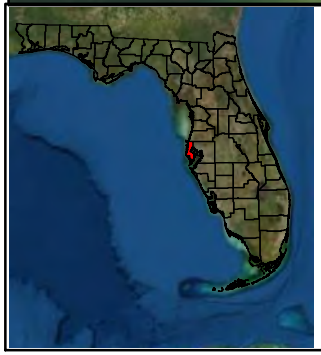
Astronomical High Tide Line

Florida Gas Transmission Company, LLC
Tampa West Project
Appendix A-6
Vegetative Cover Type Maps
Map 2 of 4
Pinellas County, Florida

Appendix A-6
Vegetative Cover
Type Maps

1 inch = 300 feet

N



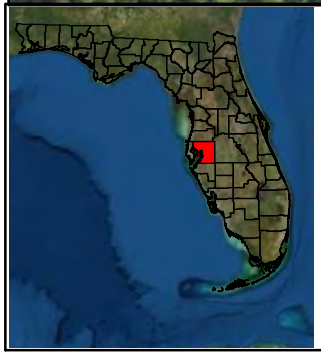
- Temporary Workspace
- Vaults
- Proposed 8" Tampa West Loop
- Existing Pipelines
- Mean High Water Line
- Astronomical High Tide Line

Florida Gas Transmission Company, LLC
Tampa West Project
Appendix A-6
Vegetative Cover Type Maps
Map 3 of 4
Pinellas County, Florida

Appendix A-6
Vegetative Cover
Type Maps

1 inch = 300 feet

N



Temporary Workspace
Vaults
Existing Pipelines
Access Roads

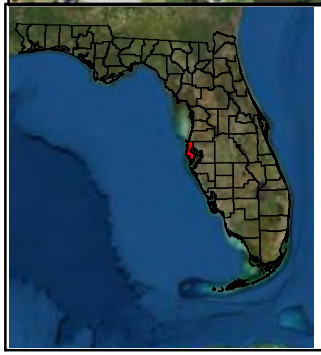
Florida Gas Transmission Company, LLC
Tampa West Project
Appendix A-6
Vegetative Cover Type Maps
Map 4 of 4
Hillsborough County, Florida

Source: SWFWMD

Appendix A-6
Vegetative Cover
Type Maps

1 inch = 100 feet

N



Contractor Yard

Access Roads

Florida Gas Transmission Company, LLC
Tampa West Project
Appendix A-6
Vegetative Cover Type Maps
Contractor Yard
Pinellas County, Florida

Source: SWFWMD

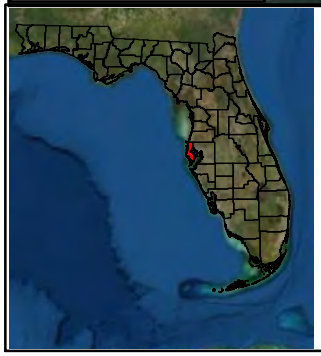
Appendix A-6
Vegetative Cover
Type Maps

1 inch = 200 feet

N

Appendix A-7

Natural Resource Conservation Service Soils Mapping



Temporary Workspace
Vaults
Proposed 8" Tampa West Loop
Existing Pipelines
Mean High Water Line
Astronomical High Tide Line

Florida Gas Transmission Company, LLC
Tampa West Project

Appendix A-7
Natural Resources Conservation Service
(NRCS) Soils Map
Map 1 of 4
Pinellas County, Florida

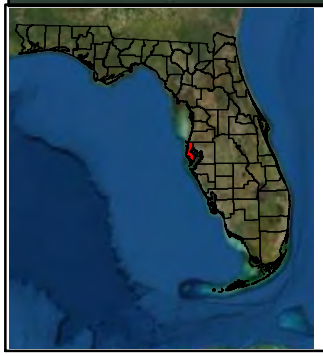
Source: USDA NRCS

Appendix A-7
NRCS Soils Maps

1 inch = 300 feet

N

Soil ID	Soil Name
16	Matlacha and St. Augustine soils and Urban land
100	Waters of the Gulf of Mexico



NRCS Soils
Temporary Workspace
Proposed 8" Tampa West Loop
Existing Pipelines
Mean High Water Line
Astronomical High Tide Line

Florida Gas Transmission Company, LLC
Tampa West Project
Appendix A-7
Natural Resources Conservation Service
(NRCS) Soils Maps
Map 2 of 4
Pinellas County, Florida

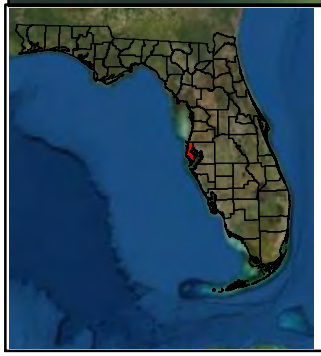
Source: USDA NRCS

Appendix A-7
NRCS Soils Maps

1 inch = 300 feet

N

Soil ID	Soil Name
16	Matlacha and St. Augustine soils and Urban land
100	Waters of the Gulf of Mexico



- Temporary Workspace
- Vaults
- Proposed 8" Tampa West Loop
- Existing Pipelines
- Mean High Water Line
- Astronomical High Tide Line

Florida Gas Transmission Company, LLC
Tampa West Project
Appendix A-7
Natural Resources Conservation Service
(NRCS) Soils Maps
Map 3 of 4
Pinellas County, Florida

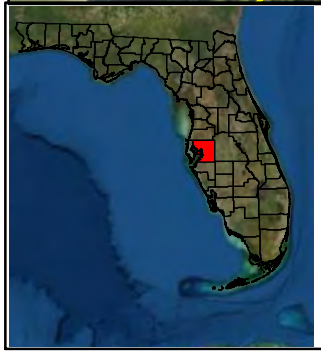
Source: USDA NRCS

Appendix A-7
NRCS Soils Maps

1 inch = 300 feet

N

Soil ID	Soil Name
30	Myakka fine sand, frequently flooded
100	Waters of the Gulf of Mexico



NRCS Soils
Temporary Workspace
Vaults
Existing Pipelines
Access Roads

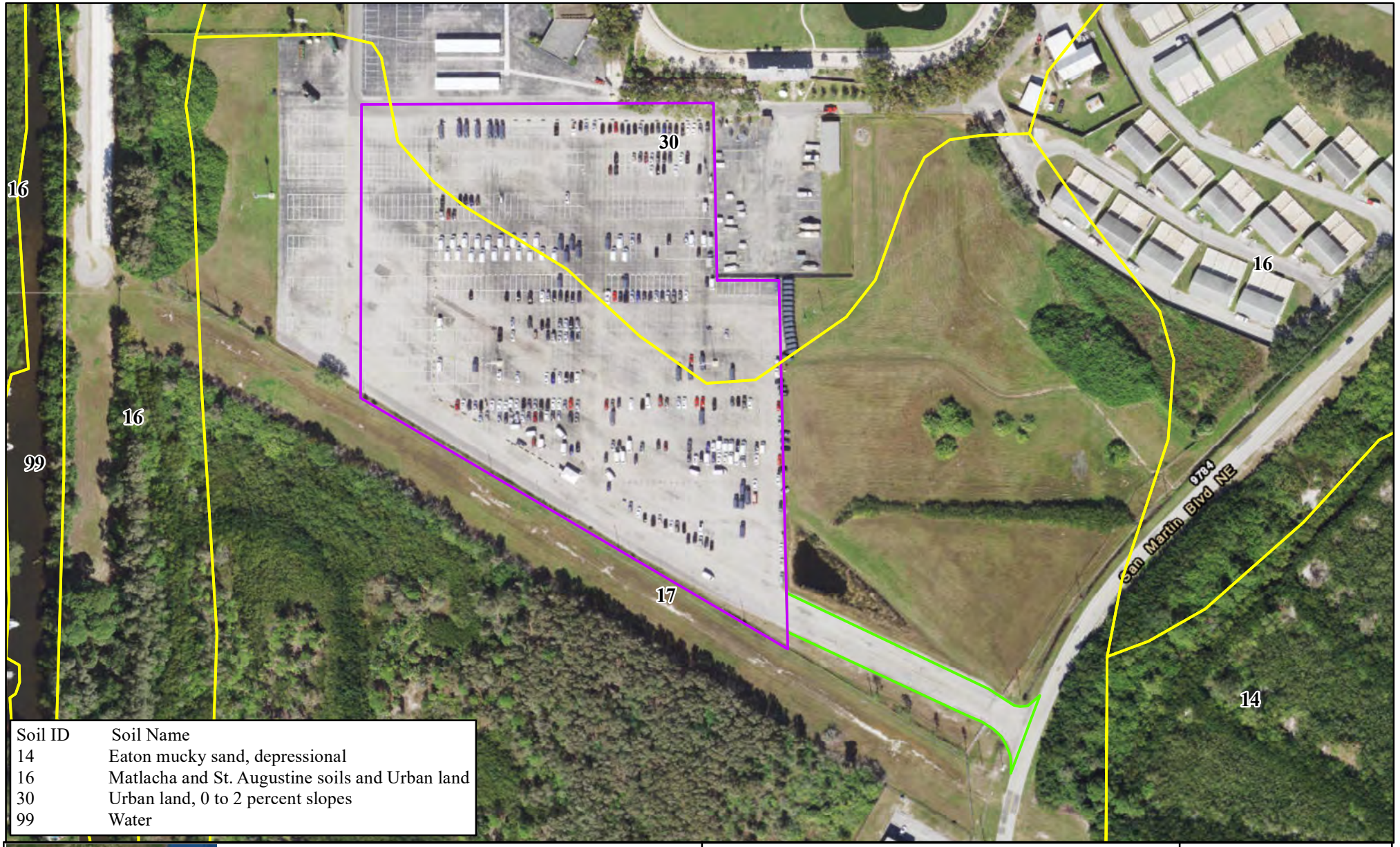
Florida Gas Transmission Company, LLC
Tampa West Project
Appendix A-7
Natural Resources Conservation Service
(NRCS) Soils Maps
Map 4 of 4
Hillsborough County, Florida

Source: USDA NRCS

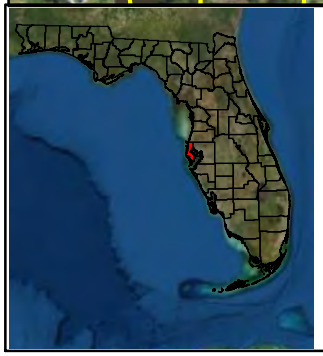
Appendix A-7
NRCS Soils Maps

1 inch = 100 feet

N



Soil ID	Soil Name
14	Eaton mucky sand, depressional
16	Matlacha and St. Augustine soils and Urban land
30	Urban land, 0 to 2 percent slopes
99	Water



NRCS Soils

Contractor Yard

Access Roads

Florida Gas Transmission Company, LLC
Tampa West Project
Appendix A-7
Natural Resources Conservation Service
(NRCS) Soils Maps
Contractor Yard
Pinellas County, Florida

Source: USDA NRCS

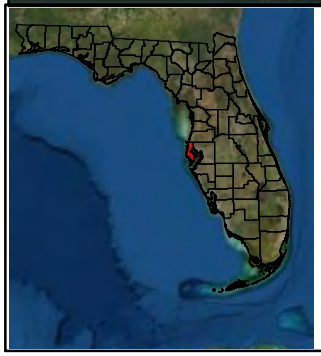
Appendix A-7
NRCS Soils Maps

1 inch = 200 feet

N

Appendix A-8

Florida Land Use and Cover Classification System (FLUCCS) Mapping



Temporary Workspace

Vaults

Proposed 8" Tampa West Loop

Existing Pipelines

Mean High Water Line

Astronomical High Tide Line

Florida Gas Transmission Company, LLC
Tampa West Project

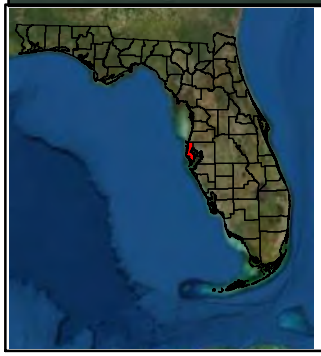
Appendix A-8
Florida Land Use, Cover and and Forms Classification System
(FLUCCS) Land Use Maps
Map 1 of 4
Pinellas County, Florida

Source: SWFWMD

Appendix A-8
Land Use Maps

1 inch = 300 feet

N



Temporary Workspace

Proposed 8" Tampa West Loop

Existing Pipelines

Mean High Water Line

Astronomical High Tide Line

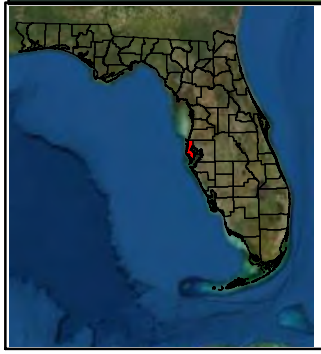
Florida Gas Transmission Company, LLC
Tampa West Project
Appendix A-8
Florida Land Use, Cover and and Forms Classification System
(FLUCCS) Land Use Maps
Map 2 of 4
Pinellas County, Florida

Source: SWFWMD

Appendix A-8
Land Use Maps

1 inch = 300 feet

N



Temporary Workspace

Vaults

Proposed 8" Tampa West Loop

Existing Pipelines

Mean High Water Line

Astronomical High Tide Line

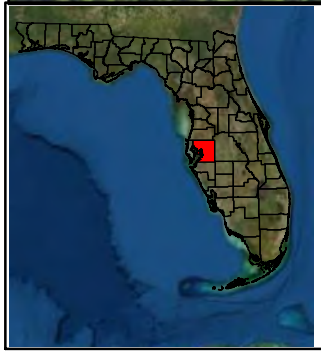
Florida Gas Transmission Company, LLC
Tampa West Project
Appendix A-8
Florida Land Use, Cover and and Forms Classification System
(FLUCCS) Land Use Maps
Map 3 of 4
Pinellas County, Florida

Source: SWFWMD

Apppendix A-8
Land Use Maps

1 inch = 300 feet

N



Temporary Workspace

Vaults

Existing Pipelines

Access Roads

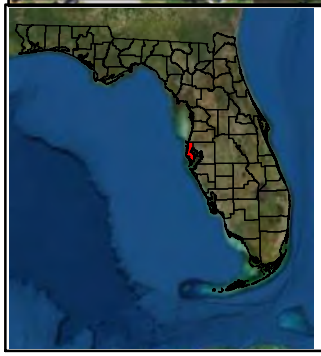
Florida Gas Transmission Company, LLC
Tampa West Project
Appendix A-8
Florida Land Use, Cover and and Forms Classification System
(FLUCCS) Land Use Maps
Map 4 of 4
Hillsborough County, Florida

Source: SWFWMD

Appendix A-8
Land Use Maps

1 inch = 100 feet

N



Contractor Yard

Access Roads

Florida Gas Transmission Company, LLC
Tampa West Project
Appendix A-8
Florida Land Use, Cover and Forms
Classification System
(FLUCCS) Land Use
Contractor Yard
Pinellas County, Florida

Source: SWFWMD

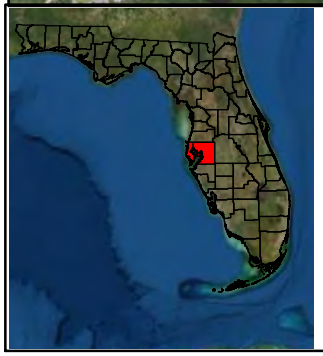
Appendix A-8
Land Use Maps

1 inch = 200 feet

N

Appendix A-9

Pipeline Alternatives



Pipeline Alternative 1

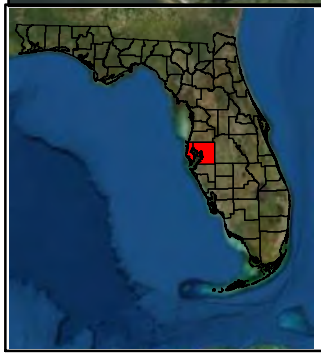
Florida Gas Transmission Company, LLC
Tampa West Project

Appendix A-9
Pipeline Alternatives Map
Pinellas and Hillsborough County, Florida

Appendix A-9
Alternatives Map

1 in = 0.5 miles

N



Pipeline Alternative 2

Florida Gas Transmission Company, LLC
Tampa West Project

Appendix A-9
Pipeline Alternatives Map
Pinellas and Hillsborough County, Florida

Appendix A-9
Alternatives Map

1 in = 0.6 miles

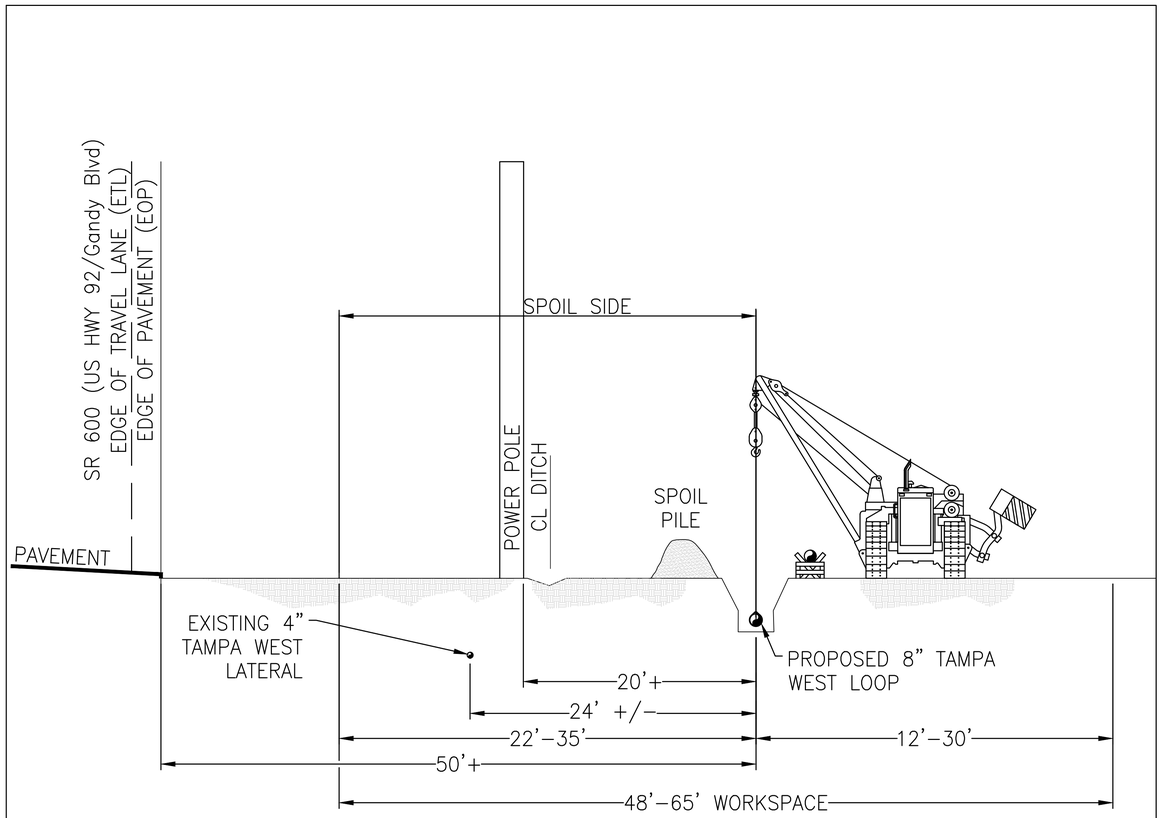
N

Appendix B Typical Drawings

B-1 Right-of-Way Configuration Cross Section Typical Drawings

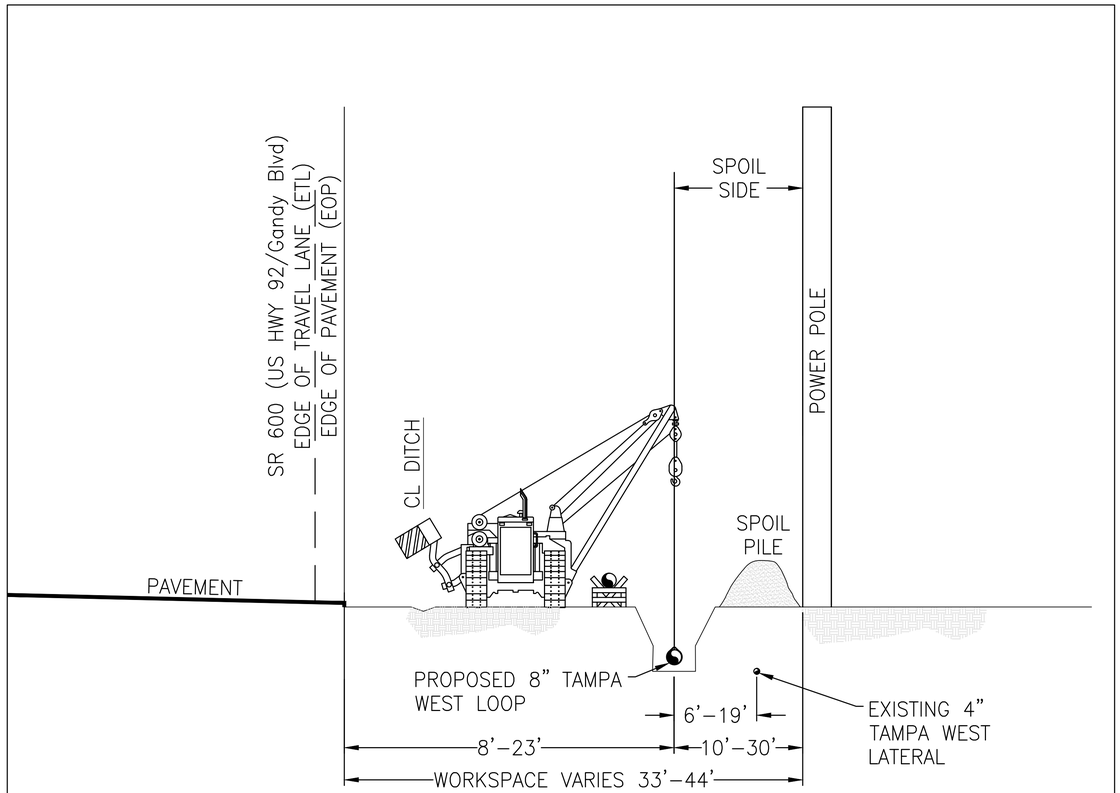
Appendix B-1

Right-of-Way Configuration Cross Section Typical Drawings



NOTE: TRENCH IS TYPICALLY 56" DEEP & EXCAVATED PER OSHA STANDARDS.

FGT MP 0.000 TO MP 0.998



NOTE: TRENCH IS TYPICALLY 56" DEEP & EXCAVATED PER OSHA STANDARDS.

FGT MP 0.998 TO MP 1.259

PREPARED BY:
hbk ENGINEERING
HBK ENGINEERING, LLC
39 SKYLINE DRIVE, SUITE 1017
LAKE MARY, FL 32746
PHONE: (407) 698-5060 FAX:(407) 732-4155
STATE OF FLORIDA, DEPARTMENT OF PROFESSIONAL REGULATION. LICENSE NO. 31896

MARC L. KATZ
No. 86749
STATE OF FLORIDA
PROFESSIONAL ENGINEER

NO.	REVISION – DESCRIPTION	BY	DATE	CHK'D	APP'D
A	ISSUED FOR FERC	SDS	11/01/22	HRL	MLK

DWG. STATUS	CHECKED BY	CHECKED DATE	APPROVED BY	APPROVED DATE	BY	DATE
PREL'Y						
BID						
CONSTR.						
CADDS	PLOT DATE:					
	FILE NAME: FLBXX-TEMP-023					

P.L./STA. NO.		
CONSTRUCTION YEAR		
	BY	DATE
DESIGN	MWC	09/22/22
DRAWN	MWC	09/22/22
ASBUILT		
FILE NO.		
SCALE: 1" = 300'		

Florida Gas Transmission Company
An Energy Transfer/Kinder Morgan Affiliate
FLORIDA GAS TRANSMISSION CO
MAITLAND, FLORIDA

FLBWD – 8" TAMPA WEST LOOP
FLBXX – 4" TAMPA WEST LATERAL
TYPICAL SECTIONS
PINELLAS COUNTY,
FLORIDA

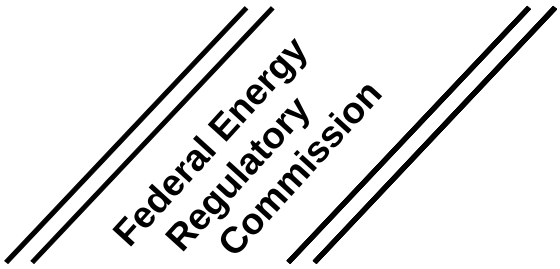
PROJECT NO. C-22075-GL-94300153
PREVIOUS DWG. NO.
SHEET OF
DWG. NO. FLBXX-TEMP-023 A
SHEET 1 OF 2

Appendix C FGT Construction Mitigation Plans

C-1 FERC Upland Erosion Control and Revegetation and Maintenance Plan
C-2 FERC Wetland and Waterbody Construction and Mitigation Procedures
C-3 FGT Spill Prevention and Response (SPAR) Plan
C-4 FGT Unanticipated Discovery Plan
C-5 FGT Fugitive Dust Control Plan
C-6 FGT Environmental Complaint Resolution Procedures
C-7 FL NRCS Post-Construction Vegetative Restoration Recommendations for Utility Pipelines

Appendix C-1

FERC Upland Erosion Control and Revegetation and Maintenance Plan



Office of
Energy Projects

May 2013

UPLAND EROSION CONTROL, REVEGETATION, AND MAINTENANCE PLAN

Washington, DC 20426

MAY 2013 VERSION

UPLAND EROSION CONTROL, REVEGETATION, AND MAINTENANCE PLAN

TABLE OF CONTENTS

UPLAND EROSION CONTROL, REVEGETATION, AND MAINTENANCE PLAN (PLAN)

I. APPLICABILITY

A. The intent of this Plan is to assist project sponsors by identifying baseline mitigation measures for minimizing erosion and enhancing revegetation. Project sponsors shall specify in their applications for a new FERC authorization and in prior notice and advance notice filings, any individual measures in this Plan they consider unnecessary, technically infeasible, or unsuitable due to local conditions and fully describe any alternative measures they would use. Project sponsors shall also explain how those alternative measures would achieve a comparable level of mitigation.

Once a project is authorized, project sponsors can request further changes as variances to the measures in this Plan (or the applicant's approved plan). The Director of the Office of Energy Projects (Director) will consider approval of variances upon the project sponsor's written request, if the Director agrees that a variance:

1. provides equal or better environmental protection;

2. is necessary because a portion of this Plan is infeasible or unworkable based on project-specific conditions; or

3. is specifically required in writing by another federal, state, or Native American land management agency for the portion of the project on its land or under its jurisdiction.

Sponsors of projects planned for construction under the automatic authorization provisions in the FERC's regulations must receive written approval for any variances in advance of construction.

Project-related impacts on wetland and waterbody systems are addressed in the staff's Wetland and Waterbody Construction and Mitigation Procedures (Procedures).

II. SUPERVISION AND INSPECTION

A. ENVIRONMENTAL INSPECTION

1. At least one Environmental Inspector is required for each construction spread during construction and restoration (as defined by section V). The number and experience of Environmental Inspectors assigned to each construction spread shall be appropriate for the length of the construction spread and the number/significance of resources affected.

2. Environmental Inspectors shall have peer status with all other activity inspectors.

3. Environmental Inspectors shall have the authority to stop activities that violate the environmental conditions of the FERC's Orders, stipulations of other environmental permits or approvals, or landowner easement agreements; and to order appropriate corrective action.

B. RESPONSIBILITIES OF ENVIRONMENTAL INSPECTORS

At a minimum, the Environmental Inspector(s) shall be responsible for:

1. Inspecting construction activities for compliance with the requirements of this Plan, the Procedures, the environmental conditions of the FERC's Orders, the mitigation measures proposed by the project sponsor (as approved and/or modified by the Order), other environmental permits and approvals, and environmental requirements in landowner easement agreements.

2. Identifying, documenting, and overseeing corrective actions, as necessary to bring an activity back into compliance;

3. Verifying that the limits of authorized construction work areas and locations of access roads are visibly marked before clearing, and maintained throughout construction;

4. Verifying the location of signs and highly visible flagging marking the boundaries of sensitive resource areas, waterbodies, wetlands, or areas with special requirements along the construction work area;

5. Identifying erosion/sediment control and soil stabilization needs in all areas;

6. Ensuring that the design of slope breakers will not cause erosion or direct water into sensitive environmental resource areas, including cultural resource sites, wetlands, waterbodies, and sensitive species habitats;

7. Verifying that dewatering activities are properly monitored and do not result in the deposition of sand, silt, and/or sediment into sensitive environmental resource areas, including wetlands, waterbodies, cultural resource sites, and sensitive species habitats; stopping dewatering activities if such deposition is occurring and ensuring the design of the discharge is changed to prevent reoccurrence; and verifying that dewatering structures are removed after completion of dewatering activities;

8. Ensuring that subsoil and topsoil are tested in agricultural and residential areas to measure compaction and determine the need for corrective action;

9. Advising the Chief Construction Inspector when environmental conditions (such as wet weather or frozen soils) make it advisable to restrict or delay construction activities to avoid topsoil mixing or excessive compaction;

10. Ensuring restoration of contours and topsoil;

11. Verifying that the soils imported for agricultural or residential use are certified as free of noxious weeds and soil pests, unless otherwise approved by the landowner;

12. Ensuring that erosion control devices are properly installed to prevent sediment flow into sensitive environmental resource areas (e.g., wetlands, waterbodies, cultural resource sites, and sensitive species habitats) and onto roads, and determining the need for additional erosion control devices;

13. Inspecting and ensuring the maintenance of temporary erosion control measures at least:

    a. on a daily basis in areas of active construction or equipment operation;

    b. on a weekly basis in areas with no construction or equipment operation; and

    c. within 24 hours of each 0.5 inch of rainfall;

14. Ensuring the repair of all ineffective temporary erosion control measures within 24 hours of identification, or as soon as conditions allow if compliance with this time frame would result in greater environmental impacts;

15. Keeping records of compliance with the environmental conditions of the FERC's Orders, and the mitigation measures proposed by the project sponsor in the application submitted to the FERC, and other federal or state environmental permits during active construction and restoration;

16. Identifying areas that should be given special attention to ensure stabilization and restoration after the construction phase; and

17. Verifying that locations for any disposal of excess construction materials for beneficial reuse comply with section III.E.

