

Documentation in Support of a Finding of Adverse Effect and Memorandum of Agreement

Submitted Pursuant to
36 CFR Part 800.4(d)(2) and 36 CFP Part 800.5(a)(1)
In Accordance with
36 CFR Part 800.11(e) and 36 CFR Part 800.11(f)

US 301 PROJECT DEVELOPMENT

St. Georges and Pencader Hundreds,
New Castle County, Delaware

▶ Prepared for:



Delaware Department of Transportation

P.O. Box 778
Dover, Delaware 19903
and

Federal Highway Administration

300 South New Street
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Dover, Delaware 19904

In association with:

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81 Mosher Street
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375 East Elm Street, Suite 200
Conshohocken, Pennsylvania 19428

November 2007

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ABSTRACT

This report presents the results of an effect assessment conducted for proposed corridor improvements to US 301 in St. Georges and Pencader Hundreds, New Castle County, Delaware (Figure 1). This report was prepared in conjunction with Rummel, Klepper, and Kahl (RK&K) for the Federal Highway Administration (FHWA) and the Delaware Department of Transportation (DelDOT). Since the undertaking will be federally funded, FHWA seeks to comply with Section 106 of the National Historic Preservation Act of 1966, as amended, and the implementing regulations outlined in 36 CFR Part 800. The purpose of the report is to document the potential effect of the proposed project on historic properties (National Register-listed and eligible resources) located within the Area of Potential Effect (APE).

DelDOT recommended the Green North Alternative plus Spur Road as its Preferred Alternative in the Draft Environmental Impact Statement (DEIS). The Secretary of Transportation announced the Green North Alternative plus Spur Road as the Preferred Alternative on May 16, 2007. For purposes of this report, the “undertaking” is defined as DelDOT’s Preferred Alternative. The APE for the Green North Alternative is shown in Figure 2.

The Preferred Alternative will be constructed as a four-lane, controlled-access tolled highway on a new location between the Delaware-Maryland state line and SR 1, south of the C&D Canal. The alternative will extend generally northward from the Delaware-Maryland state line to north of Middletown near Armstrong Corner Road, where the alignment will then continue northeast to cross over existing US 301 and SR 896 (Boyd’s Corner Road) and tie into SR 1 north of the Biddles Corner Toll Plaza. A two-lane access-controlled Spur Road will be constructed from the vicinity of Armstrong Corner Road, continuing on the ridge route to SR 896 at the base of Summit Bridge. The alignment will be 17.5 miles in length and will include six interchanges and nine overpasses or underpasses. The Preferred Alternative will include Armstrong Corner Road Area Option 2A, Summit Interchange Option 3B, and Ratledge Road Area Option 4B Modified. The Preferred Alternative is described in further detail in Section 1.0 and shown in Figures 2-24 of this report.

The steps to identify historic properties, as described in Section 2.0 of this document, indicated that 22 historic properties are located within the APE of the Green North Alternative. Generally, the limits of the APE extend southwest of the Delaware-Maryland state line, north along US 301, to just south of the Chesapeake and Delaware Canal (C&D Canal). North of Middletown, the APE extends west and runs briefly along Choptank Road and extends east to SR 1 (Figure 2).

A.D. Marble & Company conducted a historic resources survey for the project from summer 2005 to summer 2006. DelDOT provided concurrence on the Determination of Eligibility Report’s recommendations, and A.D. Marble & Company finalized the report. The Delaware State Historic Preservation Office (DE SHPO) did not provide formal concurrence within the 30-day review period but provided comments and concurrence on the eligibility determinations through correspondence dating from October 2005 to August 2006 (October 14, 2005, January 6, 2006, January 27, 2006, February 23 and 24, 2006, and August 11, 2006). The DE SHPO’s comments on the DEIS effectively confirmed the eligibility determinations (Appendix A). The historic properties located in the APE for the Green North Alternative are listed in Table 3 and

descriptions of these properties and their character-defining features are included in Section 3.0 of this report.

Background research revealed that the following 17 previously listed and eligible resources are located within the APE and retain sufficient integrity to convey their significance:

- B.F. Hanson House, Cultural Resources Survey (CRS) No. N05225;
- Rumsey Farm, CRS No. N00113;
- Hedgelawn, CRS No. N00118;
- Cochran Grange, CRS No. N00117;
- The Maples, CRS No. N00106;
- Rosedale, CRS No. N05148;
- S. Holton Farm, CRS No. N00107;
- Choptank, CRS No. N00109;
- Woodside, CRS No. N00427;
- Governor Benjamin T. Biggs Farm, CRS No. N05123;
- Armstrong-Walker House, CRS No. N05146;
- Achmester, CRS No. N03930;
- Weston, CRS No. N00121;
- Lovett Farm, CRS No. N05132;
- State Bridge Number 383, CRS No. N12636;
- Fairview, CRS No. N05244; and
- Idalia Manor, CRS No. N03947.

Five additional, previously unevaluated resources within the APE for the Green North Alternative were determined eligible for listing in the National Register as a result of the US 301 Project Development historic resources survey:

- Shahan Farm, CRS No. N14388;
- C. Polk House Estate, CRS No. N05221;
- Summerton, CRS No. N00112;
- T. J. Houston Farm, CRS No. N05131; and
- J. Houston House, CRS No. N05195;

Therefore, the Preferred Alternative has the potential to affect 22 historic properties in the vicinity.

Under the direction of 36 CFR 800.5 and 800.6, the Definition of Effect and Criteria of Adverse Effect were applied to this undertaking for the 22 historic properties. The results of the assessment are provided in Table 4 and Sections 4.0 and 5.0 of this document.

Application of the Definition of Effect, as presented in this report, determined that the Preferred Alternative will have “no effect” on the following seven resources:

- Shahan Farm, CRS No. N14388;
- Cochran Grange, CRS No. N00117;

- Woodside, CRS No. N00427;
- Achmester, CRS No. N03930;
- Weston, CRS No. N00121;
- State Bridge Number 383, CRS No. N12636; and
- Fairview, CRS No. N05244.

No property will be acquired from the National Register boundaries of these resources as part of the proposed improvements, resulting in no direct effects. Additionally, indirect impacts will be prevented by intervening landscape features or distances that impair visibility from these resources to the new alignment and/or audible changes that do not meet or begin to approach the threshold for an effect. Thus, these resources will not experience effects to the characteristics that qualify them for listing in the National Register.

As a result of the application of the Criteria of Adverse Effect, the following three properties will not be adversely affected by the proposed undertaking, as the potential visual effects to these resources will not specifically alter the integrity and characteristics that qualify them for listing in the National Register:

- Hedgelawn, CRS No. N00118;
- Lovett Farm, CRS No. N05132; and
- J. Houston House, CRS No. N05195.

Twelve historic properties in the APE for the Green North Alternative will be adversely affected by the undertaking due to the introduction of new visual and/or audible elements that will detract from the integrity and character-defining features of these resources:

- B.F. Hanson House, CRS No. N05225;
- C. Polk House Estate, CRS No. N05221;
- Rumsey Farm, CRS No. N00113;
- Summerton, CRS No. N00112;
- The Maples, CRS No. N00106;
- S. Holton Farm, CRS No. N00107;
- Rosedale, CRS No. N05148;
- Choptank, CRS No. N00109;
- Governor Benjamin T. Biggs Farm, CRS No. N05123;
- Armstrong-Walker House, CRS No. N05146;
- T. J. Houston Farm, CRS No. N05131; and
- Idalia Manor, CRS No. N03947.

Changes in the character of the property's use or of physical features within the property's setting that contribute to its historic significance will occur on many of the above historic properties.

FHWA and DelDOT considered alternatives to avoid and/or minimize adverse effects on historic properties. The Preferred Alternative includes measures to avoid and minimize effects in its

design. As an adverse effect can not be fully avoided or minimized, FHWA and DelDOT proposed a Draft Memorandum of Agreement (MOA) with measures to mitigate adverse effects on historic properties. This document can be found in Appendix C of this report. The views of the agencies and the public are included in Section 6.0.

Finally, since the project will extend into Maryland for approximately 2,600 feet to construct a four-lane roadway where existing US 301 tapers to two lanes , consultation with the Maryland State Historic Preservation Office (MD SHPO) was carried out. The staff of the MD SHPO has concurred that there are no historic structures in the project APE that would be affected by the proposed alternative. The MD SHPO has also stated that there does not appear to be the potential for impacts to significant archeological sites as long as the improvements remain within the existing right-of-way (ROW) (Appendix B). The MD SHPO is included as a signatory to the Memorandum of Agreement (MOA) and, as the project design develops, will participate in future consultation on the phased identification and evaluation of historic properties.

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**1.0 DESCRIPTION OF THE
UNDERTAKING**

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This report presents the results of an effect assessment conducted for the Delaware Department of Transportation (DelDOT) and the Federal Highway Administration (FHWA) in consultation with the Delaware State Historic Preservation Office (DE SHPO) and the Maryland State Historic Preservation Office (MD SHPO) for the US 301 Project Development in New Castle County, Delaware (Figure 1). Because the project is federally funded, FHWA seeks to comply with Section 106 of the National Historic Preservation Act of 1966, as amended and the implementing regulations contained in 36 CFR Part 800. The purpose of the report is to document the potential effect of the proposed project on historic properties located within the Area of Potential Effect (APE) for the Preferred Alternative (Figure 2).

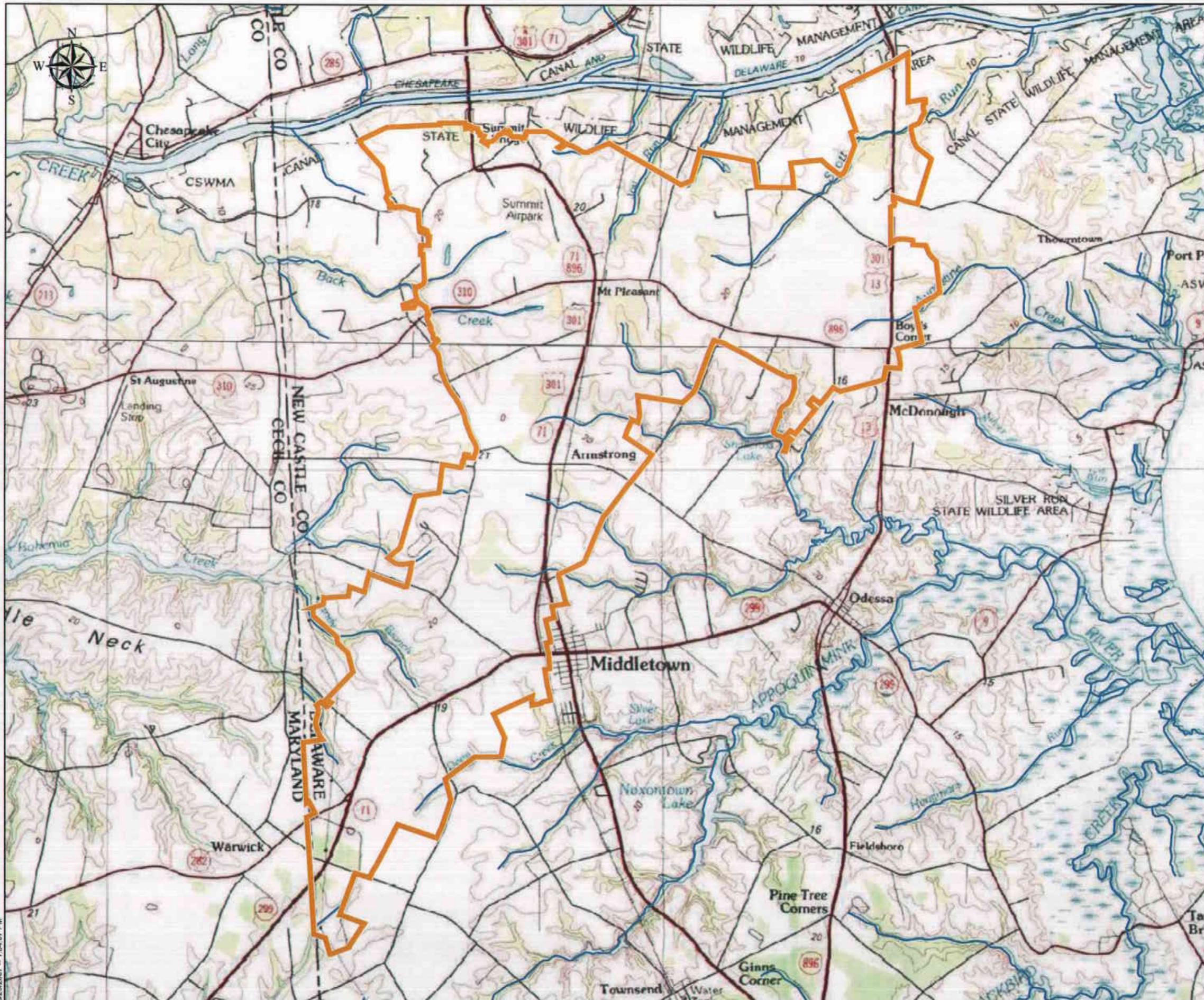
1.1 Project Background

The evaluation of improvements to the US 301 corridor in New Castle County has been ongoing since the mid-1960s, with early studies completed in the 1970s and 1980s. More recent studies initiated by DelDOT include the July 1993 *Draft Environmental Impact Statement* (DEIS), which compared the environmental impacts of a variety of alternatives to improve traffic service and operation in the US 301 corridor between the Delaware-Maryland state line and I-95 (Vanasse Hangen Brustlin, Inc. [VHB] 1993). The January 2000 *Major Investment Study* (MIS) (VHB 2000) investigated the overall transportation needs in southern New Castle County and recommended that improvements to the US 301 corridor be developed from the Delaware-Maryland state line to SR 1 south of the C&D Canal, rather than to the SR 896 corridor north of the Canal, as proposed in the 1993 DEIS. The current US 301 Project Development effort focuses on addressing the mobility and safety needs of this rapidly developing area, building upon the previous purpose and need presented in the 1993 DEIS and 2000 MIS.

A broad range of alternatives was evaluated as part of the current US 301 Project Development effort, including a No-Build and seven build alternatives: Yellow, Orange, Purple, Brown, Green, Blue, and Red. All of the build alternatives proposed the construction of a new four-lane limited access roadway from the state line to an existing limited access roadway (I-95 in the case of the Red Alternative and SR 1 south of the C&D Canal in all other cases). A.D. Marble & Company conducted a reconnaissance survey and prepared a related context report during the summer of 2005 that examined the initial alternatives (excluding the Red and Blue alternatives, which were addressed in a separate report by McCormick Taylor) (A.D. Marble & Company 2006 and McCormick Taylor 2006).

DelDOT and FHWA consulted with the state and federal resource agencies, including DE SHPO and Maryland State Highway officials, regarding the development and consideration of the alternatives and presented the range of initial alternatives at public workshops. After considering the technical analyses and the comments of the resource agencies and the public, DelDOT, following the addition of a Spur Road to the Purple and Green Alternatives, recommended that the Yellow, Purple, Brown, and Green Alternatives be retained for detailed evaluation. All of the retained build alternatives provided a four-lane limited access toll road from the Delaware-Maryland state line to SR 1, south of the C&D Canal. Two of the build alternatives (Purple and Green) provided a two-lane, limited access Spur Road from the new US 301 to the Summit

Map Document: (\\nam-com\1\cadd\Projects\PE26A\Maping\AdverseEffects\Fig1\ProjLoc.mxd) 9/29/2007 - 1:34:07 PM

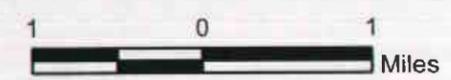


U.S. 301 Project Development
Documentation in Support of a
Finding of Adverse Effect

 Area of Potential Effect



Figure 1
Project Location Map



November 2007

Sources:
USGS 30x60 DRGs; Wilmington, DE; Dover, DE



**U.S. 301 Project Development
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**Figure 2: Green North Alternative,
Area of Potential Effect, and Historic Properties
November 2007**



- | | | |
|--------------------------|----------------|---------------------|
| Green North Alternative | CRS Points | Determined Eligible |
| Area of Potential Effect | Listed | Determined Eligible |
| Municipal Boundary | CRS Boundaries | Listed |

Sources:
2007 Census of Maryland, U.S. Census Bureau, October 2007
1:100,000
1:100,000
1:100,000

Bridge. The results of the development and consideration of the alternatives was provided in the *US 301 Project Development: Alternatives Retained for Detailed Evaluation* report, dated November 8, 2005 (RK&K 2005).

An intensive-level historic resource survey of the APE for the alternatives retained for detailed study was conducted from the summer of 2005 to 2006. An archaeological predictive model was prepared in 2005 and 2006. The results of the cultural resources studies were summarized for the public in the DEIS and are discussed in Section 2 this report. Based on the evaluations presented in the DEIS and based upon consideration of all of the impacts identified, input from the state and federal resource and regulatory agencies and the public, DelDOT recommended the Green Alternative, North Option plus Spur Road as the Preferred Alternative in the DEIS. Following additional evaluation and design refinements in consideration of comments received on the DEIS from the federal and state resource and regulatory agencies and the public, DelDOT announced its preferred Alternative on May 16, 2007. The Preferred Alternative for the US 301 Development Project includes Armstrong Corner Road Area Option 2A, Summit Interchange Option 3B and Ratledge Road Area Option 4B Modified.

1.2 Description of Preferred Alternative

DelDOT has identified the Green North Alternative plus Spur Road as its Preferred Alternative. For the purposes of this report, the “undertaking” is identified as DelDOT’s Preferred Alternative. A detailed description of the recommended Preferred Alternative was provided in the November 2006 *US 301 Project Development Draft Environmental Impact Statement* (FHWA and DelDOT 2006). The Preferred Alternative will be further detailed in the Final Environmental Impact Statement (FEIS). It is described below and summarized in Table 1.

The Preferred Alternative will provide a four-lane, limited access tolled highway. The roadway will be constructed on a new location extending generally northward from the Delaware-Maryland state line to north of Middletown, near Armstrong Corner Road. The roadway will extend approximately 2,600 feet into Maryland where the four-lane highway will tie in to the existing two-lane road. From north of Middletown, the alignment will continue generally northeast to cross over existing US 301 and SR 896 (Boyd’s Corner Road) and tie into SR 1 north of the Biddles Corner Toll Plaza, which is south of the Chesapeake & Delaware (C&D) Canal. Near Armstrong Corner Road, where the alignment extends to the northeast, a two-lane, limited access Spur Road will continue north on a new location to a new interchange with SR 896 south of Summit Bridge and the C&D Canal. DelDOT’s preferred Green North Alternative with Spur Road will include Interchange Option 2A in the Armstrong Corner Road area, Summit Interchange Option 3B in the vicinity of the Spur Road, and Option 4B Modified in the Ratledge Road area, as discussed in further detail below.

The Preferred Alternative will measure a total length of 17.5 miles, including the Spur Road, and have six interchanges: a diamond interchange southwest of Middletown at Levels Road; right-on/right-off ramps at existing US 301 in the vicinity of Armstrong Corner Road; a diamond interchange at Jamison Corner Road; flyover ramps to SR 1 north of the Biddles Corner Toll Plaza; a partial cloverleaf interchange along the Spur Road at an extended Bethel Church Road; and a flyover ramp at the terminus of the Spur Road at the SR 15/SR 896 junction.

Table 1. Description of the Preferred Alternative.

Engineering Features	Preferred Alternative Green North
Alignment Description	Ridge route plus new E/W alignment (with spur)
Alignment Length, miles	17.5
Total Area of Limit of Disturbance (LOD), acres	941
Number of Interchanges	6
Interchange Locations	Levels Road
	Armstrong Corner Rd
	Jamisons Corner Rd
	SR 1 north of Toll Plaza
	Bethel Church Road
	SR 15/SR 896
Number of Overpasses/Underpasses	9
Overpass/Underpass Locations	Strawberry Lane
	Bunker Hill Road
	Armstrong Corner Rd
	US 301
	Norfolk Southern RR
	SR 896
	Hyetts Corner Rd
	Old Schoolhouse Rd
	Churchtown Rd
Typical Section, Mainline	Two 12-foot lanes in each direction
	10-foot paved inside and outside shoulders
	66-foot wide landscaped median
Typical Section, Spur Road	One 12-foot lane in each direction
	10-foot paved inside and outside shoulders
	62-foot wide landscaped median
Design Speed	70 mph

An interchange will be provided in the Armstrong Corner Road area on the new US 301 mainline to access the areas north of Middletown. The preferred option in this area is Armstrong Corner Road Area Option 2A. This option will provide an interchange between the new US 301 and existing US 301 north of the existing intersection of Armstrong Corner Road and existing US 301. The northbound entrance and exit ramps will be located on existing US 301 approximately 1,000 feet north of Armstrong Corner Road. The southbound entrance and exit ramps will be located on the existing US 301, approximately 3,500 feet north of Armstrong Corner Road. Two new signalized intersections on existing US 301 will control exit and entry traffic.

The preferred Summit Interchange Option (3B) will provide a directional “Y” interchange between SR 896 and the US 301 Spur Road. Bethel Church Road will be extended east to a north-serving interchange with the Spur Road. Access from Choptank Road and Bethel Church Road to the Spur Road will be provided via a partial cloverleaf interchange. This option will include a cul-de-sac on Bethel Church Road east and west of the interchange. The existing sharp curve on SR 896, south of Summit Bridge, will be improved to current design standards and the existing traffic signal will be removed.

From just south of Boyds Corner Road, the preferred Ratledge Road option (4B Modified) provides the connection from the Pleasanton area to the proposed Jamison Corner Road interchange. East of the Norfolk Southern Railroad overpass, the Green North Alternative alignment will continue in a northeast direction to pass over SR 896 (Boyds Corner Road). North of SR 896, the North Option will continue in a northerly direction before turning almost directly east toward SR 1, avoiding impacts to active farmlands in this area. The new US 301 alignment will pass under a reconstructed Jamison Corner Road, pass south of the Airmont community, cross over Scott Run and under a reconstructed Hyetts Corner Road, and continue east to the interchange with SR 1 north of the existing Biddles Corner Toll Plaza and south of the SR 1 bridge over the C&D Canal. Directional ramps will be provided from southbound SR 1 to southbound US 301 and from northbound US 301 to northbound SR 1.

The APE for the Green North Alternative is shown in Figure 2 and discussed in Section 2.0 of this report. The Green North Alternative will not require the acquisition of any acreage from the National Register boundaries of the 22 identified historic properties in the APE. Proposed improvements and construction activities, including staging and stockpile, will be located within anticipated or existing transportation right-of-ways (ROW) or within areas not identified as historic properties, districts, or sensitive archaeological areas.

1.3 Public Involvement in the Section 106 Process

Consulting parties for the US 301 Project Development include DelDOT, DE SHPO, and MD SHPO. The New Castle County Department of Planning and Land Use (NCC) was invited to participate as a consulting party as it has a demonstrated interest in the project. The County did not formally respond to the invitation. However, the staff of the NCC has occasionally participated in the Section 106 consultation process in order to provide comment on the National Register eligibility of resources during the identification phase. Under the provisions of the MOA, additional consulting parties may be identified as the project development process continues. With regards to consultation with Native Americans, FHWA has contacted the Delaware Nation and the

Stockbridge-Muncee Community; to date, neither tribe has indicated its intent to participate in the consultation. The MOA allows for other consulting parties to be identified as the project development process continues.

FHWA and DelDOT hosted five rounds of public workshops in conjunction with the planning process. Notices of the project workshops were advertised in *The Delaware News Journal* and *The Middletown Transcript* and posted at more than 40 locations throughout the project area, including a park and ride facility, banks, post offices, police and fire stations, and numerous local businesses. Individuals were notified using the project mailing list. The alternatives development and the results of cultural resources investigations were presented at the public workshops on June 20 and 21; September 12, 13, and 19; December 5, 6, and 7, 2005, and February 22 and 23 and April 10 and 11, 2006. A Combined Location-Design Public Hearing (with the U.S. Army Corps of Engineers [USACE]) was held on January 8 and 9, 2007. Table 2 provides a summary of the information presented in each of the public workshops. Additionally, project updates were provided via a project newsletter and a project website. A project hotline and project office were also established to aid in the collection and distribution of project information to the public. The Project Team (DelDOT, DE SHPO, FHWA, RK&K, and A.D. Marble & Company staff), as requested, held meetings with individuals and groups to discuss project updates and potential impacts.

During the course of the historic structures survey and limited archaeological investigations, surveyors visited properties with a copy of the intent-to-enter letter issued for the project as well as an informational brochure that explained the purposes of the cultural resources studies. The staff made up to three attempts to visit properties when the owner or tenant was at home in order to ensure the residents' comfort with their presence, to answer any project-related questions, and to have an opportunity to conduct informal interviews on the history of the property.

Informal interviews were also conducted with residents identified as being able to provide further information on the history of specific resources. The results of these oral interviews were used to guide additional research efforts and National Register eligibility assessments.

As a result of these efforts, the public was part of an on-going effort to identify and evaluate historic resources; assess potential effects on historic properties; present alternative options that might avoid, minimize and mitigate potential adverse effects; and to present and discuss the Preferred Alternative. Continued public involvement will be ongoing with future archaeological investigations and implementation of mitigation measures for standing structures. The views of the agencies and the general public are summarized in Section 6.0.

Table 2. Summary of Public Workshops.

Workshop Dates	Topics Discussed
June 20 and 21, 2005	Introduction of Transportation Needs and Alternatives
	Comments indicated support for Purple and Green Alternatives; lack of support for Yellow, Orange, Brown, and Red Alternatives; and requested an investigation of a route south of Middletown (developed as the Blue Alternative)
September 12, 13, and 19, 2005	Presentation of updated evaluation of all alternatives (including the new Blue Alternative) and impacts of the alternatives
	Comments indicated support for retaining the Purple and Green Alternatives for detailed evaluation; dropping the Yellow, Orange, Brown and Blue Alternatives
	Comments were split in opinion on the Red Alternative
	Comments also suggested adjusting where the Green Alternative crosses 301 (northward)
December 5, 6, and 7, 2005	Presentation of the four retained alternatives: Yellow, Purple, Brown, and Green
	Introduction of the Purple and Green Alternatives with a Spur Road to Summit Bridge, the proposed elimination of the toll-free ramps, and two alignment options for the crossing/interchange at existing US 301
	General themes frequently repeated included the need for action, concern about the amount and pace of development in the project area, and a need to have a timely alternative decision
	Alternative-related themes included concerns about changing alignments, impacts to natural resources, and impacts to communities and community resources
	Comments provided indicated that there were an insufficient number of comments to provide support or opposition to the alternatives or options presented
February 22 and 23, 2006	Issue-focused workshops presented issues raised at the December 2005 workshops and the Project Team's evaluation of those issues
	An insufficient number of comments were received to ascertain support or opposition to the alternatives or options presented
April 10 and 11, 2006	Presentation of refined alternatives for review and comment
	Of respondents, twice as many expressed support for the Green Alternative than the Yellow or Purple Alternatives
	Petitions received requested the return of the Green and Purple Alternatives to their original alignment and the removal of the spur road; expressed opposition of the Yellow and Purple Alternatives; and expressed support for the Green Alternative with Armstrong Corner Road Area Option 2A
January 8 and 9, 2007	Presentation of DelDOT's recommended Preferred Alternative (Green North + Spur) and the Draft Environmental Impact Statement (DEIS)
	Explanation of why the other alternatives retained for detailed analysis were not selected as the Preferred Alternative

**2.0 DESCRIPTION OF STEPS
TO IDENTIFY HISTORIC
PROPERTIES**

2.0 DESCRIPTION OF STEPS TO IDENTIFY HISTORIC PROPERTIES

2.1 Area of Potential Effect

As part of the identification of historic properties effort, FHWA and DelDOT, in consultation with the DE SHPO, defined the APE for the undertaking. The APE is defined as “the geographic area or areas within which an undertaking may cause alterations in the character or use of historic properties, if any such properties exist. The area of potential effect is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking” (36 CFR Part 800.16[d], 2001).

The APE for the proposed project includes all areas containing National Register-listed or eligible cultural resources whose character and/or setting could be affected by the Preferred Alternative. The APE was initially drawn to conform to the boundaries of the tax parcels included within 600 feet of the centerline of the Alternatives Retained for Detailed Studies (ARDS). As revisions were made to the Green North Alternative, the APE was reviewed and, if necessary, the boundary was revised. All potential types of effects, including physical, audible, visual, secondary, and cumulative effects, were considered during the development of the APE. The APE for the current project includes the areas of temporary construction and permanent disturbance for the Green North Alternative. Secondary and cumulative effects for specific resources, i.e., those adversely affected by the project, were considered individually based on the past effects and anticipated future effects of development. As the project design develops, it may be necessary to revise the APE.

The properties included in the APE for the Green North Alternative were verified during field views conducted by DelDOT, DE SHPO, FHWA, RK&K, and A.D. Marble & Company staff on July 18, 2006, and February 5, 2007. Based on these field views and other reviews, none of the historic properties included within the APE will be physically impacted by the undertaking. As part of this effort, DelDOT and FHWA also consulted with the MD SHPO on the project APE limits extending into Maryland.

2.2 Historic Structures

Numerous cultural resources surveys were conducted within or near the APE for the Green North Alternative over the past 30 years. In the 1970s, persons affiliated with the Division of Historical and Cultural Affairs prepared National Register nominations for four properties within the Green North Alternative APE (The Maples, Cultural Resources Survey [CRS] No. N00106; Rumsey Farm, CRS No. N00113; Cochran Grange, CRS No. N00117; and Hedgelawn, CRS No. N00118). Three more properties were individually listed in the 1980s (Achmester, CRS No. N03930; Governor Benjamin T. Biggs Farm, CRS No. N05123, and B.F. Hanson House, CRS No. N05225). In 1985, the Center for Historic and Engineering (CHAE) - known today as the Center for Historic Architecture and Design (CHAD) - at the University of Delaware prepared the *Rebuilding St. Georges Hundred* multiple property nomination that resulted in the National Register listing of seven extant resources within the APE (S. Holton Farm, CRS No. N00107; Choptank, CRS No. N00109; Weston, CRS No. N00121; Woodside, CRS No. N00427; Idalia Manor, CRS No. N03947; Armstrong-Walker House, CRS No. N05146; and Rosedale, CRS No. N05148) (Herman et al. 1985).

Between 1985 and 1986, the firm of Killinger Kise Franks Straw (KKFS) evaluated resources within the eastern portion of the US 301 corridor as part of their work for the US 13 Relief Route corridor (present-day SR 1) that extended from SR 7 in New Castle County to US 113 in Kent County. As a result, KKFS prepared documentation for one property (Fairview, CRS No. N05244) within the Green North Alternative APE that resulted in a determination of National Register eligibility (KKFS 1995).

In 1992, CHAE/CHAD completed a preliminary survey for a proposed US 301 corridor extending from the Delaware-Maryland state line to I-95. As part of early identification efforts conducted for the proposed project in 1993, CHAE/CHAD presented eligibility recommendations for properties situated south of the C&D Canal (Siders et al. 1993). CHAE/CHAD's findings were submitted as part of the US 301 Draft Environmental Impact Statement and the US 301 MIS (VHB 1993, 2000). No formal determinations of eligibility were ever made or submitted as a result of this previous study.

A study prepared for Nextel communications in 2004 resulted in the determination of eligibility for one property (Lovett Farm, CRS No. N05132) within the Green North Alternative APE (Rottenstein 2004). Published in 2000, A.G. Lichtenstein Consulting Engineers, Inc.'s inventory of Delaware bridges resulted in the determination of eligibility for one bridge within the Green North Alternative APE (State Bridge Number 383, CRS No. N12636).

As part of the project re-initiation and in consultation with the DE SHPO, DelDOT undertook a field survey from the summer of 2005 to the summer of 2006 to identify previously evaluated resources in the vicinity of the US 301 Project Development. Previously unidentified historic properties that met the 1962 cut-off date for survey were assessed to determine if they met National Register requirements for significance and integrity. A.D. Marble & Company finalized the Historic Context and Determination of Eligibility reports, and DelDOT and DE SHPO provided concurrence on the Eligibility Report recommendations in February of 2006 (A.D. Marble & Company 2006) (Appendix A). Historic preservation planners of the NCC were also provided the opportunity to review the context and eligibility reports. Five properties within the APE that were not previously evaluated were identified, recommended eligible, and subsequently concurred with by the DE SHPO (Summerton, CRS No. N00112; T. J. Houston Farm, CRS No. N05131; J. Houston House, CRS No. N05195, C. Polk House Estate, CRS No. N05221, and the Shahan Farm, CRS No. N14388). The final reports were posted on DelDOT's 301 project web site for the general public to view. As a result of all the surveys, 22 eligible or listed resources are identified within the APE for the Green North Alternative.

2.3 Archaeology

An archaeological predictive model was prepared for the proposed study area associated with the various design alternatives under consideration for the US 301 Project Development in St. Georges, Pencader, and Appoquinimink Hundreds, New Castle County, Delaware. Archaeological predictive models developed previously for the US 13 Relief Route Corridor (Custer et al. 1984), the Route 896 Corridor (Lothrop et al. 1987) and the 1993 Reconnaissance Study for the Route 301 Corridor (Kellogg 1993) were consulted during the course of the development of this model. The model was intended to serve as a planning tool to assist in the development of the designs for

the alternatives under consideration for the project and to aid in the assessment of their relative potential impacts on archaeologically sensitive areas. Both prehistoric and historic archaeological potential were considered in this model. Characterization of the environment was accomplished using data available in a Geographic Information System (GIS) format, and GIS was used to compare the relative significance of the relevant criteria within the various parts of the study area. Historic and modern ground disturbances were modeled to qualify the areas of archaeological potential relative to their likely integrity.

Between May and July 2006, a sample Phase IB archaeological survey was undertaken within two DelDOT-owned parcels, one straddling Bethel Church Road and the other extending from Old Schoolhouse Road to south of Armstrong Corner Road. These two parcels fell within the proposed alignment of the Green North Alternative as well as the Purple and Brown Alternatives. The field studies undertaken within these parcels were intended to serve as a preliminary assessment of the utility of the archaeological predictive model (A.D. Marble & Company 2006) that was prepared for the project. The archaeological predictive model is based on current theory regarding prehistoric and historic archaeological site location selection. The results of the archaeological testing were presented as an addendum to the revised archaeological predictive model. The testing identified two previously unreported historic archaeological sites within areas that the model predicted would have a high sensitivity for such deposits. Two lower density concentrations of historic artifacts were also encountered in the course of the testing, although it is not clear that these represent intact historic archaeological sites. While this is relatively limited data, it does suggest that the historic archaeological component of the model works for resources for which historic cartographic evidence is available.

The ruins of a previously identified farmstead, the S. Burnham/“Noxon’s Adventure” property (CRS No. N05151), fell within the tested parcel north of Armstrong Corner Road. The S. Burnham farmstead ruins were cleared of overgrown vegetation, photo-documented, and mapped. This work recorded the house foundation, a wooden shed, the foundation of a second outbuilding, and a windmill. Historic research on the parcel demonstrated that the 300-acre plantation was warranted to Thomas Noxon in 1734. Other information collected during intensive background research suggests that more detailed research undertaken for other areas within the Green North Alternative’s APE may yield information similarly valuable for identifying areas of early historic archaeological potential.

As for prehistoric archaeological resources, the predictive model test failed to record any definitive sites. Rather, what was found was a small number of isolated point fragments and flakes. This suggests an ephemeral prehistoric usage of the area consistent with the current theories of prehistoric settlement and subsistence patterns in the Midpeninsular Drainage Divide Zone during the period. Because no areas of high prehistoric archaeological sensitivity fell within the two parcels, the preliminary testing cannot be considered to have adequately assessed the model. However, the data is in part supportive of the prehistoric archaeological model in that no prehistoric archaeological sites were encountered within the two parcels. The parcels contained areas of only moderate and low prehistoric archaeological sensitivity.

The MOA provides for the phased identification and evaluation of archaeological sites in consultation with the DE and MD SHPOs. The MOA also outlines the process for assessing the

effects of the project on eligible archaeological sites and consultation on ways to avoid, minimize, or mitigate for adverse effects. Mitigation may include data recovery through excavation and/or alternative treatments.

3.0 DESCRIPTION OF AFFECTED PROPERTIES

3.0 DESCRIPTION OF AFFECTED PROPERTIES

The steps to identify historic properties indicated that the 22 resources listed in Table 3 and illustrated in Figure 2 are listed in or eligible for listing in the National Register of Historic Places and are located within the APE for the Green North Alternative for the US 301 Project Development.

A brief description, history, and discussion of National Register significance for each property in the APE, including those characteristics that qualify it for listing in the National Register, are included below. Generally, the descriptions are arranged by the location of the resource within the APE, beginning with the southern boundary at the Delaware-Maryland state line and extending to the northeastern terminus where the proposed improvements will connect with SR 1.

3.1 CRS No. N14388, Shahan Farm, 389 Strawberry Lane

The Shahan Farm (CRS No. N14388) is significant under Criteria A and C as a representative example of a late-nineteenth- to early-twentieth-century farm complex. Cultivated fields surround the property to the north, south, east, and west, and tree lines and fencing serve to delineate the edges of farm fields. These features, in combination with the dwelling and related domestic and agricultural outbuildings, contribute to the feeling and setting of the farmstead. The property retains a historic house, barn, and several outbuildings in an arrangement that can be identified as a linear farm plan. The outbuildings are reflective of two local trends in agriculture: crop farming (retains corncrib/granary and equipment shed) and dairy farming (retains dairy barn and milk house). Additionally, the farmstead retains a poultry house, which was common to most farmsteads dating to the early twentieth century. A Mason-Dixon marker, already listed in the National Register, is located on the Delaware-Maryland line that stretches through the western edge of the property. The National Register boundary includes 207.00 acres. The resource, its location, and boundary are illustrated in Figure 3. The resource is shown in Photograph 1.

Joseph W. Hanson appears on the 1868 Beers atlas as the owner of the 248 acres of agricultural lands comprising the farm now known as the Shahan Farm. During the mid-nineteenth century, the property was an average size farm compared to the rest of New Castle County (United States Census Bureau 1860). The property stayed within the Hanson family until 1934, after which time the Delaware Trust Company sold the property to Nathaniel J. Williams of Middletown for the sum of \$5,250 (New Castle County Deed Book D39:319). The property remained under the ownership of the Williams family until October 10, 1950, when the farm was conveyed to Melvin and Gladys Shahan (New Castle County Deed Book R50:316). The Shahan family retains ownership of the farm today (New Castle County Deed Book X105:82).

