



Corridor Cities Transitway

Montgomery County, Maryland

Phase I Archeological Survey Technical Report

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ABSTRACT

A Phase I Archeological Survey was conducted for the Corridor Cities Transitway (CCT) project in Rockville and Gaithersburg, Maryland. The CCT project consists of a Bus Rapid Transit (BRT) system extending nine miles between the Shady Grove Metrorail Station in Rockville, Maryland, and Metropolitan Grove, a MARC station located northwest of Gaithersburg, Maryland. The transitway would primarily be surface running with grade-separated crossings of selected roadways at busy intersections as well as over the CSX railroad near Metropolitan Grove. The archeological Area of Potential Effects (APE) consists of the construction Limits of Disturbance (LOD) for the project. The survey was performed by the cultural resources staff at Rummel, Klepper & Kahl, LLP (RK&K) in September to December 2013, a February 2014 and July 2014 for the Maryland Transit Administration (MTA). The primary goal of this investigation was to locate and identify any archeological resources that may be affected by the proposed undertaking.

The archeological survey documented the remains of both prehistoric and historic activity within the APE. Parcel M-04 contains Site 18MO720, outbuilding foundations and deposits associated with the late-nineteenth- to late-twentieth-century activities of the Warfield farmstead. Due to the disturbed context of the artifacts, the limited date range for the bulk of the artifact assemblage, the limited research potential of the foundations, and the limited area of investigation, Site 18MO720 is unlikely to contribute new research into late nineteenth- to early twentieth-century farmsteads in Montgomery County. Subsequent changes to the project alignment resulted in the project APE avoiding Site 18MO720. As such, no impacts will occur to Site 18MO720. Parcel M-10 exhibits Site 18MO722, a lithic artifact concentration indicative of short duration tool manufacturing and/or maintenance activity. Based on the disturbed context of the artifact assemblage, the low density of the artifact assemblage, and the absence of diagnostic tool forms or intact cultural deposits, Site 18MO722 is unlikely to provide new information concerning patterns of Late Archaic activity in the Maryland. Site 18MO723, recorded in parcels M-16 and M-19, represents a cluster of late nineteenth- to twentieth-century domestic and architectural refuse associated with disposal activities from a structure located beyond the APE. The disturbed context of the artifacts, limited date range with the artifact assemblage, and lack of features prohibits defining the period(s) of artifact deposition and function of these artifacts with the nearby structure. Parcels M-50 and M-51 yielded Site 18MO725, a scatter of late-nineteenth- to mid-twentieth-century domestic, architectural and personal classes of artifacts associated with two tenant houses on the Belward Farm House farm complex, as well as a prehistoric component associated with a brief episode of tool manufacture/maintenance. The lack of subsurface features and scattered artifact distribution shows little or no potential to provide information important in history.

The Phase I archeological survey for the CCT project concluded that the proposed undertaking will have no impacts to significant archeological resources. Based on the results of the Phase I archeological survey, no further archeological investigation is recommended for this project.



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I. INTRODUCTION

This technical report presents the detailed analysis of the archeological resources affected by the alternatives being considered for the Corridor Cities Transitway (CCT) Project. A Phase I Archeological Survey was conducted within the proposed limits of disturbance for the CCT project, located in Gaithersburg, Montgomery County, Maryland.

A. Project Purpose and Need

1. Purpose

The purpose of the Corridor Cities Transitway is to provide enhanced transit service in the I-270 corridor in Montgomery County. The CCT project would provide the following in the study area corridor, which extends from the Metropolitan Grove MARC Station to the Shady Grove Metrorail Red Line Station (refer to **Appendix B, Figure 1**):

- Improve inter-modal connections in the corridor
- Increase transit capacity and meet transit demand
- Enhance mobility and provide congestion relief
- Support economic development and local government master plans to enhance the livability of communities in the corridor
- Improve regional air quality by increasing transit use

2. Needs

There are five specific needs to be addressed by this project:

- Lack of connections between existing transit routes (including MARC, Metrorail and the local bus network)
- Existing transit service is at or near capacity and transit demand and ridership are forecasted to grow in the future
- Roadway congestion contributes to unpredictable and slow travel times for automobiles and buses in the corridor
- Demand for managed growth and economic development in the region continues to grow in number of households and employment.
- Regional goal to improve air quality by providing alternatives to automobile usage.

B. Alternatives Evaluated

Two alternatives are being advanced for the CCT project: a No-Build and a Build Alternative. These alternatives will be evaluated and compared for their ability to address the project purpose and need and environmental impacts. These alternatives will be included in the Environmental Assessment which is being prepared pursuant to the National Environmental Policy Act (NEPA).

1. No-Build Alternative

The No-Build Alternative is the baseline against which the Build Alternative is compared. It consists of the existing road and transit network, as well as planned and programmed improvements in the approved regional plan. The No-Build Alternative represents the future conditions of transportation facilities and services in 2035 if the CCT is not built. Under the No-Build Alternative, travelers in the area would continue to rely on existing roadways, bus service, and rail stations as they are currently configured with no substantial changes. The No-Build Alternative provides a baseline by which the environmental impacts of the Build Alternative are compared.

2. Build Alternative

The Build Alternative includes Bus Rapid Transit (BRT) on the proposed CCT alignment. The transitway would primarily be surface running with grade-separated crossings of selected roadways at busy intersections as well as over the CSX railroad near Metropolitan Grove. Service on the CCT would be provided with two distinct bus routes. The CCT Direct Service route would operate between the Shady Grove and Metropolitan Grove stations of the CCT, stopping at every station along the transitway. It would operate on an exclusive, dedicated transitway. The CCT Service via Universities at Shady Grove would operate along the transitway, stopping at all stations, but would divert off the transitway to serve two additional stations using the existing roadway network.

C. Alignment Description

The proposed route of the CCT transitway would begin at Metropolitan Grove MARC Station at-grade on the south side of the CSX right-of-way, turning southbound to the west side of Quince Orchard Road before crossing to the east side of the road at the intersection of Clopper Road/West Diamond Avenue. The transitway would continue on the east side of Quince Orchard Road, crossing over to the west side of Great Seneca Highway, and continuing on the median of Muddy Branch Road. The transitway would turn east at the intersection of Muddy Branch Road and Belward Campus Drive, a proposed roadway that would run through the Belward Farm development connecting Muddy Branch Road to Johns Hopkins Drive. Continuing in the median of the Belward Campus Drive and John Hopkins Drive, the transitway would continue across Key West Avenue to the median of a new roadway proposed through the Public Safety Training Academy (PSTA) redevelopment.

The transitway would cross Great Seneca Highway onto Medical Center Drive, then turn north on Broschart Road crossing Key West Avenue to the west side of Diamondback Drive. At the intersection of Diamondback Drive/Discoverly Drive, the transitway would move into the median of Discoverly Drive. The alignment continues north through Crown Farm development, which is currently under construction along Discoverly Drive. Turning east, the transitway would continue in the proposed median of Fields Road, and then proceed east onto an aerial structure which would carry the CCT over I-270 and Shady Grove Road. Once past Shady Grove Road, the alignment would return to grade before the entrance to the Sheraton Rockville and continue in the median of King Farm Boulevard. The transitway

would cross MD 355 at-grade into the median of Shady Grove Metro Access Road. The transitway would then utilize the roadway around the existing parking lot at the Metro Station. The eastern terminus station for the CCT is the Shady Grove Station adjacent to the Shady Grove Metro Station.

The CCT Service via Universities at Shady Grove (USG) would operate along the CCT Direct Service transitway, stopping at all stations, but would divert off the transitway to serve two additional stations. This service via USG would operate as a one-way loop in mixed traffic beginning southbound on Great Seneca Highway, turning eastbound onto Darnestown Road, southbound on Traville Gateway Drive East, westbound Shady Grove Road, northbound on Traville Gateway Drive West, and northbound on Great Seneca Highway.

1. Stations

The fourteen stations for the CCT (refer to Figure 1) would be specially designed with CCT branding for easy recognition by transit users. Stations would include shelters, seating, fare machines, and both fixed and variable signage to provide customers with information on the CCT route and services as well as current operations. Safe access for pedestrians and parking for bikes would be provided at all CCT stations. The CCT would include parking at five stations: Shady Grove, Crown Farm, LSC West, Kentlands, and Metropolitan Grove.

2. Service and Operations

The CCT would feature BRT, a premium bus service operating on an exclusive transitway (separate from vehicular traffic), featuring 30 – 35 articulated, high capacity, rubber-tire modern vehicles equipped with multiple entry ways, off board fare payment and collection, and other amenities. To maintain the CCT vehicles, an operations and maintenance facility would be located near the Metropolitan Grove MARC Station. The service would be scheduled at regular intervals for predictability and utilize grade separation, transit signal priority and queue jumping at intersections where appropriate for reliability. Frequency of service would be every 6 minutes during peak periods and every 10 minutes during off-peak times for the CCT Direct Service. One-way travel time on the CCT from Metropolitan Grove to Shady Grove would be 37 minutes. For the CCT Service via Universities at Shady Grove buses would operate every 15 minutes. The BRT system would be “branded” to distinguish it as a premium transit system similar in scope and quality to light rail.

The goal of the Phase I survey is to determine the presence or absence of potentially significant archeological resources within the archeological study area. The archeological Area of Potential Effects (APE) for the CCT project is confined to the Limits of Disturbance (LOD) for the undertaking. For the purposes of the project, each parcel within the LOD was assigned a specific letter and number designation. This technical report utilizes the letter and number designations in the discussion of the archeological survey results. The cultural resources staff at Rummel, Klepper & Kahl, LLP (RK&K) performed the survey in September to December 2013 and February and July 2014. Scott A. Emory served as the Principal Investigator and principal author of the report. The Field Director for the project

was Drew Ross, with archeological field technicians Theresa Ulrich, Lily Kleppertknoop, Gideon Singer, Geri Knight-Iske, and Alex Jansen.

The following report presents the results of the archeological survey of the CCT project. Section 1.0 consists of the introduction to the report. Section 2.0 discusses the environmental setting of the study area. The survey goals and methodology for the project area is presented in Section 3.0. Section 4.0 provides an overview and analysis of the regional prehistoric and historic cultural context for the project area. The results of the archeological survey and interpretations are discussed in Section 5.0. Section 6.0 summarizes the conclusions of the undertaking.

This investigation was performed in accordance with federal and state laws that protect cultural resources. These mandates include: Section 106 of the National Historic Preservation Act of 1966, as amended; 49 U.S.C. § 470f: Protection of Historic and Cultural Resources, 36 CFR 800; the National Environmental Policy Act of 1969, 42 U.S.C §§ 4331(b)(4) and 4332; the Archeological and Historic Preservation Act of 1974, 16 U.S.C. § 469 et seq.; and the Maryland Historical Trust Act of 1985, as amended, State Finance and Procurement Articles §§5A-325 and 5A-326 of the Annotated Code of Maryland. This report follows *Standards and Guidelines for Archeological Investigations in Maryland* (Shaffer and Cole 1994) and *Standards and Guidelines for Architectural and Historical Investigations in Maryland* (Maryland Historical Trust 2000).

II. SITE CONDITIONS

The CCT project is located within the Eastern Piedmont Physiographic Province of the state (Maryland Archeological Research Unit 12, the Potomac Drainage) (see **Appendix B, Figure 2**). Schist, gneiss, gabbro, and other metamorphosed sedimentary and igneous rocks comprise the bedrock in the eastern portion of the province. The project area is underlain by Late Precambrian-age Ijamville Formation and Marburg Schist. The Ijamville Formation exhibits blue to purple phyllite and phyllitic slate, while Marburg Schist consists of a bluish-gray schist interbedded with quartzite (Maryland Geological Survey 1968, 2001). A portion of the APE in the area of Darnestown Road and Muddy Branch Road traverses the Hunting Hill Area, a zone comprising serpentinite and other ultramafic rocks.

A. Soils

Soils within the setting generally are formed in residuum, the remnants of weathered parent material, and contain high levels of fragmented rock channers from the parent material, most commonly quartz and schist. **Table 1** presents an overview of the major soil types mapped within the APE.

Gaila and Glenelg soils represent the most frequently encountered soil in the project APE. These two soil types were frequently found together, with the lower slopes assigned to the Gaila series and the more gentle uplands mapped as Glenelg soils. Both are well drained and very deep soils found in upland settings formed in residuum. Rock fragments or channers, primarily vein quartz, within the Gaila soils range between 0 to 15 percent throughout the profile. Glenelg soils tend to have a range of 0 to 35 percent of rock fragments or channers which are mostly hard white quartz and schist ranging in size from gravels to stones in size. Both soils contain a high content of mica in the substratum which causes the soils to feel slick or silty.

Baile, Glenville and Hatboro soils are typically encountered within drainage swales or along the floodplains. These poorly drained soils are formed within alluvium derived from parent residuum. Baile and Glenville soils are associated with upland depressions and foot-slopes, whereas the Hatboro soils are more frequently found within nearly flat floodplains.

The Brinklow-Blocktown soils are very similar moderately deep well drained soils found along ridges and slopes of the dissected Piedmont Plateau. Brinklow soils are commonly associated with more moderate slopes (0-45%), while Blocktown soils are found on steeper slopes (0-60%) and contain a higher range of rock fragments within the profile. Blocktown soils may contain up to 50 percent rock fragments within the A horizon and up to 90 percent in the B- and C-horizons, compared to the end range in the Brinklow soils, up to 35 percent within the A- and B-horizons and 50 percent with the C-horizon.

Chrome-Conowingo soils are formed in the residuum of rock material, however a significant difference is that both Chrome and Conowingo soils are derived from serpentine. Chrome soils are moderately deep, well drained soils compared to the deep, moderately well to

Table 1: Soils Mapped within Project APE

Soil Type	Geographic Setting	Hydrology	Location Within APE
Baile	Upland depressions and footslopes in northern Piedmont Plateau	Poorly drained	Eastern segment; along an unnamed tributary of Muddy Branch near Decoverly Drive; Long Draught Branch
Brinklow (a)	Ridges and side slopes of dissected landscapes in Piedmont Plateau	Well drained	Great Seneca Highway south of Muddy Branch
Blocktown (a)	Ridge crests and slopes of dissected Piedmont Plateau	Well drained	Great Seneca Highway south of Muddy Branch
Chrome (b)	Nearly level to steep convex uplands of Northern Piedmont Plateau	Well drained	East of Muddy Branch Road and north of Key West Avenue
Conowingo (b)	Nearly level to sloping soils in well dissected uplands the Piedmont Plateau	Moderately well to somewhat poorly drained	East of Muddy Branch Road and north of Key West Avenue
Gaila	Nearly level to very steep uplands of the Northern Piedmont Plateau	Well drained	North of CSX railroad, east of Quince Orchard Road, along Great Seneca Highway at Muddy Branch, east of Muddy Branch Road
Glenelg	Nearly level to very steep uplands of the Northern Piedmont Plateau	Well drained	
Glenville	Upland flats, foot-slopes, or near the heads of drainages	Moderately well to somewhat poorly drained	East of Quince Orchard Road
Hatboro	Nearly level flood plains	Poorly drained	Along Great Seneca Highway at Muddy Branch
Travilah	Broad convex ridges of the Piedmont Plateau	Somewhat poorly drained	South of Key West Avenue

Source: USDA-NRCS 2013; types a and b were grouped together into a single mapping unit by the USDA

somewhat poorly drained Conowingo soils. Chrome soils can be found on slopes up to 45 percent in contrast to the relatively gentler range of up to 15 percent for Conowingo soils. While the difference in the percentage of rock material found in each soil type is not significant, Conowingo soils tend to contain concretions and fine gravels, attributed to soil's hydro-morphology and drainage.

Travilah soils are similar to Chrome and Conowingo soils, in that all three soils are found in upland settings and formed in serpentine residuum. All three are also geographically associated. Unlike the well-drained Chrome soils, Travilah soils tend to be somewhat poorly drained and are found within 0 to 15 percent slopes.

B. Environmental Setting

The western portion of the APE between the Metropolitan Grove rail station and Quince Orchard Road is located within a gently rolling upland setting overlooking a small tributary of Great Seneca Creek to the north (see **Appendix B, Figures 3 and 4**). Roadway construction, housing developments, business parks, and industrial operations have significantly altered the landscape, save for a few small scattered parks or greenspaces maintained for recreational use. Browns Station Park, a large recreational area maintained by the City of Gaithersburg near the Quince Orchard interchange for I-270, contains a variety of older growth trees and understory vegetation associated with the upland and wetland settings found in the area (see **Appendix B, Figures 5 and 6**). The APE generally follows the south side of the CSX Railroad to a point just west of Quince Orchard Road, at which point the APE turns to the south and follows the western edge of Quince Orchard Road (see **Appendix B, Figure 7**). At Metropolitan Grove Road, the APE extends across the CSX tracks and encompasses portions of privately-owned lots located along the west side of the road, as well as a portion of Browns Station Park, all part of the proposed Operations and Maintenance Facility. In addition, a narrow section of the APE extends approximately 322.0 meters (1,058.0 ft) to the west along the north side of the CSX railroad.

The section of the APE following Quince Orchard Road from the CSX railroad to Great Seneca Highway features gently rolling to flat upland setting. Extensive residential and commercial development lines the corridor (see **Appendix B, Figures 8 and 9**). Pockets of wooded ground dot the suburban setting, however these wooded areas likely represent landscaped plantings associated with residential communities, or tree screens planted in business parks and shopping malls and not original forest. A section of the APE in the northwest corner of Clopper Road and Quince Orchard Road includes part of the bottomland setting flanking Long Draught Branch (see **Appendix B, Figures 10 and 11**). The National Institute Standards and Technology (NIST) campus, located on the east side of Quince Orchard Road and south of Diamond Road, exhibits large swaths of open space surrounding the campus, including a large tract of older, established forest, unlike the adjacent heavily developed communities (see **Appendix B, Figures 12 and 13**). Several drainages pass under Quince Orchard Road, channeling small streams and surface runoff to the west into Long Draught Branch, a tributary of Great Seneca Creek (see **Appendix B, Figure 14**).

Late twentieth-century development dominates the Great Seneca Highway segment of the APE as well. The western portion of this segment, at the intersection of Quince Orchard Road, includes extensive commercial development associated with various business parks and shopping malls. As the APE progresses to the southeast, residential communities become more prevalent within the setting (see **Appendix B, Figure 15**). The corridor crosses several steeply sloped wooded drainages, part of the Muddy Branch watershed. In some cases portions of the drainages have been landscaped to form artificial lakes, such as Three Sisters Lake, Lake Varuna, and Elysium Lake, creating park-like settings dividing the various residential communities and providing recreational areas for the neighborhoods (**Figure 16**). The change in topographical relief is most apparent where the corridor crosses Muddy Branch, with portions of Great Seneca Highway cutting as much as four to five meters (13.1 to 16.4 ft) into high ridges along the drainage.

From Great Seneca Highway the APE turns sharply to the south, crosses over a tributary of Muddy Branch, and follows the east side of Muddy Branch Road (see **Appendix B, Figures 17 and 18**). Approximately 667.0 meters (2188.3 ft) south of Great Seneca Highway, the APE turns east and crosses open pasture, part of Belward Farm, connecting into the terminus of Belward Campus Road, then turning south onto Johns Hopkins Road where it meets with Key West Boulevard (see **Appendix B, Figures 19 to 22**). The Belward Farm property, owned by Johns Hopkins University, consists of a gently to steeply rolling upland setting overlooking an unnamed tributary of Muddy Branch. The rolling nature of the terrain is associated with several swales that bisect the pasture, channeling runoff north and southwest into tributaries of Muddy Branch (see **Appendix B, Figure 23**). Belward Farm, an early twentieth-century farm complex, resides to the south of, and adjacent to, the LOD. Two small houses and several outbuildings within a wooded grove at the eastern end of the pasture divide the fields from the Johns Hopkins Bioresearch Park to the east. These houses and outbuildings are used as offices and storage for maintenance and groundskeeping with the Johns Hopkins facility (see **Appendix B, Figure 24**).