III. PRECONSTRUCTION PLANNING

The project sponsor shall do the following before construction:

A. CONSTRUCTION WORK AREAS

1. Identify all construction work areas (e.g., construction right-of-way, extra work space areas, pipe storage and contractor yards, borrow and disposal areas, access roads) that would be needed for safe construction. The project sponsor must ensure that appropriate cultural resources and biological surveys are conducted, as determined necessary by the appropriate federal and state agencies.

2. Project sponsors are encouraged to consider expanding any required cultural resources and endangered species surveys in anticipation of the need for activities outside of authorized work areas.

3. Plan construction sequencing to limit the amount and duration of open trench sections, as necessary, to prevent excessive erosion or sediment flow into sensitive environmental resource areas.

B. DRAIN TILE AND IRRIGATION SYSTEMS

1. Attempt to locate existing drain tiles and irrigation systems.

2. Contact landowners and local soil conservation authorities to determine the locations of future drain tiles that are likely to be installed within 3 years of the authorized construction.

3. Develop procedures for constructing through drain-tiled areas, maintaining irrigation systems during construction, and repairing drain tiles and irrigation systems after construction.

4. Engage qualified drain tile specialists, as needed to conduct or monitor repairs to drain tile systems affected by construction. Use drain tile specialists from the project area, if available.

C. GRAZING DEFERMENT

Develop grazing deferment plans with willing landowners, grazing permittees, and land management agencies to minimize grazing disturbance of revegetation efforts.

D. ROAD CROSSINGS AND ACCESS POINTS

Plan for safe and accessible conditions at all roadway crossings and access points during construction and restoration.

E. DISPOSAL PLANNING

Determine methods and locations for the regular collection, containment, and disposal of excess construction materials and debris (e.g., timber, slash, mats, garbage, drill cuttings and fluids, excess rock) throughout the construction process. Disposal of materials for beneficial reuse must not result in adverse environmental impact and is subject to compliance with all applicable survey, landowner or land management agency approval, and permit requirements.

F. AGENCY COORDINATION

The project sponsor must coordinate with the appropriate local, state, and federal agencies as outlined in this Plan and/or required by the FERC's Orders.

1. Obtain written recommendations from the local soil conservation authorities or land management agencies regarding permanent erosion control and revegetation specifications.

2. Develop specific procedures in coordination with the appropriate agencies to prevent the introduction or spread of invasive species, noxious weeds, and soil pests resulting from construction and restoration activities.

3. Develop specific procedures in coordination with the appropriate agencies and landowners, as necessary, to allow for livestock and wildlife movement and protection during construction.

4. Develop specific blasting procedures in coordination with the appropriate agencies that address pre- and post-blast inspections; advanced public notification; and mitigation measures for building foundations, groundwater wells, and springs. Use appropriate methods (e.g., blasting mats) to prevent damage to nearby structures and to prevent debris from entering sensitive environmental resource areas.

G. SPILL PREVENTION AND RESPONSE PROCEDURES

The project sponsor shall develop project-specific Spill Prevention and Response Procedures, as specified in section IV of the staff's Procedures. A copy must be filed with the Secretary of the FERC (Secretary) prior to construction and made available in the field on each construction spread. The filing requirement does not apply to projects constructed under the automatic authorization provisions in the FERC's regulations.

H. RESIDENTIAL CONSTRUCTION

For all properties with residences located within 50 feet of construction work areas, project sponsors shall: avoid removal of mature trees and landscaping within the construction work area unless necessary for safe operation of construction equipment, or as specified in landowner agreements; fence the edge of the construction work area for a distance of 100 feet on either side of the residence; and restore all lawn areas and landscaping immediately following clean up operations, or as specified in landowner agreements. If seasonal or other weather conditions prevent compliance with these time frames, maintain and monitor temporary erosion controls (sediment barriers and mulch) until conditions allow completion of restoration.

I. WINTER CONSTRUCTION PLANS

If construction is planned to occur during winter weather conditions, project sponsors shall develop and file a project-specific winter construction plan with the FERC application. This filing requirement does not apply to projects constructed under the automatic authorization provisions of the FERC's regulations.

The plan shall address:

1. winter construction procedures (e.g., snow handling and removal, access road construction and maintenance, soil handling under saturated or frozen conditions, topsoil stripping);

2. stabilization and monitoring procedures if ground conditions will delay restoration until the following spring (e.g., mulching and erosion controls, inspection and reporting, stormwater control during spring thaw conditions); and

3. final restoration procedures (e.g., subsidence and compaction repair, topsoil replacement, seeding).

IV. INSTALLATION

A. APPROVED AREAS OF DISTURBANCE

1. Project-related ground disturbance shall be limited to the construction right-of-way, extra work space areas, pipe storage yards, borrow and disposal areas, access roads, and other areas approved in the FERC's Orders. Any project-related ground disturbing activities outside these areas will require prior Director approval. This requirement does not apply to activities needed to comply with the Plan and Procedures (i.e., slope breakers, energy-dissipating devices, dewatering structures, drain tile system repairs) or minor field realignments and workspace shifts per landowner needs and requirements that do not affect other landowners or sensitive environmental resource areas. All construction or restoration activities outside of authorized areas are subject to all applicable survey and permit requirements, and landowner easement agreements.

2. The construction right-of-way width for a project shall not exceed 75 feet or that described in the FERC application unless otherwise modified by a FERC Order. However, in limited, non-wetland areas, this construction right-of-way width may be expanded by up to 25 feet without Director approval to accommodate full construction right-of-way topsoil segregation and to ensure safe construction where topographic conditions (e.g., side-slopes) or soil limitations require it. Twenty-five feet of extra construction right-of-way width may also be used in limited, non-wetland or non-forested areas for truck turn-arounds where no reasonable alternative access exists.

   Project use of these additional limited areas is subject to landowner or land management agency approval and compliance with all applicable survey and permit requirements. When additional areas are used, each one shall be identified and the need explained in the weekly or biweekly construction reports to the FERC, if required. The following material shall be included in the reports:

   a. the location of each additional area by station number and reference to previously filed alignment sheets, or updated alignment sheets showing the additional areas;

   b. identification of the filing at FERC containing evidence that the additional areas were previously surveyed; and

c. a statement that landowner approval has been obtained and is available in project files.

Prior written approval of the Director is required when the authorized construction right-of-way width would be expanded by more than 25 feet.

B. TOPSOIL SEGREGATION

1. Unless the landowner or land management agency specifically approves otherwise, prevent the mixing of topsoil with subsoil by stripping topsoil from either the full work area or from the trench and subsoil storage area (ditch plus spoil side method) in:

   a. cultivated or rotated croplands, and managed pastures;

   b. residential areas;

   c. hayfields; and

   d. other areas at the landowner's or land managing agency's request.

2. In residential areas, importation of topsoil is an acceptable alternative to topsoil segregation.

3. Where topsoil segregation is required, the project sponsor must:

   a. segregate at least 12 inches of topsoil in deep soils (more than 12 inches of topsoil); and

   b. make every effort to segregate the entire topsoil layer in soils with less than 12 inches of topsoil.

4. Maintain separation of salvaged topsoil and subsoil throughout all construction activities.

5. Segregated topsoil may not be used for padding the pipe, constructing temporary slope breakers or trench plugs, improving or maintaining roads, or as a fill material.

6. Stabilize topsoil piles and minimize loss due to wind and water erosion with use of sediment barriers, mulch, temporary seeding, tackifiers, or functional equivalents, where necessary.

C. DRAIN TILES

1. Mark locations of drain tiles damaged during construction.

2. Probe all drainage tile systems within the area of disturbance to check for damage.

3. Repair damaged drain tiles to their original or better condition. Do not use filter-covered drain tiles unless the local soil conservation authorities and the landowner agree. Use qualified specialists for testing and repairs.

4. For new pipelines in areas where drain tiles exist or are planned, ensure that the depth of cover over the pipeline is sufficient to avoid interference with drain tile systems. For adjacent pipeline loops in agricultural areas, install the new pipeline with at least the same depth of cover as the existing pipeline(s).

D. IRRIGATION

Maintain water flow in crop irrigation systems, unless shutoff is coordinated with affected parties.

E. ROAD CROSSINGS AND ACCESS POINTS

1. Maintain safe and accessible conditions at all road crossings and access points during construction.

2. If crushed stone access pads are used in residential or agricultural areas, place the stone on synthetic fabric to facilitate removal.

3. Minimize the use of tracked equipment on public roadways. Remove any soil or gravel spilled or tracked onto roadways daily or more frequent as necessary to maintain safe road conditions. Repair any damages to roadway surfaces, shoulders, and bar ditches.

F. TEMPORARY EROSION CONTROL

Install temporary erosion controls immediately after initial disturbance of the soil. Temporary erosion controls must be properly maintained throughout construction (on a daily basis) and reinstalled as necessary (such as after backfilling of the trench) until replaced by permanent erosion controls or restoration is complete.

1. Temporary Slope Breakers

   a. Temporary slope breakers are intended to reduce runoff velocity and divert water off the construction right-of-way. Temporary slope

breakers may be constructed of materials such as soil, silt fence, staked hay or straw bales, or sand bags.

b. Install temporary slope breakers on all disturbed areas, as necessary to avoid excessive erosion. Temporary slope breakers must be installed on slopes greater than 5 percent where the base of the slope is less than 50 feet from waterbody, wetland, and road crossings at the following spacing (closer spacing shall be used if necessary):

Slope (%)	Spacing (feet)
5 - 15	300
>15 - 30	200
>30	100

c. Direct the outfall of each temporary slope breaker to a stable, well vegetated area or construct an energy-dissipating device at the end of the slope breaker and off the construction right-of-way.

d. Position the outfall of each temporary slope breaker to prevent sediment discharge into wetlands, waterbodies, or other sensitive environmental resource areas.

2. Temporary Trench Plugs

Temporary trench plugs are intended to segment a continuous open trench prior to backfill.

a. Temporary trench plugs may consist of unexcavated portions of the trench, compacted subsoil, sandbags, or some functional equivalent.

b. Position temporary trench plugs, as necessary, to reduce trenchline erosion and minimize the volume and velocity of trench water flow at the base of slopes.

3. Sediment Barriers

Sediment barriers are intended to stop the flow of sediments and to prevent the deposition of sediments beyond approved workspaces or into sensitive resources.

a. Sediment barriers may be constructed of materials such as silt fence, staked hay or straw bales, compacted earth (e.g., driveable berms across travelways), sand bags, or other appropriate materials.

b. At a minimum, install and maintain temporary sediment barriers across the entire construction right-of-way at the base of slopes greater than 5 percent where the base of the slope is less than 50 feet from a waterbody, wetland, or road crossing until revegetation is successful as defined in this Plan. Leave adequate room between the base of the slope and the sediment barrier to accommodate ponding of water and sediment deposition.

c. Where wetlands or waterbodies are adjacent to and downslope of construction work areas, install sediment barriers along the edge of these areas, as necessary to prevent sediment flow into the wetland or waterbody.

4. Mulch

a. Apply mulch on all slopes (except in cultivated cropland) concurrent with or immediately after seeding, where necessary to stabilize the soil surface and to reduce wind and water erosion. Spread mulch uniformly over the area to cover at least 75 percent of the ground surface at a rate of 2 tons/acre of straw or its equivalent, unless the local soil conservation authority, landowner, or land managing agency approves otherwise in writing.

b. Mulch can consist of weed-free straw or hay, wood fiber hydromulch, erosion control fabric, or some functional equivalent.

c. Mulch all disturbed upland areas (except cultivated cropland) before seeding if:

(1) final grading and installation of permanent erosion control measures will not be completed in an area within 20 days after the trench in that area is backfilled (10 days in residential areas), as required in section V.A.1; or

(2) construction or restoration activity is interrupted for extended periods, such as when seeding cannot be completed due to seeding period restrictions.

d. If mulching before seeding, increase mulch application on all slopes within 100 feet of waterbodies and wetlands to a rate of 3 tons/acre of straw or equivalent.

e. If wood chips are used as mulch, do not use more than 1 ton/acre and add the equivalent of 11 lbs/acre available nitrogen (at least 50 percent of which is slow release).

f. Ensure that mulch is adequately anchored to minimize loss due to wind and water.

g. When anchoring with liquid mulch binders, use rates recommended by the manufacturer. Do not use liquid mulch binders within 100 feet of wetlands or waterbodies, except where the product is certified environmentally non-toxic by the appropriate state or federal agency or independent standards-setting organization.

h. Do not use synthetic monofilament mesh/netted erosion control materials in areas designated as sensitive wildlife habitat, unless the product is specifically designed to minimize harm to wildlife. Anchor erosion control fabric with staples or other appropriate devices.

V. RESTORATION

A. CLEANUP

1. Commence cleanup operations immediately following backfill operations. Complete final grading, topsoil replacement, and installation of permanent erosion control structures within 20 days after backfilling the trench (10 days in residential areas). If seasonal or other weather conditions prevent compliance with these time frames, maintain temporary erosion controls (i.e., temporary slope breakers, sediment barriers, and mulch) until conditions allow completion of cleanup.

   If construction or restoration unexpectedly continues into the winter season when conditions could delay successful decompaction, topsoil replacement, or seeding until the following spring, file with the Secretary for the review and written approval of the Director, a winter construction plan (as specified in section III.I). This filing requirement does not apply to projects constructed under the automatic authorization provisions of the FERC's regulations.

2. A travel lane may be left open temporarily to allow access by construction traffic if the temporary erosion control structures are installed as specified in section IV.F. and inspected and maintained as specified in sections II.B.12 through 14. When access is no longer required the travel lane must be removed and the right-of-way restored.

3. Rock excavated from the trench may be used to backfill the trench only to the top of the existing bedrock profile. Rock that is not returned to the trench shall be considered construction debris, unless approved for use as mulch or for some other use on the construction work areas by the landowner or land managing agency.

4. Remove excess rock from at least the top 12 inches of soil in all cultivated or rotated cropland, managed pastures, hayfields, and residential areas, as well as other areas at the landowner's request. The size, density, and distribution of rock on the construction work area shall be similar to adjacent areas not disturbed by construction. The landowner or land management agency may approve other provisions in writing.

5. Grade the construction right-of-way to restore pre-construction contours and leave the soil in the proper condition for planting.

6. Remove construction debris from all construction work areas unless the landowner or land managing agency approves leaving materials onsite for beneficial reuse, stabilization, or habitat restoration.

7. Remove temporary sediment barriers when replaced by permanent erosion control measures or when revegetation is successful.

B. PERMANENT EROSION CONTROL DEVICES

1. Trench Breakers

a. Trench breakers are intended to slow the flow of subsurface water along the trench. Trench breakers may be constructed of materials such as sand bags or polyurethane foam. Do not use topsoil in trench breakers.

b. An engineer or similarly qualified professional shall determine the need for and spacing of trench breakers. Otherwise, trench breakers shall be installed at the same spacing as and upslope of permanent slope breakers.

c. In agricultural fields and residential areas where slope breakers are not typically required, install trench breakers at the same spacing as if permanent slope breakers were required.

d. At a minimum, install a trench breaker at the base of slopes greater than 5 percent where the base of the slope is less than 50 feet from a waterbody or wetland and where needed to avoid draining a waterbody or wetland. Install trench breakers at wetland boundaries, as specified in the Procedures. Do not install trench breakers within a wetland.

2. Permanent Slope Breakers

a. Permanent slope breakers are intended to reduce runoff velocity, divert water off the construction right-of-way, and prevent sediment deposition into sensitive resources. Permanent slope breakers may be constructed of materials such as soil, stone, or some functional equivalent.

b. Construct and maintain permanent slope breakers in all areas, except cultivated areas and lawns, unless requested by the landowner, using spacing recommendations obtained from the local soil conservation authority or land managing agency.

In the absence of written recommendations, use the following spacing unless closer spacing is necessary to avoid excessive erosion on the construction right-of-way:

Slope (%)	Spacing (feet)
5 - 15	300
>15 - 30	200
>30	100

c. Construct slope breakers to divert surface flow to a stable area without causing water to pool or erode behind the breaker. In the absence of a stable area, construct appropriate energy-dissipating devices at the end of the breaker.

d. Slope breakers may extend slightly (about 4 feet) beyond the edge of the construction right-of-way to effectively drain water off the disturbed area. Where slope breakers extend beyond the edge of the construction right-of-way, they are subject to compliance with all applicable survey requirements.

C. SOIL COMPACTION MITIGATION

1. Test topsoil and subsoil for compaction at regular intervals in agricultural and residential areas disturbed by construction activities. Conduct tests on the same soil type under similar moisture conditions in undisturbed areas to approximate preconstruction conditions. Use penetrometers or other appropriate devices to conduct tests.

2. Plow severely compacted agricultural areas with a paraplow or other deep tillage implement. In areas where topsoil has been segregated, plow the subsoil before replacing the segregated topsoil.

If subsequent construction and cleanup activities result in further compaction, conduct additional tilling.

3. Perform appropriate soil compaction mitigation in severely compacted residential areas.

D. REVEGETATION

1. General

a. The project sponsor is responsible for ensuring successful revegetation of soils disturbed by project-related activities, except as noted in section V.D.1.b.

b. Restore all turf, ornamental shrubs, and specialized landscaping in accordance with the landowner's request, or compensate the landowner. Restoration work must be performed by personnel familiar with local horticultural and turf establishment practices.

2. Soil Additives

Fertilize and add soil pH modifiers in accordance with written recommendations obtained from the local soil conservation authority, land management agencies, or landowner. Incorporate recommended soil pH modifier and fertilizer into the top 2 inches of soil as soon as practicable after application.

3. Seeding Requirements

a. Prepare a seedbed in disturbed areas to a depth of 3 to 4 inches using appropriate equipment to provide a firm seedbed. When hydroseeding, scarify the seedbed to facilitate lodging and germination of seed.

b. Seed disturbed areas in accordance with written recommendations for seed mixes, rates, and dates obtained from the local soil conservation authority or the request of the landowner or land management agency. Seeding is not required in cultivated croplands unless requested by the landowner.

c. Perform seeding of permanent vegetation within the recommended seeding dates. If seeding cannot be done within those dates, use appropriate temporary erosion control measures discussed in section IV.F and perform seeding of permanent vegetation at the beginning of the next recommended seeding season. Dormant seeding or temporary

seeding of annual species may also be used, if necessary, to establish cover, as approved by the Environmental Inspector. Lawns may be seeded on a schedule established with the landowner.

d. In the absence of written recommendations from the local soil conservation authorities, seed all disturbed soils within 6 working days of final grading, weather and soil conditions permitting, subject to the specifications in section V.D.3.a through V.D.3.c.

e. Base seeding rates on Pure Live Seed. Use seed within 12 months of seed testing.

f. Treat legume seed with an inoculant specific to the species using the manufacturer's recommended rate of inoculant appropriate for the seeding method (broadcast, drill, or hydro).

g. In the absence of written recommendations from the local soil conservation authorities, landowner, or land managing agency to the contrary, a seed drill equipped with a cultipacker is preferred for seed application.

Broadcast or hydroseeding can be used in lieu of drilling at double the recommended seeding rates. Where seed is broadcast, firm the seedbed with a cultipacker or roller after seeding. In rocky soils or where site conditions may limit the effectiveness of this equipment, other alternatives may be appropriate (e.g., use of a chain drag) to lightly cover seed after application, as approved by the Environmental Inspector.

VI. OFF-ROAD VEHICLE CONTROL

To each owner or manager of forested lands, offer to install and maintain measures to control unauthorized vehicle access to the right-of-way. These measures may include:

A. signs;

B. fences with locking gates;

C. slash and timber barriers, pipe barriers, or a line of boulders across the right-of-way; and

D. conifers or other appropriate trees or shrubs across the right-of-way.

VII. POST-CONSTRUCTION ACTIVITIES AND REPORTING

A. MONITORING AND MAINTENANCE

1. Conduct follow-up inspections of all disturbed areas, as necessary, to determine the success of revegetation and address landowner concerns. At a minimum, conduct inspections after the first and second growing seasons.

2. Revegetation in non-agricultural areas shall be considered successful if upon visual survey the density and cover of non-nuisance vegetation are similar in density and cover to adjacent undisturbed lands. In agricultural areas, revegetation shall be considered successful when upon visual survey, crop growth and vigor are similar to adjacent undisturbed portions of the same field, unless the easement agreement specifies otherwise.

   Continue revegetation efforts until revegetation is successful.

3. Monitor and correct problems with drainage and irrigation systems resulting from pipeline construction in agricultural areas until restoration is successful.

4. Restoration shall be considered successful if the right-of-way surface condition is similar to adjacent undisturbed lands, construction debris is removed (unless otherwise approved by the landowner or land managing agency per section V.A.6), revegetation is successful, and proper drainage has been restored.

5. Routine vegetation mowing or clearing over the full width of the permanent right-of-way in uplands shall not be done more frequently than every 3 years. However, to facilitate periodic corrosion/leak surveys, a corridor not exceeding 10 feet in width centered on the pipeline may be cleared at a frequency necessary to maintain the 10-foot corridor in an herbaceous state. In no case shall routine vegetation mowing or clearing occur during the migratory bird nesting season between April 15 and August 1 of any year unless specifically approved in writing by the responsible land management agency or the U.S. Fish and Wildlife Service.

6. Efforts to control unauthorized off-road vehicle use, in cooperation with the landowner, shall continue throughout the life of the project. Maintain signs, gates, and permanent access roads as necessary.

B. REPORTING

1. The project sponsor shall maintain records that identify by milepost:

   a. method of application, application rate, and type of fertilizer, pH modifying agent, seed, and mulch used;

   b. acreage treated;

   c. dates of backfilling and seeding;

   d. names of landowners requesting special seeding treatment and a description of the follow-up actions;

   e. the location of any subsurface drainage repairs or improvements made during restoration; and

   f. any problem areas and how they were addressed.

2. The project sponsor shall file with the Secretary quarterly activity reports documenting the results of follow-up inspections required by section VII.A.1; any problem areas, including those identified by the landowner; and corrective actions taken for at least 2 years following construction.

   The requirement to file quarterly activity reports with the Secretary does not apply to projects constructed under the automatic authorization, prior notice, or advanced notice provisions in the FERC's regulations.

Appendix C-2

FERC Wetland and Waterbody Construction and Mitigation Procedures

Federal Energy Regulatory Commission

Office of Energy Projects

May 2013

WETLAND AND WATERBODY CONSTRUCTION AND MITIGATION PROCEDURES

Washington, DC 20426

MAY 2013 VERSION

WETLAND AND WATERBODY CONSTRUCTION AND MITIGATION PROCEDURES

TABLE OF CONTENTS

WETLAND AND WATERBODY
CONSTRUCTION AND MITIGATION PROCEDURES (PROCEDURES)

I. APPLICABILITY

A. The intent of these Procedures is to assist project sponsors by identifying baseline mitigation measures for minimizing the extent and duration of project-related disturbance on wetlands and waterbodies. Project sponsors shall specify in their applications for a new FERC authorization, and in prior notice and advance notice filings, any individual measures in these Procedures they consider unnecessary, technically infeasible, or unsuitable due to local conditions and fully describe any alternative measures they would use. Project sponsors shall also explain how those alternative measures would achieve a comparable level of mitigation.

Once a project is authorized, project sponsors can request further changes as variances to the measures in these Procedures (or the applicant's approved procedures). The Director of the Office of Energy Projects (Director) will consider approval of variances upon the project sponsor's written request, if the Director agrees that a variance:

1. provides equal or better environmental protection;

2. is necessary because a portion of these Procedures is infeasible or unworkable based on project-specific conditions; or

3. is specifically required in writing by another federal, state, or Native American land management agency for the portion of the project on its land or under its jurisdiction.

Sponsors of projects planned for construction under the automatic authorization provisions in the FERC's regulations must receive written approval for any variances in advance of construction.

Project-related impacts on non-wetland areas are addressed in the staff's Upland Erosion Control, Revegetation, and Maintenance Plan (Plan).

B. DEFINITIONS

1. "Waterbody" includes any natural or artificial stream, river, or drainage with perceptible flow at the time of crossing, and other permanent waterbodies such as ponds and lakes:

   a. "minor waterbody" includes all waterbodies less than or equal to 10 feet wide at the water's edge at the time of crossing;

   b. "intermediate waterbody" includes all waterbodies greater than 10 feet wide but less than or equal to 100 feet wide at the water's edge at the time of crossing; and

   c. "major waterbody" includes all waterbodies greater than 100 feet wide at the water's edge at the time of crossing.

2. "Wetland" includes any area that is not in actively cultivated or rotated cropland and that satisfies the requirements of the current federal methodology for identifying and delineating wetlands.

II. PRECONSTRUCTION FILING

A. The following information must be filed with the Secretary of the FERC (Secretary) prior to the beginning of construction, for the review and written approval by the Director:

1. site-specific justifications for extra work areas that would be closer than 50 feet from a waterbody or wetland; and

2. site-specific justifications for the use of a construction right-of-way greater than 75-feet-wide in wetlands.

B. The following information must be filed with the Secretary prior to the beginning of construction. These filing requirements do not apply to projects constructed under the automatic authorization provisions in the FERC's regulations:

1. Spill Prevention and Response Procedures specified in section IV.A;

2. a schedule identifying when trenching or blasting will occur within each waterbody greater than 10 feet wide, within any designated coldwater fishery, and within any waterbody identified as habitat for federally-listed threatened or endangered species. The project sponsor will revise the schedule as necessary to provide FERC staff at least 14 days advance notice. Changes within this last 14-day period must provide for at least 48 hours advance notice;

3. plans for horizontal directional drills (HDD) under wetlands or waterbodies, specified in section V.B.6.d;

4. site-specific plans for major waterbody crossings, described in section V.B.9;

5. a wetland delineation report as described in section VI.A.1, if applicable; and

6. the hydrostatic testing information specified in section VII.B.3.

III. ENVIRONMENTAL INSPECTORS

A. At least one Environmental Inspector having knowledge of the wetland and waterbody conditions in the project area is required for each construction spread. The number and experience of Environmental Inspectors assigned to each construction spread shall be appropriate for the length of the construction spread and the number/significance of resources affected.

B. The Environmental Inspector's responsibilities are outlined in the Upland Erosion Control, Revegetation, and Maintenance Plan (Plan).

IV. PRECONSTRUCTION PLANNING

A. The project sponsor shall develop project-specific Spill Prevention and Response Procedures that meet applicable requirements of state and federal agencies. A copy must be filed with the Secretary prior to construction and made available in the field on each construction spread. This filing requirement does not apply to projects constructed under the automatic authorization provisions in the FERC's regulations.

1. It shall be the responsibility of the project sponsor and its contractors to structure their operations in a manner that reduces the risk of spills or the accidental exposure of fuels or hazardous materials to waterbodies or wetlands. The project sponsor and its contractors must, at a minimum, ensure that:

a. all employees handling fuels and other hazardous materials are properly trained;

b. all equipment is in good operating order and inspected on a regular basis;

c. fuel trucks transporting fuel to on-site equipment travel only on approved access roads;

d. all equipment is parked overnight and/or fueled at least 100 feet from a waterbody or in an upland area at least 100 feet from a wetland boundary. These activities can occur closer only if the Environmental Inspector determines that there is no reasonable alternative, and the

project sponsor and its contractors have taken appropriate steps (including secondary containment structures) to prevent spills and provide for prompt cleanup in the event of a spill;

e. hazardous materials, including chemicals, fuels, and lubricating oils, are not stored within 100 feet of a wetland, waterbody, or designated municipal watershed area, unless the location is designated for such use by an appropriate governmental authority. This applies to storage of these materials and does not apply to normal operation or use of equipment in these areas;

f. concrete coating activities are not performed within 100 feet of a wetland or waterbody boundary, unless the location is an existing industrial site designated for such use. These activities can occur closer only if the Environmental Inspector determines that there is no reasonable alternative, and the project sponsor and its contractors have taken appropriate steps (including secondary containment structures) to prevent spills and provide for prompt cleanup in the event of a spill;

g. pumps operating within 100 feet of a waterbody or wetland boundary utilize appropriate secondary containment systems to prevent spills; and

h. bulk storage of hazardous materials, including chemicals, fuels, and lubricating oils have appropriate secondary containment systems to prevent spills.

2. The project sponsor and its contractors must structure their operations in a manner that provides for the prompt and effective cleanup of spills of fuel and other hazardous materials. At a minimum, the project sponsor and its contractors must:

a. ensure that each construction crew (including cleanup crews) has on hand sufficient supplies of absorbent and barrier materials to allow the rapid containment and recovery of spilled materials and knows the procedure for reporting spills and unanticipated discoveries of contamination;

b. ensure that each construction crew has on hand sufficient tools and material to stop leaks;

c. know the contact names and telephone numbers for all local, state, and federal agencies (including, if necessary, the U. S. Coast Guard and the National Response Center) that must be notified of a spill; and

d. follow the requirements of those agencies in cleaning up the spill, in excavating and disposing of soils or other materials contaminated by a spill, and in collecting and disposing of waste generated during spill cleanup.