Table 3. Historic Properties in the APE for the Green North Alternative.

CRS #	Historic Name	Address	National Register Status
N14388	Shahan Farm	389 Strawberry Ln.	Eligible
N05225.	B.F. Hanson House	1102 Middletown-Warwick Rd.	Listed
N05221.	C. Polk House Estate	929 Middletown-Warwick Rd.	Eligible
N00113.	Rumsey Farm	841 Middletown-Warwick Rd.	Listed
N00112.	Summerton	840 Middletown-Warwick Rd.	Eligible
N00118.	Hedgelawn	772 Middletown-Warwick Rd.	Listed
N00117.	Cochran Grange	704 Middletown-Warwick Rd.	Listed
N00106.	The Maples	1023 Bunker Hill Road	Listed
N05148.	Rosedale	1143 Bunker Hill Rd.	Listed
N00107.	S. Holton Farm	2010 Choptank Rd.	Listed
N00109.	Choptank	1542 Choptank Rd.	Listed
N00427	Woodside	1358 Choptank Rd.	Listed
N05123.	Governor Benjamin T. Biggs Farm	1196 Choptank Rd.	Listed
N05146.	Armstrong-Walker House	5036 Summit Bridge Rd.	Listed
N03930	Achmester	North side of Marl Pit Rd, one mile east of Summit Bridge Rd.	Listed
N00121.	Weston	4677 Summit Bridge Rd.	Listed
N05132.	Lovett Farm	1405 Cedar Lane Rd.	Eligible
N05131.	T.J. Houston Farm	1309 Cedar Lane Rd.	Eligible
N12636.	State Bridge Number 383	Jamison Corner Rd. over Scott Run; 0.75 mile north of Boyds Corner Rd.	Eligible
N05195.	J. Houston House	1000 Jamison Corner Rd.	Eligible
N05244.	Fairview	350 Hyetts Corner Rd.	Eligible
N03947.	Idalia Manor	1870 S. Dupont Highway	Listed



PROPOSED STRUCTURE
ELEVATION 98.9'

SHAHAN FARM
(N.R.E. - N14388)

STRAWBERRY LANE

MARYLAND
DELAWARE

301

- EXISTING ROAD NETWORK
- PROPOSED ROADWAY IMPROVEMENTS
- LIMIT OF DISTURBANCE / PROPOSED RIGHT OF WAY
- PROPOSED STORMWATER MANAGEMENT FACILITIES
- PROPERTY LINES
- PARCELS (UNDER DEVELOPMENT)
- PROPOSED EARTH BERMS
- APPROVED DEVELOPMENT
- PROPOSED/PENDING DEVELOPMENT
- WETLANDS (2007 field surveyed)
- WETLANDS (based on 2002 aerial imagery)
- 100-YEAR FLOODPLAINS (FEMA)
- PAVEMENT ACCESS TO BE REMOVED
- HISTORIC PROPERTIES
- NOISE RECEPTOR SITE
- PHOTO DIRECTIONAL SYMBOL



	US 301 Project Development Documentation in Support of a Finding of Adverse Effect	
Shahan Farm CRS No. N14388		
Scale: 1"=500'	November 2007	Figure 3



Photograph 1: CRS No. N14388, Shahan Farm, barn complex, view facing northwest (June 2005).

The significant characteristics of the property include the physical fabric of the house, the barn, the outbuildings, and the linear farm plan. The farm retains many of the features that date to and retain integrity from the period of active agricultural use and significance (ca. 1870 to 1955). The setting in which the farm is located continues under agricultural use/cultivation and is also a significant characteristic. The overall setting of the property and the continued existence of the farm plan and outbuildings conveys the aspects of feeling, setting, and location of a mid-nineteenth-century farm that was converted to dairying.

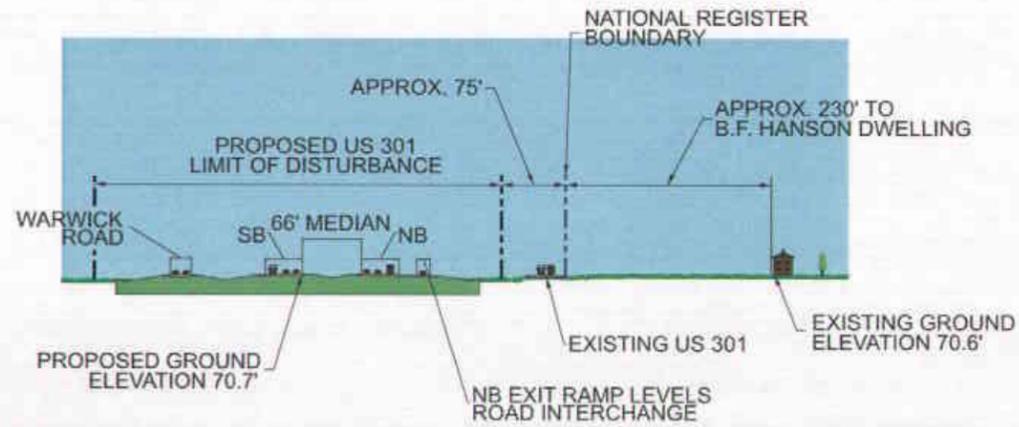
3.2 CRS No. N05225, B.F. Hanson House, 1102 Middletown-Warwick Road

The B.F. Hanson House (CRS No. N05225) was listed in the National Register in 1980 under Criterion C for its architectural significance as one of the best-preserved examples of Greek Revival architecture in Delaware. The B.F. Hanson property is located along the east side of Middletown-Warwick Road. The 25-acre parcel that the dwelling occupies includes the 1843 house, a *circa*-1850 horse barn complex, a *circa*-1910 shed at the north end, and a modern equipment retail facility at the south end. The front lawn of the house is planted with some mature trees and the property is flanked by cultivated fields to the north and east. A gravel driveway is located to the south of the dwelling, providing access from Middletown-Warwick Road to the secondary buildings and structures located east of the dwelling. The National Register boundary includes 5.30 acres and consists of the dwelling, yard space, and outbuildings. The resource, its location, and National Register boundary are illustrated in Figure 4. The resource is presented in Photograph 2.

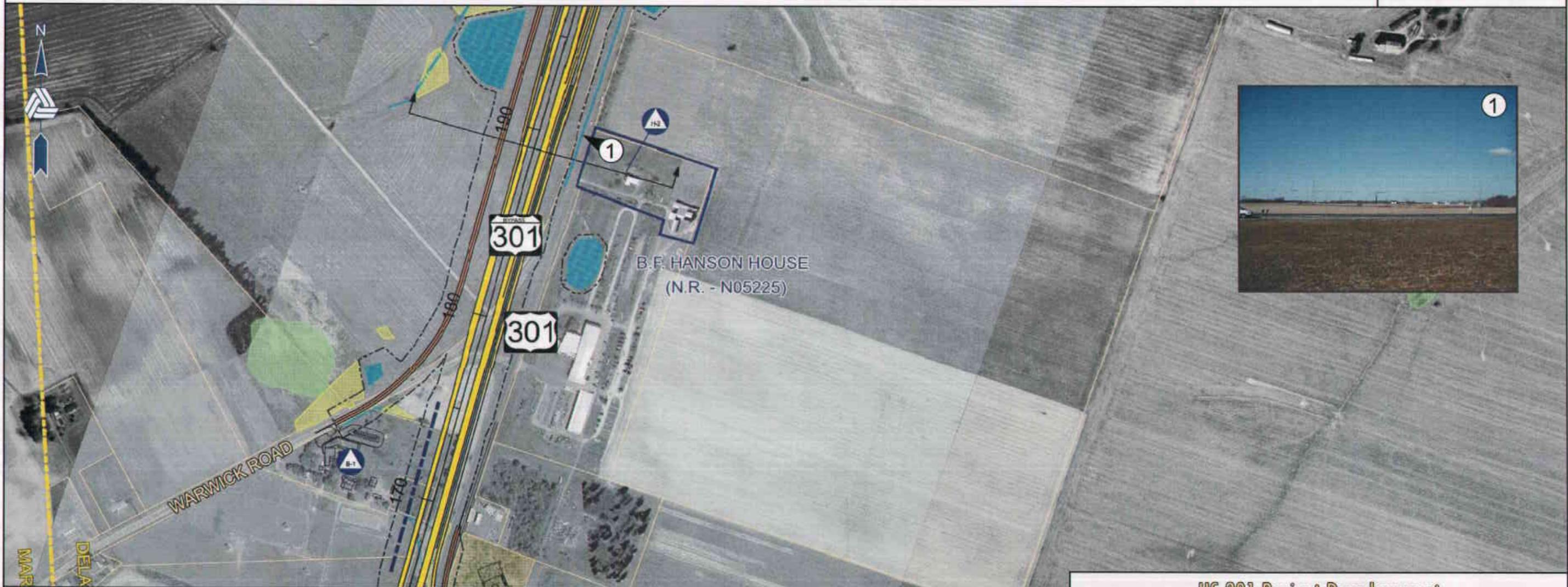
The tract of land on which the house stands was bought by Peter and Christine Hanson in 1830 and included 275 acres, a house, a barn, and orchards. Peter's will specified that the plantation be divided between his three sons, and the property was subsequently conveyed back to the eldest son, Benjamin F. Hanson, who erected the Greek Revival dwelling. The tax assessment listing for the property in 1844 confirms B.F. Hanson as one of the more affluent landholders in St. Georges Hundred, and it appears that the dwelling Hanson erected reflected his social status (Fink and Howard 1980).

The most significant aspects of the property include the integrity of design, materials, and workmanship of the dwelling. Notable features of the dwelling typical of the Greek Revival style include a columned porch spanning a portion of the façade, a low-pitched roof, a heavy cornice with unadorned frieze, emphasis on entrance in the form of transom and sidelights, and corner pilasters.

Significant architectural features include the dwelling form. The outbuildings, associated 5.3-acre parcel and the surrounding farmlands contribute to the setting of the resource, helping the property to retain integrity of association and convey the feeling of a former nineteenth-century farmstead.



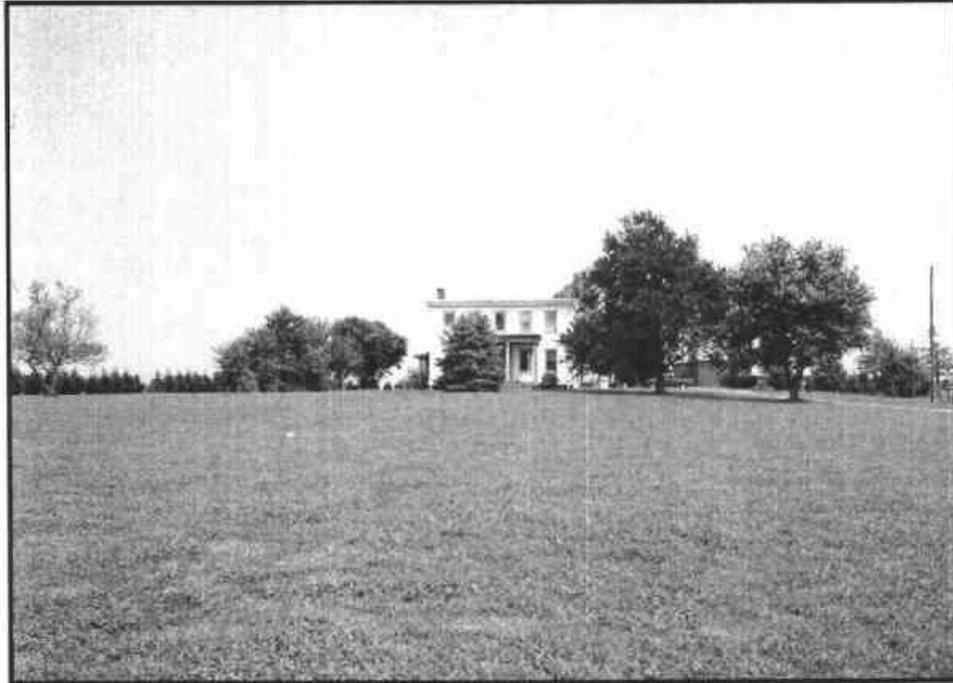
Scale: 1"=200'



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| — EXISTING ROAD NETWORK | — PROPOSED/PENDING DEVELOPMENT |
| — PROPOSED ROADWAY IMPROVEMENTS | — WETLANDS (2007 field surveyed) |
| - - - LIMIT OF DISTURBANCE / PROPOSED RIGHT OF WAY | — WETLANDS (based on 2002 aerial imagery) |
| ● PROPOSED STORMWATER MANAGEMENT FACILITIES | — 100-YEAR FLOODPLAINS (FEMA) |
| — PROPERTY LINES | XXX PAVEMENT ACCESS TO BE REMOVED |
| — PARCELS (UNDER DEVELOPMENT) | — HISTORIC PROPERTIES |
| — PROPOSED EARTH BERMS | ▲ NOISE RECEPTOR SITE |
| — APPROVED DEVELOPMENT | ① PHOTO DIRECTIONAL SYMBOL |



	US 301 Project Development Documentation in Support of a Finding of Adverse Effect		
	Cross-Section Illustrating B.F. Hanson House at STA. 189+00 CRS No. N05225		
Scale: 1"=500'	November 2007	Figure 4	



Photograph 2: CRS No. N05225, B. F. Hanson House, view facing southeast (June 2005).

3.3 CRS No. N05221, C. Polk House Estate, 929 Middletown-Warwick Road

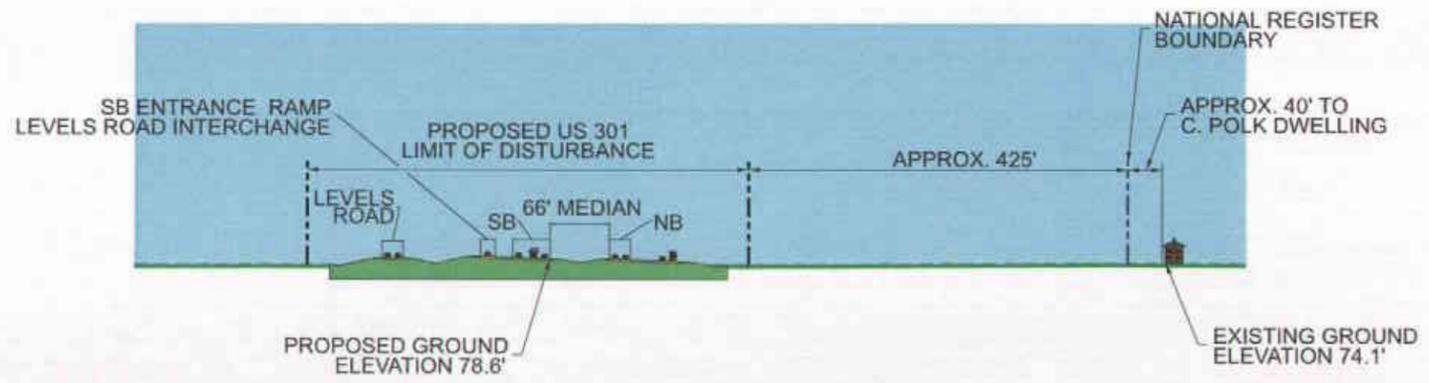
The C. Polk House Estate (CRS No. N05221) was determined eligible for listing in the National Register under Criterion C for its architectural significance as part of the US 301 Project Development effort. The C. Polk House Estate is a typical example of a rural dwelling that was rebuilt by a prosperous farmer in St. Georges Hundred in the mid-nineteenth century. This former farmstead is located on the west side of Middletown-Warwick Road. The property was previously surveyed in 1979 (Brown 1979). Since the survey, a modern produce stand was constructed along Middletown-Warwick Road, a number of the agricultural outbuildings were razed, and a piece of the property was subdivided and now houses a truck stop/gas station. The remainder of the property is comprised of agricultural lands that are rented for growing crops. The property currently contains the original farmhouse and barn. The remainder of the original buildings was torn down, with a number of modern storage structures in their stead. Two modern mobile homes are located west of the extant barn. The National Register Boundary encompasses 2.04 acres. The resource, its location, and National Register boundary are illustrated in Figure 5. The resource is presented in Photograph 3.

In the mid-nineteenth century, Charles Polk operated a mixed farm operation in this location that yielded the common products of the time: wheat, corn, Irish potatoes, oats, meat, and butter (United States Census Bureau 1850). Following agricultural success, an extant log or frame dwelling was “rebuilt” into the dwelling that still stands today, a common practice in the area. The property remained in the Polk family until 1890. The property changed hands numerous times in the early twentieth century. In 1945, Pauline F. Money purchased the 245-acre farm (New Castle County Deed Book I45:163). The property remains in the Money family today.

The significant characteristics of the property include the physical fabric and integrity of design, materials, and workmanship of the dwelling, and landscape features such as the remnants of the allee of trees that lead from Middletown-Warwick Road to the dwelling. The setting of this property amidst active farmlands is also significant as it conveys the association with and feeling of a former nineteenth-century farmstead. The extant barn, modern mobile homes, and modern storage structures are not considered contributing features to the property as they do not reflect the property’s architectural significance.

3.4 CRS No. N00113, Rumsey Farm, 841 Middletown-Warwick Road

The dwelling and domestic outbuildings associated with the Rumsey Farm (CRS No. N00113) were previously listed in the National Register in 1977 under Criterion A for agriculture and Criterion C for architecture. The buildings associated with the Rumsey Farm are located at the end of a tree-lined gravel drive, approximately 0.2 mile west of Middletown-Warwick Road. The domestic complex includes a prominent two-and-one-half-story residential dwelling and frame smoke house and privy from the mid-nineteenth century, which were previously listed in the National Register. In addition, several associated agricultural outbuildings (cart shed, corncrib/granary, milk house, and barn) that appear to date to the early twentieth century occupy the parcel and are spatially separate from the domestic area, located to the rear and side of the



Scale: 1"=200'



	EXISTING ROAD NETWORK		PROPOSED/PENDING DEVELOPMENT
	PROPOSED ROADWAY IMPROVEMENTS		WETLANDS (2007 field surveyed)
	LIMIT OF DISTURBANCE / PROPOSED RIGHT OF WAY		WETLANDS (based on 2002 aerial imagery)
	PROPOSED STORMWATER MANAGEMENT FACILITIES		100-YEAR FLOODPLAINS (FEMA)
	PROPERTY LINES		PAVEMENT ACCESS TO BE REMOVED
	PARCELS (UNDER DEVELOPMENT)		HISTORIC PROPERTIES
	PROPOSED EARTH BERMS		NOISE RECEPTOR SITE
	APPROVED DEVELOPMENT		PHOTO DIRECTIONAL SYMBOL





US 301 Project Development

Documentation in Support
of a Finding of Adverse Effect

Cross-Section Illustrating
C. Polk House Estate at STA. 231+00
CRS No. N05221



Scale: 1"=500'	November 2007	Figure 5
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Photograph 3: CRS No. N05221, C. Polk House Estate, view facing north (June 2005).

dwelling along the gravel drive. The farm complex occupies a 400-acre parcel that is comprised of agricultural fields; however, the National Register boundary consists of only 2.44 acres that include the house, nearby outbuildings, and the surrounding area. The resource, its location, and boundary are illustrated in Figure 6. The resource is shown in Photograph 4.

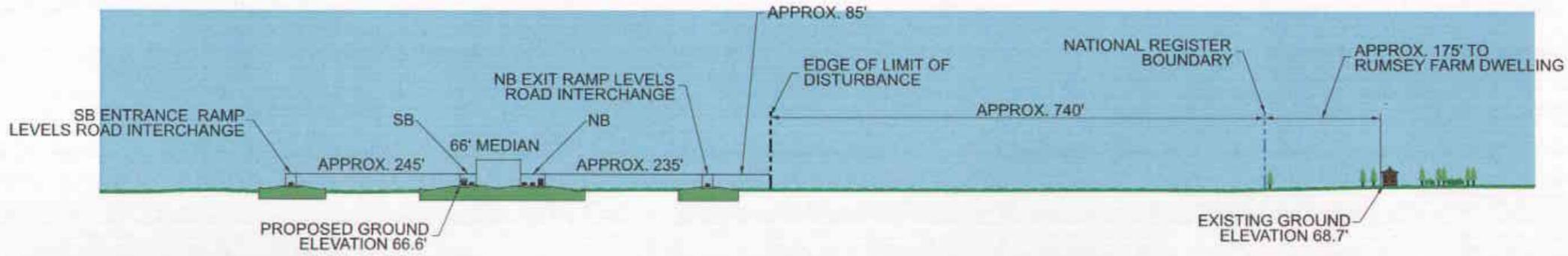
The Rumsey Farm was erected by Governor John P. Cochran in 1854 on a 400-acre tract of land once owned by William Rumsey. The land was obtained by William Polk, and following his death, was inherited by his daughter, Eliza Polk Cochran, wife of Governor John P. Cochran, in 1853. The dwelling was erected the following year. A similarly styled dwelling known as Hedgelawn (CRS No. N00118) was erected two years later in 1856 for Cochran's son, Charles. Charles is shown as the occupant of the Rumsey Farm in the Beers 1868 map. The Rumsey Farm was acquired by William R. Cochran, owner of Hedgelawn, in 1878. In 1894, William Cochran was forced to sell the farm to pay his debts. In 1897, the farm came under the ownership of Jefferson B. Foard. Foard purchased the property for investment purposes and rented the property to tenants who lived in the dwelling. Foard had an interest in horse racing and erected a track on the property, which no longer survives (Norton 1977b). The farmland and dwelling continue to be rented out. According to the tenant, the agricultural outbuildings are scheduled to be demolished to make way for future development; the domestic outbuildings and dwelling will be retained.

The property is an excellent example of a mid-nineteenth- to early-twentieth-century rural estate. The significant characteristics of the property include the architectural qualities of the dwelling, as the majority of its exterior features from the period of significance remain intact, as well as the extant domestic outbuildings. The immediate setting, which includes the tree-lined driveway and copse of trees around the house, agricultural outbuildings, and the surrounding farmlands, are significant as they help convey the feeling of a farm. The corn crib/granary, the equipment shed/corn crib, and the surrounding farmlands are also important as they convey the setting and feeling of and association with a mid-nineteenth- to early-twentieth-century farmstead.

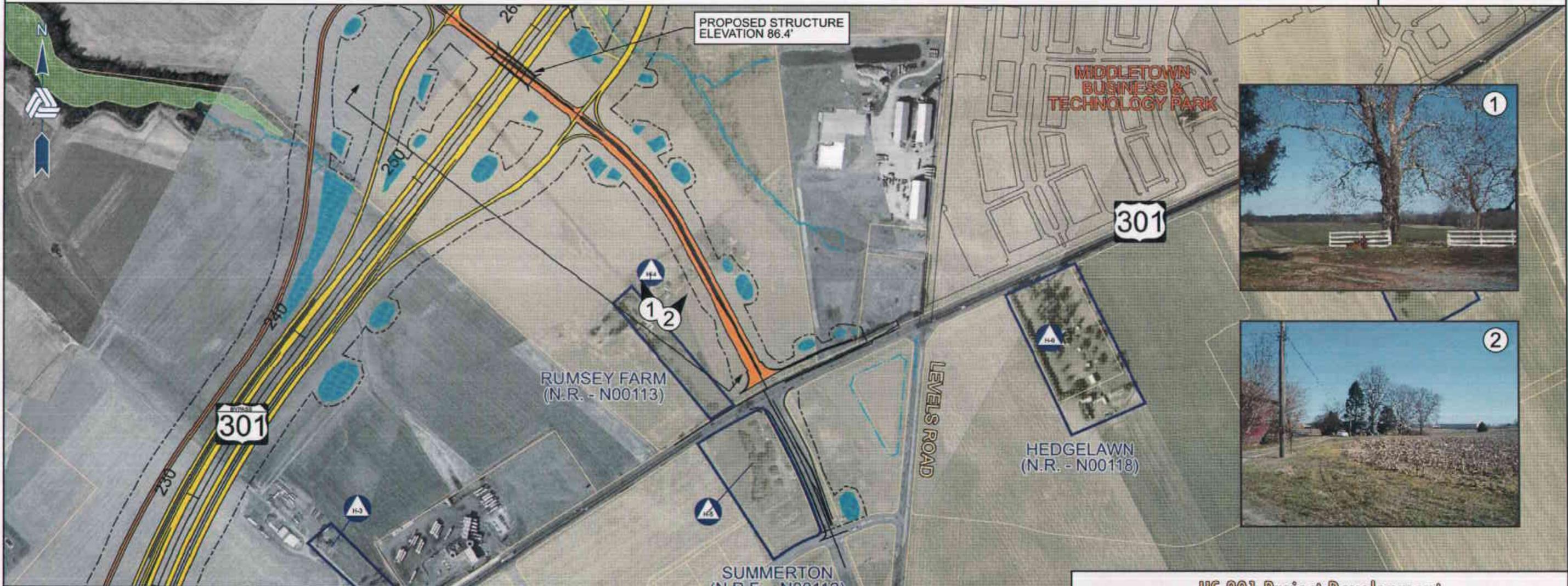
3.5 CRS No. N00112, Summerton, 840 Middletown-Warwick Road

Summerton (CRS No. N00112) was determined eligible under Criterion C of the National Register for its architectural significance. Overlooking US 301 from the east side, Summerton was historically named after the estate of John Cochran as noted on the 1868 Beers Atlas. The dwelling is a well-preserved and typical example of a mid-nineteenth-century high style dwelling that was rebuilt by a prosperous farmer in St. Georges Hundred. Open vistas and cultivated land surround the property, which exhibits the remains of a carefully landscaped front yard. This property contains a *circa*-1850 two-and-one-half-story, five-bay, brick dwelling with an original two-and-one-half-story, five-bay service ell extending east from the northeast corner of the main block. Although recently altered by modern development, the eligible boundary consists of 5.66 acres and encompasses a small area in the immediate vicinity of the residence where former outbuildings once stood. The resource, its location, and boundary are illustrated in Figure 7. The resource is shown in Photograph 5.

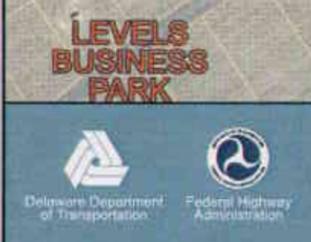
Summerton was one of four farm complexes commissioned by John P. Cochran for his sons. These properties included the commission of all new dwellings with attendant domestic and agricultural groupings. According to Delaware historian J.T. Scharf, John Cochran eagerly



Scale: 1"=200'



- EXISTING ROAD NETWORK
- PROPOSED ROADWAY IMPROVEMENTS
- - - LIMIT OF DISTURBANCE / PROPOSED RIGHT OF WAY
- PROPOSED STORMWATER MANAGEMENT FACILITIES
- PROPERTY LINES
- PARCELS (UNDER DEVELOPMENT)
- - - PROPOSED EARTH BERMS
- APPROVED DEVELOPMENT
- PROPOSED/PENDING DEVELOPMENT
- WETLANDS (2007 field surveyed)
- WETLANDS (based on 2002 aerial imagery)
- 100-YEAR FLOODPLAINS (FEMA)
- XXX PAVEMENT ACCESS TO BE REMOVED
- HISTORIC PROPERTIES
- ▲ NOISE RECEPTOR SITE
- ① PHOTO DIRECTIONAL SYMBOL





US 301 Project Development
Documentation in Support
of a Finding of Adverse Effect

**Cross-Section Illustrating
Rumsey Farm at STA. 251+00
CRS No. N00113**



Scale: 1"=500'

November 2007

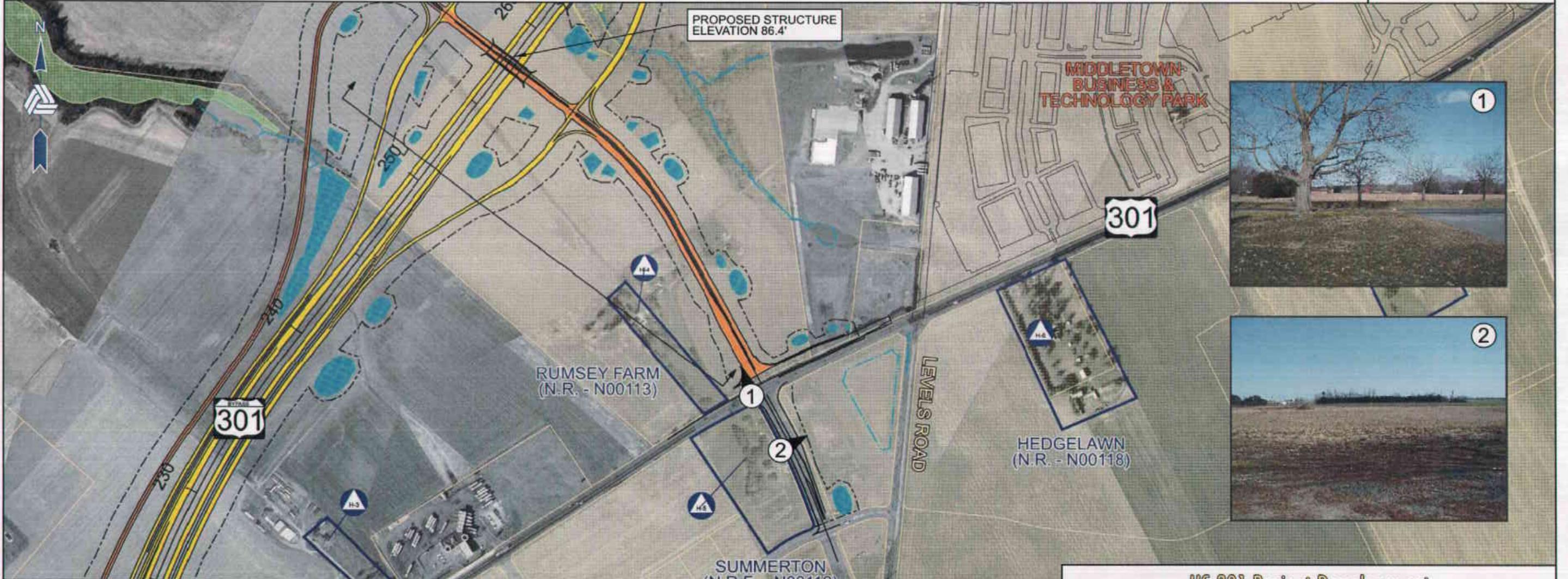
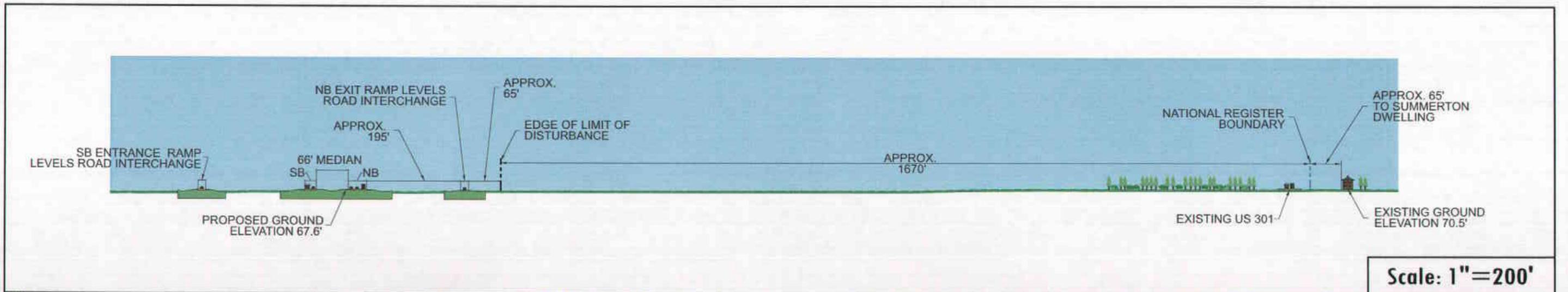
Figure 6



Photograph 4: CRS No. N00113, Rumsey Farm, view facing northwest (June 2005).



Photograph 5: CRS No. N00112, Summertown, view facing northeast (June 2005).



- EXISTING ROAD NETWORK
- PROPOSED ROADWAY IMPROVEMENTS
- LIMIT OF DISTURBANCE / PROPOSED RIGHT OF WAY
- PROPOSED STORMWATER MANAGEMENT FACILITIES
- PROPERTY LINES
- PARCELS (UNDER DEVELOPMENT)
- PROPOSED EARTH BERMS
- APPROVED DEVELOPMENT
- PROPOSED/PENDING DEVELOPMENT
- WETLANDS (2007 field surveyed)
- WETLANDS (based on 2002 aerial imagery)
- 100-YEAR FLOODPLAINS (FEMA)
- PAVEMENT ACCESS TO BE REMOVED
- HISTORIC PROPERTIES
- NOISE RECEPTOR SITE
- PHOTO DIRECTIONAL SYMBOL

LEVELS BUSINESS PARK

US 301 Project Development

Documentation in Support of a Finding of Adverse Effect

Cross-Section Illustrating Summerton at STA. 250+00
CRS No. N00112

Scale: 1"=500' November 2007 Figure 7

participated in the peach boom by planting 10,000 peach trees in 1856 on his estate one mile west of Middletown (Scharf 1888:433-444). Summerton was geared toward mixed farming, although the farm's main income was from orchard production. Cochran's orchard production was four times higher than the average for Saint Georges Hundred. He also had a greater number of horses and pigs than the Hundred's average. Cochran cultivated wheat, Indian corn, and Irish potatoes, and he also produced butter and meat. Following Cochran's death in 1894, Summerton was left to his daughter, Eliza Green. The farm remained in the Green family until 1953. The property currently serves as office space for the planned nearby Westtown Development.

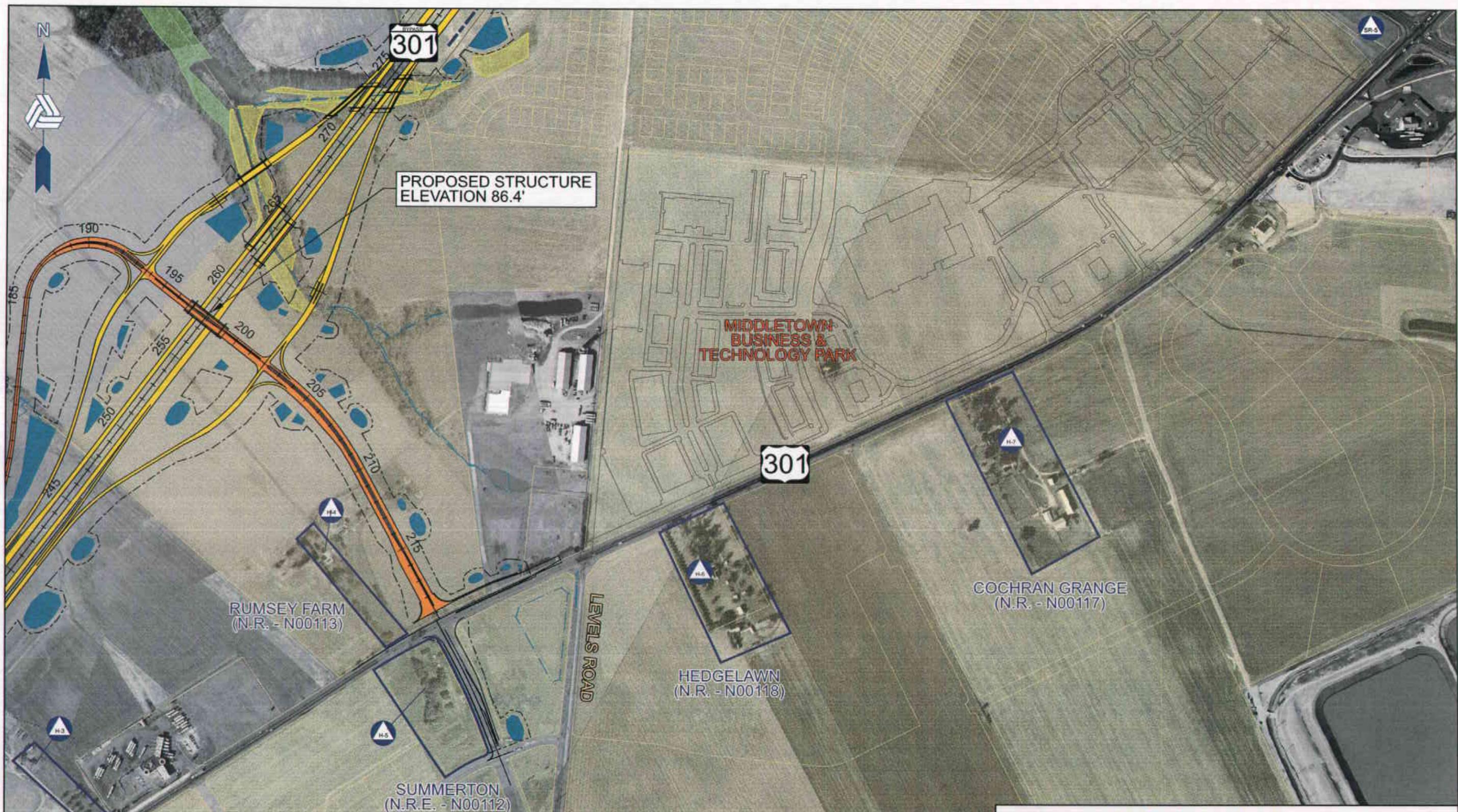
At the time of the preparation of the nomination, the significant characteristics of the property included the architectural qualities of the dwelling, which still retains its original massing, materials, fenestration, and ornamentation. The surrounding yard space, including the trees in the front yard, denoted the dwelling's status and domestic use. The trees are no longer present but some of the surrounding yard remains. The former setting amidst active farmlands and corn crib/granary were important to an understanding of the agricultural history of the property.

3.6 CRS No. N00118, Hedgelawn, 772 Middletown-Warwick Road

Hedgelawn (CRS No. N00118) was listed in the National Register on April 3, 1973, under Criterion A for its agricultural significance and under Criterion C for its architectural significance. The property is located along the southeast side of Middletown-Warwick Road (US 301) between Bunker Hill Road and Levels Road. The property consists of a dwelling and a corncrib/granary constructed in 1856; a carriage house and a forge house that appear contemporary with the dwelling and corncrib/granary; a smokehouse constructed in 1857; and a privy constructed ca. 1900. The associated 5.1-acre lot, which is included in the nominated National Register boundary, is planted with mature trees and surrounded by cultivated fields. The 7.47-acre National Register boundary includes the dwelling, outbuildings, landscape features, and immediate setting. The resource, its location, and boundary are illustrated in Figure 8. The resource is shown in Photograph 6.

