

ENVIRONMENTAL ASSESSMENT
FOR THE
NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF FISH AND WILDLIFE'S
COMMUNITY ARCHERY PARK

Submitted by:

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Table of Contents

Section No.	Title	Page No.
1.0	Purpose and Need for Action	1
1.1	Background	1
1.2	Siting Considerations	2
1.3	Laws, Directives and Goals	2
1.4	Issues, Concerns and Opportunities	3
2.0	Public Scoping	4
3.0	Alternatives	4
3.1	Alternative Site Analysis Criteria	4
3.2	Alternative Site Descriptions	5
3.3	Alternative Site Analysis	7
3.4	Preferred Alternative	8
3.5	Site Design Alternatives	8
4.0	Affected Environment	8
4.1	Existing Conditions	8
4.2	Public Access	9
4.3	Available Acreage and Compatible Land Use	9
4.4	Recreational Use Conflicts	9
4.5	Preservation/ Planning Areas	10
4.6	Vegetation/Habitat Disturbance	10
4.7	Wetlands and Vernal Pools	10
4.8	Threatened, Endangered and Rare Species	11
4.9	Historic and Cultural Resources	11
4.10	Topography	11
4.11	Streams and Flood Plains	11
4.12	Soil	12
4.13	Sewer Service Area	12
5.0	Environmental Consequences	13
5.1	No Action	12

5.2 Black River WMA, Chester Township, Morris County 13

5.3 Berkshire Valley WMA, Roxbury Township, Morris County 13

5.4 Rockaway Creek WMA, Readington Township, Hunterdon County 13

5.5 Environmental Impacts 14

5.6 Environmental Impact Summary 14

6.0 Conclusions and Recommendations..... 16

Table of Contents (continued)

<u>Figure</u>	<u>Title</u>
1	Activity Review Form (ARF)
2	Boundary Survey Prepared by Bohren and Bohren Associates, Inc.
3	Readington Township Tax Map
4	Readington Township Zoning Map, 2009
5	GeoWeb/GIS Sewer Service Map
6	USDA NRCS Soil Map
7	GeoWeb/GIS Freshwater Wetlands Map
8	GeoWeb/GIS Vernal Pools and Habitat Map
9	GeoWeb/GIS Landscape Project 3.0 Streams Map
10	FEMA Flood Insurance Rate Map
11	List of Potential Threatened, Endangered, & Species of Greatest Concern
12	USGS Raritan Quadrangle Map
13	GeoWeb/GIS National Heritage Map
14	Transportation Corridor Map
15	Proximity to Schools Map
16	Qualifications of Preparer

<u>Appendix</u>	<u>Title</u>
1	Captioned Photographs
2	Letter Report Prepared by Richard Grubb & Associates, Inc.

1.0 Purpose and Need for Action:

The New Jersey Division of Fish and Wildlife, hereafter Division, has commissioned LAN Associates, Engineering, Planning, Architecture, Surveying, Inc. (LAN) to conduct an environmental assessment of potential impacts related to the Division's need to develop a regional Community Archery Park for the purpose of providing enhanced bow hunter education programs and recreational archery shooting opportunities to the general public. The Division currently does not own or operate a dedicated facility for bow hunter education and recreational archery shooting programs.

The Division, as part of its Wildlife Management Area system, owns and manages twelve outdoor archery ranges. The Division currently has no dedicated indoor archery facility available to the public nor do all of the Division's existing outdoor ranges have covered shooting stations or classrooms associated with them. As a consequence, the Division must suspend bow hunter education programs during the winter months, November through March, because inclement weather precludes hunter education staff from offering practical live-fire exercises on uncovered ranges. The same holds true for recreational archers who wish to improve their marksmanship skills. The lack of a dedicated indoor and outdoor shooting facility limits the ability of the Division to meet hunter education and recreational shooting demand.

The Division recognizes the importance and benefit of participating in the National Archery in the Schools Program (NASP). New Jersey is a participating member in NASP and is seeking to expand participation in program from fourteen to one hundred schools. A study conducted by the Archery Trades Association in 2011 found that making archery and archery programs more accessible in metropolitan areas had the potential for producing higher returns in participation for every dollar programs invested. The development of a Community Archery Park will meet the Division of Fish and Wildlife's need for action to increase participation in the NASP program.

The Division receives substantial funding for its activities through the Federal Aid in Wildlife Restoration Program. Program funds are generated through the collection of excise taxes on firearms, ammunition, and archery equipment by hunters and recreational shooters. In recognition of the user-pay/user-benefit nature of the program the Division of Fish and Wildlife believes it is appropriate to enhance opportunities for bow hunter education and archery related recreation by developing two dedicated year round indoor/outdoor Community Archery Parks in the northern and southern regions of the state.

1.1 Background

The education and training of bow hunters in New Jersey began in 1958 with the passage of Public Law 23:3-7.1 which requires the Division to provide instruction to new hunters in bow and arrow safety and proficiency before obtaining their initial bow and arrow hunting license. The Division recognizes the importance of bow hunting in achieving wildlife management objectives in the most densely populated state in the country and the cultural and economic contributions hunters have made to New Jersey's bow hunting tradition.

The Division further recognizes the role recreational archery shooting opportunities and the National Archery in the Schools Program plays in increasing participation in archery related activities. Since 2008 the Division of Fish and Wildlife has enrolled 50 schools in NASP. Over ten thousand students participate in NASP annually, and consistent with the amendment to The Federal Aid in Wildlife Restoration Act, the Division has used federal funds to develop and enhance archery education and safety programs and archery training ranges.

1.2 Siting Considerations

The need for a Community Archery Park located in northern New Jersey has been established above. The Community Archery Park will be located on property under the administration of the Division where there will be no conflict with established fish and wildlife activities and where impacts to fish and wildlife populations and habitats will be minimized. The range facilities will be regionally located to maximize exposure of archery programs to the greatest number of public schools within a sixty minute drive of the proposed project site and near major transportation corridors to provide hunters and the general public from large population centers easy access to archery shooting opportunities. The site shall be at least thirty two acres in size and within a developable region that will accommodate the scope of the Community Archery Park project. The counties of primary interest in the northern region of New Jersey are Hunterdon and Morris.

1.3 Laws, Directives and Goals

State law requires new bow hunters must receive training and safety instruction prior to licensure. The purpose and need for the proposed Community Archery Park is consistent with the interest and regulatory responsibility of the New Jersey Division of Fish and Wildlife to provide training and recreational shooting opportunities to the general public. The following is a list of goals the proposed project wishes to accomplish:

1. To provide a safe functional facility with indoor archery ranges and classroom/storage space for year round and walk-in bow hunter education instruction.
2. To provide a safe and functional indoor archery facility for year round public recreational shooting opportunities, archery equipment safety programs, and other live-fire events.
3. To provide a safe functional 90 meter outdoor archery field course and 3-D course that permits bow hunter education field instruction and long range recreational and competitive shooting opportunities.
4. To provide classroom and office space that will support the Division's goal of increasing NASP participation by 30 schools and 3000 students per year.
5. To provide a location for outreach programs that promote bow hunter education, increases public awareness of the benefits of bow hunting and introduces new participants to the benefits of target and recreational archery shooting.
6. To develop public/private partnerships to support the development, operations, and maintenance of the Community Archery Park.

1.4 Issues, Concerns and Opportunities

Provide a facility to address the needs of the public that is consistent with the laws, directives and goals above.

A proposed facility site will be deemed suitable based on the following characteristics:

- **Ownership-** Property on which facility will be sited must be under ownership and administration of the New Jersey Division of Fish and Wildlife
- **Proximity to Schools-** Facility must be sited within sixty minute drive of 500 or more public schools to maximize exposure to DFW's NASP program

- **Public Access-** Proximity to major roads & population centers- The project site should be located near a transportation corridor affording the general public the most convenient accessibility to the facility.
- **Preservation/Planning Areas-** The proposed site should be located on property that is easily developed and not subject to the regulatory framework of preservation or planning areas.
- **Available Acreage & Compatible Land Use-** The project site should be at least thirty two acres in size and be situated at least ½ mile from schools and residential dwellings.
- **Risk of Recreation Use Conflicts-** The site should be located on property where interference with other types of fish and wildlife activities will be minimized.
- **Vegetation/Habitat Disturbance-** The site should be located on previously modified property that requires minimal excavation, vegetation removal, or habitat disturbance.
- **Wetlands and Transition Areas-** The site should be located away from wetland areas.
- **Threatened & Endangered Species-** The project site should be located on property with a low likelihood of threatened or endangered species presence.
- **Historic & Archeological Resources-** The project site should be located on property that has cultural or historical significance.
- **Topography-**The project site should be located on flat to gently rolling terrain.
- **Streams and Riparian Areas-** The project site should be located away from stream and riparian areas.
- **Soil Classification-** The project site should be located on property with well-drained soil types
- **Sewer Service Availability-** Location of project site within an area served by public sewer system would be preferable.

Following the completion of the regional feasibility studies and environmental assessments, the Division, working through the NJ Department of Environmental Protection's Office of Engineering and Construction, will contract with a professional engineer to develop facility and site plan designs for the selected locations for the Community Archery Parks. During this phase the Division will seek out and enter into agreements with other public and private entities for maintenance and operational support. The Division has already approached potential partners that have expressed strong interest in contributing to the development, operation, and maintenance of the Complex.

After selection of a facility and site design that will meet the stated objectives and goals of this project, the Division, working through the NJ Department of Environmental Protection's Office of Engineering and Construction, will contract with a professional construction company to build a facility approximately 15,000-25,000 square feet in size. The facility will include space for an indoor archery range, approximately 25 meters long, with eight to ten shooting lanes, a multi-purpose/classroom, office space for Division and partner group personnel, storage space and lavatory facilities. The contractor will develop an archery field course, approximately 90 meters in length, and a 3-D target course.

The Community Archery Park should be able to meet the goals listed above in Section 1.3.

2.0 **Public Scoping:**

The Division of Fish and Wildlife will post the Community Archery Park Environmental Assessment to the Division's website for view prior to any scheduled public meeting. Following a period of not less than thirty days, the Division will schedule one public meeting to accept oral and written comments from the general public on the proposed Community Archery Park project. The meeting will be held at the Division's Pequest Natural Resource Education Center which is regionally located near the three proposed project sites of Berkshire Valley WMA (17.36 miles), Black River WMA (15.08 miles), and Rockaway Creek WMA (19.69 miles). Notice of the public meeting will be advertised in the Star Ledger, New Jersey's largest newspaper, which circulates in all areas near the three proposed project sites.

3.0 **Alternatives:**

For the purpose of this report a total of three (3) sites were selected and analyzed based on their location and potential to support the proposed project. All sites analyzed are Wildlife Management Areas (WMA) owned by the State of New Jersey and administered by the Division of Fish and Wildlife's Bureau of Land Management. Each site was selected by the NJDEP and provided to LAN for inclusion in the analysis.

A no-action alternative was also considered as part of the analysis. A selection of the no-action alternative would not support the development of a facility for hunter education. Furthermore, a no-action alternative would not support the development of safe and responsible hunter behavior and good marksmanship skills. Therefore, the no-action alternative was dismissed from further consideration because it does not address any of the needs described above.

3.1 **Alternative Site Analysis Criteria:**

The criteria established for site analysis and evaluation was determined based on the issues outlined in section 1.4 above. Following site specific analysis, these criteria will serve as a basis for ranking the feasibility of each site to support the proposed development.

CRITERIA

Ownership

- **Good-** publically owned and administered by the NJ Fish and Wildlife
- **Poor-** private or public ownership and not under administration of NJ Fish and Wildlife

Proximity to Schools

- **Good-** one hour drive or less from 500 or more schools
- **Poor-** greater than one hour drive from 500 or more schools

Public Access

- **Good-** three or more highways or interstates within five miles of proposed site
- **Poor-** less than three highways or interstates within five miles of site.

Preservation/Planning Area

- **Good-** outside Highlands Preservation Area
- **Poor-** within Highlands Preservation Area

Available Acreage and Compatible Land Use

- **Good-** area necessary to safely conduct activities associated with this facility, thirty two acres, situated greater than ½ mile from schools and residential properties

- **Poor-** situated within ½ mile of residential properties and/or schools, inadequate area to safely conduct activities, less than thirty two acres

Recreational Use Conflict

- **Good-** low risk of interference with Fish and Wildlife Activities at site
- **Poor-** high risk of interference with Fish and Wildlife Activities at site

Vegetation/Habitat Disturbance

- **Good-** recently cleared, devoid of mature trees, modified/fallow agricultural land
- **Poor-** mature forest, sensitive plant species

Wetlands and Vernal Pools

- **Good-** project area located outside wetland or vernal pool areas
- **Poor-** project area located within wetland or vernal pool areas

Threatened and Endangered Species

- **Good-** no significant ecological features
- **Poor-** presence of special concern, threatened and/or endangered species

Historic and Archeological Resources

- **Good-** no or low sensitivity for prehistoric and/or historic archeological resources
- **Poor-** moderate to high sensitivity for prehistoric and/or historic resources

Topography

- **Good-** relatively level to gently sloping
- **Poor-** steep slopes, rock outcrops

Streams and Flood Plains

- **Good-** project area located away from streams and outside flood plains
- **Poor-** project area located near streams and/or within flood plains

Soil Classification

- **Good-** well drained soils
- **Poor-** poorly drained soils

Sewer Service Area

- **Good-** located within a sewer service area (SSA) as shown on the NJDEP iMap.
- **Poor-** located outside a sewer service area (SSA) as shown on the NJDEP iMap.

3.2 Alternative Site Descriptions

Alternative A – No Action

As described in section 3.0, the no-action alternative was deemed to be non-responsive to the needs of hunters and the general public and was dismissed from further consideration.

Alternative B – Black River WMA, Chester Township, Morris County

In 2007-2008, the NJDEP explored the possibility of constructing a Community Archery Park at Black River WMA, a state owned facility operated by the NJ Division of Fish and Wildlife. The Black River WMA is located 2.6 miles east of US Highway 206 and 5 miles south of US Highway 46 within a sixty minute drive of 1,133 public schools that would provide 619,215 students with access to archery and bow hunter education programs.

Encompassing approximately 3,080 acres, the Black River WMA is part of the Division's Wildlife Management Area system and is open to the general public for hunting and fishing related activities. The WMA is stocked with pheasants during November and December to enhance small game hunting opportunities. Wildlife viewing and hiking is also permitted on the property. In addition, Black River offers for public use a hunter training range which includes outdoor handgun and shotgun ranges as well as an outdoor archery range. There is a moderate risk that the Community Archery Park would impact existing activities.

Located in the Highlands Preservation Area, the Black River WMA is comprised primarily of forested and emergent wetlands, streams, modified agricultural fields and upland mixed hardwood forest. The proposed project site consists of fallow agricultural fields, with well drained soils, that slope from northwest to southeast resulting in little disturbance to wildlife habitat. Significant excavation would be required to develop the site. Wetlands are present along the southeast border of the proposed project location, and development in this section of the Highlands Preservation Area will require additional permits and approval from the New Jersey Department of Environmental Protection (NJDEP).

According to Version 3 of the New Jersey Landscape Project, developed by the New Jersey Division of Fish and Wildlife's Non-Game and Endangered Species program, the proposed site is valued for such species as the Wood Turtle (state threatened), Barred Owl (state threatened), Red-Shouldered Hawk (state endangered), and Veery (special concern). The Natural Heritage Grid created by NJDEP did not identify any rare plant species or rare ecological communities at the proposed project site.

According to NJDEP's historic/archeological grid, there are no historically or culturally significant resources located near the proposed project site. The proposed project site is not located in a sewer service area and construction of a facility at this location would require installation of a septic field.

Alternative C – Berkshire Valley WMA, Roxbury Township, Morris County

The proposed site under consideration for Alternative C is situated along Howard Boulevard in Roxbury Township, Morris County and is part of the Berkshire Valley Wildlife Management Area. Berkshire Valley WMA is owned and maintained by NJ DFW and is located .75 miles north of Interstate Route 80, 2.05 miles north of US Highway 46, and 4.36 miles from US Highway 206. The proposed site is within a sixty minute drive of 1,065 schools that would provide 575,796 students with access to archery and bow hunter education programs.

As part of the NJ DFW Wildlife Management Area system, the Berkshire Valley WMA comprises 2,030 acres and is open to the general public for hunting and fishing related activities. Berkshire Valley is stocked with pheasants during November and December to enhance small game hunting opportunities. Other permitted activities include wildlife viewing and hiking.

Located in the Highlands Preservation Area, the Berkshire Valley WMA consists of steep slopes and rock outcroppings. The habitat found on the WMA is primarily comprised of mature mixed hardwood forest and wetlands. The proposed project site is located along Howard Boulevard adjacent to an existing gravel parking lot in a well-drained undisturbed area with mature trees. Existing habitat would be impacted as a significant number of trees would need to be removed to prepare the site for construction. Development in this section of the Highlands Preservation Area will require additional permits and approval from the NJDEP.

According to Version 3 of the New Jersey Landscape Project, developed by the New Jersey Division of Fish and Wildlife's Non-Game and Endangered Species program, the proposed site is valued for such species as the Indiana Bat (federally listed), Barred Owl (state threatened), and Red Shouldered Hawk (state endangered). The Natural Heritage Grid created by NJDEP did not identify any rare plant species or rare ecological communities at the proposed project site.

According to NJDEP's historic/archeological grid, the proposed project site falls within a cell indicating the presence of an archaeological site that may be included in the New Jersey or National Registers of Historic Places, has been determined eligible for inclusion through federal or state processes administered by the New Jersey Historic Preservation Office (HPO), or has been identified through a cultural resource survey or other documentation on file at the HPO. According to a Sewer Service Area GIS layer created by NJDEP, the proposed project site is located in a no discharge area.

