New Jersey Historic Preservation Office Correspondence

August 20, 2014

Daniel Saunders
State of New Jersey
Department of Environmental Protection
Historic Preservation Office
501 E. State Street
Building 5, 4th Floor
Trenton, NJ 08625

Re: PennEast Pipeline Company, LLC - PennEast Pipeline Project
Hunterdon and Mercer Counties, New Jersey

Dear Mr. Saunders:

The PennEast Pipeline Company, LLC (PennEast) is a partnership with UGI Energy Services (UGIES), AGL Resources, NJR Pipeline Company, and South Jersey Industries. On behalf of PennEast, URS Corporation (URS) is initiating cultural resource consultation for the proposed PennEast Pipeline Project (Project). The Project proposes to construct a new 100-mile, 30-inch pipeline to deliver natural gas from northeast Pennsylvania to other markets in Pennsylvania and New Jersey. This document describes the proposed undertaking for the project as it is understood at this date, as well as our proposed protocol for cultural resource investigations. The lead agency for this project is the Federal Energy Regulatory Commission (FERC). We are requesting the New Jersey Historic Preservation Office's (NJHPO) review of URS's plans to identify cultural resources that may be affected by the project.

Description of the Undertaking

The PennEast Pipeline Project is designed to transport natural gas from Luzerne County, Pennsylvania, to the Transco Trenton-Woodbury interconnect in Mercer County, New Jersey. The project will include construction of approximately 100 miles of new 30-inch pipeline, three compressor stations, and three taps/interconnects. In New Jersey, the project will extend approximately 34 miles from the Delaware River in Hunterdon County to the Transco Trenton-Woodbury interconnect in Mercer County. A series of USGS-based maps depicting the approximate location of the project is included with this letter (Attachment A).

As part of the pipeline route evaluation process, PennEast has undertaken a thorough Critical Issues Assessment (CIA). The CIA initially focused on the identification of a series of corridors to determine which were most feasible from an environmental and engineering perspective. The selected route corridor was then analyzed using federal, state, and regional databases to map out resources in proximity to the corridor. Once this mapping was completed, the route was sequentially evaluated along its entirety, and the centerline adjusted to avoid and/or minimize impacts to resource areas.

The following discussion outlines the results of background research conducted to date, as well as a proposed methodology for identification of archaeological and above-ground resources within the Area of Potential Effects (APE). The APE for direct effects includes all currently known areas of potential project-related ground disturbance. The APE for visual effects includes locations from which elements of the pipeline project may be visible, including potential changes to the landscape. The study corridor for cultural resource surveys is 400 feet wide. Within that 400-foot corridor, the pipeline will be constructed within a right-of-way (ROW) of approximately 100 feet encompassing both temporary and permanent ROW. The study corridor is wider than the disturbance area to allow for minor alignment shifts to avoid any sensitive resources that may be identified during the environmental field investigations.

Background Research

URS consulted the files of the NJHPO in July 2014 in an effort to determine the extent of previous cultural resource surveys in the vicinity of the project alignment. The New Jersey State Museum's files were consulted to gather locational and other data on previously recorded archaeological sites, architectural resources, and cultural resource surveys. A one-mile study area on either side of the proposed centerline was used to identify an adequate sample of previously recorded archaeological sites from which to derive information regarding the expected types and settings of sites in the vicinity of the project. A one-quarter-mile study area on either side of the proposed centerline was used to identify historic architectural resources.

Background research identified 56 previously recorded archaeological sites within the one-mile study area. Three archaeological sites are mapped partly or wholly within the 400-foot study corridor: 28-Hu-358A, 28-Hu-378, and 28-Hu-381. None of these sites have been evaluated for listing on the National Register of Historic Places (NRHP). Fourteen historic architectural resources are located within the one-quarter-mile study area. Further discussion of archaeological and historic architectural resources is provided in the sections below. The locations of archaeological sites and historic architectural resources are depicted in Attachments B and C, respectively.

Previous Cultural Resources Surveys

Archaeological investigations associated with 44 projects have been conducted within one mile of the study corridor. These investigations ranged from a few acres for small commercial developments to longer linear surveys for pipelines and highways. Although the majority of these investigations were Phase I identification-level surveys, several Phase II site evaluations and at least one data recovery excavation have also been conducted. Archaeological sites encountered by these surveys have primarily been prehistoric Native American sites that ranged from briefly occupied surface sites to longer-term camps. The results of these investigations and others in the Delaware River drainage will be used to develop contexts for the evaluation of the potential NRHP-eligibility of sites identified in the Phase I archaeological investigation for the current project.

Previously Recorded Archaeological Sites

Fifty-six previously recorded archaeological sites were identified within one mile of the proposed centerline and are presented in Table 1. General site characteristics are summarized, including site type, temporal component, landform setting, and approximate lateral distance to the current study corridor. The NRHP eligibility status for each of these sites is listed in the table below as either: Undetermined (U), Not Eligible (NE), Eligible (E), or Listed (L). Sites within the 400-foot study corridor are listed in the table below as SC; those outside of the study corridor but within the one-mile study area are listed as SA.

Three of the 56 recorded archaeological sites are located either partially or wholly within the 400-foot study corridor. Site 28-Hu-358A is located on the floodplain of the Delaware River, intersecting the study corridor at Milepost (MP) 72.5. This site is a prehistoric Native American site of unknown temporal affiliation. Site 28-Hu-378 intersects the study corridor at MP 80.3. It is a prehistoric Native American site of unknown temporal affiliation located on lower slopes above a Delaware River tributary. Site 28-Hu-381 is located at MP 81.5 on middle slopes overlooking the Delaware River. The NRHP status of these sites is undetermined.

Fifty-three of the 56 recorded archaeological sites are located outside of the 400-foot study corridor, but within one-quarter-mile of the proposed centerline. The majority of these sites (45) are prehistoric Native American sites. Seven are historic Euro-American sites dating from the late eighteenth century through the early twentieth century. No data on temporal affiliation is available for site 28-Me-230. Two sites (28-Hu-566, 28-Hu-567) are NRHP-eligible. The NRHP status of the remaining 54 sites is undetermined.

Table 1: Previously Recorded Archaeological Sites within One Mile of the Study Corridor

Site ID	Type	Temporal Component	Setting	NRHP Status	Relationship to Study Corridor
28-Wa-544	No data	Prehistoric-Late Archaic through Middle Woodland	Floodplain	U	SA (MP 72.4)
28-Hu-1	No data	Prehistoric: No data	Floodplain	U	SA (MP 73.9)
28-Hu-2	No data	Prehistoric: No data	Floodplain	U	SA (MP 72.2)
28-Hu-3	No data	Prehistoric: No data	Floodplain	U	SA (MP 72.3)
28-Hu-4	No data	Prehistoric: No data	Floodplain	U	SA (MP 72.4)
28-Hu-5	No data	Prehistoric: No data	Floodplain	U	SA (MP 72.5)
28-Hu-6	No data	Prehistoric: No data	Hilltop	U	SA (MP 76.2)
28-Hu-7	No data	Prehistoric: No data	Hillslope	U	SA (MP 77.8)
28-Hu-8	No data	Prehistoric: No data	Floodplain	U	SA (MP 77.8)
28-Hu-14	No data	Prehistoric: No data	Floodplain	U	SA (MP 81.0)
28-Hu-15	Base camps	Prehistoric: Late Archaic through Late Woodland	Floodplain	U	SA (MP 81.4)
28-Hu-16	No data	Prehistoric: No data	Lower Slopes	U	SA (MP 81.7)
28-Hu-17	No data	Prehistoric: No data	Floodplain	U	SA (MP 81.7)
28-Hu-44	No data	Prehistoric: No data	Floodplain	U	SA (MP 92.5)

Table 1: Previously Recorded Archaeological Sites within One Mile of the Study Corridor

Site ID	Type	Temporal Component	Setting	NRHP Status	Relationship to Study Corridor
28-Hu-45	No data	Prehistoric: No data	Floodplain	U	SA (MP 92.8)
28-Hu-358A	No data	Prehistoric: No data	Floodplain	U	SC (MP 72.5)
28-Hu-366	No data	Prehistoric: No data	Lower Slopes	U	SA (MP 75.6)
28-Hu-367	No data	Prehistoric: No data	Lower Slopes	U	SA (MP 75.5)
28-Hu-368	No data	Prehistoric: No data	Lower Slopes	U	SA (MP 75.1)
28-Hu-369	No data	Prehistoric: No data	Lower Slopes	U	SA
28-Hu-370	No data	Prehistoric: No data	Lower Slopes	U	SA (MP 76.3)
28-Hu-371	No data	Prehistoric: No data	Lower Slopes	U	SA (MP 76.4)
28-Hu-376	No data	Prehistoric: No data	Lower Slopes	U	SA (MP 77.9)
28-Hu-378	No data	Prehistoric: No data	Lower Slopes	U	SC (MP 80.3)
28-Hu-379	No data	Prehistoric: No data	Lower Slopes	U	SA (MP 81.2)
28-Hu-380	No data	Prehistoric: No data	Lower Slopes	U	SA (MP 81.4)
28-Hu-381	No data	Prehistoric: No data	Middle Slopes	U	SC (MP 81.5)
28-Hu-386	No data	Prehistoric: No data	Lower Slopes	U	SA (MP 86.4)
28-Hu-394	No data	Prehistoric: No data	Lower Slopes	U	SA (MP 87.2)
28-Hu-403	No data	Prehistoric: No data	Floodplain	U	SA (MP 91.0)
28-Hu-404	No data	Prehistoric: No data	Middle slopes	U	SA (MP 91.9)
28-Hu-406	No data	Prehistoric: No data	Lower slopes	U	SA (MP 94.2)
28-Hu-410	No data	Prehistoric: No data	Upper slopes	U	SA (MP 95.1)
28-Hu-411	No data	Prehistoric: No data	Lower slopes	U	SA (MP 94.1)
28-Hu-412	No data	Prehistoric: No data	Upper slopes	U	SA (MP 94.4)
28-Hu-413	No data	Prehistoric: No data	Middle slopes	U	SA (MP 94.9)
28-Hu-414	No data	Prehistoric: No data	Middle slopes	U	SA (MP 95.1)
28-Hu-415	No data	Prehistoric: No data	Upland flat	U	SA (MP 95.5)

Table 1: Previously Recorded Archaeological Sites within One Mile of the Study Corridor

Site ID	Type	Temporal Component	Setting	NRHP Status	Relationship to Study Corridor
28-Hu-416	No data	Prehistoric: No data	Upland flat	U	SA (MP 96.2)
28-Hu-417	No data	Prehistoric: No data	Middle slopes	U	SA (MP 94.0)
28-Hu-472	No data	Prehistoric: No data	Floodplain	U	SA (MP 72.6)
28-Hu-483	No data	Prehistoric: No data	Floodplain	U	SA (MP 72.6)
28-Hu-484	No data	Prehistoric: No data	Floodplain	U	SA (MP 72.4)
28-Hu-490	No data	Prehistoric: No data	Lower slopes	U	SA (MP 98.1)
28-Hu-493	No data	Prehistoric: Late Archaic, Early Woodland	Floodplain	U	SA (MP 92.3)
28-Hu-538	No data	Prehistoric: Archaic	Lower slopes	U	SA (MP 84.4)
28-Hu-544	Farmstead, Blacksmith Shop	Historic: 19th c.	Lower slopes	U	SA (MP 96.2)
28-Hu-545	Farmstead	Historic: 19th c.	Lower slopes	U	SA (MP 92.5)
28-Hu-546	Farmstead	Historic: Late 18th c. through 19th c..	Lower slopes	U	SA (MP 91.1)
28-Hu-566	Farmstead	Historic: 19th c. through Early 20th c.	Upland flat	E	SA (MP 86.6)
28-Hu-567	Farmstead	Historic: Mid-18th c. through Early 20th c.	Upland flat	E	SA (MP 86.8)
28-Hu-573	Domestic? (foundation)	Historic: 19th c. through Late 20th c.	Lower slopes	U	SA (MP 74.1)
28-Hu-574	Domestic? (foundation)	Historic: 19th c. through Early 20th c.	Lower slopes	U	SA (MP 74.1)
28-Me-92	No data	Prehistoric: Middle Woodland	Lower slopes	U	SA (MP 104.3)
28-Me-230	No data	No data	Middle slopes	U	SA (MP 105.9)
Scattered Skinner and Schrabish Sites	No data	Prehistoric: No data	Floodplain	U	SA (MP 103.4)

Previously Recorded Above-Ground Resources

The research conducted for this project identified a total of 14 previously identified, NRHP-eligible or -listed resources within one-quarter-mile of the proposed centerline. These resources include four NRHP-eligible districts, five NRHP-eligible buildings, one NRHP-eligible structure, three NRHP-listed historic districts, and one NRHP-listed building (Table 2). Table 2 lists these

historic architecture resources in addition to information specific to their location and NRHP status.

Table 2: NRHP Listed and Eligible Above-Ground Resources within 1/4 Mile of the Project Corridor

Key #	County	Resource Name	NR Status	Resource Type
4275. 00000000	Hunterdon	Bunns Valley Agricultural Historic District	Eligible	District
3767.00000000	Hunterdon	Javes Road Bridge	Eligible	Structure
1598.00000000	Hunterdon	Pursley's Ferry Historic District	Listed	District
4591.00000000	Hunterdon	Rosemont Rural Agricultural Historic District	Listed	District
4334. 00000000	Hunterdon	Stockton Historic District	Eligible	District
1914.0000000	Hunterdon	Inch Lines Linear Multistate Historic District	Eligible	District
1641.00000000	Hunterdon	Mount Airy Historic District	Listed	District
1704.00000000	Mercer	Colonel John Van Cleve Homestead	Listed	Building
4540. 00000000	Mercer	Delaware & Bound Brook RR	Eligible	District
1701.00000000	Mercer	J. Thompson House and Barn	Eligible (Indv.)	Building
1693.00000000	Mercer	McDougal Farm and Barn	Eligible (Indv.)	Building
1674.00000000	Mercer	Adams House	Eligible (Indv.)	Building
1675.00000000	Mercer	Enoch Blackwell House	Eligible (Indv.)	Building
1687.00000000	Mercer	House	Eligible (Indv.)	Building

Historic Mapping Data

The proposed pipeline route was overlaid on nineteenth-century maps and atlases of each of the counties crossed by the project. These sources show a number of structures near the study corridor which may now represent historic archaeological sites. As project research is further developed, URS will assess which, if any, of these map-documented structures have the potential to be directly or indirectly impacted by the project.

Preliminary Geomorphological Assessment

In consultation with Dr. Frank Vento, Geomorphologist, stream order was used to initially assess the potential for buried archaeological sites where the study corridor intersects potential alluvial soils. The majority of crossings will be made through small rills as well as first- and second-

order streams. These streams typically exhibit moderate to steep gradients, straight to weak meandering channel habits, low discharges, and relatively thin (less than 3.3 feet) Holocene vertical accretion deposits. As a result they possess valley bottom zones that lack flights of terraces above the aggrading floodplain zone. The potential for site burial is assessed as low. The Delaware River, a fourth-order stream, displays lower gradients, higher discharges, and wider valley bottom zones. It possesses a weak to well-developed meandering channel habit and higher terraces. The Delaware River is the only stream with the potential to contain multiple stacked solas along the lower aggrading terraces with single well-developed pedons occurring on the higher terraces above the 100-year floodway zone. Holocene alluvial packages are anticipated to range between 3.3 feet and 14 feet in thickness. The Delaware River is assessed as having a high potential for buried archaeological sites.

Archaeological Sensitivity Model

The archaeological sensitivity model created for the project is a simple weighted combination of environmental features including topographic slope and the distance to wetlands, streams, water bodies, and the Lockatong geologic formation. The objective of this model is to identify areas that are within proximity to valuable hydrologic resources and on soils suitable for habitation. In addition, the Lockatong geologic formation was factored into this model to account for the potential presence of Native American argillite quarry sites that may not be accounted for by topography and hydrology alone. By weighing each factor individually, the model is able to not only identify the suitability of single attributes but also the combination of attributes. The theoretical underpinning of this model is simply that suitable ground and access to water are the most basic factors for habitation choices. Referred to as a "camping model," this approach mirrors how archaeologists have been locating sites for decades, but uses the availability of digital data to apply it over a large area. Clearly, there are many potential habitation locations that such a model will not identify, but this model is intended primarily as a guide to the field effort and does not replace in-field decisions for locating judgmental test locations, which are equally, if not more, important.

The assignment of weights to the classification of environmental variables allows the archaeologist to rank the importance of certain measures. There are various ways to weight a model factor, which include arbitrary assessment, inductive assessment based on known site locations, deductive assessments based on an *a priori* theory, or a combination of these. This model uses the theory that lower slopes and proximity to the Lockatong formation and water resources have a large influence on the location of most Native American archaeological sites. As such, each of the variables is weighted so that the more level or closer to a water resource or argillite-bearing geology an area is the greater the sensitivity for Native American archaeological sites. To establish the weights, layers were created in a GIS to represent the topographic slope (percent), distance to the Lockatong bedrock geology formation, streams from the National Hydrologic Dataset (high resolution), and the wetlands and water bodies of the National Wetland Database and assigned weights from 10 to 1 based on a preference for lower slopes and proximity to water. Following this, the weights of slope and distance to the Lockatong formation were added to the hydrologic resources to create the final set of weights. The final model had a range of weights from 2.5 to 41.

To create the thresholds of high, moderate, and low sensitivity, the weights were divided based on the percent of known sites located within each weight class and the amount of area that class occupied in the study area. The intention of this is to balance an acceptably high correct classification rate for known sites while at the same time not diluting the survey efficiency. The final classification of high and moderate sensitivity accounts for 70% of the known archaeological sites within a two-mile study area for the length of the project. Eighteen percent of the sites are located within low sensitivity areas and 12% within slopes greater than 15%. Given the high degree of variability for archaeological site location and environmental variation, this model will assist in targeting field work by correctly identifying the location of a large percent of known sites. Clearly, no single model can account for the full range of Native American habitation location decisions, therefore this model is simply a guide for the field effort. The true assessment of sensitivity will take place within the field where field directors can use on-the-ground observations to modify the model's recommendations and set the testing interval accordingly.

Proposed Methodology for Field Survey

Archaeological Resources

Methods for the identification of archaeological sites will be consistent with the NJ SHPO's guidelines: *Guidelines for Phase I Archaeological Investigations: Identification of Archaeological Resources.* The 400-foot study corridor will be visually inspected to identify rockshelters, foundations, or other surface indications of archaeological sites regardless of field conditions (i.e., in areas of excessive slope or standing water). Based on the archaeological sensitivity model, previous archaeological surveys, and accepted practice, relatively level landforms within approximately 300 feet of perennial water sources and similar settings adjacent to previously recorded archaeological sites are categorized as having a high probability for the presence of archaeological sites. In addition, areas in proximity to historic roads and structure locations indicated on historic maps are also categorized as high probability areas. Areas of moderate probability encompass level to gently sloping landforms between approximately 300 and 600 feet from a perennial water source. Areas with a low probability to contain archaeological sites include areas of steeper slope ($\geq$ 12%) and areas at more than 600 feet distant from perennial water sources.

Geomorphological investigations will be conducted at stream crossings within the 400-foot study corridor that may contain buried archaeological sites. These investigations will be carried out in the early stages of Phase I archaeological fieldwork and will guide the methods used to identify archaeological sites.

Subsurface testing in high probability areas will be accomplished by shovel test pits (STPs) excavated at 15-meter intervals on landforms where archaeological sites can be demonstrated to occur within one meter of the surface. In high probability areas where archaeological sites may be present below one meter, test units (TUs) measuring one-meter-square or larger will be excavated at 30-meter intervals. Subsurface testing in medium probability areas will be

conducted by STPs at 30-meter intervals, with closer-interval STPs excavated on a judgmental basis. STPs in low sensitivity areas will be excavated on a judgmental based (e.g., near locally prominent landforms or chert outcrops).

In portions of the study corridor where soil visibility is greater than 50% (except in areas of no-till agriculture), systematic inspection of the surface for artifacts will be conducted in conjunction with widely spaced subsurface probing sufficient to characterize the nature of the soils. In high probability areas the systematic inspection will occur along transects spaced at 3-meter intervals. Surface survey transects in areas of medium and low probability will be spaced at 6-meter intervals. In general, subsurface testing will not be conducted on excessive slopes (≥ 15% slope) or in areas of standing water. As noted above, these settings will be visually inspected for the presence of rockshelters, lithic sources, and structural remnants. If evidence of these features is identified in areas of excessive slope or standing water, subsurface testing will be conducted on a judgmental basis.

If cultural material is encountered in any STP, radial shovel tests at 7.5-m intervals in each of the cardinal directions will be excavated around the positive test. The threshold for site identification is three or more artifacts in two or more shovel tests. Artifact finds not meeting this criterion will be considered an isolated find.

All soils from STPs and TUs will be excavated by natural horizons. Soils from each horizon will be screened separately through one-quarter-inch wire mesh. Data from STPs and TUs will be recorded on standardized forms. Soil profiles will be recorded using the Munsell color system and standard texture classifications. Excavations will be completely backfilled, compacted, and the sod replaced. The location of survey transect beginning and end points, STPs, TUs, surface artifacts, and features will be mapped with a hand-held Global Positioning System (GPS) unit with sub-meter accuracy. Digital photography will be used to record surface conditions, select excavation profiles, cultural features, and identified archaeological sites.

Above-Ground Resources

There is potential for the PennEast pipeline to cross through parcels containing above-ground resources; including agricultural buildings and landscape features that are fifty years of age or older. Parcels with historic above-ground resources may be physically impacted by the construction of a pipeline in the form of tree cutting and other alterations to the landscape, and may be visually impacted by the construction of above-ground pipeline facilities.

URS proposes that the pipeline area of potential effects (APE) for aboveground historic resources be limited to the boundaries of parcels that are crossed by the proposed project survey corridor. Where new above-ground facilities such as compressor stations are proposed, a one-quarter-mile visual APE is recommended. It is anticipated that the overall project will include three compressor stations (in both New Jersey and Pennsylvania) and that their locations will be known during the reconnaissance survey.

Secretary of the Interior-qualified Architectural Historians will conduct an architectural history field reconnaissance of parcels along the Preferred Alignment containing above-ground resources 50 years of age or older in the APE. This will be conducted from the public right-of-way, where possible. This survey will include documentation of both previously recorded and newly identified historic resources that are in the APE for historic above-ground resources. All resources included in the survey will be documented with high resolution digital photography and will be plotted on maps.

For properties in the APE containing resources aged fifty years of age or older, URS will complete New Jersey architectural base forms for submittal to the NJHPO. NJHPO may require intensive level survey of a limited number of resources that are submitted for their review. URS will complete full New Jersey architectural survey forms for such resources.

Unanticipated Discovery Plan

Before the project begins, the FERC requires the development of a SHPO-approved Unanticipated Discovery Plan (UDP). The UDP is included with this letter as Attachment D for your review and concurrence.

URS would appreciate your consideration of the enclosed material and timely response to the proposed investigations as described herein. I look forward to hearing from you, but in the meantime should you have any questions please feel free to contact me at (610) 832-2791 or at grace.ziesing@urs.com

Sincerely,

URS Corporation
Grace H. Ziesing, Senior Archaeologist
625 West Ridge Pike, Suite E-100
Conshohocken, PA 19428

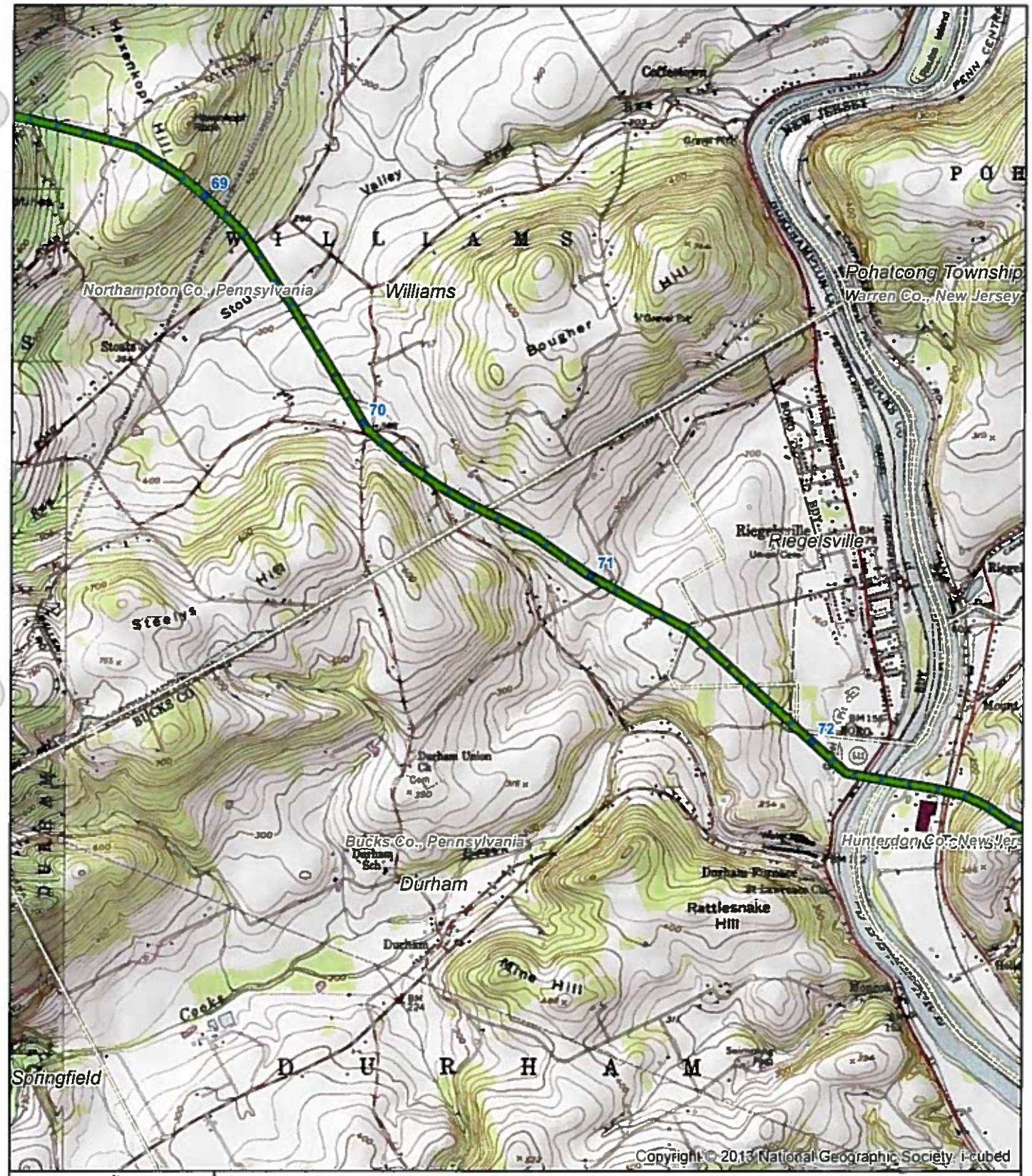
ATTACHMENT A: USGS-based Map of the PennEast Pipeline Project

ATTACHMENT B: Project Maps with Previously Recorded Archaeological Sites and Archaeological Sensitivity Model Overlay

ATTACHMENT C: Project Maps with Previously Recorded Architectural Resources

ATTACHMENT D: Unanticipated Discovery Plan

ATTACHMENT A: USGS-based Map of the PennEast Pipeline Project



Reference: USGS Topographic Quadrangle

Legend

Mile Postings | PennEast Pipeline | Municipality Boundary | County Boundary

0 800 1,600 3,200 Feet

TITLE:

PennEast Pipeline Project
USGS Topographic Quadrangle Map

LOC: Riegelsville Quadrangle			REV.:
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PennEast Pipeline Company, LLC

Reference: USGS Topographic Quadrangle

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Legend

Mile Postings | PennEast Pipeline | Municipality Boundary | County Boundary

TITLE:

PennEast Pipeline Project
USGS Topographic Quadrangle Map

LOC: Riegelsville Quadrangle			REV:
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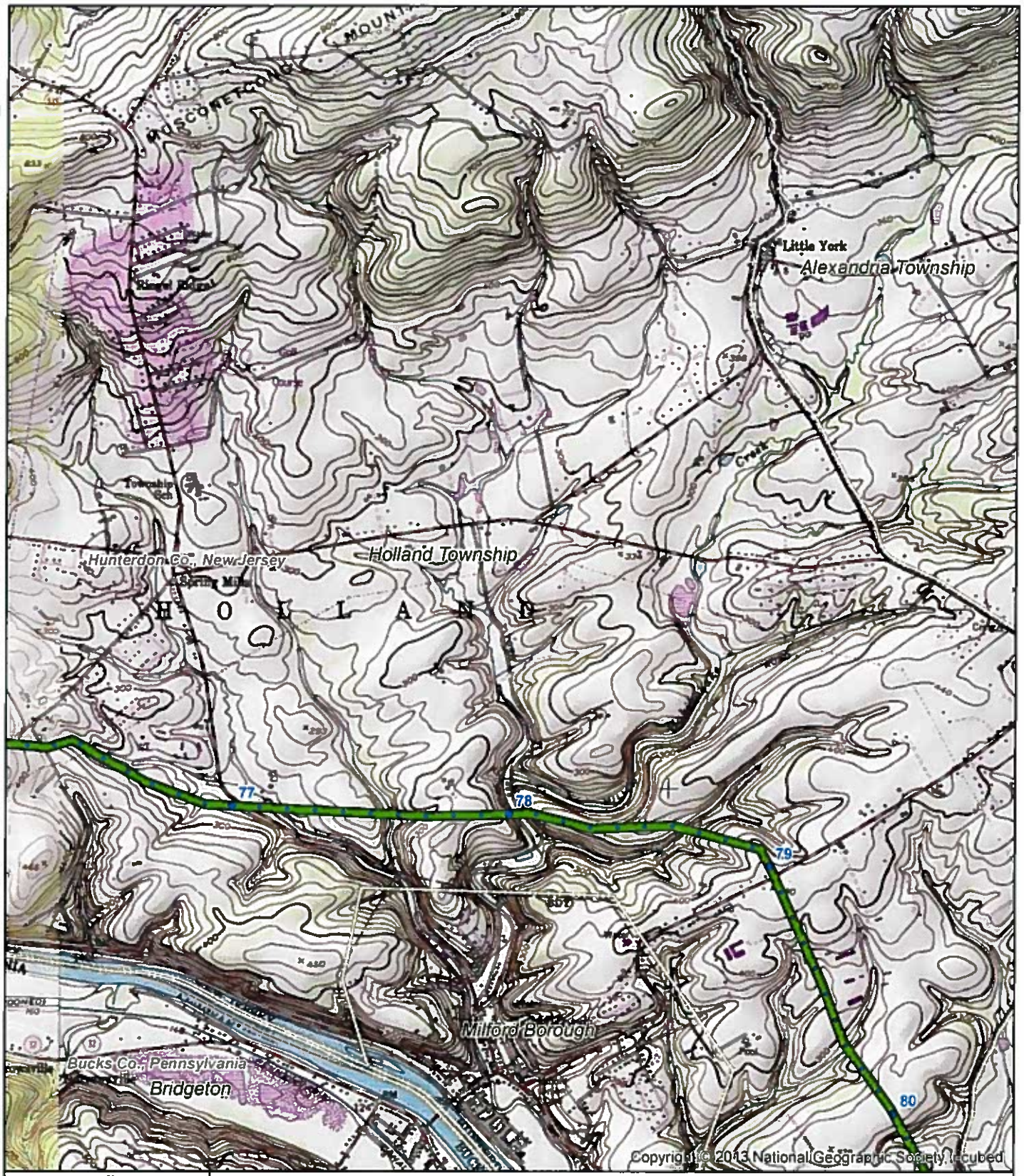
PennEast PIPELINE

PennEast Pipeline Company, LLC



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Reference: USGS Topographic Quadrangle

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Mile Postings | PennEast Pipeline | Municipality Boundary | County Boundary

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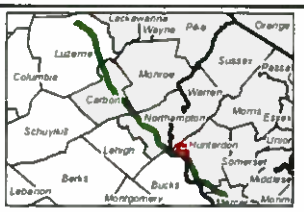
PennEast Pipeline Project
USGS Topographic Quadrangle Map



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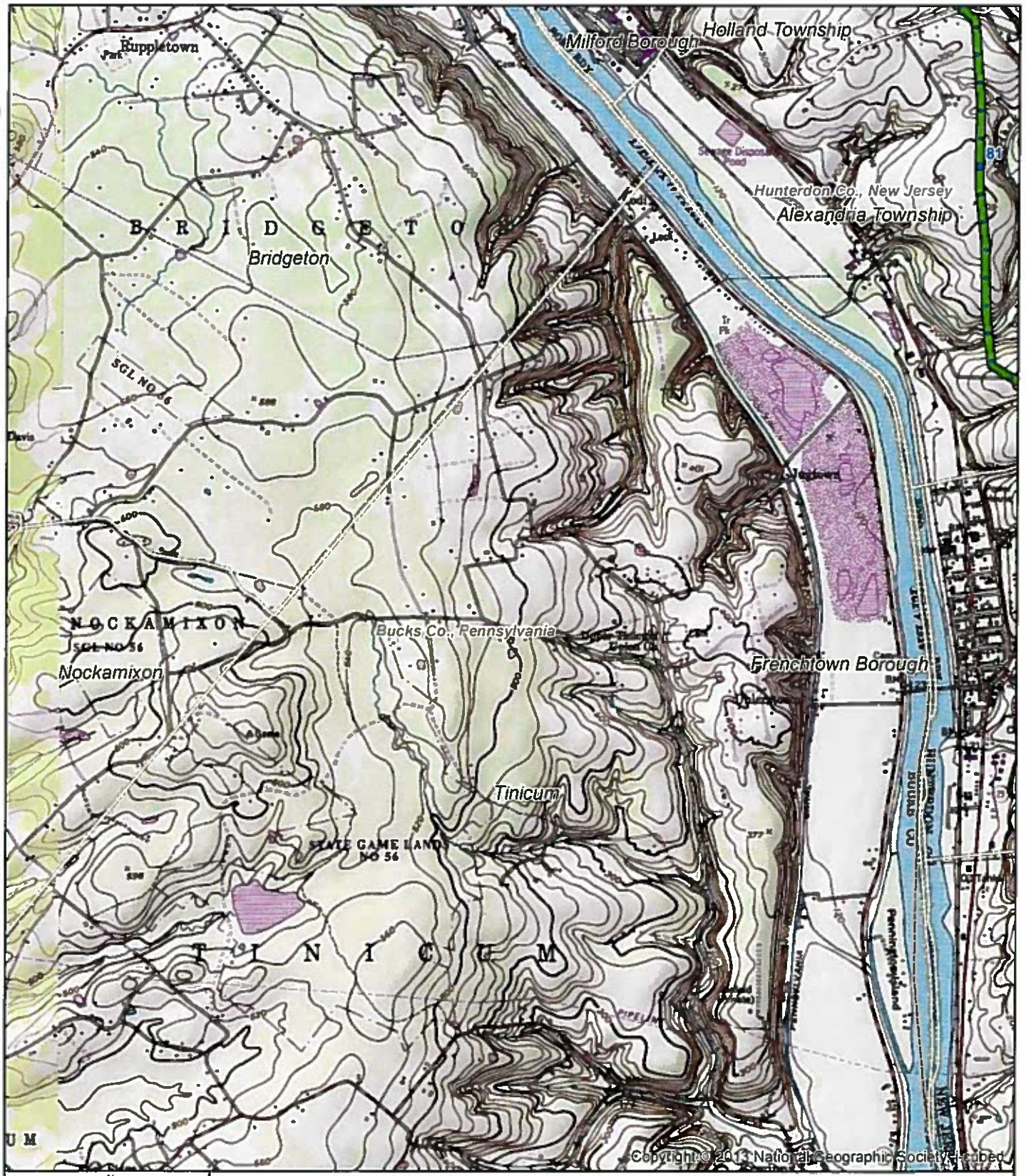
PennEast PIPELINE

PennEast Pipeline Company, LLC



Reference: USGS Topographic Quadrangle

Legend

Mile Postings | PennEast Pipeline | Municipality Boundary | County Boundary

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TITLE:

PennEast Pipeline Project
USGS Topographic Quadrangle Map

LOC: Frenchtown Quadrangle			REV.:
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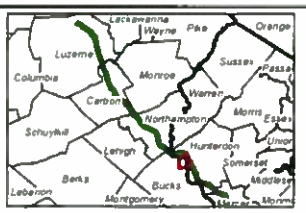
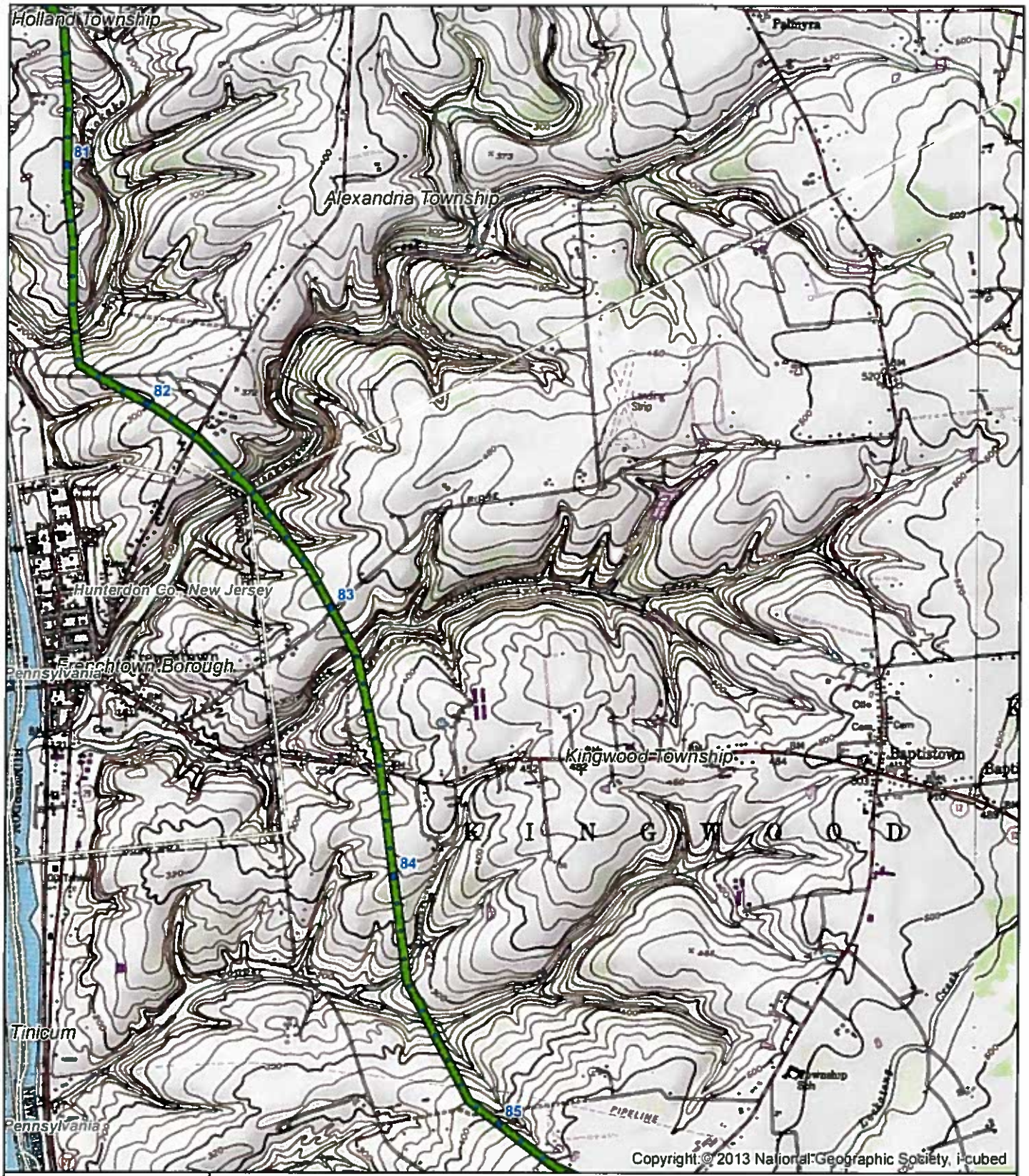


PennEast PIPELINE

PennEast Pipeline Company, LLC



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Reference: USGS Topographic Quadrangle

Legend

- Mile Postings
- PennEast Pipeline
- Municipality Boundary
- County Boundary

TITLE:

PennEast Pipeline Project
USGS Topographic Quadrangle Map

LOC: Frenchtown Quadrangle			REV.:
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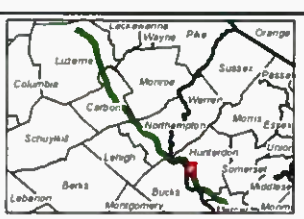
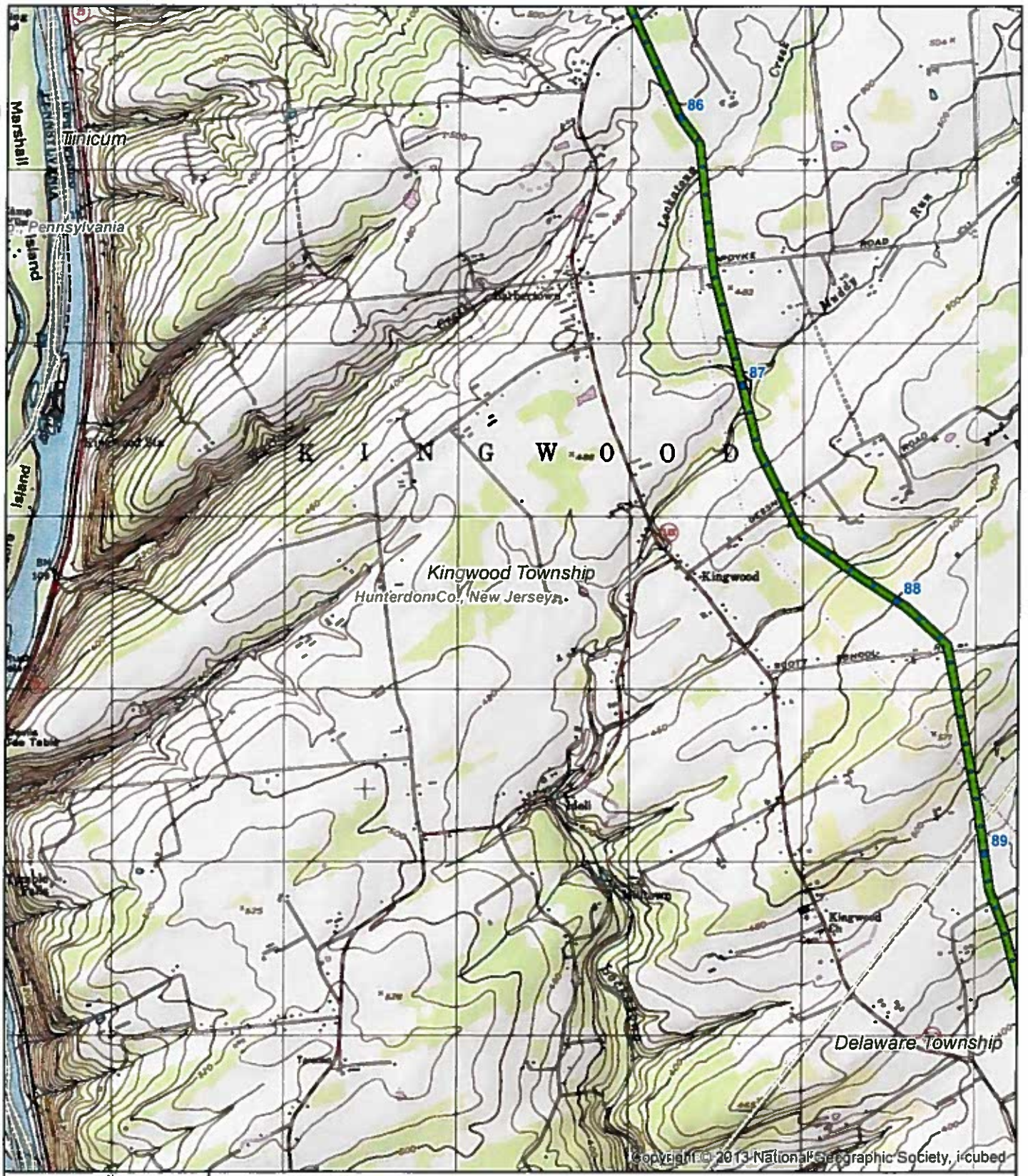


PennEast PIPELINE

PennEast Pipeline Company, LLC



Reference: USGS Topographic Quadrangle

Legend

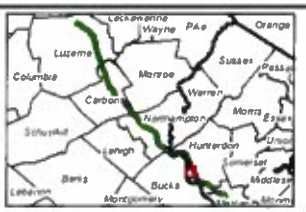
Mile Postings | PennEast Pipeline | Municipality Boundary | County Boundary

0 800 1,600 3,200 Feet

TITLE:

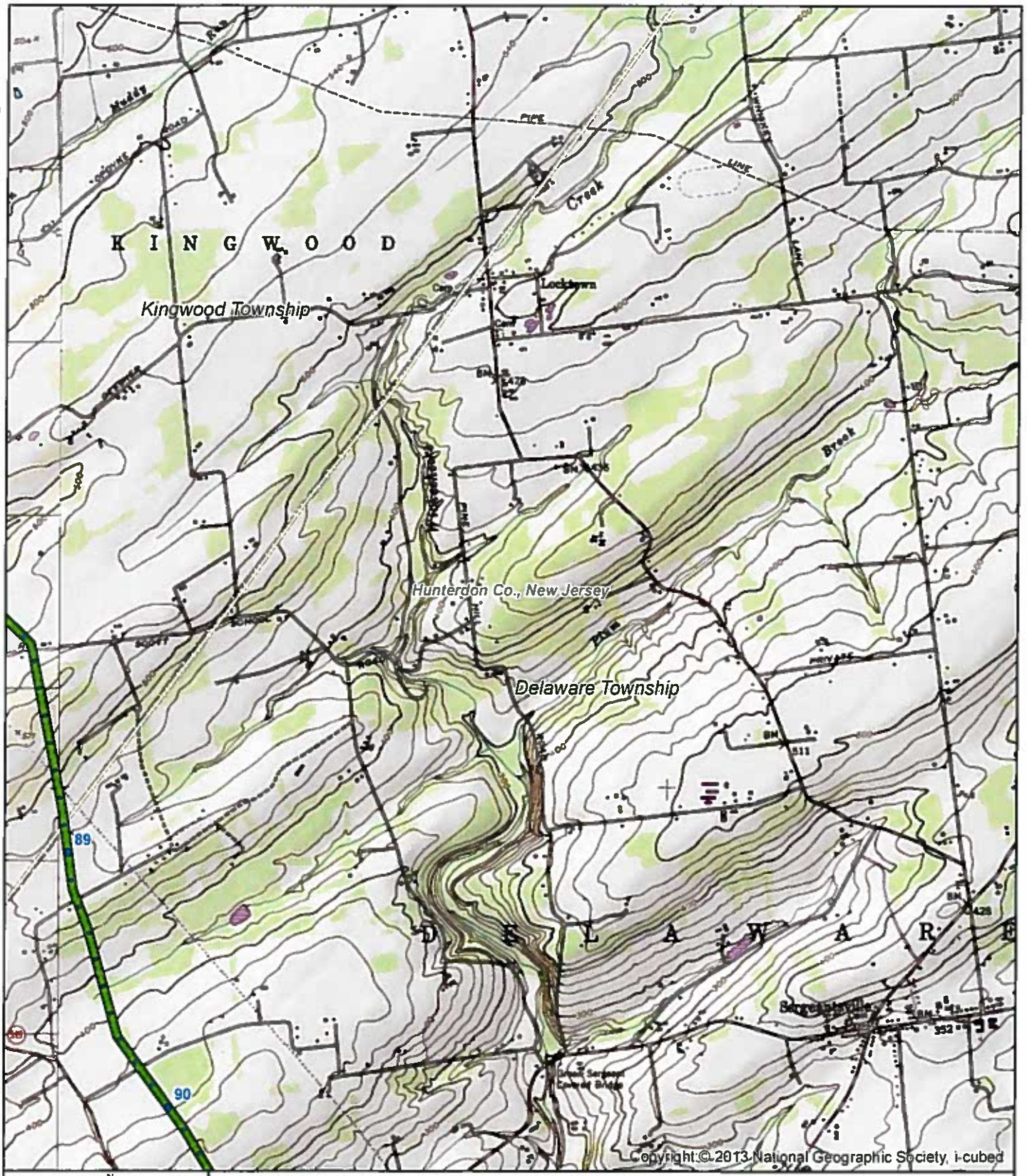
PennEast Pipeline Project
USGS Topographic Quadrangle Map

LOC: Lumberville Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 8/12/2014	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 30 of 36



PennEast PIPELINE

PennEast Pipeline Company, LLC



N W E S

0 800 1,600 3,200 Feet

Reference USGS Topographic Quadrangle

Legend

Mile Postings | PennEast Pipeline | Municipality Boundary | County Boundary

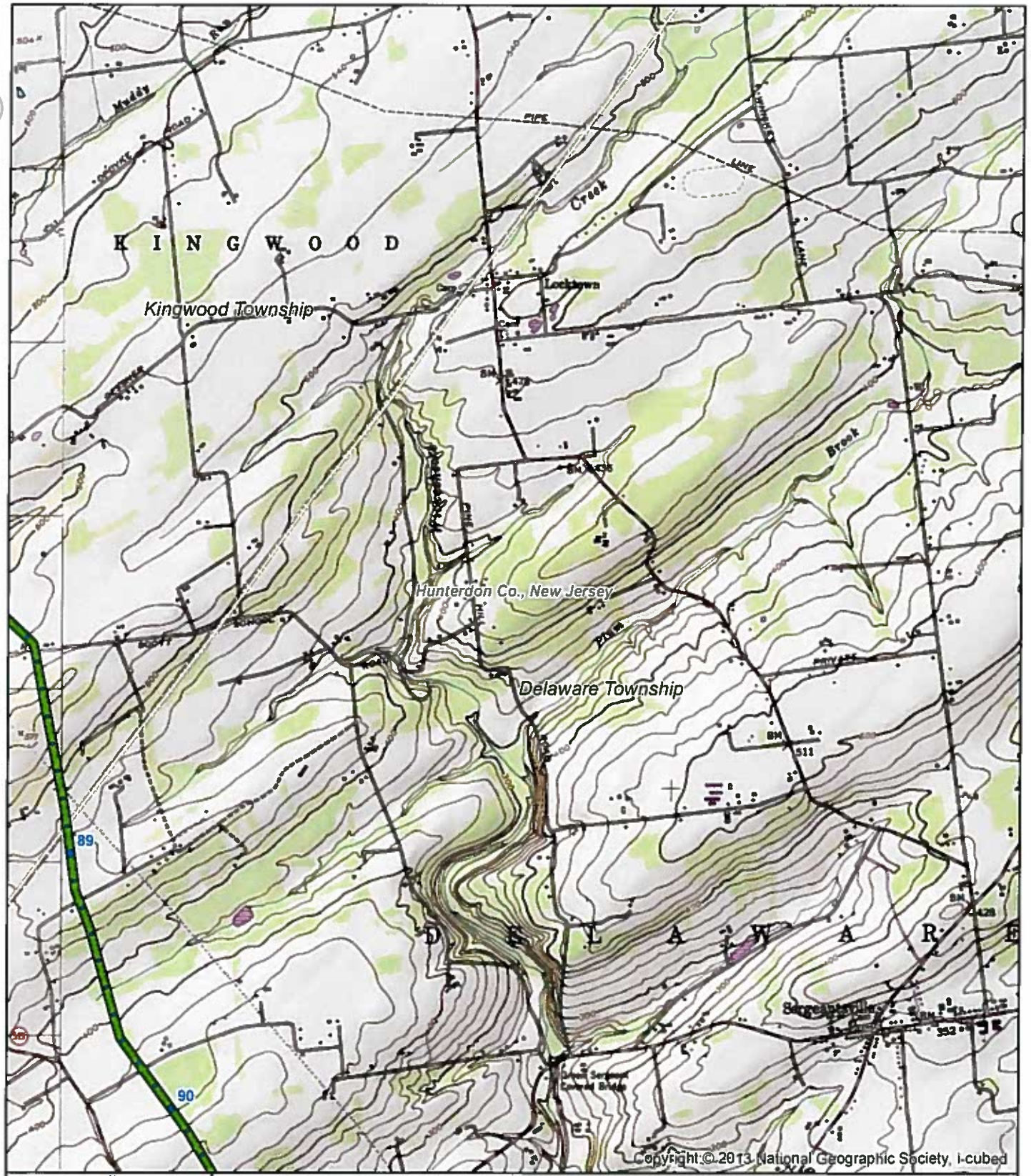
TITLE

PennEast Pipeline Project
USGS Topographic Quadrangle Map

LOC: Stockton Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 8/12/2014	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 31 of 36

PennEast PIPELINE

PennEast Pipeline Company, LLC



N
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0 800 1,600 3,200 Feet

Reference: USGS Topographic Quadrangle

Legend

Mile Postings | PennEast Pipeline | Municipality Boundary | County Boundary

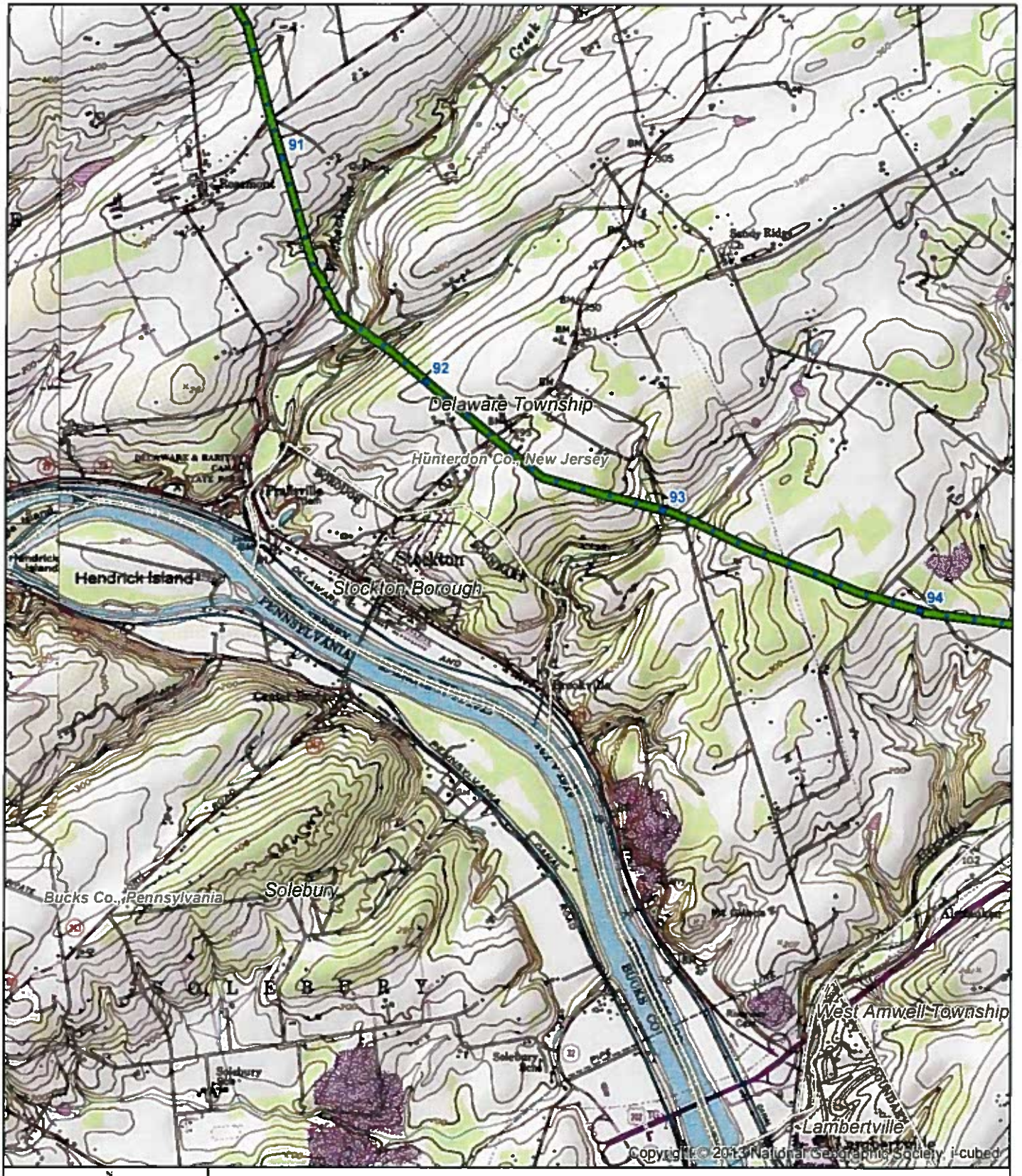
TITLE:

PennEast Pipeline Project
USGS Topographic Quadrangle Map

LOC: Stockton Quadrangle			REV:
CKD. BY: BH	ENG:	Date: 8/12/2014	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 31 of 36

PennEast PIPELINE

PennEast Pipeline Company, LLC



N
W E
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0 800 1,600 3,200 Feet

Reference: USGS Topographic Quadrangle

Legend

Mile Postings | PennEast Pipeline | Municipality Boundary | County Boundary

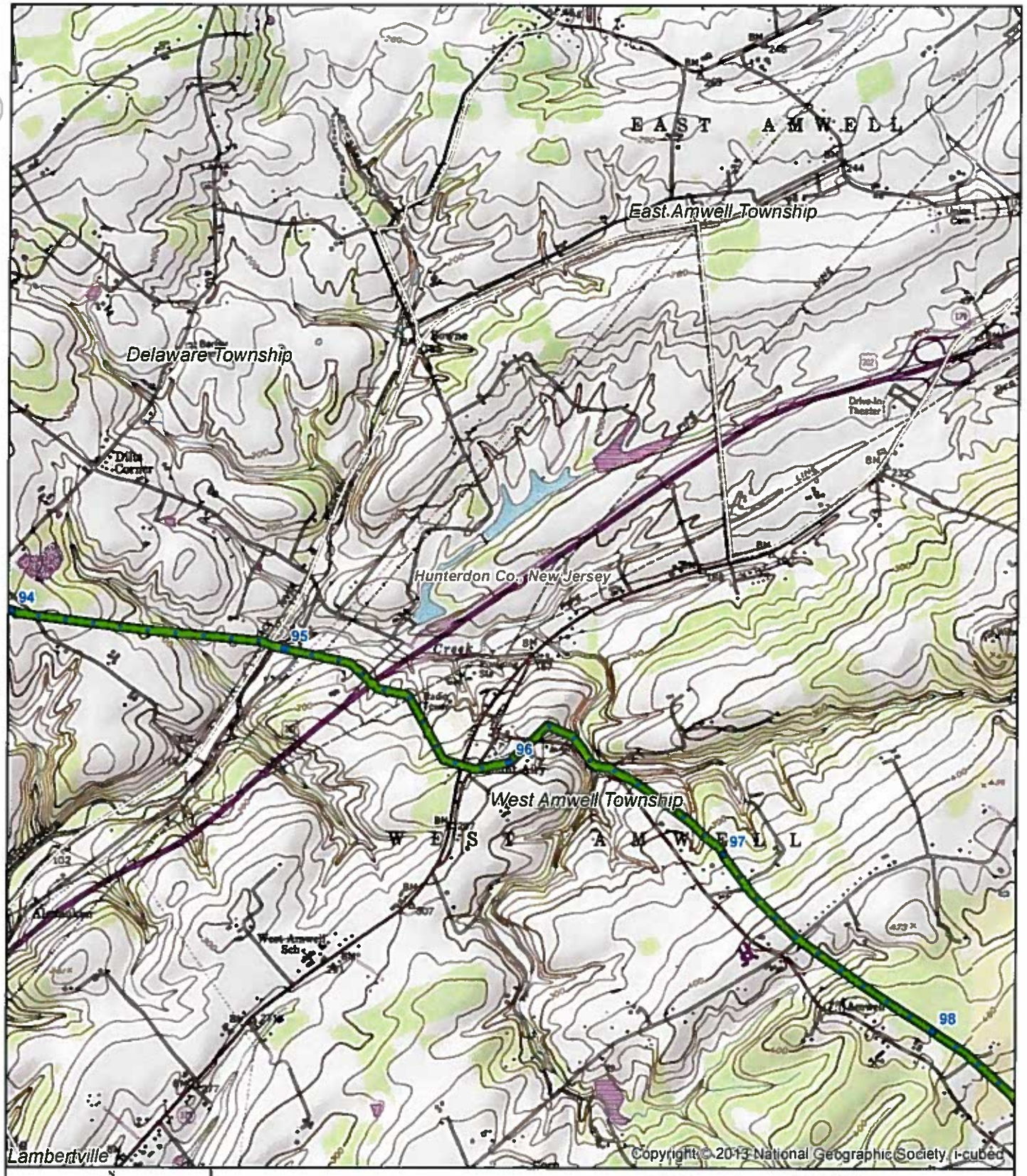
TITLE:

PennEast Pipeline Project
USGS Topographic Quadrangle Map

LOC: Stockton Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 8/12/2014	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 32 of 36

PennEast PIPELINE

PennEast Pipeline Company, LLC



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0 800 1,600 3,200 Feet

Reference: USGS Topographic Quadrangle

Legend

Mile Postings | PennEast Pipeline | Municipality Boundary | County Boundary

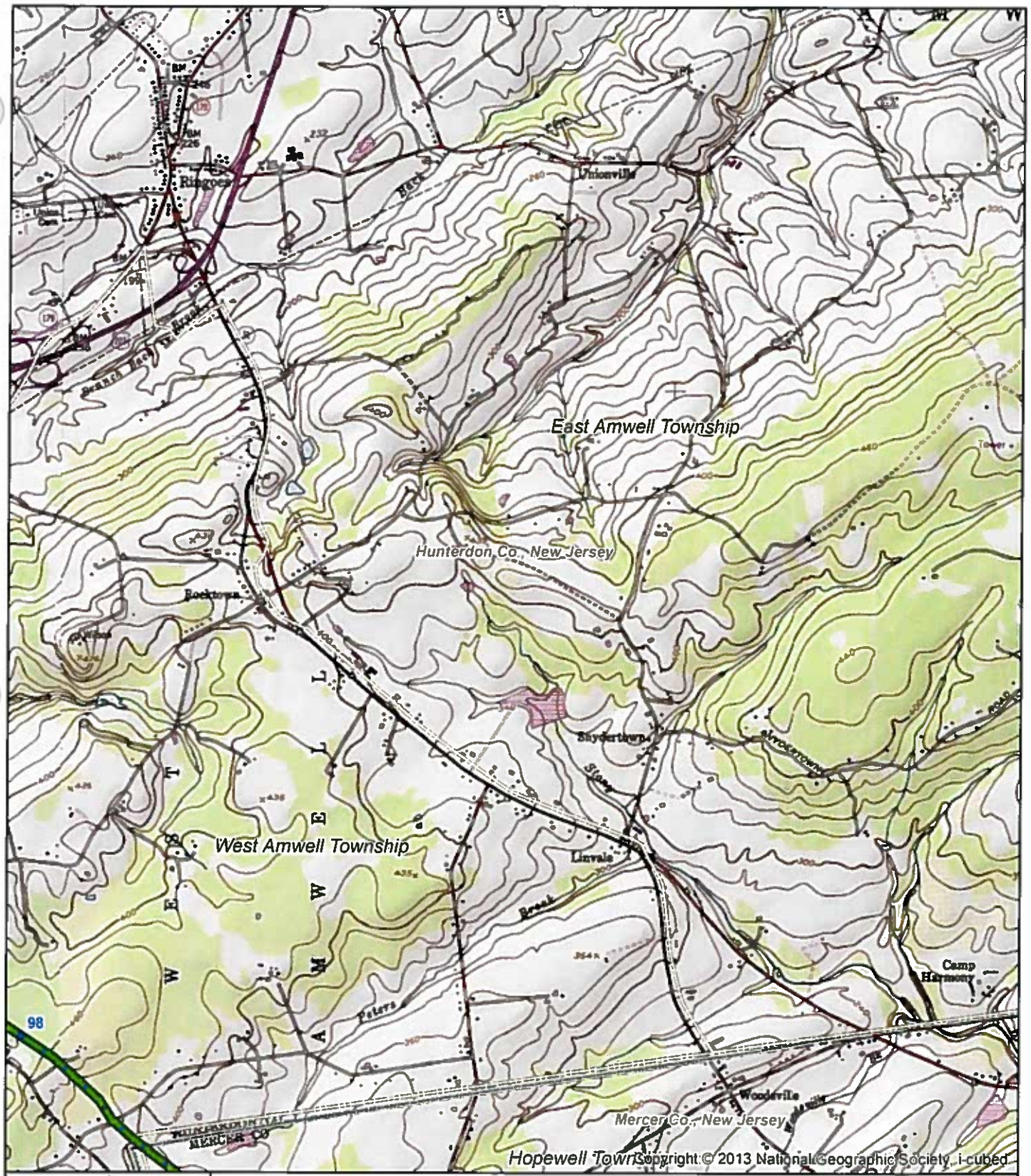
TITLE:

PennEast Pipeline Project
USGS Topographic Quadrangle Map

LOC: Stockton Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 8/12/2014	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 33 of 36

PennEast PIPELINE

PennEast Pipeline Company, LLC



N
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0 800 1,600 3,200 Feet

Reference: USGS Topographic Quadrangle

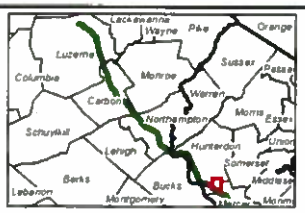
Legend

Mile Postings | PennEast Pipeline | Municipality Boundary | County Boundary

TITLE:

PennEast Pipeline Project
USGS Topographic Quadrangle Map

LOC: Hopewell Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 8/12/2014	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 34 of 36



PennEast PIPELINE

PennEast Pipeline Company, LLC

N W E S

0 800 1,600 3,200 Feet

Reference: USGS Topographic Quadrangle

Legend

- Mile Postings
- PennEast Pipeline
- Municipality Boundary
- County Boundary

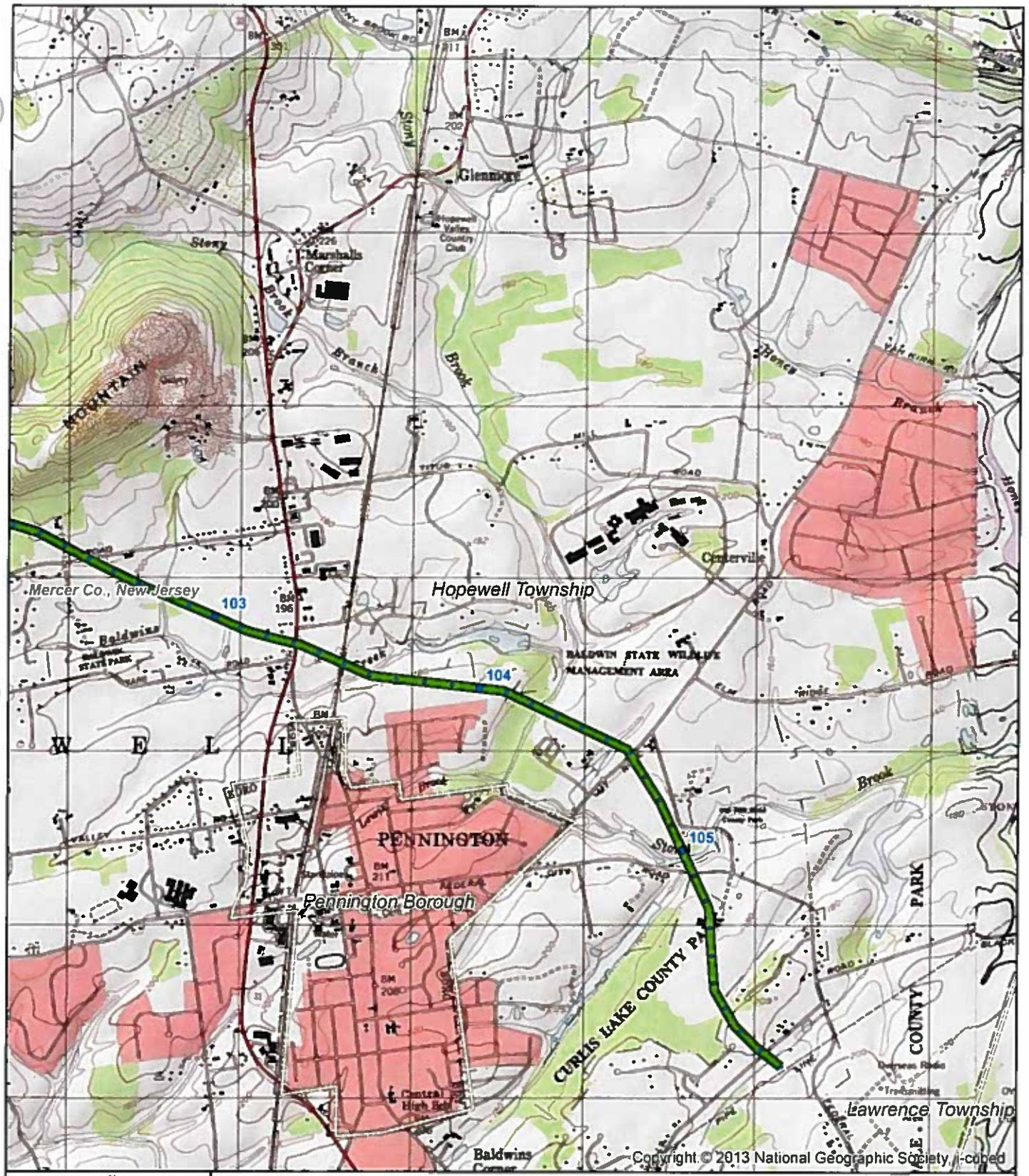
TITLE:

PennEast Pipeline Project
USGS Topographic Quadrangle Map

LOC: Pennington Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 8/12/2014	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 35 of 36

PennEast PIPELINE

PennEast Pipeline Company, LLC



N
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0 800 1,600 3,200 Feet

Reference: USGS Topographic Quadrangle

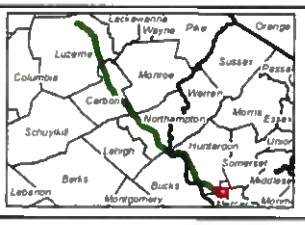
Legend

Mile Postings | PennEast Pipeline | Municipality Boundary | County Boundary

TITLE:

PennEast Pipeline Project
USGS Topographic Quadrangle Map

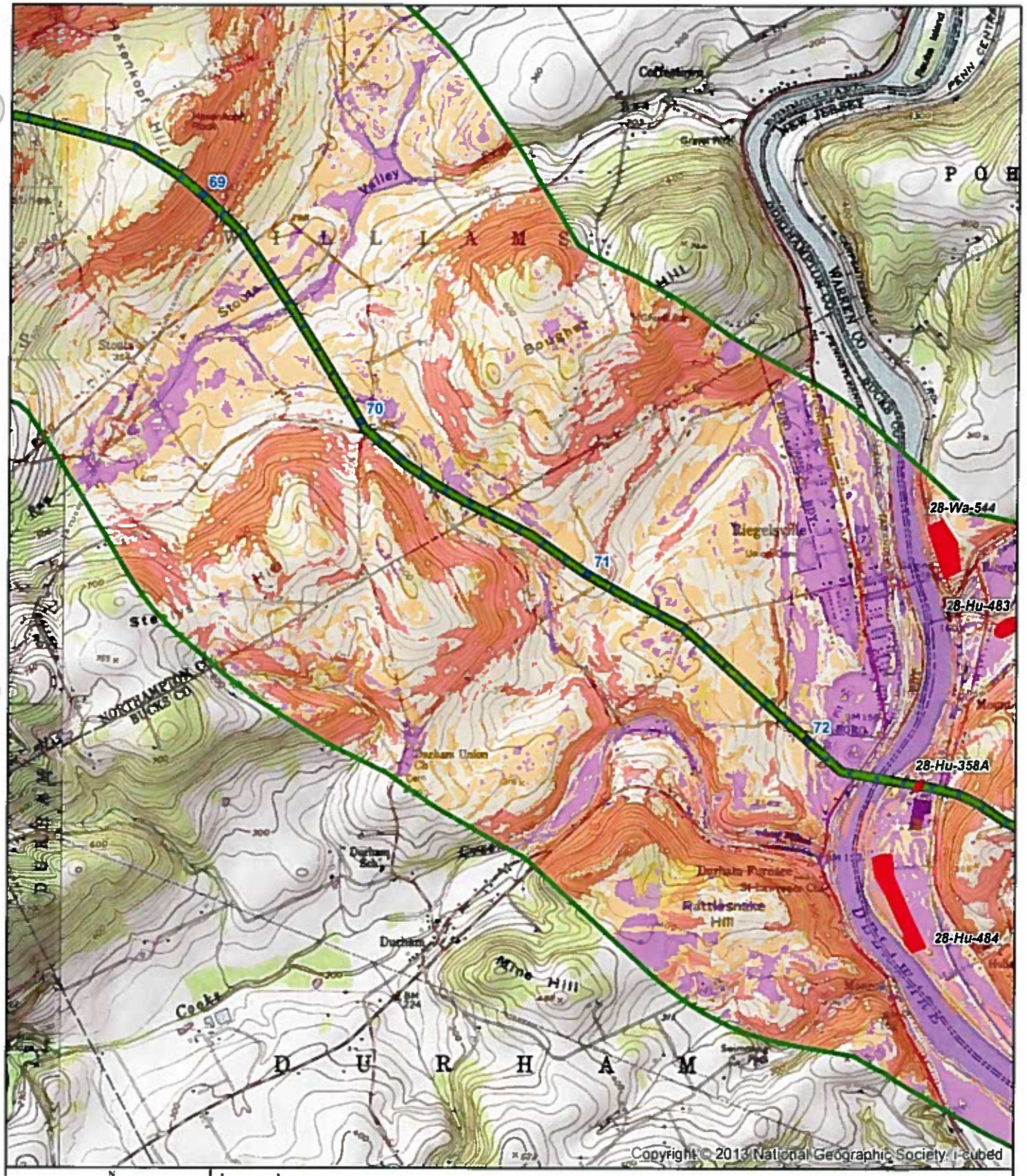
LOC: Pennington Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 8/12/2014	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 36 of 36



PennEast PIPELINE

PennEast Pipeline Company, LLC

ATTACHMENT B: Project Maps with Previously Recorded Archaeological Sites and Archaeological Sensitivity Model Overlay



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0 800 1,600 3,200 Feet

Legend

- Mile Postings
- PennEast Pipeline
- 1-Mile Study Area

Archaeological Sensitivity Model

- Low Sensitivity
- Moderate Sensitivity
- High Sensitivity
- Steep Slope (> 15%)
- Known Archaeological Site

State Boundary

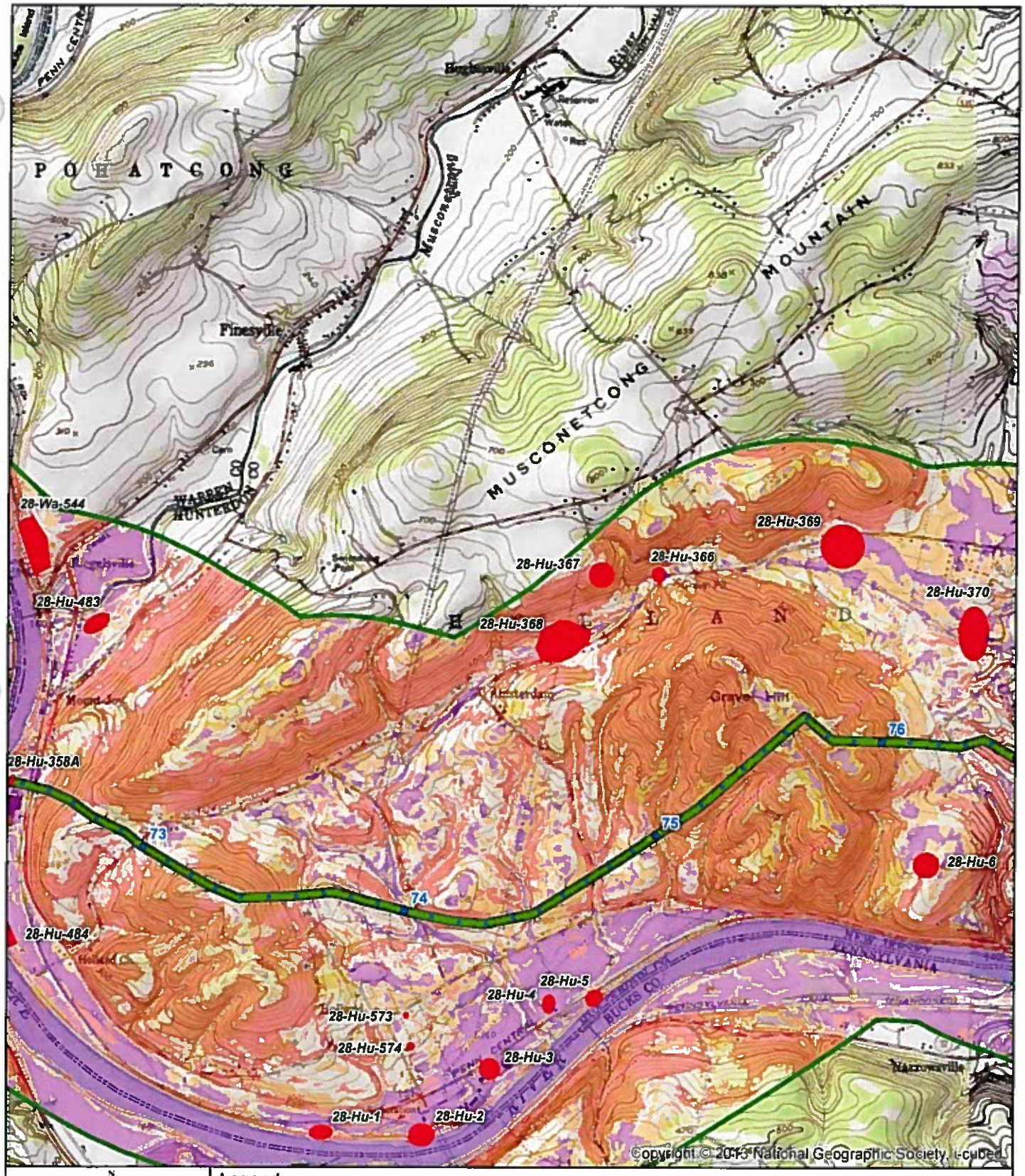
TITLE:

