

HISTORIC PROPERTIES VISUAL IMPACT ASSESSMENT

PSEG EARLY SITE PERMIT APPLICATION, SALEM COUNTY, NEW JERSEY:

ADDENDUM

This Addendum to the *Draft Historic Properties Visual Impact Assessment for the PSEG Early Site Permit Application* (MACTEC 2009) presents additional historic architectural resources analyses pertaining to the proposed project as requested by the New Jersey Historic Preservation Office (NJHPO) and the Delaware State Historic Preservation Office (DESHPO) following their review of the draft document.

Additional analyses included herein are the results of a reconnaissance-level architectural resources field survey to identify potential New Jersey/National Register of Historic Places-eligible architectural resources in a refined study area. Further, additional research was conducted to identify resources in the 10-mile-radius area of potential effect (APE) that were previously determined eligible for the National Register of Historic Places (NR) or the New Jersey Register (NJR) of Historic Places. An additional field survey was also conducted to assess the visibility of proposed project elements from all architectural resources in the APE that were not previously field-checked in the *Draft Historic Properties Visual Impact Assessment*. Finally, an assessment of the potential effects of the proposed project on architectural resources in the APE was conducted in keeping with Section 106 of the National Historic Preservation Act.

In summary, no adverse effects on architectural resources have been identified in New Jersey or Delaware. The change in context of applicable resources in both New Jersey and Delaware that would result from the proposed project would not substantially alter the existing aesthetic or scenic qualities of their setting, obstruct important views, or alter the aspects of the resources that qualify them for listing on the NR or NJR. Under the Alloway Creek Neck Road Alternative, no adverse effects on archaeological resources are anticipated. Under the Money Island Road Alternative, archaeological sites could be affected, however, a Phase II archaeological survey would be required to determine if these sites are significant (NR-eligible). If adverse effects to NR-eligible archaeological sites cannot be avoided, appropriate mitigation measures would be developed and implemented in coordination with NJHPO and any other appropriate parties. In terms of submerged cultural resources, no adverse effects are currently anticipated. However, as project plans are developed if the potential is identified for disturbance in areas of identified submerged anomalies is identified, a Phase II submerged resources survey would be required to determine whether the submerged resources are NR-eligible. If NR-eligible submerged resources would be affected by the proposed project, appropriate mitigation measures would be developed and implemented in coordination with NJHPO and any other appropriate parties.

A. RECONNAISSANCE-LEVEL ARCHITECTURAL RESOURCES SURVEY

This section presents the results of a reconnaissance-level architectural resources field survey conducted for this project in 2011 by an architectural historian that meets the professional qualification standards outlined in 36 CFR 61, Appendix A. Architectural resources in the APE are shown on Figures 1 through 4 and are listed in Tables 1 and 2.

NEW JERSEY

In order to complete the Section 106 process, NJHPO requested that all architectural resources that could be affected by the proposed project, including previously unidentified resources that meet the S/NR eligibility criteria ("potential architectural resources"), should be identified in a reconnaissance-level field survey and the potential for the proposed project to affect any such additional resources should be evaluated in a revised Historic Properties Visual Impact Assessment. NJHPO noted that in order to make this task more efficient, a smaller primary study area should be delineated in place of the 10-mile-radius area of potential effect. The smaller study area should include only locations with the potential to experience a substantial visual impact. Based on NJHPO's informal internal guidelines for delineating APEs for cell tower

projects, NJHPO suggested using a formula of 0.00833 times the height of a proposed feature to determine the radius (in miles) of the study area for the reconnaissance level survey. The application of this formula to the proposed cooling tower's maximum height of 590 feet, resulted in a study area delineation for the reconnaissance-level survey of 4.9 miles.

AKRF architectural historians conducted a reconnaissance-level architectural resources field survey of the 4.9-mile study area. Two potential architectural resources that were not previously evaluated by NJHPO were identified in, or immediately adjacent to, this 4.9-mile study area. One, the Denn House, located at 112 Poplar Street in Lower Alloways Creek Township, is an early 18th century patterned brick house (see Figure 1 and Figure 10, Photo 1). This property is located approximately 4 miles northeast of the proposed cooling tower location. The property was included in the 2009 *Draft Historic Properties Visual Impact Assessment*. This report noted that the proposed cooling tower location was not visible from the property.

A second potentially S/NR-eligible architectural resource was identified at 349 Fort Elfsborg Road in Salem County (see Figure 1 and Figure 10, Photo 2). This residence exhibits elements of the Greek Revival and Italianate styles and appears to date to the mid 19th century. This structure is located immediately north of the 4.9-mile study area, however a portion of the parcel on which the structure stands appears to be located within the 4.9-mile study area. The structure was not identified in the 2009 *Draft Historic Properties Visual Impact Assessment*. Based on the field survey conducted by AKRF, the proposed cooling tower location would be visible from the potential architectural resource.

DELAWARE

Delaware Deputy Historic Preservation Officer Joan Larrivee stated it was not necessary to conduct a full reconnaissance-level architectural resources survey to identify architectural resources that meet the National Register criteria but have not been previously evaluated. She also noted that unlike New Jersey, Delaware does not maintain a State Register of Historic Places. However, she requested that while the visibility analysis was being conducted, if any potentially National Register-eligible architectural resources were noted within 4.9 miles of the proposed cooling tower locations, these should be flagged as potential architectural resources.

One potential architectural resource was noted in the 4.9-mile study area in Delaware. This wood-frame vernacular dwelling is located at 50 Cedar Swamp Road in Townsend (see Figure 4 and Figure 11, Photo 3). The center-chimney house likely dates to the early 19th century. It is located approximately 4 miles southwest of the proposed cooling tower location. The structure was not identified in the 2009 *Draft Historic Properties Visual Impact Assessment*. Based on the field survey conducted by AKRF, the proposed cooling tower location would be visible from the potential architectural resource.

B. PROPERTIES PREVIOUSLY DETERMINED NATIONAL REGISTER-ELIGIBLE AND/OR NEW JERSEY REGISTER-ELIGIBLE

NEW JERSEY

In addition to the architectural resources identified in the Draft Historic Properties Visual Impact Assessment, ten resources that NJHPO had previously determined NR and/or NJR-eligible were identified in the APE. These resources were added to project maps (see Figure 1) and cultural resources tables (see Table 1) and were field-checked to determine the visibility of proposed project elements from the resources. These resources are discussed further in Section C, Visibility Assessment.

DELAWARE

In order to complete the Section 106 process, the DESHPO requested that resources previously determined eligible for the National Register by DESHPO be included in the visual impact analysis for the proposed project. In order to obtain information on resources determined eligible for the NR in the Delaware study area, an architectural historian conducted site file research at

the DESHPO offices. A large number of previously surveyed architectural properties were identified in the 4.9-mile study area in Delaware. The locations of these resources are illustrated on Figure 9. Of these resources, only five were previously determined NR-eligible. These consisted of 8 Liberty Street, 9 West Market Street, 7 West Market Street, 5 West Market Street, and 2 West Market Street, which were considered NR-eligible as part of the Port Penn Historic District. A field visit indicated that the building at 8 Liberty Street has since been demolished. The remaining four NR-eligible resources were added to project maps (see Figures 2-4) and cultural resources tables (see Table 2), and were field-checked to determine the visibility of proposed project elements from the resources. These resources are discussed further in Section C, Visibility Assessment.

C. VISIBILITY ASSESSMENT

The *Draft Historic Properties Visual Impact Assessment* includes an assessment of the visibility of the proposed project from some of the architectural resources in the APE. Some of the architectural resources identified in the report were not field-checked. Those that were field-checked were noted as either having visibility or not having visibility to the proposed project location in Table 1 of the report and were also documented with a photograph and brief description in Appendix B of the report. This section of the Addendum presents the results of a field survey to document the visibility of the proposed project from the architectural resources that were not field-checked as part of the original survey. In addition, architectural resources that were identified as part of this Addendum, including State/National Register-eligible resources and potentially State/National Register-eligible resources were also field-checked.

NEW JERSEY

Fourteen architectural resources were identified in the New Jersey portion of the APE in the *Draft Historic Properties Visual Impact Assessment*. All of these properties were field-checked as part of MACTEC's original survey. Four of the fourteen resources were identified by MACTEC as having views to the location of the proposed cooling tower. These resources were the following: the Joseph Ware House at 134 Poplar Street (NR-listed); the Benjamin Holmes House at 410 Fort Elfsborg Road (NR-listed); the Abel and Mary Nicholson House at 12 Fort Elfsborg Road (NR-listed); and the John Mason House (determined NR-eligible as part of this project). The proposed project was observed not to be visible from the remaining ten architectural resources identified and field-checked by MACTEC.

Table 1 provides a comprehensive list of all NJR- and NR-listed, NJR- and NR-eligible architectural resources in the APE in New Jersey. The table summarizes the results of MACTEC's original visibility field survey and also presents the results of AKRF's subsequent field survey to assess the visibility of the project from all architectural resources not previously field-checked by MACTEC. Six architectural resources were field-checked by AKRF as part of this study; the proposed project location appeared to be visible from two resources that had not been previously field-checked: the Samuel Urion / Yerkes Farmstead on Lighthouse Road and the Nathaniel Chambless House on Alloway Creek Neck Road.