Alternative D – South Branch WMA, Rockaway Creek Section, Readington Township, Hunterdon County

The proposed site under consideration for Alternative D is located in Readington Township, Hunterdon County on a 228 acre tract of land known as Rockaway Creek section, hereafter Rockaway Creek, of the South Branch Wildlife Management Area system. Rockaway Creek is conveniently located .5 miles north of US Highway 22, 2.1 miles south of Interstate Route 78, 5.2 miles north of US Highway 202, and 4.8 miles west of Interstate Route 287. The proposed site is located within a sixty minute drive of 1,295 schools providing 710,061 students with access to archery and bow hunter education programs.

Hunting and fishing opportunities at the proposed site are limited. The property is used primarily by deer hunters, and although small game hunting opportunities exist, the proposed site is not included in the Division's pheasant stocking program. There are no hiking trails or wildlife viewing stations located on the property.

Located in the Piedmont region of New Jersey, and within an agricultural/residential zoning district, the proposed site is characterized as a previously working farm interspersed with fallow agricultural fields and small woodlots. Rockaway Creek is not encumbered by wetlands or suitable habitat for any federally listed threatened or endangered species. Topography in the fallow agricultural field is relatively level and it is anticipated that soil disturbance associated with grading activities would be minimal compared to the alternatives. There is an existing gravel road for access to the interior of the property, and although currently disconnected, power lines are present along the roadway.

3.3 Alternative Site Analysis

Criteria	Alternative A No-Action	Alternative B Black River WMA	Alternative C Berkshire Valley WMA	Alternative D Rockaway Creek
Ownership	No-Action	Good	Good	Good
Proximity to Schools	No-Action	Good	Good	Good
Public Access	No-Action	Poor	Good	Good
Highlands Area	No-Action	Poor	Poor	Good
Available Acreage & Compatible Land Use	No-Action	Good	Good	Good
Recreational Use Conflict	No-Action	Poor	Poor	Good
Vegetation/Habitat Disturbance	No-Action	Good	Poor	Good

Wetlands & Vernal Pools	No-Action	Poor	Poor	Good
Threatened & Endangered Species	No-Action	Poor	Poor	Poor
Historic & Archeological Resources	No-Action	Good	Poor	Good
Streams & Flood Plains	No-Action	Poor	Good	Good
Soil Classification	No-Action	Good	Good	Poor
Sewer Service Areas	No-Action	Poor	Poor	Good

3.4 Preferred Alternative

The preferred alternative (Alternative D) achieved a rank of “Good” for eleven (11) of the thirteen (13) site analysis criteria. This location, Rockaway Creek appears to be the most feasible and least likely location to incur adverse environmental impacts from this development.

3.5 Site Design Alternatives

Alternatives to locating the improvements at the Rockaway Creek WMA include no action, development of the facility at the Black River WMA and development of the facility at the Berkshire Valley WMA. Based on the results of the alternative site analysis above the Rockaway Creek WMA is the most suitable location for the Community Archery Park.

4.0 Affected Environment:

As described in the alternatives analysis above, the preferred site is Rockaway Creek WMA. This section of the report will focus on the existing conditions present at the site including its environmental characteristics.

As part of the research process LAN utilized the NJDEP’s GeoWeb interactive Geographic Information System (GIS) to obtain a variety of information about the subject parcel. The information acquired includes but is not limited to mapped wetland areas, regulated streams, sewer service availability maps and other land use characteristics encumbering the project area.

The GeoWeb has also incorporated the Landscape Project Version 3.0 layers into its system which provide information on the presence or absence of suitable habitat for endangered, threatened or species of special concern. All information obtained from this GIS source will be referenced as GeoWeb.

4.1 Existing Conditions

The subject parcel, referred to as Rockaway Creek, is owned by the NJDEP and managed and maintained by the NJ Division of Fish and Wildlife. The parcel, part of the larger South Branch WMA system, contains approximately 228 acres and is comprised of three tax lots located in Readington Township, Hunterdon County, New Jersey and is subject to Green Acres encumbrance. A copy of a boundary survey entitled “Survey of Land for Readington Township Block 15, Lots 5, 27 & 29” prepared by Bohren and Bohren Associates, Inc. dated November 21, 2003 last revised July 25, 2005 is included as Figure 2 for reference. A copy of the Readington Township tax map is included as Figure 3 for reference. According to the Readington Township Zoning Map (see Figure 4) the parcel is located within an Agricultural Residential (AR) zone.

The parcel is bordered on the south by existing commercial properties and U.S. Route 22, on the east by an existing golf course, on the west by commercial and agricultural land and on the north by the Rockaway Creek and Lamington River.

The property can be accessed via a paved and dirt driveway off of the westbound side of U.S. Route 22 located approximately 2,500 feet east of the intersection with Island Road. The site has an existing electrical service from a utility pole on the north side of U.S. Route 22. Additional utility poles are stationed along the access drive into the site. However at the time of LAN's site visit the electrical service had been shut off due to line damage incurred during an October winter storm.

The indoor archery range, classroom building, and outdoor archery event fields, identified as Site A, will be located on the project area in a portion of the subject parcel located primarily within a fallow agricultural field to the east of the access drive approximately 1,000 feet north of Route 22. An old wood frame paddock approximately 3,600 square feet (sf) exists in the northwest corner of the agricultural field.

The 3-D bow hunter education competitive archery field course will be located approximately 2,800 feet north of Route 22 within a portion of Block 15 Lot 29, identified as Site B, is approximately eighty acres in size of which fifty eight are wooded and twenty two are fallow.

4.2 Public Access

Rockaway Creek WMA can be accessed from the westbound lane of U.S. Route 22, located approximately 2,500 feet east of the intersection of Island Road. The project area can be accessed via a paved and dirt driveway and is located to the east of the drive in a fallow agricultural field approximately 1,000 feet north of Route 22.

This parcel is ideally located within 2.1 miles of Interstate Route 78, 5.2 miles of US Highway 202, and 4.8 miles of Interstate Route 287. This location is within a sixty minute drive of the general public living completely in or portions of 14 counties in the state of New Jersey. The proposed site would provide 710,061 students from 1,295 schools access the archery related activities.

The indoor facility will be open all year and accessible to all persons for archery related and bow hunter education programs. The practical component of the bow hunter education course will be offered year round on a walk-in basis offering the general public increased opportunity to participate in bow hunter education programs.

4.3 Available Acreage and Compatible Land Use

The existing cleared fallow agricultural field contains approximately 12 acres of land and is within the proposed project area. An approximate 600 foot wooded buffer exists between the proposed project area and the adjacent property boundary. This amount of land is sufficient to safely conduct the proposed activities based on the current plan of development.

The 80 acre parcel selected for Site B has ample room to conduct 3-D archery activities. Approximately 15-20 acres will be required to develop Site B.

In addition the project area is not located within ½ mile of any residential properties or schools.

4.4 Recreational Use Conflicts

The proposed site currently offers limited hunting opportunities. The site is primarily used by deer hunters and the size of the proposed site keeps hunter density at a minimum. As stated

previously, Rockaway Creek is not included in the Division's pheasant stocking program and as such there is a low risk of conflict with existing activities.

4.5 Preservation/Planning Areas

The Highlands Water Protection and Planning Act N.J.A.C. 7:38, established rules which regulate activities within the Highlands Preservation Area. The Act also includes provisions for the protection of the Highlands Planning Area however conformance with the Planning Area regulations is voluntary and dependent on the county or municipality to revise their master plans to be in conformance with the Highlands Regional Master Plan.

As per GeoWeb, the parcel and project area are located outside both the Highlands Protection and Planning Areas.

4.6 Vegetation/Habitat Disturbance

The fallow agricultural field located within the project area is outlined by a post and wire fence along its perimeter and is dominated by herbaceous vegetation including grasses, sedges and wildflowers. A few autumn olive (*Elaeagnus umbellata*) and multiflora rose (*Rosa multiflora*) shrubs are scattered throughout the field.

The wooded area is dominated by both hard and softwood tree species. Dominant hardwood species include sassafras (*Sassafras albidum*) and red maple (*Acer rubrum*). Some pin oak (*Quercus palustris*) and white oak (*Quercus alba*) are interspersed throughout the wooded area. The dominant softwood species is eastern red cedar (*Juniperus virginiana*) and can be found throughout the wooded area. A few white pine (*Pinus strobus*) are present along the forest edges. The understory of the forested area is not well developed and consists primarily of wine raspberry (*Rubus phoenicolasius*) along the forest margins and also within the forest where the canopy is open.

The Natural Heritage Grid Map layer on GeoWeb was also searched for the presence or absence of rare plant communities near the project area. Figure 13 is a GeoWeb produced map which includes the documented locations of rare plant community grids within 1.5 miles of the project area. The project area does not intersect with any documented location of rare plant communities as shown per GeoWeb.

4.7 Wetlands and Vernal Pools

According to GeoWeb, wetlands are present within a wooded area to the southeast of the agricultural field (see Figure 7). The same map shows a thin wetland area generally reaching in an easterly/westerly direction located throughout the southern portion of the wooded area. A smaller wetland area is depicted in the westerly portion of the wooded area located near the midpoint of the westerly boundary line of lot 5. Each of these wetland areas are referred to as deciduous wooded wetlands according to NJDEP's GeoWeb.

Additional wetland areas are shown within the parcel limits to the north in the area of the proposed project site where the 3-D course would be. Any disturbance in this area would be relegated to removal of only that vegetation which is necessary to insure the safety of the shooters on the course including, but not limited to, low hanging branches, deadfalls and low shrubby growth. Effort will be made to avoid riparian buffers along the boundary of the designated wetlands and any development of walking trails between the shooting stations will be constructed of pervious materials such as wood chips.

The wetland area nearest the project area not described above is approximately 500 feet north from the northeasterly corner of the agricultural field. Disturbance to any of these wetlands

and/or their associated transition areas would be regulated by the NJDEP's Freshwater Wetlands Protection Act Rules N.J.A.C. 7:7A.

The parcel was also searched for the presence or absence of vernal habitat area or potential vernal habitat area. Figure 8 is a copy of the parcel and surrounding neighborhood which includes potential vernal habitat per the NJDEP's GeoWeb Landscape Project 3.0 Vernal Habitat layer. As shown on the map a potential vernal habitat area exists approximately 1,500 feet northwest of the northwestern most corner of the project area.

4.8 Threatened, Endangered and Rare Species

As mentioned above, LAN has received a list of potential threatened, endangered and special concern non-game species that may be found at the subject site from Mr. Robert Longcor, NJDFW. Figure 11 is a copy of this document. According to the document there are no species of concern in the project area as shown on the NJDEP's GeoWeb Landscape Project Version 3.0. LAN also performed research of GeoWeb files and concurs with these results. According to the document the most recent Species Occurrence Area file was also searched. This search revealed that the project area intersects with one (1) Upland Sandpiper (NJ State Endangered) breeding sighting, four (4) Great Blue Heron (NJ Special Concern) foraging and one (1) Eastern Box Turtle (NJ Special Concern) occupied habitat.

4.9 Historic and Cultural Resources

LAN commissioned Richard Grubb & Associates, Inc. to perform an archaeological screening of the project area. Appendix 2 is a copy of the complete letter report prepared by Richard Grubb & Associates, Inc. dated December 23, 2011.

The conclusion of this report indicates that no known archaeological constraints were identified during background research. The project area was assessed as having a moderate sensitivity for prehistoric resources and a low to moderate sensitivity for historic resources (Paul J. McEachen, MA, RPA, Richard Grubb & Associates, Inc., Archaeological Screening Report, December 23, 2011).

4.10 Topography

The project area is generally located at a high point which is situated on a large terrace in the landscape. Topography in the project area is relatively flat and slopes gently downhill to the northwest and southeast. Figure 12 is a copy of the USGS Raritan Quadrangle map with both the parcel boundary and project area indicated.

4.11 Streams and Flood Plains

Two (2) streams traverse the northern boundary of the parcel and are commonly referred to as the Rockaway Creek and the Lamington River. The Lamington River is considered Category One water by the NJDEP whereas the Rockaway Creek is not. Category One waters receive the greatest level of protection under the NJDEP's Flood Hazard Area Control Act Rules N.J.A.C. 7:13 which governs disturbance to the waterway and/or its associated riparian zone. Although the Rockaway Creek is a tributary to the Lamington River, it is not located within the same sub-watershed hydrologic unit code (HUC) as the Lamington River and would not be afforded the same level of protection.

Both streams are a considerable distance away from the project area. The portion of the project area nearest either of these streams is in the northwest corner of lot 5 which is located approximately 2,000 feet south of the Rockaway Creek. However, an unnamed tributary to the Rockaway Creek is located approximately 300 feet west of the midpoint of the westerly boundary line of lot 5. Figure 9 includes a copy of the parcel and surrounding neighborhood which includes

the streams described above per the NJDEP's GeoWeb Landscape Project 3.0 Streams layer. Disturbance to any of these streams and/or their riparian zones would be governed by the Flood Hazard Area Control Act Rules N.J.A.C. 7:13.

According to the National Flood Insurance Program, Flood Insurance Rate Map prepared by the Federal Emergency Management Agency (FEMA) a floodplain associated with the Rockaway Creek and Lamington River exists in the northern portion of the property (see Figure 10). Although the floodway extends onto the parcel it is located a considerable distance away from the project area. The portion of the project area nearest the floodplain is the northwest corner of the agricultural field which is located approximately 2,400 feet south of the 100 year flood boundary.

4.12 Soil

The United States Department of Agriculture (USDA) National Resources Conservation Service (NRCS) Soil Map for Hunterdon County indicates 3 mapping units present on the site. A copy of the Soil Map including a rough site outline is included in this report as Figure 6. The mapping units indicated for the site are (LbtB) Lansdowne silt loam, 2 to 6 percent slopes, (NotB) Norton loam, 2 to 6 percent slopes and (NotC2) Norton loam, 6 to 12 percent slopes, eroded. A brief description and typical profile of the mapping units is provided below.

(LbtB) Lansdowne silt loam

The drainage class of the Lansdowne series is considered somewhat poorly drained. The parent material consists of fine-loamy till derived from sandstone and shale over residuum weathered from sandstone and shale. Below is a typical soil profile for this soil group:

0 to 7 inches	Silt loam
7 to 13 inches	Silt loam
13 to 45 inches	Silty clay
45 to 60 inches	Stratified sandy loam to channery silty clay
60 to 157 inches	Weathered bedrock

(NotB) Norton loam, 2 to 6 percent slopes

The drainage class of the Norton series is considered well drained. The parent material consists of red fine-silty till and/or colluvium. Below is a typical soil profile for this soil group:

0 to 10 inches	Loam
10 to 14 inches	Silty clay loam
14 to 24 inches	Silty clay loam
24 to 44 inches	Silty clay loam
44 to 63 inches	Silty clay loam
63 to 70 inches	Channery loam
70 to 157 inches	Weathered bedrock

(NotC2) Norton loam, 6 to 12 percent slopes, eroded

The drainage class of the Norton series is considered well drained. The parent material consists of red fine-silty till and/or colluvium. Below is a typical soil profile for this soil group:

0 to 8 inches	Loam
8 to 13 inches	Loam

13 to 19 inches	Silt loam
19 to 76 inches	Silty clay loam
76 to 83 inches	Channery loam
83 to 157 inches	Weathered bedrock

4.13 Sewer Service Area

Sewer service area (SSA) mapping shows the planned method of wastewater disposal for specific areas such as whether wastewater will be sent to a treatment facility or treated onsite and disposed of via groundwater or surface discharge. Land areas not specifically mapped as an SSA default to individual subsurface disposal systems discharging less than 2,000 gallons per day (gpd) as long as site conditions and existing regulations allow. The designation of an area being within an SSA is used to determine consistency with the Water Quality Management (WQM) Planning rules N.J.A.C. 7:15.

Based on the SSA layer in GeoWeb a portion of the project area is located within an SSA (see Figure 5). The SSA boundary appears to coincide with the Townships Research-Office-Manufacturing (RO) zoning district.

5.0 Environmental Consequences:

5.1 No Action

The no action alternative would exclude any develop of a facility at the selected site. As described in section 3.0, the no-action alternative was deemed to be non-responsive to the needs of hunters and the general public and was dismissed from further consideration.

5.2 Black River WMA, Chester Township, Morris County

This site was considered to contain moderate to high sensitivity for prehistoric resources and a high sensitivity for historic archaeological resources. The proximity of wetlands and streams to the project area may limit the amount of useable land onsite. In addition if this site were selected, the proposed project would be considered a major Highlands development and would be subject to the regulations set forth in the Highlands Water Protection and Planning Act N.J.A.C. 7:38.

5.3 Berkshire Valley WMA, Roxbury Township, Morris County

The portion of Berkshire Valley WMA selected for consideration as a potential project area consists of steep slopes, rock-outcrops, mature forest, suitable habitat for federally listed species and at least one known vernal pool. Although already owned by the State, this site would be costly to develop as it would involve clearing large areas of mature forest and significant grading to accomplish the goals of the Community Archery Park. In addition if this site were selected, the proposed project would be considered a major Highlands development and would be subject to the regulations set forth in the Highlands Water Protection and Planning Act N.J.A.C. 7:38.

5.4 Rockaway Creek WMA, Readington Township, Hunterdon County

The Rockaway Creek WMA is ideally located with direct access to a major transportation corridor. The site includes an existing access drive, is adequate in acreage and is not encumbered by wetlands or suitable habitat for any federally listed threatened or endangered species. Topography in the fallow agricultural field is relatively level and it is anticipated that soil disturbance associated with grading activities would be minimal compared to the alternatives. In addition, this site is not encumbered by the rules set forth in the Highlands Water Protection and Planning Act N.J.A.C. 7:38 as it is located outside the Highlands Area entirely.

Site Plan Design Considerations

Based upon the needs described in section 1, the goals stated in section 1.3, and the affected environment discussed in section 4, the Division of Fish and Wildlife has identified two potential locations for the indoor archery range/classroom building, Site A, and bow hunter education/recreational shooting 3-D field course, Site B.

Site A will be located within Block 15 Lot 27 in a fallow field approximately 12 acres in size. A structure approximately 15,000-25,000 square feet in size, with a west facing orientation, will be developed at the site with associated parking for 200 cars, sanitary disposal and water supply facilities. The structure will include space for an indoor archery range, approximately 70 meters long, with ten shooting lanes, a multi-purpose/classroom, office space for Division and partner group personnel, storage space and lavatory facilities.

