STATE OF VERMONT
PUBLIC SERVICE BOARD

Petition of Vermont Gas Systems, Inc. for authority to condemn easement rights in property interests of the **Town of Hinesburg, Vermont** and Green Mountain Power Corporation, relative to property located in **Hinesburg**, Vermont in order to construct and operate Phase 1 of the Addison Rutland Natural Gas Project	)	Docket No. _____

REVISED STIPULATION REGARDING CONDEMNATION

NOW COMES Vermont Gas Systems, Inc., a Vermont corporation with its principal place of business at 85 Swift Street, South Burlington, Vermont ("Vermont Gas"), and the Town of Hinesburg, a Vermont municipality, and its successors and assigns ("Town of Hinesburg"), each acting by and through its respective counsel in the above-referenced proceeding, and hereby stipulate and agree as follows:

I. INTRODUCTION

1. Vermont Gas provides natural gas service to Vermonters via a network of approximately 750 miles of underground transmission and distribution pipelines, systems, and related appurtenances located in northern Vermont.

2. Vermont Gas intends to expand its network by installing new underground transmission and distribution pipeline and related facilities in order to extend natural gas service to additional Vermont communities in furtherance of the Addison Natural Gas Project described in Docket 7970 (the "Project").

3. Vermont Gas seeks to compensate the Town of Hinesburg for constructing, installing, maintaining, and operating its natural gas service utility corridor on a portion of the Town of Hinesburg's property known as "Geprags Community Park," located on Shelburne Falls Road in Hinesburg, Vermont and identified by Town of Hinesburg as Parcel ID # 16-20-26.1 (alternatively "Geprags Park" or the "Property").

4. Geprags Park is situated on the northerly side of Shelburne Falls Road in the Town of Hinesburg, and is all and the same land premises decreed to the Town by Partial Decree of Distribution for the Estate of Dora E. Geprags, dated December 2, 1991, and recorded on January 14, 1992 at Book 80, Page 106 of the Town of Hinesburg Land Records.

5. Based on discussions since 2014, the terms and conditions of this Revised Stipulation are acceptable to both parties to complete the Project.

6. Vermont Gas is specifically reserving the right to employ, at its sole and absolute discretion, horizontal directional drilling ("HDD") under the wetlands areas of Geprags Park extending through to the south side of Shelburne Falls Road, to protect wetlands in the Park and to complete the Project in 2016. It is also creating the opportunity for additional compensation to the Town in the event that the Project is completed and placed into operation in 2016, while leaving open the option to revert to an open-trench construction method in the event the Project cannot be completed in 2016.

II. DEED OF EASEMENT

7. Subject only to a finding by the Vermont Public Service Board that condemnation is necessary for Vermont Gas to render adequate service to the public, Vermont Gas and the Town have agreed upon the Deed of Easement attached hereto as **Exhibit A**, which provides for a utility corridor encumbering Geprags Park and a temporary easement for additional workspace during Project construction (collectively, the "Easement"). The location of the area(s) of the Property to be conveyed to Vermont Gas by the Town of Hinesburg in the Easement are set forth as an exhibit to the Deed of Easement (see "Easement Plan, Property of Town of Hinesburg, Shelburne Falls Road, Town of Hinesburg, Chittenden County, Vermont," dated November 4, 2014).

8. The Deed of Easement is intended to give Vermont Gas the right to construct, maintain, and operate the Project in Geprags Park while protecting and enhancing park uses and qualities (including but not limited to restoration, remediation, coordination on trail impacts, and implementation of a Warbler-Protection Plan and a Conservation Plan described below); requiring annual meetings between Vermont Gas and the Hinesburg Conservation Commission; limiting access points and placement of above-ground structures; restricting changes to the pipeline's features and operating pressure once installed; limiting the duration for use of temporary areas; and prohibiting fences or gates.

III. STATUTORY CRITERIA FOR EMINENT DOMAIN

9. **Necessity**. Based on the terms and conditions set forth in this Revised Stipulation, the Town leaves to the Department and Vermont Gas to demonstrate that the necessity criteria under 30 V.S.A. §112(2) has been met. Contemporaneously with submission of this Revised Stipulation, the Town shall withdraw its motion to dismiss based on the prior public use doctrine.

10. **Orderly Development**. Condemnation of the Property will not unduly interfere with the orderly development of the region and scenic preservation, provided that the terms and conditions of this Revised Stipulation and the Deed of Easement as described herein are implemented, together with any other relevant conditions in the Certificate of Public Good in Docket 7970, state and federal environmental permits, the permit issued by the Selectboard for Shelburne Falls Road pursuant 19 V.S.A. §1111, and any amendments to any or all of the foregoing. The Town of Hinesburg and Vermont Gas recognize that the use of HDD for pipeline construction within Geprags Park has the potential to reduce vegetative clearing through the park, and avoid wetland impacts and the need for temporary workspace entirely, should use of

HDD be a practicable means of completing construction of the Project within calendar year 2016. Any decision by Vermont Gas to employ HDD in Geprags Park shall be at the company's sole option, and at its sole and absolute discretion.

IV. COMPENSATION

11. **Easement Compensation**. Vermont Gas has agreed to pay to the Town of Hinesburg compensation totaling **One Hundred and Twenty Five Thousand U.S. Dollars ($125,000.00)** for the easement rights, which the Town of Hinesburg may use at its discretion (the "Easement Compensation"). Vermont Gas shall also pay any Vermont Property Transfer Tax and other fees associated with the Deed of Easement at the time of recording. Said payment will be made within fifteen (15) days of the date of a final order in the eminent domain proceeding.

12. **Additional Compensation for Timely Completion**. The Town of Hinesburg recognizes that the proposed Deed of Easement is among the last required for Vermont Gas to complete the Project in accordance with its construction planning. Accordingly, Vermont Gas will pay to the Town of Hinesburg additional compensation in the amount of **One Hundred and Twenty Five Thousand U.S. Dollars ($125,000)** (the "Additional Compensation for Timely Completion") in the event the following two conditions are met: (a) Vermont Gas is granted a final decision (with all appeal periods having elapsed) by October 1, 2016; and (b) the pipeline within Geprags Park is constructed on or about November 1, 2016, and placed into operation by December 31, 2016. Each party agrees to take reasonable efforts to ensure that these conditions are met; however, neither shall have any liability to the other in the event that due to conditions beyond the control of either party, the condition(s) are not met. If the conditions are fulfilled, Vermont Gas will make payment to the Town within fifteen (15) days of confirmation by Vermont Gas that the pipeline has been placed into operation.

13. **Richmond Road Distribution Plan**. As additional consideration for the Deed of Easement, Vermont Gas agrees to extend its distribution network as shown on the attached plan in **Exhibit B** to enable service for, at an **estimated value of $470,000** by 06/01/2017 based on fulfillment of the conditions in Section 14 below (and by no later than 12/31/2017 in any case) (hereinafter, the "Distribution Plan"). As part of the Distribution Plan:

a. Vermont Gas will make available its energy efficiency programs to any Hinesburg home or business currently along the existing natural gas line, with existing customers in Hinesburg to pay the same rates as tariffed for other Vermont Gas Customers by the Vermont Public Service Board, without regard to feasibility of service.

b. Vermont Gas will make its energy efficiency programs (including insulation and other heating-related efficiency improvements) available to at least 80% of mobile home owners shown on the map along the proposed future distribution network as shown on the map included as **Exhibit B**.

i. Residential programs include: 1. Retrofit program, 2. New Construction program, and 3. Equipment Replacement Program. The programs include financial assistance and installation support, and feature highly efficient gas furnaces and boilers that save money and energy. The programs also include financing the costs of removing a heating oil tank from a mobile home unit.

ii. Commercial programs include: (1) Workplace Equipment Replacement and Retrofit program; and (2) Workplace New Construction program.

c. Vermont Gas will absorb the cost to bring distribution lines to the side of each mobile home in the mobile home parks in the following manner: Per its existing tariff, Vermont Gas will pay the installation costs for any homes in **Exhibit B** that are situated within 100' of the public right-of-way, together with the installation costs attributable for the first 100' of distribution line for any home situated more than 100' from the public right of way. VGS will also cover installation costs of up to 40 feet of iron pipe on the customer side of the meter and one hour of labor for rentals of a water heater or conversion burner from Vermont Gas, consistent with its customary practice.

d. Vermont Gas offers a low income rate for certain eligible customers in Town of Hinesburg. The discount is 20% off of all components of the natural gas bill (the daily access charge, natural gas charge, and distribution charge) and is available to consumers with household incomes at or below 185% of the federal poverty level. Income eligibility is determined by the Department for Children and Families, Office of Energy Assistance. All customers, including low income eligible customers, pay a modest monthly fee to support the program. For a residential customer the fee is currently $1.39 per month.

14. **Conditions of Distribution Plan**. Completion of the "Distribution Plan" by 06/01/2017 is subject to the following conditions:

a. Timely approval of all required Town permits for the work. The distribution pipe will not be co-located with the Town of Hinesburg's existing water main.

b. Timely approval of all required State permits for the work, based upon submission by no later than 90 days following the pipeline being commissioned.

c. Approval and easements (as required) from each mobile home park owner, offering each the opportunity of whether to connect.

d. Construction and placement into operation of the transmission pipeline by no later than 06/01/2017.

15. **Road Preservation Measures**. Vermont Gas will take appropriate measures to video-document the existing road conditions for all roads and access points in the Town of

Hinesburg to be used for construction vehicles during initial installation of the pipeline, and to ensure that any damaged roads or access points are restored, in accordance with the 19 V.S.A. §1111 permits, Town of Hinesburg road requirements, and driveway access permits.

16. **Vegetation and Habitat Management Plan**. Vermont Gas has agreed to fully implement the applicable portions of the Addison Natural Gas Project Phase I Vegetation Management Plan for post-construction restoration of vegetation, which includes a plan for the protection and enhancement of Golden-Winged Warbler habitat in the vicinity of the pipeline, developed in collaboration with Mr. Mark LaBarr of Audubon Vermont (the "Warbler Protection Plan"). The Vegetation Management Plan is attached hereto as Exhibit C, and the Warbler Protection Plan is Attachment 1 to **Exhibit C**. Details of the Warbler Protection Plan include, but are not necessarily limited to, the following:

a. Scheduling of work (including survey & design) to avoid disruption of nesting; and a prohibition on construction between April 15 and July 31 unless site survey by Audubon Vermont in early July indicates no evidence of nesting activity.

b. Planting of woody shrubs at the boundaries of the permanent easement corridor to enhance the habitat specific to the Warblers. Plantings include additional shrubs inside the easement area as depicted in the "Vegetation Management Plan Planting Schematic Typical"), attached to **Exhibit C** as Attachment 3.

c. Implementing a corridor maintenance plan consistent with preservation and enhancement of the existing habitat to the greatest possible extent, taking into consideration requirements for monitoring and maintenance of the pipeline, and may be modified to account for the reduced impacts on Geprags Park through use of HDD if Vermont Gas chooses to employ this construction method.

d. Ensuring that any mowing in the corridor is conducted outside of nesting season.

e. Executing a post-construction monitoring plan to determine impacts, if any, on the use of the area in the vicinity of the pipeline by Golden-winged Warblers.

17. **Contribution Towards Warbler Protection**. At the time the Deed of Easement is recorded, in addition to the Easement Consideration, Vermont Gas will pay to the Town of Hinesburg the sum of **One Thousand U.S. Dollars ($1,000.00)** to support the plantings as recommended by Audubon Vermont as part of the Warbler Protection Plan. In addition, Vermont Gas will make a donation of **One Thousand U.S. Dollars ($1,000.00)** to Audubon Vermont to support the services provided to the Town of Hinesburg in connection with the pipeline Corridor as part of the Vegetation Management Plan and the Warbler Protection Plan.

18. **Environmental Inspector Reimbursement**. During initial construction of the Project, Vermont Gas will reimburse the Town for engaging an environmental inspector / observer at the Town's choosing, suitably credentialed in environmental engineering, to witness and report on construction and observance with the conditions of the Deed of Easement.

Reimbursement shall be up to $1,000 per week through to the end of the construction / restoration period.

19. **Conservation Plan**. Vermont Gas acknowledges the importance of Geprags Park to the Town of Hinesburg for its recreational and ecological values. In addition to the Warbler Protection Plan, Vermont Gas agrees to collaborate with the Hinesburg Conservation Commission in addressing other concerns that may arise from time to time in connection with the pipeline corridor. Specifically, Vermont Gas agrees to modify normal maintenance routines as needed to address concerns, provided that the modifications do not jeopardize the safety and integrity of the pipeline. Further, Vermont Gas will make payments to the Town in an amount of $3,000 per year for a period of ten (10) years to benefit the ecology in and proximate to the corridor. The foregoing is referred to hereinafter as the "Conservation Plan."

20. **Adequacy of Compensation**. By signing this Revised Stipulation, the Town of Hinesburg and Vermont Gas have agreed that, while there is no agreement as to the element of necessity in the eminent domain proceeding, the **Easement Compensation**, the **Additional Compensation for Timely Completion**, the **Distribution Plan**, the **Vegetation Management Plan**, the **Warbler Protection Plan**, the **contribution towards Warbler protection**, the **Environmental Inspector Reimbursement**, and the **Conservation Plan**, as described herein, collectively constitute fair and reasonable compensation for the rights set forth in the Deed of Easement.

V. MISCELLANEOUS

21. **Jurisdiction**. The parties agree that the Public Service Board will have continuing jurisdiction to enforce the terms and conditions of this Revised Stipulation and the Deed of Easement based on the order issued in this Docket; provided, however, that the parties must first bring any bona fide disputes regarding the terms and conditions to the Department of Public Service for consultation prior to escalating the dispute to the Board.

