Exhibit

Final

Report No. 3

October 1984

An Archeological Overview and Management Plan for Fort Monmouth (Main Post), Camp Charles Wood and the Evans Area

Under Contract CX4000-3-0018
with the

National Park Service
U.S. Department of the Interior
Philadelphia, Pennsylvania 19106

for the
U.S. Army Materiel Development and
Readiness Command

by

Envirosphere Company

2 World Trade Center
New York, New York 10048

Prepared under the Supervision of

Joel I. Klein, Principal Investigator

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15. Supplementary Notes This report was prepared as part of the DARCOM Historical/Archeological Survey (DHAS), an inter-agency technical services program to develop facility-specific archeological overviews and management plans for the U.S. Army Materiel Development and Readiness Command (DARCOM).

16. Abstract (Limit: 200 words)

This archeological overview and management plan provides a tool which can be used by DARCOM and decision-makers at Fort Monmouth to assist in complying with regulations and procedures relating to historic preservation (Technical Manual 5-801-1, Technical Note No. 78-17, Resources Management, 32 CFR 650.181-650.193, Army Regulation 420-40; 36 CFR 800). This document summarizes data relating to the area's environmental history; cultural chronology; historic and modern ground disturbances; previous archeological surveys; presently identified archeological resources; known artifact ecofact, and/or documentary collections relating to archeological resources; potentially identifiable but not presently recorded archeological resources; significant archeological resources; locational data of known archeological resources; and locational data of potential archeological resources. No archeological sites on, nominated to or formally declared eligible for the National Register of Historic Places currently exist on Fort Monmouth Main Post), Camp Charles Wood, or the Evans Area. Remains of prehistoric occupation have been identified at eight locations (six on the Main Post, two at Camp Charles Wood). Twenty-one potential historic period archeological sites and complexes were identified on the Main Post, sixteen at Camp Charles Wood, and nine at the Evans Area. The vast majority of these are remains associated with early military use of Fort property, but some are associated with pre-military activities dating to the nineteenth century. Several archeological survey programs are recommended to confirm the presence or absence of known and potential archeological sites at Fort Monmouth.

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b. Identifiers/Open-Ended Terms
Cultural Resource Management
Archeological Resource Management
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Camp Charles Wood
The Evans Area

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No archeological sites on, nominated to or formally declared eligible for the National Register of Historic Places currently exist on Fort Monmouth (Main Post), Camp Charles Wood, or the Evans Area. Remains of prehistoric occupation have been identified at eight locations (six on the Main Post, two at Camp Charles Wood). The condition and possible significance of these sites remains to be evaluated.

Twenty-one potential historic period archeological sites and complexes were identified on the Main Post, sixteen at Camp Charles Wood, and nine at the Evans Area. The vast majority of these are remains associated with early military use of Fort property, but some are associated with pre-military activities dating to the nineteenth century. However, research has suggested that large portions of all three installations have been subject to ground disturbance which may have destroyed or damaged archeological resources.

Several archeological survey programs are recommended. These will confirm the presence or absence of known and potential archeological sites at Fort Monmouth. Scopes-of-work for these surveys and several other related activities, and descriptions of how they can be integrated with future development and master planning at the Fort are presented in Section 6.0.

Joel I. Klein is Project Manager for the DARCOM project and is a contributing author of this archeological overview and management plan. He holds a B.S. in Anthropology and Physics and M.A. and Ph.D. degrees in Anthropology, and is certified by the Society of Professional Archeologists in field research and cultural resource management. His 15 years of professional experience have been in anthropological and archeological research, and cultural resource management. He has participated in archeological investigations across the United States, including many in New Jersey. He is presently a Principal Engineer with Envirosphere Company.

Leonard G. Bianchi is a contributing author for the DARCOM Project. He was responsible for the collection of the baseline historic data for the Fort Monmouth study area. Bianchi has been active in contract archeology for the last ten years. A graduate of Rutgers University, he is currently enrolled in the Master's degree program in New York University's American Civilization Department. Bianchi has held various positions including principal investigator and site director for both private consulting companies and public institutions such as the National Park Service and the New Jersey State Museum. Experienced in historical research, archeological field work, artifact analysis, and report preparation, Bianchi has been specializing in American material culture of the New York - New Jersey cultural region.

Lorraine E. Williams is a contributing author for the DARCOM Project. She was responsible for the collection of baseline prehistoric data and the preparation of the regional cultural history for the Fort Monmouth study area. She received her Ph.D. in Anthropology from New York University. Since 1974 she has been State Archaeologist for New Jersey and Curator of Archaeology at the New Jersey State Museum.

ACKNOWLEDGEMENTS

Richard Bingham and George Fitzmeyer of the Fort Monmouth staff provided essential background data and assistance.

Stephanie Rodeffer, National Park Service, provided guidance throughout the course of this project.

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1.0
INTRODUCTION

1.1 PURPOSE AND NEED

This archeological overview and management plan will assist the U.S. Army Materiel Development and Readiness Command (DARCOM) in its efforts to comply with laws and regulations concerning the management of archeological resources on Fort Monmouth and its affiliated sub-installations including Camp Charles Wood and the Evans Area.

The National Historic Preservation Act of 1966 as amended (94 Stat. 2988) affirmed the policy of the federal government (Sec. 2(3)) to "administer federally owned, administered or controlled prehistoric and historic resources in a spirit of stewardship for the inspiration and benefit of present and future generations." Section 110(a)(1) of that code specifies that each federal agency is responsible for the preservation of such resources on agency-owned or controlled lands. DARCOM is committed to the implementation of that policy, following the guidelines for historic resource management set forth in the 1966 Act and related laws, regulations, and technical guidance.

DARCOM has contracted with the U.S. Department of the Interior's National Park Service to provide technical guidance for the development of DARCOM installation cultural resource overviews and management plans. The program is entitled the DARCOM Historical/Archeological Survey (DHAS). The National Park Service has in turn separated this review and planning program into two major elements, architectural and archeological. The architectural review and planning function is being directed by the Service's Historic American Buildings Survey (HABS), while the archeological resource assessment and planning function is being handled through the Service's Interagency Resource Management Division (IRMD). The archeological function includes both prehistoric and historical archeology.

Under the requirements of the National Historic Preservation Act (NHPA) of 1966 as amended (80 Stat. 915, 94 Stat. 2987; 16 USC 470), DARCOM must:

- inventory, evaluate, and where appropriate nominate to the National Register of Historic Places all archeological properties under agency ownership or control (Sec. 110(a)(2))

- prior to the approval of any ground-disturbing undertaking, take into account the project's effect on any National Register - listed or eligible property; afford the Advisory Council on Historic Preservation a reasonable opportunity to comment on the proposed project (Sec. 106)

- complete an appropriate data recovery program on an eligible or listed National Register archeological site prior to its being heavily damaged or destroyed (Sec. 110(b), as reported by the House Committee on Interior and Insular Affairs [96th Congress, 2d Session, House Report No. 96-1457, p. 36-37])

Since the passage of the National Historic Preservation Act Amendments of 1980, DARCOM has begun a more active commmandwide program in historic resource management. DARCOM's management program involves several steps. The first step is a literature review and preliminary evaluation of known cultural resources on DARCOM facilities. This provides a basis for prediction of the overall resource base requiring management. The second step involves applying the understood parameters of the resource base in a plan which takes into consideration both short- and long-term command activities and goals.

Other compliance regulations taken into consideration by this archeological overview and management plan include:

o The Archeological and Historic Preservation Act of 1974 (88 Stat. 174, 16 USC 469), which requires that notice of an agency project that will destroy a significant archeological site be provided to the Secretary of the Interior; either the Secretary or the notifying agent may support survey or data recovery programs to preserve the resource's information values.

o The Archeological Resources Protection Act of 1979 (93 Stat. 721, 16 USC 470aa; this supersedes the Antiquities Act of 1906 [93 Stat. 225, 16 USC 431-43]), with provisions that effectively mean that

  - The Secretary of the Army may issue excavation permits for archeological resources on DARCOM lands (Sec. 4)

  - Anyone damaging an archeological resource on DARCOM lands may incur criminal (Sec. 6) or civil penalties (Sec. 7)

o 36 CFR 800, "Protection of Historic and Cultural Properties" (44 FR 6068, as amended in May 1982); these regulations from the Advisory Council on Historic Preservation set forth procedures for compliance with Section 106 of the National Historic Preservation Act

o Regulations from the Department of the Interior setting forth procedures for determining site eligibility for the National Register of Historic Places (36 CFR 60, 36 CFR 63), standards for data recovery (proposed 36 CFR 66), and procedures implementing the Archeological Resources Protection Act (43 CFR

7) (also published as Department of Defense regulation 32 CFR 229), and the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation (48 FR 44716).

- Guidance from the U.S. Department of the Army as to procedures and standards for the preservation of historic properties (32 CFR 650.181-650.193; Technical Manual 5-801-1; Technical Note 78-17; Army Regulation 420-40).

The formulation of archeological plans for DARCOM installations is part of a developing national acceptance of the Resource Protection Planning Process (RP3)(HCRS 1980). RP3 represents an outline for the development of preservation plans which, in turn, provide an analytical structure for preservation decision-making. This archeological overview management plan has been prepared with those guidelines in mind.

This report is based on data made available by installation representatives as of March, 1984.

1.2 FORT MONMOUTH, CAMP CHARLES WOOD, AND THE EVANS AREA

This archeological overview and management plan covers three parts of Fort Monmouth--the Main Post (Fort Monmouth proper) and two sub-installations, Camp Charles Wood and the Evans Area (Figures 1-1a, 1-1b, 1-1c). Although the two sub-installations are relatively close to the Main Post, allowing all to be considered within the same regional historical framework, they are distinct in many aspects. Throughout the remainder of this study the Main Post, Camp Charles Wood, and the Evans Area will be considered separately whenever appropriate. All references to "Fort Monmouth" refer to all three facilities. The Main Post will be referred to as either "Main Post" or "Fort Monmouth (Main Post)."

1.2.1 Main Post

Fort Monmouth (Main Post) (Figure 1-2, 1-2a, 1-2b, 1-2c, 1-2d) lies in Monmouth County between the boroughs of Oceanport and Eatontown, New Jersey. The installation extends for 626 a., approximately 3 mi. inland from the coastline of the Atlantic Ocean. The main post contains about 12 a. of swamp land, 10 a. of woodland. The balance of 604 a. is flat open land ranging from an elevation of 6 ft. to 30 ft. above mean sea level.

Fort Monmouth (Main Post) is bounded on the north by Parker's Creek, a shallow estuary of the Shrewsbury River having an average depth of 3 ft. at mean tide; on the east by the New York and Long Branch Railroad; on the south by Oceanport Creek, another shallow estuary of the Shrewsbury River flowing through the reservation, and Main Street of the Oceanport Borough; and on the west by New Jersey State Highway Route 35.

Fort Monmouth (Main Post) was activated at the beginning of World War I when the Signal Corps required a training center near a large port of embarkation. Authorized by the Assistant General on May 16, 1917, the

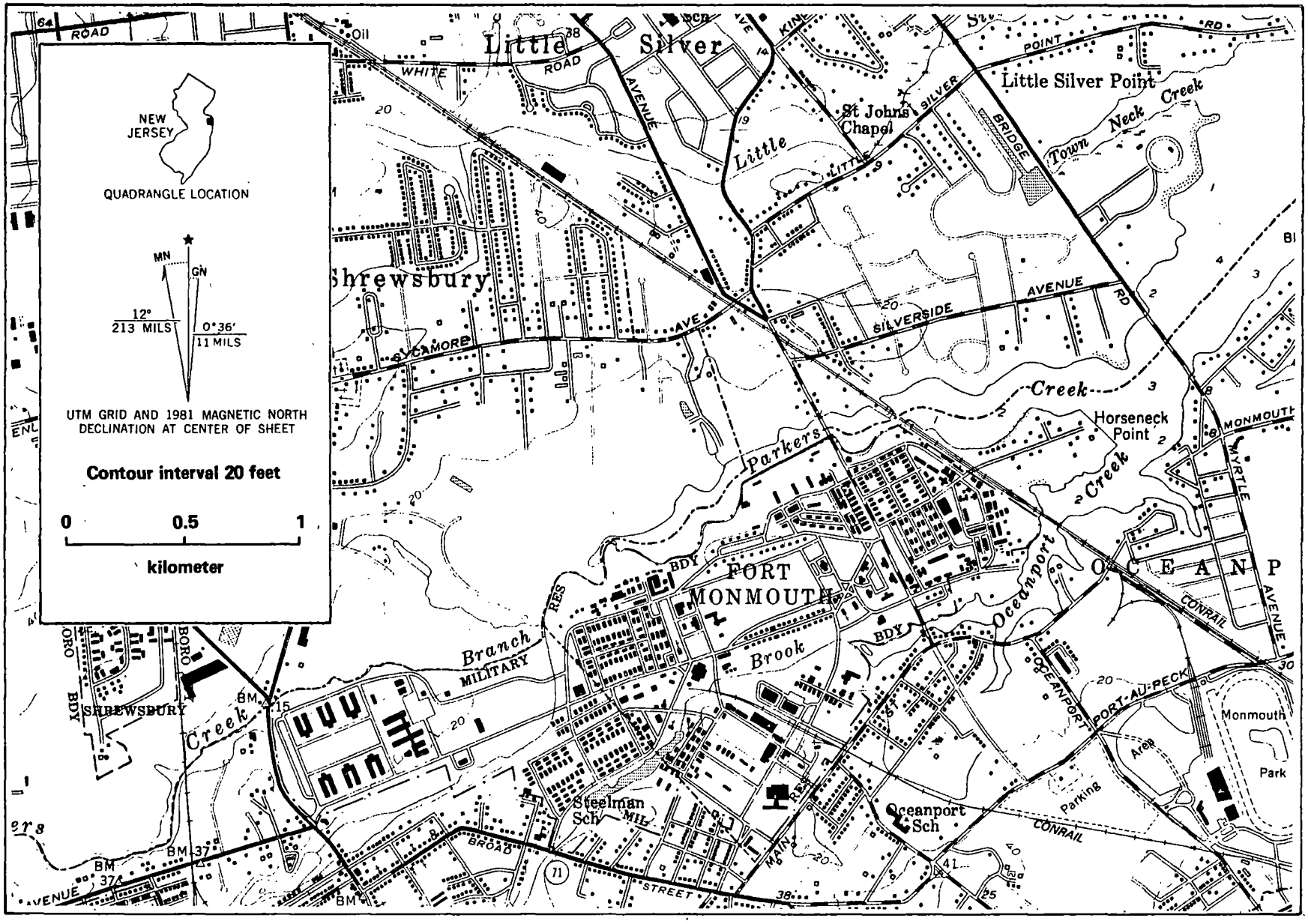

Figure 1-1a. MAP OF THE GENERAL VICINITY OF FORT MONMOUTH (MAIN POST)