The project will also develop three outdoor ranges, with an east facing orientation, directly behind the indoor range/classroom facility. The outdoor range component of the project will include a youth /community field ninety meters long by thirty meters wide, with ten shooting lanes, a practice field ninety meters long by sixty six meters wide, with twenty two shooting lanes, and an event field ninety meters long by eighty meters wide, with twenty shooting lanes. All shooting fields will have a pervious grass surface. A safety zone of ten meters, extending out to twenty meters, will be created between the three outdoor ranges.

Site B will be developed within Block 15 Lot 29 an area comprised of fifty eight wooded acres and twenty two fallow field acres. The 3-D bow hunter education/competitive archery field course will consist of fourteen stations ranging from thirty to eighty yards in length. The field course layout will follow a design template created by Easton Foundations that considers the archer's view of the target. The site design will provide thirty five meters of clear space behind the target and twenty meters of clear space at each side of the target at a maximum distance of seventy two meters. Terrain and natural features will be used to enhance safety zones as well as provide target situations that could be encountered in the field. Trail construction will attempt to minimize flooding and erosion.

The existing access drive will need to be rehabilitated. In its current condition the drive consists of many ruts and depressions which will require leveling and possibly the installation of gravel and pavement.

5.5 Environmental Impacts

Land Use

The proposed project area will not be located near any existing residences or schools and will not compromise any existing anthropogenic use of the land. The proposed facility would be consistent with the existing use of the land as a wildlife management area open to licensed hunting and fishing. Approximately fourteen (14) percent or thirty two (32) +/- acres of the existing parcel will be utilized as part of the proposed project.

Vegetation

Vegetation removal associated with the 3D target course in the forested area will be minimal and will likely consist of removing existing dead wood to protect the users of the course.

As described in section 4.6, vegetation in the fallow agricultural field consists primarily of successional herbaceous growth. Disturbance of this vegetation will be the minimum necessary to construct the facility and related utilities. It is also anticipated that some of the development will occur within the footprint of the existing 3,600 +/- s.f. paddock structure therefore further minimizing the disturbance of vegetation.

Threatened, Endangered and Rare Species

According to GeoWeb the project area is not deemed suitable habitat for any threatened, endangered or rare species. Furthermore the most recent Species Occurrence Area (SOA) file did not indicate an occurrence of any federally listed species at the site. The SOA file did reveal that the site intersects with one (1) Upland Sandpiper (NJ State Endangered) breeding sighting, four (4) Great Blue Heron (NJ Special Concern) foraging and one (1) Eastern Box Turtle (NJ Special Concern) occupied habitat. It is anticipated that the project can be completed without adversely affecting any of these species or their habitat.

Historic and Cultural Resources

As discussed in section 4.9, LAN commissioned Richard Grubb & Associates, Inc. to perform an archaeological screening of the project area. See Appendix 2 for a complete copy of their letter report dated December 23, 2011.

The conclusion of this report indicates that no known archaeological constraints were identified during background research. The project area was assessed as having a moderate sensitivity for prehistoric resources and a low to moderate sensitivity for historic resources. The conclusion of this report further states that, additional work could be necessary to fulfill the requirements of Section 106 of the National Historic Preservation Act, as amended, and state and municipal regulations (Paul J. McEachen, MA, RPA, Richard Grubb & Associates, Inc., Archaeological Screening Report, December 23, 2011).

Given the majority of disturbance will be located within a previously disturbed agricultural field LAN anticipates that the proposed project can be accomplished with adversely affecting historic or cultural resources. However, as mentioned above additional investigations may be necessary to satisfy current regulations.

Wetlands and Vernal Pools

As mentioned in section 4.7, wetlands are present within the wooded area as shown on the GeoWeb wetlands layer. Disturbance to these wetlands or their transition areas is not expected. However, the official limits and resource classification of freshwater wetlands is established through a Letter of Interpretation or General Permit application to the NJDEP. Although disturbance is not anticipated it is likely that the extent of wetland areas near the project area will need to be verified by the NJDEP prior to any site improvements.

As per GeoWeb, a vernal pool is present approximately 1,500 feet northwest of the project area. No disturbance to vernal pools is anticipated.

Streams and Floodplains

No streams or floodplains will be disturbed as part of this project.

Prime Farmlands/Croplands

The proposed project will not impact any prime farm or crop lands.

Highlands Preservation Area

The project area is not located within the Highlands Preservation or Planning Area.

Soils

Soils in the majority of the project area are considered somewhat poorly drained. If a subsurface disposal system is utilized for the disposal of wastewater the system will have to meet the Readington Township Board of Health requirements as well as the appropriate state requirements.

Soil disturbance will be kept to the minimum necessary to adequately develop the site. Project specific soil erosion and sediment control standards will be a requirement of permit approval and therefore will not have an adverse impact on local waterways or drainage systems.

5.6 Summary of Environmental Impacts

Impact Type	Alternative A No Action	Alternative B Black River WMA	Alternative C Berkshire Valley WMA	Alternative D Rockaway Creek
Land Use	No Impact	Change to non-agricultural use	Change to non-agricultural use	Change to non-agricultural use
Vegetation	No Impact	minor negative impact	major negative impact	minor negative impact
Thr/End/Can Species	No Impact	Moderate Value for T&E species	High Value for T&E species	Low Value for T&E species
Historic/Cultural Resources	No Impact	moderate sensitivity	high sensitivity	moderate sensitivity
Wetlands and Vernal Pools	No Impact	minor negative impact	no impact	minor negative impact
Streams and FloodPlains	No Impact	no impact	no impact	no impact
Prime Farmlands/Croplands	No Impact	no impact	no impact	no impact
Highlands Preservation Area	No Impact	high impact	high impact	no impact
Soils	No Impact	moderate risk of adverse effects due to excavation	high risk risk of adverse effects due to excavation	low risk of adverse effects due to excavation

6.0 Conclusion and Recommendations:

Based on LAN's research, environmental impacts associated with the construction of the Community Archery Park at the preferred location will be minimal compared to the alternatives. Given the existing conditions, location and current land use, the Rockaway Creek WMA appears to be the most suitable location for this project in the northern region.

LAN strongly recommends delineating and having the NJDEP verify the location of wetlands onsite early in the planning stages to establish the limits of any regulated areas. LAN also recommends performing soil investigations early in the planning stages to determine the capacity of the existing soil to support wastewater disposal.

The qualifications of the preparer are included as Figure 16.

Natural & Historic Resources Land Management Policy
Activity Review Form (ARF)

Reminder: All procedural information can be downloaded from the NHR Land Management Policy website accessed via **DEPNet**.

THIS FORM IS TO BE USED FOR THE SUBMISSION OF A PROPOSED ACTIVITY FOR REVIEW UNDER THE NHR LAND MANAGEMENT (LM) POLICY.

Note: Every activity to be conducted on State lands administered by DPF or DFW is to be submitted for review UNLESS the Land Manager determines that:

- (1) Pursuant to the procedures in Appendix III, Part A, the activity is not subject to review; or
- (2) Pursuant to the additional screening procedures in Appendix III, Part B, given the location of the project site, there is no reviewing program to which the activity should be submitted.

Review of a proposed project under the LM Policy does not substitute or relieve responsibility for submitting the project for any other required reviews or for obtaining any required permits or approvals.

Step 1: Complete the following in the copy of this form that you have saved:

TYPE ONLY IN THE GRAY AREAS. If you need more space, continue typing and the gray area will expand to accept your entry. Use the **TAB** key to advance to the next entry on the form.

Land Manager	Name: Miriam Dunne	Title: Northern Region Habitat Biologist
	E-Mail Address: miriam.dunne@dep.state.nj.us	Phone: 908-637-4125
	Program: SPS <input type="checkbox"/> SFS <input type="checkbox"/> SFFS <input type="checkbox"/> ONLM <input type="checkbox"/> BLM <input checked="" type="checkbox"/> ENSP <input type="checkbox"/> GA <input type="checkbox"/> Other <input type="checkbox"/> (specify) _____	
Proposed Project	State Land where the activity is to occur (primary): South Branch WMA -- Rt 22 Readington	
	Other State Lands (if any) included in <u>this</u> project submission: 1. _____ 2. _____ 3. _____ 4. _____	
	Project Name: (4 words or less) <u>Archery Park</u> _____ (Examples: "Yellow Trail Maintenance," "Greenbriar Enduro," "Oswego Lake Herbicide Treatment")	
	Will any portion of proposed activity occur on a State designated Natural Area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unsure Natural Area Name:	
	Is this project being submitted as a 5 Year Plan ? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <small>If yes, please follow review guidelines in Appendices I and IV for 5-year submittals. Once all reviews are completed forward all materials to your Division Director (DD) for final approval. You are required to wait for DD approval before proceeding with activity.</small>	
	Project Start Date(mo./day/yr.): <u>7 1 2011</u> Project End Date(mo./day/yr.): <u>6 1 2014</u> <small>(Note: If exact dates are unknown, you <u>must</u> still provide a reasonable estimate of project start & end dates (day, month, year); this period should generally not exceed one year unless the submission is a five-year plan.)</small>	
PROJECT DESCRIPTION GUIDE	On the following page, describe in detail all aspects of the project. Please read Appendix I (Guide to Exempt Activities) in its entirety; it will assist you in identifying some of the project details that are of concern to the reviewing programs.	
	<p><u>Some examples of details to include:</u></p> <ul style="list-style-type: none"> Is this a new activity or a recurring activity related to maintenance, stewardship, agricultural practices, etc? Is this activity occurring in new or an established location or is the footprint of the activity being expanded or modified? Will there be major ground disturbance or minor soil disturbance? Any vegetation or tree removal? Describe the type, level, and location of these disturbances and equipment/tools to be used. Will there be direct impacts to vegetation, trees, or wildlife habitat <u>outside</u> the main project site? (e.g., resulting from the widening of roads/trails leading to site, creation of a staging area for the project, etc.) If this is a recurring activity provide detailed history and time line of activity for each site (e.g., conducted annually; within last 3, 5, 8 years; between March 15th & Nov. 15th, etc). 	

PROJECT DETAILS	(type in the gray area below and if you need more space, continue typing and text will spill over to another page.) To advance to the next section select the "tab" key .
Description: The archery park will include the construction of a small building, parking area and 3D archery target trail. The parking area and building will be sited close to Rt. 22 on the southern half of the polygon in existing fields. Some existing buildings will also be used. The 3D archery trail will consist of minimally constructed wood chip lined trails through wooded areas. Wetlands will be avoided completely for construction activities. The building and parking area will be developed by the Office of Resource Development. ORD can be contacted for a site plan.	

Step 2: Provide site information and maps:

Site	Number of sites submitted in this review: Note: each site must be carefully located & drawn as a point, line, or polygon on the accompanying map(s).	<input checked="" type="checkbox"/> Only one (1) site submitted <input type="checkbox"/> More than one: _____ (give number)
-------------	---	--

Maps must be submitted with an ARF. Provide information below on the maps you are submitting. (Find instructions for creating maps via the "Mapping" link on the "NHR Land Management Policy" website, available under the "Programs & Units" tab on the homepage of DEPNet, the Department's intranet.)

Maps	Type of Map(s) To Be Submitted:	Details on Map Submittal:
	<input checked="" type="checkbox"/> Option 1 (GIS Shapefile) →	(Check one) <input checked="" type="checkbox"/> Hand digitized shapefile <input type="checkbox"/> Shapefile generated from GPS file(s) Make & Model of GPS unit used _____ (Ex.: Garmin GPSMAP 60CSx, Trimble Recon GPS XB) Name of GPS/GIS software used to generate shapefile _____ (Ex.: DNR_Garmin, GPS Pathfinder Office)
<input type="checkbox"/> Option 2 (GPS File) →	<input type="checkbox"/> "GPS Data Collection Form" attached	
<input type="checkbox"/> Option 3 (Electronic Map Files) →	Locator Map(s): (number submitted) _____ Detailed Site Map(s): (number submitted) _____	
<input type="checkbox"/> Option 4 (Maps on Paper) →	Locator Map(s): (number submitted) _____ Detailed Site Map(s): (number submitted) _____	

Step 3: Identify Reviewing Programs:

Follow these general steps to identify which programs should review the proposed project:

Appendix III, Part B details the procedure.

- i. CD Screening Tool
 - carefully locate the project site(s) on the Screening Tool; click on data layers specific to each reviewing program to determine if any portion of the project intersects with these data layers (i.e., if any "hits" occur).
 - provide the results in **Section A** of the table below.
- ii. Additional **Cultural Resource** Screen
 - the screening procedure requires an activity to be submitted to HPO whenever the activity may impact a building > 50 years old or if it involves ground disturbance regardless of GIS Screening Tool results.
 - in **Section B** indicate which cultural criteria, if any, apply to your project.
- iii. Land Manager Judgment
 - Land manager may request a review even if the activity is exempt from review or there are "no hits" on CD Screening Tool.
- iv. Select Reviewing Programs
 - after considering all the above criteria, **in Section C** identify which programs should review this project.

Reviewing Programs	A	Indicate whether or not all or part of the project area was highlighted on the CD Screening Tool. Please fill in this section completely, otherwise the ARF will be considered incomplete and returned.				
		ENSP	ONLM	HPO	SFS	SFFS
		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
	B	HPO criteria: Activity may impact building(s) > 50 years old <input type="checkbox"/> Activity involves ground disturbance <input checked="" type="checkbox"/>				
	C	Indicate which reviewing program should be sent this activity for review. Please fill in this section otherwise, the ARF will be considered incomplete and returned.				
		ENSP	ONLM	HPO	SFS	SFFS
	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No	


Step 4: Provide submittal information:

ARFs must be submitted electronically as email attachments.

Submittal	This ARF is being submitted electronically on DATE: <u>3/24/2011</u>	
	(Check one)	<input checked="" type="checkbox"/> All accompanying map(s)/information are being submitted <u>electronically</u> . <input type="checkbox"/> Maps or other accompanying information are being submitted <u>on paper</u> .

Step 5: Submit ARF:

Follow these steps to submit your ARF:

- i. Save the entries you have made on this ARF and close the file.
- ii. Open a new email and in the "Mail to:" dialogue box that opens:
 - On the "To:" line, enter the address of the LM Review Coordinator (gail.kenny@dep.state.nj.us)
 - On the "Subject:" line, enter "LM Submittal".
- iii. Attach the Word file containing your ARF to this email, as follows:
 - From the toolbar in the "Mail to:" dialogue box select the "Attach" button 
 - In the "Attach File" box that appears, navigate to the directory location where you have saved the ARF as a Word document
 - Highlight the Word file and then click the "OK" button. The ARF file will appear as a Word icon at the bottom of the "Mail to:" dialogue box.
- iv. If you are submitting your map information electronically, similarly attach your map file(s); if you are submitting your map information on paper, do so in accordance with the instructions in the Detailed Guidance for "Option 4: Submit Maps on Paper" found via the "Mapping" link on the "NHR Land Management Policy" website, available under the "Programs & Units" tab on the homepage of DEPNet, the Department's intranet.
- v. Also, if applicable, attach any other electronic files with supplementary information or forms to be submitted with the ARF.
- vi. Then press the "Send" button on the toolbar on in the "Mail to:" dialogue box to submit your ARF.

Note: Do NOT submit any information by fax; faxes are not sufficiently legible.

This section reserved for use by LM Review Coordinator:

Upon receipt of a LM submittal the LM Review Coordinator will:

- i. Assess the submittal for completeness and adequacy; and return if incomplete or inadequate;
- ii. Verify any shapefiles submitted; or convert any maps submitted in another format to shapefiles;
- iii. Assign a Project ID# to the submittal and rename project files incorporating the ID# (Example: 10-020arf.doc);
- iv. Enter the project in the Interim Registry; and upload ARF, shapefiles, and any supplementary information provided electronically with LM submittal to Document Library;
- v. Determine if the activity qualifies for any program-specific review exemptions;
- vi. Initiate case-by-case project review by forwarding the renamed ARF and associated files to appropriate Reviewing Programs; and document transmittal in Interim Registry; and
- vii. Notify the Land Manager via email of the assigned Project ID# and new file names, program-specific review exemptions (if any), and the reviewing program to which the submittal was forward for case-by case review and the date of this transmittal.

Review Initiation	Date(s) LM submittal received from Land Manager:	3/24/11 <input checked="" type="checkbox"/> Incomplete <input type="checkbox"/> Complete 3/31/11 <input type="checkbox"/> Incomplete <input checked="" type="checkbox"/> Complete _____ <input type="checkbox"/> Incomplete <input type="checkbox"/> Complete
	<input checked="" type="checkbox"/> Project ID# generated and added to project file names: #11-026	
	Program-specific review exemption(s) per Appendix VI: Case-by-case reviewing programs: ENSP <input type="checkbox"/> ONLM <input type="checkbox"/> HPO <input checked="" type="checkbox"/> SFS <input checked="" type="checkbox"/> SFFS <input checked="" type="checkbox"/> Comments: See 11-026.pdf and comments below. Note that the construction site plan was initially created for Black River WMA.	
	Date LM submittal forwarded electronically for case-by-case review: 3/31/11 Additional paper materials forwarded to reviewing programs: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
	Additional Comments: Comments from Paul Ritter, FW: The plan that was started for Black River. The proposed archery building/office will disturb approximately a 100ft. x 200ft. area. This is somewhat larger than originally planned as there is now a need to expand the building slightly to accommodate more shooters and possibly other activities such as basketball/indoor sports. Outside the main building the outdoor field ranges we will require approximately 12 acres of field, this does not include the 3-D range area that will be set on the property located to the left of the main entrance and will be accessible by a wood chipped walkway through the wooded area. There will not be a need to remove any existing mature trees from this area.	