Hedgelawn was erected for William R. Cochran on land that he obtained from his father, former Delaware Governor John P. Cochran. The land was originally a part of John Cochran's Stockton tract. Both the Stockton tract and the land comprising Hedgelawn were used to cultivate peaches. The dwelling at Hedgelawn was constructed in 1856 and is similar in form to the nearby dwelling known as Rumsey Farm (Schmidt 1972b).

The significant characteristics of the property include the integrity of design, materials, and workmanship of the dwelling, domestic outbuildings, and agricultural outbuildings. The overall setting of the property, with the residence facing the main roadway to the west, prominent front lawn with allee of trees, related agricultural and domestic outbuildings to the rear of the dwelling, and surrounding agricultural lands, conveys the aspects of feeling, setting, and location of a prosperous nineteenth-century rural estate.



	EXISTING ROAD NETWORK		PROPOSED/PENDING DEVELOPMENT
	PROPOSED ROADWAY IMPROVEMENTS		WETLANDS (2007 field surveyed)
	LIMIT OF DISTURBANCE / PROPOSED RIGHT OF WAY		WETLANDS (based on 2002 aerial imagery)
	PROPOSED STORMWATER MANAGEMENT FACILITIES		100-YEAR FLOODPLAINS (FEMA)
	PROPERTY LINES		PAVEMENT ACCESS TO BE REMOVED
	PARCELS (UNDER DEVELOPMENT)		HISTORIC PROPERTIES
	PROPOSED EARTH BERMS		NOISE RECEPTOR SITE
	APPROVED DEVELOPMENT		PHOTO DIRECTIONAL SYMBOL



	US 301 Project Development Documentation in Support of a Finding of Adverse Effect		
	Hedgelawn CRS No. N00118		
Scale: 1"=500'	November 2007	Figure 8	



Photograph 6: CRS No. N00118, Hedgelawn, view facing southeast (June 2005).

3.7 CRS No. N00117, Cochran Grange, 704 Middletown-Warwick Road

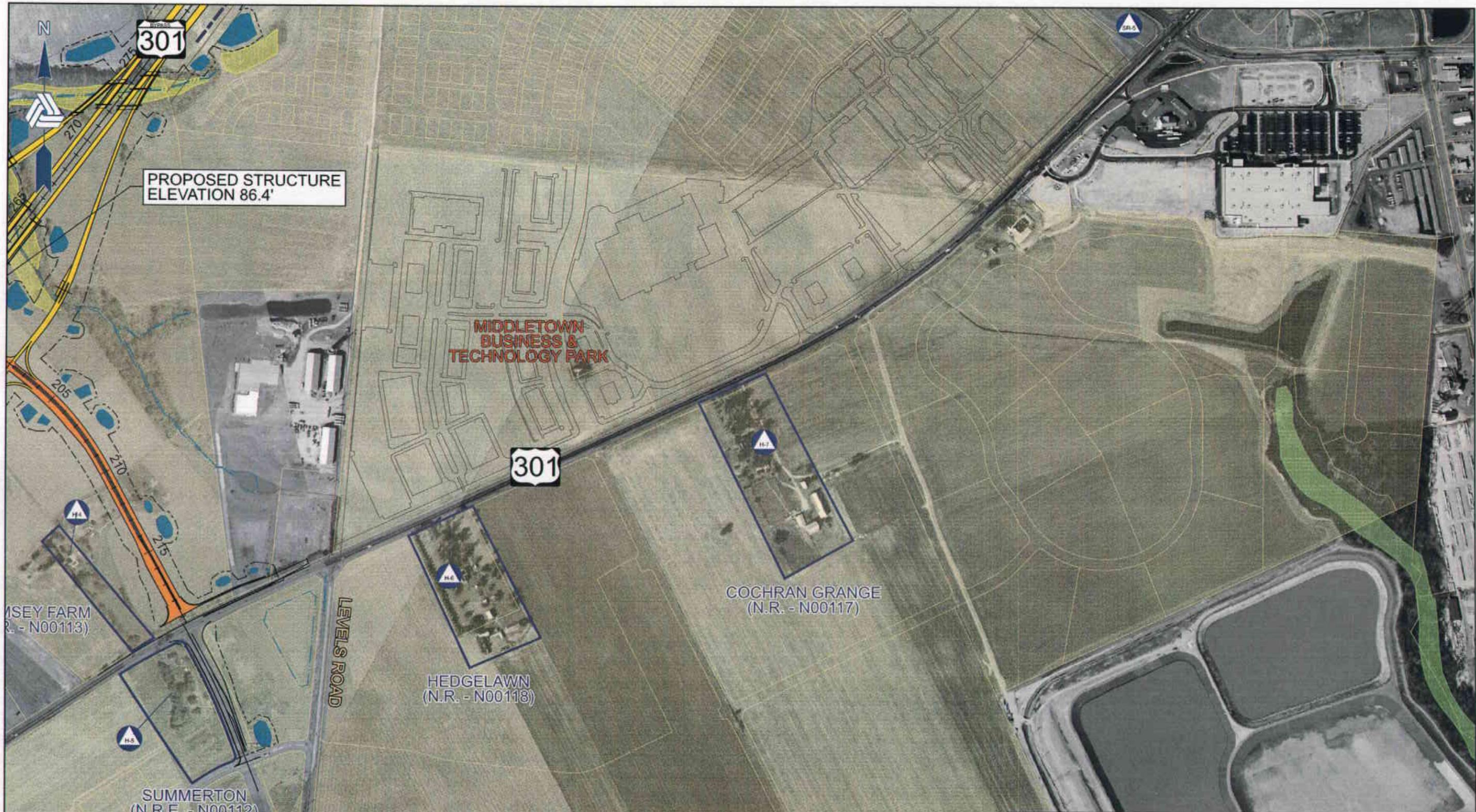
The Cochran Grange (CRS No. N00117) was previously listed in the National Register in 1972 under Criteria A for agriculture and C for architecture. The prominent dwelling sits on the east side of Middletown-Warwick Road behind a wrought iron fence that follows along the roadway and an allee of prominent trees that lead up to the façade of the dwelling. The Cochran Grange includes an architecturally impressive and well-preserved collection of domestic and agricultural buildings with a high degree of integrity, most of which date to 1834 (brick barn, threshing barn, and granary/corncrib), and an 1842 dwelling. These buildings were built by Governor John P. Cochran, who owned and operated the farm in the nineteenth century. Additional historic outbuildings include a brick slave quarters, a frame privy, and a *circa*-1910 frame milk house adjacent to the brick bank barn. The dwelling is a five-bay, two-story structure with a main block housing rooms for the family and a two-story wing to the left that historically included a kitchen and rooms for servants. The brick dwelling features architectural details of the Greek Revival and Italianate styles, including a two-story porch supported by square columns and a nearly flat roof topped by a flat-roofed cupola. The barn and an adjacent modern stable continue to be used for the boarding of thoroughbred race horses. The National Register boundary encompasses 10.0 acres and includes the dwelling, trees, lawn, and outbuildings. The resource, its location, and boundary are illustrated in Figure 9. The resource is shown in Photograph 7.

The dwelling was erected by Governor John P. Cochran, the 43rd governor of Delaware, in 1842. Cochran was one of the local leaders in peach cultivation and eventually became the largest peach producer in St. Georges Hundred (Schmidt 1972). The house remains under the ownership of members of the Cochran family.

The significant characteristics of the property include the physical fabric of the dwelling and the extant outbuildings, as they retain a high degree of integrity of materials, design, and workmanship. There are few intrusions within the historic farmstead complex beyond a modern garage and stable, both of which are painted red in color and covered in vertical board siding to imitate the rest of the agricultural complex. Other significant qualities include the setting of the property lawn and trees surrounding the buildings and farmlands encircling the farm complex. Despite surrounding modern intrusions now evident, the overall layout of the property, with the mansion overlooking the main roadway to the west and several of the key outbuildings to the rear, conveys the aspects of feeling, setting, and location of an elite farm from the early to mid-nineteenth century.

3.8 CRS No. N00106, The Maples, 1023 Bunker Hill Road

The Maples (CRS No. N00106) was listed in the National Register of Historic Places in 1978 under Criterion C for its architectural significance. The property is located along the north side of Bunker Hill Road northwest of Middletown-Warwick Road (US 301). The historic farm lane is located to the east of the dwelling, providing access from Bunker Hill Road to the secondary buildings and structures located north of the dwelling. The 186.9-acre lot is planted with mature trees (many of which are maples, inspiring the resource's name) and includes cultivated fields. The property consists of a *circa*-1850s dwelling with late Second Empire stylistic elements, a



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| EXISTING ROAD NETWORK | PROPOSED/PENDING DEVELOPMENT |
| PROPOSED ROADWAY IMPROVEMENTS | WETLANDS (2007 field surveyed) |
| LIMIT OF DISTURBANCE / PROPOSED RIGHT OF WAY | WETLANDS (based on 2002 aerial imagery) |
| PROPOSED STORMWATER MANAGEMENT FACILITIES | 100-YEAR FLOODPLAINS (FEMA) |
| PROPERTY LINES | PAVEMENT ACCESS TO BE REMOVED |
| PARCELS (UNDER DEVELOPMENT) | HISTORIC PROPERTIES |
| PROPOSED EARTH BERMS | NOISE RECEPTOR SITE |
| APPROVED DEVELOPMENT | PHOTO DIRECTIONAL SYMBOL |



US 301 Project Development Documentation in Support of a Finding of Adverse Effect		
Cochran Grange CRS No. N00117		
Scale: 1"=500'	November 2007	Figure 9



Photograph 7: CRS No. N00117, Cochran Grange, view facing northwest (June 2005).

cowshed (currently used as an equipment shed), a milking barn with an attached milk house, a windmill, and a modern pool. The National Register boundary includes an area measuring 1.66 acres, the dwelling and tree-lined front yard. The outbuildings to the rear are excluded as they do not contribute to the architectural significance of the property. The boundary follows the tree line to the northwest, the edge of the rear yard to the northeast, a farm lane to the southeast, and the property line along Bunker Hill Road to the southwest. The resource, its location, and boundary are illustrated in Figure 10. The dwelling is shown in Photograph 8.

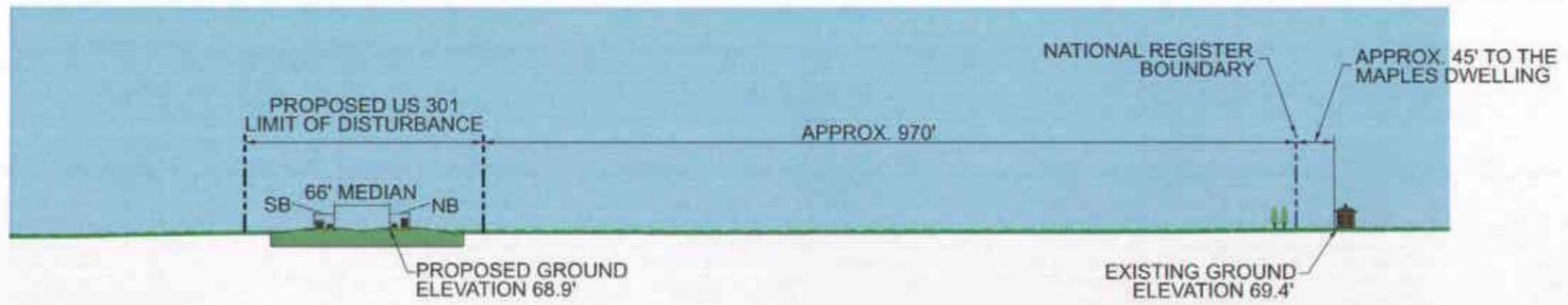
The dwelling was erected by George Derrickson, Sr., in the 1850s. George Derrickson, Sr., owned a large amount of land in Middletown, including a tract called Indian Range, which he purchased in 1837. Derrickson built the Maples on newly acquired land adjacent to Indian Range in the 1850s. George's son Charles married and moved from Indian Range to the Maples around the time of his father's death. Charles Derrickson updated the dwelling with Second Empire features in the 1880s (Norton 1977a). Later alterations to the dwelling since its listing in the National Register include an open, shed-roofed porch currently attached to the north elevation of the rear ell and a screened-in, shed-roofed porch attached to the west elevation of the ell. These alterations are not of significant massing and scale to detract from the integrity of the dwelling.

The significant characteristics of the property include the architectural features and integrity of materials, design, and workmanship of the house, which together display an eclectic range of several nineteenth-century styles, with the Second Empire predominating. The other significant characteristic is the dwelling's immediate setting, including the tree-lined front yard. The setting amidst active farmlands is important to understand the agricultural history of the associated property. The more recent agricultural outbuildings and swimming pool are not contributing features as they do not contribute to the property's historic significance.

3.9 CRS No. N05148, Rosedale, 1143 Bunker Hill Road

Rosedale (CRS No. N05148) was listed in the National Register as part of the multiple property nomination *Rebuilding St. Georges Hundred, New Castle County, 1850-1880* under Criterion A for its agricultural significance and under Criterion C for its architectural significance. The active horse farm is located along the north side of Bunker Hill Road, southwest of the intersection with Choptank Road. The property consists of a *circa*-1790 dwelling, a *circa*-1880 horse barn with an attached training stable and office, a *circa*-1950s brood mare stable, a *circa*-1950s tenant house, and a *circa*-1940 to 1960 loading chute. The dwelling, which features Georgian stylistic elements, is currently in good condition and retains notable details and form typical of the style. The historic farm lane is located to the east of the dwelling, providing access from Bunker Hill Road to the agricultural buildings located north of the dwelling. The 19.60-acre National Register boundary includes the dwelling and associated outbuildings, and is planted with mature trees and active pastures. The resource, its location, and boundary are illustrated in Figure 11. The resource is shown in Photograph 9.

The earliest mention of Rosedale in historic deeds is 1792 when Joshua E. Driver acquired a parcel of land, including the dwelling, from his grandfather, John Reynolds. Driver sold the property to Thomas Murphy in 1847, and the property remained in the Murphy family until the early 1890s. In 1860, the farm produced wheat, Indian corn, oats, potatoes, and dairy products.



Scale: 1"=200'



- EXISTING ROAD NETWORK
- PROPOSED ROADWAY IMPROVEMENTS
- LIMIT OF DISTURBANCE / PROPOSED RIGHT OF WAY
- PROPOSED STORMWATER MANAGEMENT FACILITIES
- PROPERTY LINES
- PARCELS (UNDER DEVELOPMENT)
- PROPOSED EARTH BERMS
- APPROVED DEVELOPMENT
- PROPOSED/PENDING DEVELOPMENT
- WETLANDS (2007 field surveyed)
- WETLANDS (based on 2002 aerial imagery)
- 100-YEAR FLOODPLAINS (FEMA)
- PAVEMENT ACCESS TO BE REMOVED
- HISTORIC PROPERTIES
- NOISE RECEPTOR SITE
- PHOTO DIRECTIONAL SYMBOL



US 301 Project Development
Documentation in Support
of a Finding of Adverse Effect

Cross-Section Illustrating
The Maples at STA. 308+00
CRS No. N00106

Scale: 1"=500'

November 2007

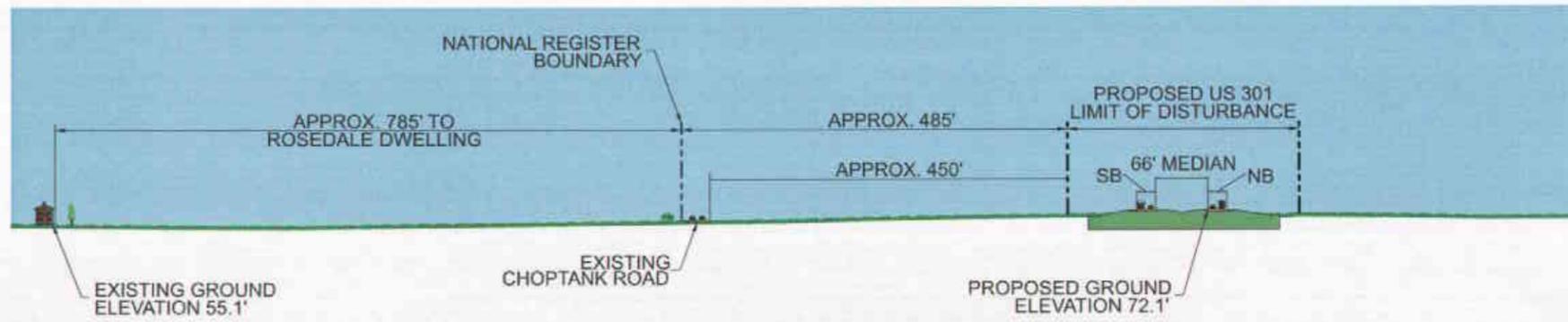
Figure 10



Photograph 8: CRS No: N00106, The Maples, view facing northwest (June 2005).



Photograph 9: CRS No. N05148, Rosedale, view facing north (June 2005).



Scale: 1"=200'



- EXISTING ROAD NETWORK
- PROPOSED ROADWAY IMPROVEMENTS
- - - LIMIT OF DISTURBANCE / PROPOSED RIGHT OF WAY
- PROPOSED STORMWATER MANAGEMENT FACILITIES
- PROPERTY LINES
- PARCELS (UNDER DEVELOPMENT)
- - - PROPOSED EARTH BERMS
- APPROVED DEVELOPMENT
- PROPOSED/PENDING DEVELOPMENT
- WETLANDS (2007 field surveyed)
- WETLANDS (based on 2002 aerial imagery)
- 100-YEAR FLOODPLAINS (FEMA)
- XXX PAVEMENT ACCESS TO BE REMOVED
- HISTORIC PROPERTIES
- ▲ NOISE RECEPTOR SITE
- ① PHOTO DIRECTIONAL SYMBOL





US 301 Project Development

Documentation in Support
of a Finding of Adverse Effect

Cross-Section Illustrating
Rosedale at STA. 315+00
CRS No. N05148



Scale: 1"=500'	November 2007	Figure 11
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In addition to the farm, the Murphys owned and operated a mill on Bohemia Creek in Cecil County, Maryland, just over the state line from Delaware. Rosedale functioned as a horse farm for most of the twentieth century and continues to serve in this capacity today (Herman et al. 1985).

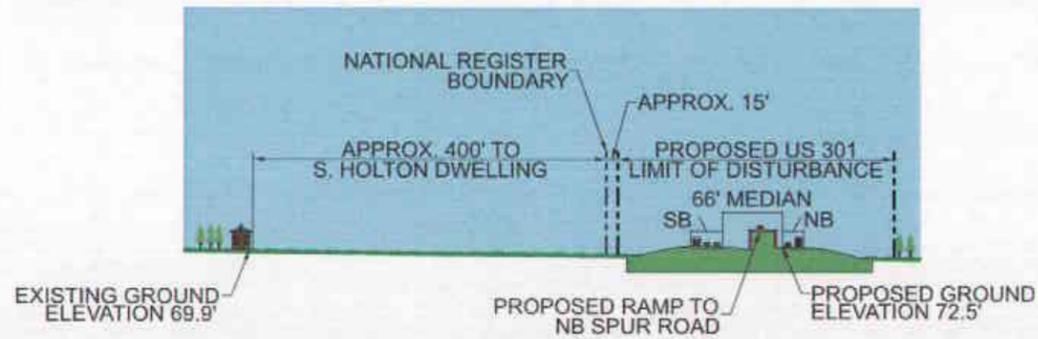
The dwelling is significant as an embodiment of the Georgian architectural style; therefore, retention of integrity of design, materials, and workmanship are critical to the eligibility of the resource. The farmstead is significant as an example of the rebuilding that occurred in the local area during the nineteenth century. The significant characteristics of the property include the physical fabric of the house, the barn, and the outbuildings, as well as the surrounding pasture land. The setting of this property amidst and within view of other active farms and associated farmlands, including the Maples (CRS No. N00106) to the east, is also significant as it conveys the feeling of and association with a rural landscape.

3.10 CRS No. N00107, S. Holton Farm, 2010 Choptank Road

The S. Holton Farm (CRS No. N00107) was listed in the National Register of Historic Places in 1985 as part of the multiple property nomination *Rebuilding St. Georges Hundred, New Castle County, 1850-1880* under Criterion A for its agricultural significance and under Criterion C for its architectural significance. Today, the property remains eligible for listing in the National Register under Criterion C. The property no longer retains its agricultural significance under Criterion A due to the loss of the barn and other outbuildings since the time of the property's listing in 1985. According to the National Register nomination form, "the farmhouse, with its related outbuildings, is significant on a local level as being one of many examples of rebuilding in the area" (Herman et al. 1985). The dwelling is also significant for its embodiment of the essential features of the Greek Revival style, which include Classical symmetry and proportion, symmetrical fenestration in all three exposed elevations of the main block, and a centrally placed front porch.

The S. Holton Farm property consists of a *circa*-1850 dwelling, a *circa*-1880 to 1900 milk house, a modern garage, and a modern shed. The property is located along the east side of Choptank Road north of Bunker Hill Road. The 81.80-acre parcel is planted with mature trees and includes cultivated fields. The historic farm lane is located to the south of the dwelling, providing access from Choptank Road to the secondary buildings located east of the dwelling. The National Register boundary includes the house, grounds, and tree-lined lane leading from Choptank Road. The boundary follows along either side of the driveway to the north and south, is drawn to include the milk house and the location of former outbuildings to the east, and includes 4.4 acres. The resource, its location, and boundary are illustrated in Figure 12. The resource is shown in Photograph 10.

Spencer Holton erected the dwelling at the S. Holton Farm ca. 1850 after purchasing additional land adjoining acreage that he acquired in 1838. In 1850, Holton produced corn, wheat, oats, butter, potatoes, hay, and clover seed, and raised milk cows, other cattle, horses, sheep, and swine. Market orchards were added to the property between 1860 and 1870, and by 1880 the farm included 25 acres of peach trees and one acre of apple trees. The farm remained in the Holton family until 1886, when it was auctioned to John Bailey. The farm went through several owners around the turn of the century, and was purchased by Howard and Mary Crossland in 1928. The



Scale: 1"=200'



- EXISTING ROAD NETWORK
- PROPOSED ROADWAY IMPROVEMENTS
- - - LIMIT OF DISTURBANCE / PROPOSED RIGHT OF WAY
- PROPOSED STORMWATER MANAGEMENT FACILITIES
- PROPERTY LINES
- PARCELS (UNDER DEVELOPMENT)
- - - PROPOSED EARTH BERMS
- APPROVED DEVELOPMENT
- PROPOSED/PENDING DEVELOPMENT
- WETLANDS (2007 field surveyed)
- WETLANDS (based on 2002 aerial imagery)
- 100-YEAR FLOODPLAINS (FEMA)
- XXX PAVEMENT ACCESS TO BE REMOVED
- HISTORIC PROPERTIES
- ▲ NOISE RECEPTOR SITE
- ① PHOTO DIRECTIONAL SYMBOL





US 301 Project Development

Documentation in Support
of a Finding of Adverse Effect

Cross-Section Illustrating
S. Holton Farm at STA. 365+00
CRS No. N00107



Scale: 1"=500'

November 2007

Figure 12



Photograph 10: CRS No. N00107, The S. Holton Farm, view facing northeast (June 2005).

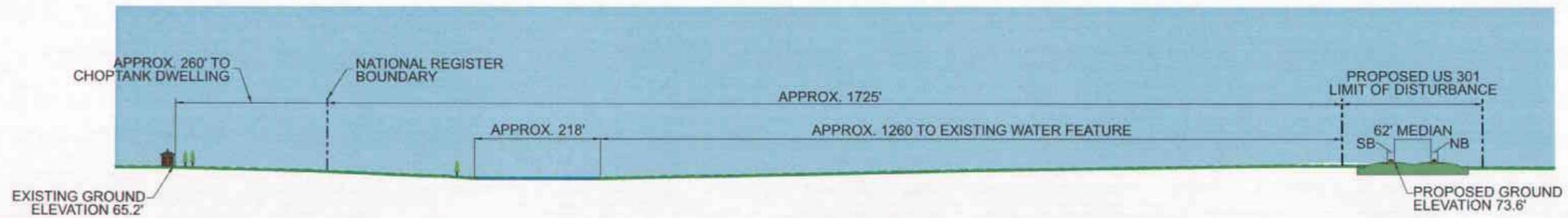
farm has remained in the Crossland family since the early twentieth century (Herman et al. 1985). The significant characteristics of the property include the architectural qualities of the dwelling, as the majority of its salient exterior features survive from the period of significance. Other significant characteristics of the property include the property's immediate setting and surrounding grounds, including the tree-lined lane leading from Choptank Road. The farmstead's location in its larger environment of cultivated farmlands conveys the setting and feeling of a mid-nineteenth-century estate in central New Castle County.

3.11 CRS No. N00109, Choptank, 1542 Choptank Road

Choptank (CRS No. N00109) was previously listed in the National Register in 1985 as part of the *Rebuilding St. Georges Hundred, New Castle County, 1850-1880* multiple property nomination under Criterion A for agriculture and under Criterion C for architecture. The property consists of a *circa*-1835 dwelling with a *circa*-1850 front block and a *circa*-1900 cow barn and milk house. The dwelling, featuring Greek Revival stylistic elements, is reflective of the rebuilding that occurred in the mid-nineteenth century throughout St. Georges Hundred; an earlier dwelling (ca. 1835) was incorporated into the rear ell and the front block with stylistic features was added ca. 1850. The extant outbuildings stand in good condition and contain little to no modern alterations. The property is located along the east side of Choptank Road. An asphalt driveway leads east from Choptank Road to the dwelling and outbuildings that comprise Choptank Farm. Mature walnut, maple, holly, and cedar trees are located in the vicinity of the dwelling, and cultivated fields, all under the ownership of the Rhoades family, surround the property to the north and south. The 14.66-acre National Register boundary includes the dwelling, the cow barn, the milk house, the tree-lined drive, the grounds, and sufficient agricultural lands to convey the property's significance under Criteria A and C. The resource, its location, and National Register boundary are illustrated in Figure 13. The resource is shown in Photograph 11.

Thomas Clayton erected Choptank on land that he obtained from his father, Colonel Joshua Clayton. The property is named for the delineation shown on the 1868 Beers Atlas. The 240 acres consisted primarily of cultivated fields used for growing corn, oats, and wheat. By 1870, the farm value increased, while the actual acreage decreased to 190 acres. Peach growing quickly replaced some of the grain production on the farm. However, after the short-lived peach boom of the late nineteenth century, the farm reverted back to grain production for its livelihood. Livestock, specifically feed cows, were raised on Choptank as well (Herman et al. 1985). According to an interview with the current owners, the property remained in the Clayton family until 1952 when the current owners, the Rhoades family, purchased the property, which was then operating as a dairy farm, from Mary Clayton. The Rhoades family used Choptank for crop farming before renting the acreage out for grain cultivation in the 1980s.

The significant characteristics of the property include the physical fabric of the dwelling, cow barn, and the milk house. The setting and location of the farmstead amidst agricultural fields is also important to an understanding of the history of the property. The swimming pool is not a contributing feature as it does not contribute to the property's agricultural or architectural significance.



Scale: 1"=200'



- EXISTING ROAD NETWORK
- PROPOSED ROADWAY IMPROVEMENTS
- - - LIMIT OF DISTURBANCE / PROPOSED RIGHT OF WAY
- PROPOSED STORMWATER MANAGEMENT FACILITIES
- PROPERTY LINES
- PARCELS (UNDER DEVELOPMENT)
- - - PROPOSED EARTH BERMS
- APPROVED DEVELOPMENT
- PROPOSED/PENDING DEVELOPMENT
- WETLANDS (2007 field surveyed)
- WETLANDS (based on 2002 aerial imagery)
- 100-YEAR FLOODPLAINS (FEMA)
- XXX PAVEMENT ACCESS TO BE REMOVED
- HISTORIC PROPERTIES
- ▲ NOISE RECEPTOR SITE
- ① PHOTO DIRECTIONAL SYMBOL





US 301 Project Development

Documentation in Support
of a Finding of Adverse Effect

Cross-Section Illustrating
Choptank at STA. 178+00
CRS No. N00109



Scale: 1"=500'

November 2007

Figure 13



Photograph 11: CRS No. N00109, Choptank, view facing southeast (June 2005).

3.12 CRS No. N00427, Woodside, 1358 Choptank Road

Woodside (CRS No. N00427) was previously listed in the National Register as part of the *Rebuilding of St. Georges Hundred National Register* thematic nomination in 1985 under Criteria A for agriculture and C for architecture. The property consists of a *circa*-1860 brick dwelling, a stable, a granary, a cattle/dairy barn, an equipment shed, and a water tower. The property is located on the east side of Choptank Road. The dwelling and outbuildings are accessed from Choptank Road by a tree-lined drive. The property is landscaped with mature trees. The 4.00-acre boundary includes the dwelling, outbuildings, and immediate setting to convey the property's significance under Criteria A and C. The resource, its location, and the National Register boundary are illustrated in Figure 14. The resource is shown in Photograph 12.

Woodside was commissioned by Henry Clayton around 1860 on a portion of his father's lands. Clayton formally purchased an encompassing 212 acres in 1873. During the area's peach boom, Henry Clayton was one of the most prosperous growers in St. Georges Hundred (Herman et al. 1985).

The significant characteristics of the property include the physical fabric of the dwelling and outbuildings and landscape features such as the mature trees in the front yard. The setting of this property amidst active farmland enables it to convey the feeling and setting of and association with a nineteenth-century farm.

3.13 CRS No. N05123, Governor Benjamin T. Biggs Farm, 1196 Choptank Road

The Governor Benjamin T. Biggs Farm (CRS No. N05123) was listed in the National Register in 1987 under Criterion A for association with the rebuilding trend, under Criterion B for its association with Governor Benjamin T. Biggs, and under Criterion C for architecture. The property consists of an 1846 brick dwelling, a smokehouse, three implement sheds (one of which is used as a garage, another as a stable), a small barn, a shop, and a dairy. The property is located on the east side of Choptank Road, and an asphalt drive, sheltered by mature trees, provides access to the dwelling and outbuildings located east of the dwelling. The 3.97-acre National Register boundary, which also serves as the current tax parcel, includes the dwelling, the outbuildings, and immediate setting to convey its significance under Criteria A, B, and C. The resource, its location, and the National Register boundary are illustrated in Figure 15. The resource is shown in Photograph 13.

The dwelling was built in 1846 by John Biggs and was deeded to Benjamin T. Biggs in 1861. Biggs was later elected Governor of Delaware in 1887. Like farmers in adjacent St. Georges Hundred, Biggs capitalized on the peach market.

The significant characteristics of the property include the physical fabric of the dwelling and outbuildings, the retention of agricultural crop lands, and landscape features such as the mature trees in the front yard and the fence lines that delineate the dwelling and yard space from the surrounding fields. The rural setting of this property is significant as it conveys the association and feeling of a nineteenth-century farm.



- | | | | |
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| | EXISTING ROAD NETWORK | | PROPOSED/PENDING DEVELOPMENT |
| | PROPOSED ROADWAY IMPROVEMENTS | | WETLANDS (2007 field surveyed) |
| | LIMIT OF DISTURBANCE / PROPOSED RIGHT OF WAY | | WETLANDS (based on 2002 aerial imagery) |
| | PROPOSED STORMWATER MANAGEMENT FACILITIES | | 100-YEAR FLOODPLAINS (FEMA) |
| | PROPERTY LINES | | PAVEMENT ACCESS TO BE REMOVED |
| | PARCELS (UNDER DEVELOPMENT) | | HISTORIC PROPERTIES |
| | PROPOSED EARTH BERMS | | NOISE RECEPTOR SITE |
| | APPROVED DEVELOPMENT | | PHOTO DIRECTIONAL SYMBOL |



US 301 Project Development
Documentation in Support
of a Finding of Adverse Effect



Woodside
CRS No. N00427

Scale: 1"=500'

November 2007

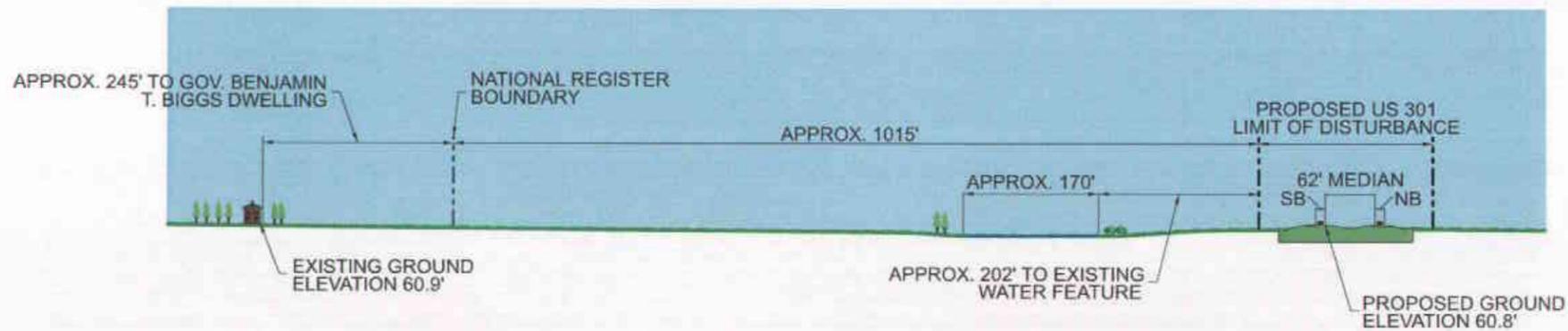
Figure 14



Photograph 12: CRS No. N00427, Woodside, view facing northeast (June 2005).



Photograph 13: CRS No. N05123, Governor Benjamin T. Biggs Farm, view facing northeast (June 2005).



Scale: 1"=200'



- EXISTING ROAD NETWORK
- PROPOSED ROADWAY IMPROVEMENTS
- - - LIMIT OF DISTURBANCE / PROPOSED RIGHT OF WAY
- PROPOSED STORMWATER MANAGEMENT FACILITIES
- PROPERTY LINES
- PARCELS (UNDER DEVELOPMENT)
- PROPOSED EARTH BERMS
- APPROVED DEVELOPMENT
- PROPOSED/PENDING DEVELOPMENT
- WETLANDS (2007 field surveyed)
- WETLANDS (based on 2002 aerial imagery)
- 100-YEAR FLOODPLAINS (FEMA)
- XXX PAVEMENT ACCESS TO BE REMOVED
- HISTORIC PROPERTIES
- ▲ NOISE RECEPTOR SITE
- ① PHOTO DIRECTIONAL SYMBOL



US 301 Project Development

Documentation in Support
of a Finding of Adverse Effect

**Cross-Section Illustrating
Governor Benjamin T. Biggs Farm at STA. 242+00
CRS No. N05123**

Scale: 1"=500'

November 2007

Figure 15

3.14 CRS No. N05146, Armstrong-Walker House, 5036 Summit Bridge Road

The Armstrong-Walker House (CRS No. N05146) was listed in the National Register as part of the multiple property nomination *Rebuilding St. Georges Hundred, New Castle County, 1850-1880* under Criterion A for its agricultural significance and under Criterion C for its architectural significance. The property consists of a brick dwelling, a barn, and a shed (all constructed ca. 1870), and a *circa*-1940 equipment shed. The property is located on the west side of Summit Bridge Road, south of its intersection with Armstrong Corner Road. The property is sparsely landscaped with a few mature trees and is surrounded by agricultural land. The 5.00-acre National Register boundary includes the dwelling, the outbuildings, and sufficient setting to convey its significance under Criteria A and C. The resource, its location, and National Register boundary are illustrated in Figure 16. The resource is shown in Photograph 14.

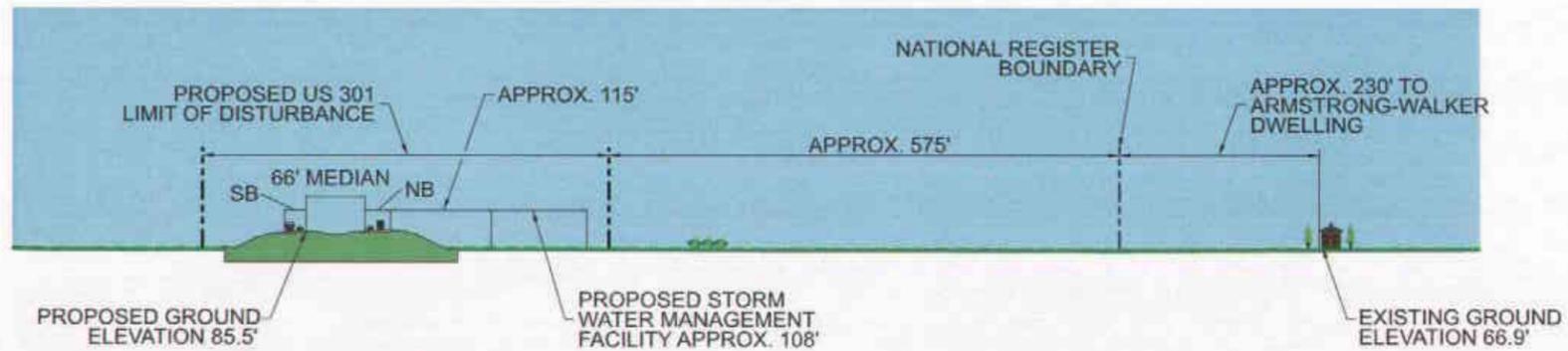
The Armstrong-Walker House was constructed ca. 1870 by Martin E. Walker, a farmer and brickyard operator. Some of the bricks produced by Walker may have been used in the construction of the dwelling (Herman et al. 1985). The Armstrong family, for whom the area of Armstrong Corners is named, acquired the property in 1889 and continues to retain ownership of the farm.

The significant characteristics of the property include the physical fabric of the dwelling, barn, and outbuildings as well as landscape features such as the placement of trees to denote the yard space. The setting of this property amidst active farmlands is also significant as it conveys the aspects and feelings of a nineteenth-century mixed farm that was converted to dairying operations in the late nineteenth and early twentieth centuries.

3.15 CRS No. N03930, Achmester, 617 Marl Pit Road

Achmester (CRS No. N03930) was listed in the National Register in 1980 under Criterion A for its agricultural significance and under Criterion C for its architectural significance. The property includes a dwelling constructed in 1829, a *circa*-1850 barn that is partially in ruins, a *circa*-1850 log smokehouse, a *circa*-1900 shed, a *circa*-1900 milk house, a modern equipment shed/garage, and a modern mobile home. With the exception of a few mature trees surrounding the dwelling, the property is minimally landscaped and is surrounded by cultivated fields. A gravel drive leading north from Marl Pit Road provides access to the dwelling and to the outbuildings located to the north. The 266.23-acre National Register boundary includes the dwelling, outbuildings, and surrounding cultivated fields to convey its significance under Criteria A and C. The resource, its location, and the National Register boundary are illustrated in Figure 17. The resource is shown in Photograph 15.