PennEast Pipeline Project
New Jersey Archaeological Resources

LOC: USGS Riegelsville Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 8/15/2014	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 1 of 12

PennEast PIPELINE

PennEast Pipeline Company, LLC



N
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0 800 1,600 3,200 Feet

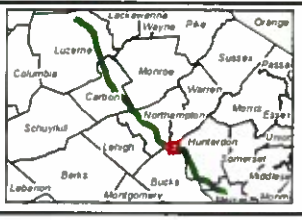
Legend

- Mile Postings
- PennEast Pipeline
- 1-Mile Study Area
- Archaeological Sensitivity Model
- Low Sensitivity
- Moderate Sensitivity
- High Sensitivity
- Steep Slope (> 15%)
- Known Archaeological Site
- State Boundary

TITLE:

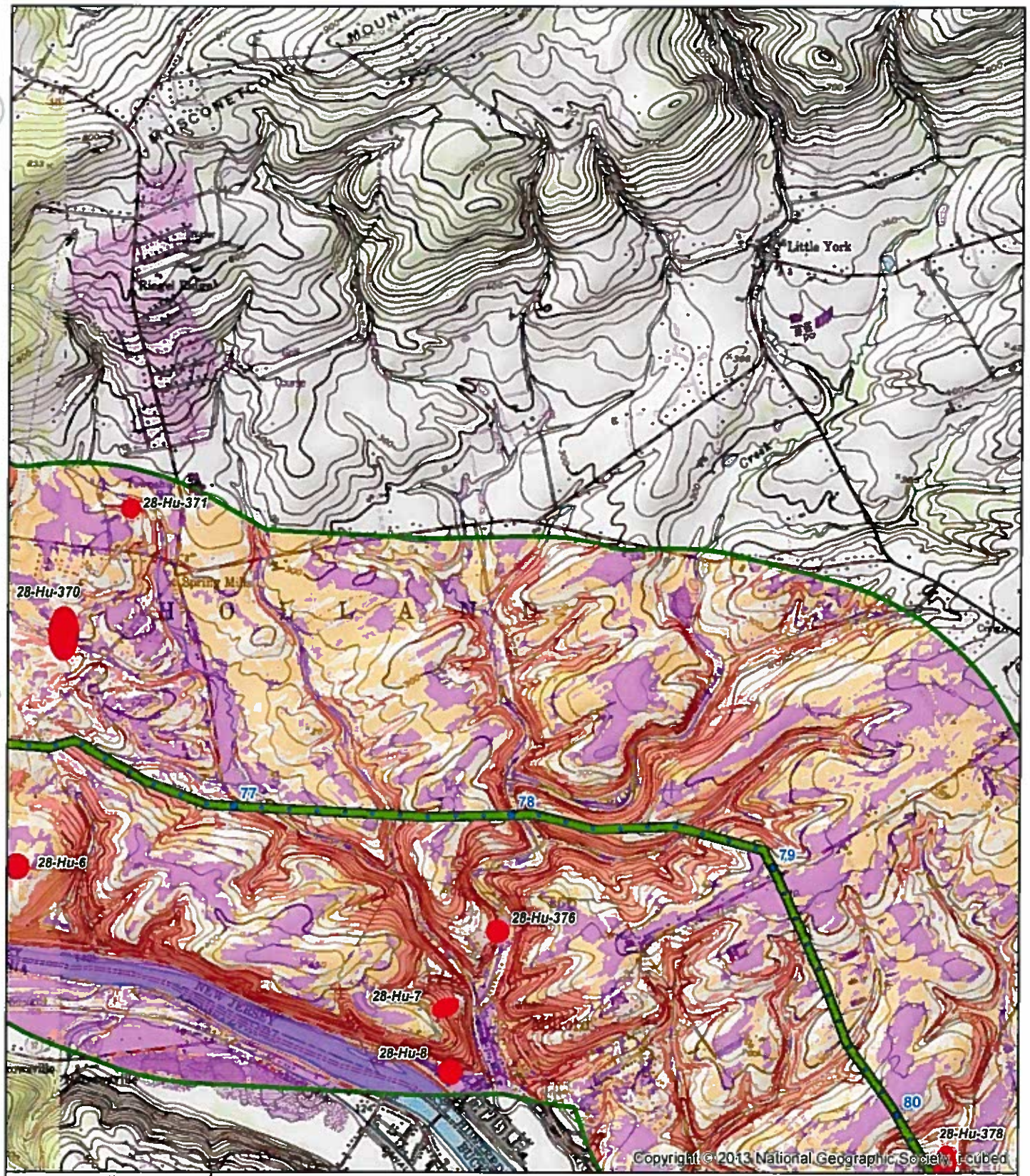
PennEast Pipeline Project
New Jersey Archaeological Resources

LOC: USGS Riegelsville Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 8/15/2014	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 2 of 12



PennEast PIPELINE

PennEast Pipeline Company, LLC



Legend

- Mile Postings
- PennEast Pipeline
- 1-Mile Study Area
- Archaeological Sensitivity Model
- Low Sensitivity
- Moderate Sensitivity
- High Sensitivity
- Steep Slope (> 15%)
- Known Archaeological Site
- State Boundary

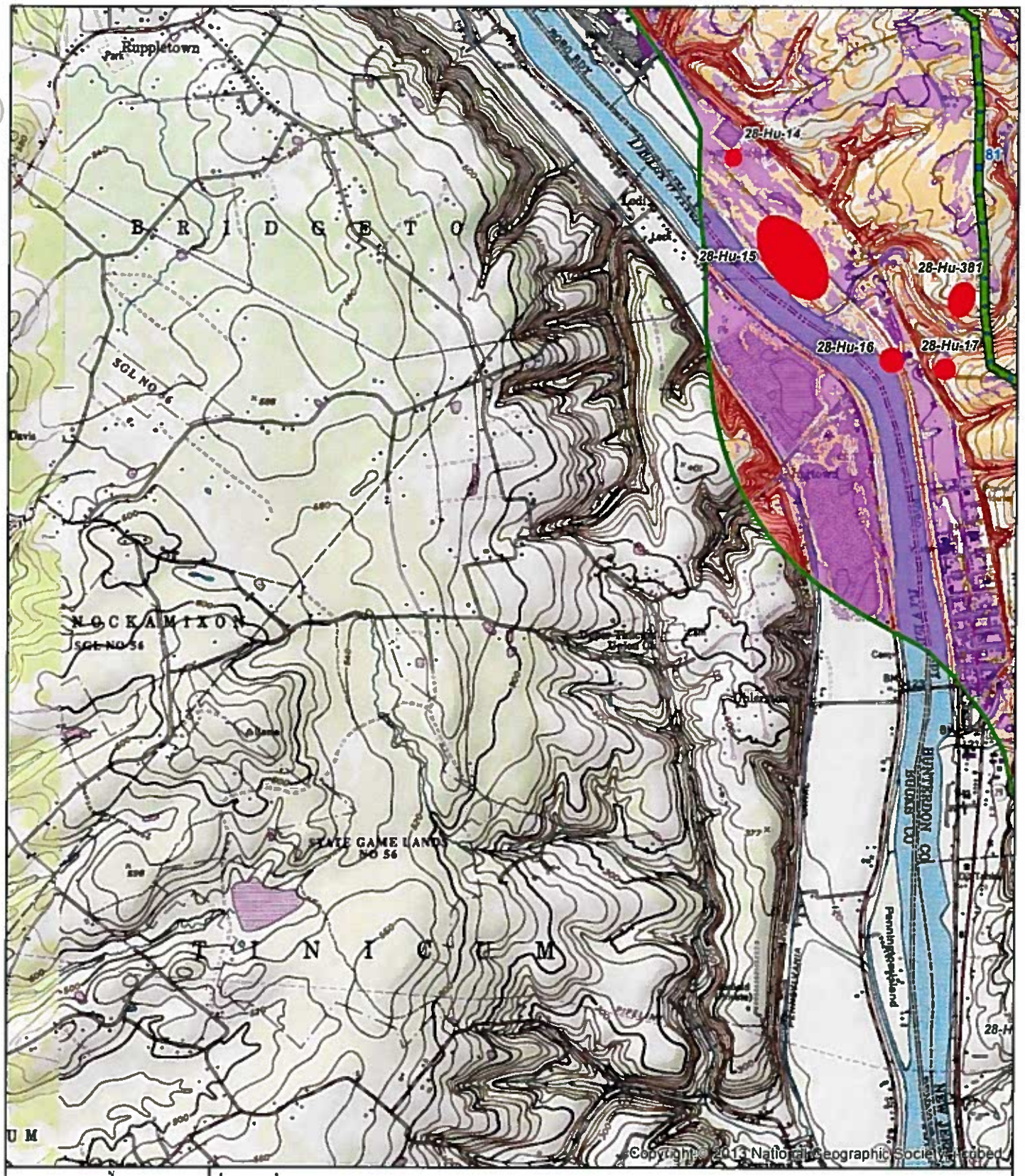
TITLE:

PennEast Pipeline Project
New Jersey Archaeological Resources

LOC: USGS Frenchtown Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 8/15/2014	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 3 of 12

PennEast PIPELINE

PennEast Pipeline Company, LLC



N
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0 800 1,600 3,200 Feet

Legend

- Mile Postings
- PennEast Pipeline
- 1-Mile Study Area
- Archaeological Sensitivity Model
- Low Sensitivity
- Moderate Sensitivity
- High Sensitivity
- Steep Slope (> 15%)
- Known Archaeological Site
- State Boundary

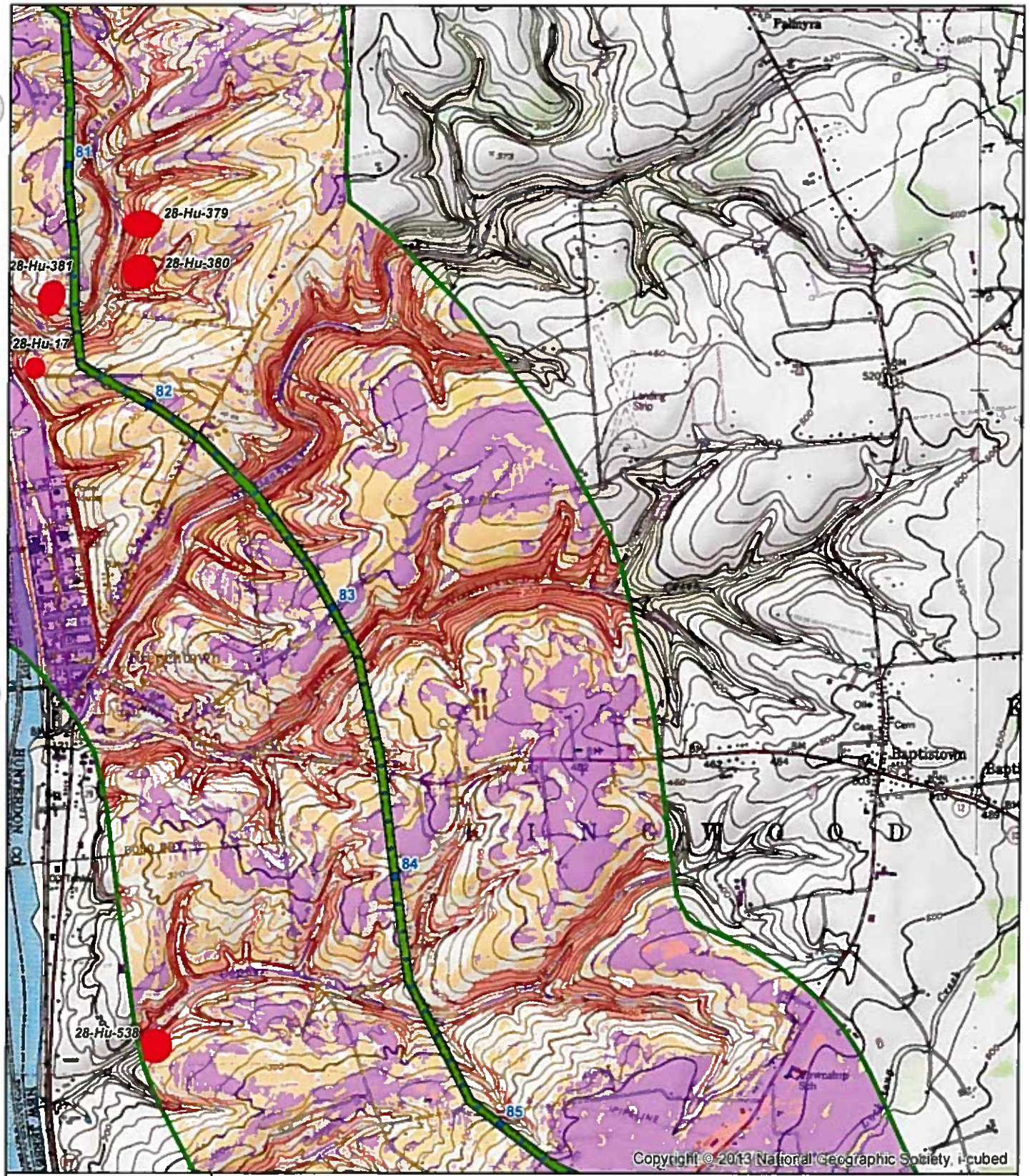
TITLE:

PennEast Pipeline Project
New Jersey Archaeological Resources

LOC: USGS Frenchtown Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 8/15/2014	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 4 of 12

PennEast PIPELINE

PennEast Pipeline Company, LLC



N
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0 800 1,600 3,200 Feet

Legend

- Mile Postings
- PennEast Pipeline
- 1-Mile Study Area
- Archaeological Sensitivity Model
- Low Sensitivity
- Moderate Sensitivity
- High Sensitivity
- Steep Slope (> 15%)
- Known Archaeological Site
- State Boundary

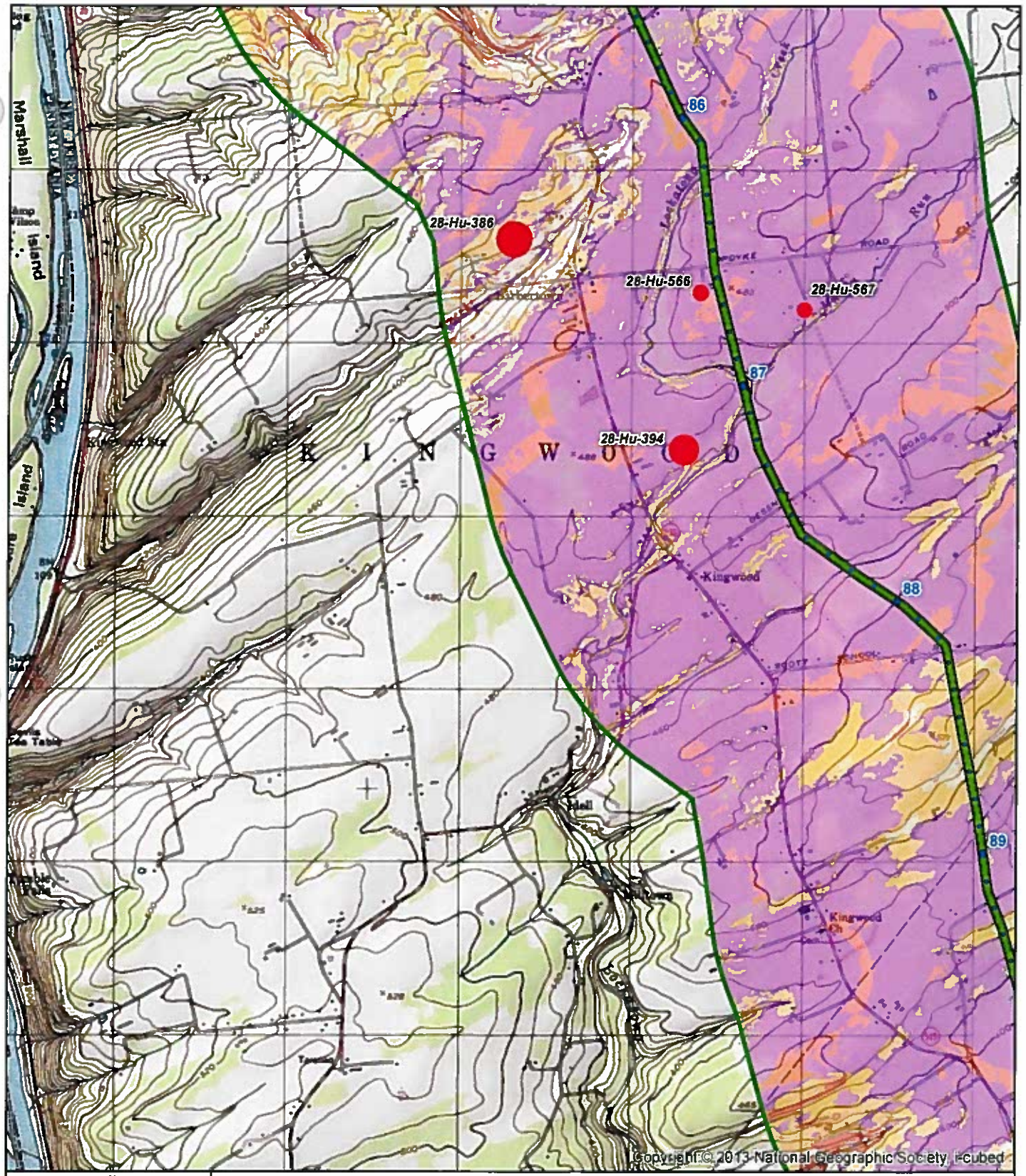
TITLE:

PennEast Pipeline Project
New Jersey Archaeological Resources

LOC: USGS Frenchtown Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 8/15/2014	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 5 of 12

PennEast PIPELINE

PennEast Pipeline Company, LLC



N
W E
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0 800 1,600 3,200 Feet

Legend

- Mile Postings
- PennEast Pipeline
- 1-Mile Study Area
- Archaeological Sensitivity Model
- Low Sensitivity
- Moderate Sensitivity
- High Sensitivity
- Steep Slope (> 15%)
- Known Archaeological Site
- State Boundary

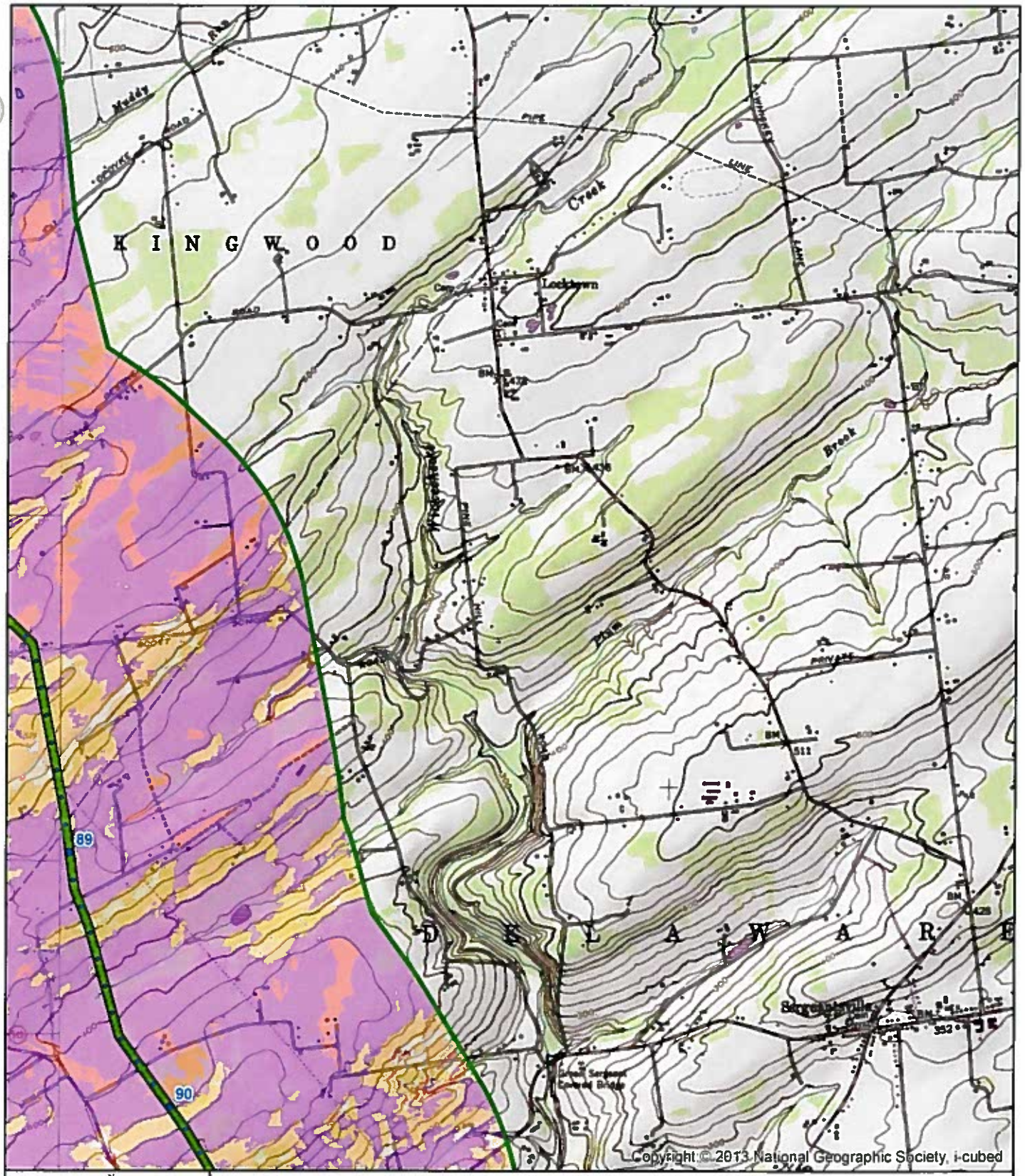
TITLE:

PennEast Pipeline Project
New Jersey Archaeological Resources

LOC: USGS Lumberville Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 8/15/2014	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 6 of 12

PennEast PIPELINE

PennEast Pipeline Company, LLC



N
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0 800 1,600 3,200 Feet

Legend

- Mile Postings
- PennEast Pipeline
- 1-Mile Study Area

Archaeological Sensitivity Model

- Low Sensitivity
- Moderate Sensitivity
- High Sensitivity
- Steep Slope (> 15%)
- Known Archaeological Site

State Boundary

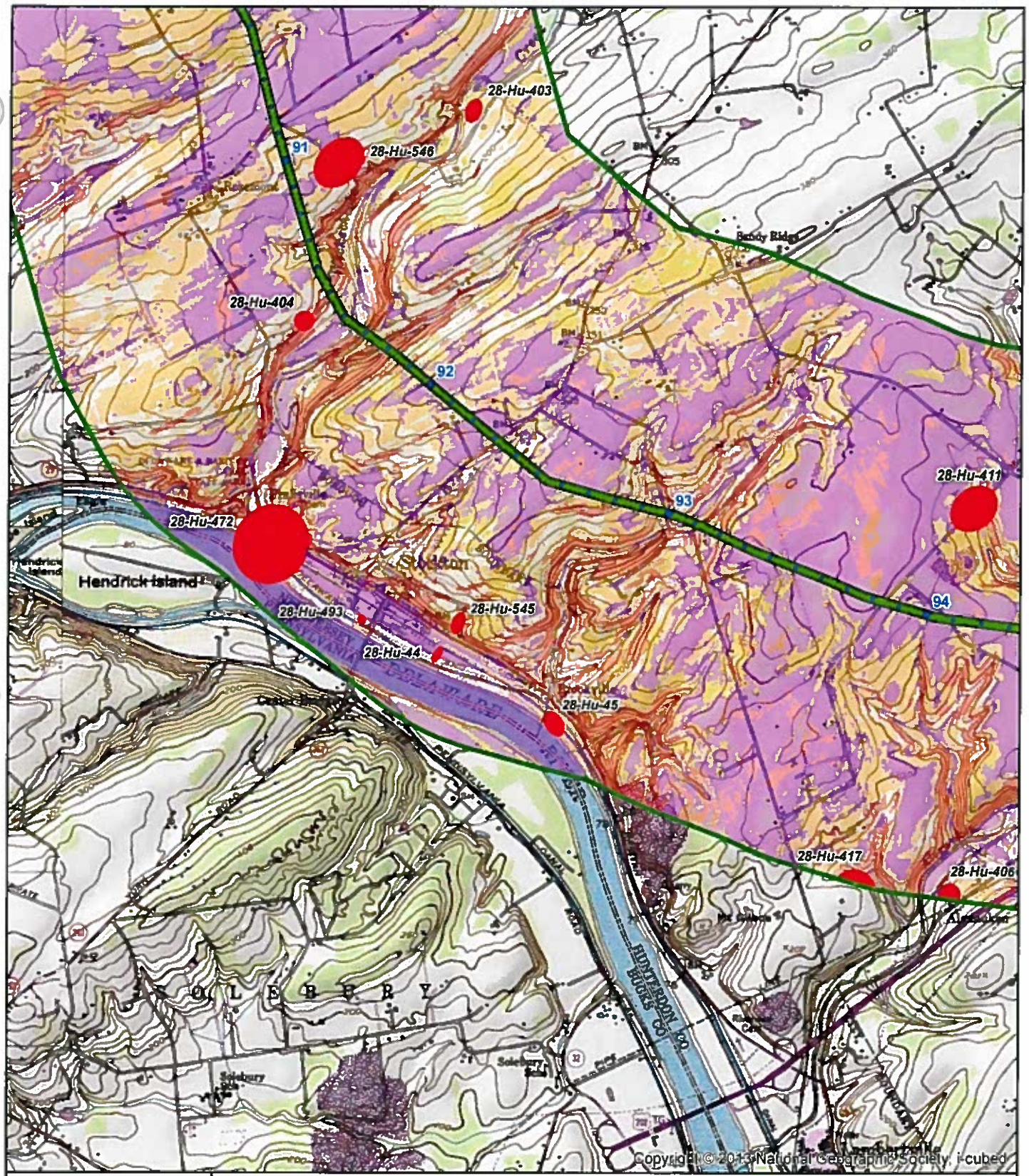
TITLE

PennEast Pipeline Project
New Jersey Archaeological Resources

LOC: USGS Stockton Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 8/15/2014	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 7 of 12

PennEast PIPELINE

PennEast Pipeline Company, LLC



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0 800 1,600 3,200 Feet

Legend

- Mile Postings
- PennEast Pipeline
- 1-Mile Study Area

Archaeological Sensitivity Model

- Low Sensitivity
- Moderate Sensitivity
- High Sensitivity
- Steep Slope (> 15%)
- Known Archaeological Site

State Boundary

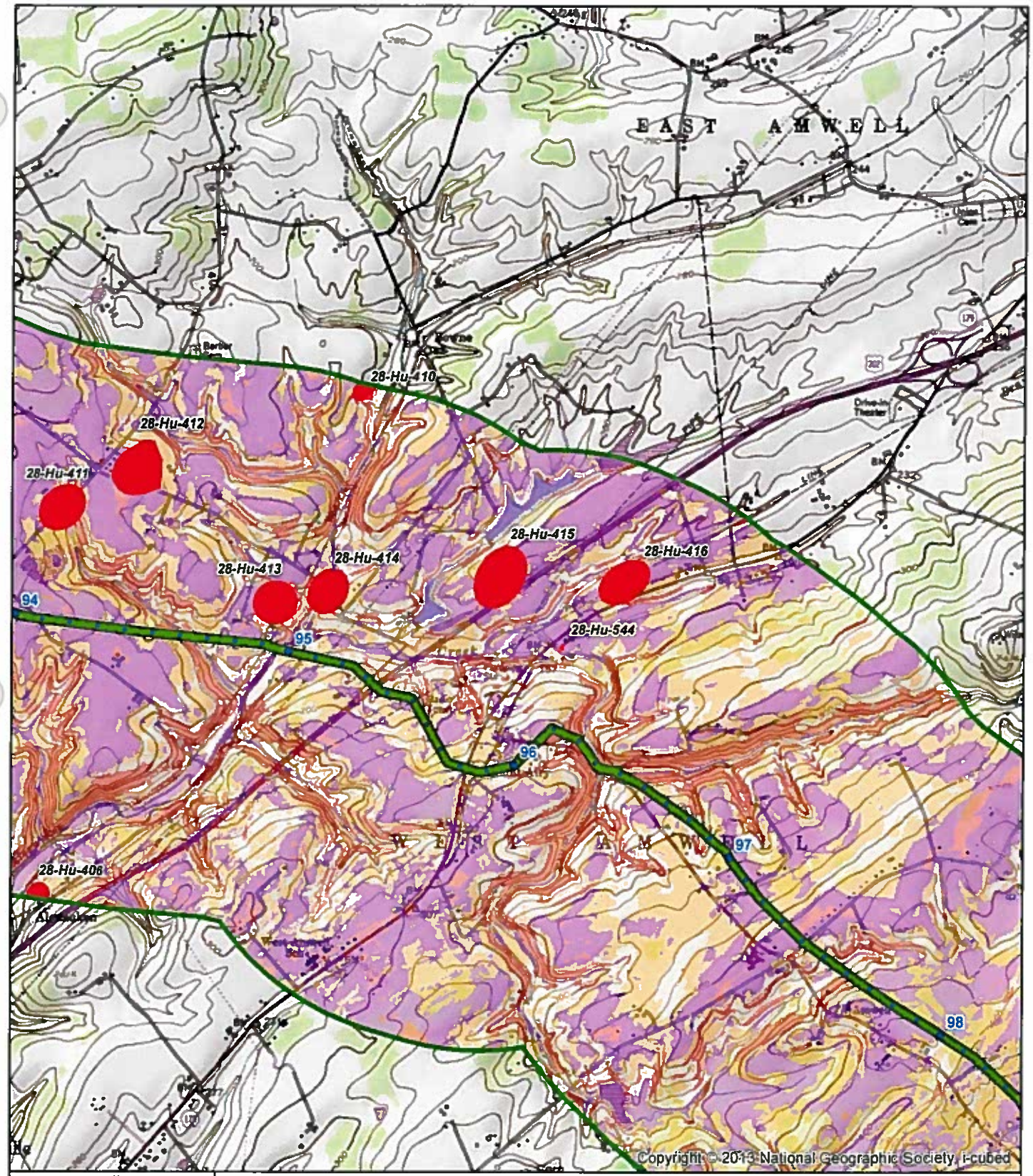
TITLE:

PennEast Pipeline Project
New Jersey Archaeological Resources

LOC: USGS Stockton Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 8/15/2014	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 8 of 12

PennEast PIPELINE

PennEast Pipeline Company, LLC



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0 800 1,600 3,200 Feet

Legend

- Mile Postings
- PennEast Pipeline
- 1-Mile Study Area

Archaeological Sensitivity Model

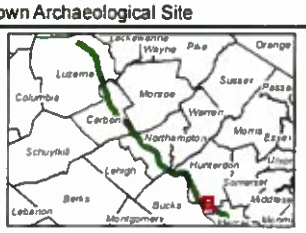
- Low Sensitivity
- Moderate Sensitivity
- High Sensitivity
- Steep Slope (> 15%)
- Known Archaeological Site

State Boundary

TITLE:

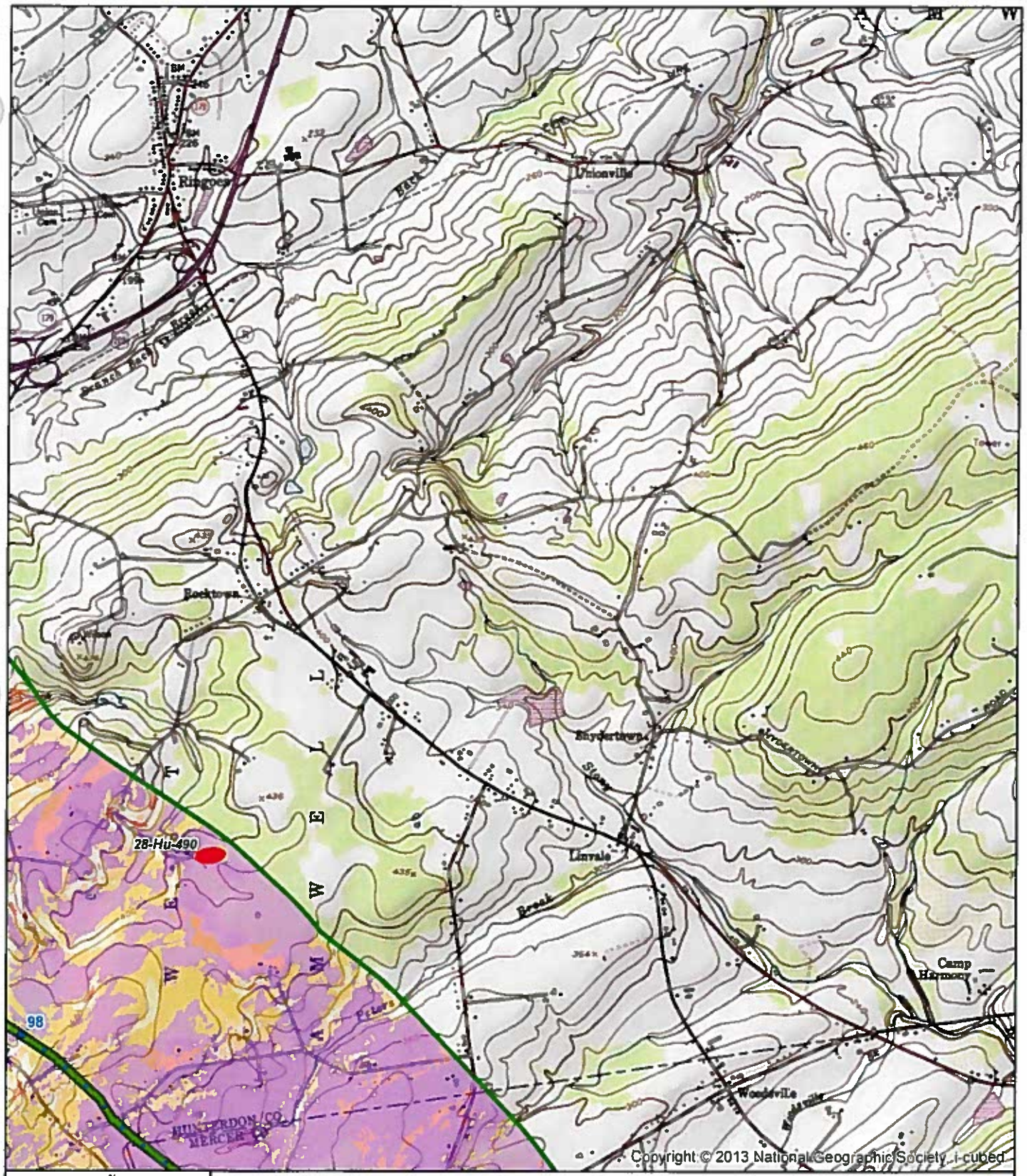
PennEast Pipeline Project
New Jersey Archaeological Resources

LOC: USGS Stockton Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 8/15/2014	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 9 of 12



PennEast PIPELINE

PennEast Pipeline Company, LLC



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0 800 1,600 3,200 Feet

Legend

- Mile Postings
- PennEast Pipeline
- 1-Mile Study Area
- Archaeological Sensitivity Model
- Low Sensitivity
- Moderate Sensitivity
- High Sensitivity
- Steep Slope (> 15%)
- Known Archaeological Site
- State Boundary

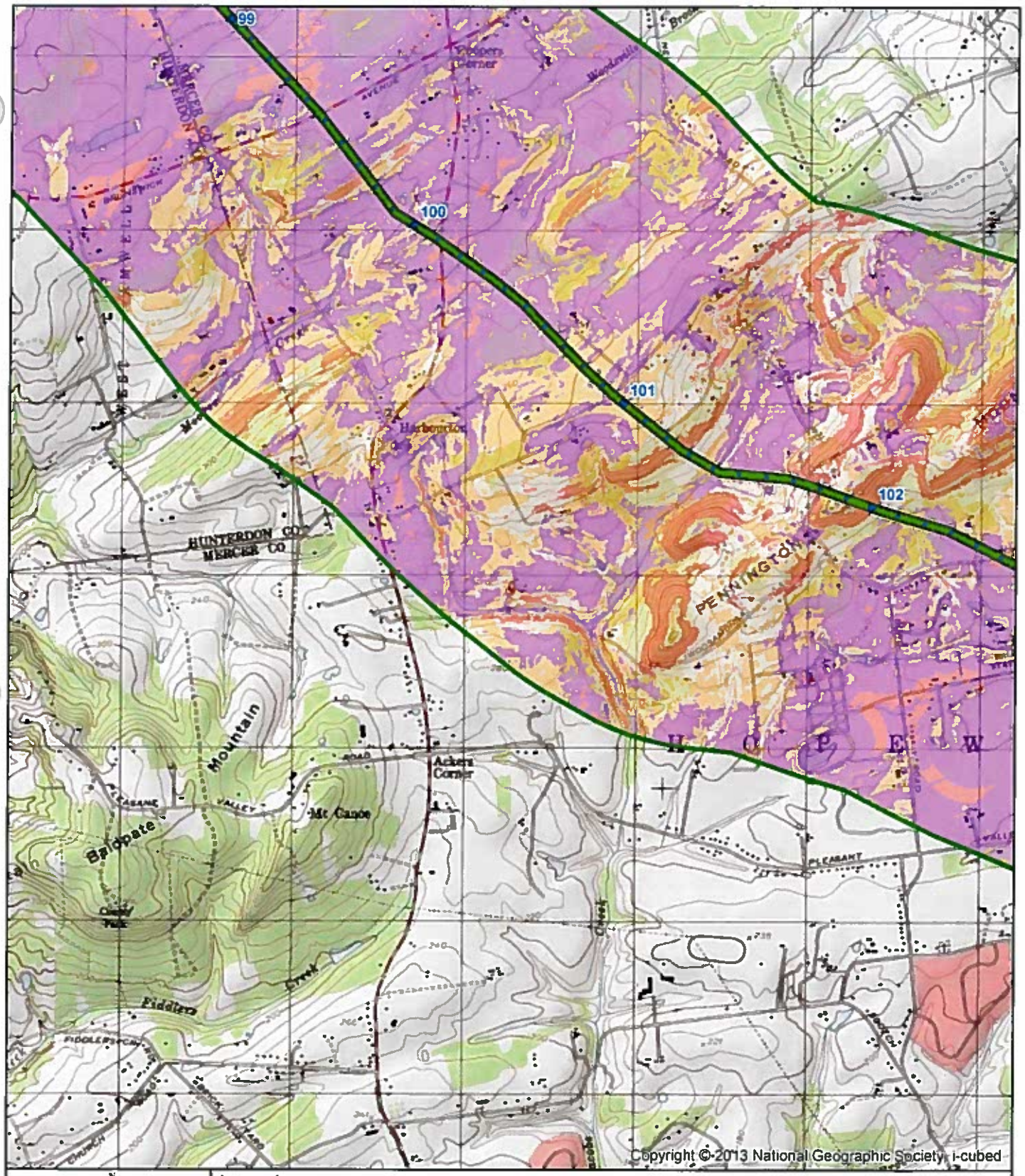
TITLE:

PennEast Pipeline Project
New Jersey Archaeological Resources

LOC: USGS Hopewell Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 8/15/2014	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 10 of 12

PennEast PIPELINE

PennEast Pipeline Company, LLC



N
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0 800 1,600 3,200 Feet

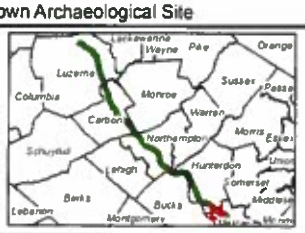
Legend

- Mile Postings
- PennEast Pipeline
- 1-Mile Study Area
- Archaeological Sensitivity Model
- Low Sensitivity
- Moderate Sensitivity
- High Sensitivity
- Steep Slope (> 15%)
- Known Archaeological Site
- State Boundary

TITLE:

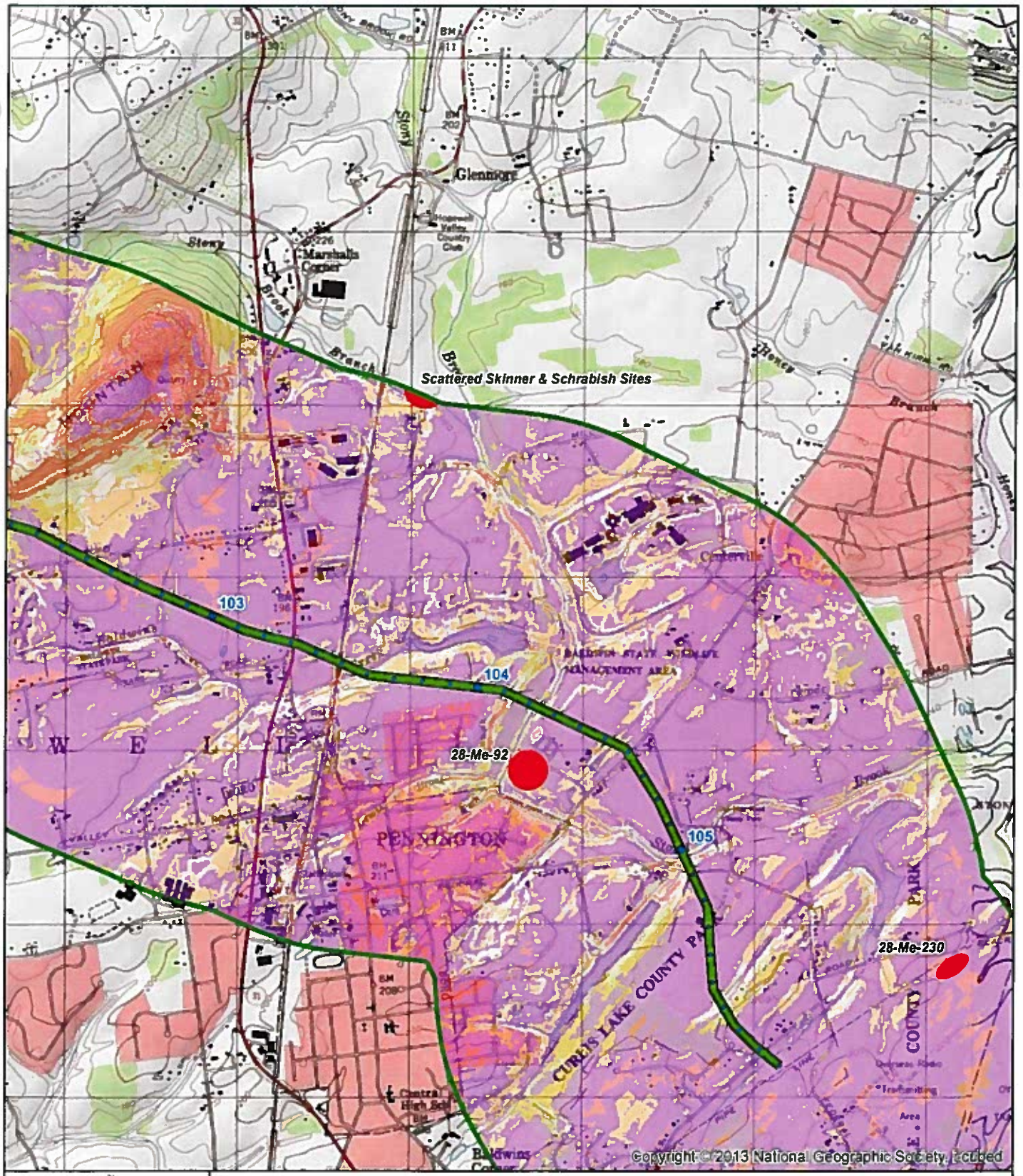
PennEast Pipeline Project
New Jersey Archaeological Resources

LOC: USGS Pennington Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 8/15/2014	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 11 of 12



PennEast PIPELINE

PennEast Pipeline Company, LLC



N
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0 800 1,600 3,200 Feet

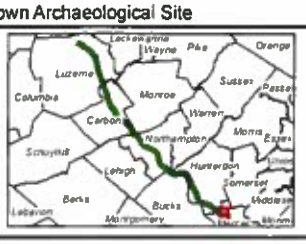
Legend

- Mile Postings
- PennEast Pipeline
- 1-Mile Study Area
- Archaeological Sensitivity Model
- Low Sensitivity
- Moderate Sensitivity
- High Sensitivity
- Steep Slope (> 15%)
- Known Archaeological Site
- State Boundary

TITLE:

PennEast Pipeline Project
New Jersey Archaeological Resources

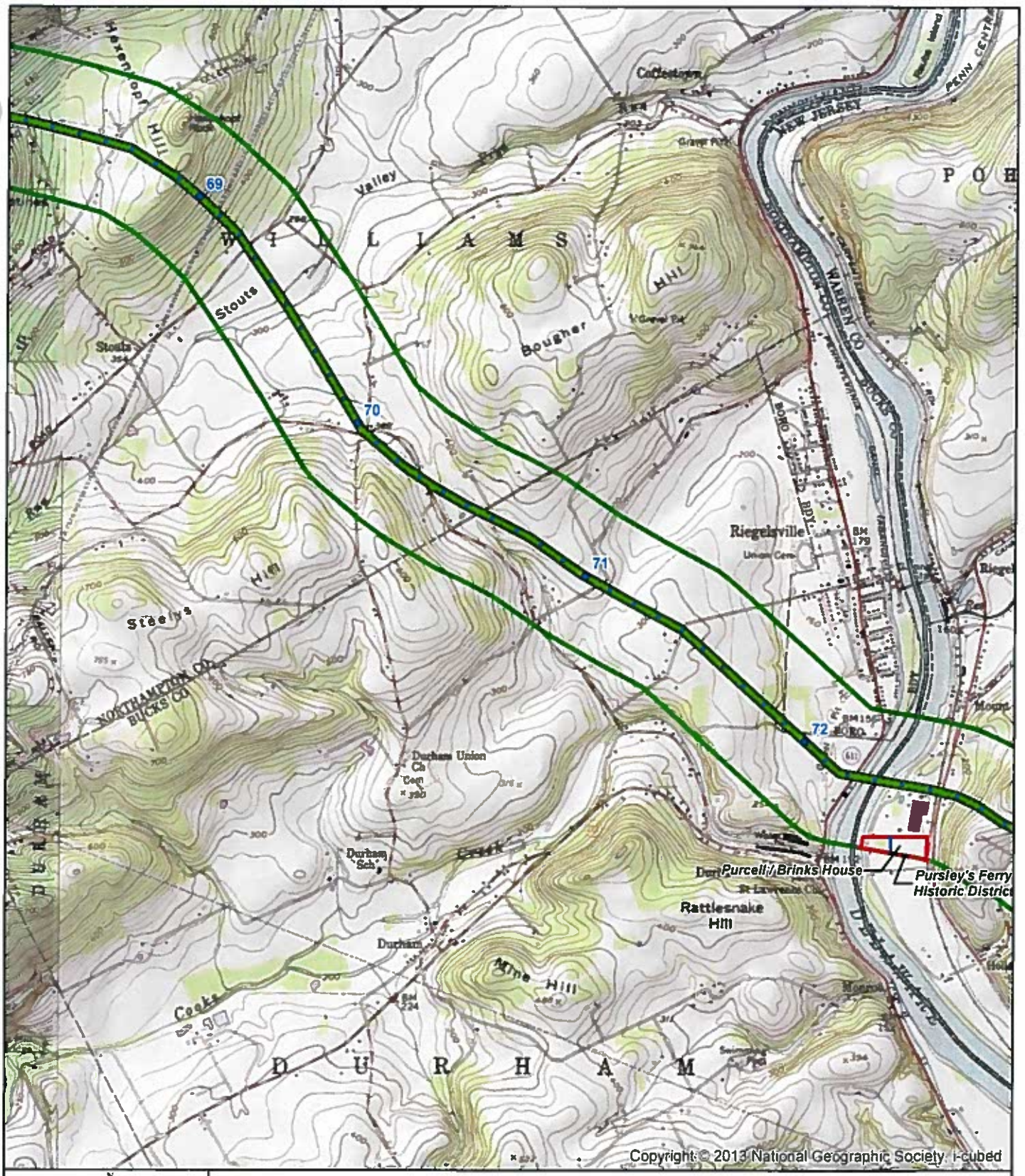
LOC: USGS Pennington Quadrangle			REV:
CKD. BY: BH	ENG.:	Date: 8/15/2014	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 12 of 12



PennEast PIPELINE

PennEast Pipeline Company, LLC

ATTACHMENT C: Project Maps with Previously Recorded Architectural Resources



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0 800 1,600 3,200 Feet

- Mile Postings
- PennEast Pipeline
- 1/4 Mile Study Area
- Historic District (Listed)
- Historic District (Eligible)
- Historic District (Identified)
- Historic Property (Eligible)
- Historic Property (Listed)
- Historic Property (Identified)
- State Boundary

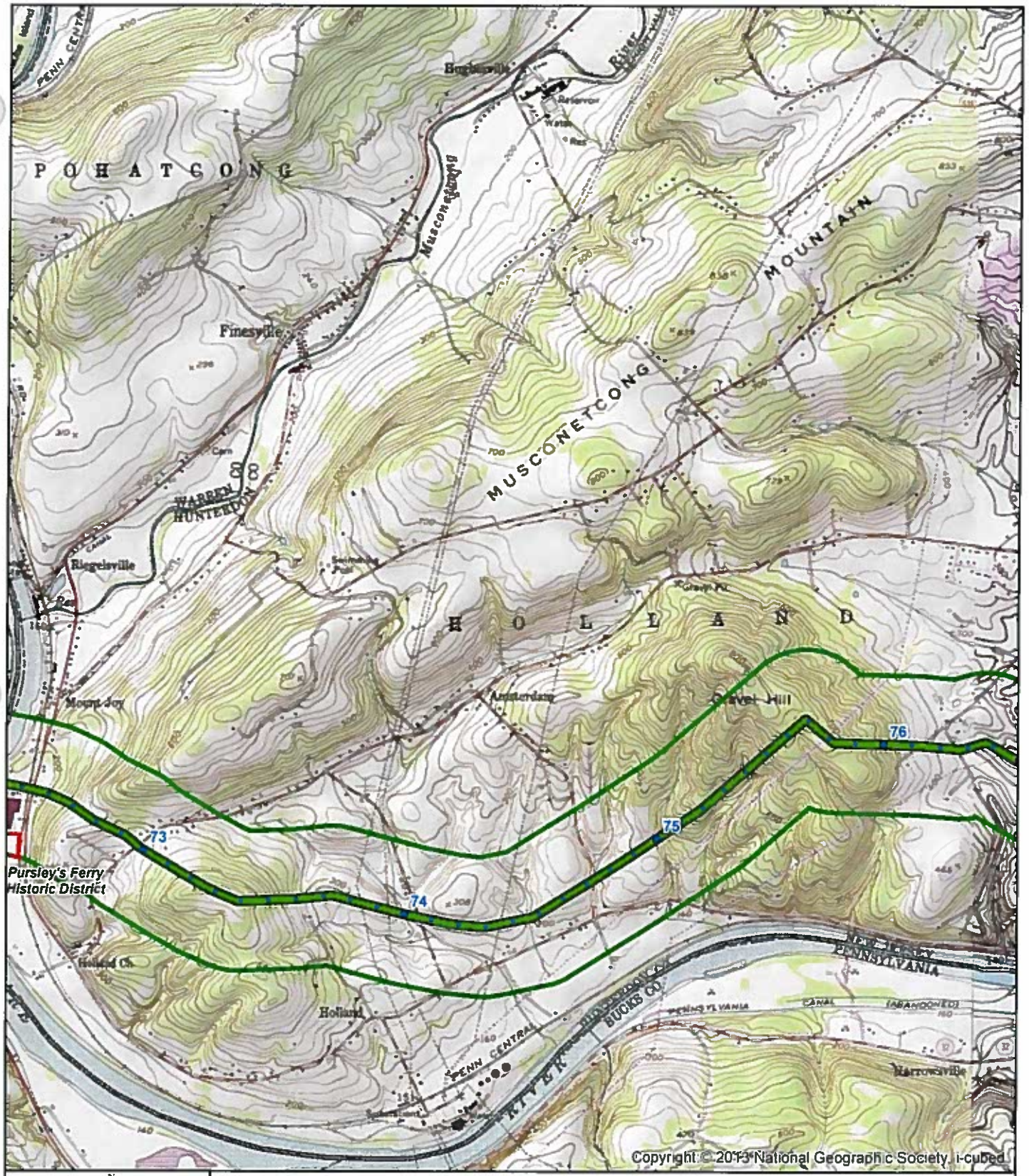
TITLE:

PennEast Pipeline Project
New Jersey Cultural and Historical Resources

LOC: USGS Riegelsville Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 8/18/2014	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 1 of 12

PennEast PIPELINE

PennEast Pipeline Company, LLC



N
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0 800 1,600 3,200 Feet

- Mile Postings
- PennEast Pipeline
- 1/4 Mile Study Area
- Historic District (Listed)
- Historic District (Eligible)
- Historic District (Identified)
- Historic Property (Eligible)
- Historic Property (Listed)
- Historic Property (Identified)
- State Boundary

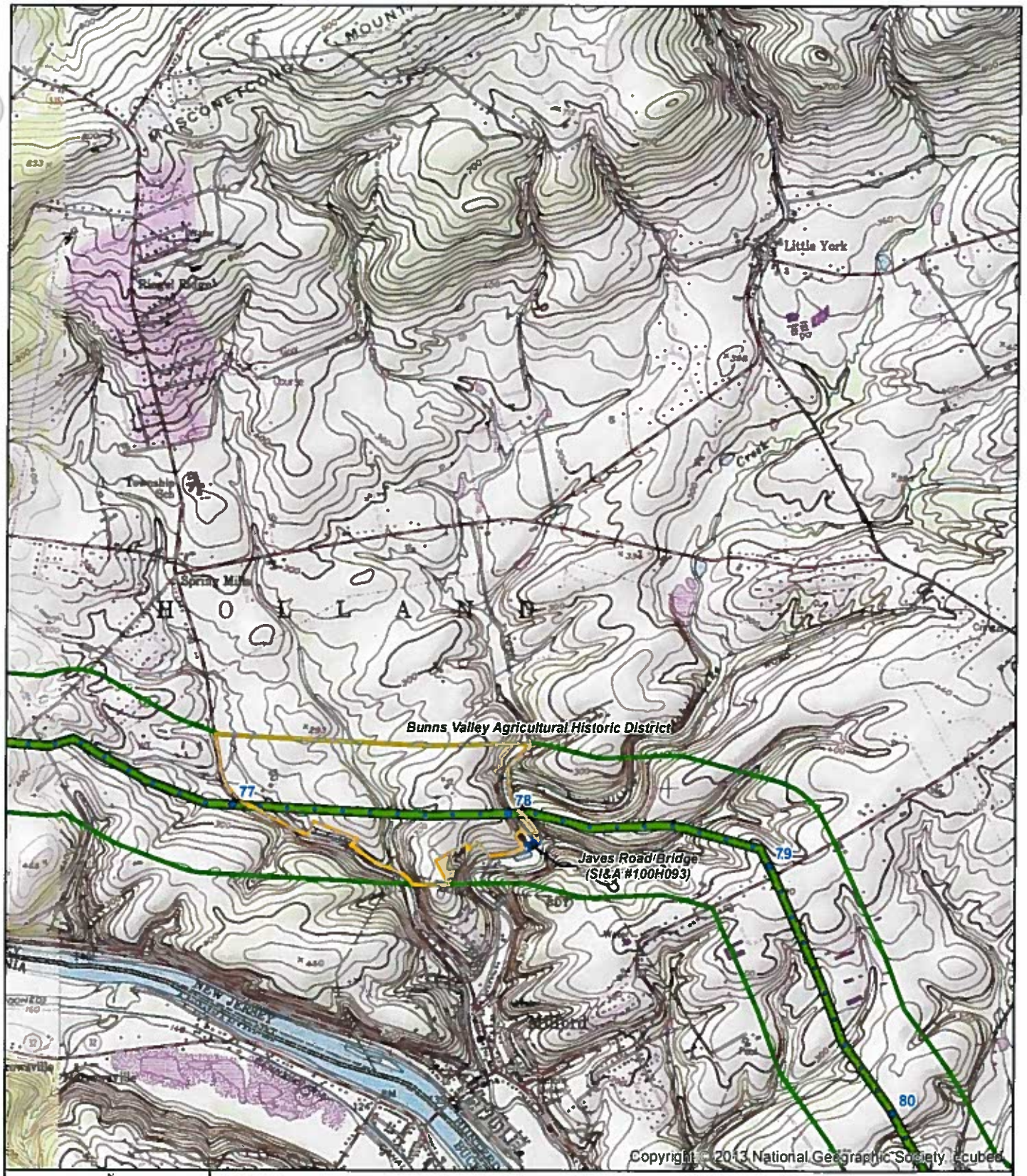
TITLE:

PennEast Pipeline Project
New Jersey Cultural and Historical Resources

LOC: USGS Riegelsville Quadrangle			REV:
CKD. BY: BH	ENG.:	Date: 8/18/2014	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 2 of 12

PennEast PIPELINE

PennEast Pipeline Company, LLC



N
W E
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0 800 1,600 3,200 Feet

- Mile Postings
- PennEast Pipeline
- 1/4 Mile Study Area
- Historic District (Listed)
- Historic District (Eligible)
- Historic District (Identified)
- Historic Property (Eligible)
- Historic Property (Listed)
- Historic Property (Identified)
- State Boundary

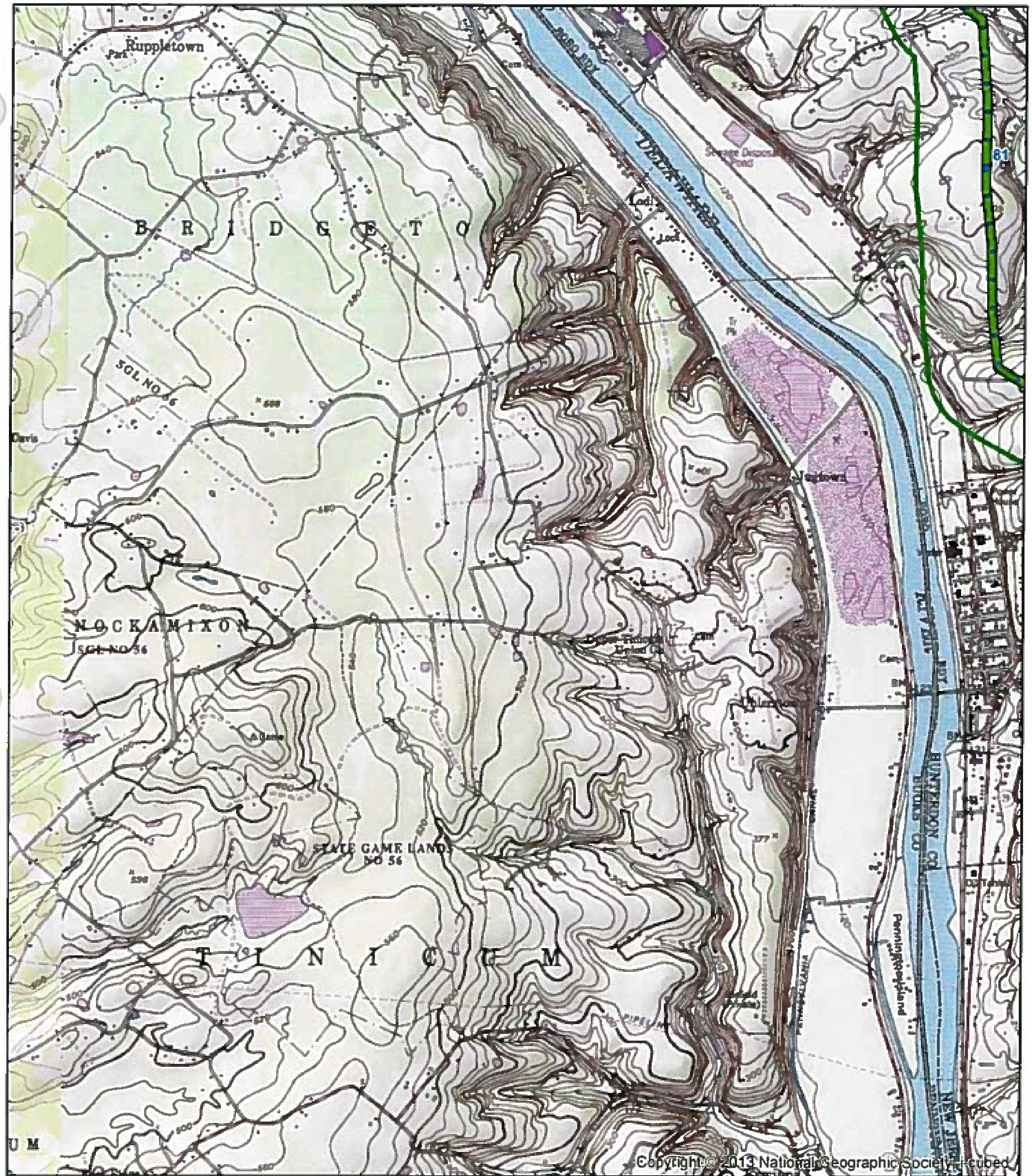
TITLE:

PennEast Pipeline Project
New Jersey Cultural and Historical Resources

LOC: USGS Frenchtown Quadrangle			REV:
CKD. BY: BH	ENG.:	Date: 8/18/2014	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 3 of 12

PennEast PIPELINE

PennEast Pipeline Company, LLC



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- Mile Postings
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- 1/4 Mile Study Area
- Historic District (Listed)
- Historic District (Eligible)
- Historic District (Identified)
- Historic Property (Eligible)
- Historic Property (Listed)
- Historic Property (Identified)
- State Boundary

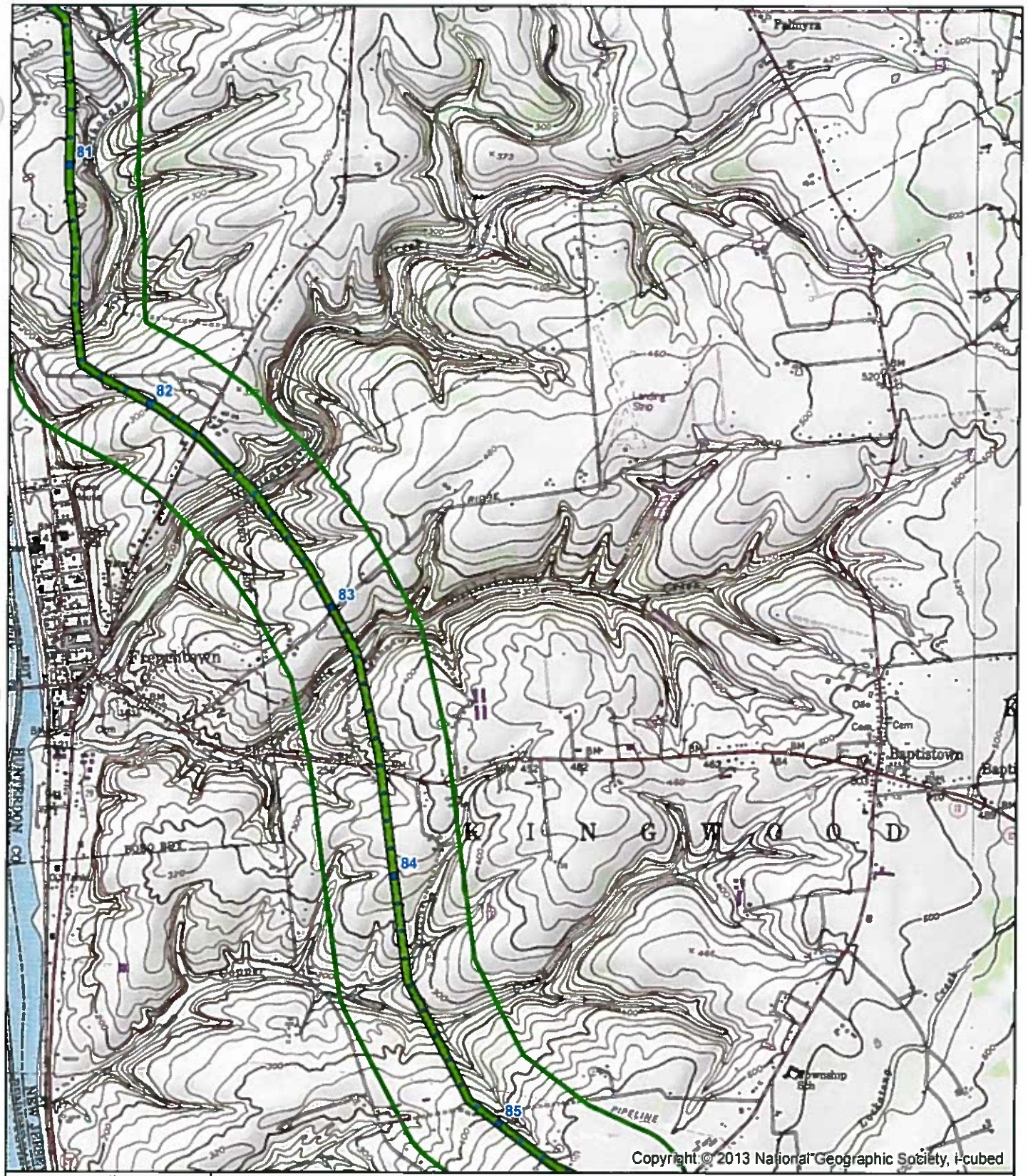
TITLE:

PennEast Pipeline Project
New Jersey Cultural and Historical Resources

LOC: USGS Frenchtown Quadrangle		REV.:
CKD. BY: BH	ENG.:	Date: 8/18/2014	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 4 of 12

PennEast PIPELINE

PennEast Pipeline Company, LLC



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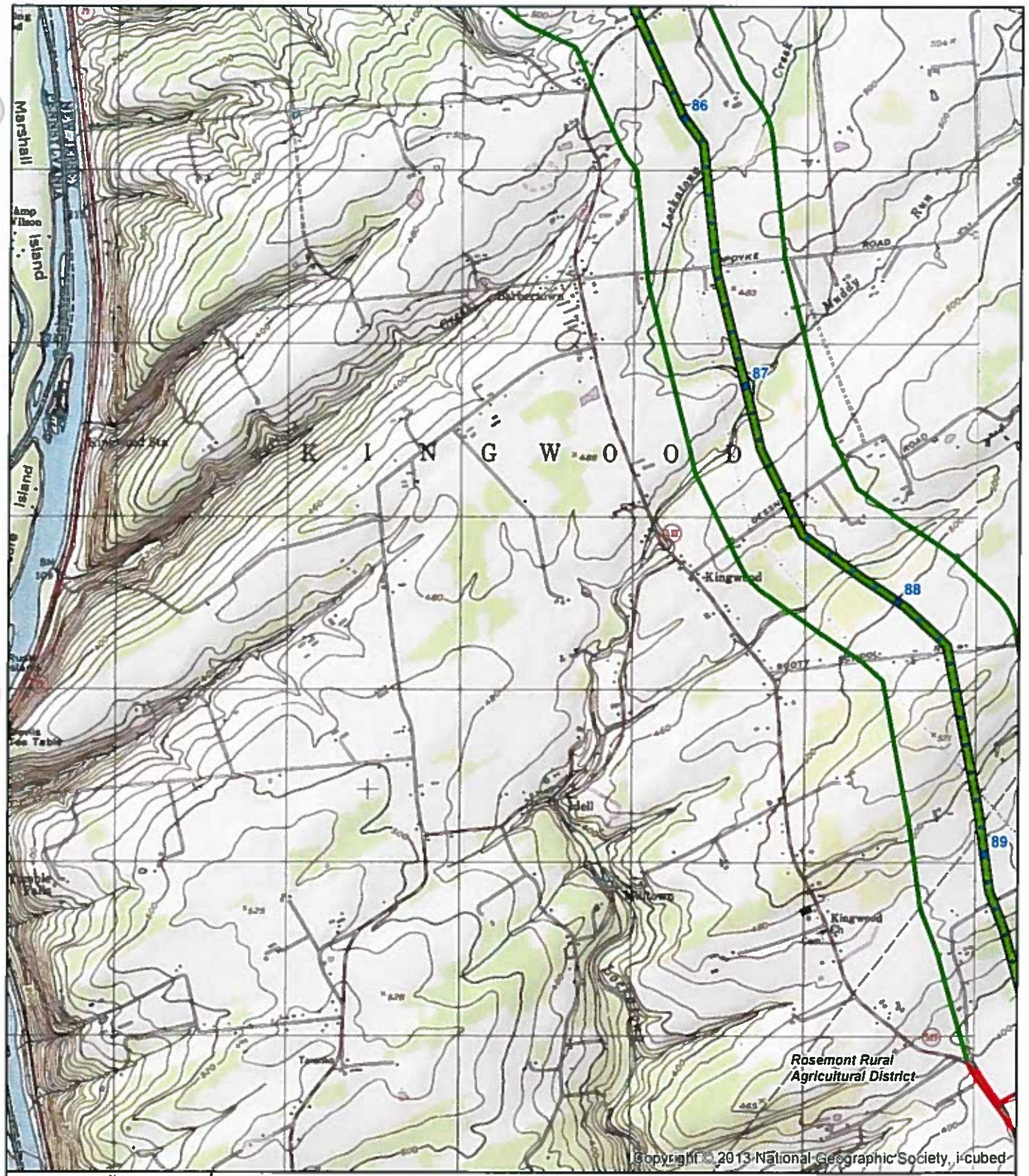
TITLE:

PennEast Pipeline Project
New Jersey Cultural and Historical Resources

LOC: USGS Frenchtown Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 8/18/2014	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 5 of 12

PennEast PIPELINE

PennEast Pipeline Company, LLC



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- Historic District (Identified)
- Historic Property (Eligible)
- Historic Property (Listed)
- Historic Property (Identified)
- State Boundary

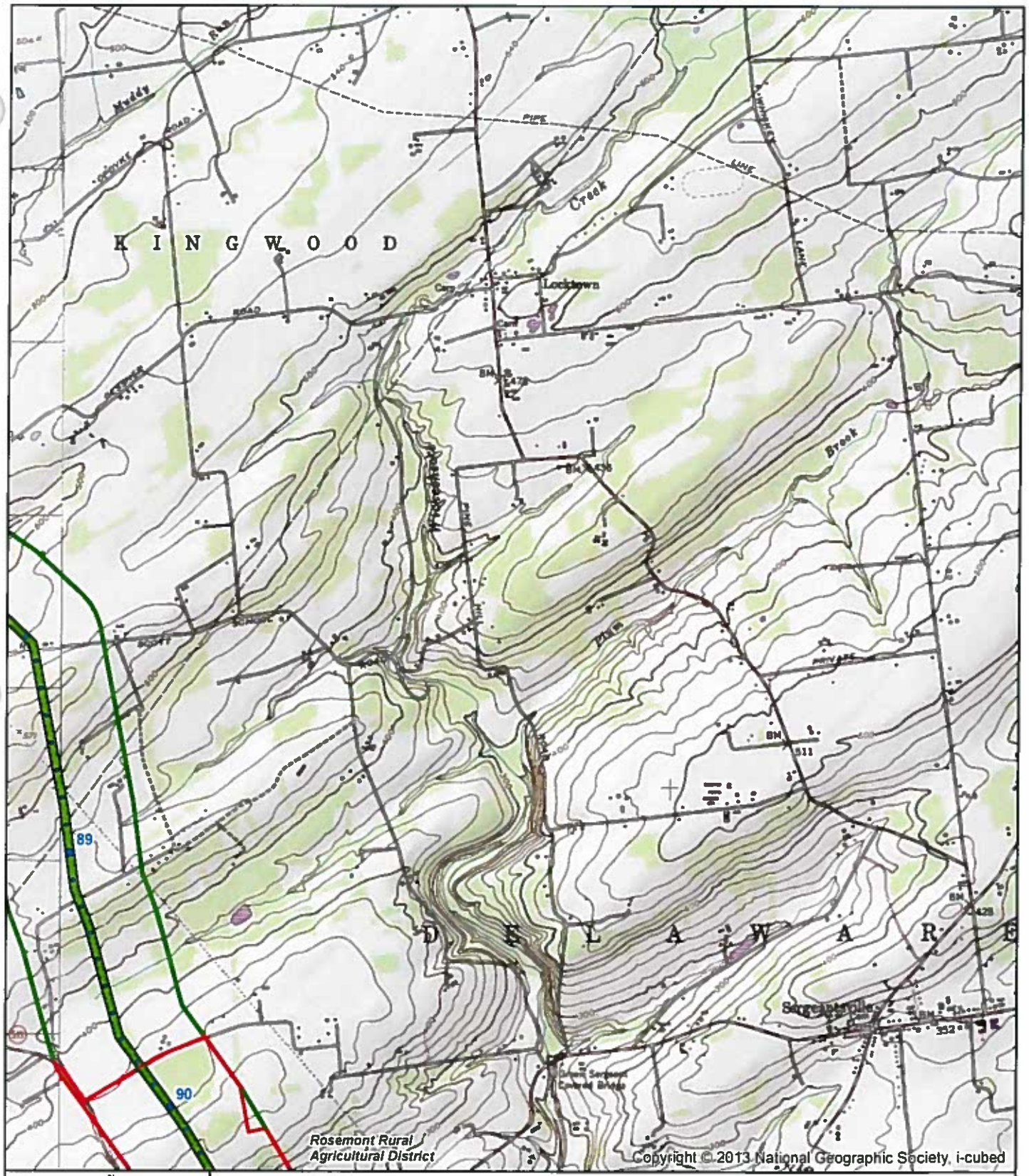
TITLE:

PennEast Pipeline Project
New Jersey Cultural and Historical Resources

LOC: USGS Lumberville Quadrangle			REV:
CKD. BY: BH	ENG.:	Date: 8/18/2014	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 6 of 12

PennEast PIPELINE

PennEast Pipeline Company, LLC



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- Historic Property (Listed)
- Historic Property (Identified)
- State Boundary

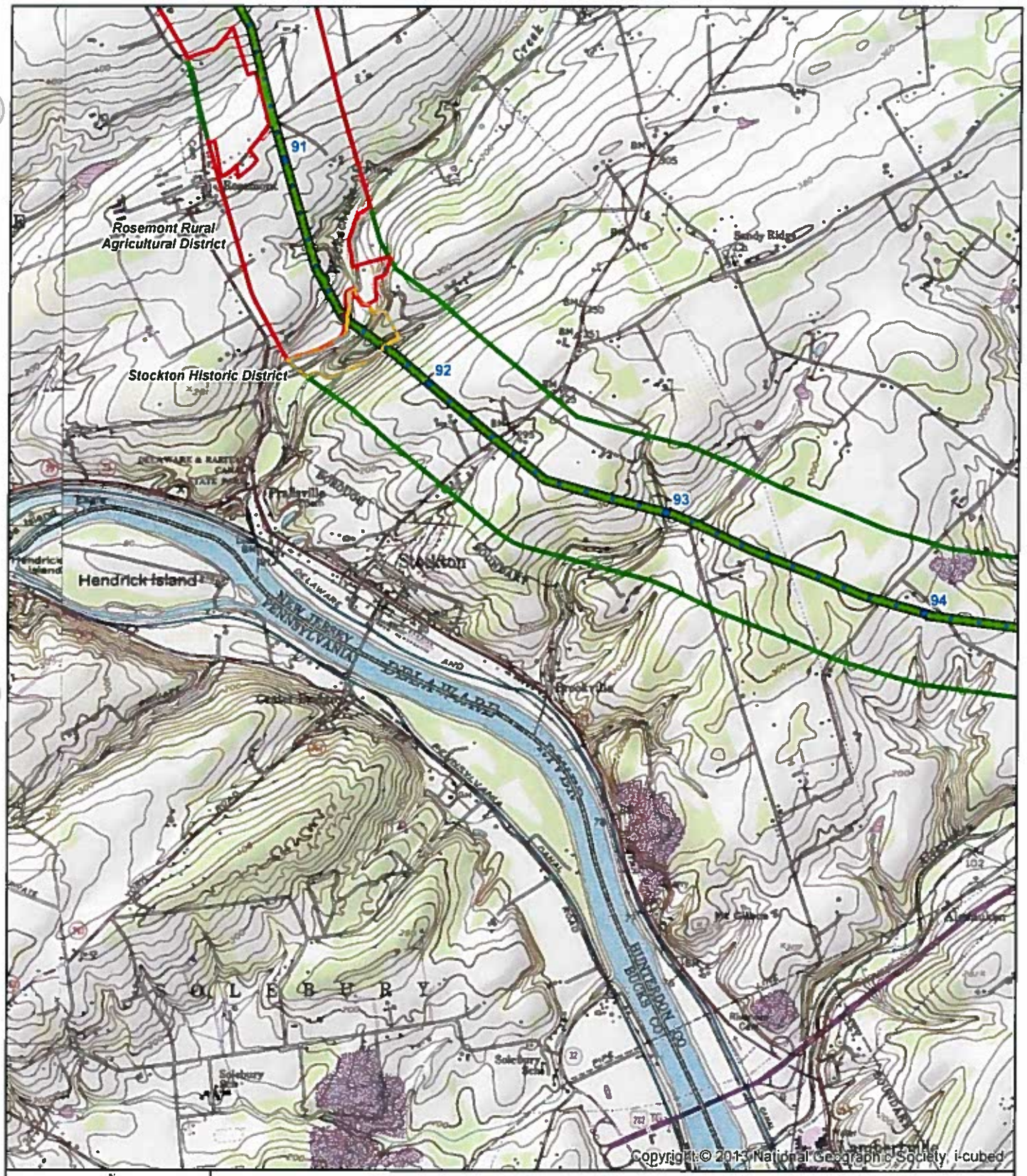
TITLE:

PennEast Pipeline Project
New Jersey Cultural and Historical Resources

LOC: USGS Stockton Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 8/18/2014	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 7 of 12