This section for use by Reviewers:

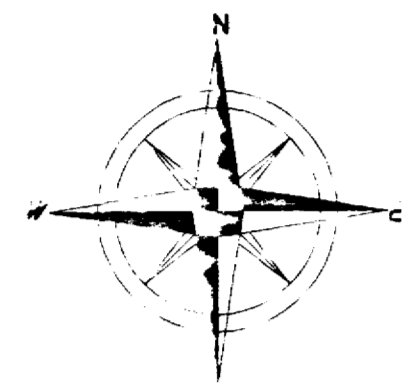
A reviewer will document his/her review in the ARF forwarded by the LM Review Coordinator, as follows:

- i. Open the ARF file (it will be one of the attachments to the forwarded "LM submittal" email and will be named as follows: [project ID#] + [arf.doc] (Example: 10-005arf.doc).
- ii. Save a copy of the ARF, naming the file in which you save your copy as follows: [project ID#] + [your program acronym] (Examples: 10-005 ENSP.doc, 09-173 ONLM.doc).
- iii. After completing your review of the ARF and its associated files, document your review by filling in the table below in your saved copy of the ARF and, if applicable, providing comments. Then re-save your file to save your entries.
- iv. Open a new email and in the "Mail to:" dialogue box that opens:
 - On the "To:" line, enter the email address of the Land Manager who submitted the ARF
 - On the Copy line ("CC:"), enter the address of the LM Review Coordinator: gail.kenny@dep.state.nj.us
 - On the "Subject:" line, enter "LM Review".
- v. Attach the ARF containing your review.
- vi. If you are providing comments separately, other than any provided in the Comment Section below, either: - include them as another attachment to the email; or
- inform the Land Manager in the email ("Message:") how you are transmitting the comments.
- vii. Send the email; this will complete your review.

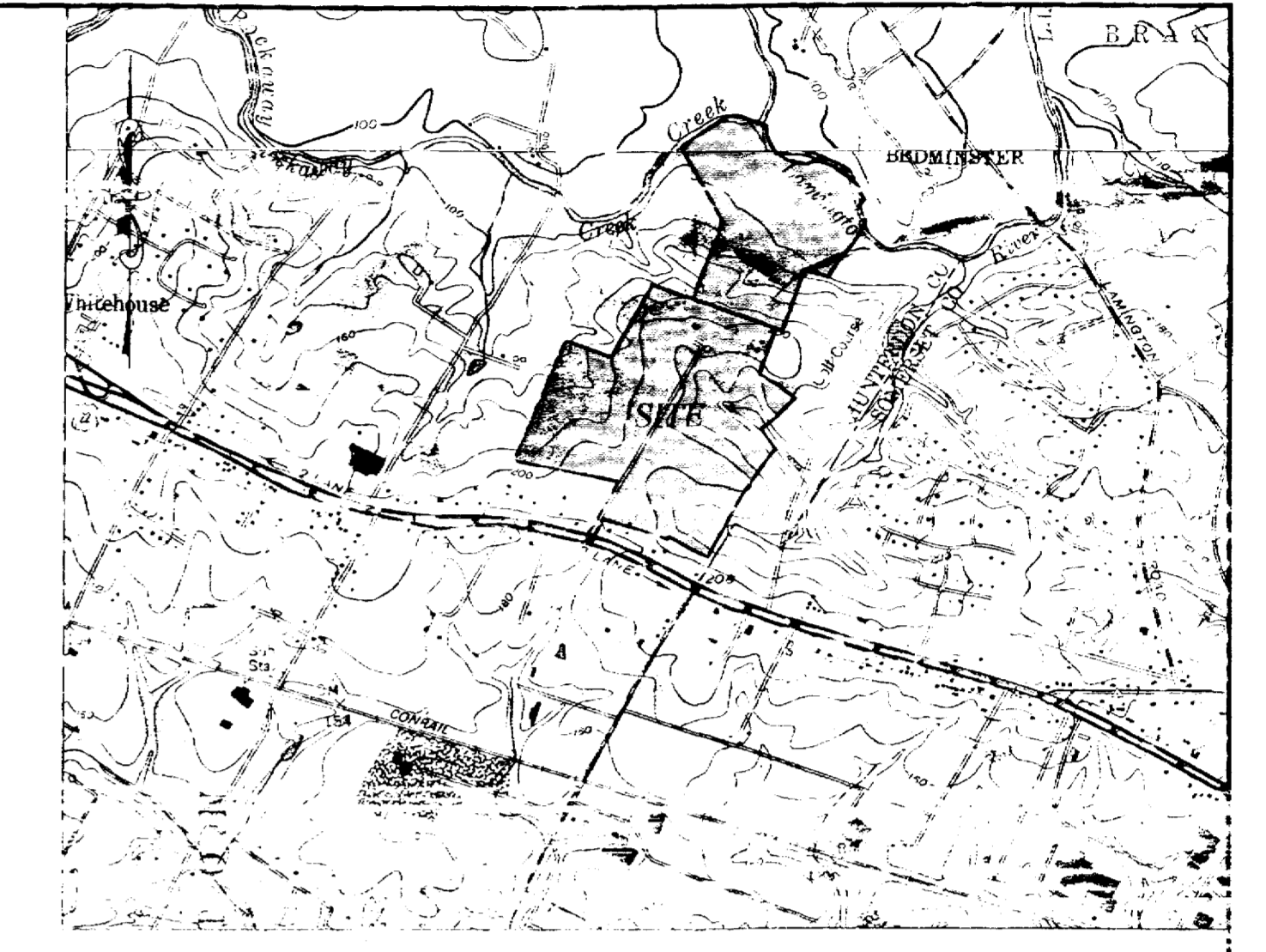
Review Documentation	Reviewing Program: ENSP <input type="checkbox"/> ONLM <input type="checkbox"/> HPO <input type="checkbox"/> SFS <input type="checkbox"/> SFFS <input checked="" type="checkbox"/> Other <input type="checkbox"/> (specify) _____	
	Reviewer's Name: MDrake Review Date: 4/18/11	
	(Check One)	<input checked="" type="checkbox"/> This review pertains to the <u>entire</u> geographic extent of submitted project. <input type="checkbox"/> This review pertains to only a <u>portion</u> of the geographic extent of submitted project; remaining project area to be reviewed by other staff in this reviewing program.
	<input checked="" type="checkbox"/> Detailed Review Conducted	Results: Does proposed activity have potential for adverse impact on resources? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes If a reviewer finds that a proposed activity may have adverse impacts ("yes" checked above), on the next page the reviewer MUST provide comments to the Land Manager; otherwise reviewer comments are optional.
<input type="checkbox"/> No Detailed Review Conducted	<input type="checkbox"/> No review conducted because project qualifies for program-specific review exemption per Appendix VI; explanation provided in comment section below. or <input type="checkbox"/> No review conducted; explanation provided in comment section below.	

Comments provided?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes →	If "yes" check one: <input type="checkbox"/> Provided below <input type="checkbox"/> Provided separately as e-mail attachment <input type="checkbox"/> Provided separately on paper
Reserved for reviewer's comments:		

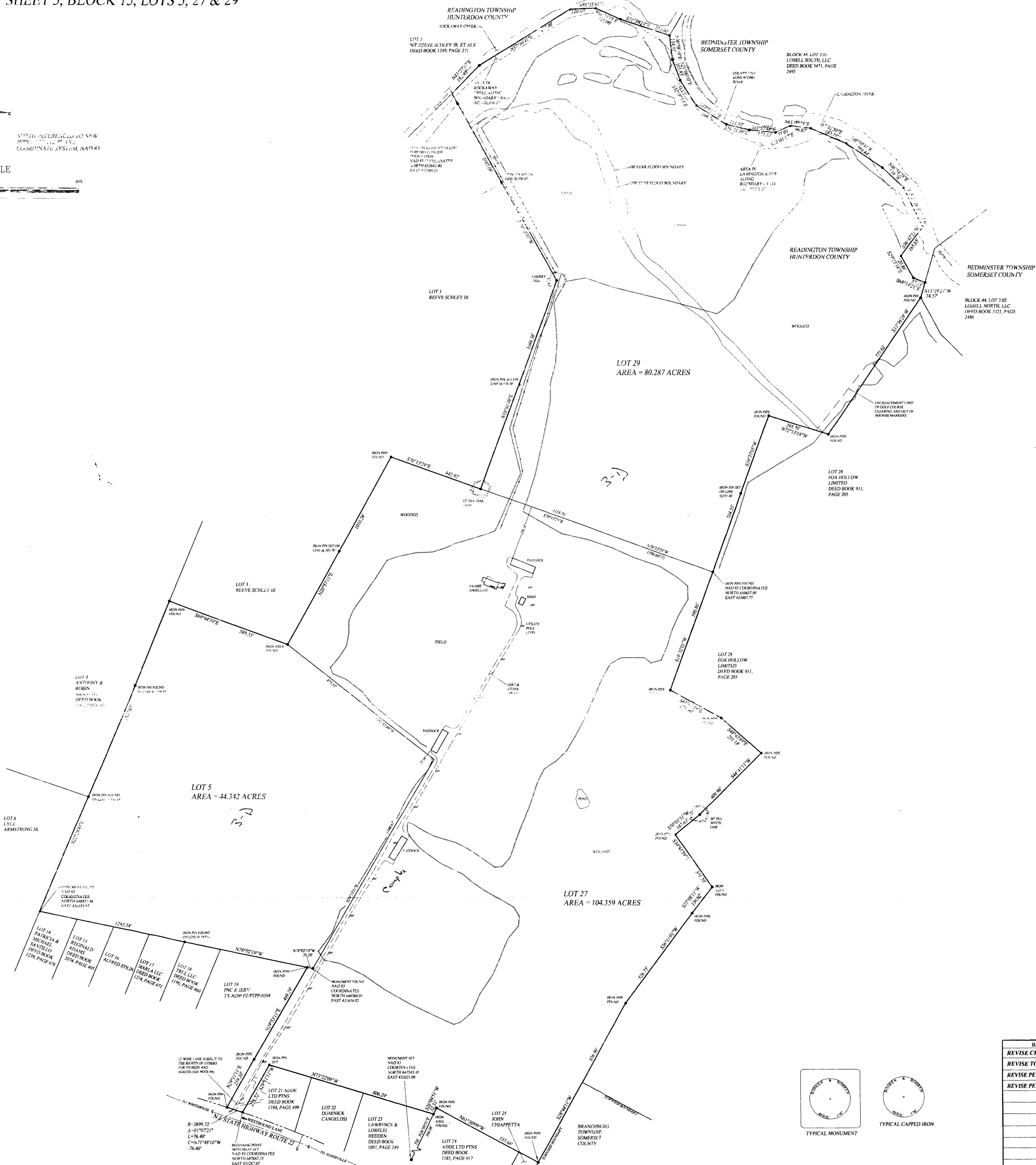
READINGTON TOWNSHIP TAX MAP: SHEET 5, BLOCK 15, LOTS 5, 27 & 29



NORTH REFERENCED TO NEW JERSEY STATE COORDINATE SYSTEM (NAD83)
GRAPHIC SCALE
0 50 100 150 200
FEET



VICINITY MAP
SCALE 1" = 2000'
(SOURCE: USGS BATHYMETRIC AND TOPOGRAPHIC DATA)



- NOTES:
1. NORTH REFERENCED TO N.J. STATE PLANE COORDINATE SYSTEM (NAD83). A FIELD TRAVERSE WAS PERFORMED FROM MONUMENTS DESIGNATED AS MONUMENTS A 29 AND Y 7. INFORMATION PROVIDED BY THE NEW JERSEY DEPARTMENT OF TRANSPORTATION.
 2. DEEDS OF REFERENCE: DEED BOOK 1037, PAGE 32.
 3. NO TITLE SEARCH WAS PROVIDED AT THE TIME OF SURVEY, THEREFORE THIS SURVEY IS SUBJECT TO SUCH FACTS THAT A TITLE SEARCH MAY DISCLOSE.
 4. LOT 27 WAS THE SUBJECT OF A RECENT BOUNDARY LINE ADJUSTMENT WITH LOT 21, LOT 27 TAKING OWNERSHIP OF THE PAVED AND DIRT & STONE "LANE" REFERRED TO AS 12' WIDE IN DEED BOOK 489, PAGE 346; BOOK 500, PAGE 46; BOOK 500, PAGE 54; BOOK 509, PAGE 333; AND BOOK 800, PAGE 76. SUBJECT TO THE RIGHTS OF OTHERS FOR INGRESS AND EGRESS.
 5. SUBJECT TO RIGHTS OF OTHERS IN THE USE OF "NATURAL DRAINAGE RIGHTS AND RIGHTS TO THE FLOW OF THE WATERS OF BROOKS OR STREAMS FROM THESE PREMISES OR TO NEIGHBORING OWNERS," AS RECORDED IN DEED BOOK 489, PAGE 346.
 6. SUBJECT TO OUTSTANDING RIGHTS OF OTHERS, IF ANY, IN AND TO ANY WATERCOURSE TRAVERSING THE PROPERTY.
 7. SUBJECT TO OUTSTANDING RIGHTS OF OTHERS IN THE USE OF THE ROCKAWAY CREEK AND LAMINGTON RIVER INCLUDING THE ROCKAWAY CREEK AND LAMINGTON RIVER.
 8. THESE PREMISES ARE SUBJECT TO DRAINAGE RIGHTS ALONG ROUTE 22 AS SHOWN ON A MAP ENTITLED "NEW JERSEY STATE HIGHWAY DEPARTMENT GENERAL PROPERTY KEY MAP ROUTE 22 (1977) SECTION 21 WHITEHOUSE TWP NORTH BRANCH SHOWING EXISTING RIGHT OF WAY AND PARCELS TO BE ACQUIRED," FILED IN THE HUNTERDON COUNTY CLERK'S OFFICE AS MAP NO. 97.
 9. SUBJECT TO ANY UTILITY LINE EASEMENTS OF RECORD.
 10. THE 100 YEAR AND 500 YEAR FLOOD BOUNDARIES SHOWN HEREON SCALED FROM THE NATIONAL FLOOD INSURANCE PROGRAM'S FLOOD INSURANCE RATE MAP FOR THE TOWNSHIP OF READINGTON, PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA). AREA WITHIN 100 YEAR FLOOD PLAIN - 40.5 ACRES - (SCALED).
 11. THESE PREMISES HAVE NATURAL WATER BOUNDARIES WHICH ARE SUBJECT TO CHANGE DUE TO NATURAL CAUSES. FOR THE PURPOSE OF THIS SURVEY, THE RECORD TITLE BOUNDARIES HAVE BEEN HELD. COURSES ALONG LAMINGTON RIVER TAKEN FROM FILED MAP #1634 AND FOLLOW THE OLD RIVER BED.

LEGEND OF ACQUISITION

PURPORTED OWNER(S): TOWNSHIP OF READINGTON
MUNICIPAL BUILDING
509 ROUTE 523
WHITEHOUSE STATION, NJ 08899
STREET ADDRESS: NEW JERSEY STATE HIGHWAY 22, NEW JERSEY 08676
TAX LOTS: READINGTON TWP, BLOCK 15, LOTS 5, 27 & 29
AREA: 228.988 AC TOTAL
MUNICIPALITY: READINGTON COUNTY: HUNTERDON

AREA SUMMARY	ACRES
AREA LOT 5	44.342
AREA IN ROAD	0
AREA NJ CLAIM	0
AREA OVERLAP	0
AREA IN WATER	0
AREA CLOUDED TITLE	0
NET AREA SUBJECT TO GREEN ACRES ENCUMBRANCE	44.342
AREA LOT 27	104.359
AREA IN ROAD	0
AREA NJ CLAIM	0
AREA OVERLAP	0
AREA IN WATER	0
AREA CLOUDED TITLE	0
NET AREA SUBJECT TO GREEN ACRES ENCUMBRANCE	104.359
AREA LOT 29	80.287
AREA IN ROAD	0
AREA NJ CLAIM	0
AREA OVERLAP	0
AREA IN LAMINGTON RIVER (NAVIGABLE)	1.127
AREA IN ROCKAWAY CREEK (NON-NAVIGABLE)	0.623
AREA CLOUDED TITLE	0
NET AREA SUBJECT TO GREEN ACRES ENCUMBRANCE	79.160
NET AREA SUBJECT TO GREEN ACRES ENCUMBRANCE	227.861

THIS SURVEY IS CERTIFIED TO TOWNSHIP OF READINGTON, GREEN ACRES, STATE OF NEW JERSEY, BY BALLARD & DRAGAN, ESQ'S, AS AGENTS FOR THE TOWNSHIP OF READINGTON, CORTES & HAY, AGENTS FOR COMMONWEALTH LAND TITLE INSURANCE COMPANY OF NEW JERSEY.

THE TOWNSHIP OF READINGTON, GREEN ACRES, STATE OF NEW JERSEY, BALLARD & DRAGAN, ESQ'S, AS AGENTS FOR THE TOWNSHIP OF READINGTON, CORTES & HAY, AGENTS FOR COMMONWEALTH LAND TITLE INSURANCE COMPANY OF NEW JERSEY, AND THEIR HEIR(S), TO THEIR TITLE INSURANCE PLAN IS BASED ON AN ACTUAL FIELD SURVEY CONDUCTED UNDER MY IMMEDIATE SUPERVISION AND THAT THIS SURVEY MEETS OR EXCEEDS THE FEDERAL REQUIREMENTS FOR THIRD ORDER CLASS SURVEY. I HEREBY DECLARE, TO THE BEST OF MY PROFESSIONAL KNOWLEDGE AND BELIEF, THAT THIS PLAN IS A CORRECT AND ACCURATE REPRESENTATION OF CONDITIONS EXISTING ON THE SITE AS OF NOVEMBER, 2003, SUBJECT TO SUCH NOTES AS MAY APPEAR HEREON.