Richard Mansfield resided at Achmester from 1819, when he purchased the property, until his death in 1846. Mansfield was a successful farmer, a commissioner of the Delaware Railroad, and a Brigadier-General in the Delaware militia. Mansfield kept detailed records of his activities between 1826 and 1844, and room-by-room inventories were taken of the dwelling at Achmester in 1841 and 1846. Primary records indicate that at least the main block of the dwelling was constructed in 1829, and the house had reached its present form by 1846 (Warnock et al. 1979).



Scale: 1"=200'



- EXISTING ROAD NETWORK
- PROPOSED ROADWAY IMPROVEMENTS
- - - LIMIT OF DISTURBANCE / PROPOSED RIGHT OF WAY
- PROPOSED STORMWATER MANAGEMENT FACILITIES
- PROPERTY LINES
- PARCELS (UNDER DEVELOPMENT)
- PROPOSED EARTH BERMS
- APPROVED DEVELOPMENT
- PROPOSED/PENDING DEVELOPMENT
- WETLANDS (2007 field surveyed)
- WETLANDS (based on 2002 aerial imagery)
- 100-YEAR FLOODPLAINS (FEMA)
- XXX PAVEMENT ACCESS TO BE REMOVED
- HISTORIC PROPERTIES
- ▲ NOISE RECEPTOR SITE
- ① PHOTO DIRECTIONAL SYMBOL





US 301 Project Development

Documentation in Support
of a Finding of Adverse Effect

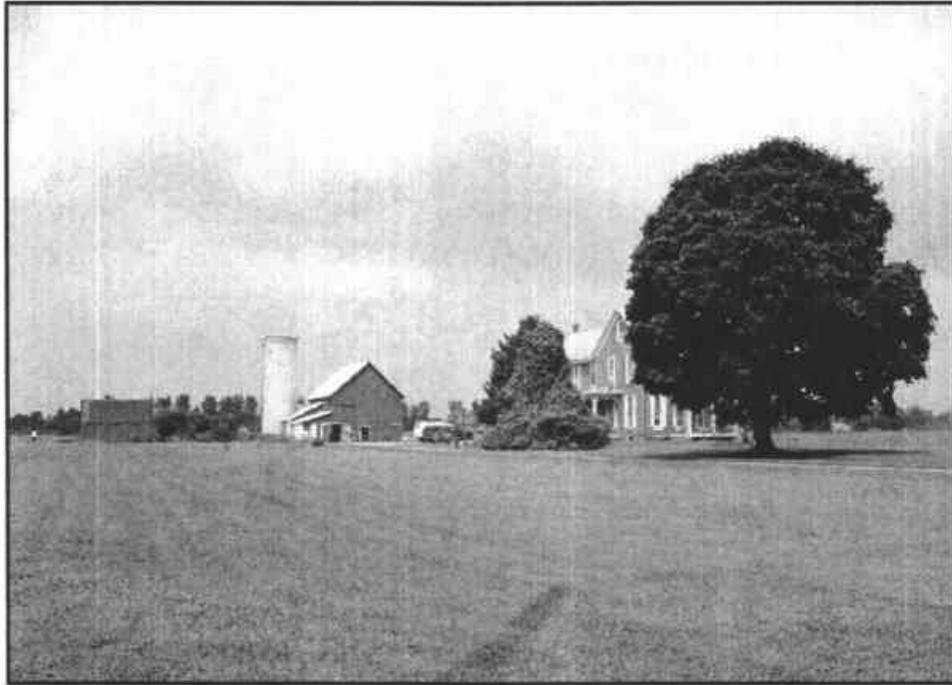
**Cross-Section Illustrating
Armstrong-Walker House at STA. 405+00
CRS No. N05146**



Scale: 1"=500'

November 2007

Figure 16



Photograph 14: CRS No. N05146, Armstrong-Walker House, view facing northwest (June 2005).



Photograph 15: CRS No. N03930, Achmester, view facing north (June 2005).



- | | |
|--|---|
| <ul style="list-style-type: none"> EXISTING ROAD NETWORK PROPOSED ROADWAY IMPROVEMENTS LIMIT OF DISTURBANCE / PROPOSED RIGHT OF WAY PROPOSED STORMWATER MANAGEMENT FACILITIES PROPERTY LINES PARCELS (UNDER DEVELOPMENT) PROPOSED EARTH BERMS APPROVED DEVELOPMENT | <ul style="list-style-type: none"> PROPOSED/PENDING DEVELOPMENT WETLANDS (2007 field surveyed) WETLANDS (based on 2002 aerial imagery) 100-YEAR FLOODPLAINS (FEMA) PAVEMENT ACCESS TO BE REMOVED HISTORIC PROPERTIES NOISE RECEPTOR SITE PHOTO DIRECTIONAL SYMBOL |
|--|---|



	US 301 Project Development Documentation in Support of a Finding of Adverse Effect	
Achmester CRS No. N03930		
Scale: 1"=500'	November 2007	Figure 17

The significant characteristics of the property include the dwelling's integrity of materials, workmanship, and design. The outbuildings and the retention of agricultural crop lands enhance integrity of setting and association and enable the farm to convey the feeling of a nineteenth-century farmstead. The tree lines associated with the property serve to delineate the edges of the farm fields and contribute to the agricultural significance of the resource. Modern structures within the farm complex are considered non-contributing features.

3.16 CRS No. N00121, Weston, 4677 Summit Bridge Road

Weston (CRS No. N00121) was listed in the National Register in 1985 as part of the *Rebuilding St. Georges Hundred, New Castle County, 1850-1880* multiple property nomination under Criterion A for agriculture and Criterion C for architecture. Weston is located on the east side of US 301 and the Norfolk Southern Railroad tracks, south of the Village of Mount Pleasant. Weston consists of an imposing brick house with an adjoining brick, three-story addition, the design of which displays influences of both Greek Revival and Italianate styles. The property also includes a group of well-preserved outbuildings: a frame tenant house, a bank barn, icehouse, and granary. The National Register boundary encompasses 36.41 acres and includes the house and outbuildings with surrounding farmland. The surrounding farmland is rented out. The resource, its location, and the National Register boundary are illustrated in Figure 18. The resource is shown in Photograph 16.

Samuel, William, and Frederick Brady, three sons of James Brady, erected the farm now known as "Weston" on land that they obtained in 1847 from the Reverend Nicholas Patterson (New Castle County Deed Book A6:369). The advent of the peach industry reached Weston after the Delaware Railroad was extended through the Brady property in 1855. The Weston property housed 90 horses and mules, which the Brady family rented out for towing purposes on the C&D Canal. The ice cut from the canal was kept in the icehouse located on the property and, in turn, sold to local residents. The property passed back and forth between the Brady brothers for over three decades until, in 1877, George Brady assumed sole proprietorship of the 445-acre "home farm" (New Castle County Deed Book V70:312). During the late nineteenth and early twentieth centuries, the property was used for dairying, as evidenced by the erection of the milk house and calf barn. Various owners briefly inhabited the property throughout the mid-twentieth century. The current owners, the Robb family, purchased the 184-acre property in 1952 from John and Evelyn Barnes (New Castle County Deed Book K52:377).

The significant characteristics of the property include the architectural detailing of the house and the outbuildings (including a relatively rare example of a bank barn). The associated landscape features, such as the mature trees in the front yard and the mature trees that now flank the present-day driveway, and the tree/fence lines that separate the buildings from the surrounding fields are also important. The setting of this property amidst farmland conveys its association with an active farmstead and the feeling of a rural landscape.



- EXISTING ROAD NETWORK
- PROPOSED ROADWAY IMPROVEMENTS
- LIMIT OF DISTURBANCE / PROPOSED RIGHT-OF-WAY
- PROPOSED STORMWATER MANAGEMENT FACILITIES
- PROPERTY LINES
- PARCELS (UNDER DEVELOPMENT)
- PROPOSED EARTH BERMS
- APPROVED DEVELOPMENT
- PROPOSED/PENDING DEVELOPMENT
- WETLANDS (2007 field surveyed)
- WETLANDS (based on 2002 aerial imagery)
- 100-YEAR FLOODPLAINS (FEMA)
- PAVEMENT ACCESS TO BE REMOVED
- HISTORIC PROPERTIES
- NOISE RECEPTOR SITE
- PHOTO DIRECTIONAL SYMBOL



US 301 Project Development

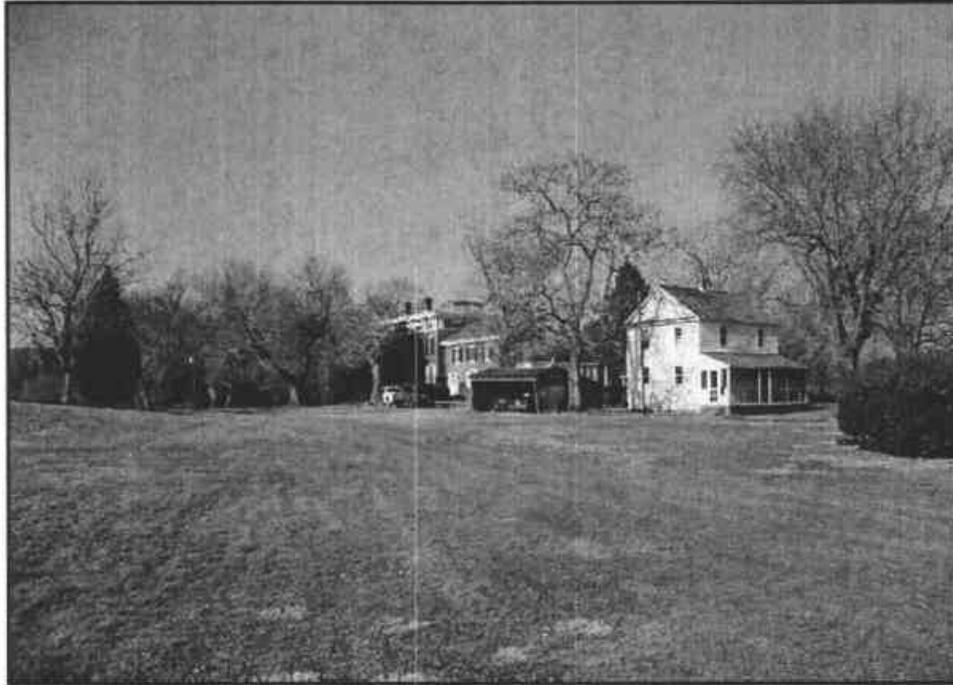
Documentation in Support
of a Finding of Adverse Effect

Weston
CRS No. N00121

Scale: 1"=500'

November 2007

Figure 18



Photograph 16: CRS No. N00121, Weston, view facing northeast (June 2005).

3.17 CRS No. N05132, Lovett Farm, 1405 Cedar Lane Road

The Lovett Farm (CRS No. N05132) was determined eligible for listing in the National Register under the *Rebuilding St. Georges Hundred* context under National Register Criteria A and C. The Lovett Farmstead/Mrs. Templeman House is composed of 100.00 acres of active agricultural land and a farm complex that is located at the end of a gravel driveway on the west side of Cedar Lane Road. The farm complex includes a number of historic buildings: a two-and-one-half-story dwelling with rear ell; two domestic outbuildings (a privy and woodshed); and a collection of agricultural outbuildings including a cowshed (now a run-in shed/tack room), a stable/cart shed/granary/equipment shed, a milk house, and a storage shed. The farm continues to cultivate field crops (corn, soybeans, and hay) and raise layer hens for the sale of eggs. The National Register boundary includes 101.2 acres. The resource, its location, and National Register boundary are illustrated in Figure 19. Photograph 17 conveys the appearance of the farmstead.

According to the current owners, the first dwelling on the property was a log cabin that was subsequently replaced by the central block of the rear ell. The original section of the present dwelling was likely erected by 1830 (based on form) and is present on the Rea and Price 1849 map of New Castle County, shown as "H. Templeman." The property appears as the Mrs. Templeman House on the 1868 Beers map. The property is shown as under the ownership of T.R. Hopkins in 1881 and as the Frank Biggs Res., 175 acres, in 1893. According to George Lovett, the current owner, prior to the Lovett family occupation the property was owned by the same family since the 1940s, and they operated it as a dairy and grain farm. Prior to that, it was a tenant-run dairy farm. The current owner also recalled that the property was historically known as Chestnut Grove Farm (Rottenstein 2004:21-25).

The significant characteristics of the property include the physical fabric of the dwelling, domestic buildings, and agricultural outbuildings, as well as landscape features such as the trees shielding the dwelling and outbuildings and tree lines and fence lines denoting the edges of agricultural fields. The outbuildings on the property convey the feeling of a nineteenth-century farm that was converted to dairying operations in the late nineteenth and early twentieth centuries. The setting of this property amidst farmlands is also significant to an understanding of its agricultural history. The continued use of the farmstead for agricultural purposes, including the occupation of the dwelling by the farm family, further enhances integrity of feeling and association with agriculture.

3.18 CRS No. N05131, T.J. Houston Farm, 1306 Cedar Lane Road

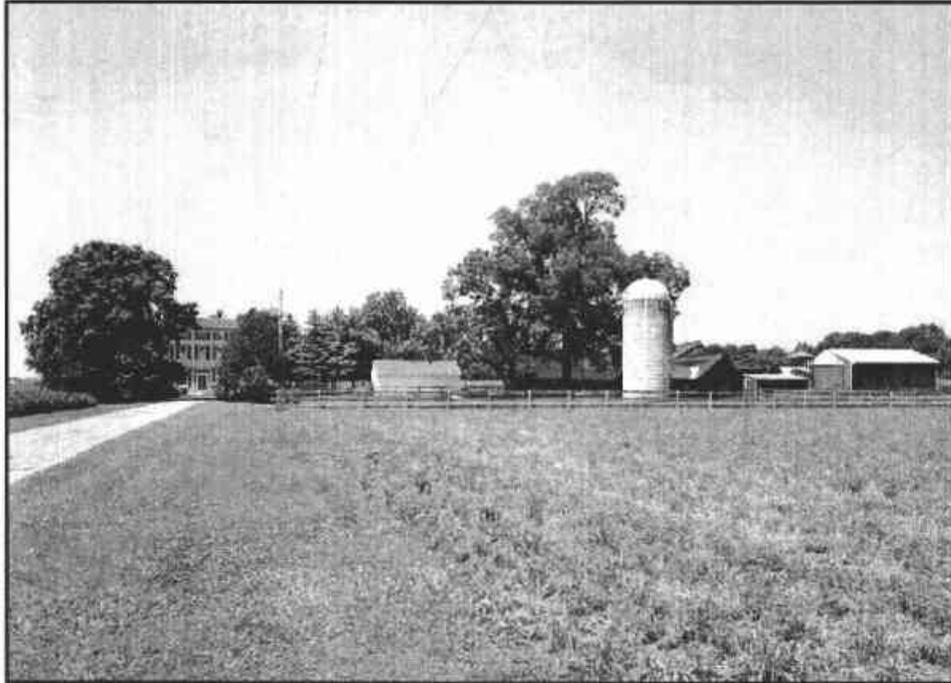
The T. J. Houston Farm (CRS No. N05131) was determined eligible for listing in the National Register as part of the US 301 Project Development effort under Criterion C for architecture. The *circa*-1860 front block of the dwelling embodies a combination of the Federal and Greek Revival architectural styles and retains integrity from its secondary period of construction. Although the property also includes a *circa*-1940 to 1960 milk house, a *circa*-1940 to 1960 shed, and a well cap, the property is not considered significant in the area of agriculture. The property is located on the west side of Cedar Lane Road, and a tree-lined gravel drive provides access to the set-back dwelling and the secondary outbuildings. The milk house and shed are located west of the dwelling. The property is minimally landscaped and is surrounded by active agricultural lands.



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| EXISTING ROAD NETWORK | PROPOSED/PENDING DEVELOPMENT |
| PROPOSED ROADWAY IMPROVEMENTS | WETLANDS (2007 field surveyed) |
| LIMIT OF DISTURBANCE / PROPOSED RIGHT OF WAY | WETLANDS (based on 2002 aerial imagery) |
| PROPOSED STORMWATER MANAGEMENT FACILITIES | 100-YEAR FLOODPLAINS (FEMA) |
| PROPERTY LINES | PAVEMENT ACCESS TO BE REMOVED |
| PARCELS (UNDER DEVELOPMENT) | HISTORIC PROPERTIES |
| PROPOSED EARTH BERMS | NOISE RECEPTOR SITE |
| APPROVED DEVELOPMENT | PHOTO DIRECTIONAL SYMBOL |



US 301 Project Development Documentation in Support of a Finding of Adverse Effect	
Lovett Farm CRS No. N05132	
Scale: 1"=500'	November 2007
Figure 19	



Photograph 17: CRS No. N05132, Lovett Farm, view facing west (June 2005).

The 2.76-acre National Register boundary includes the dwelling and the tree-lined gravel drive, providing sufficient setting for the architecturally significant dwelling. The resource, its location, and National Register boundary are illustrated in Figure 20. The dwelling is shown in Photograph 18.

The property encompassing the T. J. Houston Farm was attributed to the Houston family by 1849. The earliest portion of the dwelling appears to be enclosed within the rear block; the brick-clad main block appears to date to ca. 1860. In the mid- to late nineteenth century, the Houston farm yielded common products including wheat, corn, Irish potatoes, meat, butter, and market garden produce. Like many farms in the area, the farm later converted to dairy operations, likely in the early twentieth century. Following T.J. Houston's death, the farm was purchased by Ida V. Holton, wife of William M. Holton, for \$7,500 (New Castle County Deed Book A22:48). The Holtons retained ownership of the former Houston farm until June 1930, when they sold the property to Fred S. Robinson for \$10,500 (New Castle County Deed Book D37:97). The Robinson family retained ownership of the former Houston farm until July 1954, when they sold the farm to Bronislaw Koper and his wife, Jennie (New Castle County Deed Book H55:168). The property remained in the Koper family until May 2004, when they sold the property to Churchtown, LLC (New Castle County Deed Instrument 200406030060512). According to documentation on file with New Castle County planning staff, the double-dairy barn and corncrib/granary were only very recently removed from the property.

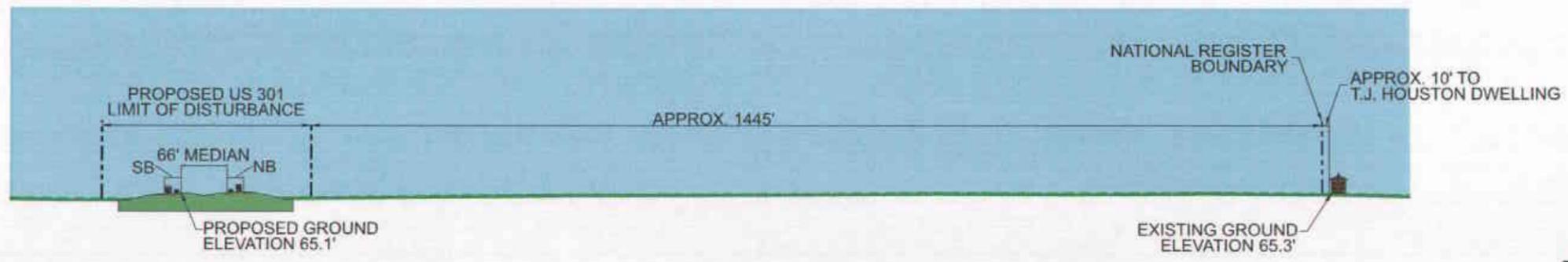
The significant characteristics of the property include the physical fabric of the dwelling and landscape features such as the trees lining the side of the driveway. The setting of this property amidst active farmlands is also significant as it conveys the historic agricultural association of the dwelling with a former dairying complex that is now largely demolished except for an extant milk house, silo, and shed.

3.19 CRS No. N12636, State Bridge Number 383, Jamison Corner Road

State Bridge Number 383 (CRS No. N12636) was determined eligible for listing in the National Register in 1988 under Criterion C for engineering significance. The bridge is a historically and technologically significant single-span, filled, solid spandrel concrete arch bridge that carries one lane of traffic on Jamison Corner Road over Scott Run. The substructure consists of concrete abutments with flared concrete wing walls. The arch is capped by a concrete parapet ornamented with incised rectangles. The resource, its location, and National Register boundary are illustrated in Figure 21. The bridge is shown in Photograph 19.

The bridge was erected in 1910 by the Luten Bridge Company of York, Pennsylvania, a leading early-twentieth-century builder of reinforced concrete bridges. A.G. Lichtenstein and Associates, Inc., indicated that the bridge is the oldest of four identified Luten arch bridges in Delaware (Lichtenstein Consulting Engineers, Inc. 2000).

The significant characteristics of this resource include the engineering and architectural features of the bridge, such as the flared concrete wing walls, and the decorative incised rectangles on the concrete parapet. The bridge's retention of integrity of materials, design, and workmanship are important to its ability to convey its engineering significance. The setting and location of this



Scale: 1"=200'



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| <ul style="list-style-type: none"> EXISTING ROAD NETWORK PROPOSED ROADWAY IMPROVEMENTS LIMIT OF DISTURBANCE / PROPOSED RIGHT OF WAY PROPOSED STORMWATER MANAGEMENT FACILITIES PROPERTY LINES PARCELS (UNDER DEVELOPMENT) PROPOSED EARTH BERMS APPROVED DEVELOPMENT | <ul style="list-style-type: none"> PROPOSED/PENDING DEVELOPMENT WETLANDS (2007 field surveyed) WETLANDS (based on 2002 aerial imagery) 100-YEAR FLOODPLAINS (FEMA) PAVEMENT ACCESS TO BE REMOVED HISTORIC PROPERTIES NOISE RECEPTOR SITE PHOTO DIRECTIONAL SYMBOL |
|--|---|



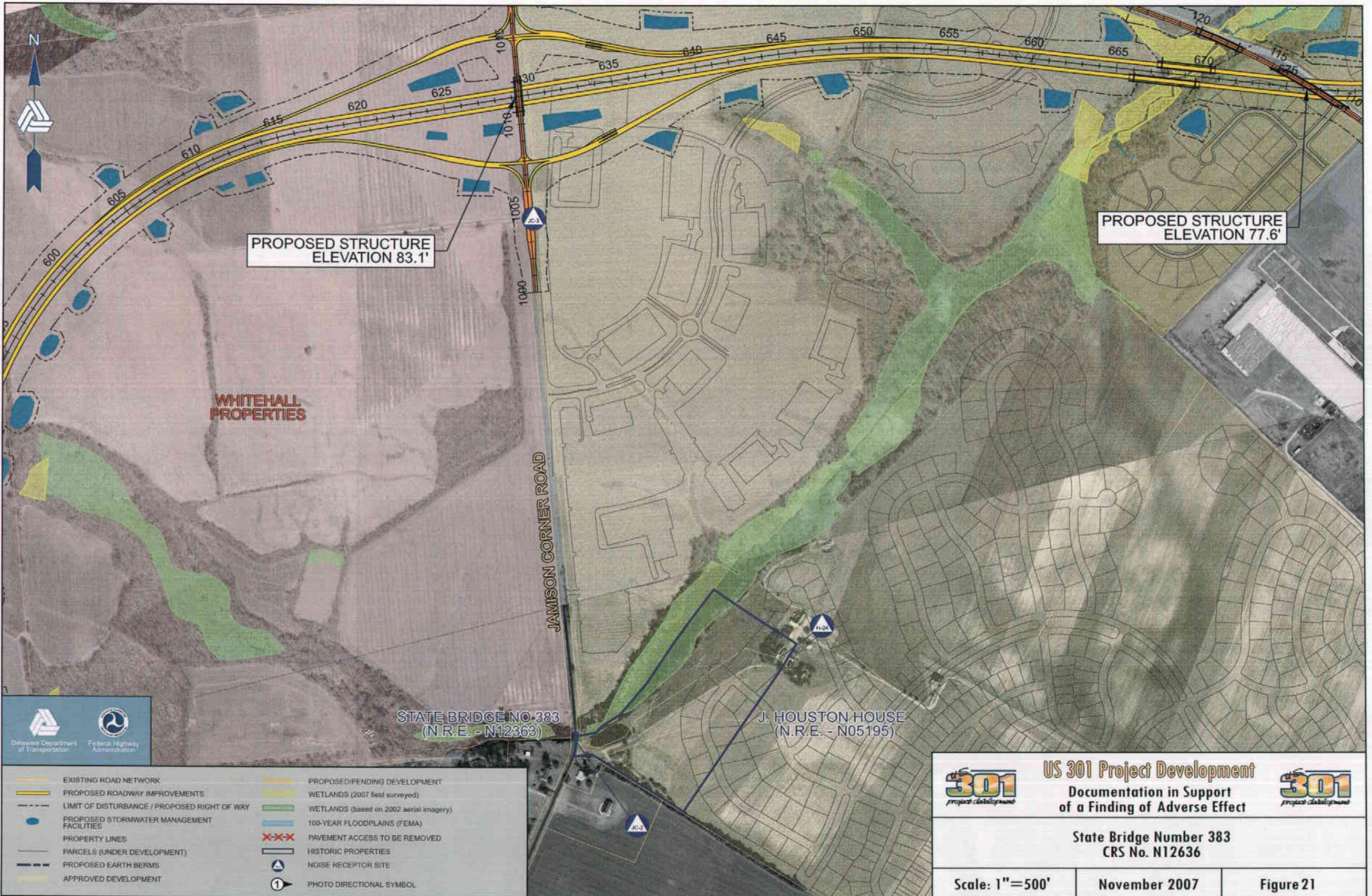
	<p>US 301 Project Development Documentation in Support of a Finding of Adverse Effect</p>	
<p>Cross-Section Illustrating T.J. Houston Farm at STA. 522+00 CRS No. N05131</p>		
Scale: 1"=500'	November 2007	Figure 20



Photograph 18: CRS No. N05131, T. J. Houston Farm, view facing northwest (June 2005).



Photograph 19: CRS No. N12636, State Bridge Number 383, view facing northwest (June 2005).



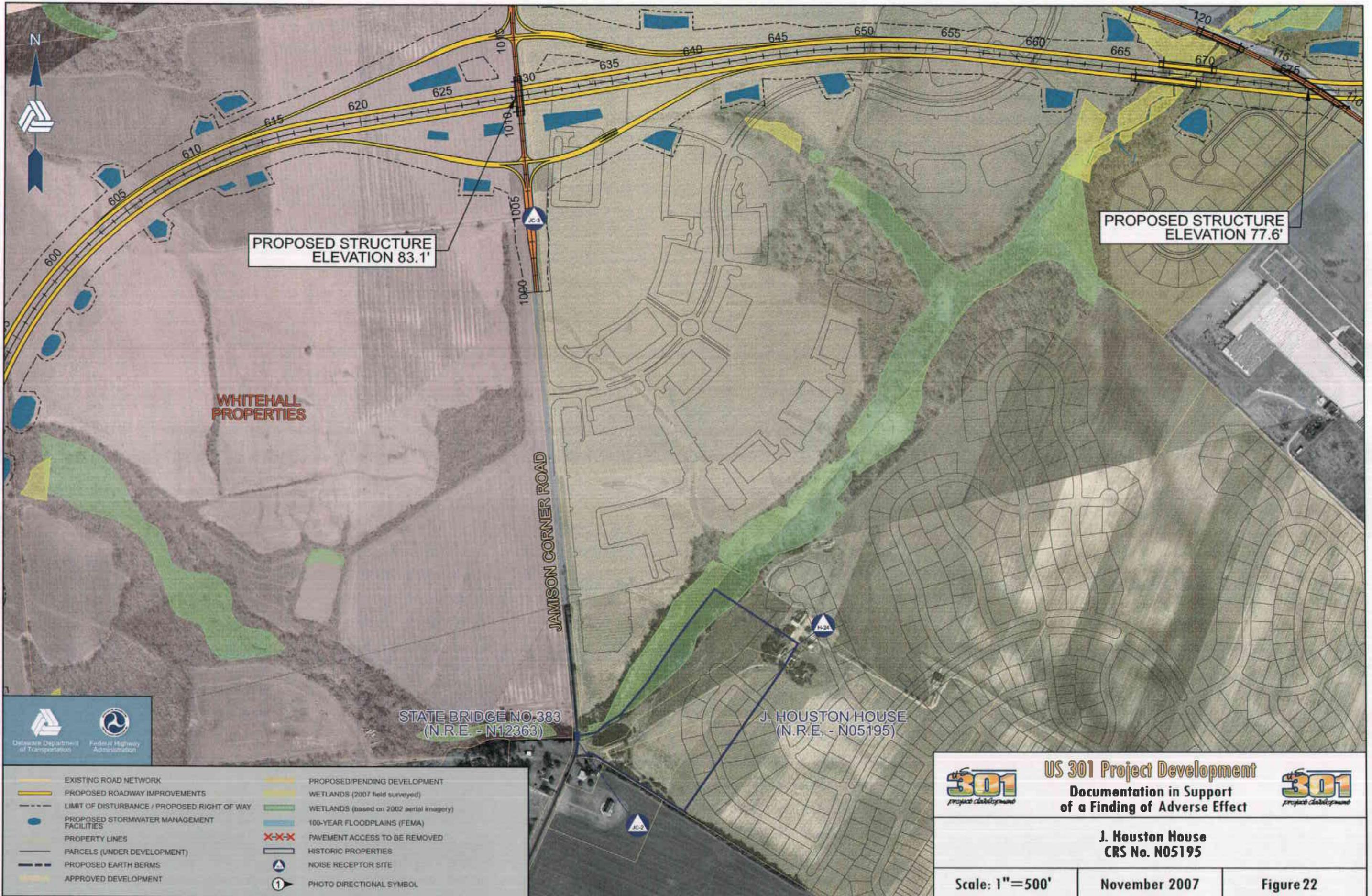
resource is also significant as it conveys the aspects and feelings of an early-twentieth-century bridge located in a sparsely populated rural area.

3.20 CRS No. N05195, J. Houston House, 1000 Jamison Corner Road

The J. Houston House (CRS No. N05195) was determined eligible for listing in the National Register as part of the US 301 Project Development effort under Criterion C for architecture. A long farm lane leads north from Jamison Corner Road to the dwelling and domestic and agricultural outbuildings that make up the J. Houston Farm, which is named for the property owner delineated on the Beers 1868 Atlas. This 254-acre property contains a *circa*-1880 two-and-one-half-story, five-bay, Folk Victorian house of frame construction with a rear ell attached to the northeast corner of the north elevation. The dwelling embodies characteristics of the Folk Victorian architectural style (1870 to 1910), including a cross gable roof; a one-story, full-façade, highly decorative wooden porch; a symmetrical façade; and a paired front door flanked by sidelights. The property also contains a number of agricultural outbuildings that are situated in a range farm plan. Included among them are a frame corncrib/granary, a poultry house, a milk house, a frame equipment shed, and three concrete block outbuildings. The property was found not eligible under Criterion A as the outbuildings, located north of the dwelling, are not contemporary to the dwelling. Nevertheless, the outbuildings enhance the setting of the farmhouse. Cultivated fields surround the property to the north, south, and east, and an original tree line remains to the west of the historic dwelling. In addition, the property contains various original trees and shrubs spaced throughout the building cluster. The 17.45-acre National Register boundary was drawn to include the dwelling and driveway that provide access to Jamison Corner Road. The resource, its location, and National Register boundary are illustrated in Figure 22. The dwelling is presented in Photograph 20.

During the late nineteenth century, John Houston, with 54 acres of approved land, three horses, two cows, and one head of cattle, owned a relatively small farm compared to the average farm size and production in St. Georges Hundred (United States Census Bureau 1870). During his ownership, John Houston erected a Folk Victorian-style house before he died intestate in August 1881. The property remained in the Houston family until 1899 when the property was conveyed to Samuel W. Hall of Dover for \$17,000 (New Castle County Deed Book D18:21). The property stayed in the hands of the Hall family for almost two decades until it was sold to George Crossland for \$20,400 in 1917 (New Castle County Deed Book C27:589). The financial problems generated by the Great Depression befell George Crossland, as it did many other residents of New Castle County, Delaware. Crossland's farm was sold at auction to Thomas C. Frame in October 1933 (New Castle County Deed Book S38:401). The farm was eventually acquired by Robert and Addie Baker in 1952. The farm, which currently consists of 254 acres, still remains in the ownership of the Baker family.

The significant characteristics of the property include the architectural aspects of the J. Houston House, which retains its original massing, fenestration, and ornamentation, and stands as a late-nineteenth-century example of Folk Victorian architecture, thereby supporting the integrity of design. Integrity of workmanship is evident through the retention of the original decorative front porch and boxed, molded, wood cornice. The retention of the other outbuildings and landscape



PROPOSED STRUCTURE
ELEVATION 83.1'

PROPOSED STRUCTURE
ELEVATION 77.6'

WHITEHALL
PROPERTIES

JAMISON CORNER ROAD

STATE BRIDGE NO. 383
(N.R.E. - N12363)

J. HOUSTON HOUSE
(N.R.E. - N05195)



- | | | | |
|-------|--|-----|---|
| — | EXISTING ROAD NETWORK | — | PROPOSED/PENDING DEVELOPMENT |
| — | PROPOSED ROADWAY IMPROVEMENTS | — | WETLANDS (2007 field surveyed) |
| - - - | LIMIT OF DISTURBANCE / PROPOSED RIGHT OF WAY | — | WETLANDS (based on 2002 aerial imagery) |
| ● | PROPOSED STORMWATER MANAGEMENT FACILITIES | — | 100-YEAR FLOODPLAINS (FEMA) |
| — | PROPERTY LINES | XXX | PAVEMENT ACCESS TO BE REMOVED |
| — | PARCELS (UNDER DEVELOPMENT) | — | HISTORIC PROPERTIES |
| — | PROPOSED EARTH BERMS | ▲ | NOISE RECEPTOR SITE |
| — | APPROVED DEVELOPMENT | ① | PHOTO DIRECTIONAL SYMBOL |

		US 301 Project Development Documentation in Support of a Finding of Adverse Effect		
		J. Houston House CRS No. N05195		
Scale: 1"=500'	November 2007	Figure 22		



Photograph 20: CRS No. N05195, J. Houston House, view facing northeast (June 2005).

features, such as landscaping in the yard, tree lines along the creek, fence lines, and surrounding fields, is also important. The setting of this property amidst a largely rural landscape is significant as it enables the property to convey the feeling of a nineteenth-century farmhouse. The extant modern agricultural outbuildings, modern dwelling, and pool do not contribute to the property's architectural significance.

3.21 CRS No. N05244, Fairview, 350 Hyetts Corner Road

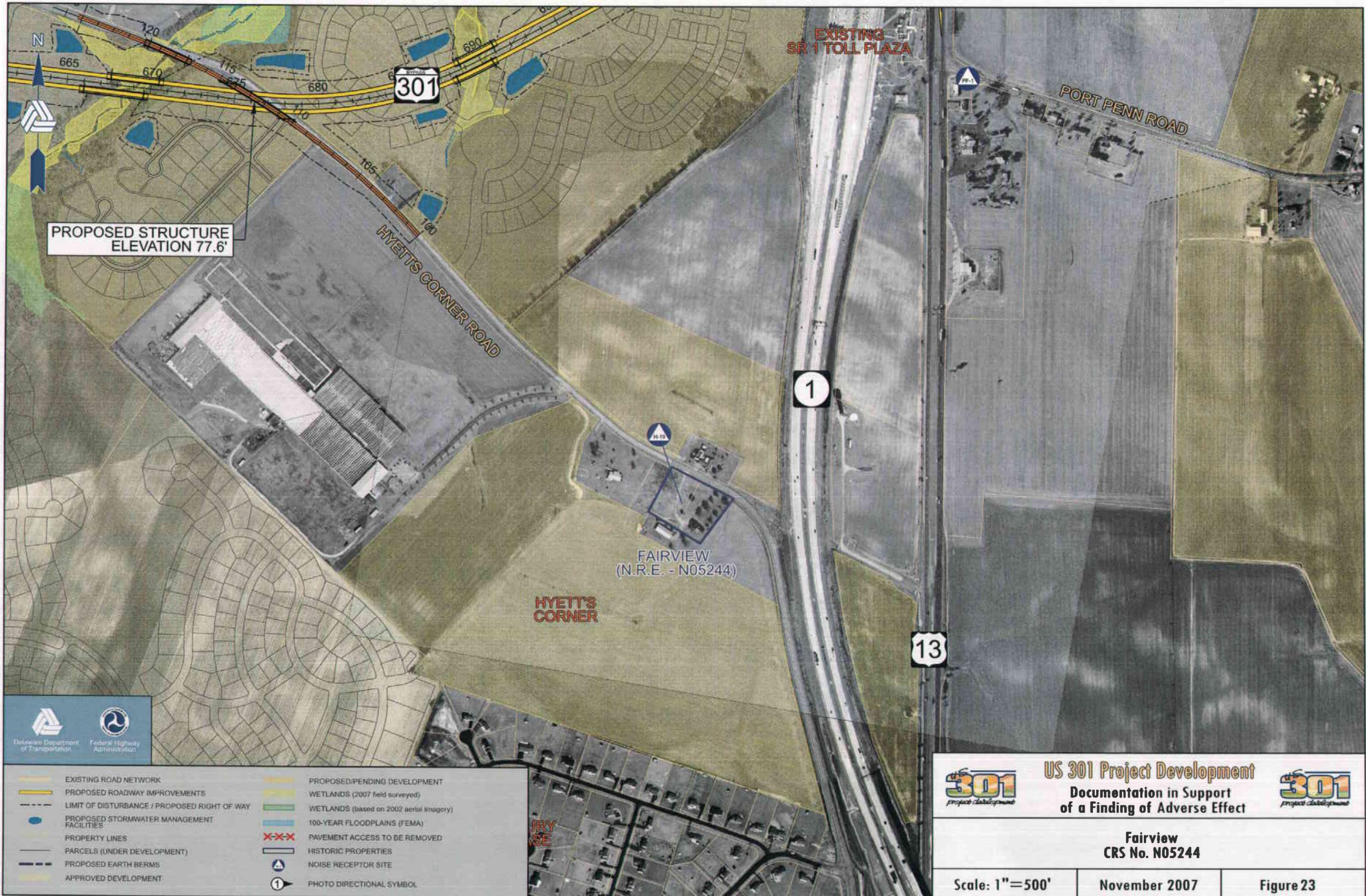
Fairview (CRS No. N05244) was determined eligible for listing in the National Register under the thematic listing *Dwellings of the Rural Elite* under Criterion A for social history and Criterion C for architecture. It lies on a 6.04-acre parcel on the south side of Hyett's Corner Road, a short distance to the west of the Village of Boyds Corner and south of the town of St. Georges. It consists of a dwelling (former farmhouse) and a modern storage building/pole barn. The dwelling is in its original location and is surrounded by a lawn and a storage/garage building. Agricultural lands surround the property on the south, east, and west. The Federal-style, brick, two-and-one-half-story dwelling features five bays on the main block and two bays on the smaller eastern wing. White stucco covers the historic portion of the building. A modern garage is appended to the east elevation of the house. The National Register boundary consists of 2.70 acres. The resource, its location, and National Register boundary are illustrated in Figure 23. Photograph 21 shows the dwelling associated with Fairview.