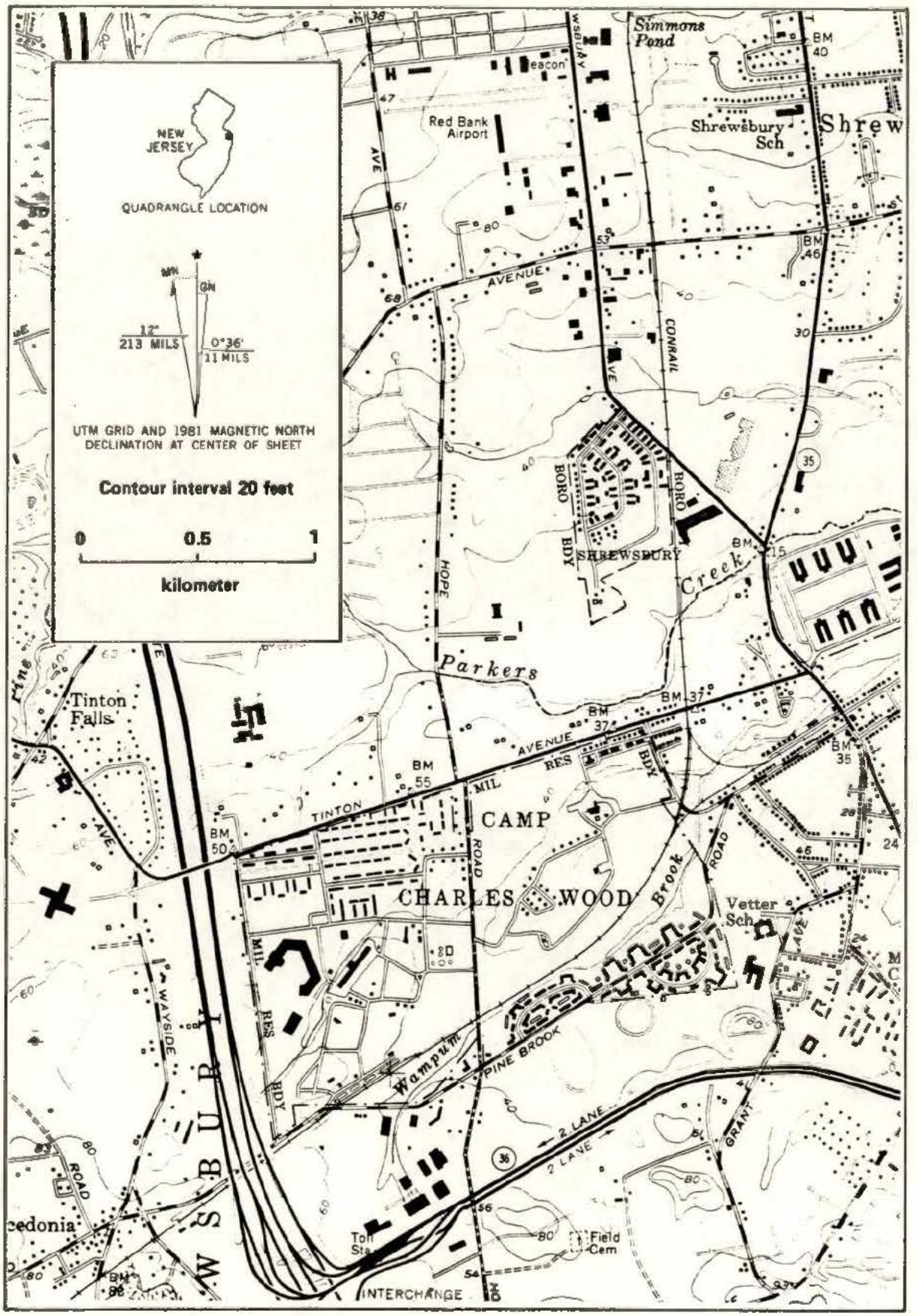

Figure 1.1b. MAP OF THE GENERAL VICINITY OF FORT MONMOUTH (CAMP CHARLES WOOD)

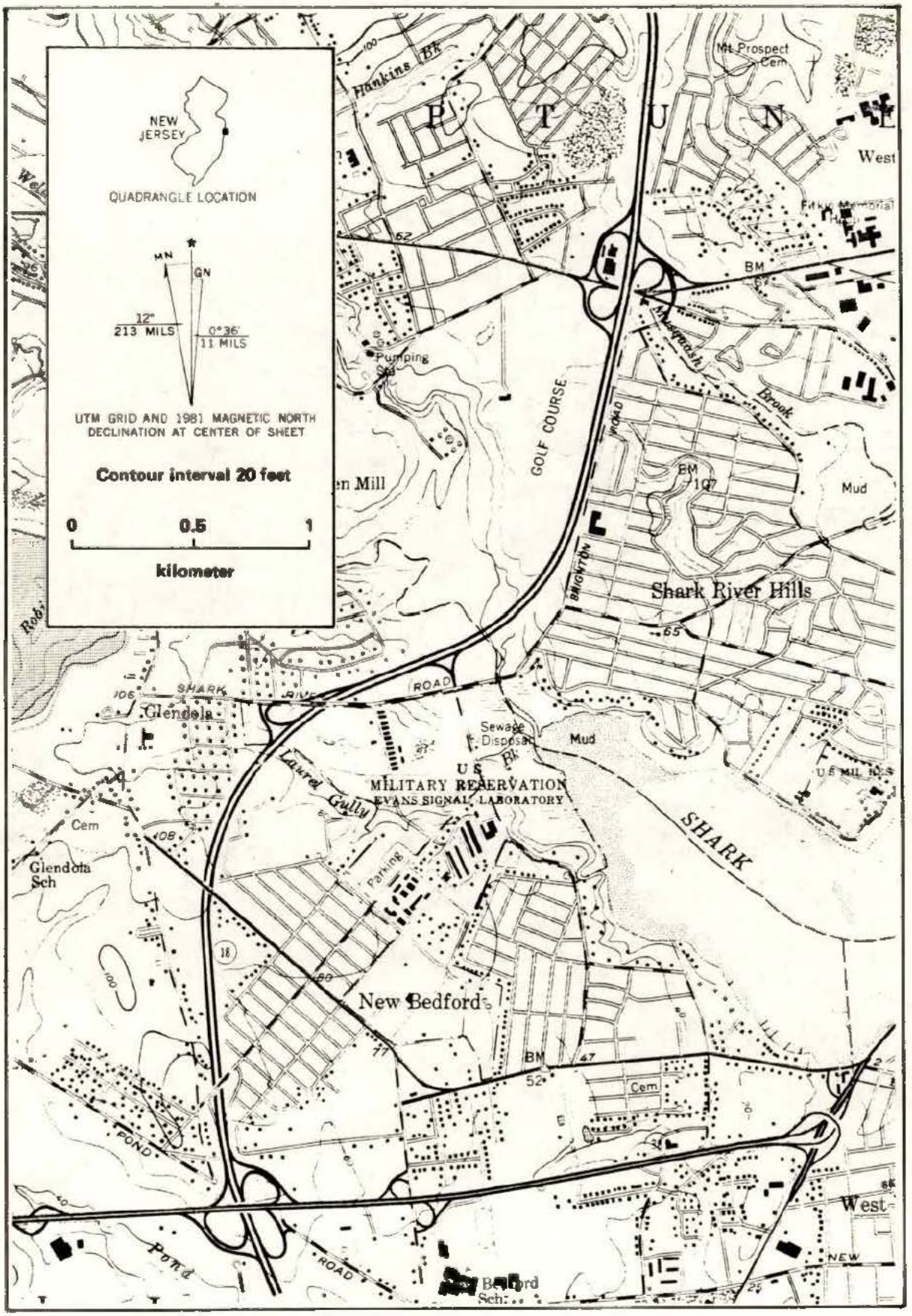

Figure 1-1c. MAP OF THE GENERAL VICINITY OF FORT MONMOUTH (EVANS AREA)

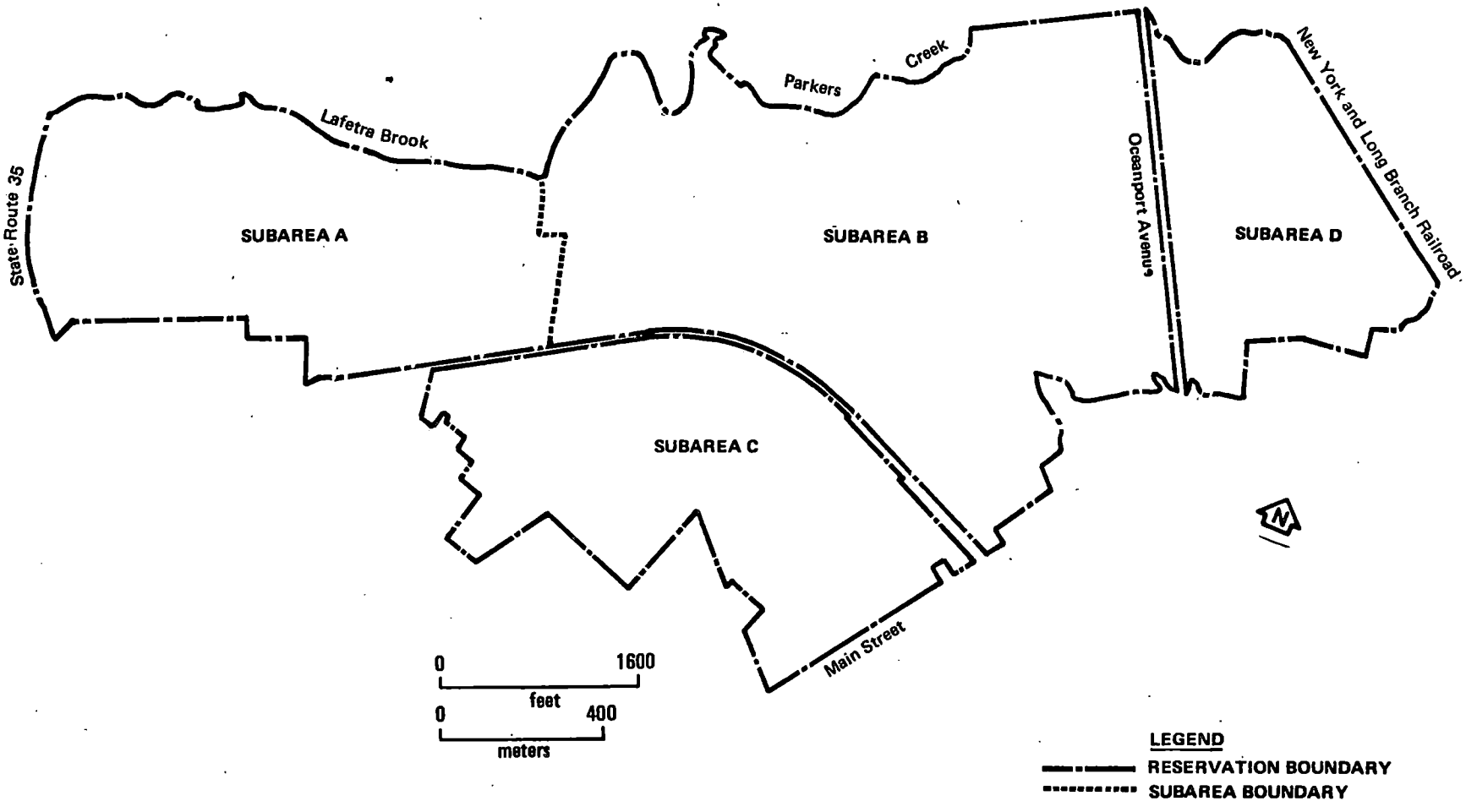

Figure 1-2. MASTER BASE MAP OF FORT MONMOUTH (MAIN POST)