B. AGENCY COORDINATION

The project sponsor must coordinate with the appropriate local, state, and federal agencies as outlined in these Procedures and in the FERC's Orders.

V. WATERBODY CROSSINGS

A. NOTIFICATION PROCEDURES AND PERMITS

1. Apply to the U.S. Army Corps of Engineers (COE), or its delegated agency, for the appropriate wetland and waterbody crossing permits.

2. Provide written notification to authorities responsible for potable surface water supply intakes located within 3 miles downstream of the crossing at least 1 week before beginning work in the waterbody, or as otherwise specified by that authority.

3. Apply for state-issued waterbody crossing permits and obtain individual or generic section 401 water quality certification or waiver.

4. Notify appropriate federal and state authorities at least 48 hours before beginning trenching or blasting within the waterbody, or as specified in applicable permits.

B. INSTALLATION

1. Time Window for Construction

Unless expressly permitted or further restricted by the appropriate federal or state agency in writing on a site-specific basis, instream work, except that required to install or remove equipment bridges, must occur during the following time windows:

a. coldwater fisheries - June 1 through September 30; and

b. coolwater and warmwater fisheries - June 1 through November 30.

2. Extra Work Areas

a. Locate all extra work areas (such as staging areas and additional spoil storage areas) at least 50 feet away from water's edge, except where

the adjacent upland consists of cultivated or rotated cropland or other disturbed land.

b. The project sponsor shall file with the Secretary for review and written approval by the Director, site-specific justification for each extra work area with a less than 50-foot setback from the water's edge, except where the adjacent upland consists of cultivated or rotated cropland or other disturbed land. The justification must specify the conditions that will not permit a 50-foot setback and measures to ensure the waterbody is adequately protected.

c. Limit the size of extra work areas to the minimum needed to construct the waterbody crossing.

3. General Crossing Procedures

a. Comply with the COE, or its delegated agency, permit terms and conditions.

b. Construct crossings as close to perpendicular to the axis of the waterbody channel as engineering and routing conditions permit.

c. Where pipelines parallel a waterbody, maintain at least 15 feet of undisturbed vegetation between the waterbody (and any adjacent wetland) and the construction right-of-way, except where maintaining this offset will result in greater environmental impact.

d. Where waterbodies meander or have multiple channels, route the pipeline to minimize the number of waterbody crossings.

e. Maintain adequate waterbody flow rates to protect aquatic life, and prevent the interruption of existing downstream uses.

f. Waterbody buffers (e.g., extra work area setbacks, refueling restrictions) must be clearly marked in the field with signs and/or highly visible flagging until construction-related ground disturbing activities are complete.

g. Crossing of waterbodies when they are dry or frozen and not flowing may proceed using standard upland construction techniques in accordance with the Plan, provided that the Environmental Inspector verifies that water is unlikely to flow between initial disturbance and final stabilization of the feature. In the event of perceptible flow, the project sponsor must comply with all applicable Procedure requirements for "waterbodies" as defined in section I.B.1.

4. Spoil Pile Placement and Control

   a. All spoil from minor and intermediate waterbody crossings, and upland spoil from major waterbody crossings, must be placed in the construction right-of-way at least 10 feet from the water's edge or in additional extra work areas as described in section V.B.2.

   b. Use sediment barriers to prevent the flow of spoil or silt-laden water into any waterbody.

5. Equipment Bridges

   a. Only clearing equipment and equipment necessary for installation of equipment bridges may cross waterbodies prior to bridge installation. Limit the number of such crossings of each waterbody to one per piece of clearing equipment.

   b. Construct and maintain equipment bridges to allow unrestricted flow and to prevent soil from entering the waterbody. Examples of such bridges include:

      (1) equipment pads and culvert(s);
      (2) equipment pads or railroad car bridges without culverts;
      (3) clean rock fill and culvert(s); and
      (4) flexi-float or portable bridges.

      Additional options for equipment bridges may be utilized that achieve the performance objectives noted above. Do not use soil to construct or stabilize equipment bridges.

   c. Design and maintain each equipment bridge to withstand and pass the highest flow expected to occur while the bridge is in place. Align culverts to prevent bank erosion or streambed scour. If necessary, install energy dissipating devices downstream of the culverts.

   d. Design and maintain equipment bridges to prevent soil from entering the waterbody.

   e. Remove temporary equipment bridges as soon as practicable after permanent seeding.

   f. If there will be more than 1 month between final cleanup and the beginning of permanent seeding and reasonable alternative access to the right-of-way is available, remove temporary equipment bridges as soon as practicable after final cleanup.

g. Obtain any necessary approval from the COE, or the appropriate state agency for permanent bridges.

6. Dry-Ditch Crossing Methods

a. Unless approved otherwise by the appropriate federal or state agency, install the pipeline using one of the dry-ditch methods outlined below for crossings of waterbodies up to 30 feet wide (at the water's edge at the time of construction) that are state-designated as either coldwater or significant coolwater or warmwater fisheries, or federally-designated as critical habitat.

b. Dam and Pump

(1) The dam-and-pump method may be used without prior approval for crossings of waterbodies where pumps can adequately transfer streamflow volumes around the work area, and there are no concerns about sensitive species passage.

(2) Implementation of the dam-and-pump crossing method must meet the following performance criteria:

(i) use sufficient pumps, including on-site backup pumps, to maintain downstream flows;
(ii) construct dams with materials that prevent sediment and other pollutants from entering the waterbody (e.g., sandbags or clean gravel with plastic liner);
(iii) screen pump intakes to minimize entrainment of fish;
(iv) prevent streambed scour at pump discharge; and
(v) continuously monitor the dam and pumps to ensure proper operation throughout the waterbody crossing.

c. Flume Crossing

The flume crossing method requires implementation of the following steps:

(1) install flume pipe after blasting (if necessary), but before any trenching;

(2) use sand bag or sand bag and plastic sheeting diversion structure or equivalent to develop an effective seal and to divert stream flow through the flume pipe (some modifications to the stream bottom may be required to achieve an effective seal);

(3) properly align flume pipe(s) to prevent bank erosion and streambed scour;

(4) do not remove flume pipe during trenching, pipelaying, or backfilling activities, or initial streambed restoration efforts; and

(5) remove all flume pipes and dams that are not also part of the equipment bridge as soon as final cleanup of the stream bed and bank is complete.

d. Horizontal Directional Drill

For each waterbody or wetland that would be crossed using the HDD method, file with the Secretary for the review and written approval by the Director, a plan that includes:

(1) site-specific construction diagrams that show the location of mud pits, pipe assembly areas, and all areas to be disturbed or cleared for construction;

(2) justification that disturbed areas are limited to the minimum needed to construct the crossing;

(3) identification of any aboveground disturbance or clearing between the HDD entry and exit workspaces during construction;

(4) a description of how an inadvertent release of drilling mud would be contained and cleaned up; and

(5) a contingency plan for crossing the waterbody or wetland in the event the HDD is unsuccessful and how the abandoned drill hole would be sealed, if necessary.

The requirement to file HDD plans does not apply to projects constructed under the automatic authorization provisions in the FERC's regulations.

7. Crossings of Minor Waterbodies

Where a dry-ditch crossing is not required, minor waterbodies may be crossed using the open-cut crossing method, with the following restrictions:

a. except for blasting and other rock breaking measures, complete instream construction activities (including trenching, pipe installation, backfill, and restoration of the streambed contours) within 24 hours.

Streambanks and unconsolidated streambeds may require additional restoration after this period;

b. limit use of equipment operating in the waterbody to that needed to construct the crossing; and

c. equipment bridges are not required at minor waterbodies that do not have a state-designated fishery classification or protected status (e.g., agricultural or intermittent drainage ditches). However, if an equipment bridge is used it must be constructed as described in section V.B.5.

8. Crossings of Intermediate Waterbodies

Where a dry-ditch crossing is not required, intermediate waterbodies may be crossed using the open-cut crossing method, with the following restrictions:

a. complete instream construction activities (not including blasting and other rock breaking measures) within 48 hours, unless site-specific conditions make completion within 48 hours infeasible;

b. limit use of equipment operating in the waterbody to that needed to construct the crossing; and

c. all other construction equipment must cross on an equipment bridge as specified in section V.B.5.

9. Crossings of Major Waterbodies

Before construction, the project sponsor shall file with the Secretary for the review and written approval by the Director a detailed, site-specific construction plan and scaled drawings identifying all areas to be disturbed by construction for each major waterbody crossing (the scaled drawings are not required for any offshore portions of pipeline projects). This plan must be developed in consultation with the appropriate state and federal agencies and shall include extra work areas, spoil storage areas, sediment control structures, etc., as well as mitigation for navigational issues. The requirement to file major waterbody crossing plans does not apply to projects constructed under the automatic authorization provisions of the FERC's regulations.

The Environmental Inspector may adjust the final placement of the erosion and sediment control structures in the field to maximize effectiveness.

10. Temporary Erosion and Sediment Control

Install sediment barriers (as defined in section IV.F.3.a of the Plan) immediately after initial disturbance of the waterbody or adjacent upland.

Sediment barriers must be properly maintained throughout construction and reinstalled as necessary (such as after backfilling of the trench) until replaced by permanent erosion controls or restoration of adjacent upland areas is complete. Temporary erosion and sediment control measures are addressed in more detail in the Plan; however, the following specific measures must be implemented at stream crossings:

a. install sediment barriers across the entire construction right-of-way at all waterbody crossings, where necessary to prevent the flow of sediments into the waterbody. Removable sediment barriers (or driveable berms) must be installed across the travel lane. These removable sediment barriers can be removed during the construction day, but must be re-installed after construction has stopped for the day and/or when heavy precipitation is imminent;

b. where waterbodies are adjacent to the construction right-of-way and the right-of-way slopes toward the waterbody, install sediment barriers along the edge of the construction right-of-way as necessary to contain spoil within the construction right-of-way and prevent sediment flow into the waterbody; and

c. use temporary trench plugs at all waterbody crossings, as necessary, to prevent diversion of water into upland portions of the pipeline trench and to keep any accumulated trench water out of the waterbody.

11. Trench Dewatering

Dewater the trench (either on or off the construction right-of-way) in a manner that does not cause erosion and does not result in silt-laden water flowing into any waterbody. Remove the dewatering structures as soon as practicable after the completion of dewatering activities.

C. RESTORATION

1. Use clean gravel or native cobbles for the upper 1 foot of trench backfill in all waterbodies that contain coldwater fisheries.

2. For open-cut crossings, stabilize waterbody banks and install temporary sediment barriers within 24 hours of completing instream construction activities. For dry-ditch crossings, complete streambed and bank stabilization before returning flow to the waterbody channel.

3. Return all waterbody banks to preconstruction contours or to a stable angle of repose as approved by the Environmental Inspector.

4. Install erosion control fabric or a functional equivalent on waterbody banks at the time of final bank recontouring. Do not use synthetic monofilament

mesh/netted erosion control materials in areas designated as sensitive wildlife habitat unless the product is specifically designed to minimize harm to wildlife. Anchor erosion control fabric with staples or other appropriate devices.

5. Application of riprap for bank stabilization must comply with COE, or its delegated agency, permit terms and conditions.

6. Unless otherwise specified by state permit, limit the use of riprap to areas where flow conditions preclude effective vegetative stabilization techniques such as seeding and erosion control fabric.

7. Revegetate disturbed riparian areas with native species of conservation grasses, legumes, and woody species, similar in density to adjacent undisturbed lands.

8. Install a permanent slope breaker across the construction right-of-way at the base of slopes greater than 5 percent that are less than 50 feet from the waterbody, or as needed to prevent sediment transport into the waterbody. In addition, install sediment barriers as outlined in the Plan.

   In some areas, with the approval of the Environmental Inspector, an earthen berm may be suitable as a sediment barrier adjacent to the waterbody.

9. Sections V.C.3 through V.C.7 above also apply to those perennial or intermittent streams not flowing at the time of construction.

D. POST-CONSTRUCTION MAINTENANCE

1. Limit routine vegetation mowing or clearing adjacent to waterbodies to allow a riparian strip at least 25 feet wide, as measured from the waterbody's mean high water mark, to permanently revegetate with native plant species across the entire construction right-of-way. However, to facilitate periodic corrosion/leak surveys, a corridor centered on the pipeline and up to 10 feet wide may be cleared at a frequency necessary to maintain the 10-foot corridor in an herbaceous state. In addition, trees that are located within 15 feet of the pipeline that have roots that could compromise the integrity of the pipeline coating may be cut and removed from the permanent right-of-way. Do not conduct any routine vegetation mowing or clearing in riparian areas that are between HDD entry and exit points.

2. Do not use herbicides or pesticides in or within 100 feet of a waterbody except as allowed by the appropriate land management or state agency.

3. Time of year restrictions specified in section VII.A.5 of the Plan (April 15 – August 1 of any year) apply to routine mowing and clearing of riparian areas.

VI. WETLAND CROSSINGS

A. GENERAL

1. The project sponsor shall conduct a wetland delineation using the current federal methodology and file a wetland delineation report with the Secretary before construction. The requirement to file a wetland delineation report does not apply to projects constructed under the automatic authorization provisions in the FERC's regulations.

   This report shall identify:

   a. by milepost all wetlands that would be affected;

   b. the National Wetlands Inventory (NWI) classification for each wetland;

   c. the crossing length of each wetland in feet; and

   d. the area of permanent and temporary disturbance that would occur in each wetland by NWI classification type.

   The requirements outlined in this section do not apply to wetlands in actively cultivated or rotated cropland. Standard upland protective measures, including workspace and topsoiling requirements, apply to these agricultural wetlands.

2. Route the pipeline to avoid wetland areas to the maximum extent possible. If a wetland cannot be avoided or crossed by following an existing right-of-way, route the new pipeline in a manner that minimizes disturbance to wetlands. Where looping an existing pipeline, overlap the existing pipeline right-of-way with the new construction right-of-way. In addition, locate the loop line no more than 25 feet away from the existing pipeline unless site-specific constraints would adversely affect the stability of the existing pipeline.

3. Limit the width of the construction right-of-way to 75 feet or less. Prior written approval of the Director is required where topographic conditions or soil limitations require that the construction right-of-way width within the boundaries of a federally delineated wetland be expanded beyond 75 feet. Early in the planning process the project sponsor is encouraged to identify site-specific areas where excessively wide trenches could occur and/or where spoil piles could be difficult to maintain because existing soils lack adequate unconfined compressive strength.

4. Wetland boundaries and buffers must be clearly marked in the field with signs and/or highly visible flagging until construction-related ground disturbing activities are complete.

5. Implement the measures of sections V and VI in the event a waterbody crossing is located within or adjacent to a wetland crossing. If all measures of sections V and VI cannot be met, the project sponsor must file with the Secretary a site-specific crossing plan for review and written approval by the Director before construction. This crossing plan shall address at a minimum:

   a. spoil control;

   b. equipment bridges;

   c. restoration of waterbody banks and wetland hydrology;

   d. timing of the waterbody crossing;

   e. method of crossing; and

   f. size and location of all extra work areas.

6. Do not locate aboveground facilities in any wetland, except where the location of such facilities outside of wetlands would prohibit compliance with U.S. Department of Transportation regulations.

B. INSTALLATION

1. Extra Work Areas and Access Roads

   a. Locate all extra work areas (such as staging areas and additional spoil storage areas) at least 50 feet away from wetland boundaries, except where the adjacent upland consists of cultivated or rotated cropland or other disturbed land.

   b. The project sponsor shall file with the Secretary for review and written approval by the Director, site-specific justification for each extra work area with a less than 50-foot setback from wetland boundaries, except where adjacent upland consists of cultivated or rotated cropland or other disturbed land. The justification must specify the site-specific conditions that will not permit a 50-foot setback and measures to ensure the wetland is adequately protected.

   c. The construction right-of-way may be used for access when the wetland soil is firm enough to avoid rutting or the construction right-of-way has been appropriately stabilized to avoid rutting (e.g., with timber riprap, prefabricated equipment mats, or terra mats).

      In wetlands that cannot be appropriately stabilized, all construction equipment other than that needed to install the wetland crossing shall

use access roads located in upland areas. Where access roads in upland areas do not provide reasonable access, limit all other construction equipment to one pass through the wetland using the construction right-of-way.

d. The only access roads, other than the construction right-of-way, that can be used in wetlands are those existing roads that can be used with no modifications or improvements, other than routine repair, and no impact on the wetland.

2. Crossing Procedures

a. Comply with COE, or its delegated agency, permit terms and conditions.

b. Assemble the pipeline in an upland area unless the wetland is dry enough to adequately support skids and pipe.

c. Use "push-pull" or "float" techniques to place the pipe in the trench where water and other site conditions allow.

d. Minimize the length of time that topsoil is segregated and the trench is open. Do not trench the wetland until the pipeline is assembled and ready for lowering in.

e. Limit construction equipment operating in wetland areas to that needed to clear the construction right-of-way, dig the trench, fabricate and install the pipeline, backfill the trench, and restore the construction right-of-way.

f. Cut vegetation just above ground level, leaving existing root systems in place, and remove it from the wetland for disposal.

The project sponsor can burn woody debris in wetlands, if approved by the COE and in accordance with state and local regulations, ensuring that all remaining woody debris is removed for disposal.

g. Limit pulling of tree stumps and grading activities to directly over the trenchline. Do not grade or remove stumps or root systems from the rest of the construction right-of-way in wetlands unless the Chief Inspector and Environmental Inspector determine that safety-related construction constraints require grading or the removal of tree stumps from under the working side of the construction right-of-way.

h. Segregate the top 1 foot of topsoil from the area disturbed by trenching, except in areas where standing water is present or soils are

saturated. Immediately after backfilling is complete, restore the segregated topsoil to its original location.

i. Do not use rock, soil imported from outside the wetland, tree stumps, or brush riprap to support equipment on the construction right-of-way.

j. If standing water or saturated soils are present, or if construction equipment causes ruts or mixing of the topsoil and subsoil in wetlands, use low-ground-weight construction equipment, or operate normal equipment on timber riprap, prefabricated equipment mats, or terra mats.

k. Remove all project-related material used to support equipment on the construction right-of-way upon completion of construction.

3. Temporary Sediment Control

Install sediment barriers (as defined in section IV.F.3.a of the Plan) immediately after initial disturbance of the wetland or adjacent upland. Sediment barriers must be properly maintained throughout construction and reinstalled as necessary (such as after backfilling of the trench). Except as noted below in section VI.B.3.c, maintain sediment barriers until replaced by permanent erosion controls or restoration of adjacent upland areas is complete. Temporary erosion and sediment control measures are addressed in more detail in the Plan.

a. Install sediment barriers across the entire construction right-of-way immediately upslope of the wetland boundary at all wetland crossings where necessary to prevent sediment flow into the wetland.

b. Where wetlands are adjacent to the construction right-of-way and the right-of-way slopes toward the wetland, install sediment barriers along the edge of the construction right-of-way as necessary to contain spoil within the construction right-of-way and prevent sediment flow into the wetland.

c. Install sediment barriers along the edge of the construction right-of-way as necessary to contain spoil and sediment within the construction right-of-way through wetlands. Remove these sediment barriers during right-of-way cleanup.

4. Trench Dewatering

Dewater the trench (either on or off the construction right-of-way) in a manner that does not cause erosion and does not result in silt-laden water flowing into any wetland. Remove the dewatering structures as soon as practicable after the completion of dewatering activities.

C. RESTORATION

1. Where the pipeline trench may drain a wetland, construct trench breakers at the wetland boundaries and/or seal the trench bottom as necessary to maintain the original wetland hydrology.

2. Restore pre-construction wetland contours to maintain the original wetland hydrology.

3. For each wetland crossed, install a trench breaker at the base of slopes near the boundary between the wetland and adjacent upland areas. Install a permanent slope breaker across the construction right-of-way at the base of slopes greater than 5 percent where the base of the slope is less than 50 feet from the wetland, or as needed to prevent sediment transport into the wetland. In addition, install sediment barriers as outlined in the Plan. In some areas, with the approval of the Environmental Inspector, an earthen berm may be suitable as a sediment barrier adjacent to the wetland.

4. Do not use fertilizer, lime, or mulch unless required in writing by the appropriate federal or state agency.

5. Consult with the appropriate federal or state agencies to develop a project-specific wetland restoration plan. The restoration plan shall include measures for re-establishing herbaceous and/or woody species, controlling the invasion and spread of invasive species and noxious weeds (e.g., purple loosestrife and phragmites), and monitoring the success of the revegetation and weed control efforts. Provide this plan to the FERC staff upon request.

6. Until a project-specific wetland restoration plan is developed and/or implemented, temporarily revegetate the construction right-of-way with annual ryegrass at a rate of 40 pounds/acre (unless standing water is present).

7. Ensure that all disturbed areas successfully revegetate with wetland herbaceous and/or woody plant species.

8. Remove temporary sediment barriers located at the boundary between wetland and adjacent upland areas after revegetation and stabilization of adjacent upland areas are judged to be successful as specified in section VII.A.4 of the Plan.

D. POST-CONSTRUCTION MAINTENANCE AND REPORTING

1. Do not conduct routine vegetation mowing or clearing over the full width of the permanent right-of-way in wetlands. However, to facilitate periodic corrosion/leak surveys, a corridor centered on the pipeline and up to 10 feet wide may be cleared at a frequency necessary to maintain the 10-foot corridor in an herbaceous state. In addition, trees within 15 feet of the pipeline with roots that could compromise the integrity of pipeline coating may be selectively cut and removed from the permanent right-of-way. Do not conduct any routine vegetation mowing or clearing in wetlands that are between HDD entry and exit points.

2. Do not use herbicides or pesticides in or within 100 feet of a wetland, except as allowed by the appropriate federal or state agency.

3. Time of year restrictions specified in section VII.A.5 of the Plan (April 15 – August 1 of any year) apply to routine mowing and clearing of wetland areas.

4. Monitor and record the success of wetland revegetation annually until wetland revegetation is successful.

5. Wetland revegetation shall be considered successful if all of the following criteria are satisfied:

   a. the affected wetland satisfies the current federal definition for a wetland (i.e., soils, hydrology, and vegetation);

   b. vegetation is at least 80 percent of either the cover documented for the wetland prior to construction, or at least 80 percent of the cover in adjacent wetland areas that were not disturbed by construction;

   c. if natural rather than active revegetation was used, the plant species composition is consistent with early successional wetland plant communities in the affected ecoregion; and

   d. invasive species and noxious weeds are absent, unless they are abundant in adjacent areas that were not disturbed by construction.

6. Within 3 years after construction, file a report with the Secretary identifying the status of the wetland revegetation efforts and documenting success as defined in section VI.D.5, above. The requirement to file wetland restoration reports with the Secretary does not apply to projects constructed under the automatic authorization, prior notice, or advance notice provisions in the FERC's regulations.

   For any wetland where revegetation is not successful at the end of 3 years after construction, develop and implement (in consultation with a

professional wetland ecologist) a remedial revegetation plan to actively revegetate wetlands. Continue revegetation efforts and file a report annually documenting progress in these wetlands until wetland revegetation is successful.

VII. HYDROSTATIC TESTING

A. NOTIFICATION PROCEDURES AND PERMITS

1. Apply for state-issued water withdrawal permits, as required.

2. Apply for National Pollutant Discharge Elimination System (NPDES) or state-issued discharge permits, as required.

3. Notify appropriate state agencies of intent to use specific sources at least 48 hours before testing activities unless they waive this requirement in writing.

B. GENERAL

1. Perform 100 percent radiographic inspection of all pipeline section welds or hydrotest the pipeline sections, before installation under waterbodies or wetlands.

2. If pumps used for hydrostatic testing are within 100 feet of any waterbody or wetland, address secondary containment and refueling of these pumps in the project's Spill Prevention and Response Procedures.

3. The project sponsor shall file with the Secretary before construction a list identifying the location of all waterbodies proposed for use as a hydrostatic test water source or discharge location. This filing requirement does not apply to projects constructed under the automatic authorization provisions of the FERC's regulations.

C. INTAKE SOURCE AND RATE

1. Screen the intake hose to minimize the potential for entrainment of fish.

2. Do not use state-designated exceptional value waters, waterbodies which provide habitat for federally listed threatened or endangered species, or waterbodies designated as public water supplies, unless appropriate federal, state, and/or local permitting agencies grant written permission.

3. Maintain adequate flow rates to protect aquatic life, provide for all waterbody uses, and provide for downstream withdrawals of water by existing users.

4. Locate hydrostatic test manifolds outside wetlands and riparian areas to the maximum extent practicable.

D. DISCHARGE LOCATION, METHOD, AND RATE

1. Regulate discharge rate, use energy dissipation device(s), and install sediment barriers, as necessary, to prevent erosion, streambed scour, suspension of sediments, or excessive streamflow.

2. Do not discharge into state-designated exceptional value waters, waterbodies which provide habitat for federally listed threatened or endangered species, or waterbodies designated as public water supplies, unless appropriate federal, state, and local permitting agencies grant written permission.

Appendix C-3

FGT Spill Prevention and Response (SPAR) Plan

FLORIDA GAS TRANSMISSION COMPANY, LLC

Tampa West Project

Spill Prevention and Response (SPAR) Plan

October 2022

Florida Gas Transmission Company

An Energy Transfer/Kinder Morgan Affiliate

TABLE OF CONTENTS

1.0 GENERAL DESCRIPTION OF SPILL PREVENTION AND RESPONSE PLAN

Florida Gas Transmission Company (FGT) has prepared a Spill Prevention and Response (SPAR) Plan for the FGT Tampa West Lateral Project (Project) that is designed to minimize hazards to human health and/or the environment from any unplanned sudden or non-sudden releases of oils, toxic, hazardous, or other polluting materials to the air, soil, surface water, or groundwater. FGT, through its Contractors and Inspectors, shall be responsible for the administration and implementation of this plan. This plan is intended to provide minimum requirements for spill prevention and response during construction activities. Contractor may develop their own spill prevention and response plan or use an existing plan provided that the plan used contains, at a minimum, all of the provisions of FGT's SPAR Plan and 40 CFR 112, as applicable.

This plan identifies:

- Measures taken for spill preparedness and prevention
- Emergency response procedures describing the actions that FGT and Contractor personnel will take in response to leaks, spills, or discharges of oil and hazardous substances/materials
- Designated emergency coordinator(s) and his/her responsibilities
- Spill incident reporting procedures
- Contact numbers for the local police and fire departments, hospitals, and state and local emergency planning committees

Prior to the start of construction in an area, the Contractor shall designate storage, refueling, loading, and unloading locations that minimize the environmental and safety impacts associated with potential releases of fuel, lubricants, or hazardous substances. These areas will be designated using the following guidelines.

- Refueling shall not occur within 100 feet (ft) of a waterbody or 100 ft from a wetland boundary without FGT Environmental Inspector coordination and approval.
- Hazardous materials, including chemicals, fuels, and lubricating oils, shall not be stored within 100 ft of a wetland, waterbody, or designated municipal watershed area without FGT Environmental Inspector coordination and approval.
- Refueling and storage of hazardous materials, including chemicals, fuels, and lubricating oils is prohibited within 200 ft of private wells and 500 ft of community and municipal wells.
- No potentially hazardous materials, other than essential equipment fuels (e.g., gasoline, diesel, etc.) or standard lubricants (e.g., engine oils, grease, etc.) shall be transported into the right-of-way or construction area without FGT Environmental Inspector coordination and approval.

CONTRACTOR will be required to comply with all applicable requirements of 40 CFR 112, Oil Pollution Prevention, for any facility set up for the storage of fuel, oil, or other hydrocarbons, or refueling of vehicles and equipment, if the facility triggers compliance with the rule. This would include the development and implementation by CONTRACTOR of a Spill Prevention, Control, and Countermeasures (SPCC) Plan if necessary.

2.0 SPILL AND LEAK PREVENTION AND PREPAREDNESS

2.1 PREVENTION AND PREPAREDNESS

The Contractor will take the following precautions to prevent a spill from occurring and to be prepared in the event that a spill does occur.

2.1.1 Containers

- All containers shall be stored on pallets and surrounded with temporary containment.
  - Small cans of gasoline, diesel, solvents, etc., should be stored within the temporary containment when not in use.
  - No incompatible materials shall be stored in the same containment area.
- Containment areas shall be capable of containing 110% of the volume of the largest container in the storage area plus sufficient freeboard for rainfall.
  - All container storage areas shall be inspected daily for leaks and deterioration.
- Leaking or deteriorated containers shall be replaced as soon as the condition is first detected.
- Container storage areas shall be secured during non-working hours.
- Any accumulated rainwater in the containment areas shall be inspected for sheens and indications of any other hazardous materials prior to release to the ground, and if a sheen or hazardous substance is detected, accumulated rainwater shall be properly disposed.

2.1.2 Tanks

- The contractor shall operate only those tanks for fuel and material storage that meet the approval of FGT. Single wall tanks shall be provided with secondary containment as described in Section 2.1.1 for Containers.
- Self-supporting tanks shall be constructed of carbon steel or other materials compatible with the contents of each tank.
- All tanks and storage areas shall be inspected daily for leaks and deterioration.
- Vehicle mounted tanks shall be equipped with flame/spark arrestors on all vents to ensure that self-ignition does not occur.
- Tanks will not be used to store incompatible materials in sequence unless first thoroughly decontaminated.

