

- b) All locales with standing structures (Appendix III and Attachment II) should be assessed for associated historic archaeological deposits. Furthermore, the structure and associated archaeological deposits should be considered as a single cultural resource, not as two unrelated phenomena.
- c) The potential standing structure site locations (Appendix IV and Attachment III) where structures are no longer extant or replaced by later structures should be treated as potential historic archaeological sites and should be evaluated for archaeological remains.
- d) Areas denoted as having a high probability for historic sites dating from 1630-1830 should be checked for archaeological deposits after the completion of archival research to document precise settlement locations. Remaining areas within specific alignments can be surveyed for historic sites as part of the general fieldwork that will search for both historic and prehistoric sites.
- e) Alignments with areas identified as High or Medium probability zones for prehistoric sites should be carefully checked during the Phase I survey. Low probability areas should also be surveyed; however, it may not be necessary to completely survey all low probability zones. It is suggested here that a non-proportional stratified sample could be used in some project areas during the Phase I survey. Prior to the beginning of Phase I survey fieldwork, the sampling design can be agreed upon in consultation with the DelDOT Archaeologist and engineers and the staff of the Delaware Bureau of Archaeology and Historic Preservation. The result would be substantial savings in time and money.
- f) The site data in Appendices I through V have been entered into a computerized data base and be cross-tabulated and sorted by individual variables or combinations of variables. The cross-tabulations can be used to assess the uniqueness of certain classes of cultural resources (see Tables 6 - 10).

In conclusion, this report has documented the known and potential cultural resources of the project area and outlined management considerations for use in project planning. Predictive models provide a guide to the archaeological potential of the study area for the prehistoric period and early historic times. The data compiled in this report, especially the historic data for the period from c. 1830 to c. 1910, is very comprehensive for agricultural sites because of the excellent map coverage available for New Castle County. The data base can be used to develop and test historical and geographic models of settlement and farm economy. The time between 1830 and 1910 includes the transportation revolution that saw the development of canal, railroad, and ultimately modern highway systems. Therefore, the data, maps from which they were drawn, and other associated documents provide a resource in and of themselves for historic and archaeological research into this important time of economic and landscape development.

CULTURAL RESOURCES OF ROUTE 301 CORRIDOR OPTIONS

Corridor options within the larger study area were divided into segments that can be linked together to form the various corridor possibilities. The Reconstruction option comprises 10 segments that provide two route alternatives (Figure 37). The Northeast options - north of the C&D Canal, and the Ridge option - south of the C&D Canal, were divided into 13 segments that provide four route alternatives (Figure 37). Herein combinations of the Northeast and Ridge segments are referred to as the Ridge option. Archaeological data are listed by corridor segment in Appendix VI. The cultural resources within each of the six possible routes comprising the two major corridor options are also listed in Appendix VI. The data were excerpted from Appendices I-V. The six Route 301 corridor alternatives are discussed below. Individual properties of historical significance are discussed and the implications of predictive models are considered also.

TABLE 43

SUMMARY OF CULTURAL RESOURCES FOR OPTIONS

Corridor Option	Prehist. Archaeo. Sites	Historic Archaeo. Sites	Standing Struct.	Uninv. Stand. Struc.	Poten. Hist. Sites	Totals
Ridge 1	8	2	8	11	10	39
Ridge 2	9	2	6	10	10	37
Ridge 3	19	1	4	7	8	39
Ridge 4	9	1	6	8	8	32
Recon. 1	9	2	30	17	29	87
Recon. 2	9	2	19	15	23	68

* See Appendix VI for a listing of the Corridor segments shown on Figure 37 that comprise each Corridor option.

ARCHAEOLOGICAL ASSESSMENT OF CORRIDOR OPTIONS

Known and Potential Cultural Resources

In general the Ridge corridor option encounters fewer known and potential cultural resources than the Reconstruction option (Table 43). Route 896 has been a major north-south transportation route in western New Castle county for over 200 years. Therefore, there are many historic houses and farms close to the road. This is clearly reflected in the numbers of Standing Structures recorded in the BAHF files. The number of structures with CRS numbers is especially large for the Reconstruction 1 option which follows present Route 896 from I-95 to Middletown. The second Reconstruction option avoids a number of historic sites when it deviates from existing Route 896 south of Summit and Mt. Pleasant.