Figure 5 illustrates the location of the architectural resources in the New Jersey portion of the APE and whether the proposed project location appeared to be visible from the resources based on MACTEC's and AKRF's surveys. Figures 12 through 16 illustrate the architectural resources whose visibility of the proposed project was field-checked as part of this Addendum. Where possible, views looking towards the proposed cooling tower from the resource are also provided. The four architectural resources that MACTEC identified as having views of the proposed project location were also revisited and photographs of these resources are also included in Figures 12 to 16.

DELAWARE

Seventy-nine architectural resources were identified in the Delaware portion of the APE in the *Draft Historic Properties Visual Impact Assessment*. Thirty-seven of these properties were field-

checked as part of MACTEC's original survey. Eight of the 37 resources were identified by MACTEC as having views to the location of the proposed cooling tower. These sites consisted of the following NR-listed resources: the Augustine Beach Hotel at 1919 St. Augustine Road; the Port Penn Historic District in Port Penn; the Liston Front Range Lighthouse at 1600 Belts Road; Hell Island; the Short's Landing Hotel Complex at 6180 Fleming Island Road; the Reedy Island Rear Range Light at the intersection of State Route 9 and Cedar Swamp Road; and Misty Vale off Reading Lane. Five of the field-checked sites were listed as "not determined," because the resource could not be located.

Table 2 provides a comprehensive list of all of the NR-listed and NR-eligible architectural resources identified in the APE in Delaware. The table summarizes the results of MACTEC's original visibility field survey and also presents the results of AKRF's subsequent field survey to assess the visibility of the proposed cooling towers from all architectural resources not previously field-checked by MACTEC. Forty-four architectural resources were field-checked by AKRF as part of this study; the proposed project location appeared to be visible from 30 of these 44 resources.

Figures 6 through 8 illustrate the location of the architectural resources in the Delaware portion of the APE and whether the proposed project location appeared to be visible from the resources based on MACTEC's and AKRF's surveys. Figures 17 through 37 provide photographs of the architectural resources whose visibility of the proposed project was field-checked as part of this Addendum. Where possible, views looking towards the proposed cooling tower from the resource are also provided.

D. EFFECTS ASSESSMENT

In accordance with Section 106 of the National Historic Preservation Act, this section assesses the potential for the proposed project to result in adverse effects to architectural resources. Effects on historic properties may include both direct effects and indirect effects resulting from project construction or project operation. Assessments of effects are based on the Advisory Council's Criteria of Adverse Effect codified in 36 CFR § 800.5(a)(2). According to the Advisory Council's criteria, an adverse effect is found "when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association." Examples of adverse effects include, but are not limited to "physical destruction or damage of all or part of the property;" "removal of the property from its historic location; change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance;" and "introduction of visual, atmospheric, or audible elements that diminish the integrity of the property's significant historic features."

The DESHPO developed specific guidelines for assessing visual effects on historic properties in accordance with Section 106 and other legislation. These guidelines consider adverse visual effects possible when a proposed action would cause a "change in aesthetic values" or "obstruction of views." The guidelines define adverse effects as "those that diminish the property's integrity, which negatively affects its historic significance and hence its eligibility for the National Register of Historic Places." The two potential types of visual effect identified by DESHPO (aesthetic effects and obstructive effects) are defined as follows: "an aesthetic effect occurs when there is an effect on the perceived beauty of a place or structure. Adverse aesthetic effects on historic properties are those that impair the character or quality of a historic property, and thus cause a diminishment of the enjoyment and appreciation of the property." An obstructive effect "occurs when the proposed project obstructs any part of a historically significant property or scenic view from the viewpoint of the historic property. Adverse obstructive effects on historic properties are those that obstruct in whole or part of the property and that cause a diminishment of the property's historic character."

NEW JERSEY

Based on project plans, proposed project construction is far enough removed from the architectural resources in the project APE that no potential for physical destruction or damage (including inadvertent damage resulting from adjacent construction) of architectural resources has been identified.

In terms of the potential for indirect effects, as described in Section C, above, field surveys performed by MACTEC and AKRF concluded that 16 of the 22 architectural resources in the New Jersey portion of the APE did not appear to possess views to the proposed project location (see Table 1). These 16 resources would not experience indirect effects as a result of the proposed project.

Six of the 22 architectural resources in the New Jersey portion of the APE were observed to possess views towards the proposed project location. These six resources are analyzed in greater detail below, in order to evaluate the potential for adverse indirect effects on these resources.

The Samuel Urion / Yerkes Farmstead (see Figure 5, Resource #2; and Figure 12, Photo 1) is a three-story brick residence located over 9 miles north of the proposed project site. Although the proposed cooling towers would likely be visible from the resource due to the flat and open terrain in the area, the proposed cooling towers would be relatively distant from the resource. Further, the existing Hope Creek cooling tower is currently distantly visible from the resource. The addition of two additional cooling towers closely adjacent to the existing cooling tower would not represent a substantial deviation from the existing views from the resource. Although the addition of two additional cooling towers would be noticeable, it would not change the overall character of the resource's context nor would it affect the aspects of the property's setting that qualify it for the New Jersey and National Registers. Therefore, no adverse effects to the Samuel Urion/ Yerkes Farmstead would result from the proposed project.

Similarly, the Benjamin Holmes House (see Figure 5, Resource #13; and Figure 14, Photo 6) is located approximately 5 miles north of the project site. The proposed cooling towers would likely be visible from the resource. As shown on Figure 14 (Photo 6) views to the existing and proposed cooling towers are partially blocked by vegetation. The addition of two new cooling towers to a view already containing a cooling tower would not substantially change the character of the resource's context, nor would it affect the qualities that qualify the resource for New Jersey and National Register listing. Therefore, no adverse effects to the Benjamin Holmes House would result from the proposed project.

The Abel and Mary Nicholson House, a patterned brick house that is both listed on the New Jersey and National Registers and as a National Historic Landmark (NHL), is located approximately five miles northeast of the project site (see Figure 5, Resource #17; and Figure 15, Photo 8). As shown on Figure 15 (Photo 8) and in a visual simulation of the existing and proposed conditions from the Abel and Mary Nicholson House that is included in the *Draft Historic Properties* as Appendix C, Photo 3, the existing cooling tower is distantly visible from the Abel and Mary Nicholson House. The proposed cooling towers would also be visible, positioned in close proximity to the existing tower. The overall change in the visual character and context of the Abel and Mary Nicholson House would not be substantial and would not compromise the aspects of the resource that qualify it for New Jersey/National Register listing and National Historic Landmark designation. Therefore, no adverse effects to the Abel and Mary Nicholson House would result from the proposed project.

The Ware Shourds House is a New Jersey/National Register-listed brick farmhouse located approximately 4 miles northeast of the proposed project (see Figure 5, Resource #20; and Figure 16, Photo 9). A visual simulation of the existing and proposed conditions from the Ware-Shourds House is included in the *Draft Historic Properties* as Appendix C, Photo 4. The existing cooling tower and the proposed cooling tower locations are marginally visible from the resource; they are partially blocked by trees and by non-contributing outbuildings on the property. The

introduction of the proposed new cooling towers on the project site would not result in a substantial change in the character of the context of the Ware Shourds House, nor would it affect the features of the property that qualify it for listing on the New Jersey or National Registers. Therefore, no adverse effects to the Ware Shourds House would result from the proposed project.

The Nathaniel Chambless House is a New Jersey/National Register-eligible patterned brick farmhouse located approximately 3.5 miles east of the proposed project (see Figure 5, Resource #22; and Figure 16, Photo 10). The resource has a relatively clear view of the existing cooling tower due to the open and flat topography in the immediate area. The proposed cooling towers are also anticipated to be visible, immediately adjacent to the existing tower. Although the introduction of a new cooling tower would constitute new feature in the context of the resource, due to the presence of an existing cooling tower, the change in the resource's context would not deviate substantially from the present conditions. The addition of the new cooling towers would not alter the resource or its context in such a way as to compromise its New Jersey/National Register eligibility. Therefore, no adverse effect to the Nathaniel Chambless House is expected to result from the proposed project.

The John Mason House (see Figure 5, Resource #15) is a residence reportedly dating to the late 17th century located approximately 4.5 miles northeast of the project site. As described in the *Draft Historic Properties Visual Impact Assessment* (see Appendix B, page B-12) and shown in a visual simulation of the existing and proposed conditions from the Mason House (see *Draft Historic Properties Visual Impact Assessment* Appendix C, Photo 2), the existing cooling tower is marginally visible from the resource and the proposed cooling towers are also expected to be marginally visible. The introduction of the proposed cooling towers into the setting of the John Mason House would not substantially alter the setting of the resource and would not alter the aspects of the property or its context that qualify it for New Jersey/National Register listing. Therefore, no adverse effects to the John Mason House are expected to result from the proposed project.