The APE continues to the south of Key West Highway, crossing through the Montgomery County Fire and Emergency Training facility, then connecting with Medical Center Drive to the east of Great Seneca Highway. The CCT Universities at Shady Grove section of the APE follows Great Seneca Highway south, turning left onto Darnestown Road then right onto Traville Gateway Drive. The APE travels behind the Traville Shopping Center then turns right onto Shady Grove Road. The APE continues west on Shady Grove Road, turns right onto Traville Gateway Drive, then back to Darnestown Road and Great Seneca Highway. The APE follows existing roadways throughout much of this heavily developed residential and commercial setting. Wooded drainages divide areas of development. The APE encompasses a small area of wooded ground along the backside of the Traville Gateway Drive. However, this area has been subjected to impacts associated with the construction of the shopping center, including grading and drainage improvements.

The main alignment of the APE turns north from Medical Center Drive and follows Broschart Road and Diamondback Road to Discoverly Drive. The APE turns north at

Decoverly Drive, following the roadway to Fields Road, then east to the Shady Grove overpass at I-270 (see **Appendix B, Figure 25**). Much of this area consists of late twentieth-century residential and commercial development, including new roadway construction, existing roadway widening, construction of stormwater retention basins, and extensive grading and landscaping (see **Appendix B, Figure 26**). A new segment of Decoverly Road passes through the Crown Farm (M:20-17) property, a late nineteenth-century farm complex (see **Appendix B, Figure 27**). The farm property is currently under construction for mixed residential and commercial use.

On the northeast side of I-270, the APE takes a northeasterly direction, following the center of King Farm Boulevard for approximately 1.8 kilometers (1.1 mi) to Somerville Drive. The APE then follows Somerville Drive around the Shady Grove Metro lot, including the section of the roadway at Redland Road (see **Appendix B, Figure 28**). This section of the APE consists of extensive late twentieth-century development associated with the construction of the King's Farm community, including multiple dwellings, roads, landscaping and associated utility infrastructure. The portion of King Farm Boulevard northeast of North Fredrick Road consists of mid- to late-twentieth-century businesses, automobile dealerships, and used car lots. The Shady Grove Metro Station, part of the Washington Metropolitan Area Transit Authority commuter railroad system, opened in December 1984.

III. REGIONAL PREHISTORIC AND HISTORIC CULTURAL CONTEXT

A. Regional Prehistoric Cultural Context

1. Paleoindian (ca. 11,000 B.C. – 7500 B.C.)

The Paleoindian period (ca. 11,000 B.C. – 7500 B.C.) characterizes the beginning of human habitation in the Mid-Atlantic Region. Paleoindian finds in Maryland are poorly represented, with a few intact sites, including the Higgins Site, and over a hundred isolated stone tools found (Dent 1995; Ebright 1992). Archeological investigations of Paleoindian sites in the Mid-Atlantic Region, such as the Shawnee-Minisink Site along the Delaware River (McNett 1985) and the Thunderbird Site in the Shenandoah Valley (Gardner 1974), have offered new evidence toward our understanding of Paleoindian subsistence, technology, and settlement in Maryland. Traditional theories suggest that Paleoindians hunted late Pleistocene megafauna, such as mastodon and elk, based on the finds of large fluted stone points at megafaunal kill sites (Willey 1966). Evidence from archeological excavations of Mid-Atlantic Region Paleoindian sites, however, indicates that aboriginal diets may have included game like deer, hare, turkey and fish, and plant foods such as wild grape, black walnut, and blackberry (Dent 1985, 1995; Ebright 1992; Gardner 1980:19-20; McNett 1985). Paleoindian tool kits reflected hunting activities as the major focus of the diet, including diagnostic Clovis, Mid-Paleo, and Dalton point styles, as well as scrapers, burins, graters, utilized flakes, knives, and hammerstones (Gardner 1980; Custer 1984; Funk 1972).

The dependency of area game and plant sources for sustenance likely required Paleoindian peoples to migrate with the changing seasons, as well as with the depletion of area resources. Archeological evidence suggests Paleoindian sites can be divided into several types based on artifact assemblage and stone tool/debitage distribution. “Base camps” are identified by the artifact variety of the site assemblage, the indication of discrete activity areas based on the distribution of stone tools and debitage, and the presence of pits and post molds (Gardner 1974, 1977, 1979). An example of a base camp is the Thunderbird site in Virginia. Smaller, specialized sites, such as quarries and reduction sites, were utilized for brief periods by smaller groups than those at base camps (Dent 1995). The Higgins Site Paleoindian occupation represents a small, short-term campsite occupied by a highly mobile small band (Ebright 1992). While no Paleoindian sites were recorded within the survey area, Sites 18MO45 and 18MO76, occupied to the Late Archaic and Early Archaic periods, respectively, were characterized as base camps. Site 18MO41, occupied through the Middle Archaic period, was categorized as an artifact concentration (Cleven, Maymon, Heidenrich, and Grose 2003:8-4). These three prehistoric sites were identified along tributaries of the Potomac River, including 18MO41, on Seneca Creek.

2. Archaic Period (7500 B.C. – 1000 B.C.)

The Early Archaic (7500 B.C.–6000 B.C.) peoples continued the traditions of those from the Paleoindian Period. Settlements expanded into more diverse environments, utilizing a wide variety of shellfish, fish, game, and plant food resources such as nuts, berries, and roots (Dent 1995). The appearance of the Corner-Notched Tradition (7500-6800 B.C.) and the Bifurcate Tradition (6800-6000 B.C.) represent tool style changes characteristic of the Early Archaic period.

Environmental fluctuations diminished in the Middle Archaic (6000 B.C.–4000 B.C.), with the climate warming to an average temperature near that of the present day. An increase in precipitation also occurred during the Middle Archaic period. In response to the stable, favorable environmental factors and diversification of the resource base, the aboriginal population expanded over a larger geographic area. Kavanagh (1982), in a study of the Monocacy Valley, noted an increase in Middle Archaic sites away from the river and along tributaries, suggesting the use of broader resource base in the environment. The populace became more sedentary with the stability and availability of resources, fostering a sense of territoriality based on the given resources located with a physiographic province or drainage basin (Custer 1986).

While Middle Archaic tool kits continued to resemble those of previous periods, several types of ground-stone tools were added for processing an expanded resource base. A variety of grinding tools found on Middle Archaic sites, such as mortars and pestles, indicate the increased reliance on plants in the diet. The Higgins Site produced fragments of mortars and pestles within its Middle Archaic component (Ebright 1992). Netsinkers and atlatl weights suggested increased collection of both fish and game. Atlatl weights have been found along the Nottaway River in Virginia (Egloff and MacAvoy 1990). Diagnostic tool forms include St. Albans, LeCroy, Kanawha, Stanly, Morrow Mountain, Guilford, and Neville point types.

The Late/Terminal Archaic Period (4000 B.C.-1000 B.C.) is marked by a greater emphasis on local resource exploitation. Warm and dry conditions favored the development of open grasslands and oak-hickory forests. Settlement patterns tend to focus more along interior drainages of first order streams, with larger social groupings and increased sedentism (Mouer 1991; Steponaitis 1980; Kavanagh 1982). Regionally, evidence for permanent housing began to appear at this time (Griffin 1978:231). The establishment of extensive trade networks and the introduction of complex mortuary practices are characteristics of this period (Thomas 1980). Carved, lug-handled steatite bowls are one of the most noted types of artifacts to be introduced to the Chesapeake Bay assemblage during the Late Archaic Period (Dent 1995). The use of the heavy steatite bowls appears to indicate a more sedentary pattern of existence (Tuck 1978:38).

3. Woodland Period (1000 B.C. - A.D. 1600)

The Early Woodland Period (1000 B.C.-300 B.C.) represents an increased sedentary lifestyle for aboriginal peoples, with larger, long-term sites being serviced by outlying extraction sites (Mouer 1991). Domesticated cultigens, such as corn, beans, and squash, together with wild

grasses, such as amaranth and chenopodium, were gradually incorporated into the daily diet. The flaked-tool industry reflects Late Archaic technology with small bifaces, drills, scrapers, and utilized flakes. Antler and bone tools have been recovered as well (Dent 1995). A rapid rise in ceramic technology flourished during the Early Woodland Period. The earliest ceramics, attributed to the Marcey Creek series, were tempered with crushed steatite and formed in a similar fashion as steatite bowls of the previous period (Mouer 1991). Other types of experimental ceramics, including Selden Island, Bushnell, and Croaker Landing wares, are possibly distinctive forms for the Chesapeake Bay area (Custer 1989). Accokeek wares, featuring sand and quartz temper and coil construction, eventually replaced Marcey Creek ceramics (Wright 1973).

The Middle Woodland Period (300 B.C.-A.D. 900) witnessed the continued elaboration of mortuary practices, including burial mounds and elaborate, exotic ceremonial grave goods related to the Adena culture (Griffin 1967). These grave practices and goods not only indicate a shift from a band level of social organization to complex rank societies, but also extensive trade associations beyond the immediate interior of Maryland. Pottery styles continued to shift. Popes Creek, a thick-walled, sand-tempered, net-impressed ware, and Mockley, a shell-tempered, cord- and net-impressed ware, are two dominant styles (Custer 1989; Dent 1995; Wright 1973).

Settlement patterns for the Late Woodland period (A.D. 900–A.D. 1600) are reflected in permanent villages with a subsistence base focused on grown foodstuffs, namely corn, beans, and squash. Floodplain locales are the favored locations for sites, likely based on the availability of fertile bottomland soils for agricultural practices. Stockade fortifications have been found at some Late Woodland Period village sites, possibly indicating defensive measures used to protect from attacking parties (Griffin 1967). Smaller base camps and procurement sites tend to serve as specialized function sites with periods of multiple re-use. Ceramic diversity continues, with a variety of motifs likely associated with the borrowing of designs from other societies through established trade networks. Food sources were diverse and plentiful, including shellfish and anadromous fish, nuts, starchy tubers, amaranth, and goosefoot (Dent 1995).

The Late Woodland Period in the project area supported three distinct cultural complexes. The Montgomery Complex (ca. A.D. 1000–A.D. 1520) features granite or quartz grit-tempered, cord-marked pottery, flexed burials with limited grave goods, and circular villages near rivers. Originally defined in the Potomac Valley near Seldon Island, recent investigations have expanded the range of sites into the Monocacy River region (Kavanagh 1982). The Mason Island Complex, dated towards the end of the Montgomery Complex, exhibits limestone-, and to a lesser degree quartz-, tempered pottery and extended burials, and is located on the upper Potomac above Harrisons Island. The Luray Phase, noted for shell tempered Keyser Cord-Marked ceramics, extends from the Shenandoah Valley into the Piedmont area of the Potomac and the Great Valley region. The archeological data suggests that the Luray Phase replaced the Montgomery and Mason Island Complexes (McNett and Gardner n.d.; Potter 1993:130-131).

B. Regional Historic Cultural Context

1. Contact and Settlement Period (1608-1750)

Captain John Smith first surveyed the Chesapeake region during his exploration of the bay and its upper reaches in 1608. Smith's investigation of the Chesapeake provided a glimpse of the vast natural resources in the bay area, encouraging colonists to settle the territory. By the early 1620s, William Claiborne had established a Native American trading post on Watson's Island near the mouth of the Susquehanna River (Johnson 1989:7). In March of 1634, a group of colonists sent by Cecil Calvert, the second Lord Baltimore, landed first on St. Clement's Island, then moved on to found St. Mary's City in southern Maryland. Colonization continued to bring settlers into the reaches of the Chesapeake Bay, spreading settlements around the rim of the watershed. Richard Bennett's group of Virginian Puritans initially settled at Providence in Anne Arundel County, across the Severn River from present-day Annapolis (Luckenbach 1995; Read 1993). Numerous tidal estuaries along the western side of the bay provided access to the northern portion of the county and the Providence settlers migrated over the next two decades, moving into southern Anne Arundel County and north into Howard, Harford, and Baltimore Counties.

The first patent of land in Montgomery County was recorded in 1688 along Rock Creek. Immigrants from Ireland, England and Wales quickly settled the area and begun clearing the land of forest and planting crops and tobacco (Montgomery County Maryland - Our History and Government, accessed 1 April 2008). By 1690, the provincial government had established a system of counties across the entire Chesapeake region of Maryland. Although Lord Calvert initially established Maryland's colonial capital in St. Mary's City, by 1690 the seat of government had moved to Annapolis. Grants were given for the land in Montgomery County after 1715 though no roads had been established. Most grants went to influential men and tobacco merchants. In 1745, a county was created in the northwestern portion of Maryland and was named Frederick County, in honor of the then Prince of Wales (MacMaster and Hiebert 1976:13).

Initially, the Native Americans and the colonists lived in harmony and established trade practices. The colonists purchased land from the Native Americans and created treaties aligning themselves with the Piscataway. Skirmishes among the Piscataway and the Susquehannocks caused tension between the Piscataway and the settlers, when the settlers refused aid to their ally. Slowly the relationship between the Native Americans and the colonists disintegrated and the Native Americans were forced out of their traditional territory and pushed west. By the end of the 1600's few Native Americans were left on the eastern shore of Maryland, which left the land open to further colonization (MacMaster and Hiebert 1976:7).

Farmers raised tobacco as the primary commercial crop in the region. Small, interspersed farms along interior drainages varied in size from a few hundred acres to several thousand acres. This labor-intensive crop warranted the use of slaves and servants to help grow and harvest the leaves. Tobacco not only functioned as the principal commercial crop, but it also

served as legal currency for the payment of debts and civil obligations (Land 1974). As such, a small number of tobacco farmers combined their leafy crops with land speculation, shipping, banking, manufacturing and other interests to increase their personal wealth (Land 1974). The expansion of financial and commercial pursuits allowed these merchant farmers to own and operate the stores, warehouses, and wharf facilities utilized by the smaller planters who used store credit to purchase supplies and paid their debts with tobacco. This barter and credit economy kept many of the small farmers, who leased their land, from achieving financial stability, forcing them to rely on a limited resource pool for their farming needs (Stiverson 1977).

2. Rural Agrarian Intensification Period (1750-1815)

Tobacco served as the main currency in Maryland and became the dominant cash crop. Virginia was considered to have grown the best quality tobacco, and Maryland tobacco was deemed of a lesser quality. English merchants preferred to trade only with the Virginians as the Virginians had adopted a standard of quality. Eventually, following the lead of Virginia, Maryland farmers and merchants created the Maryland Tobacco Inspection Act.

Once Maryland was on equal footing with Virginia, the land was open to speculators. Large tracts of land were purchased and tenancy was established. Tenant farmers cleared large plots of land and grew tobacco and planted fruit trees for the harvesting of peaches and apples for the distillation of brandy and cider. The increased production of tobacco lowered prices. The lower prices and lowered profitability made it increasingly harder for tenant farmers to purchase land. While the Tobacco Stamp Act standardized quality of tobacco, it became increasingly oppressive. The tobacco buyers designed a policy that allowed tobacco to be purchased only at inspection warehouses and only between November 1 and July 1. Tobacco could only be sold at a preset price and quantity of 900 pounds per hogshead after it had been certified by inspectors. In 1770, the Tobacco Inspection Act lapsed and new fees were set by the Governor which was met with much consternation and controversy (Chapelle et al. 1986:57). When tobacco became less profitable to grow and severely depleted the soils, it became necessary to diversify the crops or use unpaid enslaved individuals as a workforce.

Wheat gradually emerged as a cash crop for planters in the piedmont settlements, and wheat slowly replaced the tobacco industry. The lack of labor-intensive cultivation and the ease of processing for market delivery made grains as a cash crop favorable over tobacco (Stiverson 1977). Corn was grown for livestock feed and sold to the West Indies. Timber was harvested and shipbuilding made use of Maryland's resources. Ship construction utilized carpenters and blacksmiths, and iron ore was processed to meet the needs of construction. All the growth necessitated the growth of towns and the need for professionals like doctors, surveyors, merchants, and clergymen. The small community of Log Town, known today as Gaithersburg, was established in 1765 as a focal point for local farmers (Gaithersburg Maryland 2014).

Poor transportation routes hindered successful distribution of agricultural crops to local markets and the expansion of the populace into the hinterland. The Great Road, connecting

Frederick to Georgetown, established the first public road in the area, yet was still by far a rough trail. Griffith's 1794 map depicts limited overland roadways in the project area, including River Road along the Potomac River, Clopper Road between early Rockville and Frederick, and a roadway between River Road and Rockville, likely the current course of Travilah Road (see **Appendix B, Figure 29**). Road repairs were the responsibility of local citizens delegated to maintain public roadways within their neighborhoods, or were private access roads linking plantations to mills (Sween and Offut 1999:46).

In 1774, the colonists formed the Continental Congress which served as a provisional government and Maryland formed the first Maryland Convention. Maryland, Virginia, and North Carolina jointly agreed to not to export tobacco to England. The Maryland Convention voted that every free male between the ages of 16 and 50 should be enrolled in a military company. The convention also chartered on September 6, 1776, two new counties (Montgomery and Washington) to be formed from Frederick County (Sween and Offut 1999:29). Rockville became the county seat of the newly formed Montgomery County. When the Revolutionary War began, the state required 2,902 Maryland men, 156 were required from Montgomery County; recruits predominantly came from landless farmers and the labor class (MacMaster and Hiebert 1976:45). Many of Maryland's men left home and traveled to New York to join the fighting, while others stayed in Maryland to concentrate on growing food and providing support for the military. Farms started growing wheat instead of tobacco to help fuel the war effort.

No battles were fought on Maryland soil, though the threat of invasion was real. The British did enter the Chesapeake and used it as a waterway to transport troops north to other locations, and raided farms for food and supplies. With the defeat of the British and the close of the Revolutionary War, the capital of the United States was relocated to the District of Columbia, formed from a portion of Montgomery County along the Potomac River. The placement of the capitol in this location spurred growth and development throughout the region, though the countryside still largely supported scattered rural communities (Chapelle et al. 1986:87).

The War of 1812 once again found the United States in a military engagement with England. The United States sought commerce and trade with France, but the conflict between England and France blocked any goods from reaching France. English forces began raiding American ships pressing American sailors into service in the war against France. In 1807 the British attacked an American ship, the *Chesapeake*, killing three crew members and pressed several into service (Chapelle et al. 1986:101). As a result an embargo was set in place and all trade stopped.

President Madison declared war in June of 1812. The United States forces attempted to invade neighboring Canada in a failed attempt to liberate the colony from England. With the War of 1812, Maryland was this time involved. The British forces attempted to take Fort McHenry in Baltimore but were not successful. British forces also succeeded in placing a blockade on the Chesapeake Bay as well as attacking the nation's capital in Washington,

D.C. (Chapelle et al. 1986:105). The War ended in 1814, with the repelling of the British from advancing south from Canada.

3. Agricultural-Industrial Transition (1815 – 1870)

Montgomery County continued to develop its agricultural base despite the development of industry in surrounding counties. Grain crops, tobacco, livestock, and fruits and vegetables, as well as dairy operations, supplied foodstuffs to the growing cities of Baltimore and Washington, D.C. The increase in wheat production spurred the development of milling operations central to the processing of grain crops. By the early nineteenth century, the homes of millers and farmers were spread across the western portion of Montgomery County. Mills for grinding flour required steep terrain for waterpower to effectively run the operation. Such topography was once, in limited functions, for commercial use, but the increasing importance of the grain industry brought residential and commercial development into the hilly areas.

The development of the milling industry and increasing overland transportation of raw and finished products witnessed a shift in the existing roadway network patterns. Turnpikes and toll roads flourished at the end of this period, drawing funds from the increase in commercial overland shipping of produce and goods to and from Baltimore and Washington. In 1817, a turnpike was chartered from Georgetown to Rockville, providing a direct link to the county seat (Sween and Offut 1999:46). However, many of the improved roads and turnpikes were far from first rate. The expansion of the roadway network fostered the growth of villages and towns around the larger mills, as well as at principal road intersections and market roads (see **Appendix B, Figure 30**).

The expansion of the overland roadway network and economic growth into the interior areas of the county spurred an interest by investors and inhabitants into the feasibility and profitability of canals and railroads. In 1780, the Susquehanna Canal company was formed, and together with the Potomac Canal Company, constructed the Chesapeake and Ohio Canal by 1850, passing through Montgomery County on its path to Cumberland. Despite the early development of the canal system, political interests in a railroad network, combined with immediate service on smaller sections of rail line, gave the Baltimore and Ohio Railroad (B & O) a strong advantage in competition with the Chesapeake and Ohio Canal (MacMaster and Hiebert 1976:104). By 1842, the Baltimore and Ohio railroad connected Baltimore to Cumberland, beating the C&O Canal by eight years, and illustrated the commercial viability of the railroad over the canal system along the Potomac River (MacMaster and Hiebert 1976:105). The acquisition of the Metropolitan Railroad by the B & O in 1865 provided a branch line across the center of Montgomery County to Point of Rocks. The opening of the line on May 25, 1873, resulted in great economic benefit to the residents of the county through access to passenger service, shipping points for agricultural goods, and receiving products from distant companies (Montgomery County Historical Society 2014).

