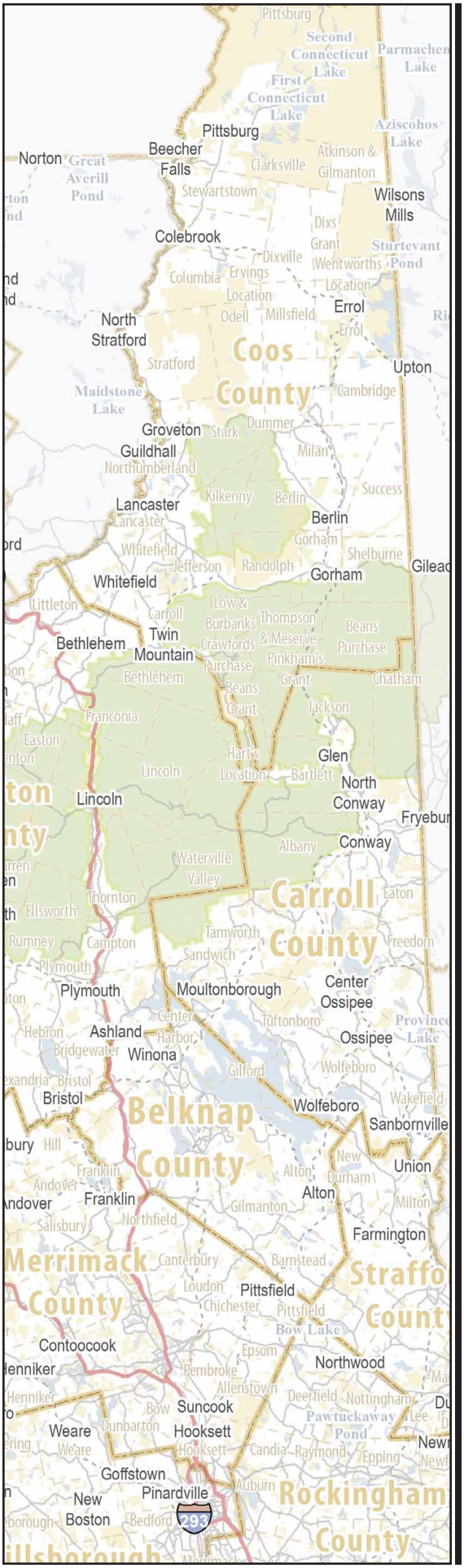


DOE/EIS-0463

FINAL

NORTHERN PASS TRANSMISSION LINE PROJECT ENVIRONMENTAL IMPACT STATEMENT

VOLUME 2: APPENDICES A–K

U.S. DEPARTMENT OF ENERGY
OFFICE OF ELECTRICITY DELIVERY
AND ENERGY RELIABILITY
WASHINGTON, DC

AUGUST 2017

Department of Energy
Washington, DC 20585
August 2017

Dear Sir/Madam:

Enclosed is the final *Northern Pass Transmission Line Project Environmental Impact Statement* (DOE/EIS-0463) prepared by the Department of Energy (DOE) pursuant to the National Environmental Policy Act of 1969 (NEPA) and its implementing regulations.

The United States Forest Service (USFS) – White Mountain National Forest, United States Environmental Protection Agency (EPA) – Region 1, United States Army Corps of Engineers (USACE) – New England District, and the New Hampshire Office of Energy and Planning (NHOEP) are cooperating agencies in the preparation of the EIS.

The proposed DOE action in the final EIS is to issue a Presidential permit to the Applicant, Northern Pass LLC, to construct, operate, maintain, and connect a new electric transmission line across the U.S./Canada border in northern New Hampshire (NH).

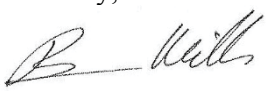
DOE has prepared this final EIS to evaluate the potential environmental impacts in the United States of the proposed action and the range of reasonable alternatives, including the No Action alternative. Under the No Action alternative, the Presidential permit would not be granted, and the proposed transmission line would not cross the U.S./Canada border.

In addition to its Presidential permit application to DOE, Northern Pass LLC applied to the USFS for a special use permit that would authorize Northern Pass LCC to construct, own, operate and maintain an electric transmission line to cross portions of the White Mountain National Forest under its jurisdiction. The final EIS will be used by the Forest Supervisor of the White Mountain National Forest to inform the Record of Decision in regard to this requested use.

DOE will use the EIS to ensure that it has the information it needs for informed decision-making.

The final EIS will also be posted on the project EIS website, http://www.northernpasseis.us/ and DOE's NEPA website at https://energy.gov/nepa/listings/environmental-impact-statements-eis.

Sincerely,



Brian Mills
Transmission Permitting and Technical Assistance,
Office of Electricity Delivery and Energy Reliability
U.S. Department of Energy

FINAL

NORTHERN PASS TRANSMISSION LINE PROJECT ENVIRONMENTAL IMPACT STATEMENT DOE/EIS-0463

Volume 2: Appendices A–K

U.S. DEPARTMENT OF ENERGY
OFFICE OF ELECTRICITY DELIVERY
AND ENERGY RELIABILITY

COOPERATING AGENCIES

United States Forest Service – White Mountain National Forest
United States Environmental Protection Agency– Region 1
United States Army Corps of Engineers – New England District
New Hampshire Office of Energy and Planning

August 2017

COVER SHEET

RESPONSIBLE FEDERAL AGENCY: U.S. Department of Energy (DOE), Office of Electricity Delivery and Energy Reliability

COOPERATING AGENCIES: United States Forest Service (USFS) – White Mountain National Forest (WMNF); United States Environmental Protection Agency (EPA) – Region 1; United States Army Corps of Engineers (USACE) – New England District; and New Hampshire Office of Energy and Planning (NHOEP)

TITLE: Northern Pass Transmission Line Project Environmental Impact Statement (DOE/EIS-0463)

LOCATION: Coös, Grafton, Belknap, Merrimack, and Rockingham counties in New Hampshire

CONTACTS: For additional information on this Environmental Impact Statement (EIS) contact:

Mr. Brian Mills, National Environmental Policy Act (NEPA) Document Manager
Office of Electricity Delivery and Energy Reliability, OE-20
U.S. Department of Energy
1000 Independence Ave. SW
Washington, DC 20585
Telephone: (202) 586-8267
Brian.Mills@hq.doe.gov

For general information on the DOE NEPA process, please write or call:

Mr. Brian Costner, Acting Director
Office of NEPA Policy and Compliance, GC-54
U.S. Department of Energy
1000 Independence Ave. SW
Washington, DC 20585
askNEPA@hq.doe.gov
Telephone: (202) 586-4600 or leave a message at (800) 472-2756

ABSTRACT: Northern Pass Transmission, LLC (Northern Pass) has applied to the DOE for a Presidential permit to construct, operate, maintain, and connect a 192-mile (309-km) electric transmission line across the United States (U.S.)/Canada border in northern New Hampshire (NH). This final EIS addresses the potential environmental impacts of the Project (Proposed Action), the No Action Alternative, and ten additional action alternatives (Alternatives 2 through 6, with variations). The NH portion of the Project would be a single circuit ±320 kilovolt (kV) high voltage direct current (HVDC) transmission line running approximately 158 miles (254 km) from the U.S. border crossing with Canada in Pittsburg, NH, to a new direct current-to-alternating current (DC-to-AC) converter station to be constructed in Franklin, NH. From Franklin, NH, to the Project terminus at the Public Service of New Hampshire's existing Deerfield Substation located in Deerfield, NH, the Project would consist of 34 miles (55 km) of 345 kV AC electric transmission line. The total length of the Project would be approximately 192 miles (309 km).

PUBLIC COMMENTS: In preparing this final EIS, DOE considered comments received during the scoping period, which extended from February 11, 2011 to June 14, 2011, and was reopened from June 15, 2011 to November 5, 2013 (DOE accepted and considered all comments during the scoping period from February 11, 2011 to November 5, 2013), and the public comment period on the draft EIS (July 31, 2015 through April 4, 2016). Comments on the draft EIS were accepted during the 45-day period

following publication of EPA's Notice of Availability (NOA) in the *Federal Register* on July 31, 2015; the public comment period was extended until April 4, 2016 following publication of EPA's NOA of the supplement in the *Federal Register* on November 20, 2015. DOE held four public meetings on the draft EIS in Colebrook, NH on March 7, 2016; Waterville Valley, NH on March 9, 2016; Concord, NH on March 10, 2016; and Whitefield, NH on March 11, 2016. All comments were considered during preparation of this final EIS. Appendix L in Volume 3 of this EIS contains the comments received on the draft EIS and DOE's responses to these comments. This final EIS contains revisions and new information based in part on comments received on the draft EIS. Vertical bars in the margins marking changed text indicate the locations of these revisions and new information. Deletions are not indicated. Appendices J and K in Volume 2 and Appendix L in Volume 3 are entirely new parts of this EIS; therefore, they do not contain bars indicating changes from the draft EIS.

The EIS analyzes the potential environmental impacts of DOE issuing a Presidential permit for the proposed Northern Pass Project, which is DOE's proposed federal action. DOE will use the EIS to inform its decision on whether to issue a Presidential permit. Additionally, Northern Pass has applied to the USFS for a special use permit (SUP) authorizing Northern Pass to construct, operate, and maintain an electric power transmission line crossing portions of the WMNF. The WMNF Forest Supervisor will use the EIS to inform its decision regarding: 1) whether to issue a SUP under the Federal Land Policy and Management Act; 2) the selection of an alternative; 3) any need to amend the Forest Plan; and 4) what specific terms and conditions should apply if a SUP is issued.

Copies of the final EIS are available for public review at 30 local libraries and town halls, or a copy can be requested from Mr. Brian Mills. The EIS is also available on the Northern Pass EIS website (http://www.northernpasseis.us/). DOE will announce its decision on the Proposed Action in a Record of Decision (ROD) in the *Federal Register* no sooner than 30 days after the EPA publishes the NOA of the final EIS. The USFS will announce its draft decision on the Proposed Action in a draft ROD in the *Federal Register* shortly after the EPA publishes the NOA of the final EIS.

APPENDIX A
MAPS

APPENDIX A. MAPS

Map 1: Vicinity Map and Geographic Sections

Map 2: Northern Section

Map 3: Central Section

Map 4: Southern Section

Map 5: Alternative 1 – No Action

Map 6: Alternative 2

Map 7: Alternative 3 – Underground Transmission Cable in Alternative 2 Alignment

Map 8: Alternative 4a – Underground Transmission Cable in Roadway Corridors – *I-93 through Franconia Notch*

Map 9: Alternative 4b – Underground Transmission Cable in Roadway Corridors – *NH Routes 112 and 116 through WMNF*

Map 10: Alternative 4c – Underground Transmission Cable in Roadway Corridors – *NH Routes 112 and 116 through WMNF and US Route 3 from North Woodstock to Ashland*

Map 11: Alternative 5a – Alternative 2 except Underground Transmission Cable along *I-93 through Franconia Notch*

Map 12: Alternative 5b – Alternative 2 except Underground Transmission Cable along *NH Routes 112 and 116 through WMNF*

Map 13: Alternative 5c – Alternative 2 except Underground Transmission Cable along *NH Routes 18, 112 and 116 through Sugar Hill, Franconia, Easton, and WMNF*

Map 14: Alternative 6a – Underground Transmission Cable in Roadway Corridors (*I-93 through Franconia Notch*) and Co-located HVAC

Map 15: Alternative 6b – Underground Transmission Cable in Roadway Corridors (*NH Routes 112 and 116 through WMNF*) and Co-located Overhead HVAC

Map 16: Alternative 7 – Proposed Action

Map 17: Alternatives 4 and 6 Variations in Vicinity of WMNF

Map 18: Alternative 5 Variations in Vicinity of WMNF

Map 19: Alternative 7 Comparison Map

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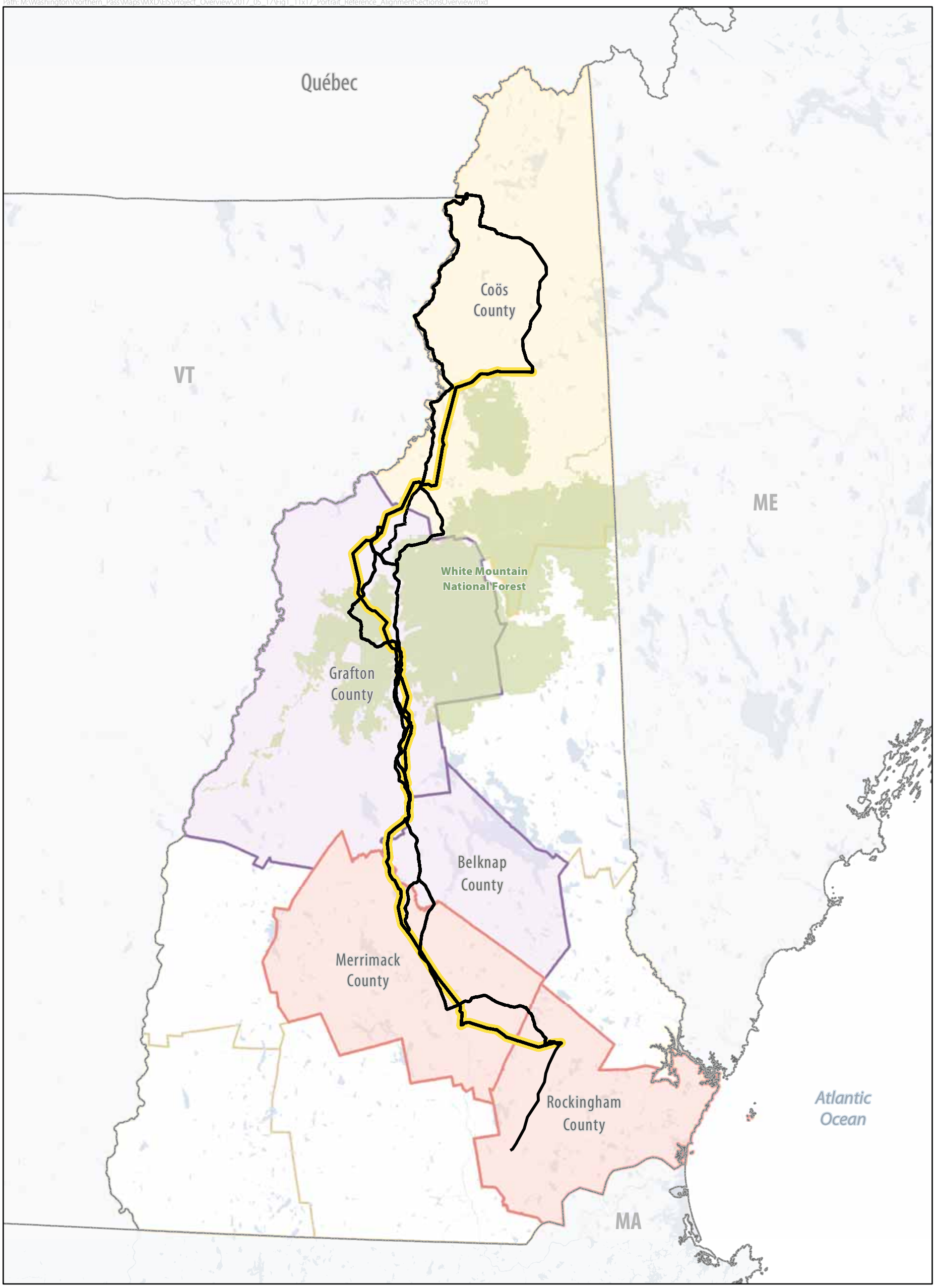

Legend

- State Boundary
- County Boundary
- Alternative Project Alignments
- Waterbody
- Existing PSNH Transmission Route

Geographic Sections

- Northern Section
- Central Section
- Southern Section
- White Mountain National Forest

SOURCE: ESRI 2012

Map 1:
Vicinity Map and Geographic Sections
Northern Pass Transmission Line Project
New Hampshire