George Smith, a wealthy individual from St. Georges Hundred, likely built the house by 1816. Brick dwellings such as this were unusual in the area in the early decades of the nineteenth century, due in part to the expense of building them. The inventory taken at Mr. Smith's passing in 1825 indicates that in addition to some 441 acres of land, the dwelling, and farm animals, he owned unusual luxury items. The property was subdivided and allocated to Smith's widow and their descendants (Bower and Cremer 1995).

The significant characteristics of the property include the integrity of design, materials, and workmanship of the dwelling and landscape features such as the tree line delineating the property's northern boundary. The farm fields located to the east, south, and west of this property enhance the integrity of setting, feeling, and association of the resource as they help convey its former use as a farm house.

3.22 CRS No. N03947, Idalia Manor, 1870 South Dupont Highway

Idalia Manor (CRS No. N03947) was listed in the National Register in 1985 as part of the *Rebuilding St. Georges Hundred* multiple property nomination under Criterion A for agriculture and Criterion C for architecture. The property consists of a side-gabled, brick, Federal-style residence that was enlarged by the 1840s. The main block of the house rises two-and-one-half stories with a smaller, two-bay section extending from the east elevation. The south elevation of the house has exposed brick, while the remainder of the dwelling is sheathed in white stucco. Surrounded by farmland, this property also has a granary/crib barn, a late-twentieth-century wagon/cart shed, another modern shed, and a modern decorative well. The current 11.44-acre National Register boundary includes the dwelling, the granary/crib barn, and sufficient acreage to



EXISTING SR 1 TOLL PLAZA

PORT PENN ROAD

301

1

13

PROPOSED STRUCTURE ELEVATION 77.6'

HYETT'S CORNER ROAD

FAIRVIEW (N.R.E. - N05244)

HYETT'S CORNER



- | | |
|--|---|
| <ul style="list-style-type: none"> — EXISTING ROAD NETWORK — PROPOSED ROADWAY IMPROVEMENTS - - - LIMIT OF DISTURBANCE / PROPOSED RIGHT OF WAY ● PROPOSED STORMWATER MANAGEMENT FACILITIES — PROPERTY LINES — PARCELS (UNDER DEVELOPMENT) - - - PROPOSED EARTH BERMS — APPROVED DEVELOPMENT | <ul style="list-style-type: none"> — PROPOSED/PENDING DEVELOPMENT — WETLANDS (2007 field surveyed) — WETLANDS (based on 2002 aerial imagery) — 100-YEAR FLOODPLAINS (FEMA) XXX PAVEMENT ACCESS TO BE REMOVED — HISTORIC PROPERTIES ▲ NOISE RECEPTOR SITE ① PHOTO DIRECTIONAL SYMBOL |
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US 301 Project Development
Documentation in Support
of a Finding of Adverse Effect



Fairview
CRS No. N05244

Scale: 1"=500'

November 2007

Figure 23

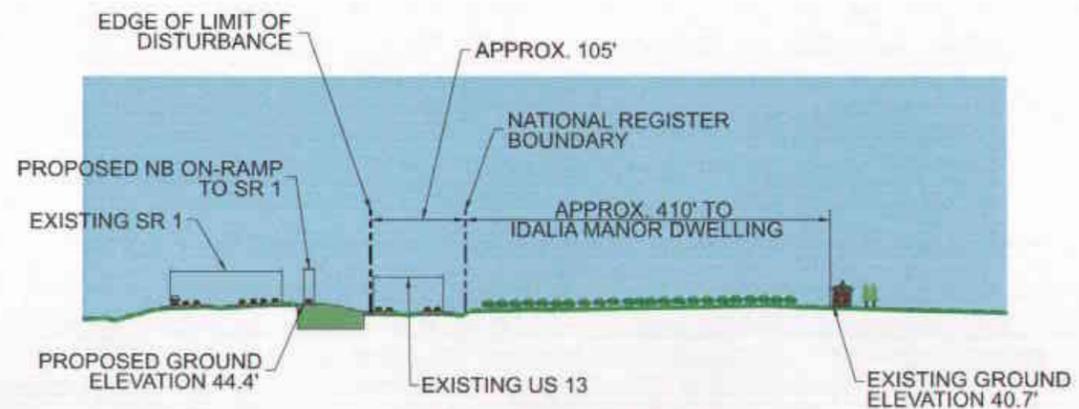


Photograph 21: CRS No. N05244, Fairview, view facing southwest (June 2005).

convey the architectural and agricultural significance of the resource. The resource, its location, and the National Register boundary are illustrated in Figure 24. The property is shown in Photograph 22.

Begun in the early 1800s, Idalia Manor was enlarged to its present size by the 1840s. This late-Federal-style building appears on the Rea and Price map of 1849 (Rea and Price 1849) and is shown with its name “Idalia Manor.” In the mid-nineteenth century, the house was remodeled on the interior with *Empire*-style trim, and the agricultural complex was replaced with a brick bank barn that featured lozenge work ventilation openings (no longer standing). In 1870, a Mrs. Osborne owned the property which included 272 improved acres, and the farm produced Indian corn, winter wheat, oats, and Irish potatoes. The farm also supported cows, swine, and a large number of horses. Today, this property lies within a large tract of land that is primarily agricultural, consisting of over 1,102 acres.

The significant characteristics of the property include the physical fabric of the dwelling and outbuildings, the retention of surrounding agricultural crop lands, and landscape features such as the tree lines that flank the driveway and separate the farmstead from the agricultural fields. The rural setting, although somewhat compromised by the introduction of SR 1 to the west and north, is also significant as it helps convey the feeling of a nineteenth-century farm.



Scale: 1"=200'



- EXISTING ROAD NETWORK
- PROPOSED ROADWAY IMPROVEMENTS
- - - LIMIT OF DISTURBANCE / PROPOSED RIGHT OF WAY
- PROPOSED STORMWATER MANAGEMENT FACILITIES
- PROPERTY LINES
- PARCELS (UNDER DEVELOPMENT)
- PROPOSED EARTH BERMS
- APPROVED DEVELOPMENT
- PROPOSED/PENDING DEVELOPMENT
- WETLANDS (2007 field surveyed)
- WETLANDS (based on 2002 aerial imagery)
- 100-YEAR FLOODPLAINS (FEMA)
- XXX PAVEMENT ACCESS TO BE REMOVED
- HISTORIC PROPERTIES
- ▲ NOISE RECEPTOR SITE
- ① PHOTO DIRECTIONAL SYMBOL





US 301 Project Development
 Documentation in Support
 of a Finding of Adverse Effect

**Cross-Section Illustrating
 Idalia Manor at STA. 759+00
 CRS No. N03947**



Scale: 1"=500'

November 2007

Figure 24



Photograph 22: CRS No. N03947, Idalia Manor, view facing east (June 2005).

**4.0 DESCRIPTION OF THE
UNDERTAKING'S EFFECTS
ON HISTORIC PROPERTIES**

4.0 DESCRIPTION OF THE UNDERTAKING'S EFFECTS ON HISTORIC PROPERTIES

This section assesses effects on historic properties in the APE for the Green North Alternative plus Spur with Armstrong Corner Road Interchange Option 2A, Summit Interchange Option 3B, and Ratledge Road Area Option 4B Modified, DelDOT's Preferred Alternative for the US 301 Project Development. The Preferred Alternative has the potential to affect 22 historic properties. Under Section 106, an effect is defined as an "alteration to the characteristics of a historic property qualifying it for inclusion in or eligibility for the National Register" (36 CFR Part 800.16[i]). The effects that a proposed undertaking will have on a historic property are predicted based on the distinguishing characteristics of the property and the design and anticipated consequences of the undertaking. Each of the types of potential effects to historic properties is discussed below.

4.1 Physical Effects

Under 800.5(a)(2) physical effects would be caused by "physical destruction of or damage to all or part of the property", a "change in the character of . . . physical features within the property's setting that contributes to its historic significance", the "removal of the property from its historic location", or "alternations . . . not consistent with the Secretary's Standards for the Treatment of Historic Properties". All of the proposed physical improvements for the US 301 project including staging and stock piling will be located outside of the National Register boundaries of the identified historic properties. Therefore, the Preferred Alternative does not have the potential to physically affect historic properties. The surrounding farmlands and open viewsheds that enhance the integrity of setting and contribute to the historic significance of many of the farmhouses/farm complexes could be physically affected by the undertaking. At this stage in the project development process, it is unknown if historic or pre-historic archaeological sites will sustain physical effects. The MOA outlined and included in Appendix C discusses the protocol to address such events, should they occur.

4.2 Audible Effects

Under 800.5(a)(2) an audible effect could be caused by the introduction of audible elements that would diminish the integrity of a property's significant historic features. Table 5 details the existing and future (including the No-Build Alternative and the Preferred Alternative) noise levels at historic properties in the APE. Predicted noise levels were calculated to 0.1 dBA and then rounded to the nearest whole integer. The locations of the noise receptors are shown in Figures 3-24.

The FHWA issued guidelines for noise evaluation as established in Title 23 of CFR Part 772, *Procedures for Abatement of Highway Traffic Noise and Construction Noise*. The FHWA's Noise Abatement Criteria (NAC) as adopted by DelDOT is 66 dBA for Category B or residential land use (23 CFR Part 722). Referencing the NAC, a Category B (residential) property would experience traffic noise impacts where future predicted (design year 2030) noise levels meet or exceed 66 dBA or there is a "substantial increase" of 10 dBA or more between the existing noise levels and the future predicted noise levels. When a property has the potential to experience a noise impact, consideration of traffic noise reduction measures and effects on the property is

necessary. Based on the NAC, an increase is considered perceptible when there is 3 dBA or more between the existing and future predicted noise levels; however, this is not considered a noise impact. For the purposes of Section 106, an increase greater than 3 dBA but less than 10 dBA would be perceptible and may be considered an effect that requires mitigation even though it would not meet the NAC for a noise impact.

Five properties will experience decreases in noise levels (Table 5). A noise level decrease will occur in these locations since the Preferred Alternative will divert traffic from the nearest roadway that most influences noise on the property and move it to the new US 301, which will be farther away.

Audible effects can be caused by the introduction of higher noise levels in the vicinity of properties for which National Register-qualifying characteristics might be adversely affected by noise level changes. Noise-sensitive historic properties include those resources for which solitude, quiet, or contemplation contribute to or define the reasons for their significance. Many of the historic properties identified in the US 301 project corridor are agricultural and retain an agrarian setting in which solitude, quiet, or contemplation is evident.

4.3 Visual Effects

Under 800.5(a)(2) an adverse visual effect could be caused by the introduction of visual elements that would diminish the integrity of a property's character defining features. To assist in the assessment of potential visual effects, site plans were prepared for those resources within the APE for the Green North Alternative to show the location of any existing landscaping and features in relation to the undertaking (see Section 3.0; Figures 3 to 24). For those resources that have the potential to be adversely affected by the proposed alternative, cross-sections were created to show how the setting of historic resources will be visually impacted by the Preferred Alternative. Photographs taken from the building complex on each of the 22 historic properties toward the proposed improvements are included in Section 3.0 of this report. Finally, Table 4 provides measurements on the distances between the Preferred Alternative and the National Register boundary and the dwelling on each historic property.

Visual effects can be caused by a change in current aesthetics, setting characteristics, or by an obstruction of views from or toward historic properties. Aesthetic and setting visual effects occur when the proposed improvements have an effect on the perceived beauty or character of a place or structure. Obstructive effects can occur when the proposed project obstructs any part of a historically significant property or viewshed from the historic property resulting in a diminishment and identifiable change of the property's historic character. Generally, the introduction of visual changes can diminish a resource's integrity of setting, location, feeling, and/or association.

Overhead lighting, which will be limited to areas around toll plazas and interchanges as much as possible, may have visual effects on historic properties in the immediate vicinity if it introduces elements that diminish the integrity of the properties' historic features or results in a non-historic use for the property. The lighting plans will be developed during the final design phases of the project and will be reviewed by the DE SHPO and other parties, as outlined under the stipulations

Table 4. Summary of Effect Assessment for Historic Properties.

CRS No.	Resource Name	NR Criteria	Visual										Noise*			Effect**	Comments
			Measurement to Mainline Taken at Station	Approximate Distance of Dwelling (feet)	Approximate Distance of Mainline LOD to Boundary (feet)	Approximate Distance of Ramp and/or Local Road LOD to Dwelling (feet)	Approximate Distance of Ramp and/or Local Road LOD to Boundary (feet)	Approximate Distance of Ramp and/or Local Road LOD to Dwelling (feet)	Approximate Elevation near Dwelling	Approximate Highest Elevation of Mainline, Spur, or Ramp	Ramp &/or Local Road	Existing	No Build	Preferred Alternative			
N14388	Shahan Farm	A, C	STA. 117+00	2336	140	2938	30	57.4	73.5	Strawberry Lane Extension	46	46	46	NE	Intervening distance and tree line		
N05225	B.F. Hanson House	C	STA. 189+00	305	75	640	75	70.6	70.7	Levels Road extension to existing US 301	61	63	59	AE: (iv) (v)	Adverse visual; mitigation recommended		
N05221	C. Polk House Estate	C	STA. 231+00	465	425	850	425	74.1	78.6	Levels Road extension to Existing US 301	56	56	50	AE: (iv) (v)	Adverse visual; mitigation recommended		
N00113	Rumsey Farm	A, C	STA. 251+00	915	740	280	230	68.7	86.4	Levels Road extension to Existing US 301	52	53	52	AE: (iv) (v)	Adverse visual; mitigation recommended		
N00112	Summerton	C	STA. 250+00	1735	1670	170	70	70.5	86.4	Levels Road extension to Existing US 301	62	63	61	AE: (v)	Adverse visual; mitigation recommended		
N00118	Hedgeclawn	A, C	STA. 164+00	2560	2260	1100	600	62.6	86.4	Levels Road extension to Existing US 301	60	60	60	NA	Intervening landscaping and development		
N00117	Cochran Grange	A, C	STA. 280+00	3615	3370	2580	2300	67.8	57.7	Levels Road extension to Existing US 301	60	59	59	NE	Intervening distance		
N00106	The Maples	C	STA. 308+00	1015	970	130	0	69.4	96.6	Bunker Hill Road	56	65	60	AE: (iv) (v)	Adverse audible and visual; view of Rosedale will be blocked by the undertaking; mitigation recommended		
N05148	Rosedale	A, C	STA. 315+00	1270	485	960	200	72.1	96.6	Bunker Hill Road	46	51	53	AE: (iv) (v)	Adverse audible and visual; view of The Maples will be blocked by undertaking; mitigation recommended		
N00107	S. Holton Farm	C	STA. 365+00	415	15	415	15	69.9	97.5	Mainline/Spur Split	46	54	59	AE: (iv) (v)	Adverse audible, visual and secondary; mitigation recommended		
N00109	Choptank	A, C	STA. 178+00	1985	1725	1025	790	65.2	97.5	Old Schoolhouse Road	46	48	46	AE: (iv) (v)	Adverse visual; mitigation recommended		
N00427	Woodside	A, C	STA. 220+00	3180	2835	1290	900	50.52	76.9	Churchtown Road	58	63	55	NE	Intervening distance and tree line		
N05123	Governor Benjamin T. Biggs Farm	A, B, C	STA. 242+00	1260	1015	1810	1540	60.9	60.8	Bethel Church Road ramp/extension	47	56	50	AE: (iv) (v)	Adverse visual; mitigation recommended		
N05146	Armstrong-Walker House	A, C	STA. 405+00	805	575	1450	1320	66.9	92.3	Armstrong Corner Road Interchange new/extension US 301	67	67	66	AE: (iv) (v)	Adverse visual; mitigation recommended		
N03930	Achmesier	A, C	STA. 431+00	3345	1215	2820	850	65	95.8	Armstrong Corner Road Interchange new/extension US 301	46	46	46	NE	Intervening distance and tree line		
N00121	Weston	A, C	STA. 490+00	2220	1045	3750	2810	70.8	95.8	Armstrong Corner Road Interchange new/extension US 301	51	52	52	NE	Intervening distance and landscaping		
N05132	Lovett Farm	A, C	STA. 512+00	2600	0	6480	4120	60.9	67.3	Armstrong Corner Road Interchange new/extension US 301	46	46	46	NA	Sufficient distance between farm complex and improvements		
N05131	T.J. Houston Farm	C	STA. 522+00	1455	1445	7625	7560	65.3	65.1	Armstrong Corner Road or Jamison Corner Road Interchange	46	46	49	AE: (iv) (v)	Adverse visual; mitigation recommended		
N12636	State Bridge Number 383	C	STA. 573+00	3085	3085	3085	3085	52.7	83.1	LOD for Interchange includes ramps & Mainline	N/A	N/A	N/A	NE	Revisit if planned improvements to Jamison Corner Rd not undertaken		
N05195	J. Houston House	C	STA. 640+00	3065	2600	3065	2600	64.7	83.1	LOD for Interchange includes ramps & Mainline	49	49	49	NA	Intervening distance and tree line		
N05244	Fairview	A, C	STA. 690+00	2885	2530	2615	2335	61.28	77.6	Hyetts Corner Road	58	60	60	NE	Intervening distance and topography		
N03947	Idalia Manor	A, C	STA. 759+00	515	105	4910	5720	40.7	44.4	SR 1 northbound ramp from Mainline to SR 1	59	63	63	AE: (iv) (v)	Adverse cumulative audible and visual effect		

*See Figures 3-24 for location of receptors within National Register boundaries.

**NE no effect
 NA no adverse effect
 AE adverse effect

An Effect means alteration to the characteristics of a historic property that qualify it for inclusion in, or eligibility for, the National Register.

An Adverse Effect is found when an undertaking may alter, directly or indirectly, 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.

Adverse effects on historic properties in the APE include two types from 36 CFR 800.5(a)(2):

- (iv) Change of the character of the property's use or of physical features within the property's setting that contributes to its historic significance; and
- (v) Introduction of visual, atmospheric, or audible elements that diminish the integrity of the property's significant historic features.

Table 5. Summary of Noise Impact Analysis.

Receptor No.	Receptor Location	Existing (2007) Noise	NAC Existing Impact?*	Future (2030) No-Build Noise	Future (2030) Build Noise	Difference (Build - Existing)	NAC Impact?/ Detectable Increase**
H-1	Shahan Farm	46	No	46	46	0	No/No
H-2	B.F. Hanson House	61	No	63	59	-2	No/No
H-3	C. Polk House Estate	56	No	56	56	0	No/No
H-4	Rumsey Farm	52	No	53	52	0	No/No
H-5	Summerton	62	No	63	61	-1	No/No
H-6	Hedgelawn	60	No	60	60	0	No/No
H-7	Cochran Grange	60	No	59	59	-1	No/No
H-25	The Maples	56	No	65	60	4	No/Yes
H-8	Rosedale	46	No	51	53	7	No/Yes
H-10	S. Holton Farm	46	No	54	59	13	Yes/Yes
H-28	Choptank	46	No	48	46	0	No/No
H-27	Woodside	58	No	63	55	-3	No/No
H-31	Governor Benjamin T. Biggs Farm	47	No	56	50	3	No/No
H-11	Armstrong-Walker House	67	Yes	67	66	-1	Yes/No
H-12	Achmester	46	No	46	46	0	No/No
H-14	Weston	51	No	52	52	1	No/No
H-13	Lovett Farm	46	No	46	46	0	No/No
H-29	T.J. Houston Farm	46	No	46	49	3	No/No
NA	State Bridge Number 383	NA	NA	NA	NA	NA	NA
H-24	J. Houston House	49	No	49	49	0	No/No
H-19	Fairview	58	No	60	60	2	No/No
H-18	Idalia Manor	59	No	63	63	4	No/Yes

*NAC Impact exists if noise level ≥ 66 dBA or there is an increase of 10 dBA or more

**A 3 dBA increase represents a perceptible change in noise level

of the MOA (Appendix C). Overhead signage may also affect the views from historic properties by introducing elements that diminish the integrity of the properties' historic views. During final design, the SHPOs and other consulting parties as appropriate will review signage placement in the vicinity of historic properties.

4.4 Atmospheric Effects

Under 800.5(a)(2) atmospheric elements that diminish the integrity of a historic property's significant historic features, including the property's use, can be considered adverse. An air quality analysis conducted for the project, including a detailed impact evaluation for carbon monoxide (CO), demonstrated that the undertaking will not cause or exacerbate localized violations of the National Ambient Air Quality Standards (NAAQS) (The Wilson T. Ballard Company 2005). Thus, it does not appear that the Preferred Alternative has the potential to have an atmospheric effect on historic properties in the APE.

4.5 Secondary and Cumulative Effects

36 CFR Section 800.5 (a) (1) of the Section 106 implementing regulations states that adverse effects to historic properties "may include reasonably foreseeable effects that could be caused by the undertaking and that may be cumulative, may occur later in time, be further removed in distance or be cumulative." Secondary effects are caused by actions later in time or farther removed in distance but are still reasonably foreseeable as a result of the undertaking.

A cumulative effect is one that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions. Cumulative impacts can result from individually minor but collectively significant actions that take place over a period of time, regardless of what agency or person undertakes such other actions. Indirect cumulative effects may include effects related to induced changes in the pattern of land use, population density, or growth rate. As acknowledged in the DEIS, the US 301 Project Development area is experiencing an unprecedented level of residential development. To date, these development pressures have resulted in the acquisition of former farmsteads, removal of all or nearly all associated buildings, and new or planned construction in the location of former farm complexes and farmlands. Development pressures and planned growth in recent years have created drastic changes to the landscape. The US 301 Project Development effort, considered alongside pre-existing developmental influences, has the potential to affect the rate of development in the area and therefore may contribute to a cumulative effect on historic properties. Secondary effects to historic properties could also occur where adjacent zoning allows for development that is incompatible with the historic setting of the resources.

4.6 Project Effects on Historic Properties

The effects of the Green North Alternative on each of the historic properties in the APE are summarized in Table 4 and discussed below. In consultation with the DE SHPO, the Preferred Alternative was found to have no effect on the following seven resources:

- Shahan Farm, CRS No. N14388
- Cochran Grange, CRS No. N00117;

- Woodside, CRS No. N00427;
- Weston, CRS No. N00121;
- Achmester, CRS No. N03930;
- State Bridge Number 383, CRS No. N12636; and
- Fairview, CRS No. N05244;

The Preferred Alternative will not alter the physical characteristics that qualify these properties for listing in the National Register. Additionally, due to intervening landscape features or distances that impair visibility of the new alignment or lack of audible impacts, these properties will not be directly affected by the Preferred Alternative.

The Green North Alternative will have an effect on the remaining 15 historic properties within the APE:

- B.F. Hanson House, CRS No. N05225;
- C. Polk House Estate, CRS No. N05221;
- Rumsey Farm, CRS No. N00113;
- Summerton, CRS No. N00112;
- Hedgelawn, CRS No. N00118;
- The Maples, CRS No. N00106;
- Rosedale, CRS No. N05148;
- S. Holton Farm, CRS No. N00107;
- Choptank, CRS No. N00109;
- Governor Benjamin T. Biggs Farm, CRS No. N05123;
- Armstrong-Walker House, CRS No. N05146;
- Lovett Farm, CRS No. N05132;
- T. J. Houston Farm, CRS No. N05131;
- J. Houston House, CRS No. N05195; and
- Idalia Manor, CRS No. N03947.

Therefore, the Criteria of Adverse Effect were applied to these historic properties; each is considered in Section 5.0 of this report, which assesses the applicability of adverse effects identified under 36 CFR 800.5.

4.6.1 CRS No. N14388, Shahan Farm, 389 Strawberry Lane

No potential effects are expected for this resource. No property located within the National Register boundary will be required for the project. The proposed roadway improvements in this area will be located to the northwest of the farmstead complex (Photograph 23). The planned improvements in this area will include the introduction of an at-grade four-lane limited access road, the Preferred Alternative mainline, to the west, a bridge structure elevated approximately 30 feet above existing ground to carry a reconstructed Strawberry Lane over US 301, a new local connector road between US 301 and Strawberry Lane, and a potential stormwater management facility. While the Limit of Disturbance (LOD) of the Preferred Alternative mainline will be in



Photograph 23: View from CRS No. N14388, Shahan Farm, facing northwest to the Preferred Alternative's overpass at Strawberry Lane from the northwest corner of the granary. Note the tree line that will shield the property from a view of the overpass (February 2007).

close proximity (within approximately 140 feet of the National Register boundary), the proposed improvements will not be visible from the historic farm complex due to intervening tree lines that run along the edge of the farmstead on the east side of existing US 301 as well as approximately 2,336 feet of intervening distance (Figure 3) between the dwelling and the boundary. As a result of comments received at the Public Hearing held on January 8 and 9, 2007, the new local connector road will provide the customers of Hooper, Inc. (a retail and repair farm equipment facility located on the east side of existing US 301) with continued local access to the business as well as safe transportation of large farm machinery across new US 301. The connector road will have no physical effect on the Shahan Farm, nor will it result in significant increases in noise or traffic in the vicinity. Additionally, none of these improvements will result in the removal of any of the trees that screen the current roadway or future roadway from the Shahan Farm. Therefore, the undertaking will have no visual effect on this property.

Noise receptor H-1 is located approximately 2,130 feet from the Preferred Alternative, close to the side of the farmstead that faces the alternative. Analysis indicates that the existing noise levels at the property (46 dBA) do not approach FHWA's NAC for Category B properties, which is 66 dBA (23 CFR Part 722). Therefore, under the NAC, the property is not currently experiencing noise impacts. Due to the distance of the farmstead from the existing highway, no change in the noise level is expected in the future (2030) if the Preferred Alternative is not carried out. Additionally, if the Preferred Alternative is constructed, the property will not experience any additional increases in the average daily noise level. Therefore, an increase in noise level will not be detectable in this location, and the undertaking will have no audible effect on the resource. No secondary or cumulative effects related to the Preferred Alternative are expected for this resource.

4.6.2 CRS No. N05225, B.F. Hanson House, 1102 Middletown-Warwick Road

Although no physical or direct effects are expected within or adjacent to the property's National Register boundary, improvements to US 301 will introduce new visual elements within the viewshed of the farm (Figure 4 and Photograph 24). Improvements in the immediate vicinity of the B.F. Hanson House will include the construction of the Preferred Alternative mainline approximately 75 feet west of the National Register boundary and parallel to existing US 301. The LOD of new roadway will be located approximately 305 feet from the B.F. Hanson House. Also, to the northwest of the property, stormwater management facilities may be constructed on both sides of the new US 301, and a toll plaza may be constructed approximately 2,000 feet to the north (south of Middle Neck Road). Access to the B.F. Hanson House using the gravel driveway that leads from existing US 301 will be maintained. The view from the front yard of the dwelling looking toward the proposed undertaking, shown in Photograph 24, illustrates that the new roadway will be clearly visible from the property. Therefore, the undertaking will have a visual effect on the B.F. Hanson House.

Noise receptor H-2 is located towards the front of the property, approximately 295 feet from the Preferred Alternative and approximately 1,100 feet north of Warwick Road. The Preferred Alternative is expected to slightly decrease existing noise levels at the B.F. Hanson House by



Photograph 24: View from CRS No. N05225, B. F. Hanson House, facing northwest to existing U.S. 301 and the Preferred Alternative from the property's front yard (February 2007).

2 dBA to 59 dBA. This decrease can be attributed to the relocation of the main roadway from approximately 240 feet to approximately 295 feet west of the location of the receptor on the property. As the property will experience a decrease in noise if the Preferred Alternative is constructed, there is no potential for an audible effect. No secondary or cumulative effects related to the Preferred Alternative are expected for this resource.

4.6.3 CRS No. N05221, C. Polk House Estate, 929 Middletown-Warwick Road

No property will be required from within the resource's National Register boundary. However, the Preferred Alternative mainline LOD will be located approximately 425 feet from the National Register boundary and will be visible from the rear of the C. Polk House Estate dwelling across open farm fields (Figure 5 and Photograph 25). Approximately 2,800 feet to the north, a grade-separated diamond interchange will be constructed to provide a connection to existing US 301 (Levels Road interchange).

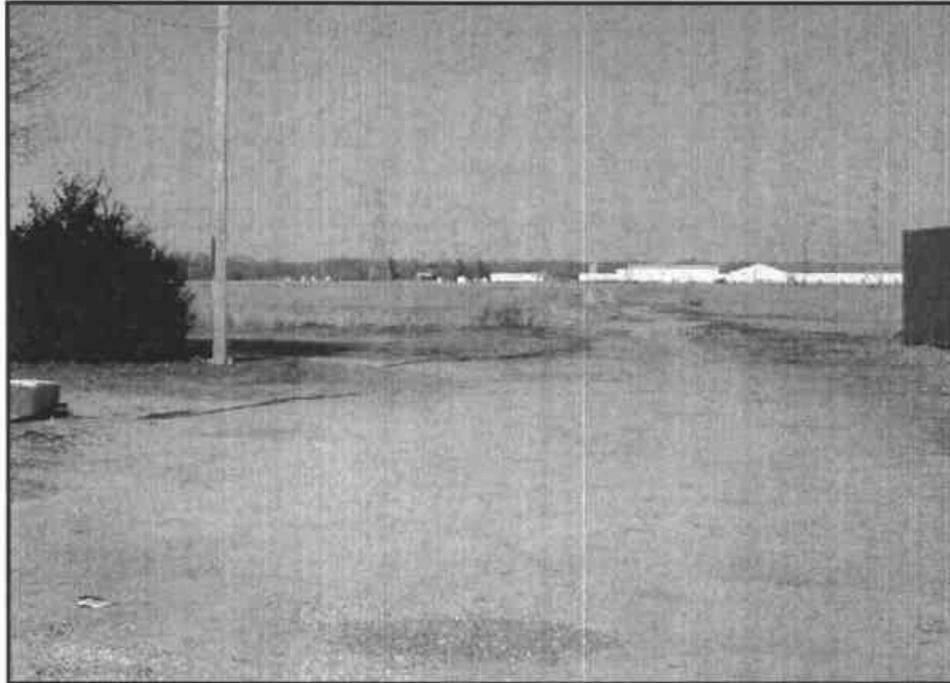
A new toll plaza will be located 1,800 feet to the southwest, south of Middle Neck Road, in the current location of agricultural lands and within view of the C. Polk House Estate. Therefore, the undertaking will have a visual effect on the C. Polk House Estate (Photograph 26).

Noise receptor H-3 is located in the front yard of the property approximately 530 feet from existing US 301. If the Preferred Alternative is constructed, the C. Polk House Estate will maintain its existing average daily noise level of 56 dBA. The maintenance of a similar level of noise can be attributed to the new highway taking much of the traffic, especially heavy truck traffic, from existing US 301 (approximately 560 feet away from the receptor) and moving it to the new Preferred Alternative roadway that will be approximately 720 feet away from the receptor. This noise level does not meet or approach the NAC; therefore the property will not experience a noise impact. No secondary or cumulative effects related to the Preferred Alternative are expected for this resource.

4.6.4 CRS No. N00113, Rumsey Farm, 841 Middletown-Warwick Road

Although no physical or direct effects are expected within or adjacent to the property's National Register boundary, the Preferred Alternative mainline, including the construction of a grade-separated interchange to the northwest, will introduce new visual elements (Figure 6). The interchange will be located approximately 740 feet to the northwest of the farm complex, across open farm fields. Both the interchange and a proposed extension of Levels Road will be clearly visible from the farm complex (Photographs 27 and 28). The Levels Road LOD (approximately 2 feet above existing ground) will be located approximately 150 feet to the northeast of the National Register boundary. Therefore, there is the potential for a visual effect to Rumsey Farm should the Preferred Alternative be constructed.

Noise receptor H-4 is located near the building on the property closest to the interchange ramp, approximately 670 feet from existing US 301. Existing noise levels at the property do not meet or approach the NAC. Since the proposed roadway will take much of the traffic, including heavy



Photograph 25: View from CRS No. N05221, C. Polk House Estate, facing northwest to the Preferred Alternative. The Preferred Alternative will block the property's view of the poultry farm in the rear of the photograph (February 2007).



Photograph 26: View from CRS No. N05221, C. Polk House Estate, facing northeast to the proposed Levels Road Interchange from the farm complex (February 2007).



Photograph 27: View from CRS No. N00113, Rumsey Farm, facing northwest to Levels Road Interchange from the northeastern corner of the dwelling. The new interchange will be partially obscured by the tree line separating the farm complex from the agricultural fields (February 2007).



Photograph 28: View from CRS No. N00113, Rumsey Farm, facing northeast to the Levels Road access road from the northern farm lane. The post-1962 dwelling will be removed as part of the new access road's construction (February 2007).

truck traffic, off of existing US 301 and onto the new roadway, which will be located further away from the receptor, the noise increase associated with traffic on improved US 301 will be negated, yielding future noise levels (52 dBA) that are comparable to existing levels (52 dBA). The traffic on relocated Levels Road will be insufficient to influence the overall noise impacts for the project, as determined during a one-hour period. Therefore, the undertaking does not have the potential to have an audible effect on the Rumsey Farm. No secondary or cumulative effects related to the Preferred Alternative are expected for this resource.

4.6.5 CRS No. N00112, Summerton, 840 Middletown-Warwick Road

No physical or direct effects are expected to the property's National Register boundary. In this location, the Preferred Alternative will construct an extension of Levels Road to an interchange located approximately 4,000 linear feet north of Middle Neck Road (Figure 7). The proposed interchange will be located to the northwest of Summerton, on the opposite side of existing US 301, and approximately 1,530 feet from the National Register boundary of the resource (Photograph 29). The intersection of existing US 301 and the extension of Levels Road will be located north of and adjacent to the resource (Photograph 30). The portion of Levels Road on the east side of existing US 301 is currently under construction relocated adjacent to Summerton as a part of the Westown Development. As part of the Preferred Alternative a turning lane will be added to the relocated roadway at the north corner of the National Register boundary. The proposed Levels Road extension and the additional left turn lane on existing Levels Road will be within the viewshed and immediate setting of the farm complex associated with Summerton, and the undertaking has the potential to have a visual effect on the property.

Noise receptor H-5 is located in the front yard approximately 250 feet from existing US 301. The existing noise levels on the property (62 dBA) do not meet the NAC. Should the Preferred Alternative be constructed, the noise level will decline by 1 dBA because much of the traffic will be removed from existing US 301 and directed onto the new roadway, which will be located further west of the property. The traffic on relocated Levels Road will be insufficient to influence the overall noise impacts for the project, as determined during a one-hour period. Therefore, the undertaking does not have the potential to have an audible effect on Summerton. No secondary or cumulative effects related to the Preferred Alternative are expected for this resource.

4.6.6 CRS No. N00118, Hedgelawn, 772 Middletown-Warwick Road

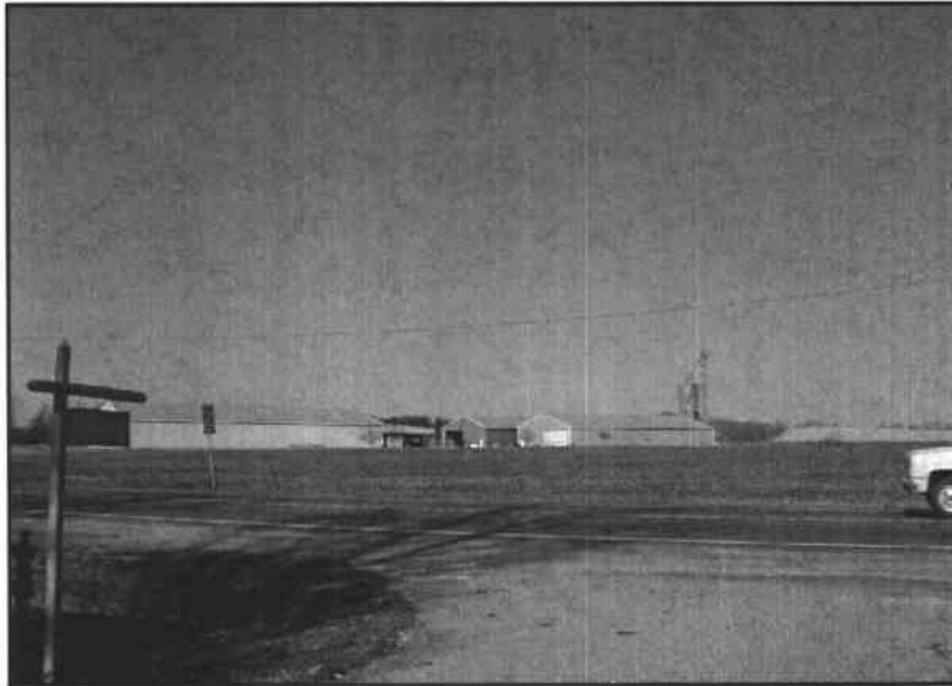
No physical or direct effects are expected to the property's National Register boundary. The Preferred Alternative mainline LOD will be located approximately 2,485 feet to the northwest of the National Register boundary and will include an elevated interchange (approximately 32 feet above existing ground) that will be only partially visible from the front yard of the farmstead due to intervening existing development (Photograph 31 and Figure 8). Plans are underway for the construction of the Middletown Business and Technology Park on the opposite side of the existing US 301. A number of buildings related to agricultural enterprises are located between Hedgelawn and the Preferred Alternative on the parcel that is planned for development. This existing construction will partially screen the mainline from the viewshed of Hedgelawn. The proposed Levels Road extension will not be easily visible from the farm complex due to an intervening line



Photograph 29: View from CRS No. N00112, Summerton, facing north to the new Levels Road interchange from the property's front yard. The new interchange will be located in the far background of this photograph (February 2007).