The use of enslaved individuals gradually declined as tobacco became less profitable to produce. The number of slaves dwindled as the number of free African Americans rose. In

1860, slaves consisted of 30 percent of the population of Montgomery County. 5421 enslaved individuals were owned by 770 individuals, with 80% of those owning on average of 10 or less slaves (MacMaster and Hiebert 1976:114). Several anti-slavery groups formed abolitionist movements, but the practice was too embedded within the culture for change to happen. The proximity of Pennsylvania, a free state, to Maryland created a conduit for runaway slaves heading north to freedom.

The introduction of the Civil War fostered conflict in the Maryland populace's view of the war. Thousands volunteered to save the union and joined forces with the north; many others were outraged at the Yankee invasion. In April of 1861, a riot occurred in Baltimore when troops from Massachusetts and Pennsylvania changed railroads on their way to Washington D.C. Angry mobs surrounded the soldiers and 16 individuals were killed in the melee. Eventually, the state of Maryland decided to remain part of the union though small groups of confederate sympathizers existed. By November 1863, approximately 18,000 Maryland men fought for the south, while close to 53,000 sided with the union (Chapelle et al. 1986:161).

During the Civil War, many skirmishes and raids occurred throughout Maryland. Several large battles were fought and included battles in Harper's Ferry in 1861 and 1862, the Battle of South Mountain in 1862 and the Battle of Antietam in September 1862. General Charles P. Stone stationed federal troops at Poolesville, Seneca and Darnestown in 1861 to guard the C&O Canal, Potomac crossings, and routes to Washington from Confederate forces, with 18,000 men at Darnestown and 20,000 troops encamped in and around Poolesville (Sween and Offutt 1999:73-74). Confederate forces frequented the same routes in the Poolesville and Darnestown area during frequent skirmishes into the Montgomery County countryside as well as larger advances towards Gettysburg and Washington. The last raid in Maryland occurred in 1864 and by April 1865 the war was over. The conclusion of the Civil War brought about the emancipation of over 90,000 enslaved individuals (Chapelle et al. 1986:168).

4. Industrial Urban Dominance Period (1870 – 1930)

After 1870, the industries in Maryland were growing. The railroads and canals transported coal, iron, and steel to the metropolitan areas where newly freed African Americans and a growing immigrant population could provide manual labor. Montgomery County began to move from an agricultural economy when land speculators bought up large parcels of land near Washington D.C. Additional railroad lines were established to the north and large dairies were founded to deliver fresh milk to the city. Dairies were profitable as they eliminated the need for expensive farm machinery and fertilizer for the fields. The large tobacco plantations were gone and replaced with smaller farms which housed dairies with the addition of other cash crops including beef cattle, poultry and egg farms, and farms providing fresh vegetables (MacMaster and Hiebert 1976:241) (see **Appendix B, Figures 31 to 33**). The town of Gaithersburg was officially incorporated on April 5, 1878 (Gaithersburg Maryland 2014).

The last quarter of the nineteenth century saw several dramatic changes take place. The invention of the roller mill in 1872 brought about the demise of Maryland's flour industry (Scharf 1882:373-378). The vast tracts of harder western wheat grown in the prairie states could now be processed as cheaply as local grains. Wheat-producing states like Maryland and Pennsylvania could not compete with the volume of wheat harvested in Kansas, Iowa, and Oklahoma, and by the early twentieth century, the flour industry shifted to the Midwest (McGrain 1980:9).

Expansion of suburban communities into the hinterlands of Washington D.C. developed in response to the growth of federal jobs and improvements to the overland transportation network radiating from the city. The 1883 Federal Civil Service Act guaranteed stable, long-term jobs to federal employees (Hiebert and MacMaster 1976). Electrified streetcar service, such as the Tenallytown to Rockville Railroad (1890-1925), the Glen Echo Railroad (1891-1900), the Rock Creek Railway Company (1892-1935), and the Washington and Great Falls Railway and Power Company (1913-1921), provided an efficient mode of daily transportation for residents living along the routes and encouraged the development of new communities (Sween and Offutt 1999:94). Hotel and seasonal accommodations blossomed to accommodate visitors to recreational facilities found at the ends of the railways. While communities blossomed along the rail line and major transportation corridors, nonetheless the bulk of Montgomery County remained rural and agricultural (see **Appendix B, Figures 34 and 35**).

The development of cities necessitated the installation of water and sewage lines, the creation of public schools, and the construction of hospitals. The Washington Suburban Sanitary Commission (WSSC) was established on May 1, 1918 in response to reports of waste from Montgomery and Prince George's Counties fouling streams in the District of Columbia (Washington Suburban Sanitary Commission 2014). The WSSC integrated municipal sewer and water systems into a regional network, ensuring consistent water and sewer service to the growing suburban communities. The development of technology saw the installation of telegraph and telephone lines, electric plants, and factories on the outskirts of the city. Increased population coincided with an increase of communicable diseases. As a result, wealthier families bought summer homes outside of Washington, D.C. for relief of the summer heat and to escape diphtheria, typhoid fever, and other such outbreaks. Many smaller planned communities, such as Takoma Park, Forest Glen, and Garrett Park, were developed to accommodate these families, often placed along or near railroad stations (MacMaster and Hiebert 1976:215-216). Consequently, these smaller enclaves required services which in turn created small towns in the suburbs of Washington, D.C.

Public education in the late nineteenth-century sought to provide children with more opportunities to expand their knowledge. Montgomery County featured a countywide public school system by 1860, but wartime predations destroyed much of the school supplies and damaged schoolhouses (MacMaster and Hiebert 1976:189). Low taxes used to support teacher's salaries, coupled with a minimal attendance of students, hindered attracting qualified teachers for the schools. No schools were established for African American

children until 1872, when the Maryland General Assembly appropriated \$50,000, of which Montgomery County received \$532 per quarter (MacMaster and Hiebert 1976:190). The Brownstown School, a one-room schoolhouse on the Germantown-Darnestown Road, provided elementary-level teaching for local colored students, but required students to travel to Rockville for a more advanced education (Dwyer 2006:87). Private schools, such as the Rockville Academy, faced similar problems maintaining rolls. Despite the difficulty in raising taxes to fund education, staffing schools with top-quality educators, and maintaining high academic standards, county residents met such objectives with faith and optimism.

The housing and land speculating boom crashed in 1929 and coincided with the stock market crash and the beginning of the great depression. Though the stock market crash did not directly affect Montgomery County, Maryland, it was felt indirectly as the agricultural economy slowed and industry slowed production and laid-off workers. Workers in the cities fared the worst, with women, African Americans and immigrants being the first to lose their jobs. Unemployment reached as high as 40 percent in some regions of Maryland (Chapelle et al. 1986:234).

5. Modern Period (1930 – Present)

In 1933, President Roosevelt's New Deal attempted to solve the problem of the Great Depression. The national government created programs to provide relief to families, and promoted industrial and agricultural prosperity, and created opportunities for employment. As the government created new programs the workforce in Washington, D.C. increased, necessitating growth into the suburbs to house the additional personnel and their families (Chapelle et al. 1986:238-239).

With the advent of World War II, local factories began producing aircraft and weapons, and farms intensified their production to meet the needs overseas. Local shipbuilders employed additional personnel and steel factories worked to full capacity. Personnel were desperately needed to meet production demands and men leaving to fight overseas left vacancies filled by African Americans and women. The need for workers created an influx into the metropolitan areas of Baltimore and Washington, D.C. resulting in a shortage of housing. But the end of the war, Maryland had rebounded back from the preceding depression and looked to an era of prosperity (Chapelle et al. 1986).

After the war, the baby boom and the increase of population in Maryland set off a buying binge for housing and goods. Maryland, and particularly Montgomery County, turned from an agrarian and rural economy to a largely suburban and urban populace. As the cities grew older and larger with an influx of immigrants it created an unsafe and overcrowded housing environment. As a result, those who could afford it out migrated to the suburbs. Between 1940 and 1950, Montgomery County's populace expanded from 83,012 to 164,401 residents. County urban populations rose from 7,650 to 124,471 individuals, while rural population decreased from 76,262 to 39,930 (United States Census Bureau 1940, 1950).

While few desired a return to the countryside, most wanted the goods and services available in the city. The construction of the Brighton Dam and Triadelphia Reservoir in 1943, and

downstream the T. Howard Duckett Dam and Reservoir in 1952, provided a large capacity regional water supply for the metropolitan area (Washington Suburban Sanitary Commission 2014). The shift in population and wealth created smaller planned communities and towns in the suburbs which sprang up along the highway and railroad corridors allowing personnel to still commute into the cities (MacMaster and Hiebert 1976:330). As shown in **Appendix B, Figure 36**, the project area in the mid-twentieth-century remained unaffected by the dense urban expansion surrounding Washington, D.C. The town of Gaithersburg exhibited development within its neighborhoods, and the town of Washington Grove, originally a Methodist camp retreat, was incorporated as a community in 1937 (Town of Washington Grove 2014). However, much of the surrounding area consisted of sparsely developed farmland and forested setting.

The last half of the twentieth century witnessed substantial development within the county. The construction of Interstate 270, originally parts of Route 70S and 240, in the 1950s opened more of the county's interior to residential and commercial development. Rail transit, including, developed as a source for quick, reliable service to the suburban communities fringing the metropolitan core of Washington. The Washington Metrorail's Red Line follows the course of the nineteenth-century Metropolitan Railroad, with the Shady Grove station located at the eastern terminus of the current undertaking. As of 2012, Montgomery County contained 1,004,709 residents, nearly 17 percent of Maryland's population (United States Census Bureau 2014).

IV. RESEARCH DESIGN AND METHODOLOGY

A. Previous Investigations and Recorded Archeological Sites

The goal of the Phase I component of the archaeological survey is to determine the presence or absence of potentially significant below-ground cultural resources within the APE. Prior to the field investigations of the archeological study area, a review of available documents was performed to ascertain if any previously recorded archaeological resources existed within, or in the vicinity of, the project area.

Primary background research began with a review of archaeological and architectural files housed at the Maryland Historical Trust Library in Crownsville, Maryland. These site files indicated the presence of documented prehistoric and historic cultural resources within a 3.2-kilometer (2 mile) radius of the study area, and provided a database of resource types to be found in these areas (**Table 2**). Additional research was conducted at the Montgomery County Historical Society in Rockville, Maryland, and the Gaithersburg Community Museum in Gaithersburg, Maryland. Historic maps, census reports, oral history, and other resources related to the prehistory, history, geography, and ethnohistory of the project area were consulted during background research.

One archeological site was previously recorded within the APE. The Crown B Site (18MO652), a late nineteenth- to early twentieth-century domestic site, was recorded on a hilltop setting adjacent to and south of Fields Road. An early twentieth-century brick dwelling, a modern garage, and two modern frame sheds stood on the property at the time of the survey in July 2007, and were razed while the archeological survey was in progress. The archeological survey recorded a light scatter of late nineteenth to early twentieth-century ceramics, bottle glass, architectural refuse and other debris in the yard areas, but no intact cultural features or buried artifact deposits were discovered within the site (Hill et al 2007). Site 18MO652 was determined ineligible for inclusion on the National Register of Historic Places (NRHP).

The 2007 survey also recorded a small prehistoric site in proximity to the APE. The Crown Site A (18MO651), a small quartz lithic scatter, was identified on a low ridge situated between Fields Road and an unnamed tributary of Muddy Branch, north of the England/Crown residence. A small number of primary and secondary flakes were collected from the plow zone context, and no intact subsurface features or buried artifact deposits were noted. Site 18MO651 was characterized as a short-term resource procurement site focused on early and late stage lithic reduction and stone tool manufacture. Based on the disturbed context of the artifacts, limited type and quantity of the artifacts, and lack of subsurface archeological potential, Site 18MO651 was determined ineligible for inclusion on the NRHP (Hill et al 2007:6-3).

Table 2: Recorded Archeological Sites Within a 3.2-Kilometer (2.0 Mile) Radius of the CCT Archeological Study Area.

Site No.	Site Name	Cultural Period	Artifacts	Setting	Site Type
18MO25	Snyder	Unknown prehistoric/historic	Worked steatite	Hillslope in northeast corner of MD 28 and MD 124 intersection	Steatite quarry
18MO168	Crown	19th century	Whiteware, feather edged whiteware, stoneware, hand finished bottle glass, window glass, brick	South slope of a small knoll overlooking perennial stream	Log cabin
18MO188	Kavanagh IX	Unknown historic	30x20 ft field stone foundation	Hillslope 200m from Great Seneca Creek	House ruins
18MO189	Kavanagh X	Late 19th to early 20th century	Burned brick, brass buckle fragment, silver plated medallion, whiteware, earthenware, stoneware, blue green plate glass, blue green bottle glass, dark blue glass, pink glass, yellowish glass, milk glass fragment	Ridgetop 150m from tributary of Muddy Branch	Artifact concentration
18MO315	DeSillum Cemetery	Early 19th century		Hilltop/bluff overlooking tributary of Muddy Branch	Cemetery
18MO338	WP-01	Unknown prehistoric	Quartz flakes, hammerstone, quartz biface	Plowed interior flat 450 ft east of Travilah Road	Artifact scatter
18MO339	WP-02	20 th century	Domestic brown stoneware, flower pot fragments, modern bottle glass, nails, slate and metal fragments	Overgrown/wooded interior flat 500 ft east of Travilah Road	House ruin
18MO340	WP-03	Late 19th-early 20th century	Standing-seam zinc roof, brick and concrete block foundation, circular sawn boards	Overgrown/wooded low terrace adjacent to Piney Branch	Barn ruin

Table 2: Recorded Archeological Sites Within a 3.2-Kilometer (2.0 Mile) Radius of the CCT Archeological Study Area, contd.

Site No.	Site Name	Cultural Period	Artifacts	Setting	Site Type
18MO341	WP-04	19 th or 20 th century	Domestic gray stoneware, cut nail	Plowed/graded low terrace overlooking Piney Branch	Possible structure
18MO342	WP-05	19 th century	Window glass, nails, bone, whiteware, and unidentified metal	Plowed low terrace overlooking Piney Branch	Artifact scatter
18MO405	Fields/King Farm	Possible 18 th and 19 th century	Ironstone, whiteware	Plowed hillslope west of MD 355 and south of Fields Road	Farmstead
18MO406	King Block VI	Prehistoric and Terrestrial	Chert, rhyolite, quartz, quartzite, chalcedony debitage; rhyolite basal biface fragment, possibly Selby Bay/Fox Creek preform; hearth	Low terrace/hillslope overlooking a tributary of Watts Branch	Short-term camp
18MO468	Site 1	Late 19 th -late 20 th century	Decorated whiteware, hard paste porcelain, yellowware, pearlware; white ironstone, domestic gray stoneware, domestic brown stoneware, Albany slip on gray stoneware, Japanese porcelain, brown-glazed redware, black-glazed redware, porcelain doll head, pipe bowl fragment w/reeded decoration, machine-made bottle glass, cut nails, wire nails, machine made bricks, buttons, bone, oyster shell, scissor handle fragments, cast iron pot leg, horseshoe nail	Upland flat adjacent to MD 28 and Muddy Branch Road	Mercantile/post office and house site

Table 2: Recorded Archeological Sites Within a 3.2-Kilometer (2.0 Mile) Radius of the CCT Archeological Study Area, contd.

Site No.	Site Name	Cultural Period	Artifacts	Setting	Site Type
18MO473	Site 9	Unknown prehistoric	Quartz debitage	Plowed hillslope overlooking a tributary of Muddy Branch	Artifact scatter
18MO509	Quince Orchard Valley #1	Unknown prehistoric	Unknown	Wooded floodplain of tributary to Great Seneca Creek	Artifact scatter
18MO553	Casey	Unknown prehistoric	Rhyolite and quartz debitage	Fallow hilltop overlooking a tributary of Great Seneca Creek	Artifact scatter
18MO554	McGown Site	Late Archaic	Rhyolite, quartz, quartzite debitage; quartz Wading River point	Flat summit of ridge nose overlooking a tributary of Great Seneca Creek	Artifact scatter
18MO651	Crown Site A	Unknown prehistoric	Quartz debitage	Plowed low ridge between Fields Road and a tributary of Muddy Branch	Artifact scatter
18MO652	Crown Site B	Late 19th-20th century	Undecorated whiteware, manganese-tinted bottle glass, domestic, architecture, hardware	Overgrown hilltop	Domestic site

Source: MHT site files

A variety of prehistoric and historic sites have been recorded within proximity to the APE. The Casey Site (18MO553) and the McGown Site (18MO554) represent two small lithic scatters recorded on hilltop and ridge settings overlooking an unnamed tributary of Great Seneca Creek north of Metropolitan Grove station. Identified during the Phase IB testing in 1999 for the I-270 at Watkins Mill Road Extended project, Site 18MO553 consisted of a small rhyolite and quartz debitage scatter recorded within the plow zone. Given the low density of artifacts and disturbed context, Site 18MO553 was not considered by the authors as potentially eligible for inclusion on the NRHP. Site 18MO554, recorded during the same survey, produced a small collection of quartz, rhyolite and quartzite artifacts within a 50.0 meter-square (164.0 ft-sq) core area. In addition to 131 pieces of debitage, the excavations also recovered a small quartz Late Archaic Wading River projectile point, a point tip, a biface fragment, three preform fragments and two utilized cores. While artifacts were recovered within plow zone and subsoil contexts, the authors suggested that intensity of excavation had exhausted the research potential of the site and recommended the site as ineligible for the NRHP (Fiedel et al 2000a).

Site 9 (18MO473), a very light quartz debitage scatter, was recorded within the plow zone of an agricultural field, part of the England Crown Farm, south of Fields Road and west of Omega Drive during the 1999 for the I-270 Multimodal Corridor Study. Based on the paucity of artifacts, lack of diagnostic tools, and wide dispersal, Site 18MO473 was determined ineligible for inclusion on the NRHP (Fiedel et al 2000b:110).

The King Block VI Site (18MO406), recorded on a low terrace approximately 213 meters (698.8 ft) north of King Farm Boulevard and the APE, produced a small collection of quartz, quartzite, rhyolite, chert, and chalcedony debitage, three flake tools, and a rhyolite biface from the plow zone horizon within a 180.0 by 170.0 meter (590.5 by 557.7 ft) area. A possible feature, a dark soil stain containing charcoal, was reported during the 1994 investigation of the site, but was partially exposed in an STP and not fully exposed to confirm its cultural origin (Fischler et al 1994). Subsequent Phase I testing in 1999 for the I-270 Multimodal Corridor Study recorded a much larger boundary to the site than documented in 1994, but nonetheless the artifact types and limits within the plow zone context remained the same (Fiedel et al 2000b:92). Based on the extensive scatter of debitage, Site 18MO406 was interpreted in the 1999 survey as refuse associated with numerous short-term camps situated near a spring during the Middle Woodland and other periods and was recommended as ineligible for inclusion on the NRHP.

In 1980, Terrence Epperson and Louise Akerson of the Maryland Geological Survey, Division of Archeology, recorded the Crown Farm Site (18MO168), a nineteenth century log cabin site, on the south slope of a small knoll located south of Fields Road and east of Muddy Branch Road. The site was recorded during the archeological reconnaissance for the proposed I-370 project by a combination of map research and interviews with descendants of the property owner. A 3.0 meter by 3.6 meter (10.0 ft by 12.0 ft) log cabin with partial stone basement, a barn and well were reported in the project area. A controlled surface collection of the site identified numerous whiteware sherds and solarized glassware fragments that

temporally correlated with the mid- to late-nineteenth- through early-twentieth-century occupation of the site (Epperson 1980:6). Site 18MO168 was recommended as potentially eligible for the NRHP and a Phase II evaluation warranted if the project could not avoid impacting the site.