2.1.3 Loading/Unloading Areas

- Transferring of liquids and refueling shall only occur in pre-designated locations at least 100 feet from all waterbodies and wetlands, 200 feet from any private water well, and 500 feet from municipal or community water supply wells unless prior approval is obtained from the FGT Environmental Inspector.
- All loading/unloading areas will be inspected for spills prior to and immediately after each use and closely monitored during use to prevent leaks and spills, and ensure immediate response in the event of a spill.
- All hose connections shall be inspected for leaks. If leaks should occur, the operation shall cease until the leak is repaired or a containment pan is placed under the leaking connection.

2.1.4 Equipment

- Contractor shall ensure that all equipment operating on the Project is maintained in good working order and free of any leaks.
- The Environmental Inspector has the authority to request the contractor to remove a piece of equipment from the Project if it is found to be leaking hazardous fluids on the ground and is not repaired by the contractor.

2.1.5 Spill Response Kits

- Any service vehicle used to transport lubricants and fuel shall be equipped with an oil spill response kit that is adequately stocked to respond to a minor oil/fuel spill event.
- Chemical spill response kits, adequately stocked to respond to a minor chemical spill event, shall be available in areas where appropriate.
- Additionally, spill response kits shall be available on the right-of-way and on or near operating equipment as deemed appropriate by the FGT Environmental Inspector.
- Equipment such as hydraulic track hoes and hydraulic pumps that could fail and cause a reportable spill shall be equipped with an oil spill response kit that is adequately stocked to respond to a minor oil/fuel spill event.

2.2 EMPLOYEE TRAINING

All personnel involved in the construction of the proposed facilities will be trained on the contents of the SPAR Plan. Training briefings will be conducted by the Contractor Superintendent or his designee and the FGT Environmental Inspector on the job site.

2.3 SPILL RESPONSE EQUIPMENT

Project construction shall have adequate manpower and equipment necessary to divert any spill from reaching water bodies and wetland areas. Emergency equipment may include, but is not limited to, shovels, backhoes, dozers, front-end loaders, oil absorbent booms, pillows, socks and/or mats and chemical absorbent pulp, pillows, socks, and/or mats.

3.0 INITIAL SPILL RESPONSE PROCEDURES

This section provides a description of spill response procedures to be performed in response to any spills that may occur during Project construction.

3.1 COMPANY AND CONTRACTOR RESPONSIBILITIES

The Contractor and FGT on-site personnel have responsibilities for spill prevention and response. **In addition to the oversight of initial spill response activities, FGT's Environmental Inspector and Environmental Project Manager will determine if state and/or Federal notifications are required and make notification accordingly.**

The Contractor will have a designated Environmental Coordinator for the site. The Contractor's Environmental Coordinator will be responsible for the Contractor's initial spill response activities. The responsibilities of the Contractor and FGT will be as follows:

3.1.1 Contractor Responsibilities

- The Contractor will be responsible for taking immediate action to safely control and contain any spills or releases of oil, petroleum products, and hazardous substances/materials.
- All spills or releases, including any sheen created on water or releases to the atmosphere, must be reported immediately to the FGT Environmental Inspector.
- The Contractor shall supply necessary manpower and equipment to control, contain, and clean up all spills and releases resulting from their operations.

3.1.2 FGT Environmental Inspector Responsibilities

- FGT's Environmental Inspector or his/her designee will be responsible for making appropriate agency notifications of any spills or releases.
- FGT will be responsible for the oversight of the initial spill response activities.
- FGT will provide supporting personnel and equipment to address releases as required.
- In the event of a spill, the Environmental Inspector shall obtain as much information as possible regarding the cause of the event, the type and amount of material spilled or released, and corrective measures or response activities being taken.
- Consult the FGT Environmental Project Manager immediately and determine if the spill or release is a reportable event. The Environmental Inspector will also notify the FGT Field Construction Office for releases of:
    - one pound or more of a solid material
    - five gallons or more of a liquid material
    - any spill to water, including any sheen on water
- Obtain a copy of the Contractor's written spill report as soon as it is available and forward a copy to the Environmental Project Manager.

3.1.3 FGT Environmental Project Manager Responsibilities

- Upon receiving spill information from the Environmental Inspector, determine if the release requires reporting to any Federal, state, or local regulatory agencies. At a minimum, notification to the following agencies may be required immediately upon detection of a spill:
    - Federal Energy Regulatory Commission,
    - Florida Department of Environmental Protection (FDEP)
- If reporting is required, direct the Environmental Inspector to notify the appropriate regulatory agencies. This includes both verbal and any follow-up written reports.
- Contact outside remediation services if necessary, in coordination with the FGT Environmental Inspector, to assist with incidents that require additional resources.

3.1.4 Reporting Requirements

The Federal Energy Regulatory Commission and Florida Department of Environmental Protection require notification for the following conditions:

- When in doubt about the reportable nature of a release, call the State Watch Office at 1-800-320-0519.
- Complete a Discharge Reporting Form to document information related to the discharge.
- Petroleum Based Spills
  - Spills into or involving state waterways (any amount)
  - Spills greater than 25 gallons (or potential > 25 gallons)
  - Spills requiring any State/Federal notifications or assistance
  - Chemical spills
  - All SARA/EHS/CERCLA Releases
  - All spills threatening population or the environment
  - All spills requiring evacuation of the public
- Weather
  - Any incident associated with weather phenomena involving possible or actual damage to property or persons (e.g., wind damage, tornadoes, lightning strikes, flooding)
- Transportation
  - Incidents involving major thoroughfare closures
  - All aircraft incidents
  - All railroad incidents
  - Incidents involving mass casualties
  - All major incidents involving commercial vehicles/vessels
- Fire
  - Major forest fires
  - Fires involving chemicals or significant amounts of petroleum products
  - Large or multiple structure fires
- General
  - Sinkholes
  - Public water source contamination
  - National security
  - Medical waste
  - Immigration issues
  - Potential/actual dam failures
  - Incidents with potential effects to adjacent countries/states
  - Incidents requiring assistance from state/Federal agencies
  - Incidents with a prolonged effect on public utilities
  - Incidents involving potential or actual evacuations

3.2 UNPLANNED AND PLANNED NATURAL GAS RELEASES

3.2.1 Unplanned Natural Gas Releases

Unplanned natural gas releases are reportable events in some of the states that FGT operates in. In the event that an unplanned release of natural gas occurs during activities related to Project construction, the Contractor shall immediately notify the FGT Environmental Inspector of the event.

3.2.2 Planned Natural Gas Releases

Some of the states that FGT operates in require prior notification and/or approval for planned releases of natural gas to the atmosphere such as blowdowns. In the event that a planned release of natural gas is scheduled to occur during activities related to Project construction, the Contractor shall contact the FGT Environmental Inspector a minimum of two weeks prior to the event and confirm that notifications have been made and/or approvals obtained if required.

3.3 SPILL CLEAN-UP AND WASTE DISPOSAL

Spill clean-up and subsequent waste disposal of contaminated media will be the responsibility of the Contractor subject to the approval of the FGT Environmental Project Manager.

4.0 KEY EMERGENCY CONTACTS

The key personnel who will be contacted in the event of an emergency or spill incident include the following: **(Information to be provided prior to construction.)**

1) **FGT Emergency Contacts**
   a) FGT Emergency Coordinator: **Wiley LeBrun, cell: 318-282-9581**
   b) Field Construction Office: **Houston Office – 1300 Main Street, Houston, TX 77002**
   c) Lead Environmental Inspector: **TBD**
   d) Environmental Project Manager: **Justin Minter, office: 409-749-3902, cell: 409-377-0054**
   e) Area Office (in case of pipeline liquid spills): **Houston office – 713-989-7475**
2) **Contractor Emergency Contact**
   a) Contractor Emergency Coordinator: **Contractor Superintendent**
3) **Local Authorities**

Department	Phone
Local Police	911
Non-Emergency	727-582-6200 (Pinellas County, FL Sheriff) 813-247-8200 (Hillsborough County, FL Sherriff)
Local Fire Department	911
Hospital	813-873-6400 (HCA Florida South Tampa Hospital)

Ambulance	911
Local Emergency Planning Committee (LEPC)	727-464-3800 (Pinellas County, FL) 813-272-6600 (Hillsborough County, FL)

Appendix C-4

FGT Unanticipated Discovery Plan

FLORIDA GAS TRANSMISSION COMPANY, LLC

Tampa West Project

Unanticipated Discoveries Plan

Cultural Resources, Human Remains, Contaminated Media and Paleontological Resources

October 2022

Florida Gas Transmission Company

An Energy Transfer/Kinder Morgan Affiliate

TABLE OF CONTENTS

1.0 INTRODUCTION

As part of the planning process for the Florida Gas Transmission Company, LLC (FGT) Tampa West Lateral Looping Project (Project), biological and cultural resources surveys were conducted in the proposed Project area. If previously unidentified resources, or unanticipated discoveries, are encountered, they could consist of:

- Archaeological or historical resources;
- Human remains;
- Contaminated media; and
- Paleontological resources.

This document describes the procedures for dealing with unanticipated discoveries during the course of Project construction. It is intended to:

- Maintain compliance with applicable Federal and State of Florida laws and regulations during construction of the Project;
- Describe to regulatory and review agencies the procedures the Project or its representative will follow to prepare for and deal with unanticipated discoveries; and
- Provide direction and guidance to Project personnel as to the proper procedures to be followed should an unanticipated discovery occur.

The Environmental Inspector (EI) will be responsible for advising the construction contractor's personnel on the procedures to follow in the event that an unanticipated discovery is made. Training will occur as part of the pre-construction on-site training program for foremen, company inspectors, and construction supervisors. The EI will advise all operators of equipment involved in grading, stripping, or trenching activities to:

1. Stop work immediately if they observe any indications of the presence of cultural materials (artifacts or other man-made features), bone, or contamination.
2. Contact the EI as soon as possible.
3. Comply with unanticipated discovery procedures (see below).
4. Treat human remains with dignity and respect.

2.0 PROCEDURES FOR THE UNANTICIPATED DISCOVERY OF CULTURAL RESOURCES

In the event that any member of the construction work force believes that a cultural resource discovery is encountered, the following procedures will be implemented:

1. All work within 100 feet of the discovery will immediately stop and the EI and Construction Manager (CM) will be notified. The area of work stoppage will be adequate to provide for the security, protection, and integrity of the materials. A cultural resource can be prehistoric or historic and could consist of, but not be limited to, for example:
    - An accumulation of shell, burned rocks, or other subsistence related materials;

- An area of charcoal or very dark soil with artifacts;
- Stone tools, arrowheads, or dense concentrations of stone artifacts;
- A cluster of bones in association with shell, charcoal, burned rocks, or stone artifacts; and
- A historic structure or assemblage of historic materials older than 50 years.

2. If the EI and/or CM believes that the discovery is a cultural resource, the EI will take appropriate steps to protect the discovery site. This will include flagging the immediate area of discovery, stopping work, or setting up an exclusion zone, as well as notifying the Environmental Project Manager and/or Company Representative. Work in the exclusion zone will not resume until treatment of the discovery has been completed.
3. FGT or its representative will arrange for the discovery to be evaluated by a qualified archaeologist in accordance with applicable regulations. The archaeologist will evaluate the discovery and provide recommendations for how to manage the resource under the State of Florida's Historic Preservation Plan.
4. If the discovery is determined to be a cultural resource with the potential for eligibility, the archaeologist and FGT will consult with the State Historic Preservation Office (SHPO), the FERC, and, if necessary, the State Archaeologist on how best to avoid, minimize, treat, or otherwise mitigate further impacts. Consultation with the SHPO and applicable federal agency should occur in order to obtain technical advice and guidance for the evaluation of the discovered cultural resource(s). Treatment measures may include mapping, photography, sample collection, or excavation activity.
5. If necessary, a mitigation plan will be prepared for the discovered resource(s). This plan should be submitted to the SHPO and the FERC for review and comment. The SHPO should be expected to respond with preliminary comments within two (2) working days, with final comments to follow as quickly as possible.
6. The archaeologist will implement the appropriate treatment/mitigation measure(s), as outlined in the mitigation plan, and provide a report on its methods and results as required. The investigation and technical report will be performed in compliance with the Secretary of the Interior's Standards and Guidelines for Archaeological Documentation (48 CFR 44734--44737); the Advisory Council on Historic Preservation (ACHP) publication "Treatment of Archaeological Properties" (ACHP 1980); and follow the guidelines set forth by the Florida SHPO.

3.0 PROCEDURES FOR THE UNANTICIPATED DISCOVERY OF HUMAN REMAINS

In the event that human remains are encountered during either construction or maintenance activities, the following outlines the specific procedures to be followed. These procedures meet or exceed the Policy Statement Regarding Treatment of Burial Sites, Human Remains, and Funerary Objects set forth by the National Historic Preservation Act (Public Law [PL] 89-665), its implementing regulations, "Protection of Historic and Cultural Properties" (36 CFR Part 800); the Native American Grave and Repatriation Act (43 CFR Part 10); Procedures for the Protection of Historic Properties (33 CFR 325 Appendix C); the Archaeological and Historic Preservation Act; and Consultation and Coordination with Indian Tribal Governments (EO 13175).

All activities that might disturb the remains shall cease and may not resume until authorized by appropriate law enforcement officials or the State Archaeologist. Any human remains, burial sites, or burial related materials that are discovered during construction will at all times be treated with dignity and respect. If any

member of the construction work force believes that human remains are encountered the following procedures will be implemented:

1. All work in the near vicinity of the human remains shall immediately cease and reasonable efforts shall be made to avoid and protect the remains from additional impact. In cases of inclement weather, the human remains shall be protected with tarpaulins.

2. The EI and CM shall be notified immediately and will take appropriate measures to protect the discovery site. This shall include flagging the immediate area of discovery as an exclusion zone, as well as notifying the Environmental Project Manager and Project Manager. Work in the immediate area will not resume until authorized by the applicable agencies.

3. FGT, or its representative, shall immediately contact a qualified Professional Archeologist to investigate the reported discovery, inventory the remains and any associated artifacts, and assist in coordinating with state and local officials.

4. The County Medical Examiner shall be immediately notified as to the findings. If the remains are found to be other than human, any construction will be cleared to proceed. If the remains are human and are less than 75 years old, the Medical Examiner and local law enforcement officials will assume jurisdiction. If the remains are found to be human and older than 75 years, the State Archaeologist shall be notified and may assume jurisdiction of the remains. The SHPO and the FERC will also be notified. As much information as possible concerning the human remains, such as location and size, as well as any information on its significance, should be provided to the SHPO and the FERC.

5. If jurisdiction is assumed by the State Archaeologist, they will (a) determine whether the human remains represent a significant archaeological resource, and (b) make a reasonable effort to identify and locate persons who can establish direct kinship, tribal community, or ethnic relationship with the remains. If such a relationship cannot be established, then the State Archaeologist may consult with a committee of four to determine the proper disposition of the remains. This committee shall consist of a human skeletal analyst, two Native American members of current state tribes recommended by the Governor's Council on Indian Affairs, and "an individual who has special knowledge or expertise regarding the particular type of the unmarked human burial."

6. A plan for the avoidance of any further impact to the human remains and/or mitigative excavation, reinternment, or a combination of these treatments shall be developed in consultation with the State Archaeologist, the SHPO, the FERC and, if applicable, appropriate Indian tribes or closest lineal descendants. All parties will be expected to respond with advice and guidance in an efficient time frame. Once the plan is agreed to by all parties, the plan will be implemented.

4.0 PROCEDURES FOR THE UNANTICIPATED DISCOVERY OF CONTAMINATED MEDIA

To date, no known areas of contamination have been identified in the proposed Project area. However, the potential for discovery remains. Indicators of possible contamination include, but are not limited to:

- Drums or containers which are rusted or in otherwise poor condition, including buried drums or containers;
- Stained or otherwise discolored soil in contrast to adjoining materials;
- Spoil material containing debris other than obvious construction material;

- Chemical or hydrocarbon odors emanating from excavations;
- Oily residues;
- Visible sheens or other discoloration on groundwater or surface water; and
- Underground structures (e.g., pipelines, storage tanks).

The EI and appropriate contractor personnel shall be trained in hazard identification, including potential contamination and worker protection. These topics shall be discussed regularly in safety meetings. The EI's duties will include, but are not limited to, ensuring compliance with all environmental conditions.

A desktop assessment for contamination within the Project footprint indicated that contamination it not likely to be encountered during construction. In the unlikely event that contamination is encountered during construction of the Project, the following procedures shall be implemented:

1. All construction activities in the immediate area of the discovery shall cease and the EI shall be notified. Work in the immediate area will not resume until an assessment of the discovery has been completed and the Company has released the site.

2. If safe to do so, the EI shall take appropriate steps to flag the area as an exclusion zone and notify the Environmental Project Manager.

3. If potentially contaminated groundwater or soil reaches (or has the potential to reach) surface waters, booms and/or absorbent materials shall be immediately deployed to contain and reduce downstream migration of the material.

4. Upon notification, the Environmental Project Manager shall perform or direct a hazard assessment to determine appropriate control measures to be implemented at the specific site. Activities may include sampling vapors, soil, sediments, groundwater, and/or wipe samples of materials.

5. Upon evaluation of the sampling results, additional notifications may be made to coordinate a work plan for measures to be implemented in the contaminated area to resume activities in a safe, environmentally compliant, and effective manner. Measures may include additional personal protective equipment, segregation of contaminated media, treatment or off-site disposal of contaminated media.

6. If warranted by the assessment, the Environmental Project Manager will notify appropriate Federal, State and Local agencies.

7. All identification /characterization, handling, labeling, storage, manifesting, transportation, record keeping, and disposal of potentially contaminated materials will be conducted in accordance with applicable federal, state, and local regulations and guidance.

5.0 PROCEDURES FOR THE UNANTICIPATED DISCOVERY OF PALEONTOLOGICAL RESOURCES

A paleontological resource would be expected to be in the form of fossils. In-situ fossils are usually found within layers of geologically old sediments and rocks where the creature lived, died, and became fossilized. However, through geologic, hydrologic, and marine activity, many fossils and parts of fossils have been carried into younger geologic areas. In the event that any member of the construction work force believes

that an unanticipated discovery of paleontological resources has been made, the following procedures shall be implemented:

1. All work in the immediate area of the discovery shall immediately cease and the EI shall be notified. The area of work stoppage shall be adequate to provide for the security, protection, and integrity of the suspected discovery.

2. If the EI believes that the discovery is a paleontological resource, the EI shall take appropriate measures to protect the discovery site. This shall include flagging the immediate area of discovery as an exclusion zone, as well as notifying the Environmental Project Manager and/or Project Manager. Work in the immediate area will not resume until treatment of the discovery has been completed.

3. The Environmental Project Manager shall arrange for the discovery to be evaluated by a qualified geologist/paleontologist in accordance with applicable regulations. The geologist/paleontologist will evaluate the discovery and provide recommendations for how to manage the resource.

Specimens destined for the Florida Museum of Natural History will be sent to the Program of Vertebrate Paleontology:

Dr. Richard C. Hulbert Jr.
Collections Manager and Coordinator of Program of Vertebrate Paleontology
Florida Museum of Natural History
Dickinson Hall
Gainesville, FL 32611
rhulbert@flmnh.ufl.edu
(352) 373-1821

6.0 KEY CONTACTS

The table below identifies key contacts that may need to be notified in the event of an unanticipated discovery of archeological resources, human remains, paleontological resources, or contaminated media.

Contact	Phone Number
Environmental Inspector	
TBD	TBD
Construction Manager	
Wylie Lebrun wileylebrun@yahoo.com	(318) 212-9581 (Mobile)
Environmental Project Manager	
Justin Minter, Sr. Manager – Environmental Projects 15645 W. Port Arthur Rd. Beaumont, TX 77705 justin.minter@energytransfer.com	(409) 749-3902 (Office) (409) 377-0054 (Mobile)
Project Manager	
Don Porter 1300 Main St. Houston, TX 77002 don.porter@energytransfer.com	(713) 989-4602 (Office) (281) 460-4317 (Mobile)
Florida State Historic Preservation Office	

Alissa Slade Lotane, State Historic Preservation Officer Florida Division of Historical Resources R.A. Gray Building 500 S. Bronough St. Tallahassee, FL 32399-0250 Katie Miyar, PhD, Chief and State Archeologist Bureau of Archeological Research B. Calvin Jones Center for Archeology at the Governor Martin House 100 de Soto Park Drive Tallahassee, FL 32301	(850) 245-6436 (850) 245-6301
Federal Energy Regulatory Commission (FERC)	
Christopher Brosman, Project Archaeologist 888 First Street NE Washington, DC 20426 Christopher.Brosman@ferc.gov	(202) 502-8573 (Office)
Medical Examiner/Coroner	
Pinellas County Medical Examiner 10900 Ulmerton Road Largo, FL 33778 Hillsborough County Medical Examiner 11025 N 46th Street Tampa, FL 33617	(727) 582-6800 (813) 914-4500
Law Enforcement	
Pinellas County Sheriff's Office Hillsborough County Sheriff's Office	(727) 582-6200 or 911 (813) 247-8200 or 911
Florida Department of Environmental Protection (FDEP)	
Florida Department of Environmental Protection Temple Terrace – Southwest District 13051 Telecom Parkway North Temple Terrace, FL 33637	(813) 470-5700 or Emergency Response (850) 245-2010

7.0 REFERENCES

Florida Museum of Natural History (FMNH). 2020a. Vertebrate Fossil Sites of Florida. Available online at: https://www.floridamuseum.ufl.edu/florida-vertebrate-fossils/sites/.

FMNH. 2020b. Florida Fossil Permit. Available online at: https://www.floridamuseum.ufl.edu/vertpaleo/amateur-collector/fossil-permit/.

Appendix C-5

FGT Fugitive Dust Control Plan

FLORIDA GAS TRANSMISSION COMPANY, LLC

Tampa West Project

Fugitive Dust Control Plan

October 2022

Florida Gas Transmission Company

An Energy Transfer/Kinder Morgan Affiliate

TABLE OF CONTENTS

ABBREVIATIONS AND ACRONYMS

Plan	Fugitive Dust Control Plan
Project	Inglis Lateral Loop Project
FGT	Florida Gas Transmission Company
EI	Environmental Inspector
FERC Plan	Upland Erosion Control, Revegetation, and Maintenance Plan
FERC Procedures	Wetland and Waterbody Construction and Mitigation Procedures

1.0 INTRODUCTION

Florida Gas Transmission Company (FGT) has developed this Fugitive Dust Control Plan (Plan) to minimize fugitive dust emissions during ground-disturbing activities associated with construction of the Tampa West Lateral Loop Project (Project).

Land disturbance from clearing and excavation activities has the potential to generate fugitive dust particles. Dust control measures are practices that help reduce the surface and air movement of dust from disturbed soil surfaces. Fugitive dust is generated by the mechanical disturbance of granular material exposed to the atmosphere. Dust from open sources is termed "fugitive" because it is not discharged to the atmosphere in a confined flow stream. This Plan outlines fugitive dust control methods that will be used on the Project to minimize fugitive dust emissions.

2.0 FUGITIVE DUST EMISSION SOURCES

The following Project activities have the potential to generate fugitive dust emissions:

- Vegetation removal;
- Clearing and grading;
- Topsoil removal;
- Cutting and filling;
- Trenching;
- Backfilling;
- Track-out onto roads;
- Bulk material loading, hauling, and unloading;
- Vehicle and motorized equipment movement on unpaved access roads;
- Use of material storage piles; and
- Use of parking, staging, and storage areas.

3.0 FUGITIVE DUST MITIGATION MEASURES

It is the responsibility of the contractor(s) and the designated Environmental Inspector(s) (EIs) to ensure that contractor personnel are complying with all fugitive dust control measures. The EIs have authority to enforce and require compliance with this Plan and to stop work activities if a contractor does not comply with fugitive dust control measures.

Implementation of construction and restoration best management practices and operational controls will be used to mitigate fugitive dust emissions. Project specific construction permits will likely outline specific practices to control fugitive dust emissions, including a construction sequence, use of temporary rock entrances, and temporary soil stabilization measures. FGT will also implement operational controls, including the use of a reduced speed limits on unpaved access roads as well as sweeping/vacuuming paved roadways when Project-related soils are tracked out onto paved surfaces.

Wet suppression is the predominate method of suppressing fugitive dust emissions on unpaved roads and gravel pads. The application of water causes finer materials to adhere to larger particles, thereby reducing the possibility of particles becoming airborne. Increasing the moisture content of finer materials can be accomplished either naturally or mechanically. Moisture content of unpaved surfaces can be naturally

increased through precipitation or mechanically through the application of water, mainly via water trucks. The amount of water required to sufficiently control fugitive dust emissions is dependent on a number of variables including surface moisture content, ambient conditions (e.g., temperature, wind, humidity, precipitation), and construction activities occurring (e.g., vehicle/equipment traffic, vehicle speeds, vehicle weight). Disturbed and unpaved areas will be kept sufficiently damp during working hours in dry conditions to minimize wind-blown or traffic-generated fugitive dust emissions. Areas to be watered include, but are not limited to:

- The construction corridor, including temporary workspace;
- Access roads;
- Aboveground facility sites;
- Active grading areas;
- Un-stabilized areas;
- Soil stockpiles; and
- Unpaved parking/staging areas.

The frequency of water applications will vary based on weather and site conditions. More frequent applications will be required in dry conditions and in areas with a high potential for fugitive dust generation. Water for fugitive dust control will be obtained from municipal water systems or other approved sources.

3.1 Pipeline Construction Activities

Fugitive dust emissions from vegetation removal, clearing, grading, cutting and filling, topsoil removal, trenching, backfilling, and stockpile storage will be controlled, to a great extent, by disturbing limited areas at a time and following the construction sequencing. Should visible dust plumes occur during construction activities, the plumes will be abated by applying water along the travel lane and disturbed areas via water truck.

3.2 Unpaved Access Roads And Staging Areas

Fugitive dust emissions from vehicle and equipment travel on unpaved surfaces will be controlled, to a great extent, by reducing speed limits on unpaved surfaces. Fugitive dust emissions generated by vehicle and equipment traffic will be controlled by wet suppression, as necessary. Specifically, fugitive dust emissions occurring on active access roads or unpaved surfaces will be controlled by periodic wetting of unpaved surfaces via water truck. The wetting of unpaved surfaces will occur more frequently during periods of high vehicle or equipment traffic to minimize fugitive dust emissions. If weather conditions are adequate to suppress fugitive dust emissions, watering of unpaved surfaces will occur less frequently.

3.3 Track-out onto Paved Roads

The track-out of loose materials will be controlled by installing rock, timber mats, or paved construction entrances on access roads that begin at a junction with paved roads. Any loose material tracked beyond the construction entrances will be recovered via sweeper trucks and/or vacuum trucks.

4.0 INSPECTION, MONITORING, AND RECORDKEEPING

The construction contractor is responsible for implementing the fugitive dust control measures specified in this Plan. All construction personnel will be informed of the measures outlined in this Plan. The EIs will have primary responsibility for monitoring and enforcing the implementation of fugitive dust control measures by the construction contractor. The EIs will also be responsible for ensuring control measures are effective and proper documentation is maintained. Field inspections for fugitive dust control will occur daily. The construction contractor and EIs will be responsible for recording the following information on a daily basis:

- Weather conditions (e.g., temperature, precipitation, wind speed and direction, etc.);
- Number of water trucks in use;
- Locations where fugitive dust suppression measures were implemented;
- Presence of track-outs and when they were cleaned; and
- Overall status of fugitive dust control compliance.

This information will be incorporated into the Lead EI's daily report.

5.0 PERSONNEL TRAINING

Prior to commencing construction, FGT will conduct environmental and safety training for FGT and contractor personnel. The training will focus on the Federal Energy Regulatory Commission's *Upland Erosion Control, Revegetation, and Maintenance Plan (FERC Plan)* and *Wetland and Waterbody Construction and Mitigation Procedures (FERC Procedures)*, and other construction, restoration, and mitigation plans, including this Fugitive Dust Control Plan, and any applicable permit conditions.

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Appendix C-6

FGT Environmental Complaint Resolution Procedures

Florida Gas Transmission Company

An Energy Transfer/Kinder Morgan Affiliate

Right of Way Department

Re: **Environmental Complaint Resolution Procedures**
Project: **Tampa West Project**
Docket No.:

Dear Landowner:

Florida Gas Transmission Company, LLC ("FGT") owns and operates an interstate natural gas pipeline system and is regulated by the Federal Energy Regulatory Commission ("FERC"). The FERC has issued its Environmental Assessment and authorized FGT to construct, own, maintain and operate approximately 1.26 miles of 8-inch lateral loop pipeline and two below ground vaults for appurtenant facilities in Pinellas County, Florida and replace one existing below ground vault with a new below ground vault with pigging and appurtenant facilities in Hillsborough County, Florida. The project is known as the Tampa West Project ("Project") and is required to provide the change in hourly service and increase delivery point capacity to Tampa Electric Company ("TECO"). No compression station activities are required for the Project

FGT anticipates construction activities for its contractor to begin on or around February 1, 2023 and will limit construction to the daytime hours of 7:00 a.m. to 10:00 p.m. Construction could occur outside these days/times in the event a task is underway and interrupting the process could adversely impact the safe completion/success of the activity.

FGT is providing you with a copy of FGT's Environmental Complaint Resolution Procedures, herein, in compliance with FERC regulations.

Should you have questions, comments, or concerns regarding the construction activities, please contact me at (800) 381-1477 (Toll-Free) during FGT's normal office hours between 8:00 a.m. and 5:00 p.m. (Eastern), Monday through Friday.