N

SCALE

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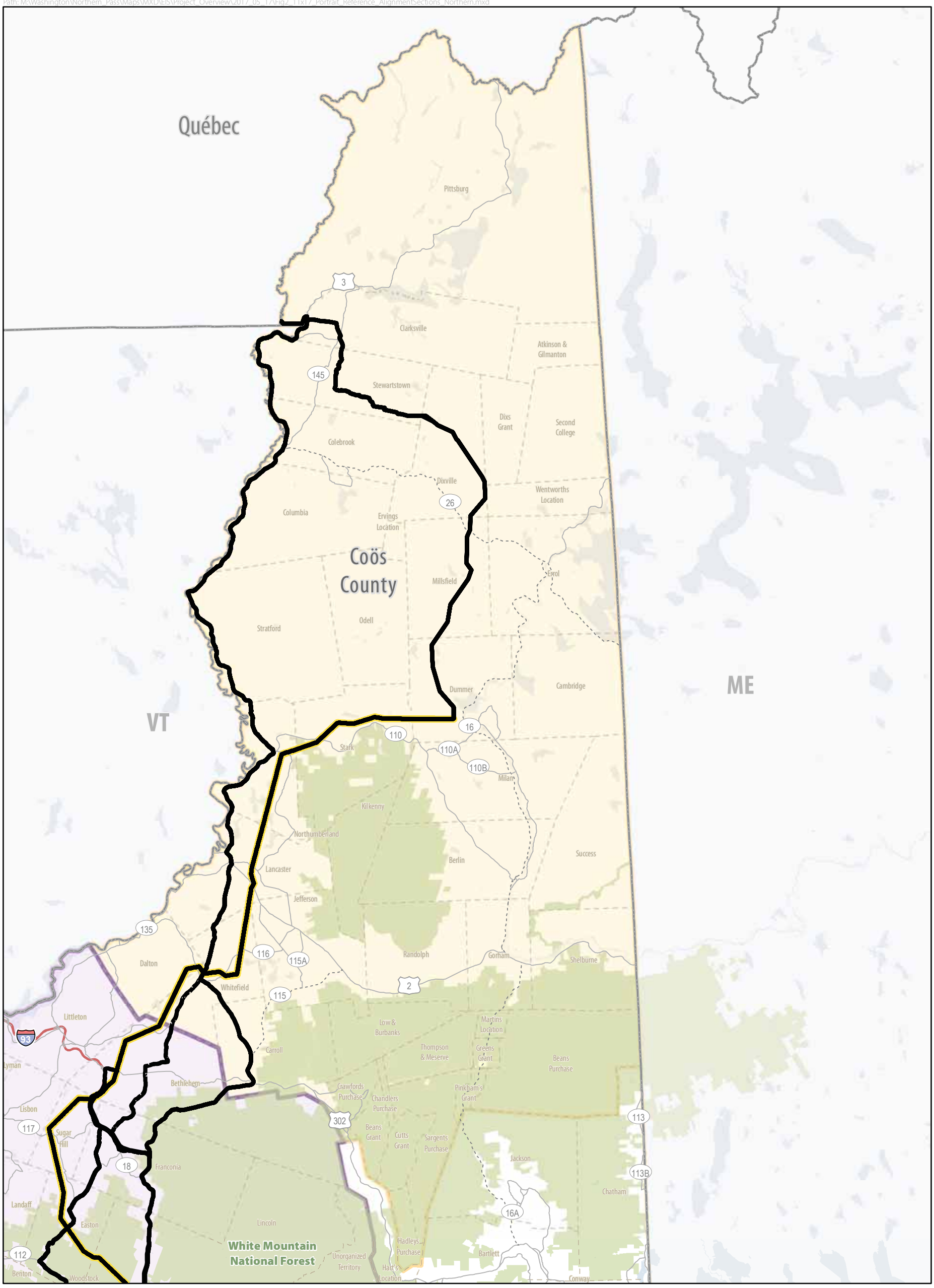

Legend

- State Boundary
- Political Boundary
- County Boundary
- Alternative Project Alignments
- Waterbody
- Existing PSNH Transmission Route

Geographic Sections

- Northern Section
- Central Section
- Southern Section
- White Mountain National Forest

SOURCE: ESRI 2010; ESRI 2012

Map 2:
Northern Section
Northern Pass Transmission Line Project
New Hampshire

N

SCALE

0 5 10 Miles

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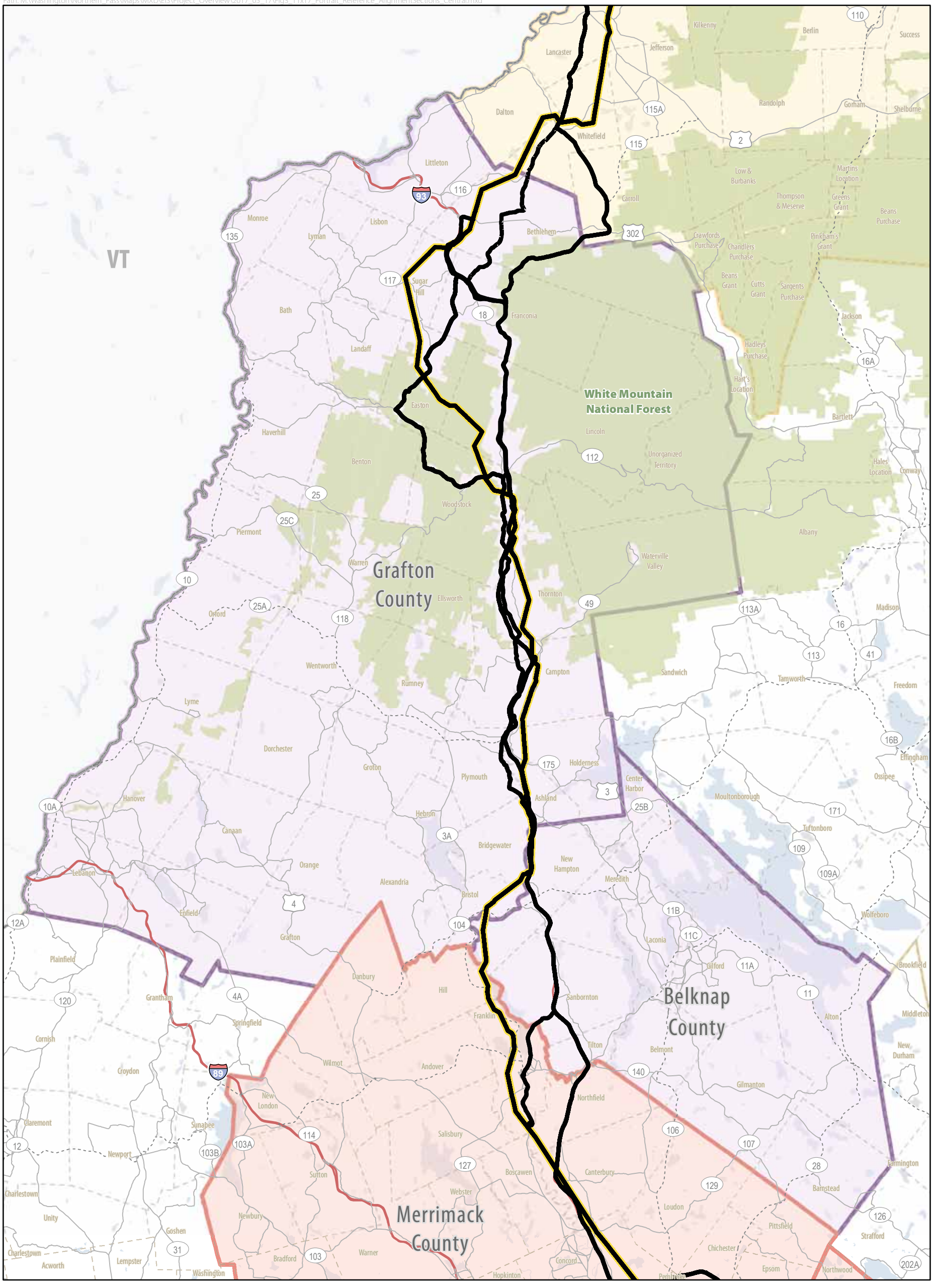

Legend

- State Boundary
- Political Boundary
- County Boundary
- Alternative Project Alignments
- Waterbody
- Existing PSNH Transmission Route

Geographic Sections

- Northern Section
- Central Section
- Southern Section
- White Mountain National Forest

SOURCE: ESRI 2010; ESRI 2012

Map 3:
Central Section
Northern Pass Transmission Line Project
New Hampshire

N

SCALE
0 5 10 Miles

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Belknap County

Merrimack County

Rockingham County

ME

MA

Legend

- State Boundary
- Political Boundary
- County Boundary
- Alternative Project Alignments
- Waterbody
- White Mountain National Forest

Section Boundaries

- Northern Section
- Central Section
- Southern Section
- Existing PSNH Transmission Route

SOURCE: ESRI 2011; Ecology and Environment 2014.

Map 4:
Southern Section
Northern Pass Transmission Line Project
Environmental Impact Statement

N

SCALE

0 5 10 Miles

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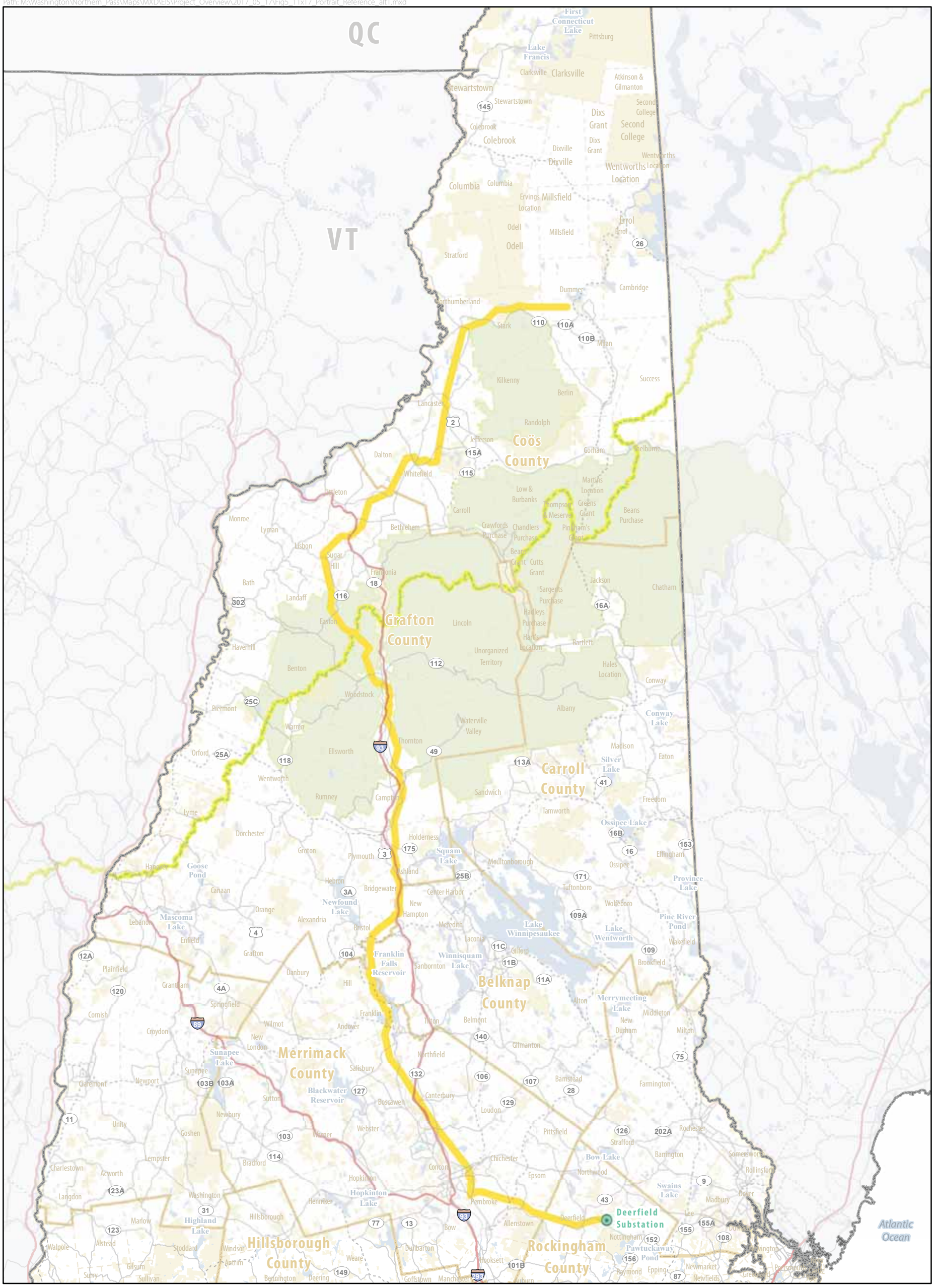

Legend

Existing Conditions

- State Boundary
- County Boundary
- Political Boundary
- Freeway
- Major Road
- Secondary Road
- Appalachian National Scenic Trail
- Waterbody
- NH Conservation Land (WMA, State Forest, Conservation Areas, etc.)
- White Mountain National Forest
- Existing PSNH Transmission Route
- Converter/Substation Location

SOURCE: ESRI 2010; ESRI 2012; NH GRANIT 2012

Map 5:
Alternative 1 - No Action
Northern Pass Transmission Line Project
New Hampshire

N

SCALE
0 5 10 Miles

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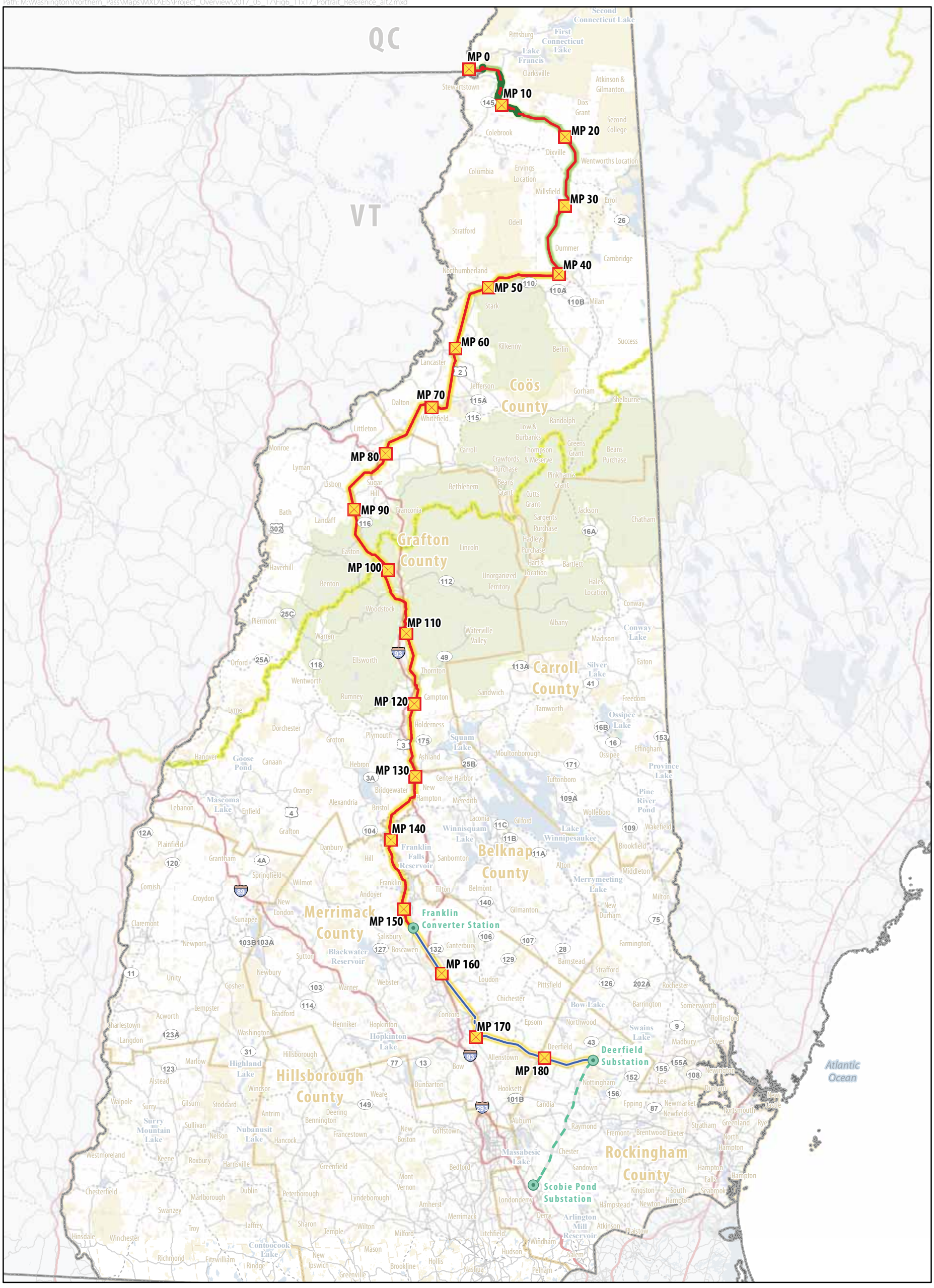