22. **Counterparts**. This Revised Stipulation may be executed in counterparts, each when combined which shall constitute one and the same instrument. An electronic copy of each signature page is sufficient to bind the signatory thereto.

[Signatures Appear on Next Page]

Dated at Burlington, Vermont this _____ day of _____ 2016.

VERMONT GAS SYSTEMS, INC.

By:_____

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EXHIBIT A TO REVISED STIPULATION:

Deed of Easement (Revised 07/22/2016)

DEED OF EASEMENT
Geprags Park, Hinesburg, Vermont. LL# 104.00

I. PRELIMINARY STATEMENT

A. The Town of Hinesburg, a municipal corporation established under the laws of the State of Vermont ("Town"), pursuant to an order of condemnation of the Vermont Public Service Board in Docket 8643 of even date herewith, is granting to Vermont Gas Systems, Inc. ("VGS" or "Vermont Gas") an easement for a single natural gas pipeline, no greater than 12" in nominal diameter, as said pipeline was approved in Vermont Public Service Board Docket 7970, to be located in Geprags Park (as described below).

B. Vermont Gas recognizes and respects the importance of Geprags Park to the Town, its Conservation Commission, and users of the park, the critical nature of sustained productive communications between Vermont Gas and the Town concerning its pipeline in the park, and the desirability of seeing that the park's natural, recreational and educational attributes are preserved and enhanced. Vermont Gas wishes to construct and maintain its pipeline in the least disruptive manner possible for park users and the surrounding natural habitat. The purpose of this easement is to convey rights for no other use in Geprags Park than those strictly necessary to construct and maintain the pipeline, while also allowing Vermont Gas to engage in certain restoration and enhancement activities as set forth below.

C. Geprags Park is a ±85.5 acre property situated on the northerly side of Shelburne Falls Road with several hiking trails. The Park is bisected by a 150' wide electric transmission-line corridor owned by Vermont Transco LLC (the "VELCO Corridor") recorded at Book 29, Pages 359 and 475 of the Hinesburg Land Records.

D. The parties recognize that construction of the pipeline may cause temporary interference with use of the public park, and has the potential within and outside of the Easement Area to affect trail and wildlife connectivity, existing municipal uses within the park, and environmental risks to groundwater, unless the conditions set forth herein and in the Revised Stipulation are observed and enforced, along with those set forth in VGS's Certificate of Public Good and existing state and federal permits for the Project.

E. Provided that the Public Service Board determines in Docket 8643 that the gas pipeline through Geprags Park is necessary to render adequate service to the public in Chittenden and Addison Counties, the terms and conditions of the grant of an easement are set forth below.

II. GRANT OF EASEMENT

KNOW ALL PERSONS BY THESE PRESENTS: That the Town of Hinesburg, a municipal corporation established under the laws of Vermont, hereinafter called **GRANTOR**, for good and valuable consideration set forth in the Order of Condemnation in the above-styled and numbered docket, paid to **GRANTOR'S** full satisfaction by **VERMONT GAS SYSTEMS, INC.**, a Vermont corporation having its principal place of business at South Burlington, in the County of Chittenden and State of Vermont, hereinafter called **VGS**, the receipt whereof is hereby acknowledged, has **REMISED**, **RELEASED**, **AND GRANTED** unto **VGS**, its successors and assigns, perpetual rights and easements over, across and under its land located in the Town of Hinesburg, County of Chittenden and State of Vermont, said rights and easements being described as follows:

Subject to strict compliance with the terms and conditions set forth in Section III of this Deed of Easement, the right to construct, and the perpetual right to reconstruct, maintain, alter, inspect, repair, replace, and remove one subsurface pipeline, no larger than twelve (12) inches in nominal diameter, to be used by **VGS** only for the transportation of natural gas, consistent with the terms and conditions set forth in Public Service Board Docket 7970, together with the right to temporarily install a second pipeline when necessary and for limited duration in connection with repairs, alterations, and/or relocations, and the right to abandon the permanent pipeline in place (in conformance with Section III(22) below). The diameter and operating pressure capacity of any replacement pipeline shall be no greater than authorized in Docket 7970 unless an amendment is permitted by the Public Service Board, and provided that any alterations do not require any land outside of the Easement Area as defined below. As used in this Deed of Easement, the term "pipeline" will include subsurface appurtenances and subsurface facilities as reasonably deemed necessary or convenient by **VGS** for its operation or maintenance and consistent with the provisions of Section III (5), as well as the right to locate reasonable surface-based pipeline markers (and any similar surface-based structures required by law) to mark the pipeline's location at reasonable locations within the Easement Area, as set forth below. VGS may not undertake any use other than those related to the pipeline herein described.

The "Easement Area" as used in this Deed of Easement means a portion of certain lands and premises presently designated by the Town of Hinesburg as "Geprags Park," Parcel ID: 16-20-26.1 (the "Property") where **VGS** will construct, operate, and maintain the pipeline. The Property is more fully described as a portion only of the real property conveyed to **GRANTOR** by Partial Decree of Distribution for the Estate of Dora E. Geprags, dated December 2, 1991, and recorded on January 14, 1992 at Book 80, Page 106 of the Town of Hinesburg Land Records. Exhibit A attached to this Deed of Easement depicts the location of the Easement Area and the temporary easements and work space ("Temporary Areas") on the Property.

The permanent Easement Area will be fifty (50) feet in width, extending in total twenty five (25) feet on each side of the pipeline's centerline as initially installed, except where the permanent pipeline is otherwise depicted on the plan attached as Exhibit A based on demarcation completed by **VGS** before construction at its sole cost and expense. If the pipeline is relocated at a future date, the pipeline will remain within the fifty (50) foot wide Easement Area as established by the original installation.

VGS is further granted rights and easements over such portions of the Property during regular park hours to engage only in certain restoration and enhancement activities with respect to Geprags Park, all as described more fully herein in connection with the Conservation Plan and Golden-Winged Warbler Protection Plan and as may be modified in accordance with requests of the Town of Hinesburg from time to time.

III. TERMS AND CONDITIONS

Execution and delivery of this Deed of Easement are subject to observance by VGS of the following terms and conditions, all which are accepted and acknowledged as evidenced by VGS's signature below.

1. Protecting Park Uses and Quality. In construing the rights and easements granted hereunder, VGS shall at all times be focused to the greatest extent practicable on preserving, protecting, and enhancing the existing recreational and educational uses of Geprags Park and the quality of the foregoing, without compromising the public safety and environmental standards required for safe construction and operation of the pipeline. VGS's right to construct, operate, maintain, repair, and replace the pipeline shall be accomplished by reducing the extent and duration of any impacts, while restoration and enhancement activities shall be undertaken using reasonable care and judgment of industry

professionals, affording substantial deference to the Town's recommendations. Any judicial or administrative tribunal interpreting this Deed of Easement shall look to this Section 1 in resolving any conflicts. Notwithstanding the foregoing, any decision as to construction method for installing the pipeline—including whether to use horizontal directional drilling or open trench—shall be determined by VGS in its sole and absolute discretion.

2. Conservation Commission. VGS shall coordinate and communicate with the Town Conservation Commission through the office designated by the Selectboard, as the municipal entity charged with maintenance and preservation of Geprags Park in accordance with its authority under 24 V.S.A. § 4505, and subject to general oversight by the Selectboard, on matters relating to the initial construction of the pipeline placement of pipeline markers, and associated restoration and enhancement activities as set forth herein, and shall wherever practicable accept the recommendations and directions of the Commission related to the foregoing. Once initial construction is complete, VGS shall furnish to the Conservation Commission periodic reports, no less than once per calendar year, concerning any maintenance, repair, or replacement activities in the Easement Area and shall meet with the Commission at least annually at the invitation of the Commission. Any dispute or disagreement between the Commission and Vermont Gas shall first be brought to the Selectboard for review prior to any enforcement action being sought.

3. Rights for Construction and Operation of Pipeline. **VGS** will have the right to engage in actions and activities consistent with the use of the rights and easements hereby granted including, but not limited to:

    a. the right, during and in preparation for the initial construction and maintenance of the pipeline and any related facilities or appurtenances, to temporarily place and store materials and equipment within the Easement Area, and within the Temporary Areas during initial construction, provided that **VGS** remove any placed or stored materials and equipment, and return any lands used for those purposes to their previous condition, promptly and as soon as practicable after the completion of the construction or maintenance;

    b. within the Easement Area, the Temporary Areas during the pipeline's initial construction, and immediately adjacent areas as necessary to eliminate a potential threat to the pipeline's integrity or maintaining the pipeline in safe condition (which for purposes of this Deed shall presumptively apply only to boughs, roots, and other protrusions into the Easement Area extending from vegetation situated within 3 feet of either side of the Easement Area), the option to cut down, remove, and keep cleared such trees, underbrush, and vegetation as in **VGS'S** judgment may interfere with or endanger the operation or maintenance of the pipeline and any related facilities or appurtenances with appropriate notice to the Town's Conservation Commission, and in accordance with the Warbler Protection Plan referenced in Paragraph 13 below; and

    c. the right, during the pipeline's construction to install, and thereafter maintain or expand or repair as necessary, both within and immediately adjacent to the Easement Area and Temporary Areas (which for purposes of this Deed shall presumptively apply only to boughs, roots, and other protrusions into the Easement Area extending from vegetation situated within 3 feet of either side of the Easement Area), the erosion prevention and sediment control measures as in **VGS**'s judgment are reasonable and necessary to complete initial installation of the permanent pipeline and any temporary pipeline and to comply with the requirements of the Project's state and federal water quality permits, with appropriate notice to the Town's Conservation Commission.

4. Non-Exclusivity; Construction Sequencing. The Easement shall be non-exclusive, so that VGS may not exclude members of the public from continuing to access the Easement Area both during and after initial construction, save for periods where, in the reasonable judgment of Vermont Gas, construction or public safety conditions require temporary exclusion of individuals or groups to render adequate service to the public. During initial construction of the pipeline, Vermont Gas shall work with the Conservation Commission to sequence construction so as to allow for continued access to the Hill Spur trail via existing and alternate routes, or resumption of use as expeditiously as possible, provided that the foregoing can be accomplished without unnecessarily prolonging the timing of construction or compromising public safety. Any subsequent exercise by VGS of a right of temporary exclusion of the public from the Easement Area shall be tailored toward preserving public trail access to the Hill Spur and any future trails to the greatest extent practicable, and to restoring full public access as expeditiously and as safely as possible.

5. Aboveground Appurtenances. Notwithstanding anything contained in this Deed of Easement to the contrary, **VGS** will not construct any above-ground appurtenances on the Easement Area, except for mandatory and lawfully-required safety and operational appurtenances necessary for the pipeline's safe operation, including pipeline markers and cathodic test leads not to exceed the minimum size requirements under state/federal law. **VGS** will not install above-ground valve sites, compressors, fences or gates, or any other similar above-ground pieces of equipment within the Easement Area or elsewhere in Geprags Park. **GRANTOR**, acting by and through the Hinesburg Conservation Commission or other entity assigned by the Selectboard, and **VGS** will mutually agree on the location of pipeline markers and other surface-based structures prior to their placement to minimize the disruption to the Property, while observing legal and safety requirements related to placement of such structures. If cathodic test leads are required, VGS shall seek to flush-mount any such leads to existing approved pipeline markers to reduce the total number of aboveground structures as much as possible.

6. Depth of Pipeline. **VGS** will bury all its subsurface facilities to a minimum of at least forty-eight (48) inches below the surface of the ground, measured from the top of the subsurface facilities to the surface of the ground, except in continuous rock areas where the minimum depth will be at least twenty-four (24) inches below the surface of the ground, measured from the top of the subsurface facilities to the surface of the ground. In areas where continuous rock requires **VGS** to install the subsurface facilities at a depth of less than forty-eight (48) inches below the surface of the ground, measured from the top of the subsurface facilities to the surface of the ground, **VGS** will deliver to **GRANTOR** an as-built alignment sheet showing the location and depths on the subsurface facilities on the Property.

7. Temporary Areas. The easement for Temporary Areas will terminate upon **VGS'S** completion of pipeline installation and remediation activities no later than 2 years from commencement of construction. After termination of the easement for Temporary Areas, before conducting any pipeline construction, maintenance, or operations in the Temporary Areas or outside the Easement Area, **VGS** must acquire a separate temporary construction easement or approval from **GRANTOR**.

8. Fencing and Gates. **GRANTOR** further covenants and agrees to consult with **VGS** and obtain **VGS's** consent (not to be unreasonably withheld, conditioned, or delayed) before installing or substantially changing any temporary fence or gate within the Easement Area and/or within the Temporary Areas during the pipeline's construction. **VGS** will replace any fence or gate removed as a result of the pipeline's construction, repair, or maintenance. **GRANTOR** and **VGS** will each have its own set of keys or lock combination for any gates installed in the fencing in order to preserve at all

times each party's respective rights of access. Fencing installed during the pipeline's construction will be removed by VGS upon completion of construction.

9. Access. **VGS** will enter upon the Easement Area and Temporary Areas only from limited existing access points where the Easement Area and/or Temporary Areas meet the Property's boundaries (i.e., Shelburne Falls Road to the south of Geprags Park, and property to the north of Geprags Park presently owned by Ballard). In accessing the Easement Area and/or Temporary Areas, **VGS** covenants:

    a. that the rights and easements are exercised in a careful manner, with any damage to areas outside the Easement Area being restored in accordance with the terms and conditions herein (and with **VGS** to promptly bear costs of or the responsibility to repair any and all damages to any other property caused by **VGS)**;

    b. that it will employ best efforts to minimize inconvenience to **GRANTOR** and any users of the Property; and

    c. that it will refrain from using ATVs; and

    d. that it will not allow the use of other non-Vermont Gas vehicles, except where related to construction, maintenance, repair, or removal of the pipeline or implementation of the conservation and warbler management plans.