Sincerely,

FLORIDA GAS TRANSMISSION COMPANY, LLC

By: _____
Beth Porter,
Contract Right of Way Manager

cc: Blair Lichtenwalter, Sr. Director – Certificates
Iain Russell, Manager – Certificates
Terry Coleman, Sr. Representative – Right-of-Way

Enclosures

SAMPLE

FLORIDA GAS TRANSMISSION COMPANY, LLC

ENVIRONMENTAL COMPLAINT RESOLUTION PROCEDURES

Florida Gas Transmission Company, LLC ("FGT") has developed its Environmental Complaint Resolution Procedures to address concerns or complaints received from affected landowners during construction of the Tampa West Project ("Project"). Affected landowners are being provided a copy of the Environmental Complaint Resolution Procedures in this mailer, prior to the commencement of construction. FGT is committed to work closely with affected landowners to ensure that any concerns or complaints are resolved satisfactorily and in a timely manner.

Affected landowners are encouraged to contact FGT with any problems or concerns regarding construction of the Project. FGT will respond to any complaints or concerns within 48 hours of receiving a call from an affected party. The Project Right-of-Way Manager should be the first contact for affected landowners. The FGT Project Right-of-Way Manager can be contacted via telephone at (800) 381-1477 (Toll Free), and will direct them to an appropriate person, such as the Lead Environmental Inspector, Chief Inspector, or Right-of-Way Agent, to resolve any issues. If a complaint has been received, a site visit will be scheduled with the affected landowner to assess the problem and provide an appropriate response. The Right of Way Manager will also maintain a voice mail system for any calls received after business hours.

If an affected landowner has contacted FGT and still feels that an appropriate response has not been provided, the landowner may contact the Federal Energy Regulatory Commission ("FERC" or "Commission") directly via the Commission's Dispute Resolution Service ("DRS") Landowner Helpline at 1-877-337-2237 (Toll-Free) or by email to LandownerHelp@ferc.gov, or writing to the Dispute Resolution Service, Federal Energy Regulatory Commission, 888 First Street, N.E., Washington DC 20426.

FGT will maintain a written record of all in-coming and out-going calls regarding landowner complaints related to its Project. A copy of this record will be maintained in FGT's Right-of-Way office. Each complaint received will be documented on a Landowner Complaint Resolution Form (example attached). Copies of this form will be distributed to the Chief Inspector, the Lead Environmental Inspector and FGT's Right-of-Way Agent.

Information regarding landowner complaints will be summarized in tabular form in a weekly report (example attached), and the table will be included in the Weekly Environmental Status Report submitted to the Commission.

SAMPLE

Florida Gas Transmission Company, LLC
Tampa West Project
Docket No.
Landowner Complaint Resolution Form

Report Number: _____

Date: _____

Time: _____

Landowners Name: _____

Location of Concern: _____

Tract: _____

Alignment Sheet

and Mile Post: _____

Call taken by: _____

Description of Concern: _____

_____

_____

_____

Inspected By: _____

Date and Time: _____

Description: _____

_____

_____

Corrective Action(s): _____

_____

Status: _____

ROW Agent Notified: _____

Date & Time: _____

SAMPLE

Florida Gas Transmission Company, LLC
Tampa West Project
Docket No.

Environmental Complaint Resolution Program
Weekly Environmental Status Report XX

Date Prepared: _____

Date of Call	Alignment Sheet & Mile Post	Description of Concern	Status of Concern

SAMPLE

Appendix C-7

FL NRCS Post-Construction Vegetative Restoration Recommendations for Utility Pipelines

FL NRCS POST-CONSTRUCTION VEGETATIVE RESTORATION RECOMMENDATIONS FOR UTILITY PIPELINES

General Considerations:

Revegetation efforts after pipeline construction should attempt to match surrounding vegetation types, as long as the surrounding vegetation types are compatible with pipeline maintenance requirements. This means that replanting shrubs and trees should be done on temporary access sites, but may not be practical when the pipeline right of way goes through a forested or native range site. When woody or shrubby species are cannot be used, only native herbaceous material should be used to revegetate such sites. Introduced (non-native) perennial grasses and legumes may be used for revegetation if the pipeline goes through a site had already been planted to these species, but revegetation using native species is an acceptable practice regardless of surrounding vegetation if livestock are not permitted access.

Noxious and Invasive Weed Control:

During construction and revegetation, care should be taken to prevent the introduction or spread of State of Florida noxious/prohibited plants or FL Exotic Pest Plant Council Category1 plant species. These lists can be found at http://www.fleppc.org/list/list.htm. Specific information on some of the invasive species listed can be found at the University of Florida, Electronic Data Information Source http://edis.ifas.ufl.edu/topic_invasive_weeds

Suggested mechanical control options to be used in conjunction with chemical control methods for woody/shrubby noxious and invasive species are shown in Table 1. Current herbicide recommendations for the control of noxious and invasive plants in native areas can be found at http://edis.ifas.ufl.edu/pdffiles/WG/WG20900.pdf

Wetland Restoration:

Construction projects that impact wetlands are subject to more state and federal regulations than upland communities. All necessary local, state, and federal permits need to be obtained prior to pipeline construction and wetland restoration. Information on permitting requirements in Florida can be found at http://www.dep.state.fl.us/water/wetlands/index.htm. Any requirements specified in the permit will supersede any of the following recommend-ations.

Sources of Information

The NRCS Wetlands webpage contains useful information on wetland science and links to resources to assist the planner in restoration planning. Florida-specific information on wetland restoration may be found at http://www.dep.state.fl.us/water/wetlands/fwric/library.htm and http://www.dep.state.fl.us/water/wetlands/docs/mitigation/mitman.pdf.

General Recommendations Prior to construction it is important to document the soils, hydrology and vegetative conditions existing on the site, the adjacent landscape, and the contributing watershed in the planning process. Base soils, vegetation and hydrology criteria for restoration on the pre-disturbance wetland type, which will be defined according to Florida NRCS "26 Ecological Communities of Florida" (or successor document), the Guide to the Natural Communities of Florida, or other recorded classification system such as the hydrogeomorphic wetland classification system.

During construction avoid covering hydric soil by fill, sediment, spoil, or other depositional material as much as practical. After construction, remove the material covering the hydric soil to the extent technically feasible or practicable. Hydroperiod, hydrodynamics, and dominant water source of

Table 1. Options for Mechanical Control of Noxious and Invasive Woody Species.			
Major Brush Species	**Treatment Periods**	**Treatment Alternatives**	**Management Prescription**
Brazilian pepper	Any time	Dozing (Grubbing)	A
	May-August	Roller Chopping-Heavy	B
	May-August	Spiral Chopping-Heavy	B
Melaleuca	Any time	Dozing (Grubbing)	A
Other Woody Noxious and Invasive Plants	Any time	Excavator-Slash Scattered	C
	Any time	Excavator-Slash Piled	D
	Any time	Tree Shear-Slash Scattered	E
	Any time	Tree Shear-Slash Piled	F

A. Dozing/Grubbing/Root Raking: Use a crawler tractor equipped with a root rake or dozer blade on front. Sever woody stems below ground surface and push into piles. Burn or remove piles as desired. This method generally provides only temporary (short-term) control of sprouting species such as Melaleuca and Brazilian Pepper.

B. Roller/Spiral Chopping – Heavy: Stack and burn top growth as needed. Use a drum type roller chopper or aerator arranged in a tandem set, minimum weight of 1,500 lbs./linear foot. Pull choppers fast enough to produce a "flipping" action such that brush roots and rhizomes are thrown out of the ground for effective kill. Use a tractor with at least 110 horsepower. For best results, use a 4-wheel drive tractor to minimize tire slip on sandy soils. Two (2) passes are generally needed to achieve maximum control of woody vegetation. The second application should be applied diagonally to the first application.

C. Hydraulic Excavator – Slash Scattered: Use an excavator equipped with a grapple attachment. This type of machine allows the operator to physically remove the tree or large shrub from the soil. In sandy soils and mucky soils, this method generally removes all above and below ground plant parts. The removal of below ground portions of the plant significantly reduces the potential for trees to resprout. The detached material may be removed from the site or stacked and burned as desired. This method is best used to remove large trees and shrubs. Target brush or tree species will be felled in a manner that places as much of the woody debris in contact with the soil surface as possible. Slash will decompose in a few years if laid on the soil surface. Scatter slash to allow accessibility to livestock and wildlife.

D. Hydraulic Excavator – Slash Piled: Use an excavator equipped with a grapple attachment. This type of machine allows the operator to physically remove the tree or large shrub from the soil. In sandy soils and mucky soils, this method generally removes all above and below ground plant parts. The removal of below ground portions of the plant significantly reduces the potential for trees to resprout. Target brush or tree species will be felled and piled for burning or to provide wildlife habitat... This method is best used to remove large trees and shrubs. Target brush or tree species will be felled and piled for burning later. Make the smallest sized slash piles as practical for the site and size of woody material. Smaller slash piles are easier to burn and minimize adverse effects from excess heat to the soil surface.

E. Tree Shear – Slash Scattered: Use a tree shear, chain saw, axe or similar implement to physically severe the base of tree or shrub above the soil surface. The detached material may be removed from the site or stacked and burned as desired. This method is best used to remove large trees and shrubs. Burn or remove piles as desired. Cut stumps can be treated with herbicides to kill the roots. Target brush or tree species will be felled in a manner that places as much of the woody debris in contact with the soil surface as possible. Slash will decompose in a few years if laid on the soil surface. Scatter slash to allow accessibility to livestock and wildlife.

F. Tree Shear – Slash Piled: Use a tree shear, chain saw, axe or similar implement to physically severe the base of tree or shrub above the soil surface. The detached material may be removed from the site or stacked and burned as desired. This method is best used to remove large trees and shrubs. Cut stumps can be treated with herbicides to kill the roots. Target brush or tree species will be felled and piled for burning or to provide wildlife habitat. Make the smallest sized slash piles as practical for the site and size of woody material. Smaller slash piles are easier to burn and minimize adverse effects from excess heat to the soil surface. Leave as much space between piles as practical to allow accessibility to livestock and to prevent areas of soil scarification that may require more intensive critical area treatment. Burn or remove piles as desired.

the restored site should approximate the conditions that existed before alteration to the extent possible without adverse impacts to offsite properties. Make sure the site has adequate substrate material and site preparation necessary for proper establishment of the selected plant species in the plan specifications.

Where natural colonization of pre-identified, selected species will realistically dominate within three years for herbaceous wetlands or five years for forested or shrub wetlands, sites may be left to revegetate naturally. If active forms of revegetation are required, utilize native species typical for the wetland type being restored. The Florida Association of Native Plant Nurseries (http://www.afnn.org/) has a searchable directory of native plants and suppliers. Any of a variety of methods, including mechanical or aerial seeding, organic mat placement, wetland sod, vegetative sprigs or transplants, etc., may be used to establish herbaceous vegetation over the entire site or a portion of the site and at densities and depths as appropriate.

Upland Restoration:

Soil Amendments

If practical, use a current soil test (< 3 yr old) processed by the IFAS Extension Soil Testing Laboratory or equivalent laboratory to determine the need for liming materials and plant nutrients.

If a soil test can not be made, use the following nutrient rates:

- On sites to be planted to introduced species, apply 1 to 2 tons per acre (of finely ground dolomite or agricultural limestone per acre. **Do not apply lime on sites to be planted with native species.**
- For grasses, other than native species, seeded alone use 40 to 50 lb per acre of nitrogen, phosphorous, and potassium at planting and annually each spring. This can be supplied by 400 to 500 lb per acre of a 10-10-10 formulation. Apply an additional 30 to 60 lb of additional nitrogen as ammonium nitrate or ammonium sulfate when grass has emerged and begun growth. If native species are planted, follow recommendations for legume plantings.
- For legumes alone or grass and legume mixtures, apply only phosphorous and potassium by using 200 to 400 lb per acre of a 0-10-20 formulation at planting.
- For woody ground covers, shrubs, vines, and trees planted on prepared seedbeds apply 1,000 lb per acre of a 10-10-10 formulation in 3 split applications during the growing season.

Application of Soil Amendments

When conventional seeding methods are used:

- Amendments (liming materials and plant nutrients) need to be uniformly applied and thoroughly mixed in to the soil during seedbed preparation when broadcast or drilled planting methods are used.
- When planting individual plants, broadcast liming material on top of ground before preparing holes or furrows. Mix fertilizer with the soil used to fill around plants or placed in separate holes or furrows 3 to 6 inches to the side of plants. When dibbles are used for planting, the fertilizer needs to be placed in a side furrow.

When hydro seeding equipment is used:

- Use only commercial fertilizers and mix them with water in the hydro seeder. This mixture is applied after the seedlings are established. Do not mix fertilizer in the seed-inoculant mixture as it may kill the inoculant.
- Liming materials may be added to the seed-inoculant mixture and applied at seeding or it may be applied with the fertilizer mixture.

Plant selection

In most cases, revegetation needs to be accomplished with herbaceous or woody perennials, but in some cases appropriate mixtures of perennial grasses and annual forbs may be used. Because herbaceous perennials can be slow establishing, short term temporary cover (nurse crop, Table 2) may be necessary.

Care should be taken when seeding perennials with a nurse crop. Faster germination and growth rate of annual nurse crops can result in excessive competition for the perennial species and result in poor perennial establishment.

Perennial warm season herbaceous species approved for use are listed in Tables 3 and 4. **At this time, there are no cool season perennial grasses recommended for Florida.**

Seed specifications

All seed used needs to meet the requirements of Florida Seed Law (http://www.flaes.org/statutesandrules.html).

- Make sure the seed lots used do not contain any prohibited or noxious weeds seeds (see http://www.doacs.state.fl.us/pi/enpp/botany/images/noxiousweedtable1.pdf).

  Do not use a seed lot if the seed has less than 95 percent purity and/or less than 85 percent germination rate without adjusting the seeding rate up based on Pure Live Seed (PLS, see box on this page).

- Use inoculant appropriate for the specific legume(s) planted and prior to the expiration date stamped on the package. Due to extreme conditions often encountered in critical areas, appropriate spreader/sticker needs to be used. Additionally, consider pelletizing the seed prior to planting. For more information on inoculants, see http://edis.ifas.ufl.edu/AG152).

"Pure Live Seed" or **PLS** represents the percentage of the material in a bag of seed that is viable seed of the desired species. PLS is not shown on the seed tag.

PLS is determined by multiplying the per cent of pure seed times the per cent of germination. (The % purity and % germination are listed on the seed tag.)

For example, a bag of switchgrass seed has 70% germination and 80% purity.

PLS = 70% germination X 80% purity divided by 100, or 56%. In other words, only 56% of the material in the bag is germinable seed.

The PLS is then used to determine the amount of seed to be used. The actual seeding rate is calculated by dividing the recommended seeding rate by the PLS.

For example: 10 LB/A divided by 0.56 = 17.9 LB/AC. You will need to plant 17.9 LB/A of the switchgrass seed to provide 10 LB/A of pure live seed per acre.

Table 2. Annual crops for use as nurse crop.

	Seeding Rate	
	Lb/acre	Lb/1,000 sq ft
Crop – Cool Season[1]		
Oats[2] (*Avena sativa*)	65	1.5
Rye[2] (*Secale cereale)*	45	1.0
Wheat[2] (*Triticum aestivum*)	45	1.0
Annual Ryegrass[3] (*Lolium multiflorum*)	15	0.5
Crop – Warm Season[4]		
Browntop Millet[5] (*Urochloa ramosa*)	20-30	0.5
Pearlmillet[5] (*Pennisetum glaucum*)	20-30	0.5-0.75
Japanese Millet[5] (*Echinochloa frumenatacea*)	20-30	0.5-0.75
Proso Millet (*Panicum miliaceum*)	20-30	0.5-0.75

[1]Seeding is to be done between September and February.

[2]See (http://edis.ifas.ufl.edu/AG175) for more information on small grains and see local extension office for recommended cultivars.

[3]See local extension service for recommended cultivars or see (http://edis.ifas.ufl.edu/AG104).

[4]Seeding is to be done between March and August.

[5]See (http://edis.ifas.ufl.edu/AG157) for more information on warm season annual grasses and see local extension office for recommended cultivars.

Vegetative planting material specifications

Some species of plants must be planted vegetatively; follow current University of Florida recommendation for planting vegetative material. Minimally follow the recommendation below:

- Be sure that planting material (sprigs or tops) is from nurseries that are pure as to species or variety and free from common bermudagrass or other weedy grasses.

- Sprigs (consisting of underground rhizomes, plant crowns, and/or stolons) can be dug in mid to late winter before the plant starts growing (before breaking dormancy). Tops (green stems) also can be used to plant most grasses in the summer rainy season, but the grass needs to be have at least six weeks or more of growth when harvested for planting.
- Do not allow planting material to dry out or go through a "heat" after harvesting as this greatly reduces quality of the planting material. Time digging or harvesting of planting material so that planting occurs the same day during the summer or within 24 hours in the early spring. Dig or harvest no more than can be planted in one 24-hr period.

Seedbed Preparation

Seedbed preparation is not required where hydraulic seeding or conservation tillage is being used to establish vegetation.

When conventional planting methods are used for broadcast or drilled plantings (seed or vegetative), soil needs to adequately loosened with tillage equipment (e.g., plow, disc, etc.) to a minimum depth of 6 inches to alleviate compaction and then smoothed and firmed for proper placement of seed or sprigs. Tillage operations need to be done on the contour where feasible.

When conventional planting methods are used for individual plants, prepare seedbeds by digging holes, opening furrows, using dibbles or other means appropriate for the plants to be used. Openings need to be large enough to accommodate plant roots without crowding or bending the tap root. See NRCS Conservation Practice Standard "Tree/ Shrub Establishment," Code 612, Guidance for more information (http://efotg.nrcs.usda.gov/references/public/FL/612-fl.guidance.A.pine.pdf and http://efotg.nrcs.usda.gov/references/public/FL/612-fl.guidance.B.other.pdf).

Planting - Seed or Vegetative Material

Freshly prepare and firmed seedbeds are a must for conventional seeding procedures. Distribute the seed uniformly over the area to be planted with a cultipacker seeder, grain drill, other mechanical seeder, or by hand.

Adjust seeder so that proper seeding depth is

Table 3. Seeded perennial herbaceous warm season species or mixtures.

Species (Area Adapted in State)[1]	Lb /A	Comment
Bahiagrass[2] (*Paspalum notatum)* (N, C, S/ST)	50	Slow establishing, use nurse crop. Use 'Argentine', 'Pensacola', or 'Tifton-9' bahiagrass.
Bahiagrass + Partridge pea (*Chamaecrista fasiculata*) (N, C, S/ST)	50 + 10	Grass/legume mixture. Only 'Comanche' partridge pea is recommended.
Switchgrass (N, C, S/ST) (*Panicum virgatum*)	10	Native grass adapted to wide range of sites, do not mow below 8-12 inches. Only 'Alamo' switchgrass is recommended.
Switchgrass + Partridge pea (N, C, S/ST)	10 + 10	Native grass/legume mixture

[1]See Figure 1.

[2]See local extension service for recommended cultivars or see http://edis.ifas.ufl.edu/AA184.

Table 4. Vegetatively planted perennial species.

Species (Area Adapted in State)[1]	Rate or Spacing	Comment
bermudgrass[2], hybrid (*Cynodon dactylon*) (N, C, S/ST)	Sprigs or stems at 1,000 – 2,000 lb/A	Well drained sites, high nutrient requirement
peanut, perennial[3] (*Arachis glabrata)* (N, C, S)	Sod (or rhizomes at 80-120 bu/A)	Moderately drained sites, slow establishing from rhizomes
Stargrass[4] (*Cynodon* nlemfuensis) (S/ST)	Stems at 1,000 – 2,000 lb/A	Somewhat poorly drained to moderately drained sites, high fertility

[1]See Fig. 1.

[2]See local extension service for recommended cultivars or see (http://edis.ifas.ufl.edu/AA200).

[3]See local extension service for recommended cultivars or see (http://edis.ifas.ufl.edu/AA183).

[4]See local extension service for recommended cultivars or see (http://edis.ifas.ufl.edu/AG154)

used (usually ¼ to ½ inch or see individual planting recommendations) or by disking or cultipacker if broadcast on surface or hand planted. Following the planting operation, the area needs to be cultipacked or firmed with other mechanical or manual methods to ensure good soil contact with seed.

Planting dates for introduced warm season perennials establishment are:

- North Florida – March 1 to August 15 (vegetative and seed)
- Central Florida – February 1 to March 15 (seed only) or June 1 to August 31 (vegetative or seed)
- South Florida – January 15 to February 28 (seed only) or June 1 to September 15 (vegetative or seed)

Introduced warm season seeded perennial grasses can be planted with a cool season nurse crop in September through January, but the site need to be inspected the following summer to ensure adequate stand has established.

The recommended planting date for switchgrass alone on in combination is:

- North Florida – December 1 – April 15
- Central Florida – December 1 – March 15
- South Florida – December 1 – March 1

In south Florida, winter can be too wet and the site can be flooded; planting may be delayed until site is dry enough for equipment to be used.

Vegetative material can be planted with a commercial sprig planter or large roll bale planter (tops only). A spinner- or slinger-type planter can be used to broadcast either sprigs or tops. Small areas can be hand planted by distributing the material (tops only) evenly over the prepared surface at the rate of 25 to 50 lb per 1,000 sq ft (equivalent to 1,000 to 2,000 lb per acre).

If a large bale planter, slinger, or hand planting method is used, cover the planting materialimmediately after planting with a disk harrow to depth of 2 to 3 inches. Long tops (stems) can also be pushed into the soil with a "fairway-type" roller.

Fig. 1. From 26 Ecological Communities of Florida, 1989, p. 146, Soil and Water Conservation Society, Gainesville, FL.

Regardless of planting method, pack the soil with a heavy roller after planting so that soil capillarity can be established which will keep the soil moist around the planting material.

No-till seeding can be done in killed cover crops or in temporary cover that is sparse enough to allow adequate growth of the permanent species. The appropriate seeding equipment needs to be used for no-till planting.

For hydraulic seeding, seed, inoculant (if required), and a seed carrier is mixed with water and applied as slurry, uniformly over the area to be treated. The seed carrier can be a cellulose fiber, natural wood fiber or cane fiber mulch material which is dyed an appropriate color to facilitate uniform application of seed. Use the correct inoculant at four times the rate specified on the package, and apply the seed-inoculant mixture within one hour after mixing. Do not mix fertilizer with the seed-inoculant mixture; apply fertilizer in a separate operation after seedlings are established.

Planting – Individual Plants

Consult Florida Plant List for Conservation Alternatives (http://efotg.nrcs.usda.gov/

references/public/FL/FloridaNRCSPlantListforConservationAlternatives.common.pdf) for approved trees and shrubs

Consider normal growth rate and proper form when trees and shrubs are planted. Wider tree spacing than desired for commercial plantings is generally better for wildlife. Planting density should be higher on areas where survival will be low or there is an erosion hazard. See NRCS Conservation Practice Standard Tree/ Shrub Establishment, Code 612, Guidance for more information on planting densities (http://efotg.nrcs.usda.gov/references/public/FL/612-fl.guidance.A.pine.pdf and http://efotg.nrcs.usda.gov/references /public/FL/612-fl.guidance.B.other.pdf).

When inter-planting in a scattered stand of existing desirable trees or shrubs, seedlings should not be planted closer than the expected canopy diameter at breast height plus 10 feet (i.e., no closer than 20 feet for a tree having an expected canopy diameter at breast height of 10 feet.)

Trees, shrubs, vines, and sprigs can be planted with appropriate planters or hand tools. Plants will be planted in a manner that avoids crowding the roots. A hole should be three to five times the width of the rootball or container and the depth 12 inches or deeper in the center to accept the rootball or rootmass. Machine planting should create a trench about 4-inches wide and 15 inches in depth.

Firm the soil around the roots, and if possible, apply water to settle soil around the roots and prevent drying out of shrubs, vines, and sprigs.

Plant nursery stocks at the same depth or slightly deeper than they grew at the nursery. The tips of vines and sprigs must be at or slightly above the ground surface.

Planting trees during December through January will provide the best survival. Deciduous shrubs are best planted during late winter; late fall planting is best for evergreen shrubs. Containerized seedlings or burlapped (a.k.a., “balled”) stock can be planted at almost any time during the year **as long as the plants are stored, handled and planted properly, and receive adequate post-planting water and care.**

Mulch

Use mulch on all slopes steeper than 3%, on dams and spillways, and on road banks.

Straw bales placed on the contour can be used in addition to mulch on long slopes. Place bales end to end and anchor each individual bale with two stakes.

Dry straw or hay used for mulch needs to be free of weed seed and applied at the rate of 1.5 to 2 tons per acre (75 – 100 lb per 1,000 sq feet) so that above 75 percent of the soil surface is covered.

Wood cellulose fiber used as carrier in hydraulic seeding operations functions as a self-sticking mulch when applied at 500 lb per acre.

If jute matting is used as mulch, half the seed needs be planted prior to the matting being is anchored down and the remainder planted afterward. Anchor jute matting on all edges and down the center of the roll at 5- or 6-foot intervals.

Bonded fiber blankets (1/4 X 1/4 inch plastic mesh laminated to a mulch blanket) can be used on areas highly susceptible to wind or water erosion. Unroll blankets and secure in place after the area has been seeded.

Regardless of the mulching method used, the mulch needs be secured immediately after placing by one of the methods listed:

- Manual – with a square spade, cut mulch in along the contour in 18-inch rows.
- Mulch anchoring tool – an implement with flat notched disks that punches or anchors the mulch into the soil to a depth of three inches. (A farm disk set straight and weighted also can be used.) The site should be moist, free of stones or other obstructions, and loose enough to allow penetration.
- Mulch netting – light weight paper, jute, plastic or wire netting which is unrolled and stapled along the edges and down the center at 5- to 6-foot intervals.

- Peg and twine – after mulch is applied wooden stakes or pegs, 8- to 10-inches long, are driven in the ground to within 2 to 3 inches of the soil surface. Twine is then stretched between the pegs in a criss-cross pattern and secured.
- Pick chain – a rolling spike-chain implement used on slopes of 3:1 or steeper.
- Petroleum-derived mulch – a liquid that is sprayed on in a thin continuous film. It will generally remain intact for a period of 4 to 10 weeks.

See Florida NRCS Conservation Practice Standard Mulching, Code 484, for more information (http://efotg.nrcs.usda.gov/references/public/FL/fl484_Mulching_Oct05.pdf.)

Irrigation

Use irrigation when available and needed to ensure establishment. Irrigation may be particularly critical for vegetatively established plants. Irrigation needs be applied at a rate that will not cause erosion.

Post Planting Management and Maintenance

Manage the area as long as necessary to stabilize the site and achieve the intended purpose.

Control or exclude pests that will interfere with the timely establishment of vegetation. Mowing may be necessary to control the competition of weeds and/or nurse crop during the establishment period of the perennial plants. If herbicides are needed, refer to Florida NRCS Conservation Practice Standard Pest Management, Code 595 (http://efotg.nrcs.usda.gov/references/public/FL/fl595.pdf); follow current Univ. Florida, IFAS recommendations (http://edis.ifas.ufl.edu/WG006); and adhere to label instructions. Inspections, reseeding or replanting, fertilization, and pest control may be needed to ensure that revegetated areas function as intended.

Table5. Criteria for Determining Probable Stand Success

Number of plants per square foot	Probable Success and Suggested Action
0 - 0.05	**Failure.** Replanting required.
0.05 – 0.1	**Probable failure.** Replanting recommended
0.1 – 0.5	**Questionable**. Consider vigor of existing plants, potential to spread, extent of competition, length of contract, weather considerations, adequacy of erosion control, and desires of producer to determine replanting decision.
>0.5	Satisfactory.

Most native perennial grasses do not flower and produce seed until the second year after planting. In fact, unless plants are know to have emerged and died during the first growing season, stands should not be rated for establishment success until the end of the second growing season. Table 5 lists criteria for rating probable success of native warm season grass establishment.

Maintenance should include a regular lime and fertilization program based on soil test recommendations. In the absence of soil tests, follow general lime and fertilization recommendations listed for establishment.

Sites seeded to suitable species may be grazed after established. At a minimum do not allow grazing until 18 months after planting and do not graze bermudagrass or bahiagrass stands less than 6 inches and switchgrass less than 12 inches.

Appendix D Landowner List

Submitted under Separate Cover as

"CUI/Privileged Information – Do Not Release"

Appendix E Agency and Stakeholder Correspondence

Appendix E-1

U.S. Fish and Wildlife Blanket Endangered Species Act Clearance – Statewide

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Florida Ecological Services Field Office

June 9, 2021

Florida Gas Transmission Company
Attention: Kristin Benbow
2405 Lucien Way, Suite 200
Maitland, Florida 32751

Service Consultation Code: 04EF2000-2021-TA-0731
Date Received: December 2, 2020
Project: Renewal of Blanket Endangered Species Act Clearance
County: Statewide

Dear Ms. Benbow:

The U.S. Fish and Wildlife Service (Service) has received the Florida Gas Transmission Company (FGT) request dated December 2, 2020, to renew and consolidate existing blanket clearance letters for specified routine activities and minor projects. This document transmits the Service's comments in accordance with Section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq., ESA).

To fulfill Federal Energy Regulatory Commission (FERC) regulations, FGT must comply with the ESA for any project authorized by the FERC Blanket Certificate Program. FGT is an interstate natural gas pipeline company regulated by the FERC, which conducts many pipeline related activities within our area of the Service jurisdiction. Pursuant to FERC regulations (18 CFR Part 157), the FERC Blanket Certificate Program enables interstate natural gas pipeline companies to proceed with specified routine activities and minor construction projects, without significant FERC involvement, provided the covered activities are consistent with all applicable environmental regulations.