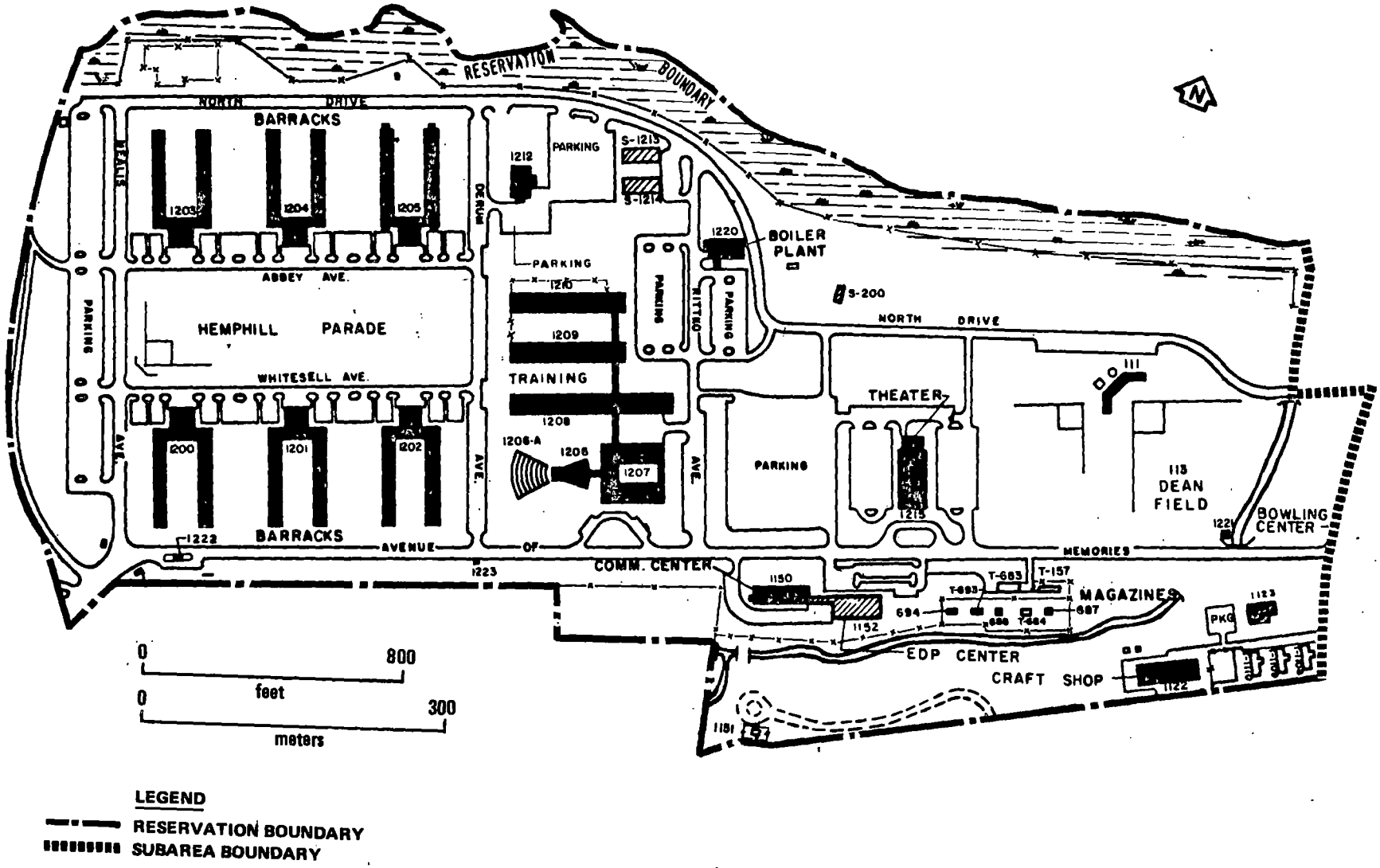

Figure 1-2a. DETAILED BASE MAP OF FORT MONMOUTH (MAIN POST), SUBAREA A

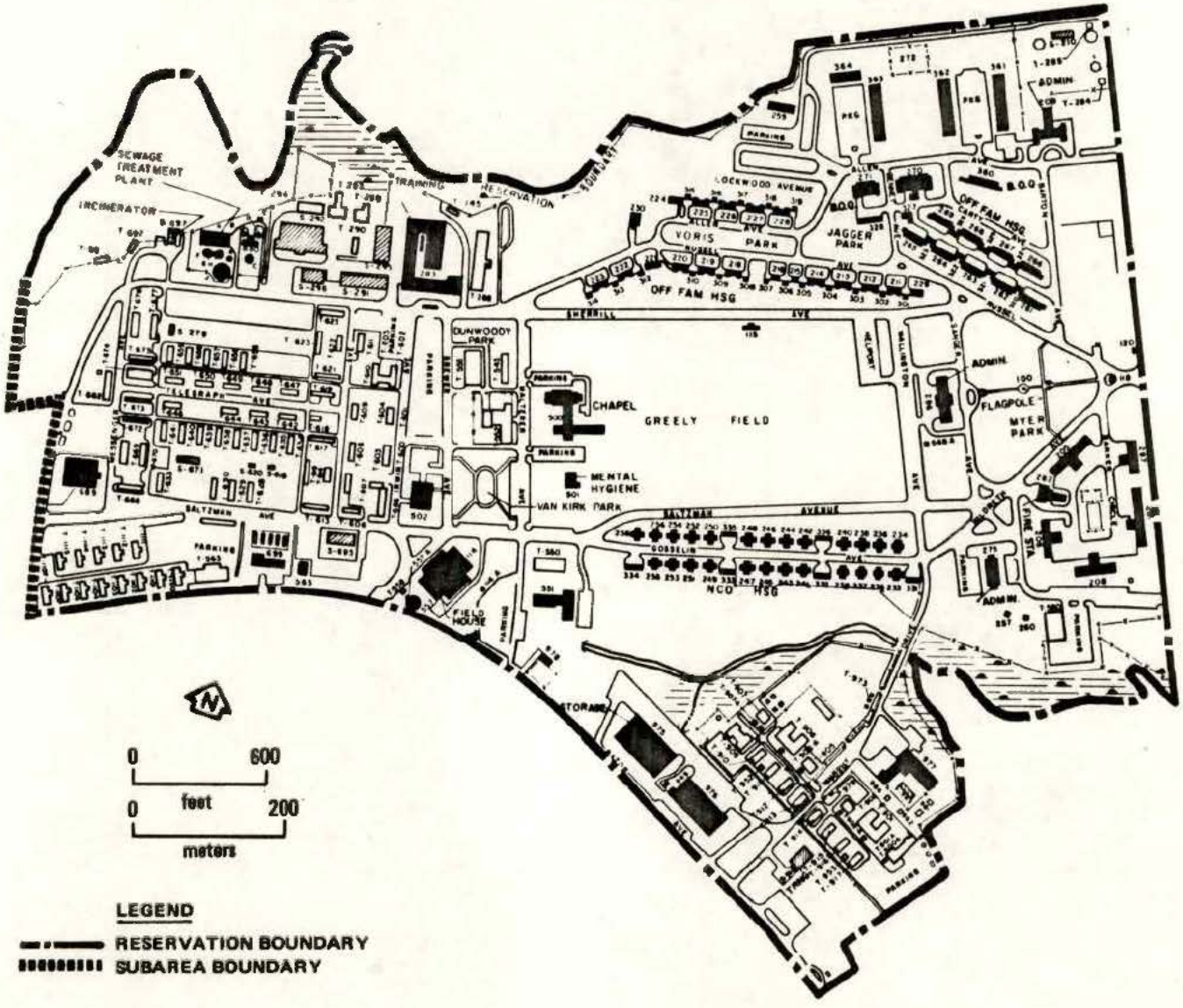

Figure 1-2b. DETAILED BASE MAP OF FORT MONMOUTH (MAIN POST), SUBAREA B

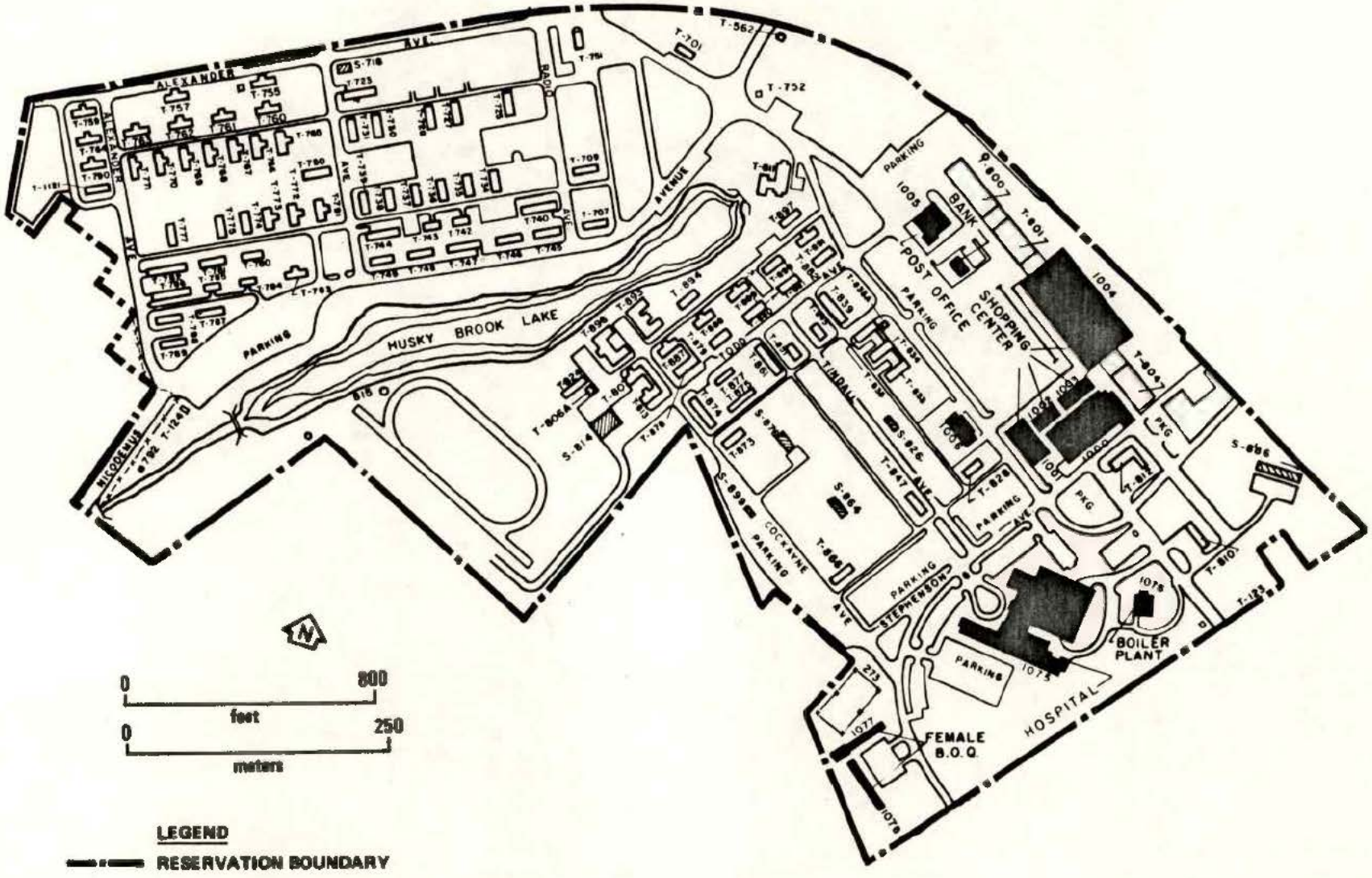

Figure 1-2c. DETAILED BASE MAP OF FORT MONMOUTH (MAIN POST), SUBAREA C

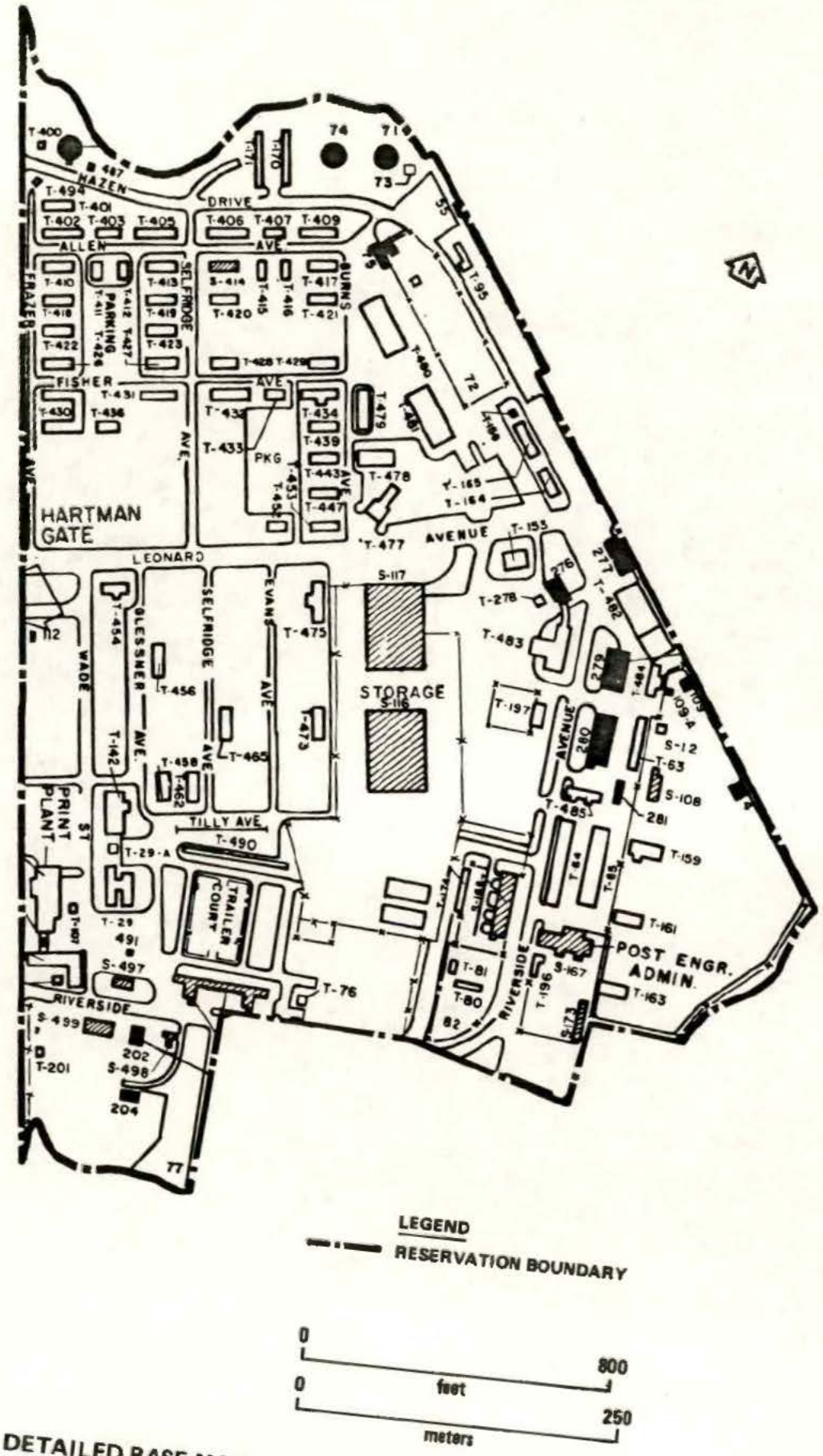

Figure 1-2d. DETAILED BASE MAP OF FORT MONMOUTH (MAIN POST), SUBAREA D

installation was designated Camp Alfred Vail, in honor of the New Jersey inventor who aided the development of the Morse Telegraph. In 1919 Camp Vail became a separation center for troops upon their return from France. The War Department declared Camp Alfred Vail a permanent military installation in 1925. It was then officially designated Fort Monmouth, in honor of the soldiers who fought and died in the American Revolution during the battle of Monmouth in 1778.