Archeological sites associated with the county's nineteenth-century agricultural heritage have been identified in proximity of the CCT study area. Site 1 (18MO468), located on the north side of Darnestown Road (MD 28) and east of Muddy Branch Road, evidenced grading and filling associated with the 1929 remodeling of the Hunting Hill Store and Post Office and demolition of the structure in 1994. An early- to mid-twentieth-century trash deposit was recorded on the site, however, the feature had no association with the period of commercial use with the store and was interpreted as unlikely to reveal significant information regarding the domestic occupation of the site (Fehr et al 1998:72). Site 18MO468 was determined to lack integrity and recommended as ineligible for inclusion on the NRHP.

Towards the eastern end of the APE, the Fields/King Farm Site (18MO405) was recorded to the south of Fields Road and west of MD 355. While the farmstead dates to the mid- to late-eighteenth-century, an archeological assessment conducted in 1994 for the Food and Drug Administration recorded two concentrations of mid-nineteenth- to twentieth century artifacts to the northwest and south of the farm house. Subsequent residential development of the farmstead destroyed much of the archeological potential of this site, however a small, approximately 61 meter (200 ft) diameter area in the center of the site, which encompassed the buried foundation of the farm house, was preserved as a small park (Fischler et al 1995).

B. Site Potential

The APE was identified as containing a high probability for historic resources. The 1865 Martenet map, the 1879 Hopkins map, and the 1908 and 1923 USGS topographical maps depict a number of historic resources within or adjacent to the project APE. In particular, the 1865 Martenet map depicts a structure with the name "Mrs. Bibb" south of the unnamed tributary of Great Seneca Creek and north of Clopper Road, near the northern end of the APE (see **Appendix B, Figure 30**). The 1879 Hopkins map illustrates the name "Mrs. Chase" next to a structure in the same vicinity of the "Bibb" structure, with a second structure, labeled as "Warfield," to the west (see **Appendix B, Figure 31**). Historical topo maps show little change within the area surveyed between 1908 and the 1940s, other than by 1908 the addition of seven structures and an unimproved road (Metropolitan Grove Road) north of the railroad corridor (see **Appendix B, Figures 34 to 36**). The structures depicted in the vicinity of the previously identified "Bibb/Chase" and "Warfield" locations continue to be shown on each quadrangle. The 1951 aerial photograph of the setting depicts a possible structure along the west side of Metropolitan Grove Road just north of a dirt lane and the B & O railroad (see **Appendix B, Figure 37**). The lane leads west to an apparent compound of several structures set far west of the roadway. Based on the location of the visible structures and the historic maps, it is suggested the resource adjacent to Metropolitan Grove Road likely represents the location of the mid-nineteenth-century Bibb/Chase residence, while resources to the far west are part of the late nineteenth-century Warfield farmstead.

Several historic structures are also depicted adjacent to the APE on the west side of Quince Orchard Road across from the National Institute of Standards and Technology (NIST) campus. Structures referenced to Joseph Thompson and Mrs. Mary Dodd are depicted on the 1865 map, but by 1879 the Dodd residence is shown as F.A. Thompson (see **Appendix B, Figures 30 and 32**). The 1908 map of the area shows the Joseph Thompson residence, as well as a second structure to the south, but the F.A. Thompson residence is no longer present (**Figure 34**).

These structures are present by 1951 but have since been subsumed into late twentieth-century commercial and residential development (see **Appendix B, Figure 38**). It is unclear if these farmsteads may have contained outbuildings located on the east side of Quince Orchard Road and within the APE, or if trash middens, wells, privies or other features associated with these domestic occupations may be present in the APE.

The 1865, 1879 and 1908 maps also illustrate several structures within and adjacent to the APE near Darnestown Road. The APE passes through the nineteenth-century Belward Farm (M:20-21) property, site of the late-nineteenth-century Ward House, home of Ignatius Ward, a local farmer and storekeeper (MHT 2014). Three tenant houses associated with Belward Farm are located along the eastern edge of the property. One house was constructed by 1908, with the remaining structures likely completed between 1923 and 1944 (see **Appendix B, Figures 34 to 36**). The APE is located north of the Ward House, along the northern periphery of the farm building complex, and encompasses two of the tenant houses along the eastern edge of the property. Archeological deposits associated with the occupation of the Ward House farm complex, as well as the tenant houses, may be present within the APE.

Finally, the England/Crown Farm (M:20-17), a late-nineteenth-century frame dwelling and several late nineteenth- to twentieth-century agricultural and domestic outbuildings, is located adjacent to the APE south of Fields Road. The farm complex is situated on a low terrace overlooking an unnamed tributary of Muddy Branch to the south. Twentieth-century topographic maps and aerial photographs illustrate a farm lane extending south from Fields Road to the England/Crown farm complex, as well as a pocket of wooded ground along the drainage south of the farm (**Figures 34 to 36, 39**). The surrounding farm is currently under development for mixed residential and commercial use, with the farmhouse and several outbuildings still standing. Portions of the APE include the wooded setting along the unnamed tributary to Muddy Branch. Given the proximity of the farm complex, features associated with the farm activities, such as wells, middens, ice ponds and dams, may be present in the wooded drainage portion of the APE. In addition, the proximity of several prehistoric sites recorded within the plowed fields to the north of the farmstead suggests that the wooded section of the APE also contains the potential for undocumented prehistoric archeological resources.

One purpose of the Phase I survey was to identify the location and limits of the structures found on historic maps in relation to the APE, and to determine if any features/deposits associated with the structures exist within the APE.

Based on the proximity of documented prehistoric archaeological sites, there was a high probability for prehistoric resources within the APE. A small number of lithic scatters were identified on hilltops and ridges overlooking the tributaries of Great Seneca Creek, suggesting that similar types of sites may be found within the APE. Temporal dates of diagnostic tools varied from a quartz Late Archaic Wading River projectile point documented in the McGowan Site (18MO554), an artifact scatter overlooking a tributary of Great Seneca Creek, to the Middle to Late Woodland period with a possible rhyolite Selby Bay/Fox Creek preform recovered from the King Block VI Site (18MO406), located on a low terrace overlooking a tributary of Watts Branch east of Shady Grove Road and north of I-270. This is not unexpected, as studies by Kavanagh (1982) in the Monocacy Valley and Clark and Inashima (2003) within the T. Howard Duckett and Triadelphia reservoirs found that the more permanent, communal campsites were found down off the mountains on well-drained soils near a consistent water source. If the archaeological survey of the APE finds prehistoric remains, site type and cultural period may be determined by comparison to other prehistoric sites in the region. Any newly discovered prehistoric sites would be evaluated for the potential to contribute further information to our understanding of prehistoric cultures in the project area.

C. Predicted Site Locations

A visual inspection of the APE, combined with historic map sources, allowed for an assessment of the potential for archaeological resources. Areas of potential and obvious disturbances (i.e. roadway impacts/truncation, landscaping, utility lines, etc.) were recorded. Segments of the project APE were considered to have high probability for prehistoric resources due to minimal disturbance and the presence of attractive environmental settings and critical resources (**Table 3**; see **Appendix B, Figure 40**). Parcel M-10 includes knolls and ridges in a well-drained, wooded setting overlooking an unnamed tributary of Great Seneca Creek, an ideal location for Native American camp sites associated with short-term resource procurement activities. Parcel M-15 consists of an undeveloped alluvial setting adjacent to Long Draught Branch which supports similar potential for sites associated with short-term resource procurement activities. Parcels M-36, M-37/M-38/M-39, M-40/M-41/M-42 also represent slope and ridge/knoll settings overlooking a tributary of Muddy Branch. The 2000 study of the I-270/US 15 Multi-modal Corridor previously assessed this setting as containing high prehistoric archeological potential (Fiedel et al 2000:10). Conversely, parcels M-17/M-18, M-19, A-56/A-57/A-61/A-62, M-50/M-51/A-252 and M-53 are located within 100 to 200 meters (328 to 656 ft) of drainage heads which likely provided access to floral, faunal and lithic resources sought out by Native Americans. Parcels M-63/M-64/M-65, while also located along an unnamed tributary of Muddy Branch, encompassed a gently rolling setting, unlike the steeper terrain encountered near parcels M-36, M-37/M-38/M-39. The proximity of Site 18MO473, a light quartz debitage scatter, as well as several other prehistoric sites along this tributary, suggests that these parcels may contain similar types of resources.

Areas of high potential for historic archeological deposits were also identified in the APE. These included any areas proximate to the location of historic structures standing near the roadside and any undeveloped areas where according to historic maps structures once stood. According to these criteria, parcels M-04/M-06, M-16, M-19, A-56/A-57/A-61/A-62, M-50/M-51/A-252, and M-63/M-64/M-65 were judged to have a high potential for historic period resources due to the identification of structures on historic period maps within these areas. All areas within the APE that met these criteria were tested.

Table 3: Areas of Archeological Potential Within the Project APE

Property Number	Tested Area (ac)	Anticipated Resource Type
M-04/M-06	1.6	Historic
M-10	15.8	Prehistoric
M-15	??	Prehistoric
M-16	9.9	Prehistoric/Historic
M-17/ M-18	1.9	Prehistoric
M-19	0.7	Prehistoric/Historic
A-56/A-57/A-61/A-62	2.8	Prehistoric/Historic
M-36	1.3	Prehistoric
M-37/M-38/M-39	4.1	Prehistoric
M-40/M-41/M-42	2.5	Prehistoric
M-50/M-51/A-252	15.6	Prehistoric/Historic
M-53	0.6	Prehistoric
M-63/M-64/M-65	1.1	Prehistoric/Historic

D. Field Methodology

A test grid was imposed over each parcel within the archeological APE recommended for subsurface investigation. Where possible a fixed datum point was used to take compass bearings to establish the magnetic north and east grid axes and plot 40.0-centimeter-diameter (15.7-in) shovel test pit (STP) excavations. In some testable parcels the survey grid was arbitrarily established due to the absence of any utility poles or other reference points. STP excavations were placed at 15 meter (49.2-ft) intervals. Testing intervals were reduced to 7.5-meter (24.6-ft) intervals in order to define artifact density and spatial distribution. Where applicable, proposed excavations located in areas exhibiting greater than ten percent slope were not conducted.

Soils in each STP were excavated according to identifiable horizons. All STPs were excavated 10.0 centimeters (0.3 ft) or deeper into culturally sterile Pleistocene deposits. All soils were screened through quarter-inch wire mesh in order to ensure uniform recovery of artifacts regardless of age cultural affiliation, or soil stratum. Each soil stratum was excavated and screened separately. Artifacts were collected and provenienced by stratigraphic layer. All artifacts were bagged and removed to the RK&K laboratory in Baltimore, Maryland, for cataloging and analysis.

Soil profile information, including measurements, soil texture, and color, was recorded on standardized forms. The location of all STPs was recorded on scaled base maps. All excavations were backfilled upon completion. Areas of slope greater than ten percent were usually not tested, as permitted by MHT guidelines (Shaffer and Cole 1994). Cultural features and land modifications were also plotted on base maps, as were potential culturally influenced vegetation (trees, shrubs, ornamentals, and ground cover). Digital photographs were taken of each area as needed. A complete listing of all excavations can be found in **Appendix C**.

At the completion of the test excavations, archeological base maps were created illustrating the locations of Phase I test excavations, standing structures, proposed study area limits, and ground disturbances within the study area.

E. Field Survey

Staff members of RK&K conducted a field view of the project area in January and February 2013, and May 2014, prior to the initiation of field excavations. A pedestrian review of the APE and assessment of existing conditions and disturbance was performed.

1. Parcels M-04 and M-06

M-04 and M-06 consist of privately owned wooded tracts located towards the western end of the project APE. The two adjacent properties are located on the north side of the CSX railroad corridor approximately 45.0 meters (148.0 ft) east of the Metropolitan Grove MARC Station (see **Appendix B, Figures 40 through 42**). The adjacent tract (A-8) to the west of M-04 has been cleared and re-contoured by mechanical grading as part of recent residential and commercial development. Tract M-06 is bounded to the east by the unimproved extension of Metropolitan Grove Road and the Montgomery County Police Vehicle Recovery Facility (A-452). Approximately 400.0 meters (1,312.0 ft) to the north is a west trending tributary of Great Seneca Creek. The topographic setting includes a low terrace within M-04 overlooking a broad shallow north-northwest trending drainage swale. A large artificial terrace (2100.0 sq. meters [22,604.2 sq ft]) created by fill episodes of concrete, asphalt and other materials encompasses the eastern section of the study area in M-06. Both lots are currently wooded with secondary growth hardwoods and contain varying degrees of undergrowth raging from sparse to dense. Recent historic activities are evident within the project area and include modern refuse disposal and possible homeless encampments.

Inspection of the M-04 tract identified two foundations and other evidence of historic-period activities within the APE. A four-meter-wide by five-meter-long (13.1 by 16.4 ft) brick foundation was observed at the western edge of the tract (see **Appendix B, Figures 43 and 44**). Sections of the foundation appear to have been rebuilt using stone, concrete block, and terra cotta chimney liner. A few pieces of timbers, possibly floor or roof joists, were noted inside of the foundation. Approximately 26.0 meters (85.0 ft) to the south of the brick foundation, a 2.3-meter-wide by 2-meter-long (7.5 by 6.6 ft) crudely constructed field stone foundation was observed along the southern edge of the tract (**Figure 45**). Finally, a three-

meter-long by 40-centimeter-wide (9.8 by 1.3 ft) linear stone feature was noted four meters (13.1 ft) to the east of the stone foundation.

Tracts M-04 and M-06 were identified by the RK&K staff as containing moderate to high potential for undocumented prehistoric and historic archeological resources based on the topography of the landscape, proximity to multiple drainages, and presence of structural ruins within the APE. A survey grid was extrapolated across M-04 and M-06 from an arbitrary datum point established in the southwest corner of M-04. A total of 19 STPs were excavated in M-04 and M-06.

2. Parcel M-10

Parcel M-10 is located on a well-drained terrace setting separated by a broad drainage swale that feeds into an un-named tributary of Great Seneca Creek located approximately 45.0 meters (147.6 ft) north of the property (see **Appendix B, Figures 40 and 46**). The western and southern boundaries of the tract have been subjected historically to grading and artificial terracing to the upper elevations of the west trending ridge terrace. The lot is bounded to the east by the Exit 11/Route 124 ramp from south bound I-270. The current flora within the tract consists of maturing secondary hardwoods. The majority of hardwoods are tulip poplars which appear to be greater than 80 years old. The understory varies from dense to moderate and includes thorns and small saplings.

Sites 18MO553 and 18MO554, two scatters of quartz, quartzite and rhyolite debitage and tools, were identified to the west, and outside, of the study area on similar landforms. Site 18MO553 consisted of a small rhyolite and quartz debitage scatter recorded within the plow zone. Site 18MO554 produced a small collection of debitage and tools within plow zone and subsoil contexts, however the site was recommended as ineligible (Fiedel et al 2000a). The similarity of topographic settings between the M-10 study area and Sites 18MO553 and 18MO554, the lack of development within the M-10 study area, and the potential for historic plowing of the landscape suggests that the M-10 study area contains high potential for archeological resources associated with Native American and Euroamerican activities.

A test grid was imposed over the archeological study area using an arbitrary datum point established in the eastern corner of the property. A series of 166 STPs were excavated within the M-10 study area. One property located on the west side of Metropolitan Grove Road at the end of the roadway was not tested due to access issues and will be investigated at a later date.

3. Parcel M-15

Parcel M-15 is located in the northwest quadrant of the intersection of Clopper Road and Quince Orchard Road (see **Appendix B, Figures 40 and 47**). The parcel is bounded to the north by the current channel of Long Draught Branch. The tract is located within a low broad alluvial setting, except for the southeast corner, which appears to be the remnant of a terrace slope. The primary vegetation within the parcel consists of tall grasses and thistle, while the southeast corner contained two mature hardwood trees and numerous saplings. The eastern and southern boundaries of the study area exhibit fill deposition associated with the berms

and widening improvements made to the two roads. The western portion of the tract contains the remnants of a road trace which can be seen on historic aerials leading to several farms north of Long Draught Branch.

M-15 supports low potential for undocumented historic archeological resources and high potential for prehistoric archeological resources. No evidence of historic dwellings, structures or other features were observed on historic maps within the study area. Conversely, Native Americans were likely drawn to the area in pursuit of floral and faunal resources attracted to the alluvial plain, although the possible wet conditions of the flood plain may have restricted Native American activity either seasonally or to lower terraces adjacent to the bottom. A total of 11 STPs were excavated on the property using an arbitrary datum point measured from the intersection of Clopper Road and Quince Orchard Road.

4. Parcel M-16

The M-16 study area consists of a gently rolling upland setting encompassed within the western portion of the NIST campus (**Figure 40**). Several west-trending swales, part of the headwaters of Long Draught Branch, bisect the study area. While much of the study area consists of manicured lawns, a large section of wooded ground resides within the southern central portion of the campus. Utilizing historic aerial photographs of the NIST campus, three sections of the M-16 study area were identified as supporting minimal disturbance associated with construction of the NIST facility and moderate to high potential for undocumented archeological resources. Area 1 consists of a small rise located between Diamond Avenue to the north, Quince Orchard Road to the west, and North Drive to the south, overlooking Long Draught Branch to the north. The area is currently a manicured lawn with several trees occupying the knoll (see **Appendix B, Figure 48**).

Area 2 extends from Sound Drive (Gate C) to a closed access entrance from Steam Street to Quince Orchard Road (see **Appendix B, Figure 48**). Area 2 consists of a gently sloping setting overlooking an unnamed tributary to Long Draught Branch. Area 3 is located in the wooded southwest corner of the NIST property adjacent to Quince Orchard Road (see **Appendix B, Figure 49**). Private and city owned tracts bound this section to the north (M-19) and south (A-56 and A-57). Several large oak trees demarcate an old road trace or driveway in Area 3 leading from Quince Orchard Road to the southeast. In addition, a small a three-sided wooden pole-lined depression, possibly a loading dock, is present in Area 3 south of the APE.

The M-16 survey area exhibits high potential for undocumented archeological resources associated with Native American activities based on the upland settings overlooking Long Draught Branch and its various tributaries. These settings present favorable locations for access to potable water, as well as proximity to floral and faunal resources. In addition, nineteenth- and twentieth-century maps depict a number of farmsteads in close proximity to the current APE. Archeological resources associated with these resources, including outbuildings, middens, wells, and privies, may be present within the APE.

Given the narrow width of the APE, the survey grids in Areas 1 and 2 were established using arbitrary datum points measured from the NIST campus fence. In Area 3, an arbitrary datum point was established from the corner of the NIST fence. A total of 7 STPs were excavated within Area 1, while Area 2 was subjected to 31 STPs. Area 3 received a total of 20 STPs.

5. Parcels M-17 and M-18

M-17 and M-18 include wooded private properties located along the east side of Quince Orchard Road, south of M-16, and west of the NIST campus (see **Appendix B, Figures 40 and 49**). A mid-twentieth-century commercial building stands on M-17. Review of the historic maps and aeriels indicates that these lots were undeveloped throughout the nineteenth- and early-twentieth-century and likely remained wooded settings. One residence, noted as F. A. Thompson on the 1878 Hopkins map, was present in the area likely west of Quince Orchard Road (**Figure 32**). By 1908, Quince Orchard Road intersected with ancestral Dosh Drive, running along the southern limits of the NIST campus, but the lots still remained undeveloped.

While the tracts exhibit low potential for historic archeological resources, the properties were assigned moderate to high potential for prehistoric archeological resources. During the field view of the NIST facility, small, shallow seasonally-wet features were noted in the wooded area approximately 220.0 meters (722.0 ft) east of the APE. While there is no evidence of historic mining operations or NIST-related disturbance in this wooded area, these depressions may represent natural seasonally-wet features that drew wildlife to the area, and thus Native Americans seeking game and plant resources. In addition, the wooded ground is located at the head of a small intermittent drainage which feeds into Muddy Branch. It is anticipated that deposits associated with short-term seasonal procurement activities may be present within M-17 and M-18.

Both tracts were designated for archeological survey. Due to access issues the archeological testing will be conducted at a later date.

6. Parcel M-19

Survey area M-19 is private property bounded to the west by Quince Orchard Road and to the south and east by NIST property (see **Appendix B, Figures 40 and 49**). The property includes a mid-twentieth-century two-story brick residence and three sheds surrounded by maintained manicured lawn and stands of pine trees.