Legend

Existing Conditions

- State Boundary
- County Boundary
- Political Boundary
- Freeway
- Major Road
- Secondary Road
- Appalachian National Scenic Trail
- Waterbody
- NH Conservation Land (WMA, State Forest, Conservation Areas, etc.)
- White Mountain National Forest
- Existing PSNH Transmission Route

Alternative 2 Components

- New Transmission Route
- Project in Roadway Corridor
- Overhead High-Voltage Direct Current Centerline
- Overhead High-Voltage Alternating Current Centerline
- Underground High-Voltage Direct Current Centerline
- Existing Transmission Line Upgrades
- Project Milepost
- Converter/Substation Location

SOURCE: ESRI 2010; ESRI 2012; NH GRANIT 2012

Map 6:
Alternative 2
Northern Pass Transmission Line Project
New Hampshire

N

SCALE
0 5 10 Miles

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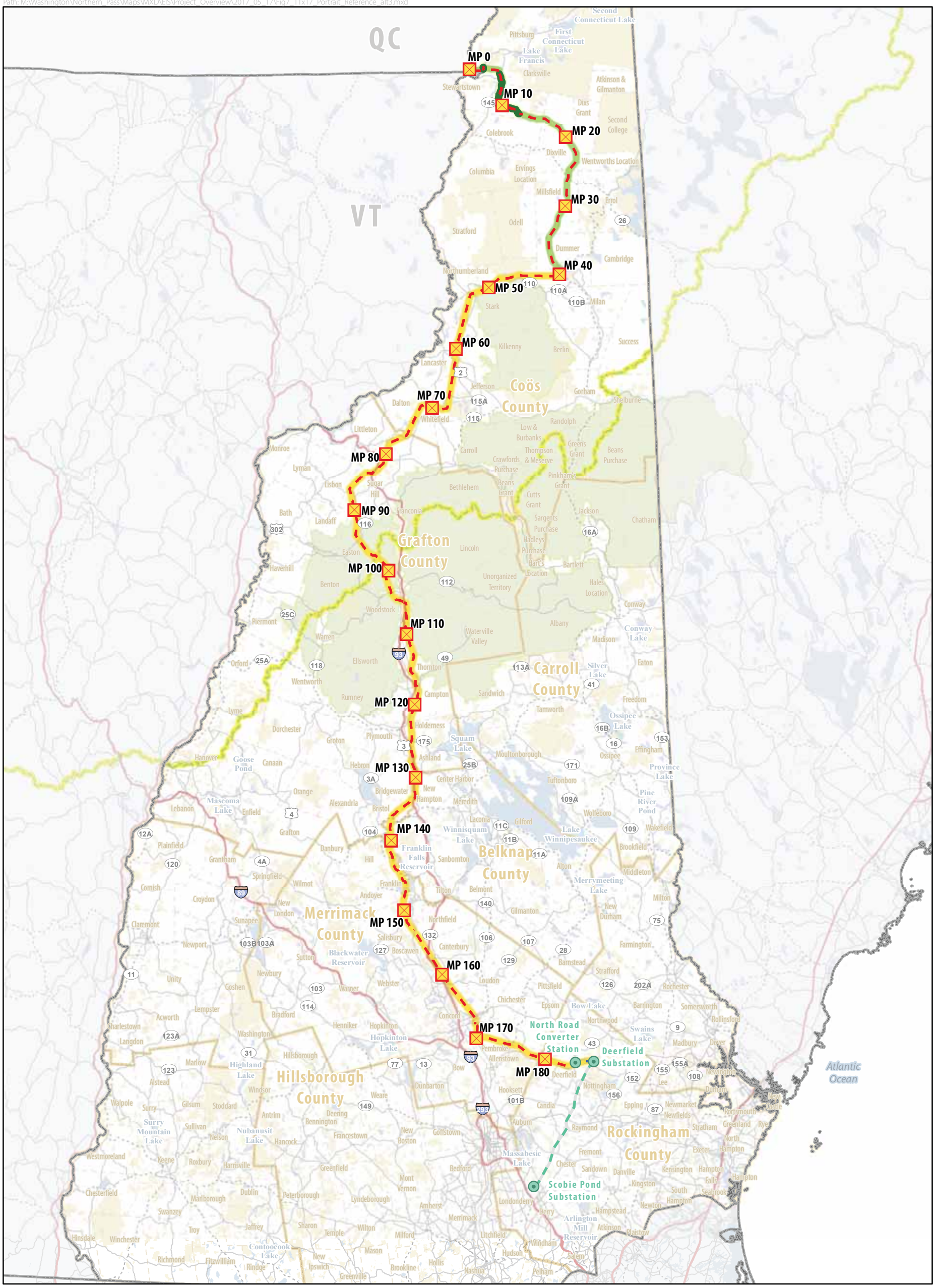

Legend

Existing Conditions

- State Boundary
- County Boundary
- Political Boundary
- Freeway
- Major Road
- Secondary Road
- Appalachian National Scenic Trail
- Waterbody
- NH Conservation Land (WMA, State Forest, Conservation Areas, etc.)
- White Mountain National Forest
- Existing PSNH Transmission Route

Alternative 3 Components

- New Transmission Route
- Project in Roadway Corridor
- Underground High-Voltage Direct Current Centerline
- Underground High-Voltage Alternating Current Centerline
- Existing Transmission Line Upgrades
- Project Milepost
- Converter/Substation Location

SOURCE: ESRI 2010; ESRI 2012; NH GRANIT 2012; USFS 2012

Map 7:
Alternative 3 - Underground Transmission Cable in Alternative 2 Alignment
Northern Pass Transmission Line Project
New Hampshire

N

SCALE
0 5 10 Miles

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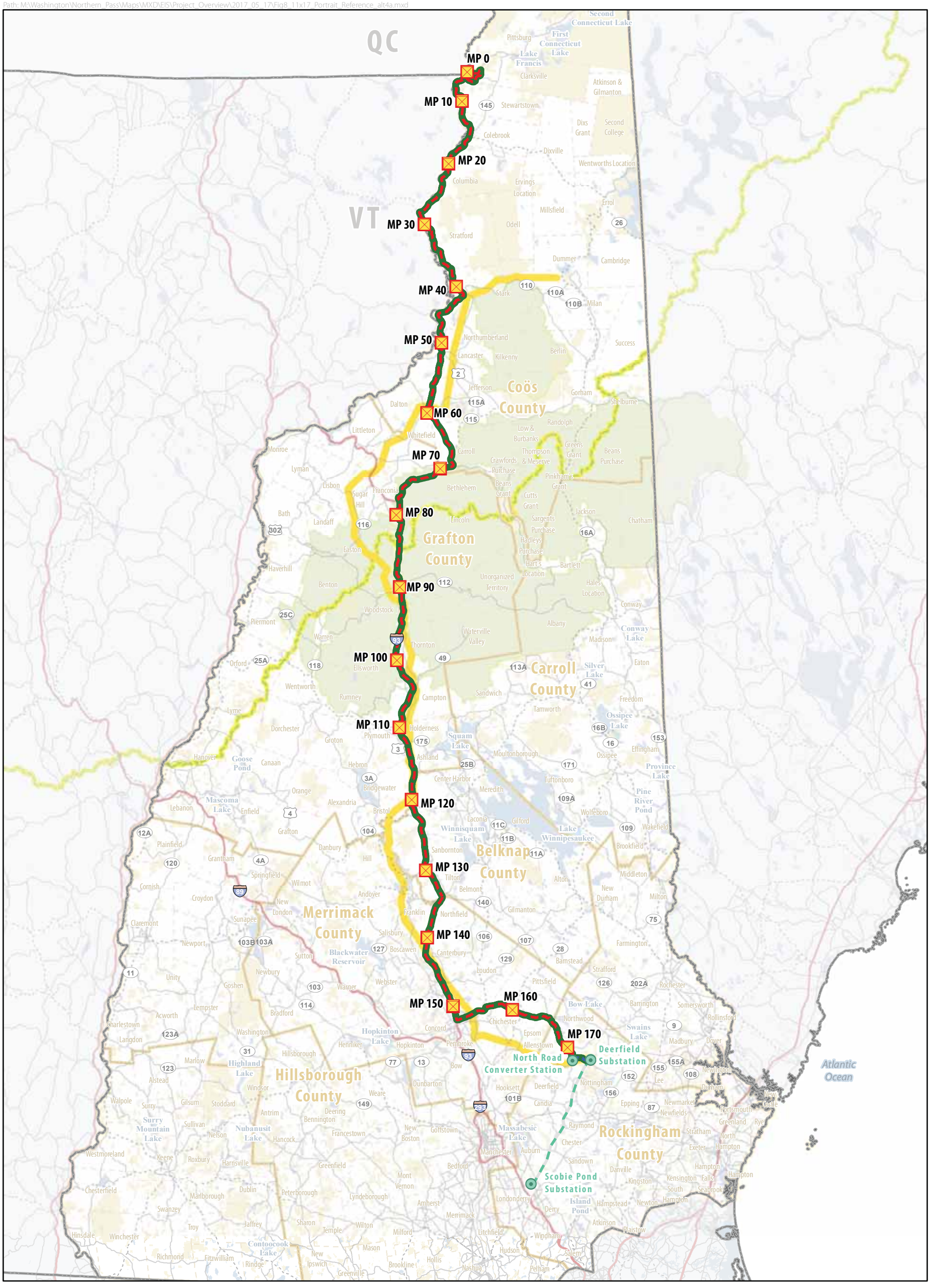

Legend

Existing Conditions

- State Boundary
- County Boundary
- Political Boundary
- Freeway
- Major Road
- Secondary Road
- Appalachian National Scenic Trail
- Waterbody
- NH Conservation Land (WMA, State Forest, Conservation Areas, etc.)
- White Mountain National Forest
- Existing PSNH Transmission Route

Alternative 4a Components

- New Transmission Route
- Project in Roadway Corridor
- Underground High-Voltage Direct Current Centerline
- Underground High-Voltage Alternating Current Centerline
- Existing Transmission Line Upgrades
- Project Milepost
- Converter/Substation Location

SOURCE: ESRI 2010; ESRI 2012; NH GRANIT 2012; USFS 2012

Map 8:

Alternative 4a - Underground Transmission Cable in Roadway Corridors - *I-93 through Franconia Notch*

Northern Pass Transmission Line Project
New Hampshire

SCALE

0 5 10 Miles

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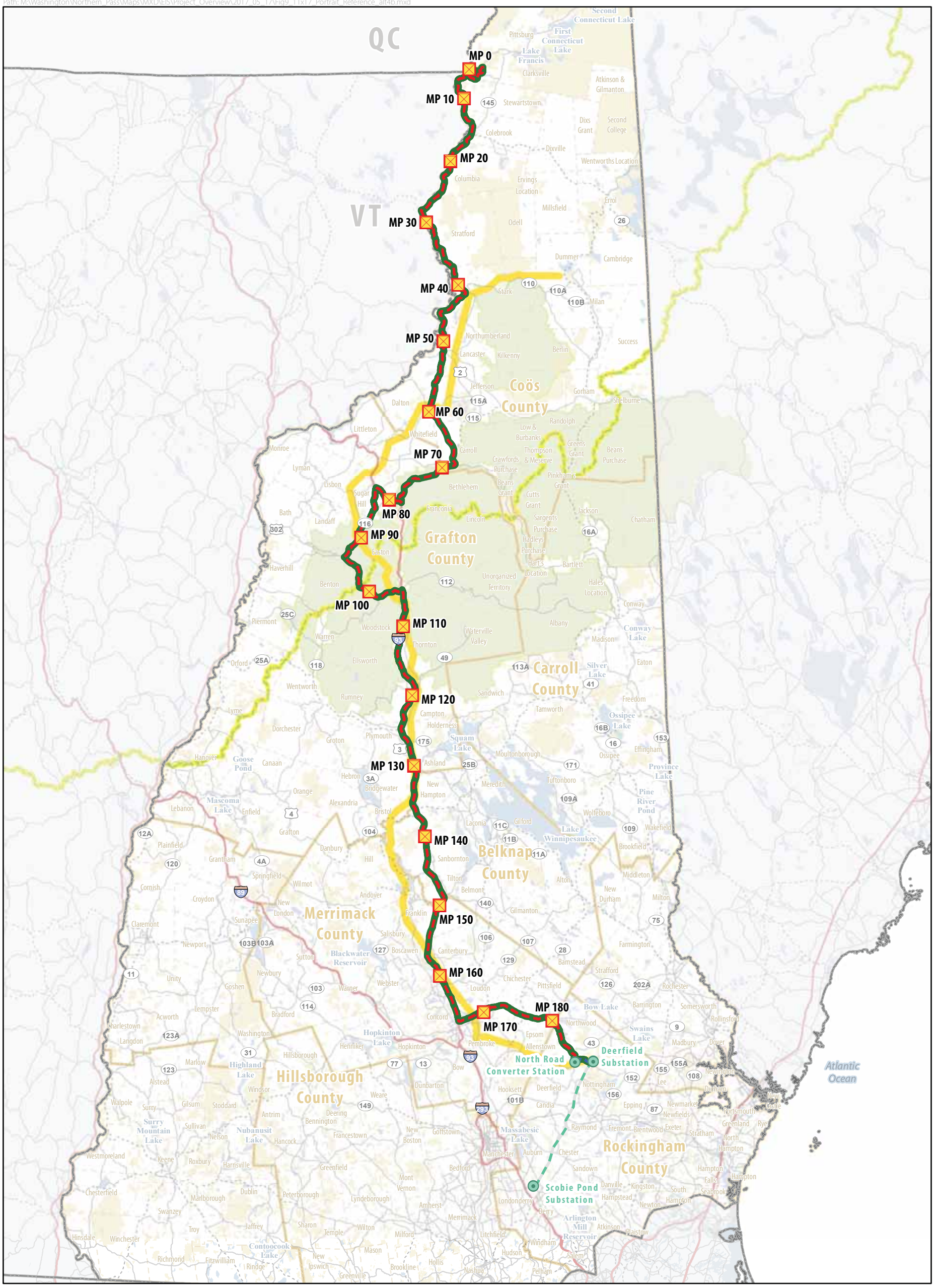

Legend

Existing Conditions

- State Boundary
- County Boundary
- Political Boundary
- Freeway
- Major Road
- Secondary Road
- Appalachian National Scenic Trail
- Waterbody
- NH Conservation Land (WMA, State Forest, Conservation Areas, etc.)
- White Mountain National Forest
- Existing PSNH Transmission Route

Alternative 4b Components

- New Transmission Route
- Project in Roadway Corridor
- Underground High-Voltage Direct Current Centerline
- Underground High-Voltage Alternating Current Centerline
- Existing Transmission Line Upgrades
- Project Milepost
- Converter/Substation Location

SOURCE: ESRI 2010; ESRI 2012; NH GRANIT 2012; USFS 2012

Map 9:
Alternative 4b - Underground Transmission Cable in Roadway Corridors -
NH Routes 112 and 116 through WMNF
Northern Pass Transmission Line Project
New Hampshire