Construction of permanent barracks, hospital, and other miscellaneous buildings was started in 1927. By the spring of 1935, extensive permanent housing (NCO's and Officers), a Signal Corps Laboratory, Post Headquarters and miscellaneous support facilities were built. Expansion continued through World War II, the Korean War, and during the Vietnam conflict.

The buildings of Fort Monmouth are of both permanent and temporary construction. In general, the pre-World War II permanent buildings are 45 to 50 years old. All of these buildings are in a relatively good state of repair. Russel Hall (former post headquarters) now houses the Headquarters and Installation Support Activity. In addition there are five troops barracks, a fire house, a former theater and a former hospital building now converted to administrative use, a former laboratory building converted to training use, and a few miscellaneous shop buildings. The majority of pre-World II permanent buildings are commissioned and non-commissioned officers quarters.

Post-World War II permanent construction consisted principally of reinforced-concrete buildings with masonry unit curtain walls. The permanent buildings constructed prior to 1935 and the new permanent-type construction built between 1950 and the present, approximately 216 units, still leave the Main Post short of essential adequate facilities to accommodate present and future requirements.

Some temporary buildings on the Main Post which were constructed in the early years of World War II for troop housing and support are extant and in a fair state of repair. Some are still being used as company HQ buildings.

The major activities located on Main Post are the Communications and Electronics Command (CECOM); the Army Communications Systems Agency (CSA); the Joint Tactical Command, Control and Communications Agency; the U.S. Military Academy Preparatory School; the U.S. Army Chaplain Center and School; the 513th Military Intelligence Group; and Patterson Army Hospital. The Signal Center and School moved to Fort Gordon in 1974. The Satellite Communications Agency is now part of CECOM. The Army Strategic Communications Agency has been integrated with CSA.

Headquarters (HQ) Fort Monmouth was attached to HQ ECOM, which was established on August 1, 1962. There have been two significant organizational changes since 1962. On January 1, 1978 ECOM was dissolved, and four new organizations were established in its place: the Electronics Research and Development Command, headquartered in Adelphi, MD; the Avionics Research and Development Activity (AVRADA), which was

attached to AVRADCOM; the Communications Research and Development Command (CORADCOM), with headquarters in the Charles Wood Area, and the Communications and Electronics Materiel Readiness Command (CERCOM). Fort Monmouth HQ was attached to CERCOM. On May 1, 1981 CERCOM and CORADCOM were combined to form the Communications-Electronics Command (CECOM), which now functions also as HQ Fort Monmouth.

CECOM is responsible for the development, acquisition, deployment and life-cycle support of communications-electronics equipment. This responsibility encompasses combat radios systems, switches, telephone and teletypewriter systems, multiplexers, satellite terminals, tactical computers, electronic test equipment and certain classes of radar. The command is also responsible for supporting equipment developed by other government agencies, including radar (combat surveillance), night vision devices, communications security equipment (not at Fort Monmouth), signal and electronic warfare items (also not at Fort Monmouth), power sources, cables and avionics equipment.

1.2.2 Camp Charles Wood

The Charles Wood Area (Figure 1-3, 1-3a, 1-3b) is a sub-post of Fort Monmouth. It is situated 2 mi. west of the West Entrance to Fort Monmouth (Main Post). This sub-post has 529.71 a. of land, of which approximately 50 a. consist of swamp woodland and the balance is open, level land, with an elevation of about 50 ft. above mean sea level.

The permanent buildings in this area include officer 4-family "Shell Type" Family Quarters that have been converted to 64-2 family field grade officers quarters, 511 units of Wherry Housing, 370 units of Capehart Housing, and 100 new NCO units.

Also located in this area is the Directorate of Research, Development, and Engineering Laboratories (Hexagon) Building 2700, Building 2525, a former research and development facility that was converted to administrative use in 1950, and the Fort Monmouth Officers Open Mess Complex. There are a total of 214 permanent buildings in the Charles Wood Area.

The temporary buildings (35 units) located at this area are in a fair state of repair. The buildings are presently used as warehouses and general storage areas, and a few of the buildings house elements of the Electronics Laboratories.

Activities located in the Charles Wood Area include: the CECOM Research and Development Center, the Avionics Research and Development Activity and field components of the Electronics Research and Development Command (ERADCOM), in addition to housing and the Officers' Club.

1.2.3 The Evans Area

The Evans Area (Figure 1-4, 1-4a, 1-4b, 1-4c, 1-4d) is a sub-post of Fort Monmouth. It is situated on the west bank of the Shark River at Belmar, New Jersey. The sub-post is located 5 mi. southwest of Asbury

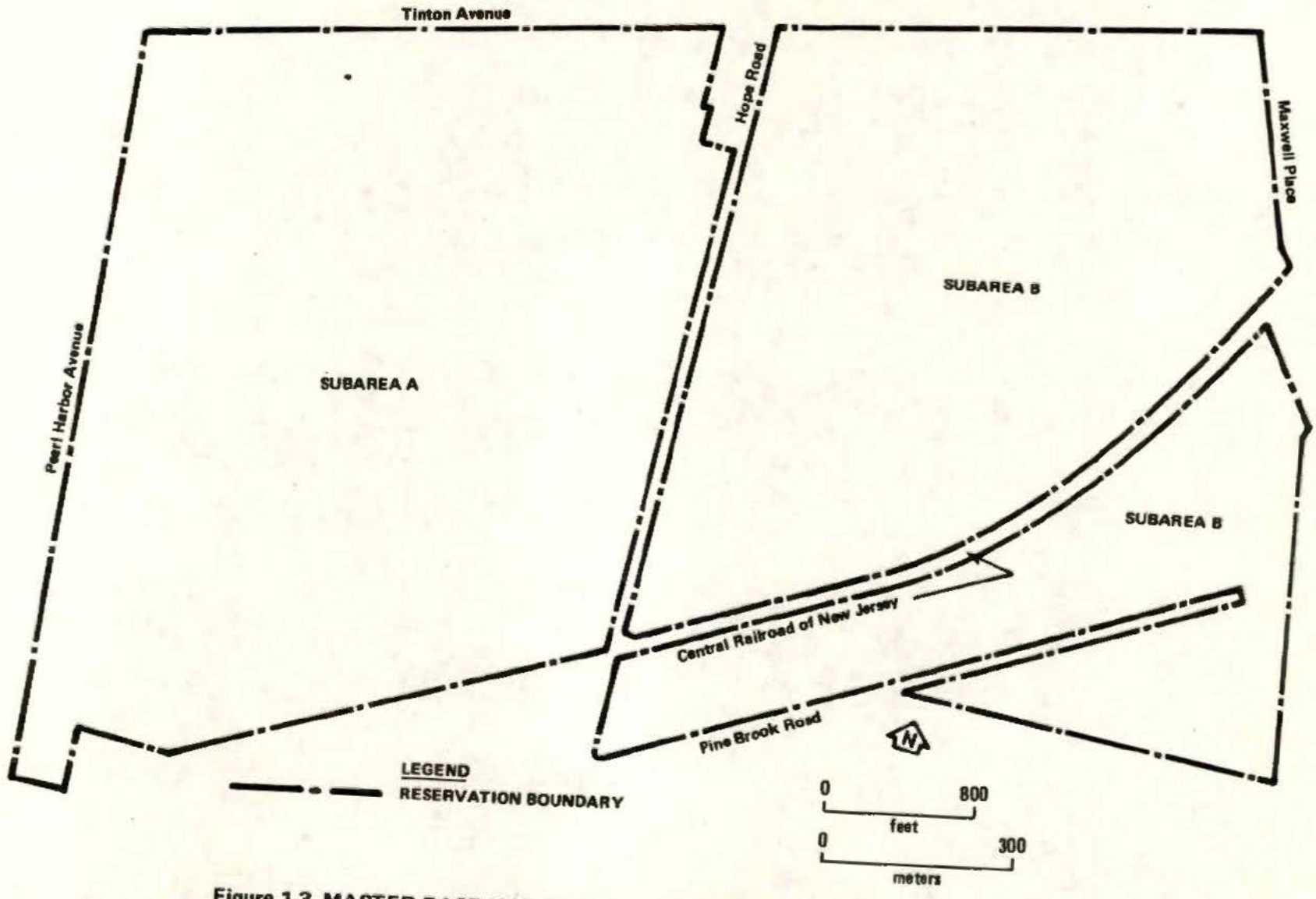

Figure 1-3. MASTER BASE MAP OF FORT MONMOUTH (CAMP CHARLES WOOD)