    VGS may traverse other areas of the Property to access the Easement Area and/or Temporary Areas only in exigent circumstances posing a significant risk to public safety or to prevent damage to the Property or the pipeline. Such access will include notice to the Town as promptly as practicable, with the preference for said notice being given prior to access.

10. Restoration; Remediation. VGS will replace soils disturbed by construction to pre-disturbance surface levels in accordance with Section 3 of the Vermont Agency of Agriculture, Food and Markets's "Reclamation of Vermont Primary Agricultural Soils" in effect on October 26, 2015. Stripped topsoil will be segregated to prevent mixing with subsoil in agricultural soil areas and wetlands. Excavated agricultural and wetland soils will be replaced in their respective areas after construction with topsoil as the uppermost layer; subsoil in trenches will be compacted to approximate its original density and these areas graded and reseeded in accordance with the requirements of Docket 7970 and any other relevant governmental approvals. The Easement Area and Temporary Areas will be de-compacted with a subsoiler following installation of the pipeline. VGS will refill any trench dug during the pipeline's construction and installation with the soil removed and level the trenched areas to the existing surface level of the ground adjacent to the trenched areas. The foregoing provisions shall not apply in the event VGS employs horizontal directional drilling. VGS will excavate and restore affected areas of the Property in accordance with the requirements of VGS' Certificate of Public Good and all permits and other approvals related to the pipeline. VGS will clean up and remove all construction debris from the Property after the pipeline's construction. VGS will not leave any dirt piles or ditches on the Property after the pipeline's construction or anytime thereafter. Where VGS disturbs the surface of the Property following initial construction and restoration, whether inside the Easement Area or elsewhere, VGS will, as much as reasonably possible, remediate the Property's surface to as good a condition as existed before the disturbance. Remediation will include re-seeding (using the specified seed mixes in the approved VGS erosion protection and sediment control plans, and where feasible taking into account the recommendations of the Conservation Commission to the extent consistent with existing

permits) of all areas of the Property disturbed in accordance with the requirements of VGS' Certificate of Public Good and all permits and other approvals related to the project.

11. Continued Use of Easement Area for Educational, Recreational, and Municipal Purposes. **GRANTOR** hereby reserves the right to continue to use and enjoy the Easement Area in a manner that is consistent with educational, recreational, and municipal uses, and which will not prevent, or interfere with, **VGS'S** use of the Easement Area and Temporary Areas, except as otherwise described in this Deed of Easement. **GRANTOR'S** uses may include, but will not be limited to, using the Easement Area and Temporary Areas for educational, recreational, agricultural, open space, set-back, density, trails, unpaved roadways and utility purposes, provided, however, that

    a. the installation and use of trails, unpaved roadways, and utilities will not unreasonably interfere with **VGS'S** pipeline within the Easement Area;

    b. **GRANTOR**, the Hinesburg Conservation Commission, and/or their respective agents, successors and assigns will consult with and obtain written consent from **VGS** before beginning any work on the trails, unpaved roadways and utilities within the Easement Area, which consent **VGS** will not unreasonably withhold, condition, or delay;

    c. **GRANTOR** will construct unpaved roadways, utilities, and related improvements as perpendicular to the Easement Area as is reasonably practicable; and

    d. **GRANTOR** will install any utilities with at least twelve (12) inches vertical separation from the pipeline.

    Trails, unpaved roadways and utilities will be installed and maintained by **GRANTOR**, its agents, successors, and assigns at their sole cost and risk; provided, that **VGS**, its successors and assigns, will bear costs and risks of (i) monitoring **GRANTOR'S** installation and maintenance of the trails, unpaved roadways and utilities where they cross the Easement Area; and (ii) in construction and maintenance of **VGS'S** pipeline where it overlaps with any pre-existing easements for utilities, the utilities themselves and related appurtenances, such as water pipes and lines, wastewater pipes and lines, and electrical transmission lines and related appurtenances.

12. Restrictions on Structures and Objects in Easement Area. Except where explicitly provided for in this Deed of Easement, **GRANTOR** covenants and agrees not to construct, install, or permit the construction or installation of any structures or objects of any kind upon or under the surface of the Easement Area, not to store or place any objects within the Easement Area, and not to change the elevation of the Easement Area, without **VGS**'s prior written agreement or approval, which **VGS** may withhold or condition in its reasonable discretion.

13. Golden-Winged Warbler Protection Plan. VGS shall at all times comply with the written plan for the protection and enhancement of Golden-Winged Warbler habitat in the vicinity of the pipeline (located west of the Easement Area), developed and maintained in collaboration with Audubon Vermont, together with the Conservation Commission (the "Warbler Protection Plan"). This plan—which is included with the Revised Stipulation between Vermont Gas and the Town being executed in advance of this Deed of Easement, the foregoing which is available at the Town of Hinesburg municipal offices—will exceed the standards of the vegetation management plan elsewhere in the Project. For avoidance of doubt, the Warbler Protection Plan includes, but may not necessarily be limited to, the following:

a. Scheduling of work (including initial construction, maintenance, repair, and replacement) to avoid disruption of nesting;

b. Prohibiting construction and disruptive maintenance / repair activities between April 15 and July 31, except for emergency situations, unless a site survey by Audubon Vermont in early July of each year indicates no evidence of nesting activity;

c. Planting of woody shrubs at the boundaries of the Easement Area to enhance the habitat specific to the Warblers, as well as additional shrubs inside the Easement Area;

d. Implementing a corridor maintenance plan consistent with preservation and enhancement of the existing habitat to the greatest possible extent, taking into consideration requirements for monitoring and maintenance of the pipeline;

e. Ensuring that any mowing in the corridor is conducted outside of the Warbler nesting season; and

f. Maintaining a post-construction monitoring plan to determine impacts, if any, on the use of the area in the vicinity of the pipeline by Warblers, and to provide for habitat quality to support other plant and animal species.

14. Prior Notification for Maintenance Work. Following initial construction of the pipeline, except in exigent circumstances posing a risk to public safety, **VGS** will notify **GRANTOR and the Hinesburg Conservation Commission** in advance of any work or maintenance in the Easement Area and/or Temporary Areas. Notification will include the expected dates and purpose of planned work. Dates of work may shift to account for unexpected weather or scheduling issues. Post-construction land disturbance involving non-emergency maintenance, repair and replacements involving significant disturbance shall take place in consultation with the Conservation Commission and, unless upon terms agreed upon by the Conservation Commission and **VGS**, shall take place outside of the warbler nesting season that takes place from April 15 through July 31, and in dry conditions to the extent reasonably possible. Any damage caused by these activities whether in the Easement Area or other areas of the Property will be promptly repaired by **VGS** at its sole expense. If any such work will require disturbance to the Hill Spur trail or any future trails, VGS shall coordinate in advance with the Conservation Commission to prepare an alternate means of access.

15. Conservation Plan. VGS and the Conservation Commission shall develop and implement the Conservation Plan referenced in the Revised Stipulation.

16. No Herbicides. At no time will **VGS** use herbicides in exercising its rights hereunder, except as may be required by permitting authorities to prevent the spread of invasive species. In instances where permitting authorities provide various options for herbicides to stop the spread of invasive species, VGS shall consult with the Conservation Commission in advance to select which herbicides to employ, methods of application, and means for advance public notice.

17. Avoidance of Trash; Conduct of VGS Representatives. **VGS** will maintain the Easement Area and Temporary Areas clean of all litter, trash, and debris created by **VGS** during periods of construction, repair, or removal. **VGS** will only use the Easement Area and Temporary Areas for the purposes specified in this Deed of Easement. **VGS**, its officers, agents, employees, contractors, invitees, guests, or representatives are strictly prohibited during the conduct of official business from hunting, fishing, and other recreational activities in the Easement Area and Temporary Areas, or anywhere on

the Property, and from bringing firearms on to the Easement Area and Temporary Areas, or anywhere on the Property.

18. Permit Compliance; Environmental Hazards. VGS shall at all times remain in compliance with the terms and conditions of all permits, including those issued by federal and state authorities with respect to wetland impacts, water quality protection, and environmental protection, as well as the applicable terms and conditions of the Certificate of Public Good in Docket 7970 (and any future dockets that may be opened with respect to the pipeline). The responsibility to observe all permit conditions as set forth herein, including those protecting water quality and avoiding releases of hazardous materials shall apply to the entire Property, and not only to the Easement Area.

19. Public Safety. **VGS** shall immediately notify **GRANTOR** of any significant condition(s) on the Property posing imminent danger to persons or property, if VGS becomes aware of such resulting from **VGS'S** operations on the Property. VGS shall notify **GRANTOR** in accordance with Hinesburg's Local Emergency Operations Plan.

20. Indemnification of Grantor. **VGS** agrees to indemnify and hold **GRANTOR** harmless from any claims, losses, damages, demands, costs, or actions arising from construction, maintenance, and use of the pipeline and related facilities and appurtenances pursuant to this Deed of Easement, regardless of whether the action occurs within the Easement Area or elsewhere in Geprags Park, and to the exercise of all rights granted hereunder, except to the extent that any claim or action results principally from the intentional, reckless, or grossly negligent acts or omissions of **GRANTOR**, its agents, licensees or invitees, or based on **GRANTOR'S** violation of this Deed of Easement's material terms and conditions prohibiting new structures or objects in the Easement Area. For purposes of this Deed of Easement, failure by **GRANTOR**, its agents, licensees, or invitees to abide by the requirements of the **Vermont Dig Safe®** program (or any successor program for excavation safety near pipelines) shall constitute gross negligence.

21. Enforcement. By virtue of the Order of Condemnation in the above-referenced Docket, the Public Service Board will have continuing jurisdiction to enforce the terms and conditions of this Agreement against VGS, its successors and assigns, including through exercise of injunctive relief where necessary to ensure compliance. Appeals of any decision of the Public Service Board issued pursuant to this section shall be to the Vermont Supreme Court.

22. Assignment and Abandonment. **VGS** and its successors and assigns will have the right to assign to others, in whole or part, any or all of the rights and easements in this Deed of Easement, provided that in the event of an assignment, the assignor will notify **GRANTOR** in writing within thirty (30) days of the assignment. If the Easement is abandoned, **VGS**, its successors and assigns, will, at their sole cost and expense, quitclaim to **GRANTOR**, its heirs, successors, and assigns, any easement rights in this Deed of Easement conveyed to **VGS**. For purposes of this provision, "abandoned" will mean that the Vermont Public Service Board or its successor has issued a final and binding determination that **VGS** has abandoned the Easement. In all cases of abandonment, **VGS** will be permitted to leave in place any underground structures or facilities associated with the Easement Area, if abandonment will create less disturbance than removal.

23. Hazardous Materials. **GRANTOR** makes no representation or warranty as to the existence of any condition on the Property related to hazardous wastes and/or toxic substances, nor regarding any spill or release of any hazardous substance and/or toxic waste during or before **GRANTOR'S** ownership of the Property, except that **GRANTOR** is not personally aware of the presence of hazardous wastes and/or toxic substances on the Property.

TO HAVE AND TO HOLD all right and title in and to said granted Easement Area and Temporary Areas for enjoyment of the rights and easements set forth herein, unto **VGS** and its successors and assigns subject to the terms and limitations set forth above; and furthermore **GRANTOR**, for itself and its successors and assigns, covenants with **VGS** and its successors and assigns that from and after the ensealing of these presents **GRANTOR**, together with its successors and assigns, will have and claim no right in or to said Easement Area in conflict with the rights granted herein, with **VGS** accepting whatever interest **GRANTOR** might have in and to the Easement Area in its condition as of the date of the petition in the above-referenced Public Service Board docket. The foregoing will be binding upon and will inure to the benefit of the respective executors, administrators, heirs, successors and assigns of **GRANTOR** and **VGS**.

[Signature and acknowledgement pages follow]

IN WITNESS WHEREOF, **GRANTOR** has set its hand this ___ day of _____, A.D., 2016.

GRANTOR

TOWN OF HINESBURG, VERMONT

By: **Hinesburg Selectboard**

By: _____
Signature
Print name: _____

STATE OF VERMONT)
COUNTY OF CHITTENDEN)ss.:

On the ___ day of _____, 201___, before me, _____, Notary Public, personally appeared _____, known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed in the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument, the person executed the instrument as his free act and deed and the free act and deed of the entity shown above.

_____
Notary Public
My Commission Expires: ___/___/___

ACCEPTED AND ACKNOWLEDGED:

VERMONT GAS SYSTEMS, INC.