N

SCALE
0 5 10 Miles

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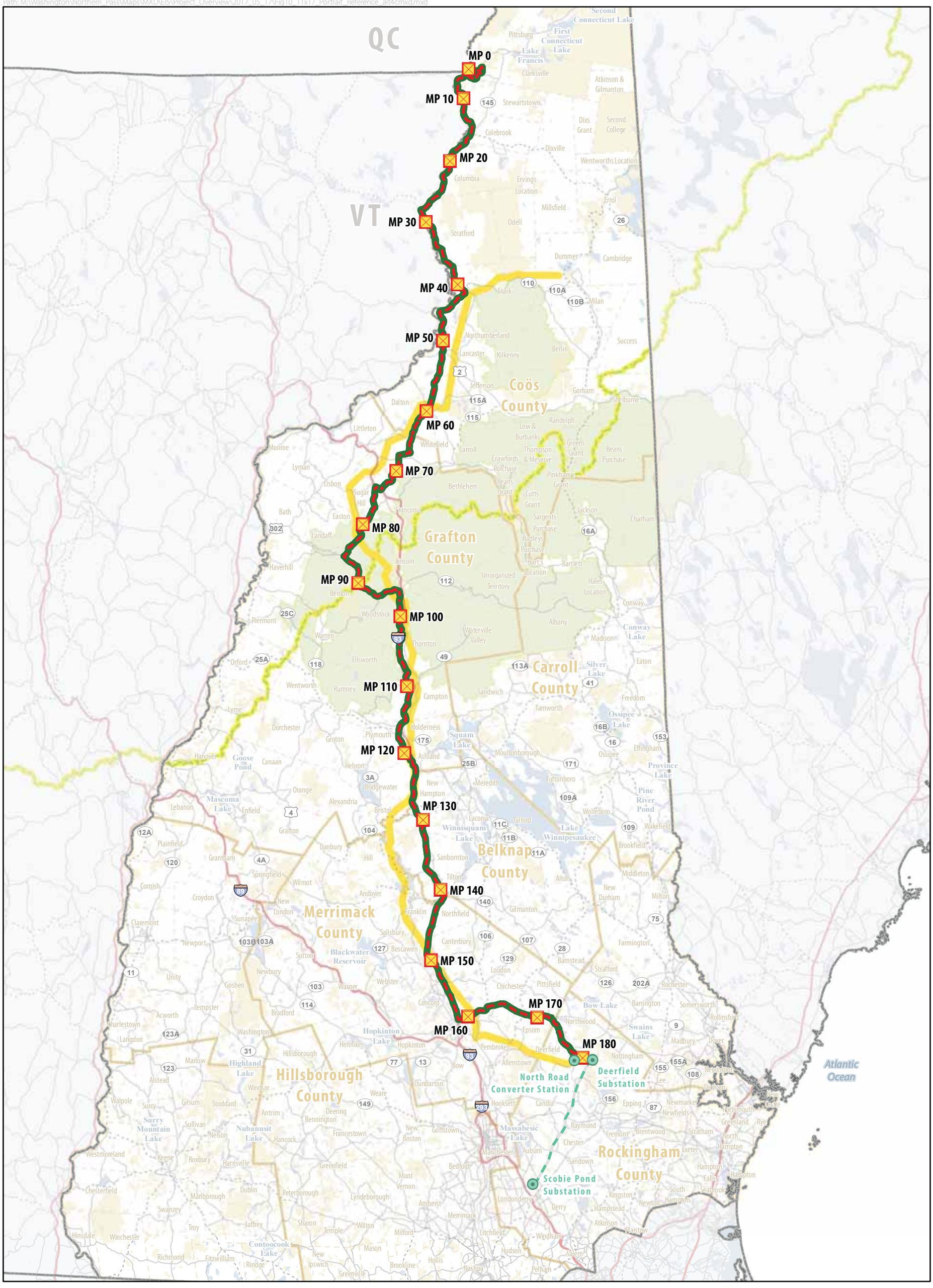

Legend

Existing Conditions

- State Boundary
- County Boundary
- Political Boundary
- Freeway
- Major Road
- Secondary Road
- Appalachian National Scenic Trail
- Waterbody
- NH Conservation Land (WMA, State Forest, Conservation Areas, etc.)
- White Mountain National Forest
- Existing PSNH Transmission Route

Alternative 4c Components

- New Transmission Route
- Project in Roadway Corridor
- Underground High-Voltage Direct Current Centerline
- Underground High-Voltage Alternating Current Centerline
- Existing Transmission Line Upgrades
- Project Milepost
- Converter/Substation Location

SOURCE: ESRI 2010; ESRI 2012; NH GRANIT 2012; USFS 2012

Map 10:
Alternative 4c - Underground Transmission Cable in Roadway Corridors -
NH Routes 112 and 116 through WMNF and US Route 3 from North Woodstock to Ashland
Northern Pass Transmission Line Project
New Hampshire

SCALE
0 5 10 Miles

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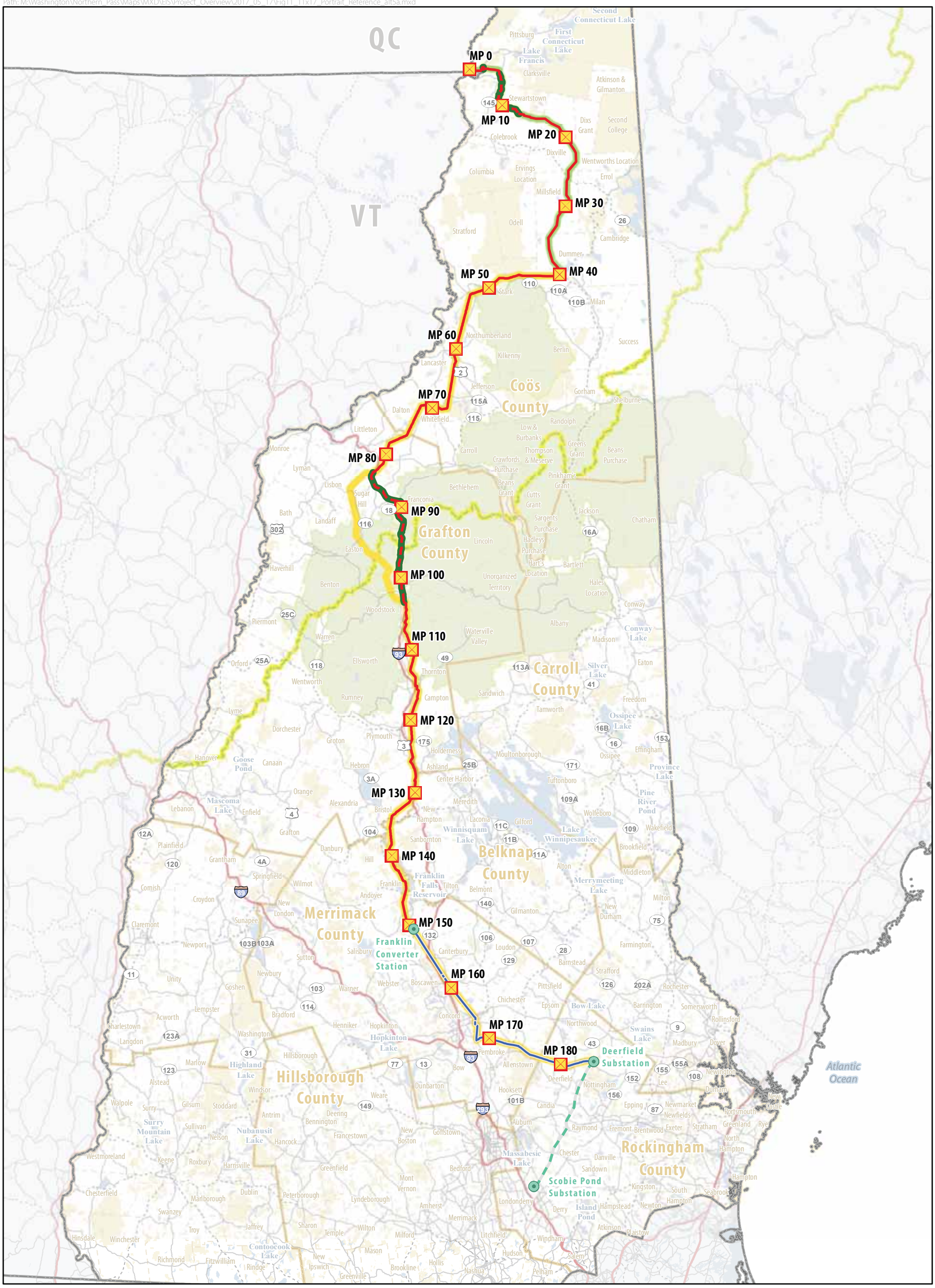

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Existing Conditions

- State Boundary
- County Boundary
- Political Boundary
- Freeway
- Major Road
- Secondary Road
- Appalachian National Scenic Trail
- Waterbody
- NH Conservation Land (WMA, State Forest, Conservation Areas, etc.)
- White Mountain National Forest
- Existing PSNH Transmission Route

Alternative 5a Components

- New Transmission Route
- Project in Roadway Corridor
- Overhead High-Voltage Direct Current Centerline
- Overhead High-Voltage Alternating Current Centerline
- Underground High-Voltage Direct Current Centerline
- Existing Transmission Line Upgrades
- Project Milepost
- Converter/Substation Location

SOURCE: ESRI 2010; ESRI 20102; NH GRANIT 2012; USFS 2012

Map 11:

Alternative 5a - Alternative 2 except Underground Transmission Cable along *I-93 through Franconia Notch*

Northern Pass Transmission Line Project
New Hampshire

N

SCALE

0 5 10 Miles

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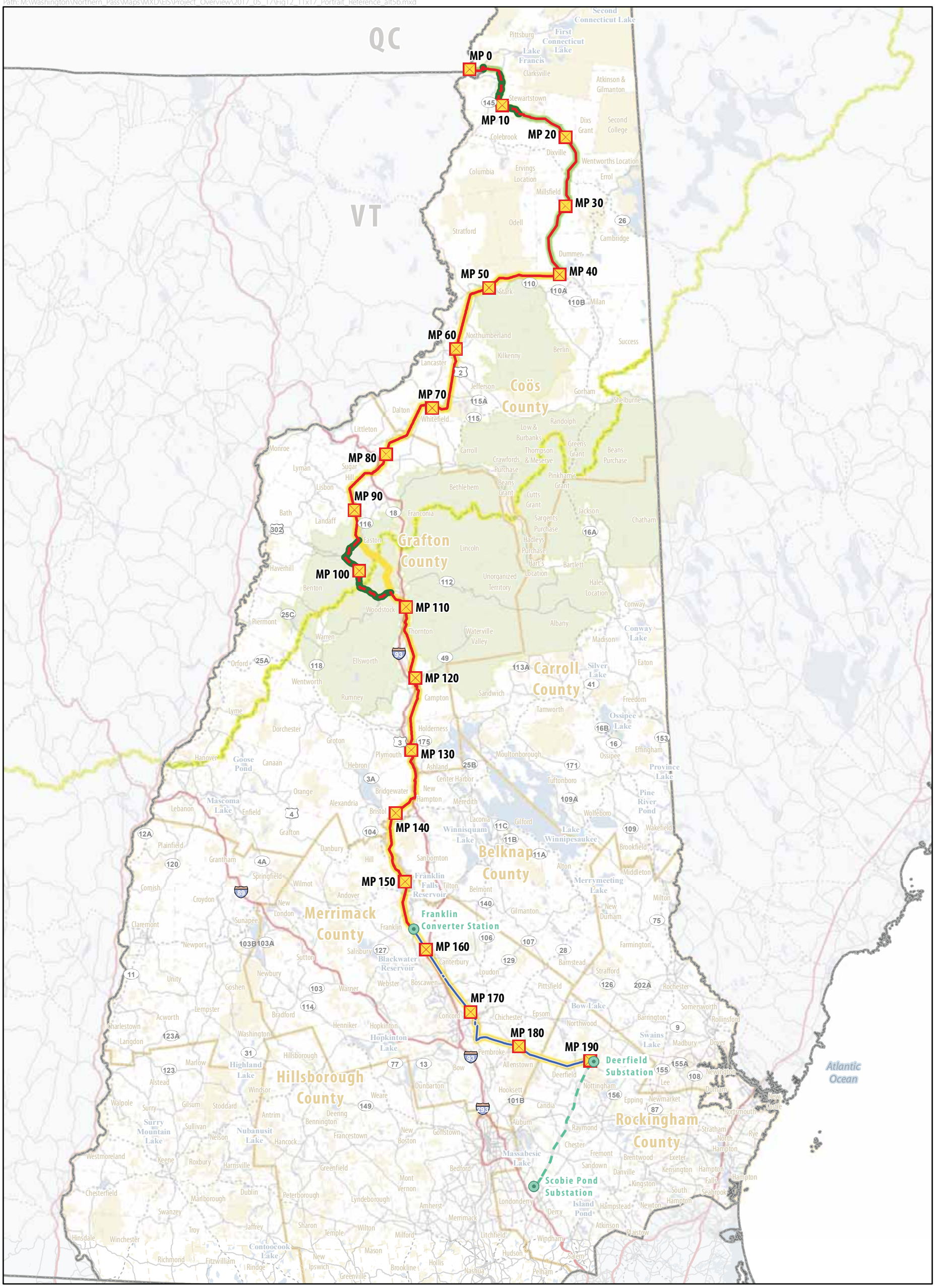

Legend

Existing Conditions

- State Boundary
- County Boundary
- Political Boundary
- Freeway
- Major Road
- Secondary Road
- Appalachian National Scenic Trail
- Waterbody
- NH Conservation Land (WMA, State Forest, Conservation Areas, etc.)
- White Mountain National Forest
- Existing PSNH Transmission Route

Alternative 5b Components

- New Transmission Route
- Project in Roadway Corridor
- Overhead High-Voltage Direct Current Centerline
- Overhead High-Voltage Alternating Current Centerline
- Underground High-Voltage Direct Current Centerline
- Existing Transmission Line Upgrades
- Project Milepost
- Converter/Substation Location

SOURCE: ESRI 2010; ESRI 2012; NH GRANIT 2012; USFS 2012

Map 12:

Alternative 5b - Alternative 2 except Underground Transmission Cable along *NH Routes 112 and 116 through WMNF*

Northern Pass Transmission Line Project
New Hampshire

N

SCALE

0 5 10 Miles

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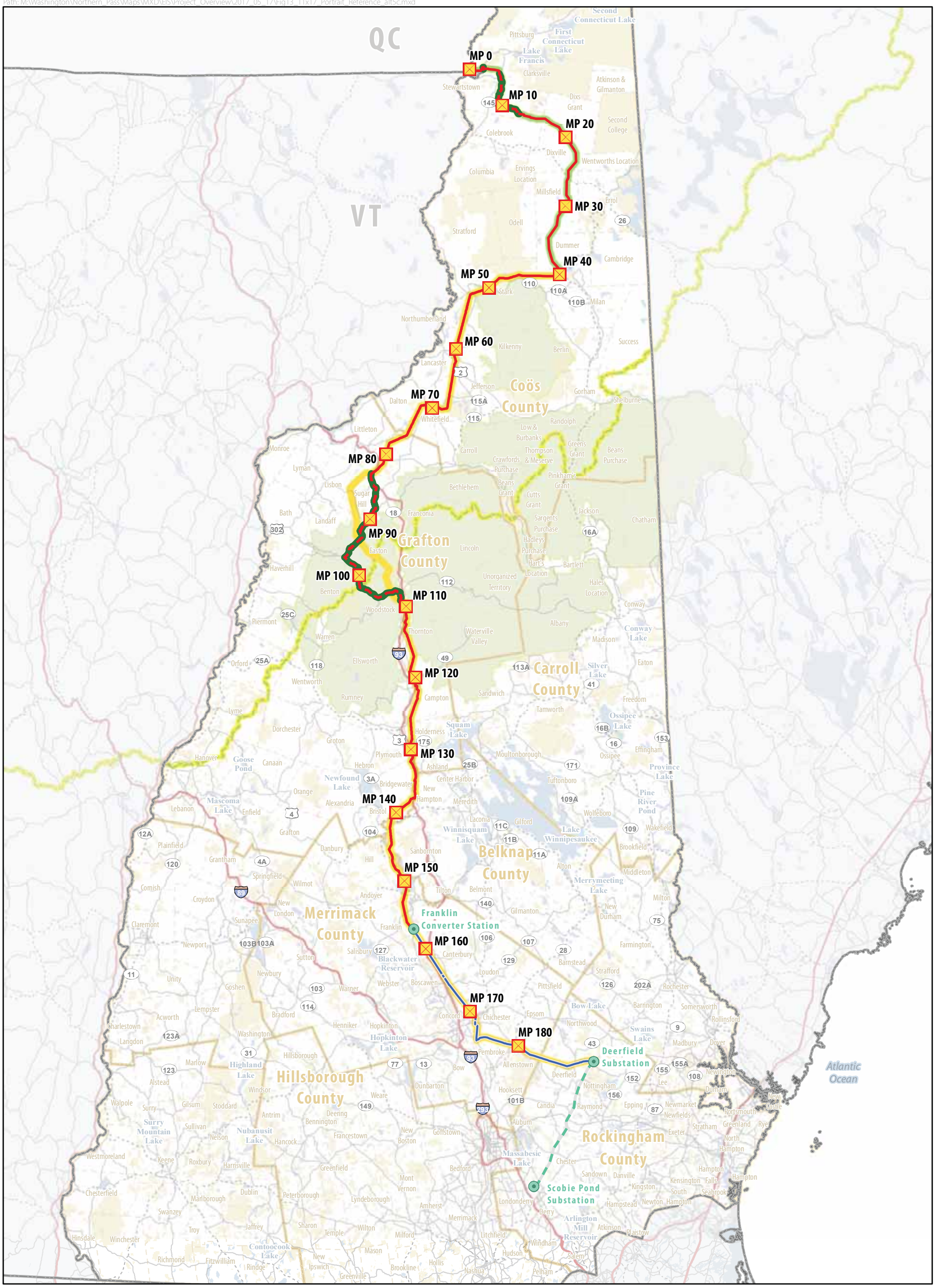