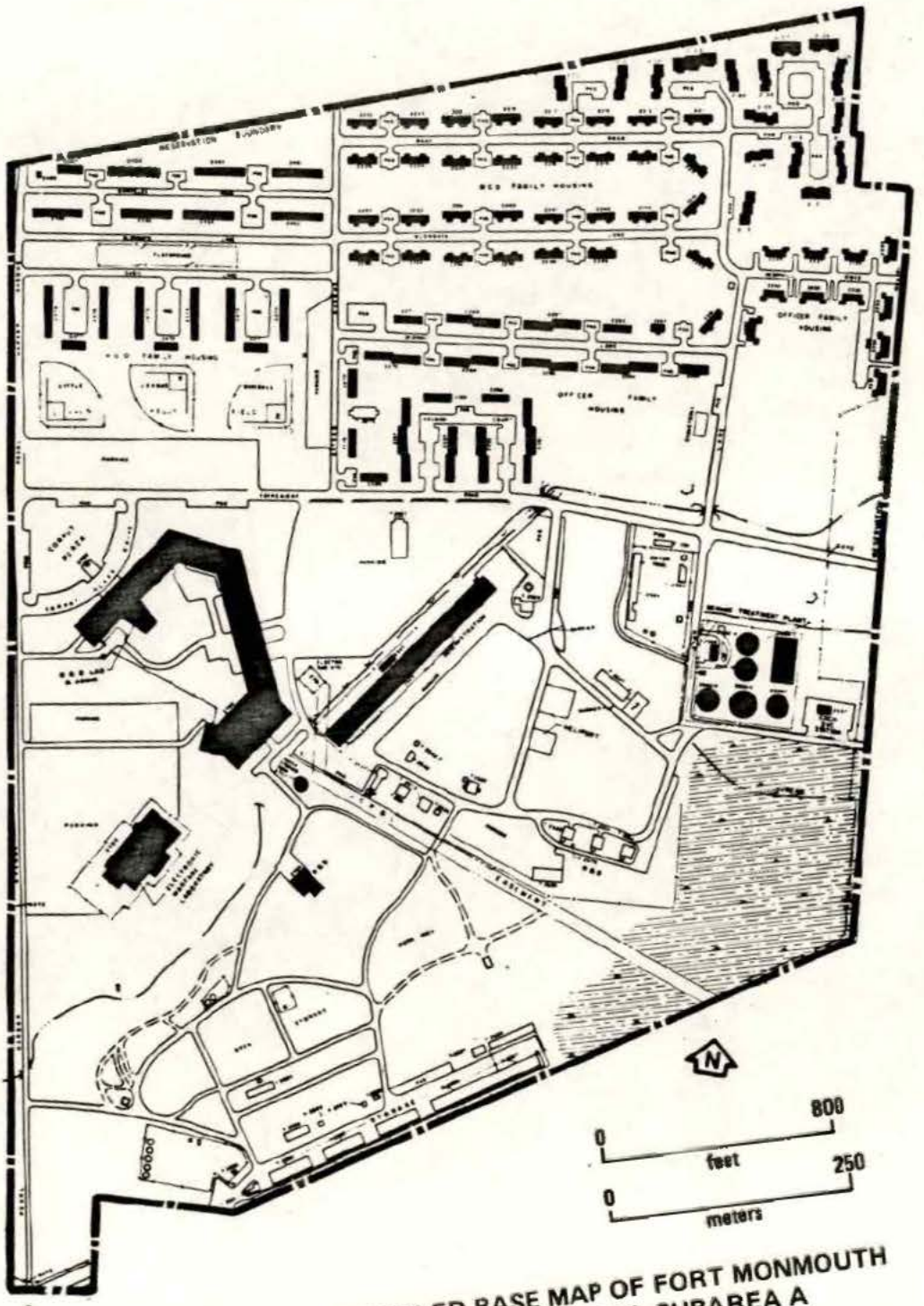

Figure 1-3a. DETAILED BASE MAP OF FORT MONMOUTH (CAMP CHARLES WOOD), SUBAREA A

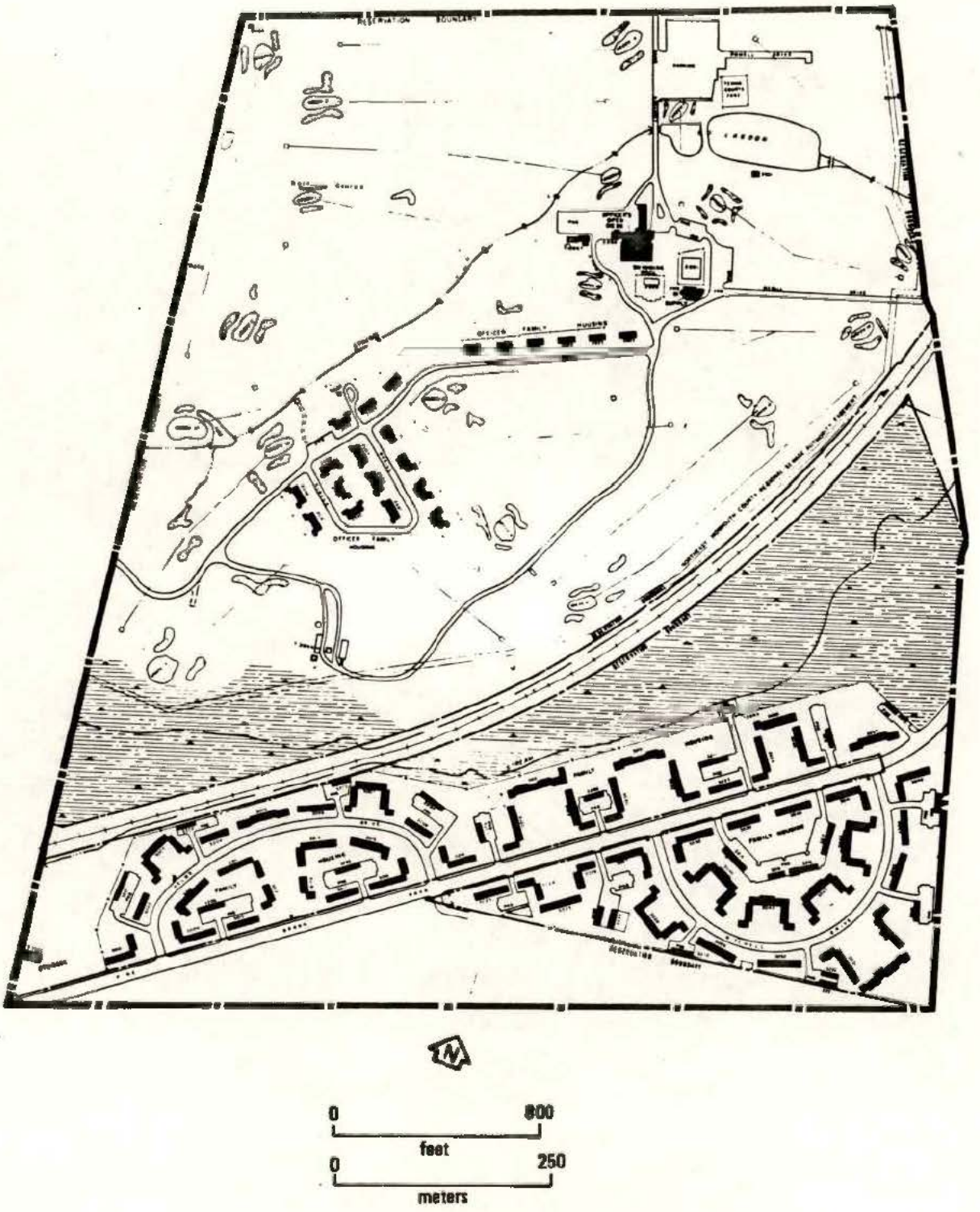

Figure 1-3b. DETAILED BASE MAP OF FORT MONMOUTH (CAMP CHARLES WOOD), SUBAREA B

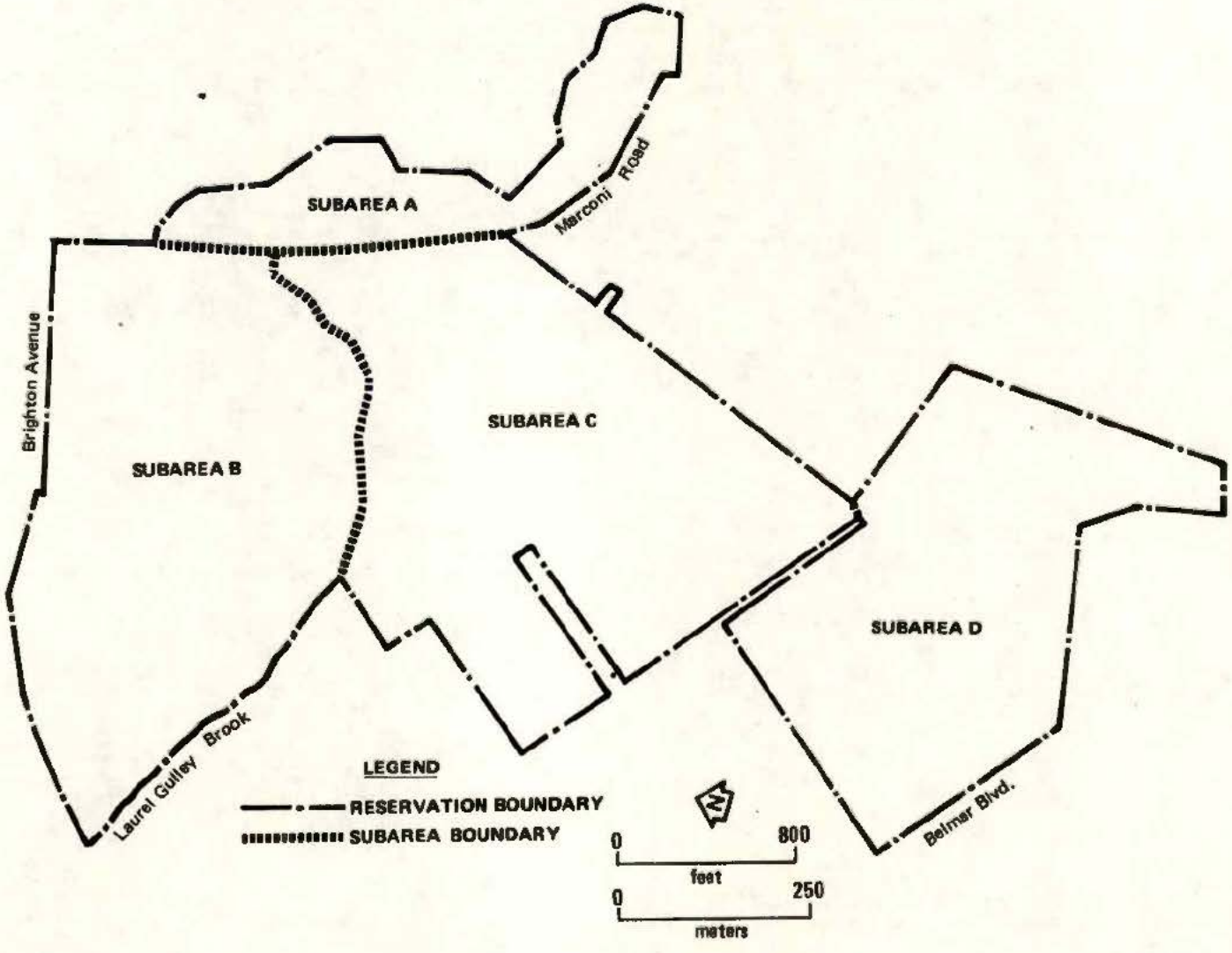

Figure 1-4. MASTER BASE MAP OF FORT MONMOUTH (EVANS AREA)