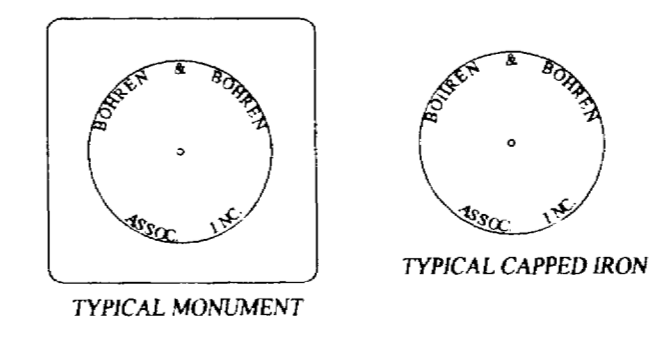
11/21/03 DATE
WILLIAM U. BOHREN H. PROFESSIONAL LAND SURVEYOR, N.J. LICENSE NO. 19001

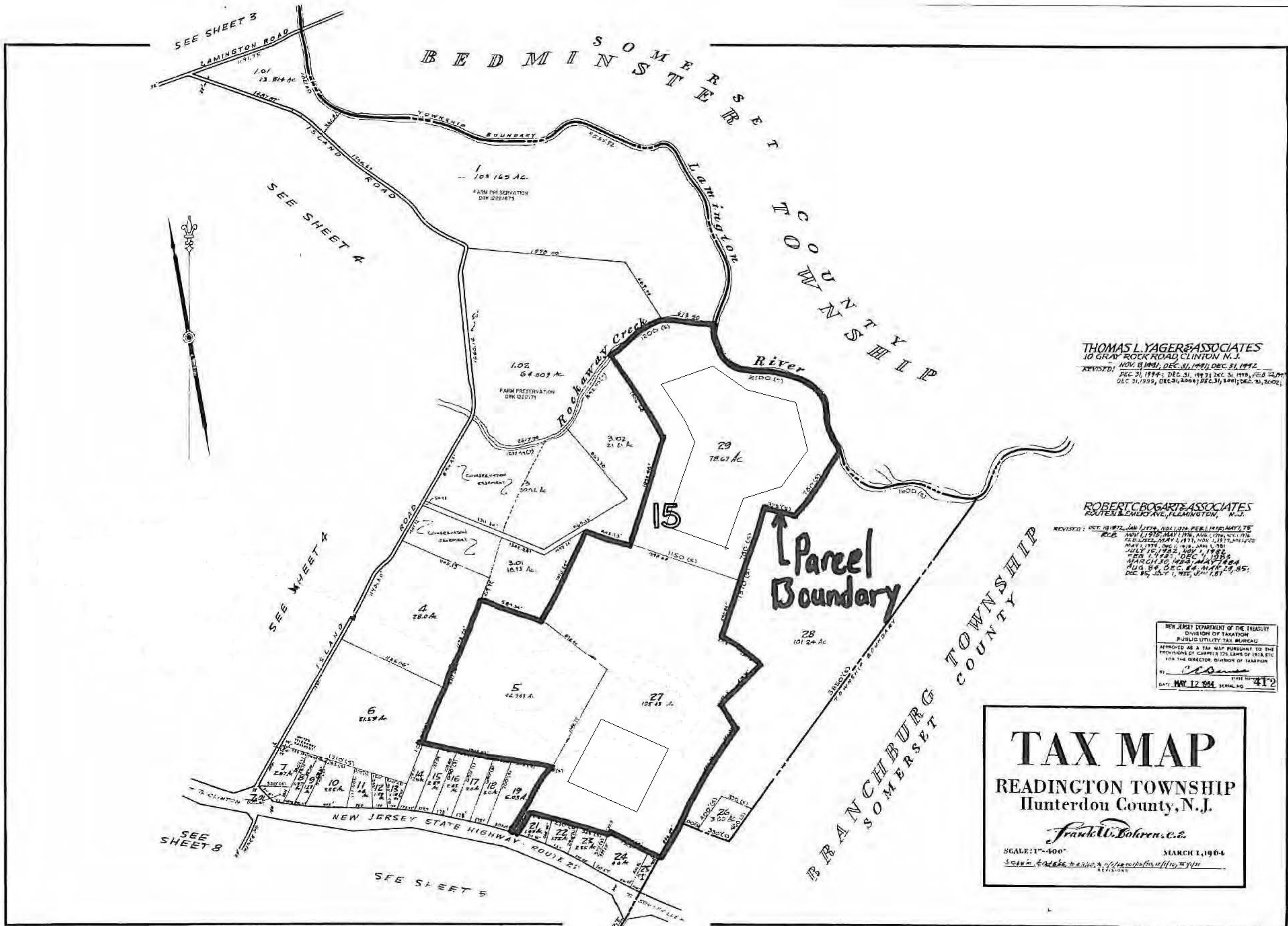
SURVEY OF LAND FOR READINGTON TOWNSHIP BLOCK 15, LOTS 5, 27 & 29 IN READINGTON TOWNSHIP, HUNTERDON COUNTY, NEW JERSEY
CERTIFICATE OF AUTHORIZATION NUMBER 246A27982500

BOHREN AND BOHREN ASSOCIATES, INC. ENGINEERS LAND SURVEYORS PLANNERS
Liberty Court • Suite 800
260 Highway 202-31, Flemington, NJ 08822
908-782-1212 Fax (908) 782-3032 Email: mail@bohrendandbohren.com

Drawn by EYW Date NOVEMBER 21, 2003
Checked by EYW Scale AS SHOWN

REVISIONS	AUTH.	DATE
REVISE CERTIFICATION	EYW	1-12-04
REVISE TO SHOW ALL LOTS	EYW	3-23-05
REVISE PER GREEN ACRES REVIEW	EYW	5-10-05
REVISE PER GREEN ACRES REVIEW	EYW	7-25-05





THOMAS L. YAGER & ASSOCIATES
 10 GRAY ROCK ROAD, CLINTON, N.J.
 REVISOR: NOV. 8, 1984; DEC. 31, 1989; DEC. 31, 1992;
 DEC. 31, 1994; DEC. 31, 1997; DEC. 31, 1998; FEB. 2, 1999;
 DEC. 31, 1999; DEC. 31, 2000; DEC. 31, 2001; DEC. 31, 2002;

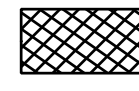
ROBERT C. BOGARTE & ASSOCIATES
 ROUTE 1, LENOX AVENUE, FLEMINGTON, N.J.
 REVISOR: OCT. 1976; JAN. 1978; NOV. 1978; FEB. 1982; MAY 1985;
 NOV. 1986; MAY 1986; AUG. 1986; NOV. 1986;
 FEB. 1987; MAY 1987; NOV. 1987; NOV. 1987;
 MAY 1988; NOV. 1988; JAN. 1989;
 JULY 1989; NOV. 1989;
 FEB. 1990; DEC. 1988;
 MARCH 30, 1990; MAY 1990;
 AUG. 26, 1990; MAR. 29, 1995;
 DEC. 25, 1997; MAR. 1, 1998; JUN. 1, 1998;

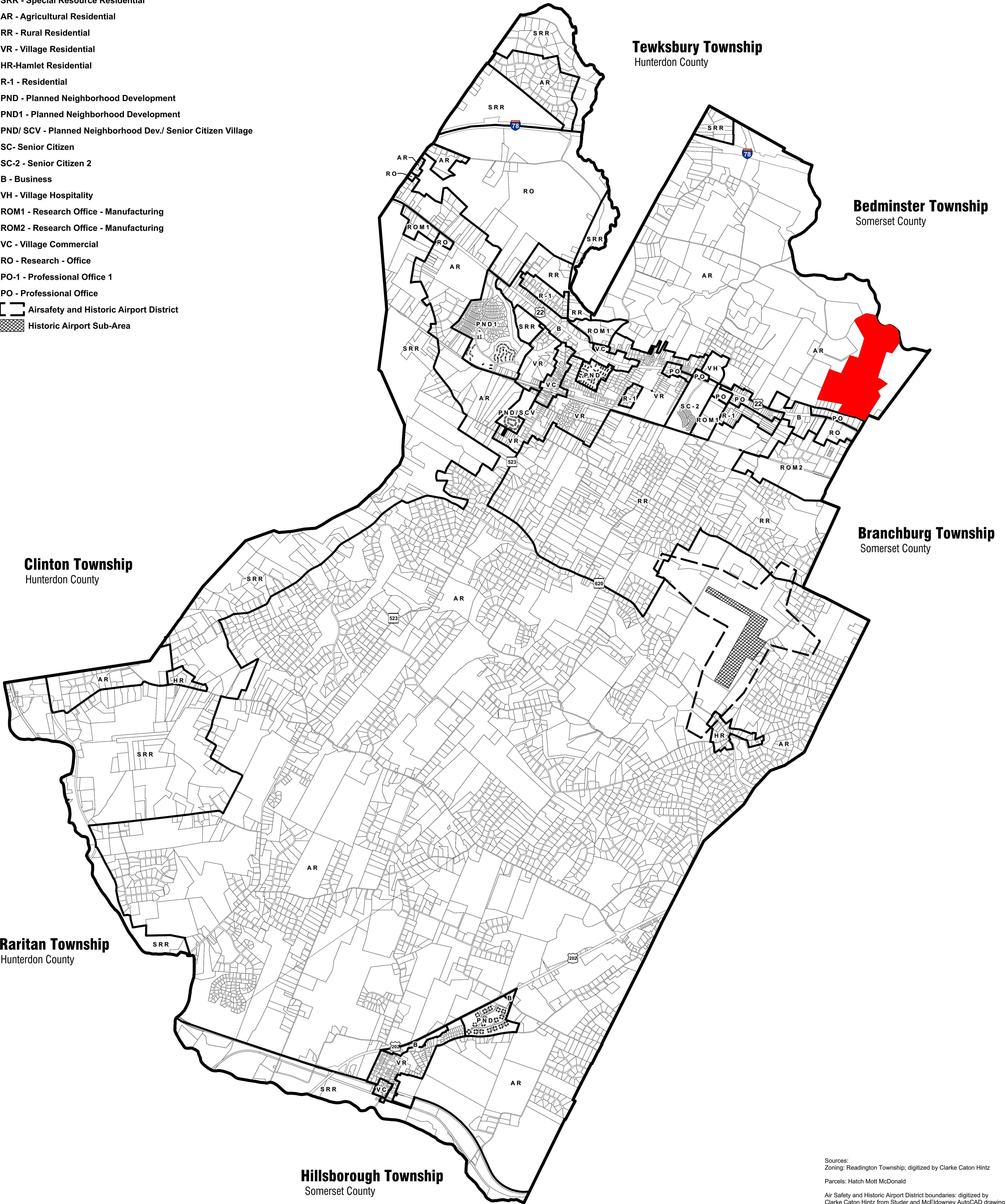
NEW JERSEY DEPARTMENT OF THE TREASURY
 DIVISION OF TAXATION
 PUBLIC UTILITY TAX BUREAU
 APPROVED AS A TAX MAP PURSUANT TO THE
 PROVISIONS OF CHAPTER 125, LAWS OF 1974, ETC.
 FOR THE DIRECTOR, DIVISION OF TAXATION
 BY: *[Signature]*
 DATE: MAY 12, 1984 SERIAL NO. 412

TAX MAP
 READINGTON TOWNSHIP
 Hunterdon County, N.J.
Frank W. Bohren, c.s.
 SCALE: 1"=400' MARCH 1, 1984
 State of New Jersey, Department of the Treasury, Division of Taxation, Public Utility Tax Bureau

Legend

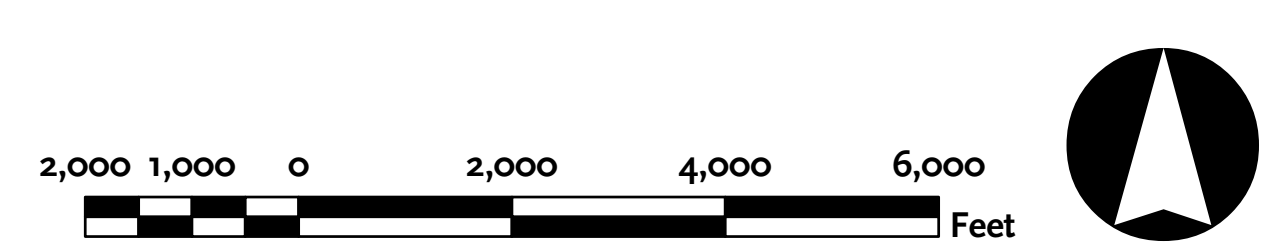
Zone

- SRR - Special Resource Residential
- AR - Agricultural Residential
- RR - Rural Residential
- VR - Village Residential
- HR - Hamlet Residential
- R-1 - Residential
- PND - Planned Neighborhood Development
- PND1 - Planned Neighborhood Development
- PND/ SCV - Planned Neighborhood Dev./ Senior Citizen Village
- SC - Senior Citizen
- SC-2 - Senior Citizen 2
- B - Business
- VH - Village Hospitality
- ROM1 - Research Office - Manufacturing
- ROM2 - Research Office - Manufacturing
- VC - Village Commercial
- RO - Research - Office
- PO-1 - Professional Office 1
- PO - Professional Office
-  Airsafety and Historic Airport District
-  Historic Airport Sub-Area



Sources:
 Zoning: Readington Township; digitized by Clarke Caton Hintz
 Parcels: Hatch Mott McDonald
 Air Safety and Historic Airport District boundaries: digitized by
 Clarke Caton Hintz from Studer and McEldowney AutoCAD drawing
 "Map for Chambers Brook & Holland Brook Greenway"
 March 3, 2005 Drawing No 5761_F signed by H. Clay McEldowney

Adopted July 6, 2009






Zoning Map

Readington Township, Hunterdon County, NJ July 2009

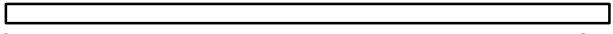
Clarke Caton Hintz ● ● ●
 Architecture
 Planning
 Landscape Architecture

Rockaway Creek WMA Sewer Service Area

Legend

-  Counties
-  Sewer Service Areas
-  Boundary



0  Feet
2,500

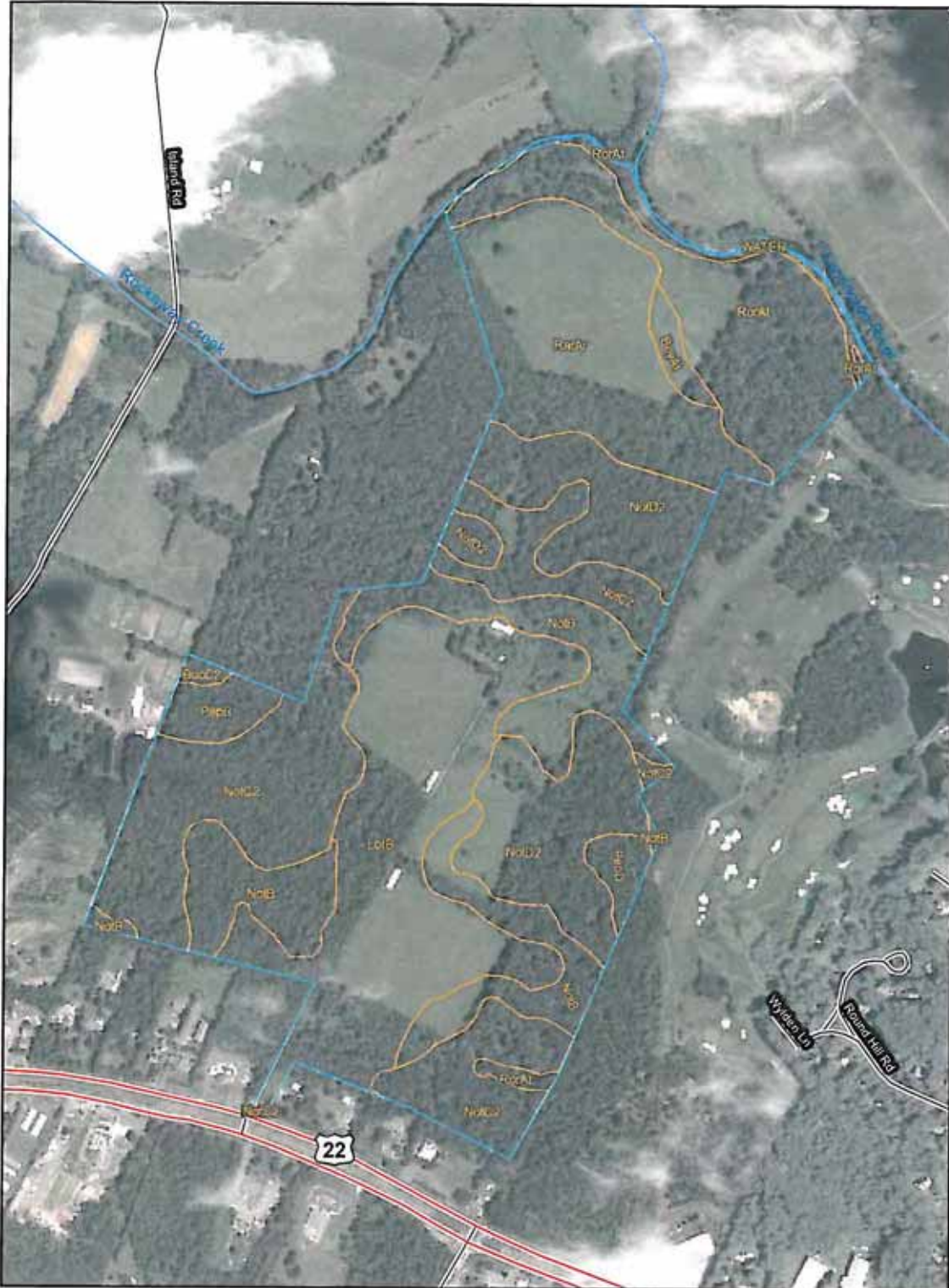
Soil Map—Hunterdon County, New Jersey
(South Branch WMA)

74° 43' 20"

74° 42' 20"

40° 37' 41"

40° 37' 41"



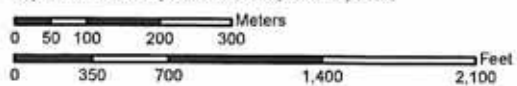
40° 36' 33"

40° 36' 33"

74° 43' 20"



Map Scale: 1:9,990 if printed on A size (8.5" x 11") sheet.