FGT has maintained individual blanket clearances within each USFWS service area within the state of Florida (Jacksonville, Vero Beach, and Panama City Field Offices). FGT requested renewal of these USFWS Blanket Clearances for minor and routine construction activities as a single, state-wide consultation. The proposed activity consists of minor construction projects which may include construction and maintenance of tap valves, meter and regulation installation and maintenance, groundbed installations, anomaly digs, minor relocations, pipe replacements, recoats, hydrostatic testing, and other projects of similar scale.

These minor pipeline maintenance activities generally consist of one or more of the following conditions:

- Ground disturbing activities are limited to existing right-of-way/easement (ROW), compressor stations, meter and regulation stations (M&R) and temporary work space (TWS) utilized to construct existing facilities;
- TWS directly adjacent to existing facilities and/or within a previously permitted/utilized area/temporary easement that has been used for staging, parking, access roads/roadway ROW, farming or other commercial activities;
- TWS that is confined to urban areas, hardscape, areas covered with limerock, commonly utilized areas, or other densely compacted surfaces (e.g., parking lots, access roads, roadway ROW, roadway embankments, etc.), or agricultural fields with landowner consent;
- TWS were previous non-FGT related activities have occurred within an FGT proposed project area and may have caused disturbance/modification to ground surface/subsurface (e.g. leveling, grading, fill/spoil placement, road ROW, farming, channelized waterways, ditches, or canals, etc.).
- Use of existing access roads and existing ROW for access, including minor upgrades such as adding gravel and/or regrading; existing cultivated farmland or pasture may also be utilized to access these sites with landowner permission;
- The acquisition of existing facilities by lease or purchase (no new ROW/TWS required); or
- Where a qualified biologist has performed an evaluation resulting in a “no effect” determination.

If a listed species is encountered during implementation of an activity, the activity would stop immediately and remain stopped, as needed, to avoid harm to the species. The activity would continue only if the species moves to, and remains in, a safe location, and/or FGT consults with the Service.

For projects outside of the described conditions, or if a biological evaluation reveals potential to harm listed species, then FGT will consult with the Service prior to initiating the project. FGT will provide a project description, project map, summary of its endangered species review, and any other required material(s) to assist the Service in its review and approval of/concurrence with a proposed FGT project. Biological evaluations are performed prior to every FGT construction project and these evaluations utilize the IPaC online service to help identify potential resources.

In accordance with the Endangered Species Act, the Service has determined that this project as described in the referenced activities is 'not likely to adversely affect' any federally-listed species known to occur in the state of Florida. This fulfills Section 7 requirements for the Service. If modifications are made to the project that may affect listed species or their habitat; if the applicant fails to comply with the stated conditions; if additional information involving potential effects to listed species not previously considered becomes available; or if take of a listed species occurs during the construction of this project, consultation will be reinitiated. This Blanket Clearance agreement would remain in effect for a period of 5 years from the date of execution, unless amended or terminated by either party with 30 days written notice.

Thank you for your cooperation and effort in protecting federally listed species and fish and wildlife resources. If you have any questions regarding this Project, please contact Jose Rivera at 772-469-4267.

Sincerely yours,

JOSE RIVERA Digitally signed by JOSE RIVERA
Date: 2021.06.10 08:48:56 -04'00'

José J. Rivera
Acting Regulatory Division Manager
Florida Ecological Services Field Office

Enclosures

cc: electronic only
Annie Dzwergowski (Service)
Paul Lang (Service)
Connie Cassler (Service)
Christopher Putnam (Service)

Appendix E-2

Florida Fish and Wildlife Conservation Commission Endangered Species Clearance - Statewide

Florida Fish and Wildlife Conservation Commission

Commissioners
Rodney Barreto
Chairman
Coral Gables

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Managing fish and wildlife resources for their long-term well-being and the benefit of people.

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Hearing/speech-impaired:
800-955-8771 (T)
800 955-8770 (V)

MyFWC.com

October 8, 2021

Kristin Benbow
Florida Gas Transmission Company, LLC
2405 Lucien Way, Suite 200
Maitland, FL 32751
Kristin.Benbow@energytransfer.com

RE: Florida Gas Transmission Company Statewide Operational and Maintenance Agreement

Dear Ms. Benbow:

Florida Fish and Wildlife Conservation Commission (FWC) staff reviewed your request for a blanket agreement for general maintenance and minor and routine construction activities. This agreement addresses regular activities conducted by the Florida Gas Transmission Company (FGT) and ensure those activities meet the requirements of Chapter 68A-27 of the Florida Administrative Code as they relate to avoiding take of state-listed species.

Minor construction and pipeline maintenance projects include construction and maintenance of tap valves, meter and regulation installation and maintenance, groundbed installations, anomaly digs, minor relocations, pipe replacements, recoats, hydrostatic testing, and other projects of similar scale. Such projects should not result in impacts to state-listed fish and wildlife species when activities are conducted outside of avoidance buffers described in the Species Conservation Measures and Permitting Guidelines or Gopher Tortoise Permitting Guidelines in the following instances:

1. Ground disturbing activities are limited to existing right-of-way/easement (ROW), compressor stations, meter and regulation stations (M&R) and temporary workspace (TWS) utilized to construct existing facilities.
2. TWSs are directly adjacent to existing facilities and/or within a previously permitted/utilized area/temporary easement that has been used for staging, parking, access roads/roadway ROW, farming or other commercial activities.
3. TWSs are confined to urban areas, hardscape, areas covered with limerock, commonly utilized areas, or other densely compacted surfaces (e.g., parking lots, access roads, roadway ROW, roadway embankments, etc.), or agricultural fields with landowner consent.
4. TWSs are in areas where previous non-FGT related activities have occurred within an FGT proposed project area and may have caused disturbance/modification to ground surface/subsurface (e.g., leveling, grading, fill/spoil placement, road ROW, farming, channelized waterways, ditches, or canals, etc.).
5. TWSs are accessed from existing access roads (improved or unimproved) and existing ROW for access, including minor upgrades such as adding gravel and/or regrading; existing cultivated farmland or pasture may also be utilized to access these sites with landowner permission.
6. The activity involves routine ROW vegetation maintenance.
7. The activity involves an immediate danger to the public's health and/or safety, including imminent or existing power outages that threaten public safety, or in direct response to an official declaration of a state of emergency by the Governor of Florida or a local governmental entity, power restoration activities.

If state-listed wildlife is discovered after project activities have begun, contact the Florida Fish and Wildlife Conservation Commission Protected Species Permit Coordinator at (850) 921-5990 or WildlifePermits@MyFWC.com for more information. Death or injury of a listed species

should be immediately reported to the Florida Fish and Wildlife Conservation Commission's Wildlife Alert Hotline at (888) 404-3922.

The liability to not impact or cause "take" of listed species, migratory wildlife, and other regulated species of wildlife is the responsibility of the property owner or permittee. Please refer to Chapter 68A-27, Florida Administrative Code, for definitions of "take" and a list of fish and wildlife species. If listed species are observed on the project site, FWC staff are available to provide decision support information or assist in obtaining the appropriate permits.

For further information or review, please contact FWC staff at ConservationPlanningServices@MyFWC.com. Thank you for contacting the FWC.

Sincerely,

Jason Hight, Acting Director
Office of Conservation Planning Services

ld/jh

CC: Claire Sunquist Blunden, Wildlife Diversity Conservation, Claire.Sunquist@MyFWC.com

ConservationPlanningServices@MyFWC.com

Appendix E-3

Florida Division of Historic Resources Consultation

FLORIDA DEPARTMENT of STATE

RON DESANTIS
Governor

Cord Byrd
Secretary of State

Tim Parsons, Senior Project Manager
SEARCH Florida – Tallahassee

October 24, 2022

RE: DHR Project File No.: 2022-7132 Received by DHR: October 19, 2022
Florida State Historic Preservation Officer (SHPO) Consultation for the Florida Gas Transmission (FGT) Tampa West Lateral Loop in Hillsborough and Pinellas Counties, Florida

Dear Dr. Parsons:

Our office reviewed the referenced project in accordance with Section 106 of the National Historic Preservation Act of 1966, as amended, and its implementing regulations in 36 CFR Part 800: Protection of Historic Properties, and Chapters 267.061, Florida Statutes, and implementing state regulations, for possible effects on historic properties listed in, or eligible for, the National Register of Historic Places (NRHP), or otherwise of historical, architectural, or archaeological value. The project is subject to compliance with requirements for the Federal Energy Regulatory Commission (FERC).

In September 2022, SEARCH conducted the above referenced Phase I cultural resource assessment survey (CRAS) on behalf of Florida Gas Transmission Company, LLC (FGT). SEARCH excavated 3 shovel tests, all negative, and encountered 3 new historic structures (8HI15320-8HI15322) within the 32-acre area of potential effect (APE) during their investigation. 8HI15320 is the historic structure housing American Legion Post 138. 8HI15321 is an historic resource group, the Port Tampa Canal System. 8HI15322 is an historic linear resource, historic Prescott Street. None of these resources are considered eligible for listing on the NRHP by SEARCH, and none are located within the APE, so there is expected to be no effect to them. SEARCH proposes that this project will have no effect on cultural resources listed, or eligible for listing in the NRHP, or otherwise of archaeological, historical, or architectural significance within the survey area, and recommends no additional work in the APE.

Based on the information provided, our office concurs with the presented survey results and recommendations and finds that the proposed project will have no effect on historic properties listed, or eligible for listing, in the NRHP, or otherwise of historical, archaeological, or architectural value within the surveyed APE. Further, we find the submitted report complete and sufficient in accordance with Chapter 1A-46, Florida Administrative Code.

If you have any questions, please contact Ethan Putman, Historic Sites Specialist, by email at Ethan.Putman@dos.myflorida.com.

Sincerely,

Kelly L Chase
For

Alissa Slade Lotane
Director, Division of Historical Resources
& State Historic Preservation Officer

Appendix E-4

Florida Department of Environmental Protection Blanket Concurrence for Activities Deemed Consistent with the Florida Coastal Management Program: Five-Year Authorization (2022 - 2027) Florida

From:	Stahl, Chris
To:	Benbow, Kristin
Cc:	State Clearinghouse
Subject:	State Clearance Letter for FL202210259637C- Concurrence for Activities Deemed Consistent with the Florida Coastal Management Program: Five-Year Authorization (2022 - 2027) Florida
Date:	Tuesday, October 25, 2022 3:55:30 PM

October 25, 2022

Kristin P. Benbow
Florida Gas Transmission Company
1300 Main Street
Houston, Texas 77002

RE: Federal Energy Regulatory Commission - Blanket Certificate Activity - Florida Gas Transmission Company -Concurrence for Activities Deemed Consistent with the Florida Coastal Management Program: Five-Year Authorization (2022 - 2027) Florida.
SAI # FL202210259637C

Dear Kristin:

Florida State Clearinghouse staff has reviewed the proposal under the following authorities: Presidential Executive Order 12372; § 403.061(42), Florida Statutes; the Coastal Zone Management Act, 16 U.S.C. §§ 1451-1464, as amended; and the National Environmental Policy Act, 42 U.S.C. §§ 4321-4347, as amended.

Based on the information submitted, the state has no objections to the subject project and, therefore, it is consistent with the Florida Coastal Management Program (FCMP). Thank you for the opportunity to review the proposed plan. If you have any questions or need further assistance, please don't hesitate to contact me at (850) 717-9076.

Thank You,

Chris Stahl

Chris Stahl, Coordinator
Florida State Clearinghouse
Florida Department of Environmental Protection
3900 Commonwealth Blvd., M.S. 47
Tallahassee, FL 32399-2400
ph. (850) 717-9076
Chris.Stahl@floridadep.gov

From:	Benbow, Kristin
To:	State.Clearinghouse@FloridaDEP.gov
Cc:	Chris.Stahl@FloridaDEP.gov
Subject:	FGT Blanket Clearance Renewal Request
Date:	Thursday, October 20, 2022 9:34:00 AM
Attachments:	FGT_FL_CZMA Request_10.20.2022.pdf FDEP CZMA Clearance_11-14-17.pdf image001.png image002.png image003.png image004.png image005.png image006.png image007.png

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Good Morning,

Please see attached request for renewal of Florida Gas Transmission Company's blanket clearance for activities deemed consistent with the Florida Coastal Zone Management Program. FGT wishes to continue this agreement for another 5-year period. FGT does not request any changes to the agreement language. I have attached the current (expiring) agreement for reference.

FGT is required to supply the Federal Energy Regulatory Commission (FERC) with documentation of all federal approvals for all projects performed under the Blanket Certificate Program (this includes a large portion of routine pipeline operations and maintenance performed by FGT on a continual basis). A "Blanket Clearance" from an agency is an acceptable form of approval, and these agreements must be supplied to the FERC and meet certain specifications. In order to be acceptable they must identify the document as an agreement (under the Blanket Certificate Program) and also note the terms under which the agreement applies. For FGT's routine operations and maintenance procedures, it has been generally agreed upon that there are no inconsistencies with the CZMA. The blanket clearance has been a crucial component of streamlining the permitting process for FGT's operations projects. FGT would appreciate the Clearinghouse's review of this request in order to continue operating a streamlined process for pipeline operations under this regulatory program.

Please contact me with any questions or concerns.

Thanks,

Kristin P. Benbow
Environmental Scientist
FGT Southeast Division

O: 407.838.7119
C: 321.200.5743

Florida Gas Transmission Company

An Energy Transfer/Kinder Morgan Affiliate

Via Email: State.Clearinghouse@dep.state.fl.us

October 20, 2022

Chris Stahl, Clearinghouse Coordinator
Office of Intergovernmental Programs
Florida Department of Environmental Protection
2600 Blair Stone Road; MS 47
Tallahassee, Florida 32399-2400

Re: Request for Renewal of Blanket Clearance Concurrence for Activities Deemed Consistent with the Florida Coastal Management Program: Five-Year Authorization (2022 - 2027)

Dear Mr. Stahl:

Please accept this request for renewal of the existing Blanket Clearance concurrence for activities compliance with the Florida Coastal Management Program for a five-year period.

Florida Gas Transmission Company, LLC (FGT), an interstate natural gas pipeline company regulated by the Federal Energy Regulatory Commission (FERC), conducts many pipeline related activities throughout the state. Pursuant to FERC regulations (18 CFR Part 157), the blanket certificate program enables interstate natural gas pipeline companies to proceed with specified routine activities, including minor construction projects, without significant FERC involvement, provided the covered activities are consistent with all applicable environmental regulations.

To fulfill FERC regulations, FGT must comply with the Florida Coastal Management Program for any project authorized by the blanket certificate program. In accordance with Federal regulations, FGT must routinely engage in minor projects which are repetitive in nature, cause little or no earth disturbance, and are mostly located in areas previously disturbed by the installation of existing facilities. This concurrence indicates only that the covered activities, if submitted individually, would not trigger dissemination by the Florida State Clearinghouse for State intergovernmental review. FGT understands this Blanket Clearance does not relieve it of any independent obligations to seek permits or authorizations as may be required pursuant to applicable Florida law.

The following examples are the types of activities authorized under this Blanket Clearance:

- Lowering of Existing Lines - FGT lowers existing pipelines when required in response to new construction (e.g., highways), encroachment by residential, commercial, or industrial facilities, erosion, or other natural forces beyond FGT's control when necessary to ensure safety or maintain the operational integrity of the facilities. Lowering of existing lines would be conducted utilizing the existing pipeline easement and workspace disturbed during the original construction of the facility.

- Relocation, Replacement, Removal, Repairs, Testing - On occasion, FGT must replace existing pipeline facilities. Replacements can involve minor relocations (i.e., relocation(s) required by DOT road widening), class upgrades (i.e., replacing existing pipe), removal, or abandonment in place, of an existing facility (e.g., pipeline segments, meters, stations, yard and station piping) and the installation of a new replacement facility. Testing can involve hydrotesting sections of pipe or running assessment tools to investigate the integrity of existing lines; which can involve a minor amount of ground disturbance to access the pipeline at a finite location. Repairs may

involve repairing the casing/coating on small sections of existing lines in order to maintain integrity.

• Meter Stations, Regulation Stations, Tap Valves and Laterals - These activities involve the construction of new tap valves, laterals (small diameter pipelines), meter and regulation stations (M&R) for interconnecting points with other pipelines and new customers. Specifically, M&R stations may include a tap valve, meter and regulation equipment, interconnecting pipelines, and appurtenant facilities such as conditioning/treatment equipment, odorization equipment, and similar facilities. Laterals and M&R stations would be constructed adjacent to or utilizing the existing pipeline easement and workspace disturbed during the construction of the existing facility or within an established fenced facility.

• Abandonment - These activities can involve the removal from service and abandonment of existing facilities such as pipelines, M&R stations, tap valves, or interconnections with other pipelines.

• Access to Minor Activities Sites - Access to the areas of work described above would typically be by use of existing roads, including two-track trail roads and existing rights-of- way. These roads are commonly used with no grading or widening of the roads required. However, limited application of gravel or grading may be required within the existing foot- print of some roads to facilitate access. Existing cultivated farmland or pasture may also be used to access these sites.

For activities not meeting the above-listed criteria, FGT will consult directly with your office to obtain a project-specific clearance.

Please feel free to contact me with any comments and/or questions you may have, as well as revisions or conditions if necessary, so that the requested Blanket Clearance will meet with your approval. If you determine that the proposed types of activities are consistent with the Coastal Zone Management Plan, please provide written approval or sign the concurrence portion of this letter and return to:

Florida Gas Transmission Company
Attention: Kristin Benbow
2301 Lucien Way, Suite 200
Maitland, FL 32751

Sincerely,

Kristin P. Benbow, M.S.
Environmental Scientist
Kristin.Benbow@energytransfer.com
407-838-7119

Concurrence:

Chris Stahl, Clearinghouse Coordinator
Office of Intergovernmental Programs

Date:

Appendix F Environmental Survey Reports and Data

F-1 FGT Tampa West Project Environmental Survey Report
F-2 Noise and Air Quality – Emissions Calculations

Appendix F-1

FGT Tampa West Project Environmental Survey Report

Environmental Survey Report
Prepared for:

Florida Gas Transmission Company, LLC
Tampa West Project
Pinellas and Hillsborough Counties, Florida

Prepared by E2A, Incorporated

September 2022

TABLE OF CONTENTS

APPENDICES

1.0 Project Description

E2A, Inc. (E2A) conducted environmental field surveys of the Florida Gas Transmission Company, LLC (FGT) Tampa West Lateral Project consisting of:

Pipeline Loop –1.3 miles of 8-inch lateral loop pipeline within the Florida Department of Transportation (FDOT) right-of-way (ROW) for Gandy Boulevard (US92/SR600);

Vaults 1, 2, & 3 – Replace existing vault (Vault 1) at the beginning of the loop and install new vault (Vault 2) at the end of the loop on the Gandy Causeway. Replace existing vault (Vault 3) at American Legion Post on east side of Tampa Bay.

Contractor Yard – One temporary staging yard in Pinellas County (approximately 8.60 acres).

A Project location map and environmental survey area maps are provided in **Appendix A**.

E2A conducted ecological surveys in September 2022, including field delineation to determine the presence of wetlands and other surface waters, baseline protected species and habitat surveys, invasive plant species surveys, ground-truthing and verification of Florida Land Use, Cover, and Forms Classification System (FLUCCS) data, and general ground reconnaissance.

2.0 Wetlands, Waterbodies and Other Surface Waters

E2A conducted field surveys to determine the presence of wetlands and/or waterbodies within the Project area during September 2022.

8-inch Lateral Loop – Pinellas County, FL – All facilities and construction activities will be limited to FDOT ROW for SR92/SR600. The area south of the road is utilized by the public for beach access (Gandy Beach). The entire area is subject to vehicle traffic, pedestrian traffic, and vehicle parking. Several cars were driving or parked within the survey area at the time of survey. FDOT was also conducting construction activities along the beach area. While high tides may extend into the southern edge of the survey area, FGT will limit all activities to areas above the high tide line (HTL). There are no wetlands or other surface waters within the survey area. The entire area consists of loose sand and/or fill material, including rock and concrete, imported during road construction over the years. No wetland plant species, hydrologic indicators, or hydric soils are present. Vegetation is limited to typical roadside herbaceous species dominated by bahia grass. The entire area is subject to routine mowing and maintenance by FDOT. Plant species are described in Section 4. Photographs of the survey area are included in Appendix C.

Contractor Yard – Pinellas County, FL – The entire survey area is an existing paved parking lot associated with a commercial business. According to review of historic aerial photography (Google Earth), the parking area was paved in the mid-1990's. There are no wetlands, waterbodies, or other surface waters within the survey footprint. Access to the survey area is available from the north (US92/SR600) through existing paved driveways and parking areas or from the southeast (San Martin Blvd NE) via an existing paved driveway. Photographs of the survey area are included in Appendix C.

Vault 3 – Hillsborough County, FL – This site is within FGT's existing, maintained, permanent ROW for the Tampa West Lateral. There is an existing FGT vault at this location in a grassed (bahia grass) area associated with the American Legion Post. The entire survey area is comprised of paved parking, roadway, and maintained landscape areas that are regularly mowed. There are no wetlands, waterbodies, or other surface waters within the survey area. Maintained areas are bordered to the north and south by mangrove wetlands along the perimeter of Tampa Bay. While soil maps indicate the presence of hydric soils within the survey area, the entire area has been filled over the years for parking for the American Legion Post (built in the 1930's) and soils are now comprised of gravel and shell fill material. There are no wetland plants or hydrologic indicators within the survey area. Vegetation consist mainly of bahia grass and ornamental landscape species as described in Section 4.

3.0 Wildlife and Listed Species

E2A's biologists conducted a desktop review using Florida Natural Areas Inventory (FNAI), Florida Fish and Wildlife Conservation Commission (FWC), and U.S. Fish and Wildlife Service (FWS) website databases to determine listed species that may potentially occur in the project area. E2A's biological field crew conducted pedestrian surveys of the environmental survey area on September 6, 2022. Listed species with potential to occur in the project area and survey results are shown in **Table 3-1**.

Table 3-1 Listed Species with Potential to Occur in or Near the Project Area

Species	Status[1]		Habitat Requirements/Survey Results
	State	Federal	
8-inch Tampa West Lateral Loop, Vault 1, Vault 2, Contractor Yard - Pinellas County			
Birds			
Eastern black rail (*Laterallus jamaicensis spp. jamaicensis*)	NL	T	Tidal marshes and salicornia on coast; grassy marshes inland. Favors very shallow water, or damp soil with scattered puddles. Survey Results: Habitat not present within survey area.
Wood stork (*Mycteria americana*)	NL	T	Freshwater marshes, swamps, lagoons, ponds, flooded fields, and depressions in marshes. Can also occur in brackish wetlands. Nests in upper parts of cypress trees, mangroves, or dead hardwoods. Survey Results: Potential habitat present adjacent to survey area in the mangroves or Tampa Bay area. Species not present during survey.
Audubon's Crested Caracara (*Polyborus plancus audubonii*)	T	T	Wet prairies with cabbage palms. Survey Results: No wet prairies with cabbage palms present within survey area. Species not present during survey.
Piping Plover (*Charadrius melodus*)	T	T	Sandy beach habitat. Survey Results: Sandy beach habitat present adjacent to survey area. Species not present during survey.
Red knot (*Calidris canutus rufa*)	T	T	Coastal marine or estuarine habitats with large areas of exposed intertidal sediments. Survey Results: Coastal and estuarine habitats present adjacent to survey area. Species not present during survey.
Florida Burrowing Owl (*Athene cunicularia floridana*)	T	NL	Dry prairies, pastures, or ruderal areas. Survey Results: No dry prairies, or pastures present. Some ruderal areas present. The nearest known colony in the area in on MacDill airfield in Hillsborough County. Species not present during survey.

Table 3-1 Listed Species with Potential to Occur in or Near the Project Area			
Species	**Status[1]**		**Habitat Requirements/Survey Results**
	State	**Federal**	
Snowy plover (*Charadrius nivosus*)	T	NL	Sandy beach habitat near vegetation or debris. Survey Results: Sandy beach habitat near vegetation or debris present adjacent to survey area. Species not present during survey.
Reddish egret (*Egretta refusecens*)	T	NL	Coastal mangrove islands or Brazilian pepper on manmade dredge spoil islands for nesting habitat. Foraging habitat includes shorelines with little vegetation. Survey Results: No coastal mangrove islands or Brazilian pepper on manmade dredge spoil islands present. Species not present during survey.
Tricolored heron (*Egretta tricolor*)	T	NL	Coastal mangrove islands or willow thickets in freshwater, flooded wetlands and tidal creeks. Survey Results: No coastal mangrove islands or willow thickets in freshwater. Some flood wetlands and tidal creeks adjacent to survey area. Species not present during survey.
American oystercatcher (*Haematopus palliatus*)	T	NL	Large beach sites used for nesting. Foraging areas include shellfish beds. Survey Results: No large beach sites or shellfish beds within survey area. Species observed outside of survey area.
Roseate spoonbill (*Platalea ajaja*)	T	NL	Coastal mangrove islands and Brazilian pepper man-made dredge spoil islands. Mangrove-dominated inlets and shallow coastal pools are used for foraging. Survey Results: No coastal mangrove islands or Brazilian pepper man-made dredge spoil island present within survey area. Some shallow coastal pool areas present adjacent. Species not present during survey.
Black skimmer (*Rynchops niger*)	T	NL	Coastal areas such as estuaries, beaches, and sandbars. Survey Results: Beaches and coastal areas adjacent to survey area. Species observed outside of survey area.
Least tern (*Sternula antillarum*)	T	NL	Coastal areas such as estuaries, beaches, and sandbars. Survey Results: Beaches and coastal areas adjacent to survey area. Species not present during survey.
Mammals			

Table 3-1 Listed Species with Potential to Occur in or Near the Project Area			
Species	**Status[1]**		**Habitat Requirements/Survey Results**
	State	**Federal**	
West Indian Manatee (*Trichechus manatus*)	T	T	Marine, brackish, and freshwater systems in coastal and riverine habitats. Survey Results: Marine and coastal habitats adjacent to survey area. Species not present during survey.
Reptiles/Amphibians			
Eastern indigo snake (*Drymarchon corais couperi*)	NL	T	Sandhill regions dominated by mature longleaf pines, turkey oaks, and wiregrass; flatwoods; hammocks, palmetto flats, prairie, and wet fields. Refuges include gopher tortoise burrows, armadillo burrows, and stump holes. Survey Results: Habitat not present within survey area. Species not present during survey.
American Crocodile (*Crocodylus acutus*)	T	T	Brackish or saltwater areas, ponds, coves, and creeks in mangrove swamps. Survey Results: Habitat present adjacent to survey area. Species not present during survey.
Gopher tortoise (*Gopherus polyphemus*)	T	C	Well-drained sandy substrates with ample herbaceous vegetation for food. Habitats include sandhill, sand pine scrub, xeric hammocks, pine flatwoods, dry prairies, and mixed hardwood-pine communities. Survey Results: Habitat not present within survey area. Species not present during survey.
Green Sea Turtle (*Chelonia mydas*)	T	T	Mainly stay along the coastline and around islands, in bays and protected shores, especially in areas with seagrass beds. Survey Results: Habitat present in Tampa Bay adjacent to the survey area.
Hawksbill Sea Turtle (*Eretmochelys imbricata*)	E	E	Mainly stay along the coastline and around islands, in bays and protected shores, especially in coral reef habitats. Survey Results: Habitat present in Tampa Bay adjacent to the survey area.
Leatherback Sea Turtle (*Dermochelys coriacea*)	E	E	Mainly stay along the coastline and around islands, in bays and protected shores. Nest on sandy beaches. Survey Results: Habitat present in Tampa Bay adjacent to the survey area.

Table 3-1 Listed Species with Potential to Occur in or Near the Project Area			
Species	**Status[1]**		**Habitat Requirements/Survey Results**
	State	**Federal**	
Loggerhead Sea Turtle (*Caretta caretta*)	T	T	Mainly stay along the coastline and around islands, in bays and protected shores. Nest on sandy beaches. Survey Results: Habitat present in Tampa Bay adjacent to the survey area.
Short-tailed Snake (*Lampropeltis extenuata*)	T	NL	Dry upland habitats, principally sandhill xeric hammocks and sand pine scrub. Survey Results: No sandhill xeric hammock or sand pine scrub habitat present.
Insects			
Monarch Butterfly (*Danaus plexippus*)	C	NL	Open fields, meadows, agricultural fields, pasture land, roadside habitat, or residential areas. Survey Results: Some roadside habitat available within survey area. Species not present during survey.
Plants			
Florida golden aster (*Chrysopsis floridana*)	E	E	Sand pine scrub, scrubby flatwoods, and xeric hammock with bare sand openings in full sun. Along roadsides and clearings. Survey Results: No sand pine scrub, scrubby flatwoods or xeric hammocks present within survey area. Roadside present; however, no species present during survey.
Golden leather fern (*Acrostichum aureum*)	T	NL	Brackish or freshwater marshes. Survey Results: No habitat within survey area.
Brittle maidenhair fern (*Adiantum tenerum*)	E	NL	Moist, shaded, limestone ledges or grottoes. Survey Results: No habitat within survey area.
Nuttall's rayless goldenrod (*Bigelow nuttallii*)	T	NL	Sand pine scrub habitat or disturbed mixtures of sand pine and slash pine. Survey Results: No habitat within survey area.
Many-flowered grass-pink (*Calopogon multiflorus*)	T	NL	Dry to moist flatwoods with longleaf pine, wiregrass, and saw palmetto. Survey Results: No habitat within survey area.
Sand butterfly pea (*Centrosema arenicola*)	E	NL	Slash pine-turkey oak sandhills or scrubby flatwood habitat. Survey Results: No habitat within survey area.