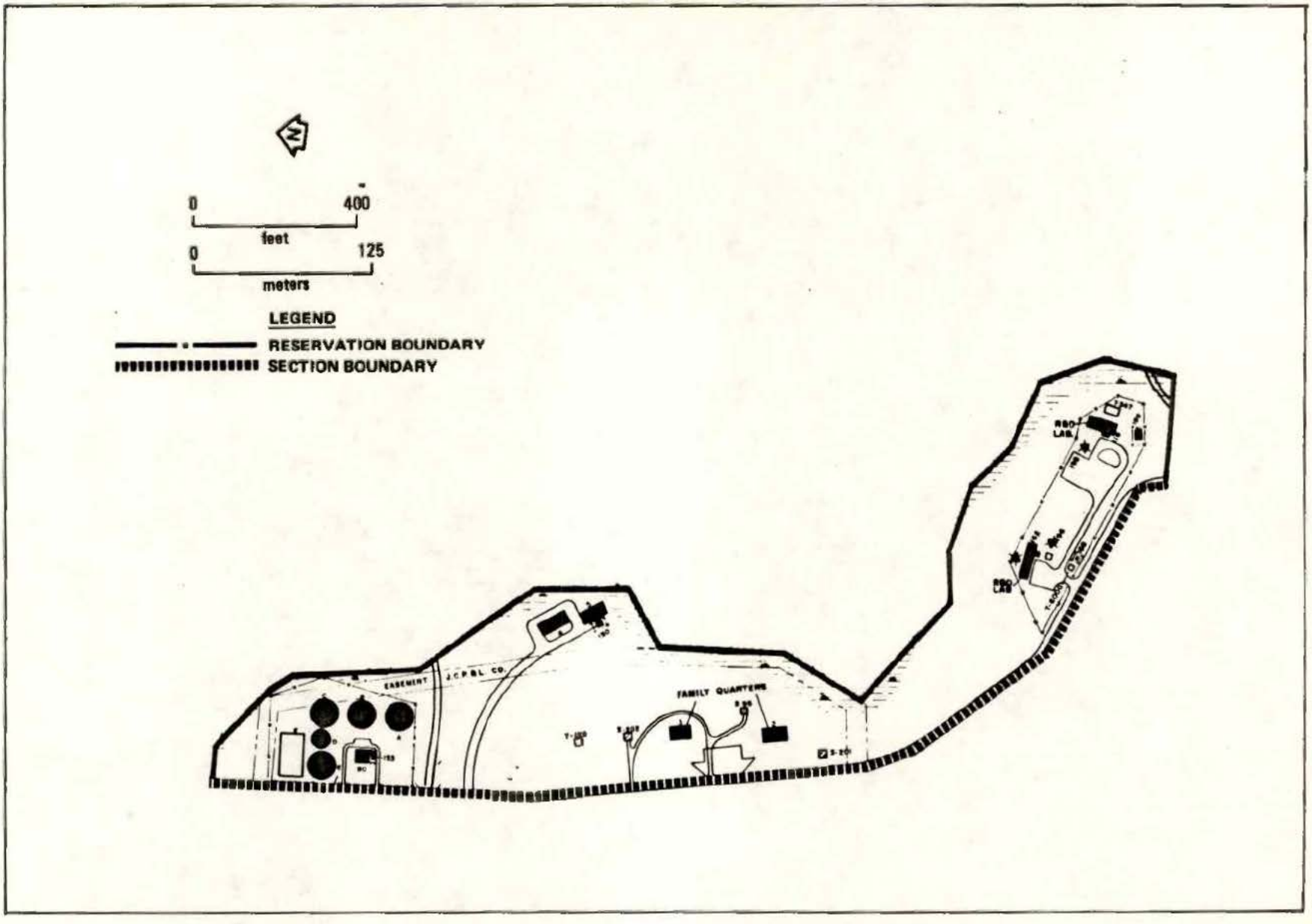

Figure 1-4a. DETAILED BASE MAP OF FORT MONMOUTH (EVANS AREA), SUBAREA A

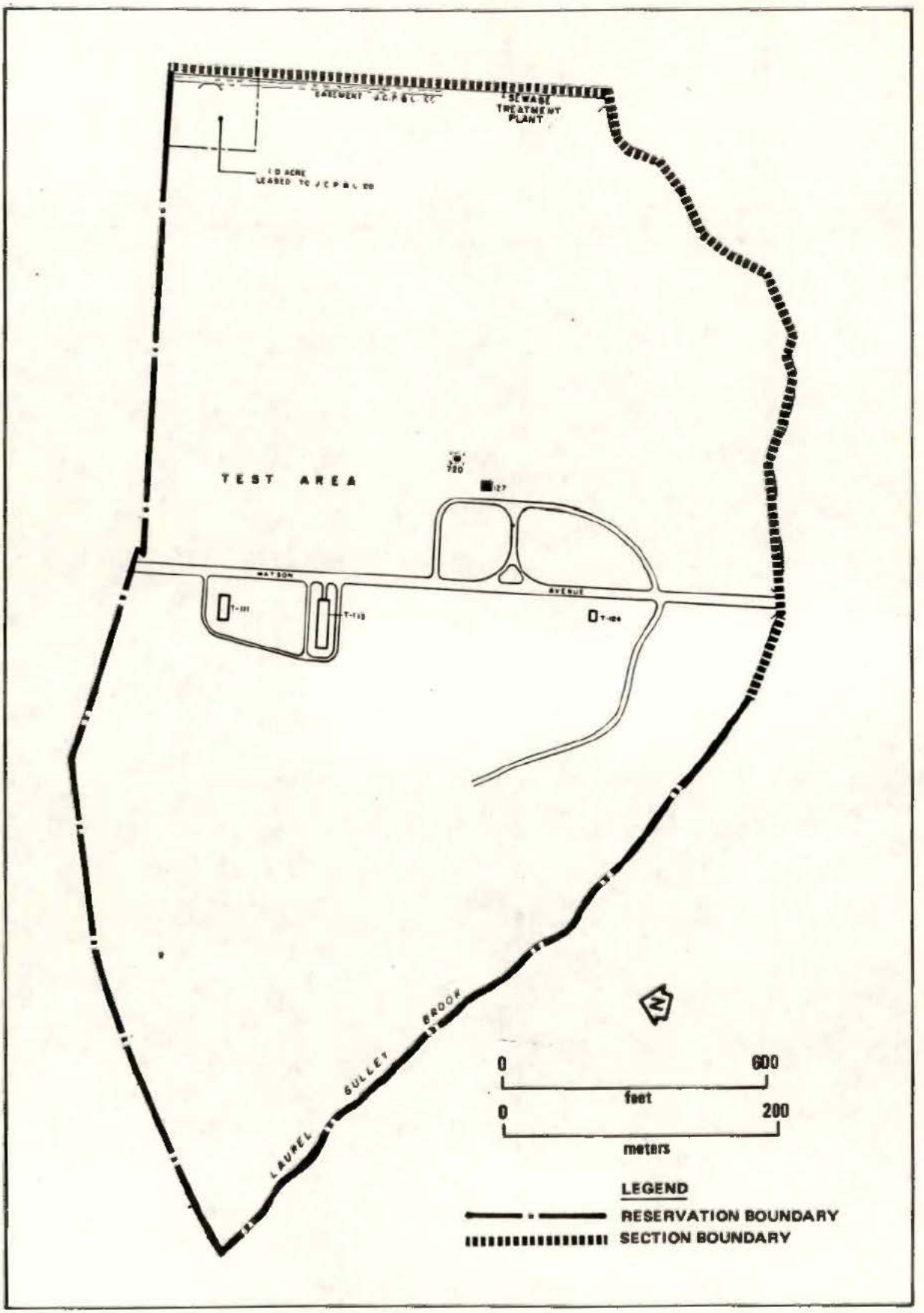

Figure 1-4b. DETAILED BASE MAP OF FORT MONMOUTH (EVANS AREA), SUBAREA B

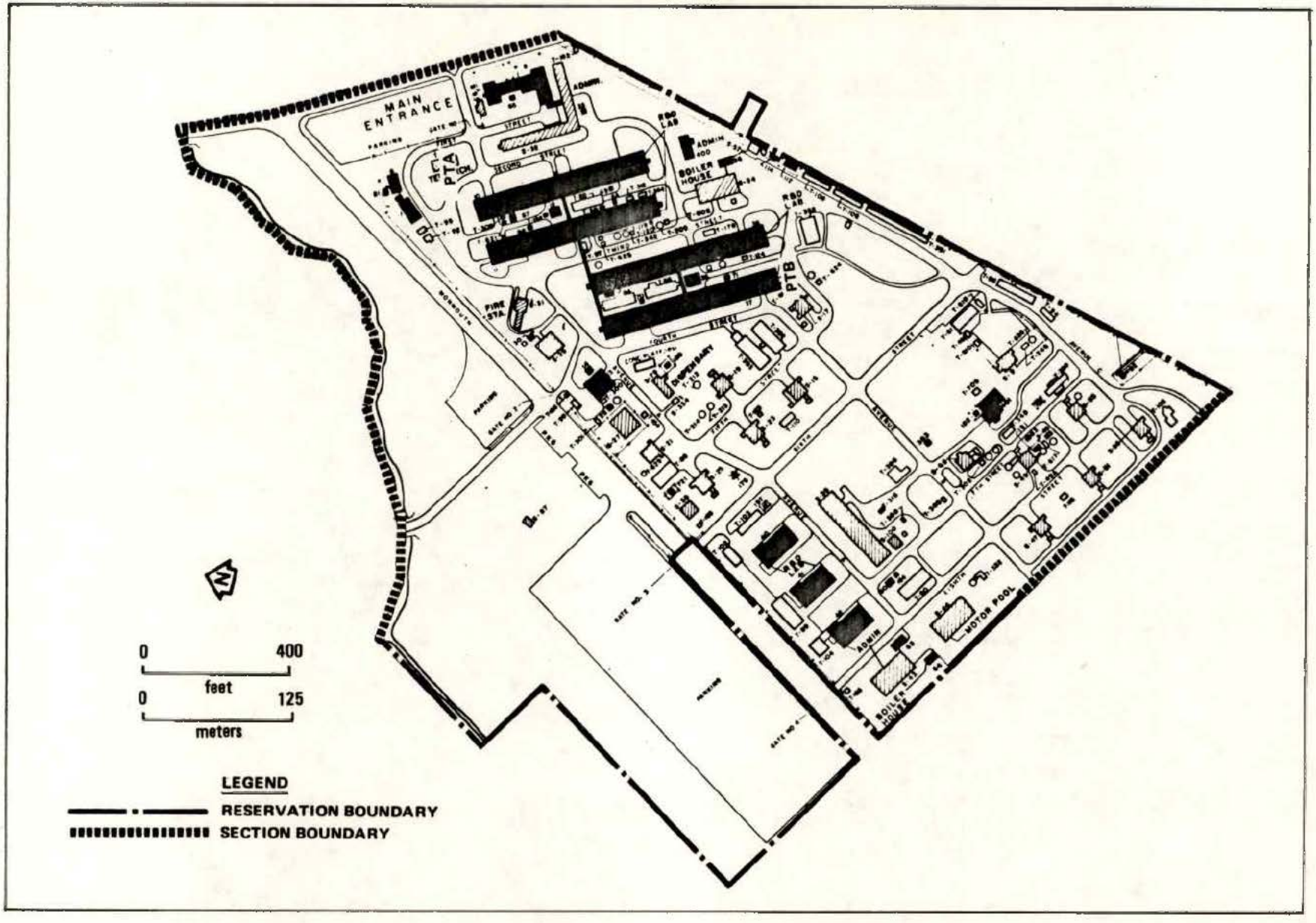

Figure 1-4c. DETAILED BASE MAP OF FORT MONMOUTH (EVANS AREA), SUBAREA C

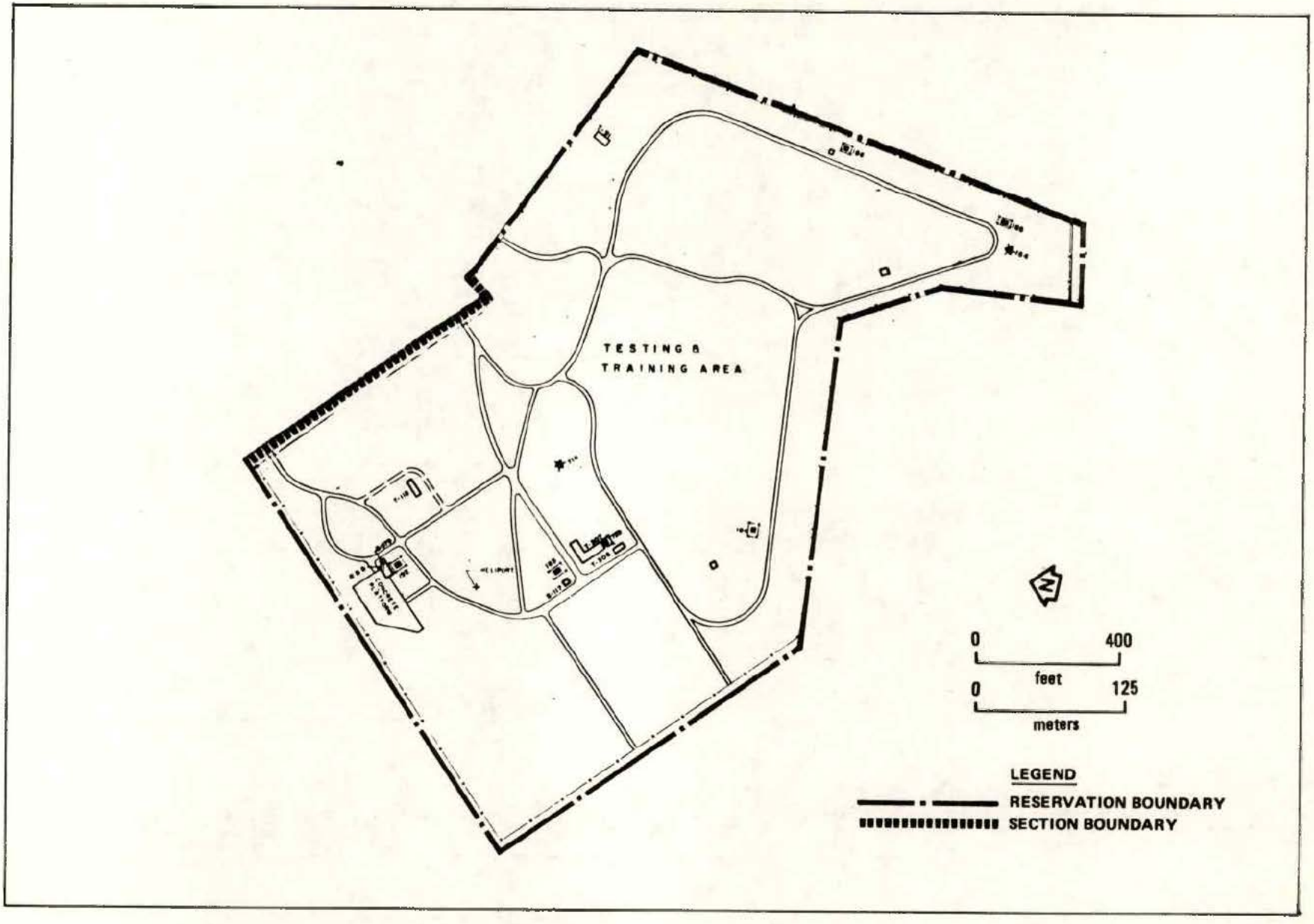

Figure 1-4d. DETAILED BASE MAP OF FORT MONMOUTH (EVANS AREA), SUBAREA D

Park and is approximately 12 mi. south of Fort Monmouth. The land is 217.08 a. of which 20 a. are heavily wooded and 197.08 acres are fairly level ground having an elevation of approximately 70 ft. above mean sea level.

The Evans Area is currently used by components of CECOM and ERADCOM. The seven permanent buildings, formerly part of the Marconi Wireless Company, that existed when the government purchased the Evans Area in 1940 are now approximately 70 years old, but are still in a good state of repair. The remaining 62 permanent buildings were constructed between 1940 - 1945 and also are in good condition. The temporary buildings (approximately 96) were constructed during the years 1940-1943 have been kept in a good state of repair.

1.3 SUMMARY OF PREVIOUS ARCHEOLOGICAL WORK CONDUCTED ON FORT MONMOUTH

There is no record of any professional archeological work having been conducted within the area of Fort Monmouth. Neither the 1913-1915 or the 1936-1941 statewide archeological survey records refer to visits to the area. The fact that much of the area of Fort Monmouth was farmed since the colonial period suggests amateur collectors may have surface collected the area prior to its becoming a military installation. Unfortunately, no collections, amateur or professional, are recorded. The New Jersey State Museum collections include prehistoric archeological specimens donated by individuals in the early 1900s which are recorded as "vicinity of" Tinton Falls and other towns in the general area of Fort Monmouth. Unfortunately more precise provenience data is unavailable for these specimens.

A telephone and letter check of museums and historical organizations in Monmouth County failed to produce knowledge of any other archeological collections which may have been made on Fort Monmouth its sub-installations or in their immediate vicinities.

Redacted - Privacy Act, a civilian employee at Fort Monmouth from 1947 to 1977, was interested in prehistoric archeology as an avocation. He made surface collections of specimens at various locations within the Fort Monmouth. Len Bianchi met with Redacted - Privac, who described the locations, which specimens were found and permitted his collection to be photographed.

According to the records of the State Historic Preservation Officer, no archeological resource surveys are known to have been conducted on Fort Monmouth or any of it affiliated sub-installations.

1.4 THE SOCIOCULTURAL CONTEXT OF THE ARCHEOLOGICAL RESOURCES ON FORT MONMOUTH

Prehistoric and early historic Native American archeological sites on Fort Monmouth are of particular concern to anthropologists. The coastal area of New Jersey received only cursory coverage in both statewide surveys and few archeological sites have been professionally excavated. The cultural chronology, settlement data and subsistence data

are all inferred by extrapolation from other areas of New Jersey and neighboring regions where more data are available. Therefore all of these constructs are hypotheses, and require archeological data for testing.

Prehistoric archeological sites found on Fort Monmouth would be of interest to Native Americans in New Jersey today. There are more than 5,000 Native Americans presently living in New Jersey. Some of these trace descent from the Delaware Indians who inhabited the area at the time of European colonial settlement in the early 1600s; others trace descent from related Delaware speaking groups. A number of organizations (i.e., The New Jersey Indian Office, The Native American Cultural Center) are concerned with archeological sites as the record of their ancestors. Burial sites are viewed by these organizations as of great religious significance and, therefore, they are opposed to any disturbance of such sites.

Historic archeological resources on Fort Monmouth would be of concern to historians, historic archeologists, industrial archeologists, military historians, and folklorists. Historic sites may document local history and economic trends. Military related sites might be of national concern. Archeological sites would also be of concern to local historic organizations and to local inhabitants in general. Monmouth County has several extremely active historical organizations which are concerned with preserving and recording the history of the area.

2.0

AN OVERVIEW OF THE CULTURAL AND RELEVANT NATURAL HISTORY OF FORT MONMOUTH

2.1 THE PHYSICAL ENVIRONMENT

Fort Monmouth lies within the Outer Coastal Plain Province, an area of generally low relief (under 100 ft. in elevation). However, the immediate vicinity of the Fort is one of greater topographic relief than found in the majority of the province. Both the Shrewsbury and Shark Rivers flow eastward into the Atlantic Ocean. At the river mouths sandy beaches border the Atlantic. Upriver, saltmarshes border the rivers and numerous small tributaries.

2.1.1 Earth Resources

The Fort Monmouth vicinity is in general one of sand, clays and gravels. No lithic materials suitable for stone tool making by prehistoric populations outcrop in the Coastal Plain region. Within the river valleys, however, cherts, quartzite and sandstone pebbles and cobbles which could have provided raw materials for prehistoric groups do exist as remnants of glacial melt outwash.

The Shrewsbury drainage is an area of Cretaceous sands. The predominant soils are classified as Freehold-Collington undifferentiated. They are deep, well-drained and considered good agricultural land (Robichaud and Buell 1973:51). The sandy soil along the river margins is easily worked and therefore could have been utilized by prehistoric agriculturalists (see Section 2.2.1). The relatively higher agricultural potential of the Shrewsbury drainage undoubtedly made it attractive to European colonists, mainly farmers, as well.

The Shark River drainage is an area of poorer agricultural potential. The soils are classified as predominantly Sassafras-Hammonton Phase. These are excessively drained sands with low retention of nutrient values (Robichaud and Buell 1973:51).