74° 42' 20"

Soil Map—Hunterdon County, New Jersey
(South Branch WMA)

MAP LEGEND

Area of Interest (AOI)	 Area of Interest (AOI)	 Very Stony Spot
Soils	 Soil Map Units	 Wet Spot
Special Point Features	 Blowout	 Other
 Borrow Pit	 Clay Spot	Special Line Features
 Closed Depression	 Gravel Pit	 Gully
 Gravelly Spot	 Landfill	 Short Steep Slope
 Lava Flow	 Marsh or swamp	 Other
 Mine or Quarry	 Miscellaneous Water	Political Features
 Perennial Water	 Rock Outcrop	 Cities
 Saline Spot	 Sandy Spot	Water Features
 Severely Eroded Spot	 Sinkhole	 Streams and Canals
 Slide or Slip	 Sodic Spot	Transportation
 Spoil Area	 Stony Spot	 Rails
		 Interstate Highways
		 US Routes
		 Major Roads
		 Local Roads

MAP INFORMATION

Map Scale: 1:9,990 if printed on A size (8.5" × 11") sheet.
The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.
Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
Coordinate System: UTM Zone 18N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Hunterdon County, New Jersey
Survey Area Data: Version 8, Sep 7, 2010

Date(s) aerial images were photographed: Data not available.



The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

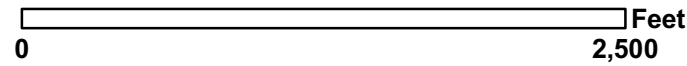
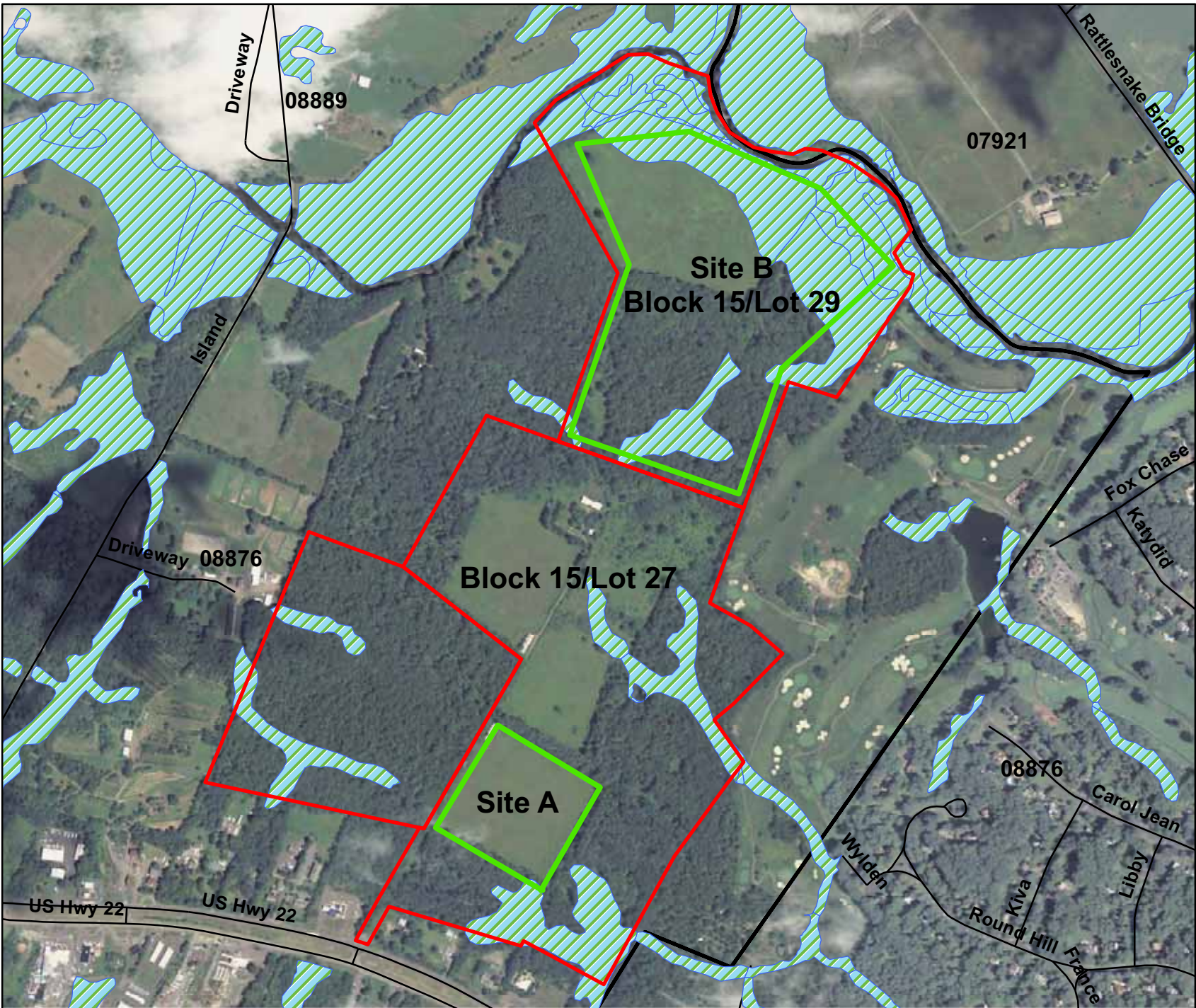
Map Unit Legend

Hunterdon County, New Jersey (NJ019)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BoyA1	Bowmansville silt loam, 0 to 2 percent slopes, frequently flooded	2.0	0.9%
BucC2	Bucks silt loam, 6 to 12 percent slopes, eroded	0.7	0.3%
Lb1B	Lansdowne silt loam, 2 to 6 percent slopes	48.0	21.0%
NotB	Norton loam, 2 to 6 percent slopes	32.5	14.2%
NotC2	Norton loam, 6 to 12 percent slopes, eroded	44.2	19.4%
NotD2	Norton loam, 12 to 18 percent slopes, eroded	33.5	14.7%
PeoD	Penn channery silt loam, 12 to 18 percent slopes	2.4	1.1%
PepB	Penn-Bucks complex, 2 to 6 percent slopes	3.8	1.7%
RarAr	Raritan silt loam, 0 to 3 percent slopes, rarely flooded	31.3	13.7%
RorAt	Rowland silt loam, 0 to 2 percent slopes, frequently flooded	26.1	11.5%
WATER	Water	3.6	1.6%
Totals for Area of Interest		228.2	100.0%

Rockaway Creek WMA Wetlands

Legend

-  Boundary
-  WETLANDS
-  Counties
-  Roads (Tele Atlas)



Rockaway Creek WMA

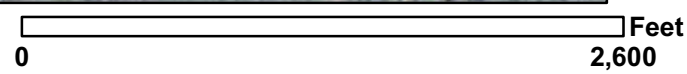
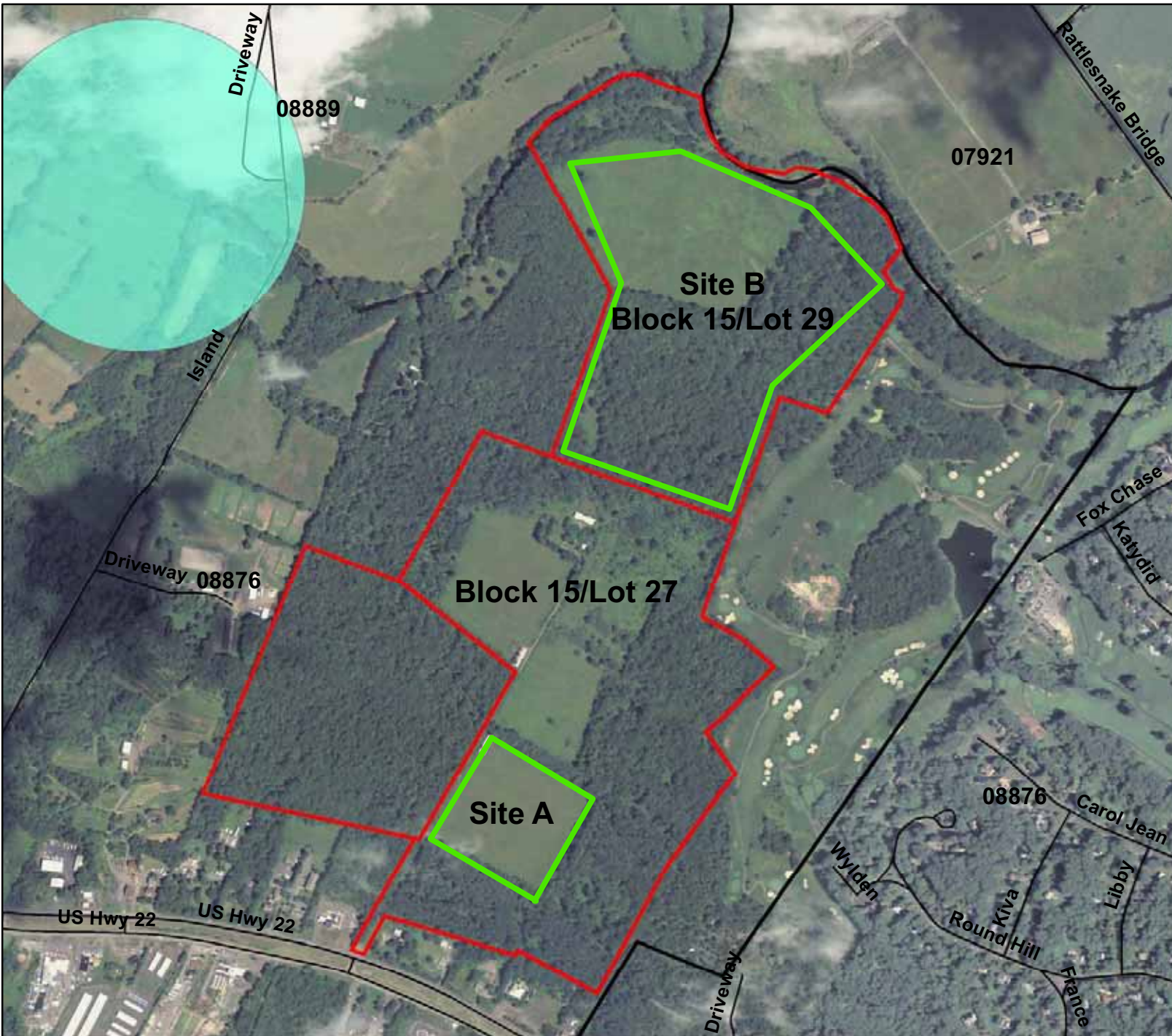
Vernal Habitat

Legend

Vernal Habitat

VPH_TYPE

-  Potential Vernal Habitat Area
-  Vernal Habitat Area
-  Boundary
-  Counties
-  Roads (Tele Atlas)



Rockaway Creek WMA

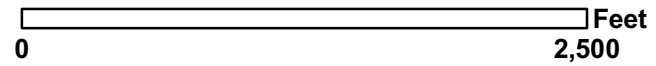


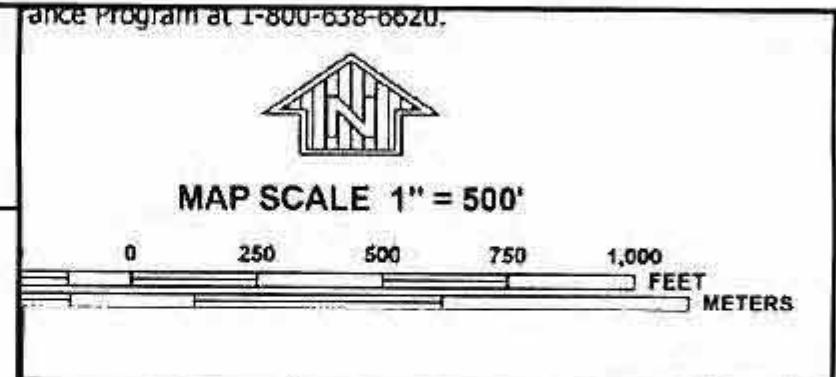
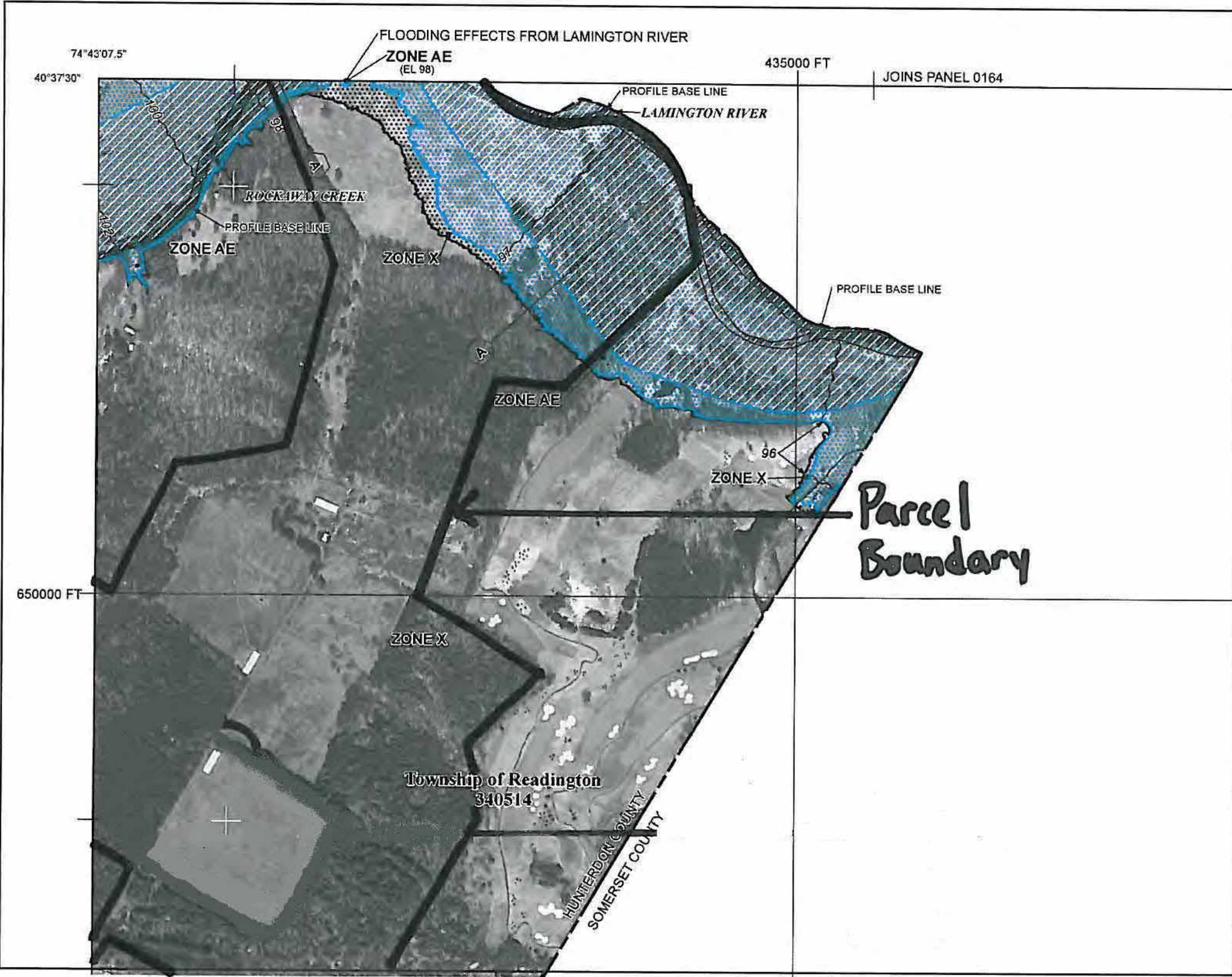
Legend

Landscape Project 3.0 - Streams

RANK

- Meets Habitat Suitability
- Special Concern /S3
- State Threatened
- State Endangered
- Federally Listed
- Boundary
- Counties
- Roads (Tele Atlas)





NFIP PANEL 0277F

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
 FLOOD INSURANCE RATE MAP
 HUNTERDON COUNTY,
 NEW JERSEY
 ALL JURISDICTIONS

PANEL 277 OF 426
 (SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:
 COMMUNITY NUMBER PANEL SUFFIX
 READINGTON TOWNSHIP OF 340514 0277 F

Notice to User: The Map Number shown herein should be used when placing map orders. The Community Number shown above should be used on insurance applications for the subject community.

MAP NUMBER
 34019C0277F

EFFECTIVE DATE
 SEPTEMBER 25, 2009

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF FISH AND WILDLIFE

Mail Code 501-03

PO BOX 420

Trenton, NJ 08625-0420

David Chanda, Director

www.NJFishandWildlife.com

(609) 292-2965

CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

BOB MARTIN
Commissioner

Beth,

Below are the species identified by one of our Non-Game GIS Specialists that might be found at the three proposed locations. If you require anything further, please contact me at 609-462-2833 or 609-292-1242. Thank you.