M-19 supports low potential for undocumented historic archeological resources and moderate to high potential for prehistoric archeological resources. As discussed with the assessment of archeological potential in M-17 and M-18, no evidence of historic dwellings, structures or other features were observed on historic maps of the M-19 setting. Conversely, Native Americans were likely drawn to the area in pursuit of floral and faunal resources attracted to the wooded and seasonally-wet setting. A total of 14 STPs were excavated on the property using an arbitrary datum point measured from the NIST campus fence.

7. Parcels A-56, A-57, A-61, A-62

The four adjacent lots are located between the convergence of Quince Orchard Road, Twin Lakes Drive and Orchard Ridge Drive see **Appendix B, (Figures 40 and 50)**. Two of the wooded lots (A-56 and A-62) are privately owned and are part of the Autumn View Townhouse development; the second two lots (A-57 and A-61) are owned by the City of Gaithersburg and serve as a wooded buffer between the development and Quince Orchard Road.

This site exhibits moderate to high potential for undocumented archeological resources associated with Native American activities. The 1908 map placed the lots at the head of an unnamed drainage that fed into Muddy Branch and would have likely provided access to floral and faunal resources found within the drainage and lowlands. In addition, a preliminary search of historic aerial photographs and maps identified a late nineteenth- to early twentieth-century farmstead approximately 250.0 meters (820.0 ft) to the southeast of the lots. The farmstead had been demolished and modern townhouses constructed in its place. However, the 1951 aerial indicates that none of the outbuildings or features associated with the farmstead were located within the APE, thereby assigning low potential for undocumented historic archeological resources within these lots.

Subsequent pedestrian survey of the four lots determined that A-57, A-61 and A-62 were all within the remnants of a natural drainage swale and had been severely disturbed by the addition of sewer lines and drainage controls. Although A-56 appeared compromised by recent construction activities, a single transect of seven STPs was excavated to confirm the degree of disturbance.

8. Parcel M-36

Tract M-36 consists of a privately owned upland wooded lot with dense undergrowth located in the northwest corner of the intersection of Great Seneca Highway and Lakelands Drive (see **Appendix B, Figures 40 and 51**). The upland terrace once overlooked the confluence of an unnamed tributary and Muddy Branch, but the construction of Lakeland Drive between 1951 and 1963 resulted in damming the tributary and creating Lake Varuna. The absence of historic structures depicted on various maps and aerials of M-36 suggests this parcel supports low potential for undocumented historic archeological resources. Conversely, the upland setting at the confluence of two drainages would provide an ideal setting for Native American activities associated with floral and faunal resource procurement, acquisition of viable stone from the drainages for manufacture of tools, and seasonal campsites, and contains high potential for undocumented prehistoric archeological resources.

A test grid was imposed over the archeological study area using an arbitrary datum point established in the eastern corner of the property. A total of 16 shovel tests were excavated within M-36.

9. Parcels M-37, M-38 and M-39

Tracts M-37, M-38 and M-39 include wooded settings owned by the City of Gaithersburg along the west side of Great Seneca Highway between Lakelands Drive and High Gables Drive (see **Appendix B, Figures 40, 51 and 52**). A pedestrian survey of tract M-37 documented extensive disturbance associated with the construction of an artificial storm water basin, thereby eliminating the archeological potential of this parcel within the LOD. M-38 and M-39 represent wooded upland terraces separated by a relic drainage swale overlooking an unnamed tributary of Muddy Branch. Unlike M-37, the portions of these two parcels within the LOD exhibited sufficient integrity to support archeological resources. A review of the historic maps and aerials do not indicate the presence of historic farmsteads or other structures within or near the LOD; thus these parcels are assigned low potential for undocumented historic archeological resources. Given the upland setting overlooking Muddy Branch, M-38 and M-39 are considered to support high potential for undocumented prehistoric archeological resources. Features and artifacts associated with floral and faunal resource procurement, acquisition of viable stone from the drainages for manufacture of tools, and seasonal campsites represent possible resource types that may be present within the parcels. Due to the narrow LOD width, the natural slope of the terraces and artificial water drainages adjacent to Great Seneca Highway, a single transect was established across the crest of two terraces within M-38 and M-39. A total of 14 STPs were excavated within the two parcels.

10. Parcels M-40, M-41, and M-42

M-40, M-41, and M-42 comprise small wooded lots owned by the City of Gaithersburg along the southwestern side of Great Seneca Highway (see **Appendix B, Figures 40 and 53**). These lots overlook an unnamed tributary of Muddy Branch to the west. The right of way for Great Seneca Highway occupies the crest of the setting within parcels M-40, M-41, and M-42, limiting the testable areas to the south slope of the upland.

Parcels M-40, M-41 and M-42 are considered to support moderate potential for undocumented prehistoric archeological resources based on the proximity of the setting overlooking the unnamed tributary of Muddy Branch. However, the slope of the ground would limit the types of resources anticipated within the LOD, including rock shelters, artifact scatters, and possibly quarrying activities. These parcels contain low potential for historic archeological resources based on the absence of any structures or other historic period resources on maps and aerials of the setting. Given the slope of the setting, a pedestrian survey was conducted along the entire corridor for each property. Two STPs were placed within M-42 along the banks of the unnamed tributary in order to determine the amount of disturbance along the banks due to the creation of walking paths, tennis courts and a pond within the low broad bottom.

11. Parcels M-50, M-51 and A-252

Parcel M-50 includes part of the 107 acre Belward Farm parcel located between Great Seneca Highway, Muddy Branch Road and MD 28 (Darnestown Road/Key West Avenue).

Lots M-51 and A-252, part of the Belward Research Campus, were formerly part of the wooded section of Belward Farm (**Figure 40**). The Belward Farm property includes the National Register-listed late-nineteenth-century Belward Farm house (M:20-21) and several agricultural outbuildings within a main compound. Four early- to mid- twentieth-century frame tenant houses occupy a wooded ridge near the eastern boundary of the parcel. The farm sits in an upland setting with three moderate to steep drainage swales; two trending north and one trending southwest. Currently the fields consist of grazing pasture. Lots M-51 and A-252 consist of wooded ground adjacent to the east boundary of the tenant houses and separated by only the remnants of a barbed wire fence.

Due to access issues, two test grids were established within the LOD. The first test grid was imposed over the pasture lands portion of the LOD using a datum point, designated N985 E985, established in the northwestern corner of the northern-most outbuilding (**Figure 54**). A Trimble GPS unit pre-loaded with the survey grid linked to the datum point was used to establish the STP excavations within the LOD. A total of 178 STPs were excavated within the pasture section of M-50. The second test grid was created in the location of the tenant houses at the eastern edge of the property (see **Appendix B, Figure 55**). An arbitrary datum point, designated N1025 E1194, was established along the west edge of the gravel drive approximately eight meters (26.0 ft) east of the pump house. From this datum point a transect was extrapolated to the north, parallel to the driveway. A second transect was established to the east from the datum point and perpendicular to the first transect. A total of 42 STPs were excavated within tenant house section of M-50.

12. Parcels M-52/M-53

Parcels M-52/M-53 consist of a small wooded lot the northwestern corner of the Montgomery County Police Academy property, just south of Key West Avenue (see **Appendix B, Figures 40 and 56**). Review of the historic maps and aerials suggests that this lot remained undeveloped throughout the nineteenth- and twentieth-century as a wooded setting. The construction of the Montgomery Police Academy in the last quarter of the twentieth-century developed part of the wooded tract to the west of Great Seneca Highway and south of Key West Avenue, however small parcels of wooded ground were left intact along the periphery of the lot.

The M-52/M-53 tract exhibits low potential for historic archeological based on the absence of any structures or other historic period resources on maps and aerials of the setting. As discussed in the previous section for M-50, M-51 and A-252, M-52/M-53 exhibits high potential for undocumented archeological resources associated with Native American short-term seasonal procurement activities.

An arbitrary datum point, designated N500 E515, was established along the northwest edge of the lot adjacent to a driveway entrance to a commercial office complex. From this datum point a transect was extrapolated to the south, perpendicular to Key West Boulevard. A second transect was established to the east from the datum point and parallel to the roadway. A total of 9 STPs were excavated within M-52/M-53.

13. M-63, M-64 and M-65

M-63, M-64 and M-65 comprise grassy right-of-way along Decoverly Drive and wooded lots that flank an unnamed tributary of Muddy Branch north of Diamondback Drive (see **Appendix B, Figures 40 and 57**). Decoverly Drive consists of an embanked roadway crossing over the floodplain of the unnamed tributary. The grassy right-of-way steeply slopes from the roadway down to the wooded floodplain. Two sewer main access ports were observed along the northeast side of the drainage west of the Decoverly Drive. All three lots are part of privately owned townhouse developments.

Based on the narrow LOD width and slope of the road berm, archeological testing was limited to the wooded sections of the parcels. In M-64, an arbitrary datum point, designated STP A-2, was established on the southwest bank of the drainage and a single transect plotted across the testable portion of the parcel. The northeastern bank of the drainage exhibited disturbance associated with a modern sewer main and was not tested. Within parcel M-63, an arbitrary datum point was set on the southwest bank of the drainage approximately seven meters (23.0 ft) south of the stream. Designated STP A-5, a transect was extrapolated to the south following parallel to the edge of the road disturbance. M-65 was not tested due to the presence of a modern sewer main. A total of six STPs were excavated within the testable portions of M-63 and M-64.

F. Laboratory Methodology

All artifacts recovered during the course of the Phase I survey were cataloged using standard typologies and terminology for the Mid-Atlantic Region. Recovered prehistoric artifacts were cataloged using standard typologies for the project region and analyzed for chronological and functional attributes as discussed in Coe (1964), Broyles (1971), Stephenson et al. (1963), Kent (1996), and Custer (1996a, 1996b, 2001). Recovered historic period material was cataloged using a variant of Stanley South's functional classification scheme and analyzed for chronological attributes (South 1977). The functional categories enable artifact material to be sorted and analyzed by use and compare the assemblage for identification of possible activity areas within the site. All artifacts were classified by functional class and materials as per current historical material culture studies. Glass color and decorative treatment were also noted when present.

Waste debitage associated with the manufacture of stone tools was characterized as primary, secondary, and tertiary flakes and shatter. Primary flakes are characterized as having a rough or patinated outer cortex that is present over more than 50 percent of the flake and covers the entire dorsal surface of the artifact. Secondary flakes display less than 50 percent cortex covering the dorsal surface. Tertiary flakes are typically associated with shaping the tool, such as bifacial reduction, and do not exhibit cortex. Shatter is characterized as lithic debris which does not exhibit a bulb of percussion or striking platform. A complete listing of all artifacts recovered can be found in **Appendix D**.

The artifacts recovered during the study for which a clear title can be obtained will be donated to the Maryland Archeological and Conservation (MAC) Laboratory and Museum

for curation. Artifacts of recent derivation that are determined to be unassociated with an identified historic site will be cataloged and discarded with special notation within the catalog list. Acid-free copies of the artifact catalog, field notes, photo log, and drawings will be included with the artifact submission.

V. RESULTS OF THE SURVEY AND ANALYSIS

A. Parcels M-04 and M-06

Soil profiles reflect the displacement and disturbance common across the site on the low terrace and alluvial sedimentation within the swale. STP N100 E100, located near the western boundary of M-4, contained two fill horizons that extended to 45.0 centimeters (cm) (1.5 ft) below surface. Stratum I consisted of a 17.0 cm-thick (0.5 ft) recently developed organic dark brown (10YR 3/3) silt loam fill underlain by Stratum II, a 28.0 cm-thick (0.9 ft) charcoal-flecked mottled dark brown (10YR 3/3) and brownish yellow (10YR 6/8) silty clay loam fill. An intact brownish yellow (10YR 6/8) clay loam B-horizon (Stratum III) was excavated from 45.0 cm (1.5 ft) to the bottom of the excavation at 60.0 cm (2.0 ft) below surface (**Appendix C**). STP N87 E113, also located on the low terrace, contained a relatively intact soil profile, including a 26.0 cm-thick (0.8 ft) dark yellowish brown (10YR 4/4) silt loam Ap-horizon overlying a yellowish red (5YR 5/6) clay loam B-horizon from 26.0 to 36.0 cm (0.8 to 1.2 ft) below surface. STP N92.5 E175, located within the broad shallow swale, evidenced two soil horizons associated with slopewash. Stratum I, a 26.0 cm-thick (0.8 ft) dark yellowish brown (10YR 4/4) silt loam, and Stratum II, a 14.0 cm-thick (0.4 ft) brown (10YR 5/3) silt loam, consisted of soils likely deposited from terrace erosion and sediments washed in through a large storm drain to the south that passes under the CSX corridor. Stratum III, a brownish yellow (10YR 6/8) clay loam subsoil, was excavated to a depth of 50.0 cm (1.6 ft) below surface and contained manganese deposits and lamellae frequent in hydric soils.

A total of 285 artifacts were recovered within the tested area. Domestic artifacts (n=151, 53%) accounted for the largest class of artifacts recovered from the site. Glassware (n=124) represented 43 percent of the artifact inventory and 82 percent of the domestic class. Examples of bottle (n=30), container (n=91) and flat (n=3) glass illustrated the different forms of glassware in the assemblage (**Appendix D**). Fragments of machine-made bottles with mold seams, molded letters, threaded exterior finishes and textured surfaces, characteristics of manufactures produced from the late nineteenth century to present, were evident in the collection. STPs N107.5 E110, Stratum II (Ap), 20.0 to 40.0 cm (0.6 to 1.3 ft) below surface, and N107.5 E115, Stratum II (fill), 15.0 to 30.0 cm (0.5 to 1 ft) below surface, produced fragments of a two-piece, mold-blown brown case-style bottle with a hand-tooled, tapered-down finish (see **Appendix B, Figure 58**). Distinct from the general assortment of late nineteenth through twentieth-century beer, soda, liquor bottle fragments, this type of bottle was manufactured circa 1750 to 1880 (Jones et al 1989:27).

The ceramic assemblage (n=16) included whiteware (n=9), ironstone (n=2), porcelain (n=2), stoneware (n=1), and unglazed white earthenware (n=2). While whiteware and ironstone represent early nineteenth century manufactures, these wares are still produced today (Miller et al 200:13). Decorations were limited to flow blue and gold gilt with the porcelain sherds, and a black interior glaze on the stoneware sherd (see **Appendix B, Figures 59 and 60**).

Gold gilding was first used on English white earthenwares by 1870 (Miller et al 2000:13). While the black interior glaze on the stoneware sherd possibly represents Albany slip, produced from 1805 to 1920, the exterior of the sherd exhibits no glaze (Miller et al 2000:10). Inspection of rims and bases in the ceramic collection suggests the presence of refined flatware and hollowware forms, such as plates, saucers, bowls and cups. Other domestic artifacts recovered include metal caps (n=5), a rubber mason jar gasket, and a metal key.

Architectural classes of artifacts recovered from M-04 and M-06 included fasteners (n=70), brick fragments (n=14), window glass (n=10), and a fragment of roofing slate (**Appendix D**). Wire nails (n=23) were the predominant fastener type recovered, followed by unidentifiable nails (n=28), cut nails (n=13), roofing nails (n=2), wire spikes (n=2), a fence staple (n=1), and a wire tack (n=1). The frequency of wire nails suggest that building activities took place during the latter part of the nineteenth century after machine cut nails had been replaced by wire nails (Hume 1970). However, the paucity of window glass appears to suggest that if a structure did exist it was not a domestic structure but perhaps a barn or outbuilding.

A number of artifacts associated with personal items (n=10) were recovered during the survey. Metal snap buttons (n=3) and eyelets (n=3) reflect various types of fasteners used on clothing (see **Appendix B, Figure 61**). Glass and ceramic marbles illustrate children's toys (see **Appendix B, Figure 62**). While earthenware marbles were first manufactured in the United States in the mid to late eighteenth-century, in 1891 the American Marble and Toy Manufacturing Company of Akron, Ohio, introduced machinery that mass produced 1,000 marbles per hour (Alan's Marble Connection 2014). A small glass bead and a metal cigarette lighter illustrate other personal finds within M-04 and M-06.

Other classes of artifacts recovered from M-04 and M-06 include industrial (n=3), unidentified (n=21), arms (n=2), faunal (n=2) (**Appendix D**). The unidentified assemblage includes plastic (n=3) and corroded metal fragments (n=18), while a fragment of an aqua glass telegraph insulator, a plastic taillight fragment, and a metal rivet comprise the industrial artifact assemblage. Two plastic shotgun shells, first manufactured in 1958 (Miller et al 200:14), illustrate possible hunting activities within the parcels. Faunal materials include a large tooth, likely from a cow, and an unidentifiable bone fragment.

Distribution patterns with the artifact assemblage revealed a distinct clustering of the assemblage within a 25.0- by 7.5-meter (82.0 by 25.0 ft) area along the western and southern boundary of M-04 (see **Appendix B, Figure 42**). The largest counts of artifacts were recorded along the western edge of M-04, specifically in STPs N92.5 E100 (n=39), N100 E100 (n=89), N107.5 E100 (n=51), N111 E103.5 (n=49). Interestingly, this area of artifact density also historically correlates with a small complex of outbuildings in the southwestern portion of the farmstead complex, suggesting that the artifacts are associated with these outbuildings (see **Appendix B, Figure 37**). However, the bulk of the artifact assemblage (n=186, 65%) was recovered within displaced fill horizons, followed by the Ap-horizon (n=65, 23%), the Ao-horizon (n=35, 12%), and the B-horizon (n=1, <1%). No trends were

observed by artifact type to suggest that discrete activity areas associated with the historic occupation of the site were present.

Two structural features were identified within the boundaries of the historic artifact scatter. Feature 1, a four-meter-wide by five-meter-long (13.1 by 16.4 ft) brick foundation, was recorded in the northwest corner of the artifact scatter (see **Appendix B, Figures 42 to 44, 63**). Sections of the foundation appear to have been rebuilt using machine bricks, cored bricks, hollow bricks, quarried stone, field stone and masonry block. A few pieces of timbers, possibly floor or roof joists, were noted inside of the foundation. STP N111 E103.5 was excavated outside the southwest corner of the brick foundation. A builder's trench was identified extending into the B-horizon to the base of the south wall and large quarried stone provided the base for the brick foundation (see **Appendix B, Figure 64**). As shown in **Table 4**, artifacts recovered from STP N111 E103.5 were consistent with the class and age for the rest of the site.

Table 4: Artifacts Recorded in STP N111 E103.5

Stratum	Soil Designation	Depth (cmbs)	Count	Artifact Description
I	Ao	0-13	1	Roofing slate
I	Ao	0-13	1	Nail, cut
I	Ao	0-13	2	Nail, unidentified
I	Ao	0-13	1	Shotgun shell, plastic
I	Ao	0-13	2	Glass, container, blue
I	Ao	0-13	2	Glass, container, pale aqua
I	Ao	0-13	3	Glass, container, clear
II/III	Displaced/Fill	13-31	1	Cow tooth
II/III	Displaced/Fill	13-31	4	Brick fragments
II/III	Displaced/Fill	13-31	2	Glass, window, aqua
II/III	Displaced/Fill	13-31	5	Nail, cut
II/III	Displaced/Fill	13-31	4	Nail, unidentified
II/III	Displaced/Fill	13-31	2	Nail, wire
II/III	Displaced/Fill	13-31	1	Spike, wire
II/III	Displaced/Fill	13-31	1	Porcelain, molded with gold gilding
II/III	Displaced/Fill	13-31	1	Whiteware; rim
II/III	Displaced/Fill	13-31	2	Glass, container, blue
II/III	Displaced/Fill	13-31	1	Glass, container, clear; possible stemware base
II/III	Displaced/Fill	13-31	1	Glass, container, aqua green
II/III	Displaced/Fill	13-31	1	Glass, container, clear; embossed ridging
II/III	Displaced/Fill	13-31	7	Glass, container, clear
II/III	Displaced/Fill	13-31	4	Seal; mason jar; rubber

Feature 2 comprised a 2.3-meter-wide by two-meter-long (7.5 by 6.6 ft) crudely constructed field stone foundation located between STPs N85 E100 and N85 E107.5 (see **Appendix B, Figures 42, 45 and 65**). A wire spike was recovered from Stratum II, 16.0 to 32.0 cm (0.5 to 1.0 ft) below surface, a fill context in STP N85 E100, while two clear container glass fragments were found in Stratum I, 0.0 to 19.0 cm (0.0 to 0.6 ft), the Ap-horizon in STP N85 E107.5.