2.1.2 Water Resources

The Shrewsbury and Shark Rivers are brackish to salt as they drain to the Atlantic in the study area. Fresh water is available in springs and in some of the small seasonally filled ponds in upland sections. Unfortunately, disturbances of the original drainage configuration makes it necessary to rely on local tradition for the locations of such resources, which were vital to both prehistoric and historic human

settlement. (For example, a spring is reported to have existed in the present golf course area within Fort Monmouth.)

2.1.3 Modern Climate

The Fort Monmouth area is one of coastal climate. Winter temperatures rarely fall below freezing. The average winter temperature is 34.5°F, while the average summer temperature is 74.6°F (Robichaud and Buell 1973:56-57). Average precipitation is 42.94 in. per year, peaking slightly in July and August (Robichaud and Buell 1973:61).

2.1.4 Plant Resources

The Shrewsbury and Shark River drainages are areas of varied vegetation cover located on the northern fringe of the New Jersey Pine Barrens which occupy the majority of the area of the Outer Coastal Plain Province within the state. Small areas of tidal marsh occur along the Shrewsbury River, particularly where smaller streams feed into the river. The vegetation in the marshes and along the edges of them includes marsh grasses and salt-marsh elder. Some of the grasses could have provided weaving materials for prehistoric groups, while some marsh grasses were important as salt hay for farmers in the historic period.

Forest cover includes both evergreen and deciduous trees. The most common trees are the red maple, black gum tree, American holly (particularly on drier soils such as those of Shark River), with shrubs such as blueberry, huckleberry, laurel and azalea common in the undergrowth (Robichaud and Buell 1973:156-158). The variety of berrying plants would have been a seasonally significant food for prehistoric populations of the area.

2.1.5 Animal Resources

The study area includes mixed forests and undergrowth which would have supported white-tailed deer, a staple food of all known prehistoric populations of New Jersey. A variety of small mammals, including muskrat, skunk, possum and beaver would have also been available to prehistoric hunters.

Since the study area is on the Atlantic flyway for migratory ducks and geese, and the tidal marshes offer good forage for these wildfowl, the area of Fort Monmouth would be expected to have been utilized in fall and spring when wildfowl could have provided an important addition to the diet of prehistoric groups. The marsh and tidal pond areas, along with the rivers, are spawning grounds for many fish species and shell fish are also available. Eels are still abundant in the Shrewsbury River and were historically an important food source, being speared or drag-caught in both winter and summer.

2.1.6 Paleoenvironment

The paleoenvironment of the Fort Monmouth study area changed drastically over the past 20,000 years. The following summary of those

changes is by necessity based upon general knowledge and extrapolation of data from surrounding areas, since no specific data are available for the study area.

Although never glaciated during the last or Wisconsin glaciation, the Fort Monmouth area was from ca. 18,000 to 11,000 BP a treeless, windswept tundra, subject to permafrost (Wolfe 1977:292-293). Pollen samples from north of the study area suggest some herbaceous vegetation existed between 17,000 and 13,000 BP (Sirken and Minard 1972). The inferred environment would have supported mammoth, mastodon and other species now extinct or no longer found in the area due to subsequent environmental changes.

Although the environment of the Fort Monmouth area would have been rather hostile to human inhabitants, Paleo-Indians are known to have exploited such environments and there is every expectation that the Fort Monmouth study area would have been thus exploited. Prior to 11,000 BP, the Fort Monmouth area was not in a coastal location, as the Atlantic coastline was some 80 mi. farther east than it is today. The area included at this time in the Shark River section the kind of high ground which is known to have attracted Paleo-Indians because such rises provided good vantage points for viewing the movements of migratory game.

Millman and Emery (1968) have suggested sea level rise along the Atlantic coast, with subsequent landward migration of the coastline, drowning of river valleys and creation of estuarine environments began approximately 14,000 years ago and continued at a rapid rate until approximately 7000 years ago. After 7000 BP coastal submergence continued at an abated rate until at approximately 3000 BC today's coastline, give or take local erosion, was achieved.

From ca. 14,000 to 11,000 BP, pollen data available consistently indicate an increase in pine and spruce and a change of the area from tundra to coniferous forest. It is unclear how hospitable an environment this was for late Paleo-Indian or Early Archaic populations.

After 11,000 BP, pollen data indicate a shift from coniferous to deciduous forest cover, with oak, chestnut, hickory and hemlock increasing through ca. 9500 BP. The climate is inferred to have been cool and the forests would have supported white-tailed deer and a variety of small game animals known to have been mainstays of Archaic populations' diets.

Between ca. 9500 and 5750 BP there is some evidence of a warming trend, with pollen samples showing hemlock and beech predominating. After ca. 5750 BP there was gradual cooling until the present-day climate was reached. By ca. 3000 BC the coastline was much as it is today and all of the environmental variety noted in previous descriptions of the contemporary environment was available to Archaic and later Woodland populations. Subsequent sections detail in what ways we know such kinds of environments have been utilized by prehistoric populations. The changes in paleoenvironment for the Fort Monmouth area are summarized in Table 2-1.

2.2 THE CULTURAL ENVIRONMENT

A summary of the cultural chronology of the Fort Monmouth vicinity is presented in Table 2-2.

2.2.1 Prehistory

During the last (Wisconsin) glaciation, the area of Fort Monmouth was approximately 50 mi. south of the of the southermost limit of glacial advance. Prior to the glacial retreat of ca. 11,000 BP, the Fort Monmouth area was one of permafrost. Wolfe (1977:292-93) has described the area are treeless tundra subject to high winds. The Atlantic coastline, in the period of glacial advance when sea levels were lower, was approximately 80 mi. east of where it is today.

Fluted projectile points associated with Paleo-Indian occupation have been reported for Monmouth County. Since Paleo-Indian populations are known to have occupied areas covered by the Wisconsin glaciation very shortly after the glacial retreat, it is possible and even probable that Paleo-Indian groups occupied the immediate southern unglaciated regions prior to 11,000 BP. By extrapolation from data available for other areas of the Northeast and Middle-Atlantic regions, Paleo-Indian populations in the area of Fort Monmouth can be assumed to have consisted of small groups dependent upon hunting and gathering. These groups presumably moved about in a seasonal round of occupation. This permitted utilization of different animal and plant resources as well as exploitation of raw materials, such as lithics, for the manufacture of tools.

Marshall (1982:35-36) has identified (after Eisenberg 1978; Funk 1972, 1978; and Gardner 1974, 1975) a number of locations favored by Paleo-Indian populations as campsites. These include ridges overlooking broad lowlands supporting game animals, fresh water sources, riverine and swamp environments that would have supported fish and bird populations. The Fort Monmouth area would have offered both fresh water sources and the riverine and swamp locations known to have been favored in other areas. The Shark River area offered these environments, as well as high ridges from which migrating game animals would be visible. A Paleo-Indian projectile point was reportedly found within the Fort Monmouth installation. The exact location of the find within the Fort is unknown.

From ca. 9000 or 8000 BC through 1000 BC, the Archaic Period, the Northeast and Middle-Atlantic regions were occupied by small groups dependent upon hunting and gathering who were seasonally mobile. The Fort Monmouth area during the Archaic Period would have offered a variety of environmental habitats known to have been utilized by prehistoric populations. These include fresh water streams and springs, fresh and salt water marshes, flood plains and bogs, which supported fish, shellfish, small mammals and migratory bird species. The forest scrub vegetation of these areas supported white-tailed deer (an important food animal in all known Archaic components with preserved faunal remains) and a variety of seasonally important food sources such as nuts and berries.

Table 2-1. A SUMMARY OF THE ENVIRONMENTAL HISTORY OF FORT MONMOUTH (INCLUDING CAMP CHARLES WOOD AND THE EVANS AREA)

Wolfe 1977		Serkin and Minard 1972	
Date	Inferred Climate	Date	Inferred Climate
5750 BP - present	Slight cooling to present climate.		
9500 - 5750 BP	Warming trend with oak, hemlock and beech forests predominating.		
11,000 - 9500 BP	Cool climate with oak, chestnut and hickory increasing.	12,000 - 8500 BP	Shift to oak and hemlock forests.
14,000 - 11,000 BP	Rising sea levels, coniferous forests increasing.	13,000 - 12,000 BP	Open parkland shifting to pine and spruce forests.
18,000 - 11,000 BP	Permafrost, treeless tundra with high winds.	17,000 - 13,000 BP	Herbaceous vegetation.

Table 2-2. A SUMMARY OF THE CULTURAL CHRONOLOGY OF THE AREA OF FORT MONMOUTH (INCLUDING CAMP CHARLES WOOD AND THE EVANS AREA)

Cultural Unit					
Tradition	Period or Phase	Date	General Settlement Patterns	General Subsistence Systems	Kinds of Archeological Remains Representative of Period
American	Modern cultural landscape (suburban/military/ resort)	AD 1865 to present	Commercial and industrial development along road system. Sub-division of farms for single family houses. Rise of shore resort communities. Establishment of military bases. Introduction of railroads to area.	Importation of food, energy, commerce, truck farms, orchards.	Dominance of American manufactures, construction material, transportation. Late nineteenth century industrial remains, town centers.
	Urban/industrial revolution (rural/small towns)	AD 1800-1865	Late development of transportation (turnpikes, railroads). Rise of port and commercial centers. Continuance of farmsteading.	Agriculture, raising of livestock, orchards.	Increase in American manufactures, construction material, industrial remains. Dominance of English manufactures, ceramics, railroad routes, docks, wharves.
	Revolutionary War/ Early Federal (rural/small towns)	AD 1765-1810	Expansion of agriculture, industry, transportation systems (roads). Development of towns around industrial sites. Rise in commercial activities. Continuance of exploitation of forest resources.	Agriculture, raising of livestock, orchards.	English imports and manufactures dominate. American construction materials, handicraft industries.
	Colonial/early settlement (rural/villages)	AD 1765-1660	Exploitation of mill sites. Development of overland transportation routes. Exploitation of forest resources. Clearing of land for agriculture. Establishment of towns, purchasing proprietory land grants.	Agriculture, raising of livestock, orchards.	English imports and manufactures dominate. American construction materials.
Contact	European-Native American contact.	AD 1600-1700	Seasonally occupied villages and campsites.	Hunting and gathering, horticulture.	Storage pits, midden deposits, including shell middens, postmolds, cooking pits, burials.
Native American	Pre-contact Late Woodland	AD 900-1600	Seasonally occupied villages and campsites.	Hunting and gathering, horticulture.	Storage pits, midden deposits, including shell middens, postmolds, cooking pits, burials.
	Middle Woodland	AD 500-900	Seasonally occupied villages and campsites.	Hunting and gathering, possibly horticulture.	Storage pits, midden deposits, including shell middens, postmolds, cooking pits, burials.
	Early Woodland	1000 BC-500 AD	Seasonally occupied villages and campsites.	Hunting and gathering.	Lithic and ceramic concentrations, ground stone tools.

Table 2-2. A SUMMARY OF THE CULTURAL CHRONOLOGY OF THE AREA OF FORT MONMOUTH (INCLUDING CAMP CHARLES WOOD AND THE EVANS AREA (Concluded)

Cultural Unit					
Tradition	Period or Phase	Date	General Settlement Patterns	General Subsistence Systems	Kinds of Archeological Remains Representative of Period
	Late Archaic	BC 4000-1000	Seasonally occupied campsites near springs and other fresh water sources, lithic workshops	Hunting and gathering.	Lithic scatters, rock hearths, some lithic concentrations.
	Middle Archaic	BC 6000-4000	Seasonally occupied campsites near springs and other fresh water sources, lithic workshops.	Hunting and gathering.	Lithic scatters, isolated surface points, lithic concentrations in stratified context, activity areas (i.e., tool making, butchering).
	Paleo-Indian - Early Archaic	BC 10,000-6000	Seasonally occupied campsites near springs and other fresh water sources, lithic workshops.	Hunting and gathering.	Lithic scatters, isolated surface points, lithic concentrations in stratified context, activity areas (i.e., tool making, butchering).

By ca. 1000 BC evidences of new cultural influences apparently from the south are manifest from northern Pennsylvania to southern New England in the form of broad blade spear points and soapstone vessels. These diagnostic artifacts are both found in artifact collections from archeological sites in Monmouth County. Major rivers and streams seem to have been favored locations for sites of this tradition throughout their area of distribution.

Known Archaic sites in southern New Jersey range in size from a few hundred square ft. to two or three a. in area. They may contain tools and tool manufacturing debris (debitage) as well as stone-lined hearths and occasionally shallow pits. There is a much greater density of known Archaic than Paleo-Indian sites throughout the Northeast and Middle-Atlantic regions. This undoubtedly partly reflects population increase as environmental conditions became more favorable for human habitation and an improvement in the socio-technic adaptations of Archaic groups. However, as sea level rose, the available land area for occupation on the Outer Coastal Plain decreased, which may also partly account for a greater density of Archaic sites.

The period from ca. 1000 BC to the time of European exploration and settlement of southern New Jersey (AD 1700) is known as the Woodland Period. It is not known if in the initial part of this period horticulture was practiced, or if human populations were still completely dependent upon hunting and the collection of wild plant foods. By the Late Woodland period (ca. AD 1000), however, Indian populations in the area are known to have practiced hoe cultivation of corn and beans, and presumably squash and tobacco as well.

There is evidence of some population increase and of larger settlement size during the Woodland Period, although available data indicate groups were still following a seasonal round of hunting and gathering. Food and water resources in the Fort Monmouth vicinity, which would have attracted earlier groups, would have also attracted Woodland peoples. In addition, the sandy, easily worked soils of the river flood plains and lower terraces would have been eminently suitable for cultivation with simple digging tools.

A variety of different kinds of Woodland sites have been identified. These include large villages (over two acres in extent), small hunting camps, fishing and shellfish processing stations and cemeteries (all of the latter usually small in areal extent). Village sites and hunting and/or fishing camps have been found to contain stone-lined hearths and storage pits (presumably for cultivated foods and nuts) and occasionally human burials within habitation areas.