Bob Longcor

Readington/Hunterdon- x(432123), v(648794)

Nothing is valued in this area in the current version (3.0) of the Landscape Project maps. The most recent Species Occurrence Area file was queried and the area intersects with:

- 1 Upland Sandpiper Breeding Sighting (State Endangered)
- 4 Great Blue Heron Foraging (Special Concern)
- 1 Eastern Box Turtle Occupied Habitat (Special Concern)

Roxbury/Morris- x(454445), v(756115)

In the current version (3.0) of the Landscape Project maps, this area is valued for:

- Indiana Bat (Federally Listed)
- Barred Owl (State Threatened)
- Red-shouldered Hawk (State Endangered)

The most recent Species Occurrence Area file was queried and this area intersects with:

- 4 Great Blue Heron Foraging (Special Concern)

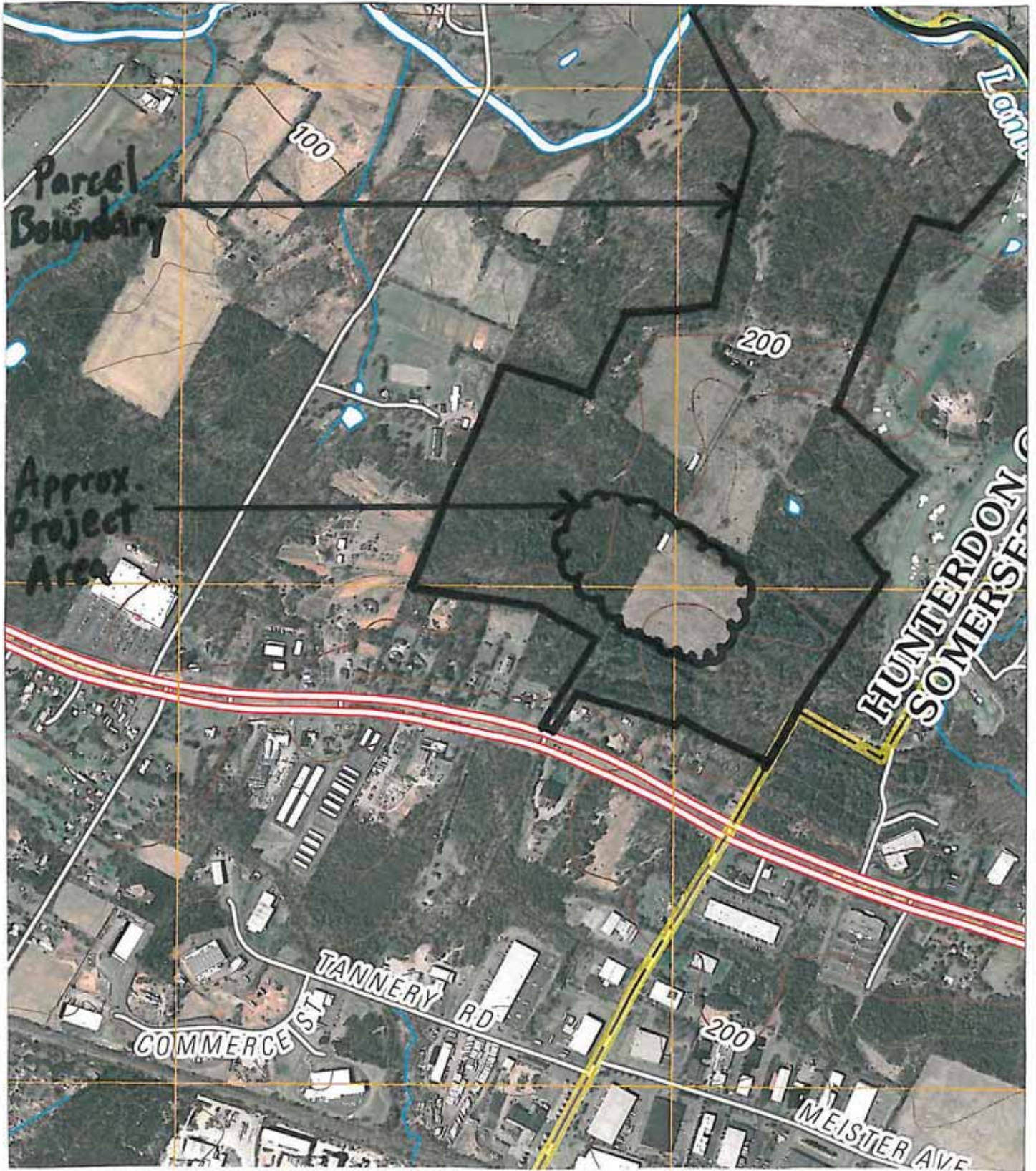
Chester/Morris- x(446284), v(719626)

In the current version (3.0) of the Landscape Project maps, this area is valued for:

- Barred Owl (State Threatened)
- Red-shouldered Hawk (State Endangered)
- Wood Turtle (State Threatened)
- Veery (Special Concern)

The most recent Species Occurrence Area file was queried and this area intersects with:

- 2 Barred Owl Breeding Sightings (State Threatened)
- 3 Great Blue Heron Foraging (Special Concern)
- 1 Wood Thrush Breeding Sighting (Special Concern)



SCALE N.T.S.

SITE LOCATION MAP
ROCKAWAY CREEK WMA
READINGTON TOWNSHIP, HUNTERDON COUNTY, NJ

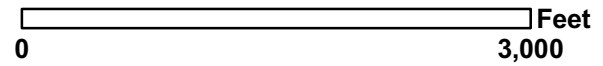
DATE: 01/22/12

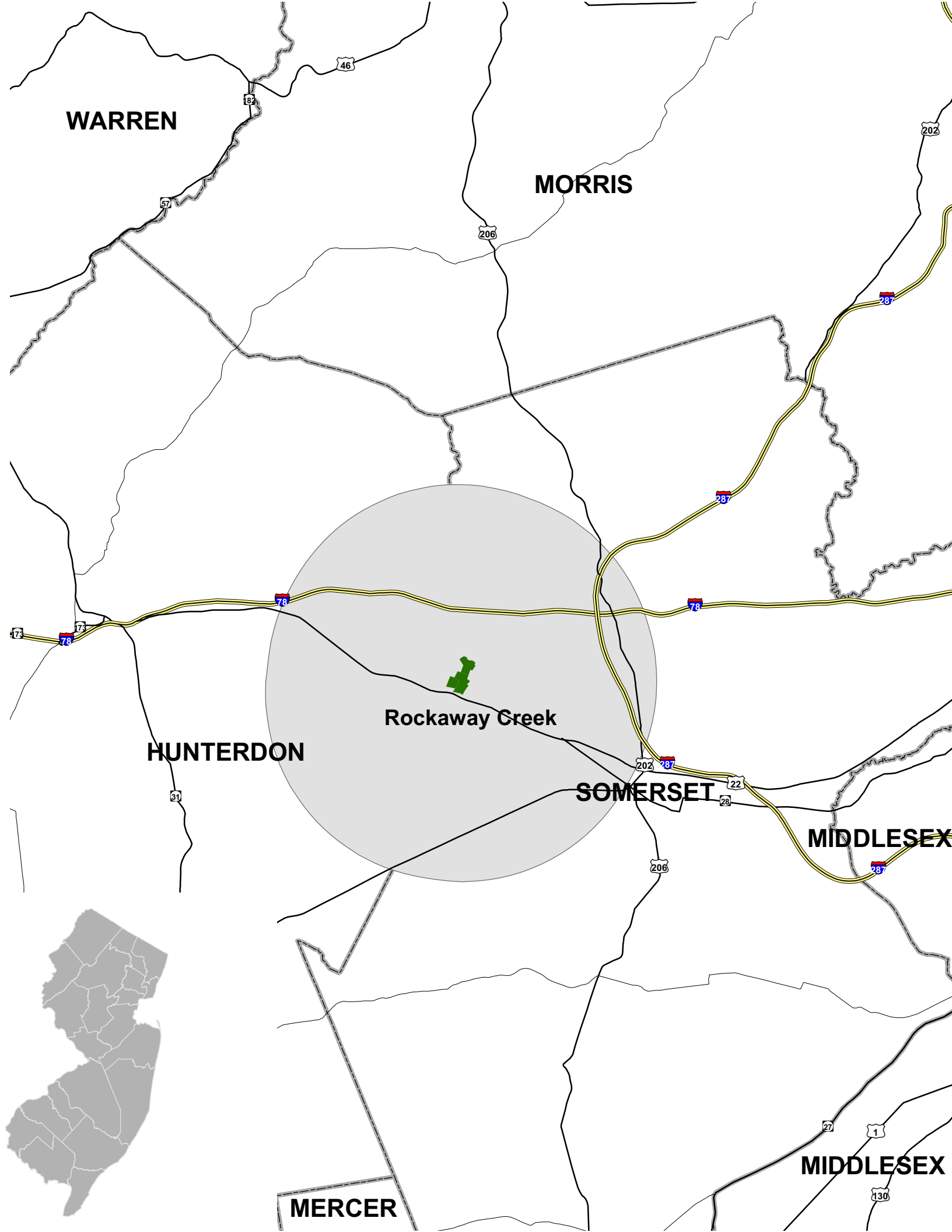
Rockaway Creek WMA National Heritage Grid Map



Legend

- BOTH - Both 'M' and 'S' Occurances
- M- Documented Location Known Within 1.5 Miles
- S - Documented Location Known Precisely
- Boundary





WARREN

MORRIS

HUNTERDON

Rockaway Creek

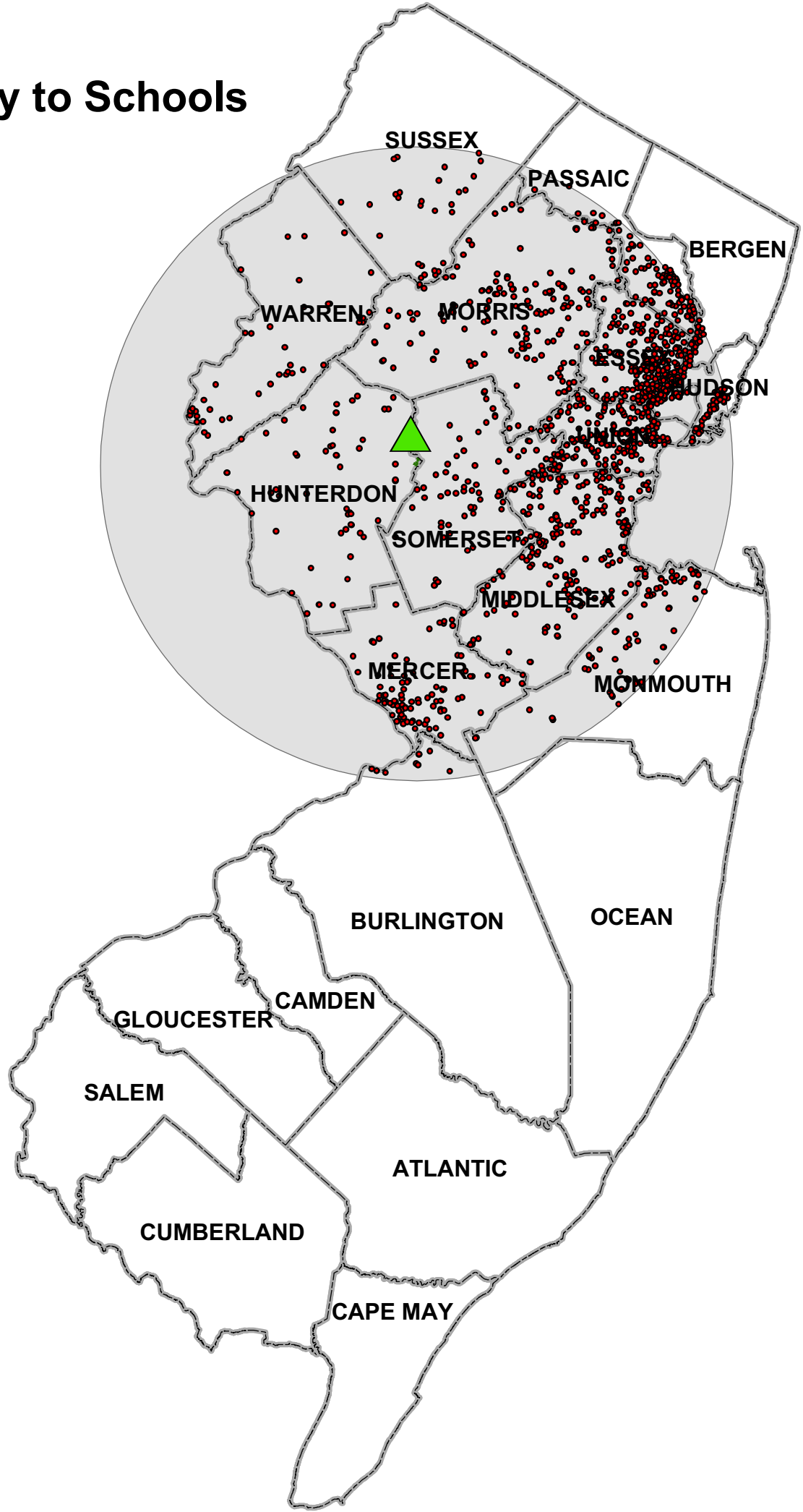
SOMERSET

MIDDLESEX

MERCER

MIDDLESEX

Proximity to Schools



Christopher S. Guddemi

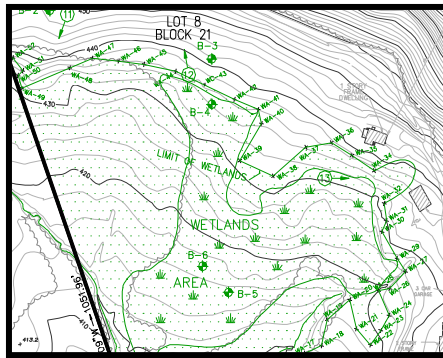
Professional Land Surveyor, Wetlands Specialist,
Project Manager, LEED AP

LAN

LAN ASSOCIATES

ENGINEERING ■ PLANNING ■ ARCHITECTURE ■ SURVEYING, INC.

SINCE 1965



Education

Ramapo College, BA, 2001
Mahwah, NJ
Bachelor of Arts in Environmental
Studies

Professional Development

Rutgers University:

Vegetation Identification for Wetland
Delineation

Hydric Soils Evaluation

Methodology for Delineating
Wetlands

Freshwater Wetland Construction

NJDEP Regulatory Short Course

Certifications

40-Hour OSHA Hazardous Waste Site
Worker Training

Rutgers University Wetland
Delineation Program

NYSDEC Soil Erosion & Sediment
Control, Trainee SWT #006789

Organizations

Association of State Wetland
Managers, Inc.

New York State Association of
Professional Land Surveyors

New Jersey Society of Professional
Land Surveyors

Experience

Mr. Christopher Guddemi has been with LAN since 2001 and serves as a Professional Land Surveyor and Wetlands Specialist for the Civil, Environmental and Facilities Engineering Division. Mr. Guddemi has performed numerous boundary, topographic and bathymetric surveys for a variety of clients in both the public and private sector, which have been relied upon for subdivisions and site plans, and have been utilized for real estate transactions, volume calculations and a variety of construction projects. Mr. Guddemi is familiar with working with attorneys and regulatory agencies to establish development options for sites with a multitude of land use restrictions.

Summary Qualifications

Mr. Guddemi has performed numerous wetland delineations, wetland presence or absence determinations, and site feasibility studies. With a background in environmental studies, Mr. Guddemi is also a wetlands delineator and has experience in the permitting process of several regulatory agencies, including the New Jersey Department of Environmental Protection, the New York State Department of Environmental Conservation, and the U.S. Army Corps of Engineers. He has an extensive background in Land Surveying and is familiar with all facets of the delineating and permitting process from gathering field data to application and plan preparation. Mr. Guddemi has also prepared environmental assessments and impact statements, stream encroachment permits, monitored soils and groundwater for both contamination and fluctuating water tables, and is familiar with working at contaminated sites.

Mr. Guddemi is also well versed in commercial and residential subsurface sewage disposal systems (SSDS) and has completed numerous site evaluations and designs. Mr. Guddemi has designed both traditional and alternative systems, and is familiar with local, regional and state requirements throughout the New York City Metro area and beyond. Mr. Guddemi has performed hydraulic head, basin flood, pit bail permeability and percolation tests for both new and replacement systems. Mr. Guddemi has also supervised and performed hydraulic loading tests on existing systems to determine in place system capacity.

Project Experience

- Flood Hazard Permitting
- Subdivisions
- Land Surveying
- ALTA Surveys
- Bathymetric Surveys
- Title Surveys
- Wetland Delineation & Permitting
- Subsurface Sewage Disposal Systems
- Vegetation Inventory Surveys
- Wetland Restoration Design
- Boundary & Topographic Surveys
- Large Quantity Volume Calculations
- Soil Permeability Studies & Evaluation

Cresskill High School, Cresskill, NJ: NJDEP LOI Line Verification; performed delineation of a 30+ acre campus and prepared application to DEP for an addition to the school; acted as field chief for boundary and topographic survey.

Christian Health Care Center, Wyckoff, NJ: NJDEP LOI Line Verification; performed delineation of a 50+ acre campus, tree survey and prepared application to DEP for various site improvements. Application led to providing expert analysis in the presence of a DEP representative to determine the true wetland and State Open Boundaries onsite. Subsequently, wetland boundaries deviated from those as originally determined by the DEP.

Orange Ulster BOCES, Goshen, NY: 100+ acre campus boundary survey wetland delineation.

Belle Fair Homeowner's Association, Rye Brook, NY: Conduct vegetation inventory survey, delineate invasive species communities and prepare report detailing invasive species eradication techniques.

Crystal Run Village, Inc., Wallkill, NY: NYSDEC/ACOE joint application submission for wetland jurisdictional determination on 17.5 acre campus; performed boundary and topographic survey.

Howell Site Plan, Goshen, NY: NYSDEC jurisdictional determination to establish limits of wetlands and NYSDEC/ACOE jurisdictional boundaries.

Grill Cluster Subdivision, Warwick, NY – ACOE jurisdictional determination; performed delineation of a 10+ acre parcel; prepared application for a 4 lot cluster subdivision, design multiple SSDS, perform boundary and topographic survey, represent client at local Planning and Zoning Board meetings.

Photos by: CSG on 11/2/11

Photo No. 1

A view of the entrance to the site. Photo taken from the northerly sideline of Route 22 facing west.



Photo No. 2

A close up view of the entrance to the site. Photo taken from the northerly sideline of Route 22 facing west.



Photo No. 3

A view of the entrance to the site. Photo taken from the northerly sideline of Route 22 facing east.



Photos by: CSG on 11/2/11

Photo No. 4

A view of the entrance to the site. Photo taken from the northerly sideline of Route 22 facing north.



Photo No. 5

A view of the access drive to the project area. Photo taken approximately 250 feet north of the northerly sideline of Route 22 facing north.



Photo No. 6

A view of the fallow agricultural field to the east of the access drive. Photo taken from the southwest corner of the field facing east.



Photos by: CSG on 11/2/11

Photo No. 7

A view of the fallow agricultural field to the east of the access drive. Photo taken from the southwest corner of the field facing northeast.