Two potential architectural resources are located within or adjacent to the 4.9-mile-radius study area in New Jersey: the John Maddox Denn House at 112 Poplar Street and the residence at 349 Fort Elfsborg Road (see Figures 5 and 10). The Denn House is located approximately four miles east of the project site; MACTEC's field survey determined that the Denn House did not have views to the proposed cooling tower sites. The residence at 349 Fort Elfsborg Road is located approximately 5 miles north of the project site; the property on which the residence stands is within or immediately adjacent to the 4.9-mile-radius study area. Although the existing cooling tower is distantly visible from the resource and the proposed cooling towers are predicted to be distantly visible, this change would not alter the character-defining features of the resource nor substantially alter aspects of the resource's existing context in such a way that would affect its eligibility for the New Jersey/National Register. Therefore, no adverse effects to the John Mason House or the John Maddox Denn House are expected to result from the proposed project.

DELAWARE

Proposed project construction, all located in New Jersey, is far enough removed from the architectural resources in the Delaware portion of the APE that no potential for physical destruction or damage (including inadvertent damage resulting from adjacent construction) of architectural resources in Delaware has been identified.

In terms of the potential for indirect effects, as described in Section C, above, field surveys performed by MACTEC and AKRF concluded that 32 of the 79 architectural resources in the Delaware portion of the APE did not appear to possess views to the proposed project location (see Table 2). These 32 resources would not experience indirect effects as a result of the proposed project.

Forty-seven of the 79 architectural resources in the Delaware portion of the APE were observed to possess views towards the proposed project location. These resources are analyzed in greater detail below in order to evaluate the potential for adverse indirect effects on these resources in accordance with Section 106. In general, architectural resources in Delaware with views of the project site are located more than two miles west of the project site and are separated from the project site by the Delaware River. Due to the flat topography and open terrain that characterizes the area, the existing cooling tower can be seen from distances of at least ten miles from the project site where obstructions do not intervene. Similarly, the proposed cooling towers would also likely be visible from many relatively distant vantage points. Resources in Delaware with views of the project site are summarized in Table 2; their locations are shown on Figures 6 through 8. Photographs of the resources field-checked by MACTEC are included in Appendix B of the *Draft Historic Properties Visual Impact Assessment*. Photographs of those field-checked by AKRF are included in Figures 17 through 37 of this Addendum.

Forty-three of the 47 architectural resources in the Delaware portion of the APE with views of the project site are listed on the National Register. One of these resources, the Corbit-Sharp House (Resource # 54), located approximately 6 miles west of the project site, is also an NHL. Four of the 47 architectural resources in the Delaware portion of the APE with views of the project site were determined eligible for the National Register as a proposed expansion of the NR-listed Port Penn Historic District. One potentially NR-eligible resource was identified in Delaware.

All of the resources located within the 10-mile APE but beyond the 4.9-mile study area (including the NHL Corbit-Sharp House) experience only distant views of the cooling tower locations. This distant view is often partially blocked by topography or vegetation; for example, Okolona (see Figure 7, Resource #44; and Figure 27, Photo 21) from which the existing cooling tower can be only distantly perceived and the Arnold S. Naudain House (see Figure 8, Resource #66; and Figure 33, Photo 34) from which only the water vapor issuing from the existing cooling tower can be seen above the tree line. The proposed addition of two cooling towers in close proximity to the existing cooling tower is not expected to result in a substantial aesthetic change in the context of the resources in the APE that are located more than 4.9 miles from the project site. Further, the proposed cooling tower would not obstruct views of any architectural resources in this area nor would it change or obstruct any existing scenic views in a manner that would affect the National Register eligibility of the resources. No adverse effects on these resources would result from the proposed project.

Eighteen of the architectural resources identified in Delaware are located within 4.9 miles of the project site, including two historic districts: the NR-listed Port Penn Historic District and the NR-listed Ashton Historic District. The Port Penn Historic District (see Figure 7, Resource #28), located approximately 3.5 miles northwest of the project site, and the adjacent four NR-eligible architectural resources that comprise a possible expansion of that Historic District (see Figure 7, Resources #76 through 79; and Figures 35 through 37) have only marginal views towards the cooling tower in the winter months; in the summer the existing cooling tower and proposed cooling tower locations are largely obscured by vegetation. The Ashton Historic District (see Figure 6, Resource #20; and Figure 22, Photo 11) is located approximately 4 miles northwest of the project site. Distant views of the existing cooling tower and the locations of the proposed cooling towers were observed in a field visit. The change that would result in the context of this resource and the other resources located within 4.9 miles of the project site would not constitute an aesthetic effect on these resources. The context of the resources already contains a cooling tower; the addition of two new cooling towers would not substantially alter the overall aesthetic character of the resources or their setting. Further, the proposed cooling towers would not block views of historic resources or obstruct existing scenic views enjoyed from the architectural resources.

One potential architectural resource was identified by AKRF, within or adjacent to, the 4.9-mile-radius study area in Delaware: a wood-frame vernacular house at 50 Cedar Swamp Road (see Figures 8 and 11) located approximately 4 miles southwest of the project site. Although the

existing cooling tower is distantly visible from the resource and the proposed cooling towers are also predicted to be distantly visible, this change would not alter aspects of the resource's existing context in such a way that would affect its eligibility for the New Jersey/National Register. Therefore, no adverse effects to the potential architectural resource at 50 Cedar Swamp Road would result from the proposed project.

In summary, no adverse effects would occur on architectural resources in the Delaware portion of the APE as a result of the proposed project. Although the resources that currently have views of the existing cooling tower would likely have views of the proposed cooling towers, the change in the context of these resources that would result from the proposed project would not substantially alter the aesthetic or scenic qualities of their existing setting, obstruct important views, or alter the aspects of the resources that qualify them for National Register listing.

Table 1
Architectural Resources in New Jersey APE

Map ID*	NAME	Location	NHL	NR/SR-Listed	NR/SR Eligible	Survey	Cooling Tower Visibility
1	Finn's Point Rear Range Light	Intersection of Fort Mott and Lighthouse Roads		X		MACTEC	No
2	Samuel Urion / Yerkes Farmstead	Lighthouse Road, Supawna National Wildlife Refuge			X	AKRF	Yes
3	Fort Mott and Finn's Point National Cemetery Historic District	On the Delaware River at Finn's Point		X		MACTEC	No
4	Fort Mott and Finns Point National Cemetery Historic District Boundary Increase	On the Delaware River at Finn's Point		X		MACTEC	No
5	Salem Motor Vehicle Inspection Station	185 Route 45			X	AKRF	No
6	Market Street Historic District	Market Street from East Broadway to Fenwick Creek		X		MACTEC	No
7	Chestnut Street Streetscape	Chestnut Street			X	AKRF	No
8	Hedge-Carpenter-Thompson Historic District	Bounded by Hedge, Thompson, South Third, and Oak Street		X		MACTEC	No
9	Oak Street Streetscape	Oak Street			X	AKRF	No
10	Walnut Street Streetscape	Walnut Street			X	AKRF	No
11	Broadway Historic District	West Broadway, East Broadway, and small portions of Johnson, New Market, and Yorke Streets		X		MACTEC	No
12	Salem Working Class Historic District	Portions of Elm, Olive, Church, Sinnickson, Eakin, Linden Streets			X	AKRF	No
13	Holmeland (Benjamin Holmes House)	Fort Elfsborg-Hancock's Bridge Road		X		MACTEC	Yes
14	Samuel and Sarah Nicholson House	Amwellbury Road near Featherbed Lane		X		MACTEC	No
15	John Mason House	63 Money Island Road			X	MACTEC	Yes
16	New Bridge Road (CR623) Bridge (Str. #1701399)	New Bridge Road (County Route 623) over Alloways Creek			X	AKRF	No
17	Abel and Mary Nicholson House	Hancocks Bridge-Fort Elfsborg Road	X	X		MACTEC	Yes
18	Abbot House	120 Abbot Farm Road			X	MACTEC	No
19	Hancock House	Hancock's Bridge, Locust Island Road		X		MACTEC	No
20	Ware-Shourds House	134 Poplar Street		X		MACTEC	Yes
21	Alloways Creek Friends Meetinghouse	74 Buttonwood Avenue		X		MACTEC	No
22	Nathaniel Chambless House	Alloway Creek Neck Rd.			X	AKRF	Yes

Notes:

NHL: National Historic Landmark

NR/SR: National Register/State Register of Historic Places

* Corresponds to Figure 1.