PennEast PIPELINE

PennEast Pipeline Company, LLC



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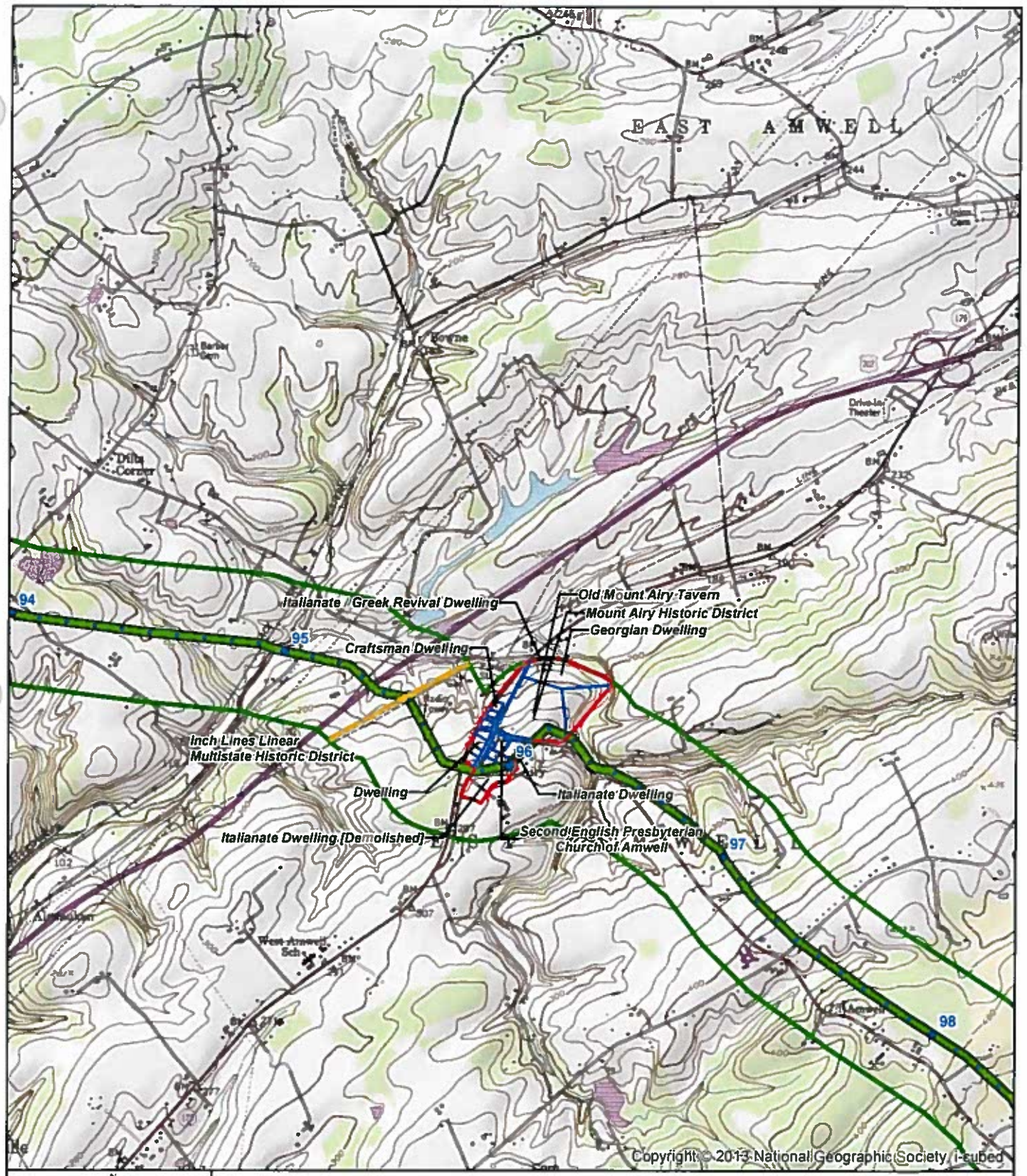
TITLE:

PennEast Pipeline Project
New Jersey Cultural and Historical Resources

LOC: USGS Stockton Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 8/18/2014	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 8 of 12

PennEast PIPELINE

PennEast Pipeline Company, LLC



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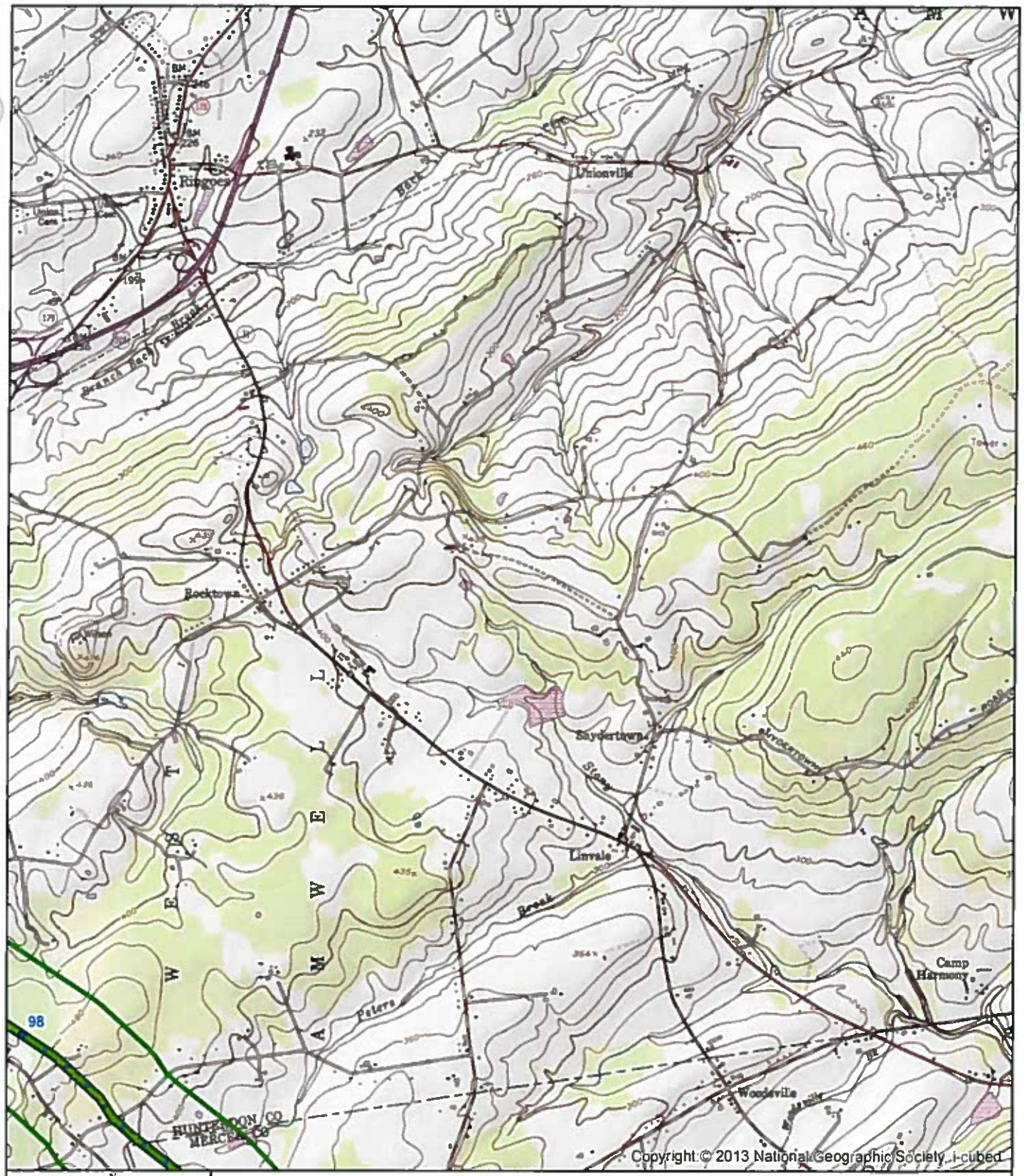
TITLE:

PennEast Pipeline Project
New Jersey Cultural and Historical Resources

LOC: USGS Stockton Quadrangle			REV:
CKD. BY: BH	ENG.:	Date: 8/18/2014	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 9 of 12

PennEast / PIPELINE

PennEast Pipeline Company, LLC



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- Historic Property (Eligible)
- Historic Property (Listed)
- Historic Property (Identified)
- State Boundary

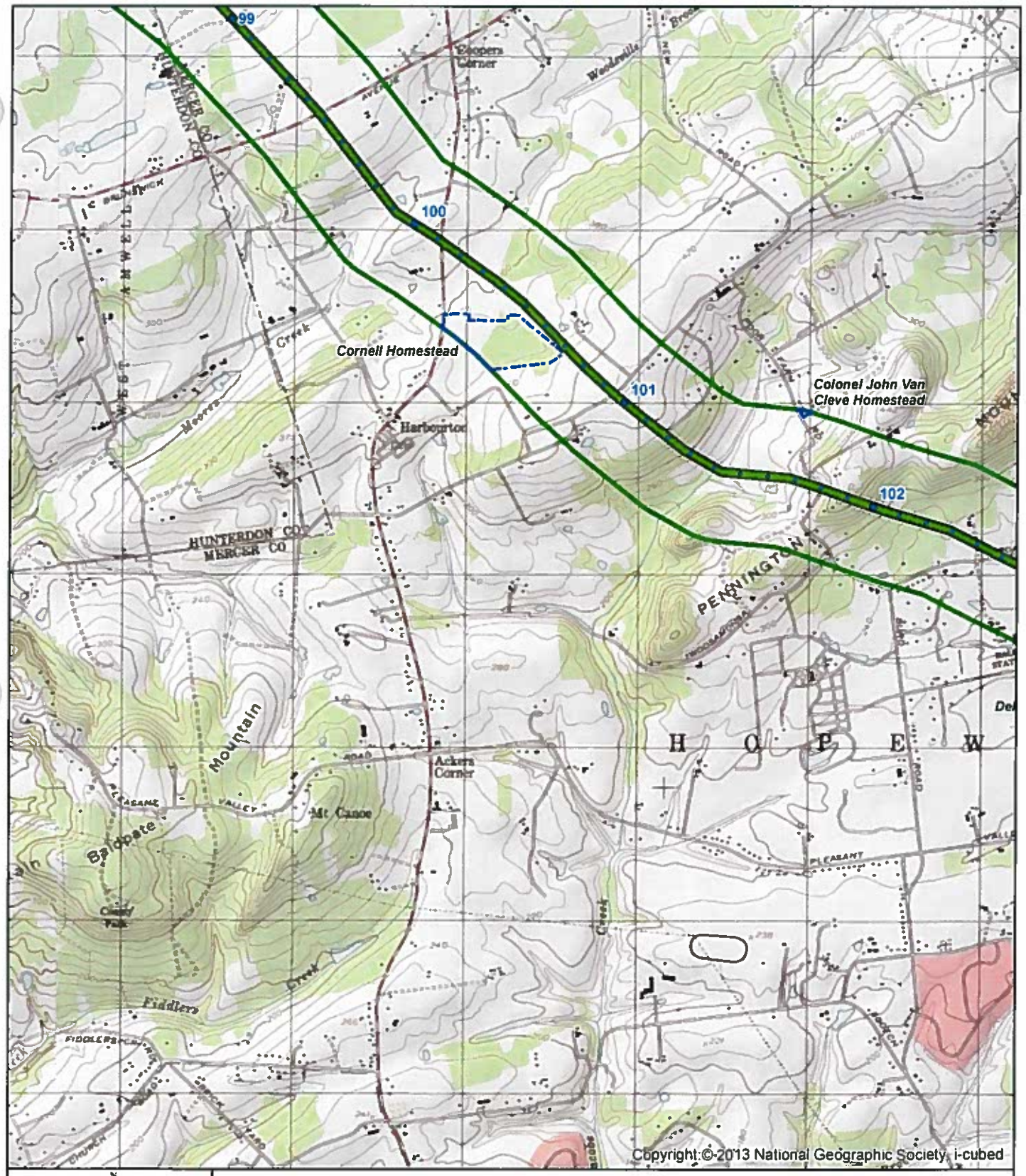
TITLE:

PennEast Pipeline Project
New Jersey Cultural and Historical Resources

LOC: USGS Hopewell Quadrangle			REV:
CKD. BY: BH	ENG:	Date: 8/18/2014	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 10 of 12

PennEast PIPELINE

PennEast Pipeline Company, LLC



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- Historic Property (Eligible)
- Historic Property (Listed)
- Historic Property (Identified)
- State Boundary

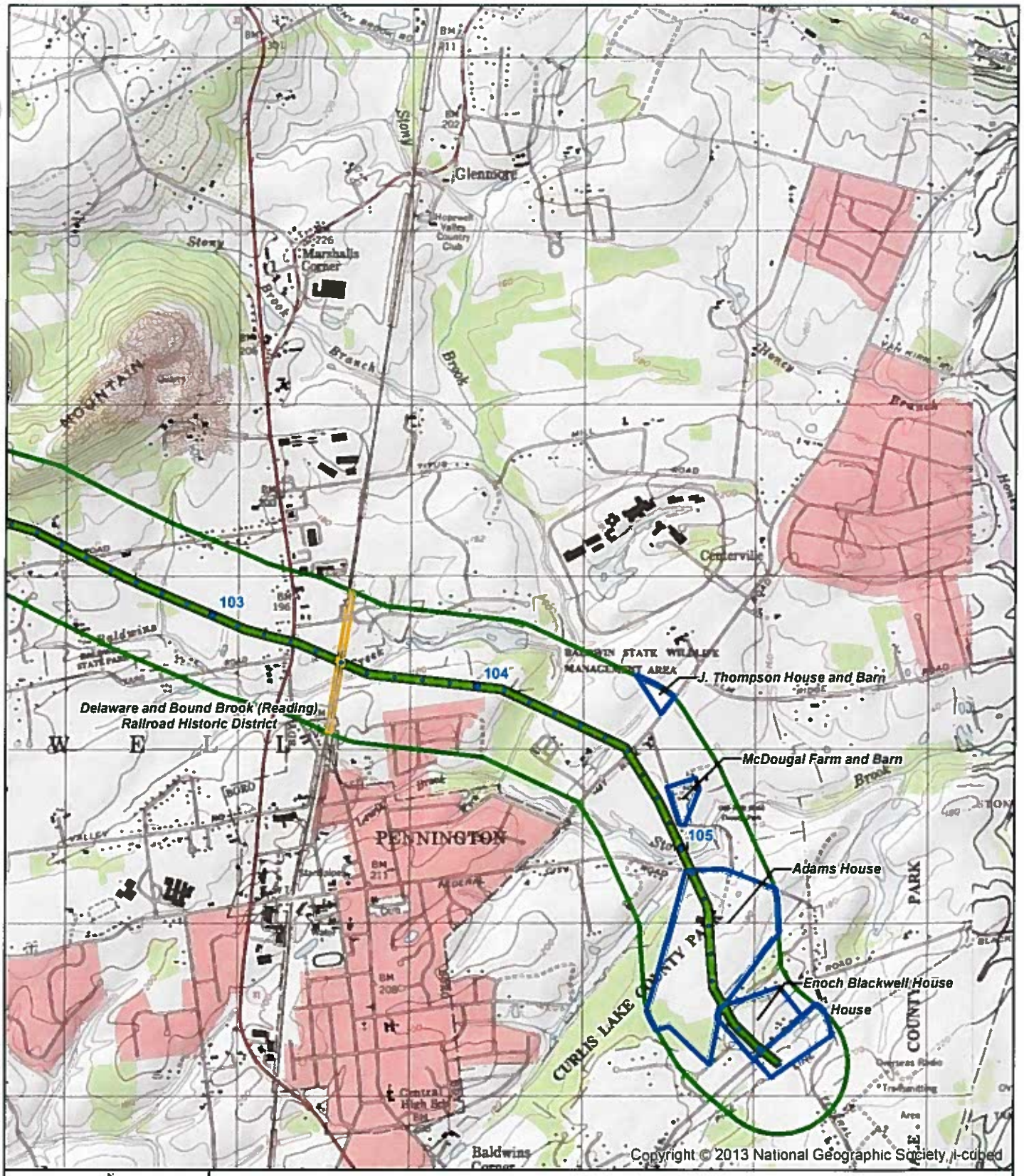
TITLE:

PennEast Pipeline Project
New Jersey Cultural and Historical Resources

LOC: USGS Pennington Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 8/18/2014	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 11 of 12

PennEast PIPELINE

PennEast Pipeline Company, LLC



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PennEast Pipeline Project
New Jersey Cultural and Historical Resources

LOC: USGS Pennington Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 8/18/2014	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 12 of 12

PennEast PIPELINE

PennEast Pipeline Company, LLC

ATTACHMENT D: Unanticipated Discovery Plan

URS

PennEast PIPELINE

Unanticipated Discovery Plan for the PennEast Pipeline Project

In order to assist the Federal Energy Regulatory Commission (FERC) in meeting the requirements of Section 106 as defined in the Advisory Council on Historic Preservation (Council) regulations "Protection of Historic Properties" (36 CFR Part 800), URS Corporation (URS) and the PennEast Pipeline Company, LLC (PennEast), have developed the following Unanticipated Discovery Plan to be implemented should new or additional cultural resources be found after construction has begun on the proposed project (undertaking). This plan has been developed in reference to the regulations embodied in "Protection of Historic Properties" issued by the Council (revised August 2004, www.achp.gov/regs-rev04.pdf). While no official guidelines for developing Unanticipated Discovery Plans were accessed through the New Jersey Historic Preservation Office (NJHPO), this plan is based upon previous Unanticipated Discovery Plans used for natural gas pipeline projects. The plan detailed here will be implemented by PennEast if previously undiscovered archaeological resources and/or human remains are identified. The following steps will be implemented should an unanticipated discovery be made by a PennEast inspector, a contractor, or subcontractor during the proposed undertaking:

1) Construction activities within the immediate area of an unanticipated discovery will be halted ("immediate area" is a context-specific measure, however roughly 30–50 feet is generally adequate, although special attention should be given to the possible extension of a new find beyond this buffer zone), and the discovery protected from further disturbance;

2) PennEast will notify their cultural resources consultant (URS), who will notify by telephone and/or email the FERC and the NJHPO and (if necessary) the applicable County Coroner and Sheriff (the latter parties will be notified only in the case of a finding of human remains). These notifications will take place within 24 hours of an unanticipated discovery;

3) Specific FERC and NJHPO instructions concerning an unanticipated discovery resulting from the notification as described above will be followed, although at a minimum sufficient archaeological work will be performed on the unanticipated discovery location to stabilize deposits, protect deposits from scavengers or looters, and to collect readily available samples (e.g., for radiocarbon dating) that may help pinpoint the age of deposits;

4) PennEast and URS will consult with the FERC and the NJHPO to follow through on the course of action. This may involve further archaeological study or consultation with Native American groups or other parties with established cultural affiliation. Construction activities will remain halted until the FERC and the NJHPO indicates to PennEast that it may proceed in the area of a specific unanticipated discovery; and

5) The construction supervisor will have the authority and responsibility to halt construction in the immediate area of the unanticipated discovery. The construction supervisor will notify his immediate supervisor, who will be responsible for notifying URS. Any revisions made to this chain of responsibility will be presented in writing at the pre-construction meeting.

6) The unanticipated discovery and the actions taken to address it will be documented in a written report that will be submitted to FERC and NJHPO. The report format will be determined by the level of effort required.

In the case of an unanticipated discovery of human remains, PennEast proposes to follow all relevant state and federal law, and recommendations regarding treatment of human remains. PennEast recognizes the importance of providing careful and respectful treatment for human remains recovered as an unanticipated discovery or as part of an archaeological investigation. In the event of an unanticipated discovery of human remains, PennEast will consult with the appropriate Native American groups previously identified and contacted through the Section 106 consultation process. Lastly, in coordination with the NJHPO and other interested parties, a decision will be made for the treatment of the remains (e.g., reburial, preservation in place, scientific study, sacred rituals, or a combination thereof).

PennEast will implement the measures outlined in its treatment plan, after the plan has been reviewed and approved by the FERC and the NJ-SHPO, and the FERC has provided written notice to proceed with treatment. PennEast is responsible for all costs regarding the implementation of this plan and associated archaeological investigations, treatment, reporting, and curation of artifacts.

PennEast will conduct a short archaeological resource identification training program for pipeline construction staff in advance of the work. The program will be presented by the project's cultural resources professional and is intended to help construction staff identify unanticipated discoveries in the field and report them to the construction supervisor., scientific study, sacred rituals, or a combination thereof).

Contact List: Unanticipated Discovery Plan for the PennEast Pipeline Project

FERC Contact
To Be Determined

PennEast Contact
Dante D'Alessandro
UGI Energy Services
Office Phone: (610) 373-7999 ext. 173
Cell: (484) 269-3816
ddalessandro@ugies.com

URS Contact
Grace H. Ziesing
URS Corporation
625 West Ridge Pike, Suite E-100
Conshohocken, PA 19428
Office Phone: (610) 832-2791
Fax: (610) 832-2791
Cell: (610) 220-3714
grace.ziesing@urs.com

NJHPO Contact
Daniel Saunders
State of New Jersey
Department of Environmental Protection
Historic Preservation Office
501 E. State Street
Building 5, 4th Floor
Trenton, NJ 08625
Phone: (609) 633-2397

State of New Jersey
MAIL CODE 501-04B
DEPARTMENT OF ENVIRONMENTAL PROTECTION
NATURAL & HISTORIC RESOURCES
HISTORIC PRESERVATION OFFICE
P.O. Box 420
Trenton, NJ 08625-0420
TEL. (609) 984-0176 FAX (609) 984-0578

CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

BOB MARTIN
Commissioner

September 24, 2014

Grace H. Ziesing
Senior Archaeologist
URS Corporation
625 West Ridge Pike, Suite E-100
Conshohocken, Pennsylvania 19428

Re: Hunterdon and Mercer Counties
Proposed Work Plan
Penn East Pipeline Project

Dear Ms. Ziesing:

Thank you for providing the Historic Preservation Office (HPO) with the opportunity to review and comment on the cultural resources work plan for the proposed PennEast 30-inch pipeline through Hunterdon and Mercer Counties. On September 16, 2014 the HPO met with representatives from URS Corporation to discuss the proposed cultural resources survey methodology for the proposed pipeline project. The minutes from this meeting have been approved and a copy has been included for the record. In addition to the items outlined in the meeting minutes, the HPO has the following additional comments to be addressed in a revised copy of the work plan and submitted to our office for further review and comment:

- The plan employs the term "study corridor" for cultural resources review and defines it as a 400-foot wide corridor that is wider than the proposed 100-foot wide pipeline right-of-way, to allow for minor alignment shifts to avoid sensitive resources. For the purposes of cultural resources review, specific areas of potential effect (APE) should be developed individually for potential effects to archaeological historic properties, as well as potential effects to historic structures and landscapes. The HPO requests that specific APEs for archaeological and historic structures/landscapes and be defined verbally and graphically in the revised plan.
- The archaeological sensitivity model as currently employed in the plan only represents sensitivity for Native American archaeological historic properties. As such it will be necessary to develop a sensitivity model for historic-period archaeological historic properties based on available historic-period maps and documentation. Please update the plan to reflect this information.

- The proposed methodology for field survey on page 9 details the survey methodology for portions of the study corridor where visibility is greater than 50%. As proposed, the plan recommends a combination of visual inspection combined with widely spaced subsurface testing for these sections of the APE. Please note, this methodology is only appropriate for the potential presence of Native American archaeological sites where it can be demonstrated that all Holocene sediments are contained within a plowzone. Please update the plan to reflect this information. In addition, survey documentation will need to include graphic documentation of all sections where this methodology was employed, photographic documentation of surface conditions where this methodology is employed, as well as point plotting and cataloguing of all surface finds.
- As currently written, the plan does not identify steps for post-field survey work including: artifact processing, analysis, and curation. Please update the plan to reflect this information.
- As currently written, the plan does not identify steps for reporting. Please update the plan to reflect this information. Please note that all graphics in the technical report detailing the locations of subsurface testing must contain notations allowing for the identification of individual subsurface tests. In addition, the technical report must include a representative soil log documenting the stratigraphy of each shovel test and excavation unit.

With regard to the Unanticipated Discovery Plan submitted as part of the draft work plan, the HPO has the following comments to be addressed in a revised copy of the Unanticipated Discovery Plan and submitted to our office for further review and comment:

- While the submitted Unanticipated Discovery Plan contains all of the necessary information required under the Federal Energy Regulatory Commission's (FERC) *Guidelines for Reporting on Cultural Resources Investigations for Pipeline Projects*, the information is organized in a counterintuitive manner. The HPO recommends reorganizing the plan to read as a step-by-step guidance document, outlining all of the necessary steps as they will be executed if implementation is necessary. Please update the plan to reflect this information.
- As currently written, the plan does not identify specific individuals who will be responsible at each stage of the plan. While the HPO understands that specific roles within the project have not been assigned yet, simply saying "PennEast" will notify is far too general for this plan. Specific titles of people with authority in the unanticipated discovery response will need to be identified at each step in the plan. Please update the plan to reflect this information.
- As currently organized, the plan addresses all types of potential unanticipated cultural resources as part of one process. Due to the differing nature of the steps involved, the HPO recommends developing specific processes for situations where human remains are identified. Please update the plan to reflect this information.
- As currently written, the plan does not specifically address the relevant federal, state, and local laws that may be applicable in the event of an unanticipated discovery, especially with respect to human remains, including the New Jersey Cemetery Act and P.L. 2002, c. 127. Please update the plan to reflect this information.

- Please update the contact for the HPO to be Jesse West-Rosenthal, Historic Preservation Specialist (609-984-6019).

As discussed in the September 16th meeting, a listing of Native American tribes who may have an interest in projects within New Jersey has also been included with this letter. As stated in the meeting, the HPO is not a source of information regarding Native American religious sites in New Jersey. Please note that the list provided is not comprehensive and does not represent a complete listing of Native American entities that may have an interest in the proposed undertaking. Further research will need to be completed to identify all Native American entities that may have an interest in the proposed project.

Thank you for providing the opportunity to review and comment on the potential for the above-referenced project to affect historic properties. The HPO looks forward to receiving the above-referenced documentation for review and comment. If additional consultation with the HPO is needed for this undertaking, please reference HPO project number 14-4462 in any future calls, emails, submissions or written correspondence to help expedite your review and response. If you have any questions, please feel free to contact Jesse West-Rosenthal (609-984-6019) of my staff with questions regarding archaeology or Meghan Baratta (609-292-1253) with questions regarding historic architecture.

Sincerely,

/Km

Daniel D. Saunders
Deputy State Historic
Preservation Officer

Enclosures: Meeting Minutes-September 16, 2014
Sample list of Tribal Contacts

URS

PennEast PIPELINE

January 14, 2015

Mr. Jesse West-Rosenthal
NJ DEP Historic Preservation Office
P.O. Box 402
Trenton, NJ 08625

Dear Mr. West-Rosenthal:

On behalf of PennEast Pipeline Company, LLC, we would like to thank you for your continued coordination on the proposed PennEast Pipeline Project. PennEast is a joint project of AGL Resources; NJR Pipeline Company, a subsidiary of New Jersey Resources; PSEG Power LLC; South Jersey Industries; Texas Eastern Transmission, LP; and UGI Energy Services (UGIES), a subsidiary of UGI Corporation.

As an interstate natural gas pipeline, PennEast will be regulated by the Federal Energy Regulatory Commission (FERC). FERC issued a Notice of Intent to prepare an Environmental Impact Statement (EIS) for this project on January 13, 2015.

Over the past months, PennEast has worked to refine a preferred alternative route and to obtain permissions to survey. To that end, we must inform you that the preferred alternative route has been adjusted to account for engineering, environmental, and land use constraints that have been identified since we last provided your agency with detailed project mapping on October 24, 2014. In New Jersey, the new preferred alternative route has been re-routed for approximately 21 miles, from M.P. 90 (approximate) to the southern project terminus. This re-route has also necessitated a 1.3-mile, 36-inch lateral near Lambertville, NJ to transport gas to Algonquin and Texas Eastern Transmission systems. USGS topographic maps showing just the new route adjustments in New Jersey and updated shapefiles for the entire new preferred alternative route are being provided to aide in your review and analysis of the project.

We look forward to working with you and your colleagues on this important project. Please contact me if you have any questions.

Sincerely,

Bernie Holcomb
Pipeline Environmental Services Manager

URS URS Corporation 625 West Ridge Pike, Suite E-100 ; Conshohocken, PA 19428
Direct: 610 832 1810; Cell: 215 275-7956 ; Fax: 610-832-3501 bernard.holcomb@urs.com

State of New Jersey
MAIL CODE 501-04B
DEPARTMENT OF ENVIRONMENTAL PROTECTION
NATURAL & HISTORIC RESOURCES
HISTORIC PRESERVATION OFFICE
P.O. Box 420
Trenton, NJ 08625-0420
TEL. (609) 984-0176 FAX (609) 984-0578

CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

BOB MARTIN
Commissioner

January 30, 2015

Bernie Holcomb
Pipeline Environmental Services Manager
AECOM
625 West Ridge Pike, Suite E-100
Conshohocken, Pennsylvania 19428

Re: Hunterdon and Mercer Counties
Preferred Alternative Route Update
PennEast Pipeline Project
FERC Docket # PF15-1-000

Dear Mr. Holcomb:

Thank you for providing the Historic Preservation Office (HPO) with the opportunity to review and comment on the potential for the proposed PennEast pipeline through Hunterdon and Mercer Counties to affect historic properties. Based on the information provided, the revised preferred alternative route represents a significant change in scope from the alignment previously reviewed by the HPO in September of 2014. As a result, the HPO looks forward to further consultation with AECOM and the Federal Energy Regulatory Commission (FERC) regarding the identification and treatment of historic properties within the undertakings area of potential effects (APE) in anticipation to the FERC obligation pursuant to Section 106 of the National Historic Preservation Act.

Please note, the HPO has yet to receive the requested revisions to previously reviewed work plan, as outlined in our letter dated September 24, 2014 (14-4462-1/HPO-I2014-554). A copy of this letter has been enclosed for your reference. We believe these comments will assist you in developing the work plan for the revised alignment that will conform to the Office's guidelines. We look forward to receiving a copy of the work plan for the revised alignment that incorporates these comments.

Thank you for providing the opportunity to review and comment on the potential for the above-referenced project to affect historic properties. The HPO looks forward to receiving the above-referenced documentation for review and comment. If additional consultation with the HPO is needed for this undertaking, please reference HPO project number 14-4462 in any future calls,

emails, submissions or written correspondence to help expedite your review and response. If you have any questions, please feel free to contact Jesse West-Rosenthal (609-984-6019) of my staff with questions regarding archaeology or Meghan Baratta (609-292-1253) with questions regarding historic architecture.

Sincerely,

Daniel D. Saunders
Deputy State Historic
Preservation Officer

Cc: Grace Ziesing – AECOM
Medha Kochar – FERC

[enclosures]

State of New Jersey
MAIL CODE 501-04B
DEPARTMENT OF ENVIRONMENTAL PROTECTION
NATURAL & HISTORIC RESOURCES
HISTORIC PRESERVATION OFFICE
P.O. Box 420
Trenton, NJ 08625-0420
TEL. (609) 984-0176 FAX (609) 984-0578

CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

BOB MARTIN
Commissioner

February 18, 2015

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First St., N.E.
Washington, D.C. 20426

Dear Ms. Bose:

As Deputy State Historic Preservation Officer for New Jersey, in accordance with 36 CFR Part 800: Protection of Historic Properties, as published in the *Federal Register* on December 12, 2000 (65 FR 77725-77739) and amended on July 6, 2004 (69 FR 40544-40555), I am providing continuing Consultation Comments for the following proposed undertaking:

Hunterdon and Mercer Counties
Notice of Intent to Prepare an Environmental Impact Statement
PennEast Pipeline Project
FERC Docket # PF15-1-000
Federal Energy Regulatory Commission

Thank you for providing the Historic Preservation Office (HPO) with the opportunity to review and comment on the Notice of Intent to Prepare an Environmental Impact Statement, received at this office on January 26, 2015. The HPO will also be reviewing the potential for the above-referenced project to affect historic properties, pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations 36 CFR § 800.

800.4 Identification of Historic Properties

To date the HPO has been in contact with PennEast's cultural resource consultant, URS/AECOM, regarding the development of methodology for the identification of historic properties within the undertaking's area of potential effects (APE). The following is a summary of consultation to date:

- On September 16, 2014 the HPO met with representatives from URS/AECOM to discuss the proposed cultural resources survey methodology for the proposed pipeline project.

This meeting discussed project details that were to be outlined in a scope of work to be submitted to the HPO for review and comment. The HPO raised concerns regarding the implementation of cultural resources testing that are memorialized in the meeting minutes. A copy of the meeting minutes [enclosure 1] has been included for your reference.

- In a letter dated September 24, 2014 (HPO-I2014-554), the HPO provided comments to URS/AECOM detailing our review of the submitted proposed work plan. This letter echoed our comments from the September 16th meeting as well as provided additional technical comments on the submitted work plan. A copy of our September 24, 2014 (HPO-I2014-554) letter [enclosure 2] has been included for your reference.
- In a letter dated January 24, 2015 (HPO-A2015-346), the HPO responded to updated project information received on January 14, 2015 detailing the new preferred alternative for the proposed undertaking. In this letter the HPO stated that it looked forward to further consultation regarding the proposed undertaking and that believed its previous comments would assist URS/AECOM in developing the work plan for the revised alignment that will conform to the HPO's guidelines. A copy of this letter [enclosure 3] has been included for your reference.
- On January 26, 2015, the HPO received a revised cultural resources work plan for the new preferred alternative. This work plan is currently under review.

Revised Work Plan Comments

The HPO has reviewed the revised Scope of Work for the new preferred alternative and believes our previous comments have been addressed with one exception. With regard to the Archaeological Sensitivity Model being employed for the proposed undertaking, the HPO appreciates the more detailed explanation of the criteria being utilized for the development of a Geographic Information Systems-based analysis provided in the revised Scope of Work; however this still does not address our previous concerns with the criteria being used. In particular, the Archaeological Sensitivity Model does not address what New Jersey-specific archaeological research is being utilized to support the employed criteria. The Archaeological Sensitivity Model as currently written does not include any references to prior research or data that supports the use of the model outlined in the Scope of Work. Current models for archaeological site sensitivity in New Jersey are available at our webpage at: http://www.nj.gov/dep/hpo/1identify/arkeo_res.htm. In addition, if the consultant has additional research that may be relevant to the current study, the HPO would be willing to review the applicability of this information.

In light of this, the HPO once again requests that the Archaeological Sensitivity Model be updated to address archaeological sensitivity as it relates to our current understanding of previous archaeological research and archaeological site potential within the region. Please note, failure to adhere to New Jersey based archaeological modeling may result in the need for additional archaeological testing which may cause significant project delays.

The HPO looks forward to further consultation with FERC regarding the identification and evaluation of historic properties within the undertakings APE, pursuant to Section 106 of the National Historic Preservation Act, as amended.

Additional Comments

The HPO has noted that the address utilized to send the Notice of Intent to our office is incorrect. To ensure all consultation is received here at the HPO in the most expedient manner possible, please utilize the following contact information:

Daniel D. Saunders
Deputy State Historic Preservation Officer
Attn: Jesse West-Rosenthal (HPO Project # 14-4462)
New Jersey Historic Preservation Office
Department of Environmental Protection
Mail Code 501-04B
501 E. State Street
PO Box 420
Trenton, NJ 08625

Thank you for providing the opportunity to review and comment on the potential for the above-referenced project to affect historic properties. If additional consultation with the HPO is needed for this undertaking, please reference HPO project number 14-4462 in any future calls, emails, submissions or written correspondence to help expedite your review and response. If you have any questions, please feel free to contact Jesse West-Rosenthal (609-984-6019) of my staff with questions regarding archaeology or Meghan Baratta (609-292-1253) with questions regarding historic architecture.

Sincerely,

Daniel D. Saunders
Deputy State Historic
Preservation Officer

Cc: Grace Ziesing – AECOM

Enclosure 1 - September 16, 2014 Meeting Minutes
Enclosure 2 - September 24, 2014 HPO Comment Letter (HPO-I2014-554)
Enclosure 3 - January 24, 2015 HPO Comment Letter (HPO-A2015-346)

DDS/KJM/JWR

Grace H. Ziesing
Senior Archaeologist
AECOM
625 West Ridge Pike, Suite E-100
Conshohocken, Pennsylvania 19428

[Enclosure 1]

CONFIDENTIAL

Meeting Minutes

Meeting: Pre-Field Consultation
Date: September 16, 2014
Location: NJHPO, Trenton

PROJECT TEAM/ATTENDEES:

Name	Organization	Position	e-mail address	Phone
Jesse West-Rosenthal	NJHPO	Historic Preservation Specialist	jesse.west-rosenthal@dep.nj.gov	609 984-6019
Vincent Maresca	NJHPO	Senior Historic Preservation Specialist	vincent.maresca@dep.nj.gov	609 633-2395
Meghan Baratta	NJHPO	Principal Historic Preservation Specialist	meghan.baratta@dep.nj.gov	609 292-1253
Vanessa Zeoli	URS	Architectural Historian	vanessa.zeoli@urs.com	609 386-5444
Jon West	URS	Environmental Scientist	jonathan.west@urs.com	610 832-3653
Grace Ziesing	URS	Senior Archaeologist	grace.ziesing@urs.com	610 832-2791

Introductions and Project Summary:

- NJHPO represented by West-Rosenthal (archaeology reviewer), Maresca (archaeology reviewer), and Baratta (architectural history reviewer). URS represented by Zeoli (architectural history field lead), West (deputy project manager), and Ziesing (archaeology lead, New Jersey).
- West introduced the project, explaining that it is a FERC-regulated undertaking. Pre-filing is expected to occur in October and take 6-9 months to process, with final 7 (c) application filing in July 2015, certificating in December 2016, and construction beginning April 2017.
- Several alternatives were considered, and an EIS will be filed.
- The project team has met with some local municipalities and a few agencies. The Delaware River Basin Commission has been consulted and asked to be involved at a high level.

Archaeology:

- Maresca stated that only federally recognized tribes will require consultation and that state recognized tribes should be treated as regular consulting parties. West-Rosenthal has a list of tribes that he can provide to URS. FERC is responsible for identifying other consulting parties.

- West-Rosenthal asked that shovel test identifiers avoid being tied to design elements that may change, such as mileposts. Ziesing explained that URS has broken the corridor into Sections that will not change, and that the shovel test will be tied to the Sections.
- Ziesing asked if NJHPO preferred one combined archaeology/architectural history report, or two. If combined, URS will supply two copies so the reviews can occur simultaneously. All three NJHPO reviewers said it was up to URS, that either one combined or two separate reports would be acceptable.
- In response to a question by Ziesing, Maresca said that NJHPO does not require a specific buffer for site avoidance, but that the edge of the defined site is adequate in most cases. As a guideline, the site boundary/avoidance area may be defined as the first line of negative shovel tests. In some situations, such as a historic masonry foundation susceptible to vibration impacts, a buffer might be necessary.
- Maresca stated that areas excluded from testing due to excessive slopes or wetlands need to be photo-documented in the report so that the reviewer can assess the condition independently.
- Maresca asked that a better explanation of the predictive modeling strategy be included in the report. He would like to know what regional models were used to inform the decision re: thresholds between high, medium, and low sensitivity. He specifically asked why the value of 300 feet from water is being used as the measure of high sensitivity when New Jersey research suggests 500 feet is more appropriate in the state. West-Rosenthal commented that some of the known archaeological sites seem to be located partially within areas defined as moderate or low sensitivity.
- For the historic-period sensitivity analysis, Maresca urged URS to use detailed historic maps as opposed to the general county atlases. A discussion of sources ensued, including the coastal topographic surveys (T-sheets) on-line at the Alabama maps website and the Sanborns at Princeton's website. NOAA provided a full set of the T-sheets to NJHPO, and Maresca thinks they might have been georectified.
- Ziesing requested clarification of the acceptable testing interval in areas of high, medium, and low archaeological sensitivity. Maresca responded that the interval depends on field conditions, but that the overarching requirement is that the testing average 17 shovel tests per *testable* acre (meaning that documented areas of excessive slope, wetlands, or disturbance can be excluded from the total). In addition, radials around positive shovel tests and within previously documented sites should be excavated at 10-foot (~3.3-m) intervals.
- Maresca said that archaeological testing is not required for HDD alignments, with the exception of the exit and entry pits. Geomorphology would be required within impact areas (e.g., HDD exit or entry pits) on floodplains and possibly T1 terraces of any crossing where deep deposits might be expected. Ziesing explained that the project geomorphologist, Dr. Frank Vento, assessed the crossings in New Jersey and determined that only the Delaware River is of concern from a geomorphological perspective. West stated that the HDD pits would be above the floodplain.
- Maresca stated that if geomorphology is deemed necessary, mechanical test trenching would need to reach the bottom of the pipe trench and that 1–2 of the trenches would need to extend further, to the bottom of the soil profile, to document the depth of the deposits.

- Maresca and West-Rosenthal requested that project GIS files such as centerlines, shovel tests, and possibly the sensitivity model be provided with the report to facilitate review.
- West-Rosenthal reminded URS that the New Jersey State Museum curation facility is full and that URS should start considering other repository options. The New Jersey State Museum still requests right of first refusal, however.
- West-Rosenthal indicated that he will have comments on the scoping letter ready in the next week or so, and that he will be asking for a revised submittal before providing concurrence on the field methodology.

Architectural History:

- In response to the discussion about tribal consulting parties, Zeoli asked if a list of other interested and consulting parties should be submitted separately or with the architectural history report. Maresca said that a single, complete list of consulting parties (including tribes and other local organization) could be submitted within both reports for NJSHPO's review.
- Baratta asked Zeoli if the architectural history team would consider effects to cultural landscapes (agricultural and other) as part of their survey/analysis effort. Zeoli confirmed they would.
- Zeoli explained the architectural history survey/reporting methodology as outlined in the scoping letter. After some discussion, Baratta and Zeoli agreed that properties that are clearly not eligible for listing in the NRHP would be documented in a tabular format with accompanying photographs. Properties that appear to be potentially eligible will be documented on a Base Form. The information gathered during the initial identification-level study would be submitted to NJ SHPO for review and comment on resources that would need additional research and an effects assessment.
- Baratta inquired if the survey and analysis would consider properties within the viewshed of tree-takes. Zeoli confirmed they would.
- Ziesing asked if there was more current data on New Jersey's aboveground properties available than the 2011 edition currently on NJGeoWeb. Maresca suggested sending a shapefile of the project APE to Kinny Clark, the NJDEP data manager, and request he clip the current dataset, which is kept up-to-date. Maresca and West-Rosenthal said that the topo quads of CR surveys on file at NJHPO stopped being updated in 2010. West-Rosenthal has compiled a list of ALL CR reports, however, and it can be browsed for studies that occurred between 2010 and 2014. Further, NJHPO has digital copies of all reports submitted since 2010, and Maresca is willing to download requested reports to a flash drive if one is provided to him.
- Maresca also indicated that only the Hurricane-Sandy affected areas have municipal/county-wide surveys (green binders) that have been digitized.

[Enclosure 2]

State of New Jersey
MAIL CODE 501-04B
DEPARTMENT OF ENVIRONMENTAL PROTECTION
NATURAL & HISTORIC RESOURCES
HISTORIC PRESERVATION OFFICE
P.O. Box 420
Trenton, NJ 08625-0420
TEL. (609) 984-0176 FAX (609) 984-0578

CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

BOB MARTIN
Commissioner

September 24, 2014

Grace H. Ziesing
Senior Archaeologist
URS Corporation
625 West Ridge Pike, Suite E-100
Conshohocken, Pennsylvania 19428

Re: Hunterdon and Mercer Counties
Proposed Work Plan
Penn East Pipeline Project

Dear Ms. Ziesing:

Thank you for providing the Historic Preservation Office (HPO) with the opportunity to review and comment on the cultural resources work plan for the proposed PennEast 30-inch pipeline through Hunterdon and Mercer Counties. On September 16, 2014 the HPO met with representatives from URS Corporation to discuss the proposed cultural resources survey methodology for the proposed pipeline project. The minutes from this meeting have been approved and a copy has been included for the record. In addition to the items outlined in the meeting minutes, the HPO has the following additional comments to be addressed in a revised copy of the work plan and submitted to our office for further review and comment:

- The plan employs the term "study corridor" for cultural resources review and defines it as a 400-foot wide corridor that is wider than the proposed 100-foot wide pipeline right-of-way, to allow for minor alignment shifts to avoid sensitive resources. For the purposes of cultural resources review, specific areas of potential effect (APE) should be developed individually for potential effects to archaeological historic properties, as well as potential effects to historic structures and landscapes. The HPO requests that specific APEs for archaeological and historic structures/landscapes and be defined verbally and graphically in the revised plan.
- The archaeological sensitivity model as currently employed in the plan only represents sensitivity for Native American archaeological historic properties. As such it will be necessary to develop a sensitivity model for historic-period archaeological historic properties based on available historic-period maps and documentation. Please update the plan to reflect this information.

- The proposed methodology for field survey on page 9 details the survey methodology for portions of the study corridor where visibility is greater than 50%. As proposed, the plan recommends a combination of visual inspection combined with widely spaced subsurface testing for these sections of the APE. Please note, this methodology is only appropriate for the potential presence of Native American archaeological sites where it can be demonstrated that all Holocene sediments are contained within a plowzone. Please update the plan to reflect this information. In addition, survey documentation will need to include graphic documentation of all sections where this methodology was employed, photographic documentation of surface conditions where this methodology is employed, as well as point plotting and cataloguing of all surface finds.
- As currently written, the plan does not identify steps for post-field survey work including: artifact processing, analysis, and curation. Please update the plan to reflect this information.
- As currently written, the plan does not identify steps for reporting. Please update the plan to reflect this information. Please note that all graphics in the technical report detailing the locations of subsurface testing must contain notations allowing for the identification of individual subsurface tests. In addition, the technical report must include a representative soil log documenting the stratigraphy of each shovel test and excavation unit.

With regard to the Unanticipated Discovery Plan submitted as part of the draft work plan, the HPO has the following comments to be addressed in a revised copy of the Unanticipated Discovery Plan and submitted to our office for further review and comment:

- While the submitted Unanticipated Discovery Plan contains all of the necessary information required under the Federal Energy Regulatory Commission's (FERC) *Guidelines for Reporting on Cultural Resources Investigations for Pipeline Projects*, the information is organized in a counterintuitive manner. The HPO recommends reorganizing the plan to read as a step-by-step guidance document, outlining all of the necessary steps as they will be executed if implementation is necessary. Please update the plan to reflect this information.
- As currently written, the plan does not identify specific individuals who will be responsible at each stage of the plan. While the HPO understands that specific roles within the project have not been assigned yet, simply saying "PennEast" will notify is far too general for this plan. Specific titles of people with authority in the unanticipated discovery response will need to be identified at each step in the plan. Please update the plan to reflect this information.
- As currently organized, the plan addresses all types of potential unanticipated cultural resources as part of one process. Due to the differing nature of the steps involved, the HPO recommends developing specific processes for situations where human remains are identified. Please update the plan to reflect this information.
- As currently written, the plan does not specifically address the relevant federal, state, and local laws that may be applicable in the event of an unanticipated discovery, especially with respect to human remains, including the New Jersey Cemetery Act and P.L. 2002, c. 127. Please update the plan to reflect this information.

- Please update the contact for the HPO to be Jesse West-Rosenthal, Historic Preservation Specialist (609-984-6019).

As discussed in the September 16th meeting, a listing of Native American tribes who may have an interest in projects within New Jersey has also been included with this letter. As stated in the meeting, the HPO is not a source of information regarding Native American religious sites in New Jersey. Please note that the list provided is not comprehensive and does not represent a complete listing of Native American entities that may have an interest in the proposed undertaking. Further research will need to be completed to identify all Native American entities that may have an interest in the proposed project.

Thank you for providing the opportunity to review and comment on the potential for the above-referenced project to affect historic properties. The HPO looks forward to receiving the above-referenced documentation for review and comment. If additional consultation with the HPO is needed for this undertaking, please reference HPO project number 14-4462 in any future calls, emails, submissions or written correspondence to help expedite your review and response. If you have any questions, please feel free to contact Jesse West-Rosenthal (609-984-6019) of my staff with questions regarding archaeology or Meghan Baratta (609-292-1253) with questions regarding historic architecture.

Sincerely,

Daniel D. Saunders
Deputy State Historic
Preservation Officer

Enclosures: Meeting Minutes-September 16, 2014
Sample list of Tribal Contacts

CONFIDENTIAL

Meeting Minutes

Meeting: Pre-Field Consultation
Date: September 16, 2014
Location: NJHPO, Trenton

PROJECT TEAM/ATTENDEES:

Name	Organization	Position	e-mail address	Phone
Jesse West-Rosenthal	NJHPO	Historic Preservation Specialist	jesse.west-rosenthal@dep.nj.gov	609 984-6019
Vincent Maresca	NJHPO	Senior Historic Preservation Specialist	vincent.maresca@dep.nj.gov	609 633-2395
Meghan Baratta	NJHPO	Principal Historic Preservation Specialist	meghan.baratta@dep.nj.gov	609 292-1253
Vanessa Zeoli	URS	Architectural Historian	vanessa.zeoli@urs.com	609 386-5444
Jon West	URS	Environmental Scientist	jonathan.west@urs.com	610 832-3653
Grace Ziesing	URS	Senior Archaeologist	grace.ziesing@urs.com	610 832-2791

Introductions and Project Summary:

- NJHPO represented by West-Rosenthal (archaeology reviewer), Maresca (archaeology reviewer), and Baratta (architectural history reviewer). URS represented by Zeoli (architectural history field lead), West (deputy project manager), and Ziesing (archaeology lead, New Jersey).
- West introduced the project, explaining that it is a FERC-regulated undertaking. Pre-filing is expected to occur in October and take 6-9 months to process, with final 7 (c) application filing in July 2015, certificating in December 2016, and construction beginning April 2017.
- Several alternatives were considered, and an EIS will be filed.
- The project team has met with some local municipalities and a few agencies. The Delaware River Basin Commission has been consulted and asked to be involved at a high level.

Archaeology:

- Maresca stated that only federally recognized tribes will require consultation and that state recognized tribes should be treated as regular consulting parties. West-Rosenthal has a list of tribes that he can provide to URS. FERC is responsible for identifying other consulting parties.

Federally Recognized Tribes

Tribe	THPO Contact	Tribal Government Contact
Delaware Nation	THPO The Delaware Nation Cultural Preservation Office PO Box 825 31064 State Highway 281 Anadarko, Oklahoma 73005 UPS-Mail for Cultural Preservation Office- 31064 US HWY 281, Bldg 100 Anadarko, Oklahoma, 73005 Tel: 405-247-2448 Ext. 1180 NAGPRA: Ext. 121 Section 106: Ext. 120 Fax: 405-247-8905	President The Delaware Nation PO Box 825 31064 State Highway 281 Anadarko, Oklahoma 73005 nhorn@delawarenation.com Tel: 405-247-2448 Fax: 405-247-9393
Delaware Tribe of Indians	Blair Fink Delaware Tribe of Indians Historic Preservation Representative Department of Anthropology Gladfelter Hall, Temple University 1115 W. Polett Walk Philadephia, Pennsylvania 19122 temple@delawaretribe.org Tel: 609-220-1047 THPO Level Inquires: Dr. Brice Obermeyer, THPO Delaware Tribe of Indians Delaware Tribe Historic Preservation Office 1200 Commercial St. Roosevelt Hall, Rm 212 Emporia, Kansas 66801 bobermey@emporia.edu BriceObermeyer@yahoo.com	Paula Pechonick, Chief Delaware Tribe of Indians Delaware Tribal Headquarters 170 N.E. Barbara Avenue Bartlesville, Oklahoma 74003 ppechonick@delawaretribe.org Tel: 918-337-6593 Fax: 918-337-6540

	www.delawaretribeofindians.nsn.us Tel: 918-335-7026	
Absentee Shawnee Tribe of Indians of Oklahoma	Joseph Blanchard, THPO Absentee- Shawnee Tribe of Indians of Oklahoma 2025 S. Gorden Cooper Drive. Shawnee, Oklahoma 74801 Joseph.blanchard@astribe.com Tel: 405-275-4030 Ext. 203	Edwina Butler- Wolfe, Governor Absentee- Shawnee Tribe of Indians of Oklahoma 2025 South Gordon Copper Drive Shawnee, Oklahoma 74801 edwinad@astribe.com Tel: 405-275-4030 Ext. 188
Shawnee Tribe of Oklahoma	Kim Jumper, THPO Shawnee Tribe of Oklahoma Historic Preservation Department 29 South Highway 69A Miami, Oklahoma, 74354 shawneetribe@neok.com Tel: 918-542-2441 Fax: 918-542-9915	Ron Sparkman, Chief Shawnee Tribe of Oklahoma PO Box 189 Miami, Oklahoma 74354 shawneetribe@shawneetribe.com Tel: 918-542-2441 Fax: 918-542-2922
Stockbridge-Munsee Band of Mohicans	Sherry White, THPO Stockbridge- Munsee Band of the Mohicans W13447 Camp 14 Road PO Box 70 Bowler, Wisconsin 54416 Sherry.white@mohican-nsn-gov Greg.miller@mohican-nsn.gov Tel: 715-793-3970 Fax: 715-793-4437	Wallace Miller, President Stockbridge- Munsee Band of the Mohicans N 8476 Moh He Con Nuck Road Bowler, Wisconsin 54416 Tel: 715-793-4111

New Jersey Recognized Tribes

Tribe	Contact
Nanticoke Lenni Lenape Indians	Mark Gould Tribal Chairperson Nanticoke Lenni-Lenape Indians of New Jersey 18 East Commerce Street P.O. Box 544 Bridgeton, New Jersey 08302 Phone: 856-455-6910 Fax: 856-455-5338 Email: mgould24@aol.com www.nanticoke-lenape.org
Ramapough Mountain Indians	Joanne Hawkins Administrator Powhatan Renape Nation P.O. Box 2353 Riverton NJ 08077 Phone: 609-261-4747 Fax: 609-702-1473 Email: friends@powhatan.org www.powhatan.org
Powhatan Renape Nation	Dwaine C. Perry Principal Chief Ramapough Lenape Nation Ramapough Tribal Office 189 Stag Hill Road Mahwah, New Jersey 07430 Phone: 845642-6531 Fax-201-529-3212 Email: chiefperry@ramapoughlenapenation.org www.ramapoughlenapenation.org

Additional New Jersey Tribes (without State recognition)

Tribe	Contact
Sand Hill Indian Historical Association	Claire T. Garland, Director Sand Hill Indian Historical Association P.O. Box 444 Lincroft, NJ 07738 Ph: 732-747-5709
Cherokee Nation of New Jersey	C.W. Longbow Principal Chief Cherokee Nation of New Jersey 182 Ellery Avenue Newark, New Jersey 07106 Phone: 973-489-1368
Cherokee Tribe of New Jersey	Echota Chickamauga Cherokee Tribe of New Jersey 1164 Stuyvesant Avenue Irvington, New Jersey 07111 Phone: 973-372-0252

[Enclosure 3]

State of New Jersey
MAIL CODE 501-04B
DEPARTMENT OF ENVIRONMENTAL PROTECTION
NATURAL & HISTORIC RESOURCES
HISTORIC PRESERVATION OFFICE
P.O. Box 420
Trenton, NJ 08625-0420
TEL. (609) 984-0176 FAX (609) 984-0578

CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

BOB MARTIN
Commissioner

January 30, 2015

Bernie Holcomb
Pipeline Environmental Services Manager
AECOM
625 West Ridge Pike, Suite E-100
Conshohocken, Pennsylvania 19428

Re: Hunterdon and Mercer Counties
Preferred Alternative Route Update
PennEast Pipeline Project
FERC Docket # PF15-1-000

Dear Mr. Holcomb:

Thank you for providing the Historic Preservation Office (HPO) with the opportunity to review and comment on the potential for the proposed PennEast pipeline through Hunterdon and Mercer Counties to affect historic properties. Based on the information provided, the revised preferred alternative route represents a significant change in scope from the alignment previously reviewed by the HPO in September of 2014. As a result, the HPO looks forward to further consultation with AECOM and the Federal Energy Regulatory Commission (FERC) regarding the identification and treatment of historic properties within the undertakings area of potential effects (APE) in anticipation to the FERC obligation pursuant to Section 106 of the National Historic Preservation Act.

Please note, the HPO has yet to receive the requested revisions to previously reviewed work plan, as outlined in our letter dated September 24, 2014 (14-4462-1/HPO-I2014-554). A copy of this letter has been enclosed for your reference. We believe these comments will assist you in developing the work plan for the revised alignment that will conform to the Office's guidelines. We look forward to receiving a copy of the work plan for the revised alignment that incorporates these comments.

Thank you for providing the opportunity to review and comment on the potential for the above-referenced project to affect historic properties. The HPO looks forward to receiving the above-referenced documentation for review and comment. If additional consultation with the HPO is needed for this undertaking, please reference HPO project number 14-4462 in any future calls,

emails, submissions or written correspondence to help expedite your review and response. If you have any questions, please feel free to contact Jesse West-Rosenthal (609-984-6019) of my staff with questions regarding archaeology or Meghan Baratta (609-292-1253) with questions regarding historic architecture.

Sincerely,

Daniel D. Saunders
Deputy State Historic
Preservation Officer

Cc: Grace Ziesing – AECOM
Medha Kochar – FERC

[enclosures]

Document Content(s)

February 2, 2015

Daniel Saunders
State of New Jersey
Department of Environmental Protection
Historic Preservation Office
501 E. State Street
Building 5, 4th Floor
Trenton, NJ 08625

Re: PennEast Pipeline Company, LLC - PennEast Pipeline Project
Hunterdon and Mercer Counties, New Jersey
HPO Project #14-4462
REVISED as per NJHPO Comments dated September 24, 2014

Dear Mr. Saunders:

The PennEast Pipeline Company, LLC (PennEast) is a partnership with UGI Energy Services (UGIES), AGL Resources, NJR Pipeline Company, and South Jersey Industries. On behalf of PennEast, URS is initiating cultural resource consultation for the proposed PennEast Pipeline Project (Project). The Project proposes to construct a new 110-mile, 30-inch pipeline to deliver natural gas from northeast Pennsylvania to other markets in Pennsylvania and New Jersey. The lead agency for this project is the Federal Energy Regulatory Commission (FERC). We are requesting the New Jersey Historic Preservation Office's (NJHPO) review of URS's plans to identify cultural resources that may be affected by the project.

This document has been revised to address comments from your office on September 24, 2014, and includes an updated understanding of the project. An update letter and GIS shapefiles with the current project alignment were sent to Jesse West-Rosenthal on January 14, 2015. As detailed in that letter, the new preferred alternative route in New Jersey has been re-routed for approximately 21 miles, from MP 90 (approximate) to the southern project terminus. This re-route has also necessitated a 1.3-mile, 36-inch lateral near Lambertville, New Jersey, to transport gas to Algonquin and Texas Eastern Transmission systems.

Description of the Undertaking

The PennEast Pipeline Project is designed to transport natural gas from Dallas Township, Luzerne County, Pennsylvania, to the Transco Trenton-Woodbury interconnect in Pennington Township, Mercer County, New Jersey. The project will include construction of approximately 110 miles of new 36-inch pipeline, one compressor station, and nine taps/interconnects. The project also includes a 2.1-mile 24-inch lateral near Hellertown, Pennsylvania to transport gas to an interconnection with UGI Utilities and a 1.3-mile, 36-inch lateral near Lambertville, Hunterdon County, NJ to transport gas to an interconnection with Algonquin and Texas Eastern Transmission Company. In New Jersey, the project will extend approximately 37 miles from the

Delaware River in Hunterdon County to the Transco Trenton-Woodbury interconnect in Mercer County. A series of USGS-based maps depicting the approximate location of the project is included with this letter (Attachment A).

As part of the pipeline route evaluation process, PennEast has undertaken a thorough Critical Issues Assessment (CIA). The CIA initially focused on the identification of a series of corridors to determine which were most feasible from an environmental and engineering perspective. The selected route corridor was then analyzed using federal, state, and regional databases to map out resources in proximity to the corridor. Once this mapping was completed, the route was sequentially evaluated along its entirety, and the centerline adjusted to avoid and/or minimize impacts to resource areas.

The following discussion outlines the results of background research conducted to date, as well as a proposed methodology for identification of archaeological and above-ground resources within the Area of Potential Effects (APE). APEs for both archaeology and above-ground resources were defined for the project and encompass all areas where construction activities could directly or indirectly impact significant historic properties.

Area of Potential Effects

The APE for archaeology, or the direct APE, comprises all areas of potential project-related ground disturbance. Types of activities that are expected to require ground disturbance for this project include construction of the 100-foot temporary and permanent right-of-way (ROW), temporary and permanent workspaces, ancillary above-ground infrastructure (including compressor stations, mainline block valves, and interconnects), and access roads. The APE for above-ground resources encompasses properties within the limits of disturbance, as well as adjacent properties that may be visually or contextually affected by alterations to the landscape or the by the construction of project-related above-ground infrastructure.

To date, details of the alignment location, ancillary features/structures, and workspaces have not been finalized. URS will therefore use a 400-foot corridor around the proposed centerline as the basis for their studies. Archaeological survey will be conducted throughout the 400-foot corridor and above-ground studies will be conducted on properties that are intersected by the 400-foot corridor. These areas will be considered the APEs and are mapped in Attachment B (Archaeology APE and Above-Ground APE). As the design process progresses, the archaeological and above-ground APEs will be modified, and the final APEs will be presented in the technical report submittals.

Background Research

URS consulted the files of the NJHPO in July 2014 and again in December 2014 in an effort to determine the extent of previous cultural resource surveys in the vicinity of the project alignment. The NJHPO and the New Jersey State Museum's files were consulted to gather locational and other data on previously recorded archaeological sites, architectural resources, and cultural resource surveys. A one-mile study area on either side of the proposed centerline was used to identify an adequate sample of previously recorded archaeological sites from which to

derive information regarding the expected types and settings of sites in the vicinity of the project. A one-quarter-mile study area on either side of the proposed centerline was used to identify historic architectural resources.

Background research identified 65 previously recorded archaeological sites within the one-mile study area. Three archaeological sites are mapped partly or wholly within the 400-foot study corridor: 28-Hu-358A, 28-Hu-378, and 28-Hu-381. None of these sites have been evaluated for listing on the National Register of Historic Places (NRHP). Seventeen historic architectural resources are located within the one-quarter-mile study area. Further discussion of archaeological and historic architectural resources is provided in the sections below. The locations of archaeological sites and historic architectural resources are depicted in Attachments C and D, respectively.

Previous Cultural Resources Surveys

Archaeological investigations associated with approximately 50 projects have been conducted within one mile of the study corridor. These investigations ranged from a few acres for small commercial developments to longer linear surveys for pipelines and highways. Although the majority of these investigations were Phase I identification-level surveys, several Phase II site evaluations and at least one data recovery excavation have also been conducted. Archaeological sites encountered by these surveys have primarily been prehistoric Native American sites that ranged from briefly occupied surface sites to longer-term camps. The results of these investigations and others in the Delaware River drainage will be used to develop contexts for the evaluation of the potential NRHP-eligibility of sites identified in the Phase I archaeological investigation for the current project.

Previously Recorded Archaeological Sites

Sixty-five previously recorded archaeological sites were identified within one mile of the proposed centerline and are presented in Table 1. General site characteristics are summarized, including site type, temporal component, landform setting, and approximate lateral distance to the current study corridor. The NRHP eligibility status for each of these sites is listed in the table below as either: Undetermined (U), Not Eligible (NE), Eligible (E), or Listed (L). Sites within the 400-foot study corridor are listed in the table below as SC; those outside of the study corridor but within the one-mile study area are listed as SA.

Three of the 65 recorded archaeological sites are located either partially or wholly within the 400-foot study corridor. Site 28-Hu-358A is located on the floodplain of the Delaware River, intersecting the study corridor at Milepost (MP) 75. This site is a prehistoric Native American site of unknown temporal affiliation. Site 28-Hu-378 intersects the study corridor at MP 82.8. It is a prehistoric Native American site of unknown temporal affiliation located on lower slopes above a Delaware River tributary. Site 28-Hu-381 is located at MP 84 on middle slopes overlooking the Delaware River. The NRHP status of these sites is undetermined.

Sixty-two of the 65 recorded archaeological sites are located outside of the 400-foot study corridor, but within one-quarter-mile of the proposed centerline. The majority of these sites (52)

are prehistoric Native American sites. Eleven are historic Euro-American sites dating from the late eighteenth century through the early twentieth century. One site is multicomponent: late 18th–early 19th century with a possible Archaic–Woodland component. No data on temporal affiliation is available for site 28-Hu-252. Two sites (28-Hu-566, 28-Hu-567) are NRHP-eligible. The NRHP status of the remaining 63 sites is undetermined.

Table 1: Previously Recorded Archaeological Sites within One Mile of the Study Corridor (Privileged and Confidential)

Site ID	Type	Temporal Component	Setting	NRHP Status	Relationship to Study Corridor
28-Wa-544	No data	Prehistoric-Late Archaic through Middle Woodland	Floodplain	U	SA (MP 75)
28-Hu-1	No data	Prehistoric: No data	Floodplain	U	SA (MP 76.5)
28-Hu-2	No data	Prehistoric: No data	Floodplain	U	SA (MP 76.7)
28-Hu-3	No data	Prehistoric: No data	Floodplain	U	SA (MP 76.8)
28-Hu-4	No data	Prehistoric: No data	Floodplain	U	SA (MP 76.9)
28-Hu-5	No data	Prehistoric: No data	Floodplain	U	SA (MP 77.1)
28-Hu-6	No data	Prehistoric: No data	Hilltop	U	SA (MP 78.5)
28-Hu-7	No data	Prehistoric: No data	Hillslope	U	SA (MP 80.2)
28-Hu-8	No data	Prehistoric: No data	Floodplain	U	SA (MP 80.2)
28-Hu-14	No data	Prehistoric: No data	Floodplain	U	SA (MP 83.5)
28-Hu-15	Base camps	Prehistoric: Late Archaic through Late Woodland	Floodplain	U	SA (MP 83.8)
28-Hu-16	No data	Prehistoric: No data	Lower Slopes	U	SA (MP 84.2)
28-Hu-17	No data	Prehistoric: No data	Floodplain	U	SA (MP 84.2)
28-Hu-45	No data	Prehistoric: No data	Floodplain	U	SA (MP 96.2)
28-Hu-46	No data	Prehistoric: No data	Middle slopes	U	SA (MP 99.3)
28-Hu-48	No data	Prehistoric: No data	Middle slopes	U	SA (MP 97.3)
28-Hu-50	No data	Prehistoric: No data	Floodplain	U	SA (MP 99.2)
28-Hu-51	No data	Prehistoric: No data	Floodplain	U	SA (MP 101.2)
28-Hu-81	No data	Prehistoric: No data	Floodplain	U	SA (MP 101.4)
28-Hu-252	No data	No data	Upland Flat	U	SA (MP 104.5)
28-Hu-358A	No data	Prehistoric: No data	Floodplain	U	SC (MP 75)
28-Hu-366	No data	Prehistoric: No data	Lower Slopes	U	SA (MP 78.1)
28-Hu-367	No data	Prehistoric: No data	Lower Slopes	U	SA (MP 78)
28-Hu-368	No data	Prehistoric: No data	Lower Slopes	U	SA (MP 77.4)
28-Hu-369	No data	Prehistoric: No data	Lower Slopes	U	SA (MP 78.3)
28-Hu-370	No data	Prehistoric: No data	Lower Slopes	U	SA (MP 78.8)
28-Hu-371	No data	Prehistoric: No data	Lower Slopes	U	SA (MP 78.8)

Table 1: Previously Recorded Archaeological Sites within One Mile of the Study Corridor (Privileged and Confidential)

Site ID	Type	Temporal Component	Setting	NRHP Status	Relationship to Study Corridor
28-Hu-376	No data	Prehistoric: No data	Lower Slopes	U	SA (MP 80.4)
28-Hu-378	No data	Prehistoric: No data	Lower Slopes	U	SC (MP 82.8)
28-Hu-379	No data	Prehistoric: No data	Lower Slopes	U	SA (MP 83.7)
28-Hu-380	No data	Prehistoric: No data	Lower Slopes	U	SA (MP 83.9
28-Hu-381	No data	Prehistoric: No data	Middle Slopes	U	SC (MP 84)
28-Hu-386	No data	Prehistoric: No data	Lower Slopes	U	SA (MP 89)
28-Hu-394	No data	Prehistoric: No data	Lower Slopes	U	SA (MP 89.9)
28-Hu-402	No data	Prehistoric: No data	Middle slopes		SA (MP 93.9)
28-Hu-403	No data	Prehistoric: No data	Floodplain	U	SA (MP 93.9)
28-Hu-406	No data	Prehistoric: No data	Lower slopes	U	SA (MP 97.3)
28-Hu-411	No data	Prehistoric: No data	Lower slopes	U	SA (MP 96.4)
28-Hu-412	No data	Prehistoric: No data	Upper slopes	U	SA (MP 96.4)
28-Hu-413	No data	Prehistoric: No data	Middle slopes	U	SA (MP 97.1)
28-Hu-414	No data	Prehistoric: No data	Middle slopes	U	SA (MP 97.1)
28-Hu-415	No data	Prehistoric: No data	Upland flat	U	SA (MP 97.4)
28-Hu-416	No data	Prehistoric: No data	Upland flat	U	SA (MP 97.6)
28-Hu-417	No data	Prehistoric: No data	Middle slopes	U	SA (MP 97)
28-Hu-418	No data	Prehistoric: No data	Upland flat	U	SA (MP 100.1)
28-Hu-468	No data	Prehistoric: Early to Middle Woodland	Floodplain	U	SA (MP 99.8)
28-Hu-470	Industrial	Historic: 19th century	Floodplain	U	SA (MP 99.7)
28-Hu-483	No data	Prehistoric: No data	Floodplain	U	SA (MP 75.1)
28-Hu-484	No data	Prehistoric: No data	Floodplain	U	SA (MP 75)
28-Hu-538	No data	Prehistoric: Archaic	Lower slopes	U	SA (MP 86.8)
28-Hu-544	Farmstead, Blacksmith Shop	Historic: 19th c.	Lower slopes	U	SA (MP 97.8)
28-Hu-546	Farmstead	Historic: Late 18th c. through 19th c..	Lower slopes	U	SA (MP 93.8)

Table 1: Previously Recorded Archaeological Sites within One Mile of the Study Corridor (Privileged and Confidential)

Site ID	Type	Temporal Component	Setting	NRHP Status	Relationship to Study Corridor
28-Hu-566	Farmstead	Historic: 19th c. through Early 20th c.	Upland flat	E	SA (MP 89.1)
28-Hu-567	Farmstead	Historic: Mid-18th c. through Early 20th c.	Upland flat	E	SA (MP 89.3)
28-Hu-573	Domestic? (foundation)	Historic: 19th c. through Late 20th c.	Lower slopes	U	SA (MP 76.6)
28-Hu-574	Domestic? (foundation)	Historic: 19th c. through Early 20th c.	Lower slopes	U	SA (MP 76.7)
28-Me-120	No data	Prehistoric: No data	Floodplain	U	SA (MP 101.7)
28-Me-246	Farmstead	Historic: 18th/19th century	Upland flat	U	SA (MP 109.4)
28-Me-253	Farm	Historic: 19th century	Upland flat	U	SA (MP 104.6)
28-Me-295	No data	Prehistoric: No data	Floodplain	U	SA (MP 101.4)
28-Me-369	No data	Prehistoric: Archaic–Woodland; Historic: late 18th–early 19th century	Upland flat	U	SA (MP 108.8)
28-Me-370	Farmstead	Historic: 19th century	Upland flat	U	SA (MP 108.2)
28-Me-380	Canal station, railroad station, domestic	Historic: 19th through 20th century	Floodplain	U	SA (MP 101.9)
Scattered Skinner and Schrabish Sites	No data	Prehistoric: No data	Middle slopes	U	SA (MP 100.2)
Scattered Skinner and Schrabish Sites	No data	Prehistoric: No data	Upland flat	U	SA (MP 100.4)

Previously Recorded Above-Ground Resources

The research conducted for this project identified a total of 17 previously identified resources within a 1/4-mile study area surrounding the project centerline. These resources include seven NRHP-listed or eligible districts, five NRHP-listed or eligible buildings, two NRHP-eligible structures, and three buildings that were identified, but not evaluated for NRHP eligibility (Table 2). Table 2 lists these resources in addition to information specific to their location and NRHP status.

Table 2: NRHP Listed and Eligible Above-Ground Resources within 1/4 Mile of the Project Corridor

ID #	County	Resource Name	NR Status	Resource Type
1598	Hunterdon	Pursley's Ferry Historic District	NR Listed: 10/8/1980 SR Listed: 7/12/1978	District
4275	Hunterdon	Bunns Valley Agricultural Historic District	Eligible: 5/3/2004	District
3767	Hunterdon	Javes Road Bridge	Eligible: 2/11/1999	Structure
2293	Hunterdon	Edward Fox House and Farm	Eligible: 9/14/2012	Building
8004	Hunterdon	George Fox (IV)-John Phillips-David Pittenger House	Identified	Building
4591	Hunterdon	Rosemont Rural Agricultural Historic District	NR Listed: 6/18/2010 SR Listed: 2/10/2010	District
1914	Hunterdon	Inch Lines Linear Multistate Historic District	Eligible: 8/31/1993	District
1641	Hunterdon	Mount Airy Historic District	NR Listed: 11/13/1989 SR Listed: 9/14/1989	District
1698	Mercer	Pleasant Valley Historic District	NR Listed: 6/14/1991 SR Listed: 4/12/1991	District
4412	Mercer	Atchley Farmstead	Identified	Building
4750	Mercer	Oldis (Smith-Mershon) Farm	Eligible: 5/17/2004	Building
6726	Mercer	Harts Corner Schoolhouse	Identified	Building
1684	Mercer	Hart/Hoch House	NR Listed: 3/14/1973 SR Listed: 8/7/1972	Building
4540	Mercer	Delaware & Bound Brook RR Historic District	Eligible: 9/9/2005	District
4993	Mercer	NJ Route 31 Circle (Pennington Circle)	Eligible: 9/21/2010	Structure
1676	Mercer	Joseph P. Blackwell Farm	Eligible: 6/23/1982	Building
2932	Mercer	Adams House	Eligible: 6/23/1982	Building

Historic Mapping Data

The proposed pipeline route was overlaid on nineteenth-century maps and atlases of each of the counties crossed by the project. These sources show a number of structures near the study corridor which may now represent historic archaeological sites. As project research is further developed, URS will assess which, if any, of these map-documented structures have the potential to be directly or indirectly impacted by the project.

Preliminary Geomorphological Assessment

In consultation with Dr. Frank Vento, Geomorphologist, stream order was used to initially assess the potential for buried archaeological sites where the study corridor intersects potential alluvial

soils. The majority of crossings will be made through small rills as well as first- and second-order streams. These streams typically exhibit moderate to steep gradients, straight to weak meandering channel habits, low discharges, and relatively thin (less than 3.3 feet) Holocene vertical accretion deposits. As a result they possess valley bottom zones that lack flights of terraces above the aggrading floodplain zone. The potential for site burial is assessed as low. The Delaware River, a fourth-order stream, displays lower gradients, higher discharges, and wider valley bottom zones. It possesses a weak to well-developed meandering channel habit and higher terraces. The Delaware River is the only stream with the potential to contain multiple stacked solas along the lower aggrading terraces with single well-developed pedons occurring on the higher terraces above the 100-year floodway zone. Holocene alluvial packages are anticipated to range between 3.3 feet and 14 feet in thickness. The Delaware River is assessed as having a high potential for buried archaeological sites.

Archaeological Sensitivity Model

Assessing archaeological sensitivity is the first step in determining the need for additional archaeological studies. It is a qualitative appraisal of the project corridor based on knowledge of previously recorded archaeology sites and historical occupational patterns with the goal of identifying landforms and areas that have the potential to contain archaeological resources. The PennEast project corridor was assessed for sensitivity for both pre-contact and historic-period archaeological resources. An understanding of pre-contact sensitivity was developed through a GIS-based modeling protocol that uses the environmental parameters associated with known site locations. Historic-period archaeological sensitivity was developed using historical map sources. Roads were digitized from 1848,[1] 1851,[2] 1890,[3] and 1891[4] maps and were buffered 200 feet; buildings were digitized from the 1849 and 1851 maps and were also buffered 200 feet. The results of the sensitivity analysis are shown in Attachment C.

The pre-contact archaeological sensitivity model created for the project is a simple weighted combination of environmental features including topographic slope and the distance to wetlands, streams, water bodies, and the Lockatong geologic formation. The objective of this model is to identify areas that are within proximity to valuable hydrologic resources and on soils suitable for habitation. All areas within 152 m (500 feet) of streams/wetlands and known archaeological sites were automatically assumed to have high sensitivity. In addition, the Lockatong geologic formation was factored into this model to account for the potential presence of Native American argillite quarry sites that may not be accounted for by topography and hydrology alone. The theoretical underpinning of this model is simply that suitable ground and access to water are the most basic factors for habitation choices. Referred to as a "camping model," this approach mirrors how archaeologists have been locating sites for decades, but uses the availability of digital data to apply it over a large area. Clearly, there are many potential habitation locations that such a model will not identify, but this model is intended primarily as a guide to the field

[1] J.W. Otley and J. Keily, *Map of Mercer County New Jersey*, Lloyd Van Derveer, Camden, New Jersey, 1849.
[2] Samuel C. Cornell, *Map of Hunterdon County New Jersey*, Lloyd Van Derveer & Cornell, Camden, New Jersey, 1851.
[3] USGS, Pennsylvania–New Jersey, Lambertville Sheet, U.S. Geological Survey, Washington, D.C. 1890.
[4] USGS, Pennsylvania–New Jersey, Easton Sheet, U.S. Geological Survey, Washington, D.C., 1891.

effort and does not replace in-field decisions for locating judgmental test locations, which are equally, if not more, important.

The assignment of weights to the classification of environmental variables outside the 152-m (500-foot) buffer zone around streams/wetlands allows the archaeologist to rank the importance of certain measures. There are various ways to weight a model factor, which include arbitrary assessment, inductive assessment based on known site locations, deductive assessments based on an *a priori* theory, or a combination of these. This model uses the theory that lower slopes and proximity to the Lockatong formation and water resources have a large influence on the location of most Native American archaeological sites. As such, each of the variables is weighted so that the more level or closer to a water resource or argillite-bearing geology an area is the greater the sensitivity for Native American archaeological sites. To establish the weights, layers were created in a GIS to represent the topographic slope (percent), distance to the Lockatong bedrock geology formation, streams from the National Hydrologic Dataset (high resolution), and the wetlands and water bodies of the National Wetland Database and assigned weights from 10 to 1 based on a preference for lower slopes and proximity to water. Following this, the weights of slope and distance to the Lockatong formation were added to the hydrologic resources to create the final set of weights. The final model had a range of weights from 2.5 to 41.

Clearly, no single model can account for the full range of Native American habitation location decisions, therefore this model is simply a guide for the field effort. The true assessment of sensitivity will take place within the field where field directors can use on-the-ground observations to modify the model's recommendations and set the testing interval accordingly.