Photo No. 8

A view of the fallow agricultural field to the east of the access drive. Photo taken from the southwest corner of the field facing north.



Photo No. 9

A view of the fallow agricultural field to the east of the access drive. Photo taken from the northwest corner of the field facing south.



Photos by: CSG on 11/2/11

Photo No. 10

A view of the fallow agricultural field to the east of the access drive. Photo taken from the northwest corner of the field facing southeast.



Photo No. 11

A view of the old paddock structure located at the northwest corner of the fallow agricultural field. Photo taken from the access drive facing north.



Photo No. 12

A view of the old paddock structure located at the northwest corner of the fallow agricultural field. Photo taken from the access drive facing northeast.



Photos by: CSG on 11/2/11

Photo No. 13

A view of the old paddock structure located at the northwest corner of the fallow agricultural field. Photo taken from the northwestern portion of the agricultural field facing north.



Photo No. 14

A view of the fallow agricultural field to the east of the access drive. Photo taken from the northwest corner of the field facing east.



Photo No. 15

A view of the old paddock structure located at the northwest corner of the fallow agricultural field. Photo taken from the access drive facing southeast.



Photos by: CSG on 11/2/11

Photo No. 16

A view of the forested area to the west of the access drive. Photo facing southwest.



Photo No. 17

A view of the access drive at the project area. Photo taken near the northwestern most corner of the fallow agricultural field facing south.



Photo No. 18

A view of the NJDEP DFW WMA sign near the entrance to the site.



LAN Associates, EPAS, Inc.

LAN No.: 2.3397.124
NJDEP/Rockaway Creek WMA in Readington/Proposed
Archery Range/WO185-05

Photos by: CSG on 11/2/11

Photo No. 19

A view of the access drive facing south. Photo taken approximately 200 feet north of Rt. 22.

cc: 2.3397.124





Richard Grubb & Associates, Inc.
Cultural Resource Consultants

email: mail@richardgrubb.com • www.richardgrubb.com

December 23, 2011

Elizabeth Bouvier, PE, CIH, LEED@AP
Director of Regulatory Compliance
LAN Associates
445 Godwin Avenue
Midland Park, New Jersey 07432

**RE: Archaeological Screening
Proposed Archery Range
Readington Township, Hunterdon County, New Jersey**

Dear Ms. Bouvier:

Richard Grubb & Associates (RGA) has been contracted by LAN Associates, on behalf of the New Jersey Department of Environmental Protection-Division of Parks and Forestry (NJDEP), to complete an archaeological screening for a proposed archery range in Readington Township, Hunterdon County, New Jersey (Figures 1-3). The purpose of the screening is to identify known and potential archaeological resource constraints in the project area so that they may be considered in project planning. It is the understanding of RGA that this information will be used in an Environmental Assessment being prepared to meet the requirements of the National Environmental Policy Act (NEPA).

Description of Undertaking

The project area is located in an agricultural field east of a driveway that runs north from U.S. Route 22 (Chris Guddemi, LAN Associates, personal communication, November 9, 2011). It is the understanding of RGA that the proposed project includes the construction of a parking area, sidewalk, field target archery range, beginners' archery range, and an office building housing a meeting room, storage space and an indoor archery range. Plans for this project have not been finalized.

Background Research

Environmental Setting and Soils

The project area lies on an upland terrace at an elevation of roughly 200 feet above mean sea level. The project area lies within an agricultural field located at the beginning of a peninsular terrace roughly 1,500 feet west of an unnamed tributary of Lamington River. The Lamington River is situated 4,000 feet northeast of the project area, and is a tributary of the North Branch of the Raritan River. The confluence of the Lamington River and South Branch of the Rockaway Creek lies approximately 4,000 feet north of the project area.

The project area is situated within the New Jersey Piedmont Physiographic Province (Wolfe 1977). Lower Jurassic and Upper Triassic age siltstone and shale of the Passaic Formation underlie the project area (Drake et al. 1996). Soils in the project area are characterized as Lansdowne silt loam (LbtB) (Table 1). These soils are somewhat poorly-drained (Natural Resources Conservation Service 2010).

Table 1: Soils situated within the project area (Based on Natural Resources Conservation Service 2010).

Name	Soil Horizon Depth (in)	Texture, Inclusions	Slope	Drainage	Landform
Lansdowne Silt Loam (LbtB)	0-7 inches 7-13 inches 13-45 inches 45 to 60 inches 60 to 157 inches	Silt Loam Silt Loam Silty Clay Stratified Sandy Loam to Channery Silty Clay Weathered Bedrock	2-6%	Somewhat Poorly-Drained	Flats

National Register Files

There are no properties listed in or eligible for the National Register in or within one-half mile of the project area.

Cultural Resource Surveys

Background research identified no cultural resource surveys that were completed in the project area. One cultural resources survey was conducted within one-half mile of the project area, which consisted of an archaeological and historical survey for a sewer system roughly 400 feet south of the project area. This survey did not identify any cultural resources (Kraft 1977).

New Jersey State Museum Site Files

A review of site files at the New Jersey State Museum indicated that no registered archaeological sites are located within or adjacent to the project area; however, seven sites are situated within one mile of the project area (Table 2). All of the identified archaeological sites represent prehistoric occupations. Very few details are available for these sites (see Schrabisch 1917). Four sites were also plotted on the Collector's Maps at the New Jersey Historic Preservation Office: 463, 470, 757, and 758. These sites likely correspond to registered sites 28-Hu-147, 154, 262, and 263.

Table 2: Registered archaeological sites within one mile of the project area.

Site	Name	Period	Site Type	Drainage/ Distance (ft)	Distance to Project Area (ft)	Reference
28-Hu-147	Lamington Creek	Prehistoric	Unknown Prehistoric	Lamington River/ 500 feet	4,200 feet	Schrabisch 1917
28-Hu-153	Rockaway Creek	Prehistoric	Unknown Prehistoric	Rockaway Creek/ 1,500 feet	5,000 feet	Schrabisch 1917
28-Hu-154	Lamington Creek	Prehistoric	Unknown Prehistoric	Rockaway Creek/ adjacent	4,200 feet	Schrabisch 1917
28-Hu-262	Rockaway Creek East of White House	Prehistoric	Unknown Prehistoric	Tributary of Rockaway Creek/ adjacent	2,200 feet	Schrabisch 1917
28-Hu-263	Rockaway Creek East of White House Station	Prehistoric	Unknown Prehistoric	Rockaway Creek/ 500 feet	2,200 feet	Schrabisch 1917
28-Hu-268	West of North Branch Depot	Prehistoric	Unknown Prehistoric	Tributary of Chambers Brook/ adjacent	3,700 feet	Schrabisch 1917
28-Hu-269	West of North Branch	Prehistoric	Unknown Prehistoric	Tributary of Chambers Brook/ adjacent	5,000 feet	Schrabisch 1917

Historic Maps and Aerials

A review of historic atlases and maps suggests that project area and vicinity was moderately developed during the late eighteenth through nineteenth century (Hills 1781; Cornell 1851; Beers 1873). The project area was situated northwest of an area known as Mechanicsville during the mid-nineteenth century. A farm lane was surveyed on the west side of the project area on mid-nineteenth-century maps, which led from the Somerville and Easton Turnpike (future U.S. Route 22) to a farmstead owned by W. Ditmus in 1851 and J. B. Ditmars in 1873 (Cornell 1851, Beers 1873). The farmstead was situated approximately 1,300 feet north of the project area. Further, several dwellings and a blacksmith shop located 600 feet south of the project area lined the north side of Somerville and Easton Turnpike during the mid-nineteenth century (Cornell 1851; Beers 1873). Most of the dwellings and the blacksmith shop were razed prior to 1931 (NETR 1931). The project area was characterized as an open agricultural field from the early twentieth to early twenty-first century (NETR 1931, 1940, 1953, 1956, 1963, 1970, 1971, 1972, 1979, 1987, 1988, 1995, 2002, 2006, 2007). Between 1979 and 1987, a large storage structure was erected near the project area in the northwest corner of the agricultural field (NETR 1979, 1987).

Site Visit

The project area was examined on November 11, 2011 by Allison Gall, Project Archaeologist. The project area is located on the east side of a 2,700-foot long nineteenth-century driveway that extends from U.S. Route 22 to the former Ditmus farm complex. The project area is situated in a large, fallow, agricultural field. One large storage structure or paddock, constructed in the late twentieth century, is situated in the northwestern portion of the agricultural field. With the exception of agricultural plowing, no extensive disturbance was visible within the project area. No foundations or artifacts were observed during the site visit.

Sensitivity Assessment

Prehistoric Resources

The topographic setting and background research suggest that the project area has a moderate sensitivity to contain prehistoric resources.

Historic Resources

Based on an examination of historic atlases, maps, and aerials, the project area is situated along a nineteenth century driveway, with nineteenth-century structures formerly located roughly 1,500 feet north and approximately 600 feet south of the project area. Given the distance to these structures, the sensitivity for related historic archaeological resources within the project area is considered low to moderate.

Conclusions

No known archaeological constraints were identified during background research. The project area was assessed as having a moderate sensitivity for prehistoric resources and a low to moderate sensitivity for historic resources. However, additional work could be necessary to fulfill the requirements of Section 106 of the National Historic Preservation Act, as amended, and state and municipal regulations.

Please call me at 609-655-0692, ext. 309 if you have any questions.

Sincerely,



Paul J. McEachen, MA, RPA
Principal Senior Archaeologist

PJM:mjg

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**Archaeological Screening
Proposed Archery Range
Page 5 of 5**

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FIGURES AND PHOTO PLATES

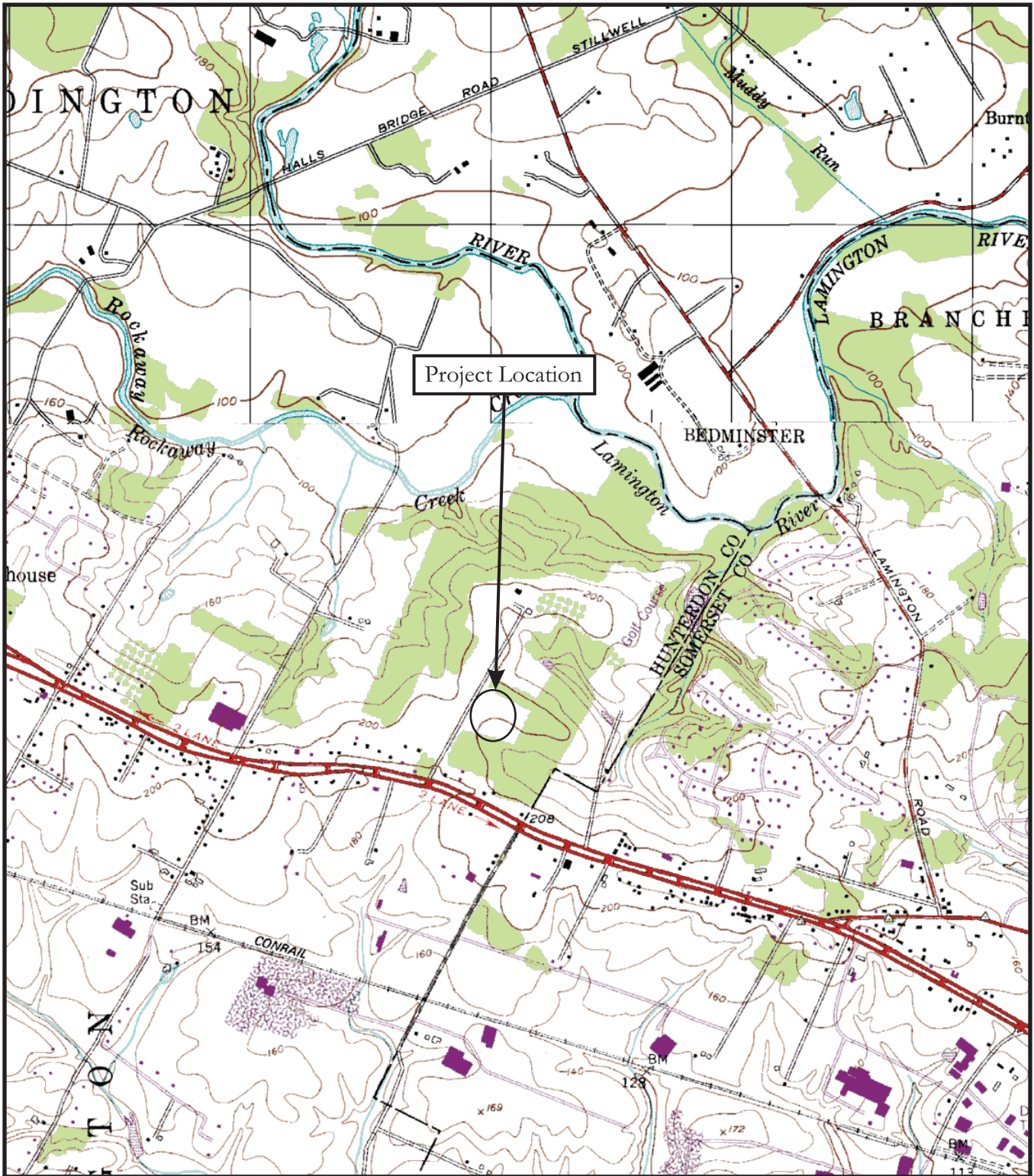
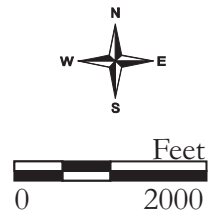


Figure 1:

U.S.G.S. Map
 (from U.S.G.S. 7.5 Quadrangles: 1955 Raritan, NJ
 [Photorevised 1981] and 1995 Gladstone, NJ)



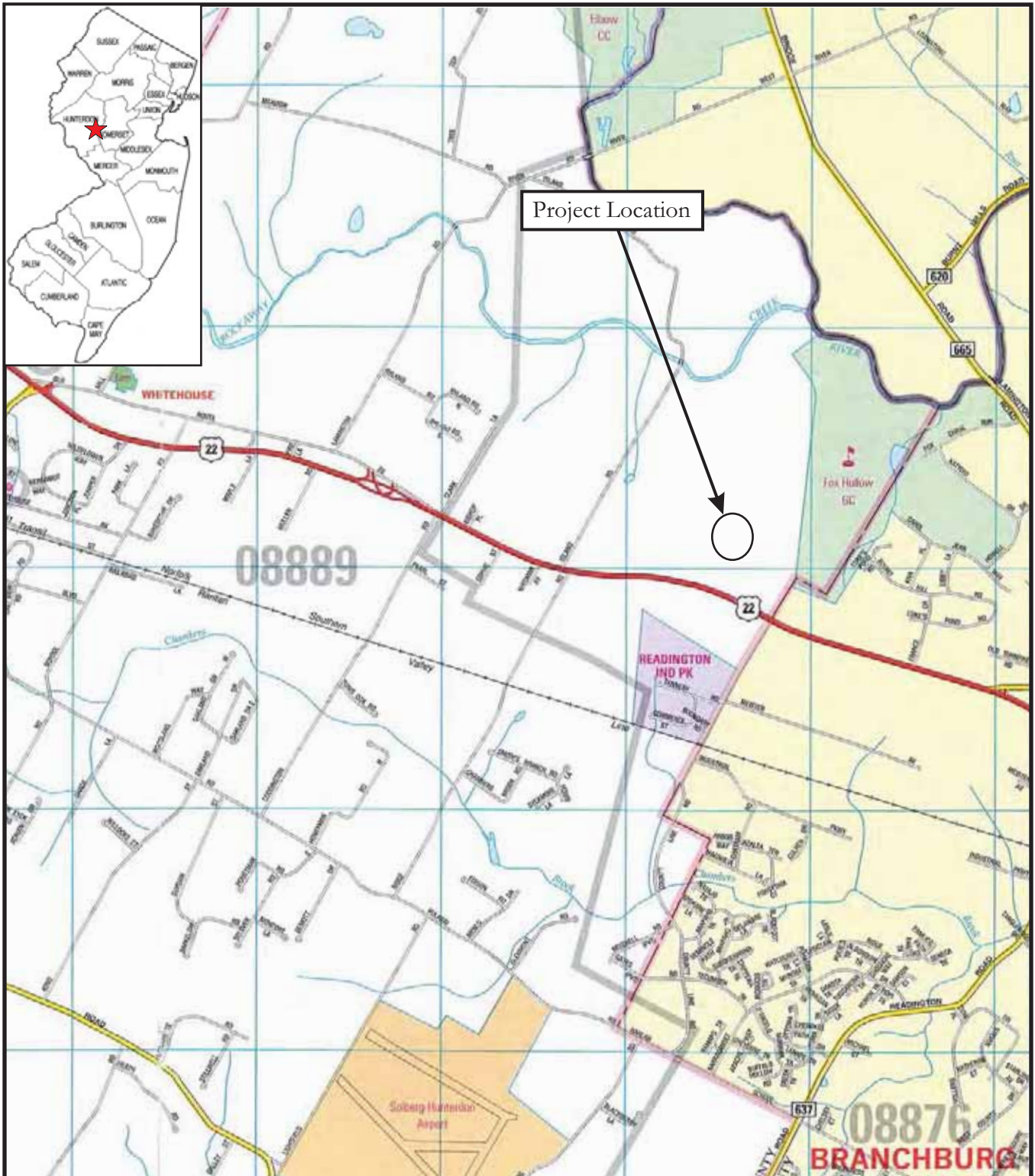


Figure 2:

County Map
 (from 2005 Hagstrom Map Company, Inc.,
 Street Map of Hunterdon County, New Jersey).





Plate:

1

Photo View:

Southeast

Photographer:

Allison Gall

Date:

November 11, 2011

Focal Length:

38mm

Approximate distance from site (ft/m):

N/A

Overview of the approximate location of the proposed archery range.



Plate:

2

Photo View:

Northwest

Photographer:

Allison Gall

Date:

November 11, 2011

Focal Length:

38mm

Approximate distance from site (ft/m):

N/A

Overview of the existing paddock or storage structure located near the project area.