A second stone feature, designated Feature 3, was recorded to the east of Feature 2 (see **Appendix B, Figure 42**). Feature 3 represented a three-meter-long by 40.0-cm-wide (9.8 by 1.3 ft) linear stone feature, possibly a pathway border or landscape feature. STP N85 E115, excavated one meter (3.3 ft) north of the linear stone feature, evidenced a 26.0 cm-thick (0.8 ft) dark brown (10YR 3/3) silt loam Ap-horizon overlying a yellowish red (5YR 5/6) clay loam B-horizon, but did not yield any artifacts. Based on the current data collected from the shovel testing it is difficult to assign any definitive association between the stone surface features and the activities on the site, but the brick foundation may be a food storage cellar.

In addition to Features 1 through 3, a large metal rectangle with two large stones was observed near shovel test N85 E107.5 (see **Appendix B, Figure 66**). While the function of the object is unknown, it is located in an area of a recent homeless campsite possibly represents a cooking feature, although no charcoal or other burnt material was observed. The iron rectangle resembles either a possible brace for a large beam or framing for a grate. A feature number was not assigned to this resource but was depicted on the basemap for the properties.

Based on the presence of two foundations, a linear stone feature, and a scatter of artifacts, these resources were designated as the CCT M-4 Site (18MO720). Diagnostic artifacts recovered from the site generally reflected historic activities dating between the late nineteenth- through late twentieth-century. The 1865 Martenet map depicts a structure with the name “Mrs. Bibb” in proximity to the site (see **Appendix B, Figure 30**). By 1879 a structure shown as “Mrs. Chase” is present in the study area near the eastern end of M-06, while a second structure, labeled as “R. Warfield,” is shown to the west of the Chase residence (see **Appendix B, Figure 31**). Little change occurred within the area between 1908 and the 1940s, other than by 1908 the addition of seven structures and an unimproved road (Metropolitan Grove Road) north of the railroad corridor. The structure depicted in the vicinity of the previously identified Warfield structure continues to be shown on each quadrangle through 1979. The 1951 aerial photograph of the area depicts a road leading to the Warfield farmstead, including several structures in the southwestern portion of the property (see **Appendix B, Figure 37**). While the clarity of the photograph is not clear enough to define the form or function of the structures, the APE, including Site 18MO720, encompasses the southern edge of the Warfield farmstead.

It is suggested that Site 18MO720 represents outbuilding foundations and deposits associated with the late-nineteenth- to late-twentieth-century activities of the Warfield farmstead. The low density of ceramic artifacts suggests that Features 1 and 2 represent outbuildings associated with the farm, such as storage sheds, and not a focus of domestic activities.

Although glass artifacts were recovered in the highest density, most of the glass recovered comprised machine-made bottle or container glass fragments recovered from fill or the Ap/Ao-horizons. Four case bottle fragments from the same bottle reflect a potential late eighteenth to late nineteenth-century manufacture, albeit a very limited signature. Given the dispersed context of the artifact collection, the assemblage is attributed to post-depositional disturbance associated with the razing of any former structures on the site. Furthermore, the high quantity of machine-manufactured glassware possibly also represents refuse disposal and dumping activities associated with post-abandonment use of the site. Due the disturbed context of the artifacts, the limited date range for the bulk of the artifact assemblage, the limited research potential of the foundations, and the limited area of investigation, Site 18MO270 is unlikely to contribute new research into late nineteenth- to early twentieth-century farmsteads in Montgomery County.

During the fieldview of the M-04 and M-06 project survey area, a five-meter-wide by six-meter-long (16.4 by 19.7 ft) stone foundation and associated artifact scatter was recorded on a knoll just west of Metropolitan Grove Road and 90.0 meters (295.0 ft) north of the railroad corridor (see **Appendix B, Figure 42**). It is unclear if this foundation is associated with the location of the Chase residence shown on the 1879 map, given its proximity to the railroad, or one of the structures built along Metropolitan Grove Road by 1908. A cursory inspection of site surface noted examples of machine-manufactured bottle glass, providing minimally a late-nineteenth-century period of occupation. No excavations were conducted within this area due to its location outside of the project APE. The resource was designated the M-6 Metropolitan Grove Site (18MO721).

B. Parcel M-10

Parcel M-10 is located on a well-drained setting overlooking an unnamed tributary of Great Seneca Creek. A total of 166 STPs were excavated within the parcel (see **Appendix B, Figure 46**). The profiles recorded across each terrace were consistent relative to placement along the slopes and distances to the drainage swale. The eastern terrace adjacent to the I-270 exit ramp exhibited a high degree of displacement and disturbance possibly associated with cuts made for the construction of the exit ramp and cloverleaf. STP N1230 E1215, located along the eastern boundary of M-10, illustrates the level of disturbance associated with the edge of the exit ramp road cut. Stratum I consisted of a displaced fill of light yellowish brown (10YR 6/4) silt loam from 0.0 to 25.0 cm (0.0 to 0.8 ft) below surface. Stratum II, 25.0 to 40.0 cm (0.8 to 1.3 ft) below surface, exhibited a red (2.5YR 5/8) clay fill mottled with light red (2.5YR 6/6) and light yellowish brown (10YR 6/4) silt loam (**Appendix C**).

Beyond the impacts from road construction the soil profiles revealed a relatively intact setting. In general, a 17.0 to 30.0 cm-thick (0.6 to 1.0 ft) brown to dark yellowish brown (10YR 5/3 to 3/4) silt loam plow zone (Ap, Stratum I) was noted across the survey area. The thicker plow zone horizons were observed along the gentle slopes below the crest, suggesting colluvial accretion over time from the upslope positions. A yellowish red to reddish brown (5YR 5/8 to 4/3) clay loam B-horizon (Stratum II) was recorded below the Ap-horizon and consistently terminated at approximately 50.0 to 60.0 cm (1.6 to 2.0 ft) below the surface.

Density of small to moderate sized nodules of quartz and schist inclusions in the soils ranged across the survey area from one to five percent. Stratum III, a very pale brown to yellowish brown (10YR 7/3 to 5/8) very fine silt loam to clay loam B/C-horizon, was recorded below the B-horizon. In some instances larger platy deposits of schist would be encountered within the B/C-horizon transition. The density of quartz and schist deposits within the B/C-horizon tended to be substantial (>3 to 5%) and extremely degraded (**Appendix C**).

Variable levels of soil disturbance from historic plowing activities were observed within a small area. STP N1282.5 E1125 exhibited a 12.0 cm-thick (0.4 ft) dark grayish brown (10YR 4/2) silt loam mixed with recently developed organic matrix. Stratum II, the Ap-horizon, evidenced a yellowish red (5YR 4/6) silty loam matrix from 12.0 to 30.0 cm (0.4 to 1.0 ft) below the surface. This stratum resembled a B-horizon based on texture and hue. However, the soil contained a platy structure with an abrupt boundary at the interface with the apparent intact B-horizon (Stratum III), a silty clay loam, 30.0 cm (1.0 ft) below the surface. Stratum IV, a transitional B/C-horizon, was identified at 57.0 cm (1.9 ft) below surface and consisted of a very pale brown (10YR 7/3) fine silt loam and was excavated to a closing depth of 80.0 cm (2.6 ft) below the surface.

The soil profile in STP N1275 E1035, excavated along a drainage swale, exhibited characteristics of alluvial deposition. Stratum I (Ao), 0.0 to 14.0 cm (0.0 to 0.4 ft), contained a dark yellowish brown (10YR 3/4) silty clay loam of mixed recently deposited organics and silts underlain by Stratum II, 14.0 to 65.0 cm (0.4 to 2.1 ft), a pale brown (10YR 6/3) coarse sandy loam B-horizon. The test was terminated at 75.0 cm (2.5 ft) below surface in Stratum III, a yellowish red (5YR5/6) loamy clay B/C-horizon, due to refusal on large worn quartz cobbles. The profiles within the swale demonstrated that hydric activity likely intermittently scoured and silted in the swales, providing an unsuitable location for occupation.

Evidence of infilling and landscape alterations were also observed along the southwestern edge of the parcel. Three parcels adjacent to the southwest corner of M-10, A-451, A-448 and A449, have been mechanically terraced and in-filled to create an artificial terrace along the western edge of a narrow swale (see **Appendix B, Figures 67 and 68**). Periodic refuse dumping activities associated with these properties had spilled over into the swale and onto M-10, leaving behind a dense scatter of mid to late twentieth-century refuse. Due to the unknown source of the refuse and the recent date range associated with the materials no samples were taken and testing was not conducted within the swale.

A small collection of prehistoric (n=14) and historic (n=4) artifacts were recovered from M-10 during the Phase I archeological survey (**Table 5**). Evidence of early stage reduction activities focused on the use of quartz cobbles is suggested based on the recovery of secondary (n=4) stage debitage and shatter (n=1). Conversely, late stage thinning of bifaces or maintenance of existing tools may be associated with the presence of tertiary (n=6) flakes. The recovery of two utilized quartz flakes and a Late Archaic quartz Brewerton/Claggett notched projectile point fragment reflect the potential source of the tool manufacture and maintenance activities within the parcel. The few historic artifacts, including three clear glass

container fragments and a plastic shotgun shell, illustrate modern refuse discarded with the property (**Appendix D**).

Table 5: Prehistoric and Historic Artifacts Recovered from Parcel M-10

STP	Stratum	Horizon	Depth (cmbgs)	Count	Description
N1140 E975	I	Ap	0-10	3	Glass; container; clear
N1260 E1110	I/II	Ao/Ap	0-20	1	Flake; tertiary; quartz; fragment
N1275 E1110	I	Ao	0-7	1	Flake; secondary; quartz
N1275 E1110	II	Ap	0-19	1	Flake; secondary; quartz
N1275 E1125	I/II	Ao/Ap	0-30	1	Utilized flake; quartz
N1335 E1080	I	Ap	0-23	1	Shotgun shell
N1335 E1095	I/II	Ap/E	10-30	1	Projectile point; notched; Distal and tang break; possible Brewerton/Clagett (LA
N1170 E1050	I	Ap	0-14	1	Utilized flake; quartz
N1282.5 E1125	I	Ap	0-30	1	Flake; tertiary; quartz; fragment
N1282.5 E1125	I	Ap	0-30	1	Flake; tertiary; quartz
N1260 E1102.5	I	Ap	0-26	2	Flake; secondary; quartz
N1275 E1102.5	I	Ap	0-33	1	Flake; tertiary; quartz; fragment
N1290 E1117.5	I	Ap	0-27	1	Flake; tertiary; rhyolite
N1290 E1117.5	I	Ap	0-27	1	Shatter; quartz
N1290 E1117.5	I	Ap	0-27	1	Flake; tertiary; quartz

Distribution of the artifact assemblage revealed a discrete cluster of prehistoric artifacts within the northern central portion of the site. STPs N1260 E1110, N1275 E1110, N1275 E1125, N1282.5 E1125, N1260 E1102.5, N1275 E1102.5, and N1290 E1117.5, roughly following the crest of the eastern slope of the drainage swale, yielded a total of 11 quartz artifacts and one rhyolite flake within the Ao- or Ap-horizons (see **Appendix B, Figure 46; Table 5**). No artifacts were recovered within the underlying subsoil in this cluster and no subsurface features were observed. This cluster of artifacts was designated the M-10 OMF Site (18MO722).

The few prehistoric artifacts recorded outside of the main artifact cluster represent isolated finds. The quartz projectile point in STP N1335 E1095 was recovered near the interface of a possible A/B transitional horizon (I/II) 10.0 to 30.0 cm (0.3 to 1.0 ft) below surface on the north slope of the terrace overlooking the un-named tributary of Great Seneca Creek. The elevation of this test pit is approximately 3.6 meters (12.0 ft) above the right bank of the tributary. One blade edge appears to have been re-touched. The recovery of the isolated point

downslope from Site 18MO722 suggests that this tool may have been transported by natural (colluvial wash) and mechanical (clearing and plowing activities) forces, or lost during a hunting foray. No evidence was identified during the survey that this point represented a second site within the M-10 parcel, or linked to Site 18MO722.

STP N1170 E1050 contained a modified quartz flake recovered within Stratum I (Ap), 0.0 to 14.0 cm (0.0 to 0.5 ft) below the surface. This STP was located on the west slope of the broad drainage swale approximately three meters (10.0 ft) above the base of the broad drainage swale. The flaked tool appeared to be the result of an isolated discard since no additional prehistoric artifacts were identified on the terrace.

Site 18MO722 is interpreted as a temporally unknown short-term occupation focused on lithic reduction and tool maintenance activities. Sites 18MO553 and 18MO554, identified on narrow terraces overlooking swales and the same unnamed tributary of Great Seneca Creek, were identified approximately 500.0 and 900.0 meters (1640.0 and 2953.0 ft), respectively, to the west of the M-10 parcel. In addition to occupying similar topographic landforms within the same drainage system, Sites 18MO553, 18MO554 and 18MO722 were also characterized by primarily quartz reduction. Sites 18MO553 and 18MO554 were not considered potentially eligible for listing on the National Register of Historic Places due to either the low density (18MO553) or the amount of effort conducted during the Phase I (18MO554) having exhausted the limited research potential. Based on the low density and disturbed context of the artifacts, the lack of diagnostic artifacts, and absence of subsurface features, Site 18MO722 lacks contextual integrity and offers little potential to contain intact cultural features or address research questions. Site 18MO722 is not considered potentially eligible for the NRHP.

The four historic and two isolated prehistoric artifacts recovered from the study area are classified as random finds and designated 18MOX138.

C. Parcel M-15

A total of 11 STPs were excavated at 15 meters (49.2 ft) intervals along two transects within M-15 (see **Appendix B, Figure 47**). Excavations conducted within the parcel revealed evidence of a plowed setting partially masked under colluvium and modern fill. The deepest fill deposits were identified along the eastern boundary of the parcel, near Quince Orchard Road. STP N985 E1000 exhibited a 20.0 cm-thick (0.6 ft) mottled yellowish red (5YR 5/8) clay loam with brown (10YR 5/3) silt loam fill (Stratum I) overlying Stratum II, a 28.0 cm-thick (0.9 ft) pale brown (10YR 6/3) silt loam mottled with very pale brown (10YR 7/3) sandy loam fill (**Appendix C**). A grayish brown (10YR 5/2) silt loam plow zone (Stratum III) was identified from 48.0 to 58.0 centimeters (1.6 to 1.9 ft) below the surface, underlain by the yellowish red (5YR 5/6) clay loam B-horizon. STP N1000 E1000 produced a 32.0 cm-thick (1.0 ft) light brown (7.5YR 6/3) silt loam fill horizon in Stratum I, followed by a light yellowish brown (10YR 6/4) silt loam B-horizon. STPs N985 E895 through N985 E940 contained similar plow zone and subsoil profiles as noted in STP N985 E1000, but did not evidence the overlying fill deposits. Based on the location of the deeper fill matrices along

the eastern edge of the parcel, adjacent to Quince Orchard Road and Clopper Road, these fill horizons are interpreted as slopewash from fill material used during the construction of Quince Orchard Road north of Clopper Road, constructed sometime between 1951 and 1963, as well as widening and subsequent improvements to the roadways. An additional episode of infilling was observed at the western end of the APE. STP N985 E880 contained a 45.0 cm-thick (1.5 ft) brown (10YR 5/3) silt loam fill (Stratum I) overlying a mottled yellowish brown (10YR 5/8), light gray (10YR 7/1) and dark yellowish brown (10YR 4/6) clay loam (Stratum II) from 45.0 cmbs (1.5 ft) to the bottom of the excavation at 75.0 cmbs (2.5 ft). Refusal was achieved at 75 cmbs (2.5 ft) on rock, but unclear if gravels or bedrock. The proximity of Long Draught Branch and the depiction of the stream channel at different locations within the project area suggest that the fill recorded in STP N985 E880 possibly represents infilling of a relic channel or low spot to build up the arable surface of the field.

The few artifacts recovered in M-15 illustrate late nineteenth- to early twentieth-century domestic goods. Three solarized glass container fragments were recovered from Stratum I, a fill and Ap-horizon, respectively, in STPs N985 E880 (n=1) and N985 E895 (n=2) (**Appendix D**). The shard in STP N985 E880 contains visible bubbles and a blemished surface attributed to the mold, and likely represents a machine-manufactured container. Given the location of artifacts west of the historic road trace that bisects the parcel, and the lack of any structures depicted in the area during the mid-nineteenth- through mid-twentieth century, these few artifacts likely represent roadside refuse disposal. Based on the disturbed context and small count, these artifacts are considered random finds and designated as part of 18MOX138.

D. Parcel M-16

A total of 58 STPs were excavated within M-16 across three separate areas (see **Appendix B, Figures 48 and 49**). Excavations conducted within Area 1 revealed evidence of soil disturbance associated with grading and displacement. STP N160 E96.25 represented the general profile of the setting, with a 30 cm-thick (1 ft) mottled yellowish brown and brown (10YR 5/4 and 5/3) silty clay loam fill overlying a brownish yellow to yellowish red (10YR 6/8 to 5YR 5/6) silty clay B-horizon containing ten percent schist (**Appendix C**). No cultural materials were recovered within Area 1.

Excavations within Area 2 also yielded evidence of grading activities. In general, graded fill was recorded within the initial 30.0 cm (1.0 ft) of the soil profile. STP N895 E985 yielded three separate episodes of fill associated with landscaping and contouring of the property during construction activities (**Table 6**). The severity of the disturbance extended into the B/C horizon within this excavation, suggesting any potential cultural surfaces or deposits likely were destroyed or truncated by the grading activities. The Ap-horizon was present within STP N1075 E985, but even in this instance grading had truncated the horizon, leaving a remnant of the stratum capped with 30.0 cm (1.0 ft) of mottled displaced soils (**Table 7**).

Artifacts recovered from Area 2 included two lead glazed redware sherds recovered from STP N835 E1000, Stratum I, 0.0 to 30.0 cm (0.0 to 1.0 ft) below surface, fill context

(**Appendix D**). No additional artifacts or cultural features were observed in Area 2. The few redware sherds possibly represent debris associated with late nineteenth- to early-twentieth-century field manuring activities mixed and graded during construction of the government facility. Historic maps of the M-16 parcel do not depict any structures in Area 1 and 2, but does show two farmsteads on the west side of ancestral Quince Orchard Road proximal to the NIST site, as well as a third farm east of the facility (see **Appendix B, Figure 34 to 36**). Mid-twentieth-century aerials illustrate active agricultural fields along the east side of Quince Orchard Road, further supporting the possibility of field manuring leaving behind scattered artifacts associated with adjacent farmstead refuse disposal.

Table 6: Parcel M-16, Area 2, STP N895 E985 Profile

Stratum	Soil Horizon	Depth (cmbs)	Munsell	Texture
I	Displaced/Fill	0.0-16.0	Brown (10YR 5/3)	silt loam
II	Displaced/Fill	16.0-32.0	Yellowish brown (10YR 5/6)	silt loam
III	Displaced/Fill	32.0-39.0	Pale brown (10YR 6/3)	silt loam
IV	B/C	39.0-50.0	Reddish brown (2.5YR 4/4)	clay loam

Table 7: Parcel M-16, Area 2, STP N1075 E985 Profile

Stratum	Soil Horizon	Depth (cmbs)	Munsell	Texture
I	Displaced/Fill	0.0-30.0	Yellowish brown (10YR 5/4)	silty clay loam
II	Ap	30.0-40.0	Dark brown (10YR 3/3)	silt loam
III	B	40.0-52.0	Reddish brown (2.5YR 4/4)	clay loam

Testing in Area 3, located in a wooded setting at the southern end of the M-16 parcel, revealed a relatively intact setting (see **Appendix B, Figure 49**). STP N100 E137.5 illustrates a standard profile for the area. Stratum I consisted of a dark yellowish brown (10YR 4/4) silt loam Ap-horizon from 0.0 to 17.0 cm (0.0 to 0.6 ft) underlain by Stratum II, (B-horizon) a yellowish red (5YR 5/6) clay loam B-horizon from 17.0 to 38.0 cm (0.6 to 1.2 ft) below surface. Stratum III, 38.0 to 45.0 cm (1.2 to 1.5 ft) below surface, consisted a very pale brown (10YR 7/3) silt loam transitional B/C horizon (**Appendix C**).