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Existing Conditions

- State Boundary
- County Boundary
- Political Boundary
- Freeway
- Major Road
- Secondary Road
- Appalachian National Scenic Trail
- Waterbody
- NH Conservation Land (WMA, State Forest, Conservation Areas, etc.)
- White Mountain National Forest
- Existing PSNH Transmission Route

Alternative 5c Components

- New Transmission Route
- Project in Roadway Corridor
- Overhead High-Voltage Direct Current Centerline
- Overhead High-Voltage Alternating Current Centerline
- Underground High-Voltage Direct Current Centerline
- Existing Transmission Line Upgrades
- Project Milepost
- Converter/Substation Location

SOURCE: ESRI 2010; ESRI 2012; NH GRANIT 2012;USFS 2012

Map 13:

Alternative 5c - Alternative 2 except Underground Transmission Cable along *NH Routes 18, 112 and 116 through Sugar Hill, Franconia, Easton and WMNF*

Northern Pass Transmission Line Project
New Hampshire

SCALE

0 5 10 Miles

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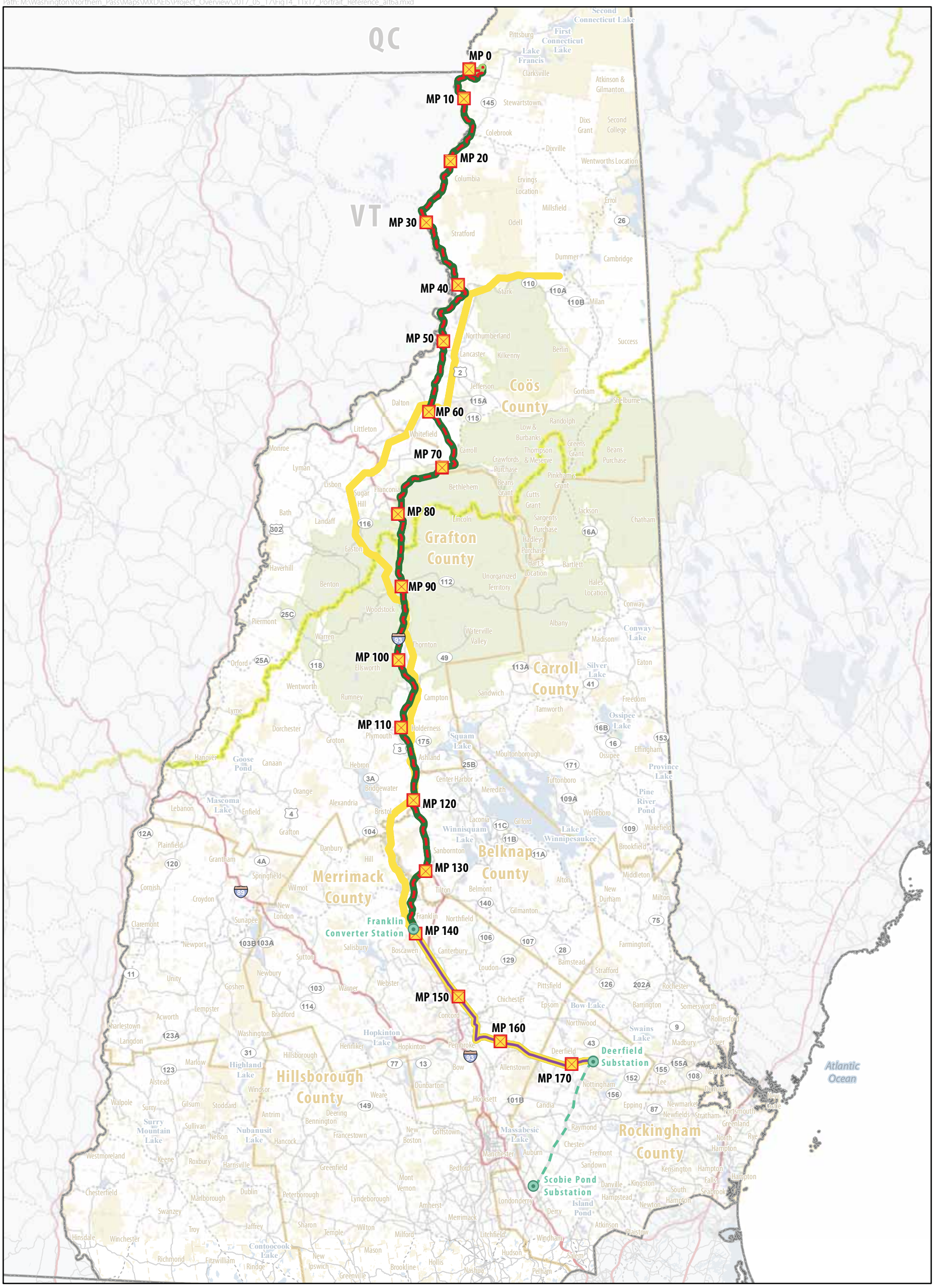

Legend

Existing Conditions

- State Boundary
- County Boundary
- Political Boundary
- Freeway
- Major Road
- Secondary Road
- Appalachian National Scenic Trail
- Waterbody
- NH Conservation Land (WMA, State Forest, Conservation Areas, etc.)
- White Mountain National Forest
- Existing PSNH Transmission Route

Alternative 6a Components

- New Transmission Route
- Project in Roadway Corridor
- Overhead Co-located High-Voltage Alternating Current Centerline
- Underground High-Voltage Direct Current Centerline
- Existing Transmission Line Upgrades
- Project Milepost
- Converter/Substation Location

SOURCE: ESRI 2010; ESRI 2012; NH GRANIT 2012; USFS 2012

Map 14:
Alternative 6a - Underground Transmission Cable in Roadway Corridors *(I-93 through Franconia Notch)* and Co-located HVAC
Northern Pass Transmission Line Project
New Hampshire

N

SCALE
0 5 10 Miles

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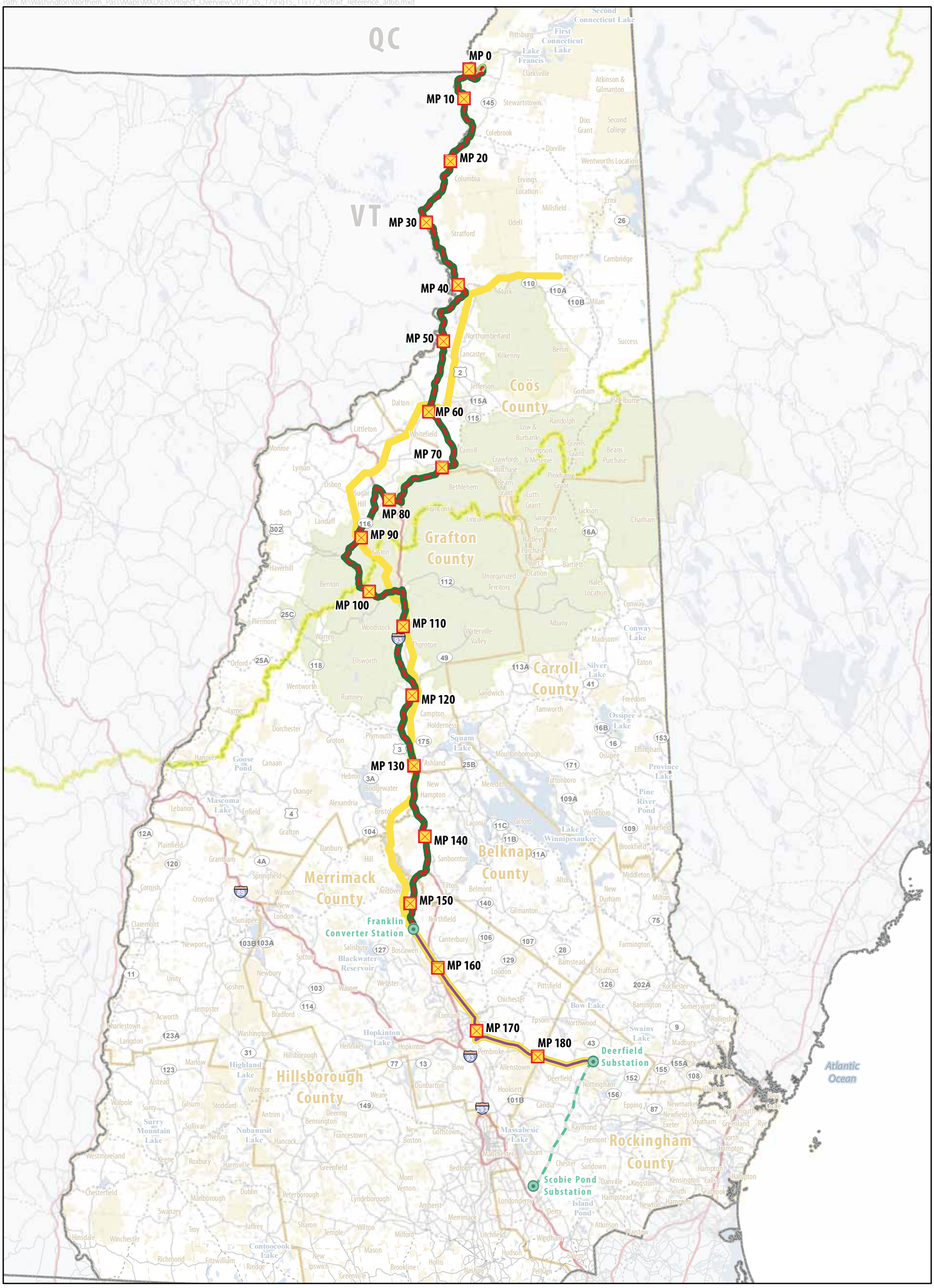


Legend

Existing Conditions

- State Boundary
- County Boundary
- Political Boundary
- Freeway
- Major Road
- Secondary Road
- Appalachian National Scenic Trail
- Waterbody
- NH Conservation Land (WMA, State Forest, Conservation Areas, etc.)
- White Mountain National Forest
- Existing PSNH Transmission Route

Alternative 6b Components

- New Transmission Route
- Project in Roadway Corridor
- Overhead Co-located High-Voltage Alternating Current Centerline
- Underground High-Voltage Direct Current Centerline
- Existing Transmission Line Upgrades
- Project Milepost
- Converter/Substation Location

SOURCE: ESRI 2010; ESRI 2012; NH GRANIT 2012;USFS 2012

Map 15:

Alternative 6b - Underground Transmission Cable in Roadway Corridors

(NH Routes 112 and 116 through WMNF)

and Co-located Overhead HVAC

Northern Pass Transmission Line Project

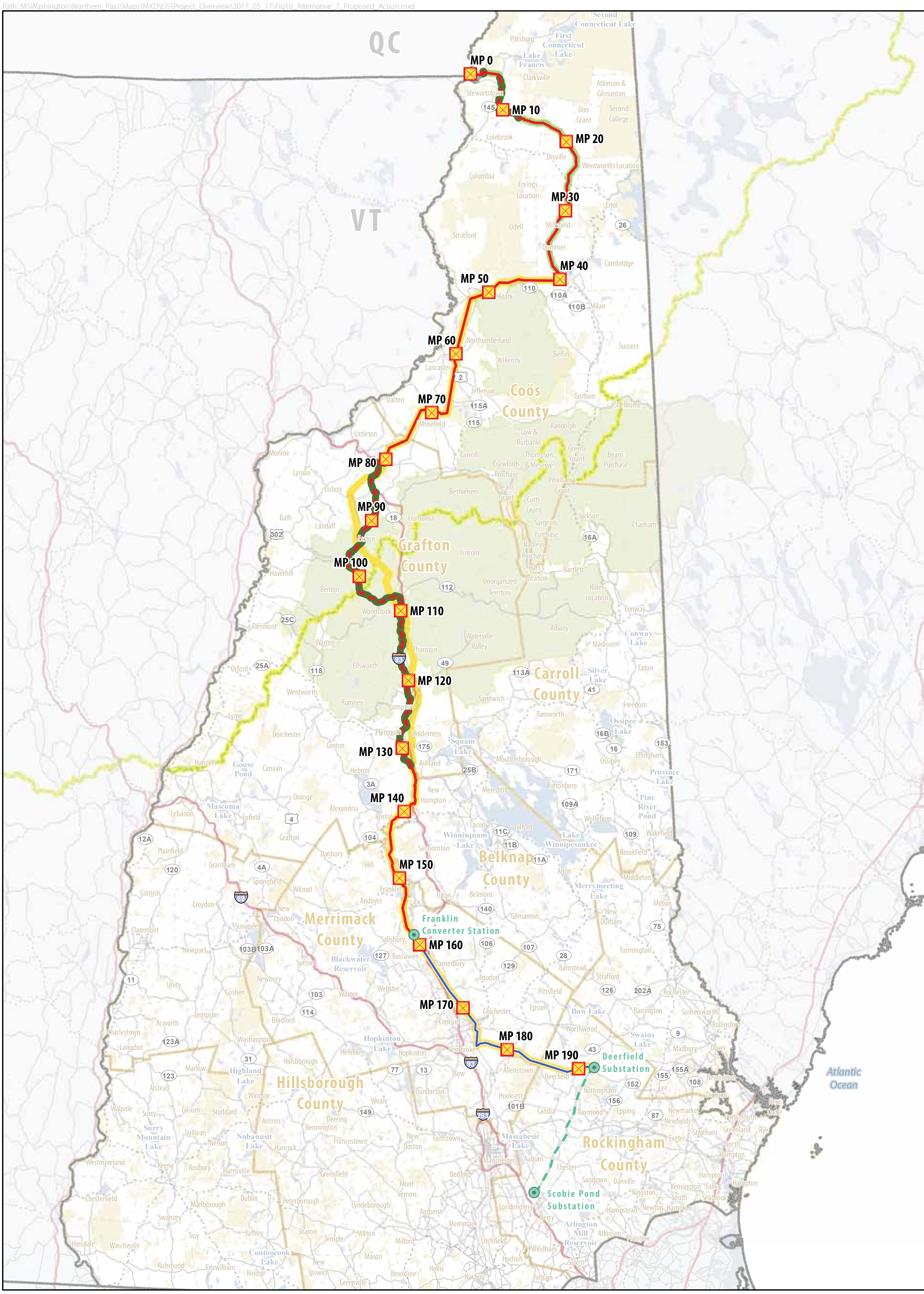
New Hampshire

N

SCALE

0 5 10 Miles

Path: M:\Washington\Northern_Pass\Maps\MXD\EIS\Project_Overview\2017_05_17\Fig16_Alternative_7_Proposed_Action.mxd



Legend

Existing Conditions

- State Boundary
- County Boundary
- Political Boundary
- Freeway
- Major Road
- Secondary Road
- Appalachian National Scenic Trail
- Waterbody
- NH Conservation Land (WMA, State Forest, Conservation Areas, etc.)
- White Mountain National Forest
- Existing PSNH Transmission Route

