

## **VI. Assessment of Effect and Proposed Mitigation**

For each archaeological site within the APE that was identified as being eligible for listing on the National Register of Historic Places, the effect of the proposed project on that resource was assessed. An effect to an eligible historic property may occur when there is alteration to the characteristics of a historic property qualifying it for inclusion in or eligible for the National Register of Historic Places, as defined in 36 CFR § 800.16(i). If the project is determined to have an effect on an eligible or potentially eligible resource, then the Criteria of Adverse Effect (36 CFR § 800.5) is applied. 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.

The portions of 7NC-B-11 and 7NC-B-54 that are located within the APE for this project will be destroyed by the proposed construction project. Therefore, the project will have an adverse effect on both of these National Register eligible sites.

### **A. The Weldin Plantation Site (7NC-B-11)**

Archaeological data recovery is recommended to mitigate the adverse effect that the project will have on 7NC-B-11. The recommended data recovery involves a combination of intensive background research and archaeological excavations.

This work will be designed to meet the requirements of all applicable federal and state mandates that apply to the project, as well as Stipulation VII.A of the Memorandum of Agreement executed for the project. Federal mandates for cultural resources protection include: The United States Department of Transportation Act of 1966 as amended; the National Environmental Policy Act of 1966; the National Historic Preservation Act of 1966 as amended; Executive Order 11-593; the Archaeological and Historic Preservation Act of 1974. This work will be performed in accordance with the Delaware State Historic Preservation Office's *Guidelines for Architectural and Archaeological Surveys in Delaware* (October 1993 as amended) under the supervision of an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards.

The following mitigation plan was developed in April of 2003 in consultation with DelDOT, FHWA, and the Delaware SHPO.

#### **1. Background Research**

Additional background research will be conducted to develop a context in which to discuss the data recovered from the site. The background research will consist of gathering data about similar archaeological sites in Delaware and on the Piedmont in adjacent states as well as information about farming during the period of occupation of the site. The research questions

pertain to landscape use and socioeconomic phenomena. The additional research will be geared toward obtaining information about these topics in this region during the eighteenth and nineteenth centuries. Additional research will be conducted about the Weldin family and this property, and will include examination of newspapers, property inventories, court records (orphans court, wills, marriage/birth records). Oral interviews of Weldin descendants or individuals who remember the property during the early part of the twentieth century will be attempted. Appropriate reference documents will be utilized and will be include, but not be limited to, “Dwellings of the Rural Elite” and “Agricultural Buildings and Complexes of Mill Creek Hundred”.

## **2. Recordation of Above Ground Foundations**

The existing above ground foundations will be recorded using photographs and sketches by Watson & Henry prior to any stabilization or removal of the foundations. Watson & Henry will provide an informal recordation report, based on the DE SHPO’s *Delaware Guidelines for Documentation of Historic Properties as an Mitigation of Adverse Effect under Section 106 of the NHPA*. The purpose of this work is to recover information that may be relevant to research topics in areas of the site directly affected by the construction. The information and graphics derived from this work could also be useful in developing public outreach materials.

## **3. Archaeological Field Work**

The project will impact approximately 22,690 square feet (~6916 square meters) of the archaeological site. Structure A will be destroyed during construction, while the other structures will not be directly impacted. It has not yet been determined if Structure A will be reconstructed or how it will be interpreted after construction is completed. The portion of the site that will be impacted contains the majority of the contexts of the site with eighteenth century TPQs. The majority of the contexts that date to the eighteenth century are under strata that date to the nineteenth century. Therefore, there is the opportunity to obtain data from both centuries.

It is anticipated that 30 3x3 foot test units will be excavated in the portion of the site that will be impacted by the project. Each 3x3 test unit will be excavated by natural strata. All soils recovered from these tests will be screened through ¼ inch hardware cloth, and all artifacts will be segregated by stratigraphic context. Drawings will be made of all stratigraphic tests, and representative stratigraphic profiles will be included in any reports. Photographs will be taken as per the Delaware SHPO’s *Guidelines for Architectural and Archaeological Surveys*.

The field work has been designed to focus on the areas of the site which appear to contain intact eighteenth century contexts.

Proposed placement of first twenty units at the Weldin Site:

- (1) Expand TUs 5 and 6 into a 3x2 block – 4 units
- (2) Expand TUs 1 and 2 into a 2x2 block – 2 units
- (3) Expand TUs 11 and 12 into a 2x2 block – 2 units
- (4) Expand TU 9 and 10 into a 2x2 block – 2 units

- (5) Expand TUs 7 and 8 into a 2x2 block – 2 units
- (6) Expand TU 13 into a 1x2 block – 1 unit
- (7) Place a TU near STP 49 – 1 unit
- (8) Place a TU near STP 14 – 1 unit
- (9) Place a TU near STP 29 – 1 unit
- (10) Place a TU near STP 50 – 1 unit
- (11) Place a TU along the exterior of the north wall – 1 unit
- (12) Place two TUs within the interior of the newer part of the building - 2 units

The other ten units will be placed as seems appropriate based on the results of the previous excavations. The decision on placement of the additional units will be made in consultation with DelDOT, the Delaware SHPO, and DNREC.