**Table 2
Architectural Resources in Delaware APE**

Map ID*	CRSNUM	Name	City	Location	NHL	NR-Listed	NR-Eligible	Survey	Cooling Tower Visibility
1	N00145	Fort Delaware on Pea Patch Island	Delaware City	Pea Patch Island in the Delaware River		X		AKRF	Yes
2	N01559	Eastern Lock of the Chesapeake and Delaware Canal	Delaware City	Battery Park		X		MACTEC	Yes
3	N06333	Delaware City Historic District	Delaware City	Roughly bounded by the Delaware River, Dragon Creek, DE 9, and the Delaware and Chesapeake Canals		X		MACTEC	No
4	N00429	Chelsea	Delaware City	DE 9		X		MACTEC	No
5	N01499	Fort Dupont Historic District	Delaware City	East side of route 9, south of the Chesapeake and Delaware Canal		X		MACTEC	Yes
6	N05048	Fairview	Delaware City	US 13		X		AKRF	No
7	N01493	Linden Hill	St. Georges	US 13		X		AKRF	Yes
8	N05038	Dragon Run Farm	Kirkwood	McCoy Rd.		X		AKRF	No
9	N05041	St. Georges Cemetery Caretaker's House	St. Georges	Kirkwood and St. Georges Rd.		X		AKRF	No
10	N00142	McCoy House	Kirkwood	Kirkwood and McCoy Rds.		X		AKRF	No
11	N05045	Vernacular Frame House	St. Georges	Delaware St.		X		AKRF	No
12	N05002	North Saint Georges Historic District	St. Georges	Main, Broad, Delaware and Church Streets		X		MACTEC	No
13	N09561	St. Georges Presbyterian Church	St. Georges	Main St.		X		MACTEC	No
14	N00144	Sutton House	St. Georges	Broad and Delaware Sts.		X		MACTEC	No
15	N05042	Bloomfield	St. Georges	US 13		X		MACTEC	No
16	N12738	Windsor	Port Penn	1060 Dutch Neck Rd.		X		AKRF	Yes
17	N03947	Idalia Manor	Mt. Pleasant	Rt. 13		X		AKRF	Yes
18	N05193	Fairview	Odessa	Rt. 412		X		AKRF	No
19	N03939	John B. Nelson, House	Port Penn	W of Port Penn off U.S. 13		X		AKRF	Yes
20	N03932	Ashton Historic District	Port Penn	N of Port Penn on Thornton Rd.		X		AKRF	Yes
21	N05253	Mondamon Farm	Odessa	Rt. 2		X		MACTEC	Yes
22	N03935	Biddle House	St. Georges	S of St. Georges on U.S. 13		X		MACTEC	Yes
23	N01623	Liston Range Rear Light Station	Port Penn	W of Port Penn on DE 2		X		MACTEC	Yes
24	N03944	Cleaver House	Port Penn	Off Biddle's Corner Rd.		X		AKRF	Yes
25	N13383	Robert Grose House	Port Penn	1000 Port Penn Rd		X		AKRF	Yes
26	N00413	A. Eliason House	Mt. Pleasant	Rt. 896		X		AKRF	No
27	N00147	Dilworth House	Port Penn	Off DE 9		X		AKRF	Yes
28	N03928	Port Penn Historic District	Port Penn	DE 9		X		MACTEC	Yes
29	N00148	Hazel Glen	Port Penn	W of Port Penn on DE 420		X		AKRF	Yes
30	N05201.001	Retirement Farm	Odessa	US 13		X		AKRF	Yes
31	N00150	Augustine Beach Hotel	Port Penn	S of Port Penn on DE 9		X		MACTEC	Yes
32	N05181	Elm Grange	Odessa	US 13		X		AKRF	Yes
33	N00121	Weston	Middletown	Off DE 71		X		AKRF	No

Table 2
Architectural Resources in Delaware APE

Map ID*	CRSNUM	Name	City	Location	NHL	NR-Listed	NR-Eligible	Survey	Cooling Tower Visibility
34	N05165	S. Higgins Farm	Odessa	Rt. 423		X		AKRF	Yes
35	N00424	Comdr. Thomas MacDonough House	Odessa	N of Odessa on U.S. 13		X		MACTEC	Yes
36	N00432	Monterey	Odessa	N of Odessa on Bayview Rd.		X		MACTEC	No
37	N05155	Bellevue	Middletown	Rt. 428		X		AKRF	Yes
38	N05159	Misty Vale	Odessa	Rt. 423		X		MACTEC	No
39	N05170	Riverdale	Odessa	Off Bay View and Silver Run Rds.		X		MACTEC	Yes
40	N01503	Mount Jones	Odessa	2569 Dupont Pkwy. (US 13)		X		AKRF	Yes
41	N03901	Liston Range Front Lighthouse	Bay View Beach	1600 Belts Road		X		MACTEC	Yes
42	N03930	Achmester	Middletown	N of Middletown on SR 429		X		MACTEC	No
43	N05146	Armstrong-Walker House	Middletown	DE 71		X		MACTEC	No
44	N05135	Okolona	Middletown	Rt. 429		X		AKRF	No
45	N00116	Sereck Shallcross House	Odessa	W of Odessa off U.S. 13		X		AKRF	No
46	N05177	J. Vandegrift House	Odessa	Rt. 44		X		AKRF	Yes
47	N00154	Old Drawyers Church	Odessa	U.S. 13		X		AKRF	Yes
48	N00120	Williams House	Odessa	1.2 mi. NW of Odessa on Marl Pit Rd.		X		AKRF	No
49	N01617	Old St. Paul's Methodist Episcopal Church	Odessa	High St.		X		MACTEC	No
50	N00416	Appoquinimink Friends Meetinghouse	Odessa	Main St.		X		MACTEC	No
51	N00188	Greenlawn	Middletown	N. Broad St.		X		MACTEC	No
52	N00105	Fields Heirs	Middletown	Off DE 71		X		MACTEC	No
53	N00126	Odessa Historic District	Odessa	Bounded roughly by Appoquinimink Creek on SE, High St. on NE, 4th St. on NW, and Main St. on SW		X		MACTEC	No
54	N00125	Corbit-Sharp House	Odessa	SW corner of Main and 2nd Sts.		X		MACTEC	Yes
55	N00115	J. Shallcross House	Odessa	DE 4		X		AKRF	Yes
56	N00155	Middletown Academy	Middletown	218 N. Broad St.		X		MACTEC	No
57	N05934	Pharo House	Middletown	Odessa and Silver Lake Rds.		X		AKRF	Yes
58	N00425	Middletown Historic District	Middletown	Roughly bounded by Redding, Scott, Lockwood, and Catherine Sts.		X		MACTEC	No
59	N00214	Fairview	Odessa	SE of Odessa		X		AKRF	Yes
60	N06240	Green Meadow	Odessa	Thomas Landing Rd. (DE 440)		X		AKRF	Yes
61	N03890	St. Joseph's Church	Middletown	15 W. Cochran St.		X		MACTEC	No
62	N06237	David W. Thomas House	Odessa	326 Thomas Landing Rd.		X		AKRF	Yes
63	N00122	Noxontown	Middletown	S of Middletown off DE 896		X		AKRF	Yes
64	N00124	Old St. Anne's Church	Middletown	S of Middletown off DE 71		X		AKRF	No
65	N05898	Hill Island Farm	Odessa	3379 Dupont Pkwy. (US 13)		X		AKRF	Yes
66	N00123	Arnold S. Naudain House	Middletown	S of Middletown on DE 71		X		AKRF	Yes
67	N00152	Hart House	Taylor's Bridge	E of Taylor's Bridge on DE 453		X		MACTEC	Yes