Table 3-1 Listed Species with Potential to Occur in or Near the Project Area			
Species	**Status[1]**		**Habitat Requirements/Survey Results**
	State	**Federal**	
Sanibel lovegrass (*Eragrostis pectinacean var. tracyi*)	E	NL	Beach dunes, maritime hammocks, old fields or coastal grassland habitat. Survey Results: No habitat within survey area.
Tampa vervain (*Glandularia tampensis*)	E	NL	Sandy coastal hammocks, dunes, well-drained live oak-slash or longleaf pine-saw palmetto flats habitat present. Survey Results: No habitat within survey area.
Gulf coast Florida lantana (*Lantana depressa var. sanibelensis*)	E	NL	Barrier islands and on limestone coastal prairie habitat. Survey Results: No habitat within survey area.
Nodding pinweed (*Lechea cernua*)	T	NL	Ancient dunes, mature scattered pine or oak habitat. Survey Results: No habitat within survey area.
Pine pinweed (*Lechea divaricata*)	E	NL	Sand pine scrub, ancient dune, scrub oak, or moist dune swale habitat. Survey Results: No habitat within survey area.
Narrowleaf naiad (*Najas filifolia*)	T	NL	Freshwater habitats with dark water characteristics. Survey Results: No habitat within survey area.
Comb polybody (*Pecluma ptilota var. bourgeauana*)	E	NL	Roadside ditches or badly eroded pastures. Survey Results: No habitat within survey area.
Giant orchid (*Pteroglossaspis ecristata*)	T	NL	Scrub oak habitat, pine rocklands, pine-palmetto flatwoods, fields, dry grassy clearings, or dry-mesic pine savannah present. Survey Results: No habitat within survey area.
Ray fern (*Schizaea pennula*)	E	NL	Saw palmetto or gallberry habitat. Survey Results: No habitat within survey area.
Small ladies' tresses (*Spiranthes brevilabris*)	E	NL	Moist prairies, pine-hardwood forests, open pinelands, wetland pine savannahs/flatwoods, meadows or dry to moist fields. Survey Results: No habitat within survey area.
Redmargin zephrylily (*Zephryanthes simpsonii*)	T	NL	Wet flatwoods or meadows. Survey Results: No habitat within survey area.
Vault 3 – Hillsborough County			
Birds			

Table 3-1 Listed Species with Potential to Occur in or Near the Project Area			
Species	**Status[1]**		**Habitat Requirements/Survey Results**
	State	**Federal**	
Eastern black rail (*Laterallus jamaicensis spp. jamaicensis*)	NL	T	Tidal marshes and salicornia on coast; grassy marshes inland. Favors very shallow water, or damp soil with scattered puddles. Survey Results: Habitat not present within survey area.
Wood stork (*Mycteria americana*)	NL	T	Freshwater marshes, swamps, lagoons, ponds, flooded fields, and depressions in marshes. Can also occur in brackish wetlands. Nests in upper parts of cypress trees, mangroves, or dead hardwoods. Survey Results: Potential habitat present adjacent to survey area in the mangroves or Tampa Bay area. Species not present during survey.
Audubon's Crested Caracara (*Polyborus plancus audubonii*)	T	T	Wet prairies with cabbage palms. Survey Results: No wet prairies with cabbage palms present within survey area. Species not present during survey.
Red knot (*Calidris canutus rufa*)	T	T	Coastal marine or estuarine habitats with large areas of exposed intertidal sediments. Survey Results: Coastal and estuarine habitats present adjacent to survey area. Species not present during survey.
Florida scrub-jay (*Aphelocoma* coerulescens)	T	T	Fire-dominated, low-growing oak scrub habitat. Survey Results: No habitat within survey area.
Florida Sandhill Crane (*Antigone canadensis pratensis*)	T	NL	Prairies, freshwater marshes, and pasture lands. Avoids forests and deep marshes, but uses transition zones and edges between these and prairies or pasture lands. Favors wetlands dominated by pickerelweed and maidencane. Survey Results: No habitat within survey area.
Florida Burrowing Owl (*Athene cunicularia floridana*)	T	NL	Dry prairies, pastures, or ruderal areas. Survey Results: No dry prairies, or pastures present. Some ruderal areas present. The nearest known colony in the area in on MacDill airfield in Hillsborough County. Species not present during survey.

Table 3-1 Listed Species with Potential to Occur in or Near the Project Area			
Species	**Status[1]**		**Habitat Requirements/Survey Results**
	State	**Federal**	
Snowy plover (*Charadrius nivosus*)	T	NL	Sandy beach habitat near vegetation or debris. Survey Results: No habitat within survey area. Species not present during survey.
Reddish egret (*Egretta refusecens*)	T	NL	Coastal mangrove islands or Brazilian pepper on manmade dredge spoil islands for nesting habitat. Foraging habitat includes shorelines with little vegetation. Survey Results: No coastal mangrove islands or Brazilian pepper on manmade dredge spoil islands present. Species not present during survey.
Little blue heron (*Egretta caerulea*)	T	NL	Fresh, salt, and brackish water environments including swamps, estuaries, ponds, lakes, and rivers. Survey Results: Salt and brackish water environments adjacent to survey area. Species not present during survey.
Tricolored heron (*Egretta tricolor*)	T	NL	Coastal mangrove islands or willow thickets in freshwater, flooded wetlands and tidal creeks. Survey Results: Coastal mangrove areas and tidal creeks adjacent to survey area. Species not present during survey.
Roseate spoonbill (*Platalea ajaja*)	T	NL	Coastal mangrove islands and Brazilian pepper man-made dredge spoil islands. Mangrove-dominated inlets and shallow coastal pools are used for foraging. Survey Results: Some shallow coastal pool and mangrove areas present adjacent to survey area. Species not present during survey.
Black skimmer (*Rynchops niger*)	T	NL	Coastal areas such as estuaries, beaches, and sandbars. Survey Results: Coastal areas adjacent to survey area. Species not present during survey.
Least tern (*Sternula antillarum*)	T	NL	Coastal areas such as estuaries, beaches, and sandbars. Survey Results: Coastal areas adjacent to survey area. Species not present during survey.
Mammals			

Table 3-1 Listed Species with Potential to Occur in or Near the Project Area			
Species	**Status[1]**		**Habitat Requirements/Survey Results**
	State	**Federal**	
West Indian Manatee (*Trichechus manatus*)	T	T	Marine, brackish, and freshwater systems in coastal and riverine habitats. Survey Results: Marine and coastal habitats adjacent to survey area. Species not present during survey.
Reptiles/Amphibians			
Eastern indigo snake (*Drymarchon corais couperi*)	NL	T	Sandhill regions dominated by mature longleaf pines, turkey oaks, and wiregrass; flatwoods; hammocks, palmetto flats, prairie, and wet fields. Refuges include gopher tortoise burrows, armadillo burrows, and stump holes. Survey Results: Habitat not present within survey area. Species not present during survey.
American Crocodile (*Crocodylus acutus*)	T	T	Brackish or saltwater areas, ponds, coves, and creeks in mangrove swamps. Survey Results: Habitat present adjacent to survey area. Species not present during survey.
Gopher tortoise (*Gopherus polyphemus*)	T	C	Well-drained sandy substrates with ample herbaceous vegetation for food. Habitats include sandhill, sand pine scrub, xeric hammocks, pine flatwoods, dry prairies, and mixed hardwood-pine communities. Survey Results: Habitat not present within survey area. Species not present during survey.
Hawksbill Sea Turtle (*Eretmochelys imbricata*)	E	E	Mainly stay along the coastline and around islands, in bays and protected shores, especially in coral reef habitats. Survey Results: Habitat present in Tampa Bay adjacent to the survey area.
Leatherback Sea Turtle (*Dermochelys coriacea*)	E	E	Mainly stay along the coastline and around islands, in bays and protected shores. Nest on sandy beaches. Survey Results: Habitat present in Tampa Bay adjacent to the survey area.
Loggerhead Sea Turtle (*Caretta caretta*)	T	T	Mainly stay along the coastline and around islands, in bays and protected shores. Nest on sandy beaches. Survey Results: Habitat present in Tampa Bay adjacent to the survey area.

Table 3-1 Listed Species with Potential to Occur in or Near the Project Area			
Species	**Status[1]**		**Habitat Requirements/Survey Results**
	State	**Federal**	
Short-Tailed Snake (*Lampropeltis extenuata*)	T	NL	Dry upland habitats, principally sandhill, xeric hammock, and sand pine scrub. Survey Results: Habitat not present within survey area.
Florida Pine Snake (*Pituophis melanoleucus*)	SSC	NL	Relatively open canopies and dry sandy soils, specially sandhill and former sandhill, including old fields and pastures, but also sand pine scrub and scrubby flatwoods. Often coexists with pocket gophers and gopher tortoises. Survey Results: Habitat not present within survey area.
Plants			
Florida golden aster (*Chrysopsis floridana*)	E	E	Sand pine scrub, scrubby flatwoods, and xeric hammock with bare sand openings in full sun. Along roadsides and clearings. Survey Results: No sand pine scrub, scrubby flatwoods or xeric hammocks present within survey area. Roadside present; however, no species present during survey.
Florida Bonamia (*Bonamia grandiflora*)	T	T	Deep, white, dry sands of ancient dunes and sandy ridges in clearings or openings of scrub habitat on the Central Ridge of Florida. Survey Results: Project not located on the Central Ridge of Florida.
Pygmy Fringe-tree (*Chionanthus pygmaeus*)	E	E	Species primarily located on the Lake Wales Ridge in scrub, sandhill, and xeric hammock habitats. Survey Results: Project not located on the Lake Wales Ridge.
Golden leather fern (*Acrostichum aureum*)	T	NL	Brackish and freshwater marshes. Survey Results: Habitat not present within survey area.
Brittle maidenhair fern (*Adiantum tenerum*))	E	NL	Moist, shaded, limestone ledges or grottoes. Survey Results: Habitat not present within survey area.
Incised groove-bur (*Agrimonia incisa*)	T	NL	Longleaf pine-deciduous scrub oak, open pine woods, mixed pine-oak woods, bluffs, small clearings and old road habitats. Survey Results: Habitat not present within survey area.
Pinewoods bluestem (*Andropogon arctatus*)	T	NL	Wet pine flatwoods or seepage wetlands and wet pine savanna habitat. Survey Results: Habitat not present within survey area.
Auricled spleenwort (*Asplenium erosum*)	E	NL	Tree trunks or logs in swamps and hammocks. Survey Results: Habitat not present within survey area.

Table 3-1 Listed Species with Potential to Occur in or Near the Project Area			
Species	**Status[1]**		**Habitat Requirements/Survey Results**
	State	**Federal**	
Many-flowered grass-pink (*Calopogon multiflorus*)	T	NL	Dry to moist flatwoods with longleaf pine, wiregrass, and saw palmetto habitat present. Survey Results: Habitat not present within survey area.
Chapman's sedge (*Carex chapmannii*)	T	NL	Well-drained hammock woodlands, sandy hammocks, and floodplains of blackwater streams. Survey Results: Habitat not present within survey area.
Sand butterfly pea (*Centrosema arenicola*)	E	NL	Slash pine turkey oak sandhills or scrubby flatwoods habitat. Survey Results: Habitat not present within survey area.
Tampa vervain (*Glandularia tampensis*)	E	NL	Sandy coastal hammocks, dunes, well-drained live oak, slash, or longleaf pine-saw palmetto flats. Survey Results: Habitat not present within survey area.
Nodding pinweed (*Lechea cernua*)	T	NL	Ancient dunes, mature scattered pine or oak habitat. Survey Results : Habitat not present within survey area.
Pine pinweed (*Lechea divaricata*)	E	NL	Sand pine scrub, ancient dune, scrub oak, or moist dune swale habitat. Survey Results: Habitat not present within survey area.
Lowland loosestrife (*Lythrum flagellare*)	E	NL	Wet prairie, floodplain marshes, pineland sloughs, edge of cypress domes, or roadside ditch habitat. Survey Results: Habitat not present within survey area.
Florida spiny-pod (*Matelea floridana*)	E	NL	Upland hardwood forests, limesink areas, oak-hickory, or oak oak-hickory-pine upland forest habitats. Survey Results: Habitat not present within survey area.
Hand fern (*Ophioglossum palmatum*)	E	NL	Sabal palmetto in moist hammock habitats. Survey Results: Habitat not present within survey area.
Widespread polypody (*Pecluma dispersa*)	E	NL	Limestone outcrops or hammock habitats. Survey Results: Habitat not present within survey area.
Plume polybody (*Pecluma plumula*)	E	NL	Rocklands, wet flatwood, river bank, hammocks, or limesink habitats. Survey Results: Habitat not present within survey area.
Comb polypody (*Pecluma ptilota var. bourgeauana*)	E	NL	Roadside ditches or badly eroded pastures. Survey Results: Habitat not present within survey area.

Table 3-1 Listed Species with Potential to Occur in or Near the Project Area			
Species	**Status[1]**		**Habitat Requirements/Survey Results**
	State	**Federal**	
Giant orchid (*Pteroglossaspis ecristata*)	T	NL	Scrub oak habitat, pine rocklands, pine-palmetto flatwoods, fields, dry grassy clearings, or dry mesic pine savannahs. Survey Results: Habitat not present within survey area.
Large-plumed beaksedge (*Rhynchospora megaplumosa*)	E	NL	Scrubby flatwood habitat. Survey Results: Habitat not present within survey area.
Scrub bluestem (*Schizachyrium niveum*)	E	NL	Sandhill scrub communities, rosemary scrub, sand pine scrub, or oak scrub habitat. Survey Results: Habitat not present within survey area.
Chaffseed (*Schwalbea americana*)	E	NL	Open pine flatwoods, seepage bogs, palustrine pine savannahs, or peaty wetlands. Survey Results: Habitat not present within survey area.
Rockland hoary-pea (*Tephrosia angustissima var. corallicola*)	E	NL	Open pine rocklands. Survey Results: Habitat not present within survey area.
Coastal hoary-pea (*Tephrosia angustissima var. curtissii*)	E	NL	Coastal scrub habitat. Survey Results: Habitat not present within survey area.
Toothed maiden fern (*Thelypteris serrata*)	E	NL	Freshwater swamps, cypress sloughs, and boggy ponds. Survey Results: Habitat not present within survey area.
Broad-leaved nodding-caps (*Triphora amazonica*)	E	NL	Well-drained, moist humus of upland hardwood hammocks habitat. Survey Results: Habitat not present within survey area.
Poponax (*Vachellia tortuosa*)	E	NL	Pine rocklands or buttonwood hammocks. Survey Results: Habitat not present within survey area.
Redmargin zephyrlily (*Zephyranthes ssimpsonii*)	T	NL	Wet flatwoods or meadows. Survey Results: Habitat not present within survey area.
[1] T = Threatened; E = Endangered; C = Candidate; PT = Proposed Threatened; NL = Not Listed			

4.0 Vegetation and Land Use

E2A's biologists conducted a desktop review using the Southwest Florida Water Management District's Land use codes to identify current land use categories and vegetation types in the project area. FLUCCS maps are included in **Appendix B**. E2A's ecological field crew conducted pedestrian surveys on September 6, 2022 to verify land use and vegetative communities. Vegetative cover types, FLUCCS codes, and dominant vegetation are summarized in **Table 4-1** below along with survey verification.

Table 4-1 FLUCCS and Plant Species			
FLUCCS Code/ Description	**Dominant Vegetation per FLUCCS Code**	**Survey Data**	**FLUCCS Verified / Corrected**
Pipeline Loop, Vault 1, Vault 2 – Pinellas, FL			
8100: Transportation	Characterized by a highways and limited access rights-of-way and service facilities. Vegetation may include ornamental landscaping and grassy areas.	Dominant vegetation included Bahia grass (*Panicum notatum*), Bermuda grass (*Cynodon dactylon*), goose grass (*Eleusine indica*), bayhops (*Ipomea pes-caprae*), common wireweed (*Sida acuta*), common beggartick (*Bidens alba*), Egyptian grass (*Dactyloctenium aegyptium*), hairy crabgrass (*Digitaria sanguinalis*), and torpedo grass (*Panicum repens*).	Verified
Vault 3 – Hillsborough, FL			
1400: Commercial and Services	Predominately associated with the distribution of products and services. Vegetation may include ornamental landscaping and grassy areas.	Dominant vegetation included Bermuda grass, common beggartick, poor-man's pepperweed (*Lepidium virginicum*), creeping woodsorrel (*Oxalis corniculata*), common wireweed, Bahiagrass, false buttonweed (*Spermacoce spp.*), switchgrass (*Panicum rigidulum*), and cogon grass (*Imperata cylindrica*).	Verified/Corrected FLUCCS database indicates some mangrove swamp within the eastern part of the survey area. This area has been filled for parking associated with the American Legion Post.
Contractor Yard – Pinellas, FL			
1800: Recreational	Predominately associated with areas whose physical structure indicates that active user-oriented recreation is or could be occurring. This could include picnic areas, service stands, and large parking lots adjacent to the recreation area.	The Contractor Yard is a large parking lot located behind the Win! Derby Poker Room. No vegetation was observed.	Verified Entire area paved. Ornamental landscape species are present outside of paved parking areas.

4.1 Invasive Species

E2A's ecological field crew identified and recorded occurrences of invasive, nuisance and exotic plant species within the survey area.

Table 4-2 Invasive Species

Common Name	Scientific Name	Description	Location/Prevalence
Torpedo grass	*Panicum repens*	Perennial grass that can grow up to 40 inches tall from creeping rhizomes and stolons. Primarily spreads vegetatively by rhizomes and stem fragments, which can form new plants. This occurs from mowers or other heavy equipment as well as boats and aquatic equipment.	Torpedo grass was not dominant anywhere within the survey area, but was observed in small quantities in the ROW of US92/SR600.

5.0 Conclusions

5.1 Wetland, Waterbody and Other Surface Waters

No wetlands or waterbodies are present in any of the proposed work areas. FGT's proposed loop is entirely within upland areas inside of FDOT's existing ROW for US92/SR600. The survey area for Vault 3 consists entirely of upland areas associated with parking and access to the American Legion Post. The contractor yard is an existing paved parking lot. While Tampa Bay is adjacent to the proposed pipeline loop and Vault 3, no impacts are proposed to Tampa Bay. All activities will take place above the HTL, no impacts to Waters of the United States, in accordance with 33 CFR Part 328. Permitting may be required with the Florida Department of Environmental Protection (FDEP).

5.2 Listed Species

No federally or state-listed species were observed within the survey area. Some listed species may utilize beach habitat outside of the survey area to the south of the proposed pipeline loop along US92/SR600. The Project, as currently proposed, is consistent with FGT's existing blanket authorizations with FWS and FWC.

Potential impacts to migratory birds and/or habitat are not anticipated given that the Project is collocated with existing road ROW and FGT facilities and clearing of trees will not be required.

5.3 Land Use and Vegetation

5.3.1 FLUCCS Data

FLUCCS data was verified to be generally accurate with regard to current land use and vegetative cover type. A few areas were corrected.

5.3.2 Invasive Species

While nuisance species were recorded within the survey area, species composition and concentrations are consistent with those typically observed throughout Florida, especially along maintained road ROW.

6.0 References

FNAI. 2020-2022. FNAI Biodiversity Matrix Map Server of Rare Species Occurrence Information Statewide. Available online at: https://www.fnai.org/species-communities/tracking-main. Accessed September 2022.

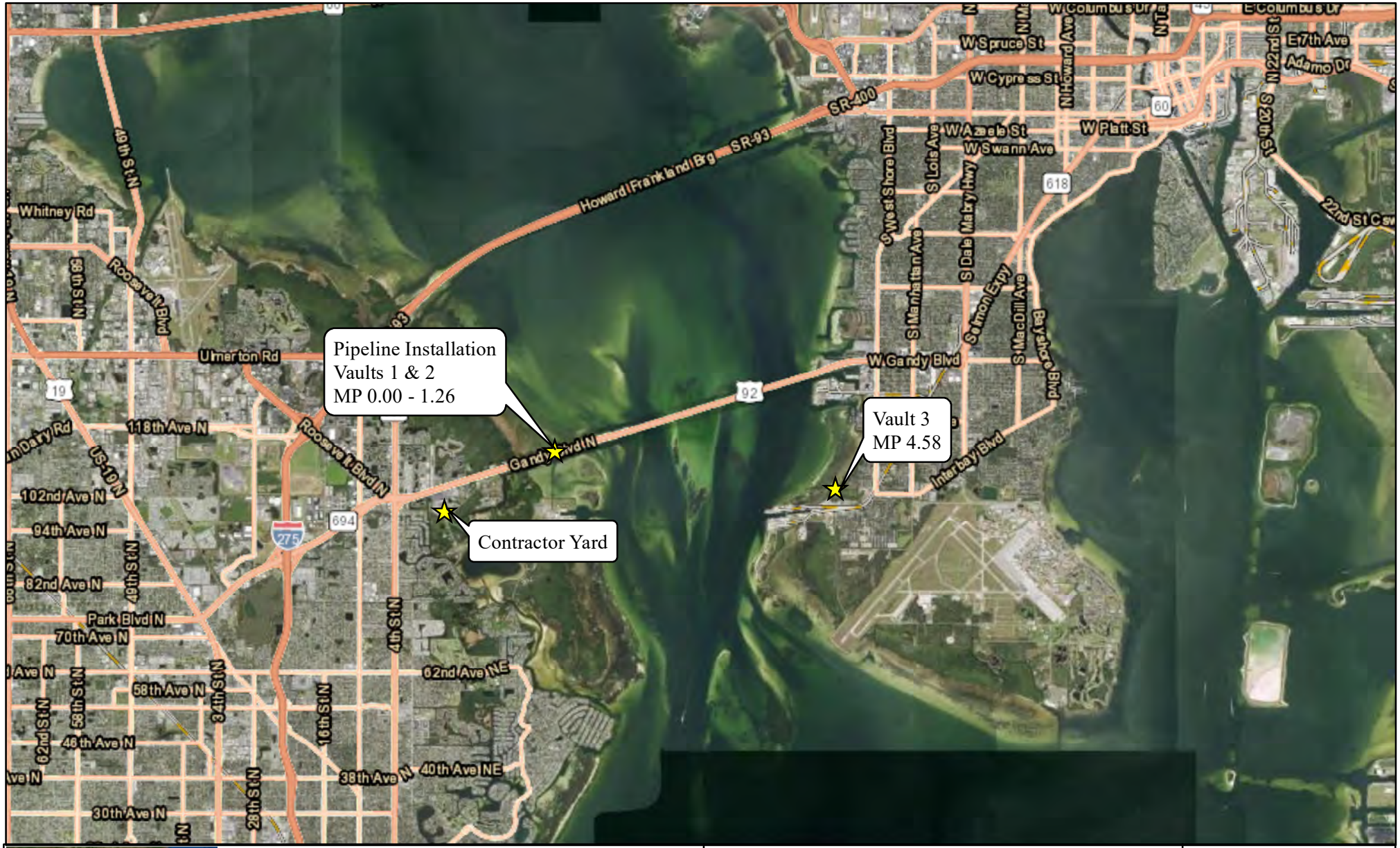
IFAS. University of Florida. 2022. Center for Aquatic and Invasive Plants. Available online at: https://plants.ifas.ufl.edu/. Accessed September 2022.

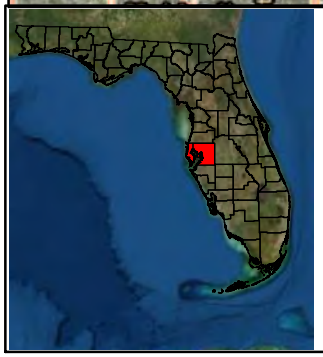
USFWS Information for Planning and Consulting (USFWS IPaC). 2022. Environmental Conservation Online System (ECOS). Available online at: https://ecos.fws.gov/ipac/. Accessed September 2022.

Appendix A Project Mapping

Appendix A-1

Project Location Map





★ Project Locations

Florida Gas Transmission Company, LLC
Tampa West Project
Appendix A-1
Project Location Map
Pinellas and Hillsborough Counties, Florida

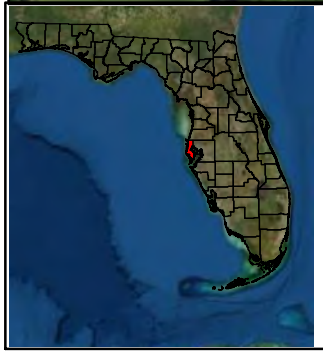
Appendix A-1
Project Location

1 inch = 10,000 feet

N

Appendix A-2

Environmental Survey Area



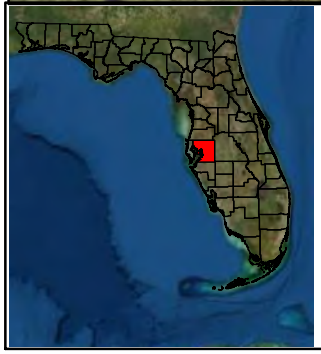
Environmental Survey Area

Florida Gas Transmission Company, LLC
Tampa West Project
Appendix A-2
Environmental Survey Area Maps
Pipeline Installation and Vaults 1 & 2
(MP 0.00 - 1.26)
Map 1 of 3
Pinellas County, Florida

Appendix A-2
ENV Survey Area
Map 1 of 3

1 inch = 800 feet

N



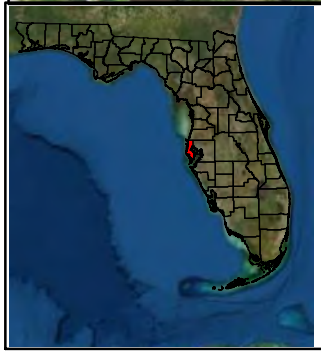
Environmental Survey Area

Florida Gas Transmission Company, LLC
Tampa West Project
Appendix A-2
Environmental Survey Area Maps
Vault 3 Location (MP 4.58)
Map 2 of 3
Hillsborough County, Florida

Appendix A-2
ENV Survey Area
Map 2 of 3

1 inch = 200 feet

N



Environmental Survey Area

Florida Gas Transmission Company, LLC
Tampa West Project
Appendix A-2
Environmental Survey Area Maps
Contractor Yard
Map 3 of 3
Pinellas County, Florida

Appendix A-2
ENV Survey Area
Map 3 of 3

1 inch = 200 feet

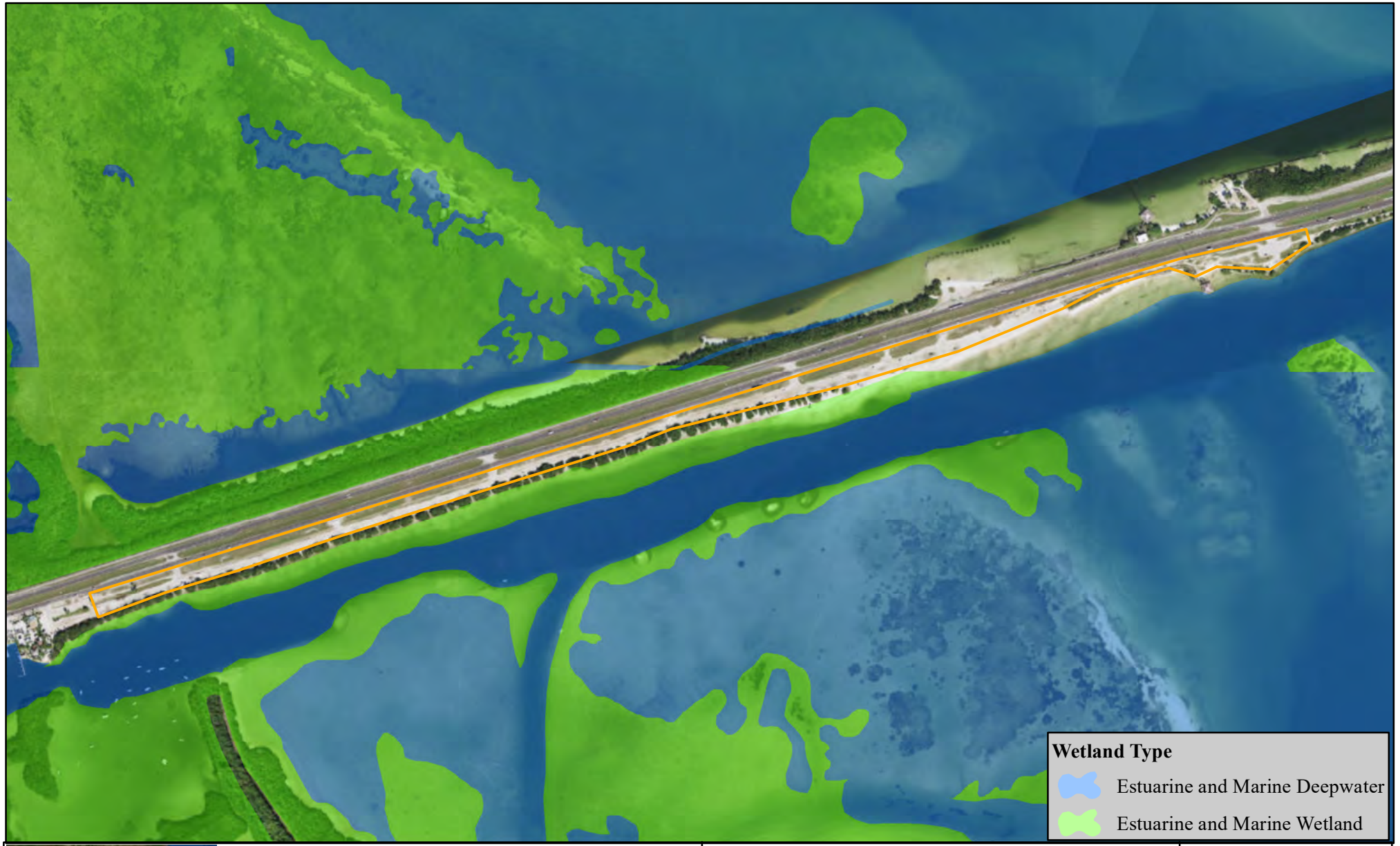
N

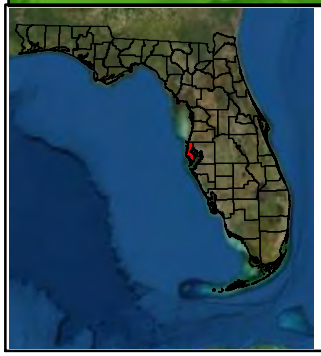
Appendix B Resource Mapping

B-1 NWI Wetlands
B-2 FLUCCS Maps

Appendix B-1

NWI Wetland Maps





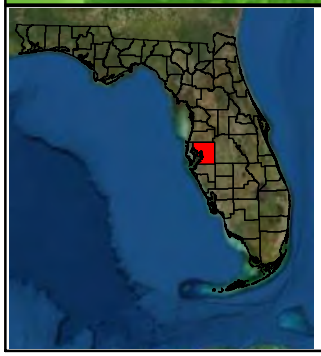
Environmental Survey Area

Florida Gas Transmission Company, LLC
Tampa West Project
Appendix B-1
USFWS National Wetlands Inventory
(NWI) Wetland Map
Pipeline Installation and Vaults 1 & 2 (MP 0.00 - 1.26)
Map 1 of 3
Pinellas County, Florida
Source: USFWS NWI