Proposed Methodology for Field Survey

Archaeological Resources

Field Survey

Methods for the identification of archaeological sites will be consistent with the NJ SHPO's guidelines: *Guidelines for Phase I Archaeological Investigations: Identification of Archaeological Resources*. The archaeological APE will be visually inspected to identify rockshelters, foundations, or other surface indications of archaeological sites regardless of field conditions (i.e., in areas of excessive slope or standing water). Based on the archaeological sensitivity model, previous archaeological surveys, and accepted practice, relatively level landforms within approximately 500 feet of perennial water sources and similar settings adjacent to previously recorded archaeological sites are categorized as having a high probability for the presence of archaeological sites. In addition, areas in proximity to historic roads and structure locations indicated on historic maps are also categorized as high probability areas. Areas of moderate probability encompass level to gently sloping landforms between approximately 500 and 600 feet from a perennial water source. Areas with a low probability to contain archaeological sites include areas of steeper slope (≥ 12%) and areas at more than 600 feet distant from perennial water sources.

Geomorphological investigations will be conducted at stream crossings within the archaeological APE that may contain buried archaeological sites. These investigations will be carried out in the early stages of Phase I archaeological fieldwork and will guide the methods used to identify archaeological sites.

Subsurface testing in high and moderate probability areas will be accomplished by shovel test pits (STPs) excavated at 15-meter intervals on landforms where archaeological sites can be demonstrated to occur within one meter of the surface. In high and moderate probability areas where archaeological sites may be present below one meter, test units (TUs) measuring one-meter-square or larger will be excavated at 30-meter intervals. Subsurface testing in low probability areas will be conducted by STPs at 30-meter intervals, with closer-interval STPs excavated on a judgmental basis.

In portions of the study corridor where soil visibility is greater than 50% (except in areas of no-till agriculture), systematic inspection of the surface for artifacts will be conducted in conjunction with widely spaced subsurface probing sufficient to characterize the nature of the soils and establish the depth of Holocene sediments. If it is determined that Holocene sediments extend below the plowzone, a regular program of testing, as defined above, will be initiated. In high and moderate probability areas the systematic inspection will occur along transects spaced at 3-meter intervals. Surface survey transects in areas of low probability will be spaced at 6-meter intervals. Artifacts noted during surface survey will be point plotted and collected for processing and analysis. Surface conditions will be documented photographically, and the locations where surface survey was employed will be indicated on the report mapping. In general, subsurface testing will not be conducted on excessive slopes ($\geq$ 15% slope) or in areas of standing water. As noted above, these settings will be visually inspected for the presence of rockshelters, lithic sources, and structural remnants. If evidence of these features is identified in areas of excessive slope or standing water, subsurface testing will be conducted on a judgmental basis.

If cultural material is encountered in any STP, radial shovel tests at 3.3-m (10-foot) intervals in each of the cardinal directions will be excavated around the positive test. The threshold for site identification is three or more artifacts in two or more shovel tests. Artifact finds not meeting this criterion will be considered an isolated find.

All soils from STPs and TUs will be excavated by natural horizons. Soils from each horizon will be screened separately through one-quarter-inch wire mesh. Data from STPs and TUs will be recorded on standardized forms. Soil profiles will be recorded using the Munsell color system and standard texture classifications. Excavations will be completely backfilled, compacted, and the sod replaced. The location of survey transect beginning and end points, STPs, TUs, surface artifacts, and features will be mapped with a hand-held Global Positioning System (GPS) unit with sub-meter accuracy. Digital photography will be used to record surface conditions, select excavation profiles, cultural features, and identified archaeological sites.

Post-Field Artifact Processing

All artifacts recovered during the test excavations will be returned to URS's archaeological laboratory in Burlington, New Jersey, for cleaning, cataloging, and analysis according to the NJHPO standards and the Secretary of the Interior's *Standards and Guidelines for Curation* (36 CFR 79). The objectives of laboratory processing and analysis will be to determine—to the extent possible—the date, function, and cultural affiliation of the site with which the artifacts are associated, as well as to prepare the artifacts for curation.

Prehistoric artifacts will be cataloged in terms of material type, form, function, and, if possible, cultural affiliation. Ceramics will be classified by body, temper, and decoration. Lithic tools will be analyzed in terms of functional type and raw material. Debitage will be classified using morphological traits such as presence of a platform and bulb of percussion, the type of platform, dorsal flake scars, and presence of cortex. Evidence of thermal alteration on debitage will be tabulated.

Historic artifacts will be analyzed in terms of type of material, form, function, and temporal attributes. Ceramics will be characterized by paste, glaze, and decoration. Vessel function will be inferred whenever possible, based on vessel shape and size. Maker's marks will be recorded and identified if present. Quality of evidence permitting, the date and place of manufacture will be specified for each vessel in the assemblage.

Glass containers will be characterized by type, color, and element (body, rim, base). Whenever the quality and completeness of the vessel is sufficient, the date of manufacture and the function of the bottle will be specified. Window glass will be characterized by color, and nails by manufacturing process, where possible. Pipes will be characterized by the shape of bowls and diameter of bore holes. Decorations or maker's marks will be recorded when present, and a date and place of manufacture will be specified when possible.

The information from laboratory analysis will be entered into a Microsoft Access database. The database is designed to facilitate the generation of tables of artifact subassemblages from the sites, as well as to generate data for mapping analyses. An appropriate artifact curation facility that meets with the approval of the New Jersey State Museum will be identified during the course of the project, and the artifacts will be prepared according to the standards required by the facility.

Reporting

Following the completion of field and lab studies, a technical report of the archaeological investigation will be prepared according to NJ-HPO's *Guidelines for Preparing Cultural Resources Management Archaeological Reports* (July 2000). The report will include introductory material describing the project and the refined archaeological APE; the results of background research detailing the environmental setting of the project and pre-contact and historic-period contexts; a research design with objectives, expected results, and detailed field and lab methods; the results of the fieldwork, including artifact analyses and site interpretations, if applicable; and a discussion of potential National Register of Historic Places significance,

project effects, and recommendations for additional work. The report will also include a complete list of references cited and appendixes that include the qualifications of key staff, representative soil logs, an artifact inventory, and site forms.

The technical report will be illustrated with photographs from the fieldwork, representative soil profiles, and maps showing the results of the testing. All graphics showing the locations of subsurface testing will include labels identifying the individual tests.

Above-Ground Resources

There is potential for the PennEast Pipeline to cross through parcels containing above-ground resources over 50 years of age including buildings, structures, objects, districts and landscape features. Parcels with historic above-ground resources may be physically and visually affected by the construction of a pipeline. As previously mentioned, the APE for above-ground resources encompasses properties within the limits of disturbance (direct APE), as well as adjacent properties that may be visually or contextually affected by construction of above-ground infrastructure or potential changes to the landscape (indirect APE). Types of activities that are expected to require ground disturbance for this project includes construction of the 100-foot temporary and permanent right-of-way (ROW), temporary and permanent workspaces, ancillary above-ground infrastructure (including compressor stations, mainline block valves, and interconnects), and access roads. Types of activities that may cause a visual effect include tree cutting and other alterations to the landscape as well as the construction of above-ground pipeline facilities that will be within the viewshed of historic resources.

To date, details of the alignment location and ancillary features/structures have not been finalized. As a result, URS proposes to conduct their above-ground studies on properties that are intersected by a 400-foot wide corridor that has been established to encompass any minor facility and alignment shifts in the project planning phase, as well as to avoid any sensitive resources that may be identified during the environmental field investigations. Where only portions of a property are intersected, URS will consider the entire property. This 400-foot corridor will be considered the APE and is mapped in Attachment B. As field work progresses, the architectural historians will modify the APE to reflect any potential effects that may result from tree or landscape removal. Likewise, the APE will also be modified, if needed, when the location and design of new above-ground facilities (such as compressor stations) are known.

For the field survey effort, Secretary of the Interior-qualified architectural historians will conduct a vehicular and pedestrian reconnaissance-level survey of properties over 50 years of age in the APE. This survey will include documentation of both previously recorded and newly identified historic resources. All resources included in the survey will be documented with high resolution digital photography and will be plotted on maps.

For the reporting effort, URS will prepare a Reconnaissance-Level Survey Report that follows the guidelines set forth in the NJHPO's *Guidelines for Architectural Survey*. The report will include a modified APE that will be described in text and plotted on maps; a list of all previously identified and newly identified resources in the APE; a historical overview that will address historic contexts in the project area and be based on archival research conducted at regional

repositories; and recommendations for further work. For newly identified properties in the APE containing resources over 50 years of age, URS will complete Base Forms that will be inserted to the report as an appendix. The report and survey forms will be submitted to NJHPO for review and comment. URS anticipates that NJHPO may require intensive-level survey of a limited number of resources that appear to be potentially eligible for listing in the NRHP. URS will conduct additional survey of those resources and will document them using survey form Attachments and the Historic District Overlay, as necessary. URS will also fill out the Eligibility Worksheet to make recommendations on whether resources are eligible for listing in the NRHP. In order to assess eligibility, URS will conduct additional archival research on the resource to establish its historic context and make informed decisions about eligibility. Completed survey forms will be submitted to NJHPO for review and comment.

Unanticipated Discovery Plan

Before the project begins, the FERC requires the development of a SHPO-approved Unanticipated Discovery Plan (UDP). The UDP is included with this letter as Attachment E for your review and concurrence.

URS would appreciate your consideration of the enclosed material and timely response to the proposed investigations as described herein. I look forward to hearing from you, but in the meantime should you have any questions please feel free to contact me at (610) 832-2791 or at grace.ziesing@urs.com

Sincerely,

URS
Grace H. Ziesing, Senior Archaeologist
625 West Ridge Pike, Suite E-100
Conshohocken, PA 19428

ATTACHMENT A: USGS-based Map of the PennEast Pipeline Project

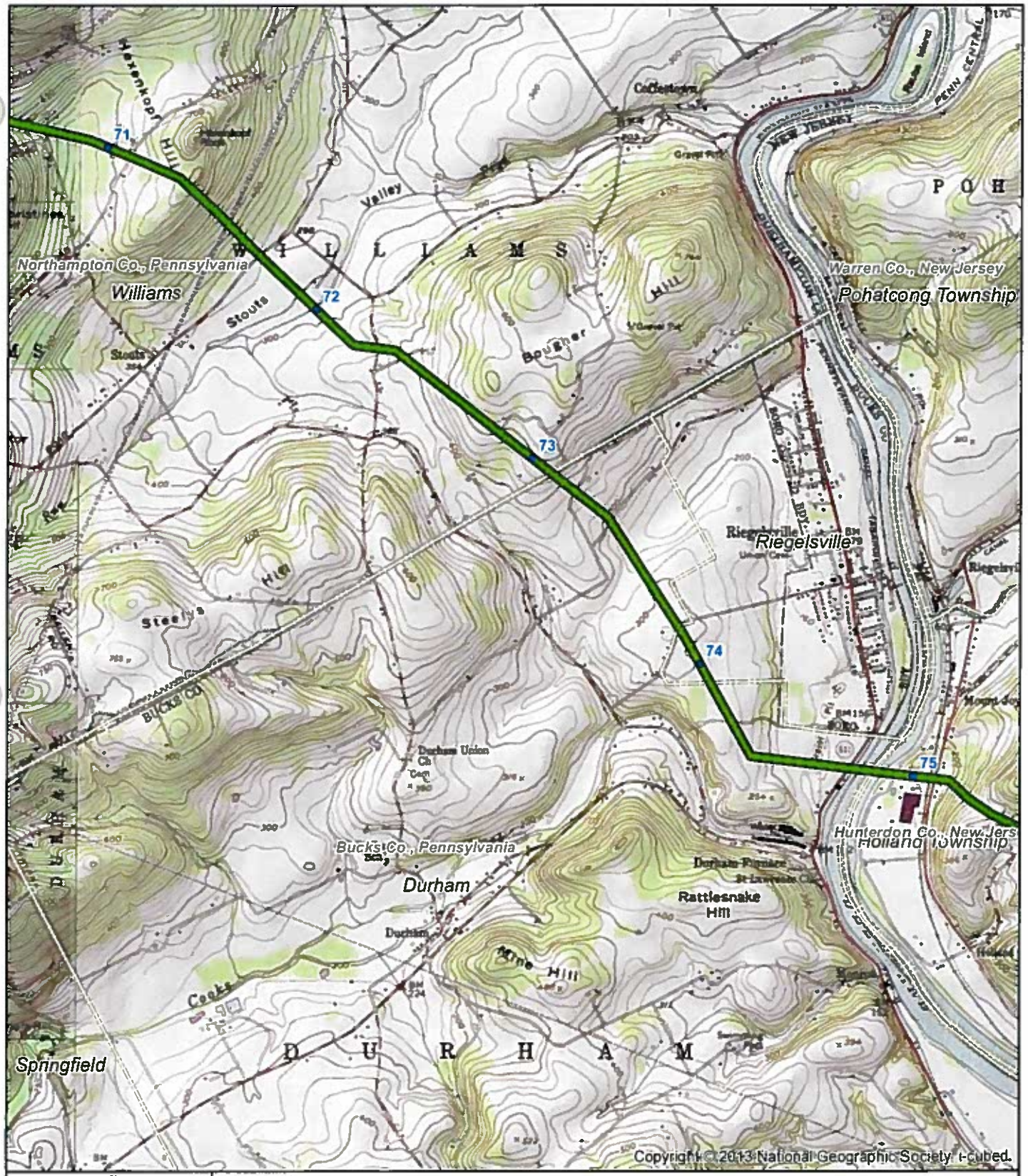
ATTACHMENT B: Archaeological APE and Above-Ground APE

ATTACHMENT C: Project Maps with Previously Recorded Archaeological Sites and Archaeological Sensitivity Model Overlay (Privileged and Confidential)

ATTACHMENT D: Project Maps with Previously Recorded Architectural Resources

ATTACHMENT E: Unanticipated Discovery Plan

ATTACHMENT A: USGS-based Map of the PennEast Pipeline Project



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Legend

- Mile Postings
- Interconnect
- PennEast Pipeline
- Municipality Boundary
- County Boundary

TITLE:

PennEast Pipeline Project
USGS Topographic Quadrangle Map

LOC: Riegelsville Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 2/3/2015	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 23 of 33

PennEast PIPELINE

PennEast Pipeline Company, LLC

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Legend

- Mile Postings
- Interconnect
- PennEast Pipeline
- Municipality Boundary
- County Boundary

TITLE:

PennEast Pipeline Project
USGS Topographic Quadrangle Map

LOC: Riegelsville Quadrangle			REV.:
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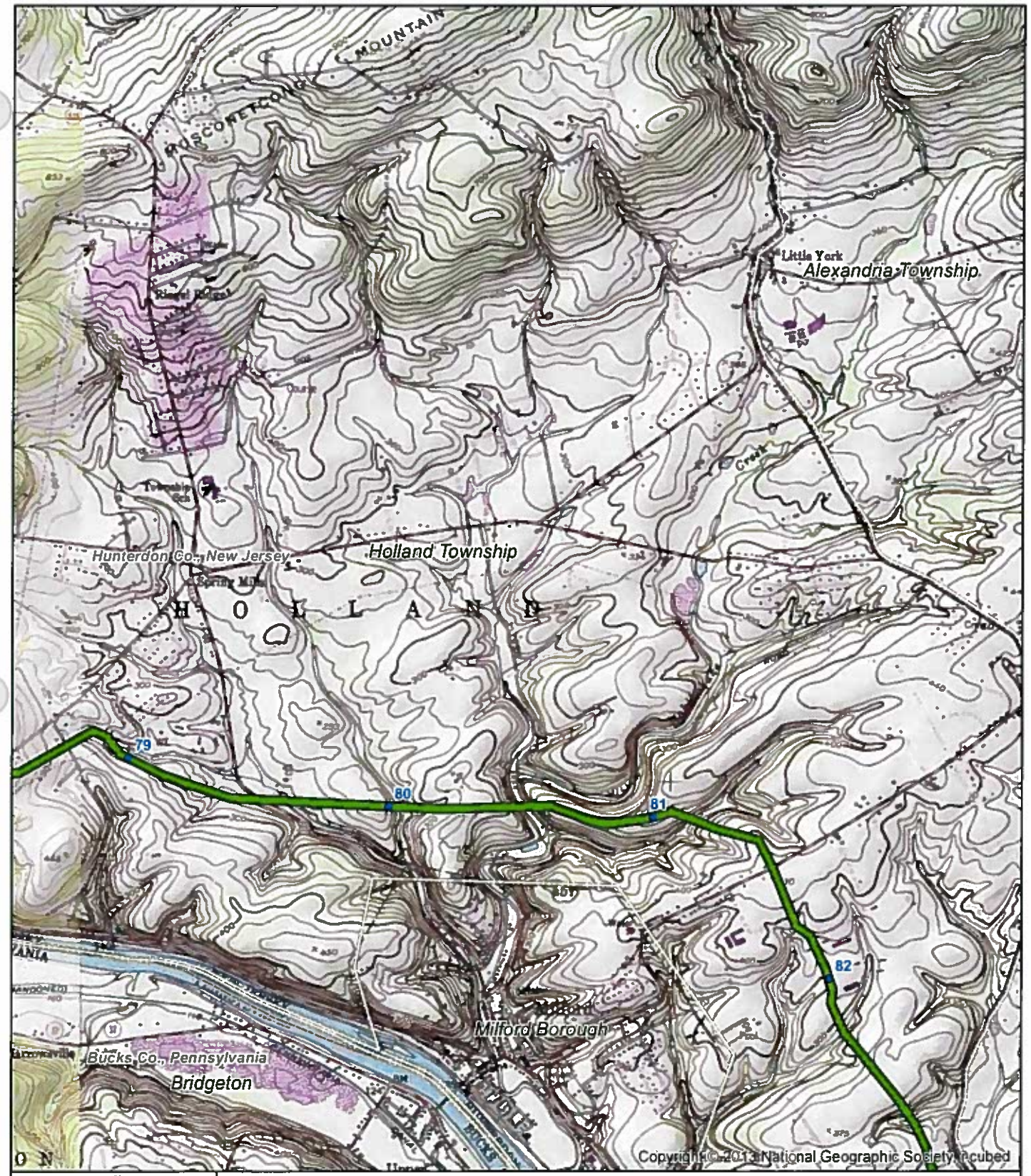
PennEast PIPELINE

PennEast Pipeline Company, LLC



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Legend

- Mile Postings
- Interconnect
- PennEast Pipeline
- Municipality Boundary
- County Boundary

TITLE:

PennEast Pipeline Project
USGS Topographic Quadrangle Map

LOC: Frenchtown Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 2/3/2015	W.O.:
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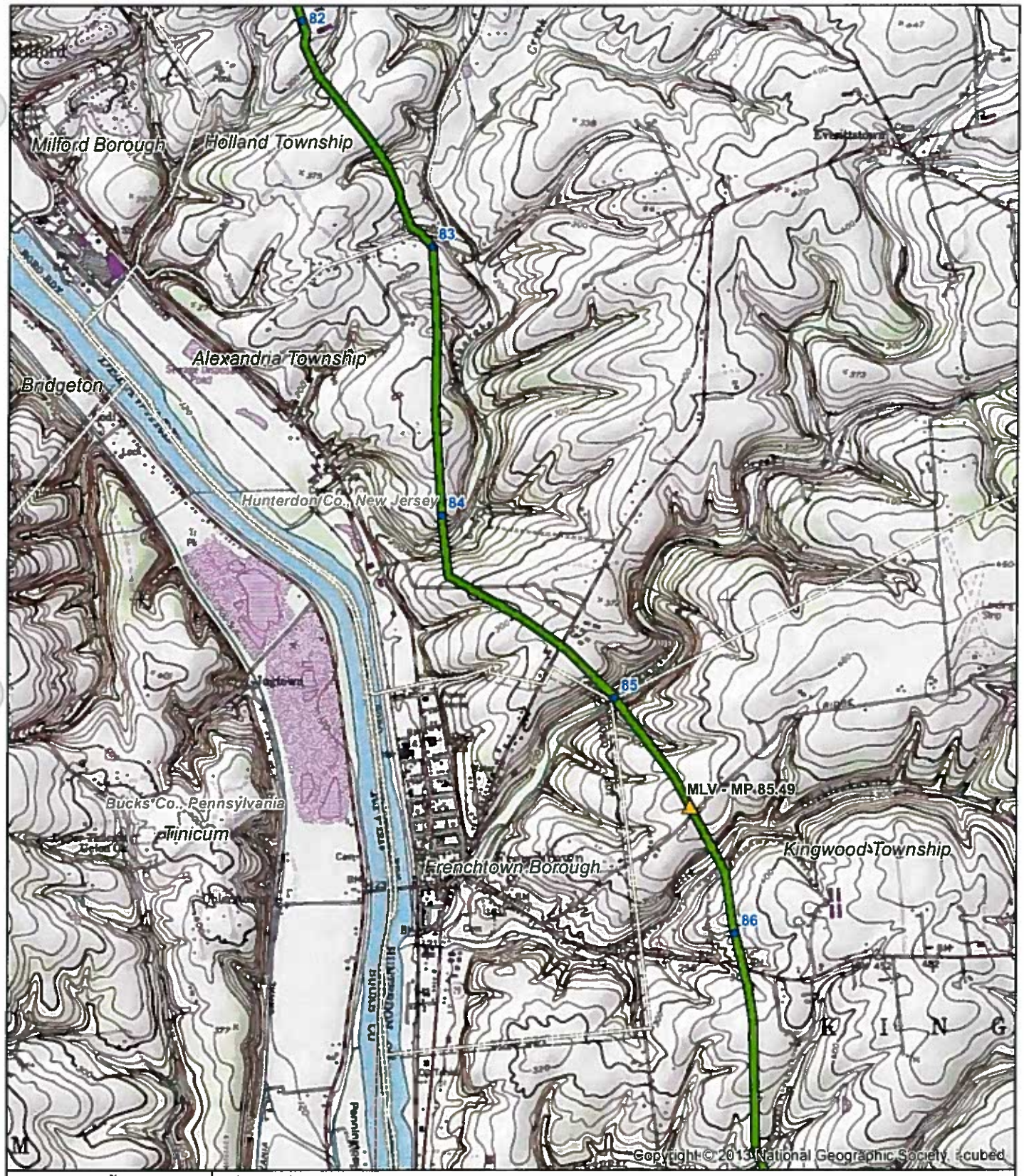
PennEast PIPELINE

PennEast Pipeline Company, LLC



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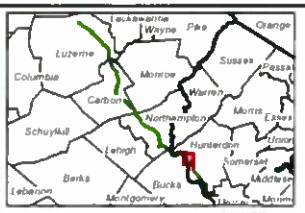
Legend

- Mile Postings
- Interconnect
- PennEast Pipeline
- Municipality Boundary
- County Boundary

TITLE:

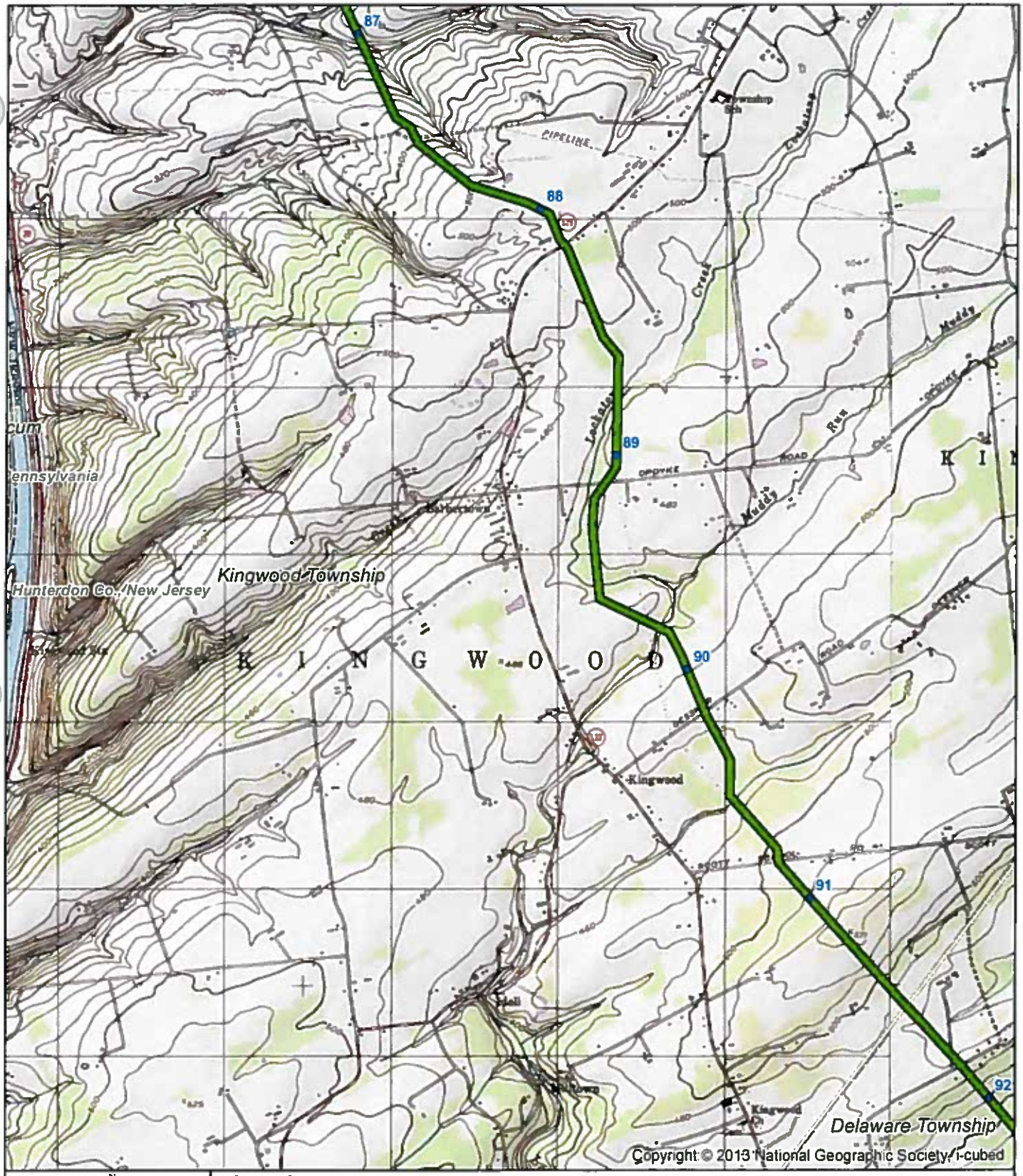
PennEast Pipeline Project
USGS Topographic Quadrangle Map



PennEast PIPELINE

PennEast Pipeline Company, LLC

LOC: Frenchtown Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 2/3/2015	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 26 of 33



Legend

- Mile Postings
- Interconnect
- PennEast Pipeline
- Municipality Boundary
- County Boundary

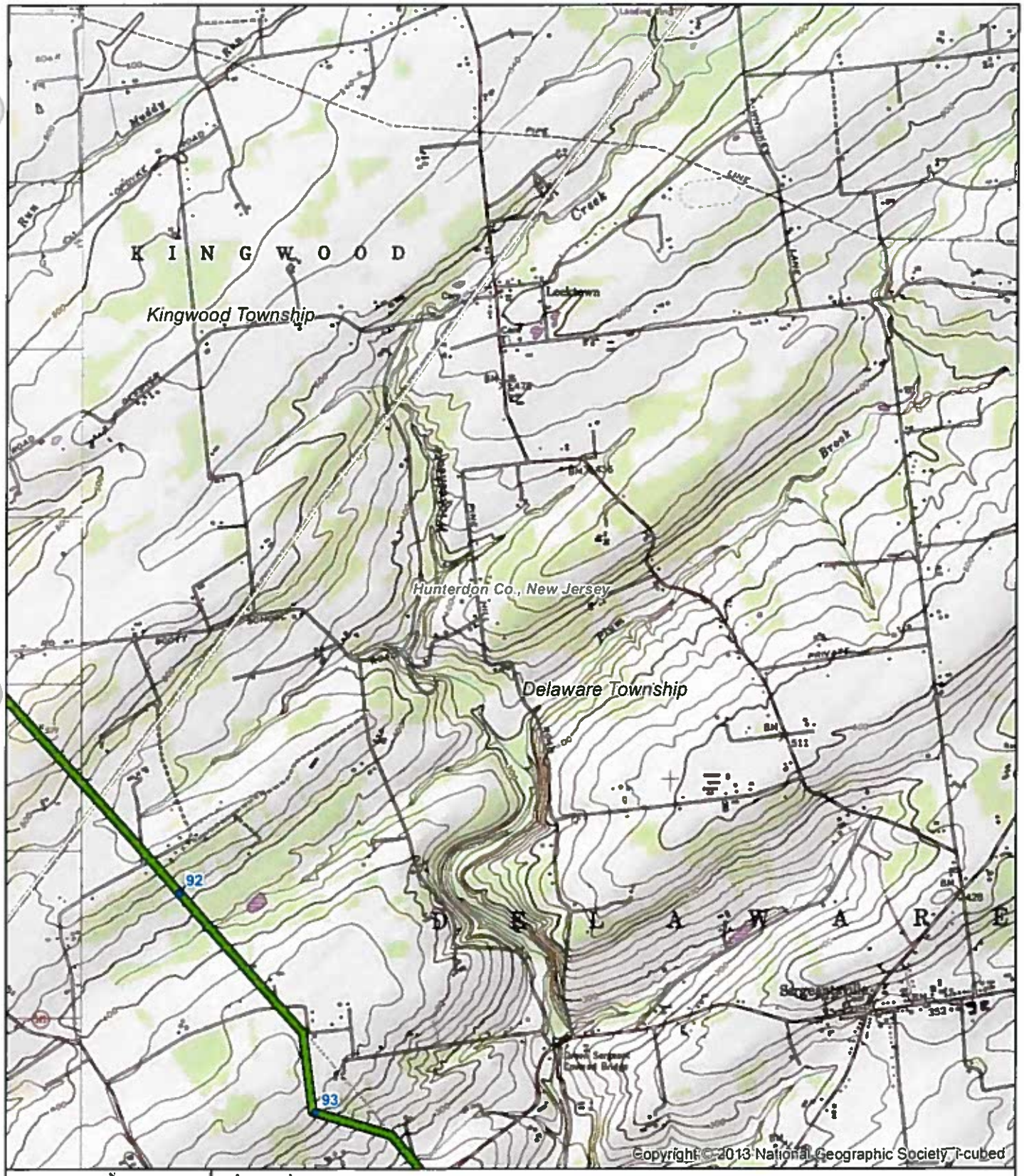
TITLE:

PennEast Pipeline Project
USGS Topographic Quadrangle Map

LOC: Frenchtown, Lumberville Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 2/3/2015	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 27 of 33

PennEast PIPELINE

PennEast Pipeline Company, LLC



N
W E
S

0 800 1,600 3,200 Feet

Legend

- Mile Postings
- Interconnect
- PennEast Pipeline
- Municipality Boundary
- County Boundary

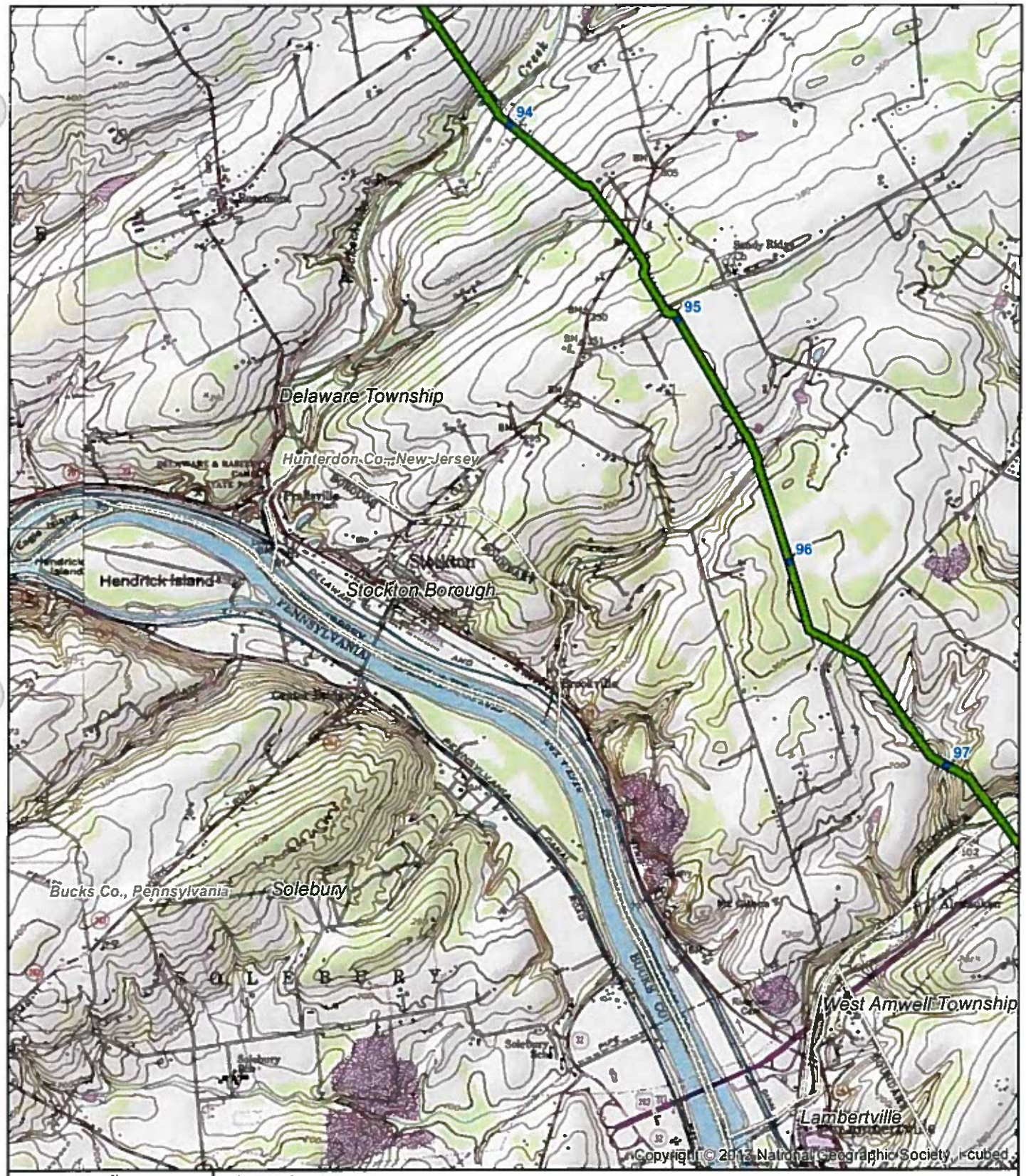
TITLE:

PennEast Pipeline Project
USGS Topographic Quadrangle Map

LOC: Stockton Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 2/3/2015	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 28 of 33

PennEast PIPELINE

PennEast Pipeline Company, LLC



N
W E
S

0 800 1,600 3,200 Feet

Legend

- Mile Postings
- Interconnect
- PennEast Pipeline
- Municipality Boundary
- County Boundary

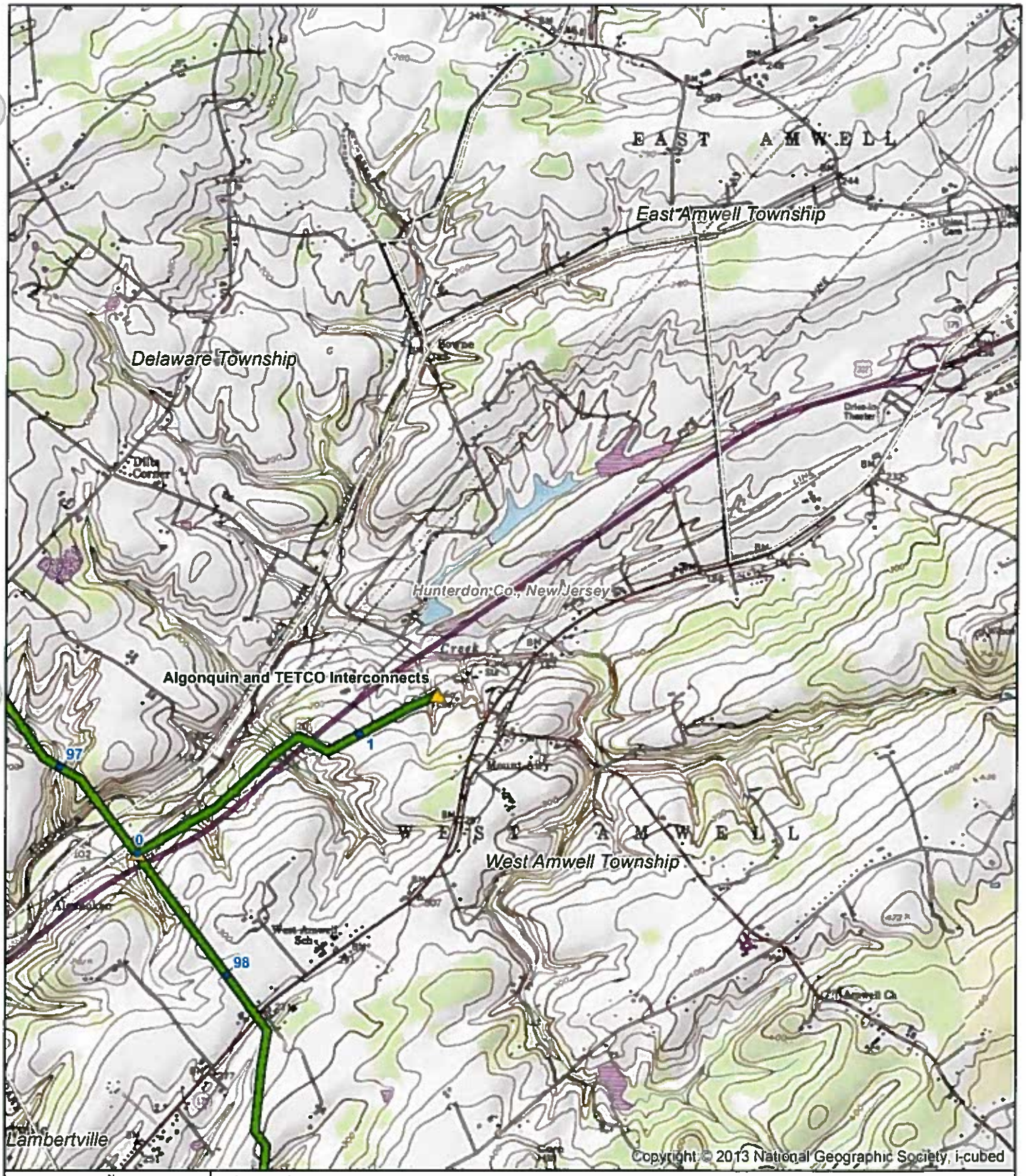
TITLE

PennEast Pipeline Project
USGS Topographic Quadrangle Map

PennEast PIPELINE

PennEast Pipeline Company, LLC

LOC: Stockton Quadrangle			REV:
CKD. BY: BH	ENG.:	Date: 2/3/2015	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 29 of 33



N
W E
S

0 800 1,600 3,200 Feet

Legend

- Mile Postings
- Interconnect
- PennEast Pipeline
- Municipality Boundary
- County Boundary

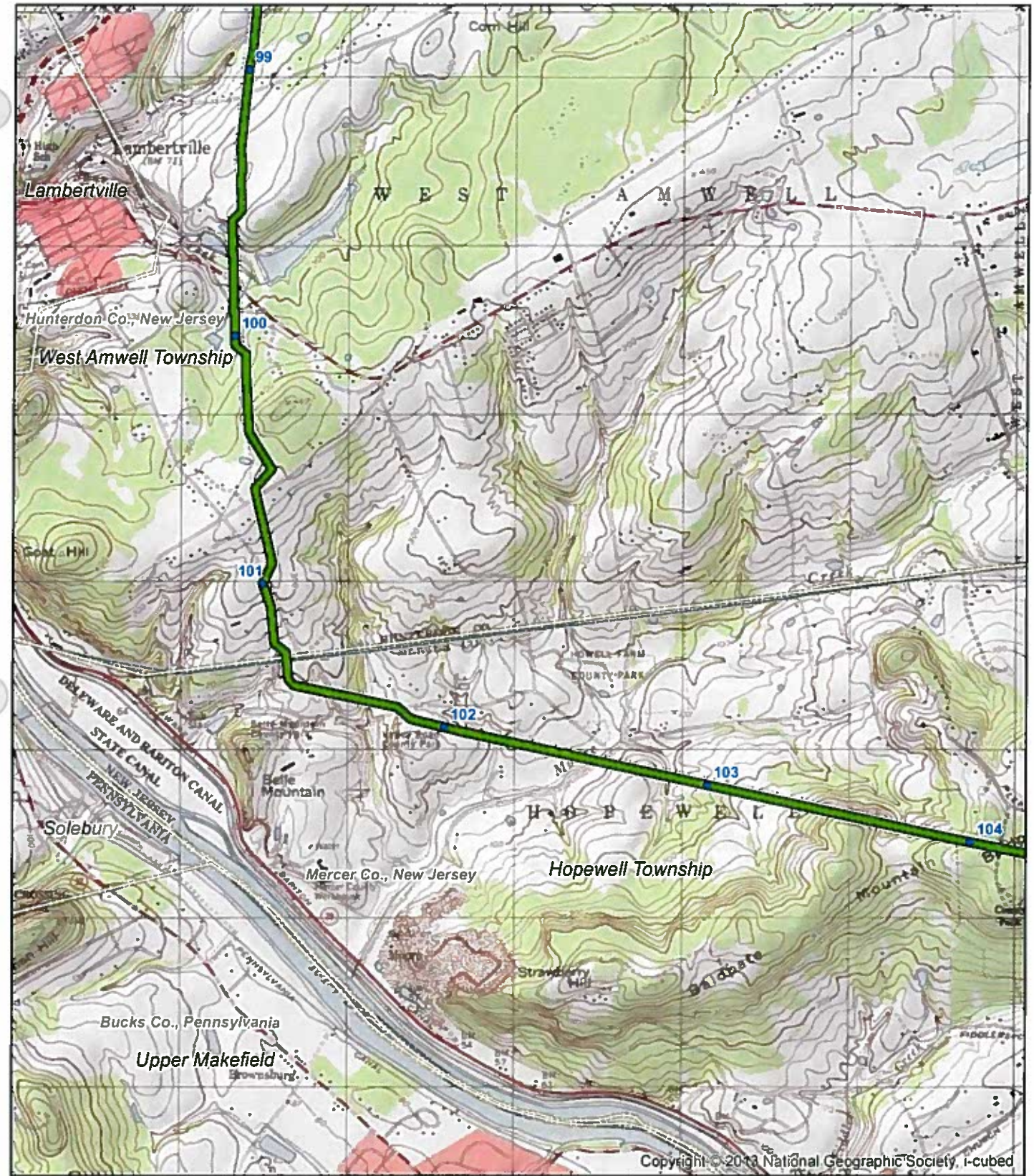
TITLE:

PennEast Pipeline Project
USGS Topographic Quadrangle Map

LOC: Stockton Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 2/3/2015	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 30 of 33

PennEast PIPELINE

PennEast Pipeline Company, LLC



N
W E
S

0 800 1,600 3,200 Feet

Legend

- Mile Postings
- Interconnect
- PennEast Pipeline
- Municipality Boundary
- County Boundary

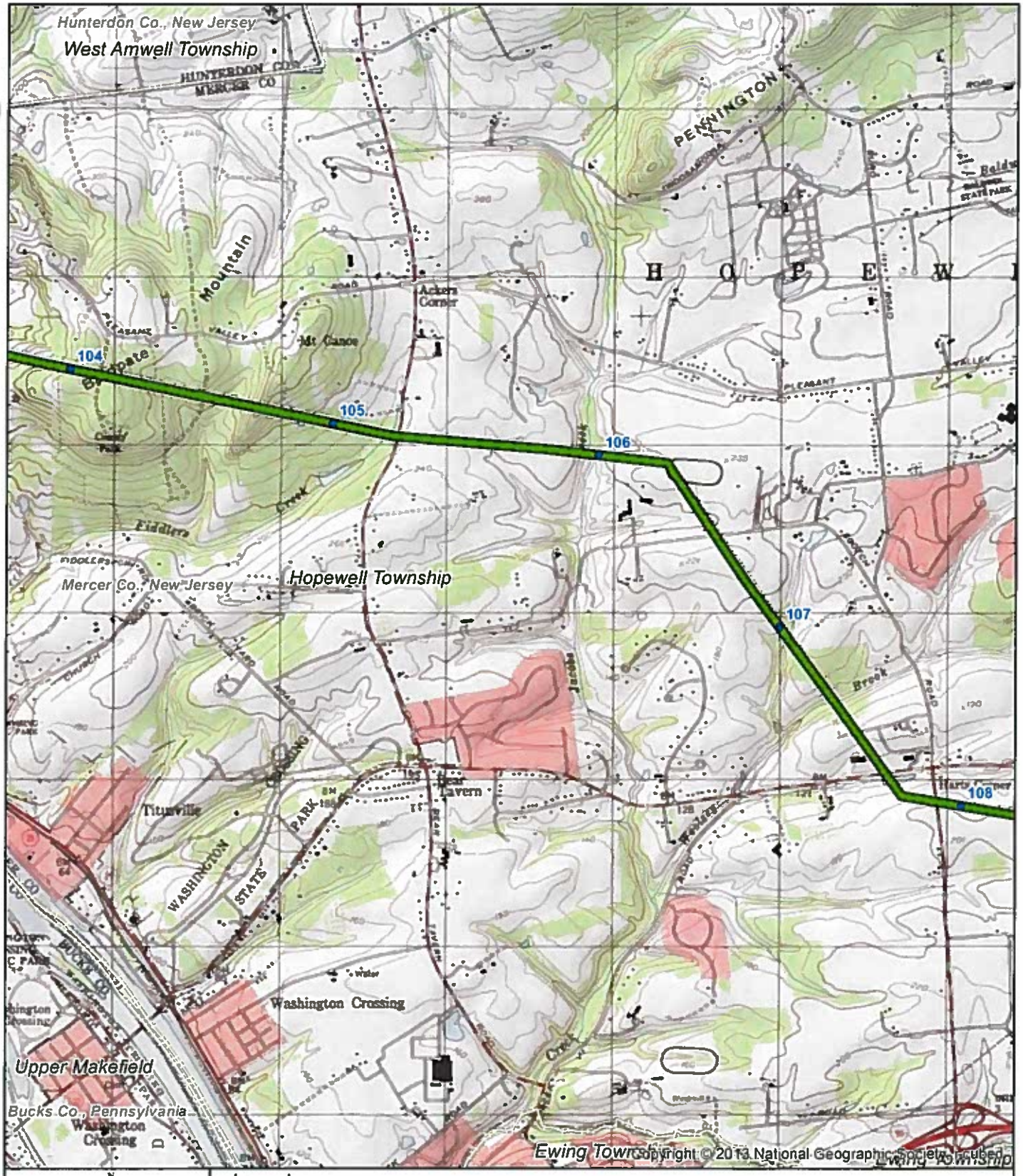
TITLE:

PennEast Pipeline Project
USGS Topographic Quadrangle Map

LOC: Hopewell Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 2/3/2015	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 31 of 33

PennEast PIPELINE

PennEast Pipeline Company, LLC



N
W E
S

0 800 1,600 3,200 Feet

Legend

- Mile Postings
- Interconnect
- PennEast Pipeline
- Municipality Boundary
- County Boundary

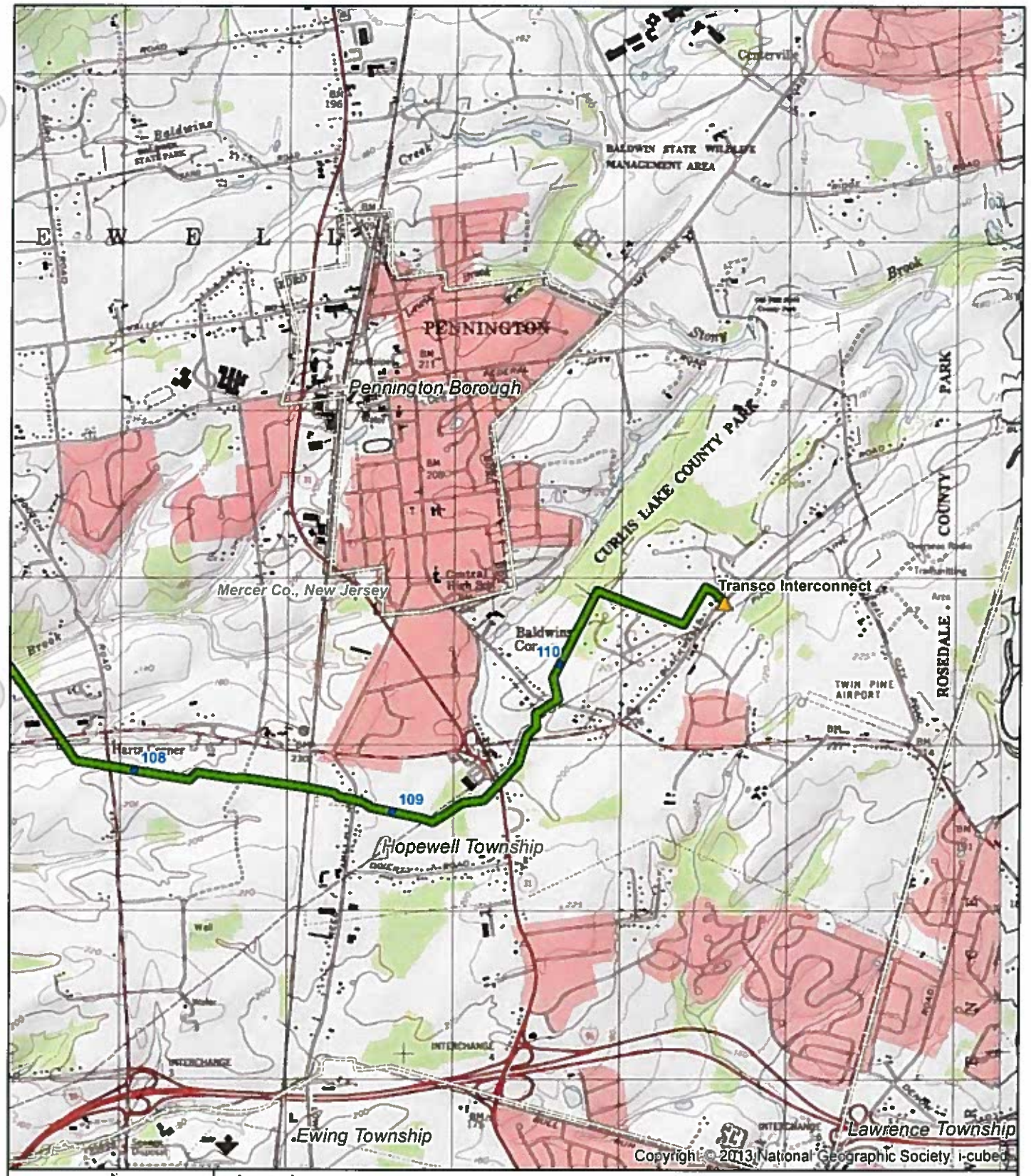
TITLE:

PennEast Pipeline Project
USGS Topographic Quadrangle Map

PennEast PIPELINE

PennEast Pipeline Company, LLC

LOC: Lambertville Quadrangle			REV:
CKD. BY: BH	ENG.:	Date: 2/3/2015	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 32 of 33



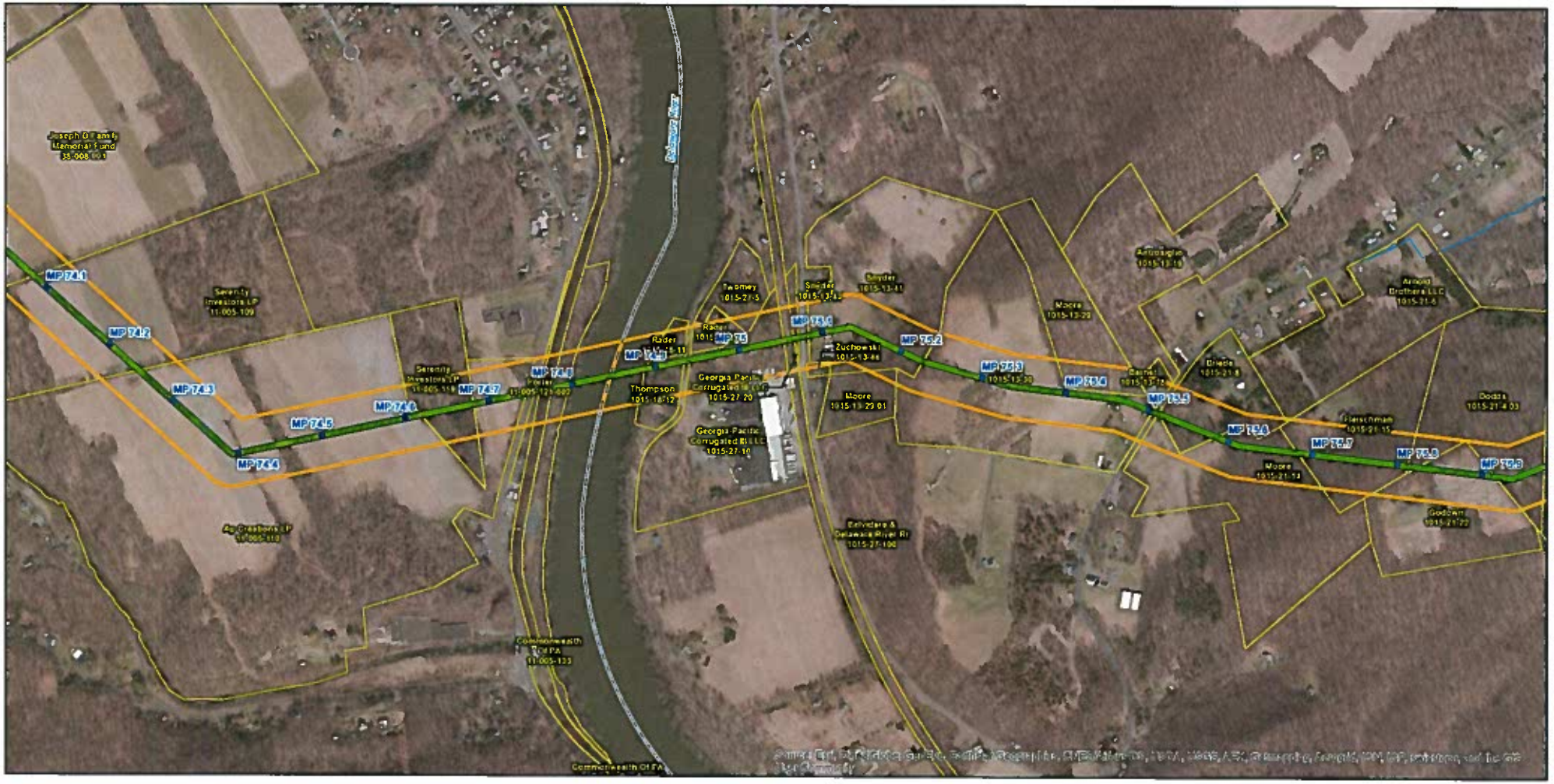
TITLE:

PennEast Pipeline Project
USGS Topographic Quadrangle Map

LOC: Pennington Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 2/3/2015	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 33 of 33

PennEast Pipeline Company, LLC

ATTACHMENT B: Archaeological APE and Above-Ground APE



Legend

Mile Postings | Preferred Route | Stream (USGS NHD) | Archaeological APE | Above-Ground APE | Municipal Boundary

PennEast PIPELINE

PennEast Pipeline Company, LLC

N W E S

0 250 500 1,000 Feet

NAD 1983 UTM Zone 18N
Projection: Transverse Mercator
Linear Unit: Meter (1.0)

Key Map Not Drawn to Scale

TITLE:

PennEast Pipeline Project
Areas of Potential Effects

LOC: DURHAM TWP, BUCKS COUNTY, PA AND HOLLAND TWP, HUNTERDON COUNTY, NJ			REV:
CKD. BY: GZ, VZ	ENG:	Date: 2/2/2015	W.O:
DRN. BY: VP	SCALE: See Graphic Scale	DWG. NO.:	SHEET: 1 of 28

Legend

Mile Postings | Preferred Route | Stream (USGS NHD) | Archaeological APE | Above-Ground APE | Municipal Boundary

PennEast Pipeline Company, LLC

N W E S

0 250 500 1,000 Feet

NAD 1983 UTM Zone 18N
Projection: Transverse Mercator
Linear Unit: Meter (1.0)

Key Map Not Drawn to Scale

TITLE:

PennEast Pipeline Project
Areas of Potential Effects

LOC: HOLLAND TWP, HUNTERDON COUNTY, NJ			REV:
CKD. BY: GZ, VZ	ENG.:	Date: 2/2/2015	W.O.
DRN. BY: VP	SCALE: See Graphic Scale	DWG. NO.:	SHEET: 2 of 28

Legend

Mile Postings | Preferred Route | Stream (USGS NHD) | Archaeological APE | Above-Ground APE | Municipal Boundary

PennEast Pipeline Company, LLC

N W E S

0 250 500 1,000 Feet

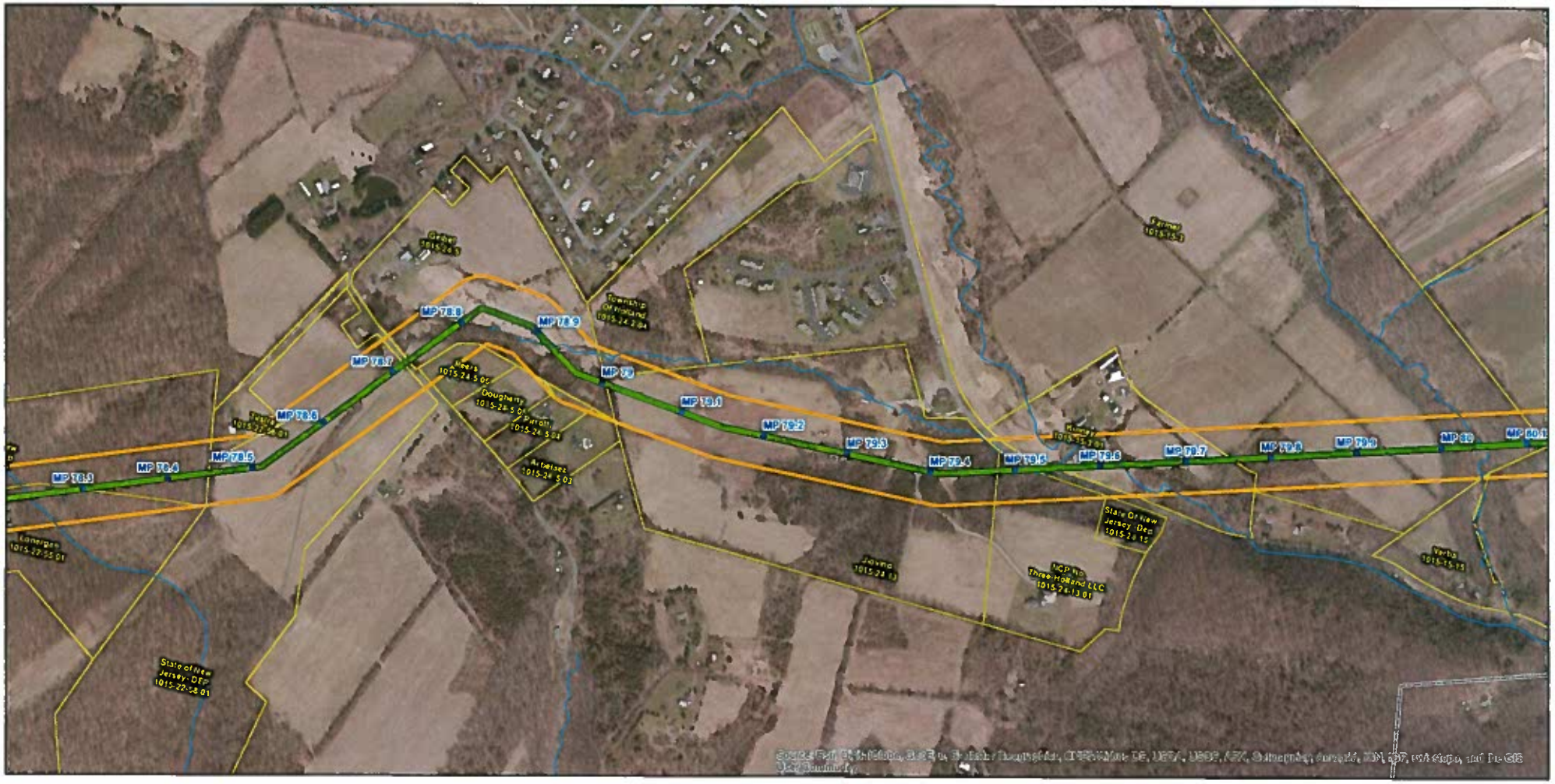
NAD 1983 UTM Zone 18N
Projection: Transverse Mercator
Linear Unit: Meter (1.0)

Key Map Not Drawn to Scale

TITLE:

PennEast Pipeline Project
Areas of Potential Effects

LOC: HOLLAND TWP, HUNTERDON COUNTY, NJ			REV:
CKD. BY: GZ, VZ	ENG.:	Date: 2/2/2015	W.O.:
DRN. BY: VP	SCALE: See Graphic Scale	DWG. NO.:	SHEET: 3 of 28



Legend

Mile Postings | Preferred Route | Stream (USGS NHD) | Archaeological APE | Above-Ground APE | Municipal Boundary

PennEast PIPELINE

PennEast Pipeline Company, LLC

N W E S

0 250 500 1,000 Feet

NAD 1983 UTM Zone 18N
Projection Transverse Mercator
Linear Unit Meter (1.0)

Key Map Not Drawn to Scale

TITLE:

PennEast Pipeline Project
Areas of Potential Effects

LOC: HOLLAND TWP, HUNTERDON COUNTY, NJ			REV:
CKD. BY: GZ, VZ	ENG.:	Date: 2/2/2015	W.O.:
DRN. BY: VP	SCALE: See Graphic Scale	DWG. NO.:	SHEET: 4 of 28

Legend

Mile Postings | Preferred Route | Stream (USGS NHD) | Archaeological APE | Above-Ground APE | Municipal Boundary

PennEast PIPELINE

PennEast Pipeline Company, LLC

N W E S

0 250 500 1,000 Feet

NAD 1983 UTM Zone 18N
Projection: Transverse Mercator
Linear Unit: Meter (1.0)

Key Map Not Drawn to Scale

TITLE:

PennEast Pipeline Project
Areas of Potential Effects

LOC. HOLLAND TWP. HUNTERDON COUNTY, NJ			REV:
CKD. BY: GZ, VZ	ENG.:	Date: 2/2/2015	W.O.:
DRN. BY: VP	SCALE: See Graphic Scale	DWG. NO.:	SHEET: 5 of 28

Legend

Mile Postings | Preferred Route | Stream (USGS NHD) | Archaeological APE | Above-Ground APE | Municipal Boundary

PennEast Pipeline Company, LLC

0 250 500 1,000 Feet

NAD 1983 UTM Zone 18N
Projection: Transverse Mercator
Linear Unit: Meter (1.0)

Key Map Not Drawn to Scale

TITLE:

PennEast Pipeline Project
Areas of Potential Effects

LOC: HOLLAND TWP, HUNTERDON COUNTY, NJ			REV:
CKD. BY: GZ, VZ	ENG:	Date: 2/2/2015	W.O.:
DRN. BY: VP	SCALE: See Graphic Scale	DWG. NO.:	SHEET: 6 of 28

Legend

Mile Postings | Preferred Route | Stream (USGS NHD) | Archaeological APE | Above-Ground APE | Municipal Boundary

PennEast PIPELINE

PennEast Pipeline Company, LLC

N W E S

0 250 500 1,000 Feet

NAD 1983 UTM Zone 18N
Projection: Transverse Mercator
Linear Unit: Meter (1.0)

Key Map Not Drawn to Scale

TITLE:

PennEast Pipeline Project
Areas of Potential Effects

LOC: HOLLAND TWP AND ALEXANDRIA TWP, HUNTERDON COUNTY, NJ			REV:
CKD. BY: GZ, VZ	ENG.:	Date: 2/2/2015	W.O.:
DRN. BY: VP	SCALE: See Graphic Scale	DWG. NO.:	SHEET: 7 of 28

Legend

Mile Postings | Preferred Route | Stream (USGS NHD) | Archaeological APE | Above-Ground APE | Municipal Boundary

PennEast PIPELINE

PennEast Pipeline Company, LLC

0 250 500 1,000 Feet

NAD 1983 UTM Zone 18N
Projection: Transverse Mercator
Linear Unit: Meter (1.0)

Key Map Not Drawn to Scale

TITLE:

PennEast Pipeline Project
Areas of Potential Effects

LOC: ALEXANDRIA TWP AND KINGWOOD TWP, HUNTERDON COUNTY, NJ			REV:
CKD. BY: GZ, VZ	ENG:	Date: 2/2/2015	WO:
DRN. BY: VP	SCALE: See Graphic Scale	DWG. NO:	SHEET: 8 of 28

Legend

Mile Postings | Preferred Route | Stream (USGS NHD) | Archaeological APE | Above-Ground APE | Municipal Boundary

PennEast PIPELINE

PennEast Pipeline Company, LLC

0 250 500 1,000 Feet

NAD 1983 UTM Zone 18N
Projection: Transverse Mercator
Linear Unit: Meter (1.0)

Key Map Not Drawn to Scale

TITLE:

PennEast Pipeline Project
Areas of Potential Effects

LOC: KINGWOOD TWP, HUNTERDON COUNTY, NJ			REV:
CKD. BY: GZ, VZ	ENG.:	Date: 2/2/2015	W.O.:
DRN. BY: VP	SCALE: See Graphic Scale	DWG. NO.:	SHEET: 9 of 28

Legend

Mile Postings | Preferred Route | Stream (USGS NHD) | Archaeological APE | Above-Ground APE | Municipal Boundary

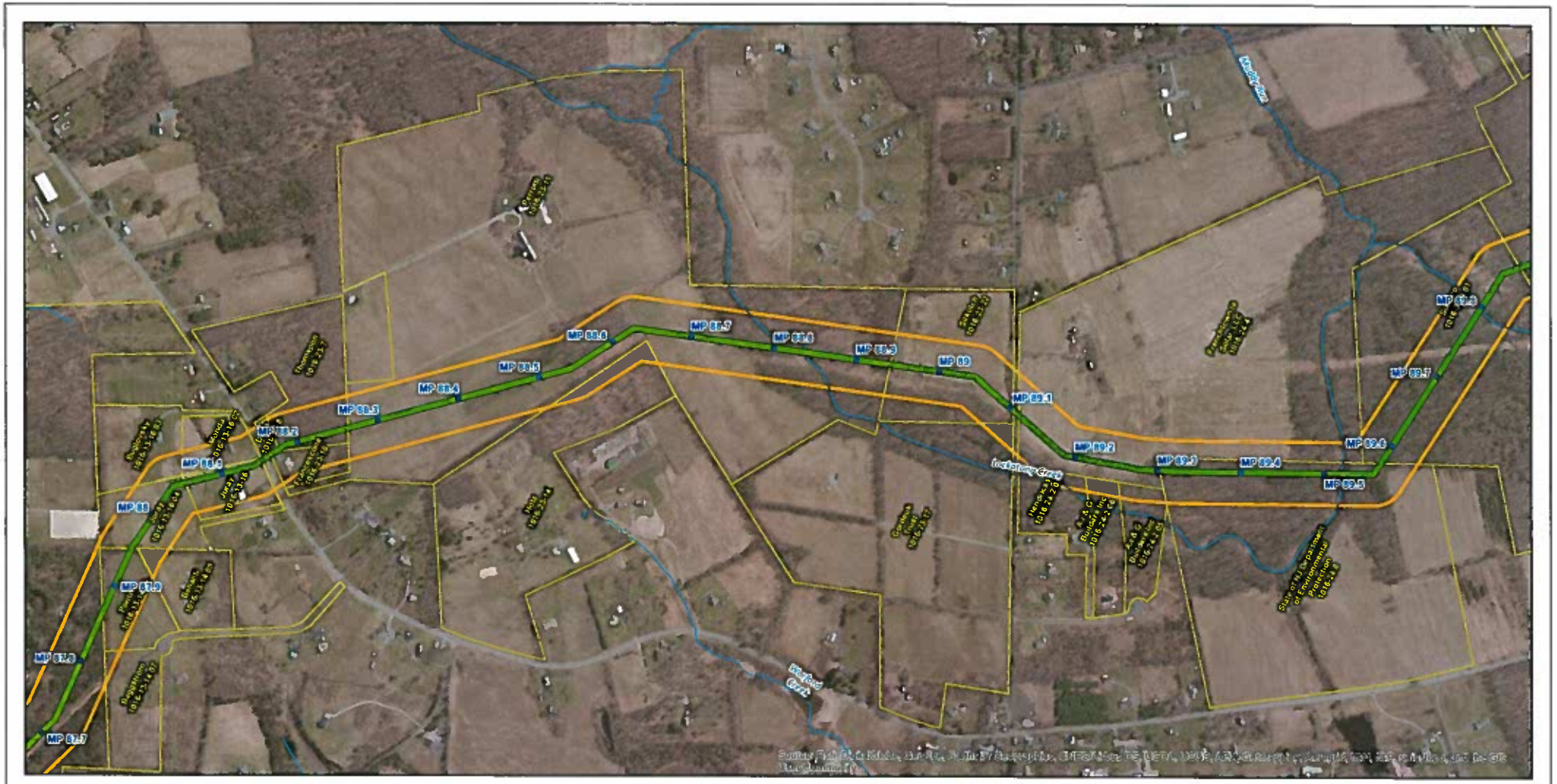
PennEast PIPELINE

PennEast Pipeline Company, LLC

TITLE:

PennEast Pipeline Project
Areas of Potential Effects

LOC: KINGWOOD TWP, HUNTERDON COUNTY, NJ			REV:
CKD. BY: GZ, VZ	ENG:	Date: 2/2/2015	W.O.:
DRN. BY: VP	SCALE: See Graphic Scale	DWG. NO.:	SHEET: 10 of 28



Legend

Mile Postings | Preferred Route | Stream (USGS NHD) | Archaeological APE | Above-Ground APE | Municipal Boundary

PennEast PIPELINE

PennEast Pipeline Company, LLC

0 250 500 1,000 Feet

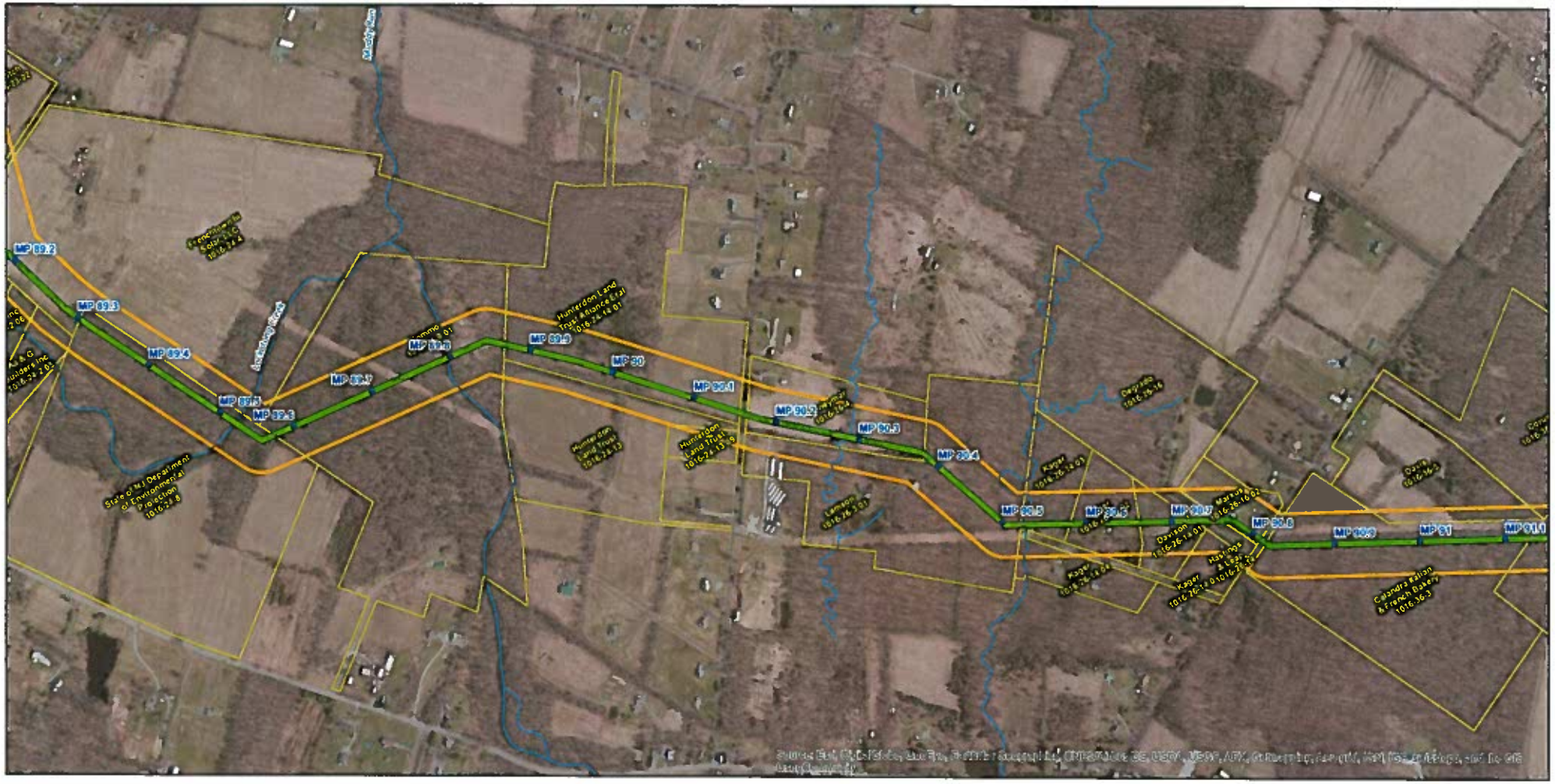
NAD 1983 UTM Zone 18N
Projection: Transverse Mercator
Linear Unit: Meter (1.0)

Key Map Not Drawn to Scale

TITLE:

PennEast Pipeline Project
Areas of Potential Effects

LOC: KINGWOOD TWP, HUNTERDON COUNTY, NJ			REV:
CKD. BY: GZ, VZ	ENG:	Date: 2/2/2015	W.O.:
DRN. BY: VP	SCALE: See Graphic Scale	DWG. NO.:	SHEET: 11 of 28



Legend

Mile Postings | Preferred Route | Stream (USGS NHD) | Archaeological APE | Above-Ground APE | Municipal Boundary

PennEast / PIPELINE

PennEast Pipeline Company, LLC

0 250 500 1,000 Feet

NAD 1983 UTM Zone 18N
Projection: Transverse Mercator
Linear Unit: Meter (1.0)

Key Map Not Drawn to Scale

TITLE:

PennEast Pipeline Project
Areas of Potential Effects

LOC: KINGWOOD TWP, HUNTERDON COUNTY, NJ			REV:
CKD. BY: GZ, VZ	ENG.	Date: 2/2/2015	W.O.
DRN. BY: VP	SCALE: See Graphic Scale	DWG. NO.	SHEET: 12 of 28

Legend

Mile Postings | Preferred Route | Stream (USGS NHD) | Archaeological APE | Above-Ground APE | Municipal Boundary

PennEast PIPELINE

PennEast Pipeline Company, LLC

0 250 500 1,000 Feet

NAD 1983 UTM Zone 18N
Projection: Transverse Mercator
Linear Unit: Meter (1.0)

Key Map Not Drawn to Scale

TITLE:

PennEast Pipeline Project
Areas of Potential Effects

LOC: KINGWOOD TWP AND DELAWARE TWP, HUNTERDON COUNTY, NJ			REV:
CKD. BY: GZ, VZ	ENG:	Date: 2/2/2015	W.O.:
DRN. BY: VP	SCALE: See Graphic Scale	DWG. NO:	SHEET: 13 of 28

Legend

Mile Postings | Preferred Route | Stream (USGS NHD) | Archaeological APE | Above-Ground APE | Municipal Boundary

PennEast PIPELINE

PennEast Pipeline Company, LLC

0 250 500 1,000 Feet

NAD 1983 UTM Zone 18N
Projection: Transverse Mercator
Linear Unit: Meter (1.0)

Key Map Not Drawn to Scale

TITLE:

PennEast Pipeline Project
Areas of Potential Effects

LOC: DELAWARE TWP, HUNTERDON COUNTY, NJ			REV:
CKD. BY: GZ, VZ	ENG.:	Date: 2/2/2015	W.O.:
DRN. BY: VP	SCALE: See Graphic Scale	DWG. NO.:	SHEET: 14 of 28

Legend

Mile Postings | Preferred Route | Stream (USGS NHD) | Archaeological APE | Above-Ground APE | Municipal Boundary

PennEast PIPELINE

PennEast Pipeline Company, LLC

0 250 500 1,000 Feet

NAD 1983 UTM Zone 18N
Projection: Transverse Mercator
Linear Unit: Meter (1.0)

Key Map Not Drawn to Scale

TITLE:

PennEast Pipeline Project
Areas of Potential Effects

LOC: DELAWARE TWP, HUNTERDON COUNTY, NJ			REV:
CKD. BY: GZ, VZ	ENG:	Date: 2/2/2015	W.O.:
DRN. BY: VP	SCALE: See Graphic Scale	DWG. NO.:	SHEET: 15 of 28

Legend

Mile Postings | Preferred Route | Stream (USGS NHD) | Archaeological APE | Above-Ground APE | Municipal Boundary

PennEast Pipeline Company, LLC

0 250 500 1,000 Feet

NAD 1983 UTM Zone 18N
Projection: Transverse Mercator
Linear Unit: Meter (1.0)

Key Map Not Drawn to Scale

TITLE:

PennEast Pipeline Project
Areas of Potential Effects

LOC: DELAWARE TWP, HUNTERDON COUNTY, NJ			REV:
CKD. BY: GZ, VZ	ENG:	Date: 2/2/2015	W.O.
DRN. BY: VP	SCALE: See Graphic Scale	DWG. NO.:	SHEET: 16 of 28

Legend

● Mile Postings — Preferred Route — Stream (USGS NHD) — Archaeological APE — Above-Ground APE — Municipal Boundary