Table 2
Architectural Resources in Delaware APE

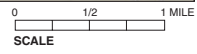
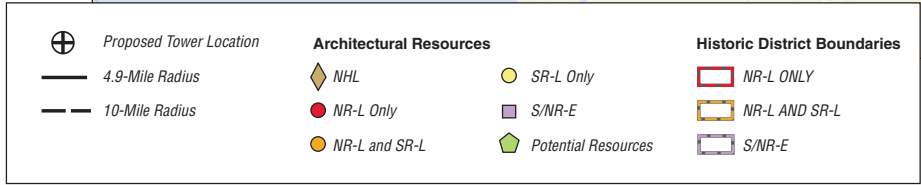
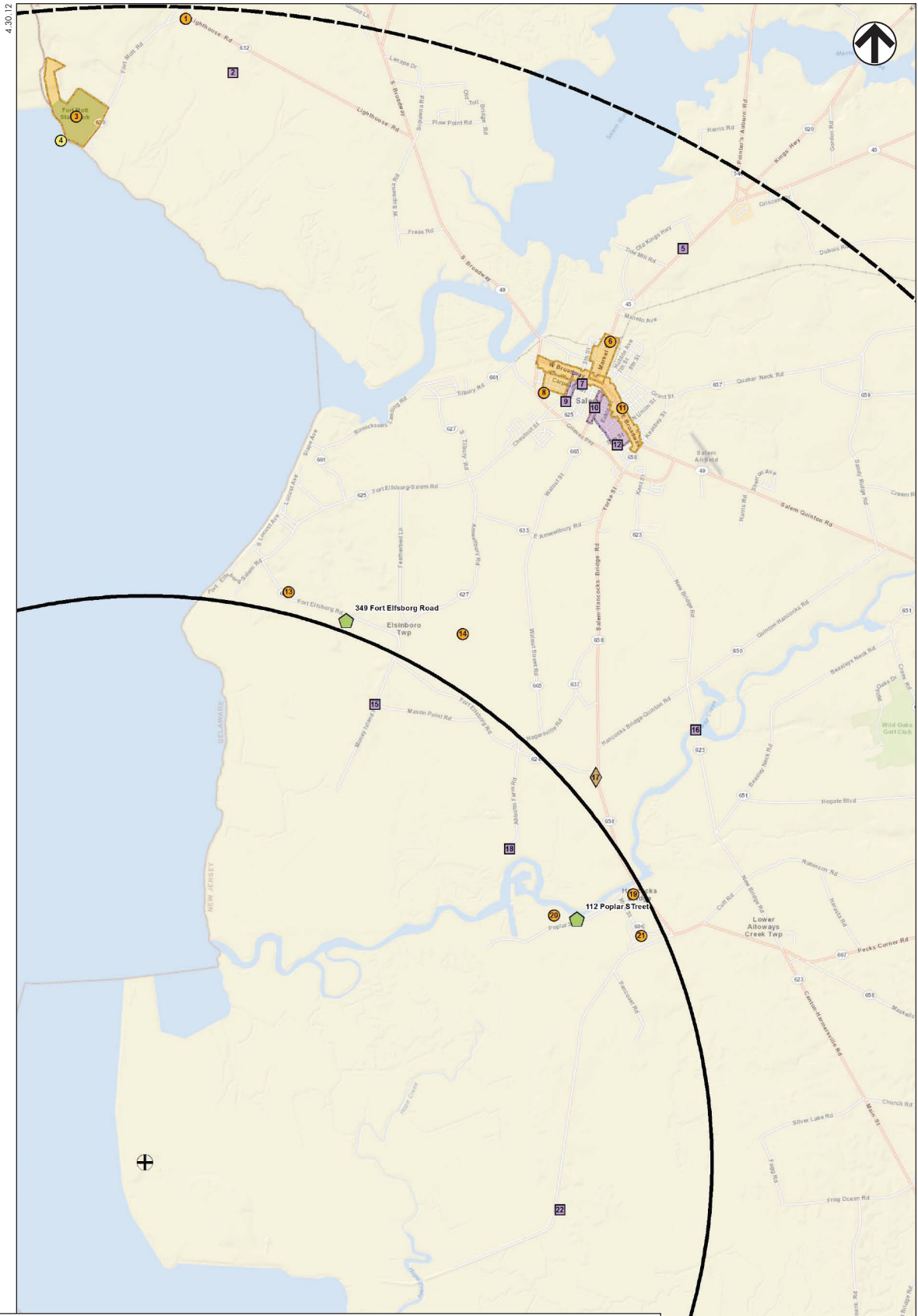
Map ID*	CRSNUM	Name	City	Location	NHL	NR-Listed	NR-Eligible	Survey	Cooling Tower Visibility
68	N04247	Johnson Home Farm	Taylor's Bridge	Co. Rd. 453 E of jct. with DE 9		X		AKRF	Yes
69	N05120	Reedy Island Range Rear Light	Taylor's Bridge	Jct. of DE 9 and Rd. 453		X		MACTEC	Yes
70	N00151	Liston House	Taylor's Bridge	E of Taylors Bridge on DE 453		X		MACTEC	Yes
71	N00419	Huguenot House	Taylor's Bridge	W of Taylors Bridge on DE 9		X		MACTEC	Yes
72	N10297	Townsend Historic District	Townsend	Roughly bounded by Gray, Ginn and South, Lattamus and Main Sts., and Commerce St. and Cannery Ln. and Railroad Ave.		X		AKRF	No
73	N00423	Old Union Methodist Church	Blackbird Crossroads	0.2 mi. N of Blackbird Crossroads on U.S. 13		X		AKRF	No
74	N00153	Fleming House	Smyrna	NE of Smyrna on DE 9		X		MACTEC	Yes
75	K03993	Short's Landing Hotel Complex	Smyrna	NE of Smyrna		X		MACTEC	Yes
76	N1246	9 West Market Street	Port Penn	9 West Market Street			X	AKRF	Yes
77	N1247	Elmer Bender House	Port Penn	7 West Market Street			X	AKRF	Yes
78	N1248	Charles Hickman Dwelling Complex	Port Penn	5 West Market Street			X	AKRF	Yes
79	N1249	David Corbit House	Port Penn	3 West Market Street			X	AKRF	Yes

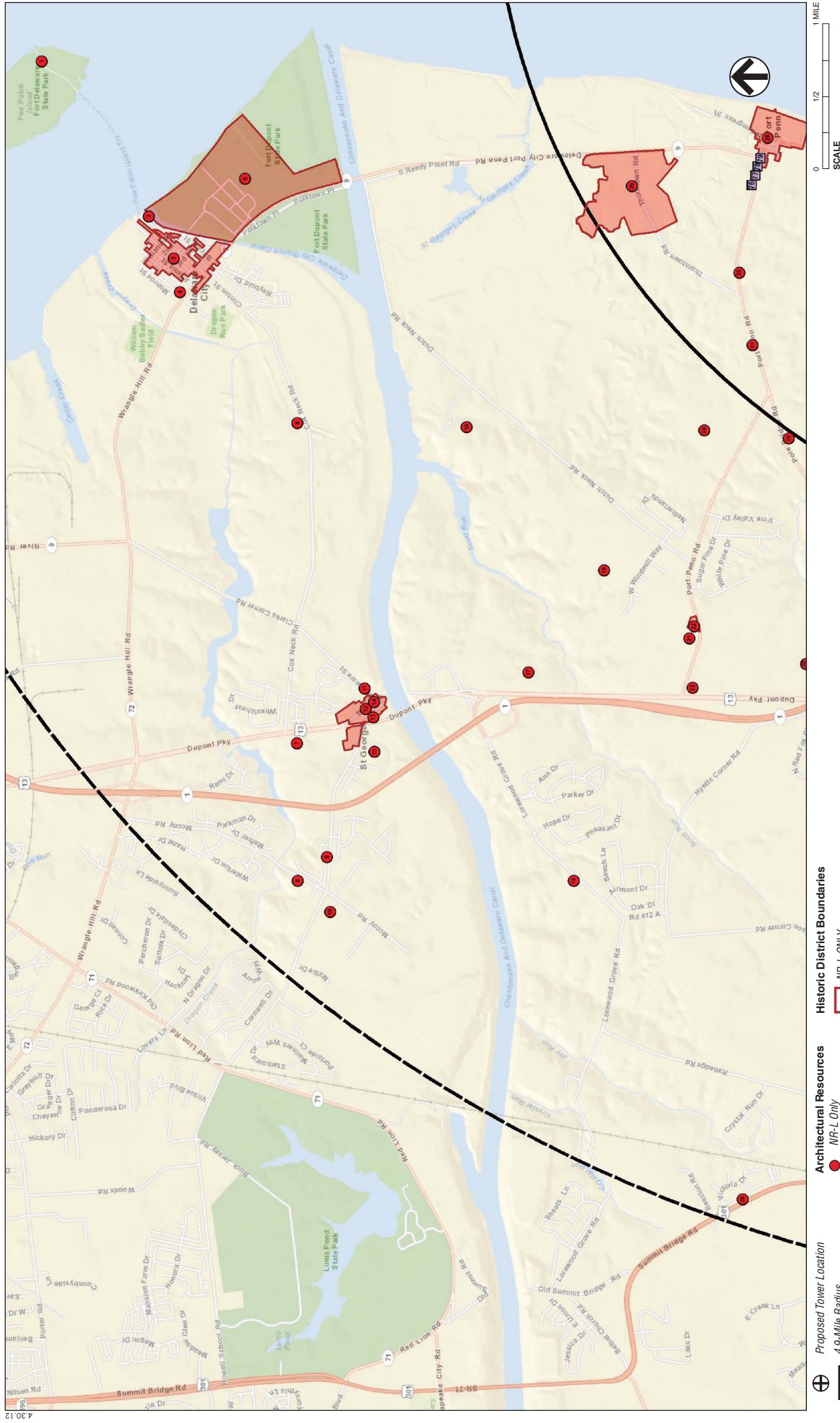
Notes:

NHL: National Historic Landmark

NR: National Register of Historic Places

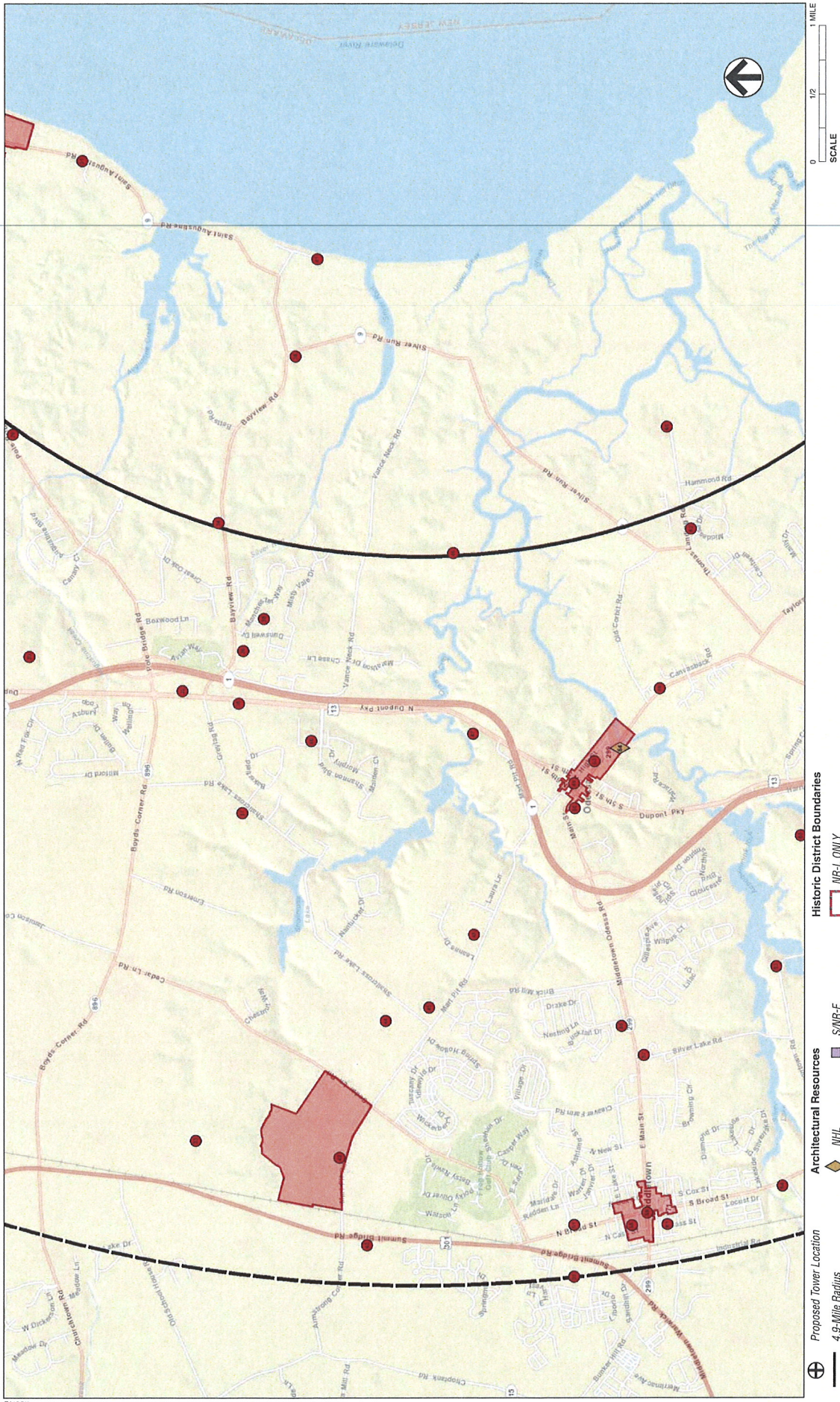
* Corresponds to Figures 2-5



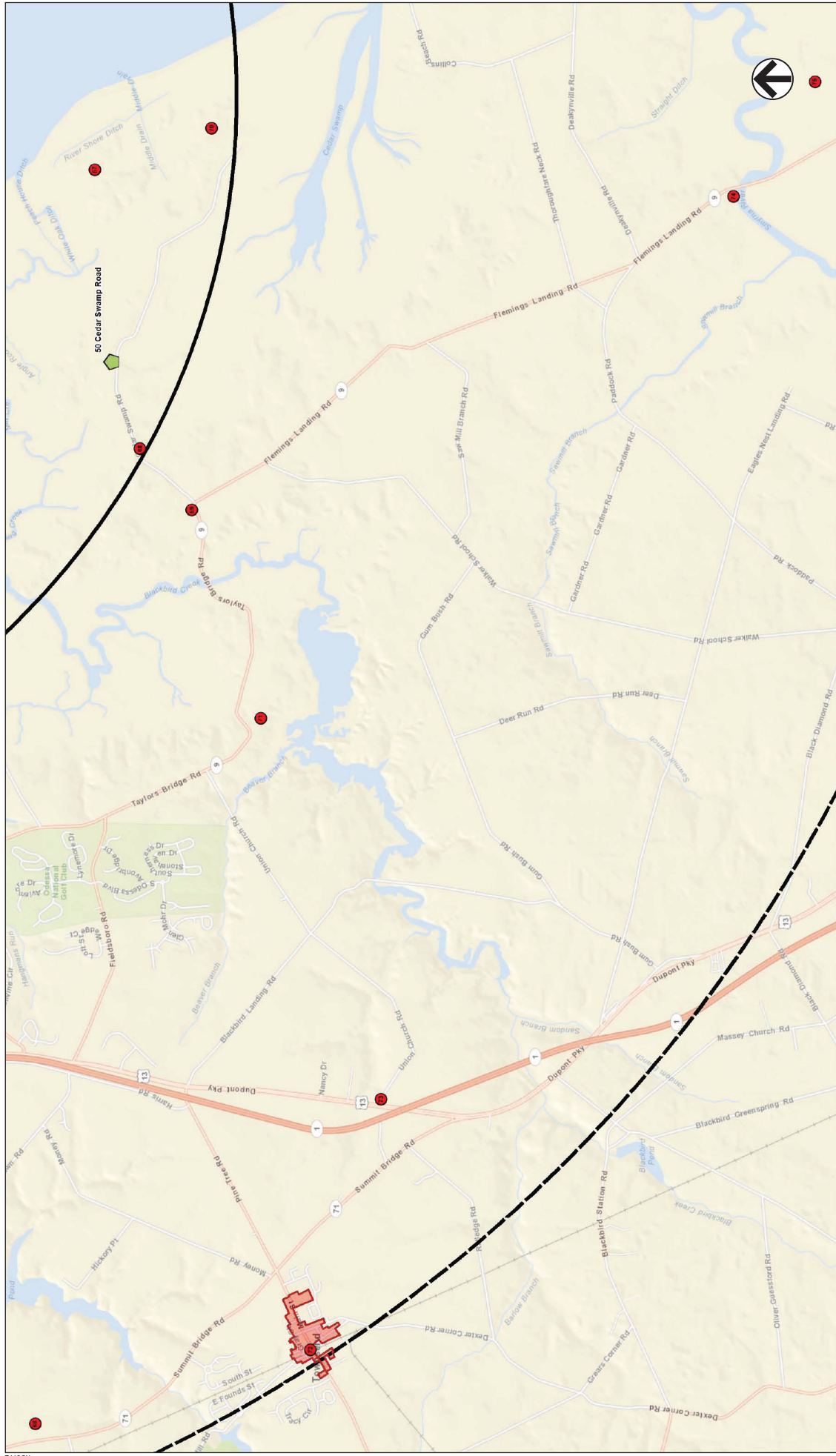


Delaware Architectural Resources
Figure 2

ESP Application Visual Impact Assessment Addendum



Delaware Architectural Resources
Figure 3



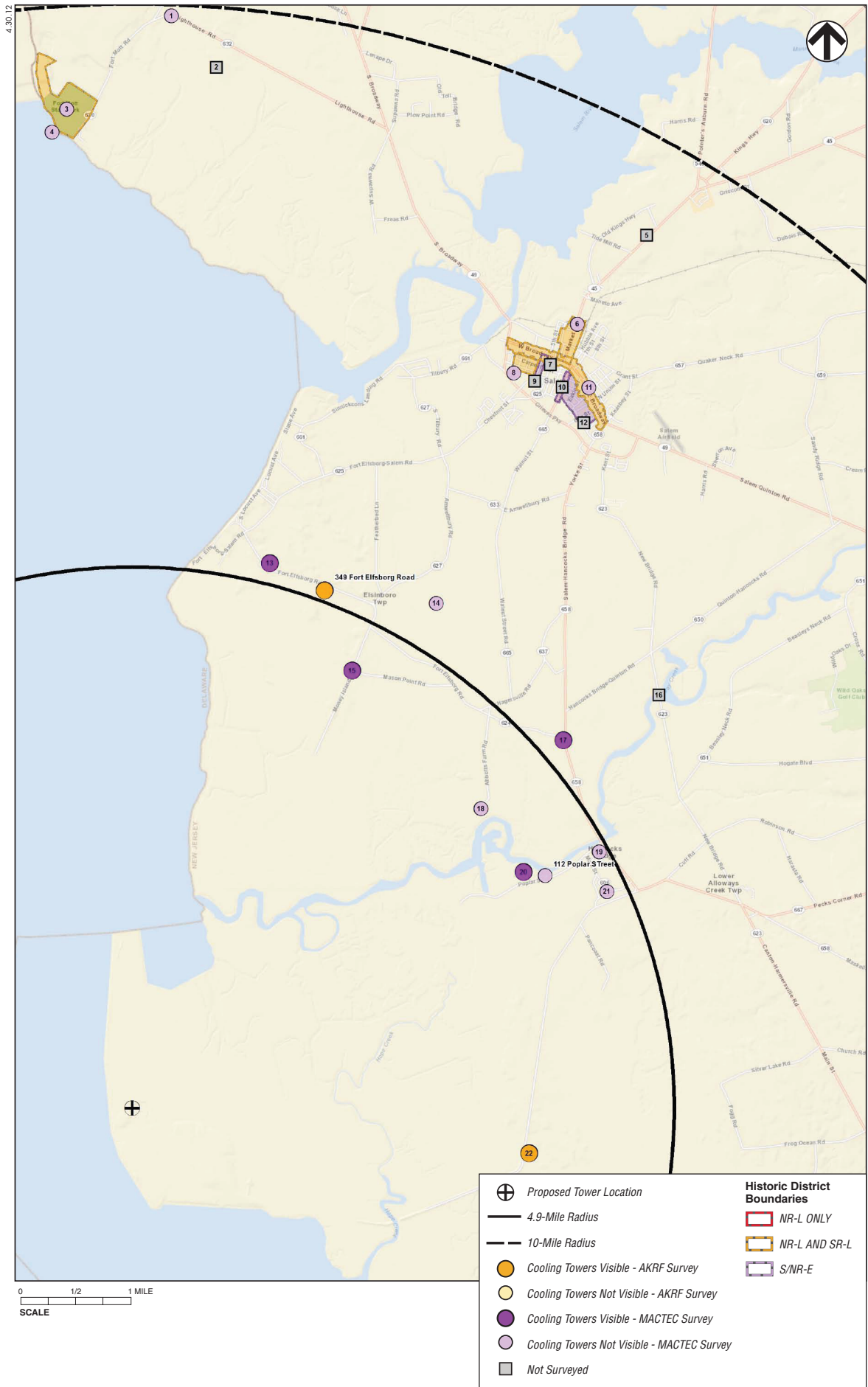
Proposed Tower Location
 4.9-Mile Radius
 10-Mile Radius