Photograph 30: View from CRS No. N00112, Summerton, facing northeast to the new Levels Road access road from the farm complex. The new road will be located in the photograph's foreground. Cochran Grange is visible in the background of the photograph (February 2007).



Photograph 31: View from CRS No. N00118, Hedgelawn, facing northwest to Levels Road Interchange from the property's driveway. Note the existing, modern agricultural buildings shielding the view from the property to the new interchange (February 2007).

of evergreens that follows along the southern edge of the National Register boundary for Hedgelawn (Photograph 32). Despite intervening development, the Preferred Alternative mainline will be partially visible from the farmstead complex associated with Hedgelawn, and therefore the Preferred Alternative has the potential to have a visual effect on the resource.

The existing noise levels on the property (60 dBA) do not meet the NAC. If the Preferred Alternative is constructed, the property will not experience any increases in the average daily noise level. Therefore, an increase in noise level will not be detectable in this location. The undertaking does not have the potential to have an indirect audible effect on Hedgelawn. No secondary or cumulative effects related to the Preferred Alternative are expected for this resource.

4.6.7 CRS No. N00117, Cochran Grange, 704 Middletown-Warwick Road

No potential effects are expected for this resource. No physical or direct effects are expected within the property's National Register boundary. The Preferred Alternative will construct a four-lane, limited-access divided highway that will not be visible from the front yard of the farmstead (Photograph 33 and Figure 9). The LOD of the proposed highway will be located approximately 3,615 feet to the northwest of the dwelling on the opposite side of existing US 301. Therefore, the undertaking will not have a visual effect on Cochran Grange due to intervening distance.

The existing noise levels on the property (60 dBA) do not meet the NAC based on noise receptor H-7, which is located approximately 350 feet from existing US 301 and greater than 1,500 feet from the Preferred Alternative mainline, outside of the range of influence of traffic noise from the new roadway. If the Preferred Alternative is constructed, the property not be affected by traffic noise from the new roadway. Therefore, the Preferred Alternative does not have the potential to have an audible effect on the property. No secondary or cumulative effects related to the Preferred Alternative are expected for this resource.

4.6.8 CRS No. N00106, The Maples, 1023 Bunker Hill Road

While no physical or direct impacts are expected to the National Register boundary, the Preferred Alternative will be visible from the rear of the yard where there is a discontinuation of the tree line running along the western edge of the National Register boundary (Photograph 34 and Figure 10). The Preferred Alternative mainline LOD will be located approximately 970 feet to the northwest of the boundary. The Bunker Hill overpass (approximately 23 feet above existing ground) will be visible from the southwest corner of the National Register boundary (Photograph 35). Both the highway and the overpass will be visible from The Maples across farm fields. The undertaking will also partially block the view from The Maples to Rosedale, a nearby farm located on the opposite side of Choptank Road. As the undertaking will introduce new visual elements into the landscape and obstruct a historic viewshed, it will have a visual effect on The Maples.

Noise receptor H-25 is located in the front yard of the property approximately 133 feet from Bunker Hill Road. Existing noise levels (56 dBA) do not meet the NAC. If the Preferred Alternative is constructed, the property will experience a 4 dBA increase in the average daily noise level. Although this increase does not meet the FHWA criteria for an impact, the increase will be



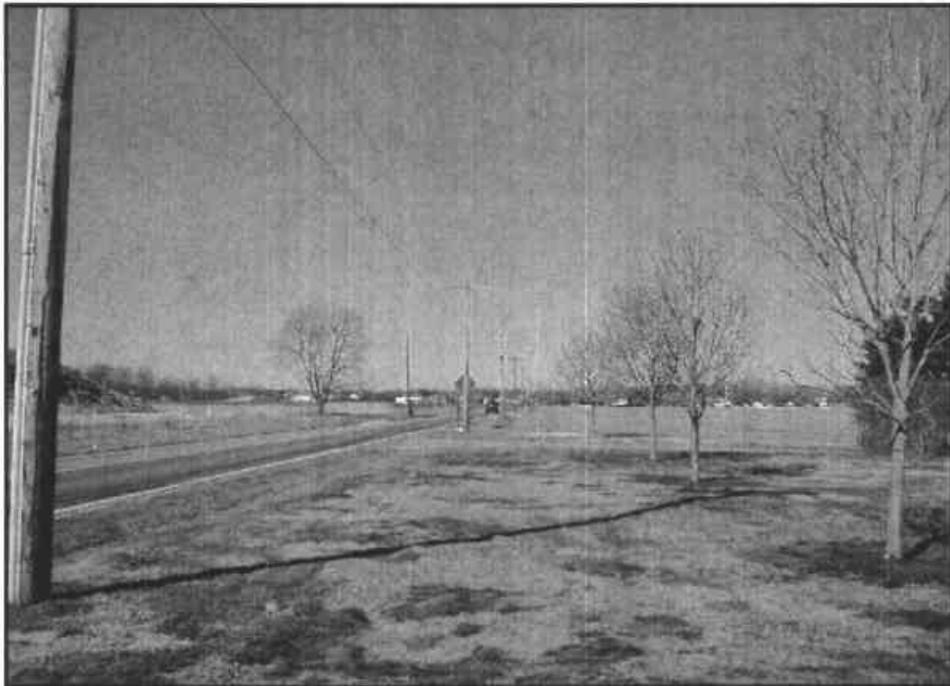
Photograph 32: View from CRS No. N00118, Hedgelawn, facing southwest to the Levels Road Ramp. Note the intervening line of evergreens that shields the property from view of Levels Road (February 2007).



Photograph 33: View from CRS No. N00117, Cochran Grange, facing northwest to the Preferred Alternative. Notice the intervening distance between the property and the new roadway which will be located in the far background of this photograph (February 2007).



Photograph 34: View from CRS No. N00106, The Maples, facing northwest to the Preferred Alternative from the northern edge of the National Register boundary. Note fenceline associated with Rosedale to the left in the background (February 2007).



Photograph 35: View from CRS No. N00106, The Maples, facing northwest to the Bunker Hill Road overpass from the front yard, adjacent to the dwelling (February 2007).

perceptible. For the purposes of Section 106 consultation in Delaware, based on an application of the Criteria of Adverse Effect this increase is considered an adverse effect. Therefore, the undertaking has the potential to have an audible effect on the Maples. No secondary or cumulative effects related to the Preferred Alternative are expected for this resource.

4.6.9 CRS No. N05148, Rosedale, 1143 Bunker Hill Road

No property will be required from the National Register boundary of the resource. However, the Preferred Alternative mainline will be clearly visible from the farm complex, as the LOD will be located approximately 485 feet to the southeast of the National Register boundary. Intervening space between the roadway and the dwelling will include open yard, Choptank Road, and farmlands (Photograph 36 and Figure 11). Stormwater management facilities may be located in close proximity to the highway on the west side of the proposed alignment. Additionally, improvements to Bunker Hill Road to provide an overpass of the new US 301 will be visible from the southeast corner of the property historic boundary. At its highest elevation (approximately 23 feet above existing ground), Bunker Hill Road will be approximately 750 feet distant (Photograph 37). As a result of the close proximity of the property to the proposed overpass and highway, the project will have a visual effect on Rosedale.

Potential noise impacts to Rosedale were evaluated based on noise analysis conducted for noise receptor H-8, located in the front yard of the property approximately 1,200 feet from the planned highway. If the Preferred Alternative is constructed, Rosedale may experience +7 dBA of additional noise, bringing the average daily level to 53 dBA. The increase in noise will be perceptible in this location; however, this increase would not be considered an impact under FHWA guidelines since the increase will be less than 10 dBA. For Section 106 consultation in Delaware as part of the application of the Criteria of Adverse Effect, this noticeable increase is considered an adverse effect. No secondary or cumulative effects related to the Preferred Alternative are expected for this resource.

4.6.10 CRS No. N00107, S. Holton Farm, 2010 Choptank Road

No property will be required from within the resource's National Register boundary. The Preferred Alternative mainline LOD will be located approximately 15 feet east of the National Register boundary of the resource amidst open farm fields, resulting in a loss of farmlands and viewsheds within view of the S. Holton Farm (Photograph 38 and Figure 12). The roadway mainline will be approximately three to nine feet above existing ground in this location. The ramp to connect the northbound US 301 mainline to the northbound Spur Road will pass over the southbound mainline lanes northeast of the property and will be elevated approximately 35 feet above existing ground (Photograph 39). Both the mainline and ramp will be visible from the farm complex in this location. Therefore, the proposed improvements will introduce new visual elements into the immediate vicinity and larger environment of the resource as well as compromise historic views and connections to surrounding farmlands.

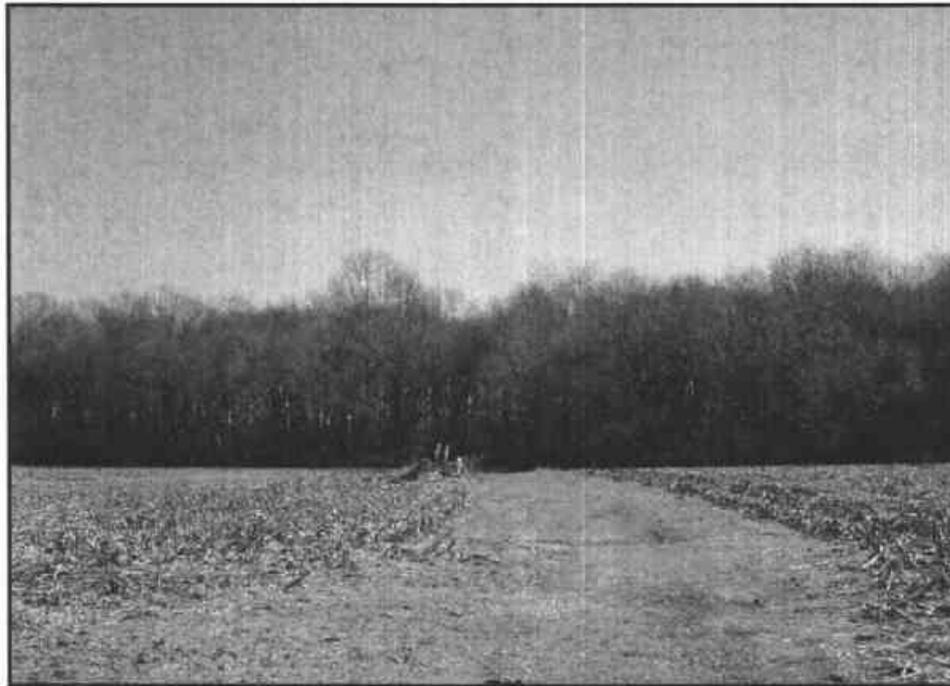
The existing noise levels on the property (46 dBA) do not meet the NAC. If the Preferred Alternative is constructed, the property will experience a 13 dBA increase in the average daily noise level. An increase of 10 dBA or more meets the FHWA criteria for a noise impact; therefore, the undertaking has the potential to audibly affect the S. Holton Farm. For the purposes of Section 106 consultation in Delaware as part of



Photograph 36: View from CRS No. N05148, Rosedale, facing east to Choptank Road and the area of the Preferred Alternative. The alternative will be located to the rear of the photograph, behind Choptank Road (February 2007).



Photograph 37: View from front yard of CRS No. N05148, Rosedale, facing southeast to the Bunker Hill Road overpass which will be located to the rear of the photograph (February 2007).



Photograph 38: View from CRS No. N00107, S. Holton Farm, facing southeast to the Preferred Alternative. The mainline will be located between the farm and the tree line visible in the background (February 2007).



Photograph 39: View from the yard of CRS No. N00107, S. Holton Farm, facing northeast to the ramp that will connect the northbound U.S. 301 mainline to the northbound Spur Road (February 2007).

the application of the Criteria of Adverse Effect, this increase is considered an adverse effect.

There may be a change in the character of the use of a portion of the farmlands associated with the S. Holton Farm. The proposed construction of the four-lane divided highway will separate a portion of the farmlands at the eastern end of the tax parcel from the rest of the property (Figure 12). Although the improvements are outside the National Register boundary, the undertaking has the potential to have a secondary effect on the S. Holton Farm by resulting in the loss of some of the associated agricultural lands.

4.6.11 CRS No. N00109, Choptank, 1542 Choptank Road

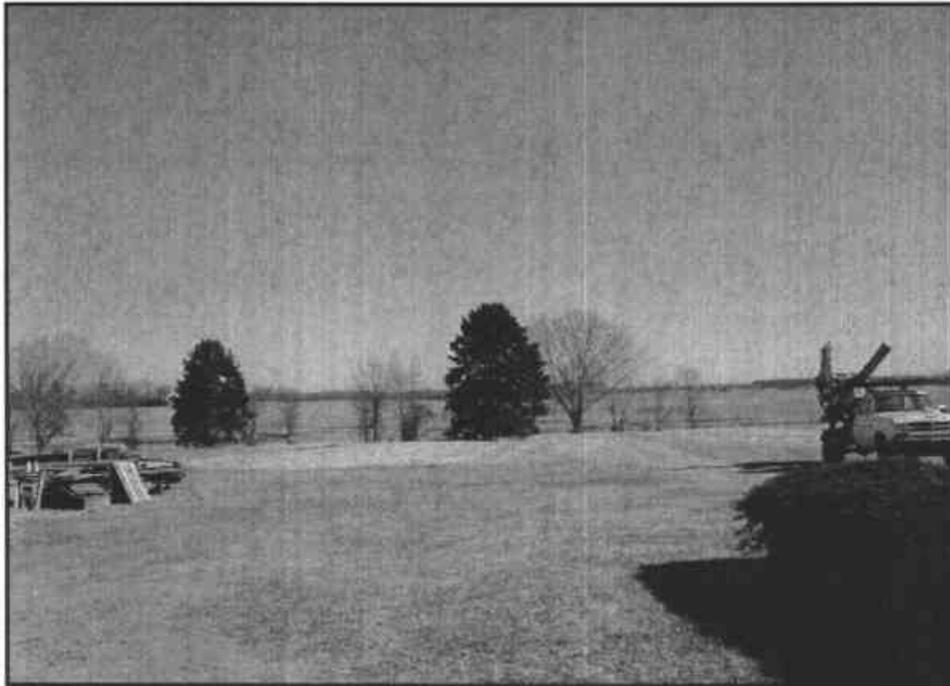
No property will be required from within the resource's National Register boundary. The LOD of the proposed two-lane Spur Road will be constructed approximately 1,725 feet northeast of the National Register boundary of the resource across open farm fields (Photograph 40 and Figure 13). The roadway will be approximately two to five feet above existing ground in this location. Old School House Road to the southeast of the resource will be reconstructed to cross over the Spur Road and will be approximately 30 feet above existing ground at its highest point (approximately 1,900 feet from the National Register boundary) over the Spur Road (Photograph 41 and Figure 13). Therefore, the improvements will create a change in the agrarian setting of the resource by introducing new visual elements in the vicinity, resulting in a visual effect.

Potential noise impacts to Choptank were evaluated based on noise analysis conducted for noise receptor H-28, located approximately 800 feet from Choptank Road and approximately 1,725 feet from the proposed Spur Road LOD. If the Preferred Alternative is constructed the property will not experience any change in the average daily noise level. Therefore, the Preferred Alternative does not have the potential to have an audible effect on the property. No secondary or cumulative effects related to the Preferred Alternative are expected for this resource.

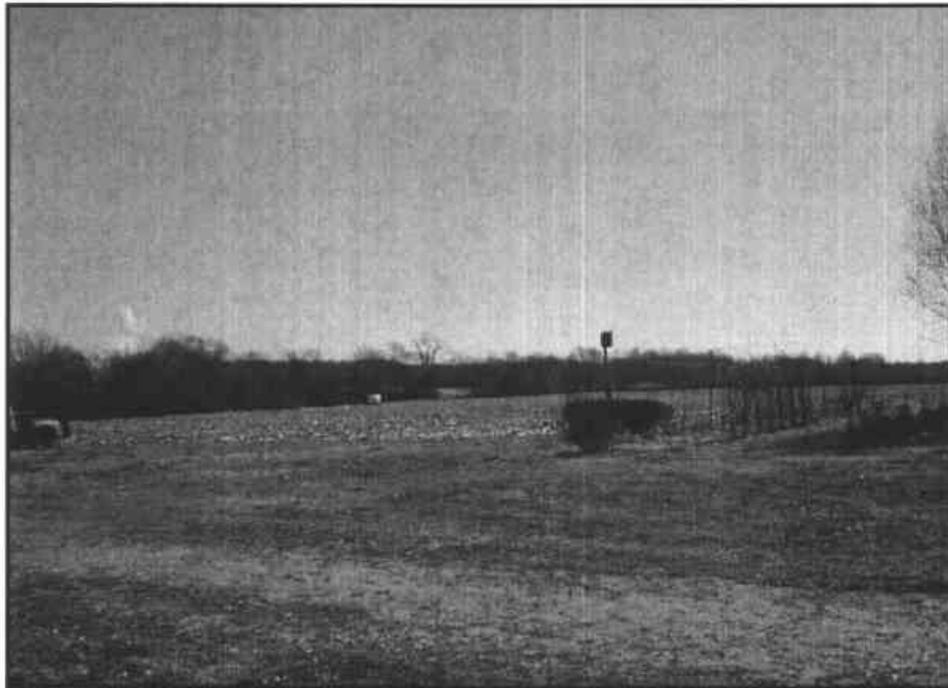
4.6.12 CRS No. N00427, Woodside, 1358 Choptank Road

No potential effects are expected for this resource. No property will be acquired from within the resource's National Register boundary. The proposed two-lane Spur Road will not be visible from the property, as it will be obscured from view by a tree line located to the east of Woodside along an intermittent stream. Additionally, there will be approximately 2,835 feet between the National Register boundary and the proposed improvements to the east, which include an overpass (approximately 29 feet above existing ground) that will carry Churchtown Road over the two-lane Spur Road. Figure 14 and Photograph 42 illustrate that the proposed ramp will not be visible from the farm complex on the property. Therefore, the undertaking will not have a visual effect on Woodside.

Noise receptor H-27 is located near the front of the property and approximately 140 feet from Choptank Road. The average daily noise level will not increase. If the Preferred Alternative is constructed, Woodside will experience a decline of 3 dBA as existing traffic on Choptank Road to the west will be diverted onto the proposed Spur Road that will be located at a further distance to



Photograph 40: View from CRS No. N00109, Choptank, facing northeast to the Spur Road. The roadway will be located beyond the tree line visible in the photograph (February 2007).



Photograph 41: View from CRS No. N00109, Choptank, facing east to the Old School House Road overpass. The overpass will not be higher than the trees and will only be visible through the gap in the tree line created by Old School House Road (February 2007).



Photograph 42: View from CRS No. N00427, Woodside, facing east to the Spur Road from the rear of the farm complex. Note the tree and brush lines that will screen the Spur Road from the viewshed of the property (February 2007).

the east. No audible impact on Woodside is anticipated from the proposed undertaking. No secondary or cumulative effects related to the Preferred Alternative are expected for this resource.

4.6.13 CRS No. N05123, Governor Benjamin T. Biggs Farm, 1196 Choptank Road

No property will be acquired from within the property's National Register boundary. The proposed two-lane Spur Road LOD will be located approximately 1,015 feet from the National Register boundary (Figure 15). A view taken from the farm complex shows the roadway will be visible from the rear of the property (Photograph 43). A partial cloverleaf interchange and ramp to an extended Bethel Church Road will be located to the northeast. The interchange and ramp will be partially visible from the farm complex (Photographs 44 and 45). The extension of Bethel Church Road will not have any secondary effects on the property as it will not be clearly within view due to intervening distance (Photograph 46) and will not result in increases in noise or traffic within the vicinity. Therefore, the improvements will create a change in the setting of the resource by introducing new visual elements, resulting in a visual effect.

An analysis of noise receptor H-31, located approximately 425 feet from Choptank Road and 1,225 feet from the proposed Spur Road, reveals that the average daily noise level will not have a perceptible increase. If the Preferred Alternative is constructed, the Governor Benjamin T. Biggs Farm will experience an increase of 3 dBA, bringing the average daily noise level to approximately 50 dBA. These noise levels do not meet or approach the NAC, and therefore the property will not experience an NAC impact if the Preferred Alternative is constructed. No secondary or cumulative effects related to the Preferred Alternative are expected for this resource.

4.6.14 CRS No. N05146, Armstrong-Walker House, 5036 Summit Bridge Road

No property will be acquired from within the property's National Register boundary. In this area, the proposed Preferred Alternative mainline will be elevated approximately 24 feet above existing ground to pass over Armstrong Corner Road and the LOD will be located approximately 805 feet northwest of the National Register boundary. Despite some limited intervening tree lines, the highway will be visible across farm fields from the northwestern corner of the farm and from the rear of the farm complex (Photographs 46 and 47 and Figure 16). A proposed ramp to existing US 301 located north of the Armstrong-Walker House will have returned to grade from the Armstrong Corner Road crossing. The ramp will be located approximately 1450 feet to the north of the dwelling on the Armstrong-Walker House property, on the other side of Armstrong Corner Road. While the proposed ramp will be located at a far distance, it will be within view of the farm complex. Therefore, there is the potential for a visual effect to the Armstrong-Walker House.

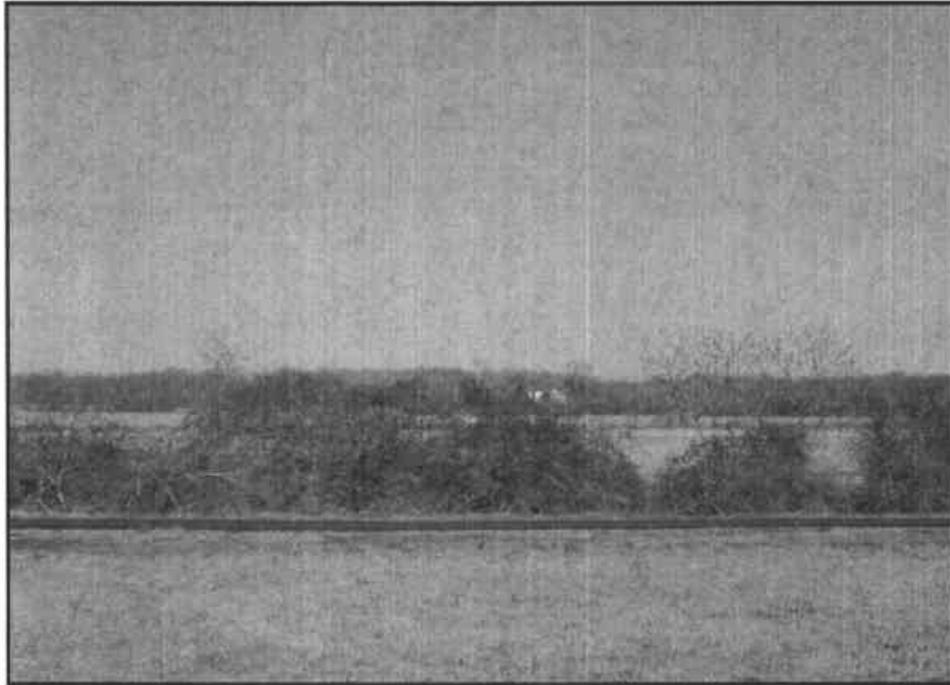
Noise receptor H-11 is located in the front yard approximately 150 feet from existing US 301. The existing average daily noise level of 67 dBA exceeds the NAC. Therefore, the property is currently experiencing noise impacts. Based on noise modeling data, the construction of the Preferred Alternative will result in a decrease in the noise level by 1 dBA. Therefore, the project will have no effect on the existing average daily noise levels on the Armstrong-Walker House property. No secondary or cumulative effects related to the Preferred Alternative are expected for this resource.



Photograph 43: View from CRS No. N05123, Governor Benjamin T. Biggs Farm, facing east to the Spur Road from the eastern edge of the National Register boundary. The Spur Road will be located between the tree line visible in the center of the photograph and the dense tree line depicted in the background (February 2007).



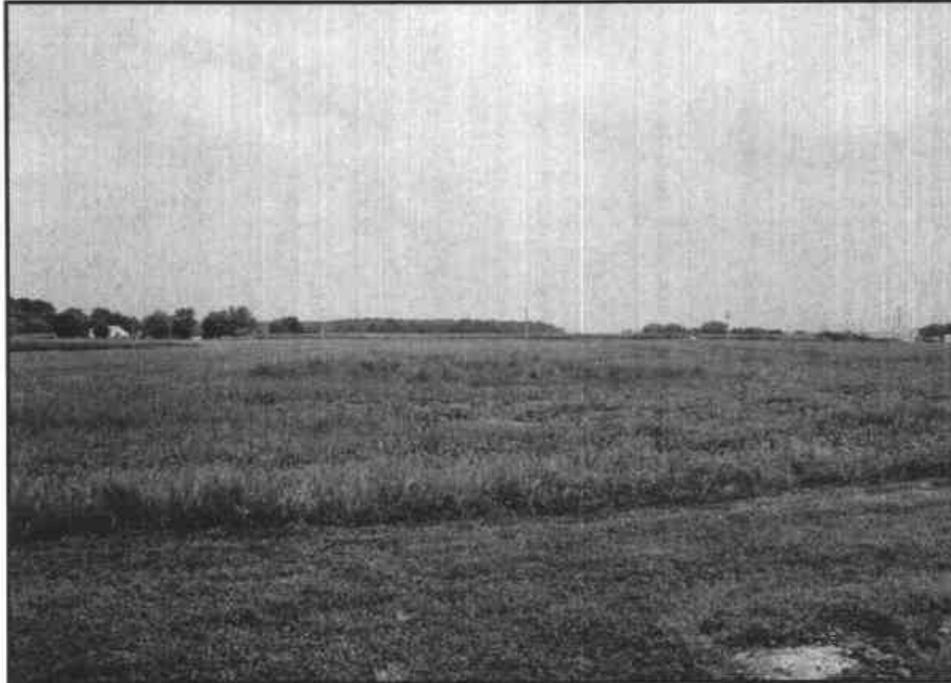
Photograph 44: View from CRS No. N05123, Governor Benjamin T. Biggs Farm, facing northeast to the Spur Road interchange with the Bethel Church Road extension from the eastern National Register boundary. The interchange will be located between the line of vegetation located in the foreground and the Summit Bridge Farms Subdivision located in the background (February 2007).



Photograph 45: View from CRS No. N05123, Governor Benjamin T. Biggs Farm, facing north to the Bethel Church Road extension from the northeastern corner of the National Register boundary. The extension will be located between the line of vegetation and the dwelling shown in the far background of the photograph (February 2007).



Photograph 46: View from rear of the property associated with CRS No. N05146, Armstrong-Walker House facing northwest to the Armstrong Corner Road overpass. The post-1962 dwelling visible between the posts will be within the path of the Preferred Alternative and will be removed (February 2007).



Photograph 47: View from the side yard at the CRS No. N05146, Armstrong-Walker House facing north to the ramp to existing U.S. 301. The ramp will be located on the opposite side of Armstrong Corner Road (February 2007).

4.6.15 CRS No. N03930, Achmester, 617 Marl Pit Road

No potential effects are expected for this resource. No property will be acquired from within the resource's National Register boundary. The Preferred Alternative will include an overpass of existing US 301 and the Norfolk Southern railroad tracks (approximately 29 feet above existing ground). The proposed mainline LOD will be located approximately 1,215 feet northwest of the National Register boundary for the resource (Figure 17 and Photograph 48) and approximately 3,345 feet from the dwelling located along Marl Pit Road. Tree lines that run along an intermittent stream and the Norfolk Southern Railroad at the northern and eastern edges of the National Register boundary will serve to screen the alternative visually from the viewshed of the property; therefore, there is no potential for a visual effect.

Noise receptor H-12 is located in the yard of the resource, approximately 3,276 linear feet from the LOD of the Preferred Alternative and outside of the influence of traffic noise from the new roadway. The average daily noise level of 46 dBA is not considered a noise impact. If the Preferred Alternative is constructed, the noise level will remain the same. This noise level does not meet or approach the NAC, and therefore the property will not experience an audible effect. No secondary or cumulative effects related to the Preferred Alternative are expected for this resource.

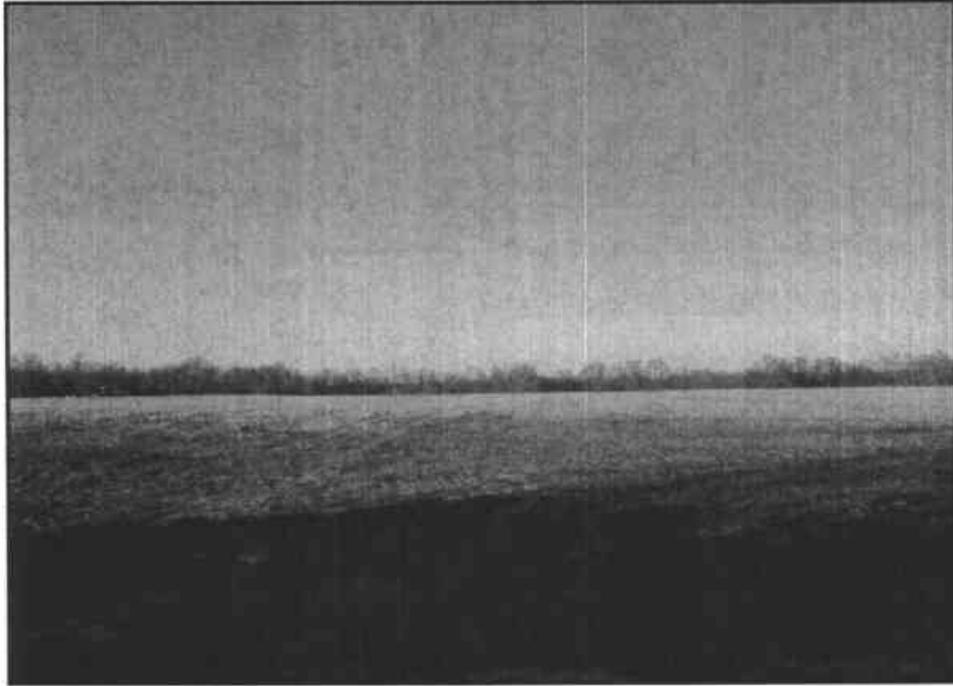
4.6.16 CRS No. N00121, Weston, 4677 Summit Bridge Road

No potential effects are expected for this resource. No property will be acquired from within the property's National Register boundary. The Preferred Alternative mainline LOD will be located across farm fields and wetlands approximately 1,045 feet to the southeast of the National Register boundary. A portion of the roadway will be carried on an at-grade bridge in order to span wetlands in this area. The roadway will not be visible from the farm complex associated with Weston due to intervening tree lines located along a stream that generally forms the southeastern corner of the National Register boundary (Photograph 49 and Figure 18). Therefore, there will be no visual change in the setting of Weston if the Preferred Alternative is constructed.

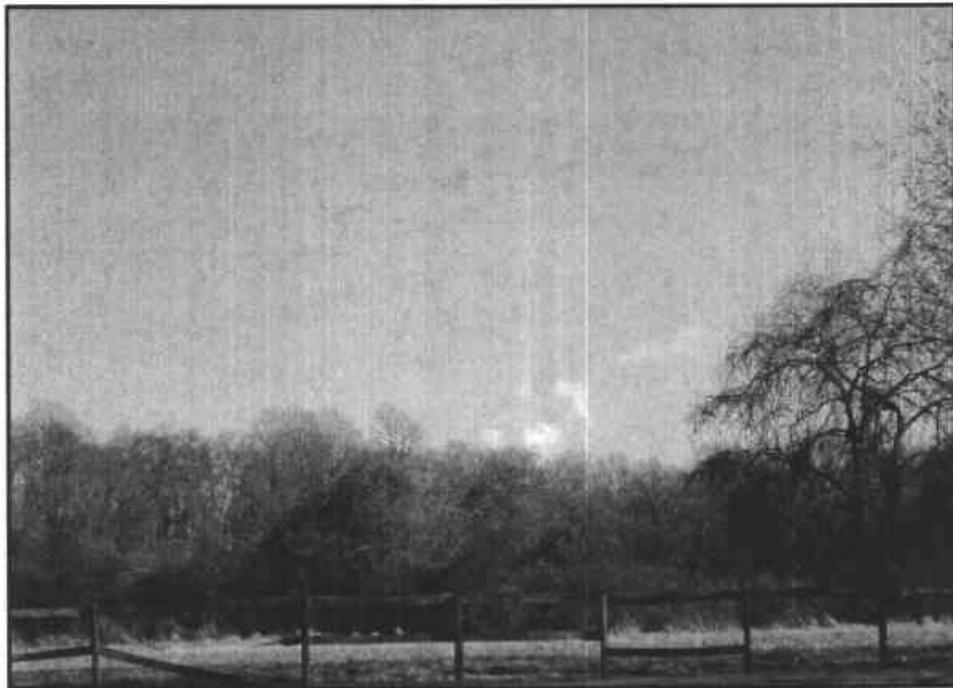
The existing noise levels on the property (51 dBA) do not meet the NAC based on noise receptor H-14, which is located near the dwelling at the end of the main driveway, approximately 740 feet from existing US 301. If the Preferred Alternative is constructed, the dwelling, which is over 1,500 feet from the new roadway, will not be influenced by traffic noise from the new roadway. Therefore, the Preferred Alternative does not have the potential to have an audible effect on the property. No secondary or cumulative effects related to the Preferred Alternative are expected for this resource.

4.6.17 CRS No. N05132, Lovett Farm, 1405 Cedar Lane Road

No property will be acquired from within the property's National Register boundary. The proposed improvements, including the Preferred Alternative mainline and an at-grade bridge spanning wetlands, will be located to the northwest of the property within close proximity to the National Register boundary and approximately 2,600 feet from the dwelling (Figure 19).



Photograph 48: View from CRS No. N03930, Achmester, facing north to the Preferred Alternative. The tree line, which also serves as the northern National Register boundary, will visually screen the mainline from view (February 2007).



Photograph 49: View from CRS No. N00121, Weston, facing southeast to the Preferred Alternative from the southern edge of the farm complex. The tree line and vegetation will visually screen the mainline from view (February 2007).

The proposed improvements will be within the viewshed of the Lovett Farm due to the level topographic conditions and open nature of the farmland (Photograph 50). These improvements may be partially screened from view in the future by an approved residential development between the farm complex and the undertaking and within the historic boundary adjacent to the building complex. Whether the undertaking of the highway construction precedes or postdates the development of residential homes in this location, at the time of the Section 106 consultation process the Preferred Alternative has the potential to visually affect the property.

Regarding audible changes, the existing average daily noise level is 46 dBA, which does not meet the NAC. If constructed, the Preferred Alternative will not change the average daily noise level (modeled for receptor H-13); therefore, the undertaking does not have the potential to have an audible effect on the Lovett Farm. No secondary or cumulative effects related to the Preferred Alternative are expected for this resource.

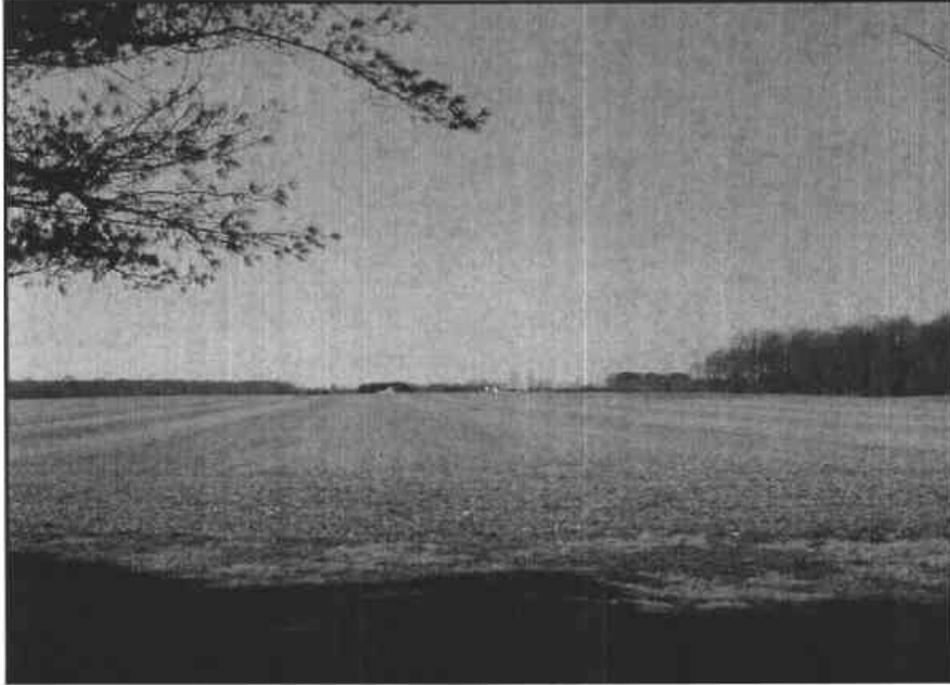
4.6.18 CRS No. N05131, T.J. Houston Farm, 1306 Cedar Lane

No property will be acquired from within the property's National Register boundary. The proposed Preferred Alternative mainline LOD will be located northwest of the property, within approximately 1,445 feet of the National Register boundary and approximately 1,455 feet of the dwelling (Figure 20). A view taken from the farm complex shows the roadway will be clearly visible across open farm fields from the rear of the property (Photograph 51). Although plans have been approved for the construction of a residential development known as Churchtown Manor on the farmland that lies between the farm complex and the undertaking, construction has not yet begun. Whether the undertaking of the highway construction precedes or postdates the development of residential homes in this location, at the time of the Section 106 consultation process the Preferred Alternative has the potential to visually affect the property.

Potential noise impacts to the T. J. Houston Farm were evaluated based on noise receptor H-29, located approximately 1,000 feet from Cedar Lane Road and approximately 1,485 feet from the mainline LOD. If the Preferred Alternative is constructed, the T. J. Houston Farm will not experience a noise impact, as the existing noise level of 46 dBA, will experience a +3 dBA increase which will not be perceptible at the property. Therefore, the undertaking does not have the potential to affect the T. J. Houston Farm audibly. No secondary or cumulative effects related to the Preferred Alternative are expected for this resource.

4.6.19 CRS No. N12636, State Bridge Number 383, Jamison Corner Road

No potential effects are expected for this resource. No property will be acquired from within the property's National Register boundary, and noise and visual effects do not apply to this resource as it is a vehicular bridge. As part of a separate undertaking by DelDOT, Jamison Corner Road will be improved. The improvements may include a new bridge west of the existing bridge in order to accommodate future traffic related to planned development. As part of the planned improvements the existing structure may remain in place to be used as a bicycle/pedestrian bridge.