Alternative 7 Components

- New Transmission Route
- Project in Roadway Corridor
- Overhead High-Voltage Direct Current Centerline
- Overhead High-Voltage Alternating Current Centerline
- Underground High-Voltage Direct Current Centerline
- Existing Transmission Line Upgrades
- Project Milepost
- Converter/Substation Location

SOURCE: ESRI 2011; GRANIT 2012; Burns and McDonnell 2013; USFS 2012; Ecology and Environment 2013

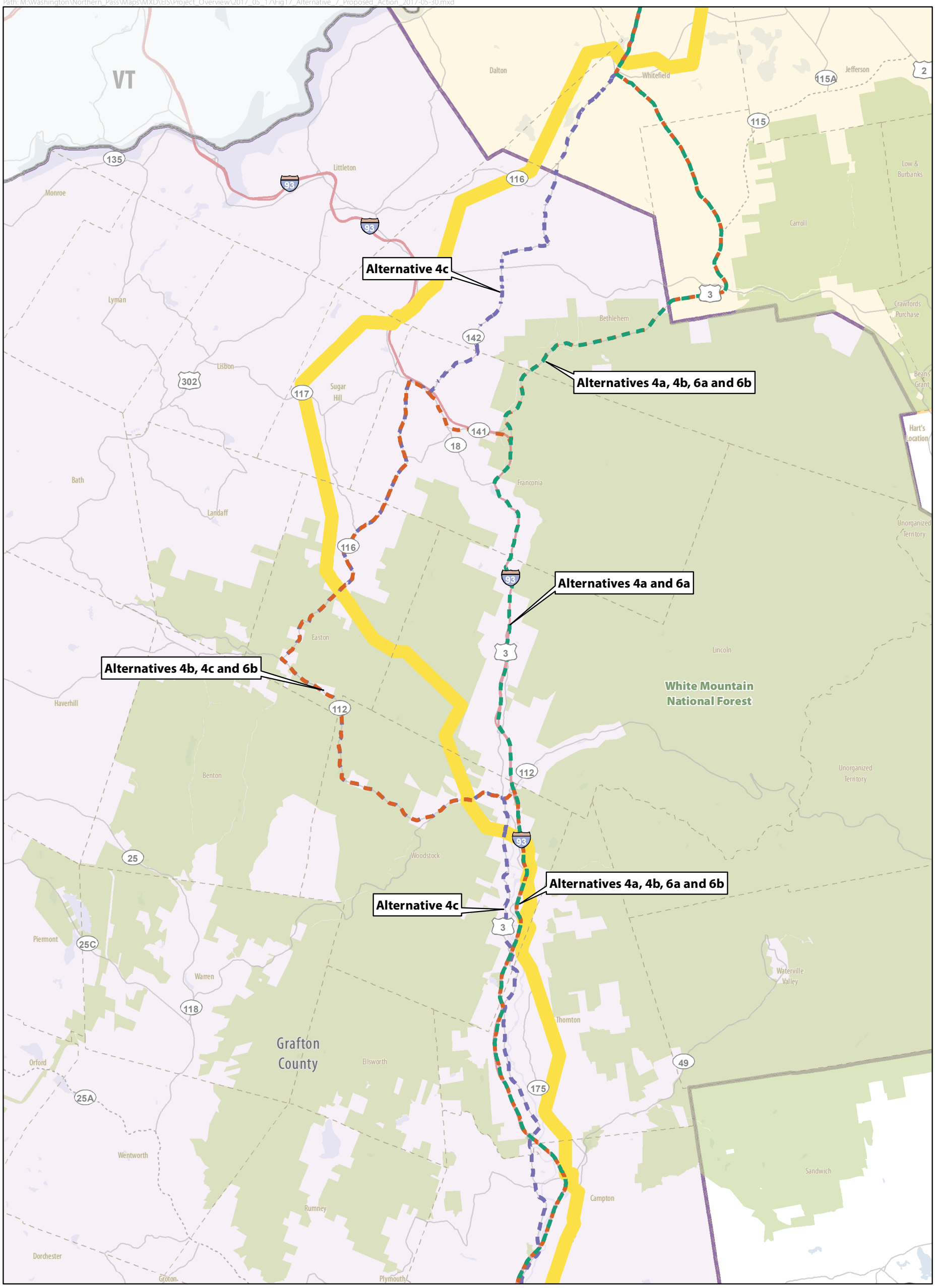
Map 16:
Alternative 7 - Proposed Action
Northern Pass Transmission Line Project
Environmental Impact Statement

N

SCALE

0 5 10 Miles

Path: M:\Washington\Northern_Pass\Maps\MXD\EIS\Project_Overview\2017_05_17\Fig17_Alternative_7_Proposed_Action_2017-05-30.mxd



Legend

- State Boundary
- Political Boundary
- County Boundary
- Alternatives 4a and 6a
- Alternatives 4b and 6b
- Alternative 4c
- Waterbody
- White Mountain National Forest
- Existing PSNH Transmission Route

Section Boundaries

- Southern Section
- Central Section
- Northern Section

SOURCE: ESRI 2011; Ecology and Environment 2014.

Map 17:

Alternative 4 and 6 Variations in Vicinity of WMNF

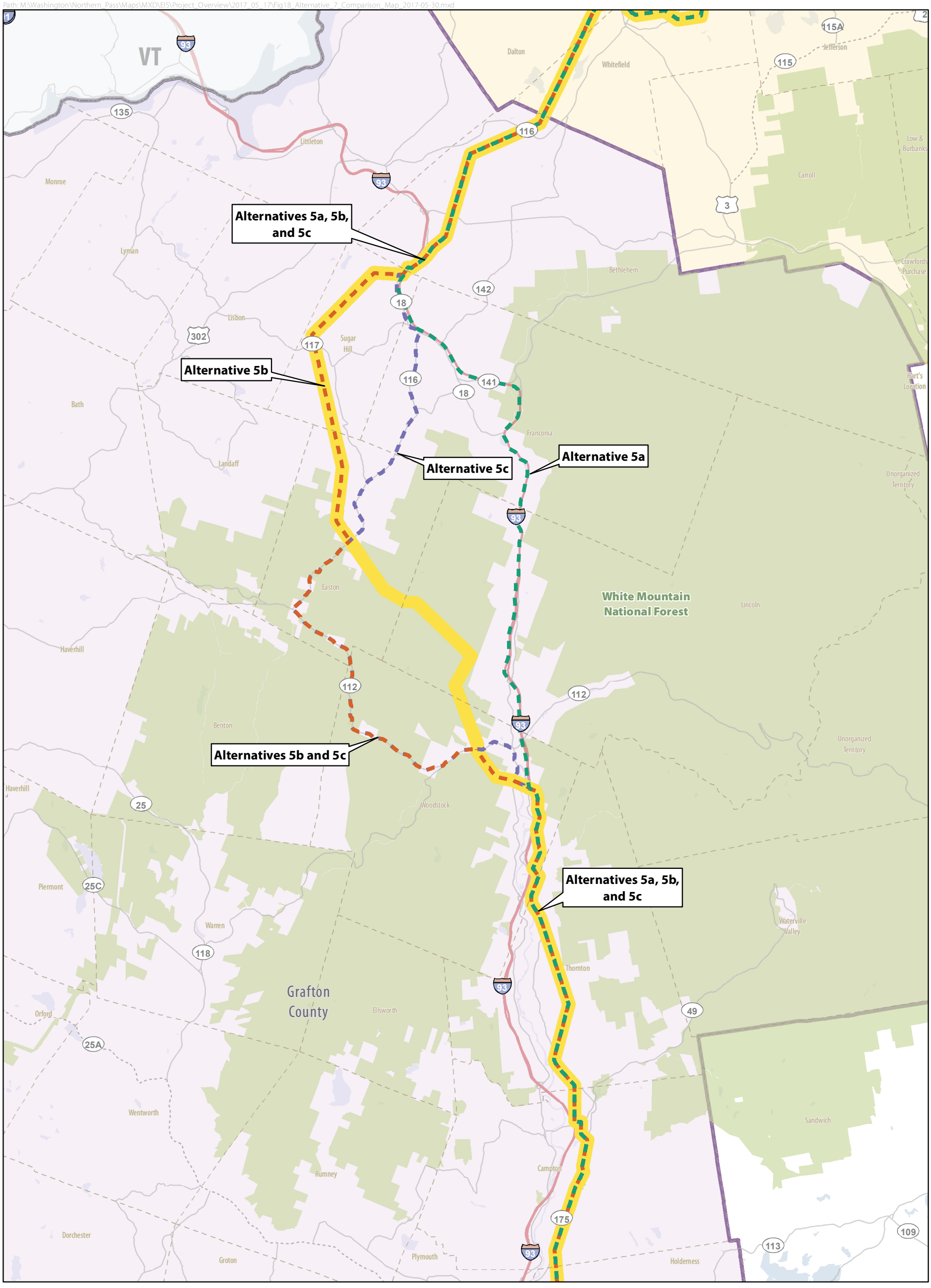
Northern Pass Transmission Line Project
Environmental Impact Statement

N

SCALE

0 1 2 Miles

Path: M:\Washington\Northern_Pass\Maps\MXD\EIS\Project_Overview\2017_05_17\Fig18_Alternative_7_Comparison_Map_2017-05-30.mxd



Legend

- State Boundary
- Political Boundary
- County Boundary

Alternative Project Alignment

- Alternative 5a
- Alternative 5b
- Alternative 5c

- Waterbody
- White Mountain National Forest
- Existing PSNH Transmission Route

Section Boundaries

- Southern Section
- Central Section
- Northern Section

SOURCE: ESRI 2011; Ecology and Environment 2014.

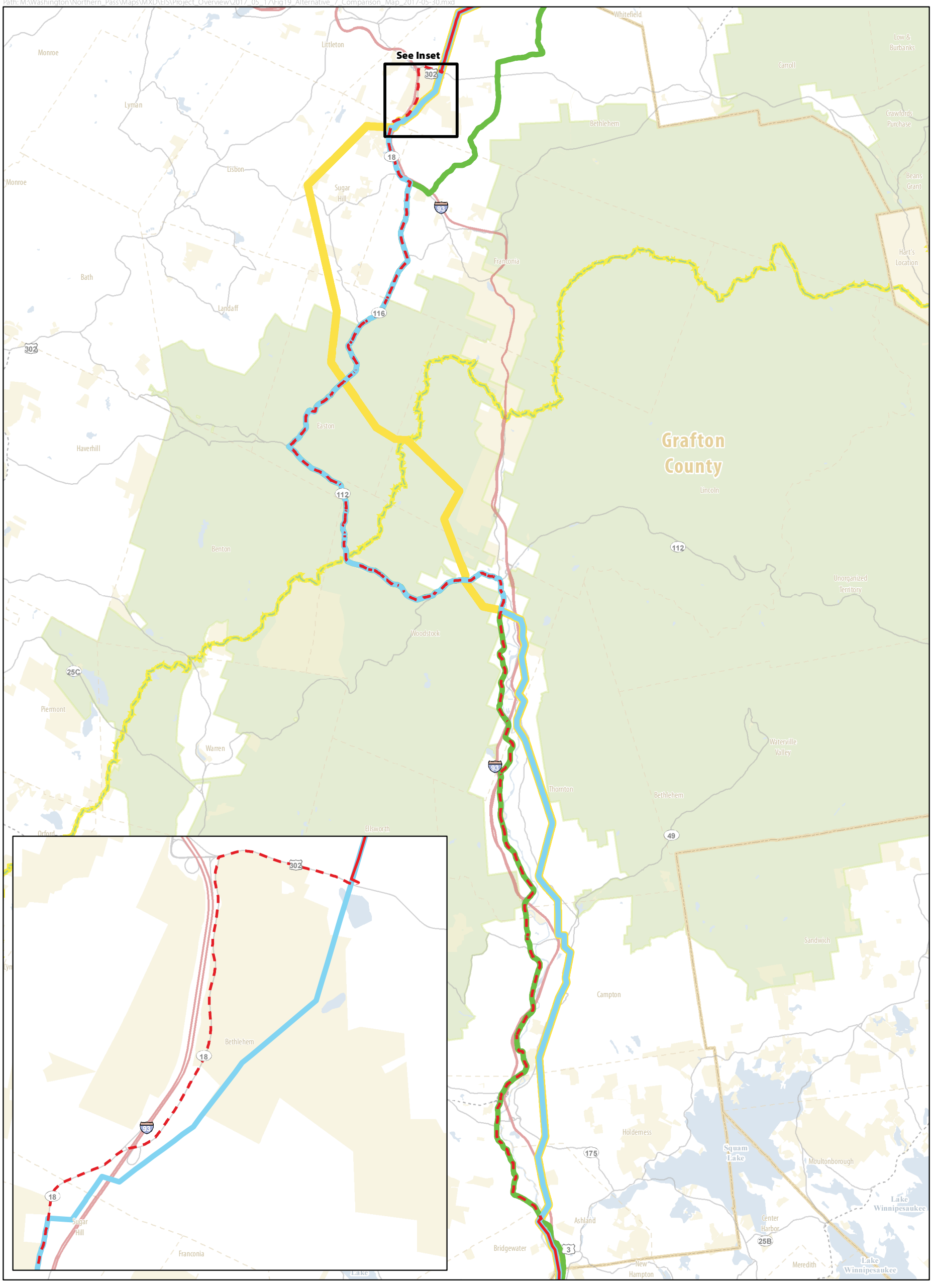
Map 18:
Alternative 5 Variations in Vicinity of WMNF
Northern Pass Transmission Line Project
Environmental Impact Statement

N

SCALE

0 1 2 Miles

Path: M:\Washington\Northern_Pass\Maps\MXD\EIS\Project_Overview\2017_05_17\Fig19_Alternative_7_Comparison_Map_2017-05-30.mxd



Legend

Existing Conditions

- State Boundary
- County Boundary
- Political Boundary
- Freeway
- Major Road
- Secondary Road
- Appalachian National Scenic Trail
- Waterbody
- NH Conservation Land (WMA, State Forest, Conservation Areas, etc.)
- White Mountain National Forest
- Existing PSNH Transmission Route

Analyzed in the Draft EIS

- Alternative 4c Alignment
- Alternative 5c Alignment

Alternative 7 Projects

- Overhead High-Voltage Direct Current Centerline
- Underground High-Voltage Direct Current Centerline

SOURCE: ESRI 2010; ESRI 2012; NH GRANIT 2012; USFS 2012

Map 19:
Alternative 7 Comparison Map
Northern Pass Transmission Line Project
Environmental Impact Statement

N

SCALE

0 2.5 5 Miles

APPENDIX B
SCOPING ISSUE STATEMENTS

APPENDIX B. SCOPING ISSUE STATEMENTS

Through the public scoping process, commenters expressed concerns over a broad range of topics, including, but not limited to, the NEPA process, the federal agencies' purpose and need, the range of alternatives to be considered in the EIS, potential socioeconomic impacts in the region, potential visual impacts, potential impacts to wildlife, and potential impacts to tourism. Listed here is a summary of issues considered in the draft EIS, including issues analyzed in detail as well as issues that were determined to be outside the scope of the EIS or otherwise did not warrant detailed analysis. These issues eliminated from detailed study, including the rationale for not analyzing them in detail, are discussed in **Section B.2**. Issues retained for detailed analysis are discussed in **Chapter 4**. Other scoping comments regarding alternatives are not discussed here; **Chapter 2** of the EIS describes the range of alternatives considered in the analysis. Issues raised during the draft EIS public review period are summarized in **Section 1.5.3** of the final EIS and additional information is presented in **Appendix L**.

B.1 ISSUES RETAINED FOR DETAILED ANALYSIS

The following issues are analyzed in detail in the EIS. Developed through information received through public as well as internal agency scoping, these issue statements have guided the analysis for the EIS.

B.1.1 Visual Resources

- The Project could lead to visual impacts within and throughout the Project corridors' viewsheds on private and public lands, including the WMNF and scenic by-ways. Comments suggest that these impacts could affect tourism, recreation, property values, and the New Hampshire economy.