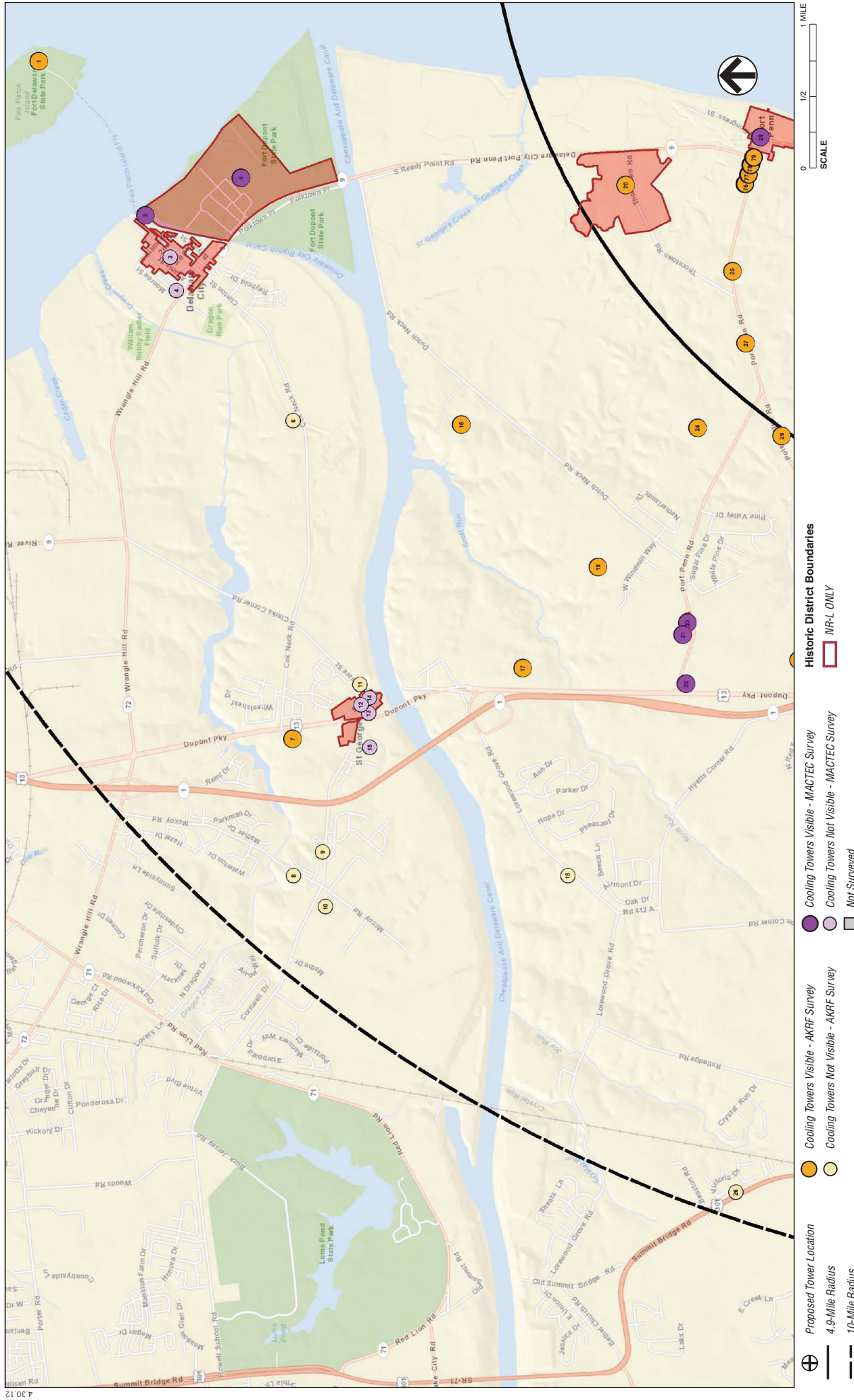
Architectural Resources
 NR-L Only
 S/MR-E
 Potential Resources

Historic District Boundaries
 NR-L ONLY

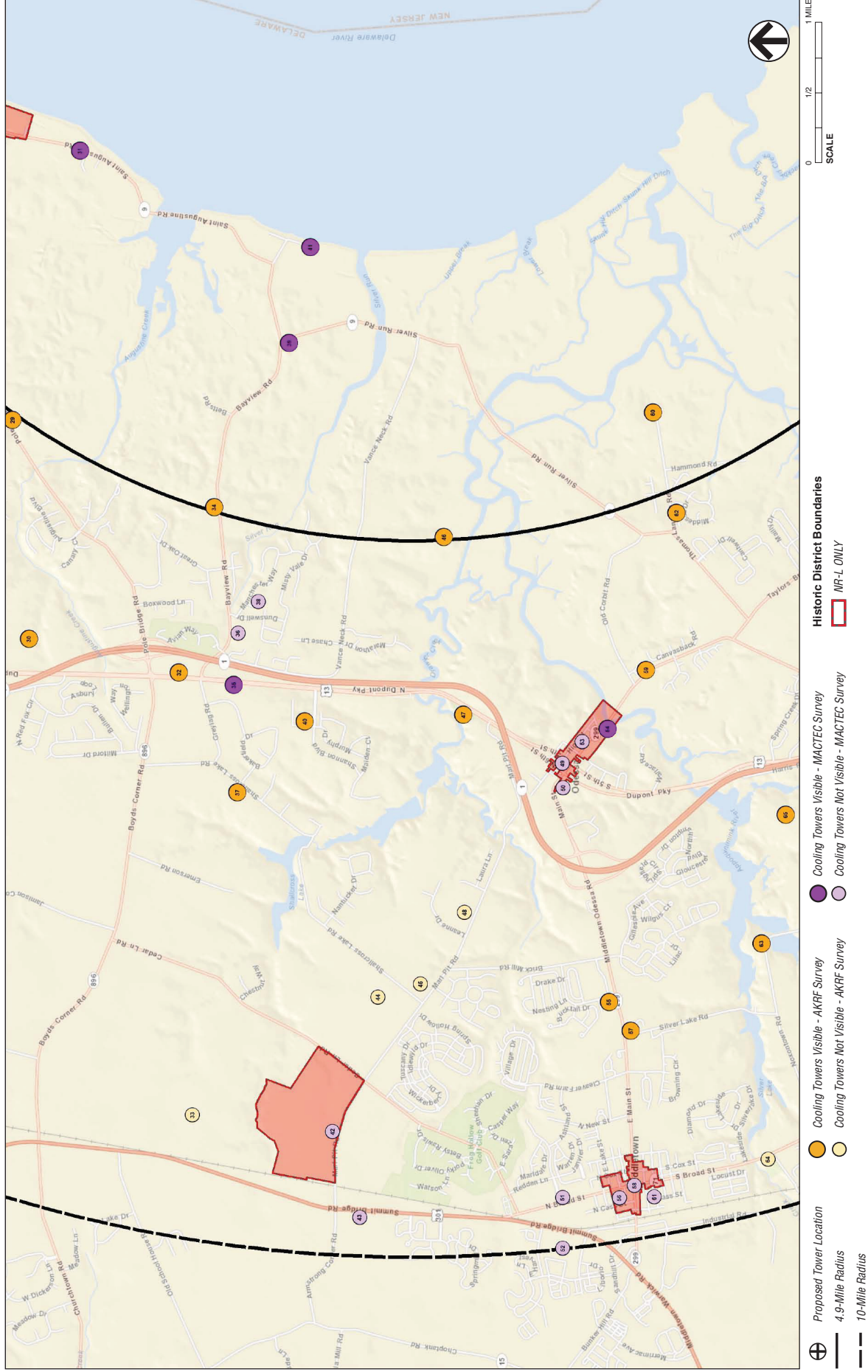
ESP Application Visual Impact Assessment Addendum