North of the C&D Canal prehistoric sites have been documented and studied by several projects. The majority of sites encountered by the several Route 301 corridor options were recorded during studies of the Route 896 corridor (Lothrop, Custer, and De Santis 1987) and the Old Baltimore Pike corridor (Catts, Hodny, and Custer 1989). The potential for encountering other prehistoric sites is seen in the Ridge 3 corridor option (Table 43). A recent survey by Varisco and Custer (1992) found a cluster of prehistoric archaeological sites on the flood plain of the Christina River.

The prehistoric archaeology of the area south of the C&D Canal is poorly known. No prehistoric archaeological sites were encountered in any of the corridor options south of the C&D Canal. The potential impacts of the Route 301 corridor options on prehistoric archaeological sites are discussed in more detail below in the section on the predictive models.

Significant Cultural Resources

The majority of the known prehistoric archaeological sites within any of the Route 301 corridor options are no longer culturally significant, because they have been previously studied and evaluated and few are extant or intact.

The major exception is the cluster of sites recently located along the Christina River (Varisco and Custer 1992). Those prehistoric archaeological sites have not been adequately studied to assess their significance; however, their potential to yield significant archaeological information is high because they have not been plowed (Varisco, personal communication).

The historic archaeological sites that fall within the corridor options are also no longer archaeologically significant. With few exceptions historic archaeological sites are assigned numbers after they have been discovered and investigated. Therefore, no significant remains are present at these localities.

The corridor options encounter several properties listed on the National Register of Historic Places. In Segment NRE-3 (see Appendix VI) two properties are encountered - N422, the New Castle and Frenchtown Railroad bed, and N3986, a nineteenth century brick house and farm complex that shows on Beer's 1868 atlas as "C. Boulden". The New Castle and Frenchtown Railroad, the first commercial railroad in the U.S. to be abandoned, began operations in 1832 with horse drawn carriages. The bed was abandoned after the Philadelphia, Wilmington, and Baltimore line became operational with a bridge over the Susquehanna River. The section encountered by the Route 301 corridor was destroyed when Route 896 was dualized. Intact sections of the railroad bed exist east of the Route 301 corridor.

Two other National Register sites are encountered by Segment SRE-5 (See Appendix VI) near Middletown - N113, Rumsey Farm built around 1854, and N5225, the B. F. Hanson frame house built before 1868. In addition, Segment NRE-1 passes across a corner of the Cooches Bridge National Register Historic District.

The archaeological potential of other BAHP Standing Structures is speculative, but the earlier the occupation of a locality the more significant it is. The Potential column in the listings suggests the possibility that a site is relatively undisturbed by later activities. Thus, a high potential site has been little impacted by modern development and construction.

The significance and potential of Uninventoried Standing Structures and Potential Historic Archaeological Sites is more speculative than for BAHP Standing Structures. These sites have been identified only by studies of historic maps. Field studies will be necessary to determine the exact locations of these sites and their characteristics. The archaeological significance and potential of the localities listed in Appendix VI were based on the age and type of site, and the amount of modern development in the area.

Prehistoric Predictive Modeling Results

Figure 38 shows the Route 301 corridor options overlain on the prehistoric predictive zones. The Reconstruction option north of the C&D Canal crosses relatively large expanses of High Probability zones; however, the majority of those areas have been previously evaluated for the dualization of Route 896 (Lothrop, Custer, and De Santis 1987). Fifteen archaeological sites were found between Route 4 and the Summit Bridge approach. Eight of these sites were test excavated. Three of the sites were recommended for further research which has been completed. Results of excavations at the Thomas Williams historic site were reported by Catts and Custer (1990). Reports on the Brennan prehistoric site (7NC-F-66), and the Cazier Tenancy historic site (7NC-F-64) are pending. The Route 301 study corridor is four times wider than the area surveyed for the Route 896 study, so there is added potential for intersecting archaeological sites. All of the prehistoric sites found during survey of the Route 896 corridor were within 200 feet of a water course (Lothrop, Custer, and De Santis 1987:189). The predictive model developed for the Route 301 report considers High probability zones as areas within 500 feet of a water course; therefore, the High Probability zone is generous.