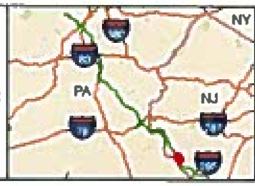
PennEast PIPELINE

PennEast Pipeline Company, LLC

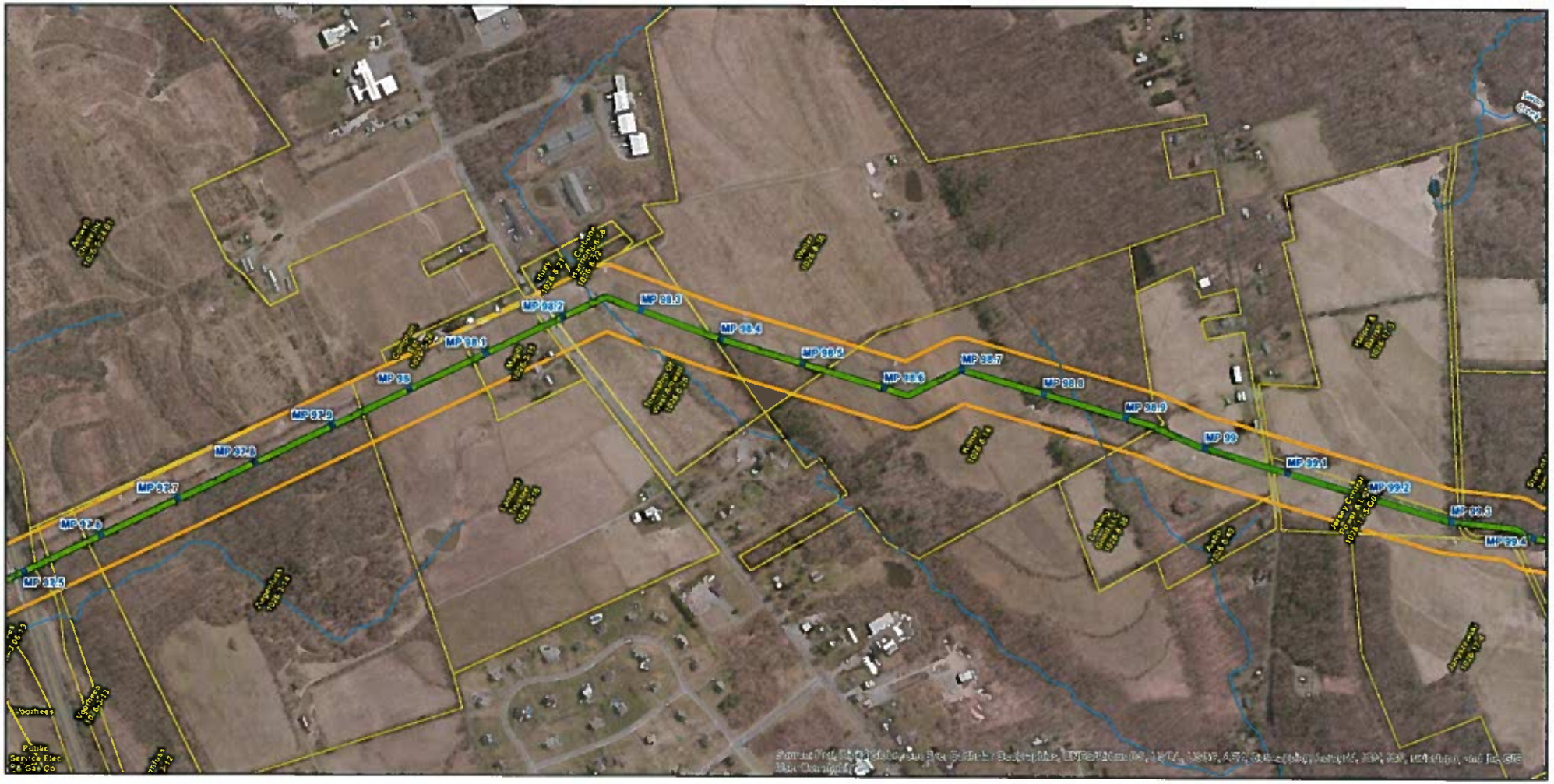
0 250 500 1,000 Feet

NAD 1983 UTM Zone 18N
Projection: Transverse Mercator
Linear Unit: Meter (1.0)

Key Map Not Drawn to Scale



TITLE: PennEast Pipeline Project Areas of Potential Effects			
LOC: DELAWARE TWP AND WEST AMWELL TWP, HUNTERDON COUNTY, NJ			REV.:
CKD. BY: GZ, VZ	ENG.:	Date: 2/2/2015	W.O.:
DRN. BY: VP	SCALE: See Graphic Scale	DWG. NO.:	SHEET: 17 of 28



Legend

Mile Postings | Preferred Route | Stream (USGS NHD) | Archaeological APE | Above-Ground APE | Municipal Boundary

PennEast PIPELINE

PennEast Pipeline Company, LLC

0 250 500 1,000 Feet

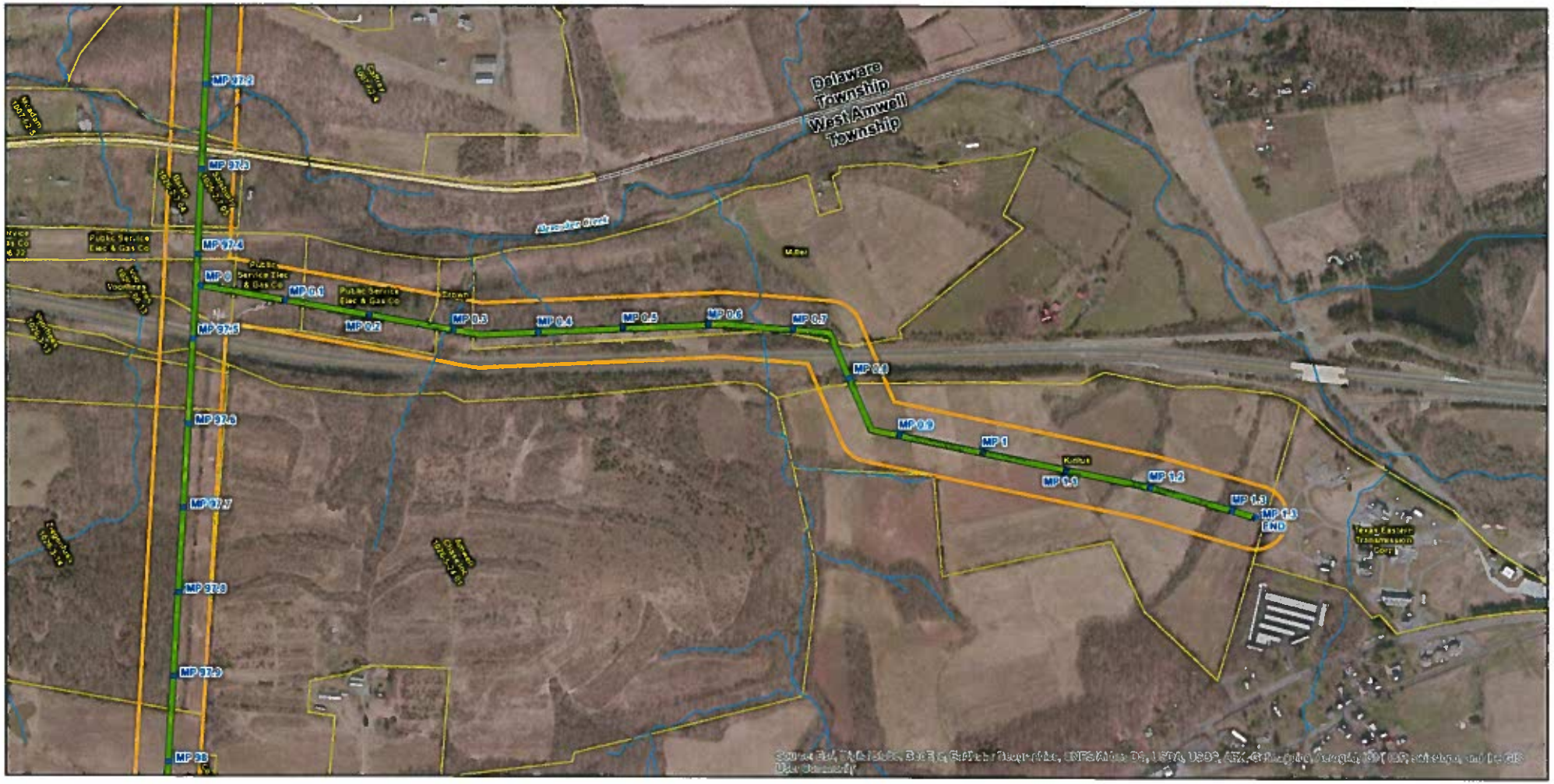
NAD 1983 UTM Zone 18N
Projection: Transverse Mercator
Linear Unit: Meter (1.0)

Key Map Not Drawn to Scale

TITLE:

PennEast Pipeline Project
Areas of Potential Effects

LOC: WEST AMWELL TWP, HUNTERDON COUNTY, NJ			REV:
CKD. BY: GZ, VZ	ENG.:	Date: 2/2/2015	W.O.:
DRN. BY: VP	SCALE: See Graphic Scale	DWG. NO.:	SHEET: 18 of 28



Legend

Mile Postings | Preferred Route | Stream (USGS NHD) | Archaeological APE | Above-Ground APE | Municipal Boundary

PennEast PIPELINE

PennEast Pipeline Company, LLC

0 250 500 1,000 Feet

NAD 1983 UTM Zone 18N
Projection: Transverse Mercator
Linear Unit: Meter (1.0)

Key Map Not Drawn to Scale

TITLE:

PennEast Pipeline Project
Areas of Potential Effects

LOC: DELAWARE TWP AND WEST AMWELL TWP, HUNTERDON COUNTY, NJ			REV:
CKD. BY: GZ, VZ	ENG:	Date: 2/2/2015	W.O.:
DRN. BY: VP	SCALE: See Graphic Scale	DWG. NO.:	SHEET: 19 of 28

Legend

Mile Postings | Preferred Route | Stream (USGS NHD) | Archaeological APE | Above-Ground APE | Municipal Boundary

PennEast Pipeline

PennEast Pipeline Company, LLC

N W E S

0 250 500 1,000 Feet

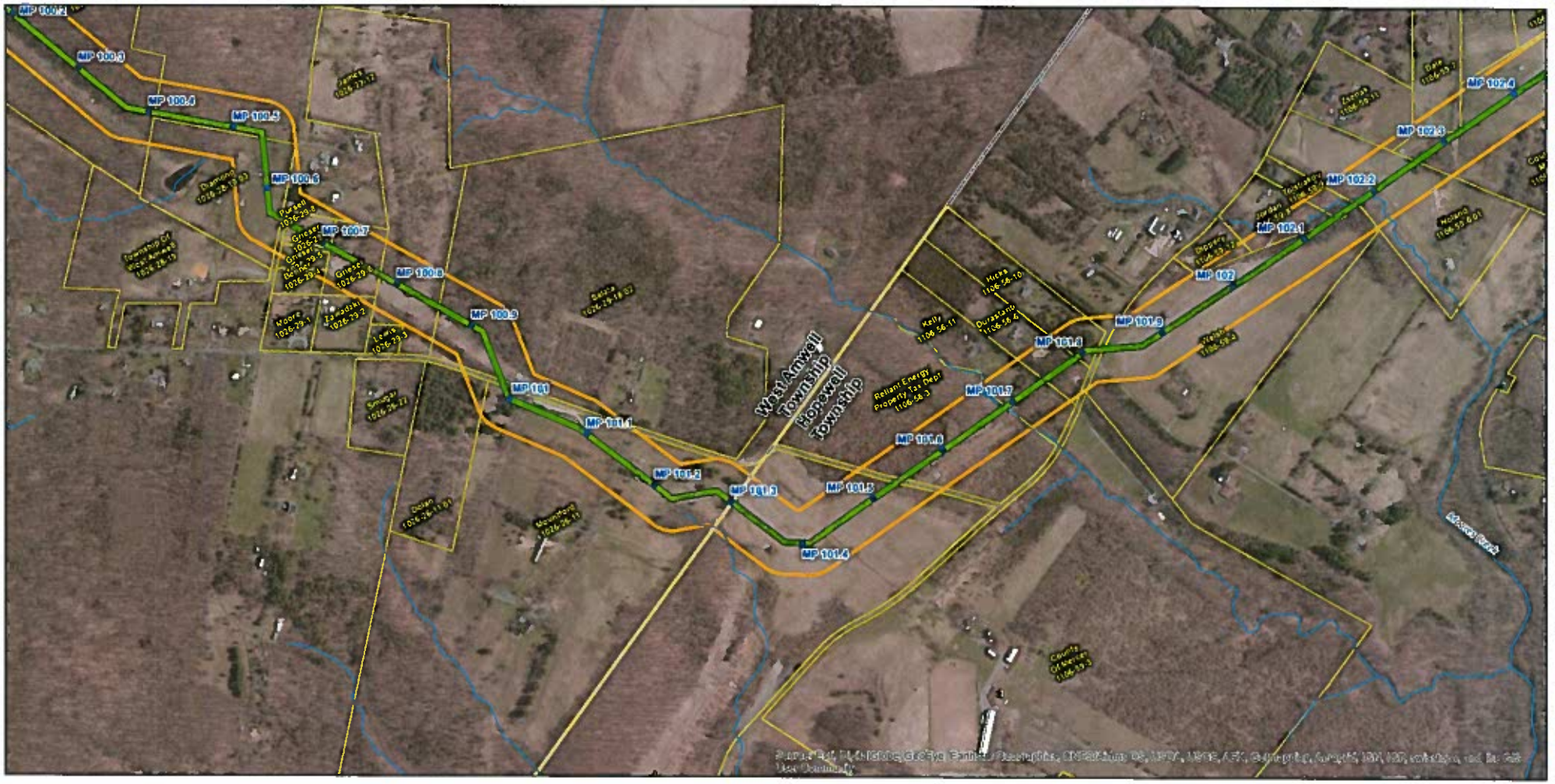
NAD 1983 UTM Zone 18N
Projection: Transverse Mercator
Linear Unit: Meter (1.0)

Key Map Not Drawn to Scale

TITLE:

PennEast Pipeline Project
Areas of Potential Effects

LOC: WEST AMWELL TWP, HUNTERDON COUNTY, NJ			REV:
CKD. BY: GZ, VZ	ENG:	Date: 2/2/2015	W.O.:
DRN. BY: VP	SCALE: See Graphic Scale	DWG. NO.:	SHEET: 20 of 28



Legend

Mile Postings | Preferred Route | Stream (USGS NHD) | Archaeological APE | Above-Ground APE | Municipal Boundary

PennEast PIPELINE

PennEast Pipeline Company, LLC

0 250 500 1,000 Feet

NAD 1983 UTM Zone 18N
Projection: Transverse Mercator
Linear Unit: Meter (1.0)

Key Map Not Drawn to Scale

TITLE:

PennEast Pipeline Project
Areas of Potential Effects

LOC: WEST AMWELL TWP. HUNTERDON COUNTY AND HOPEWELL TWP. MERCER COUNTY			REV:
CKD. BY: GZ, VZ	ENG.	Date: 2/2/2015	W.O.
DRN. BY: VP	SCALE: See Graphic Scale	DWG. NO.	SHEET: 21 of 28

Legend

Mile Postings | Preferred Route | Stream (USGS NHD) | Archaeological APE | Above-Ground APE | Municipal Boundary

PennEast PIPELINE

PennEast Pipeline Company, LLC

N W E S

0 250 500 1,000 Feet

NAD 1983 UTM Zone 18N
Projection: Transverse Mercator
Linear Unit: Meter (1.0)

Key Map Not Drawn to Scale

TITLE:

PennEast Pipeline Project
Areas of Potential Effects

LOC: HOPEWELL TWP, MERCER COUNTY, NJ			REV:
CKD. BY: GZ, VZ	ENG:	Date: 2/2/2015	W.O.:
DRN. BY: VP	SCALE: See Graphic Scale	DWG. NO.:	SHEET: 22 of 28

Legend

Mile Postings | Preferred Route | Stream (USGS NHD) | Archaeological APE | Above-Ground APE | Municipal Boundary

PennEast PIPELINE

PennEast Pipeline Company, LLC

N W E S

0 250 500 1,000 Feet

NAD 1983 UTM Zone 18N
Projection: Transverse Mercator
Linear Unit: Meter (1.0)

Key Map Not Drawn to Scale

TITLE:

PennEast Pipeline Project
Areas of Potential Effects

LOC: HOPEWELL TWP, MERCER COUNTY, NJ			REV:
CKD. BY: GZ, VZ	ENG:	Date: 2/2/2015	W.O.:
DRN. BY: VP	SCALE: See Graphic Scale	DWG. NO.	SHEET: 23 of 28

Legend

Mile Postings | Preferred Route | Stream (USGS NHD) | Archaeological APE | Above-Ground APE | Municipal Boundary

PennEast PIPELINE

PennEast Pipeline Company, LLC

N W E S

0 250 500 1,000 Feet

NAD 1983 UTM Zone 18N
Projection: Transverse Mercator
Linear Unit: Meter (1.0)

Key Map Not Drawn to Scale

TITLE:

PennEast Pipeline Project
Areas of Potential Effects

LOC: HOPEWELL TWP, MERCER COUNTY, NJ			REV.:
CKD. BY: GZ, VZ	ENG.:	Date: 2/2/2015	W.O.:
DRN. BY: VP	SCALE: See Graphic Scale	DWG. NO.:	SHEET: 24 of 28

Legend

- Mile Postings
- Preferred Route
- Stream (USGS NHD)
- Archaeological APE
- Above-Ground APE
- Municipal Boundary

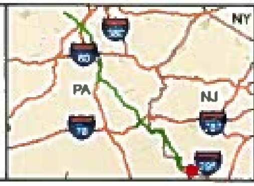
PennEast PIPELINE

PennEast Pipeline Company, LLC

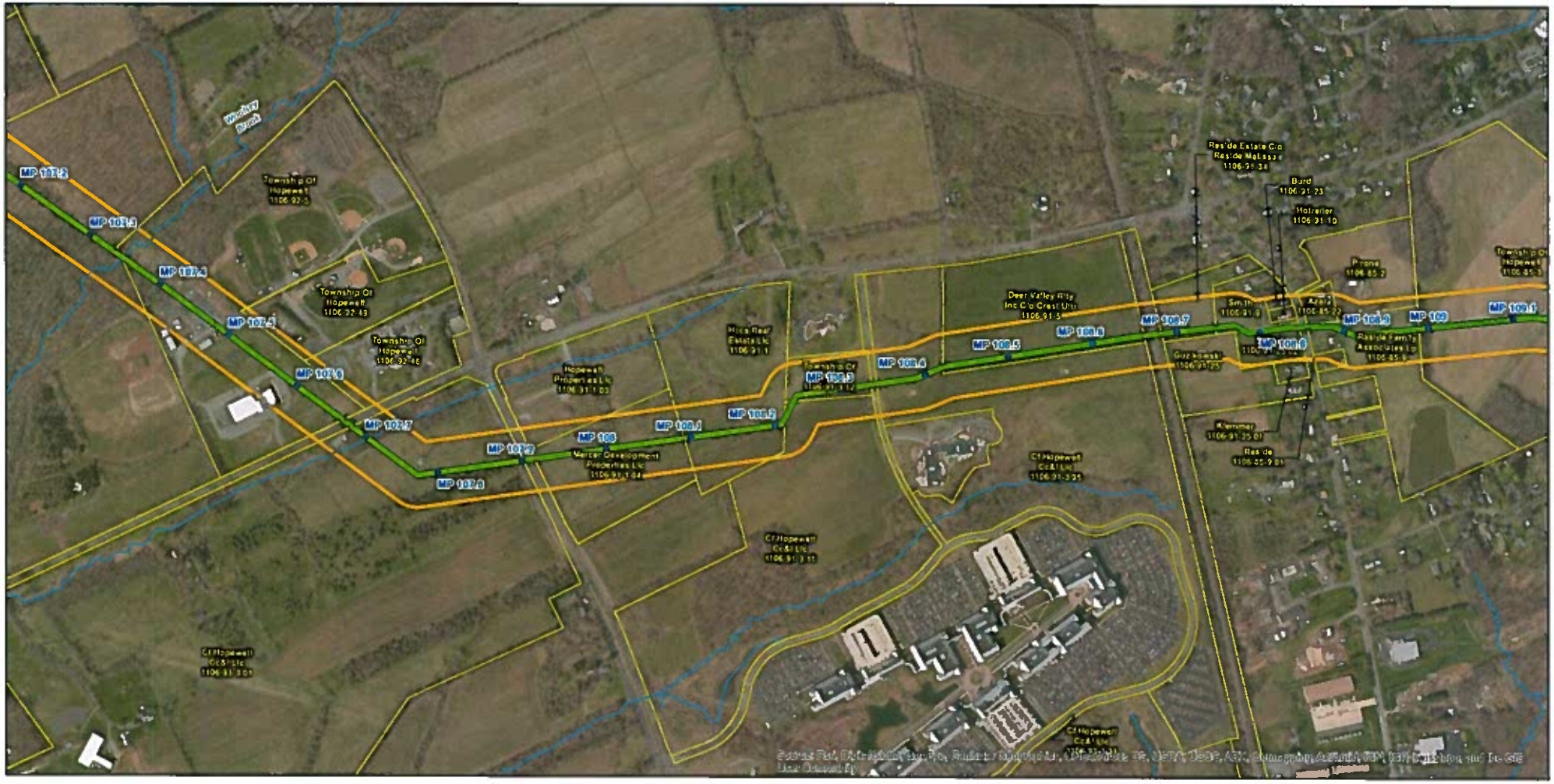
0 250 500 1,000 Feet

NAD 1983 UTM Zone 18N
Projection: Transverse Mercator
Linear Unit: Meter (1.0)

Key Map Not Drawn to Scale



TITLE:			
PennEast Pipeline Project Areas of Potential Effects			
LOC: HOPEWELL TWP, MERCER COUNTY, NJ			REV.:
CKD. BY: GZ, VZ	ENG.:	Date: 2/2/2015	W.O.:
DRN. BY: VP	SCALE: See Graphic Scale	DWG. NO.:	SHEET: 25 of 28



Legend

Mile Postings | Preferred Route | Stream (USGS NHD) | Archaeological APE | Above-Ground APE | Municipal Boundary

PennEast /PIPELINE

PennEast Pipeline Company, LLC

N W E S

0 250 500 1,000 Feet

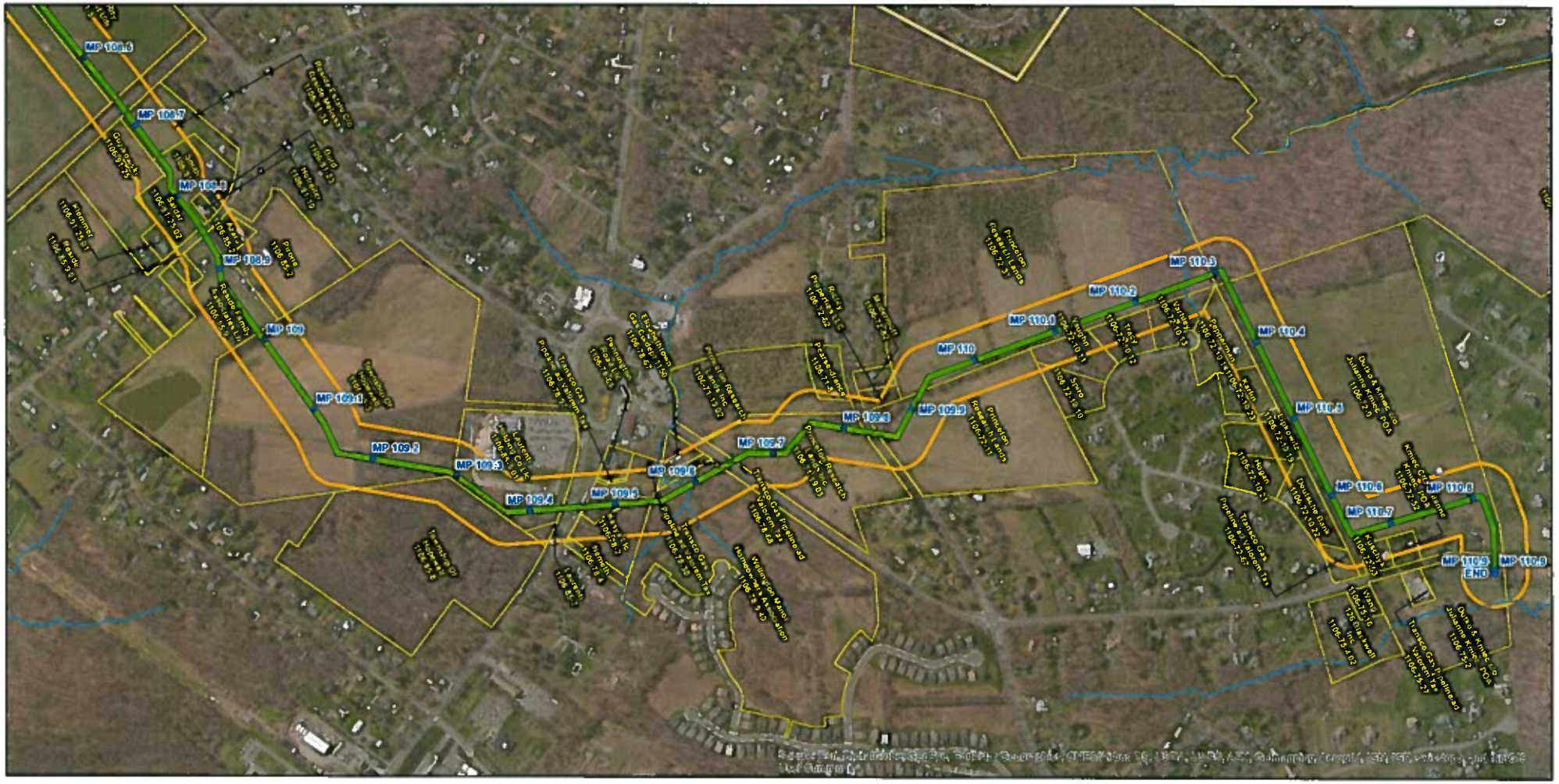
NAD 1983 UTM Zone 18N
Projection: Transverse Mercator
Linear Unit: Meter (1.0)

Key Map Not Drawn to Scale

TITLE:

PennEast Pipeline Project
Areas of Potential Effects

LOC: HOPEWELL TWP, MERCER COUNTY, NJ			REV:
CKD. BY: GZ, VZ	ENG.	Date: 2/2/2015	W.O.:
DRN. BY: VP	SCALE: See Graphic Scale	DWG. NO.:	SHEET: 26 of 28



Legend

Mile Postings | Preferred Route | Stream (USGS NHD) | Archaeological APE | Above-Ground APE | Municipal Boundary

PennEast PIPELINE

PennEast Pipeline Company, LLC

0 250 500 1,000 Feet

NAD 1983 UTM Zone 18N
Projection: Transverse Mercator
Linear Unit: Meter (1.0)

Key Map Not Drawn to Scale

TITLE:

PennEast Pipeline Project
Areas of Potential Effects

LOC: HOPEWELL TWP, MERCER COUNTY, NJ			REV:
CKD. BY: GZ, VZ	ENG:	Date: 2/2/2015	W.O.:
DRN. BY: VP	SCALE: See Graphic Scale	DWG. NO.:	SHEET: 27 of 28

Legend

Mile Postings | Preferred Route | Stream (USGS NHD) | Archaeological APE | Above-Ground APE | Municipal Boundary

PennEast PIPELINE

PennEast Pipeline Company, LLC

N W E S

0 250 500 1,000 Feet

NAD 1983 UTM Zone 18N
Projection: Transverse Mercator
Linear Unit: Meter (1.0)

Key Map Not Drawn to Scale

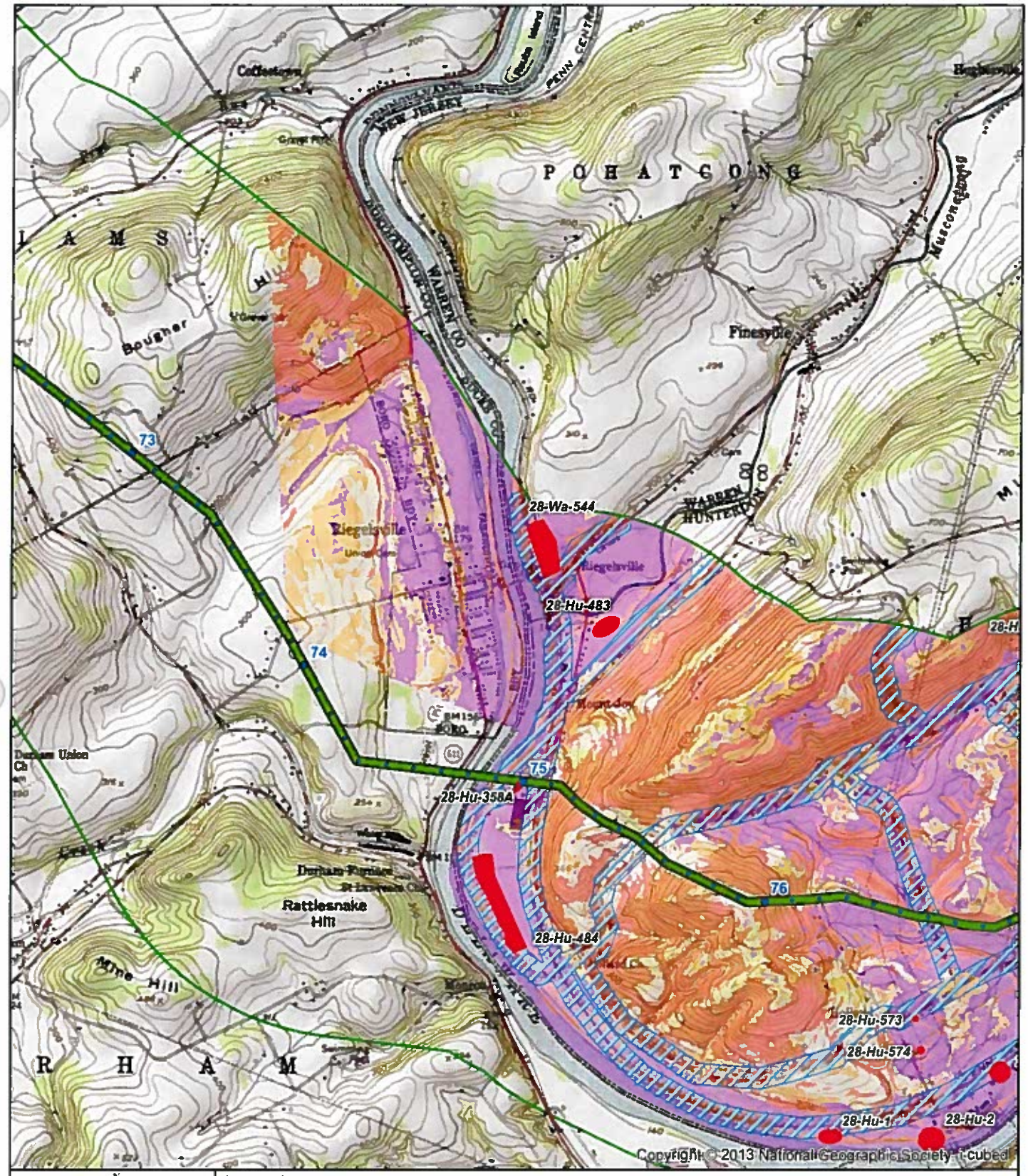
TITLE:

PennEast Pipeline Project
Areas of Potential Effects

LOC: HOPEWELL TWP, MERCER COUNTY, NJ			REV.:
CKD. BY: GZ, VZ	ENG.:	Date: 2/2/2015	W.O.:
DRN. BY: VP	SCALE: See Graphic Scale	DWG. NO.:	SHEET: 28 of 28

ATTACHMENT C: Project Maps with Previously Recorded Archaeological Sites and Archaeological Sensitivity Model Overlay (Privileged and Confidential)

Privileged and Confidential



Legend

- 1-Mile Study Area
- Historic Period Sensitivity Model
- Archaeological Sensitivity Model
- Low Sensitivity
- Moderate Sensitivity
- High Sensitivity
- Steep Slope (> 15%)
- Known Archaeological Site
- State Boundary

0 800 1,600 3,200 Feet

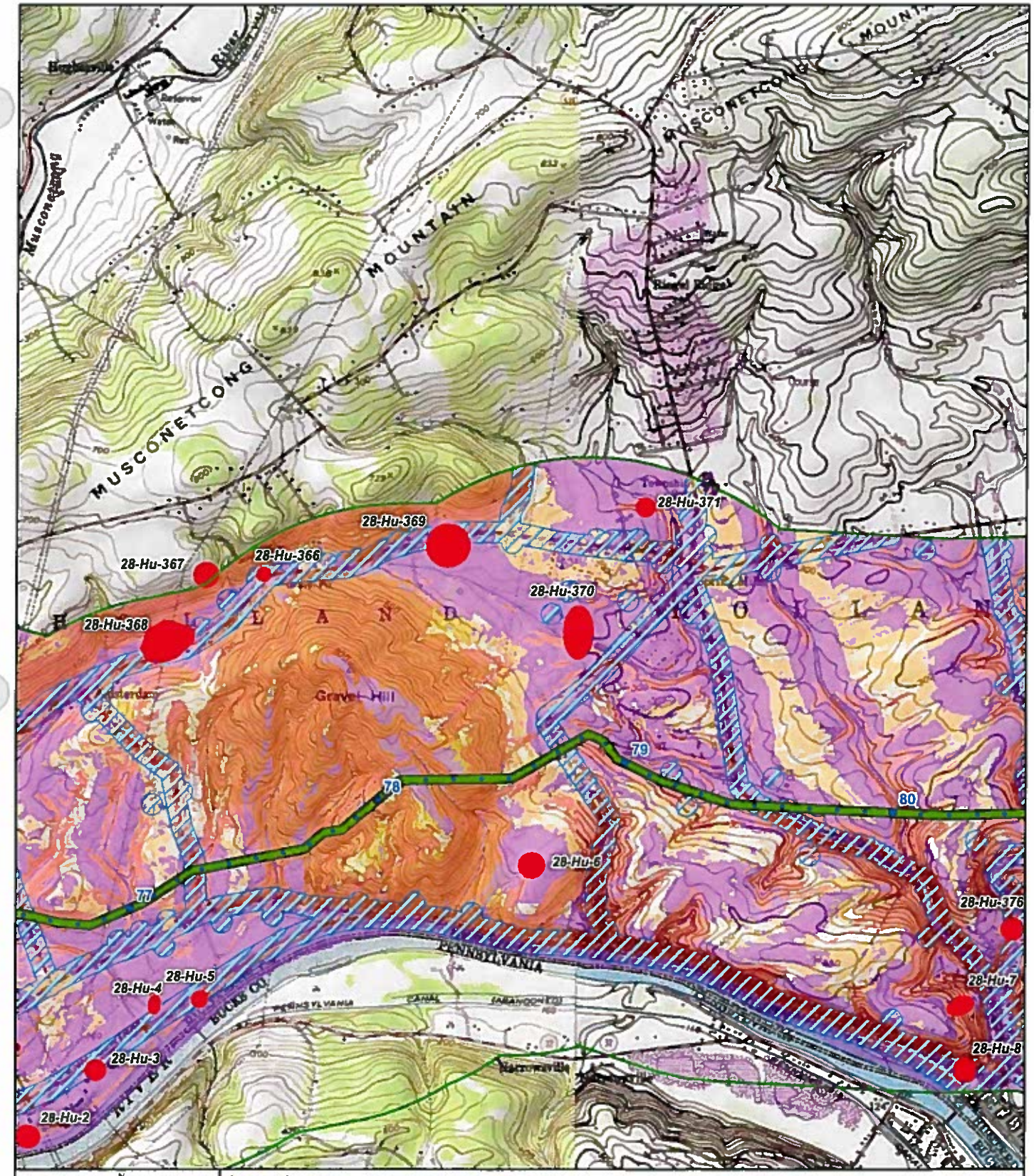
TITLE:

PennEast Pipeline Project
New Jersey Archaeological Resources

LOC: USGS Riegelsville Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 2/2/2015	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 1 of 13

PennEast PIPELINE

PennEast Pipeline Company, LLC



Legend

- 1-Mile Study Area
- Historic Period Sensitivity Model
- Archaeological Sensitivity Model
- Low Sensitivity
- Moderate Sensitivity
- High Sensitivity
- Steep Slope (> 15%)
- Known Archaeological Site
- State Boundary

TITLE:

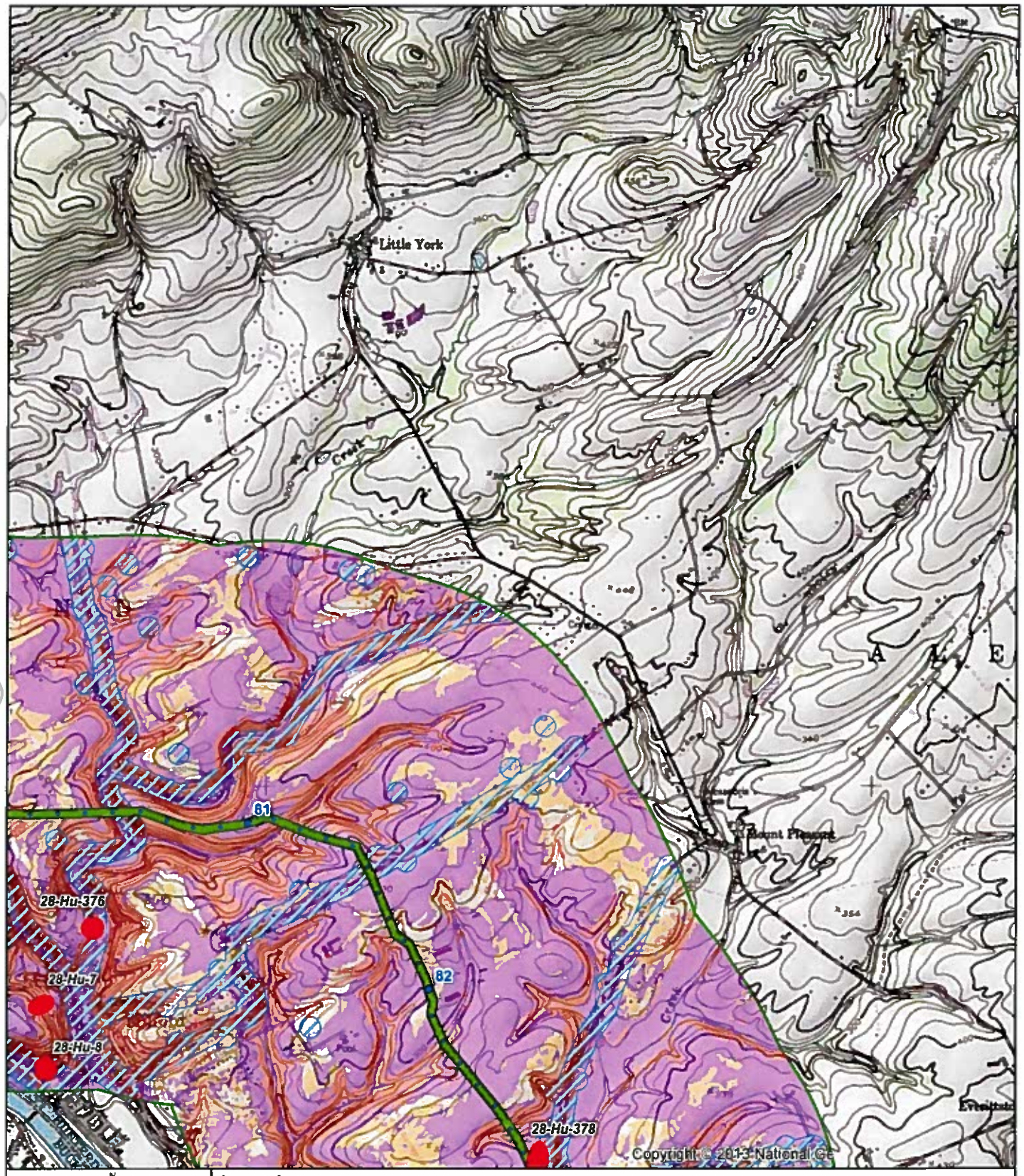
PennEast Pipeline Project
New Jersey Archaeological Resources

LOC: USGS Riegelsville Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 2/2/2015	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 2 of 13

PennEast PIPELINE

PennEast Pipeline Company, LLC

Privileged and Confidential



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0 800 1,600 3,200 Feet

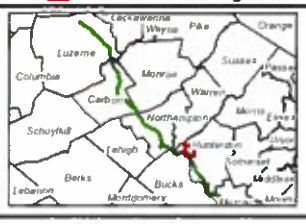
Legend

- 1-Mile Study Area
- Historic Period Sensitivity Model
- Archaeological Sensitivity Model
- Low Sensitivity
- Moderate Sensitivity
- High Sensitivity
- Steep Slope (> 15%)
- Known Archaeological Site
- State Boundary

TITLE:

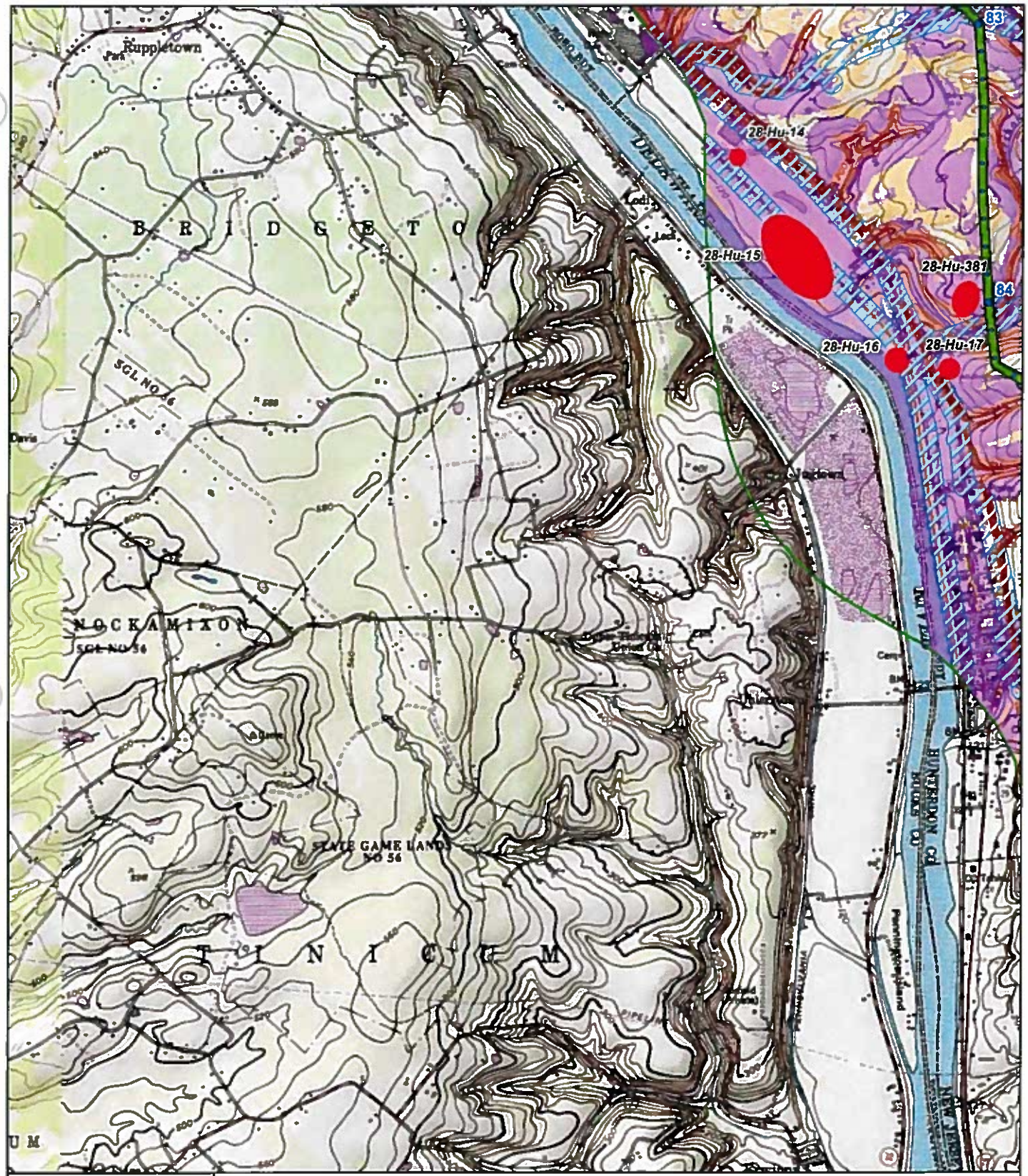
PennEast Pipeline Project
New Jersey Archaeological Resources

LOC: USGS Frenchtown Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 2/2/2015	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 3 of 13



PennEast PIPELINE

PennEast Pipeline Company, LLC



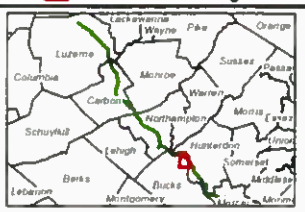
Legend

- 1-Mile Study Area
- Historic Period Sensitivity Model
- Archaeological Sensitivity Model
- Low Sensitivity
- Moderate Sensitivity
- High Sensitivity
- Steep Slope (> 15%)
- Known Archaeological Site
- State Boundary

TITLE:

PennEast Pipeline Project
New Jersey Archaeological Resources

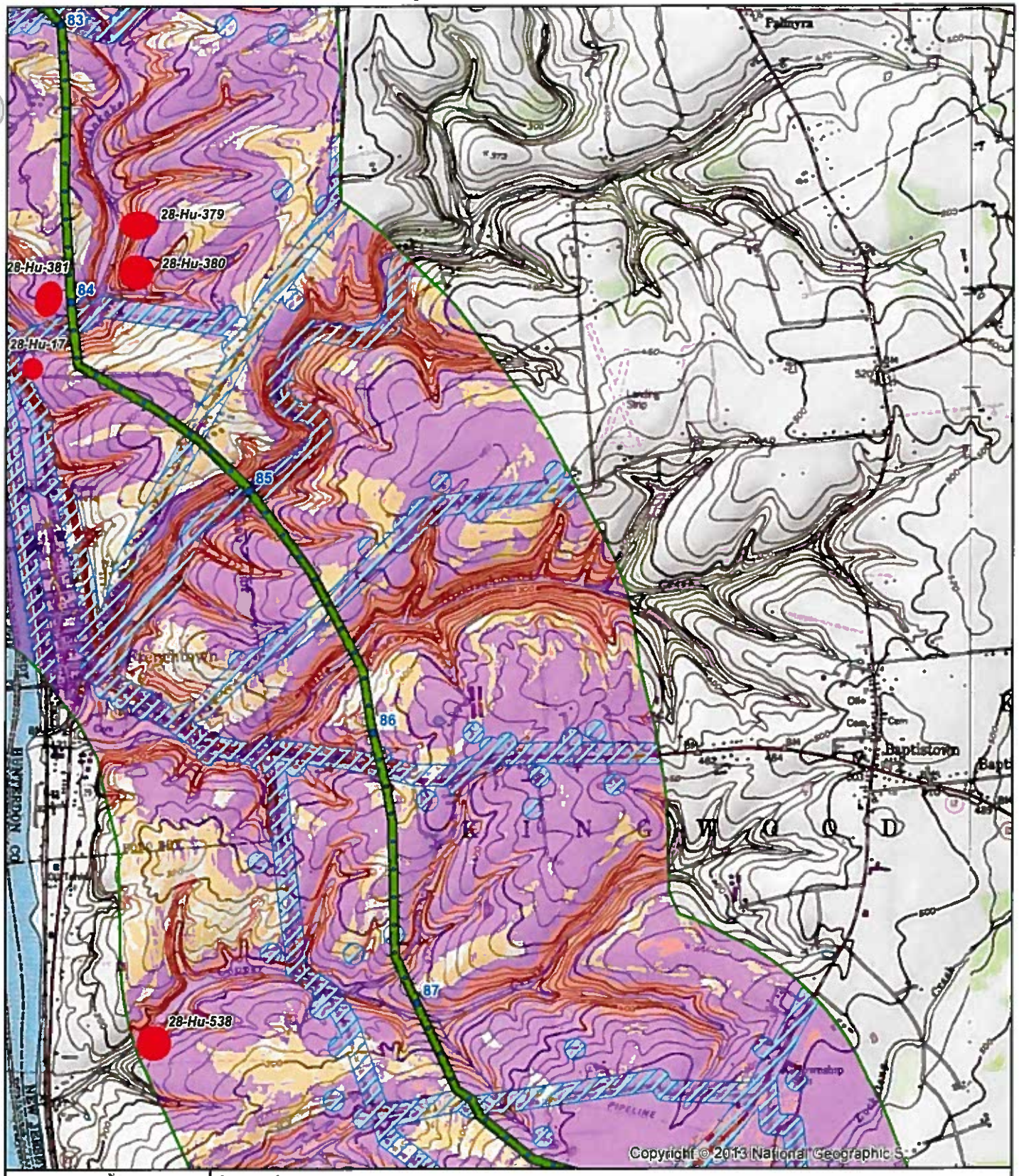
LOC: USGS Frenchtown Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 2/2/2015	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 4 of 13



PennEast PIPELINE

PennEast Pipeline Company, LLC

Privileged and Confidential



N
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0 800 1,600 3,200 Feet

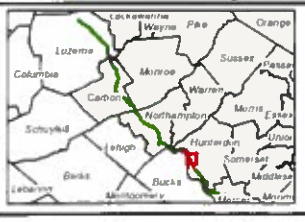
Legend

- 1-Mile Study Area
- Historic Period Sensitivity Model
- Archaeological Sensitivity Model
- Low Sensitivity
- Moderate Sensitivity
- High Sensitivity
- Steep Slope (> 15%)
- Known Archaeological Site
- State Boundary

TITLE:

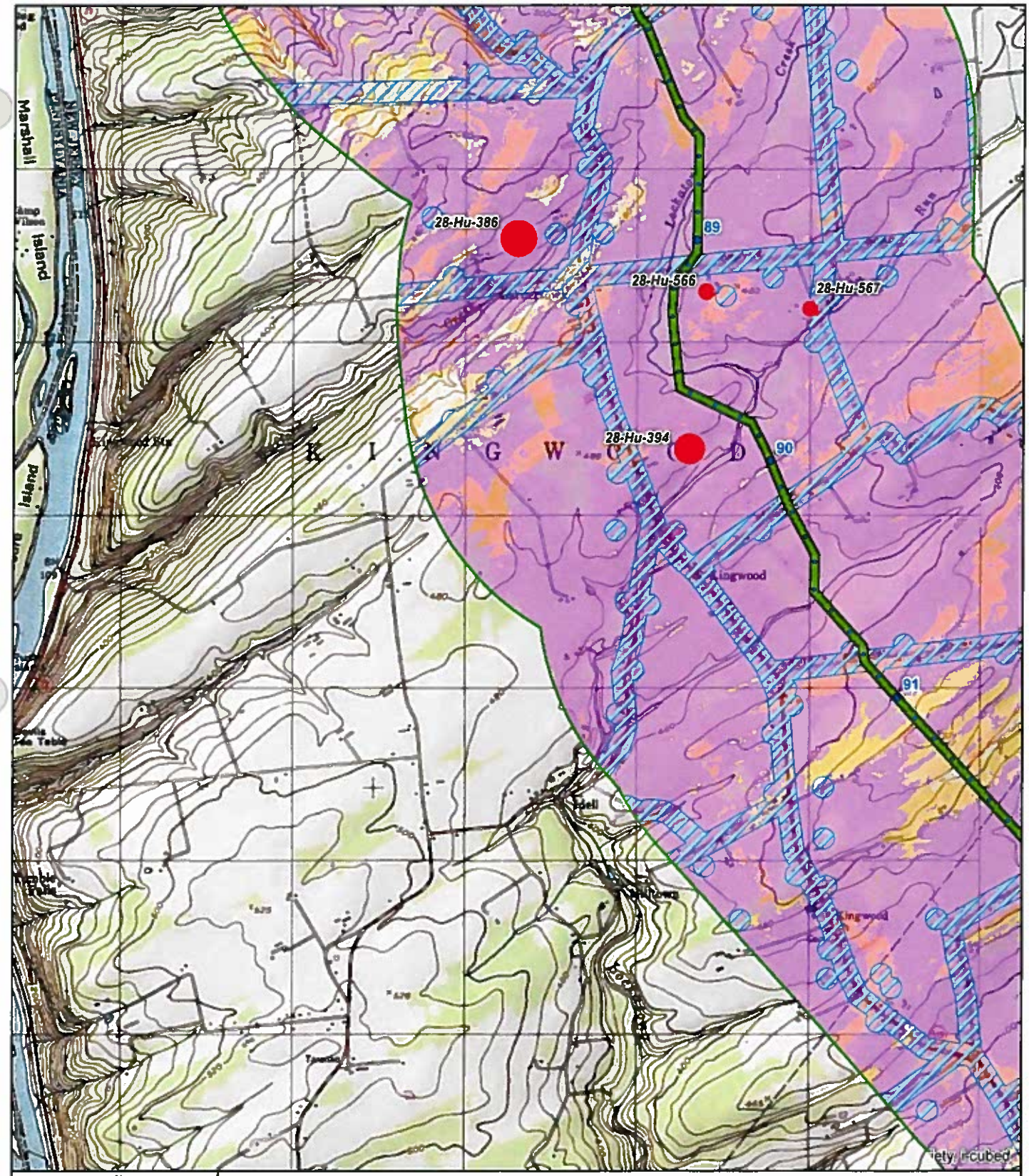
PennEast Pipeline Project
New Jersey Archaeological Resources

LOC: USGS Frenchtown Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 2/2/2015	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 5 of 13



PennEast PIPELINE

PennEast Pipeline Company, LLC



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0 800 1,600 3,200 Feet

Legend

- 1-Mile Study Area
- Historic Period Sensitivity Model
- Archaeological Sensitivity Model
- Low Sensitivity
- Moderate Sensitivity
- High Sensitivity
- Steep Slope (> 15%)
- Known Archaeological Site
- State Boundary

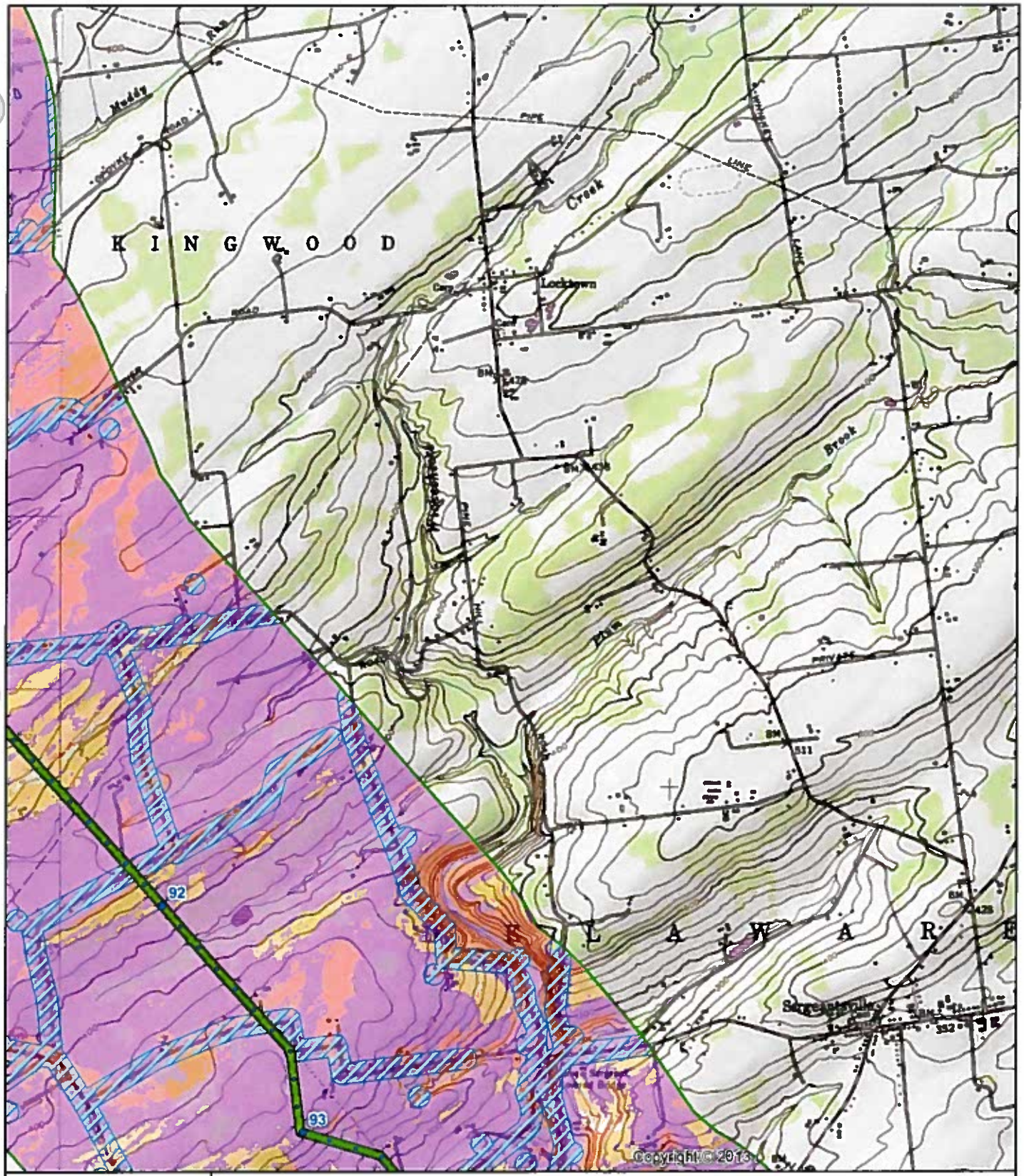
TITLE:

PennEast Pipeline Project
New Jersey Archaeological Resources

LOC: USGS Lumberville Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 2/2/2015	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 6 of 13

PennEast PIPELINE

PennEast Pipeline Company, LLC



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Legend

- 1-Mile Study Area
- Historic Period Sensitivity Model
- Archaeological Sensitivity Model
- Low Sensitivity
- Moderate Sensitivity
- High Sensitivity
- Steep Slope (> 15%)
- Known Archaeological Site
- State Boundary

TITLE:

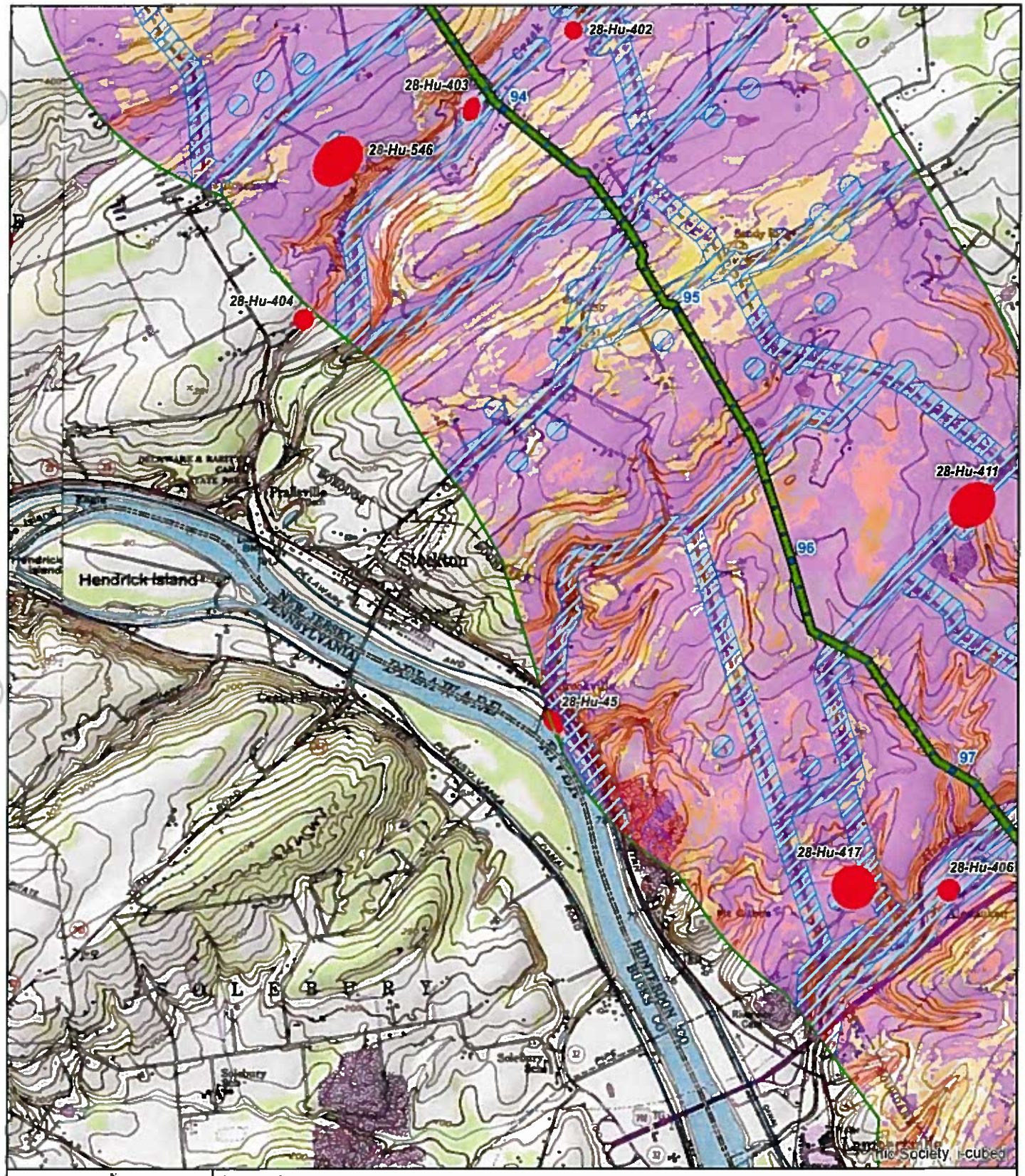
PennEast Pipeline Project
New Jersey Archaeological Resources

LOC: USGS Stockton Quadrangle			REV:
CKD. BY: BH	ENG:	Date: 2/2/2015	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 7 of 13

PennEast PIPELINE

PennEast Pipeline Company, LLC

Privileged and Confidential



N
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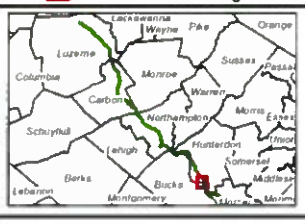
0 800 1,600 3,200 Feet

Legend

- 1-Mile Study Area
- Historic Period Sensitivity Model
- Archaeological Sensitivity Model
- Low Sensitivity
- Moderate Sensitivity
- High Sensitivity
- Steep Slope (> 15%)
- Known Archaeological Site
- State Boundary

TITLE:

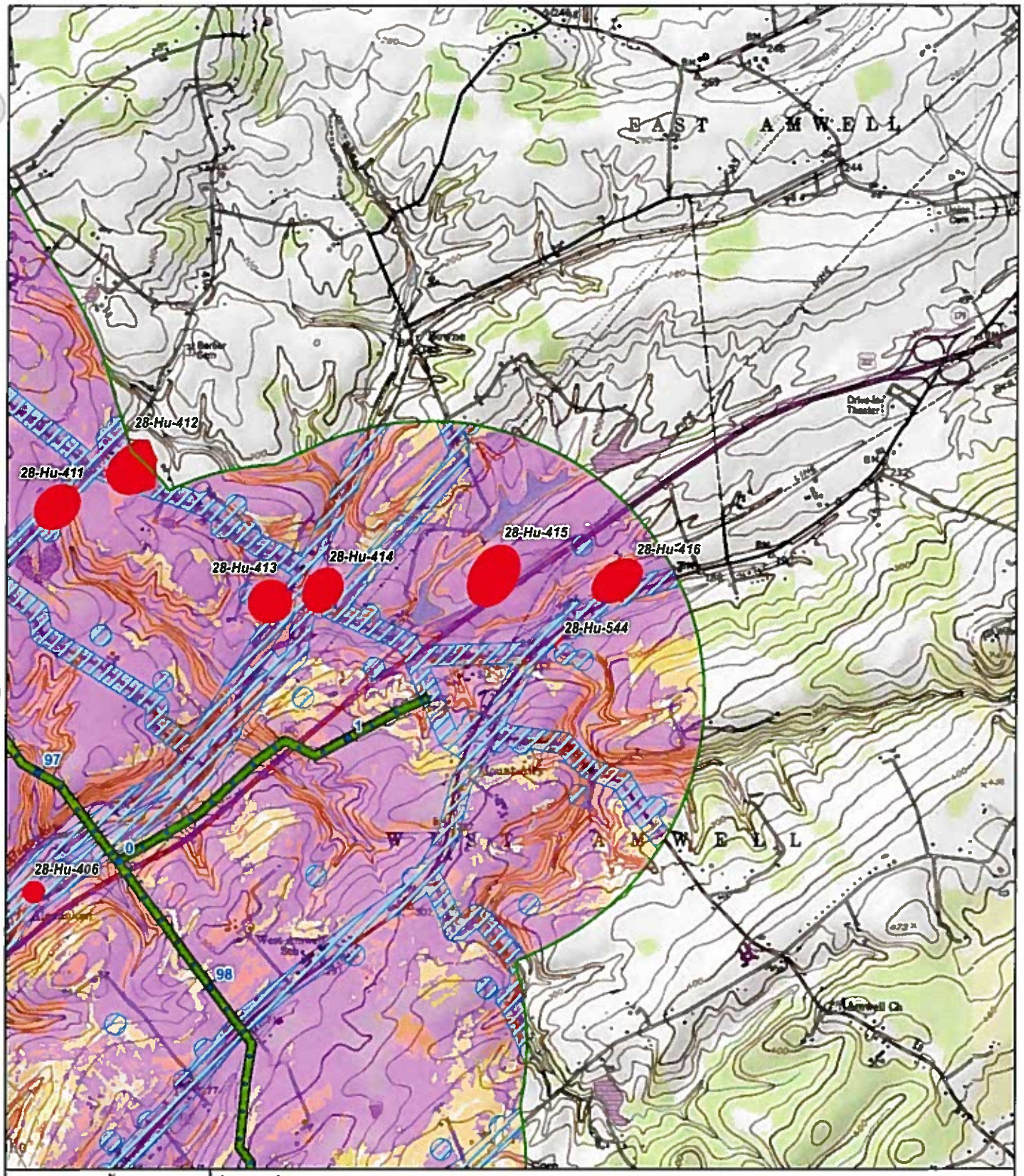
PennEast Pipeline Project
New Jersey Archaeological Resources



LOC: USGS Stockton Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 2/2/2015	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 8 of 13

PennEast PIPELINE

PennEast Pipeline Company, LLC



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0 800 1,600 3,200 Feet

Legend

- 1-Mile Study Area
- Historic Period Sensitivity Model
- Archaeological Sensitivity Model
- Low Sensitivity
- Moderate Sensitivity
- High Sensitivity
- Steep Slope (> 15%)
- Known Archaeological Site
- State Boundary

TITLE:

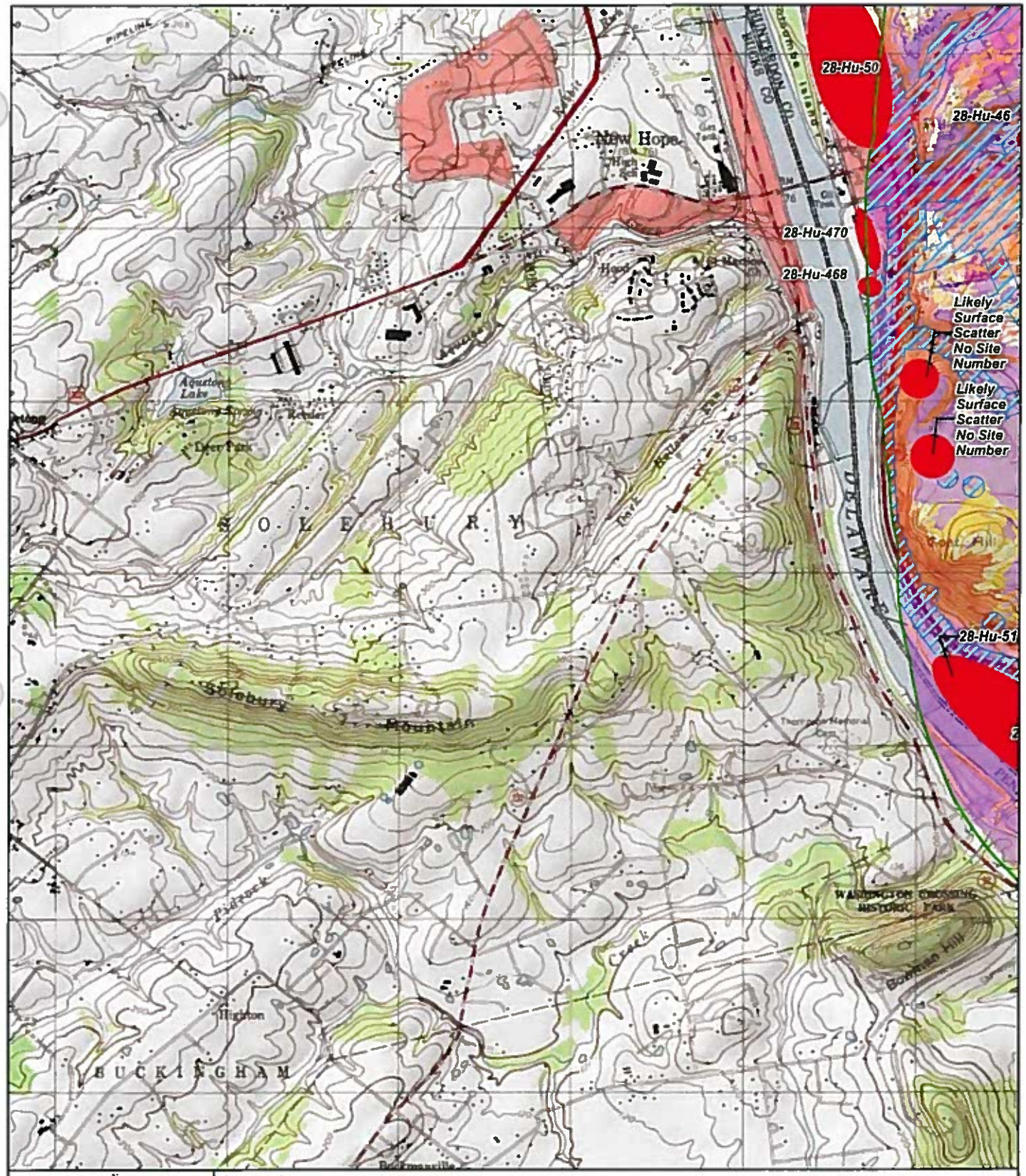
PennEast Pipeline Project
New Jersey Archaeological Resources

LOC: USGS Stockton Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 2/2/2015	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 9 of 13

PennEast PIPELINE

PennEast Pipeline Company, LLC

Privileged and Confidential



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0 800 1,600 3,200 Feet

Legend

- 1-Mile Study Area
- Historic Period Sensitivity Model
- Archaeological Sensitivity Model
- Low Sensitivity
- Moderate Sensitivity
- High Sensitivity
- Steep Slope (> 15%)
- Known Archaeological Site
- State Boundary

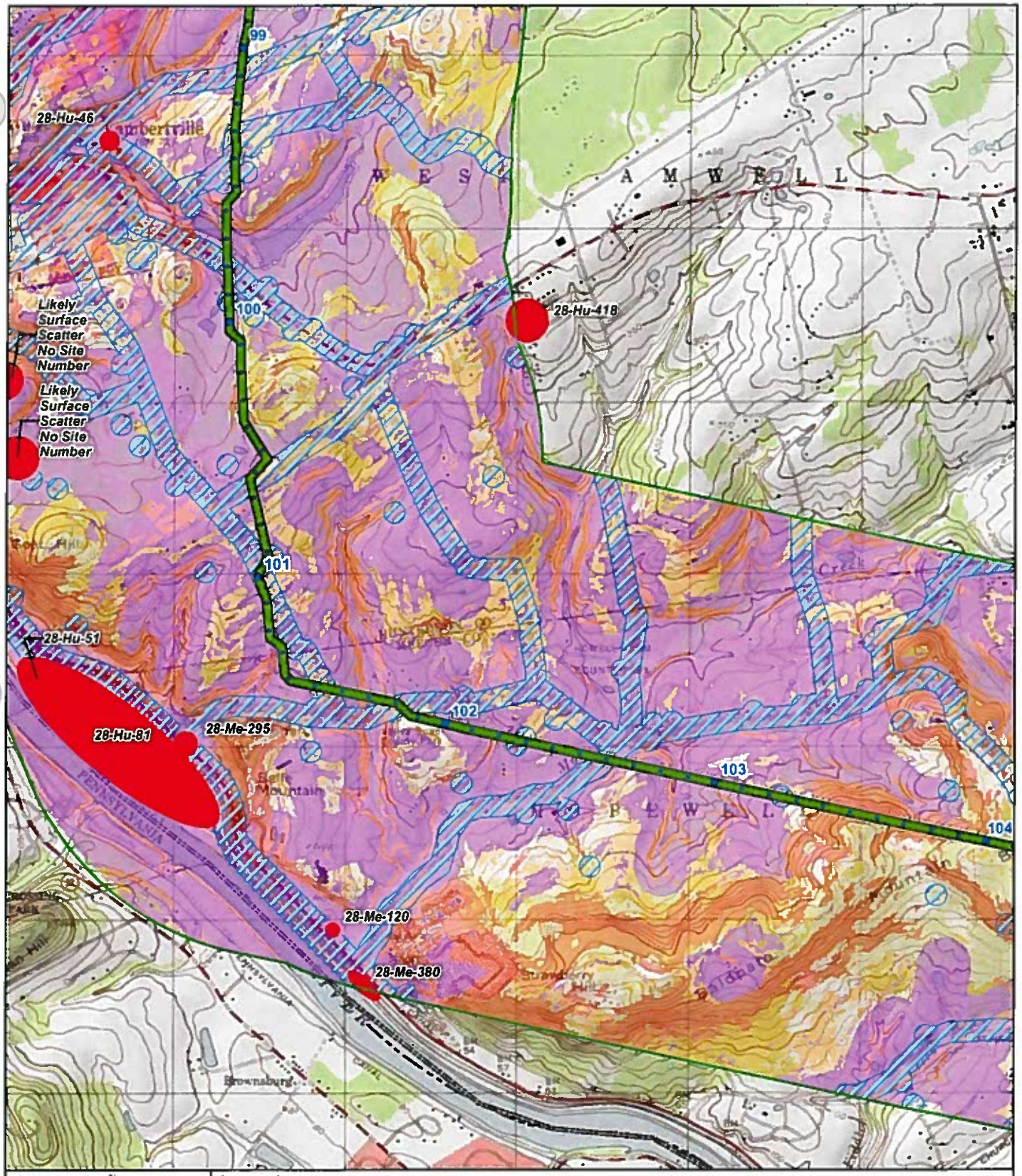
TITLE:

PennEast Pipeline Project
New Jersey Archaeological Resources

LOC: USGS Lambertville Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 2/2/2015	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 10 of 13

PennEast PIPELINE

PennEast Pipeline Company, LLC



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0 800 1,600 3,200 Feet

Legend

- 1-Mile Study Area
- Historic Period Sensitivity Model
- Archaeological Sensitivity Model
- Low Sensitivity
- Moderate Sensitivity
- High Sensitivity
- Steep Slope (> 15%)
- Known Archaeological Site
- State Boundary

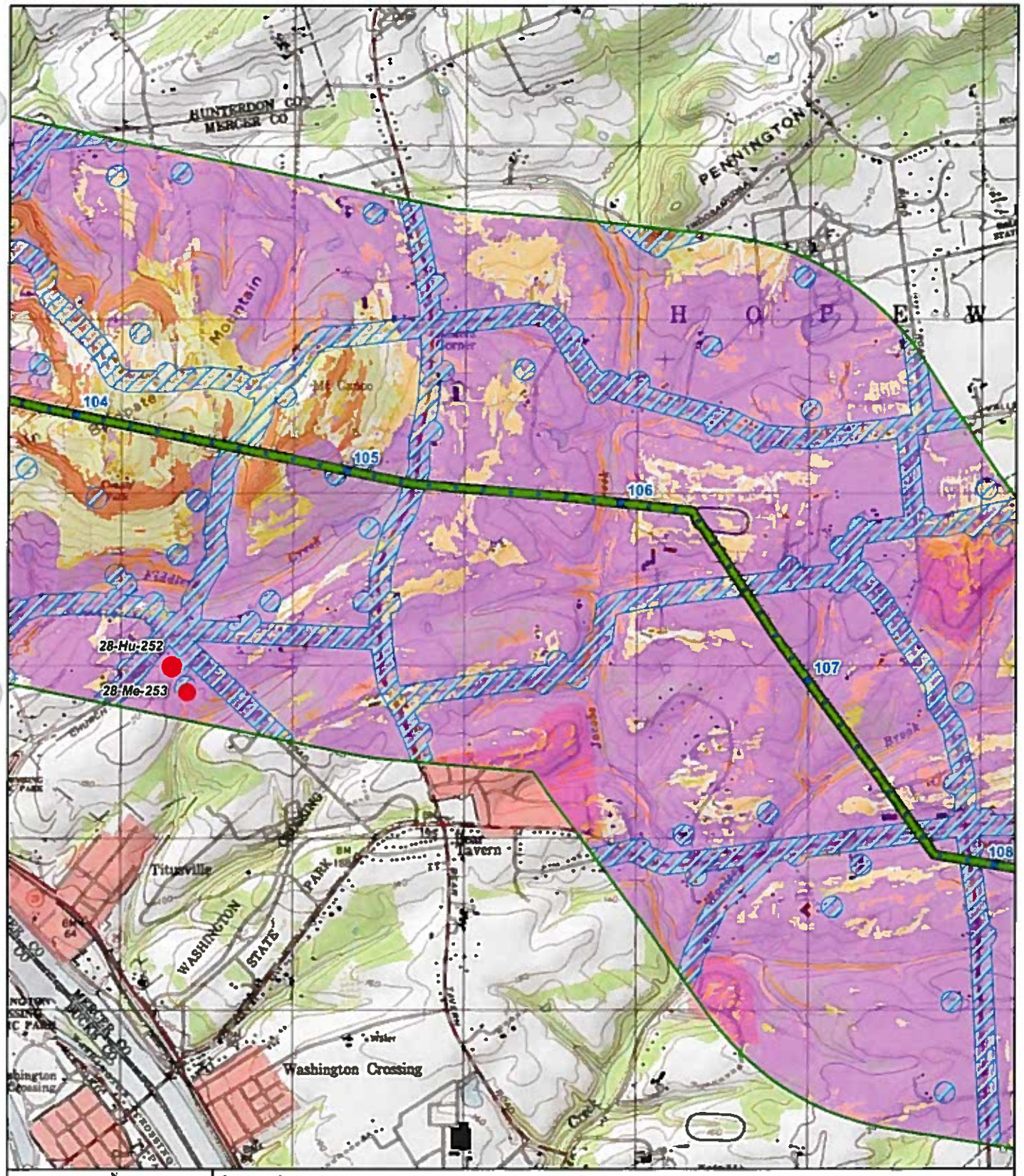
TITLE:

PennEast Pipeline Project
New Jersey Archaeological Resources

LOC: USGS Hopewell Quadrangle			REV:
CKD. BY: BH	ENG.:	Date: 2/2/2015	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 11 of 13

PennEast PIPELINE

PennEast Pipeline Company, LLC



Legend

- 1-Mile Study Area
- Historic Period Sensitivity Model
- Archaeological Sensitivity Model
- Low Sensitivity
- Moderate Sensitivity
- High Sensitivity
- Steep Slope (> 15%)
- Known Archaeological Site
- State Boundary

TITLE:

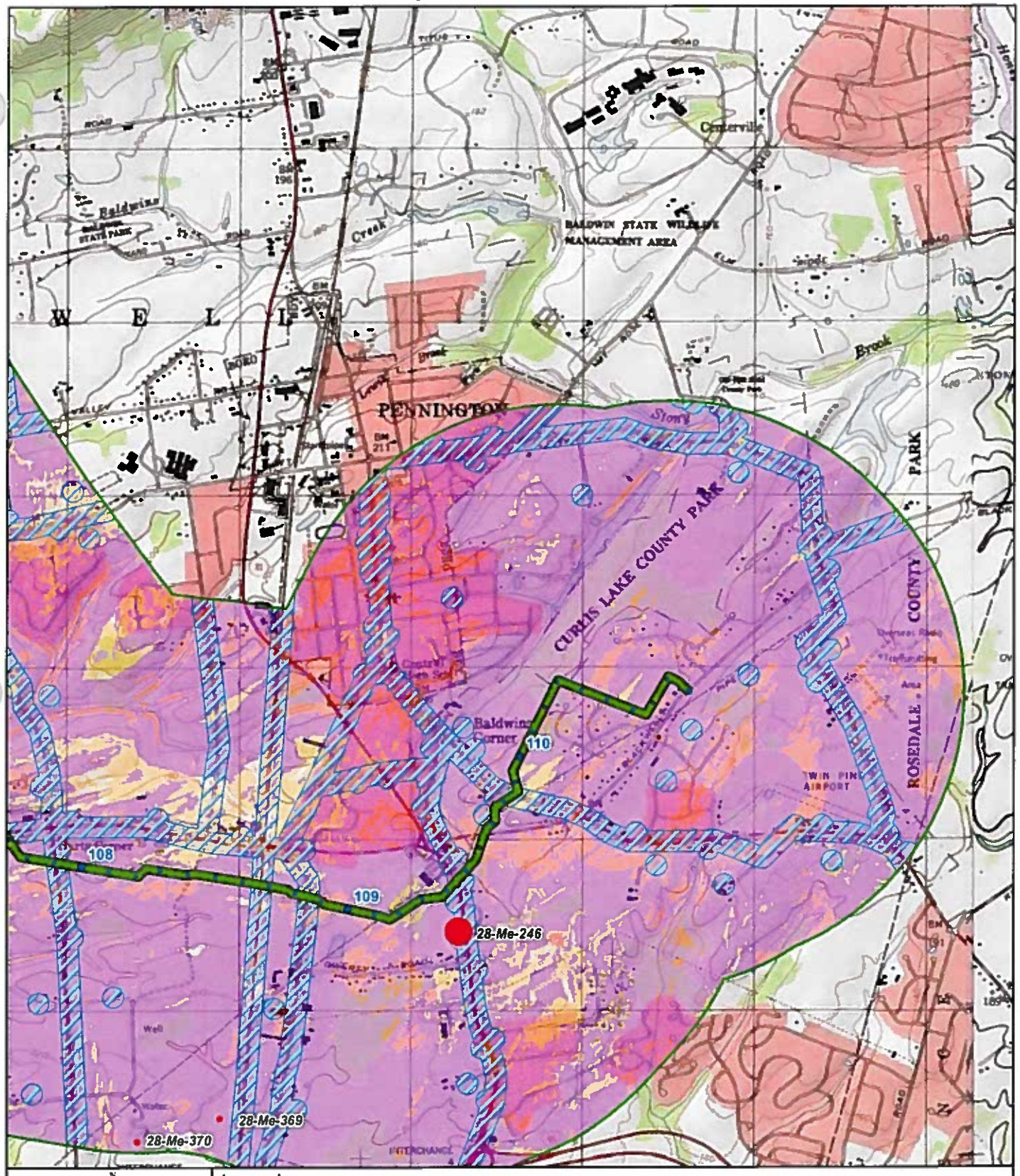
PennEast Pipeline Project
New Jersey Archaeological Resources

LOC: USGS Pennington Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 2/2/2015	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 12 of 13

PennEast PIPELINE

PennEast Pipeline Company, LLC

Privileged and Confidential



Legend

- 1-Mile Study Area
- Historic Period Sensitivity Model
- Archaeological Sensitivity Model
- Low Sensitivity
- Moderate Sensitivity
- High Sensitivity
- Steep Slope (> 15%)
- Known Archaeological Site
- State Boundary

TITLE:

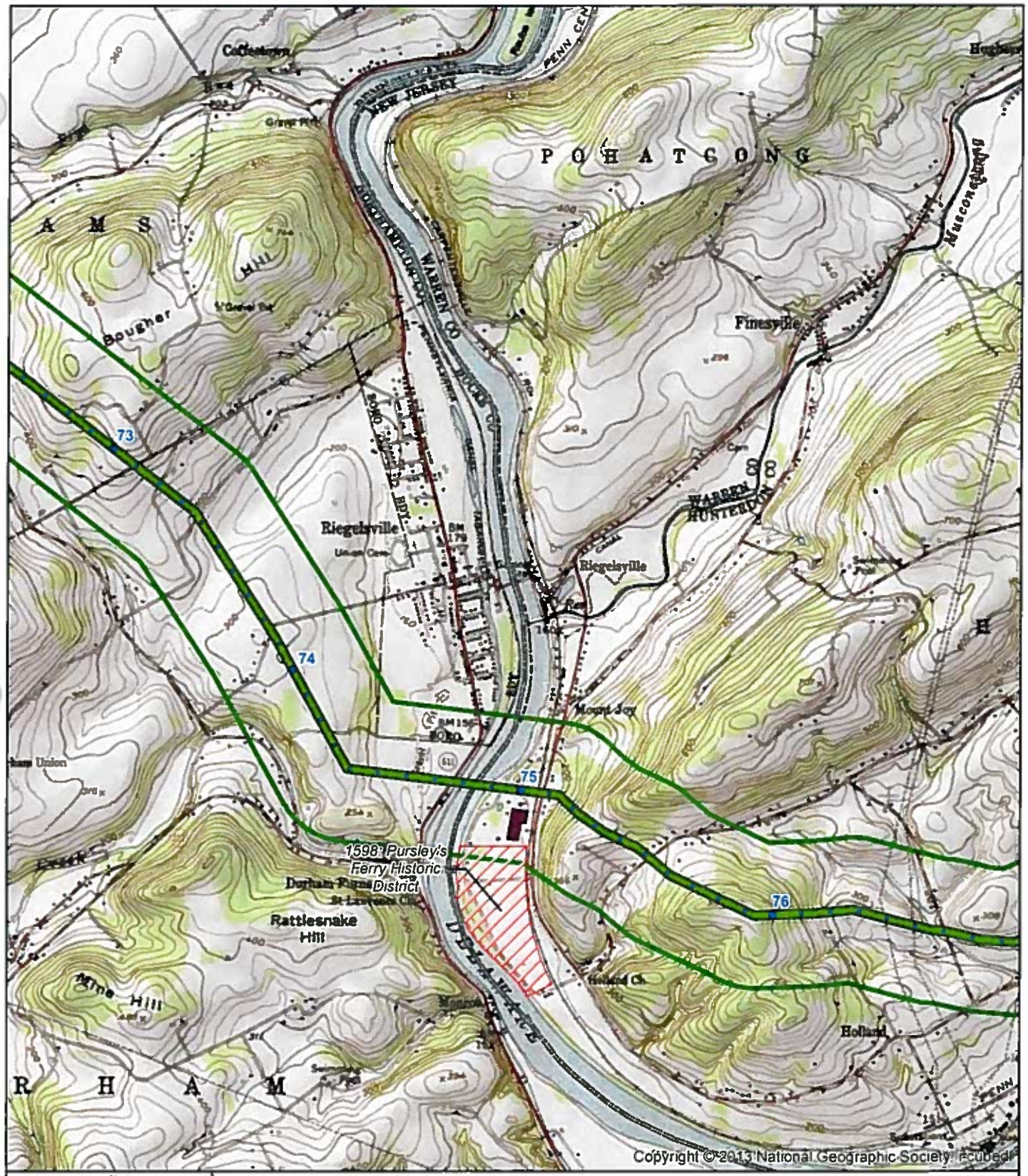
PennEast Pipeline Project
New Jersey Archaeological Resources

LOC: USGS Pennington Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 2/2/2015	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 13 of 13

PennEast PIPELINE

PennEast Pipeline Company, LLC

ATTACHMENT D: Project Maps with Previously Recorded Architectural Resources



N
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0 800 1,600 3,200 Feet

- Mile Postings
- PennEast Pipeline
- 1/4 Mile Study Area
- Historic District or Property (Listed)
- Historic District or Property (Eligible)
- Historic District or Property (Identified)
- State Boundary

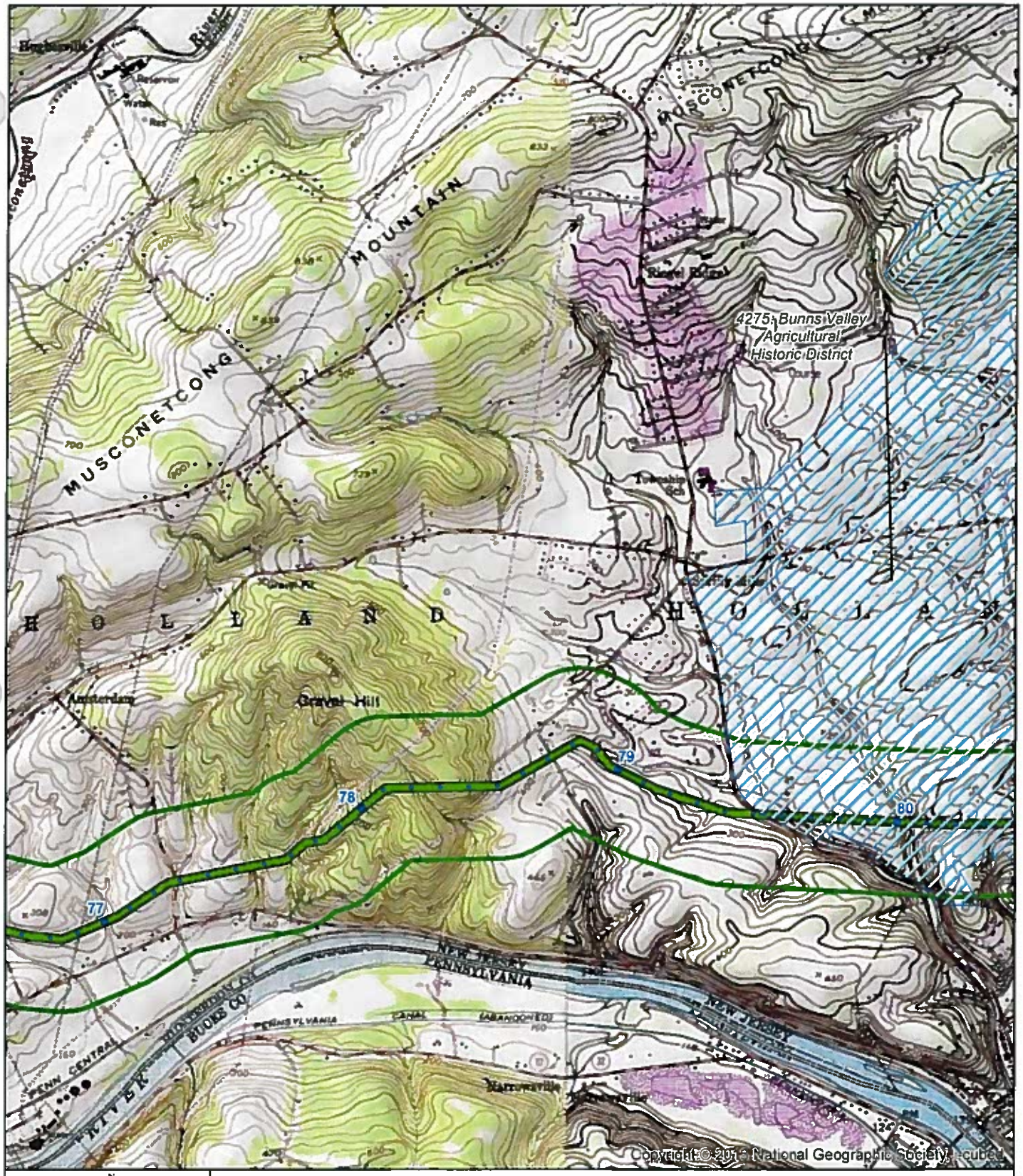
TITLE:

PennEast Pipeline Project
New Jersey Cultural and Historical Resources

LOC: USGS Riegelsville Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 2/2/2015	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET 1 of 12

PennEast PIPELINE

PennEast Pipeline Company, LLC



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0 800 1,600 3,200 Feet

- Mile Postings
- PennEast Pipeline
- 1/4 Mile Study Area
- Historic District or Property (Listed)
- Historic District or Property (Eligible)
- Historic District or Property (Identified)
- State Boundary

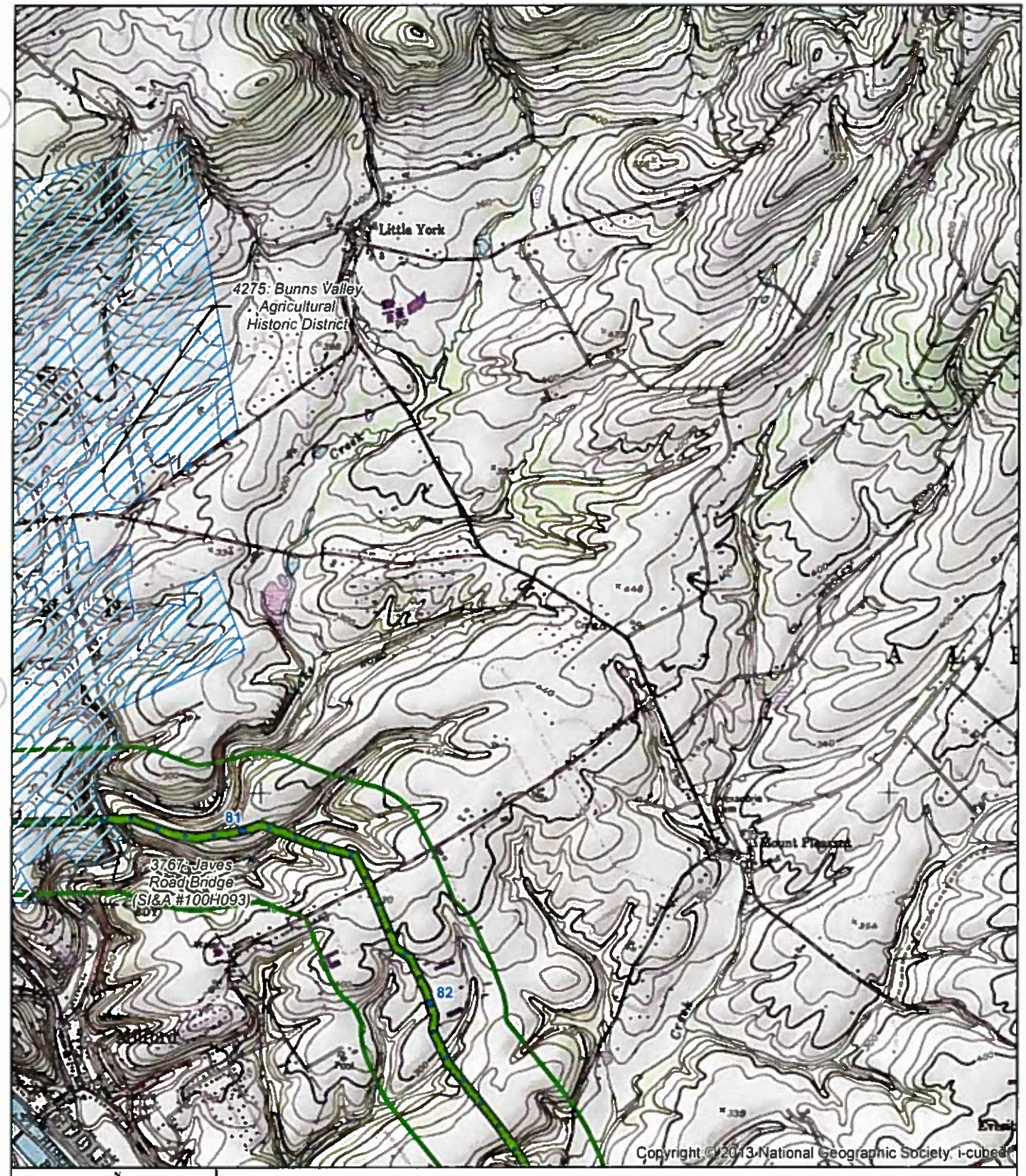
TITLE:

PennEast Pipeline Project
New Jersey Cultural and Historical Resources

LOC: USGS Riegelsville Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 2/2/2015	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 2 of 12

PennEast PIPELINE

PennEast Pipeline Company, LLC



N
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0 800 1,600 3,200
Feet

- Mile Postings
- PennEast Pipeline
- 1/4 Mile Study Area
- Historic District or Property (Listed)
- Historic District or Property (Eligible)
- Historic District or Property (Identified)
- State Boundary

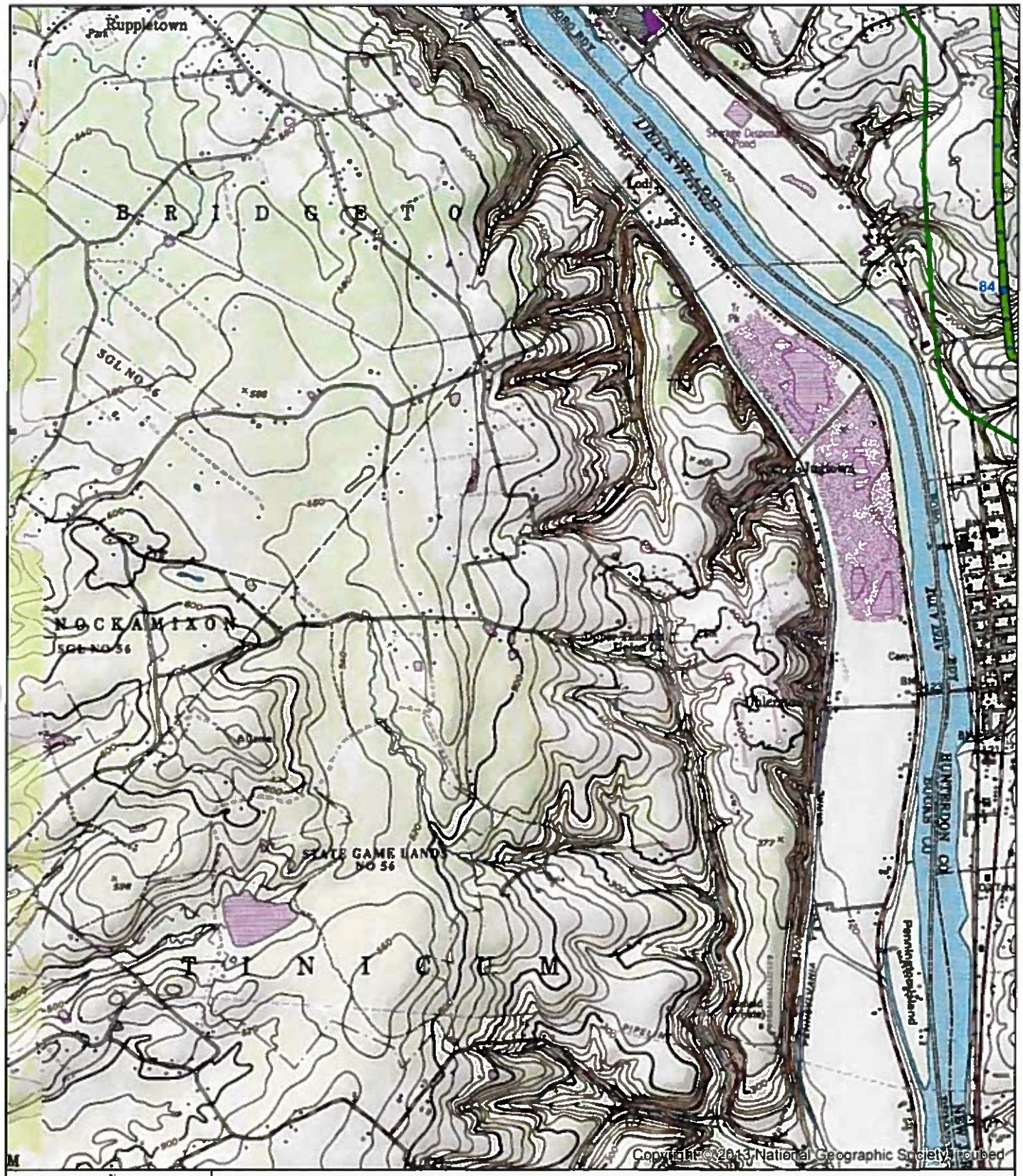
TITLE:

PennEast Pipeline Project
New Jersey Cultural and Historical Resources

LOC: USGS Frenchtown Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 2/2/2015	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 3 of 12

PennEast PIPELINE

PennEast Pipeline Company, LLC



N
W E
S

0 800 1,600 3,200 Feet

- Mile Postings
- PennEast Pipeline
- 1/4 Mile Study Area
- Historic District or Property (Listed)
- Historic District or Property (Eligible)
- Historic District or Property (Identified)
- State Boundary

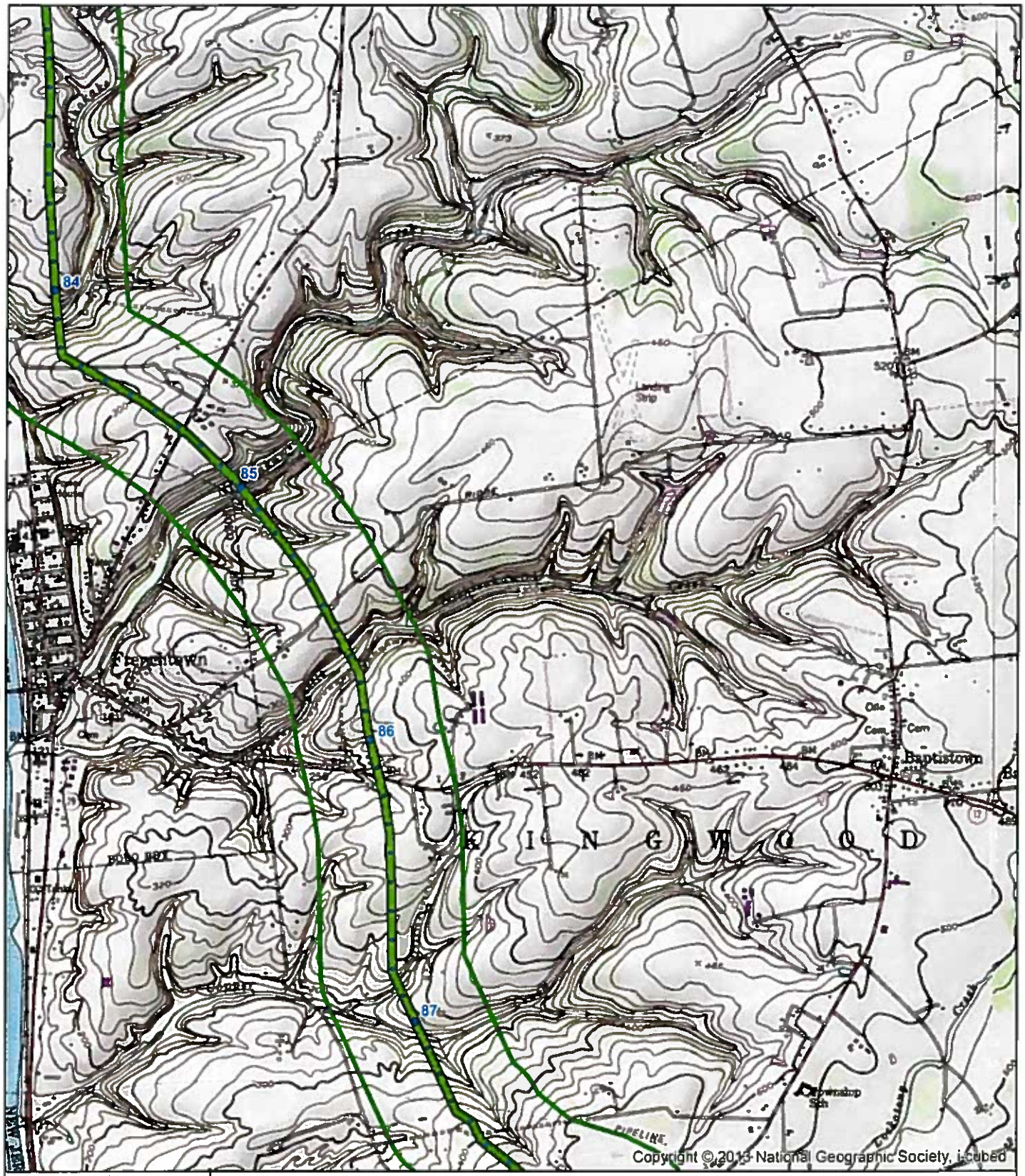
TITLE:

PennEast Pipeline Project
New Jersey Cultural and Historical Resources

LOC: USGS Frenchtown Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 2/2/2015	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 4 of 12

PennEast PIPELINE

PennEast Pipeline Company, LLC



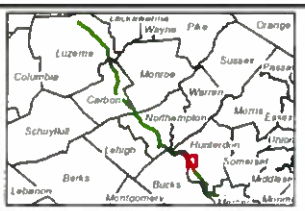
N
W E
S
0 800 1,600 3,200
Feet

- Mile Postings
- PennEast Pipeline
- 1/4 Mile Study Area
- Historic District or Property (Listed)
- Historic District or Property (Eligible)
- Historic District or Property (Identified)
- State Boundary

TITLE:

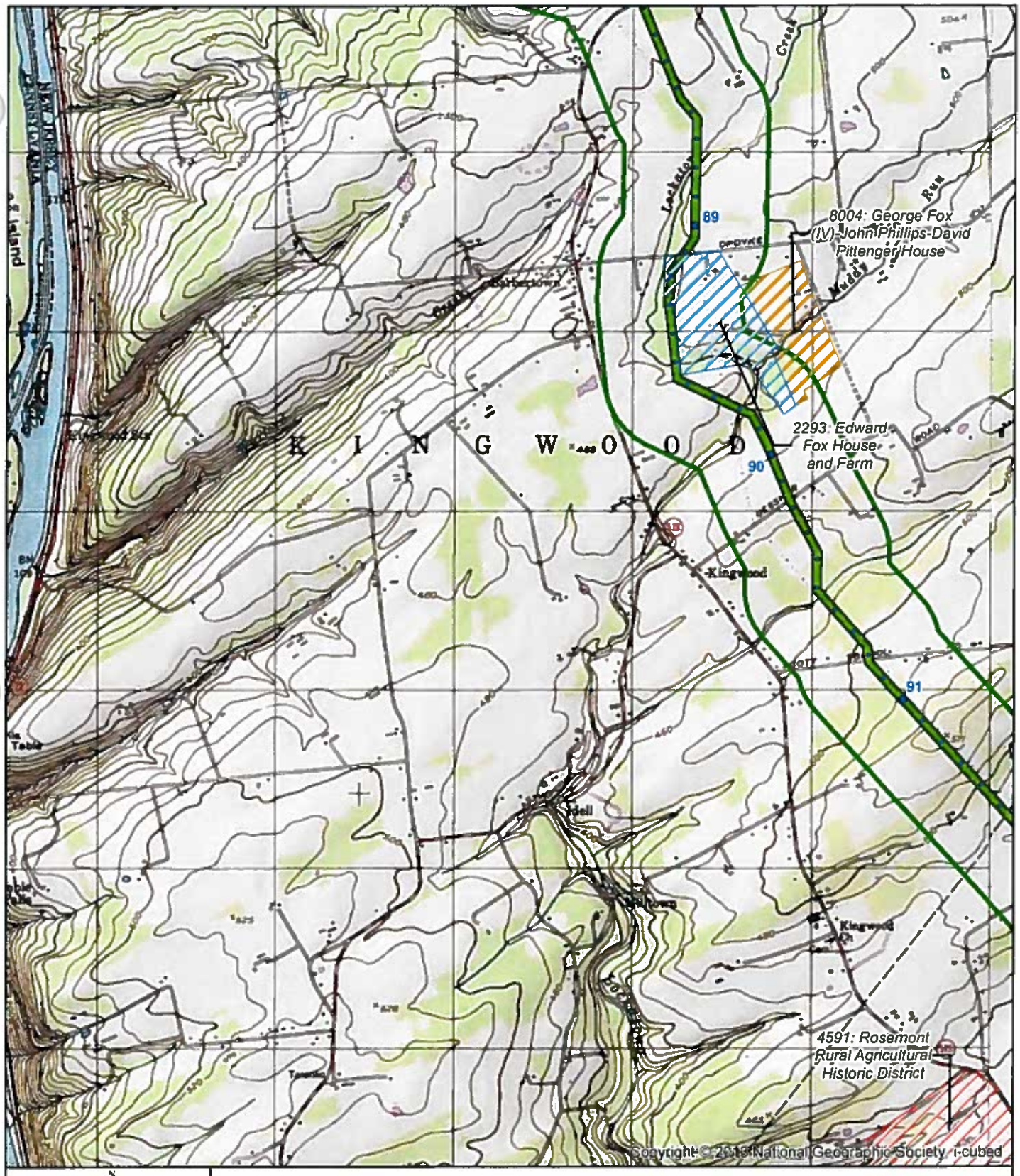
PennEast Pipeline Project
New Jersey Cultural and Historical Resources

LOC: USGS Frenchtown Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 2/2/2015	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 5 of 12



PennEast PIPELINE

PennEast Pipeline Company, LLC



N
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0 800 1,600 3,200 Feet

- Mile Postings
- PennEast Pipeline
- 1/4 Mile Study Area
- Historic District or Property (Listed)
- Historic District or Property (Eligible)
- Historic District or Property (Identified)
- State Boundary

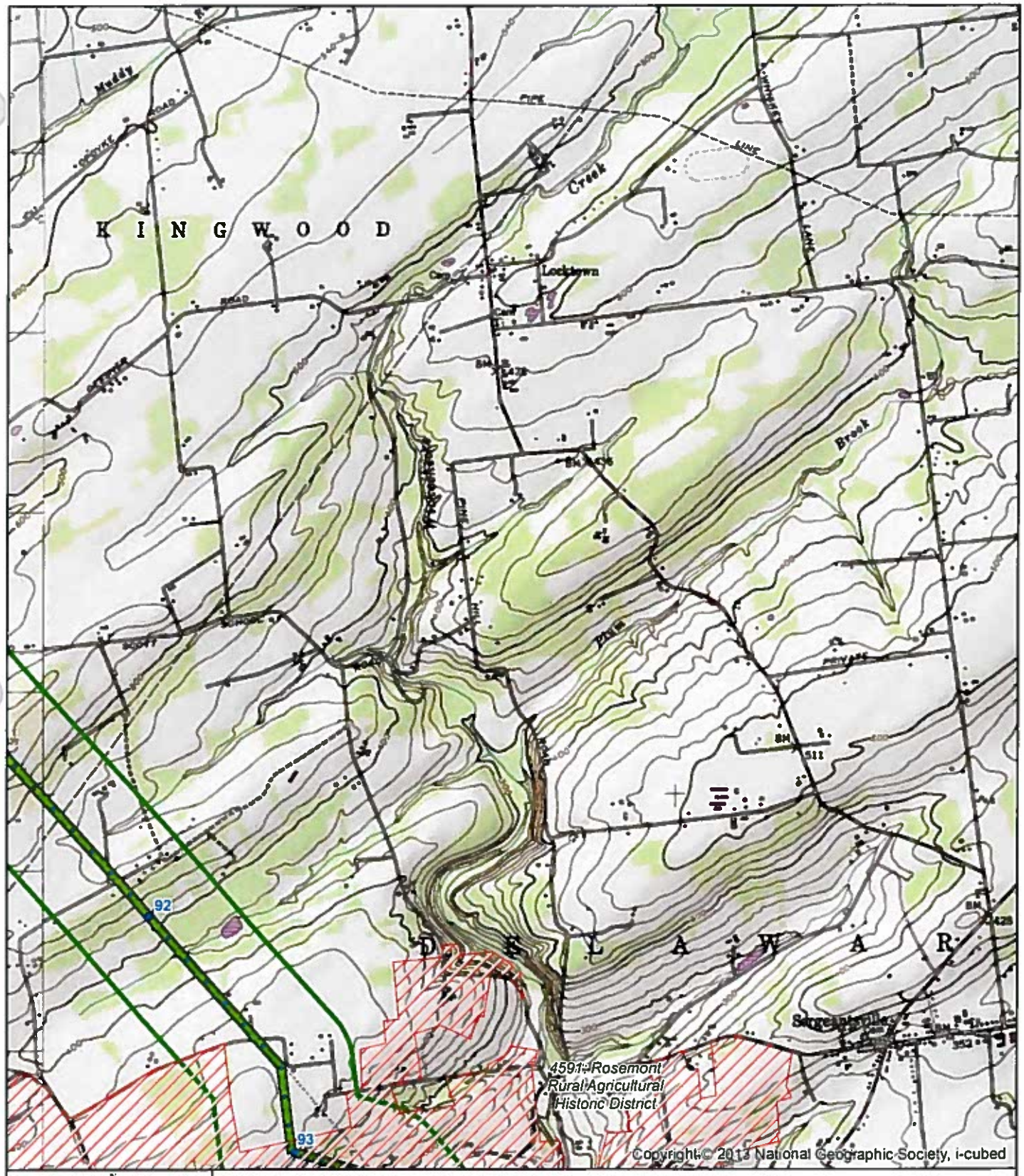
TITLE:

PennEast Pipeline Project
New Jersey Cultural and Historical Resources

LOC: USGS Lumberville Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 2/2/2015	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 6 of 12

PennEast PIPELINE

PennEast Pipeline Company, LLC



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- Mile Postings
- PennEast Pipeline
- 1/4 Mile Study Area
- Historic District or Property (Listed)
- Historic District or Property (Eligible)
- Historic District or Property (Identified)
- State Boundary

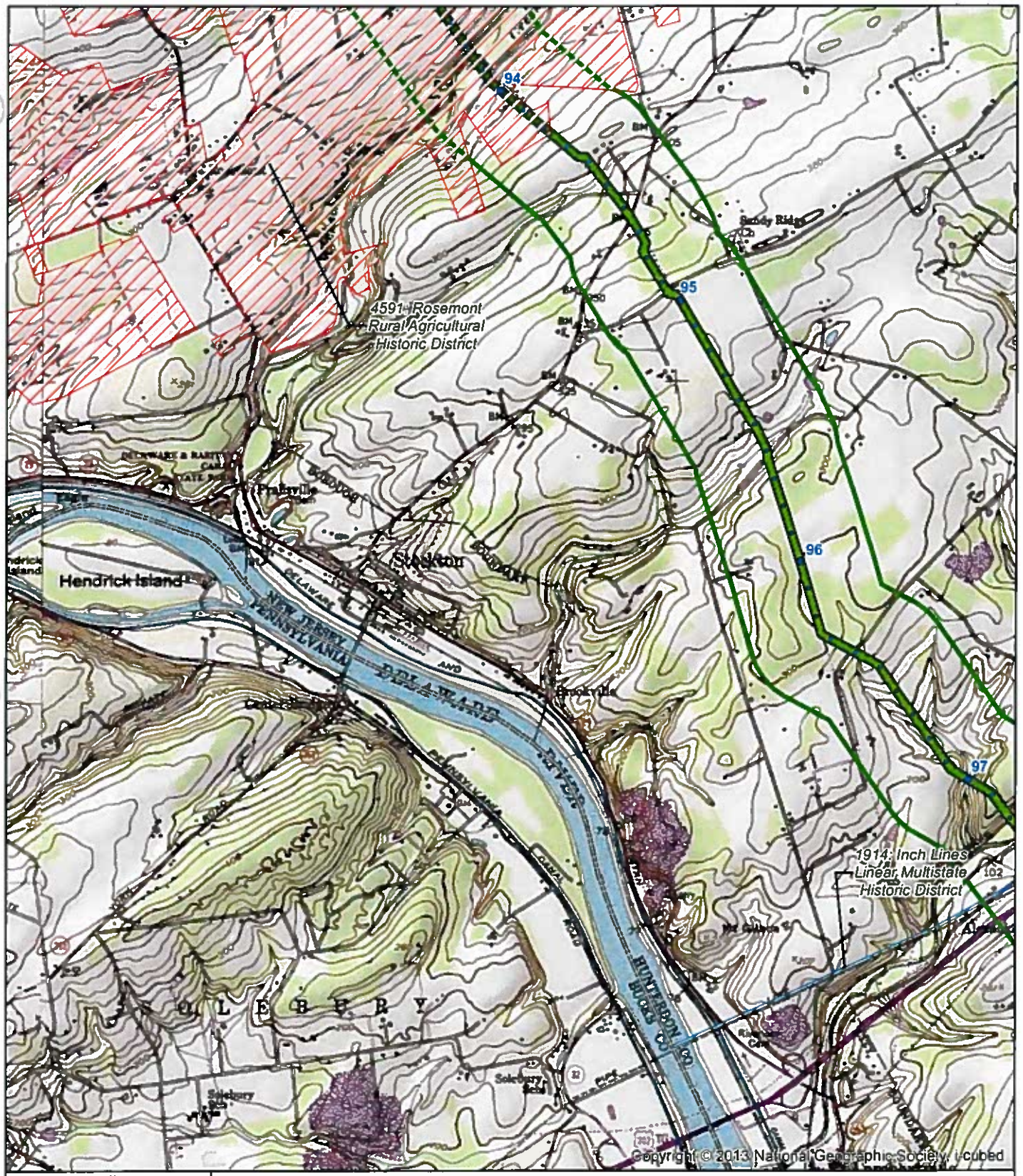
TITLE

PennEast Pipeline Project
New Jersey Cultural and Historical Resources

LOC: USGS Stockton Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 2/2/2015	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 7 of 12

PennEast PIPELINE

PennEast Pipeline Company, LLC



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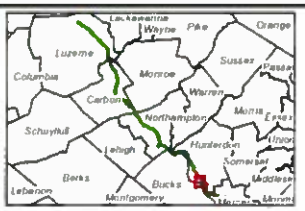
LOC: USGS Stockton Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 2/2/2015	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 8 of 12



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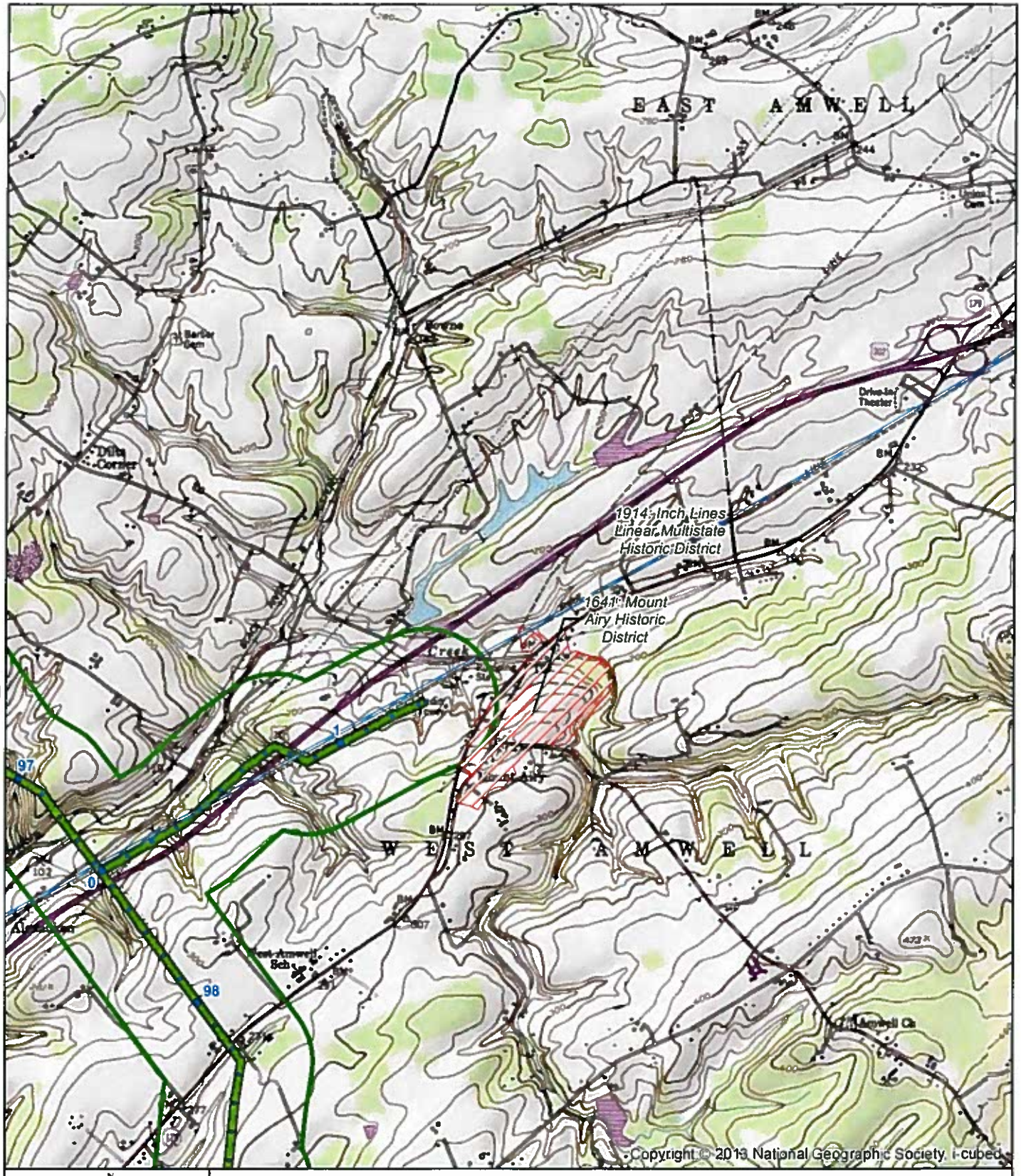
PennEast Pipeline Company, LLC



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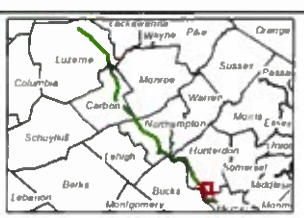
New Jersey Cultural and Historical Resources

LOC: USGS Stockton Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 2/2/2015	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 9 of 12



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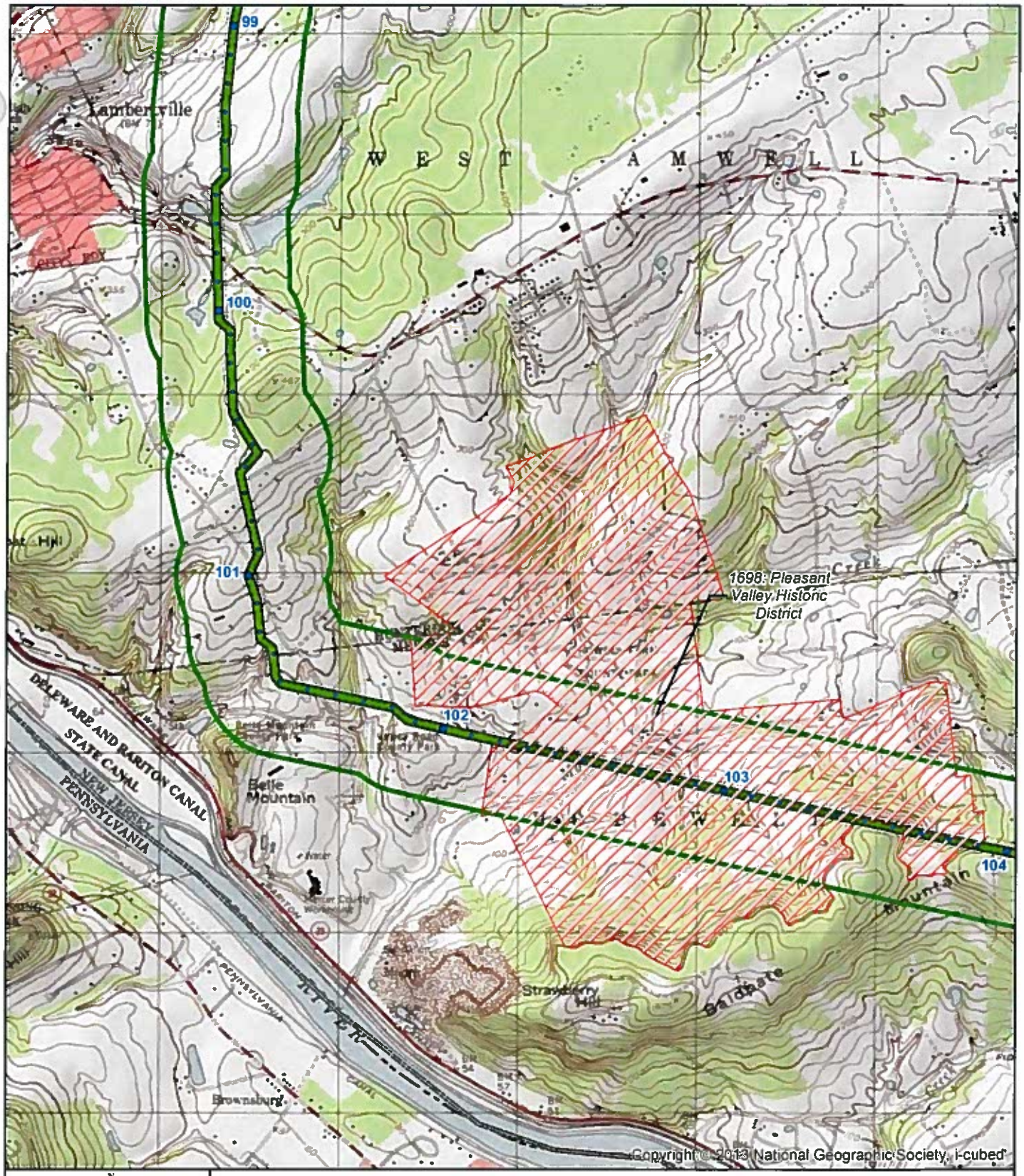

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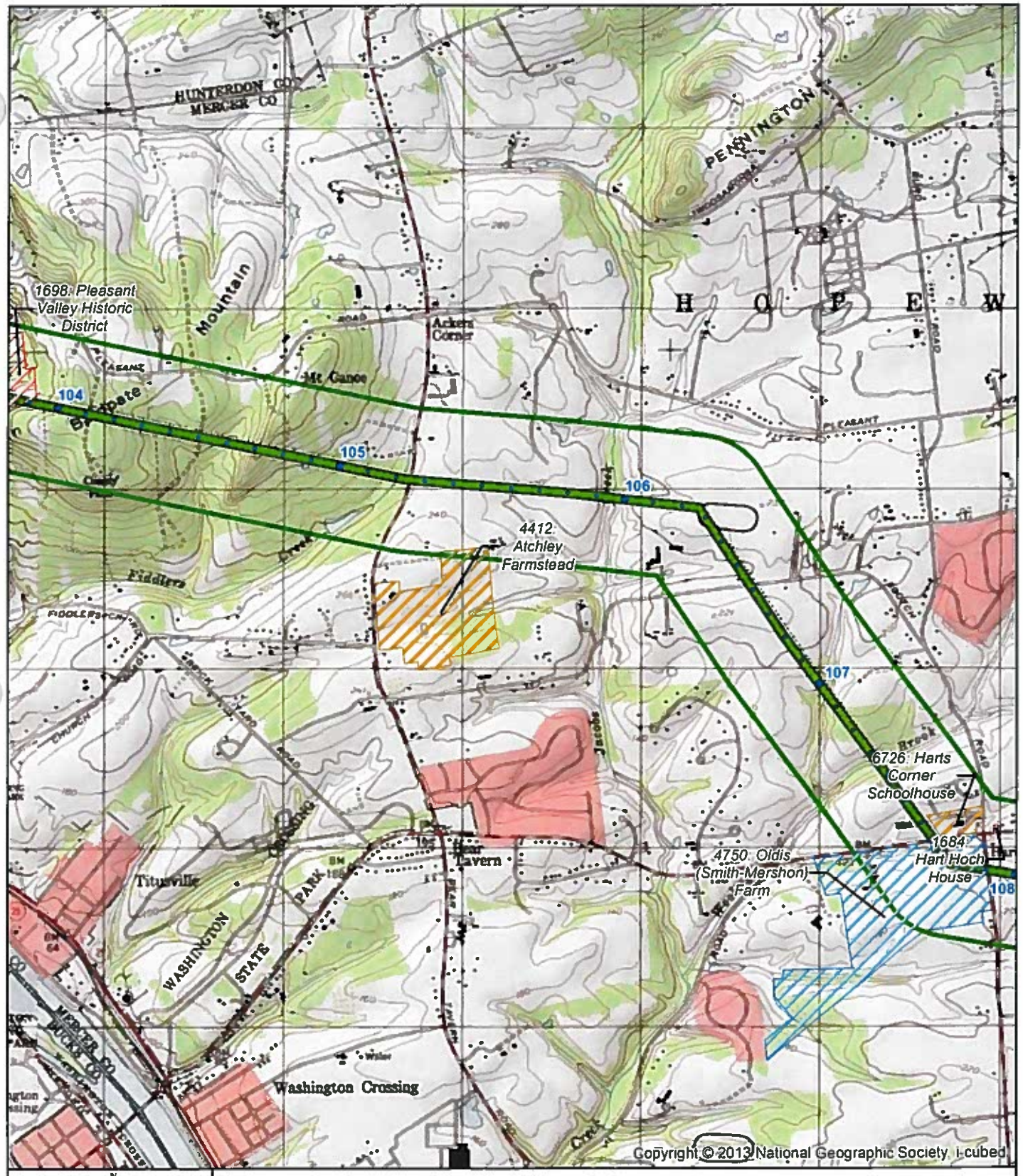
TITLE:

PennEast Pipeline Project
New Jersey Cultural and Historical Resources

LOC: USGS Hopewell Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 2/2/2015	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 10 of 12

PennEast PIPELINE

PennEast Pipeline Company, LLC



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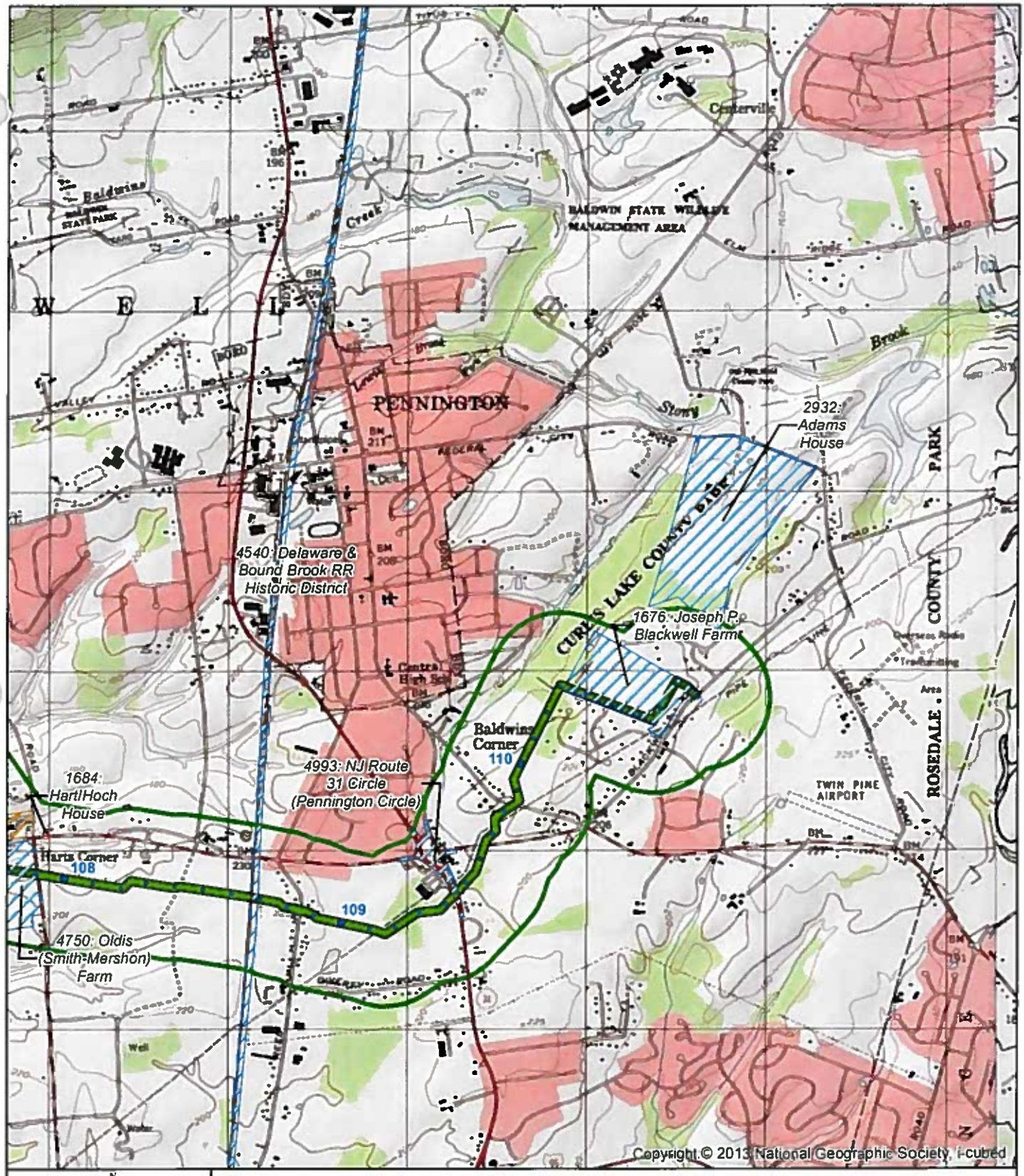
TITLE

PennEast Pipeline Project
New Jersey Cultural and Historical Resources

LOC: USGS Pennington Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 2/2/2015	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 11 of 12

PennEast PIPELINE

PennEast Pipeline Company, LLC



TITLE:

PennEast Pipeline Project
New Jersey Cultural and Historical Resources

LOC: USGS Pennington Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 2/2/2015	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 12 of 12

PennEast PIPELINE

PennEast Pipeline Company, LLC

ATTACHMENT E: Unanticipated Discovery Plan

Unanticipated Discovery Plan for the PennEast Pipeline Project

In order to assist the Federal Energy Regulatory Commission (FERC) in meeting the requirements of Section 106 as defined in the Advisory Council on Historic Preservation (Council) regulations "Protection of Historic Properties" (36 CFR Part 800), URS Corporation (URS) and the PennEast Pipeline Company, LLC (PennEast), have developed the following Unanticipated Discovery Plan (UDP) to be implemented should new or additional cultural resources be found after construction has begun on the proposed project (undertaking). This plan has been developed in reference to the regulations embodied in "Protection of Historic Properties" issued by the Council (revised August 2004, www.achp.gov/regs-rev04.pdf). While no official guidelines for developing UDPs were accessed through the New Jersey Historic Preservation Office (NJHPO), this plan is based upon previous Unanticipated Discovery Plans used for natural gas pipeline projects. The plan detailed here will be implemented by PennEast if previously undiscovered archaeological resources and/or human remains are identified. A list of contacts is provided at the end of this plan.

In the case of an unanticipated discovery, PennEast proposes to follow all relevant state and federal law, and recommendations regarding treatment of human remains and other items of cultural patrimony. Relevant laws include the following:

Native American Graves Repatriation Act (NAGPRA) (Public Law 101-601; 25 U.S.C. 3001-3013)

> Requires that Indian tribes be consulted when cultural items are unexpectedly uncovered on federal or tribal lands.

New Jersey Cemetery Act, 2003 (P.L. 2003, c. 261, s. 1)

> Prohibits human remains from being removed from an interment space within a cemetery unless certain conditions are met; allows removal of human remains from a property that is not part of a cemetery by the property owner if certain conditions are met.

New Jersey P.L. 2002, c. 127

> Criminalizes the unlawful disturbance, movement, or desecration of human remains.

In the event of an unanticipated discovery, the construction supervisor will have the authority and responsibility to halt construction in the immediate area of the find. The construction supervisor will notify his immediate supervisor, who will be responsible for notifying URS. Any revisions made to this chain of responsibility will be presented in writing at the pre-construction meeting.

Human Remains

The following steps will be taken in the event that human remains are encountered by a PennEast inspector, a contractor, or subcontractor during the proposed undertaking.

1) Halt Work. Construction activities within the immediate area of the human remains will be halted ("immediate area" is a context-specific measure, however roughly 30–50 feet is generally adequate, although special attention should be given to the possible extension of a new find beyond this buffer zone), and the discovery protected from further disturbance. The on-site construction supervisor will have the authority and responsibility to halt construction in the immediate area of the find.

2) Notify Project Manager and Cultural Resources Contractor. The PennEast construction supervisor (inspector, contractor, or subcontractor) on-site when the discovery is made will notify the PennEast Project Manager, Jeff England (cell: 719-213-8273) and URS cultural resources professional, Grace Ziesing (direct: 610-832-2791).

3) Notify Authorities. The PennEast construction supervisor (inspector, contractor, or subcontractor) on-site when the discovery is made will notify the local law enforcement agency; local law enforcement may in turn contact County Medical Examiner.

4) Notify FERC. The PennEast Project Manager (Jeff England) will notify FERC (contact to be determined).

5) Protect the Site. The PennEast Project Manager (Jeff England) will arrange for security to protect the suspected burial from vandalism.

If in consultation between local law enforcement and the URS cultural resources consultant the remains are found to be non-archaeological (modern) in nature:

6) Defer to law enforcement personnel and County Medical Examiner. No further engagement of NJHPO is necessary.

If in consultation between local law enforcement and the URS cultural resources consultant the remains are found to be archaeological (*not* modern) in nature:

6) Notify NJHPO. The URS cultural resources professional (Grace Ziesing) will notify Jesse West-Rosenthal (direct: 609-984-6019) of the discovery.

7) Engage in Consultation. PennEast, through their cultural resources consultant (Grace Ziesing), will engage in consultation with NJHPO (Jesse West-Rosenthal) and FERC (contact to be determined) to ensure that all provisions of NAGPRA are followed and to determine the potential National Register of Historic Places significance of the find. Sufficient archaeological review, in consultation with URS staff forensic anthropologist Dr. Thomas A. Crist if necessary, will be performed to assess ethnic origin. Several courses of action may proceed from this point, depending on the ethnic origin of the remains and the eligibility finding. Additional archaeological work may be performed as required/approved by the NJHPO and FERC.

8) Final Disposition of Remains. PennEast, through their cultural resources consultant (Grace Ziesing), will engage in consultation with NJHPO (Jesse West-Rosenthal) and

FERC (contact to be determined) to coordinate the proper removal of the remains or the need for preservation in place. In the event the human remains need to be removed, all applicable state and local laws concerning the relocation of human remains will be adhered to. Only after a NJHPO/FERC approved plan for dealing with the human remains has been finalized may construction of the pipeline facilities in the site area be resumed.

9) Report. The human remains and the actions taken to address them will be documented in a written report that will be submitted to FERC and NJHPO. The report format will be determined by the level of effort required.

PennEast recognizes the importance of providing careful and respectful treatment for human remains recovered as an unanticipated discovery or as part of an archaeological investigation. In the event of an unanticipated discovery of human remains, PennEast, through FERC, will consult with the appropriate Native American groups previously identified and contacted through the Section 106 consultation process. Lastly, in coordination with the NJHPO and other interested parties, a decision will be made for the treatment of the remains (e.g., reburial, preservation in place, scientific study, sacred rituals, or a combination thereof).

Other Archaeological Resources

The following steps will be taken in the event that any archaeological resources other than human remains are encountered by a PennEast inspector, a contractor, or subcontractor during the proposed undertaking.

1) Halt Work. Construction activities within the immediate area of the archaeological resource will be halted ("immediate area" is a context-specific measure, however roughly 30–50 feet is generally adequate, although special attention should be given to the possible extension of a new find beyond this buffer zone), and the discovery protected from further disturbance. The on-site construction supervisor will have the authority and responsibility to halt construction in the immediate area of the find.

2) Notify Project Manager and Cultural Resources Contractor. The PennEast construction supervisor (inspector, contractor, or subcontractor) on-site when the discovery is made will notify the PennEast Project Manager, Jeff England (cell: 719-213-8273) and URS cultural resources professional, Grace Ziesing (direct: 610-832-2791).

3) Notify FERC. The PennEast Project Manager (Jeff England) will notify FERC (contact to be determined).

4) Protect the Site. The PennEast Project Manager (Jeff England) will arrange for security to protect the find spot from vandalism.

5) Notify NJHPO. The URS cultural resources professional (Grace Ziesing) will notify Jesse West-Rosenthal (direct: 609-984-6019) of the discovery.

6) Engage in Consultation. PennEast, through their cultural resources consultant (Grace Ziesing), will engage in consultation with NJHPO (Jesse West-Rosenthal) and FERC (contact to be determined) to determine the potential National Register of Historic Places significance of the find. Sufficient archaeological work will be performed on the unanticipated discovery location to stabilize deposits, protect deposits from scavengers or looters, and to collect readily available samples (e.g., for radiocarbon dating) that may help pinpoint the age of deposits. If the site is determined to be potentially eligible for inclusion in the National Register of Historic Places, additional work, such as a data recovery, will be performed as required/approved by the NJHPO and FERC. This may also involve consultation with Native American groups or other parties with established cultural affiliation. Construction activities will remain halted until the FERC and the NJHPO indicates to PennEast that it may proceed in the area of a specific unanticipated discovery.

7) Report. The unanticipated discovery and the actions taken to address it will be documented in a written report that will be submitted to FERC and NJHPO. The report format will be determined by the level of effort required.

Summary

PennEast will implement the measures outlined in this plan, after the plan has been reviewed and approved by the FERC and the NJ-SHPO. PennEast is responsible for all costs regarding the implementation of this plan and associated archaeological investigations, treatment, reporting, and curation of artifacts.

PennEast will conduct a short archaeological resource identification training program for pipeline construction staff in advance of the work. The program will be presented by the project's cultural resources professional and is intended to help construction staff identify unanticipated discoveries in the field and report them to the construction supervisor.

Contact List: Unanticipated Discovery Plan for the PennEast Pipeline Project

FERC Contact
To Be Determined

PennEast Project Manager
Jeff England
UGI Energy Services
Office Phone: (610) 373-7999 ext. 222
Cell: (719) 213-8273
jengland@ugies.com

URS Cultural Resources Professional
Grace H. Ziesing
URS Corporation
625 West Ridge Pike, Suite E-100
Conshohocken, PA 19428
Office Phone: (610) 832-2791
Fax: (610) 832-2791
Cell: (610) 220-3714
grace.ziesing@aecom.com

URS Staff Forensic Anthropologist
Thomas Crist, Ph.D.
FAAFS Professor
Utica College
1600 Burrstone Road
Utica, NY 13502
Phone: (315) 792-3390

NJHPO Contact
Jesse West-Rosenthal
Historic Preservation Specialist
State of New Jersey
Department of Environmental Protection
Historic Preservation Office
501 E. State Street
Building 5, 4th Floor
Trenton, NJ 08625
Phone: (609) 984-6019

HUNTERDON COUNTY

Hunterdon County Medical Examiner
Steven Diamond, D.O.
Hunterdon Medical Ctr., 2100 Wescott
Flemington, NJ 08822
Phone: (908) 788-6100, ext. 3708
Fax: (908) 237-2334

Alexandria Township
New Jersey State Police
Kingwood Station
945 Route 12
Frenchtown, NJ 08825
Phone: (908) 996-3404
Fax: (908) 996-7823

Delaware Township
Delaware Township Police Department
816 Sergeantsville Road
Sergeantsville, NJ 08557
(609) 397-0911
Fax: (609) 397-8699

Holland Township
Holland Township Police Department
61 Church Road
Milford, NJ 08848
Phone: (908) 995-4670
Fax: (908) 995-4612

Kingwood Township
New Jersey State Police
Kingwood Station
945 Route 12
Frenchtown, NJ 08825
Phone: (908) 996-3404
Fax: (908) 996-7823

West Amwell Township
West Amwell Township Police Department
24 Mt. Airy Village Road
Lambertville, NJ 08530
Phone: (609) 397-1100
Fax: (609) 397-8801

MERCER COUNTY

Mercer County Medical Examiner
Raafat Ahmad, M.D.
Mercer County Airport
29 East Piper Avenue
West Trenton, NJ 08628
Phone: (609) 530-7523

Fax: (609) 530-7522

Hopewell Township
Hopewell Township Police Department
201 Washington Crossing Pennington Road
Titusville, NJ 08560
Phone: (609) 737-3100
Fax: (609) 737-1775

URS

PennEast PIPELINE

March 31, 2015

Mr. Jesse West-Rosenthal
NJ DEP Historic Preservation Office
P.O. Box 402
Trenton, NJ 08625

Dear Mr. West-Rosenthal:

On behalf of PennEast Pipeline Company, LLC, we would like to thank you for your continued coordination on the proposed PennEast Pipeline Project. PennEast is a joint project of AGL Resources; NJR Pipeline Company, a subsidiary of New Jersey Resources; PSEG Power LLC; South Jersey Industries; Spectra Energy Partners; and UGI Energy Services (UGIES), a subsidiary of UGI Corporation.

As an interstate natural gas pipeline, PennEast will be regulated by the Federal Energy Regulatory Commission (FERC). FERC issued a Notice of Intent to prepare an Environmental Impact Statement (EIS) for this project on January 13, 2015. Over the past months, PennEast has worked to refine a preferred alternative route and to obtain permissions to survey. To that end, we must inform you that the preferred alternative route has again been adjusted to account for engineering, environmental, and land use constraints that have been identified since we last provided your agency with detailed project mapping on January 14, 2015.

Following feedback from FERC's scoping meetings and numerous conversations with landowners, state and local agencies, and other various stakeholders, PennEast has revised and refined various portions of the preferred alternative route. The largest variations to the previously released route are related to the location of the crossing of the Bethlehem Authority water supply mainline (MP 44 and MP 45), Appalachian Trail crossing (between MP 46 and MP 55), and accommodating future subdivision and housing development plans. Additional field data gained over the last month has helped make smaller adjustments related to environmental surveys and individual discussions with landowners.

In addition to the route variations noted above, an additional interconnect was needed for the Gilbert Power Generation facility in Holland Township, New Jersey, which is fed by a small lateral (12 inches) to supply natural gas to the facility. The previously located interconnection with Elizabethtown Gas was relocated so that both interconnects can be co-located within the power station's industrial property to minimize additional above-ground impacts.

A summary of the significant route variations in New Jersey is provided below:

- In Holland Township, Hunterdon County, NJ, a new 12-inch lateral is needed to run from milepost 76.6 on the mainline pipeline route approximately ½-mile south to an interconnect with Elizabethtown Gas and the Gilbert Power Generation facility. The previously located interconnection with Elizabethtown Gas was relocated so that both interconnects can be co-located within the power station's industrial property to minimize additional above-ground impacts.

- In Holland Township, Hunterdon County, NJ, approximately two miles of the alignment has been re-routed less than ½-mile to the south of the previous route to accommodate a future private development planned for the area.

- In West Amwell Township, Hunterdon County, NJ, approximately 1 mile of the alignment has been re-routed up to 1,000 feet east of the previous route to avoid a newly constructed home that was identified by a landowner.

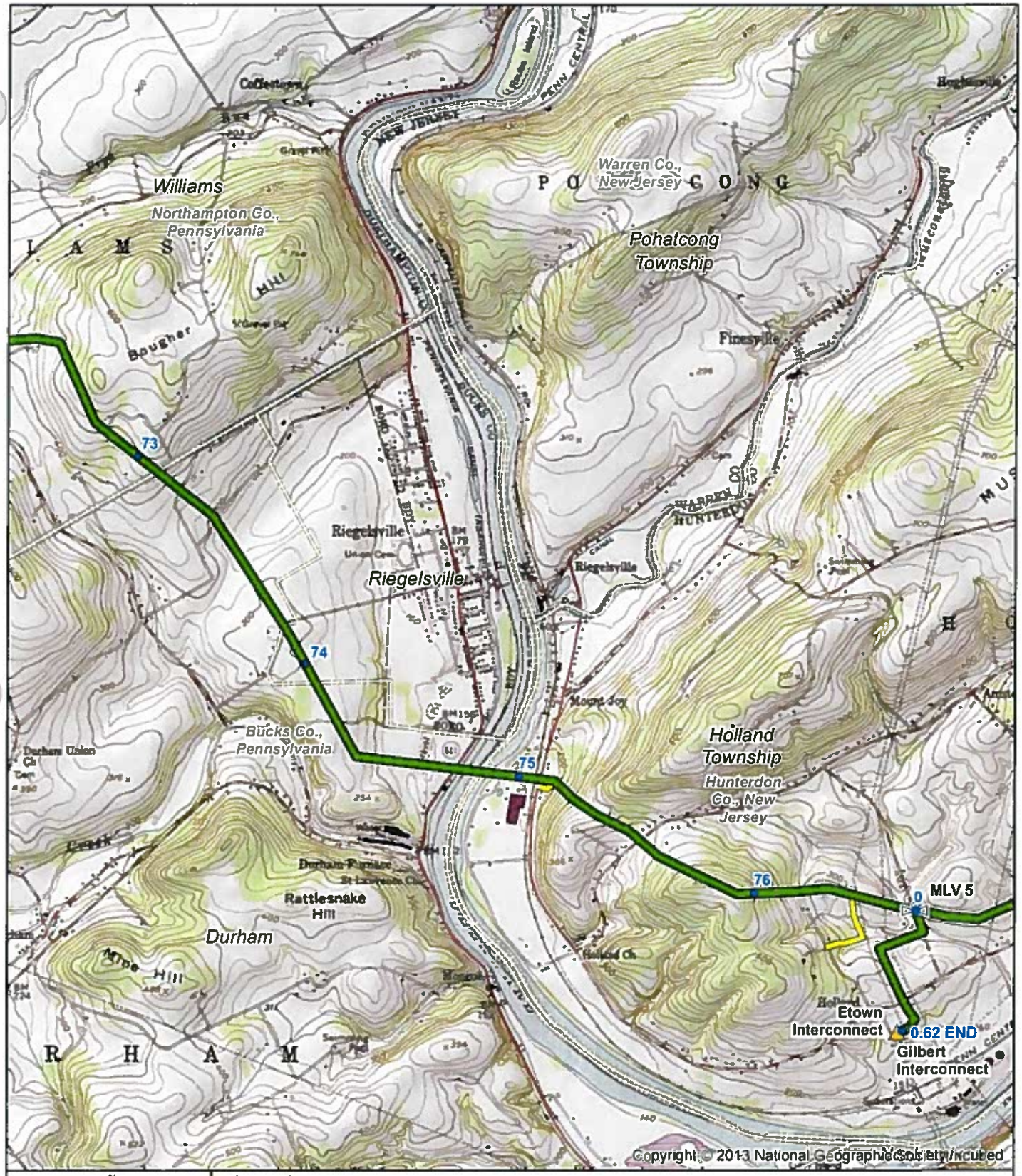
Updated project mapping for the entire new preferred alternative route is attached to this letter; updated GIS shapefiles are also being provided to aide in your review and analysis of the project.

We look forward to continuing to work with you and your colleagues on this important project. Please contact me if you have any questions.