Delaware Architectural Resources Figure 4



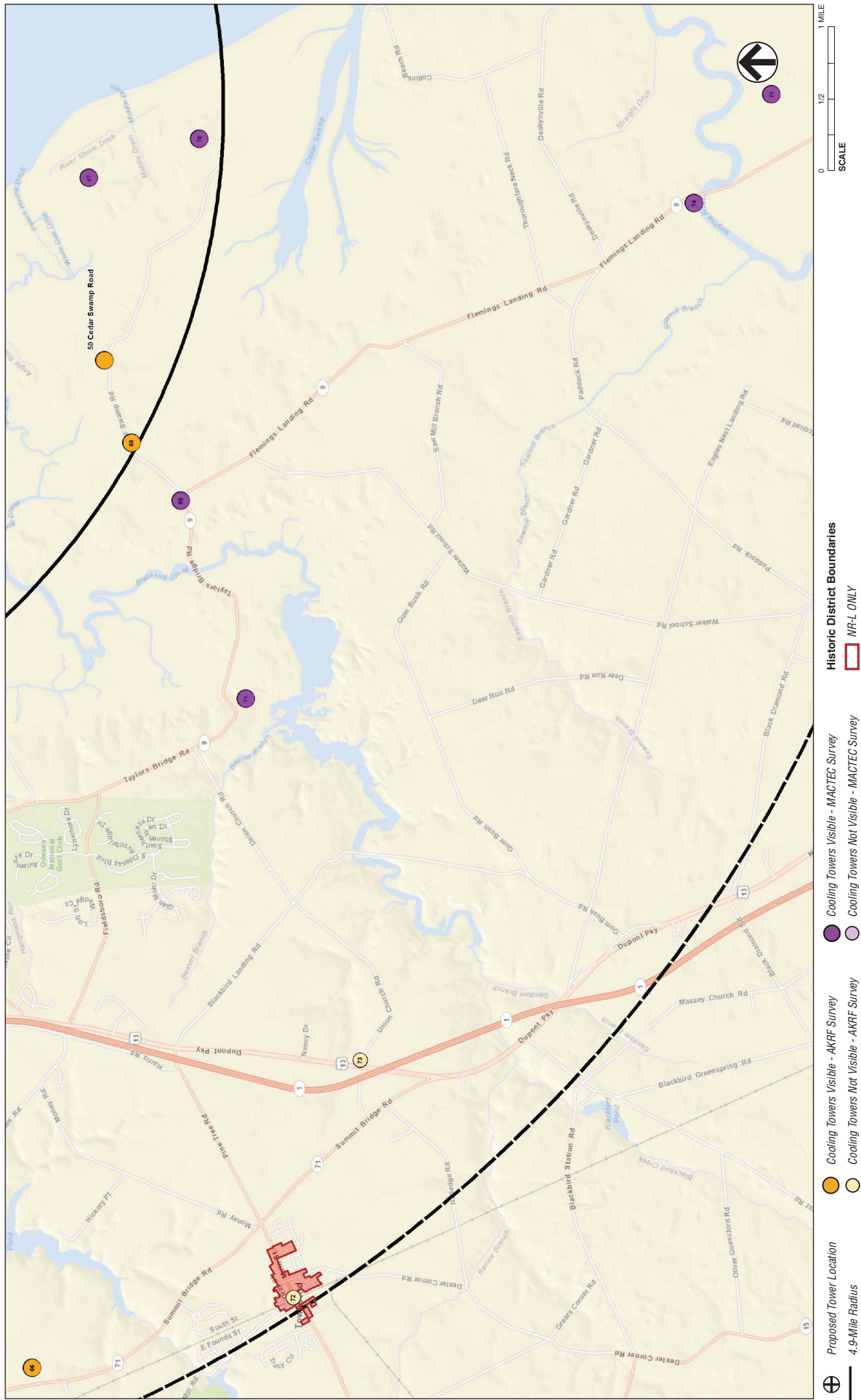


Delaware Visibility Assessment **Figure 6**



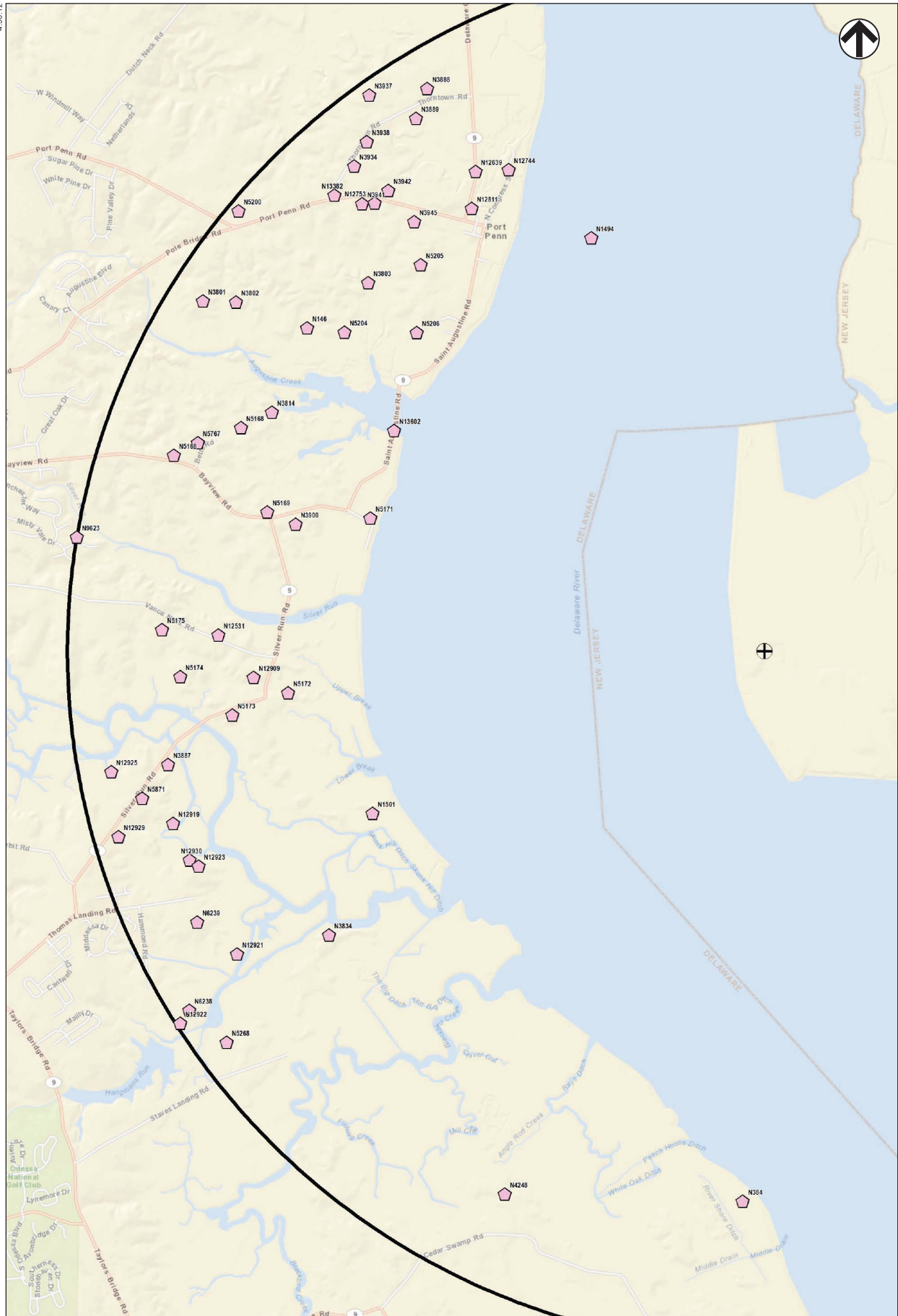
ESP Application Visual Impact Assessment Addendum

Delaware Visibility Assessment
Figure 7



- ⊕ Proposed Tower Location
- 4.9-Mile Radius
- 10-Mile Radius
- Cooling Towers Visible - AKRF Survey
- Cooling Towers Not Visible - AKRF Survey
- Cooling Towers Visible - MACTEC Survey
- Cooling Towers Not Visible - MACTEC Survey
- ▭ Historic District Boundaries
- ▭ NPL ONLY

Delaware Visibility Assessment **Figure 8**



⊕ Proposed Tower Location

○ 4.9-Mile Radius

⬠ DE SHPO Inventoried Resources

0 1/2 1 MILE
SCALE