By: _____
Duly Authorized Agent

Date: _____

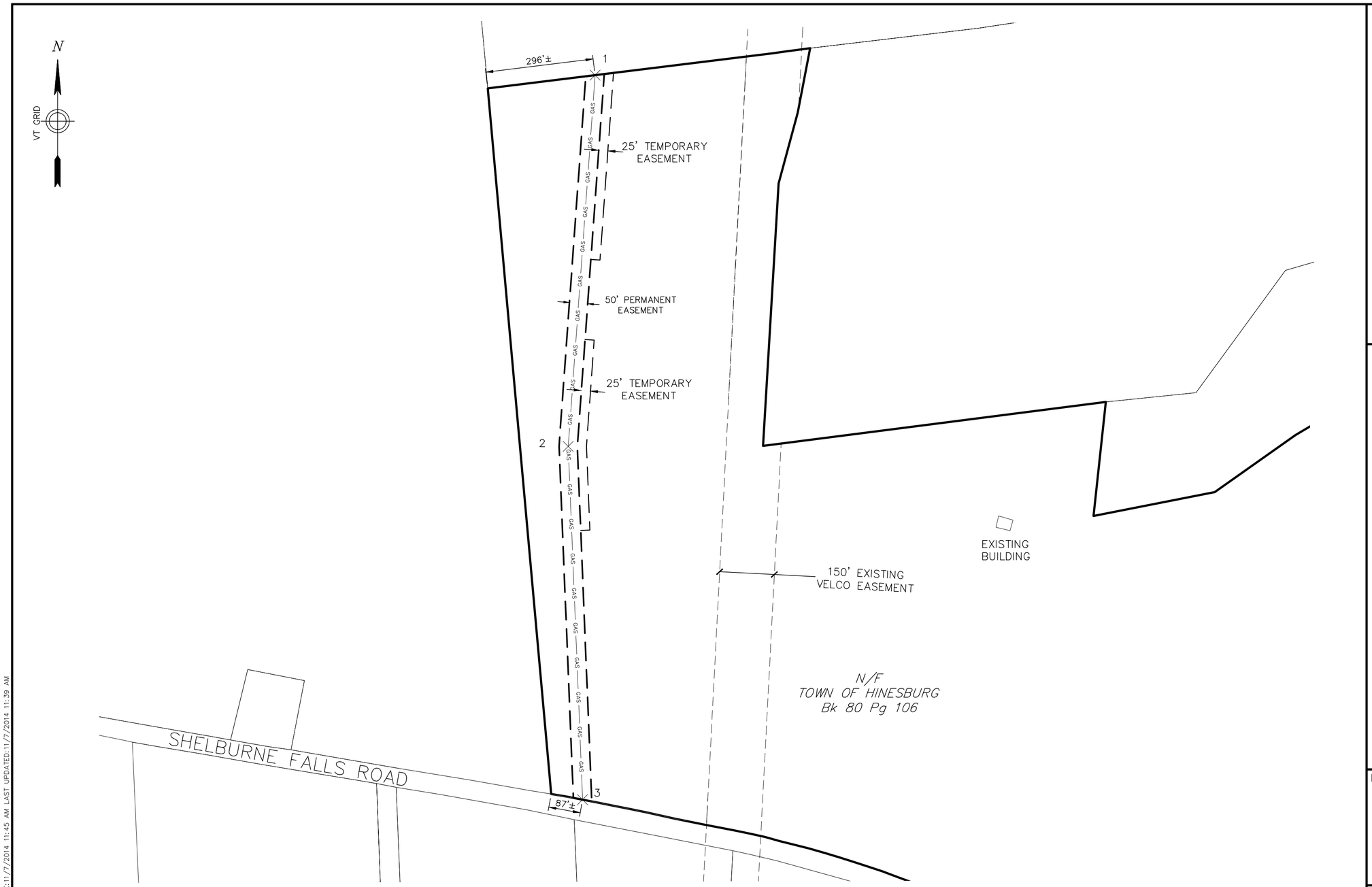
EXHIBIT A TO DEED OF EASEMENT:

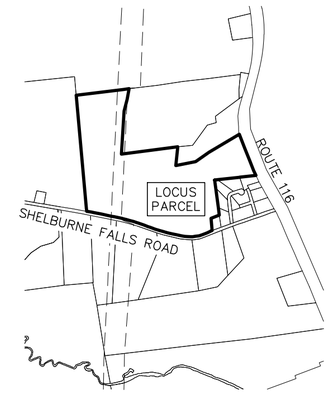
EASEMENT PLAN

Title: Easement Plan, Property of Town of Hinesburg, Shelburne Falls Road, Town of Hinesburg, Chittenden County, Vermont, dated November 4, 2014, to be recorded in the Hinesburg Land Records.

[See attached]

16833081.3





LOCUS MAP
N.T.S.

NOTES:

1. THE PROPERTY LINES DEPICTED HEREON HAVE BEEN COMPILED FROM VARIOUS SOURCES AND DO NOT REPRESENT A DEFINITIVE FIELD SURVEY. SAID LINES ARE APPROXIMATE ONLY AND DO NOT REPRESENT A FORMAL BOUNDARY OPINION.

2. THE LOCATION OF EXISTING FEATURES DEPICTED HEREON (STRUCTURES, DRIVEWAYS, ETC.) ARE APPROXIMATE AND ARE SHOWN FOR REFERENCE PURPOSES ONLY.

3. THE LOCATION OF THE PERMANENT AND TEMPORARY EASEMENTS ARE BASED ON PRELIMINARY STUDIES AND ARE SUBJECT TO CHANGE DUE TO PERMITTING AND/OR DESIGN REQUIREMENTS. FINAL EASEMENT LOCATIONS WILL BE BASED ON THE AS-BUILT LOCATION OF THE PIPELINE.

4. DRAFTING STANDARDS FOR THIS PLAT ARE BASED ON THE CRITERIA DESCRIBED IN 27 VSA 1403.

PREPARED FOR:

Vermont Gas

CHA
design/construction solutions

LEGEND

N/F	NOW OR FORMERLY
SF	SQUARE FEET
—— GAS —— GAS ——	PROPOSED GAS PIPE
— — — —	PROPOSED PERMANENT EASEMENT
— — — —	PROPOSED TEMPORARY EASEMENT
━━━━━	SUBJECT PROPERTY LINE
———	PROPERTY LINE
— — — — — — —	EXISTING VELCO EASEMENT

PROPOSED EASEMENT & PIPELINE INFORMATION
LENGTH OF PIPE CENTERLINE: 1987'±
PERMANENT EASEMENT: 50' WIDE (AREA OUTSIDE VELCO EASEMENT), 99403± SF (2.3± ACRES)
TEMPORARY EASEMENT: 25' WIDE (AREA OUTSIDE VELCO EASEMENT), 25874± SF (0.6± ACRES)

COORDINATE AND BEARING TABLE

POINT	NORTHING	EASTING	BEARING	DISTANCE
1	673611	1476105		
			S04° 08'W	1019±
2	672595	1476031		
			S02° 20'E	968±
3	671627	1476071		

STATE OF VERMONT
DONALD A. JOHNSTON
No. 686
LICENSED LAND SURVEYOR

EXHIBIT B

EASEMENT PLAN
PROPERTY OF
TOWN OF HINESBURG SHELBURNE FALLS ROAD

TOWN OF HINESBURG
CHITTENDEN COUNTY, VERMONT

DATE: NOVEMBER 04, 2014 | 00104.00

DRAWN: AFC	DATE: 11/04/14
CHECKED: DAJ	DATE: 11/04/14
APPROVED: DAJ	DATE: 11/04/14

1" = 200' (FEET)
200 100 0 200 400

y:\xl. line list\00104.00 - town of hinesburg\legal-rces-plans\00104.00.dwg PLOT DATE:11/7/2014 11:45 AM LAST UPDATED:11/7/2014 11:39 AM

EXHIBIT B TO REVISED STIPULATION:

Distribution Plan

[redacted]

VGS Proposed Future Distribution Network

North Road Area - Hinesburg, VT

February 28, 2014

Exhibit B to
Revised Stipulation

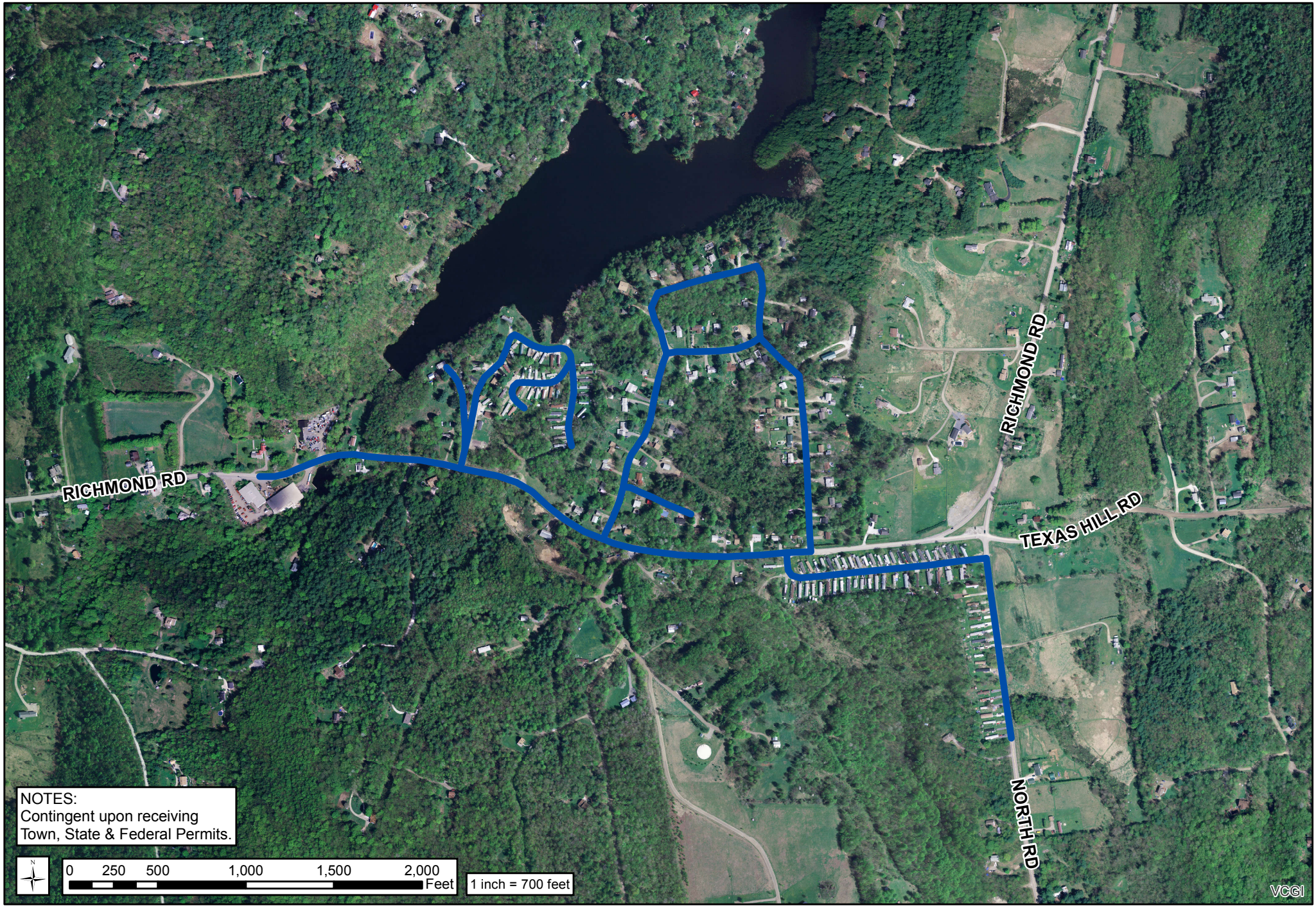


EXHIBIT C TO REVISED STIPULATION:

Vegetation Management Plan (May 18, 2016)

Memorandum

To: Vermont Gas Systems / Addison Natural Gas Project ("ANGP") Phase 1 Project File

Date: May 18, 2016

Project #: 57563.00

From: Meghan Lout, Environmental Scientist

Re: ANGP Phase 1 - Geprags Park/VGS ROW Vegetation and Habitat Management Plan

---

The following restoration plan combines elements of the Vermont Gas Systems, Inc. ("VGS") Addison Natural Gas Project Phase 1 ("ANGP Phase 1") Vegetation Management Plan ("VMP") and the Audubon Vermont Golden-Winged Warbler Protection Plan (see Attachment 1). It is intended to provide the policy and guidance for management of the 50-foot VGS right-of-way ("ROW") through Geprags Park in Hinesburg, Vermont. VGS will cooperate with the Hinesburg Selectboard and Hinesburg Conservation Commission in its implementation and future revisions, as needed.

Introduction

At the request of VGS, VHB has prepared this memorandum to summarize vegetation and habitat management practices for the segment of the ANGP Phase 1 within Geprags Park (LLN 104) in Hinesburg, Vermont, that is a 50-foot corridor overlying the natural gas pipeline, which for maintenance and integrity reasons must be managed in a relatively open condition, similar to its present condition. As presented herein, vegetation management along the pipeline corridor within Geprags Park will be conducted so as to enhance the early successional field to forest habitat currently present. The Geprags Park/VGS ROW Vegetation and Habitat Management Plan ("GPVR VHMP") is intended to enhance and protect breeding habitat for the golden-winged warbler (*Vermivora chrysoptera*) as well as other wildlife species (such as meadow voles, fox, rabbit, etc.) that prefer this habitat type. Suitable wildlife habitat includes a mosaic of early successional species (see below) comprised of sparse trees and shrubs with an herbaceous understory of grasses and forbs[1].

Geprags Park

Geprags Park is an approximately 85.5 acre parcel located in the northwest portion of the Town of Hinesburg, Vermont. The Park is managed by the Town of Hinesburg and is composed of grassland, meadows with natural springs, shrubland, herbaceous vegetation and a mature maple-beech forest. A map of Geprags Park showing the proposed VGS ROW is available in Attachment 2. The landscape is also interspersed with small openings, which, along with hedgerows, edge habitat, and an existing overhead electric utility corridor operated by VELCO, complement the diversity of habitats found within the Park. A network of recreational trails also meander through the Park, rendering views of the Adirondacks and Green Mountains and further diversifying the landscape. VGS will coordinate with the Hinesburg Conservation Commission to assess and implement Geprags Park trails plans, including discussion of trails at the annual meeting between VGS and the Hinesburg Conservation Commission.