Sincerely,

Bernie Holcomb
Pipeline Environmental Services Manager

URS Corporation 625 West Ridge Pike, Suite E-100; Conshohocken, PA 19428
Direct: 610 832 1810; Cell: 215 275-7956; Fax: 610-832-3501 bernard.holcomb@urs.com



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Legend

- Mile Posting
- PennEast Pipeline
- Interconnect
- Main Line Valve Site
- Potential Access Road
- Municipality Boundary
- County Boundary

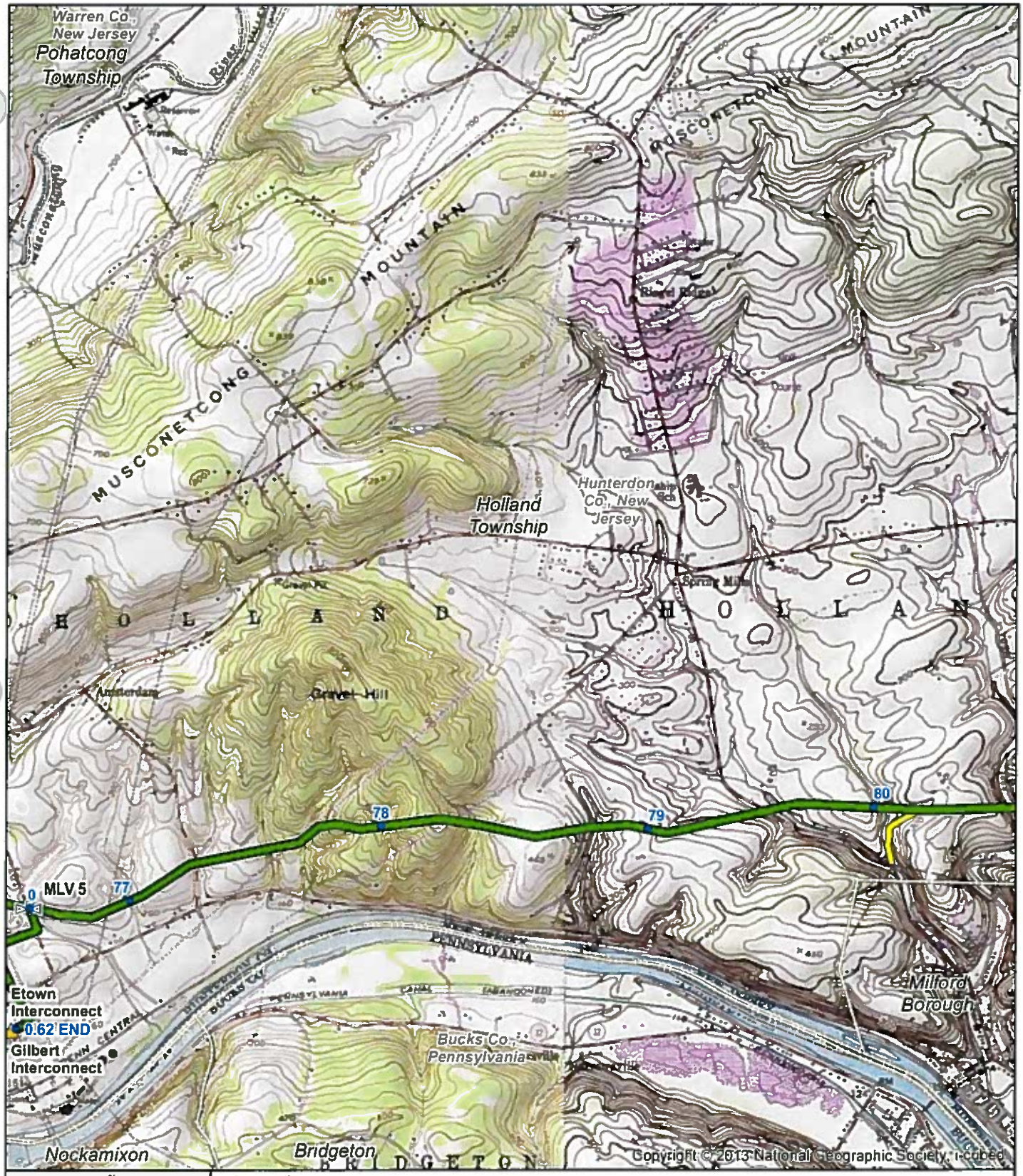
TITLE:

PennEast Pipeline Project - New Jersey
USGS Topographic Quadrangle Map

LOC: Riegelsville Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 3/31/2015	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 1 of 12

PennEast PIPELINE

PennEast Pipeline Company, LLC



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USGS Topographic Quadrangle Map

LOC: Riegelsville Quadrangle			REV.:
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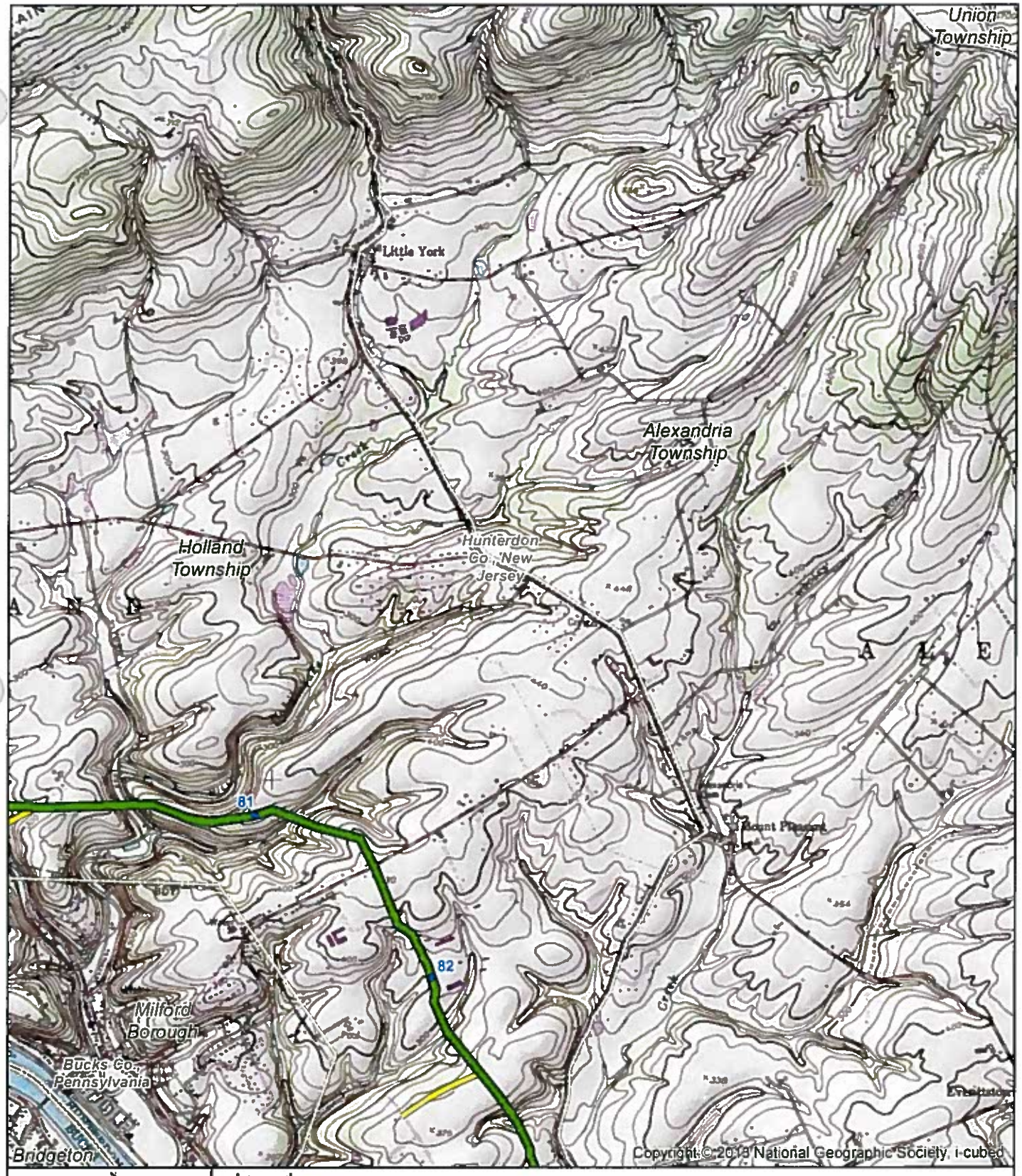
PennEast Pipeline Company, LLC



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- Mile Posting
- PennEast Pipeline
- Potential Access Road
- Municipality Boundary
- County Boundary

TITLE:

PennEast Pipeline Project - New Jersey
USGS Topographic Quadrangle Map

LOC: Frenchtown Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 3/31/2015	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 3 of 12

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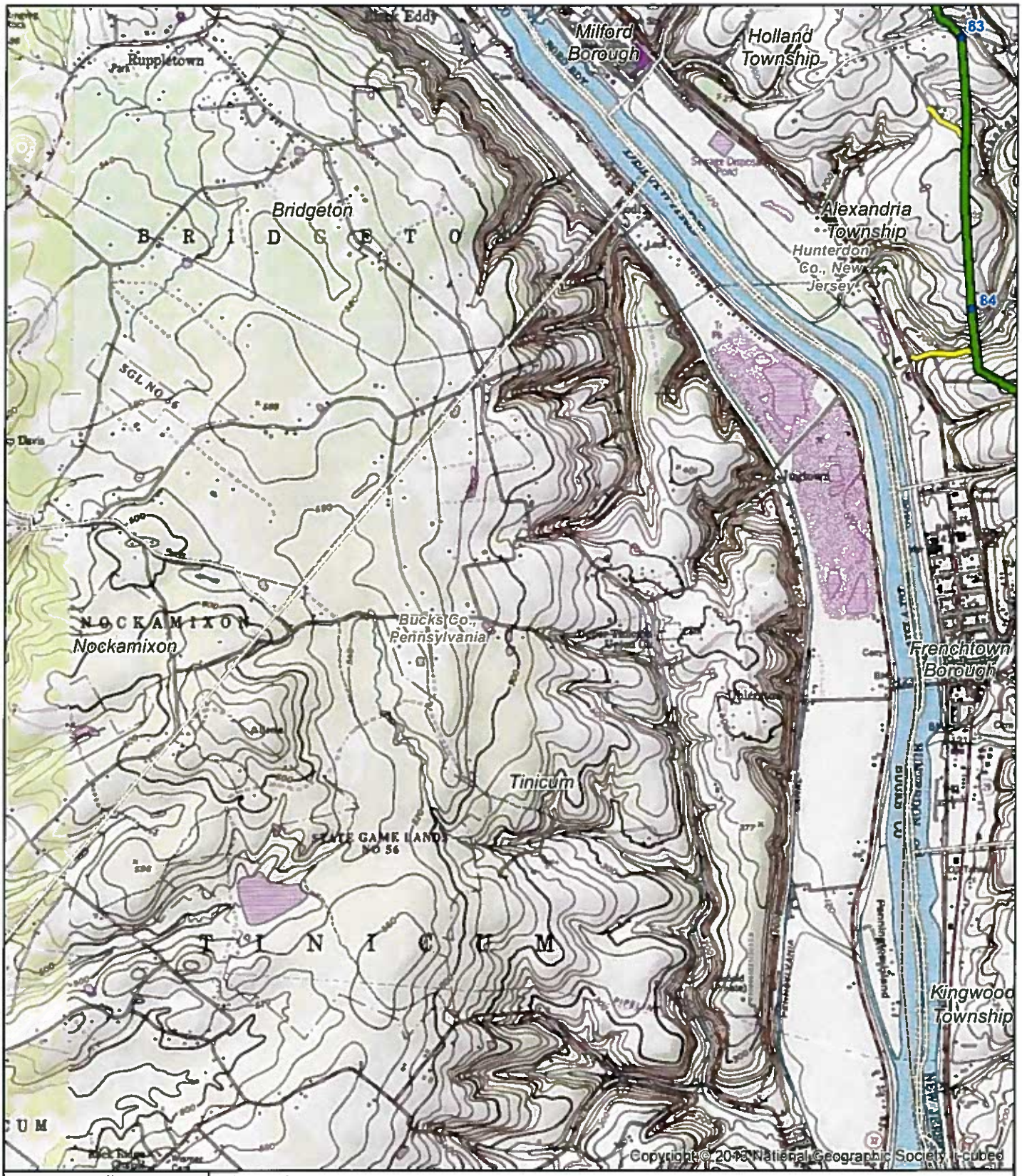
PennEast Pipeline Company, LLC



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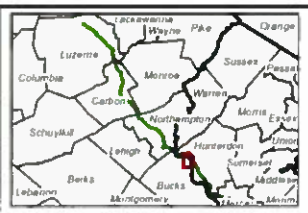
- Mile Posting
- PennEast Pipeline
- Potential Access Road
- Municipality Boundary
- County Boundary

TITLE:

PennEast Pipeline Project - New Jersey
USGS Topographic Quadrangle Map

LOC: Frenchtown Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 3/31/2015	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 4 of 12



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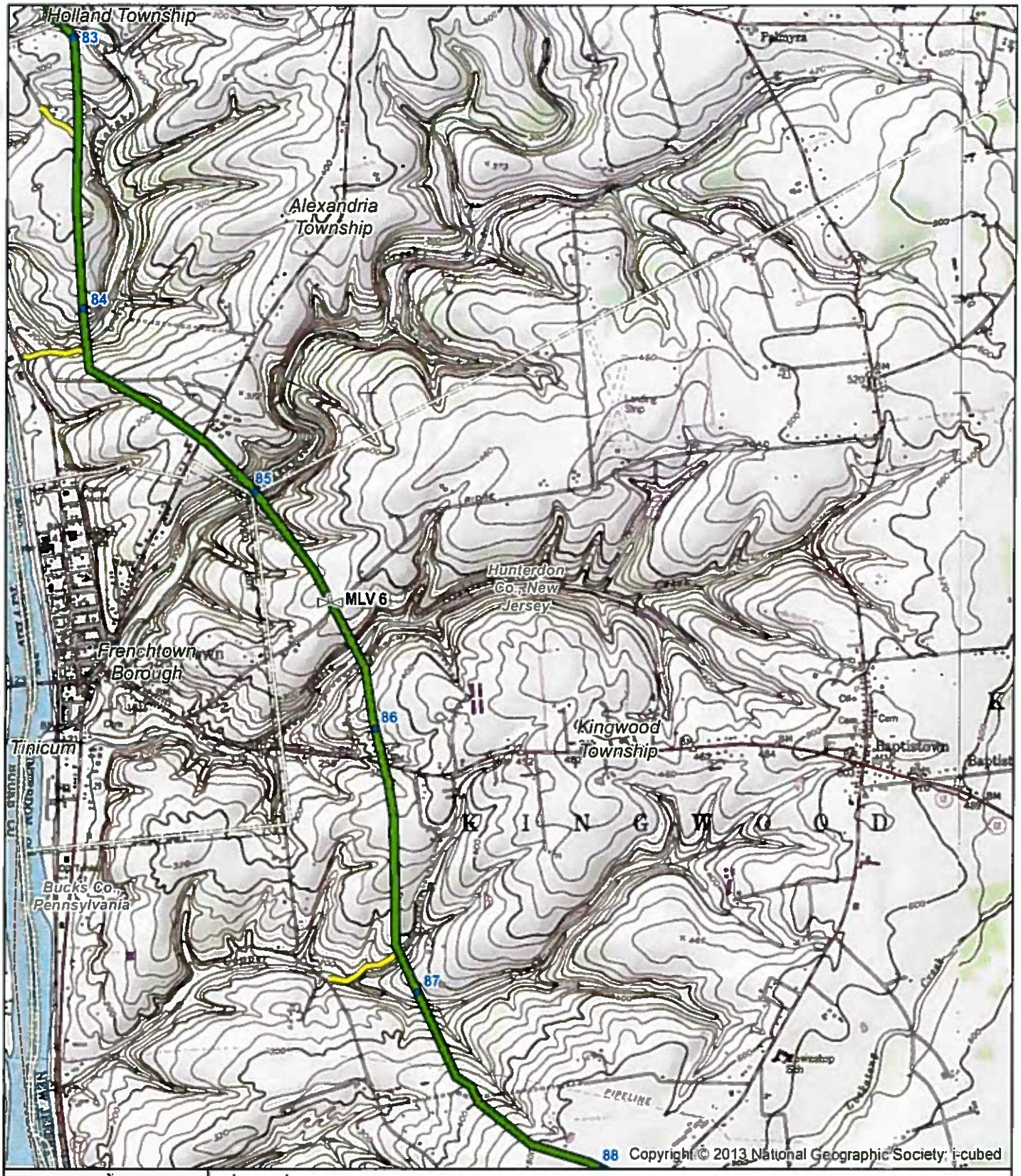

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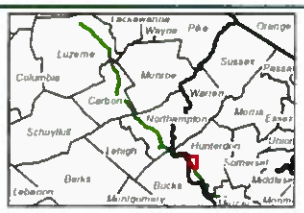
Legend

- Mile Posting
- PennEast Pipeline
- Main Line Valve Site
- Potential Access Road
- Municipality Boundary
- County Boundary

TITLE:

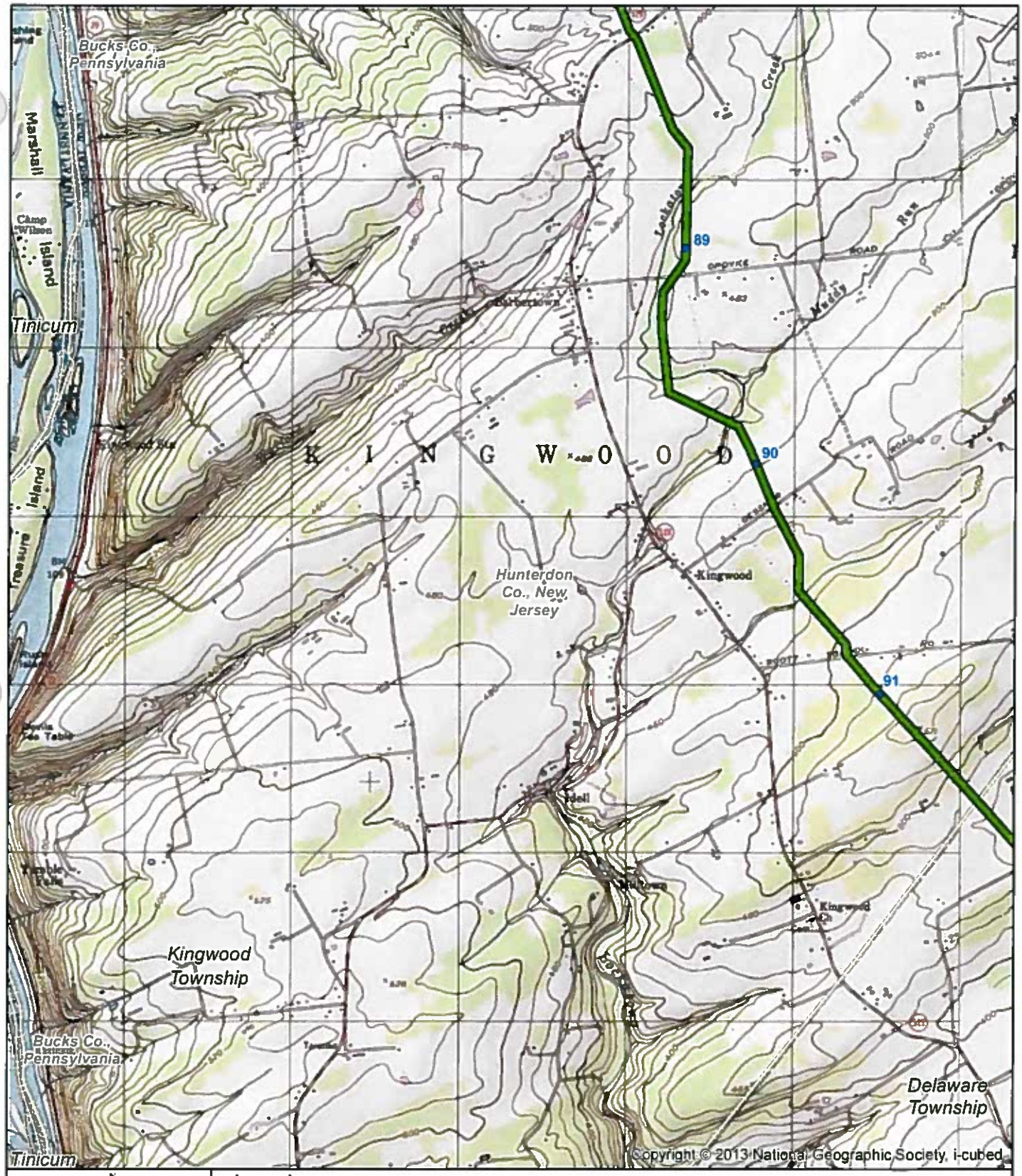
PennEast Pipeline Project - New Jersey
USGS Topographic Quadrangle Map

LOC: Frenchtown Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 3/31/2015	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 5 of 12



PennEast PIPELINE

PennEast Pipeline Company, LLC



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Legend

- Mile Posting
- PennEast Pipeline
- Potential Access Road
- Municipality Boundary
- County Boundary

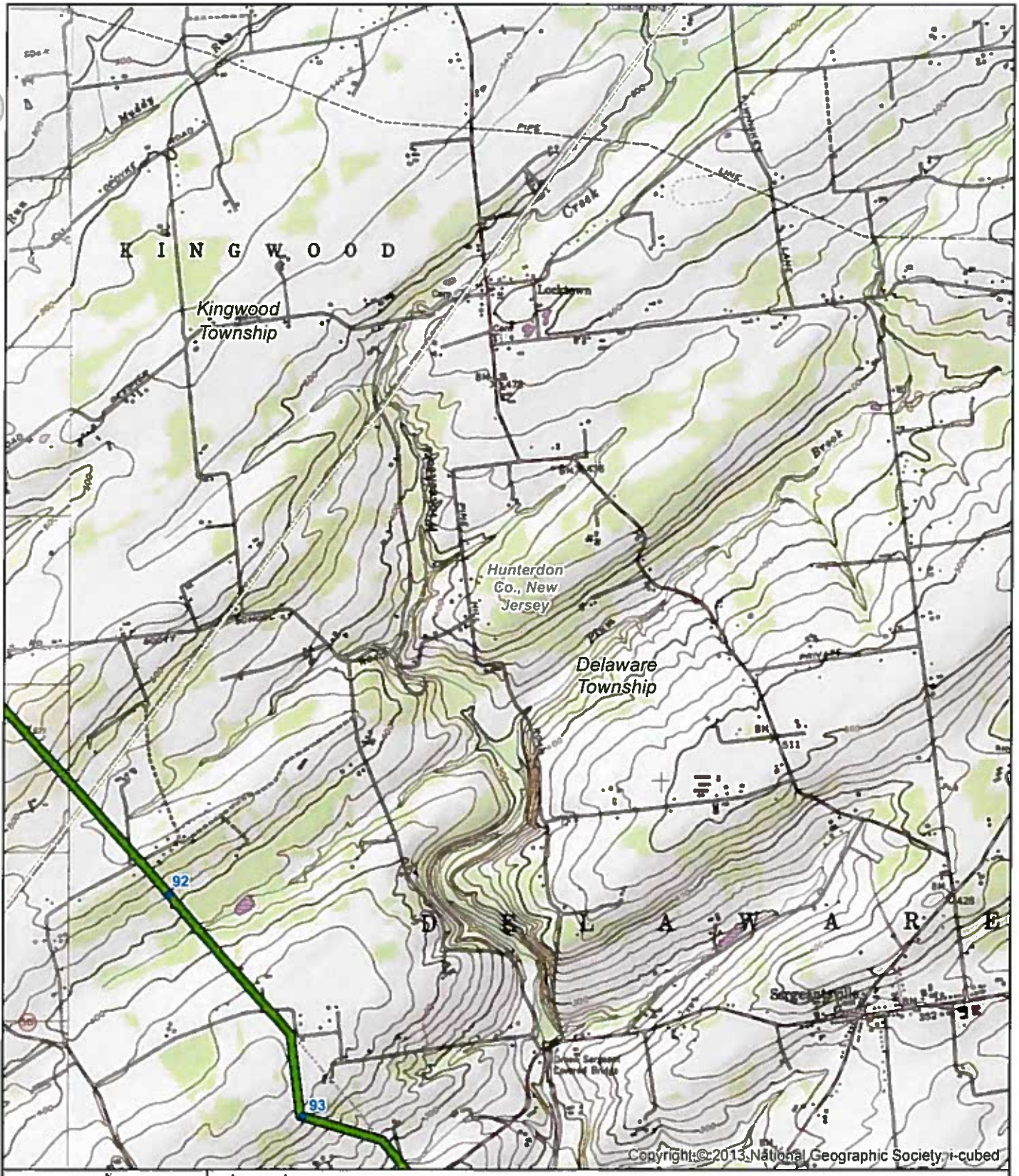
TITLE:

PennEast Pipeline Project - New Jersey
USGS Topographic Quadrangle Map

PennEast PIPELINE

PennEast Pipeline Company, LLC

LOC: Lumberville Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 3/31/2015	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 6 of 12



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Legend

- Mile Posting
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- Potential Access Road
- Municipality Boundary
- County Boundary

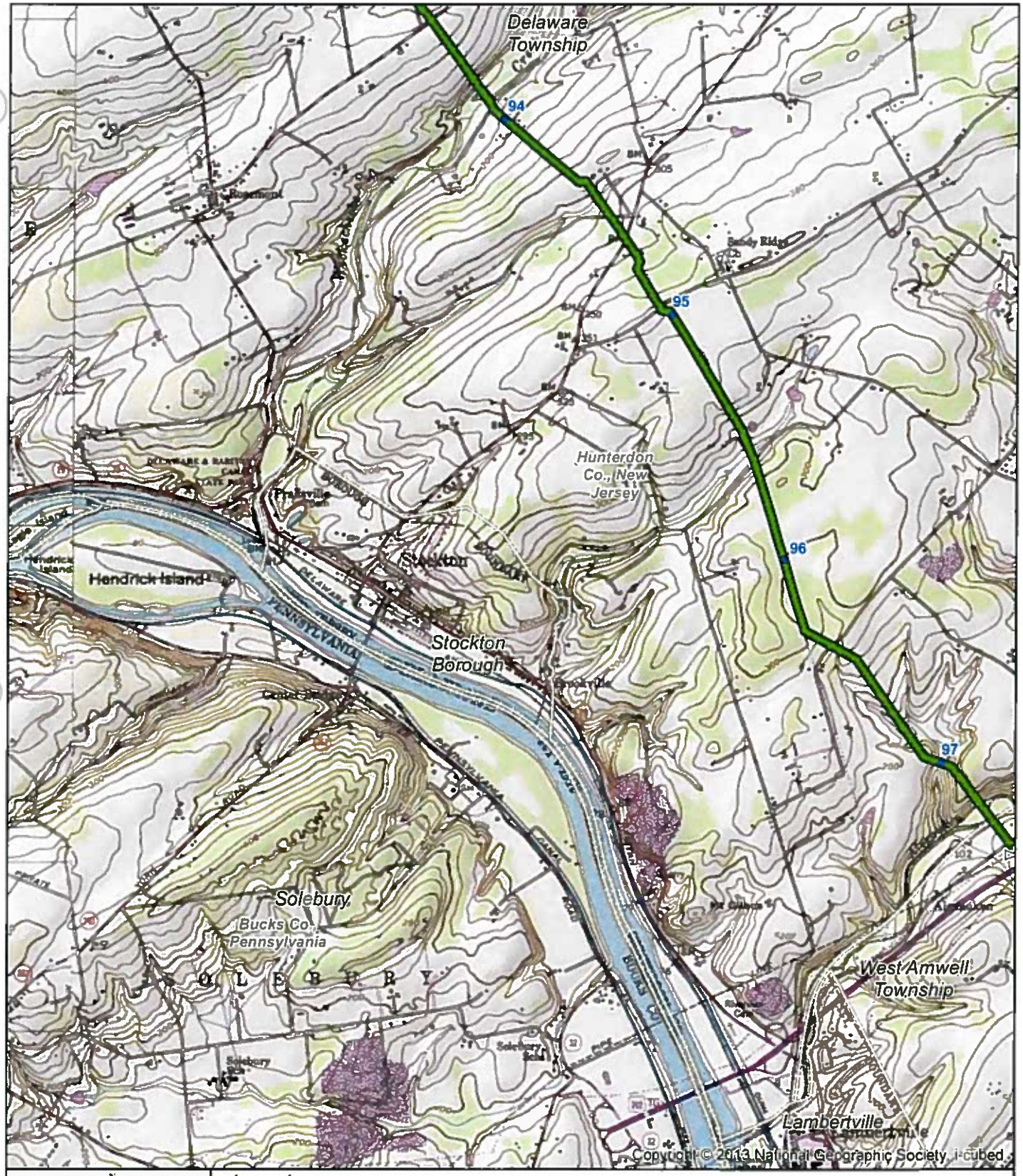
TITLE:

PennEast Pipeline Project - New Jersey
USGS Topographic Quadrangle Map

PennEast PIPELINE

PennEast Pipeline Company, LLC

LOC: Stockton Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 3/31/2015	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 7 of 12



N
W E
S

0 800 1,600 3,200 Feet

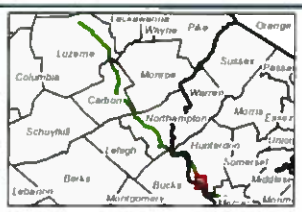
Legend

- Mile Posting
- PennEast Pipeline
- Main Line Valve Site
- Potential Access Road
- Municipality Boundary
- County Boundary

TITLE:

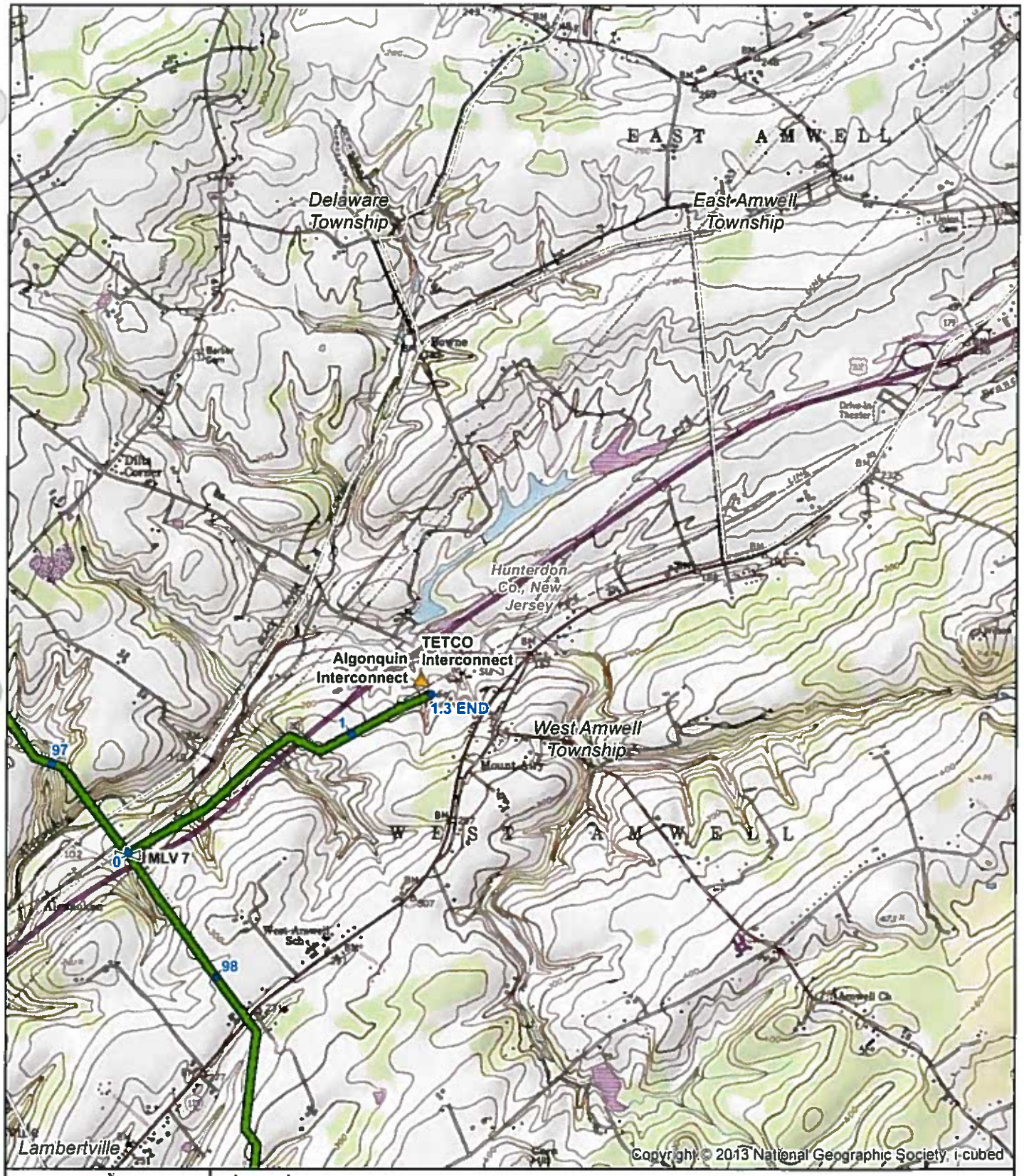
PennEast Pipeline Project - New Jersey
USGS Topographic Quadrangle Map

LOC: Stockton Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 3/31/2015	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 8 of 12



PennEast PIPELINE

PennEast Pipeline Company, LLC



N
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0 800 1,600 3,200 Feet

Legend

- Mile Posting
- PennEast Pipeline
- Interconnect
- Main Line Valve Site
- Potential Access Road
- Municipality Boundary
- County Boundary

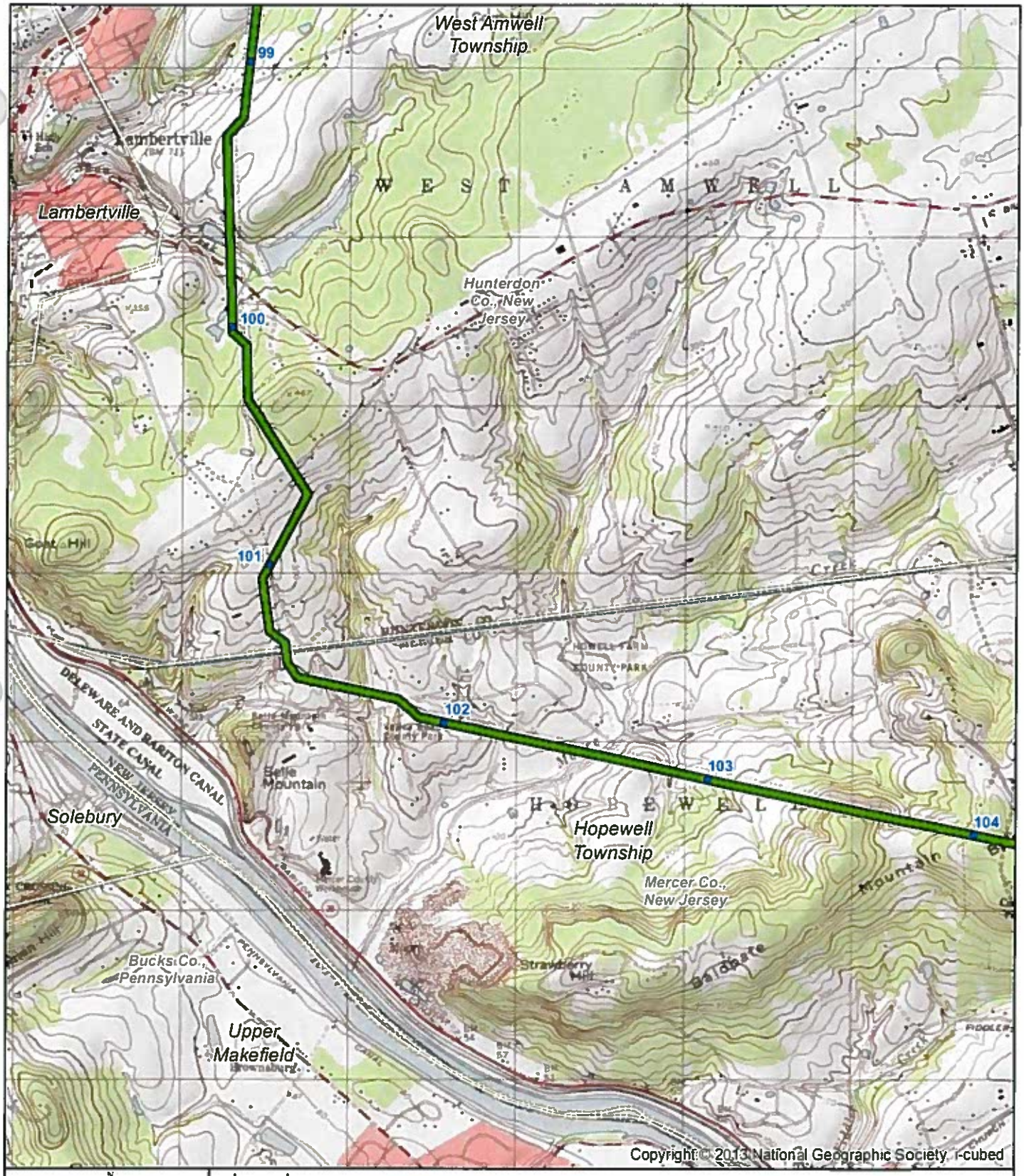
TITLE:

PennEast Pipeline Project - New Jersey
USGS Topographic Quadrangle Map

LOC: Stockton Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 3/31/2015	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 9 of 12

PennEast PIPELINE

PennEast Pipeline Company, LLC



N
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0 800 1,600 3,200 Feet

Legend

- Mile Posting
- PennEast Pipeline
- Potential Access Road
- Municipality Boundary
- County Boundary

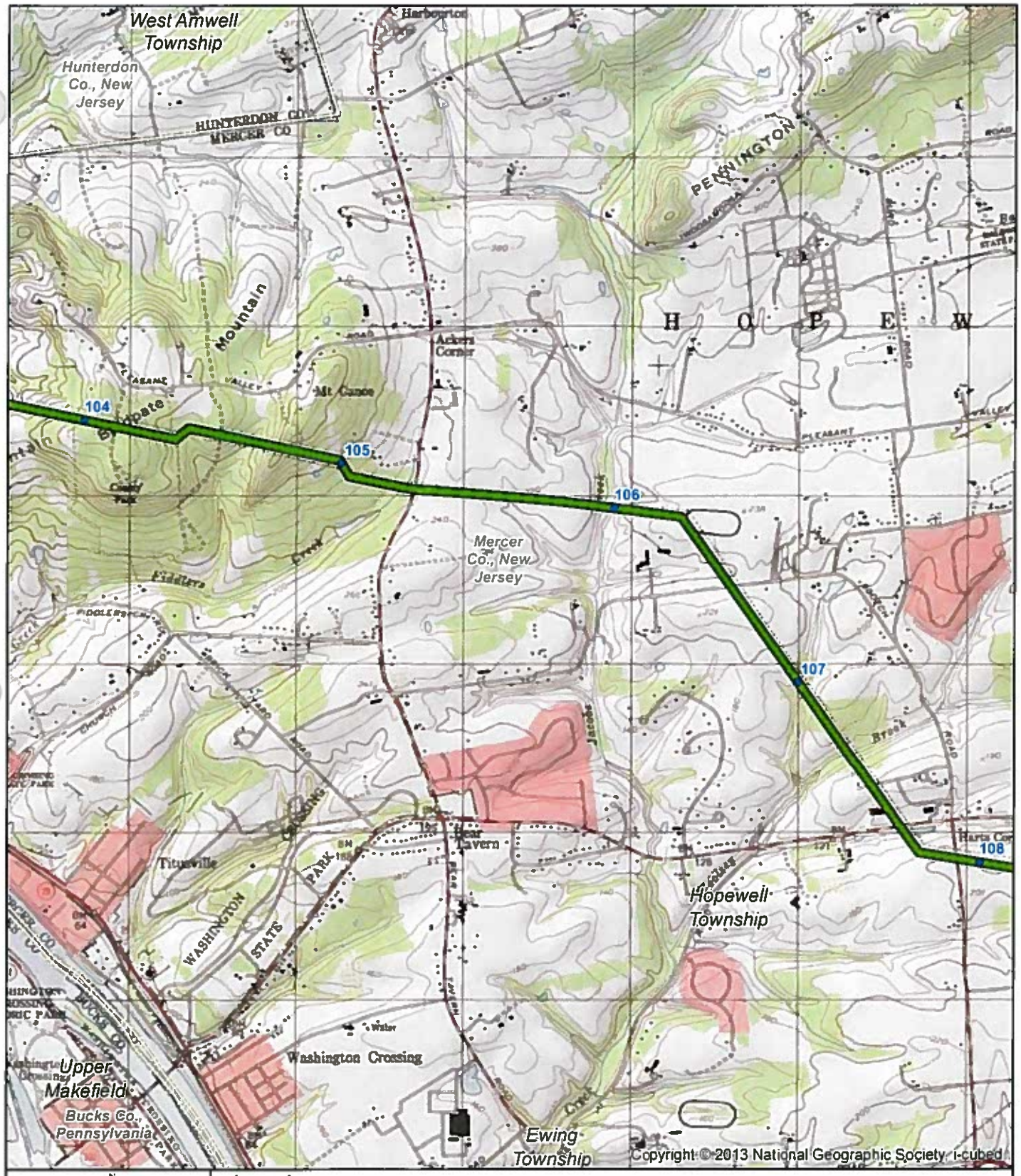
TITLE:

PennEast Pipeline Project - New Jersey
USGS Topographic Quadrangle Map

LOC: Hopewell Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 3/31/2015	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 10 of 12

PennEast PIPELINE

PennEast Pipeline Company, LLC



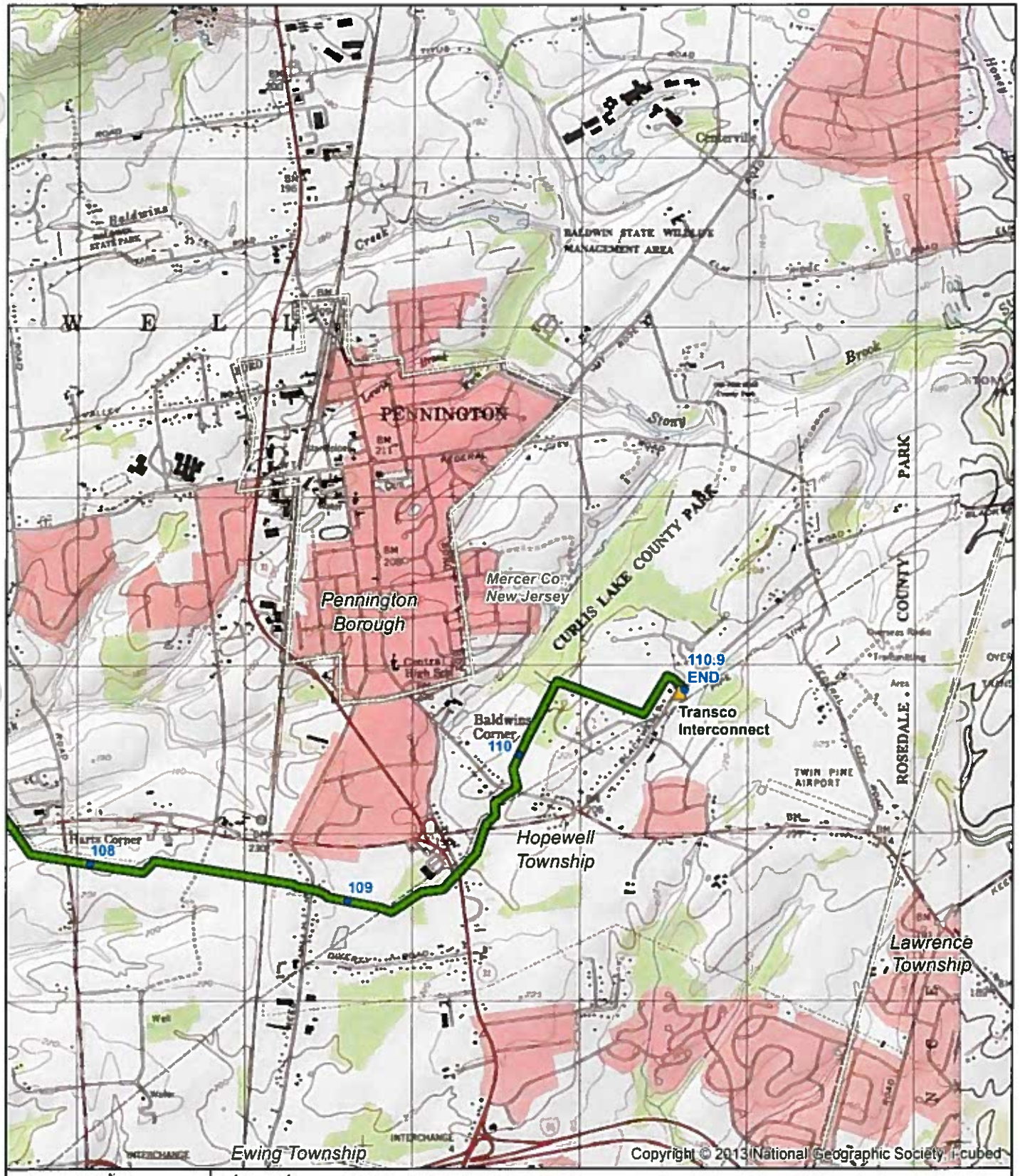
TITLE:

PennEast Pipeline Project - New Jersey
USGS Topographic Quadrangle Map

LOC: Pennington Quadrangle			REV.:
CKD BY: BH	ENG.:	Date: 3/31/2015	W.O.:
DRN BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 11 of 12

PennEast PIPELINE

PennEast Pipeline Company, LLC



N
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0 800 1,600 3,200 Feet

Legend

- Mile Posting
- Interconnect
- Potential Access Road
- PennEast Pipeline
- Municipality Boundary
- County Boundary

TITLE:

PennEast Pipeline Project - New Jersey
USGS Topographic Quadrangle Map

LOC: Pennington Quadrangle			REV.:
CKD. BY: BH	ENG.:	Date: 3/31/2015	W.O.:
DRN. BY: VP	SCALE: SEE GRAPHIC SCALE	DWG. NO.:	SHEET: 12 of 12

PennEast PIPELINE

PennEast Pipeline Company, LLC

ORIGINAL

State of New Jersey
MAIL CODE 501-04B
DEPARTMENT OF ENVIRONMENTAL PROTECTION
NATURAL & HISTORIC RESOURCES
HISTORIC PRESERVATION OFFICE
P.O. Box 420
Trenton, NJ 08625-0420
TEL. (609) 984-0176 FAX (609) 984-0578

CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

BOB MARTIN
Commissioner

April 8, 2015

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First St., N.E.
Washington, D.C. 20426

PF15-1

Dear Ms. Bose:

As Deputy State Historic Preservation Officer for New Jersey, in accordance with 36 CFR Part 800: Protection of Historic Properties, as published in the *Federal Register* on December 12, 2000 (65 FR 77725-77739) and amended on July 6, 2004 (69 FR 40544-40555), I am providing continuing Consultation Comments for the following proposed undertaking:

Hunterdon and Mercer Counties
Archaeological Sensitivity Model Clarification and
Preferred Alternative Route Update (March 31, 2015)
PennEast Pipeline Project
FERC Docket # PF15-1-000
Federal Energy Regulatory Commission

Archaeological Sensitivity Model

The Historic Preservation Office (HPO) was recently provided the opportunity to review and comment on a clarification to the proposed archaeological sensitivity model for the above-referenced undertaking, as requested in our letter to the cultural resources consultant dated September 24, 2014 (HPO-I2014-554). The HPO has reviewed the clarification to the revised archaeological sensitivity model and finds it has adequately addressed this office's previous comments.

Preferred Alternative Route Update (March 31, 2015)

Thank you for providing information regarding the most recent update to the proposed preferred alternative route for the above-referenced undertaking. The HPO looks forward to further consultation with Federal Energy Regulatory Commission (FERC) and AECOM regarding the identification and treatment of historic properties within the undertakings area of potential effects

(APE) in anticipation to the FERC obligation pursuant to Section 106 of the National Historic Preservation Act.

Additional Comments

Thank you for providing the opportunity to review and comment on the potential for the above-referenced project to affect historic properties. If additional consultation with the HPO is needed for this undertaking, please reference HPO project number 14-4462 in any future calls, emails, submissions or written correspondence to help expedite your review and response. If you have any questions, please feel free to contact Jesse West-Rosenthal (609-984-6019) of my staff with questions regarding archaeology or Meghan Baratta (609-292-1253) with questions regarding historic architecture.

Sincerely,

Daniel D. Saunders
Deputy State Historic
Preservation Officer

Cc: Grace Ziesing – AECOM

Document Content(s)

CP15-558

State of New Jersey
MAIL CODE 501-04B
DEPARTMENT OF ENVIRONMENTAL PROTECTION
NATURAL & HISTORIC RESOURCES
HISTORIC PRESERVATION OFFICE
P.O. Box 420
Trenton, NJ 08625-0420
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CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

BOB MARTIN
Commissioner

ORIGINAL

October 21, 2015

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, D.C. 20426

Dear Ms. Bose:

As Deputy State Historic Preservation Officer for New Jersey, in accordance with 36 CFR Part 800: Protection of Historic Properties, as published in the *Federal Register* on December 12, 2000 (65 FR 77725-77739) and amended on July 6, 2004 (69 FR 40544-40555), I am providing Consultation Comments for the following proposed undertaking:

Hunterdon and Mercer Counties
PennEast Pipeline
Docket No. CP15-558-000
Federal Energy Regulatory Commission

800.3 Initiation of the Section 106 Process

The Historic Preservation Office (HPO) was recently contacted by Judith Sullivan, counsel for the Ramapough Lenape Indian Nation, regarding the Ramapough's inclusion as a consulting party in the Section 106 process. In the Monthly Progress Report filed by the PennEast Pipeline Company, LLC (applicant) on October 8, 2015, the applicant indicated that the Federal Energy Regulatory Commission is not required under the National Historic Preservation Act to consult with the Ramapough Lenape Indian Nation, due to their status as a non-federally recognized tribe.

While non-federally recognized tribes do not have a statutory right to be consulting parties in the Section 106 process, the federal agency may invite them to consult as an "additional consulting party" as provided under the regulations at 36 CFR Section 800.2(c)(5), if they have a "demonstrated interest." It has been the experience of the HPO that as a State-recognized tribe in New Jersey, the Ramapough Lenape Indian Nation may be able to provide the federal agency with additional information regarding historic properties that should be considered in the review

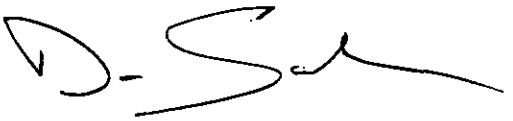
process. Therefore, the HPO respectfully requests that the Ramapough Lenape Indian Nation be considered an additional consulting party for this undertaking, pursuant to 36 CFR Section 800.2(c)(5).

Please note, while PennEast may make recommendations to the federal agency regarding the completion of Section 106 consultation, the ultimate decision on whether to consult with non-federally recognized tribes rests with the federal agency. The decision should be given careful consideration and made in consultation with the HPO. If the agency decides that it is inappropriate to invite non-federally recognized tribes to consult as "additional consulting parties," those tribes can still provide their views to the agency as members of the public under 36 CFR Section 800.2(d).

Additional Comments

Thank you for providing this opportunity to review and comment on this proposed project. The HPO looks forward to further consultation regarding the development of the proposed undertaking. If additional consultation with the HPO is needed for this undertaking, please reference the HPO project number 14-4462 in any future calls, emails, submissions or written correspondence to help expedite your review and response. If you have any questions, please feel free to contact Jesse West-Rosenthal (609-984-6019) of my staff with questions regarding archaeology.

Sincerely,



Daniel D. Saunders
Deputy State Historic
Preservation Officer

Cc: Eric Howard, FERC
John Eddins, ACHP
Grace Ziesing, AECOM
Judith Sullivan

DDS/KJM/JWR

Document Content(s)

State of New Jersey
MAIL CODE 501-04B
DEPARTMENT OF ENVIRONMENTAL PROTECTION
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HISTORIC PRESERVATION OFFICE
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Trenton, NJ 08625-0420
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CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

BOB MARTIN
Commissioner

October 22, 2015

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, D.C. 20426

ORIGINAL

Dear Ms. Bose:

As Deputy State Historic Preservation Officer for New Jersey, in accordance with 36 CFR Part 800: Protection of Historic Properties, as published in the *Federal Register* on December 12, 2000 (65 FR 77725-77739) and amended on July 6, 2004 (69 FR 40544-40555), I am providing Consultation Comments for the following proposed undertaking:

Hunterdon and Mercer Counties
Phase I Archaeological Survey
PennEast Pipeline
Docket No. CP15-558-000
Federal Energy Regulatory Commission

800.4 Identification of Historic Properties

The Historic Preservation Office (HPO) was recently provided with the opportunity to review and comment of the following Phase I archaeological survey report, received at this office on September 24, 2015, for the above-referenced undertaking:

Ziesing, Grace H. Joseph Kwiatek, Eileen Hood, Robert Kingsley, and Brian Albright
2015 *Phase I Archaeological Survey Report, PennEast Pipeline Project, Hunterdon and Mercer Counties, New Jersey, Volume I: Report Text.* Prepared for PennEast Pipeline Company, LLC Wyomissing, Pennsylvania. Prepared by URS, Burlington, New Jersey.

And

Ziesing, Grace H. Joseph Kwiatek, Eileen Hood, Robert Kingsley, and Brian Albright
2015 *Phase I Archaeological Survey Report, PennEast Pipeline Project, Hunterdon and Mercer Counties, New Jersey, Volume II: Appendixes.* Prepared for PennEast Pipeline Company, LLC Wyomissing, Pennsylvania. Prepared by URS, Burlington, New Jersey.

The HPO has reviewed the above-referenced report. We are unable to agree with the recommendations within the report at this time. We are concerned that the field testing protocol employed during the Phase I archaeological survey does not appear to be consistent with the *New Jersey Historic Preservation Office Guidelines for Phase I Archaeological Investigations: Identification of Archaeological Resources*, available through the HPO's web page at: (http://www.nj.gov/dep/hpo/lic1entify/survarkeo.htm). Specifically, Phase I archaeological survey must penetrate the full depth of intact Holocene soils. Based on the information provided, it is unclear whether full penetration of Holocene deposits has been achieved by the shovel testing protocol employed. The HPO requests clarification regarding the field methodology employed before an assessment of the recommendations made within the report can appropriately be evaluated by this office.

Additional Comments

In this project, we are asked to review a large, but partial (due to landowner objection) report quickly. That task is made more difficult because the format of the submitted report does not meet the HPO's *Guidelines for Preparing Cultural Resources Management Archaeological Reports Submitted to the Historic Preservation Office:*

1. A review of the documentation submitted indicates that report figures were included as an appendix to the report. HPO reporting guidelines stipulate that figures, plates, and tables should be incorporated into the text on the page(s) following their citation to reduce the time needed to review a report. They should not be appended to the report.

2. A review of the survey mapping indicates that the map keys are incomplete. Specifically, features represented on the maps detailed in Figure 17 are not appropriately coded to the map key. For example, "Figure 17. Results of archaeological survey, New Jersey (map 52 of 54)" includes two point features not referenced in the key: an orange point feature and a black point feature ringed in red. Please update the mapping to clarify these features.

3. According to the report, the project's area of potential effects (APE) was divided into survey segments to facilitate data management. For a majority of the survey alignment, the segments are numerically sequential geographically, ascending west to east. However, in certain instances the survey segments deviate from this organization making use of this system difficult to reference. The report should include data for the mileposts that bound the survey segments as part of the attribute data for each survey segment referenced in the text of the report.

4. A review of the shovel test log included with the report indicates that the documentation is incomplete. Please revise the shovel test log to also include information pertaining to the soil horizons corresponding to each stratigraphic layer identified.

5. Mapping for the sensitivity model that was developed and included in the HPO-approved Scope of Work for this undertaking is not included within the report. Please add this mapping to Chapter 3 of the report.

6. It appears that a project-specific system of organization and notation for the block and lot data associated with parcels included within the APE for this undertaking has been utilized.

While this may assist the applicant with the management of the project internally, this system has no basis for reference to the HPO. The HPO requests that the documentation be revised to include the actual block and lot data for each parcel as employed in earlier documentation, such as the HPO-approved Scope of Work.

7. In several instances it is indicated that specific background deed research was conducted for parcels within the APE. However, details of the results of this research are not included within the report beyond summary reference within the text. Please revise the report to include the results of parcel-specific deed research in tabular form.

8. Several cultural landscape features, such as historic fieldstone walls, were identified during pedestrian survey of the APE. However, a review of the mapping detailing survey results does not include the location of these features. Please revise the mapping for the undertaking to include all cultural features identified during Phase I archaeological survey.

Thank you for providing the opportunity to review and comment on the potential for the above-referenced project to affect historic properties. The HPO looks forward to further consultation regarding the development of the proposed undertaking and receiving the requested documentation for review and comment. Once the HPO receives the info requested above, we will be able to continue reviewing the archaeological survey. If additional consultation with the HPO is needed for this undertaking, please reference the HPO project number 14-4462 in any future calls, emails, or written correspondence to help expedite your review and response. Please do not hesitate to contact Jesse West-Rosenthal (609-984-6019) of my staff with any questions regarding archaeology.

Sincerely,

Daniel D. Saunders
Deputy State Historic
Preservation Officer

Cc: Eric Howard, FERC
Grace Ziesing, URS

DDS/KJM/JWR

Document Content(s)

State of New Jersey
MAIL CODE 501-04B
DEPARTMENT OF ENVIRONMENTAL PROTECTION
NATURAL & HISTORIC RESOURCES
HISTORIC PRESERVATION OFFICE
P.O. Box 420
Trenton, NJ 08625-0420
TEL. (609) 984-0176 FAX (609) 984-0578

CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

BOB MARTIN
Commissioner

October 29, 2015

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, D.C. 20426

ORIGINAL

Dear Ms. Bose:

As Deputy State Historic Preservation Officer for New Jersey, in accordance with 36 CFR Part 800: Protection of Historic Properties, as published in the *Federal Register* on December 12, 2000 (65 FR 77725-77739) and amended on July 6, 2004 (69 FR 40544-40555), I am providing Consultation Comments for the following proposed undertaking:

Hunterdon and Mercer Counties
Reconnaissance-Level Historic Architectural Survey Report
PennEast Pipeline
Docket No. CP15-558-000
Federal Energy Regulatory Commission

800.4 Identification of Historic Properties

The Historic Preservation Office (HPO) was recently provided with the opportunity to review and comment on the following reconnaissance-level historic architectural survey report, received at this office on October 19, 2015, for the above-referenced undertaking:

Zeoli, Vanessa and Eileen Hood.
September 2015 *Reconnaissance-Level Historic Architectural Survey Report, PennEast Pipeline Project, Hunterdon and Mercer Counties, New Jersey.* Prepared for PennEast Pipeline Company, LLC, Wyomissing, Pennsylvania. Prepared by URS Corporation, Burlington, New Jersey.

According to the above-referenced report, this report documents a total of 21 previously undocumented historic architectural resources over 48 years of age within the study corridor (area of potential effects.) The 48 year cutoff was chosen, rather than 50, based on the

understanding that the intended project implementation will occur in 2017, at which time, those resources would be 50 years of age or older. The study corridor is 400 feet wide, chosen to account for minor changes that may occur in the pipeline alignment.

Of those 41 resources surveyed, 27 were recommended not eligible for listing on the National Register of Historic Places (NRHP), 7 were recommended eligible, and an additional 7 needed more research to determine potential eligibility. The 41 resources outlined in this report represent only the 41 to which URS was given access for documentation and survey. Properties to which the surveyors were not granted access include known locally designated historic properties, as well as ones that are listed on or eligible for listing on the New Jersey and National Registers of Historic Places. According to the report summary, there are an additional 102 properties (tax parcels) that still need survey, 5 of which URS currently has permission to access and are planned for survey in October 2015.

The HPO concurs that the following 22 newly identified resources over 48 years of age are ineligible for listing on the National Register of Historic Places:

- 646 Riegelsville Road, Holland Township, Hunterdon County (URS Field No. HU-0095)
- 626 Riegelsville Road, Holland Township, Hunterdon County (URS Field No. HU-0071)
- 111 Spring Garden Road, Holland Township, Hunterdon County (URS Field No. HU-0198)
- 100 Spring Garden Road (Block 24, Lot 6), Holland Township, Hunterdon County (URS Field No. HU-0196)
- 100 Spring Garden Road (Block 24, Lot 11), Holland Township, Hunterdon County (URS Field No. HU-0197)
- 284 Javes Road, Holland Township, Hunterdon County (URS Field No. HU-0072)
- 507 Milford-Mount Pleasant Road, Holland Township, Hunterdon County (URS Field No. HU-0073)
- 508 Milford-Mount Pleasant Road, Holland Township, Hunterdon County (URS Field No. HU-0074)
- 325 Stamets Road, Holland Township, Hunterdon County (URS Field No. HU-0185)
- 319 Stamets Road, Holland Township, Hunterdon County (URS Field No. HU-0186)
- 755 County Road 519, Kingwood Township, Hunterdon County (URS Field No. HU-0105)
- 189 Kingwood-Locktown Road, Kingwood Township, Hunterdon County (URS Field No. HU-0110)
- 32 Hewitt Road, Delaware Township, Hunterdon County (URS Field No. HU-0165)
- 45 Sanford Road, Delaware Township, Hunterdon County (URS Field No. HU-0216)
- 887 Sergeantsville Road, Delaware Township, Hunterdon County (URS Field No. HU-0193)
- 1454 Route 179, West Amwell Towsnhip, Hunterdon County (URS Field No. HU-0199)
- 32 Rocktown-Lamb Road, Delaware Township, Hunterdon County (URS Field No. HU-0171)

- 75 Valley Road, Hopewell Township, Mercer County (URS Field No. HU-0168)
- 1293 Bear Tavern Road, Hopewell Township, Mercer County (URS Field No. HU-0215)
- 324 Penn Harbourton Road, Hopewell Township, Mercer County (URS Field No. HU-0209)
- 1650 Reed Road, Hopewell Township, Mercer County (URS Field No. HU-0180)
- 1646 Reed Road, Hopewell Township, Mercer County (URS Field No. HU-0219)
- 24 Penn Lawrenceville Road, Hopewell Township, Mercer County (URS Field No. HU-0170)

No further survey work is necessary for the above-referenced properties.

The HPO furthermore concurs that the following resources may be eligible for listing on the NRHP and warrant intensive-level architectural survey:

- 83 Old River Road, Holland Township, Hunterdon County (URS Field No. HU-0070)
  - As noted in the survey forms, this property, the John Moore Farmhouse, was nominated to the NJ and NRHPs in 1979, but the nomination was tabled. Since that time, the exterior has been extensively altered. Intensive-level survey will help determine whether it still retains sufficient integrity for individual eligibility. In addition, this property lies within the original Barker Tract, which has recently been identified as a potentially eligible agricultural historic district or MPDF. The property's eligibility should also be assessed within this context, particularly if it no longer retains sufficient integrity for individual eligibility.
- 234 Riegelsville Road, Holland Township, Hunterdon County (URS Field No. HU-0148)
  - This property is also within the area known as the Barker Tract.
- 445 Miller Park Road, Holland Township, Hunterdon County (URS Field No. HU-0195)
  - Careful consideration should be taken when investigating the context for this property, which may be associated with the 20th century movement of artists, patrons, and other associated individuals, to this area from New York City and Philadelphia.
- 369 Stamets Road, Holland Township, Hunterdon County (URS Field No. HU-0075)
- 32 Kappus Road, Alexandria Township, Hunterdon County (URS Field No. HU-0094)
- 130 County Road 513, Alexandria Township, Hunterdon County (URS Field No. HU-0093)
- 97 Horseshoe Road, Kingwood Township, Hunterdon County (URS Field No. HU-0147)
- 155 Lower Creek Road, Delaware Township, Hunterdon County (URS Field No. HU-0210)
- Black River & Western Railroad, West Amwell Township, Hunterdon County (URS Field No. HU0191)
- Rock Road/Rocktown Road/The Road Along the Rocks, West Amwell Township, Hunterdon County (URS Field No. HU-0221)

- 87 Valley Road, Hopewell Township, Mercer County (URS Field No. ME-0172)
- 349 Penn Titusville Road, Hopewell Township, Mercer County (URS Field No. ME-0190)
- 1653 Reed Road, Hopewell Township, Mercer County (URS Field No. ME-0181)
    - The HPO is particularly interested in the builder of this house as it may relate to the property's significance.
- Joseph B. Blackwell Farm, 135 Blackwell Road, Hopewell Township, Mercer County (URS Field No. ME-0218)

The HPO respectfully disagrees with the report's assessment that the following resources do not merit further investigation, and requests intensive-level survey of these properties, in addition to the 14 above-referenced properties, identified by the consultant:

- 504 Milford-Mount Pleasant Road, Holland Township, Hunterdon County (URS Field No. HU-0194)
    - Although significantly altered, based upon the early date of construction given for the stone portion of the building, this property warrants additional investigation to determine both integrity and potential associations, which may render it significant under one or more of the NRHP Criteria.
- 173 Horsehoe Bend Road, Kingwood Township, Hunterdon County (URS Field No. HU-0184)
    - Analysis by HPO architectural historians indicates that this structure may have been built earlier than 1880, based upon the history of this building type in Hunterdon County, although additional details were difficult to discern based on the angle and distance of photos, along with vegetation.
- James Lambert House, 1465 Route 179, West Amwell Township, Hunterdon County (URS Field No. HU-0207)
    - Despite additions and some alterations, the reconnaissance-level survey forms for this property do not adequately justify its lack of inclusion on the intensive-level survey list.
- 108 Old Route 518 East, West Amwell Township, Hunterdon County (URS Field No. HU-0208)
    - Based upon the date of construction given for this dwelling, the HPO believes that this property may also be associated with the art community in Hunterdon County in the 20th century. Although the house does not appear to be significant architecturally, the property may be associated with significant person(s).

In addition to the newly identified historic resources (and the Joseph B. Blackwell, which was issued a SHPO Opinion of Eligibility on June 23, 1982) the report noted that there were 8 properties listed on or eligible for listing on the NRHP within the project's APE:

- Bunns Valley Agricultural Historic District (SHPO Opinion: 5/3/2004)

- Rosemont Rural Agricultural Historic District (NR: 6/18/2010; SR: 2/10/2010)
- Inch Lines Linear Multistate Historic District (SHPO Opinion: 8/31/1993)
- Pleasant Valley Historic District (NR: 6/14/1991; SR: 4/12/1991)
- Oldis (Smith-Mershon) Farm (SHPO Opinion: 5/17/2014)
- Delaware & Bound Brook Railroad Historic District (SHPO Opinion: 9/9/2005)
- NJ Route 31 Circle (Pennington Circle) (SHPO Opinion: 9/21/2010)

According to the report, survey of the above-referenced properties within the APE was incomplete as of September 2015 when the report was printed.

The report text states that one source of background research for surveyed properties was local historic preservation commissions. It was noted that when available online, a list of locally designated historic properties was obtained for survey. In order to identify all possible local sources, URS should consult with municipalities directly to obtain lists of local historic properties when that information is not readily available online. This will ensure that no locally significant properties, which may not be recognized at the state and federal level, are included in survey efforts.

As noted above, a potential new historic district has been brought to the HPO's attention in Holland Township, Hunterdon County. The Barker Tract, which was described in the 1979 John Moore House NRHP nomination form, is currently being evaluated, and its context is important to many of the properties in Holland Township.

Additional Comments

The submitted reconnaissance-level survey report meet's the HPO's *Guidelines for Architectural Survey*. The report is well laid out, and the HPO appreciates the clear and concise manner in which the survey data were reported for our review. We look forward to receiving the additional reconnaissance-level survey reports in this format. Please note that for properties that have been documented as part of Hunterdon County's Historic Sites Survey, individual files reside with the Hunterdon County Heritage and Cultural Commission in Flemington.

The HPO concurs that for those properties to which URS surveyors are unable to gain access permission, and are unlikely to be adversely affected by the PennEast Pipeline project, no further survey will be necessary, unless there are subsequent changes to project scope or alignment that may change the assessment of effects. Properties that fall into this category shall be noted in a future report for formal concurrence by the HPO prior to project implementation.

Thank you for providing the opportunity to review and comment on the potential for the above-referenced undertaking to affect historic properties. The HPO looks forward to receiving additional reconnaissance and intensive-level survey reports to complete identification of historic properties pursuant to 36 CFR § 800.4 from URS. If you have any questions regarding historic architecture, please contact Michelle Craren of my staff at (609) 292-0032) or michelle.craren@dep.nj.gov. Please reference the HPO Project Number 14-4462 in any future

calls, emails, or written correspondence in order to expedite our review and response. Thank you.

Sincerely,

Daniel D. Saunders
Deputy State Historic
Preservation Officer

CC: Chris Squazzo, DLUR
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Document Content(s)

March 6, 2015

Daniel Saunders
State of New Jersey
Department of Environmental Protection
Historic Preservation Office
501 E. State Street
Building 5, 4th Floor
Trenton, NJ 08625

Re: PennEast Pipeline Company, LLC – PennEast Pipeline Project
Hunterdon and Mercer Counties, New Jersey
HPO Project # 14-4462
Archaeological Sensitivity Model Clarification

Dear Mr. Saunders,

URS, on behalf of PennEast, is providing additional information about the archaeological sensitivity modeling presented in the Revised Work Plan dated February 2, 2015. This is in response to comments your office provided to Kimberly D. Bose, Federal Energy Regulatory Commission, on February 18, 2015.

The model itself has not changed, but, as documented on the following pages, we have provided details regarding the New Jersey-specific research that informed the development of the model (Attachment A). Detail maps showing the sensitivity model can be found in Attachment C of the Revised Work Plan dated February 2, 2015. It is worth noting that only a small percentage of the 400-foot study corridor (5.2%) is classified as low sensitivity, and these areas are outside the Lockatong geologic formation and are more than 500 feet away from a water source. Even so, the work plan stipulates that these areas will be systematically tested at a 30-m interval. Another 19.8% of the study corridor is steeply sloped and not near any roads or structures that appear on the historic-period maps consulted. As stated in the work plan, these areas will be examined for evidence of rock shelters, lithic sources, and historic-period structural remains and will be judgmentally tested based on field observations. The majority of the study corridor (75%) has been classified as high or moderate sensitivity for pre-contact and/or historic-period resources and will be systematically tested at a 15-m interval.

URS would appreciate your consideration of the enclosed material. I look forward to hearing from you, but in the meantime should you have any questions please feel free to contact me at (610) 832-2971 or at grace.ziesing@aecom.com.

Sincerely,

URS Corporation
Grace H. Ziesing, Senior Archaeologist
625 West Ridge Pike, Suite E-100
Conshohocken, PA 19428

ATTACHMENT A: Sensitivity Model Methods, Revised March 2015

ATTACHMENT A: Sensitivity Model Methods, Revised March 2015

Archaeological Sensitivity Model

Assessing archaeological sensitivity is the first step in determining the need for additional archaeological studies (Grossman and Cavallo 1982). It is a qualitative appraisal of the project corridor based on knowledge of previously recorded archaeology sites, prior archaeological surveys, and historical occupational patterns with the goal of identifying landforms and areas that have the potential to contain archaeological resources. The PennEast project corridor was assessed for sensitivity for both pre-contact and historic-period archaeological resources.

Pre-contact Archaeological Sensitivity

The project corridor is located primarily on upland terrain within a few miles of the Delaware River in the Piedmont Physiographic Province. An extensive amount of prior archaeological work has been conducted near the project corridor (Burrow et al 1999; Schrabisch 1917; Stewart 2005). Prior research indicates that large multicomponent pre-contact sites are common adjacent to the Delaware River in Pennsylvania and New Jersey. Numerous pre-contact sites have been identified in the uplands and near tributaries by Max Schrabisch (1917) and other investigators (Louis Berger and Associates 1982; Mounier 1989, 1994; Richard Grubb & Associates, Inc. 2007). In the Upper Delaware Valley, a similar pattern in the distribution of uplands pre-contact sites has been documented near the Delaware River (3D/Environmental 1996; Botwick and Wall 1994). The upland sites typically represent shorter term occupations (Richard Grubb & Associates, Inc. 2007). A potential exists for argillite quarry related sites to be present in portions of the project corridor where the Lockatong geologic formation is mapped (Walker 2008). Rockshelters may be present along the project corridor in excessively sloped terrain. Pre-contact archaeological sites have typically been found within 500 feet of water and wetlands in the Piedmont and other portions of northern New Jersey (Louis Berger and Associates 1982; Mounier 1989, 1994, 3D/Environmental 1996). This background research was carefully considered during the development of the GIS-based predictive model.

An understanding of pre-contact sensitivity was developed through a GIS-based modeling protocol that uses the environmental parameters associated with known site locations. The pre-contact archaeological sensitivity model created for the project is a weighted combination of environmental features including topographic slope and the distance to wetlands, streams, water bodies, and the Lockatong geologic formation. The objective of this model is to identify areas that are within proximity to valuable hydrologic resources and on soils suitable for habitation. All areas within 152 m (500 feet) of streams/wetlands and known archaeological sites were automatically assumed to have high sensitivity. In addition, the Lockatong geologic formation was factored into this model to account for the potential presence of Native American argillite quarry sites that may not be accounted for by topography and hydrology alone. The theoretical underpinning of this model is that suitable ground and access to water are the most basic factors for habitation choices. Referred to as a "camping model," this approach mirrors how archaeologists have been locating sites for decades, but uses the availability of digital data to apply it over a large area.

The assignment of weights to the classification of environmental variables outside the 152-m (500-foot) buffer zone around streams/wetlands allows the archaeologist to rank the importance of certain measures. There are various ways to weight a model factor, which include arbitrary assessment, inductive assessment based on known site locations, deductive assessments based on an *a priori* theory, or a combination of these. This model uses the theory that lower slopes and proximity to the Lockatong formation and water resources have a large influence on the location of most Native American archaeological sites. As such, each of the variables is weighted so that the more level or closer to a water resource or argillite-bearing geology an area is the greater the sensitivity for Native American archaeological sites. To establish the weights, layers were created in a GIS to represent the percent topographic slope, distance to the Lockatong bedrock geology formation, streams from the National Hydrologic Dataset (high resolution), and the wetlands and water bodies of the National Wetland Database and assigned weights from 10 to 1 based on a preference for lower slopes and proximity to water. Following this, the weights of slope and distance to the Lockatong formation were added to the hydrologic resources to create the final set of weights. The final model had a range of weights from 2.5 to 41.

Historic Archaeological Sensitivity

A review of historic maps and general historic development of the project corridor was used to assess the historic archaeological sensitivity. The project corridor traverses the historic settlements of Frenchtown, Stockton, and Lambertville through terrain that has remained relatively rural throughout the nineteenth and twentieth centuries. Portions of the project corridor near historic roads and buildings and other historic communities were considered to have a high sensitivity for historic archaeological resources. Portions of the project corridor near Washington Crossing State Park and Pennington are near locations where Revolutionary War activities occurred. Other historic archaeological resources dating from the late eighteenth and nineteenth centuries may also exist near the project corridor. Historic-period archaeological sensitivity was developed using historical map sources. Roads were digitized from 1848 (Otley and Keily 1849), 1851 (Cornell 1851), 1890 (USGS 1890), and 1891 (USGS 1891) maps and buildings were digitized from the 1849 and 1851 maps. Digitized roads and buildings were buffered 200 feet to account for original mapping inaccuracies and georectification issues. Other historic maps and historic aerial photographs will also be consulted during the course of the Phase I archaeological survey. Most of the map-documented buildings near the project corridor consist of farmsteads. Other historical archaeological resources such as outbuildings, mills, and dams, which may not be documented on historic maps, may also be present near the project corridor.

Results of Sensitivity Analysis

The results of the sensitivity analysis for pre-contact and historic archaeological resources are shown on maps included as Attachment C in the Revised Work Plan dated February 2, 2015. The model indicates that 75% (1,418 acres) of the 400-foot study corridor has a moderate to high sensitivity for pre-contact and historic-period archaeological resources. Only 5.2% (97.2 acres) of the study corridor has a low sensitivity for archaeological resources. Excessively sloped terrain that was not modeled as sensitive for historic-period resources encompasses the remaining 19.8% (374 acres) of the study corridor.

No single model can account for the full range of Native American habitation location decisions, nor can historic-period maps be relied upon to show all potential resources. Therefore, this model is simply a guide for the field effort. The true assessment of sensitivity will take place within the field where field directors can use on-the-ground observations to modify the model's recommendations and set the testing interval accordingly.

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March 18, 2016

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First St., N.E.
Washington, D.C. 20426

Dear Ms. Bose:

As Deputy State Historic Preservation Officer for New Jersey, in accordance with 36 CFR Part 800: Protection of Historic Properties, as published in the *Federal Register* on December 12, 2000 (65 FR 77725-77739) and amended on July 6, 2004 (69 FR 40544-40555), I am providing continuing Consultation Comments for the following proposed undertaking:

Hunterdon and Mercer Counties
Phase IB Archaeological Survey
Preferred Alternative Route Updates
PennEast Pipeline Project
FERC Docket # CP15-558-000
Federal Energy Regulatory Commission

800.4 Identification of Historic Properties

The Historic Preservation Office (HPO) was recently provided with the opportunity to review and comment of the following Phase I archaeological survey report, received at this office on December 15, 2015, for the above-referenced undertaking:

Ziesing, Grace H. Joseph Kwiatek, Eileen Hood, Robert Kingsley, and Brian Albright
2015 *Phase I Archaeological Survey Report, PennEast Pipeline Project, Hunterdon and Mercer Counties, New Jersey. Revised December 2015.* Prepared for PennEast Pipeline Company, LLC Wyomissing, Pennsylvania. Prepared by URS Corporation, Burlington, New Jersey.

The above-referenced report represents a revised report to address consultation comments provided in a letter dated October 22, 2015 (14-4462-12/HPO-J2015-262). Based on a review of

the current revised report, all requested items have been included. Thank you for addressing these comments. The revised report now meets the HPO's *Guidelines for Preparing Cultural Resources Management Archaeological Reports Submitted to the Historic Preservation Office.*

The above-referenced report documents Phase I archaeological testing of the preferred project alignment as of August 2015. Archaeological survey was conducted within a 400-foot study corridor (200 feet on either side of the proposed centerline) in order to accommodate minor shifts in design. Archaeological survey was limited to portions of the project alignment where landowner permission had been given to conduct archaeological testing. The above-referenced report documents archaeological survey conducted along 12.1 miles of the proposed centerline, accounting for 32% of the project length in New Jersey and approximately 99% of the project area where landowner permission was given.

According to the report, 6,259 shovel test pits (STPs) were excavated within the currently defined study corridor. The study corridor was modeled for archaeological sensitivity, and field-confirmed areas of high and moderate sensitivity were subjected to shovel-testing at 15 meter intervals. Areas of low sensitivity were shovel tested at 30 meter intervals, and steep areas were visually inspected and judgmentally tested.

The current program of Phase I archaeological testing identified seventeen archaeological historic properties. Eleven locations were characterized as isolated finds. The remaining six locations were recorded as archaeological sites with the New Jersey State Museum (NJSM). However, two of the sites identified did not meet the archaeological site criteria set for by the NJSM and were not given Smithsonian trinomials. The report makes recommendations regarding whether additional archaeological testing is needed to assess the historic property's eligibility for listing on the New Jersey and National Registers of Historic Places, whether avoidance is feasible, or whether no further archaeological testing is necessary due to a lack of significance of the historic property identified.

17 archeo sites
↓
11 isolated finds
6 archeo sites

Archaeological Site 28-Hu-577

Archaeological 28-Hu-577 consists of multiple stone quarry pits and their associated refuse rock piles. It was identified during systematic pedestrian survey and shovel testing of survey segment NJHu85/NJHu99. Site survey identified approximately 90 stone quarry pits. The pits appear to be the result of the removal of one or more large bedrock boulders resulting in a depression in the ground. The surrounding rock at the edges of the pits show chisel/pin marks from the quarrying process. A refuse pile of smaller, angular fragments is typically located on the downslope edge of the pit. According to the report, no signs of blasting or infrastructure for transporting large volumes of material from the quarry (e.g., canal, narrow-gauge railroad, etc.) were identified in the field, suggesting that cutting and trimming activities may have been conducted on-site and/or that the volume of material produced was relatively small.

A property record search of site 28-Hu-577 including deeds, wills, estate inventories and accounts, industrial censuses, newspapers, local and family histories, and cartographic resources revealed no evidence of quarrying anywhere within the site boundaries. The site was generally in the hands of three families: the Holcombes, Coryells, and Arnetts, who were directly involved in

the building business in Lambertville and may have used material from the quarry. The three families were wealthy and owned numerous properties, but none lived on the site.

As currently designed, the project's area of potential effects will pass through the site. As a result, the report recommends that a Phase II, evaluation-level study be undertaken to determine whether the site is eligible for listing on the New Jersey and National Registers of Historic Places. *The HPO concurs with this assessment, however the HPO does not concur with the proposed Phase II plan at this time.*

Based on the information provided, the HPO does not believe that the proposed research methodology appropriately addresses the potential research questions regarding the archaeological site. The HPO recommends further consultation with this office to further develop a Phase II program that will be appropriate to the resource in question.

Archaeological Site 28-Hu-578

Archaeological site 28-Hu-578 is a low density Native American lithic scatter. It was identified during shovel testing of segment NJHu97 west of Lockatong Creek. Artifacts were recovered from four shovel tests within the site and consisted of five jasper flakes and one chert biface fragment. Two of the jasper flakes exhibited a dark red coloring indicative of heat treatment. All of the artifacts were recovered from the plow zone soil horizon.

Two isolates, each consisting of one jasper flake, were recovered 60 m and 160 m to the southeast. All three finds are located within 175–300 m of the mapped location of previously recorded site 28-Hu-394, recorded by Max Schrabisch in 1917 as a "large argillite workshop covering several acres" at the confluence of Lockatong Creek and Muddy Run (site #24-42-6-8-1). The report states that it is possible that site 28-Hu-578 and the two isolated finds are associated with the larger site, but shovel testing did not indicate a continuous artifact scatter. Survey permission was not obtained for the tract on which 28-Hu-394 is mapped, so the relationship between the finds and the Schrabisch site is unclear.

Given its possible association with a site complex at the convergence of Lockatong Creek and Muddy Run, the report concludes that archaeological site 28-Hu-578 is potentially eligible for listing on the New Jersey and National Registers of Historic Places. According to the report, as the undertaking is currently proposed, the site is currently outside the APE and will not be impacted by construction. As a result, the report recommends that the avoidance and protection measures be adopted during construction to prevent incidental damage to the site. *The HPO does not concur with this assessment at this time [see report comments beginning on page 6].*

HPO Dis not agree

Archaeological Site 28-Hu-579

SA41-2

Archaeological site 28-Hu-579 consists of a dry-laid stacked stone foundation, a low density historic artifact scatter, and a low density Native American lithic scatter. The archaeological site was identified during systematic pedestrian survey and shovel testing of segment NJHu87 near MP 81.2 southeast of Gravel Hill. The site is located on the eastern bank of a perennial drainage at the bottom of a steeply sloped ravine.

The stone foundation (Foundation 1) is composed of dry laid field stone, some of which are rounded cobbles. The foundation measures approximately 4.8 × 7.6 m and its maximum depth below ground surface is 0.55 m. The southwestern, downslope wall of the foundation is the best preserved. The historic artifact scatter is concentrated around the foundation and extends downslope to the drainage. A number of architectural and household artifacts were recovered during shovel testing and surface survey of the area. Architectural components include brick fragments and aqua colored window glass. Household artifacts include a mix of lead-glazed redware, whiteware, and container glass. The Native American artifact scatter comprises three jasper flakes and one late stage chert biface recovered from shovel testing of the area. All artifacts were recovered from humic or A-horizon soils.