Photograph 50: View from CRS No. N05132, Lovett Farm facing west to the Preferred Alternative from the farm complex. The mainline will be located in the far background of the photograph and will pass behind the treeline along the right side (February 2007).



Photograph 51: View from CRS No. N05131, T. J. Houston Farm facing northwest to the Preferred Alternative from the western edge of the farm complex. The mainline will be located between the treeline and the farm complex (February 2007).

With regards to the Preferred Alternative, the proposed improvements will include the construction of a diamond interchange approximately 3,830 feet north of the existing bridge (Figure 21). This interchange will provide local access from the new US 301 south to Jamison Corner Road and the proposed Scott Run Business Park and north to Hyetts Corner Road. As there are separate plans underway for improvements to Jamison Corner Road and the associated structure over Scott Run, at this time the project does not have the potential to have a secondary effect on the bridge. However, should the planned improvements to the Jamison Corner Road Bridge over Scott Run not be undertaken, the potential of the Preferred Alternative to affect State Bridge Number 383 will need to be revisited.

4.6.20 CRS No. N05195, J. Houston House, 1000 Jamison Corner Road

No property will be acquired from within the property's National Register boundary. In this location, the undertaking will involve the construction of a four-lane, divided highway with diamond interchange (approximately 6 feet above existing ground) to provide local access to Jamison Corner Road and Hyetts Corner Road (Figure 22). The Preferred Alternative will not be clearly visible from the property, as it will be largely obscured from view by a tree line located along Scott Run at the western edge of the National Register boundary (Photograph 52). Additionally, there will be at least 2,598 linear feet in distance from the National Register boundary to the proposed improvements and approximately 3,065 linear feet between the dwelling and the proposed improvements. Buildings and structures associated with the approved Scott Run Business Park development, not yet under construction, will be located between the farm complex and the Preferred Alternative. Thus, this resource has the potential for a visual effect.

Noise receptor H-24 is located near the dwelling at the end of the main driveway, approximately 1,300 feet from Jamison Corner Road. Existing noise levels at the property (49 dBA) do not approach the NAC; therefore, the property is not currently experiencing noise impacts. Additionally, if the Preferred Alternative is constructed, the property will not experience any increases in the average daily noise level. Therefore, an increase in noise level will not be detectable in this location, and the undertaking will have no audible effect on the resource. No secondary or cumulative effects related to the Preferred Alternative are expected for this resource.

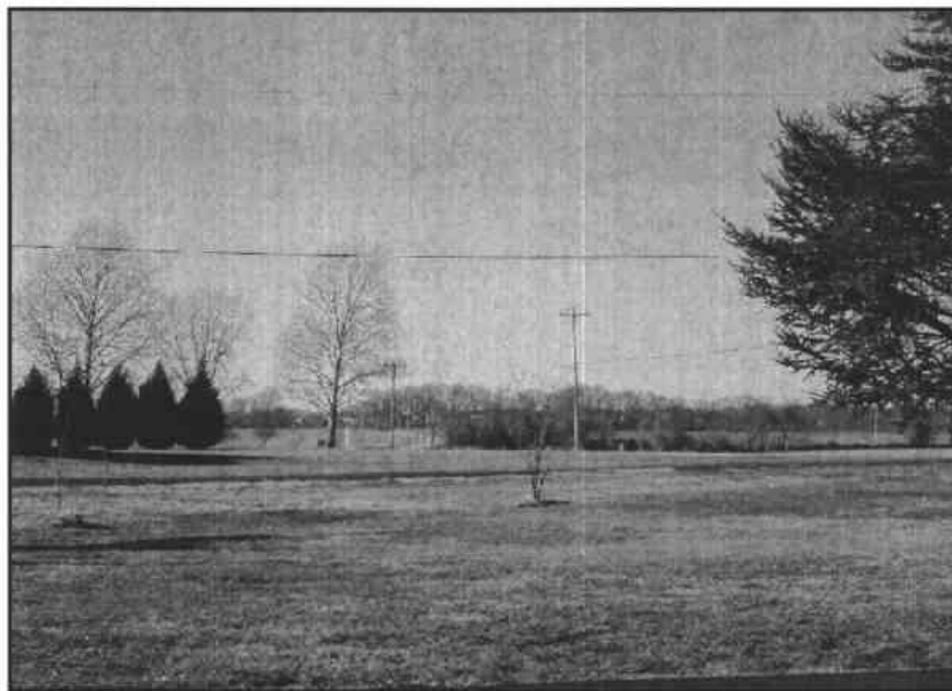
4.6.21 CRS No. N05244, Fairview, 350 Hyetts Corner Road

No property will be acquired from within the property's National Register boundary. Proposed improvements in the vicinity include the construction of an overpass to carry a reconstructed Hyetts Corner Road over the new Preferred Alternative mainline, approximately 22 feet above existing ground and approximately 3,085 feet northwest of the National Register boundary. The improvements associated with the overpass will begin along Hyetts Corner Road northwest of Fairview. It does not appear that these improvements will be within view of the dwelling due to intervening distance and topography; therefore, there is no potential visual effect to this resource (Photograph 53 and Figure 23).

The existing noise levels on the property (58 dBA) do not meet the NAC based on receptor H-19, which is located in the front yard, approximately 170 feet from Hyetts Corner Road. Because the



Photograph 52: View from CRS No. N05195, J. Houston House facing northwest to the Jamison Corner Road interchange with the Preferred Alternative. The tree line and intervening distance will largely screen the interchange from view of the property (February 2007).



Photograph 53: View from CRS No. N05244, Fairview facing northwest to Hyetts Corner Road overpass from the property's driveway. The overpass will be in the location of the tree line visible in the background and will not be visible from the property due to topography and intervening distance (February 2007).

property is further than 1,500 feet from any element of the Preferred Alternative, it is considered outside of the influence of traffic noise from the proposed highway. Existing and future noise levels (58 dBA and 60 dBA, respectively) do not meet or approach the NAC, and therefore the property will not experience an NAC impact whether or not the Preferred Alternative is constructed. No secondary or cumulative effects related to the Preferred Alternative are expected for this resource.

4.6.22 CRS No. N03947, Idalia Manor, 1870 South Dupont Highway

No property will be acquired from within the property's National Register boundary. The proposed improvements in the vicinity of the resource will include the tie-in of the new US 301 to SR 1 north of the Biddles Corner Toll Plaza and south of the Senator Roth Bridge over the C&D Canal. Directional ramps will be provided from southbound SR 1 to southbound US 301 and from northbound US 301 to northbound SR 1 (Figure 24 and Photograph 54). The northbound flyover ramp (approximately 30 feet above existing SR 1) will be within view of the dwelling and farm complex associated with Idalia Manor. The existing viewshed from Idalia Manor to the north and west is compromised by SR 1 and US 13 and bridges over the C&D Canal. The introduction of additional roadway improvements to the north and west of the farm complex will result in an additional visual change in the roadway infrastructure within the viewshed of Idalia Manor. The introduction of additional roadway improvements to the north and west of the farm complex, in combination with the previous construction of SR 1, has the potential to result in a cumulative visual effect; if the Preferred Alternative is constructed, it will direct additional traffic onto the existing SR 1 and result in further traffic and roadway infrastructure within the viewshed of Idalia Manor.

The existing ambient noise levels on the property (59 dBA) do not meet the NAC. Noise receptor H-18 is located in the front yard, approximately 450 feet from US 13. If the Preferred Alternative is constructed, the property will experience an increase in the average daily noise level of 4 dBA to 63 dBA. Although this increase does not meet the FHWA criteria for an impact, the increase will be perceptible. For the purposes of Section 106 consultation in Delaware, based on an application of the Criteria of Adverse Effect this increase is considered an adverse effect. Therefore, the undertaking has the potential to have an audible effect on Idalia Manor.



Photograph 54: View from CRS No. 03947, Idalia Manor, facing southwest to point where the proposed northbound on-ramp will tie into existing SR 1 north (July 2006).

5.0 EXPLANATION OF
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In accordance with Section 106 of the National Historic Preservation Act and the implementing regulations (36 CFR Part 800), FHWA and DelDOT, in consultation with the DE SHPO, applied the Criteria of Adverse Effect to the historic properties in the APE of the Preferred Alternative (as defined in Section 1.0 of this report). This section describes the results of that assessment, explains why the undertaking was found to have Adverse Effects on historic properties, and describes efforts that have and/or will be undertaken to avoid, minimize or mitigate, for adverse effects. Tables 4 and 5 include a summary of the adverse effects.

5.1 The Criteria of Adverse Effect

Adverse effects were evaluated with regard to the Criteria of Adverse Effect, formulated by the Advisory Council on Historic Preservation (36 CFR 800.5). According to these 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. Consideration shall be given to all qualifying characteristics of a historic property, including those that may have been identified subsequent to the original evaluation of the property's eligibility for the National Register. Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance or be cumulative. (36 CFR Part 800.5 [a] [1])

Adverse effects on historic properties include, but are not limited to:

- (i) Physical destruction of or damage to all or part of the property;
- (ii) Alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation, and provision of handicapped access, that is not consistent with the Secretary's Standards for the Treatment of Historic Properties (36 CFR Part 68) and applicable guidelines;
- (iii) Removal of the property from its historic location;
- (iv) Change of the character of the property's use or of physical features within the property's setting that contributes to its historic significance;
- (v) Introduction of visual, atmospheric, or audible elements that diminish the integrity of the property's significant historic features;
- (vi) Neglect of a property which causes its deterioration, except where such neglect and deterioration are recognized qualities of a property of religious and cultural significance to an Indian tribe or Native Hawaiian organization; and
- (vii) Transfer, lease, or sale of property out of federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-

term preservation of the property's historic significance. (36 CFR Part 800.5 [a] [2])

Each of these examples of adverse effects and their applicability to historic properties within the APE is discussed in detail below.

5.2 Resources Not Adversely Affected by the Preferred Alternative

As a result of the application of the Criteria of Adverse Effect, the Preferred Alternative was found to have no adverse effect on these three resources:

- Hedgelawn, CRS No. N00118;
- Lovett Farm, CRS No. N05132; and
- J. Houston House, CRS No. N05195.

As discussed in Section 3.0 and presented in Tables 2 and 4, Hedgelawn and Lovett Farm were previously listed or determined eligible for listing in the National Register under Criterion A in the area of agriculture and Criterion C in the area of architecture. The aspects of integrity most important to the resources eligible under Criterion A that may be affected by the introduction of new visual elements in the area are setting, feeling, and association. However, due to distance and intervening landscaping and/or existing development, it does not appear that the undertaking has the potential to alter the setting or significant visual elements of the resources to the extent that the characteristics that qualify them for listing in the National Register will be diminished. In addition to Hedgelawn and the Lovett Farm, the J. Houston House was also previously determined eligible under Criterion C in the area of architecture. Since these properties are eligible for the architectural significance of their dwellings, retention of integrity of materials, workmanship, and design are most important. None of these aspects of integrity will be adversely altered by the Preferred Alternative or by the overall undertaking.

At Hedgelawn, the proposed improvements along Levels Road will be screened from view of the farm complex by a tree line that follows along the southern edge of the National Register boundary (Figure 11 and Photograph 31). In addition, the viewshed from this property toward the Preferred Alternative mainline has already been somewhat compromised by the introduction of modern structures on the east side of existing US 301 (Photograph 32). Furthermore, there is a business park planned between the property and the proposed mainline. As a result of existing vegetation and modern development within its viewshed, it does not appear that the Preferred Alternative has the potential to significantly detract from the setting or visual characteristics that contribute to Hedgelawn's agricultural significance under Criterion A. The dwelling will not be altered as a result of the undertaking; thus, the property will maintain its architectural significance under Criterion C.

While the proposed improvements will be within close proximity of the National Register boundary, the undertaking will be located over 2,600 feet from the dwelling associated with the Lovett Farm (Photograph 46 and Figure 22). Due to the significant distance between the farm complex and the proposed undertaking, it is unlikely that the Preferred Alternative will adversely detract from the integrity of feeling, association, setting of the farmstead, or the visual features or

aspects of setting that contribute to the resource's agricultural significance under Criterion A. Integrity of materials, design, and workmanship of the dwelling will not be affected by the undertaking, and the dwelling will retain its significance under Criterion C.

The proposed undertaking will be located over 2,600 feet from the National Register boundary and 3,065 feet from the dwelling associated with the J. Houston House (Photograph 46 and Figure 22). Although eligible under Criterion C for architecture, integrity of setting enhances the agricultural feeling and association of the J. Houston House. Due to the significant distance between the dwelling and the proposed undertaking, it is unlikely that the Preferred Alternative will adversely detract from the integrity of feeling, association, or setting or the visual features or aspects of setting that enhance the resource's agricultural history. Additionally, the most important aspects of integrity for the architecturally significant J. Houston House, integrity of materials, workmanship, and design, will not be altered by the construction of the Preferred Alternative.

5.3 Resources Adversely Affected by the Preferred Alternative

Under the examples of adverse effects presented in 36 CFR Part 800.5(c)(2), the Preferred Alternative was found to have an adverse effect on 12 historic properties identified as having the potential for an effect:

- B.F. Hanson House, CRS No. N05225.
- C. Polk House Estate, CRS No. N05221;
- Rumsey Farm, CRS No. N00113;
- Summerton, CRS No. N00112;
- The Maples, CRS No. N00106;
- Rosedale, CRS No. N05148;
- S. Holton Farm, CRS No. N00107;
- Choptank, CRS No. N00109;
- Governor Benjamin T. Biggs Farm, CRS No. N05123;
- Armstrong-Walker House, CRS No. N05146;
- T. J. Houston Farm, CRS No. N05131; and
- Idalia Manor, CRS No. N03947.

Specifically, the Preferred Alternative will result in the following types of adverse effects:

- Changes of the character of a historic property's use or physical features within the property's setting that contribute to its historic significance; or
- Introduction of visual, atmospheric, or audible elements that diminish the integrity of a historic property's significant historic features.

5.3.1 (iv) Changes of the character of a historic property's use or physical features within the property's setting that contribute to its historic significance

The undertaking has the potential to alter the character of the setting of 12 historic properties in the APE, all of which are farms or farmsteads that were historically associated with the prosperous agricultural heritage of the area. As discussed in Section 3.0 and presented in Table 4, the following six historic properties are eligible under Criterion A for their agricultural significance and Criterion C for their architectural significance: the Rumsey Farm, Rosedale, Choptank, the Governor Benjamin T. Biggs Farm, the Armstrong-Walker House, and Idalia Manor. All are examples of the rebuilding campaign that occurred on the most prosperous farmsteads in St. Georges Hundred during the mid- to late nineteenth century. The aspects of integrity that best enable these farm complexes to convey their agricultural significance include integrity of feeling, setting, association, and location. Character-defining features include the farm complexes, landscaping features, and surrounding farmlands. Integrity of materials, design, and workmanship enhance the architectural significance of the associated dwellings. The Governor Benjamin T. Biggs Farm is also eligible under Criterion B as the place most associated with the productive life of the former governor.

The following six resources are eligible under Criterion C for their architectural significance: the B.F. Hanson House, the C. Polk House Estate, Summerton, The Maples, the S. Holton Farm, and the T. J. Houston Farm. Except for the B.F. Hanson House, which is a well-developed example of the Greek Revival style, these dwellings reflect the use of a variety of architectural styles and features, a common practice during the rebuilding campaign that occurred in this area during the mid- to late-nineteenth century. The aspects of integrity most important for conveying the significance of these properties are integrity of materials, design, and workmanship. Retention of integrity of setting, feeling, association, and location, which is made possible through the presence of an associated farm complex, landscape features, and surrounding agricultural lands, enhances the character of these former farmhouses.

Eleven of the 12 farm complexes/farmhouses (excluding Summerton whose setting has been compromised by the presence of modern development) are located in a rural setting amidst agricultural lands and often have open views of nearby farmsteads or farmlands. The agricultural lands are differentiated from the yards of the farm complexes by gravel access drives, landscaping, the edge of farm fields, tree lines, and/or fencing. Given the largely rural character of the landscape and the current setting of these complexes, the proposed undertaking could be considered an incompatible intrusion. As discussed in detail in Section 4.0, the undertaking will introduce a new four-lane roadway, the Preferred Alternative mainline and/or the Preferred Alternative two-lane Spur Road and/or associated infrastructure in the location of former farmlands. These improvements will be within 1,725 feet or less of these 11 properties. The introduction of these new features will result in changes to the historic properties' rural setting. Additionally, this roadway will not be in keeping with the scale, mass, proportion, and in some cases, height, of the road network that currently serves the area. By introducing this new roadway, physical features of setting that contribute to the historic significance of these farmsteads including surrounding farmlands and open viewsheds will be lost, and integrity of setting, feeling, and association will be diminished. As the undertaking will result in a change in the surrounding physical features that contribute to the historic significance of the farmsteads, it will have an

adverse effect on the following 11 historic properties: the B.F. Hanson House, the C. Polk House Estate, the Rumsey Farm, The Maples, Rosedale, the S. Holton Farm, Choptank, the Governor Benjamin T. Biggs Farm, the Armstrong-Walker House, the T. J. Houston Farm, and Idalia Manor.

The setting of Idalia Manor was previously compromised by improvements to US 13 and the introduction of a four-lane divided highway (SR 1) to the west and an associated elevated bridge that carries SR 1 over the C&D Canal to the north. The addition of the US 301 project would be part of the cumulative adverse changes that have occurred to the setting of Idalia Manor.

The setting of Summerton has been more recently compromised by the demolition of contributing outbuildings, removal of all trees on the property, and the relocation of Levels Road to the immediate north to serve the Westown development project.

There may be a change in the character of the use of a portion of the farmlands associated with the S. Holton Farm. The proposed construction of the four-lane divided highway will separate a portion of the farmlands at the eastern end of the tax parcel from the rest of the property (Figure 12). Although this agricultural land is located outside of the National Register boundary, it can be considered to contribute to the setting and function of the S. Holton Farm as an agricultural property. Therefore, the undertaking has the potential to have a secondary adverse effect on the S. Holton Farm by resulting in the loss of some of the associated agricultural lands, thereby diminishing the property's nearby setting.

5.3.2 (v) Introduction of visual, atmospheric, or audible elements that diminish the integrity of the property's significant historic features

As discussed in Section 4.0 and detailed in Table 4, the alternative has the potential to have a visual and/or audible effect on the 12 historic properties discussed in Section 5.3.1 above. The Preferred Alternative will introduce new visual elements, such as a new four-lane divided highway, interchanges, local roadway overpasses, and a two-lane Spur Road onto the existing landscape, usually in the location of active farmlands or open space. The project also has the potential to have noise impacts to one historic property, the S. Holton Farm, and have a perceptible increase at two additional historic properties, Rosedale and Idalia Manor. Where the introduction of these new features will diminish the integrity of the properties' significant historic features, the effects will be considered adverse.

The qualities of a farmstead's visual setting, particularly its location amidst active farmlands and views of surrounding farmsteads, contribute greatly to its agricultural significance and enhance integrity of setting, feeling, location, and association. Historically and currently, these twelve farmsteads were located amidst active fields and pastures and, in some cases (Rosedale and The Maples), within view of adjacent farms. The Preferred Alternative will introduce new visual elements that will diminish the integrity of the properties' significant features. The mass, scale, proportion, and, in some cases, height of the roadway will not be in keeping with the character of the existing landscape, thereby detracting from the original scenic view from or view toward historic properties located within the vicinity. Additionally, the proposed improvements will result in the elimination of open space and viewsheds associated with the agricultural landscape. For two

historic properties, The Maples and Rosedale, the proposed alternative will have an obstructive visual effect by altering the views of neighboring farmsteads. Therefore, the introduction of new visual features will diminish significant historic features and will have an adverse visual effect on 12 historic properties: the B.F. Hanson House, the C. Polk House Estate, Rumsey Farm, Summerton, The Maples, Rosedale, the S. Holton Farm, Choptank, the Governor Benjamin T. Biggs Farm, the Armstrong-Walker House, the T. J. Houston Farm, and Idalia Manor.

When SR 1 was planned for construction, the improvements in the vicinity of Idalia Manor were determined to have the potential for an adverse visual effect on the resource. The Preferred Alternative will introduce greater levels of traffic on SR 1 and result in a cumulative adverse visual effect on the resource.

The Preferred Alternative will also introduce additional noise in the locations of the historic properties in the APE. This increased noise will be perceptible (increase of 3 dBA or more) at the following historic properties: The Maples (+4), Rosedale (+7 dBA), Idalia Manor (+4 dBA), and the S. Holton Farm (+13 dBA). The Criteria of Adverse Effect seek to determine if the introduction of audible elements will diminish the integrity of the properties' historic features. These properties are eligible for their agricultural significance under Criterion A and/or Criterion C for their architectural significance. The projected noise increases at The Maples, Rosedale, and Idalia Manor coupled with visual changes in the vicinity, will be of sufficient magnitude to detract from the setting, feeling, and association of these former farmsteads. By introducing greater levels of traffic on SR 1, the noise increases at Idalia Manor will result in a cumulative adverse audible effect on the resource. The projected increase in noise level at S. Holton Farm is of a sufficient magnitude (+13 dBA) that the improvements will introduce audible elements that will diminish the integrity of setting, feeling, and association of the resource, resulting in an adverse audible effect to the S. Holton Farm.

5.4 Criteria of Adverse Effect Not Applicable to the Preferred Alternative

The following examples of adverse effects under 36 CFR Part 800.5(a)(2) were not found applicable to the Preferred Alternative.

5.4.1 (i) Physical destruction of or damage to all or part of the property

The Preferred Alternative will not involve physical destruction or damage to all or part of any of the historic properties. No associated land will be acquired from the National Register boundaries and no buildings, structures, or landscape features will physically affected by the Preferred Alternative.

5.4.2 (ii) Alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation, and provision of handicapped access, that is not consistent with the Secretary's Standards for the Treatment of Historic Properties (36 CFR Part 68) and applicable guidelines

The Preferred Alternative will not physically alter any of the identified historic properties.

5.4.3 (iii) Removal of the property from its historic location

The Preferred Alternative will not involve the removal of any of the historic properties from their historic location. The resources will remain in the place in which they were originally constructed and retain physical relationships to related features such as farmland.

5.4.4 (vi) Neglect of a property that causes its deterioration, except where such neglect and deterioration are recognized qualities of a property of religious and cultural significance to an Indian tribe or Native Hawaiian organization

The Preferred Alternative will not result in physical neglect and deterioration of any of the historic properties.

5.4.5 (vii) Transfer, lease, or sale of property out of federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance.

This criterion is not applicable to historic properties in the APE since none of the identified historic properties are under federal ownership.

5.5 Measures to Minimize Adverse Effects

Throughout the project development planning process, DelDOT, FHWA, DE SHPO, RK&K, and A.D. Marble & Company staff were aware of and have considered the potential impacts of the proposed undertaking on historic properties as well as all other resources (social, economic, and natural). Preliminary impacts of the Alternatives Retained for Detailed Evaluation (ARDs), as documented in the DEIS, compared the potential impacts of each alternative:

- the Yellow Alternative would have the potential for direct physical impacts to four historic structures, as well as indirect impacts to 17 structures (including two with physical impacts to the boundaries); would have the highest potential (41.4% compared to between 23.1% – 24.2% for the other build alternatives) to impact sites with high or moderate historic archaeological potential; and would have the lowest potential (13.9%) to impact sensitive prehistoric sites;
- the Purple Alternative would have the potential to indirectly impact 22 historic structures; would have a 24.2% potential to impact archaeological sites with high to moderate historic archaeological sensitivity; and would have a low potential (25.8%) to impact sites of high to moderate prehistoric sensitivity;
- the Brown Alternative would have the potential to impact less areas with high and moderate sensitivity for historic archaeological sites (23.7%/23.4%, North/South options, respectively); would have a moderate potential (34.4%/32.9%, North/South Options respectively) to impact sites of high to moderate prehistoric sensitivity; would result in indirect impacts (17%/16%, North/South options, respectively) to historic structures; and
- the Green Alternative would potentially have indirect impacts to 21 historic structures (both North & South options); would have the potential to impact less areas with high and moderate sensitivity for historic archaeological sites (23.1%/23.4%, North/South

options, respectively); would have a moderate potential (28.9%/35.9%, North/South options respectively) to impact sites of high to moderate prehistoric sensitivity.

Throughout the planning process, an effort was made to avoid direct impacts to historic structures. Preliminary efforts to realign the Yellow Alternative to avoid direct impacts were not considered feasible because of significantly greater potential impacts to socioeconomic and natural resources. Alignments were also evaluated on the comparative indirect impacts of each of the alternatives and options considered, and adjustments of alignments were made where possible to lower the severity of the indirect effects while considering all other resource impacts. The Green North Alternative was selected as the Preferred Alternative based on a holistic comparison of the potential impacts on cultural resources and other environmental, social, and economic impacts.

Since the recommendation of the Green North Alternative as the Preferred Alternative was published in the DEIS, refinements have been made to the design, resulting in the current Preferred Alternative. The alignment of the Preferred Alternative was refined as a result of comments received on the DEIS and during the Public Hearings to include Ratledge Road Area Option 4B Modified and a local connection between Strawberry Lane and existing US 301. Refinements in planning-level engineering included additional alignment modifications, refined sections based on topography, and refined stormwater management design based on the identification of existing drainage patterns. This combination of refinements resulted in the elevation of the roadway being raised in some areas to provide adequate drainage, resulting in an expanded Limit of Disturbance (LOD) and the potential for more impacts to areas of archaeological potential. Prior to refined engineering, the LOD for the Green North Alternative was 897 acres; the Preferred Alternative LOD encompasses 941 acres, a five percent increase. It is anticipated that the LOD of all of the alternatives would increase proportionally were they subjected to the same level of design refinement as the Preferred Alternative.

Since the publication of the Preferred Alternative in the DEIS, the refinement of engineering and in-depth application of the Criteria of Adverse Effect has resulted in less potential indirect effects to above-ground resources. Prior to refined engineering, the number of resources that would be indirectly impacted by the Green North alternative was 21; the Preferred Alternative has the potential to impact 15 above-ground resources. It is anticipated that the number of resource impacts for all of the alternatives would decrease proportionally were they subjected to the same level of detail as the Preferred Alternative.

As aforementioned, the Preferred Alternative includes design decisions that serve to minimize potential adverse effects on historic properties:

- Whenever possible, when designing the Preferred Alternative in the vicinity of historic properties, the roadway was aligned to minimize physical and visual impacts, the elevation of the proposed roadway was kept as close to existing ground as feasible, and other methods were used to avoid or minimize visual impacts and changes to the integrity of setting, feeling, and association of the resources. For example, in the vicinity of CRS No. N00109, Choptank the roadway was designed to be as close to grade as possible to minimize visual effects to the property.

- In the vicinity of two historic properties, Weston (N00121) and the Lovett Farm (N05195), the Preferred Alternative was located between the two resources in order to avoid the introduction of new visual elements within the viewsheds of either of the farm complexes associated with these properties.
- During final design, roadway landscaping will be determined to minimize effects to surrounding properties, including historic residential resources. Highway lighting will be designed, where possible, to shield the surrounding area from illumination and focus lighting onto the highway.
- During final design, archaeological surveys (Phase I/II) will be conducted prior to any construction activities, with priority investigation anticipated in areas of high sensitivity for historic and prehistoric resources.

5.6 Mitigation Measures

The following mitigation measures are proposed for the Preferred Alternative and have been considered during the development of the project Memorandum of Agreement (MOA). A draft MOA is presented in Appendix C of this document.

5.6.1 Adverse Visual Effects

As indicated above, the B.F. Hanson House, the C. Polk House Estate, the Rumsey Farm, Summerton, The Maples, Rosedale, Choptank, the S. Holton Farm, the Governor Benjamin T. Biggs Farm, the Armstrong-Walker House, the T.J. Houston Farm, and Idalia Manor will experience adverse visual effects and changes to their setting if the Preferred Alternative is constructed. Recommendations for mitigation for these properties include the development of visual screens in consultation with property owners and the DE SHPO to reduce the impact on the setting of historic properties. The screens could consist of earthen berms, plantings, fencing, or other appropriate visual barriers that are complementary to the surrounding environment and existing vegetation. The landscaping or fencing will serve as a barrier between the proposed undertaking and property's main historic characteristics. Whenever feasible, all screening or landscaping elements will be installed prior to actual construction activities.

5.6.2 Adverse Audible Effects

Measures to mitigate adverse audible effects to four historic properties, The Maples, Rosedale, the S. Holton Farm, and Idalia Manor, will be discussed with the property owners and DE SHPO and, if feasible, will be included in the final design of the project, as stipulated in the MOA (Appendix C).

5.6.3 Adverse Secondary and Cumulative Effects

The potential for the separation of associated farmlands from the S. Holton Farm resulted in a finding that the undertaking will have a secondary adverse effect on the resource. DelDOT will

work with the property owner to minimize secondary effects to the resource and develop feasible mitigation measures as outlined in the MOA (Appendix C).

The potential introduction of further visual intrusions in the agricultural setting of Idalia Manor resulted in the finding that the undertaking will have a cumulative adverse visual effect on Idalia Manor. In consultation, DelDOT and DE SHPO staff determined that this effect cannot be mitigated.

The US 301 Project Development area is already experiencing an unprecedented level of residential development, which is one of the factors indicating a need for the new roadway. These development pressures have already resulted in the acquisition of former farmsteads, removal of all or nearly all associated buildings, and new or planned construction in the location of farmlands. Thus, the potential for the US 301 Project to result in cumulative impacts to historic properties as a result of development pressure should be considered alongside other past, present, and reasonably foreseeable future actions.

5.7 Archaeological Concerns

In consultation with DelDOT, DE SHPO, and MD SHPO, FHWA will ensure that the identification/evaluation, effect determination/mitigation, public outreach, discovery of and treatment of human remains and burials, and curation stipulations for archaeological resources will be carried out as outlined in the MOA (Appendix C).

5.8 General Issues

During all implementation phases of the Preferred Alternative, DelDOT shall provide copies of project plans at various plan development states to the DE SHPO and/or MD SHPO and other parties as deemed appropriate for review and comment. Within 30 days of receipt, all plan review and comments must be submitted in writing. DelDOT shall take into account any comments provided on behalf of the DE SHPO, MD SHPO, or other consulting parties prior to the development of final construction plans.

DelDOT will notify FHWA, DE SHPO, MD SHPO and other interested parties as deemed appropriate of any subsequent changes during actual construction or design stages of the project. Such notification will involve modifications to the construction methods, materials, footprint, scale, or design elements of the project that will alter existing agreements or visual and design aspects of the project. During such time, consultation under Section 106 shall be re-established to assess and determine the project impact and any additional compliance needs.

6.0 VIEWS OF THE
SHPOs AND THE PUBLIC

6.0 VIEWS OF THE SHPOS AND THE PUBLIC

6.1 Comments of the DE and MD SHPOs

Comments from the DE SHPO were addressed on a number of issues including the alternatives, eligibility of resources in the APE, the National Register boundaries of previously listed resources, and the potential effects on historic properties.

The DE SHPO provided comments on the Alternatives Retained for Detailed Studies on October 7, 2005 (Appendix A). The DE SHPO noted that the Green Alternatives (North and South) were among several alternatives that were deemed generally “satisfactory” (“alternatives which have overall fewer potential effects”) to carry forward for further analysis but recommended consideration of “additional designs that would avoid or minimize the effects on historic buildings, in particular”. About the Green Alternatives specifically, the DE SHPO stated: “When compared with the data on all of the other alternatives, the Green Alternatives generally fall in the middle of the range of potential effects on historic properties”. The comments also noted the Green Alternatives posed relatively high potential effects on historic buildings and areas with prehistoric archaeological potential.

Comments were received from the DE SHPO with regards to the DEIS on February 14, 2007 (Appendix A). As part of their comments, the DE SHPO indicated that the Preferred Alternative will affect a number of National Register-listed or eligible properties. In terms of archaeology, the Preferred Alternative is more likely to affect pre-contact sites but less likely to affect historic period sites. The DE SHPO also noted that all options in regards to the Armstrong Corner Interchange will adversely affect the S. Holton Farm (CRS No. N00107) and the Armstrong-Walker House (CRS No. N05146). The SHPO also noted that the Preferred Alternative’s Boyd’s Corner Road/Ratledge Road Crossing (Option 4B Modified) would bring the proposed improvement closer to the Lovett Farm (CRS No. N05132) and the T. J. Houston Farm (CRS No. N05131), as well as possibly affect areas with higher archaeological potential. The DE SHPO was open to further discussion of Option 4B Modified and requested further consideration on the purpose, need, and design of the proposed Spur Road. No other comments regarding historic properties impacts were received from New Castle County and other interested parties with regards to the Preferred Alternative.

DelDOT has taken the views of the DE SHPO into consideration during the design process. DelDOT regards the Spur Road as an integral part of the project and will continue to evaluate ways to mitigate unavoidable impacts to resources during the engineering design phase of the project. For example, landscape screening may be developed during final design for resources within view of the Spur Road, such as the Armstrong-Walker House (CRS No. 05146).

DE SHPO and DelDOT staff worked in close coordination regarding the eligibility determinations and potential effects of the Preferred Alternative. Field views to discuss potential effects to resources in the APE for the Green North Alternative were conducted by DelDOT, DE SHPO, RK&K, and A.D. Marble & Company staff on July 18, 2006, and February 5, 2007.

Since the undertaking will extend approximately 2,600 feet into Maryland in order to enable the widening of the roadway from two lanes to four lanes, DelDOT consulted with the Maryland State Historic Preservation Office (MD SHPO) on the potential effects of the project on historic resources in Maryland. The MD SHPO concurred that the project does not have the potential to effect historic resources as long as the proposed improvements remain within the existing right-of-way (ROW) (Appendix B). As the project design develops, the MD SHPO will participate in future consultation on the phased identification and evaluation of historic properties and will be a signatory of the MOA.

6.2 Comments of the Public

Public comments with regards to a preference for an alternative as well as concerning various elements of the project including the treatment of historic properties were sought throughout the project planning process during the public workshops, during the public hearing, through the project's website, and through interaction with members of the Project Team during community meetings and at the project office. None of the public comments received expressed views on the treatment of historic resources. More detailed comments from the public are included in Section IV of the Final Environmental Impact Statement. Public involvement will be ongoing with future archaeological investigations and implementation of mitigation measures for standing structures.

Meetings have been held between DelDOT staff and the owners of historic properties who were concerned about potential project effects. Visits were made to the Robb family (Weston, CRS No. N00121); the Rhoades family (Choptank, CRS No. N00109); and the Renck family (Fairview, CRS No. N05244). The New Castle County Department of Planning and Land Use (NCC) has been invited to provide comments on the project's potential effects on historic properties although they have not responded to the invitation. Although the Delaware Nation and the Stockbridge-Muncee Community have not indicated intent to participate in the Section 106 consultation process, under the provisions of the MOA, FHWA will advise the Tribes of Native American archaeological sites, investigations, and treatments.

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BIBLIOGRAPHY

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APPENDIX A:
CORRESPONDENCE FROM
DE SHPO

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February 14, 2007

Mr. Robert Kleinburd
Division Program Manager
Federal Highway Administration
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300 South New Street
Dover, DE 19904-6726

RUMMEL, KLEPPER & KAHL, LLP

RE: US 301 Corridor Study/Project Development; Draft Environmental Impact Statement

Dear Mr. Kleinburd:

Thank you for the opportunity to comment on the US 301 Draft Environmental Impact Statement (DEIS), prepared for compliance with the National Environmental Policy Act. The DEIS describes DelDOT's detailed analysis of those alternatives retained for further study (Yellow, Purple, Brown North, Brown South, Green North, and Green South), and identifies Green North as the "Recommended Preferred Alternative". The staff of the DE SHPO offers its comments on the analyses performed to date, including steps taken to comply with Section 106 of the National Historic Preservation Act, and the Alternatives' relative potential effects on historic properties.

Under separate cover, this office is also providing technical comments on the DEIS. However, one technical comment bears mentioning in this letter. The Summary, Chapter III (Environmental Resources and Consequences), and Chapter V (Recommended Preferred Alternative) contain inconsistent information on the number of historic properties that may be affected by the Alternatives. The inconsistency is significant, as some of the figures given suggest that the preferred Green North alternative would affect fewer properties than may actually be the case. Please ensure that correct information is given in the Final EIS, and, in the interim, is provided to any members of the public who inquire about this aspect of the DEIS.

Analyses Performed/Section 106 Process:

The Federal Highway Administration (FHWA) and DelDOT reinitiated Section 106 consultation on the US 301 project in February 2005, and began the process of re-defining an Area of Potential Effect and identifying and evaluating historic properties. Earlier studies, performed by the University of Delaware (the Center for Historic Architecture and Engineering and the Center for Archaeological Research, 1993) were consulted, but new survey of architectural properties and studies of archaeological potential were warranted.



Letter to R. Kleinburd
February 14, 2007
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Survey of those buildings, structures, and historic cemeteries that are likely to be affected by the Alternatives has been completed; DelDOT and DE SHPO staff have reached consensus on these resources' eligibility for listing in the National Register of Historic Places. As the project design progresses, FHWA, DelDOT and SHPO should consult further to determine if additional resources fall within the Area of Potential Effect (APE) and need to be evaluated.

The DEIS characterizes the general types of effects that the Alternatives may impose on historic properties in the study area. However, currently, our agencies are consulting to formally apply the Section 106 Criteria of Adverse Effects to historic properties in the APE of the Recommended Preferred Alternative (Green North). The assessment will need to be documented in accordance with the regulations implementing Section 106 (36 CFR Part 800.11). Since adverse effects are anticipated, FHWA must notify and invite the Advisory Council on Historic Preservation to participate in the consultation.

To date, no local governments, preservation organizations, Indian Tribes or individuals have requested to participate in the Section 106 process as formal consulting parties. Nevertheless, this office recommends that FHWA and DelDOT again contact such entities, and offer them an opportunity to participate in the resolution of adverse effects. In particular, the New Castle County historic preservation planner, and owners of affected historic properties should be invited to consult on measures to avoid, minimize and/or mitigate adverse effects. Such measures will be stipulated in a Memorandum of Agreement (MOA).