A total of 67 historic period artifacts and one prehistoric artifact were recovered in Area 3 (**Table 8**). The domestic class of artifacts represented the largest class of artifacts recovered within Area 3. Glassware included examples of a clear milk bottle fragment, as well as a variety of colors within the container glass assemblage. Examples of machine-made mold seams and embossed letters were observed on a few shards of glass, suggesting a late

nineteenth to twentieth-century period of manufacture. Solarized glassware, commercially manufactured from the last quarter of the nineteenth century through the early twentieth-century, incorporated manganese in the glass batch, which tinted the glassware purple when exposed to sunlight (Jones et al 1989:12). Undecorated whiteware and ironstone sherds illustrate wares manufactured beginning in the early nineteenth century and produced well into the twentieth century. The few rim and base fragments observed within the whiteware and ironstone assemblages suggest the use of flatware and hollowware vessels, but the paucity of morphological characteristics prohibits defining the form of the wares. One sherd of Albany slip stoneware represents a type of stoneware decoration produced from 1805 to 1930, whereas gray salt-glazed stoneware was manufactured generally from the early eighteenth- through the early twentieth-century (Miller et al 2000:10; South 1977). The few artifacts from the architectural group also suggest turn of the century activities within Area 3. One quartz tertiary flake represents the only prehistoric artifact recovered within Area 3.

Table 8: Artifact Collection Recovered from Parcel M-16, Area 3

Group	Class	Type	Description	Count	
Historic (n=67, 98.5%)	Architectural (n=6, 9%)	Brick		1	
		Unidentifiable metal		1	
		Mortar		1	
		Nail	Cut	1	
		Spike	Wire	1	
		Window glass	Aqua	1	
	Domestic (n=59, 88%)	Ceramic	Ironstone		10
			Stoneware, gray salt-glazed ext		2
			Stoneware, Albany slip		1
			Whiteware		4
		Glass, bottle	Clear		2
		Glass, container	Solarized		4
			Clear		13
			Light blue		11
			Aqua blue		1
			Pale aqua blue		2
			Brown		8
		Glass	Lid liner		1
		Unidentified (n=2, 3%)	Metal	Unidentified	
	Prehistoric (n=1, 1.5%)	Debitage	Flake, tertiary, quartz		1
TOTAL				68	

While the artifact assemblage was recovered within the Ap-horizon in a fairly discrete cluster centered on STPs N100 E107.5, N100 E115, N100 E122.5, N100 E130, N107.5 E115, N107.5 E122.5, N115 E107.5 and N115 E115, no distinct patterns of activity associated with a specific artifact type was observed. STP N115 E115 contained the largest count of artifacts (n=42), but nonetheless the general mix of bottle and container glass, ceramics, and architectural artifacts in this STP was consistent with the finds in Area 3. STP N115 E107.5 produced a single quartz tertiary flake from Stratum II, the B-horizon. However, no other prehistoric artifacts were observed within Area 3, and no additional artifacts were recovered from below the Ap-horizon. These artifacts were recorded as the M-16 NIST Site (18MO723).

Two surface features associated with potential historic and modern use of the property were noted outside of the APE. First, a road trace was observed leading in an easterly direction from the eastern edge of Area 3 (see **Appendix B, Figure 69**). Several large elm trees lined the road trace, but no evidence of curbing, shrubbery or other landscape features associated with the roadway was present. Second, a partially subterranean three-sided wooden pole-lined feature was recorded approximately 25.0 meters (82.0 ft) east of the project LOD (see **Appendix B, Figure 70**). The poles appear to be the type used to support aerial utility lines and exhibited creosote coating in some locations. The method of construction could not be clearly ascertained based on slumped soil and vegetation covering its surface, but the poles were laid horizontally to the ground. It was estimated that the feature extended approximately one meter (3.3 ft) below ground surface and may have served as a crude loading dock.

A review of the 1908 and 1923 topographic maps depicts a roadway in the immediate vicinity of Area 3, but by 1944 the roadway is gone and an unimproved road with a structure at the end is shown (see **Appendix B, Figures 32 to 34**). Given the late nineteenth- to twentieth-century association with the artifact assemblage, Site 18MO723 likely represents refuse disposal associated with activities relating to the structure beyond the LOD. The absence of subsurface features within the site and any discrete patterns of activity within the artifact assemblage prohibits defining the period(s) of artifact deposition and function of these artifacts with the nearby structure. Due the disturbed context of the artifacts and the limited date range with the artifact assemblage, Site 18MO723 is unlikely to contribute new research into late nineteenth- to early twentieth-century domestic activities in Montgomery County.

E. Parcels M-17 and M-18

M-17 and M-18 include wooded private properties located along the east side of Quince Orchard Road, south of M-16, and west of the NIST campus. A mid-twentieth-century commercial building stands on M-17. Review of the historic maps and aerials indicates that these lots were undeveloped throughout the nineteenth- and early-twentieth-century and likely remained wooded settings. One residence, noted as F. A. Thompson on the 1878 Hopkins map, was present in the area likely west of Quince Orchard Road. By 1908, Quince Orchard Road intersected with ancestral Dosh Drive, running along the southern limits of the NIST campus, but the lots still remained undeveloped.

Both tracts were originally designated for archeological survey; however, due to access issues archeological testing could not be conducted as part of this investigation. While no fieldwork occurred in these areas at the time, Phase I archeological testing on the adjacent Parcels M-16 and M-19 indicated substantial disturbance and grading associated with the construction of a brick residence and garage as well as debris associated with construction activities outside of the proposed LOD. The construction of the dwelling and subsequent landscaping on Parcel M-17 and other construction activities east and adjacent to Parcels M-17 and M-18 likely similarly impacted these parcels. As such, it is unlikely Parcels M-17 and M-18 contain intact archeological resources and no further work is recommended in these areas.

F. Parcel M-19

Parcel M-19 consists of a small private property bounded to the south and east by the NIST property (M-16), to the west by Quince Orchard Road, and the north by a second private property (M-18) (see **Appendix B, Figure 49**). A total of 14 STPs were excavated on the property. STPs excavated in the manicured lawn contained profiles that suggested grading and displacement associated with the construction of the brick residence and garage had affected the setting. STP B-2 provided a representative profile of the yard area, consisting of a recently developed dark yellowish brown (10YR 3/4) silt loam Ao-horizon from 0.0 to 13.0 cm (0.0 to 0.4 ft) below surface, followed by a reddish yellow (7.5YR 6/8) silty clay loam B-horizon. One STP in the southeast corner of the property exhibited a profile characterized as evidence of possible agricultural use associated with the adjacent M-16 parcel. STP D-1 contained a 20.0 cm-thick (0.6 ft) brown (10YR 5/3) silt loam plow zone (Stratum I) overlying a reddish brown (5YR 5/3) clay loam B-horizon (Stratum II).

A total of 72 artifacts were recovered from M-19 (**Table 9**). While the architectural assemblage yielded the largest count of artifacts, particularly within the window glass collection, the recovery of 36 aqua green window glass fragments in STP D-1, Stratum I, 0.0 to 20.0 cm (0.0 to 0.6 ft) below surface, likely represents a single episode of window glass damage near the STP. No nails or metal fasteners were recovered that would suggest the location of a potential structure. The few domestic classes of artifacts illustrate a general cross-section of table and utilitarian ceramics and glassware. Whiteware and ironstone, manufactured from the early nineteenth- through twentieth-century, and Albany slip stoneware, produced from 1805 to 1930, illustrate examples of refined tableware and utilitarian crockery forms (Miller et al 2000:10). Samples of slag collected from the excavations evidenced a mix of coal and other burnt materials.

Table 9: Artifact Collection Recovered from Parcel M-19

Group	Class	Type	Description	Count
Faunal (n=1, 1.4%)	Faunal	Mammal	Femur head?	1
Historic (n=71, 98.6%)	Architectural (n=44, 61%)	Brick		3
		Window glass	Aqua green w/patina	36
			Clear	1
	Mortar		4	
	Domestic (n=13, 18%)	Ceramic	Terra cotta	4
			Ironstone	1
			Stoneware, Albany slip	1
			Whiteware	3
		Glass, container	Bright green	3
	Glass, flat	Clear	1	
	Industrial (n=14, 20%)		Slag	
TOTAL				72

Other than STP A-1, which yielded three fragments of a green glass container in Stratum I, the Ao-horizon, in the front yard of the property, the remainder of the artifact collection was recovered from the Ao/AP-horizon in the back yard area of the house (**Figure 49**). No patterns within the artifact collection were observed that suggested the presence of discrete activity areas within the back yard of the parcel, and no evidence of subsurface features was recorded. STPs D-1 and D-2 were excavated on either side of a pile of brick rubble described by the owner as the location of a former outdoor fireplace (Mudrick 2013). While the STPs yielded a few ceramic sherds, a large quantity of window glass, and a few brick fragments, no evidence of artifacts or soil stains were observed in the subsoil to suggest that the rubble represented the location of a former structure.

The consistency of the artifacts within M-19 to the artifacts recorded in adjacent Site 18MO723 suggests that these artifacts are part of the same resource. As such, the boundary of Site 18MO723 was extended to include the artifacts within M-19 (**Figure 49**). While the boundary was revised, Site 18MO723 is still considered unlikely to contribute new research into late nineteenth- to early twentieth-century domestic activities in Montgomery County. The three artifacts recovered within STP A-1 are considered isolated finds and designated Random Finds 18MOX138.

G. Parcels A-56, A-57, A-61, A-62

A single transect of eight STPs was excavated within parcel A-56 (see **Appendix B, Figure 50**). The profiles recorded along the transect confirmed much of the area had been subjected to grading episodes. STP A-2 represents the typical profile within the parcel. Stratum I, 0.0 to

14.0 cm (0.0 to 0.5 ft) below surface, contained a mottled yellowish brown (10YR 5/6) silt loam fill over Stratum II, 14.0 to 26.0 cm (0.5 to 0.8 ft) below surface, a grayish brown (10YR 5/2) silt loam fill. Stratum III, 26.0 to 36.0 cm (0.8 to 1.2 ft) below surface, consisted of a yellowish brown (10YR 5/8) silty clay loam B-horizon (**Appendix C**). Interestingly, STP A-6 exhibited a 13.0 cm-thick (0.4 ft) dark yellowish brown (10YR 4/6) silt loam Ap-horizon (Stratum I) overlying Stratum II, 13.0 to 28.0 cm (0.4 to 0.9 ft) below surface, a yellowish brown (10YR 5/6) silty clay loam B-horizon with platy schist inclusions.

Although modern refuse (foil, glass bottle fragments, and plastic) was observed on the surface no artifacts were retained from the testing and no further testing is recommended in parcel A-56.

H. Parcels M-36 and M-37

Parcel M-36 comprises a privately owned upland wooded lot overlooking an unnamed tributary and Muddy Branch. A total of 16 STPs were excavated within this parcel (see **Appendix B, Figure 51**). The standard soil profile consisted of a deflated 15.0 to 20.0 cm-thick (0.5 to 0.6 ft) light yellowish brown to light brownish gray (10YR 6/4 to 6/2) silt loam Ap-horizon overlying a yellowish brown to reddish yellow (10YR 5/6 to 5YR 4/3) silty clay loam B-horizon. STPs A-8, B-7 and B-8, located along the western portion of the tract within an upland drainage swale, contained displaced and disturbed profiles to a depth of 30.0 cm (1.0 ft) below the surface (**Appendix C**). Signs marking a sewer line were observed within the swale, suggesting that the soil disturbance observed in STPs A-8, B-7 and B-8 represented impacts from the construction and possible maintenance of the sewer line. No cultural materials were observed in M-36 and no further work is recommended.

I. Parcels M-38 and M-39

A total of 14 shovel tests were excavated within M-38 and M-39. STPs A-1 through A-4 were excavated along the crest of the southern upland terrace (M-39) and STPs B-1 through B-10 were excavated along the northern upland terrace (M-38) (see **Appendix B, Figure 52**).

The profiles recorded on both landforms reflected a plow zone underlain by a B-horizon. The profile for STP A-4 was consistent with the profiles recorded. Stratum I (Ap) contained a dark yellowish brown (10YR 3/4) silt loam from 0.0 to 29.0 cm (0.0 to 0.9 ft) below the surface. Stratum II was excavated from 29.0 to 45.0 cm (0.9 to 1.5 ft) below surface and contained a yellowish red (5YR 5/6) silty clay loam with large platy schist inclusions. In one incidence 18.0 cm (0.6 ft) of displaced fill overburden was recorded in STP B-4. A reddish brown (5YR 4/3) clay with schist fragments was recorded over the plow zone. The displaced fill may be associated with either the construction of the highway or excavations associated with the stone storm drains that paralleled the right of way for the highway.

No cultural materials were observed or retained during the testing. Furthermore, no subsurface cultural features associated with prehistoric or historic activities within the parcels were recorded within M-38 and M-39. No further archeological investigation is warranted for Parcels M-38 and M-39.

J. Parcels M-40, M-41, and M-42

Parcels M-40, M-41 and M-42 consist of wooded lots overlooking an unnamed drainage of Muddy Branch. A pedestrian survey was conducted along the entire corridor for each property. No suitable areas for subsurface archeological investigation were observed in parcels M-40 and M-41 due to excessive slope or disturbances associated with the construction of Great Seneca Highway within the LOD. STPs A-1 and A-2 were placed within M-42 along the banks of the unnamed tributary in order to determine the extent of disturbance along the banks due to the creation of walking paths, tennis courts and a pond within the low broad bottom (see **Appendix B, Figure 53**).

STP A-1 was excavated along the right bank of the tributary near a bend in the creek below the confluence of the stream and an intermittent drainage. Stratum I contained a 16.0 cm-thick (0.5 ft) brown (10YR 5/3) silt loam mottled with reddish brown (5YR 5/4) clay loam fill. Stratum II, a pale brown (10YR 6/3) silt loam fill, was recorded from 16.0 to 33.0 cm (0.5 to 1.1 ft) below surface. Large quartz nodules at the bottom of STP A-1 prohibited further excavation beyond the exposed fill matrices. STP A-2 was excavated on the left bank upstream from STP A-1 and at the confluence between the artificial pond and the current stream channel. Two distinct fill episodes underlain by a plastic mesh liner were recorded before termination of the excavation. Stratum I, a dark yellowish brown (10YR 4/6) coarse sandy loam fill, was noted from 0.0 to 17.0 cm (0.0 to 0.6 ft) below surface. Stratum II, a dark yellowish brown (10YR 4/6) mottled with a yellowish brown (10YR 5/6) sandy clay loam fill, was terminated at 26.0 cm (0.8 ft) below surface when a plastic mesh liner was exposed. Given the location of the STP between the current channel and the artificial pond the sandy fill episodes may have been the result of channel dredged materials utilized as berm fill for the pond.

During the course of the pedestrian survey of parcel M-41 bedrock outcrops were observed near the base of the slope at the mouth of a relic drainage swale. Located approximately 24.0 meters (78.7 ft) south of the APE, inspection the outcrops noted two substantial cavities with southern exposures suitable to provide dry shelter (see **Appendix B, Figures 71 and 72**). Based on the amount of fragmented spall material observed it also appears that the sheltered portions may have been larger before collapse and sedimentation. No testing was conducted within the shelters during the survey, but a small quartz tertiary flake was observed on the ground surface. This resource was recorded as the M-41 Rock Shelter Site (18MO724).

K. Parcels M-50, M-51 and A-252

A total of 230 STPs were excavated within parcels M-50, M-51 and A-252 (see **Appendix B, Figures 54 and 55**). Soil profiles within the pasture portion of the LOD matched the well-drained Glenelg series and had an observable plow zone indicating that historically the fields had been plowed. STP N940 E670 exhibited a representative profile containing a 23.0 cm-thick (0.7 ft) dark yellowish brown (10YR 4/4) silt loam Ap-horizon (Stratum I) followed by Stratum II, a yellowish red (5YR 5/8) clay loam argillic B-horizon (Bt1) from 23.0 cm (0.7 ft) to the bottom of the excavation at 47.0 cm (1.5 ft) below surface (**Appendix C**). Quartz

and schist inclusions were common; inclusions ranged from two to five percent relative to depth and location on the slopes and swales. Moderate slopes typically noted a higher percent of quartz and schist in Stratum II and the flat upland sections frequently contained higher percentage within Stratum I. The profiles recorded for shovel tests along the broad low swale in the southwest corner of the property noted very little (<1%) quartz or schist within the profiles. This variation appears to be the result of erosional re-deposition of soil sediments down slope.

An exception to the Glenelg series across the pasture land was noted in STP N1015 E850 located near the head of a north trending swale (see **Appendix B, Figure 54**). The profile recorded a 15.0 cm-thick (0.5 ft) dark yellowish brown (10YR 4/4) sandy silt loam mottled with fine very pale brown (10YR 8/4) sand fill horizon capping the Ap-horizon. The excavation was terminated within the Ap-horizon at 22.0 cm (0.7 ft) below surface due to impassable large quartz nodules (**Appendix C**). The profile suggests that an attempt was made to fill in a low wet area to provide vehicle access across the drainage head and may have used soils excavated locally within the swale. The amount of sand recorded in the texture closely matches the textures ascribed to the Gaila series which represents the only soils mapped for the area with a notable sand content in the description.

Unlike the schist and quartz minerals observed in the pasture section across much of the M-50 parcel, the eastern wooded section evidenced soils formed in residuum from serpentine minerals. A possible serpentine deposit was identified in the deflated profile of STP N1045 E1165 (see **Appendix B, Figure 55**). A 14.0 cm-thick (0.5 ft) dark yellowish brown (10YR 4/4) silt loam Ap-horizon (Stratum I) was recorded overlying a very pale brown (10YR 7/4) silt loam B-horizon (Stratum II). A large nodule of serpentine was exposed in Stratum II at 25.0 cm (0.8 ft) below surface, terminating the excavation. STP N1058.5 E1217.5 also demonstrated characteristics which differentiated the eastern ridge soils from the broader pasture. Stratum II, a yellowish brown (10YR 5/6) clay loam B-horizon, yielded groundwater infiltration at 40.0 cm (1.3 ft) below surface, characteristic of the poorly drained Chrome Conowingo soils in the project area.

Excavations within M-50/M-51/A-252 produced a small assortment of prehistoric and historic period artifacts (**Table 10**). Within the historic artifact assemblage, container and bottle glass (n=51) represented almost the entire domestic group of artifacts. Evidence of embossing (n=13) characteristic of machine manufactured glassware in the glass assemblage reflects late nineteenth to twentieth century production (**Appendix D**). Gold gilding on a single whiteware sherd is characteristic of gilded decoration first produced in 1870 (Miller et al 2000:13). Wire nails were commonly available by the last quarter of the nineteenth century (Nelson 1969). Conversely, machine-cut nails were commercially manufactured by the 1820s and remained most common throughout the nineteenth century (Visser 1996). Plastic toy fragments and personal artifacts likely date no earlier than the mid-twentieth century. The few prehistoric artifacts included a biface, two pieces of shatter and three tertiary flakes, all composed of quartz. In addition, two pieces of steatite were recovered, but did not evidence any cultural use.

Distribution trends with the artifact assemblage revealed a cluster of artifacts surrounding the early to mid-twentieth-century tenant houses located in the wooded setting along the eastern periphery of the property. While the artifact assemblage was restricted to the Ap-horizon, a few observed trends included a small quantity of cut, wire and unidentifiable nails in STPs N1058.5 E1217.5, N1058.5 E1225, and N1063 E1237 within the wooded area east of southern-most tenant house, attributed to wood fence posts used with an animal pen, and a few small plastic toy fragments recovered in STPs N1048 E1225, N1058.5 E1217.5, and N1051 E1225, the backyard of the house, associated with children’s activities (see **Appendix B, Figure 55**). The presence of nineteenth-century cut nails in the same context as late nineteenth- through twentieth-century wire nails suggests potential overlap of metal fasteners used within the tenant houses, or possibly building refuse disposal across the property. Analysis of the glassware assemblage identified a higher count (n=16) of clear container glass fragments in STP N1050 E1215, which may be attributed to a single episode of discard associated within one container. However, the general dispersal of domestic artifacts across the tenant house property and within the plow zone provides very limited data concerning patterns of activity specific to each tenant house. Given the current use of these tenant houses by the facilities maintenance personnel for Johns Hopkins University, and the use of the property for disposal of landscaping debris and equipment storage, the ubiquitous nature of the historic artifact collection makes it difficult to determine which artifacts may have been associated with the historic tenancy of the houses and which artifacts may be associated with the current use of the property. Furthermore, no evidence of subsurface features, including post molds, privies, or middens, was observed during the survey that could provide details concerning early to mid-twentieth-century tenant activities within the property.