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[1] The Golden-winged Warbler Working Group. 2009. Information available online at www.gwwa.org.

40 IDX Drive, Building 100
Suite 200
South Burlington, VT 05403
P 802.497.6100

Land cover types within the parcel include forest (46.9 percent of the parcel), grassy areas (30.4 percent), and scrub/shrubland (22.7 percent). Soil composition within Geprags Park is provided in Table 1 and soil types within the 50-foot permanent VGS ROW within Geprags Park are provided in Table 2.

Table 1: Summary of soil types within Geprags Park

Soil Name*	Vermont Farmland Classification	Vermont Farmland Agricultural Value	Area (acres)
Geprags Park			
Belgrade and Eldridge soils, 3 to 8 percent slopes	Statewide	2	0.2
Covington silty clay	Statewide (b)	6d	26.9
Enosburg and Whately soils, 3 to 8 percent slopes	Statewide (b)	4d	7.7
Farmington extremely rocky loam, 20 to 60 percent slopes	NPSL	11	22.4
Farmington-Stockbridge rocky loams, 12 to 20 percent slopes	NPSL	9	0.7
Georgia stony loam, 3 to 8 percent slopes	Prime	3	6.6
Georgia stony loam, 8 to 15 percent slopes	Statewide	7	3.1
Georgia extremely stony loam, 0 to 15 percent slopes	NPSL	11	2.9
Georgia extremely stony loam, 15 to 60 percent slopes	NPSL	11	2.2
Limerick silt loam	Statewide (b)	4d	0.8
Livingston clay	NPSL	10	0.7
Peru extremely stony loam, 0 to 20 percent slopes	NPSL	11	0.1
Stockbridge and Nellis extremely stony loams, 15 to 60 percent slopes	NPSL	11	3.7
Vergennes clay, 2 to 6 percent slopes	Statewide	6	5.3
Vergennes clay, 6 to 12 percent slopes	Statewide	7	2.4
Total	----	----	85.8

***Soils based on Natural Resources Conservation Service's dataset from the Vermont Center for Geographic information, 2015.**

Geprags Park is managed by the Town of Hinesburg with the goal of creating and maintaining early successional scrub/shrubland for recreation and wildlife[2]. The southern Lake Champlain Valley (BCR13) is a focal area for conservation efforts with respect to golden-winged warbler and other bird species, such as, prairie warbler (*Setophaga discolor*) and loggerhead shrike (*Lanius ludovicianus*) that occur in early successional habitats. Many wildlife species depend upon early successional habitat that is scarce due to the loss of sparsely vegetated areas through ecological succession. Geprags Park habitat currently supports knows population of golden-winged warblers, as five observations were recorded at Geprags Park in 2015 (Vermont Audubon[3]). As a species whose habitat requirements mirror that of many others, habitat management for the warbler will benefit other wildlife species.

The Vermont Department of Fish and Wildlife ("FWD") designated the golden-winged warbler as a wildlife species of regional conservation concern in the Northeastern Unites States[4] and a Species of Greatest Conservation Need ("SGCN") in the State of Vermont. The FWD therefore assigned this species a S3B rank, a status given to species whose breeding populations are at moderate risk. Golden-winged warbler is also identified as a priority species by the Vermont State Wildlife Action Plan ("VTWAP"), Vermont Audubon and the North American Bird Conservation Initiative ("NABCI"). Habitat requirements of this species also encompass resources used by a suite of additional SGCN and Priority Bird Species found within Bird Conservation Region 13 ("BCR 13"), the Lower Great Lakes/St. Lawrence Plain. Although not confirmed at Geprags Park other bird species that would also prefer golden-winged warbler's habitat requirements include: American woodcock (*Scolopax minor*)[5,6], brown thrasher (*Toxostoma rufum*) [3,4], eastern towhee (*Pipilo erythrophthalmus*)[3], willow flycatcher (*Empidonax traillii*)[4], blue-winged warbler (*Vermivora cyanoptera*)[3,4], field sparrow (*Spizella pusilla*)[3,4], and Baltimore oriole (*Icterus galbula*)[4]. Suitable golden-winged warbler habitat also provides critical resources to migrant birds, resident mammals (i.e. white-tailed deer [*Odocoileus virginianus*], rodents and bats), and predatory animals (i.e. raptors and coyotes [*Canis latrans*]) that prey upon these species.

The ANGP Phase 1 permanent ROW[7] will be a 50-foot corridor and occupy approximately 2.48 acres of the western section of Geprags Park. Habitats within the ROW are currently composed of early successional scrub/shrublands containing dogwoods, viburnums and honeysuckle (38.0 percent of the ROW), and early successional forest composed of saplings and small trees (10.3 percent), grassy areas (51.7 percent). Small to medium sized openings and a trail system exist within the shrubland structure. Soils within the Project corridor are provided in Table 2.

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[2] Geprags Park Trails. Updated on May 28, 2014. Available on-line at http://www.mobilemaplets.com/showplace/11361
[3] Labar, M. of Vermont Audubon. Habitat Assessment for the Vermont Gas Pipeline through Geprags Park Hinesburg, Vermont. May 3, 2016
[4] Vermont's Species of Greatest Conservation Need. Chapter 4: Conserving Vermont's Wildlife Resources. Vermont's CWCS. 2005. Available on-line at www.vtfishandwildlife.com.
[5] Vermont's Species of Greatest Conservation Need from the Vermont Wildlife Action Plan.
[6] Bird Conservation Region 13 (Lower Great Lakes/St. Lawrence Plain) Priority Bird Species from the North American Bird Conservation Initiative.
[7] During construction portions of the ANGP Phase 1 will have an additional 25 foot temporary ROW located on the eastern side of the ROW

Table 2: Summary of soil types within 50-foot permanent VGS ROW within Geprags Park			
Soil Name*	**Vermont Farmland Classification**	**Vermont Farmland Agricultural Value**	**Area (acres)**
Covington silty clay	Statewide (b)	6d	0.7
Enosburg and Whately soils, 3 to 8 percent slopes	Statewide (b)	4d	1.8
Limerick silt loam	Statewide (b)	4d	0.1
Livingston clay	NPSL	10	0.2
Total	-	-	2.9

***Soils based on Natural Resources Conservation Service's dataset from the Vermont Center for Geographic information, 2015.**

Geprags Park VGS ROW Vegetation and Habitat Management Plan

Following the installation of the pipeline through Geprags Park the site will be restored to pre-construction elevations, stabilized, seeded and mulched per the Erosion Prevention and Sediment Control ("EPSC") Plan as approved through the Individual Construction Stormwater Permit (No. INDC-6949.2). Seed mixes are specified in the EPSC Plan and are specific to wetland and upland areas as needed. Following site stabilization VGS would install additional plantings, as described in the GPVR VHMP details below, within the corridor and additional workspace to accelerate the natural revegetation process.

Previously, VHB prepared a VMP for ANGP to describe the protocols for operational phase vegetation maintenance, non-native invasive plant species ("NNIS") monitoring, and rare plant impact monitoring to be performed along the Project alignment. The VMP's objectives are to protect existing natural resources found within the ROW while allowing VGS to adhere to required pipeline corridor maintenance safety standards. Per the VMP, VGS will conduct special vegetation management practices and conduct monitoring for the presence/absence and potential control of NNIS within the ROW. VGS will also monitor for the spread or colonization of NNIS.

The primary goal of the GPVR VHMP is to enhance, create and maintain a unique array of early successional habitat for the golden-winged warbler, which would inherently benefit a suite of other wildlife species that utilize these areas. Early successional habitat includes a medley of grasses, forbs, shrubs and small trees. It provides an abundance of resources for a variety of wildlife species, although regular disturbance, such as tree removal, mowing, and/or schematic plantings (i.e. a planned layout of specific species at predetermined locations), is required in order to maintain an early successional state. The type, frequency, and intensity or size of the disturbance regimes are determined based on factors such as the desired habitat and project size.

Managing the corridor to benefit the golden-winged warbler will provide suitable habitat for a variety of bird and other species. Shrubland habitats are important for bees and butterflies, black bear (*Ursus americanus*), white-tailed

deer (*Odocoileus virginianus*), garter snake (*Thamnophis* species) and frogs. Wetlands in the park and in the vicinity of the VGS corridor also provide breeding habitat for insects, which in turn provide a food resource for bat species, including hoary bat (*Lasiurus cinereus),* silver-haired bat (*Lasionycteris noctivagans*) and northern long-eared bat (*Myotis Septrionalis*). Bats may also forage for insects in or commute through open, early successional areas that act as a flyway between roosts and foraging locations. Rodents, such as voles (*Microtus* species), a variety of mice, moles, shrew and lemming, utilizing the corridor would also be potential prey items for predators like the gray fox (*Urocyon cinereoargenteus*) and weasels (*Mustella* species). Raptors, such as the American kestrel (*Falco sparverius*) and red-tailed hawk (*Buteo jamaicensis*) might also hunt for small mammals and amphibians within corridor.

Pre-construction monitoring of the GPVR VHMP identified two NNIS, Morrow's honeysuckle (*Lonicera morrowii*) and reed canary-grass (*Phalaris arundicacea*). The GPVR VHMP may include pre-treatment of the ROW if it is necessary for the establishment of desired plants. Post-construction NNIS monitoring and treatment may also be required in order to prevent encroachment of invasive species and formations of dense, monotypic stands that are not suitable for use by golden-winged warbler[8]. Any individual or small grouping of NNIS identified during annual monitoring will be removed by manual extraction with off-site disposal if there is risk to economic or resource value. Risk assessment may include a professional evaluation of the occurrence propensity to dominate (e.g. develop a colony size > or equal to 20 percent of the given habitat type). Control of larger populations/occurrences that pose a risk to economic or resource value will also be conducted by manual extraction as feasible and identified by annual monitoring reporting. VGS will only use herbicides for vegetation control under the direction of the Vermont Agency of Natural Resources ("ANR"), and in consultation with the Hinesburg Conservation Commission. Specific control activities undertaken in any given year will be included in the annual monitoring report. If particular area has been overspread by population(s) of NNIS that are beyond the extent or control of Project activities, this information will be reported to the ANR in the annual report and no control activities will be undertaken[9].

VGS will provide $2,000 to $3,000 per year to the Town of Hinesburg for ten years to implement and adaptively manage the GPVR VHMP, in accordance to budget agreements that may be reached between VGS and the Hinesburg Conservation Commission. The proposed GPVR VHMP is subject to revision in future years based on feedback from the Hinesburg Conservation Commission and VGS. The GPVR VHMP is intended to exceed basic corridor restoration and vegetation management requirements specified in the Project's Certificate of Public Good and associated exhibits. Per the Deed of Easement, VGS will comply with the written plan for the protection and enhancement of golden-winged warbler habitat in the pipeline vicinity and, in the future, collaborate with Audubon Vermont and the Hinesburg Conservation Commission. Accordingly, the following actions are compliant with recommendations outlined in the "Best Management Practices for Golden-winged Warbler Habitat on Utility Rights-of-way in the Great Lakes", "Best Management Practices for the Golden-winged Warbler Habitat in Forest and Shrub Wetlands of the

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[8] Golden-winged Warbler Working Group. Best Management Practices for the Golden-winged Warbler Habitat in Forest and Shrub Wetlands of the Appalachians. Unknown date.
[9] Vanasse Hangen Brustlin, Inc. May 3, 2013. Vermont Gas Systems, Inc. Addison Natural Gas Project – Phase I (Colchester to Middlebury).

Appalachians", and are specific to the Deed of Easement between VGS and the Town of Hinesburg and The Habitat Assessment for the Vermont Gas Pipeline through Geprags Park (Audubon Vermont 2016):

- Vegetation management and any additional work, including initial construction, maintenance, repair and replacement, and mowing, will not occur between April 15 and July 31, 2016, unless breeding bird surveys indicate no evidence of nesting activity, to avoid disturbance to nesting birds. This time frame will also give the area time to recover prior to the 2017 breeding season.

- Work will only occur within the ROW and designated temporary construction sites to minimize disturbance to wildlife.

- ROW maintenance will occur per the VMP on a 2 to 3 year cycle to allow for the establishment of desirable grasses and forbs, primarily goldenrod.

    - Per the VMP a 20-foot corridor centered on the pipe will be kept mowed to keep woody vegetation from becoming established.
    - The remaining 15-foot zone on either side of the 20-foot mowed corridor, out to the edge of the ANGP Phase 1 ROW will be managed for golden-winged warbler habitat as described herein.
    - Per the VMP, Vegetation Management Type A (RTE Plant Species) and B1 (Perennial Stream Riparian Corridors) will be applied in the southern portion of Geprags Park (see Sheet 31 of VMP Attachment 1)

- A planting schematic has been developed to facilitate the appropriate placement of native woody shrubs and grasses to maximize species structure and diversity along the ROW boundaries. Plantings will be arrayed in clumps and may include areas along the ROW and south of the treed hedgerow in the old field habitat (a list of potential vegetative species is provided in Table 3).
    - Woody shrubs will be planted at the boundaries of the Easement Area to enhance the habitat specific to the Warblers, as well as additional shrubs inside the Easement Area as depicted on the "Riparian Zone Vegetation Management Plan".

- Vegetative management will occur within the permanent ROW.

- Audubon Vermont will continue to monitor the golden-winged warbler following construction and may provide input to VGS on whether adaptive vegetation management is necessary.