B.1.2 Socioeconomics

- The Project could impact the local and regional economies in terms of expenditures on electricity, job creation, property values, tax revenues, and construction and ancillary spending.
- The Project could impact existing employment levels and future job creation during both the construction period and subsequent operation/maintenance phase. Comments suggest that the analysis should evaluate the nature of the jobs which would be created in terms of short-term verses permanent, and differentiate among jobs created locally (within New Hampshire) and those which would be imported from out-of-state.
- The Project could change the local/regional electricity generation mix affecting existing generation facilities. Comments suggest that development of the Project could put independent generation facilities out of business and create an energy monopoly or form an unacceptable reliance upon a single generation source, potentially leading to higher energy rates.
- The analysis should determine whether New Hampshire residents, primarily affected by the construction and operation of the Project, would receive electricity provided by the Project. Comments suggest that the analysis should specifically evaluate how, if at all, electricity rates would be affected for New Hampshire residents.
- The Project could provide annual tax benefits to state and local communities throughout New Hampshire. Comments suggest that current and future tax abatement appeals (on behalf of the utility) could affect estimated tax benefits. Comments suggest that the analysis should evaluate, and contrast, the potential increases in taxes paid to the state, and communities, by the proponent (as a function of the value of the construction/operation of the Project) against potential decreases

in property tax revenues as a result of potential changes to property values diminished by the Project.

- The visual impacts of the Project could impact property values throughout New Hampshire.
- Comments suggest that if property values are impacted, property tax revenues could be proportionately affected. Comments suggest that this evaluation should specifically acknowledge that New Hampshire does not collect sales taxes, nor does the state have a wage-based income tax, and that property taxes are a substantial portion of state and local government revenue.
- Effects to visual resources resulting from the Project could impact local, regional, and state tourism and resultant impacts to tourism-based businesses, and New Hampshire's tourism-dependent economy.
- The Project could impact tourism related to cultural and historic sites.

B.1.3 Appalachian National Scenic Trail[1]

- The Project could lead to physical impacts on the ANST, which is eligible for the NRHP, and audible, visual, and recreational impacts to the trail users. These impacts could occur in the short-term (during construction) and long-term (operation). Visual resources and recreational user experiences, including the sense of primitiveness and remoteness, could be impacted at numerous locations along the Kinsman and Franconia ridge sections of the ANST through the WMNF.

B.1.4 Recreation

- The Project could physically and/or visibly impact the recreational experience for users across the entire length of the Project on both public and private lands.
- The Project could impact land availability for recreational use (e.g., hiking and snowmobiling) within the Project corridors and current recreational uses of the land.

B.1.5 Health and Safety

- Operation of the Project could produce EMFs that could impact the health of persons, particularly children, spending time near the Project.
- The Project could be susceptible to damage from extreme weather such as wind, ice-loading, and other natural disasters, potentially resulting in line collapse and associated safety concerns.
- The Project could create local safety risks associated with power surges, increased lightning strikes, and line-induced fires.
- The Project could impact the safety of people using recreational trails or otherwise travelling in proximity to the transmission lines through exposure to EMFs and potential infrastructure collapse.
- The Project could impact public health from the use and/or discovery of hazardous materials during construction, operation, and maintenance.
- The Project could create a safety hazard due to proximity to a natural gas pipeline in the Project corridor.
- The Project could create safety concerns for workers during construction and maintenance.

[1] The analysis of this issue is not specific to a single resource topic so discussion is provided, as appropriate, within the visual resources, recreation, and historic and cultural resources analyses in **Chapter 3** and **Chapter 4**.

- The Project could cause interference with communication infrastructure and impact the operation of electronic devices.
- The Project would locate HVDC and HVAC lines within the same transmission route. Comments suggest that this could result in health impacts due to interference between EMFs.

B.1.6 Traffic and Transportation

- The Project could cause road closures, construction-related traffic impacts, and impacts to transportation infrastructure (including air traffic and flight instrumentation proximate to the Concord Airport).

B.1.7 Land Use

- Construction related to the installation and/or relocation of lines within the existing transmission route on the WMNF could be inconsistent with the Forest Plan.
- The Project could impact the characteristics of proximate IRAs.
- The Project could impact the landscape, viewshed, recreation, and conservation values of lands managed by the federal government, the state government, municipal governments, and private land trusts and land held under conservation easement.
- The Project could impact the eligibility and potential future designation of Wild and Scenic Rivers.
- The Project could impact the current or future/planned use of existing private lands, including residential, commercial, and industrial properties.
- The Project could impact public ROWs.

B.1.8 Electricity System Infrastructure[2]

- The Project could affect characteristics of the electricity supply in the New England region.
- The Project could impact existing and future sources of electricity generation within New England.
- The Project could impact regional transmission system reliability.

B.1.9 Noise

- The Project could cause noise impacts related to blasting and other construction activities.
- The Project could result in increased noise levels caused by sound from the HVDC line and associated infrastructure, particularly during inclement weather conditions.

B.1.10 Environmental Justice

- The Project could result in disproportionately high and adverse human health or environmental effects on minority or low-income populations in communities proximate to new facilities.

B.1.11 Air Quality

- The Project could impact regional air quality and emissions due to construction and operation of the Project.

[2] Discussion of this issue is provided within the socioeconomic analysis in **Chapter 3** and **Chapter 4**.

- The Project could impact regional air quality and greenhouse gas emissions as a result of changes in diversity of local/regional electricity generation sources. Comments suggest that the Project could affect the achievement of emissions reductions goals established in regional agreements and policy.
- The Project could impact greenhouse gas emissions and the ability of the forest to sequester carbon as a result of the clearing of forest and vegetation.

B.1.12 Wildlife

- The Project could impact wildlife and aquatic species, including individuals and the habitat of federally threatened, endangered, and proposed species, USFS management indicator species, and state-listed species.
- The Project could impact areas designated as "critical habitat" in the New Hampshire Wildlife Action Plan.
- The Project could lead to the fragmentation of wildlife habitat and/or the subsequent disruption of terrestrial and aquatic species.
- The Project could impact wildlife habitat, specifically that of hunting game, which are important to the local economy and way of life.

B.1.13 Vegetation

- The Project could lead to the fragmentation of large, contiguous blocks of forest that are important to wildlife, plants, watershed, and recreation.
- The Project could impact federal and state threatened and endangered plant species, and exemplar natural communities along the Project corridor.
- The Project could result in the spread of invasive terrestrial and aquatic plant species as a result of ground disturbance and construction-related activities.
- The Project could impact the ability of habitat, proximate to the Project corridor, to sustain biodiversity.

B.1.14 Water Resources

- The Project could increase erosion and sedimentation sources, reduce stream bank stability, and affect riparian habitat, wetlands, and vernal pools due to ground disturbance associated with the construction and on-going operation.
- The Project could impact domestic wells, municipal water sources, groundwater, source water protection areas, wetlands, and watersheds due to construction and ground disturbing activities.
- The Project could lead to increased in-stream flows and water yield, which may create an increased risk of flooding.
- The Project could impact wetlands due to the potential need for adequate support for towers and subsequently impact the function of wetlands as a natural filter for water resources.

B.1.15 Geology and Soils

- The Project could impact soil stability and quality as a result of construction and vegetation removal. Erosion, water contamination, damage to water crossings, and land form stability issues could result from the construction and maintenance of the Project.
- The Project could lead to erosion and other resource impacts due to the potential construction of additional access and maintenance roads and staging areas for materials and equipment.

B.1.16 Historic and Cultural Resources

- The Project could directly (physically) and/or indirectly (visually or audibly) affect known and previously unidentified cultural resources and historic properties within the area of potential APE for the Project. These effects could occur, in the short-term (during construction) and long-term (operation).

B.2 ISSUES OUTSIDE THE SCOPE OF THE EIS OR DISMISSED FROM FURTHER DETAILED ANALYSIS

The following issues were raised during scoping, but were determined to be outside the scope of this EIS or otherwise did not warrant detailed analysis. Rationale for dismissing these issues is provided.

B.2.1 Purpose and Need

- The Project does not meet the qualification requirements of the Renewable Portfolio Standard (RPS) and its goals, as the energy may not be considered "clean" and would not be generated within New Hampshire.

This issue was dismissed from further detailed analysis because the qualification status of the energy potentially delivered by the Project is not relevant to the analysis of the Project's potential environmental impacts.

- DOE's purpose and need statement is too narrowly defined and would not adequately consider a reasonable range of alternatives for analysis.

This issue was dismissed from further detailed analysis because the purpose of, and need for, the DOE's action is to determine whether or not to grant the requested Presidential permit for the Project at the international border crossing proposed in the amended Presidential permit application. Executive Order (EO) 10485, as amended by EO 12038, "requires that executive permission be obtained for the construction and maintenance at the borders of the United States of facilities for the exportation or importation of electric energy." DOE is authorized to "receive applications for the construction, operation, maintenance, or connection, at the borders of the United States, of facilities for the transmission of electric energy between the United States and a foreign country[,]" and "[u]pon finding the issuance of the permit to be consistent with the public interest, and, after obtaining the favorable recommendations of the Secretary of State and the Secretary of Defense thereon, to issue to the applicant, as appropriate, a permit for [the] construction, operation, maintenance, or connection" (EO 10485). DOE's purpose and need reflects this limited authority.

B.2.2 Socioeconomics

- The Project could impact specific existing energy suppliers and efforts towards renewable energy generation, and non-generation alternatives, resulting in impacts to local competition, impact efforts to reduce energy use, and impact energy rates and reliability.

This issue was dismissed from further detailed analysis because the impact of the Project on individual energy suppliers, renewable energy generation, and non-generation alternatives is beyond the scope of this EIS. The socioeconomic analysis contained in this document discusses impacts to the energy economy.

- The Project could impact specific businesses and industries located both near and far from the Project corridor, in particular the recreation, forest products, agriculture, real estate, ski resort, and scenic flight industries.

This issue was dismissed from further detailed analysis because the potential impacts of the Project on the general economy of the region are discussed in the socioeconomic analysis contained in this EIS.

- The Project could result in an increased frequency of forest fires. More frequent forest fires would increase the cost of fighting forest fires, and result in economic impacts from lost homes and lost tax revenue on the local economy.

This issue was dismissed from further detailed analysis because the potential economic impacts of forest fire response efforts are unknown and would be highly speculative. The potential for increased risk of forest fire is described in the health and safety analysis contained in this EIS.

- Comments stated that the Project could negatively impact property values and the amount of taxes paid by property owners to the government, which could result in increased taxes on other residents.

This issue was dismissed from further detailed analysis because the establishment of specific tax rates depends on numerous variables and it would be impossible to accurately anticipate the potential effect of the Project or predict a specific response which a taxing jurisdiction might make. The potential impacts of the Project on the general economy, property values, and on tax revenues and payments are discussed in the socioeconomic analysis contained in this EIS.

- The Project could temporarily increase tax revenues, which could reduce funding from the state and federal governments even after local revenues are gone.

This issue was dismissed from further detailed analysis because it is not possible to predict future tax rates and therefore impossible to accurately predict any effect the Project could potentially have on such tax rates. The potential impacts of the Project on the general economy and on tax revenues and payments are discussed in the socioeconomic analysis contained in this EIS.

B.2.3 Land Use

- The Project could lead to loss of property value, which may not adequately be compensated by the Applicant.

This issue was dismissed from further detailed analysis because any compensation programs of the Applicant are beyond the scope of this EIS. The potential impact of the Project on residential property values is analyzed in the socioeconomic analysis contained in this EIS.

B.2.4 Wildlife

- The Project could require the use of herbicides to maintain a clear Project corridor, which could result in impacts to water resources, vegetation, wildlife habitat, and the health of humans and wildlife near the Project.

This issue was dismissed from further detailed analysis because herbicides are not included in PSNH's vegetation management program. Mechanical means would be employed for vegetation management, and the potential impacts of these activities are analyzed in this EIS.

- The Project could impact the health and navigation abilities of wildlife as a result of the potential effects of EMFs and noise from the Project.

This issue was dismissed from further detailed analysis because the best available data do not support these claims or indicate that they warrant further investigation. Studies show that some species of birds use "magnetoreception" for navigation as they migrate over long distances (Mouritsen et al. 2005a). However, magnetoreception is only one of a number of mechanisms that birds use for navigation (Wiltschko et al. 2012a). An evaluation of peer-reviewed scientific literature revealed no studies which document that EMF from transmission lines has any effects on migrating birds. Additionally, the EMF levels produced by the Project would decrease rapidly with distance from the lines. While the magnetic field from the HVDC portion of the line could produce subtle effects on the behavior of animals close to the line, there is no reason to believe that such effects would be adverse to the animals or affect migration over long distances. The noise analysis and health and safety analysis contained in this EIS include discussions of potential effects of EMFs and noise from the Project.

B.2.5 Vegetation

- Heat from the Project's overhead lines and underground cables may impact plant habitat near the Project corridor, and could result in establishment of invasive species.

This issue was dismissed from further detailed analysis because the heat generated by the overhead lines and underground cables would be negligible. Studies of plants in the presence of power transmission lines and cables do not indicate that these exposures have any significant influence on plants or the establishment of invasive species (PSC Wisconsin n.d.; Irle et al. 2011a).

- The Project could inhibit the ability of habitat proximate to the Project corridors to withstand the impacts of climate change.

This issue was dismissed from further detailed analysis because, while there would be some vegetation clearing required for the Project, most clearing would occur adjacent to existing cleared areas and is not anticipated to change the overall characteristics of nearby vegetated habitat. Moreover, the localized impacts of global climate change on particular New Hampshire habitats would be difficult to ascertain and require speculation. Impacts to vegetation resulting from the Project are discussed in the vegetation analysis contained in this EIS.

B.2.6 Water Resources

- The Project could impact surface and groundwater resources through the use of herbicides used in construction and maintenance
- The Project could impact drinking and household water supplies and private wells due to the use of herbicides.

These issues were dismissed from further detailed analysis because herbicides are not included in Eversource Energy's vegetation management program. Mechanical means would be employed for vegetation management, and the potential impacts of these activities are analyzed in this EIS.

B.2.7 Air Quality

- The Project could impact regional air quality as a result of aerosol pollutants being attracted to the transmission lines.

This issue was dismissed from further detailed analysis. Studies of other HVDC projects have shown that the amount of aerosol pollutants that would be attracted to the transmission lines would be negligible (EPRI

2003a; Exponent, Inc. 2011a). These studies indicate that there is no theoretical basis or empirical data to suggest the ambient air quality would be affected in this manner.

B.2.8 Geology and Soils

- The Project could impact the quality of a landfill cover in the vicinity of Campton, Thornton, and Ellsworth if new transmission towers are built on top of or in the immediate vicinity of the landfill cover.

This issue was dismissed from further detailed analysis because the precise location of individual towers has not yet been determined. Subsequent to the release of this EIS, state and local agencies would determine individual tower locations, at which time this issue could be considered.

B.2.9 NEPA Process

- DOE should consider potential biases of data collected by contract teams hired by the Applicant that might subsequently obstruct an open, fair, and impartial NEPA review of the Project.

This issue was dismissed from further detailed analysis because DOE, not the Applicant, selected the contractor which is supporting the DOE's preparation of this EIS, including all data collection. The Applicant selected a separate contractor to support the Applicant's permitting efforts with the State of New Hampshire. Disclosure statements indicating that neither the contractor selected by DOE nor any of the sub-consultants have a financial or other interest in the outcome of the Project are included in **Appendix I**. In accordance with 40 CFR 1506.5(c), DOE has determined that the selected contractor and its sub-consultants have no conflict of interest with respect to the preparation of this EIS.

B.2.10 Design Criteria/Mitigation Measures

- The transmission line for the Project could be an inefficient design resulting in energy loss.

This issue was dismissed from further detailed analysis. All transmission mediums result in some energy loss. Overhead transmission lines are the most cost effective form of transmission when compared with other forms based on the Project life cycle cost of capital and losses (i.e., lost energy). The Project would be designed according to applicable industry standards and the design would incorporate good utility practices, such that the energy loss would be minimized based on project economics and life cycle costs.

B.2.11 Impacts in Canada

- Various impacts in Canada should be addressed in the EIS. These include: economic impacts of the Project on Canadian taxpayers, increase in greenhouse gas emissions from the reservoirs used to generate the hydroelectric power, impacts to river ecosystems and the culture of native people in Canada due to the flooding needed for large scale hydropower dams in Canada, and the potential for hydroelectric reservoirs to cause geologic instability and earthquakes.