A significant portion of the Reconstruction route north of the C&D Canal runs along the mid-peninsular drainage divide on relatively high ground and thus avoids the poorly-drained soils that abound in the western half of the Route 301 study area. The soils are considered potentially attractive to past settlement as wetlands or fresh water sources. The Ridge options north of the C&D Canal, however, crosses wide areas characterized by a mosaic of wet and dry soil types. These areas have a high probability of prehistoric use and occupation. The various segment options of the Ridge route also cross the Christina River that is considered a High probability zone. The

proof of this is in the number of prehistoric sites encountered in a recent survey of the Christina River (Varisco and Custer 1992). A series of sites were discovered on the flood plain of the streams. Segment NE-3 falls across the densest cluster of sites located by Varisco and Custer (1992). Prehistoric sites can be expected at nearly every stream crossing along any of the corridor options.

The area south of the C&D Canal is very poorly known from an archaeological perspective. Only very limited systematic survey has been conducted in areas crossed by the corridor options considered here. The prehistoric predictive model suggests that the Ridge option will encounter fewer archaeological sites than the Reconstruction options. The Ridge corridor follows the higher ground along the mid-peninsular drainage divide and skirts most of the drainages in the area. The Reconstruction options pass closer to drainages and areas of wet/dry soil mosaic that are considered High probability zones.

Historic Predictive Modeling Results

Two historic predictive models were developed based on distances to navigable drainages and the contemporaneous road network. The first model applies to historic occupations prior to 1730 which DeCunzo and Catts (1990) define as the period of "Exploration and Frontier Settlement." North of the C&D Canal no High probability areas are encountered by any of the corridor alternatives. Very little is known about settlement during this period, so the predictive model is probably conservative. However, early historic sites are most likely near the major water courses in the area, such as the Christina River.

Just north of the C&D Canal Segment NRE-3 intersects one of the earliest inland transportation routes in the study area which follows the present Route 301 leading from Red Lion to Summit, but this area has already received some archaeological attention (eg., Lothrop, Custer, and De Santis 1987). Furthermore, south of the C&D Canal the Route 301 corridor uses the existing Route 896 Summit Bridge and approaches.

South of the C&D Canal the Reconstruction options do not follow the earliest roads in the area until approaching Middletown. The Ridge option, however, follows the Old Choptank Road, a route established in the seventeenth century, for several miles. This area was assigned a Medium probability for historic occupation. The potential exists for historic sites that would have been on the ill-defined border between Maryland and Delaware. Sites dating to the period before 1730 would be very significant because they are rare in Delaware.

For the period prior to 1770, the Historic predictive model includes the present Route 896 as a Medium Probability zone. North of the C&D Canal the Ridge options crosses Old Baltimore Pike which was established shortly after 1730. Archaeological research has been undertaken for the dualization of Old Baltimore Pike (Catts, Hodny, and Custer 1989). Segments NE-1 and NE-2 of the Route 301 Ridge option cross Old Baltimore Pike Segment 2 (Catts, Hodny, and Custer 1989:66). Only the Dehorty historic site (7NC-D-124), which falls within Route 301 Ridge segment NE-1, was found to be significant. The Dehorty site was excavated in the winter of 1992.

South of the C&D Canal Reconstruction segment SRE-4 strays from the present Route 896 and crosses a Low probability zone in the Pre-1770 Historic Predictive model. Both the Ridge and remaining Reconstruction options follow Medium probability zones for Historic sites. The probability of encountering historic sites dating after 1770 is reflected in the numbers of Inventoried Standing Structures, Uninventoried Standing Structures, and Potential Historic Archaeological sites included in the listings here.

SUMMARY AND CONCLUSIONS

Two major options for the proposed Route 301 corridor have been considered - the Route 896 reconstruction and the Ridge option. Minor variations result in a total of six corridor alternatives - two for the Reconstruction option, and four for the Ridge option. In general the Ridge option encounters the fewest known cultural resources. Ridge option number 4 impacts the least number of known or suspected cultural resources.

North of the C&D Canal both corridor options follow existing Route 896 for a substantial distance. The Route 896 corridor was previously evaluated and impacts to the archaeology of the corridor were mitigated (Lothrop, Custer, and De Santis 1987). If the Route 301 reconstruction does not deviate beyond the bounds of the area included in the earlier study, then no further impact on cultural resources will be expected. However, further research may be required if the Route 301 reconstruction extends beyond the Route 896 right of way.

South of the C&D Canal the Reconstruction options encounter a substantial number of historic properties and potential archaeological sites. In addition, the Reconstruction corridors cross more area considered as High probability zones for prehistoric archaeological sites than does the Ridge option. The Ridge option does follow an early transportation route for some distance where there is a Medium probability for historic archaeological sites dating prior to 1730.