The configuration of planned habitat components within the ROW will be strategically arranged in a way that is consistent with best management practices for golden-winged warblers (see Attachment 3). The fundamental components of golden-winged warbler habitat include a unique array of plant species and structural heterogeneity. A variety of shrub species and woody vegetation will be planted unevenly along the forest on the western side of the

proposed VGS permanent ROW; goldenrod, native grasses or per EPSC Plan Seed Mix will be scattered in clumps throughout the corridor. This layout creates a "feathered edge" that includes fundamental structural and vegetative diversity. Approximately 30 to 70 percent of the corridor will be composed of unevenly distributed shrubs and saplings (3 to 13 feet) and low-woody vegetation (less than 3 feet) will occupy less than 25 percent of open space[10]. The east side of the proposed permanent VGS ROW currently lacks mature forest. Therefore, an estimated two to four canopy trees would be planted along the eastern portion of the corridor, as the guidelines recommend approximately 30 percent canopy cover. Canopy trees on the eastern portion of the ROW will be interspersed with shrubs and clumps of desired grasses. A summary of selected native species that can be planted are listed in Table 3. The desired species for plantings will be reviewed with ANR and Audubon Vermont.

Table 3. Native plants that can be used for early successional habitat enhancement.

Trees	
willow	*Salix* spp
prickly-ash	*Zanthoxylem* spp
hazel (tree variety)	*Corylus* spp.
alders (tree variety)	*Alnus* spp.
Shrubs/Woody Vegetation	
hawthorn	*Crataegus* spp.
dogwood	*Cornus* spp.
viburnums	*Viburnum* spp.
alders (shrub variety)	*Alnus* spp.
brambles	*Rubus* spp
elderberry	*Sambucus* spp.
hazel (shrub variety)	*Corylus* spp.
Grasses	
Per EPSC Plan Seed Mix	

Planting efforts will be made so that the distances between microedges, or changes in vegetation, will be less than 20 feet from any point within the corridor[8]. For example, one type of planting (grass clump, shrub or tree) will be within 20 feet of a different type of planting. Plantings will occur after installation of the pipeline, preferably during the 2016 growing season to allow the permanent ROW time to reestablish vegetation prior to the 2017 breeding season.

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[10] Golden-winged Warbler Association. Best Management Practices for the Golden-winged Warbler Habitats in the Appalachian Region. A Guide for Land Managers and Land Owners. Available on-line at http://webcache.googleusercontent.com/search?q=cache:5iEV1U3TMvYJ:www.gwwa.org/resources/GWWA-APPLRegionalGuide_130808_lo-res1.pdf+&cd=2&hl=en&ct=clnk&gl=us.

Conclusion

The GPVR VHMP will serve to protect and enhance early successional habitat within the ANGP Phase 1 corridor in Geprags Park. The pipeline ROW will be specifically managed to create early successional transitional edge habitat that is preferential to the golden-winged warbler and many other wildlife species. Project construction will take place outside of the golden-winged warbler breeding season. Following construction and stabilization, selected native trees and shrubs will be planted within the VGS ROW to minimize the time period required to restore the habitat, thereby minimizing the time period of potential impact to breeding habitat for the golden-winged warbler and other species from the construction and operation of ANGP Phase 1, and also enhancing and protecting habitat in the long term in Geprags Park. Cooperation between VGS and the Hinesburg Conservation Commission will guide implementation and any necessary future revisions of the GPVR VHMP.

ATTACHMENT 1

Habitat Assessment for the Vermont Gas Pipeline through Geprags Park Hinesburg, Vermont.

Golden-winged Warbler

Prepared by
Mark LaBarr
Audubon VT
March 2016

Audubon VERMONT

Introduction

The following pages provide a habitat assessment and management strategies for portions of Geprags Park that are associated with the Vermont Gas (VTG) pipeline and its associated right of way (ROW) in Hinesburg, Vermont. This assessment is part of the Golden-winged Warbler Protection Plan in the Stipulated Agreement between Town of Hinesburg and VTG. The assessment is also part of Audubon Vermont's Champlain Valley Bird Initiative (CVBI) which works with landowners to promote effective avian habitat management in the Champlain Valley. These recommendations are based on habitat requirements of priority bird species, primarily Golden-winged Warbler (*Vermivora chrysoptera*) and Blue-winged Warbler (*Vermivora cyanoptera*), that have been identified by the Vermont State Wildlife Action Plan (VTWAP) and the North American Bird Conservation Initiative (NABCI) as conservation priorities, and are the focus of regional conservation efforts (Appendix 1). Although this report is concerned primarily with habitat management for birds, numerous non-avian species will also benefit from its recommendations.

Geprags Park is located in Lower Great Lakes/St. Lawrence Plain Bird Conservation Region (BCR 13) as delineated by NABCI. The Lower Great Lakes/St. Lawrence Plain encompasses a narrow, low-lying plain stretching from the Champlain Valley west to Northeastern Ohio and surrounds the St. Lawrence River, and lakes Erie, Ontario and Champlain (Figure 1).

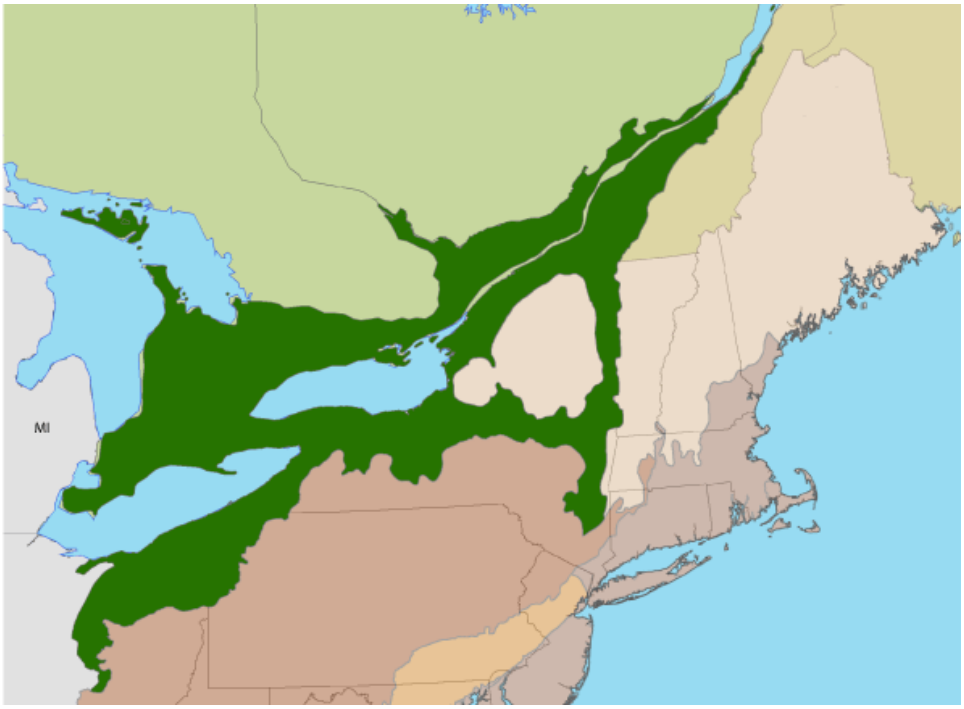


Figure 1. The Lower Great Lakes/St. Lawrence Plain (BCR 13) shown in green.

This BCR is comprised of extensive wetland ecosystems, accompanied by a mosaic of forests, agricultural fields and early-successional habitat (abandoned fields reverting to shrubland or young forests). The Champlain Valley of Vermont and New York has been identified as a Focus Area within BCR 13 because its mixed habitat types and open water are home to a number of BCR13's priority bird species.

Geprags Park is located in the northwest portion of the town of Hinesburg, Vermont. The larger landscape surrounding the property includes a mix of agricultural lands, small to medium-sized forest patches, and residential development. The property comprises approximately 86 acres of fields, early successional shrublands, and forest. The fields are not currently in agricultural use and contain a mix of grasses and forbs. The early successional shrublands, are comprised of a number of shrubland plant species including dogwoods and viburnums as well as invasive plant species. The property also supports a young forest of primarily northern hardwoods. Several small drainages run throughout the property, the largest of which is on the western portion of the property. There are roughly two miles of maintained trails in the park and Vermont Electric Power Company (VELCO) maintains a ROW under its powerlines that run through the park. Numerous invasive plant species including wild parsnip, European buckthorn, and honeysuckle are also present due to the past disturbance regime and the strong presence of these species in the Champlain Valley.

Current management activities include mowing most of the open fields, the trails and several larger openings annually. Beginning in 2012, Audubon Vermont worked with the Town of Hinesburg, the Hinesburg Conservation Commission and the U. S. Fish and Wildlife Partners Program to manage portions of the shrublands for priority bird species. This work was done over a period of about a year and a half and consisted of heavy brush hogging and removal of trees and invasive plant species with a chainsaw. The work resulted in the creation and maintenance of habitat that benefited Golden-winged Warblers and other shrubland species.

The habitat types at Geprags Park are common in the Champlain Valley and support bird species associated with early successional habitat types (shrublands and young forest), and mixed forests. Priority Bird Species (as identified by VTWAP, NABCI and Audubon Vermont) that are particularly well suited to these habitats include the focal species of this report, Golden-winged and Blue-winged warbler. The Golden-winged Warbler's high priority status is due to declines in its populations across its range, and the species is the focus of numerous conservation efforts directed in large part by the Golden-winged Warbler Working Group and the Golden-winged Warbler Conservation Plan. More information about the life history of this species, the working group and the conservation plan can be found at www.gwwa.org.

Vermont Gas Pipeline and Associated Right of Way (ROW)

The focus of this report is the western section of Geprags Park where the VTG pipeline will run and where the ROW will be maintained (Figure 2). This area comprises approximately 28 acres of the park. The siting of the pipeline was determined in part by the location of wetlands within and adjacent to the park. The pipeline and its associated 50 foot ROW as approved by the Vermont Public Service Board will run through an old field, a treed hedgerow and shrubland. In 2015, both a Golden-winged Warbler and a Blue-winged Warbler were trapped and banded in the shrubland section as well as other locations within the park (Figure 2). Golden- winged Warblers, Blue-winged Warblers and their hybrids have been observed since 2010 in the

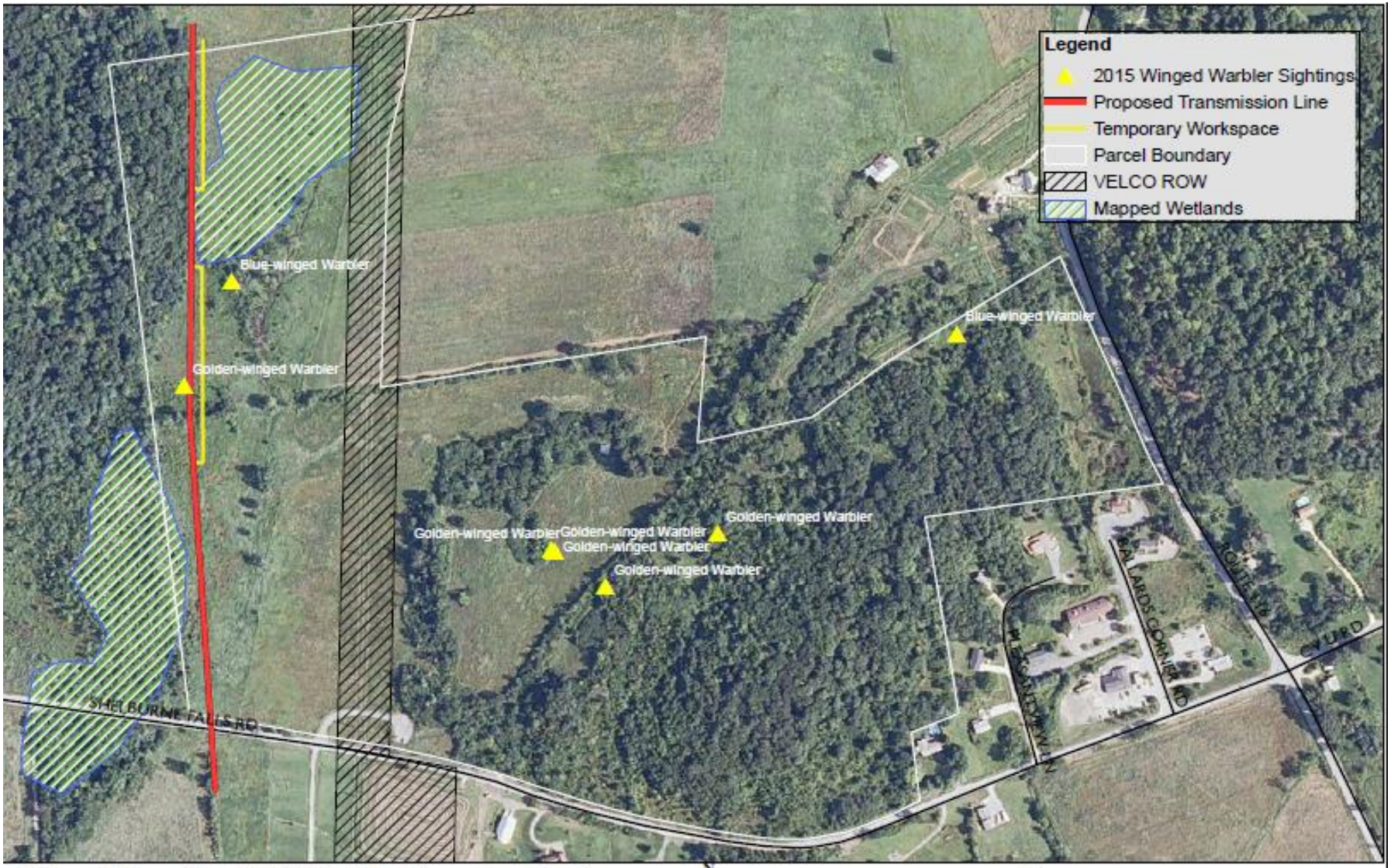


Figure 2. Locations in 2015 of Golden-winged and Blue-winged Warblers in relation to the proposed Vermont Gas Pipeline in Geprags Park, Hinesburg, VT.