DelDOT's consultant also prepared models for predicting areas with a higher probability to contain archaeological sites. These models provide a means of comparing the alternatives at a very gross scale, as presented in the DEIS' impact matrices. For the selected alternative, the MOA should stipulate the process by which FHWA, DelDOT and DE SHPO will consult on the appropriate level of work to identify and evaluate archaeological sites, assess effects on National Register eligible sites, and determine ways to avoid, minimize, and/or mitigate for adverse effects. All aspects of the construction – the alignment proper, service roads, stormwater management facilities, wetland mitigation facilities, stockpile and staging areas, etc., – should be considered.

Other Analyses Performed:

Of the numerous other analyses discussed in the DEIS, the following have particular bearing on the project's potential effects to historic properties: Visual and Aesthetic Characteristics; Air Quality; Noise; and Secondary and Cumulative Effects. This office asks that the following issues be addressed in both the Final EIS and the Section 106 Assessment of Effects:

- The section on Visual and Aesthetic Characteristics should discuss the height, spacing, direction and intensity of lighting on the new facility; these factors can exacerbate the highway's visual effects, particularly at toll plazas and interchanges.

- Negative changes in Air Quality can be viewed as an atmospheric effect, listed among the examples of adverse effects in the Section 106 regulations. Data in the DEIS indicate that some degradation of air quality will likely occur at the Rosedale and Maples historic properties, if the preferred alternative (or any "ridge" alignment) is built.
- Noise, or audible effects, is also listed among the examples of adverse effects. The DEIS indicates that several National Register-listed or eligible properties -- as grouped with other types of properties in "Noise Sensitive Areas" -- may be adversely affected by the introduction of highway noise, but states that mitigation is not feasible or not reasonable to undertake. Under Section 106, further consultation on noise effects to historic properties, specifically, and exploration of ways to minimize or mitigate for those effects is needed. Additionally, the analysis projects that noise levels under some Build alternatives would *decrease* over the current ambient/peak hour and/or the projected No Build noise levels at some historic properties (The Maples, for example); the Final EIS and Section 106 Assessment of Effects should include explanation of these results.
- The Section 106 Criteria of Adverse Effect include "reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance or be cumulative", similar to the definition of Secondary and Cumulative Effects given in the DEIS. The DEIS acknowledges that the project has the potential to result in secondary and cumulative effects, but relies on County ordinances, State land use guidance, and Section 106 regulations to address these effects (please see further discussion in the technical comments). This office suggests that FHWA and DeDOT continue to seek ways that the design of the facility itself could discourage such effects; a study of the actual secondary and cumulative effects of SR 1, a similar, large scale limited access highway that is now completed, might prove instructive.

Alternatives' and Options' Potential Effects on Historic Properties

The DE SHPO's views on the alternatives are similar to those expressed in October, 2005. With the exception of "No Build", all of the Alternatives presented to date are likely to adversely affect historic properties. The "Build" Alternatives, and various new Options associated with certain alternatives, can be characterized by their relative degree and nature of potential effects.

The Yellow, Purple and Green Alternatives all affect a higher number of known National Register listed or eligible properties than would the Brown Alternatives. Further, the Yellow Alternative would result in physical impacts to four historic properties. The effects of the alternatives on areas with a higher probability to contain archaeological sites is mixed, with Yellow and Purple less likely to affect pre-contact period Native American sites, but more likely to affect historic period sites; the reverse is the case for the Green and Brown alternatives.

As discussed by DE SHPO staff at resource agency meetings, this office remains concerned with DelDOT's addition of the north-south "Spur Road" to the Green and Purple Alternatives. The inclusion of this additional facility contributes to the higher number of affected historic properties on these routes. Functionally, the Brown Alternatives appear to achieve similar movement of traffic, but with fewer affected historic properties. The design of the two-lane Spur Road, depicted as a corridor nearly as wide as, and with the same 70 mph design speed as the mainline facility, seems out of proportion with the percentage of traffic it may carry, particularly as existing Route 301 will remain in service. As indicated in the DEIS, the addition of the Spur Road was also of significant concern to some members of the public.

If the issues with the Brown Alternatives cannot be overcome (as stated in the DEIS), and FHWA and DelDOT continue to view Green North as the preferred alternative, this office requests further consideration of the purpose, need, and design of the Spur Road.

Several other Options that have been discussed would vary in the degree of potential effects on historic properties, as follows:

- Armstrong Corner Road Interchange (Green and Purple alternatives): All options would have adverse visual and noise effects on the Holton Farm, common to all of the "ridge" Alternatives. Option 1 would be furthest from, with a lesser degree of potential visual and/or noise effects to the Armstrong-Walker House. DelDOT's preferred Option 2a, while not as impactful to Armstrong-Walker as Options 2 and 3, would affect areas with higher probability to contain archaeological sites, as indicated by the predictive model.
- Boyd's Corner Road Interchange (Yellow and Purple alternatives): All Options would likely adversely affect the Shallcross House, though the degree of those effects may be more significant with Options 2 and 3.
- Boyds's Corner Road/Ratledge Road Crossing (Green North alternative): As discussed at the February 8, 2007, resource agency meeting, DelDOT's ongoing consultation with the local community and the natural resource agencies has resulted in consideration of additional Options for this crossing. The new Option 4B Modified appears to balance the community and natural resource issues. However, as compared to Option 1 (the route identified in the DEIS), Option 4B Modified would move the highway closer to the historic T.J. Houston House and Lovett Farm, and may affect areas with higher archaeological potential (pre-contact Native American sites). Nevertheless, the DE SHPO is open to further discussion of Option 4B Modified.

Thank you for your consideration of these comments. This office looks forward to working with FHWA and DelDOT on completing the assessment of effects, and developing the Memorandum of Agreement. It is the DE SHPO's understanding that consultation with Maryland's SHPO (the Maryland Historical Trust) is also ongoing. Please keep us apprised of these efforts.

Letter to R. Kleinburd
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If you have any questions at this time, please do not hesitate to contact Gwen Davis, who is conducting the review of this project, at (302) 736-7400.

Sincerely,


Joan N. Larrivee
Deputy State Historic Preservation Officer

cc: Edward Bonner, Philadelphia District, U.S. Army Corps of Engineers
Timothy Slavin, Director DCHA/State Historic Preservation Officer
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October 7, 2005

Mr. Robert Kleinburd
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RE: US 301 Corridor Study – Alternatives

Dear Mr. Kleinburd:

At the resource agency meetings held this summer, DelDOT has sought comments on the Alternatives being considered for the US 301 Corridor project. With DelDOT's recent submittal of the revised impacts matrix, including information derived from the archaeological predictive model, this office now has sufficient information on which to base such comments. Since it is uncertain when the next resource agency meeting for this project will occur, this office is offering written comments for FHWA and DelDOT to consider as the analysis of the alternatives continues.

Please note that these comments are based primarily on the data contained in the revised impact matrix, received by this office on September 26, 2005. The architectural evaluation survey report, which conveys the consultant's specific recommendations on which resources are eligible for listing in the National Register of Historic Places, is still under review by this office. Also, this office has just received the revised archaeological predictive model report. The views expressed in this letter may be revised after this office completes its review of these reports.

The matrix identifies several categories of cultural resource issues. Of these, this office considers the following as the most critical categories:

- properties listed in or eligible for the National Register of Historic Places which may be physically affected (potential "4(f)" properties);
- properties listed in or eligible for the National Register of Historic Places which may be subject to visual or audible intrusions, significant changes of setting, or other such indirect adverse effects;

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RUMMEL, KLEPPER & KAHL, LLP



- surveyed properties (CRS) – including buildings and structures built prior to 1962, historic districts, objects, and known archaeological sites – which may be physically or indirectly affected;
- areas with High potential for Prehistoric and/or Historic period archaeological sites, as defined by the archaeological predictive model which may be physically affected; and
- cemeteries which may be physically or indirectly affected.

With the exception of “No Build”, all of the Alternatives presented to date are likely to adversely affect such known and potential historic properties. However, it is understood that DelDOT views the “No Build” alternative as not viable, as it would not meet the project’s “Purpose and Need” defined through the National Environmental Policy Act review process.

The “Build” Alternatives can be characterized by their relative degree and nature of potential effects to historic properties. This office views those alternatives which have overall fewer potential effects as “satisfactory” for the purposes of being carried forward for further analysis. From this perspective, specific comments on the Alternatives are given below.

Brown Alternatives (North and South):

In most of the critical cultural resource categories noted above, the Brown Alternatives have fewer potential impacts. This is particularly the case for above-ground resources and areas with historic archaeological potential. An exception is that the Brown routes have relatively high impacts to areas with prehistoric archaeological potential. Overall, this office views these alternatives as “satisfactory”, as defined above.

Green Alternatives (North and South)

When compared with the data on all of the other alternatives, the Green Alternatives generally fall in the middle of the range of potential effects on historic properties. Like the Brown Alternatives, the Green routes have relatively high impacts to areas with prehistoric archaeological potential. However, unlike the Brown routes, the Green Alternatives also pose relatively high potential effects on historic buildings. This office views these alternatives as “satisfactory”, as defined above, but recommends consideration of additional designs that would avoid or minimize the effects on historic buildings, in particular.

Yellow, Orange and Purple Alternatives:

The Yellow, Orange & Purple alternatives could have significant physical, visual, audible and other adverse effects on above-ground resources, including many that are already listed in the National Register of Historic Places. Yellow and Orange could affect two cemeteries, as well. Although these alternatives could have fewer impacts on areas with prehistoric archaeological potential, this office’s view of the Yellow, Orange and Purple alternatives is that they pose an unsatisfactory level of potential effects on historic properties. DelDOT has recommended that the Orange Alternative be dropped from further study; this office supports that recommendation.

Blue Alternatives (North and South):

Strictly by the data in DelDOT's matrix, the Blue Alternatives have fewer potential impacts in several critical cultural resource categories. However, as noted in the matrix, the cultural resource data for these Alternatives are incomplete. There are considerations beyond the numbers as well.

Because the projected routes would cross less intensively developed areas, the Blue Alternatives could significantly alter the setting of historic properties (potential historic landscapes). This office raised similar concerns about the "South Ridge" route in the first US 301 Corridor study. Subsequent development in that area has diminished such concerns.

Additionally, local concern about the Blue Alternatives will likely reopen the controversial issue of historic properties in "the Levels" area. As you may be aware, the initial study and nomination of the Levels Historic District was abandoned in 1985, at the request of land owners in the designated area who expressed this desire at a public hearing. However, this office recently received inquiries from an historic property owner concerned about the Blue routes' effects on the Levels area. Whether this reflects a general shift in the sentiment of area land owners is unknown. To date, DelDOT's consultants have not completed a re-evaluation of this area, so it is unclear if a viable district still remains here.

Although the information is not complete, this office believes the Blue Alternatives may pose an unsatisfactory level of potential effects on historic properties. DelDOT has recommended that these Alternatives be dropped from further study. This office does not object to that recommendation.

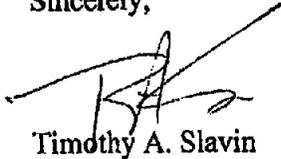
Red Alternative

This alternative is essentially DelDOT's preferred alternative from the previous US 301 Corridor study. At the time of the earlier study, this office viewed the section south of the C & D Canal as preferable to other alternatives considered, but viewed the section north of the Canal as less favorable than other alternatives considered. Concerns about the north section were due to potential effects on several National Register listed properties, including the Cooch's Bridge Historic District. The current matrix data for the Red Alternative are incomplete, but it appears that these conditions still exist in the north section, at least in part. Therefore, this office views the Red Alternative, north of the Canal, as posing an unsatisfactory level of potential effects on historic properties. DelDOT has recommended that the Red Alternative be dropped from further study; this office supports that recommendation.

Thank you for your consideration of these comments. This office looks forward to the continuing consultation on this project. Comments on the draft architectural survey report and revised archaeological predictive model will be provided to you presently. In the interim, if you have any questions, please do not hesitate to contact Gwen Davis, who is conducting the review of this project in consultation with the Division Director and Deputy Director.

Letter to R. Kleinburd
October 7, 2005
Page 4

Sincerely,



Timothy A. Slavin
Director/State Historic Preservation Officer

cc: Edward Bonner, Philadelphia District, U.S. Army Corps of Engineers
Stephen Marz, Deputy Director, Division of Historical and Cultural Affairs
Robert Taylor, Assistant Director, Engineering Support, DeIDOT
Therese M. Fulmer, Manager, Environmental Studies, DeIDOT
Mark Tudor, Project Manager, Project Development North II, DeIDOT
Michael C. Hahn, Senior Highway Planner, DeIDOT
Gwenyth A. Davis, Archaeologist, SHPO, Division of Historical & Cultural Affairs
Robin Bodo, National Register Coordinator, SHPO, Division of Historical & Cultural Affairs
Stephanie Bruning, Preservation Planner, New Castle County Dept. of Land Use
Bill Hellmann, RK&K, Inc.
Katry Harris, RK&K, Inc.

**APPENDIX B:
CORRESPONDENCE WITH
MD SHPO**



Maryland Department of Planning
Maryland Historical Trust

Martin O'Malley
Governor

Anthony G. Brown
Lt. Governor

Richard Eberhart Hall
Secretary

Matthew J. Power
Deputy Secretary

June 29, 2007

Ms. Therese M. Fulmer
Delaware Department of Transportation
800 Bay Road
P.O. Box 778
Dover, DE 19903



Re: US 301 Project Development
Delaware/Maryland State Line to US 1
New Castle County, Delaware

Dear Ms. Fulmer:

Thank you for contacting the Maryland Historical Trust (Trust), a division of the Maryland Department of Planning, regarding the above-referenced undertaking. We are writing to offer our comments in accordance with Section 106 of the National Historic Preservation Act and the Maryland Historical Trust Act of 1985, as appropriate.

As noted in your letter, the project within Maryland involves the widening of existing US 301 to four lanes for a distance of 2600 feet. This work will occur within the existing US 301 right-of-way. Other ancillary activities, including the construction of storm water management facilities, may also occur within Maryland. Based upon our review of the project documentation, the Trust agrees that the Area of Potential Effects (APE) for the undertaking does not contain historic structures. In addition, it is the Trust's opinion that the proposed project area has been disturbed and has a low potential for containing National Register-eligible archeological resources that have not yet been identified. We agree with your assessment that no archeological investigations are warranted within Maryland. If ancillary activities are proposed outside of the existing right-of-way for US 301, additional coordination with the Trust will be necessary to determine the potential for impacts to unknown archeological resources. Therefore, we agree to participate in the execution of a Memorandum of Agreement (MOA) to assure future coordination of archeological investigations in Maryland.

We look forward to working with you to successfully complete the preservation requirements for the proposed undertaking. If you have questions or require assistance, please contact Beth Cole (regarding archeology) at bcole@mdp.state.md.us \ 410-514-7631 or me (regarding historic built environment) at ttamburrino@mdp.state.md.us \ 410-514-7637.

Sincerely,

Tim Tamburrino
Preservation Officer
Maryland Historical Trust

TJT/ 200701412

cc: Mr. Dan Johnson (FHWA)
Ms. Julie Schablitsky (SHA)

100 Community Place • Crownsville, Maryland 21032-2023
Telephone: 410.514.7600 • Fax: 410.987.4071 • Toll Free: 1.800.756.0119 • TTY Users: Maryland Relay
Internet: www.marylandhistoricaltrust.net

**APPENDIX C:
MEMORANDUM OF
AGREEMENT**

MEMORANDUM OF AGREEMENT

AMONG THE FEDERAL HIGHWAY ADMINISTRATION, THE DELAWARE STATE HISTORIC PRESERVATION OFFICE, THE DELAWARE DEPARTMENT OF TRANSPORTATION, AND THE MARYLAND STATE HISTORIC PRESERVATION OFFICE

REGARDING IMPLEMENTATION OF THE U.S. 301 PROJECT FROM THE DELAWARE-MARYLAND STATE LINE TO S.R. 1, ST. GEORGE'S HUNDRED AND PENCADER HUNDRED NEW CASTLE COUNTY, DELAWARE

WHEREAS, the Federal Highway Administration (FHWA) with the Delaware Department of Transportation (DelDOT) propose to make the following improvements to U. S. 301 in St. George's Hundred and Pencader Hundred in New Castle County, Delaware: construct a four-lane, controlled access roadway and associated facilities (Exhibit A) from the Delaware-Maryland State Line to S.R. 1; and

WHEREAS, FHWA has selected the Green North Alternative plus a two lane spur road connecting to the southern terminus of Summit Bridge (Project) as the preferred alternative for the Project (see Exhibit A); and

WHEREAS, FHWA in consultation with the Delaware State Historic Preservation Office (DE SHPO) and DelDOT has established an initial Area of Potential Effect (APE) for the Project, as defined in 36 CFR Part 800.16(d) (Exhibit B); and

WHEREAS, FHWA has elected to phase the identification and evaluation of historic properties as provided in 36 CFR 800.4(b)(2) as stipulated under this agreement; and

WHEREAS, FHWA pursuant to 36 CFR Part 800.4(a)(2), has determined that within the APE in the State of Delaware the following properties are listed in the National Register of Historic Places:

The Maples, Cultural Resource Survey (CRS) No. N-106;
S. Holton Farm, CRS No. N-107;
Choptank, CRS No. N-109;
Rumsey Farm, CRS No. N-113;
Cochran Grange, CRS No. N-117;
Hedgelawn, CRS No. N-118;
Weston, CRS No. N-121;

Woodside, CRS No. N-427;
Achmester, CRS No. N-3930;
Idalia Manor, CRS No. N-3947;
Governor Benjamin T. Biggs Farm, CRS No. N-5123;
Armstrong-Walker House, CRS No. N-5146;
Rosedale, CRS No. N-5148; and
B.F Hanson House, CRS No. N-5225; and

WHEREAS, FHWA pursuant to 36 CFR Part 800.4(c), has determined that within the APE in the State of Delaware the following properties are eligible for listing in the National Register of Historic Places:

Summerton, CRS No. N-112;
T.J. Houston Farm, CRS No. N-5131;
Lovett Farm, CRS No. N-5132;
J. Houston House, CRS No. N-5195;
C. Polk House Estate, CRS No. N-5221;
Fairview, CRS No. N-5244;
State Bridge Number 383, CRS No. N-12636; and
Shahan Farm, CRS No. N-14388; and

WHEREAS, to date no historic properties have yet been identified in the APE in the State of Maryland; and

WHEREAS, FHWA in consultation with the DE SHPO has applied the criteria of adverse effect to historic properties; and

WHEREAS, FHWA has determined that the Project will have no effect on:

Cochran Grange, CRS No. N-117;
Weston, CRS No. N-121;
Woodside, CRS No. N-427;
Achmester, CRS No. N-3930;
Fairview, CRS No. CRS No. N-5244;
State Bridge Number 383, CRS No. N-12636; and
Shahan Farm, CRS No. N-14388; and

WHEREAS, FHWA has determined that the Project will have no adverse effect on:

Hedgelawn, CRS No. N-118;
Lovett Farm, CRS No. N-5132; and
J. Houston House, CRS No. N-5195; and

WHEREAS, FHWA has determined that the Project will have an adverse effect on:

The Maples, CRS No. N-106;
S. Holton Farm, CRS No. N-107;
Choptank, CRS No. N-109;
Rumsey Farm, CRS No. N-113;
Summerton, CRS No. N-112;
Idalia Manor, CRS No. N-3947;
Governor Benjamin T. Biggs Farm, CRS No. N-5123
T.J. Houston Farm, N-5131;
Armstrong-Walker House, CRS No. N-5146;
Rosedale, CRS No. N-5148;
C. Polk House, CRS No. N-5221; and
B.F. Hanson House, CRS No. N-5225; and

WHEREAS, FHWA has determined that the Project may also affect as yet unidentified historic properties in areas that have not been subject to prior cultural resource investigations, such as areas that are associated with proposed alignment modifications or other Project-related ancillary activities including, but not limited to, stormwater management facilities, wetland mitigation sites, staging, stockpiling and access areas, and disposal sites, and

WHEREAS, DelDOT participated in the consultation, has responsibilities for implementing stipulations under this MOA, and pursuant to 36 CFR 800.6(c)(2) has been invited to be a signatory to this MOA, and

WHEREAS, FHWA and DelDOT have consulted with the DE SHPO and the Maryland State Historic Preservation Office (MD SHPO) in accordance with Section 106 of the National Historic Preservation Act; 16 U.S.C. 470 (NHPA), and its implementing regulations (36 CFR Part 800) to resolve the effects of the Project on historic properties; and

WHEREAS, FHWA and DelDOT have notified the Advisory Council on Historic Preservation (Council) of the Project's adverse effect on historic properties and it declined to participate in the consultation, and

WHEREAS, FHWA has contacted the Delaware Nation, and the Stockbridge-Muncee Community; to date, neither Tribe has indicated its intent to participate in the consultation. However, FHWA will advise these Tribes of Native American archaeological sites, investigations, and treatments as provided for under the stipulations of this agreement, and

WHEREAS, FHWA has afforded the public an opportunity to comment on the effects of the Project on historic properties through the National Environmental Policy Act (NEPA) of 1969, as amended; and through DelDOT's Public Involvement Procedures.

NOW, THEREFORE, FHWA, DelDOT, DE SHPO, and MD SHPO agree that the Project shall be implemented in accordance with the following stipulations in order to take into account the effects of the undertaking on historic properties:

Stipulations

FHWA shall ensure that the following actions will be carried out:

I. Archaeological Resources

A. Identification/Evaluation

DelDOT in consultation with the DE SHPO and MD SHPO shall conduct identification (Phase I) archaeological surveys within the APE for the project, and will determine if identified sites will require a Phase II level archaeological survey to evaluate their National Register of Historic Places eligibility. Evaluation Studies (Phase II) may require additional background research and/or additional field excavations.

DelDOT shall prepare reports on findings of the archaeological identification/evaluation surveys and shall submit the reports to the DE SHPO and MD SHPO, as appropriate, for their review and concurrence. Upon receipt of the document, the review period will be thirty (30) days. FHWA and DelDOT will take into account comments and will recommend any next steps.

During the Evaluation Studies (Phase II), FHWA and DelDOT shall apply the National Register criteria (36 CFR 60.4) in accordance with 36 CFR 800.4 (c), taking into account applicable historic contexts and management plans developed for Delaware or Maryland's historic and prehistoric archaeological resources.

If FHWA and DelDOT determine that any of the National Register criteria are met, and the DE SHPO and/or the MD SHPO agrees, as applicable, the archaeological site(s) shall be considered eligible for the National Register.

If FHWA and DelDOT determine that the National Register criteria are not met, and the DE SHPO and/or the MD SHPO agrees, as applicable, the archaeological site(s) shall be considered not eligible for the National Register.

Based on the Evaluation Studies (Phase II), should a signatory to this agreement not agree on the eligibility determination of an archaeological site(s), the DelDOT or FHWA shall obtain a determination from the Secretary of the Interior, pursuant to 36 CFR 800.4(c)(2), 36 CFR 63.2(c) and 63.3(d).

B. Effect Determination/Mitigation

If eligible archaeological sites are identified and affected within the APE, DelDOT will make a reasonable effort to avoid these sites or to minimize impacts to them. If the eligible sites cannot be avoided, DelDOT will apply the Criteria of Adverse Effect in accordance with 36 CFR Part 800.5.

If the project will have an adverse effect on archaeological sites, DelDOT in consultation with the DE SHPO and/or MD SHPO, shall develop a treatment plan. The treatment plan may include elements of data recovery or an alternative mitigation plan.

DelDOT shall submit the treatment plan to the relevant SHPO and other consulting parties that may be identified, including Indian Tribes as defined in 36 CFR 800.16(m), for their review and comment. Upon receipt of the document, the review period will be thirty (30) days. Following 30 days, DelDOT will take into account any comments, and will recommend any next steps.

Should data recovery investigations be warranted, DelDOT shall ensure that a data recovery plan is developed in consultation with the relevant SHPO. The plan shall specify, at a minimum:

- the property, properties, or portions of properties where data recovery is to be carried out, and any property that will or may be destroyed without data recovery;
- research questions to be addressed through data recovery, with an explanation of their relevance and importance;
- the research methods to be used, with an explanation of their relevance to the research questions;
- the methods to be used in analysis, data management, and data dissemination, including a schedule;
- a provision for assessing materials that may be in need of conservation
- proposed disposition of recovered materials and records;
- proposed methods for involving the interested public in the data recovery, and for disseminating the results of the work to the interested public;

- a proposed schedule for the submission of progress reports to the relevant SHPO; and
- provisions to meet on-site in order to evaluate the success of the initial fieldwork phase of any data recovery program, and near the end of the fieldwork efforts to validate substantial completion.

When and/or if an alternative mitigation strategy is chosen and approved by the DE SHPO, MD SHPO, FHWA, and DelDOT, it may include but is not limited to: analysis and synthesis of past data accumulated through either SHPO, FHWA, and DelDOT projects, updating the relevant SHPO and DelDOT archaeological websites and GIS databases, development of historic and prehistoric contexts and preservation priorities, statewide predictive models, development of travel or informational displays with the cultural resource work for this Project, and improved archaeological data management and access for both SHPO and DelDOT.

DelDOT will complete all necessary data recovery field work prior to commencing construction in the site areas, alternative mitigation may or may not be completed prior to commencing construction in the site areas.

DelDOT shall provide all draft and final archaeological reports and public information materials to the appropriate SHPO for review and comment. All final reports shall meet the Secretary of the Interior's standards and Guidelines for Archaeological Documentation (48 FR 44734-37), while also satisfying the necessary SHPO's guidelines for archaeological surveys or investigations.

C. Public Outreach

If mitigation is necessary, DelDOT will prepare a public participation plan and public information materials. DelDOT shall submit the plan and materials to the FHWA, DE SHPO, MD SHPO, and other consulting parties that may be identified for their review and comment. Upon receipt of the materials, the review period will be thirty (30) days. Following 30 days, DelDOT will take into account any comments received, and will recommend any next steps.

The public participation plan may include, but is not limited to archaeological site tours for the public and educational groups. The specific public outreach materials produced will be determined individually for each site for which mitigation is necessary and may include, but are not limited to pamphlets, videos, historical markers, brochures, exhibits, displays for public buildings booklets on the history or prehistory of the project area, lectures and or presentations at academic conferences, and/or public institutions such as schools and historical societies.

DelDOT shall distribute the public information materials to consulting parties, local schools, historical societies, libraries, museums and/or other venues and individuals deemed pertinent in consultation with the DE SHPO, MD SHPO, and FHWA.

D. Discovery of and Treatment of Human Remains and Burials

In the State of Delaware, DelDOT shall immediately notify the DE SHPO of the discovery of any human remains encountered during the archaeological investigations or the project construction. DelDOT shall cease all activities that may disturb or damage the remains, and comply with the Delaware Unmarked Human Remains Act (7DE code Chapter 54).

In the State of Maryland, DelDOT shall follow the Maryland State burial law: Title 10 Subtitle 4 §§ 10-401 through 10-404 of the Annotated Code of Maryland. Upon discovery, DelDOT shall cease all activities that may disturb or damage the remains.

If the human remains are of Native American affiliation, then FHWA will determine an appropriate course of action, in accordance with 36 CFR 800, and the above cited state laws. The FHWA will include the DE SHPO and/or MD SHPO in such consultation. The DE SHPO or MD SHPO will comply with the Native American Graves Protection and Repatriation Act of 1990 (PL 101-601) with regard to disposition of the remains and/or associated funerary objects, as applicable.

E. Curation

DelDOT shall ensure that all records and materials resulting from the archaeological investigations conducted for this undertaking in the State of Delaware are processed, prepared for, and curated in accordance with 36 CFR Part 79 and the Division of Historical & Cultural Affairs' (the Division) "Guidelines and Standards for the Curation of Archaeological Collections" (2001).

These records and materials shall be curated at the Division, or its designee, following the policies of the institution, except as may be provided for under the following paragraph.

As part of the Public Outreach efforts outlined in Stipulation I.C. of this Agreement, the FHWA, DelDOT and DE SHPO will consult to determine if any archaeological materials may be loaned to a public museum or other public institution for the purposes of exhibit or research, following the Division's loan policy and procedures. Such loans and exhibits may occur only after the curatorial procedures, referenced in the first paragraph in this stipulation, have been completed.

All materials and records resulting from cultural resources investigations conducted in the State of Maryland for the Project will be processed in accordance with the MD SHPO's *Revised Technical Update No. 1 of the Standards and Guidelines for Archeological Investigations in Maryland – Collections and Conservation Standards* (2005) and curated in accordance with 36 CFR 79 at the Maryland Archeological Conservation Laboratory, unless clear title or Deed of Gift to the collection cannot be obtained.

II. Historic Structures, Buildings, and Districts

The Project will adversely affect the following historic properties by introducing visual and/or audible elements that may produce a change in setting or feeling associated with the property:

The Maples, CRS No. N-106;
S. Holton Farm, CRS No. N-107;
Choptank, CRS No. N-109;
Rumsey Farm, CRS No. N-113;
Summerton, CRS No. N-112;
Idalia Manor, CRS No. N-3947;
Governor Benjamin T. Biggs Farm, CRS No. N-5123
T.J. Houston Farm, N-5131;
Armstrong-Walker House, CRS No. N-5146;
Rosedale, CRS No. N-5148;
C. Polk House, CRS No. N-5221; and
B.F. Hanson House, CRS No. N-5225; and

Should DelDOT, in consultation with the DE SHPO and MD SHPO, redefine the Area of Potential Effect beyond the areas depicted in Exhibit B of this MOA, DelDOT shall consult with the DE SHPO and MD SHPO to identify and evaluate historic buildings, structures, and/or districts in the newly affected areas, and assess the effects of the project thereon, following the process outlined for Archaeological Resources in Stipulations I.A. and I.B of this agreement, as applicable.

DelDOT shall seek ways to avoid or minimize adverse affects in the design of the Project, such as, but not limited to decreasing grades, creating cuts, or otherwise manipulating the elevation of the roadway and ramps, where deemed appropriate.

When adverse effects can not be avoided in the design, DelDOT shall develop in consultation with the FHWA, DE SHPO, and applicable properties owners, and other consulting parties as appropriate, mitigation for the adverse visual, audible, and setting impacts of the Project. This may include, but is not limited to, screening, earth berming, landscaping, fencing, or other appropriate barriers. Whenever practicable all screening or landscaping elements will be installed prior to actual construction activities.

To the degree practicable, FHWA and DelDOT will ensure that any mitigation elements installed are complementary to the surrounding environment and/or natural vegetation, without introducing additional visual effects that may be considered cumulative in nature.

In addition, as part of the public outreach efforts, DelDOT shall disseminate information on Delaware's architectural history in relationship to the Project and APE. These efforts may include, but are not limited to, pamphlets, guides, or other media that provide historical

information in the Project Area or describe National Register listed or eligible historic properties identified for the Project.

III. Disposal of Project Related Materials

DelDOT shall consult with the DE SHPO or the MD SHPO concerning the location for disposal of materials produced by any demolition, construction, excavation, and/or dredging. Upon the provision of adequate information, the DE SHPO or MD SHPO will have 30 days to review all such locations to ensure the disposal will not adversely affect historic properties. DelDOT shall not use any such locations if the DE SHPO or MD SHPO objects to proposed disposal sites.

IV. Review of Project Related Plans

DelDOT shall provide relevant sections of preliminary, semi-final, and final project plans to the DE SHPO, MD SHPO, and any other party deemed appropriate for review and comment. Upon circulation and assurance that relevant sections have been distributed, the DE SHPO, MD SHPO, and any other reviewing party will have 30 days to provide comments. DelDOT shall take into account any comments.

V. Subsequent Changes to the Project

A. If subsequent to the implementation of Stipulation IV, if DelDOT proposes any significant changes to the Project affecting location, design, methods of construction, materials, or relative footprint of the Project, DelDOT shall provide FHWA, DE SHPO, MD SHPO, and any other party deemed appropriate with information concerning the proposed changes. The DE SHPO, the MD SHPO, and any other party deemed appropriate will have 30 days from the receipt of this information to comment on the proposed changes. DelDOT shall take into account any comments, prior to implementing such changes.

VI. Administrative Stipulations

A. Personnel Qualifications

All cultural resource work carried out pursuant to this agreement will be by or under the direct supervision of a person or persons meeting at a minimum the "Secretary of the Interior's Standards and Guidelines" (http://www.cr.nps.gov/local-law/Arch_Standards.htm), formerly 61 CFR Appendix A.

DelDOT's Environmental Studies personnel will have direct authority to choose and authorize any qualified cultural resource management firms or subconsultant to carry out this work on an as-needed basis throughout the duration of the Project.

B. Survey and Data Recovery Standards

DelDOT shall ensure that all cultural resource surveys and data recovery plans conducted pursuant to this Agreement are done in accordance with the *Secretary of the Interior's Standards and Guidelines for Identification and Evaluation*, and for *Archaeological Documentation*, and in accordance with the DE SHPO's *Guidelines for Architectural and Archaeological Surveys in Delaware* (1993) or the MD SHPO's *Standards and Guidelines for Archeological Investigations in Maryland* (Shaffer and Cole 1994), as applicable.

Survey proposals and data recovery plans shall include a research design that stipulates: objectives, methods, and expected results; production of draft and final reports; and preparation of materials for curation in accordance with Stipulation I.E., including budgeting for initial conservation assessments and treatment. Additional requirements for data recovery plans are found in Stipulation I.B. of this Agreement.

All data recovery plans shall also take into account the Advisory Council on Historic Preservation's guidance *Recommended Approach for Consultation on Recovery of Significant Information from Archaeological Sites*, and reports will meet professional standards set forth by the Department of the Interior's "Format Standards for Final Reports of Data Recovery Program" (42 FR 5377-79).

All data recovery plans, public outreach, or future consultation shall also follow and/or consider any supplemental guidance and provisions provided by, but not limited to, the American Association of State Highway Transportation Officials, FHWA, Transportation Research Boards, National Park Service, Advisory Council on Historic Preservation or recognized academic journals or professional organizations as identified by DelDOT and/or the SHPOs.

DelDOT shall ensure that all draft and final cultural resource reports are provided to the FHWA and appropriate SHPO within two (2) years of the completion of fieldwork.

C. Late Discoveries

If any unanticipated discoveries of cultural resources are encountered during the implementation of this undertaking, DelDOT shall immediately suspend work in the area of the discovery, and FHWA shall comply with 36 CFR Part 800.13 by consulting with the DE SHPO or MD SHPO. The FHWA will notify the DE SHPO or MD SHPO within one working day of the discovery. The FHWA, DelDOT, and the DE SHPO or MD SHPO will meet at the location of the discovery

within forty-eight (48) hours of the initial notification to determine appropriate treatment of the discovery prior to resumption of construction activities within the area of discovery.

D. Amendments

Any party to this MOA may propose to FHWA that it be amended, whereupon FHWA shall consult with the other parties to this MOA to consider such an amendment. 36 CFR Part 800.6(c)(7) shall govern the execution of any such amendment.

E. Resolving Objections

1. Should any party to this MOA object in writing to FHWA regarding any action carried out or proposed with respect to the Project or implementation of this MOA, FHWA shall consult with the objecting party to resolve the objection. If after initiating such consultation FHWA determines that the objection cannot be resolved through consultation, FHWA shall forward all documentation relevant to the objection to the Council, including FHWA's proposed response to the objection. Within thirty (30) days after receipt of all pertinent documentation, the Council shall exercise one of the following options:

- a. Advise FHWA that the Council concurs in FHWA's proposed response to the objection, whereupon FHWA shall respond to the objection accordingly;
- b. Provide FHWA with recommendations, which FHWA shall take into account in reaching a final decision regarding its response to the objection; or
- c. Notify FHWA that it will comment pursuant to 36 CFR 800.7(a) and proceed to comment. Any Council comment provided in response to such a request will be taken into account by FHWA in accordance with 36 CFR 800.7(c)(4).

Should the Council not exercise one of the above options within thirty (30) days after receipt of all pertinent documentation, FHWA may assume the Council's concurrence in its proposed response to the objection.

FHWA shall take into account any Council recommendation or comment provided in accordance with this stipulation with reference only to the subject of the objection; FHWA's responsibility to carry out all actions under this MOA that are not the subjects of the objection shall remain unchanged.

F. Resolution of Objections by the Public

At any time during implementation of the measures stipulated in this MOA, should any objection pertaining to any such measure or its manner of implementation be raised by a member of the public, FHWA shall notify the parties of this MOA and take the objection into account consulting with the objector and, should the objector so request, with any of the parties to this MOA to resolve the objection.

G. Review of Implementation

FHWA, DelDOT, DE SHPO and MD SHPO shall review the project annually, to monitor progress of the implementation of the terms of this MOA. This review should occur in January of each year following execution of the MOA.

H. Duration of the Agreement

This MOA shall be null and void if its terms are not carried out within six (6) years from the date of its execution. Within six months of the end of this period, the FHWA may request in writing that the signatories consider an extension of this MOA. Should all parties deem an extension to this MOA necessary, such extension shall be treated as an amendment under Stipulation VI.D. above. No extension or amendment will be effective unless all signatories to the MOA have agreed to it in writing.

I. Termination

1. If FHWA determines that it cannot implement the terms of this MOA, or the DE SHPO, or the MD SHPO determines that the MOA is not being properly implemented, FHWA, DelDOT, the DE SHPO, or the MD SHPO may propose to the other parties that this MOA be terminated.

2. The party proposing to terminate this MOA shall so notify all parties to this MOA, explaining the reasons for termination and affording them at least thirty (30) days to consult and seek alternatives to termination. The parties shall then consult.

3. Should such consultation fail, FHWA, DelDOT, DE SHPO, or the MD SHPO may terminate the MOA by so notifying all parties in writing.

4. Should this MOA be terminated, FHWA shall either:

a. Consult in accordance with 36 CFR Part 800.6(a)(1) to develop a new MOA; or

- b. Request the comments of the Council pursuant to 36 CFR Part 800.7(a)(1). The Council shall have forty-five (45) days to respond with comments.

5. FHWA and the Council may conclude the Section 106 process with an MOA between them if the DE SHPO and/or the MD SHPO terminates consultation in accordance with 36 CFR Part 800.7(a)(2).

Execution of this MOA by FHWA, DE SHPO, MD SHPO and DelDOT and the implementation of its terms, evidence that FHWA has taken into account the effects of the Project on historic properties.

FEDERAL HIGHWAY ADMINISTRATION

By: _____ Date: _____
Robert Kleinburd

DELAWARE STATE HISTORIC PRESERVATION OFFICER

By: _____ Date: _____
Timothy Slavin

MARYLAND STATE HISTORIC PRESERVATION OFFICER

By: _____ Date: _____
J. Rodney Little

DELAWARE DEPARTMENT OF TRANSPORTATION

By: _____ Date: _____
Robert Taylor