Appendix B-1
USFWS NWI Maps

1 inch = 800 feet

N



Environmental Survey Area

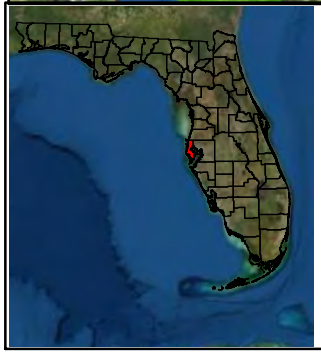
Florida Gas Transmission Company, LLC
Tampa West Project
Appendix B-1
USFWS National Wetlands Inventory
(NWI) Wetland Map
Vault 3 (MP 4.58)
Map 2 of 3
Hillsborough County, Florida

Source: USFWS NWI

Appendix B-1
USFWS NWI Maps

1 inch = 100 feet

N



Environmental Survey Area

Florida Gas Transmission Company, LLC
Tampa West Lateral
Appendix B-1
USFWS National Wetlands Inventory
(NWI) Wetland Maps
Contractor Yard
Map 3 of 3
Pinellas County, Florida

Source: USFWS NWI

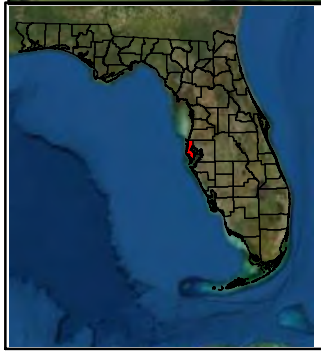
Appendix B-1
USFWS NWI Maps

1 inch = 200 feet

N

Appendix B-2

FLUCCS Maps



Environmental Survey Area

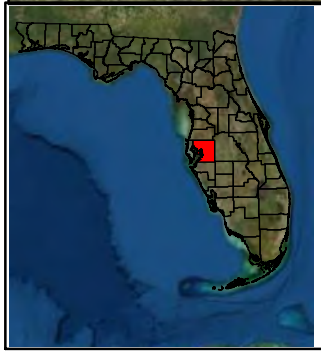
Florida Gas Transmission Company, LLC
Tampa West Project
Appendix B-2
Florida Land Use, Cover and and Forms Classification System
(FLUCCS) Land Use Maps
Pipeline Installation and Vaults 1 & 2 (MP 0.00 - 1.26)
Map 1 of 3
Pinellas County, Florida

Source: SWFWMD

Appendix B-2
FLUCCS Maps

1 inch = 800 feet

N



Environmental Survey Area

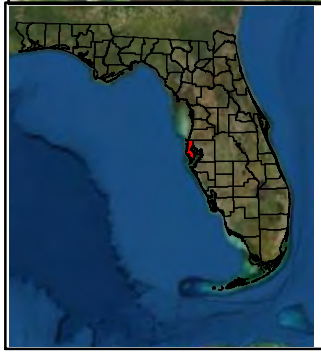
Florida Gas Transmission Company, LLC
Tampa West Project
Appendix B-2
Florida Land Use, Cover and and Forms Classification System
(FLUCCS) Land Use Maps
Vault 3 (MP 4.58)
Map 2 of 3
Hillsborough County, Florida

Source: SWFWMD

Appendix B-2
FLUCCS Maps

1 inch = 200 feet

N



Environmental Survey Area

Florida Gas Transmission Company, LLC
Tampa West Project
Appendix B-2
Florida Land Use, Cover and and Forms Classification System
(FLUCCS) Land Use Maps
Contractor Yard
Map 3 of 3
Pinellas County, Florida

Source: SWFWMD

Appendix B-2
FLUCCS Maps

1 inch = 200 feet

N

Appendix C Photo Log

8-inch Pipeline Loop – Pinellas County, FL

Beginning of proposed pipeline loop at west end of Gandy Causeway facing east. Typical upland roadside herbaceous species present. Some water present in southern edge of survey area from elevated tides. Bollards along mangroves installed by FDOT. Area subject to high levels of vehicle traffic and parking.

Proposed pipeline loop along Gandy Causeway facing west toward Vault 1. Existing two-track and utilities visible along entire segment. All upland. No wetland indicators present.

Same location as previous photo facing east/southeast toward Tampa Bay. Bollards installed by FDOT landward of mangroves.

Proposed pipeline loop along Gandy Causeway facing west. Construction materials and debris present in survey area. Note cars parked along bollards along south edge of survey area.

Proposed pipeline loop along Gandy Causeway facing west. Parked cars along survey area.

Proposed pipeline loop along Gandy Causeway facing west near north end of public area. Parked cars along beach outside of survey area. Rock riprap along edge of US92/SR600.

Approx. same location as previous photo facing east near north end of public area toward towers at end of proposed loop.

Proposed pipeline loop along Gandy Causeway facing west near north end of proposed loop along south edge of US92/SR600. Upland vegetation. Rock and concrete riprap present along south edge of survey area. Sparse upland vegetation and pavement in survey area.

North end of proposed loop and location of Vault 2 facing east. Sparse upland vegetation and existing unpaved parking area.

Contractor Yard – Pinellas County, FL

Existing paved parking lot. Photo taken from southeast corner facing northwest. No wetlands, waterbodies, or vegetation present.

Proposed contractor yard from approximate center of paved parking lot facing southeast.

Vault 3 – Hillsborough County, FL

Photo taken adjacent to existing FGT vault facing west. Existing paved access/driveway to American Legion Post and surrounding landscaped area. All upland with sandy fill containing gravel and shell.

Photo taken adjacent to existing FGT vault facing southwest. Existing paved parking area surrounded by upland landscaped areas.

Appendix F-2

Noise and Air Quality – Calculations

Table 9.A.1-1
Construction Equipment Criteria Pollutant Tailpipe Emissions

Nonroad Equipment / *On-Road Equipment*	Fuel	Source Category[1]	Nonroad Horsepower / *On-Road Avg MPH*	Load Factor	Nonroad Engine Emission Factor (g / hp-hr)[1] *On-Road Engine Emission Factor (g / VMT)* [1]							Pieces of Equipment	Weeks of Project	Days / Week	Hours / Day	Total Operating Hours	Criteria Pollutant Emissions (tons)						
					CO	NO_x	SO_2	VOC	Total HAPs[2]	PM_{10}	$PM_{2.5}$						CO	NO_x	SO_2	VOC	Total HAPs	PM_{10}	$PM_{2.5}$
Contractor Yards and set up Field Offices																							
D6 LGP Dozer (or equivalent)	Diesel	2270002069	235	82%	0.52	1.55	2.90E-03	0.16	2.87E-03	0.1	0.1	0	0	0	0	0	0.00	0.00	0.0E+00	0.00	0.00E+00	0.00	0.00
336 Track Hoe (Or equivalent)	Diesel	2270002036	345	82%	0.44	1.34	2.90E-03	0.15	2.69E-03	0.08	0.08	1	6	6	10	360	0.05	0.15	3.3E-04	0.02	3.02E-04	0.01	0.01
Pickup Trucks	*Diesel*	*2016123223*	*10*	-	*1.60*	*2.02*	*4.80E-03*	*0.28*	*5.02E-03*	*0.1*	*0.09*	*5*	*6*	*6*	*10*	*1,800*	*0.03*	*0.04*	*9.5E-05*	*0.01*	*9.96E-05*	*0.00*	*0.00*
Farm Tractor	Diesel	2270005010	1	65%	4.66	4.34	4.00E-03	0.57	1.02E-02	0.38	38	1	6	6	10	360	0.00	0.00	1.0E-06	0.00	2.64E-06	0.00	0.01
289D Skid Steer[4]	Diesel	2270002069	205	73%	0.52	1.55	2.90E-03	0.16	2.87E-03	0.1	0.1		2	6	10	0	0.00	0.00	0.0E+00	0.00	0.00E+00	0.00	0.00
307.5 Mini Excavator	Diesel	2270002036	28	59%	0.44	1.34	2.90E-03	0.15	2.69E-03	0.08	0.08		2	6	10	0	0.00	0.00	0.0E+00	0.00	0.00E+00	0.00	0.00
Lateral Loop, Vault 1, Vault 2																							
Bulldozers (D8 LGP Dozer or equivalent)	Diesel	2270002069	215	82%	0.89	2.22	3.10E-03	0.16	2.87E-03	0.13	0.13	1	6	6	10	360	0.06	0.16	2.2E-04	0.01	2.01E-04	0.01	0.01
Track Hoe (345 or equivalent)	Diesel	2270002036	345	82%	0.77	1.9	3.10E-03	0.15	2.69E-03	0.12	0.12	3	6	6	10	1,080	0.26	0.64	1.0E-03	0.05	9.06E-04	0.04	0.04
289D Skid Steer[4]	Diesel	2270002069	265	82%	0.52	1.55	2.90E-03	0.16	2.87E-03	0.1	0.1	1	6	6	10	360	0.04	0.13	2.5E-04	0.01	2.47E-04	0.01	0.01
Welding Machines	Diesel	2270006025	25	82%	4.09	4.92	4.30E-03	0.93	1.67E-02	0.65	0.65	4	6	6	10	1,440	0.13	0.16	1.4E-04	0.03	5.43E-04	0.02	0.02
375 Air compressor	Gasoline	2265006020	110	87%	21.34	1.89	1.00E-02	0.64	1.15E-02	0.07	0.07	1	6	6	10	360	0.81	0.07	3.8E-04	0.02	4.36E-04	0.00	0.00
185 Air compressor	Gasoline	2265006020	65	55%	21.34	1.89	1.00E-02	0.64	1.15E-02	0.07	0.07				10	0	0.00	0.00	0.0E+00	0.00	0.00E+00	0.00	0.00
Pickup Trucks and Pipe Haul Trucks	*Diesel*	*2016123223*	*10*	-	*1.60*	*2.02*	*4.80E-03*	*0.28*	*5.02E-03*	*0.1*	*0.09*	*11*	*6*	*6*	*10*	*3,960*	*0.07*	*0.09*	*2.1E-04*	*0.01*	*2.19E-04*	*0.00*	*0.00*
Water Pumps[3]	Diesel	2270006010	100	69%	2.00	4.34	3.58E-03	0.460332	8.25E-03	0.34	0.33	4	6	6	10	1,440	0.22	0.48	3.9E-04	0.05	9.04E-04	0.04	0.04
Light Towers	Diesel	2270002027	13	43%	2.42	4.59	4.00E-03	0.49	8.78E-03	0.35	0.35	2	6	6	10	720	0.01	0.02	1.8E-05	0.00	3.90E-05	0.00	0.00
307.5 Mini Excavator	Diesel	2270002036	58	59%	0.44	1.34	2.90E-03	0.15	2.69E-03	0.08	0.08				10	0	0.00	0.00	0.0E+00	0.00	0.00E+00	0.00	0.00
Vault 3																							
Bulldozers (D8 LGP Dozer or equivalent)	Diesel	2270002069	310	82%	0.78	1.93	3.10E-03	0.16	2.87E-03	0.11	0.11	0			10	0	0.00	0.00	0.0E+00	0.00	0.00E+00	0.00	0.00
Track Hoe (345 or equivalent)	Diesel	2270002036	345	82%	0.66	1.63	3.00E-03	0.15	2.69E-03	0.1	0.1	2	6	1	10	120	0.02	0.06	1.1E-04	0.01	1.01E-04	0.00	0.00
289D Skid Steer[4]	Diesel	2270002069	205	82%	0.52	1.55	2.90E-03	0.16	2.87E-03	0.1	0.1	0			10	0	0.00	0.00	0.0E+00	0.00	0.00E+00	0.00	0.00
Welding Machines	Diesel	2270006025	25	82%	4.09	4.92	4.30E-03	0.93	1.67E-02	0.65	0.65	2	6	1	10	120	0.01	0.01	1.2E-05	0.00	4.52E-05	0.00	0.00
375 Air compressor	Gasoline	2265006020	110	87%	21.34	1.89	1.00E-02	0.64	1.15E-02	0.07	0.07	1	6	1	10	60	0.14	0.01	6.3E-05	0.00	7.26E-05	0.00	0.00
185 Air compressor	Gasoline	2265006020	65	55%	21.34	1.89	1.00E-02	0.64	1.15E-02	0.07	0.07		6	1	10	0	0.00	0.00	0.0E+00	0.00	0.00E+00	0.00	0.00
Pickup Trucks	*Diesel*	*2016123223*	*10*	-	*1.60*	*2.02*	*4.80E-03*	*0.28*	*5.02E-03*	*0.1*	*0.09*	*5*	*6*	*1*	*10*	*300*	*0.01*	*0.01*	*1.6E-05*	*0.00*	*1.66E-05*	*0.00*	*0.00*
Water Pumps[3]	Diesel	2270006010	100	69%	2.00	4.34	3.58E-03	0.46	8.25E-03	0.34	0.33	2	6	1	10	120	0.02	0.04	3.3E-05	0.00	7.53E-05	0.00	0.00
Light Towers	Diesel	2270002027	13	43%	2.42	4.59	4.00E-03	0.49	8.78E-03	0.35	0.35	0	6	1	10	0	0.00	0.00	0.0E+00	0.00	0.00E+00	0.00	0.00
307.5 Mini Excavator	Diesel	2270002036	58	59%	0.44	1.34	2.90E-03	0.15	2.69E-03	0.08	0.08				10	0	0.00	0.00	0.0E+00	0.00	0.00E+00	0.00	0.00
																Subtotal	**1.89**	**2.07**	**0.00**	**0.23**	**0.00**	**0.15**	**0.15**

1. User's Guide for the Final NONROAD2005, except as noted Model, EPA420-R-05-013, US EPA, December 2005 (non-road engines)
Motor Vehicle Emission Simulator (MOVES) - User Guide for MOVES2010b, U.S. Environmental Protection Agency, June 2013 (onroad engines)
EPA NONROAD2008 run for calendar year 2016, Florida (or nonroad engine), MOVES 2010b (onroad engine)
2. Ratio of total HAP to VOC emission factor for diesel engines determined from AP-42 Chapter 3, Tables 3.3-1 and 3.3-2. This ratio was applied to gasoline engines as well as AP-42 Chapter 3 does not detail HAP emissions for gasoline engines
3. USEPA MOVES 2014a run for 2017 calendar year in Florida; used for water pumps emission factors
4. Source Category 2270002069 (LGP Dozer) assumed for 289D Skid Steer emissions

Table 9.A.1-2
Construction Equipment Greenhouse Gas Tailpipe Emissions

Nonroad Equipment / *On-Road Equipment*	Fuel	Source Category[1]	Nonroad Horsepower / *On-Road Ave MPH*	Load Factor	Nonroad Engine Emission Factor (g / hp-hr)[1] *On-Road Engine Emission Factor (g / VMT)* [1]				Pieces of Equipment	Weeks of Project	Days / Week	Hours / Day	Total Operating Hours	GHG Pollutant Emissions (tons)			
					CO_2	CH_4	N_2O	CO_2e						CO_2	CH_4	N_2O	CO_2e
Contractor Yards and set up Field Offices																	
D6 LGP Dozer (or equivalent)	Diesel	2270002069	205	73%	536	0.03	0.014	541	0	0	0	0	0	0	0.0.E+00	0.0.E+00	0
336 Track Hoe (Or equivalent)	Diesel	2270002036	266	82%	536	0.03	0.014	541	1	6	6	10	360	46	2.6.E-03	1.2.E-03	47
Pickup Trucks	*Diesel*	*2016123223*	*10*	-	*639*	-	-	*640*	5	6	6	10	1,800	13	n/a	n/a	13
Farm Tractor	Diesel	2270005010	90	82%	594	0.034	0.015	600	1	6	6	10	360	17	1.0.E-03	4.4.E-04	18
289D Skid Steer	Diesel	2270002069	205	73%	536	0.03	0.014	541	0	2	6	10	0	0	0.0.E+00	0.0.E+00	0
307.5 Mini Excavator	Diesel	2270002036	58	59%	536	0.03	0.014	541	0	2	6	10	0	0	0.0.E+00	0.0.E+00	0
Lateral Loop, Vault 1, Vault 2																	
Bulldozers (D8 LGP Dozer or equivalent)	Diesel	2270002069	310	82%	536	0.03	0.014	541	1	6	6	10	360	54	0.00	0.00	55
Track Hoe (345 or equivalent)	Diesel	2270002036	345	82%	536	0.03	0.014	541	3	6	6	10	1,080	181	0.01	0.00	182
289D Skid Steer	Diesel	2270002069	205	73%	536	0.03	0.014	541	1	6	6	10	360	32	0.00	0.00	32
Welding Machines	Diesel	2270006025	25	82%	693	0.039	0.018	700	4	6	6	10	1,440	23	0.00	0.00	23
375 Air compressor	Gasoline	2265006020	110	87%	707	0.04	0.016	713	1	6	6	10	360	27	0.00	0.00	27
185 Air compressor	Gasoline	2265006020	65	55%	707	0.04	0.018	713	0	0	0	10	0	0	0.00	0.00	0
Pickup Trucks	*Diesel*	*2016123223*	*10*	-	*639*	-	-	*640*	11	6	6	10	3,960	28	n/a	n/a	28
Water Pumps[3]	Diesel	2270006010	100	69%	568	0.017	0.03	575	4	6	6	10	1,440	62	0.00	0.00	63
Light Towers	Diesel	2270002027	13	43%	589	0.033	0.015	594	2	6	6	10	720	3	0.00	0.00	3
307.5 Mini Excavator	Diesel	2270002036	58	59%	536	0.03	0.014	541	0	0	0	10	0	0	0.00	0.00	0
Vault 3																	
Bulldozers (D8 LGP Dozer or equivalent)	Diesel	2270002069	310	82%	536	0.03	0.014	541	0	0	0	10	0	0	0.00	0.00	0
Track Hoe (345 or equivalent)	Diesel	2270002036	345	82%	536	0.03	0.014	541	2	6	1	10	120	20	0.00	0.00	20
289D Skid Steer	Diesel	2270002069	205	73%	536	0.03	0.014	541	0	0	0	10	0	0	0.00	0.00	0
Welding Machines	Diesel	2270006025	*25*	82%	693	0.039	0.018	700	2	6	1	10	120	2	0.00	0.00	2
375 Air compressor	Gasoline	2265006020	*110*	87%	707	0.04	0.016	713	1	6	1	10	60	4	0.00	0.00	5
185 Air compressor	Gasoline	2265006020	*65*	55%	707	0.04	0.018	713	0	6	1	10	0	0	0.00	0.00	0
Pickup Trucks	*Diesel*	*2016123223*	*10*	-	*639*	-	-	*640*	5	6	1	10	300	2	n/a	n/a	2
Water Pumps[2]	Diesel	2270006010	100	69%	568	0.017	0.03	575	2	6	1	10	120	5	0.00	0.00	5
Light Towers	Diesel	2270002027	*13*	43%	589	0.033	0.015	594	0	6	1	10	0	0	0.00	0.00	0
307.5 Mini Excavator	Diesel	2270002036	58	59%	536	0.03	0.014	541	0	0	0	10	0	0	0.00	0.00	0
													Subtotal	**519**	**0**	**0**	**523**

1. User's Guide for the Final NONROAD2005, except as noted Model, EPA420-R-05-013, US EPA, December 2005 (non-road engines)
Motor Vehicle Emission Simulator (MOVES) - User Guide for MOVES2010b, U.S. Environmental Protection Agency, June 2013 (onroad engines)
EPA NONROAD2008 run for calendar year 2016, Florida (or nonroad engine), MOVES 2010b (onroad engine)
2. USEPA MOVES 2014a run for 2017 calendar year in Florida; used for water pumps emission factors

Table 9.A.1-3
On-Road Material Delivery and Worker Commuting Tailpipe Emissions

Vehicle	Emission Factor (g/VMT)[1]									Round Trip Distance	# of Vehicles	Vehicle usage (total days of use)	Vehicle Miles Traveled	Emissions (tons)								
	CO	NOx	SO_2	VOC	Total HAPs[2]	PM_{10}	$PM_{2.5}$	CO_2	CO_2e					CO	NOx	SO_2	VOC	Total HAPs	PM_{10}	$PM_{2.5}$	CO_2	CO_2e
Diesel Heavy Trucks (deliveries)	1.39	5.15	0.014	0.295	0.002	0.211	0.204	1939	1941	50	5	72	18,000	0.03	0.10	2.78E-04	5.85E-03	3.78E-05	4.19E-03	4.05E-03	38.5	38.5
Diesel Light Trucks (deliveries)	1.6	2.02	0.005	0.277	0.002	0.096	0.093	642	643	50	6	72	21,600	0.04	0.05	1.19E-04	6.60E-03	4.26E-05	2.29E-03	2.21E-03	15.3	15.3
Gasoline Passenger Cars (commuter)	1.88	0.19	0.005	0.044	0.000	0.004	0.003	314	315	50	2	72	7,200	0.01	0.00	3.97E-05	3.49E-04	2.25E-06	3.17E-05	2.38E-05	2.5	2.5
Gasoline Passenger Trucks (commuter)	4.29	0.65	0.007	0.161	0.001	0.007	0.006	431	432	50	2	72	7,200	0.03	0.01	5.56E-05	1.28E-03	8.25E-06	5.56E-05	4.76E-05	3.4	3.4
													Subtotal	0.11	0.16	4.92E-04	0.01	9.08E-05	0.01	0.01	59.67	59.75

1. MOVES 2010b for onroad engines
2. Ratio of total HAP to VOC emission factor for diesel engines determined from AP-42 Chapter 3, Tables 3.3-1 and 3.3-2. This ratio was applied to gasoline engines as well as AP-42 Chapter 3 does not detail HAP emissions for gasoline engines

Table 9.A.1-4
Fugitive Dust

Activity	Acres[3]	Emission Factor (ton/acre-month)[1]		Duration (months)[2]	Uncontrolled Emissions (tons)	
		PM_{10}	$PM_{2.5}$		PM_{10}	$PM_{2.5}$
Active Construction Zone-Contractor Yards and Field Offices						
Construction	8.6	1.10E-01	1.10E-02	0.5	0.47	0.05
Wind Erosion	8.6	1.60E-02	2.40E-03	6	0.83	0.12
Active Construction Zone-Tampa West Lateral Loop						
Construction	10.43	1.10E-01	1.10E-02	2	2.29	0.23
Wind Erosion	10.43	1.60E-02	2.40E-03	6	1.00	0.15
Active Construction Zone-FPL Vault 3						
Construction	0.38	1.10E-01	1.10E-02	2	0.08	0.01
Wind Erosion	0.38	1.60E-02	2.40E-03	6	0.04	0.01
Access Roads						
Construction	0.7	1.10E-01	1.10E-02	2	0.15	0.02
Wind Erosion	0.7	1.60E-02	2.40E-03	6	0.07	0.01
				Subtotal	**4.71**	**0.56**

1. WRAP Fugitive Dust Handbook, Countess Environmental, September 2006, Table 3-2, level 1, average conditions PM2.5/PM10 = 0.10 (WRAP Fugitive Dust Handbook, Section 3.4.1. PM10/TSP = 0.5, PM2.5/PM10 = 0.15, (WRAP Fugitive Dust Handbook, Section 7-2) Emission factor converted from ton/acre-year to ton/acre-month by dividing by 12 Wind erosion of exposed areas (seeded land, stripped or graded overburden) = 0.38 ton TSP/acre/yr (WRAP Fugitive Dust Handbook, Table 11-6) Assume 50% control from water and other approved dust suppressants. (WRAP Fugitive Dust Handbook, Countess Environmental, September 2006, Section 3.4.1.
2. It is assumed that earth-moving construction activities will take place for 10 weeks and that it will require an average of 6 months to fully revegetate disturbed areas

Table 9.B.1-1
Annual Operating Fugitive Station Emissions

Site	Equipment Type	Emission Factor (kg/hr/component) [a]	Count	VOC wt% [b]	VOC (tons/yr)	CH_4 wt% [b]	CH_4 (tons/yr)	CO_2 wt% [b]	CO_2 (tons/yr)	CO_2e (tons/yr) [c]
Vault 1, Vault 2, Vault 3	Valves	4.50E-03	12	0.87%	3.76E-01	90.2%	39.19	1.8%	7.93E-01	980.48
	Connectors	2.00E-04	12		3.34E-03		0.35		7.05E-03	8.72
			Total (tons/yr)		**3.79E-01**		**39.54**		**8.00E-01**	**989.20**

(a) Emission factors are from Table 2-4 of the Protocol for Equipment Leak Emission Estimates. EPA-453/R-95-017.

(b) Weight Percents of Hydrocarbons derived from North American Energy Standard Board Typical Natural Gas Composition, https://www.naesb.org/pdf2/wgq_bps100605w2.pdf Accessed 12/5/2018

(c) Calculated based on the global warming potentials for CH4 and CO2 found in 40 CFR 98 Table A-1

Table 9.B.1-2
Emissions from two 8" Pig Launcher and Receiver Blowdown

Source Type:	8" PIG Launcher /Receiver Blowdown	Op. Pressure:	1,000.0 psig
Blowdown Volume:	139.1 scf/Blowdown	Op. Temperature:	80.0 F
Total Annual Flowrate:	0.1 Mscf/yr	Diameter:	0.67 ft
		Length:	6 ft
Molecular Weight:	16.9 lb/lb-mol	Volume (acf):	2.09
H_2S Content of Fuel	1.0 ppm H2S	Std. Volume (scf):	139.14
Number of Blowdowns per Year:	1	STD Conditions = 14.7 psia & 60 °F	

Pollutant	Wt % of Gas [a]	Emission Factor [b] (lb/MMscf)	Emission Rates [c] [d] Uncontrolled	
VOC	0.87	385.5	0.1 lb/yr	0.0000268 tpy
Methane	90.18	40,166.0	5.6 lb/yr	0.0027944 tpy
CO2	1.83	812.8	0.1 lb/yr	0.0000566 tpy

Notes:

(a) Typical Natural Gas Composition From North American Energy Standard Board, https://www.naesb.org/pdf2/wgq_bps100605w2.pdf Accessed 12/5/2018

(b) Emission Factor (lb/MMscf) = (MW, lb/lb-mole) / (379 scf/lb-mole) * (consituent weight %) / 100 / 10^6

(c) Emission Rate (lb/blowdown) = (Blowdown Volume, SCFH) * (MW, lb/lb-mol) / (379 scf/lb-mole) * (Wt %)

(d) Annual Emission Rate (tpy) = (Short Term Emission Rate, lb/blowdown) * (blowdowns/yr) / (2,000 lb/ton)

Table 9.B.1-4 Annual Operating Fugitive Emissions & Pigging Emissions			
Emissions (tons)			
VOC	CH_4	CO_2	CO_2e^2
0.38	39.54	0.80	989.20
1 GWP of 25 for CH4 and 298 for N20 used. From 40 CFR Part 98 Subpart A			

Appendix G FGT Tampa West Project Phase I Cultural Resources Survey Report

Submitted under Separate Cover as
"CUI/Privileged Information – Do Not Release"

FLORIDA GAS TRANSMISSION COMPANY, LLC

TAMPA WEST PROJECT

ATTACHMENT C

FLOW DIAGRAM INFORMATION

Attachment C

FLORIDA GAS TRANSMISSION COMPANY, LLC

TAMPA WEST PROJECT

Flow Diagram - Existing

Submitted under Separate Cover as
"***CUI/Critical Energy Infrastructure Information – Do Not Release***"

Attachment C

FLORIDA GAS TRANSMISSION COMPANY, LLC

TAMPA WEST PROJECT

Flow Diagram - Proposed

Submitted under Separate Cover as
"***CUI/Critical Energy Infrastructure Information – Do Not Release***"