Given the archaeological site's possible association with oral tradition that states that the area was inhabited by freed slaves, the report concludes that archaeological site 28-Hu-579 is potentially eligible for listing on the New Jersey and National Registers of Historic Places. According to the report, as the undertaking is currently proposed, the site is currently outside the APE and will not be impacted by construction. As a result, the report recommends that the avoidance and protection measures be adopted during construction to prevent incidental damage to the site. *The HPO does not concur with this assessment at this time [see report comments beginning on page 6].*

HPO does not concur

SA41-3

Archaeological Site 28-Me-386

Archaeological site 28-Me-386 is a moderately dense historic artifact scatter emanating from an existing farmhouse/barn complex and from a now-demolished structure within the complex. Archaeological site 28-Me-386 was identified during shovel testing on segment NJMe35 in the manicured grass backyard and horse pasture to the west and north of the farmhouse. The site is located on the western side of Blackwell Road within the Joseph P. Blackwell Farm, which was determined eligible for listing on the New Jersey and National Registers of Historic Places in 1982.

Site on Blackwell Farm

According to the report, a large collection of artifacts was recovered from shovel tests excavated within the backyard and the adjacent horse pasture. Both household and architectural resources were found in abundance. Ceramic types are dominated by whitewares (both transferprinted and hand painted), but also include later (e.g., White Granite) and earlier (e.g., pearlware) types. Most of the ceramics are likely to be tablewares, but kitchenwares and flower pots are also represented. Numerous fragments of container glass were recovered, only a few of which could be positively identified as bottles. Architectural materials include nails, bricks, and window glass. Other functional groups are minimally represented in the assemblage, including just two personal items (a button and a buckle), fuel (coal), and food (clam shell). Temporally diagnostic artifacts suggest a use-period from the middle to late nineteenth century, and possibly into the early twentieth century. Although a period of significance has not been established for the property, the report states that it would likely span the construction and use-dates of the contributing structures, which appears to be between ca. 1830 and the early twentieth century. The report concludes that archaeological site 28-Me-386 is clearly associated with the occupation period of the Joseph P. Blackwell Farm and is potentially eligible for listing on the

New Jersey and National Registers of Historic Places as contributing to the historic property's significance.

As currently designed, the APE passes through a portions of the site located on the opposite (north) side of a gravel driveway from the main farmstead complex and the center of artifact density. The report states that most of the artifacts recovered from the north side of the drive were ranged along the road's edge, and were probably displaced during driveway construction or maintenance. Two shovel tests within the APE were positive for artifacts, and the artifacts recovered consisted of later types: a White Granite body sherd, a solarized glass bottle finish, a single fragment each of brick and slag, and an aqua container-glass body sherd. The report recommends that this portion of the site would not contribute to the overall significance of the site, and therefore no further archaeological consideration within the APE would be necessary. The report further recommends that avoidance and protection measures be adopted during construction to prevent incidental damage to the remainder of the site. *The HPO does not concur with this assessment at this time [see report comments beginning on page 6].*

SHPO do not concur

SA41-4

This assessment of contributing and non-contributing portions of an archaeological site is inconsistent with the National Register *Guidelines for Evaluating and Registering Archeological Properties*. As a general rule, because it is inconsistent within the concept of a site, specific areas within the boundaries of the property cannot be excluded from the consideration of a property. As a result, the assessment of effects on archaeological site 28-ME-386 needs to consider effects to the site holistically and not exclude individual portions.

Site PE-Me27-S1

Site PE-Me27-S1 is a dense historic artifact dump/refuse pile dominated by bottle and container glass. It was identified during systematic pedestrian survey of segment NJMe27 in the rocky uplands of Baldpate Mountain within Mercer County Park system recreation land. Artifacts were predominantly recovered from the surface or within the first few centimeters of leaf litter. The collected artifacts (n = 41) were dominated by household materials (78%), nearly half of which were fragments of bottle glass. Fragments of sewer pipe were also found, but were discarded in the field. Artifacts of note include a zinc metal screw cap Mason jar lid, a blue mold blown "Noxzema" apothecary jar, and multiple Trenton and Mercer Bottling Co. beer and soda bottles. The dump appears to date to the second third of the twentieth century, with a terminus post quem of 1929.

According to the report, a site registration form was submitted to the NJSM, but they determined that the site does not meet their site criteria, and a Smithsonian trinomial was not assigned. The Pleasant Valley Historic District is listed on the National Register of Historic Places under Criteria A and C, with a period of significance from ca. 1735 to ca. 1925. Its significance lies in the fact that it is a "well-preserved example of an isolated and somewhat marginal agricultural community that developed in the 18th and 19th centuries in the upper reaches of the Delaware River" (Greiff 1990). Site PE-Me27-S1 appears to post-date the district's period of significance, and is therefore unlikely to be considered a contributing resource. Given the density of artifacts and the possibility that it represents a short-term depositional event, however, the report states

that Site PE-Me27-S1 may possess modest information potential if an association with a specific household or group of people can be established.

As currently designed, the project's area of potential effects will pass through the site. As a result, the report recommends that a Phase II, evaluation-level study be undertaken to determine whether the site is eligible for listing on the New Jersey and National Registers of Historic Places. *The HPO does not concur with this assessment.* The HPO does not believe that further archaeological evaluation of the identified resource will yield new information important in history to warrant further archaeological investigations. As a result, Phase II archaeological survey is not warranted.

SA41-5

Site PE-Me35-S1

Site PE-Me35-S1 is a low density historic field scatter. It was identified during shovel testing on segment NJMe35 in the field north of County Route 632. The site is located within a grass-covered agricultural field on the Princeton Research Lands. According to the report, all of the artifacts were recovered from the plow zone in seven shovel tests, each of which contained just one artifact (with the exception of one shovel test that contained three artifacts). The small assemblage consisted of household and architectural items, including whiteware, redware, container glass, window glass, and mortar. The report states that although the terminus post quem is 1815 (based on the presence of whiteware), it is likely this assemblage dates to the late nineteenth century or early twentieth century. A small number of additional historic-period artifacts were found in shovel tests approximately 90 m (295.3 feet) to the north and south of the site, but only the main concentration of artifacts was designated as a site. There was no evidence of structures, ruins, or features in the vicinity.

According to the report, a site registration form was submitted to the NJSM, but they determined that the site does not meet their site criteria, and a Smithsonian trinomial was not assigned. Given the diffuse nature of the artifact scatter, the small size and poor condition of the artifacts, the fact that the artifacts were recovered from the disturbed plow zone, and the likelihood that the artifacts are not associated with a specific house or farmstead, the report concludes that Site PE-Me35-S1 is not eligible for listing on the New Jersey and National Registers of Historic Places. As a result, the report recommends no additional archaeological consideration for Site PE-Me35-S1. *The HPO cannot concur with this assessment at this time [see report comments beginning on page 6].*

Report Comments

Based upon a review of the revised report, the HPO has significant concerns about the work being conducted and the information as it is presented. Included below are specific details regarding the HPO's review of the data presented within the report. Our comments are as follows:

- Based on the nature of the report, the HPO is unable to concur at this time with site specific assessments of resource eligibility for listing on the New Jersey and National Registers of Historic Places. As previously stated, current cultural resource survey access

for the proposed undertaking is only a 32% of the overall alignment. The current survey access represents a fragmentary and discontinuous assessment of the overall project alignment. As a result, the HPO does not have sufficient information to appropriately evaluate the nature and significance of archaeological historic properties at this time. More detailed information regarding the entirety of the alignment is necessary for the HPO to evaluate the presence and significance of historic properties identified within the APE. Specifically, the HPO is concerned writing specific historic properties off before a fuller understanding of the nature and presence of historic properties within the APE is developed. This can only be achieved by completing survey within the entirety of the proposed APE.

- Based on the current status of the undertaking, the HPO cannot concur with the recommendations for avoidance of archaeological resources at this time. Currently, the HPO has received no information regarding what the level of impacts regarding the proposed project will be. As we currently understand the project, specific methods of construction and the areas needed to undertake this construction are still being evaluated. Therefore, the HPO cannot concur at this time that the work zones and recommended avoidance measures are appropriate for the proposed undertaking. In addition, it has been the HPO's experience that while historic properties may be avoided during initial construction, long-term maintenance of the right-of-way and or the pipeline may cause impacts to the archaeological site(s) that were originally avoided during initial construction. Therefore, the assessment of effects should include consideration of reasonable foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance, or be cumulative. As a result, further consultation with this office will be necessary as project plans develop to address appropriate treatment options for the historic properties identified.

- Throughout the report, there appears to be a disconnect between the assessment of above-ground historic properties and the assessment archaeological historic properties. Specifically, the archaeological survey report notes the presence of landscape features throughout the project alignment that are representative of prior land use within the APE (e.g. dry-laid stone boundary walls). However, the report fails to assess these resources as they relate to above-ground historic properties within the APE, beyond their presence. Are these historic properties related to historic-period agricultural practices? Are they potentially related to prior Native American occupation within the APE? A broader understanding of the landscape needs to be incorporated into the analysis of resources discovered during the archaeological survey to fully evaluate historic properties identified. In addition, the report should take into account that the remnant features of prior land use may be representative of a broader landscape-based historic property within the APE.

- Thank you for updating the report with a section discussing the presence of Holocene soils within the APE in response to the HPO's October 22, 2015 request for further clarification of field methodology as it relates to excavation through the full depth of Holocene soils. While the report currently under review includes further discussion of the presence of Holocene soils within the APE as it relates to the potential presence of

archaeological historic properties, no reference information is provided to support these conclusions.

In addition, a review of the published descriptions of the profiles for the upland soils mapped for the project corridor indicates a variable degree of development for the B horizons of individual soil series. Evaluating the degree of B horizon development and the potential passage of time that it represents can be tricky, especially when aeolian sediments are involved. Not all of the uppermost B horizons can be assumed to reflect development that occurred over the same amount of time.

Contrary to a number of statements throughout the report, a moderate number of upland soils found in the project area are characterized as "deep" by Jablonski (1974) in his description of Hunterdon County soils. The report needs to qualify what is meant when it states that upland soils are "shallow." The types of upland settings crossed by the project corridor could include deposits resulting from a variety of colluvial processes that could result in the burial of surfaces/soils and the thickening of deposits worthy of archaeological testing. Given the small areas that might be involved, published soil surveys will not be adequate to identify them prior to fieldwork. This needs to be identified and discussed further.

- The HPO has specific concerns with the level of public consultation that has taken place to better inform the results of the archaeological survey. Public engagement is an important tool for identifying potential historic properties that may be located within an APE. This was demonstrated during the initial survey effort through the identification of Archaeological site 28-Hu-579 through consultation with representatives of the New Jersey Department of Environmental Protection, Natural Lands Trust. There have been several other instances where the public has engaged the HPO to identify the presence of historic sites and this information has been passes on to the cultural resource consultant, however, there is no evidence that further public consultation has taken place elsewhere in the report. Have property owners, resource agencies, subject matter experts, local interest groups, etc. been engaged? What has been there response? The report should document this engagement and detail the results of this consultation.

Public engagement

- The HPO has concerns with the level of background research conducted to inform this project. The Native American background section fails to demonstrate a familiarity with the most recent literature and is less detailed in comparison with what is provided for the historic-period. This could have an impact on the assessment of the significance of pre-contact sites within the APE.

Given the general proximity of the upland areas of the project corridor to the Delaware River and other high order streams, as well as the existence of known sites that can be interpreted as camps or some type of residential area, it is surprising that more lithic scatters were not found. This statement assumes that lithic scatters are, in many cases, the result of forays out from habitation sites, i.e., they occur within a foraging radius of the habitation site. What does this imply about settlement patterns and the zones being exploited by the inhabitants of nearby habitation sites?

With regard to lithic resources, a review of the artifact catalogue indicates that not a single argillite artifact was located during the present Phase IB investigations. This is surprising given the proximity to known bedrock source outcropping, as well as other sites where this lithic material has been identified. Given the lack of occurrence of such a prolific resource in the Middle Delaware Valley, what does this imply about lithic sourcing and procurement within the region? Can speculation regarding the age of the lithic scatters found be made on the basis of what is known about lithic use patterns in the Middle Delaware Valley? Why is there no speculation as to the possible typology of the two bifaces found during the survey? While broken, there is a sufficient amount of material to support some cautious speculation regarding typology and chronological association.

Based on a review of information provided in the report, many "high sensitivity" areas for the occurrence of pre-contact sites were identified within the APE, yet few sites of any type were found. The archaeological sensitivity model and variables used for the designation of sensitivity areas should be addressed and discussed. To what degree do the specific association of previously recorded upland sites in and adjacent to project corridor compare with newly discovered sites? Given the fact that lithic scatters could represent forays out of camps or other habitation types of sites, the known location of camps/habitation sites should be considered in future sensitivity models used in site survey.

In examining the relationship of the project region to identified resources in the vicinity, other studies have specifically linked portions of the project corridor with the settlement territories of the native peoples who also utilized the landscapes of the Abbott Farm National Historic Landmark. For example:

Stewart, R. Michael
1987 *Gropp's Lake Site (28Me100G), Data Recovery.* Trenton Complex Archaeology: Report 2. The Cultural Resource Group, Louis Berger and Associates, Inc., East Orange, New Jersey. Prepared for the Federal Highway Administration and the New Jersey Department of Transportation, Trenton.

1990 The Middle to Late Woodland Transition in the Lower/Middle Delaware Valley. *North American Archaeologist* 11(3):231-254.

1998 *Ceramics and Delaware Valley Prehistory: Insights From the Abbott Farm.* Trenton Complex Archaeology, Report 14. Special Publication of the Archaeological Society of New Jersey and the New Jersey Department of Transportation, Trenton.

Obermeyer, Brice, Robert Grumet, R. Michael Stewart, Jim Rementer and Greg Brown
2015 Cultural Affiliation of the Abbott Farm National Historic Landmark. Report of NAGPRA Documentation Grant (40-12-GP-566) awarded to the Delaware Tribe of Indians, Oklahoma.

Wall, Robert, R. Michael Stewart, John Cavallo, Douglas McLearen, Robert Foss, Philip Perazio, and John Dumont
1996 *Prehistoric Archaeological Synthesis*. Trenton Complex Archaeology: Report 15. The Cultural Resource Group, Louis Berger and Associates, Inc., East Orange, New Jersey. Prepared for the Federal Highway Administration and the New Jersey Department of Transportation, Trenton.

What do the results of the current survey imply about the nature and use of these proposed settlement/exploitative territories?

How do the survey results compare with what Custer and Wallace (1982) say about the Piedmont uplands?

Custer, J.F., and E.B. Wallace
1982 Patterns of Resource Distribution and Archaeological Settlement Patterns in the Piedmont Uplands of the Middle Atlantic Region. *North American Archaeologist* 3(2):139–172.

Given the small size of the lithic scatters encountered during the survey, the investigators should comment on the degree to which their grid alignments and STP intervals would have missed such sites. Since archaeological survey of the APE is only 32% complete, this is important as it will help refine the archaeological survey as the identification of historic properties moves forward for the remaining two-thirds of the undertaking's APE.

Based on the comments above, the HPO recommends a meeting with the cultural resource consultant to discuss these concerns further and identify an appropriate path forward for the identification and treatment of historic properties for the proposed undertaking.

Preferred Alternative Route Update (January 16, 2016 and February 23, 2016)

Thank you for providing the Historic Preservation Office (HPO) with information regarding the most recent updates to the proposed preferred alternative route for the above-referenced undertaking. Based on the information provided, the revised preferred alternative route includes reroutes and minor route variations to minimize impacts to multiple resource types. The Scope of Work (SOW) for this project dated February 2, 2015, and the subsequent updated Archaeological Sensitivity Model dated March 6, 2015, are applicable to the revised alignment. Specifically, as outlined in the approved SOW, the project's Area of Potential Effect (APE) needs to be modified to account for the reroutes and minor variations. Additionally, the Archaeological Sensitivity Model should be applied to the revised alignment and areas of archaeological sensitivity will require subsurface testing as defined in the SOW.

The HPO looks forward to further consultation with Federal Energy Regulatory Commission (FERC) and URS regarding the identification and treatment of historic properties within the undertakings area of potential effects (APE) pursuant to FERC's obligation under Section 106 of the National Historic Preservation Act.

Additional Comments

Thank you for providing the opportunity to review and comment on the potential for the above-referenced project to affect historic properties. Please reference HPO project number 14-4462 in any future calls, emails, submissions or written correspondence to help expedite your review and response. If you have any questions, please feel free to contact Jesse West-Rosenthal (609-984-6019) of my staff with questions regarding archaeology or Michelle Craren (609-292-0032) with questions regarding historic architecture.

Sincerely,

Daniel D. Saunders
Deputy State Historic
Preservation Officer

Cc: Eric Howard, FERC
Grace Ziesing, URS/AECOM

DDS/KJM/JWR

Document Content(s)

Date: April 28, 2016, 1:30 PM

Location: New Jersey Department of Environmental Protection
New Jersey Historic Preservation Office
501 E. State Street
Trenton, NJ 08609

Attendees: Jesse West-Rosenthal, Senior Historic Preservation Specialist, NJDEP – HPO
Kate Marcopul, Supervising Historic Preservation Specialist, NJDEP – HPO
Michelle Craren, Architectural Historian, NJDEP – HPO
Grace Ziesing, Senior Archaeologist, URS
Jesse Walker, Senior Archaeologist, URS
Stephen Tull, Vice President of Cultural Resource Management, URS
Vanessa Zeoli, Senior Architectural Historian, URS
Juan Mones-Cazon, Project Manager, PennEast
Tamara Bernstein, Project Manager, PennEast

Subject: Discussion of HPO 18 March 2016 review letter pertaining to the PennEast December 2015 Phase IB Archaeological Survey report (HPO Project #14-4462)

GZ: Per previous conversation with Jesse West-Rosenthal, report will not be resubmitted, but guidelines provided by HPO in their review letter (dated 3-18-16) will be followed in future submittals. The goal of this meeting is not to discuss individual archaeological sites mentioned in the letter, but to address general comments on methodology.

Discussion of General Comments #1 and #2

(Comment # 1: HPO does not have sufficient information to evaluate the nature and significance of archaeological historic properties due to the limited and fragmentary nature of the survey.
Comment #2: HPO cannot concur with recommendations for avoidance because construction impacts have not been defined and long-term maintenance may have effects.)

GZ: Submittal of the Phase IB Archaeological Survey report to HPO was timed to occur with a FERC filing in February. Conducting survey and submitting fragmented reports to SHPOs for review is standard practice for large linear projects where property access is ever-changing.

KM: In HPO's experience a more typical procedure is for them to receive a report documenting an entire alignment, with subsequent changes addressing route changes, instead of partial information on a project that appears to be so early in the planning process. It is also not typical for HPO to handle a project with such little property access. It is difficult to make decisions of significance based on minimal information and perhaps that means that the studies should not be submitted until the project is more developed. The comment was meant to help avoid issues HPO has had with other projects. In one

instance, HPO agreed to avoidance measures for a pipeline project and when later maintenance activities were needed and a site was impacted.

JWR: If site installations (project design plans) still have not been decided and the project is still fluid, HPO is uncomfortable making a decision on avoidance measures.

ST: Want to clarify that the purpose of the 400-foot corridor is to incorporate all potential effects and environmental constraints, but gives PennEast wiggle room if they need to move the line. It is typical practice for the archaeologists to assume the worst case, and recommend the sites eligible to help the client move through the process.

KM: Main concern is that methods of construction haven't been decided yet.

GZ: Maybe we don't present the avoidance plan until engineering is finished. Perhaps the thing to do is to present boundaries and information on the sites now and then provide HPO another opportunity to review and comment on the avoidance plans when the design is more fully developed.

KM: What types of provisions can be put in place in the event PennEast wants to conduct future maintenance that has not been cleared by HPO?

ST: In the past, we have set up plans in perpetuity, signage, and fencing among others.

GZ: It is important to note that post-construction, PennEast only has jurisdiction to alter the permanent right of way. They cannot go outside the permanent right of way during operation. This probably needs to be codified and defined in the reports.

JWR: For another project, we had a situation where a site was avoided because the design plans called for an HDD, but there was a blow-out which required the construction methods to change to open trenching and in the process, the site was destroyed. HPO wants to make sure there are measures in place to prevent this sort of thing from happening in the future.

GZ: In order to facilitate the design process and keep the project on schedule, we need to understand if avoidance is something we can recommend to PennEast and what HPO will accept in terms of avoidance measures.

KM: If avoidance is possible, it is the preferred solution, but HPO needs more information on the project plans to make a decision. Seems like letting PennEast know there is a site that needs to be avoided is important, so it would be helpful if a proposal could be developed outlining a method.

GZ: Suggest that URS prepare a "programmatic" avoidance plan that describes construction methods and anticipated maintenance activities and sets forth general avoidance strategies. HPO can review and comment on the plan so that URS and PennEast can implement it where possible. Site-specific avoidance plans will be developed toward the end of the project, when design is finalized, and submitted to HPO for final approval. As per our pre-field meeting in September 2014, buffers around archaeological sites are not required (for either site definition or avoidance).

JWR: This is correct—buffers around sites are not required.

GZ: URS has surveyed approximately 130 more acres since the report was submitted. This represents about one-quarter of what was in the original report. URS would like to submit a small addendum covering the newly surveyed areas and then submit another report for the remainder of the corridor, probably after the project has been certificated and condemnation has occurred.

KM: When multiple reports are submitted, it is difficult to keep track of where the sites are located in the overall alignment. It would be helpful if there was a map or a table that summarized the locations.

JWR: It is acceptable to submit an addendum prior to condemnation. In another project, the consultant used a running table to identify sections that were completed, which made it much easier for HPO to follow along and understand what survey was complete and what was not. Station locations were used as the consistent reference points.

GZ: URS can add a tracking table to the next report; since mileposts will change, we will probably use survey segments.

TB: PennEast will be developing a table for other purposes and can share that table with HPO. Condemnation plan will happen in two parts. After draft EIS, people will be more aware of the project and some properties may become accessible, but for the most part, we can assume we will not get much more access than we have now. After FERC receives their certificate, federal courts will issue permission for condemnation. The process will be very quick.

JWR: Around the time the certificate is issued, Section 106 and NEPA will have to be complete. This is often accomplished through a Programmatic Agreement (PA) to guide the remainder of the work. Usually they are prepared by the consultant and signatories are FERC, SHPO, ACHP, the tribes, and other important stakeholders, as determined by FERC.

JWR: Since FERC is the lead federal agency, they are responsible and would have to decide if and how they want to prepare a PA. It would be their responsibility to orchestrate it, though the consultant may help draft the document.

KM: The PA process usually takes several months. As a heads up, when issuing permits, the USACOE like to conduct their own tribal consultation process. As for the PA, it will specify the process once condemnation occurs – survey, reporting, review, etc. And just to clarify, the PA should also include the process for architectural history.

Discussion of General Comment #3

(HPO noted a disconnect between above- and belowground reporting; URS needs to give greater consideration to landscape features)

GZ: Want to assure HPO that the archaeology and the architectural history teams are sharing information on architectural features. We put together maps showing the rock walls to share with the group.

VZ: Our typical methodology and one that has been discussed and approved by PHMC, is that any new above-ground feature that is identified by the archaeological crew on a property that contains other structures and is being documented on an intensive-level survey form will be incorporated into that form. For those features that are on properties already listed or eligible, URS will assess the effects to the features as part of the overall resource during the effects assessment phase.

KM: The purpose of the HPO comment in the letter is to ensure that AH and archaeology are cross-communicating throughout the project.

JWR: Identifying any potential cultural landscapes is also a concern. So if there are a number of features identified in an area, even if there are no other building complexes on a property, HPO would like the consultant to consider the possibility of a cultural landscape

KM: Documentation of this effort would be to include the findings in both AH and archaeology reports. Isolated features may warrant larger background research to determine if this is a cultural landscape.

GZ: One of the examples we have poses a complicated situation. Two sets of rock walls were found within the Phillips Mill Site, which is partially within the NRHP-listed Pleasant Valley Historic District: some are within the boundaries of the historic district, and some are within the boundaries of the Phillips Mill Site. Problem is that the site was identified as a resource in the GIS files shared with URS by the HPO in 2014, but those shared in 2015 do not contain the Phillips Mill Site.

KM and JWR: In cases such as this, it is acceptable to informally email HPO (outside the Section 106 process) to inform them of data inconsistencies. HPO will research the issue and make the correction, as necessary.

Discussion of General Comment #4
(HPO concerned with the depth of Holocene soils as well as colluvial and eolian deposition)

GZ: URS has a geomorphologist on staff and is aware of different depositional environments and their implications for the thickness of soil with the potential to contain archaeological deposits. The field staff reviews the soils and geology data before going in the field to identify areas where deeper deposits are possible. The geomorphologist also reviews the data to alert the crew to areas where deeper excavation may be required to fully sample Holocene soils with the potential contain archaeological deposits.

JW: Will incorporate references missing from soils discussions in the text in the addendum report. Most of the survey areas were on uplands where soils formed out of weathered bedrock and potential archaeological deposits would be confined to the plowzone and upper portion of the subsoil. Most areas with the potential for deeper deposits have not yet been surveyed due to access restraints.

JWR: A summary of these efforts should be included in methodology section of the report, including contribution of geomorphologist. Include in the report a discussion of the soils training provided to field crew.

Discussion of General Comment #5
(HPO request for Public Outreach documentation)

GZ: PennEast has done a substantial amount of outreach. Early in the process they reached out to stakeholders, they have had public meetings, public comment periods, open houses, and they regularly meet with the municipalities, thereby offering many opportunities for the public to provide comment. More recently, PennEast and URS have targeted local organizations, including a letter writing campaign, which only resulted in two responses. All correspondence has been filed with FERC, and will be included in the next report.

JWR: HPO does not always see the FERC filings; typically the coordination is included in the report and would like all these efforts documented in the next report submittal.

Discussion of General Comment #6
(HPO comments regarding prehistoric context and research questions)

GZ: Much of the research requested seemed beyond a Phase 1 level. A revised prehistoric context will be provided in a future addendum report.

JWR: HPO's concern was to make recommendations for research. Their particular concern was the lack of information on argillite considering the project area's proximity to known argillite areas.

GZ: Most of the survey documented in the report occurred outside of locations mapped with argillite in the Lockatong Formation (map provided to HPO).

JW: The field crew inspected portions of the study corridor within the Lockatong Formation for potential argillite quarries or processing sites and will continue to do so as more properties within that area become available for survey.

ST: All the archaeological technicians on the project receive in field training about argillite artifact identification .

GZ: Study corridor is being heavily sampled and will provide good information for future research. We are using a broad sensitivity model that includes intensive testing within approximately 75% of the study corridor.

Additional Discussion

GZ: What guidance can HPO provide regarding sites that will be only partially impacted by the project? The Joseph P. Blackwell Farm site (28-Me-386; SHPO Opinion: 6/23/1982) is mostly outside the current LOD, but was identified on an earlier alignment. A few artifacts were recovered on the opposite side of a gravel driveway from the main site, and URS argued that the portion of the site to be impacted did not have the potential to contribute to the overall significance of the site.

JWR: According to Section 106, you can't segment sites and determine that pieces of them are not eligible. This site is within an above-ground property that is eligible for the NRHP, and it undoubtedly contributes to the significance of the property.

JWR & KM: Not sure how to handle this situation—need to consult the regulations and look at the National Register bulletins. Will get back to URS.

ACTION ITEMS:

- **URS** will prepare an addendum for portions of the study corridor/LOD surveyed since last submittal and through next week (or when currently accessible properties have been surveyed) and submit to HPO for review and comment. In addition to new survey areas, addendum will include:
    - updated prehistoric context
    - table showing survey/results status of survey segments
    - additional geomorphology documentation
    - tables/narrative describing public consultation conducted to date
    - updated recommendations for sites documented in the original report to reflect current project construction design
- **URS** will prepare a programmatic site avoidance plan for construction and operation and submit to HPO for review and comment, to be used as a guide moving forward. Site-specific avoidance plans will be developed after project design has been finalized and will be presented on alignment sheets.
- **URS** will begin to discuss the preparation and execution of a Programmatic Agreement with PennEast
- **GZ** will coordinate with HPO to discuss the specific site issues raised in the letter, particularly the quarry site
- **HPO** will research how to address portions of sites within the LOD and get back to URS with guidance

Date: June 23, 2016, 10:00 AM

Location: New Jersey Department of Environmental Protection
New Jersey Historic Preservation Office
501 E. State Street
Trenton, NJ 08609

Attendees: Jesse West-Rosenthal, Senior Historic Preservation Specialist, NJDEP – HPO
Kate Marcopul, Supervising Historic Preservation Specialist, NJDEP – HPO
Michelle Craren, Architectural Historian, NJDEP – HPO
Grace Ziesing, Senior Archaeologist, URS
Vanessa Zeoli, Senior Architectural Historian, URS
Jason Doersom, Project Manager, PennEast
Tamara Bernstein, Project Manager, PennEast

Subject: Follow-up discussion to April 28, 2016 meeting (HPO Project #14-4462)

The purpose of the meeting was to review the general avoidance and protection guidelines developed by URS, to talk about site-specific issues raised in HPO's review of the December 2015 Phase I report, to discuss the process for architectural history review, and to get guidance from HPO regarding an MOA/PA for the project to guide post-certificate work. Ms. Marcopul requested that we address the architectural history issues first since Ms. Craren had other commitments.

Architectural History Review Process

Ms. Zeoli suggested that the latest round of reconnaissance-level architectural history survey be presented in a letter report, as an addendum to the original report. The letter report would include eight (8) short survey forms (Base Forms) for each of the properties identified. HPO agreed that this would be an acceptable approach.

Intensive-level survey and full survey forms are being developed for 17 properties that HPO requested additional information on, and Ms. Zeoli asked if URS may submit them in batches and if it would be acceptable to bundle the effects discussion with the eligibility assessments. Ms. Craren said that from a review perspective that would be fine, but Ms. Marcopul pointed out that a finding of effect is project-wide, not for individual properties. Ms. Zeoli suggested that the discussion could occur for the individual properties, but that a summary would be prepared at the end of the project to allow HPO to issue the project-wide effects finding. Ms. Marcopul agreed that this would be acceptable, but the process would have to be outlined in an agreement document (such as a PA).

Ms. Zeoli asked about mitigation, and Ms. Marcopul said that property-specific treatment plans for historic architectural resources would need to be memorialized in an agreement document (an MOA or PA). Some general approaches to mitigation/treatment can be developed now, however.

Ms. Zeoli and Ms. Craren had a brief discussion outside of the meeting in regards to assessing effects to historic properties that are already listed in the National Register of Historic Places (NRHP) or were determined eligible for listing in the NRHP. Ms. Zeoli indicated that not all of the listed/eligible properties were accessible, but for those that were, she asked if effects assessments could be submitted in a letter-report format similar to the intensive-level survey forms and effects letters discussed in the meeting. Ms. Craren said that as long as the submission was well organized like the Reconnaissance-Level Historic Architectural Survey Report (submitted in September 2015), that would be fine. Ms. Craren also suggested that assessing effects of some of the previously listed/eligible properties may be possible without access, but would depend on the resource and project details in those locations.

Post-Certificate Agreement Document

Ms. Ziesing stated that PennEast would like to have a discussion with Eric Howard, the FERC cultural resources reviewer, to see if he intends to develop a PA for the project. HPO confirmed URS's understanding that FERC initiates the process and drafts the document. URS was hoping to get some input from HPO on provisions they would be willing to agree to so that these could be passed on to Mr. Howard. Ms. Marcopul explained that FERC is likely to have standard approaches to such documents and that since they are the lead federal agency and are legally responsible for Section 106 compliance, HPO would not be comfortable engaging in a discussion without FERC present. In a project of this size and complexity, it is likely the ACHP will want to be involved as well. Ms. Ziesing agreed that the next step is for PennEast to talk to Mr. Howard, to the extent permitted by the *ex parte* rules.

Archaeological Site Avoidance and Protection Guidelines

Mr. West-Rosenthal stated that he had reviewed the draft guidelines and had no issues or concerns. The descriptions of project activities provide HPO the information they need to understand potential project impacts, and the avoidance and protection measures outlined conform with standard, accepted practice. Ms. Ziesing asked how the guidelines would be implemented/memorialized since they have not been through a formal review process. Ms. Marcopul asked if they have been submitted to FERC, and discussion ensued. It was agreed that the guidelines should be appended to the forthcoming Phase I Addendum report, and in that way would enter into the formal review stream and also be made available to FERC for review. Ms. Marcopul also said that the document will likely be referenced in the PA, and possibly included as an exhibit.

Site-Specific Discussion

Ms. Ziesing presented mapping for each of the archaeological sites identified to date for the PennEast project, illustrating how PennEast has entirely avoided some sites by adopting reroutes, or is considering route modifications to avoid impacting others. Since the alignment has changed since the first report was submitted in December, Ms. Ziesing suggested that the Phase I Addendum report recap each of the sites and the potential for each to be affected by the current route. HPO agreed that this would be a good approach and would afford HPO the opportunity to formally respond to the findings for each site.

Given that some routing and/or workspace designs are still being developed to address archaeological sites, Ms. Ziesing asked how site-specific avoidance and protection should be addressed in the upcoming Phase I Addendum report. She clarified that any statements detailing avoidance and/or protection measures included in the report will represent firm commitments by PennEast and not just URS recommendations, a point to which Mr. Doersom and Ms. Bernstein agreed. HPO agreed this was acceptable and suggested the Avoidance and Protection Guidelines be revised so that the different site location scenarios (e.g., site outside the LOD, site within the LOD but outside the Permanent ROW, etc.) be given numbers that could be referred to in the report text. URS would then assign sites to the applicable location scenario(s) and provide reference to the guidelines for the appropriate avoidance/protection measures.

HPO clarified that mitigation/treatment is best conducted post-certificate, as stipulated in an agreement document negotiated between FERC, ACHP, SHPO, and other signatories. This provides the lead federal agency and the ACHP the opportunity to comment on treatment measures (a requirement of Section 106) and avoids the risk of them not agreeing to the measures after they have already been carried out.

HPO provided guidance on sites such as NJ-Me-386 that will only be partially impacted by the project. Rather than trying to argue at the Phase I stage that the portion of the site to be impacted would not contribute to the significance of the site as a whole, they suggested drawing site boundaries more carefully to exclude areas that may contain artifacts, but that are later than the main body of the site or do not contain intact deposits or diagnostic materials that are likely to be associated with the site. In cases where the site truly extends into the LOD, HPO agreed that only the portion of the site to be impacted would need to be subject to Phase II/III investigations (unless a feature integral to site interpretation extends outside the LOD). Mr. West-Rosenthal clarified that in the particular case of site NJ-Me-386, this approach would only apply to the archaeological component since the property is eligible for the National Register of Historic Places for its architectural elements, which would have to be addressed separately.

HPO also provided guidance on a Phase II work plan for site NJ-Hu-577, the historic-period quarry site. They agreed that extensive subsurface testing is not appropriate for the site, although limited testing may be useful. They suggested detailed recording (e.g., LiDAR and on-the-ground, high-resolution

mapping) in addition to more property-specific research and contextual quarry research. They provided suggestions for research, as follows:

- Quarry contexts from other states;
- Vicki Chirco at the Delaware and Raritan Canal State Park for information about stone sources for the canal armor, which is also diabase;
- Pierre LeCombe at USGS, a geologist with a particular research interest in the intersection of geology and history;
- New Jersey Geological Survey—possible unpublished sources (URS has already consulted their historical publications);
- PAL (a Massachusetts CR firm), who has worked on similar quarry sites in Massachusetts that are associated with nearby canals;
- Phil Laporta, a prehistorian who has worked extensively with prehistoric quarries in northern New Jersey, but may have insights into how to best recover information from this resource type.

Ms. Ziesing agreed to revise the Phase II work plan accordingly and submit it with the Phase I Addendum report. Ms. Bernstein asked when that report would be submitted, and Ms. Ziesing said mid-July or before.

URS

August 25, 2016

Ms. Katherine Marcopul
Deputy State Historic Preservation Officer
Historic Preservation Office
New Jersey Department of Environmental Protection
501 East State Street, 4th Floor
Trenton, NJ 08625-0420

RE: PennEast Pipeline Company, LLC – PennEast Pipeline Project
Hunterdon and Mercer Counties
Phase I Archaeological Survey Report, Addendum 1, August 2016

HPO Project #14-4462

Dear Ms. Marcopul,

On behalf of PennEast Pipeline Company, LLC, URS Corporation is submitting the above-referenced Phase I Addendum archaeological survey report for your review. This addendum documents Phase I archaeological survey for the preferred alignment filed with FERC in February 2016 and current as of August 2016. It also addresses comments NJHPO issued on 18 March 2016 for the original Phase I survey report and discussed in meetings with your office on 28 April and 23 June 2016. Finally, the report provides updated information on sites included in the original Phase I survey report resulting from additional survey and/or project design changes.

The survey reported herein identified three additional archaeological sites. One of the sites is outside the limit of disturbance and will not be impacted by the project. Two sites are potentially eligible for the National Register of Historic Places and, according to current project plans, will not be avoided. Phase II level investigations are recommended for both of these sites, and work plans are included as an appendix to the report.

I am also enclosing a CD-ROM containing data to assist in your review of the above-referenced report. In addition to a PDF of the report, the CD-ROM includes the following GIS shapefiles:

- PennEast_Centerline_08-2016
- PennEast_Mileposts_08-2016
- PennEast_StudyCorridor_08-2016
- PennEast_NJ_STPs_08-2016
- PennEast_NJ_SurveySegments_08-2016

URS Corporation
437 High Street
Burlington, NJ 08016
Tel: 609.386.5444
Fax: 609.386.6994

- PennEast_NJ_URS-ArchaeologicalSites_08-2016

These are the primary project files used in the production of the survey results maps provided in the report. If there are other files you need, please let me know.

Please do not hesitate to contact me at (610) 832-2791 or grace.ziesing@aecom.com with any questions, comments, or concerns. Thank you in advance for your consideration of these materials.

Sincerely,

URS Corporation

Grace H. Ziesing
Senior Archaeologist

URS Corporation
437 High Street
Burlington, NJ 08016
Tel: 609.386.5444
Fax: 609.386.6994

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CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

BOB MARTIN
Commissioner

ORIGINAL

August 31, 2016

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, D.C. 20426

Dear Ms. Bose:

As Deputy State Historic Preservation Officer for New Jersey, in accordance with 36 CFR Part 800: Protection of Historic Properties, as published in the *Federal Register* on December 12, 2000 (65 FR 77725-77739) and amended on July 6, 2004 (69 FR 40544-40555), I am providing Consultation Comments for the following proposed undertaking:

Hunterdon and Mercer Counties
Reconnaissance-Level Historic Architectural Survey Report - Addendum 1
PennEast Pipeline
Docket No. CP15-558-000
Federal Energy Regulatory Commission

800.4 Identification of Historic Properties

The Historic Preservation Office (HPO) was recently provided with the opportunity to review and comment on the following addendum to the previously reviewed reconnaissance-level historic architectural survey report, received at this office on August 10, 2016, for the above-referenced undertaking:

Hammel, Matthew, Nicole McKairnes, Ann Marie DiLucia, Sam Pickard, Michael Robb and Jennifer Robinson.
July 2016 *Reconnaissance-Level Historic Architectural Survey Report Addendum, PennEast Pipeline Project, Hunterdon and Mercer Counties, New Jersey.* Prepared for PennEast Pipeline Company, LLC, Wyomissing, Pennsylvania. Prepared by URS Corporation, Conshohocken, Pennsylvania.

URS Corporation was recently given access to 8 additional tax parcels containing historic resources greater than 50 years of age, not previously surveyed, which are documented within Addendum 1. All 8 of the resources surveyed were recommended not eligible for listing on the National Register of Historic Places (NRHP).

The HPO concurs that, based upon the submitted survey forms, the following 8 identified resources do not appear to meet any of the criteria necessary for listing on the National Register of Historic Places:

- Dwelling and associated outbuildings within the Thomas F. Breden Preserve at Milford Bluffs, Milford-Warren Glen Road, Holland Township, Hunterdon County (URS Field No. HU-0247)
- 310 Milford-Warren Glen Road, Holland Township, Hunterdon County (URS Field No. HU-0246)
- 38 Hewitt Road, Delaware Township, Hunterdon County (URS Field No. HU-0232)
- 66 Sanford Road, Delaware Township, Hunterdon County (URS Field No. HU-0248)
- 1469 County Highway 179, West Amwell Township, Hunterdon County (URS Field No. HU-0233)
- 1443 County Highway 179, West Amwell Township, Hunterdon County (URS Field No. HU-0166)
- 756 Brunswick Pike, West Amwell Township, Hunterdon County (URS Field No. HU-0234)
- 340 Pennington-Titusville Road, Hopewell Township, Mercer County (URS Field No. HU-0249)

No further architectural survey work is necessary for the above-referenced properties. The HPO looks forward to receiving archaeological survey of these properties for review and comment, once available.

Please note that it has come to the HPO's attention through public comment that identification-level architectural survey has failed to identify the following circa 1882 single-barrel stone arch bridge: Bridge #D-449 Worman Road over Shoppon's Run. This bridge, located on Worman road in Stockton (Delaware Township) is located within the area of potential effects (APE) for the pipeline right of way (ROW) but was not included in the previously-received survey. The bridge is listed in the inventory of stone arch bridges in the National Register of Historic Places (NRHP) Multiple Property Documentation Form (MPDF) nomination for Historic Bridges of Delaware Township. This MPDF was listed on the New Jersey Register of Historic Places on July 28, 2016 and is currently under review for NHRP listing by the NPS.

In addition to bridges directly within the ROW APE, there is a concern that historic bridges on access routes could be damaged by construction-related vehicles. Although these vehicles may meet posted weight limits, the volume of traffic may be much higher during construction than is typical for these roads. Continued identification should address bridges outside of tax parcels, as well as structures directly adjacent to proposed access routes for construction of the pipeline, which may be affected by an increased volume of heavy vehicle traffic.

Additional Comments

The submitted addendum generally meets the HPO's *Guidelines for Architectural Survey* and the HPO appreciates the clear and concise manner in which the survey data were reported for our review. Please note, however, that future submissions should include the résumés of all individuals completing survey forms. We look forward to receiving the additional reconnaissance-level survey reports in this format as access is granted to those properties.

Thank you for providing the opportunity to review and comment on the potential for the above-referenced undertaking to affect historic properties. The HPO looks forward to receiving additional

reconnaissance and intensive-level survey reports to complete identification of historic properties pursuant to 36 CFR § 800.4 from URS. If you have any questions regarding historic architecture, please contact Michelle Craren of my staff at (609) 292-0032 or michelle.craren@dep.nj.gov. Please reference the HPO Project Number 14-4462 in any future calls, emails, or written correspondence in order to expedite our review and response. Thank you.

Sincerely,

Katherine J. Marcopul

Katherine J. Marcopul
Deputy State Historic
Preservation Officer

CC: Matt Hamel, URS/AECOM

MC/ef

Document Content(s)

September 26, 2016

Mr. Jesse West-Rosenthal
NJ DEP Historic Preservation Office
P.O. Box 402
Trenton, NJ 08625
via email: jesse.west-rosenthal@dep.nj.gov

Re: HPO Project #14-4462
PennEast Pipeline Company, LLC – PennEast Pipeline Project
Hunterdon and Mercer Counties, New Jersey

Dear Mr. West-Rosenthal,

On behalf of PennEast Pipeline Company (PennEast), thank you for your continued collaboration on the proposed PennEast Pipeline Project (Project). As an interstate natural gas pipeline, the Project is under the jurisdictional, multi-year review of the Federal Energy Regulatory Commission (FERC).

PennEast filed its Application for a Certificate of Public Convenience and Necessity and Related Authorizations with FERC September 24, 2015. PennEast filed route modifications with FERC February 22, 2016, and FERC issued a Draft Environmental Impact Statement (EIS) for the Project July 22, 2016. Since the February 22, 2016 route update and issuance of the draft EIS, PennEast has studied an additional 33 minor route deviations to reduce impacts on endangered species and wetlands, increase co-location with existing utilities, and address feedback from collaborative discussions with landowners and regulatory agencies.

On September 23, 2016, PennEast filed with FERC the 33 route modifications and an updated project route, which is provided in the attached Google Earth kmz file and shapefiles for your review. A narrative describing each modification and the explanation for the proposed changes is available on the FERC eLibrary (http://elibrary.ferc.gov/idmws/docket_search.asp) under Docket Number CP15-558-000.

URS's cultural resources team will submit updated lists of all currently identified archaeological sites and historic architectural resources that will be affected by the new alignment in the near future. If you have any questions regarding archaeology, please contact Grace Ziesing at 610.832.2791 or at grace.ziesing@aecom.com. If you have any questions regarding historic architecture, please contact Matthew Hamel at 610.832.4538 or at matthew.hamel@aecom.com.

Sincerely,

Bernie Holcomb
Pipeline Environmental Services Manager

URS Corporation 625 West Ridge Pike, Suite E-100; Conshohocken, PA 19428
Direct: 610 832 1810; Cell: 215 275-7956; Fax: 610-832-3501 bernard.holcomb@urs.com

URS

October 31, 2016

Ms. Katherine Marcopul
Deputy State Historic Preservation Officer
Historic Preservation Office
New Jersey Department of Environmental Protection
501 East State Street, 4th Floor
Trenton, NJ 08625-0420

RE: PennEast Pipeline Company, LLC – PennEast Pipeline Project
Hunterdon and Mercer Counties
Archaeological Site Recommendations, September 2016 Route Update
FERC Docket #CP15-558
HPO Project #14-4462

Dear Ms. Marcopul,

On behalf of PennEast Pipeline Company, LLC, URS Corporation is submitting updated recommendations for archaeological sites identified for the PennEast Pipeline Project (Project) that were documented in the original survey report (December 2016) and the Addendum 1 report (August 2016). The updates are necessary due to route changes filed with FERC in September 2016 and submitted to your office on September 29, 2016.

The table below includes all archaeological sites identified to date for the Project. Those for which the recommendations have been updated as a result of the route changes are indicated in bold type. Maps showing the new relationship of the sites to the Project are attached.

We also wanted to inform you that PennEast will be reaching out to FERC and the U.S. Army Corps of Engineers to discuss their views on the need for a Programmatic Agreement for the Project. We will keep you posted on the results of that discussion, and look forward to your participation in executing the document.

URS Corporation
437 High Street
Burlington, NJ 08016
Tel: 609.386.5444
Fax: 609.386.6994

FedEx Tracking No. 777597013132

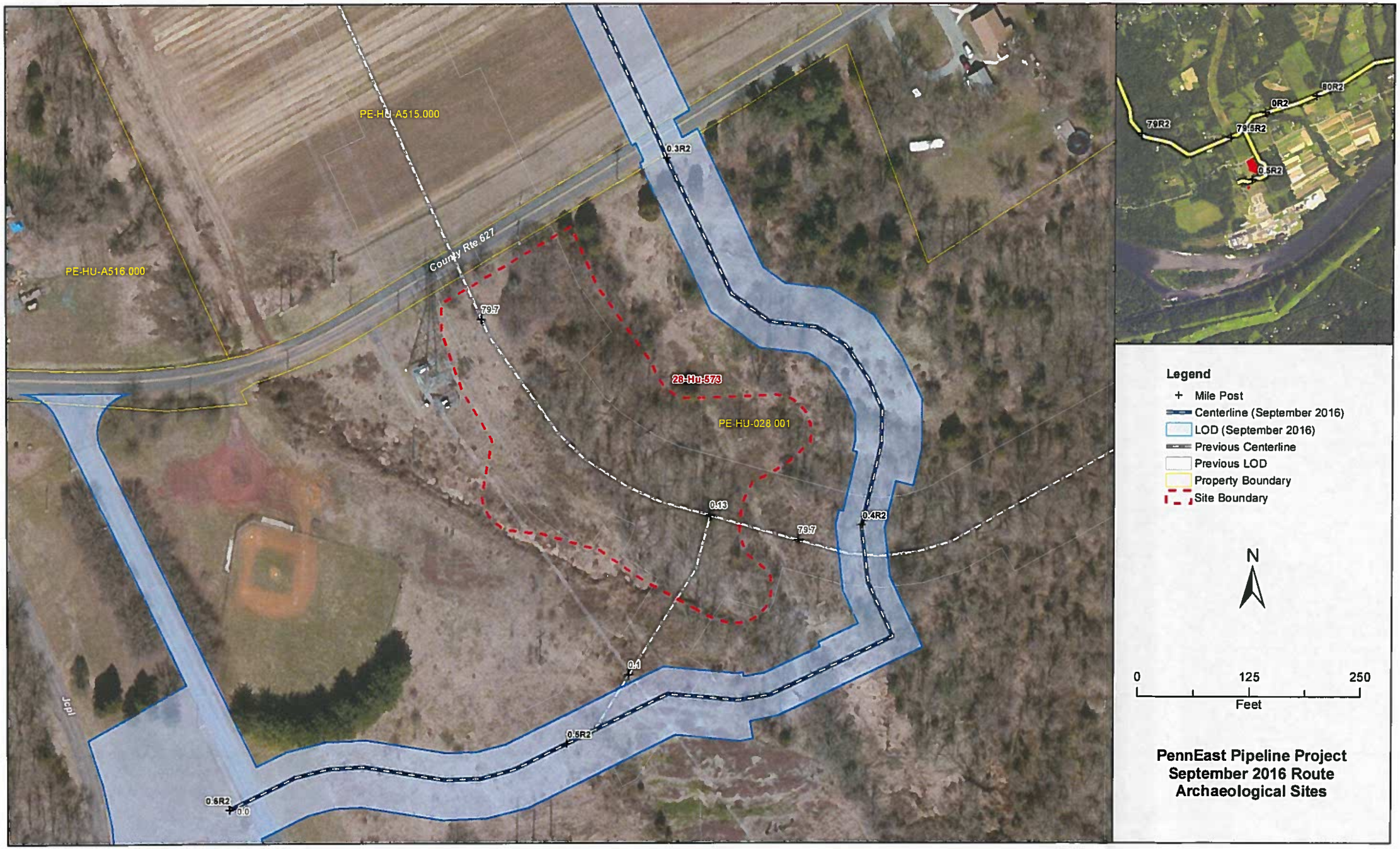
Identification Number*	Cultural Affiliation/ Site Type	Recommended NRHP Status	Recommended Action
28-Hu-573	**Historic/Farmstead**	**Not Evaluated, Potentially Eligible**	**Site greater than 50 feet from LOD; no further investigation or avoidance needed**
28-Hu-574	Historic Foundation	Not Evaluated, Potentially Eligible	Avoidance/Protection
28-Hu-577	Historic/Quarry	Not Evaluated, Potentially Eligible	Phase II evaluation study to determine NRHP eligibility
28-Hu-578	Prehistoric/Lithic Scatter	Not Evaluated, Potentially Eligible	Site greater than 50 feet from LOD; no further investigation or avoidance needed
28-Hu-579	**Historic/Foundation and Artifact Scatter; Prehistoric/Lithic Scatter**	**Not Evaluated, Potentially Eligible**	**Site greater than 50 feet from LOD; no further investigation or avoidance needed**
28-Hu-583	Historic Houselot	Not Evaluated, Potentially Eligible	Phase II evaluation study to determine NRHP eligibility
28-Me-386	Historic/Joseph P. Blackwell Farm (NJHPO ID 1676)	Joseph P. Blackwell Farm Individually Eligible; Archaeological Component Not Evaluated, Potentially Eligible	Avoidance/Protection
PE-Me27-S1	Historic/Refuse Dump within Pleasant Valley Historic District/ Phillips Mill Site	Not Eligible (NJHPO Opinion 18 March 2016)	No further investigation or avoidance needed
PE-Me35-S1	Historic/Field Scatter	Not Eligible	Site greater than 50 feet from LOD; no further investigation or avoidance needed
* New Jersey site numbers issued by the NJSM begin with 28. Field numbers begin with PE. Resources with field numbers do not meet the NJSM criteria for a site and were therefore not assigned a New Jersey site number.			

Please do not hesitate to contact me at (610) 832-2791 or grace.ziesing@aecom.com with any questions, comments, or concerns. Thank you in advance for your consideration of these materials.

Sincerely,
URS Corporation

Grace H. Ziesing
Senior Archaeologist

URS Corporation
437 High Street
Burlington, NJ 08016
Tel: 609.386.5444
Fax: 609.386.6994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County Rte 627
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28-Hu-573
PE-HU-028 001
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0.1
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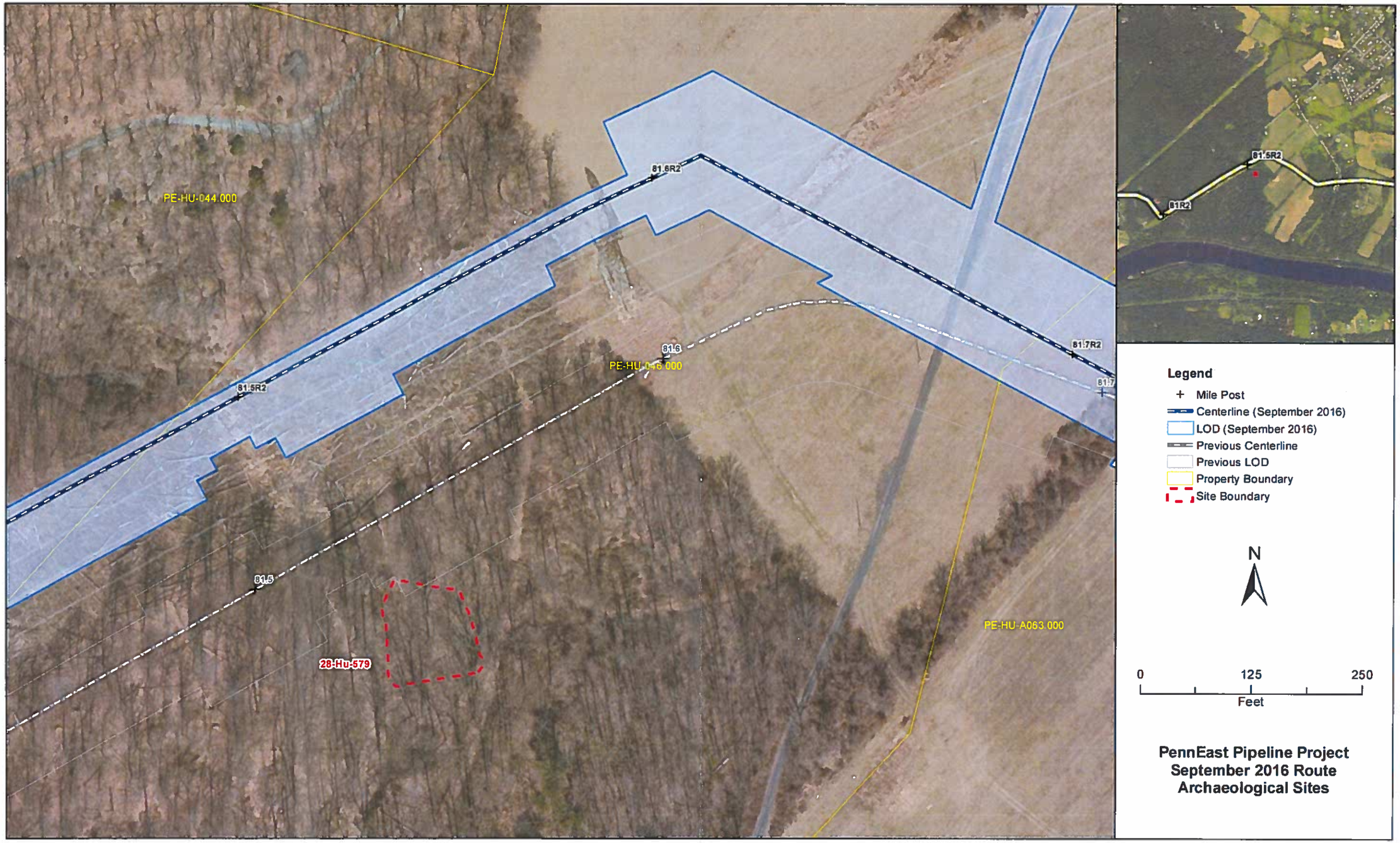
0.6R2
0.0
Jcpl
0.3R2
70R2
79.5R2
0R2
80R2
0.5R2
Legend
Mile Post
Centerline (September 2016)
LOD (September 2016)
Previous Centerline
Previous LOD
Property Boundary
Site Boundary
N
0
125
250
Feet
PennEast Pipeline Project
September 2016 Route
Archaeological Sites



Legend

- + Mile Post
- Centerline (September 2016)
- LOD (September 2016)
- Previous Centerline
- Previous LOD
- Property Boundary
- Site Boundary

N

0 125 250
Feet

PennEast Pipeline Project
September 2016 Route
Archaeological Sites

State of New Jersey

MAIL CODE 501-04B
DEPARTMENT OF ENVIRONMENTAL PROTECTION
NATURAL & HISTORIC RESOURCES
HISTORIC PRESERVATION OFFICE
P.O. Box 420
Trenton, NJ 08625-0420
TEL. (609) 984-0176 FAX (609) 984-0578

CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

BOB MARTIN
Commissioner

ORIGINAL

CONTAINS PRIVILEGED INFORMATION - DO NOT RELEASE

December 20, 2016

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First St., N.E.
Washington, D.C. 20426

Dear Ms. Bose:

As Deputy State Historic Preservation Officer for New Jersey, in accordance with 36 CFR Part 800: Protection of Historic Properties, as published in the *Federal Register* on December 12, 2000 (65 FR 77725-77739) and amended on July 6, 2004 (69 FR 40544-40555), I am providing continuing Consultation Comments for the following proposed undertaking:

Hunterdon and Mercer Counties
Phase I Archaeological Survey Report
Addendum 1: Survey Results, August 2015 through June 2016
Updated Archaeological Site Recommendations (September 2016 Route Update)
PennEast Pipeline Project
FERC Docket # CP15-558-000
Federal Energy Regulatory Commission

800.4 Identification of Historic Properties

The Historic Preservation Office (HPO) was recently provided with the opportunity to review and comment of the following addendum to the Phase I archaeological survey report, received at this office on August 26, 2016, for the above-referenced undertaking:

Ziesing, Grace H. Joseph Kwiatek, Jesse O. Walker, and Elisabeth LaVigne
2016 *Phase I Archaeological Survey Report, PennEast Pipeline Project, Hunterdon and Mercer Counties, New Jersey, Addendum 1: Survey Results, August 2015 through June 2016.* Prepared for PennEast Pipeline Company, LLC Wyomissing, Pennsylvania. Prepared by URS Corporation, Burlington, New Jersey.

According to the above-referenced report, subsequent to submittal of the initial Phase I archaeological survey report, access to properties that had previously been denied was granted. Additional investigations were conducted. This report documents Phase I archaeological survey for the preferred alignment filed

with FERC in February 2016 and current as of August 2016, addresses the HPO's comments issued for the original Phase I survey report, and provides updated information on sites recorded in that report resulting from additional survey and/or project design changes.

The Phase I addendum survey was conducted between August 2015 and June 2016, and was limited to portions of the study corridor where landowners had granted survey permission. Archaeological survey has been completed along approximately 14 miles of the proposed centerline in New Jersey, accounting for 35% of the total Project length and all of the centerline where survey permission had been granted as of the end of June 2016. Alignment changes postdating the original Phase I survey report resulted in the abandonment of some survey segments that had been completed such that the current survey represents a net increase in survey completion of only 3% of the overall project length.

Archaeological survey was conducted within a 400-foot study corridor (200 feet on either side of the proposed centerline) in order to accommodate minor shifts in design. The study corridor was modeled for archaeological sensitivity, and field-confirmed areas of high and moderate sensitivity were shovel tested at 49.2-foot (15-m) intervals. Areas of low sensitivity were shovel-tested at 98.4- foot (30-m) intervals, and steep areas were visually inspected and judgmentally tested. A total of 3,588 shovel tests were excavated within the current study corridor or in abandoned survey segments immediately adjacent to it, as documented in this report.

Based on consultation conducted to date, the report states that New Jersey and National Registers of Historic Places (NRHP) eligibility and treatment recommendations for all archaeological sites identified during the survey have been updated to reflect potential impacts associated with the current design. Nine archaeological sites have been recorded for the project to date, three of which were identified during the survey period covered by this report.

Site Updates

According to the report, five potentially eligible archaeological sites were identified in the original Phase I survey report. Evaluations and recommendations for each of those sites resulting from additional survey or project alignment adjustments were provided as follows:

28-HU-577

The report states that survey on parcel 1026-28-1.16, within site 28-Hu-577, and on parcel 1026-16-3, to its north, encountered additional quarry pits identical to those found within the site. Given the similarities and their proximity to one another, the boundary of the site has been adjusted to incorporate both areas. For the pits noted on parcel 1026-28-1.16, the boundary was extended to the west. The pits on parcel 1026-16-3 represent a discontiguous site locus. The main body of the site on the south side of Route 518 was designated Locus 1 and the small concentration of pits on the north side of the road was designated Locus 2.

According to the report, Locus 2 is at least 140 feet away from the survey-defined Limit of Disturbance (LOD) [the area of direct effects]. As a result, the report states that Locus 2 will be completely avoided, as per the *Proposed Guidelines for Avoidance and Protection of Archaeological Resources in New Jersey for the PennEast Pipeline Project (Guidelines)* included as Appendix D. URS therefore recommends no further work at Locus 2.

According to the report, the pipeline passes through Locus 1, however, and cannot be realigned to avoid the site. URS therefore recommends that a Phase II-level investigation be conducted within the LOD to determine if the site is eligible for listing on the New Jersey and National Registers of Historic Places. A

Phase II work plan was provided in the original Phase I survey report, but it has been revised as part of the addendum to address HPO comments. *The HPO concurs with this assessment. The HPO has reviewed the submitted Phase II work plan and finds it to be acceptable.*

28-HU-578

According to the report, this Native American lithic scatter is no longer located near any project activities and will not be affected by the current design of the undertaking. The site currently lies approximately one-quarter mile west of a portion of the pipeline that will be installed using a horizontal directional drill. Since the site is more than 50 feet away from the LOD, the report states that it will be completely avoided, as per the *Guidelines*, and URS therefore recommends no further work at this site. *The HPO concurs with this assessment. However if project plans change to include site 28-Hu-578 within the APE, further consultation with the HPO for the archaeological evaluation and treatment of site 28-Hu-578 will be necessary.*

28-HU-579

According to the report, this historic-period foundation and sparse artifact scatter is located at the southern edge of the 400- foot study corridor for the route filed with FERC in February 2016. The northern corner of the site is clipped by a workspace as currently designed. If the alignment does not change, the site will be within the LOD, but outside the permanent right of way, in which case the avoidance and protection measures outlined under Scenario 2 of the *Guidelines* will be implemented.

The report states that PennEast is currently developing plans, however, to avoid the site by moving the alignment further to the north, in which case the site will fall under Scenario 1 of the *Guidelines*. In either case, the site will not be impacted by the Project, and URS recommends no further archaeological work. The report states that a site-specific avoidance and protection plan will be developed for inclusion in construction documents once Project design is finalized.

Subsequent to submission of the Phase I addendum, the pipeline was rerouted around site 28-Hu-579. As a result, the report states that site 28-Hu-579 is outside of the APE for this undertaking. In light of this, URS recommends that no further archaeological investigations or avoidance measures are needed for site 28-Hu-579. *The HPO concurs with this assessment. However if project plans change to include site 28-Hu-579 within the APE, further consultation with the HPO for the archaeological evaluation and treatment of site 28-Hu-579 will be necessary.*

28-ME-386

According to the report, this historic-period artifact scatter is associated with the Joseph P. Blackwell Farm, which is eligible for listing on the New Jersey and National Registers of Historic Places under Criterion C. As presented in initial Phase I report (2015:294–304), the site extended into the LOD on the north side of the property's gravel driveway based on the presence of two positive shovel tests containing five artifacts with limited interpretive value. URS speculated that the artifacts on the north side of the driveway were likely displaced during driveway construction or maintenance. While there was a clear concentration close to the driveway's edge, the materials to the north of that—those within the LOD—were sparse and spatially distinct from the main body of the site to the south. URS argued that the portion of the site within the LOD was unlikely to contribute to the significance of the site and recommended no further work. NJHPO suggested that a better approach would be to exclude the shovel tests from the site since they were isolated from the main body of the site by the driveway and did not contain materials that contributed to the significance of the historic property. The report states that the site boundary has therefore been revised to include the series of positive shovel tests along the north side of the driveway,

but not the two shovel tests that extend into the LOD. As now configured, the site is outside the LOD, and URS recommends that the avoidance and protection measures outlined under Scenario 1 of the *Guidelines* be implemented. The report states that a site-specific avoidance and protection plan will be developed for inclusion in construction documents, once Project design is finalized. *The HPO concurs with this assessment and looks forward to further consultation regarding the treatment of archaeological site 28-Me-386.*

PE-ME35-S1

According to the report, the LOD for the current route alignment is approximately 200 feet east of the historic-period artifact scatter and therefore, the site will not be affected by the undertaking, as currently proposed. Since the site is more than 50 feet away from the LOD, it will be completely avoided as per the *Guidelines* and URS therefore recommends no further work at this site. *The HPO concurs with this assessment. However if project plans change to include site PE-ME35-S1 within the APE, further consultation with the HPO for the archaeological evaluation and treatment of site PE-ME35-S1will be necessary.*

Newly Identified Archaeological Sites

For the survey conducted between August 2015 and June 2016, thirteen new locations were positive for cultural materials. Of these, 10 may be characterized as isolated finds where no additional work is recommended. The three remaining positive locations were recorded as archaeological sites.

SITES 28-HU-573 (M. FRALEY HOUSE) AND 28-HU-574 (GENON SITE 1)

Two previously identified historic-period archaeological sites were located on Block 26, Lot 11: site 28-Hu-573 (M. Fraley House site) and site 28-Hu-574 (Genon Site 1). Phase I testing within and around the mapped locations of these sites resulted in the adjustment of their boundaries. Site 28-Hu-573 consists of multiple structural remnants and a large historic-period artifact scatter containing both structural and household components. Site 28-Hu-574 consists of a stone wall and a light density historic artifact scatter. Although both sites contain modern materials, artifacts from the least disturbed contexts suggest an occupation period of the mid-nineteenth century to the mid-twentieth century.

Historical research and map evidence indicates that both sites were part of a small farm originally built as early as 1810. Between 1843 and 1915 the farm was owned and occupied by three generations of the Fraley family. A second house may have been built on the property in the 1850s. The revised site boundaries overlaid on the 1969 plot plan shows two buildings within site 28-Hu-573 and four adjacent to site 28-Hu-574.

Site 28-Hu-573 encompasses the main house lot, with a house near the road and a barn and other outbuildings near the center of the site. According to the report, no subsurface features were identified during the Phase I testing, but the wooded portion of the site, between the two power line corridors, has the greatest potential to be intact. Dense artifact deposits (surface and subsurface) along the bordering drainages are likely the result of slopewash and/or post-occupation clearing activities, but occupation-period dumping episodes may also have occurred in these areas. The site offers a rare opportunity to trace the fortunes of a small farm across the eventful years of the nineteenth century, from the nascence of the industrial era, through the tumult of the civil war, into the modern consumer age at the turn of the twentieth century. And much of that journey can be explored through the lens of a single family, with a focus on how macroeconomic and social changes affected their consumer choices and their material world. As a result, the report recommends that due to the research opportunities site 28-Hu-573 may offer, it is potentially eligible for the New Jersey and National Registers of Historic Places.

According to the report, site 28-Hu-573 is located within and adjacent to the LOD and the permanent right of way for the current design of the undertaking. As such site 28-Hu-573 does not meet the criteria for avoidance or protection outlined in the *Guidelines.* The report states that PennEast is considering an alternative route that will avoid the site, but if impacts to the site cannot be avoided a Phase II, evaluation-level archaeological investigation is recommended. Based on the current design of the undertaking, a Phase II archaeological work plan for site 28-Hu-573 was included with the report as Appendix K of the addendum report. However, subsequent to submission of the Phase I addendum, the pipeline was rerouted around site 28-Hu-573 (M. Fraley House site). As a result, site 28-Hu-573 (M. Fraley House site) is outside of the APE. In light of this, URS recommends that no further archaeological investigations or avoidance measures are needed for site 28-Hu-573 (M. Fraley House site). *The HPO concurs with this assessment. However if project plans change to include site 28-Hu-573 (M. Fraley House site) within the APE, further consultation with the HPO for the archaeological evaluation and treatment of site 28-Hu-573 (M. Fraley House site) will be necessary.*

The report states that site 28-Hu-574 may be the remains of the second house built on the property in the 1850s. It appears to have been heavily disturbed by the construction of the valve station and its surrounding pad, at which time the two buildings on the east side of the Gilbert Generating Station access road shown on the 1969 plot plan were likely removed. According to the report, the site is located outside the LOD and therefore meets the avoidance criteria of *Guidelines* Scenario 1. URS recommends no further work archaeological work at the site, but since it is within 50 feet of the LOD, a site-specific avoidance and protection plan will be developed for inclusion in construction documents once the design of the undertaking is finalized. *The HPO concurs with this assessment.*

SITE 28-HU-583 (PE-HU143-S1)

According to the report, site 28-Hu-583 was composed of an abandoned domestic structure with an associated low density historical artifact scatter. It was identified during pedestrian survey and shovel testing of segment NJHu143 on the sparsely wooded eastern bank of a perennial stream. The site encompasses the northern half of the study corridor on tax parcel 1001-18-23 near MP 86.75.

The entire study corridor within tax parcel 1001-18-23 was excavated at a high probability 15-m interval on the pre-mapped survey grid. Initial survey identified a concentration of shovel tests positive for historical artifacts in the northern half of the study corridor surrounding the abandoned domestic structure. Starting from the south of the parcel and working north, an additional 22 judgmental shovel tests were excavated at a 7.5-m interval and aligned to the pre-mapped survey grid to determine a precise southern boundary for the site. The perennial stream bordered the site to the west. The report states that the site's artifact scatter likely extended outside of the study corridor to the north and possibly onto the parcel to the east, which was not accessible to surveyors.

Historical research and architectural evidence suggest that this site was occupied by at least 1823, if not earlier. Three generations of the Shuster family owned and occupied a farmstead on the property between 1823 and 1893, the type of long-term presence that provides the potential for archaeological deposits with the ability to address important research questions about social and cultural changes that occurred over the course of an eventful century in American history. The materials recovered from the site are of mixed contexts and include late twentieth-century artifacts, and therefore do not indicate the presence of archaeologically significant deposits. Given the potential age of the extant structure, however, additional intact deposits may be present.

The extant structure may have been an outbuilding associated with the building complex on the neighboring property to the east, which was historically part of the same parcel (the property has not yet

been surveyed due to lack of access). The pipeline passes through the southern end of the site as currently defined, and cannot be realigned to avoid the site. URS therefore recommends that a Phase II level investigation be conducted within the LOD for the project to determine if there are significant deposits that may be impacted during construction. Based on the current design of the undertaking, a Phase II archaeological work plan for site 28-Hu-583 was included with the report as Appendix K of the addendum report. *The HPO concurs with this assessment. The HPO has reviewed the submitted Phase II work plan and finds it to be acceptable.*

ISOLATED FIND PE-ME51-IF1

The report states that the discovery of an interesting artifact in a shovel test on the north side of County Route 632 in Hopewell Township, on parcel 1106-72-11, prompted additional research. The artifact is a 1772 Spanish half real minted in Mexico City. The coin was recovered from the Ap-horizon (within 26 cm of the surface) in shovel test NJMe51-B4. The find was located 160 feet east of site NJMe35-S1, and was confirmed to be an isolated occurrence through the excavation of eight negative radial shovel tests and a negative metal detection survey.

The obverse of the coin reads CARLOUS.III.DEI.GRATIA, and the reverse HISPAN.ET IND.R.Mo.M.F. The coin is 18 mm in diameter and weighs 1.69 grams. Even though the third digit of the year is illegible (only "17_2" can be discerned), the date identification of the coin is definitive. According to the report, the bust is Carlous III, and he ruled from 1759 to 1788, leaving three possible decades for the coin: 1762, 1772, or 1782. The mint mark and assayer mark are upside down, however, and this only occurred in 1772 and 1773 (CoinFacts Wiki 2012). The half real, as one-sixteenth of a dollar, would have traded in the United States for 6.5 cents.

According to the report, the Spanish Real was recovered from a shovel test within the study corridor, but well outside the LOD (40 feet) and even further from the permanent right of way (100 feet). Extensive subsurface testing and a metal detecting survey in the vicinity of the shovel test revealed no additional materials near this artifact. The report concludes the that the coin is therefore considered an isolated find not associated with an archaeological site. A sparse scatter of historic-period artifacts is located approximately 160 feet to the west of the isolated find, but as documented in the initial Phase I survey, the materials are likely field scatter resulting from manuring and plowing activities in the twentieth century. According to the report, the property was farmed since at least 1850 under Asa Hunt, but the location of the house lot appears to have been well to the east of this field.

Although the property was possibly owned by Captain John Hunt during the Revolutionary War, the report states that there is no clear evidence to suggest that it was used during the war to house troops, and Block 72 Lot 11 is only a small portion of Captains Hunt's land holdings. Although there was Revolutionary War-era activity in this area, there is no evidence that the coin was deposited during that period, and without archaeological context, no way to make that determination. URS recommends no further archaeological work at this location. *The HPO concurs with this assessment.*

Other Areas of Concern

SURVEY SEGMENT NJHU103

Survey segment NJHu103 begins at Rocktown Lambertville Road and follows a generally southern trajectory for approximately 0.13 miles, at which point it turns to the southwest and continues for another 0.05 miles before terminating at the western boundary of parcel 1026-17-4 (Figure 4.26). The segment is defined by gently sloping agricultural fields and a small wooded drainage/field break. An existing high voltage powerline corridor runs above the western edge of the study corridor, with a push pile along a

portion of it. A farm road elevated from the surrounding landscape cuts across the southern edge of the segment.

The survey strategy within this segment was modified from the standard methodology due to reports of possible unmarked burials in the area. Local historians contacted the HPO in April 2015 and reported that a "potters' field" was located on parcel 1026-17-4 based on a description in Sara Gallagher's 1903 book, *Early History of Lambertville New Jersey: 1703-1903*, which indicated the potters' field was located on a property sold to John Lilly in 1901. According to the report, a deed search revealed that Parcel 1026- 17-4 was not purchased by Lilly in or around 1901, however. At URS's request, the local historians provided the deed book and page number for the 1901 Lilly deed, which URS plotted, reaching the conclusion that the property Gallagher referenced in her Lambertville history is more likely on the east side of the Parcel 1026-17-5, encompassing modern parcels 1026-17-5-Q0188 and 1026-17-5, through which survey segment NJHu103 passes.

Gallagher references a gully that the burials were near, so the report states that it is likely the burials were well to the east of the project corridor, toward the bottom of the hill where there is currently a stock pond. To confirm that no burials are present within the project corridor, however, PennEast commissioned a ground penetrating radar (GPR) survey, after which URS conducted shovel testing at a 7.5-m interval. The initial GPR survey identified numerous potential anomalies at a depth of 3 feet (0.91 m) below ground surface. The URS Phase I survey contained a total of 585 excavated shovel tests in this segment. Shovel tests within these potential anomalies were classified as requiring deep testing and were excavated down to decaying bedrock. The report states that without exception, decaying bedrock was reached in all deep tests before achieving the GPR anomaly depth of 3 feet, and no evidence of burials was uncovered. *The HPO concurs with this assessment.*

Guidelines for Avoidance and Protection of Archaeological Resources

According to the plan, opportunities for site avoidance have been built into the archaeological survey program. Along the alignment of the pipeline, URS is surveying a 400-foot study corridor—at least 150 feet wider than most planned construction impacts—in order to provide PennEast the ability to adjust the alignment and/or the workspaces to avoid archaeological sites that are identified during survey. URS is also providing full survey of all off-alignment workspaces and proposed access routes to inform Project designers of archaeological site locations. This will provide PennEast with an opportunity to redesign its Project activities and facilitate site avoidance.

PennEast and URS are proposing to treat all archaeological sites as though they are potentially eligible for listing in the New Jersey and National Registers of Historic Places. Only potentially eligible sites outside the permanent right-of-way (ROW) and within 50 feet of the LOD will be considered candidates for avoidance/protection measures. Sites more than 50 feet away from the LOD will not require protection measures. Sites within the ROW will require evaluation for New Jersey and National Registers of Historic Places eligibility. In some cases, such a determination may be possible at the Phase I level of survey; other cases will require Phase II level investigation. PennEast and URS, in consultation with FERC and the HPO, will determine the need for Phase II studies on a case-by-case basis.

Protection and avoidance will follow one of four scenarios:

- Sites outside the LOD will be avoided during construction.
- Sites within the LOD but outside the Permanent ROW will be protected during construction if the following conditions are met:
    - Construction impacts are limited to surface rutting and compaction that can be minimized by the use of surface protection measures such as matting.

  - The sites do not contain aboveground elements such as stone walls or foundations.
- Sites along a Trenchless Pipe Installation path will not be impacted during construction if they are outside the entry or exit pit locations and if the pipe is at sufficient depth to avoid them. In these cases, measures addressed in the plan will be adopted to minimize the effects of unanticipated trenchless pipe installation failure.
- Sites within Wareyards or Staging Areas will be avoided during construction if the site location can be isolated from the work area or will be protected if grading at the site location is not required. If the site cannot be avoided, surface rutting and compaction can be minimized by using surface protections such as matting. Tree removal impacts can be minimized by restricting removal to hand-cutting at ground level with no stump grubbing. Wareyards or Staging Areas that have been temporarily leased from landowners are not subject to future impact by pipeline maintenance activities and no further protection measures are needed. Sites within Wareyards and Staging Areas that have been acquired by PennEast may require additional protections, as detailed in the plan.

During construction, PennEast will employ an Environmental Inspector (EI) and/or an Archaeological Inspector (AI) to ensure that the avoidance and protection measures stipulated in the site-specific plans are documented and adhered to and that inadvertent damage to sites is prevented, minimized, and immediately reported. AIs will be selectively used in highly sensitive areas, as determined in consultation with the HPO. PennEast and URS will develop and implement a cultural resources training program for EIs prior to construction. *The HPO concurs with these recommendations for avoidance. The HPO looks forward to further consultation regarding the identification, evaluation, and treatment of archaeological historic properties.*

Additional Comments

Thank you for providing the opportunity to review and comment on the potential for the above-referenced project to affect historic properties. Please reference HPO project number 14-4462 in any future calls, emails, submissions or written correspondence to help expedite your review and response. If you have any questions, please feel free to contact Jesse West-Rosenthal (609-984-6019) of my staff with questions regarding archaeology or Michelle Craren (609-292-0032) with questions regarding historic architecture.

Sincerely,

Katherine J. Marcopul

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