Table 10: Artifact Collection Recovered from Parcels M-50/M-51/A-252

Group	Class	Type	Description	Count
Biological (n=1,1%%)	Faunal	Mammal	Cow molar	1
		Architectural (n=17, 18.8%)	Brick	
Window glass	Clear		8	
Nail	Cut		2	
	Unidentified		2	
	Wire		2	
Historic (n=83, 92.2%%)	Domestic (n=5662.2%%)	Ceramic	Whiteware pink and gold design and foliated plain sherds, Ironstone hotel ware with a red stripe, tan glazed stoneware,	5
		Glass, bottle	Clear	1
		Glass, container	Clear	43
			Bright green	3
			Brown	2

	Industrial (n=3, 3.3%)	Metal	Pale aqua green	1
			Olive green	1
			Can pull tab	1
			Copper key	1
			Heart shaped dog tag	1
	Personal (n=2, 2.2% %)	Metal	Hickok silver plate belt buckle, "H", mid-1920s	1
		Plastic	Bead, pearlesque	1
	Toy (n=5, 5.5%%)	Plastic	Green Army Man leg?	1
			Black toy wheels	2
			Articulated toy part	1
Gray toy part			1	
Prehistoric (n=6, 6.6%)	Tool	Biface fragment, quartz	1	
	Debitage	Shatter, quartz	2	
		Flake, tertiary, quartz	3	
TOTAL			90	

The prehistoric component reflects a plow zone-based low density quartz lithic scatter along the western extent of the tenant house yard area (**Table 11**; see **Appendix B, Figure 55**). The recovery of tertiary flakes and a quartz biface fragment may be attributed to activities associated with late stage reduction. Conversely, the few pieces of shatter suggest that early stage reduction also occurred within the setting. The quantity of non-culturally modified quartz observed in the excavations conducted across parcels M-50 and M-51 suggests that Native Americans may have exploited naturally occurring quartz deposits in the study area for tool manufacture.

Table 11: Prehistoric Artifact Collection Recovered from Parcel M-50/M-51/A-252

STP	Stratum	Soil	Depth (cmbs)	Artifact Description	Count
N1045 E1180	II	Ap	26-50	Flake; tertiary; quartz	1
N1051 E1192	I/II	Ap	0-28	Flake; tertiary; quartz	1
N1052.5 E1180	II	Ap	32-36	Flake; tertiary; quartz	1
N1065 E1192	I	Ap	0-10	Biface; quartz	1
N1072.5 E1192	I	Ap	0-20	Shatter; quartz	2
Total					6

Based on the low density of lithic materials recovered from a plow zone context and the absence of any subsurface features, the prehistoric component is characterized as a brief episode of tool manufacture and maintenance. The cluster of prehistoric and historic artifacts

along the eastern edge of the M-50 parcel was designated the M-50 Belward Farm Tenant Site (18MO725).

In addition to the cluster of artifacts recorded along the eastern edge of the property, STPs N775 E625, N790 E610, N790 E625, N820 E625, N940 E685, N970 E700, N985 E835, and N1030 E970 yielded a few historic artifacts associated with isolated incidents of casual discard (**Appendix D**). These artifacts were designated as Random Finds 18MOX138.

Site 18MO725 represents a scatter of artifacts associated with the early to late twentieth-century occupation of two frame tenant houses associated with the Belward property, as well as a temporally unclassified episode of Native American tool manufacture and maintenance likely utilizing local quartz deposits. A long gravel drive leading from Key West Avenue passes by the structures and terminates just past the northern-most tenant house. However, evidence of a road trace continues from the gravel drive to the north. In addition, evidence of a possible capped well, landscaped plantings, and a concrete pad are evident in the woods north of the two extant tenant houses. The 1908 USGS topographic map depicts one tenant house at the end of a drive leading from the site of the non-extant Hunting Hill Methodist Church, but by 1944 three dwellings are depicted in the area (see **Appendix B, Figures 34 and 36**). It is suggested that the two extant buildings likely represent those tenant houses constructed between 1908 and 1944.

Despite the information pertaining to the period of construction, the context of the historic artifact assemblage in Site 18MO725 provides limited comparative data reflecting the social, ethnic and economic status of the occupants of these dwellings. While patterns in the artifact collection reflect activities associated with child's play and an animal pen, overall the general dispersal of domestic and architectural debris within the Ap-horizon, the limited nature of the domestic assemblage, and the lack of subsurface features suggests that Site 18MO725 offers limited research value towards new information regarding early to mid-twentieth-century farmstead tenancy in Montgomery County. Furthermore, the prehistoric component of Site 18MO725 illustrates a brief episode of tool manufacture/maintenance limited to a disturbed plow zone context. Give the absence of diagnostic artifacts and subsurface features, the prehistoric component is unlikely to provide new information regarding resource procurement and settlement patterns within the state. No further archeological investigation is recommended for Site 18MO725.

L. Parcel M-53

A total of nine shovel tests were excavated within M-52/M-53 (see **Appendix B, Figure 56**). The profile of STP N485 E515 is representative of the profiles encountered in the parcels. Stratum I, the Ap-horizon, consisted of a 28 cm-thick (0.9 ft) grayish brown (2.5YR 5/2) silt loam. Stratum II, the B-horizon, was excavated from 28 to 38 cm (0.9 to 1.2 ft) below surface and comprised a mottled light yellowish brown (10YR6/4) with gray (10YR 6/1) clay loam containing small mineral concretions (**Appendix C**). The mottling and mineral concretions observed within Stratum II reflect the poorly drained nature of the setting.

No cultural materials were observed or retained during the testing. Furthermore, no subsurface cultural features associated with prehistoric or historic activities within the parcels were recorded within M-52 and M-53. No further archeological investigation is warranted for parcels M-52 and M-53.

M. Parcels M-63, M-64 and M-65

Excavations conducted within parcels M-63, M-64 and M-65 revealed indications of historic agricultural activities within the setting, as well as alluvial/colluvial deposition associated with the drainage. STPs A-1, A-2, A-3 and A-5 in M-63 contained a 27.0 to 30.0 cm-thick (0.9 to 1.0 ft) brown to pale brown (7.5YR 5/3 to 10YR 6/3) sandy clay to silt loam Ap-horizon (Stratum I) (see **Appendix B, Figure 57**). Interestingly, Stratum II in STPs A-1 and A-2 consisted of a 15.0 cm-thick (0.5 ft) dark grayish brown (10 YR 4/2) silt loam Ab-horizon overlying a dark grayish brown (10 YR 4/2) sandy loam B-horizon (Stratum III) (**Appendix C**). STP A-5 did not contain the Ab-horizon, but instead exhibited the dark grayish brown (10 YR 4/2) sandy loam B-horizon (Stratum II) beneath the plow zone. In STP A-3, a large root was encountered at 30.0 cm (1.0 ft) below surface, the bottom of the Ap-horizon, which prohibited completion of the excavation.

Within Parcel M-64, on the west side of the roadway, STPs A-1 exhibited a shallow, 5.0 cm-thick (0.2 ft) organic reddish brown (7.5YR 5/3) silt loam Ao-horizon (Stratum I) overlying Stratum II, a reddish brown (5YR 4/3) clay loam B-horizon excavated from 5.0 to 30.0 cm (0.2 to 1.0 ft) below surface. This profile suggests that the landform was likely truncated by the construction of an adjacent stormwater retention pond and installation of the drainage control measures. STP A-2 contained three soil deposits. Stratum I, 0.0 to 22.0 cm (0.0 to 0.7 ft) below surface, contained a yellowish brown (10YR 5/6) sandy silt loam with mica flecking, followed by Stratum II, 22.0 to 36.0 cm (0.7 to 1.2 ft) below surface, a brown (7.5YR 5/3) silt loam. Stratum I represents recent alluvial deposits possibly associated with the clearing and grading activities that took place during construction of the townhome developments, whereas Stratum II illustrates older alluvial deposits possibly associated with run-off from historic farming activities prior to residential development. Stratum III, excavated from 36.0 to 48.0 cm (1.2 to 1.6 ft) below surface, contained a bluish gray (gley 2 7/1) silty clay matrix with iron reduction mottles commonly associated with hydric soils (**Appendix C**). Prior to historic settlement and later development the immediate area surveyed may have actually been more periodically wet allowing hydric or wetland soil conditions to develop. Historic clearing for farming and eventual later development likely altered the flow of water and increased the sedimentation. No additional shovel tests were excavated due to the disturbances previously noted and the lack of conditions favorable for identifying intact culture deposits.

No cultural materials were observed or retained during the testing. Furthermore, no subsurface cultural features associated with prehistoric or historic activities within the parcels were recorded within M-63, M-64 and M-65. No further archeological investigation is warranted for these parcels.

VI. CONCLUSIONS AND RECOMMENDATIONS

A Phase I Archeological Survey was conducted for the Corridor Cities Transitway (CCT) project in Rockville and Gaithersburg, Maryland. The CCT project consists of a Bus Rapid Transit (BRT) system extending nine miles between the Shady Grove Metrorail Station in Rockville, Maryland, and Metropolitan Grove, a MARC station located northwest of Gaithersburg, Maryland. The transitway would primarily be surface running with grade-separated crossings of selected roadways at busy intersections as well as over the CSX railroad near Metropolitan Grove. The archeological Area of Potential Effects (APE) consists of the construction Limits of Disturbance (LOD) for the project. The Phase I archeological survey for the CCT project concluded that the proposed undertaking will have no impacts to significant archeological resources. Based on the results of the Phase I archeological survey, no further archeological investigation is recommended for this project. However, in the event that additional areas are identified for project alignment modifications, ancillary actions, or environmental mitigation, additional Phase I archeological investigations may be required. FTA and MTA will continue to consult with the Maryland Historical Trust during project planning and will address any additional identification surveys, where needed.

A. Parcels M-04 and M-06

The Phase I archeological survey of Parcel M-04 identified artifacts, outbuilding foundations, and landscape features associated with a late-nineteenth- to late-twentieth-century domestic site, designated Site 18MO720. A variety of artifacts associated with domestic activities, architectural resources, and personal finds generally reflected historic activities dating between the late nineteenth- through late twentieth-century. Features 1 and 2, a brick/stone and stone foundation, respectively, represent small outbuildings associated with domestic activities within the farmstead complex. A linear stone feature, designated Feature 3, possibly represents a landscape feature, such as a pathway border. While the function of these buildings is unknown, Feature 1 possibly was used for food storage.

It is suggested that Site 18MO720 represents outbuilding foundations and deposits associated with the late-nineteenth- to late-twentieth-century activities of the Warfield farmstead. The low density of ceramic artifacts suggests that Features 1 and 2 were likely not a focus of domestic or kitchen related activities. Although glass artifacts were recovered in the highest density, most of the glass recovered comprised machine-made bottle or container glass fragments recovered from fill or the Ap/Ao-horizons. Four case bottle fragments from the same bottle reflect a potential late eighteenth to late nineteenth-century manufacture, albeit a very limited signature. Given the dispersed context of the artifact collection, the assemblage is attributed to post-depositional disturbance associated with the razing of any former structures on the site. Furthermore, the high quantity of machine-manufactured glassware possibly also represents refuse disposal and dumping activities associated with post-abandonment use of the site. Due the disturbed context of the artifacts, the limited date range for the bulk of the artifact assemblage, the limited research potential of the foundations, and

the limited area of investigation, Site 18MO270 is unlikely to contribute new research into late nineteenth- to early twentieth-century farmsteads in Montgomery County.

Based on the results of the Phase I archeological survey, no further archeological investigation was recommended for Site 18MO720.

Subsequent changes to the project alignment resulted in the project APE avoiding Site 18MO720. As such, no impacts will occur to Site 18MO720.

B. Parcel M-10

The Phase I archeological survey of Parcel M-10 identified a small prehistoric site, designated 18MO722. This site consists of a lithic artifact concentration indicative of short duration tool manufacturing and/or maintenance activity. Quartz and rhyolite secondary and tertiary debris, as well as quartz utilized flakes, represent the cultural materials recovered from the plow zone within the site. While no diagnostic artifacts or subsurface features were identified within the site, the documentation of a quartz Late Archaic Brewerton/Claggett notched projectile point fragment in STP N1335 E1095, downslope of the site, suggests a possible Late Archaic temporal association. Two lithic reduction sites focused on the use of quartz and rhyolite, the temporally unclassified Site 18MO553 and the Late Archaic Site 18MO554, were recorded west of Site 18MO722 on the same unnamed tributary of Great Seneca Creek. Both of the previously identified sites were not considered potentially eligible for NRHP due to either the low density (18MO553) or the amount of effort conducted during the Phase I (18MO554) having exhausted the limited research potential. Based on the context of the archeological evidence in Site 18MO722, the low density of the artifact assemblage, the absence of diagnostic tool forms or intact cultural deposits, and the presence of similar types of archeological sites within the immediate area, Site 18MO722 is unlikely to provide new information concerning patterns of Late Archaic activity in Maryland. In addition, the few random finds recorded within M-10, designated 18MOX138, also offer little value to the archeological record of prehistoric activities in the project area. While a small portion Parcel M-10 within the proposed LOD was not accessible during the investigation, the untested area represents a low potential for containing additional archeological resources. As such, no further archeological investigations are warranted on M-10.

C. Parcel M-15

The Phase I archeological survey of M-15 produced three late nineteenth- to early twentieth-century glass container fragments recovered from disturbed contexts. These artifacts are interpreted as casual discard given the proximity to a remnant road trace, the precursor of Quince Orchard Road north of Clopper Road. Designated as 18MOX138, the artifacts offer little value to the archeological record of historic activities in the project area, and no further archeological investigations are warranted in M-15.

D. Parcel M-16

The Phase I archeological survey of M-16 identified one multicomponent site in Area 3, designated Site 18MO723. Site 18MO723 represents a discrete cluster of late nineteenth- to

twentieth-century domestic and architectural refuse associated with disposal activities from a structure located beyond the APE. A single isolated quartz tertiary flake represents the prehistoric component of the site. The absence of subsurface features within the site and any discrete patterns of activity within the artifact assemblage prohibit defining the period(s) of artifact deposition and function of these artifacts with the nearby structure. Due the disturbed context of the artifacts and the limited date range with the artifact assemblage, no further archeological investigation is recommended for Site 18MO723.

The few historic artifacts recorded in Area 2 of M-16 are attributed to domestic debris from late-nineteenth- to early-twentieth-century field manuring along the eastern side of Quince Orchard Road. These random finds, designated 18MOX138, offer little value to the archeological record of historic activities in the project area. No further archeological investigations are warranted for the artifacts recovered in Area 2 of parcel M-16.

E. Parcels M-17 and M-18

M-17 and M-18 include wooded private properties located along the east side of Quince Orchard Road, south of M-16, and west of the NIST campus. Both tracts were designated for archeological survey; however, due to access issues archeological testing could not be conducted as part of this investigation. While no fieldwork occurred in these areas at the time, Phase I archeological testing on the adjacent Parcels M-16 and M-19 indicated substantial disturbance and grading associated with the construction of a brick residence and garage as well as debris associated with construction activities outside of the proposed LOD. The construction of the dwelling and subsequent landscaping on Parcel M-17 and other construction activities east and adjacent to Parcels M-17 and M-18 likely similarly impacted these lots. As such, it is unlikely Parcels M-17 and M-18 contain intact archeological resources and no further work is recommended in these areas.

F. Parcel M-19

A discrete cluster of late nineteenth- to twentieth-century domestic and architectural refuse recorded within the southeastern backyard portion of the parcel was designated part of Site 18MO723. The historic and modern artifacts recorded in Site 18MO723 represents debris from refuse dumping attributed to a structure located beyond the LOD. The absence of subsurface features within the site and any discrete patterns of activity within the artifact assemblage prohibit defining the period(s) of artifact deposition and function of these artifacts with the nearby structure. Due the disturbed context of the artifacts and the limited date range with the artifact assemblage, no further archeological investigation is recommended for Site 18MO723.

The few historic artifacts recorded in STP A-1 are attributed to modern roadside debris along Quince Orchard Road. These random finds, designated 18MOX138, offer little value to the archeological record of historic activities in the project area. No further archeological investigations are warranted for these random artifacts in M-19.

G. Parcels A-56, M-36, M-38, M-39, M-40, M-41, and M-42

No archeological sites were identified during the Phase I archeological survey of parcels A-56, M-36, M-38, M-39, M-40, M-41, and M-42. Soil profiles within these parcels indicated varying levels of disturbance associated with agricultural activities in the area prior to modern residential development, roadway construction and buried utility installation. The presence of modern refuse in parcel A-56 reflects roadside disposal of trash and not an indication of historic occupation. The M-41 Rock Shelter Site (18MO724), a temporally unclassified rock shelter, was recorded to the south, and outside, of the APE in parcel M-41. While a quartz flake associated with possible tool manufacture was noted in association with the rock shelter, no artifacts, features or other evidence of prehistoric or historic occupation was observed within the APE in M-41 or the other six parcels. Based on the results of the Phase I archeological survey, no further archeological investigation is recommended for these parcels.

H. Parcels M-50, M-51, and A-252

The Phase I archeological survey recorded one multicomponent site, 18MO725, within the archeological APE. The historic component of Site 18MO725 represents a scatter of late-nineteenth- to mid-twentieth-century domestic, architectural and personal classes of artifacts associated with two tenant houses on the Belward Farm House farm complex. Historical research suggests that the two structures were built between 1908 and 1944, which correlates with the period of manufacture associated with diagnostic artifacts in the historic artifact assemblage. However, the disturbed context of the artifact assemblage in Site 18MO725 provides limited comparative data reflecting the social, ethnic and economic status of the occupants of these dwellings. No subsurface features or midden soils were documented by the investigations, and the recovered artifact represent non-descript assemblages typical of many scatters recorded across the region. Furthermore, the high quantity of machine-manufactured glassware possibly also represents refuse disposal and dumping activities associated with current commercial use of the site. The historic artifact assemblage lacks patterned artifact distributions or discrete subsurface features that might yield meaningful data relevant to important research questions. It therefore shows little or no potential to provide information important in history.

The prehistoric component of Site 18MO725 represents a brief episode of tool manufacture/maintenance. The presence of quartz tertiary stage debris, a quartz biface fragment, and quartz shatter in the assemblage reflects the acquisition and utilization of local gravel resources, likely extracted from nearby knolls. No fragments of FCR, charcoal or other evidence of a fire was observed. No diagnostic artifacts were recovered to assign a time period to the resource. The recovery of the prehistoric artifact assemblage predominantly from the plow zone horizon and an absence of diagnostic artifacts suggest that this resource has been impacted by historic plowing of the landscape.

Based on the limited research potential of the archeological data, no further archeological investigation is recommended for Site 18MO725.

A few additional historic artifacts recorded near the southwestern and central portions of the APE within this parcel are attributed to domestic debris from late-nineteenth- to early-twentieth-century field manuring activities associated with Belward Farm. These random finds, designated 18MOX138, offer little comparative data to assign use within a specific function of the farm or to the archeological record of historic activities in the project area. No further archeological investigations are warranted for these random artifacts recovered in M-50.

I. Parcels M-52, M-53, M-63, M-64 and M-65

No archeological sites were identified during the Phase I archeological survey of parcels M-52, M-53, M-63, M-64 and M-65. Soil profiles within these parcels indicated varying levels of disturbance associated with agricultural activities in the area, modern residential development, roadway construction and buried utility installation. The poorly drained soils observed in parcel M-52 possibly represented the location of spring or wetland, an attraction to Native Americans for floral and faunal resources, however no evidence of stone tools, debitage, ceramics or features was recorded to indicate their presence. Conversely, alluvial deposition within parcels M-63, M-64 and M-65 reflected the effects of soil deflation attributed to historic plowing of the adjacent uplands, as well as disturbance from construction of the adjacent residential complexes. The lack of artifacts and subsurface features, and the context of the soil horizons, suggests that the APE in this area was not a suitable environment for occupation in prehistory. In addition, the archeological data indicates that no historic period activities occurred within the APE as well. Based on the results of the Phase I archeological survey, no further archeological investigation is recommended for these parcels.

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