N
W E
S

0 225 450 900 Feet

Audubon VERMONT

Map created by Margaret Fowle, March 2016
Data provided by Audubon VT, VCGI, ESRI, and VT Gas Systems

Not a survey. All boundaries and acreage figures approximate.

western section where the pipeline will be located. The habitat, a mix of shrubs, goldenrod filled openings, saplings and mature forest is ideal for these two species and a "Warbler Protection Plan" within the Stipulated Agreement has been created to protect these species during the breeding season. The plan includes efforts to enhance the habitat through plantings and monitoring the species post construction. Utility ROWs can be managed in a way that maintains habitat for Golden-winged Warblers, as addressed by the Golden-winged Winged Warbler Working Group's document "Best Management Practices for Golden-winged Warbler Habitat On Utility Rights-of-way in the Great Lakes" (http://www.gwwa.org/resources/GWWA-Habitat-GreatLakes-utility-130808_lo-res.pdf).

Management Options

Management options are provided for the portion of Geprags Park west of the main drainage and along the pipeline corridor. They are designed to provide guidance for activities that would benefit priority bird species and prevent and alleviate any disturbance resulting from the pipeline construction and ROW maintenance**.**

Assessment of Current Habitat Conditions along the Pipeline Corridor:
The shrubland habitat types where the pipeline will run are currently a mix of old field, early successional shrublands composed of dogwoods, viburnums and honeysuckle, and early successional forest composed of saplings and various species of small trees. Within this shrubland structure are a number of small to medium sized openings and a trail system. The shrubland habitat is situated between a mature hardwood forest to the west and hayfields to the east. As mentioned above, this mix of vegetation types and openings provides ideal habitat for a suite of bird species dependent on early successional habitat. Efforts to maintain this habitat structure by managing the amount of reforestation that occurs would benefit numerous priority species, including Golden-winged and Blue-winged warblers. Saplings, primarily ash, are currently beginning to dominate the area where the winged-warblers are found. Over time this succession of shrubland to forest will limit the use of this area by Golden-winged and Blue-winged warblers. As such, management actions will be required in the next couple of years to maintain the habitat. If done responsibly, the construction of the pipeline and the resulting ROW may enhance this habitat by removing saplings and creating a maintained 50-foot wide open area of grasses and forbs including goldenrod. If the pipeline and ROW do not go through Geprags Park, then other management actions some of which are described below will need to be undertaken in this area.

General Management Options for Shrublands:

- Brush hog portions of the shrublands every 3-5 years after August 1st to maintain shrubland habitat. Target native and non-native shrubs that are greater than 10 feet high for cutting (these will quickly regenerate) while maintaining 5-10 foot native shrubs, some trees, saplings, and snags throughout. The optimal shrub height is 5-10 feet tall for shrubland priority species. Brush hogging will enhance the habitat structure while preventing the encroachment of trees and will benefit several priority shrubland species
- Selectively remove tall trees after August 1st while retaining desirable shrub species. Trees can be cut or girdled outside of the nesting season, which is generally from April 15 – August 1. Girdled trees will become snags which can provide singing perches and nesting sites for cavity nesters.

- Aim to maintain at least 40% of the area in grasses and forbs to create a mixture of open field and shrubland. Leaving some areas undisturbed every year (ie brush hogging in thirds) will provide cover and food for species while the disturbed areas regenerate. Shrubland priority species benefit from a mixture of native shrubs, grasses, and forbs, all of which provide nesting habitat and food resources. Light pasturing after August 1st can also help achieve this habitat structure.
- If possible, target non-native shrubs such as buckthorn and honeysuckle for removal. Retain orchard fruit trees such as apples and pears where applicable. Native shrubs such as dogwoods and orchard fruit trees provide better quality resources than non-native species. For more information, see Invasive Plant Species section below.
- In areas where shrubs are limited, plant native shrubs to further the succession from field to shrubland. Plantings should be "clumped" to create the mosaic of shrubs and grasses and forbs.

Specific Management Actions Recommended for the Pipeline Corridor

Many of the recommended management actions follow those mentioned above with more specific guidance coming from the "Best Management Practices for Golden-winged Warbler Habitat On Utility Rights-of-way in the Great Lakes" (http://www.gwwa.org/resources/GWWA-Habitat-GreatLakes-utility-130808_lo-res.pdf). Below are actions specific to the agreement between VTG and the town of Hinesburg as explained in the Warbler Protection Plan.

- Work will be scheduled to avoid disruption of nesting. As such, no work will occur between April 15 and July 31, 2016 unless site surveys by Audubon Vermont in July indicate no evidence of nesting activity. Audubon Vermont recommends that actual construction occur after July 31 so as not to disturb the habitat prior to the arrival of the birds and give the area time to recover for the 2017 breeding season. In addition, future management of the ROW should take place outside these dates. ROW maintenance should occur on a 2-3 year cycle to allow the establishment of grasses and forbes, primarily goldenrod.
- Work within the area should stay within the pipeline ROW and designated temporary construction sites.
- Plantings of woody shrubs at the boundaries of the ROW should occur to enhance habitat for Golden-winged Warblers. As mentioned above, these plantings should be "clumped" and could include areas along the ROW south of the treed hedgerow in the old field habitat. This would bring this area into shrubland habitat at a faster rate and make it available for priority bird species sooner. A planting schematic should be put together post construction to assist with appropriate plant placement. VTG has committed $1000.00 to the purchase of native shrubs for this purpose.
- Monitor the ROW post construction to determine the impacts to the Golden-winged and Blue-winged warblers. As mentioned above the two birds captured in 2015 now have metal bands on their legs with unique number combinations. Return rates of these birds can be compared to other banded birds in the park. Surveys should be conducted over the next several years of both the birds and the vegetation (photo documentation) so management action can be altered if it is determined that other strategies would work better.

Summary

Geprags Park is home to many bird species including a number of priority birds such as the Golden-winged Warbler. This management plan looks to provide guidance during construction and post construction activities in an effort to protect nesting birds and maintain and potentially enhance habitat along the pipeline corridor. The park's juxtaposition next to other properties with similar early successional shrubland habitat types supports management actions that maintain the current habitat structure. Past management practices have maintained this shrubland habitat in other areas of the park. These management practices, however, will need to occur at regular intervals to insure the grasslands and shrublands are maintained long-term. Based on the results of past management efforts in the park we believe the pipeline and its associated ROW, if managed correctly, can provide opportunities for habitat maintenance and enhancement for priority bird species, including the Golden-winged Warbler.

Appendix 1.

Audubon VERMONT

Champlain Valley Priority Bird List

September 2014

Wetlands

Pied-billed Grebe [1,2]
American Bittern [1,2]
Least Bittern [1,2]
Wood Duck[2]
Common Goldeneye [2]
American Black Duck [1,2]
Sora [1]
Blue-winged Teal [1]
Bald Eagle [1]
Osprey[1]
Black Tern [1]

Agricultural Grasslands

American Kestrel [1]
Northern Harrier [1,2]
Short-eared Owl [1,2]
Upland Sandpiper [1,2]
Sedge Wren [1]
Vesper Sparrow [1]
Grasshopper Sparrow [1,2]
Bobolink [1,2]
Eastern Meadowlark [1,2]

Islands

Great Blue Heron [1]
Black-crowned Night Heron [1,2]
Common Tern [1,2]

Shrub/Early Successional

American Woodcock [1,2]
Brown Thrasher [1,2]
Eastern Towhee [1]
Willow Flycatcher [2]
Golden-winged Warbler [1,2]
Blue-winged Warbler [1,2]
Field sparrow [1,2]
Baltimore Oriole [2]

Deciduous/Mixed Forest

Scarlet Tanager [1]
Black-billed Cuckoo [1,2]
Whip-poor-will [1]
Veery [1]
Wood Thrush [1,2]
Canada Warbler [1,2]
Ruffed Grouse [1]
Chestnut-sided Warbler [1]
Black-throated Blue Warbler[1,2]
Cerulean Warbler [1,2]
Northern Flicker [2]
Rose-breasted Grosbeak [2]
Peregrine Falcon

[1] Vermont's Species of Greatest Conservation Need from the Vermont Wildlife Action Plan
[2] Bird Conservation Region 13 (Lower Great Lakes/St. Lawrence Plain) Priority Bird Species from the North American Bird Conservation Initiative

Audubon VERMONT

Champlain Valley Bird Initiative Resource List

NATIVE & INVASIVE PLANTS

Trees, Shrubs, & Vines for Attracting Birds by Richard M. DeGraaf, 2002. A wonderful guide to woody plants that are useful for attracting birds. Helpful tables for each plant species indicating birds that use the plant in terms of food, cover & nesting. $20

Landscape Plants for Vermont by Norman Pellett and Mark C. Starrett, 2002. An incredible reference book for plants that will grow in Vermont; highlights native species. Organized by plant type (i.e., vines, shrubs, trees) and mature height. Lists plants resistant to deer browse and poisonous plants. Order online through UVM Master Gardener Program. $15 *See website list.*

Native Shrubs and Vines for Northern New England Landscapes by Norman Pellett, 2001. Strictly native Vermont plants. Includes plant descriptions and uses in the landscape; appendices list plants suited for wet, dry and woodland sites. Published by Friends of the Horticulture Farm, P. O. Box 64788, Burlington, VT 05406. $7

Native Trees, Shrubs, and Vines: a Guide to Using, Growing, and Propagating North American Woody Plants by William Cullina, 2002. A tremendous reference book with wonderfully written, engaging prose. Species accounts include wildlife uses, cultural and propagation information, native habitats and more. Color photos. $40

Native Plants of the Northeast; A Guide for Gardening and Conservation by Donald J. Leopold, 2005. A book that is specific to our region with a great balance of perennials, annuals, shrubs, trees & vines. $40

Sources of Native Plant Materials in Vermont, Agency of Natural Resources, 2003. An updated publication, listing Vermont nurseries that carry native species and the plant species available at each nursery. Contact information included. A great resource.
http://www.anr.state.vt.us/dec/waterq/wetlands/docs/wl_nativeplants.pdf
Available in print or online. Free.

Vermont Invasive Exotic Plant Fact Sheet Series, revised 2003. A collection of black and white fact sheets for 25 invasive species. Identification, habitat and control information. Available online from Vermont Master Gardeners, *see website list*.

Native Alternatives for Invasive Ornamental Plant Species, edited by Timothy M. Abbey for the Connecticut Invasive Plant Working Group. Small booklet; recommends multiple native alternatives for five commonly planted invasive ornamentals – color photos. Available in print or online. http://www.caes.state.ct.us/SpecialFeatures/NativeAlternatives.pdf

FORESTRY & CONSERVATION

Working with Your Woodland: A Landowner's Guide, *revised edition* by Mollie Beattie, Charles Thompson, and Lynn Levine, 1993. Covers a wide spectrum of compatible woodland management

objectives – wildlife, recreation, timber and firewood - as well as the technological, environmental, tax and legal concerns. $25.

BIRDS

The Audubon Society Guide to Attracting Birds: Creating Natural Habitats for Properties Large & Small by Stephen W. Kress, 2006. The "everything-you-need-guide!" From specific native plant recommendations to create cover and nesting sites on your property, this book thoroughly covers all the aspects of attracting birds to your yard and beyond. Great designs for nesting platforms, advice for the larger landowner, and a wonderful resource appendix. $24.95

Birdwatching in Vermont by Ted Murin & Bryan Pfeiffer, 2002. Great for finding spots to visit for specific birds in order learn about their habitat requirements. $20

Sibley's Birding Basics by David Allen Sibley, 2002. Learn how to look at and listen to birds. $15.95

Bird Watcher's Digest *magazine,* edited by William Thompson, III. Bird identification tips, landscape and gardening articles, and in-depth exploration of different bird species. *http://birdwatchersdigest.com/* Six issues per year, $20 subscription.

Identify Yourself: The 50 Most Common Birding Identification Challenge by Bill Thompson III, 2005. This is an excellent book for sorting out and identifying those tricky birds that are difficult to distinguish from one another. Aimed at beginners and intermediates. $19.95

WILDLIFE HABITAT

A Landowner's Guide: Wildlife Habitat Management for Vermont Woodlands Ronald J. Regan and Ginger Anderson, publication coordinators. Each creature receives an entire chapter that focuses on its natural history, habitat requirements and management practices or projects. Booklet available through VT Fish & Wildlife Department, Waterbury, (802) 241-3700, free.