This issue was dismissed from further detailed analysis because NEPA does not require an analysis of potential environmental impacts that occur within another sovereign nation that result from actions approved by that sovereign nation. Additionally, the construction and operation of Hydro- Québec power generation projects and electricity transmission line projects in the bulk Hydro- Québec system will occur regardless of whether DOE issues a Presidential permit for the proposed Northern Pass Project international border crossing. See **Section 1.5.4.1** of the EIS for further discussion.

B.2.12 Cumulative Impacts

- The Project would not necessarily provide "clean, low carbon" electricity because Hydro-Québec, the energy provider, owns multiple fossil fuel-based generation facilities and cannot guarantee hydropower—only electricity or certain electricity rates in the future.

This issue was dismissed from further detailed analysis because, while the source of power transmitted by the Project can be any generating station interconnected to the Hydro-Québec TransÉnergie electric transmission system, DOE assumed that the power delivered by the Project would be primarily hydropower because approximately 98 percent of Hydro-Québec's energy generation capacity comes from hydropower (NESCOE 2013a). The air quality analysis in this EIS discusses potential impacts to regional air quality and carbon emissions. Additionally, the socioeconomic analysis contained in this EIS discusses potential impacts to electricity rates resulting from the Project.

- The Project should be considered within a larger context of regional energy needs (i.e., a Programmatic EIS) and should assess the nature of New England's need for Canadian energy imports and the most effective, least impactful way to meet those needs.

This issue was dismissed from further detailed analysis because the analysis of regional energy needs is beyond the scope of this EIS. Pursuant to Executive Order 10485, the DOE is responsible for receiving "applications for permits for the construction, operation, maintenance, or connection at the borders of the United States, of facilities for the transmission of electric energy between the United States and a foreign country" and determining whether to issue the requested permit. Currently before the DOE is an application from Northern Pass seeking a permit for a single international border crossing for a transmission line project. DOE's purpose and need is to determine whether or not to grant the requested Presidential permit for the Project at the international border crossing proposed in the further amended Presidential permit application (August 2015). There is not before the DOE a proposed regional plan for the importation of Canadian hydropower that would serve as the subject of a programmatic EIS. Further, DOE does not have the authority to determine underlying regional energy needs and goals within the New England regional transmission system or to establish a master plan for regional importation of Canadian hydropower. Regional energy needs and a plan for meeting those needs within the New England region would be determined by ISO-NE in coordination with the New England states. DOE does, however, assess the impacts associated with past, present, and reasonably foreseeable future actions (such as other regional transmission lines) that could, along with implementation of the Project, have cumulative environmental impacts. **Section 5.1** and **Appendix D** of the EIS contain the cumulative impacts analysis.

APPENDIX C
PROPOSED FOREST PLAN AMENDMENTS

APPENDIX C. PROPOSED FOREST PLAN AMENDMENTS

Forest Plan Amendments would only be required should Alternative 2 or Alternative 5b be selected.

C.1 USFS DIRECTION FOR AMENDING FOREST PLANS

The USFS requirements for amending forest plans are included in agency regulations and policies. These require that proposed activities be consistent with forest plans, and that proposed activities which may be in conflict with the Forest Plan either be denied or modified (so as to be consistent), or that the Forest Plan be amended. The USFS is authorized to implement amendments to forest plans in response to changing needs and opportunities, information identified during project analysis, or the results of monitoring and evaluation. The process to consider Forest Plan Amendments is contained in 36 CFR § 219.13 and Forest Service Handbook 1909.12, Chapter 20.

The Forest Plan states, "Adjusting the Forest Plan requires an amendment, and the need for an amendment may result from…Determination by the Forest Supervisor that existing or proposed projects, contracts, etc. are appropriate and necessary, but not consistent with Forest Plan management direction" (USDA Forest Service 2005a).

The Forest Plan also states, "Standards and guidelines are the specific, technical direction for managing resources. A standard is a course of action that must be followed, or a level of attainment that must be reached, to achieve management goals and objectives, and can only be changed through an amendment to the Plan. A guideline also is a required course of action or level of attainment, but permits operational flexibility to respond to variations in conditions. Guidelines can be modified or not implemented, but the rationale for doing so must be documented in a project-level analysis and signed decision" (USDA Forest Service 2005a).

C.2 PROPOSED AMENDMENTS TO THE WMNF LAND AND RESOURCE MANAGEMENT PLAN

The alternatives considered in detail in the EIS were reviewed for consistency with the Forest Plan standards and guidelines (see **Appendix F**). Based on a review of the Forest Plan standards and guidelines and Project impacts, Alternative 2 would be inconsistent with four Forest Plan standards: 1) Forest-wide Recreation General Standard S-2; 2) MA 8.3 – Appalachian National Scenic Trail, Recreation Standard S-2; 3) MA 8.3 – Appalachian National Scenic Trail, Scenery Management Standard S-1; and 4) MA 8.3 – Appalachian National Scenic Trail, Scenery Management Standard S-2. Alternative 5b would be inconsistent with one standard: MA 8.3 – Appalachian National Scenic Trail, Scenery Management Standard S-1.

- Forest-wide Recreation General Standard S-2 states: "Current development levels in the backcountry will be maintained or lowered where appropriate." (USDA Forest Service 2005a)

- MA 8.3 – Appalachian National Scenic Trail, Recreation Standard S-2 states: "Management of the AT experience must be compatible with the prescribed recreation experience opportunity class. Lands within this management area should be managed under the semi-primitive non-motorized (SPNM) Recreation Opportunity Spectrum (ROS) class. There are situations where the AT crosses or follows public roads and snowmobile trails, and where developed facilities are present. Current inconsistencies in this ROS Class, such as Appalachian Mountain Club huts, are acceptable but are managed to minimize impacts on the SPNM experience." (USDA Forest Service 2005a)

- MA 8.3 – Appalachian National Scenic Trail, Scenery Management Standard S-1 states: "The AT is a Concern Level 1 Travelway, and middleground and background areas on National Forest lands seen from the AT must be managed for scenery in accordance with Scenic Integrity Objectives identified through the Scenery Management System." (USDA Forest Service 2005a)

- MA 8.3 – Appalachian National Scenic Trail, Scenery Management Standard S-2 states: "All management activities will meet a Scenic Integrity Objective of High or Very High." (USDA Forest Service 2005a)

All other alternatives would be consistent with these standards, so no amendments would be necessary.

As identified in **Appendix F –** Forest Plan Consistency Analysis, consistency of all alternatives with Forest-wide, Lands – Land Use Authorizations (Special Uses) Standard S-1 and of Alternatives 2 and 5b with MA 8.3 – Appalachian National Scenic Trail, Lands – Special Uses Standard S-3 will be determined through the EIS process and will be documented in the Record of Decision.

C.2.1 Forest-wide, Recreation General Standard S-2

This standard is intended to help the Forest meet the Forest Plan goals and objectives of managing consistent with the ROS framework and minimizing increased development in the backcountry. Alternative 2 would be inconsistent with Forest-wide Recreation General Standard S-2 because the construction of additional, larger towers and lines within the existing transmission corridor would increase the development level in the backcountry and increase inconsistencies in some ROS classes.

Alternative 2 would require a Forest Plan Amendment for Forest-wide, Recreation General Standard S-2. Alternative 2 would site-specifically amend the Forest Plan to indicate that this Project does not need to meet this standard. The recreation impact from Alternative 2 to ROS classifications is analyzed in **Chapter 4**, **Section 4.5.3.2**.

C.2.2 MA 8.3 – Appalachian National Scenic Trail, Recreation Standard S-2

This standard protects the recreation experience of the ANST as it crosses the WMNF. Construction of additional, larger towers and lines within MA 8.3 results in additional inconsistencies in the SPNM ROS class. While existing inconsistencies are accepted, new inconsistencies would be contrary to this standard. Therefore, the Project would be inconsistent with this standard.

Alternative 2 would require a Forest Plan Amendment for MA 8.3 – Appalachian National Scenic Trail, Recreation Standard S-2. Alternative 2 would site-specifically amend the Forest Plan to indicate that this Project does not need to meet this standard. The recreation impact from Alternative 2 to ROS classifications is analyzed in **Chapter 4**, **Section 4.5.3.2**.

C.2.3 MA 8.3 – Appalachian National Scenic Trail, Scenery Management Standard S-1

This standard protects the middleground and background viewshed as seen from the ANST. The Project under Alternatives 2 and 5b would be consistent with the SIO of "Very Low," and inconsistent with all other SIOs. Consequently, the Project would be inconsistent with SIOs, including in some areas that could be visible in the middleground or background from the ANST; therefore, Alternatives 2 and 5b would be inconsistent with this standard.

Alternatives 2 and 5b would require a Forest Plan Amendment for MA 8.3 – Appalachian National Scenic Trail, Scenery Management Standard S-1. Alternatives 2 and 5b would site-specifically amend the Forest

Plan to indicate that this Project does not need to meet this standard. The scenery impact from Alternative 2 and 5b is analyzed in **Chapter 4**, **Section 4.5.1.2** and **Section 4.5.1.8.**

C.2.4 MA 8.3 – Appalachian National Scenic Trail, Scenery Management Standard S-2

Alternative 2 would cross the ANST in the existing transmission route where existing PSNH transmission line infrastructure is present. At this specific intersection, the ANST and the Project are within Easement 965 and Forest Plan standards and guidelines do not apply. However, portions of the Project would be located within the MA 8.3 boundary in areas authorized under the SUP; therefore, Project consistency with MA 8.3 standards and guidelines is necessary in those areas.

Alternative 2 would be inconsistent with MA 8.3 – Appalachian National Scenic Trail, Scenery Management Standard S-2 because the Project would not meet a SIO of High or Very High. Alternative 2 would be consistent with a SIO of Very Low.

The Proposed Action would require a Forest Plan Amendment for MA 8.3 – Appalachian National Scenic Trail, Scenery Management Standard S-2. Alternative 2 would site-specifically amend the Forest Plan to indicate that this Project does not need to meet this standard. The visual impact from Alternative 2 to the ANST is analyzed in **Chapter 4**, **Section 4.5.1.2.**

APPENDIX D
CUMULATIVE EFFECTS PROJECTS

APPENDIX D. CUMULATIVE EFFECTS PROJECTS

D.1 INTRODUCTION

This appendix contains a list of all past, present, and reasonably foreseeable future projects considered for cumulative impacts in the EIS. The analysis of cumulative effects is contained in **Chapter 5** of the final EIS.

D.2 PAST, PRESENT, AND REASONABLY FORESEEABLE FUTURE PROJECTS

Table D-1. Past, Present, and Reasonably Foreseeable Future Projects

Project	Project Location	Project Description	Project Status	Project Area (acres/length)	Resources Potentially Affected
Transportation Projects					
NHDOT Transportation Projects	Project-wide	A database of approximately 6,000 past, present, and reasonably foreseeable future NHDOT projects is available online at: http://gis.dot.nh.gov/projectviewer/. These projects include actions such as road improvements and repair. These projects are considered, at the appropriate spatial and temporal scale, for all resources potentially affected.	Varies	Varies	Health and Safety Traffic and Transportation Noise Historic and Cultural Resources Environmental Justice Air Quality Wildlife Vegetation Water Resources Geology and Soils
Energy Projects[a]					
Granite Reliable Wind Park	Millsfield, NH	A 99-MW wind farm with 33 turbines located on Dixville Peak, Mount Kelsey, Owlhead Mountain, and Fishbrook Ridge.	Constructed in 2011 and currently operating	Varies	Visual Resources Socioeconomics Recreation Land Use Historic and Cultural Resources Wildlife Environmental Justice

Table D-1. Past, Present, and Reasonably Foreseeable Future Projects

Project	Project Location	Project Description	Project Status	Project Area (acres/length)	Resources Potentially Affected
Jericho Power Wind	Berlin, NH	A wind farm consisting of five wind turbines to be located on the western slope of Jericho Mountain and Mount Forist. The turbines are between 450 and 500 feet tall.	Construction commenced in 2013 and currently operating	Varies	Visual Resources Socioeconomics Recreation Land Use Historic and Cultural Resources Wildlife Environmental Justice
Groton Wind Power	Groton, NH	A 48-MW wind farm located on Tenney Mountain and Fletcher Mountain. The project consists of 24, 2.0 MW wind turbines.	Constructed in 2012 and currently operating	4,180 acres	Visual Resources Socioeconomics Recreation Land Use Historic and Cultural Resources Wildlife Environmental Justice
Future Wind Projects	NH	Additional wind power projects in ISO-NH could be constructed in the foreseeable future.	Planned	N/A	Visual Resources Socioeconomics Recreation Land Use Historic and Cultural Resources Wildlife Environmental Justice
Champlain Hudson Power Express	From Canada through VT to NY	A 1,000-MW HVDC transmission line project that will deliver power from Canada to New York City. Transmission cables will be buried underground or underwater for the length of the project.	Approved in 2014 and construction yet to occur	333 miles	Socioeconomics Air Quality Environmental Justice

Table D-1. Past, Present, and Reasonably Foreseeable Future Projects

Project	Project Location	Project Description	Project Status	Project Area (acres/length)	Resources Potentially Affected
New England Clean Power Link	From Canada to VT	A 1,000-MW HVDC transmission line project that will deliver power from Canada to Vermont. Transmission cables will be buried underground or underwater for the length of the project.	Approved in 2016 and construction yet to occur	154 miles	Socioeconomics Air Quality Environmental Justice
National Grid/ Anbaric Green Line	From ME to MA	A 1000-MW HVDC transmission line project that will deliver power from Maine to Massachusetts. Transmission cables will be buried underground or underwater for the length of the project.	Conceptual	300 miles	Socioeconomics Environmental Justice
Eversource Energy/National Grid AC Plan	Pelham, Hudson, Windham, and Londonderry, NH	New overhead transmission lines in existing ROWs, two new underground cables through several Massachusetts and New Hampshire communities, and upgrades to existing lines.	Approved in 2015 and operation expected in 2017/18	43 miles	Socioeconomics Environmental Justice
Massachusetts Clean Energy RFP Transmission Projects	ISO-NE	Proposed projects associated with the Massachusetts Omnibus Energy Bill to procure 1,600 MW of offshore wind by 2027 and 9,450,000 MW/hr/Yr of clean energy by 2022. Potential proposals include: Granite State Power Link, New England Clean Power Link, Emera's Atlantic Link, and Anbaric Green Line.	Planned	N/A	Socioeconomics Air Quality
Planned Natural Gas Pipeline projects	ISO-NE	Planned projects (Access Northeast, Atlantic Bridge, etc.) to expand natural gas capacity in ISO-NE. While current projects have been put on hold, volatility in the natural gas market could bring them back in the foreseeable future.	Planned	N/A	Socioeconomics Air Quality Environmental Justice

Table D-1. Past, Present, and Reasonably Foreseeable Future Projects

Project	Project Location	Project Description	Project Status	Project Area (acres/length)	Resources Potentially Affected
Regional Projects					
General Regional/County Growth	Coös, Grafton, Belknap, Merrimack, and Rockingham Counties, NH	General, on-going growth and development that has and will continue to occur in associated counties the Project is within. Population growth results in additional residential and commercial development, development of additional infrastructure and traffic.	On-going	Five-county area	Visual Resources Socioeconomics Recreation Traffic and Transportation Land Use Noise Historic and Cultural Resources Air Quality Wildlife Vegetation Water Resources Geology and Soils
WMNF Forest Plan	WMNF (Coös and Grafton Counties, NH)	Provides guidance for managing and protecting natural resources and visitors' experiences on the WMNF; sets goals, objectives, and desired future conditions for all lands managed by the WMNF.	Decision authorized in 2005 and implementation/ construction is on-going	750,852 acres	Visual Resources Recreation Land Use Noise Historic and Cultural Resources Air Quality Wildlife Vegetation Water Resources
Miscellaneous Projects					
City of Franklin Brownfield Project – Former Guay's Garage	Franklin, NH	Cleanup of hazardous materials located on the property of the former Guay's Garage on South Main Street in Franklin, NH.	Completed in 2013	2.4 acres	Health and Safety Water Resources

Notes:
[a] To be considered in the cumulative impact analysis (**Chapter 5**) as a reasonably foreseeable future energy project, the project applicant must have taken official action with a permitting agency (e.g., submitted an application with federal, state, or local permitting authorities).