#### **4. Laboratory Analysis**

The analysis of the recovered artifacts will focus on the interpretation of the assemblage regarding the socioeconomic stature of the inhabitants of the site during the different occupations of the site. The analysis will include, but not be limited to, mapping of artifact distributions, mapping and discussion of artifact patterning, and information concerning use and change in use on different areas of the site.

Flotation samples will be taken and processed from excavated features. Floral and faunal analysis will be completed for all floral and faunal materials recovered by experts in those fields.

All artifacts will be processed, inventoried, catalogued and analyzed as per *Guidelines for Architectural and Archaeological Surveys in Delaware*, Delaware State Historic Preservation Office, October 1993 and *Curation Guidelines and Standards for Archaeological Collections*, Delaware State Museums, ca. 1997. The Delaware State Museum will be consulted concerning any unusual or fragile artifacts which might need specialized processing or stabilization.

An archaeologist from MTA will visit the Delaware State Museum to examine the collection of artifacts and associated paperwork from the Phase I survey completed by Thunderbird Archeological Associates. This data will be incorporated into MTA's analysis.

Per Stipulation VII.D of the MOA, the archaeological artifacts and all records generated from this data recovery will be curated at the Delaware State Museum. MTA will transfer this material to the Delaware State Museum after the final data recovery report is concurred upon by DelDOT and the SHPO.

#### **5. Stabilization of Existing Foundations**

The stabilization of the foundations for Structures B, C, and D and the Barnyard Complex will be part of the mitigation for the site. This stabilization will be completed by Watson & Henry; they are currently completing a proposal and scope of work. MTA will not be involved in this work. In addition, an evaluation will be made of the foundations to determine if they are likely to be impacted by vibration during construction. Coordination will occur with the Delaware

Department of Natural Resources and Environmental Control to determine how much stabilization is appropriate.

## **6. Technical Report Preparation**

Brief management summaries will be prepared for distribution to DelDOT, the Delaware SHPO, and DNREC for review when consultation is required to determine the need for additional testing. The summaries will include sufficient information to evaluate the progress of the data recovery and determine if adequate work has been completed.

A technical Data Recovery report will be prepared which will document the field work and laboratory analysis and discuss the significance of the site. The document will contain an abstract, introduction, project location and general description, results of background research, research goals and design, field methodology, field results, artifact description and analysis, interpretations, significant information the site has contributed, references, and appropriate mapping, photographs, figures, and appendices. The report will also be provided in a format so that it can be available on DelDOT's website.

## **7. Public Involvement and Outreach**

Six open house days will be scheduled while the excavations are in progress. The general public and/or specific groups will be invited to the site for a tour and hands-on assistance.

Information which interprets the significance of the site will be prepared and distributed in a publicly accessible manner. This information would be disseminated by one or more of the following means: exhibits/display boards at public locations; resource information brochure(s)/booklets; lesson plan/slide or video presentation that can be used by schools and other appropriate interested groups and organizations; posters; DelDOT's website; and/or presentations at local schools or meetings for interested groups. The specific appropriate public outreach will be developed in consultation with the Consulting Parties and other interested members of the public.

## **8. Monitoring of Structures B, C, D, and the Barn Complex**

The foundations will be evaluated by a structural engineer prior to project construction. MTA will not be directly involved in the monitoring. Portions of the free standing walls may have to be removed for safety reasons. The structural engineer will monitor the foundations during construction to ensure that they are not damaged. An evaluation will be conducted after construction. If any damage occurred due to vibration or other project related activities, coordination will occur among the consulting parties to determine the appropriate course of action.

## **9. Monitoring of Removal of Weldin Road**

An archaeologist from MTA will be present during the removal of existing Weldin Road to document any archaeological features or artifacts that are identified. If archaeological resources are identified, DelDOT will determine, in consultation with the SHPO, how to proceed.

Archaeological data recovery is also recommended to mitigate the adverse effect that the project will have on 7NC-B-54. The mitigation plan for that site will be developed by the archaeological consultants undertaking the Phase III excavations.

### **B. The Ronald McDonald House Site (7NC-B-54)**

Archaeological data recovery is recommended to mitigate the adverse effect that the project will have on 7NC-B-11. DelDOT and FHWA will consult with the SHPO to develop an appropriate methodology for the data recovery.