Landowner's Guide to Wildlife Habitat; Forest Management for the New England Region by Richard M. DeGraaf, Mariko Yamasaki, William B. Leak, and Anna M. Lester, 2005. An easy-to-use guide for enhancing wildlife habitat quality, timber values and the appearance of forest lands. Explains how to work with professional foresters to meet your goals. Great color photographs. $16.95

Enhancement of Wildlife Habitat on Private Land by Daniel Decker and John Kelley, 1998. A popular 42-page publication with illustrations and instructions for 10 projects designed to provide desirable habitat for wildlife. http://store.cce.cornell.edu/ Order online through Cornell Cooperative Extension Resource Center. Publication #16271

Landscaping for Wildlife by Carrol Henderson, 1987. A landowner's guide to developing backyard, farm, and woodlot habitats for wildlife.
http://www.comm.media.state.mn.us/bookstore/bookstore.asp Available online through Minnesota's Bookstore, Department of Natural Resources. $10.95

Backyard Wildlife Habitat in Vermont by Steve Parren, 1993. Provides information on creating habitat for birds and other wildlife, specific to Vermont. Booklet available through VT Fish and Wildlife Department, Waterbury, (802) 241-3700, $3

Noah's Garden: Restoring the Ecology of Our Own Back Yards by Sara Stein, 1995. This author completely breaks through the mysteries of gardening and shows us how we need to simply plant

with nature (i.e. plant native plants and plant them where they will thrive) instead of fighting against nature. $13.00

Planting Noah's Garden: Further Adventures in Backyard Ecology by Sara Stein, 1997. Furthers Stein's campaign to make lawns animated, full of disorder, life, and wildness. Packed with practical instructions for planning and maintaining a garden of one's own. Wonderful entertainment for anyone with a green thumb. $35

VERMONT NATURAL HISTORY

Wetland, Woodland, Wildland; A Guide to the Natural Communities of Vermont by Elizabeth H. Thompson & Eric R. Sorenson, 2000. A ground-breaking, comprehensive book on Vermont's natural communities, including descriptions of over 80 community types, their native species and places to visit. $20

The Nature of Vermont; Introduction and Guide to a New England Environment by Charles W. Johnson, 1980. An engaging narrative history. $17

Reading the Forested Landscape by Tom Wessels with Brian Cohen illustrator, 1997. Bill McKibben wrote, "Equal parts Sherlock Holmes and Aldo Leopold, it will help thousands of New Englanders answer the questions that come to mind when they walk this landscape of stone walls, stunted apple trees and towering hemlocks."$19

FIELD GUIDES

The Sibley Field Guide to Birds of Eastern North America by David Allen Sibley, 2003. A portable version of the Sibley guide, limited to Eastern birds; beautiful full-colored drawings and color-coded range maps. $20

A Field Guide to the Birds of Eastern and Central North America*, 5th edition (Peterson Field Guides)* by Roger Tory Peterson, 2002. A birding classic. Page numbers in *Birding by Ear's* booklet refer to the species descriptions in this book. $20

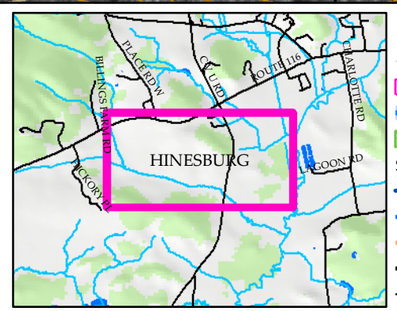
Birding by Ear: Eastern/Central North America (Peterson Field Guides) by Richard Walton and Robert Lawson, 1990. Teaches a unique system for distinguishing and remembering bird songs, using mnemonics and descriptive words. The authors have created learning groups of similar bird songs and clearly point out distinguishing characteristics. 3 CDs and guide booklet, $30

The Shrub Identification Book by George W. Symonds, 1963. Organized like the Tree Identification Books; a great tool for learning shrubs. $15

ATTACHMENT 2

Note: The second page of this Attachment 2 includes an updated wetland delineation prepared July 8 and 12, 2016, the information which is intended to supersede and replace the wetland delineation information contained on the map on the first page of Attachment 2. All other information shown on the map on the first page remains true and correct in all material respects.

Sources: Background By VMP (2011); Study Areas by VHB (2012-2015); Delineated Wetlands and Streams, Vernal Pools, Ordinary High Water, & Bridge/Culverts by VHB (2011-2015); RTE Species, Veg. Nat. Communities, & Bat Trees surveyed by Gilman & Briggs (2012-2015); WDP Element Occurences by ANR (2013); VSWI Wetlands by ANR (2014); Deer Wintering Areas by VHB (2012/13); 10' Contours generated by VHB from HydroDEM by VCGI (2008); Statewide datasets from VCGI (2010) include: Roads by VTrans (2015), Town and County Boundaries by VCGI (2008), Streams and Waterbodies by VHD (2008), Railroads by VTrans (2003), Parcel Boundaries provided by CHA (2015); VELCO Structures from VELCO (2012); Proposed Transmission/Distribution/Network by CHA (2012-2015).



2015 Golden-winged Warbler Sightings (Audubon VT)
Trails (hart)
VHB Study Area
Approved Route (CHA)
Wetland (Proposed Class) (VHB)
Stream (Proposed Type)
Stream Centerline (VHB)
Stream Top of Bank or Slope (VHB)
Ditch (VHB)
50 ft. Class II Wetland Buffer (VHB)
Natural Resource Buffer (VHB)

Vernal Pool (VHB)
Potential Vernal Pool (VHB)
RTE Plant Area (G&B)
RTE Plant Location (G&B)
Surveyed Potential Bat Tree (G&B)
Potential Bat Tree (G&B)
Deer Wintering Area (VHB)

Veg. Natural Community (G&B)
Natural Resource Feature Continues (VHB)
RTE Species/Communities (VT FWD)
VELCO Structure Location (VELCO)
Transmission Lines (VELCO)
Deer Wintering Area (ANR)
VSWI Wetland (ANR)
NRCS Soil Boundary (VCGI)

Bridge (VHB)
Culvert (VHB)
Railroad (VTrans)
Roads (VTrans)
10' Contour (VCGI)
50' Contour (VCGI)
Stream (VHD)

400 200 0 400
Feet

Vermont Gas - ANGP Phase I
Hinesburg, Vermont
Geprags Park

May 17, 2016

vhb

\\vtsbdata\projects\57563.00 VGS Addison Expansion\GIS\Project\Geprags Park\GepragsPark_NR_11x17_Site Map.mxd Prepared by: jtherrien

Geprags Park Study Area Wetland Delineation and RTE Plant Inventory Updated by VHB (Werts, Crary and Fenner) on July 5 and 6, 2016, and field reviewed by the VT DEC Wetland Program on July 8 and 12, 2016.

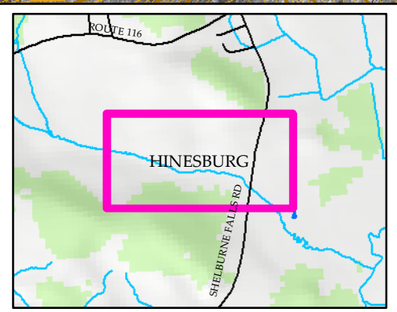
Geprags Park Study Area Update
Approx. Size = 38 ac

LLN: 103
LLN: 104.01
LLN: 104
LLN: 106.01
LLN: 106
LLN: 105
LLN: 105.01
LLN: 103.01
LLN: 105.02

SHELBURNE-FALLS RD

2012/2016-JB-33/34/35 (Class II)
2012/2016-JB-32 (Class III)
K43
2016-dp-12
2016-dp-2
2016-dp-1
2012-RTE-CT-080 S3/Not Listed
2012-RTE-CT-082 S3/Not Listed
2016-dp7
2016-dp6
2016-dp9
2016-dp8
2016-dp-11
2012-SC-JB-10 (Perennial)
2016 dp3
2016-dp-10
2012-CM-232 (Class II)
2012-RTE-CT-081 S3/Not Listed
2012-CM-233 (Class III)
2016-dp-5
2016-dp-4
MP 18.5
MP 19.0

Sources: Background By VMP (2011); Study Areas by VHB (2012-2016); Delineated Wetlands and Streams, Vernal Pools, Ordinary High Water, & Bridge/Culverts by VHB (2011-2016); RTE Species, Veg. Nat. Communities, & Bat Trees surveyed by Gilman & Briggs (2012-2015); WDP Element Occurences by ANR (2015); VSWI Wetlands by ANR (2015); Deer Wintering Areas by VHB (2012/13); 10' Contours generated by VHB from HydroDEM by VCGI (2008); Statewide datasets from VCGI (2010) include: Roads by VTrans (2015), Town and County Boundaries by VCGI (2008), Streams and Waterbodies by VHD (2008), Railroads by VTrans (2003), Parcel Boundaries provided by CHA (2015); VELCO Structures from VELCO (2012); Proposed Transmission/Distribution/Network by CHA (2012-2015).



- VHB Study Area
- Geprags Park Study Area Update (VHB, 2016)
- Geprags Park Parcel
- Proposed Transmission Mainline
- Existing Gas Transmission Main
- Proposed Distribution Mainline
- Proposed Distribution Local Network
- Wetland (Proposed Class)
- Prior Wetland Delineation Boundary (VHB)
- Delineation Data Point (VHB)

Stream (Proposed Type)
- Stream Centerline
- Stream Top of Bank or Slope
- Ditch

- Vernal Pool
- Potential Vernal Pool
- RTE Plant Area (G&B)
- RTE Plant Location (G&B)
- Surveyed Potential Bat Tree
- Potential Bat Tree
- Deer Wintering Area (VHB)
- 50 ft. Class II Wetland Buffer
- Natural Resource Buffer

- Veg. Natural Community (G&B)
- RTE Species/Communities
- VELCO Structure Location
- Transmission Lines (VELCO)

- Deer Wintering Area (ANR)
- VSWI Wetland
- Bridge
- Culvert
- Railroad (VTrans)
- Roads (VTrans)
- Stream (VHD)
- Proposed Access Road
- 2 ft. Contour
- 10 ft. Contour

200 100 0 200 Feet

Vermont Gas - ANGP Phase I
Hinesburg, VT
Natural Resources Map
Geprags Park Study Area Update

July 13, 2016

vhb

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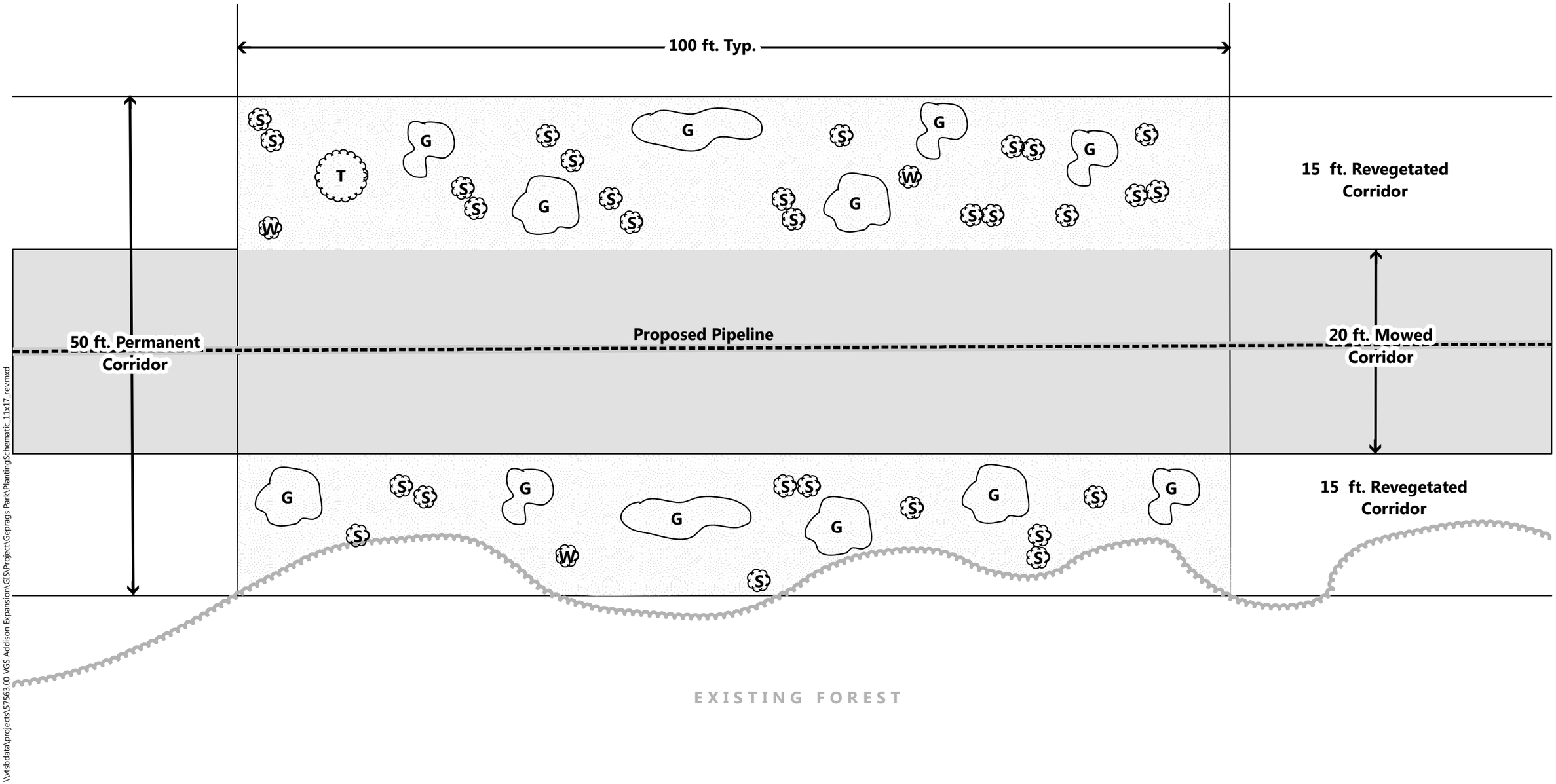
ATTACHMENT 3

May 17, 2016



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Not To Scale

T Proposed Tree

G Proposed Area of Grass Planting

W Proposed Woody Vegetation

S Proposed Shrub

Addison Natural Gas Project Phase 1 | Hinesburg, Vermont

Geprags Park
Vegetation Management Plan
Planting Schematic
Typical