2.2.2 Ethnohistory

The southern New Jersey area at the time of European contact is known to have been occupied by the Delaware or Lenape Indians, following a Late Woodland cultural tradition. Although sporadic contacts with explorers and fishermen undoubtedly occurred in the late 1500's and early 1600's, sustained contacts between the Native American Delaware and European

settlers began in the 1630's and increased in intensity throughout the 17th century. Ethnohistoric references are very few and sketchy in content for the Atlantic coast of New Jersey. By extropolation with other areas for which data are available, it is hypothesized that the contact situation led to Native American occupation of a smaller number of sites for longer periods of time.

As European settlers increased in number, Indian populations decreased through disease and emigration as access to food resource collecting areas and good farmland was restricted through sale of their lands to Europeans. By the early 1700's most of the Delaware Indians had moved out of New Jersey. Although organized Indian societies had ceased to exist by the early 1700's in the Atlantic coastal area of New Jersey, individual Native Americans continued to live in the area. In Monmouth County a group known as the Sand Hill Delaware (Weslager 1972:278) were culturally identifiable into the mid-20th century.

Early contact sites are frequently extremely difficult to recognize because the main way of identifying them is by the presence of European-made objects such as pipes, gun parts and metal hoes in the midden and pit refuse of what otherwise appear to be Late Woodland Indian sites. As Indian populations left the area as European settlement increased, the Indians remaining as individuals or small families have been known to live as marginal members of the new European society. The sites left by these Indians are distinguished only with great difficulty from those of the poorest European members of the society.

2.2.3 History

Colonial Period (ca. 1660-1765). The early settlement patterns of Monmouth County reflect the cultural diversity of its residents and of New Jersey in general. By 1765 New Jersey possessed the greatest cultural heterogeneity of any English colony. While distinct cultural regions have been identified for eighteenth century New Jersey, northern Monmouth County is best considered as culturally fragmented (Wacker 1982:207).

The first permanent European settlement in the northeast section of Monmouth County occurred after English colonial rule replaced the Dutch in the early 1660's. In 1664 the "two towns of the Nevesink," Middletown and Shrewsbury, were set up by patentees who had emigrated from New England by way of Gravesend Long Island (Ellis 1885:573). While setting up village centers the patentees also divided up sections of the countryside into "out plantations" (Salter 1890:38).

Additional settlement in the 1680's introduced Dutch farmers from Long Island into the northern part of the country (Wacker 1982:199). These family groups purchased their land from the Proprietors of East Jersey, the legal owners of the land. In addition to the European population a significant population of African slaves was brought into the country. Finally, it should not be forgotten that at the start of this period an aboriginal population (of unknown size) still existed and was in contact with the Europeans and Africans.

The early municipal history of the northern Monmouth County area also reveals some important aspects of this settlement. In 1693 three original townships of Monmouth County, Shrewsbury, Middletown, and Freehold were laid out by an act passed by Provincial Assembly, and approved by Governor Hamilton. The old township of Shrewsbury included all the eastern part of the country from the Nevesink River in the north, southward to Little Egg Harbor, which included the greater part of present-day Ocean County (Ellis 1885:573). Apparently by 1693 the cultural differences between the towns were significant enough to be formalized in their legal separation.

Fort Monmouth (Main Post), Camp Charles Wood and the Evans Area, were all located in what was originally the northeastern section of Shrewsbury Township. In 1801 the township of Howell was formed from the southern part of Shrewsbury Township, including what is now the Evans Area. The Shark River area of Shrewsbury Township, including the Evans Area, appears to have lagged behind the settlement and development of the northern part of the municipality. It was not until 1685 that land in the vicinity of Shark River was purchased from aboriginal owners and later patented from the East Jersey Proprietors. The purchasing groups were comprised of settlers who had previously located at Shrewsbury and Middletown (Ellis 1885:786).

The predominant economic activity of Shrewsbury Township in the period AD 1660-1765, with some important exceptions, appears to have been agricultural. Agricultural products consisted of grains, livestock and fruit. Of equal importance to the local economy was agriculture related industry and the exploitation of forest resources. As noted above, in the formation of Middletown and Shrewsbury "out plantations" were also granted to members of towns. The plantations consisted not only of prime agricultural land, but also included sites with potential for water powered industry.

Soon after the settlement of the area at least two grist mills were in operation to process the local agricultural products. One of the grist mills was established by Thomas Eaton. It was set up on the stream (presently called Wampum Brook) which runs through present day Eatontown, and may have been located on what is now Camp Charles Wood (Ellis 1885:875)..

The industrial potential of the waterfall, located in present day Tinton Falls, attracted patentees from Middletown who set up a company early in the 1670s to manufacture iron (Ellis 1885:586). The iron furnace and forge may have been in operation as early as 1676 (Freiday 1976). The furnace smelted locally gathered bog iron ore, which could have come from sites within what is now Fort Monmouth.

The needs of the charcoal-fueled iron industry in the area contributed to the early development of a lumber industry. Wood, in the form of charcoal, cordwood, and lumber appears to have been the chief natural resource in the area during this period. Besides being used as charcoal for the local iron industry, no doubt large quantities were exported as cordwood and construction material. Long after the local

iron industry declined, the exploitation of forest resources continued to be an important economic activity.

A major north/south overland road (present-day State Highway No. 35) connecting the southern portion of the township with Shrewsbury village was the "old Squan road". It forms the western border of Fort Monmouth (Main Post). Prior to 1763 this road extended to the Manasquan River (Ellis 1885:797). An undated Revolutionary War-era map depicts this same route labeled the "main road to Barnagt". It is shown extending from Shrewsbury village through the vicinity of Eatontown. The road continues south to a bridge which crosses the Shark River.

In summary, the early history of the northern Monmouth County is quite complex. Early on, a diverse economy existed, supported by a combination of inland roads and waterways which added in the exploitation of the area's resources. Agriculture, the main activity, was joined by mining and the processing of iron ore, as well as the intensive utilization of forest resources for construction material and fuel. The diversity of economic endeavors was paralleled by the cultural heterogeneity of the area's inhabitants.

Based on the history of the northern Monmouth County area some general statements can be made about the types of colonial period cultural remains which may exist on Fort Monmouth. The site types most likely to occur are complexes of farm structures, although a structure such as ice house might be located farther afield to take advantage of a water source. At this level of research, resources associated with the lumber industry, such as temporary logging camps or access roads would be difficult, if not impossible, to locate. Sites such as sawmills and those related to the iron industry, which processed and utilized forest resources, would leave more substantial remains.

Navigable streams, such as Parkers and Oceanport Creeks, which form the northeast and southeast boundaries of Fort Monmouth (Main Post), may have associated docks and domestic sites anywhere along their banks up to the head of navigation. Small streams which are not silted up may have been navigable for greater distances inland. Sites related to agricultural industry, such as grist mills, may be located on small streams or creeks which pass through Fort Monmouth.

Finally, elements of the colonial road system may exist within the boundaries of Fort Monmouth. Roadways laid out during the period are important factors in the location of potential domestic and commercial structures.

Immediate Pre-Revolutionary Era to the Pre-Industrial Period (AD 1765-1810).

The period AD 1765 to 1810 in New Jersey's history is best described as one of growth and development. Wacker (1982) has noted the major features of this development. Demographic increase in most counties of the state resulted from natural increase rather than immigration. The period also saw growth in the number of functions (i.e., industrial, commercial, social, religious) controlled by urban centers; the

expansion of industry into new areas; and the improvement of the state's transportation network. An emphasis on development in the state is not meant to ignore the devastating economic and social impact of the War of Revolution. The war was a lengthy devisive battle with widespread destruction of the state's domestic and industrial built environment. All of these factors have been reviewed by Wacker and what follows is an application of his findings to the Fort Monmouth area.

The predominant economic activities during this period in northeast Monmouth County continued to be agriculture and the exploitation of forest resources. The expansion and land under cultivation continued, but a serious limiting factor to growth appears to have been the availability of labor. Contributing to the expansion of arable land was the lumber industry. As areas were cleared for forest resources its value as farm land increased (Wacker 1982:215). Another factor which changed the pattern of utilization and increased the value of marginal land was the use of natural fertilizers. Marl, a primary source of lime, phosphoric acid, and potassium, was found in 1768 on a farm in western Monmouth County and was soon in general use in the area (Raum 1887:362, Dahlgren 1977:18).

By the mid-eighteenth century the iron producing industry at Tinton Falls, with its attendant requirement for large quantities of charcoal, appears to have ended (Freiday 1976:16). However, wood in the form of charcoal or cordwood was being exported to southern New Jersey and to New York (Ellis 1805:890; Wacker 1982:215).

The dominance of agriculture and forest related activities in the economy of the Fort Monmouth region is reflected in the industry of the area. The hydro-powered grist mills at Tinton Falls and Eatontown were in operation throughout the period (Ellis 1885:588,878). In Eatontown, commercial and industrial sites were clustered to the south and east of the mill and Wampum Brook. These included taverns, storehouses, boat yards, tanneries, and hotels (Ellis 1885:877).

The main improvement in the transportation system of the area occurred in the east of Eatontown's town center. Eatontown's dock facilities were established along the south side of Oceanport Creek at the head of navigation on the South Shrewsbury River. Presently known as Oceanport, the area began as a depot for storing charcoal, which was then shipped to New York (Ellis 1885:890).

In addition to the growth of commerce and industry in this period, the area saw the appearance of the resort and tourist trade, which is to this day a major industry of the New Jersey shore.

The major Revolutionary War battle in Monmouth County was fought near present day Freehold (formerly Monmouth Courthouse), west of Fort Monmouth. After an inconclusive confrontation, the British army retreated northeastward through Middletown Township to Sandy Hook. Throughout the period Sandy Hook was occupied by royalists and British forces, northern Monmouth County was subjected to raids (Ellis 1885:450, Salter 1890:85-86). In addition to capturing influential leaders, the

raids were designed to destroy or carry off stores of food, livestock and weapons. Raids were also undertaken to destroy wartime production of strategic commodities, such as salt works located on the Shrewsbury and Shark Rivers (Martin 1914:4, Wilson 1953:166).

Based on the historical background of northeast Monmouth County for the period 1765-1810 the following types of historic archeological resources may occur on Fort Monmouth. As the main economic activity of the area was agriculture, the primary cultural resources would be the remains of farm complexes. Archeological remains from such sites, combined with documentary evidence might allow loyalist homesteads to be distinguished from, and compared to homesteads occupied by supporters of the Revolution. Since the area of the installations was subject to repeated raids by Loyalist and British forces, examples of destroyed buildings may be present on farmsteads which were located within Fort Monmouth. In addition to domestic sites, those industrial sites which processed agricultural products may be extant.

The remains of the grist mills or parts of a hydro-system, such as the raceway, may also be found. As stated for the earlier period (AD 1660-1765), the remains of the lumber industry would be confined to those sites where the resource was processed, such as saw mills or charcoal ovens.

Since no major Revolutionary War battles were fought in the area of the installation no sites related to military maneuvers or encampments should be found.

Industrial and Urban Period (AD 1800-1865). The history of New Jersey must be viewed in relation to the larger New York/Philadelphia geographic region. By virtue of its location between these densely populated port cities, the direction of the state's economic and social development was suited to meet the needs of the urban centers. In the period 1800-1865 New Jersey's cultural landscape was drastically altered by industrialization, massive immigration, and a revolution in the means of transportation. By 1865, all of the major New Jersey cities of today and almost all of the major railroad lines were present. The basic features of the modern cultural map of New Jersey were formed by 1865 (Larrabee 1982:220-221).

The changes brought about by improvements in technology, transportation, and the shift toward a more urban landscape had but a minimal impact on Monmouth County. Changes in the rural character of the area did not occur until after the midpoint of the nineteenth century. Because it was located outside the main transportation corridor between New York and Philadelphia there were not the same pressures or advantages for local towns to develop industry and commerce. The northeastern Monmouth County area did contain some of the most fertile soil to be found on the outer coastal plain (Dahlgren 1977:18, Raum 1877:344). As during earlier periods, this basic resource was exploited for agricultural and forest products. The settlement pattern, inherited from the seventeenth century, continued to be a mixture of dispersed agricultural homesteads and small town centers in which the major industrial and commercial establishments were located.

An earlier nineteenth century account contains an important description of the northeastern Monmouth County area and of Shrewsbury Township in particular at the midpoint of this period. Gordon, in the Gazetteer of New Jersey (1834), notes that the business of the county was chiefly agriculture, "but many persons are employed in cutting and sawing timber, and in preparing and carrying cord wood to market..." (1834:181).

The major developments of the 1800-1865 period have been outlined by Edward Larrabee (1982). An application of his outline to our project area will follow a brief but necessary review of the municipal history of the areas in which Fort Monmouth is located.

Howell Township (the most southern township of Monmouth County) was formed in 1801 from the southern portion of Shrewsbury Township. This included the area presently occupied by the Evans Area along the southwest shore of Shark River Bay. The area occupied by Fort Monmouth (Main Post) and Camp Charles Wood remained in Shrewsbury Township. By the mid-point of the nineteenth century, in response to the development of the New Jersey shore, two new townships were created. In early 1849 the eastern portion of Howell Township (including the Evans Area), between the Shark and Manasquan Rivers eastward to the coast, became Wall Township. Likewise, in 1851, the eastern portion of Shrewsbury Township, between the Shrewsbury and Shark River and east to the coast, became Ocean Township. The eastern half of what is now Fort Monmouth (Main Port) was then in Ocean Township, while the remainder of the post and all of Camp Charles Wood were located in Shrewsbury Township (Snyder 1969:178-187).

Agriculture in New Jersey during the early years of the period 1800-1865 continued in the eighteenth century mode: land was available and expendable, but employing farm labor was expensive. A growing interest in making land more productive led to experimentation with new plants and animal breeds in the early decades of the century. By the mid-nineteenth century, a peak in rural population had been reached. After this point increased mechanization of the farm reduced the need for human labor. Also, a significant proportion of the farm population was attracted to the state's urban centers (Larrabee 1982:221-223).

Factors contributing to industrial expansion during the period were available labor, speculative capital, improved technology, and the use of coal as a fuel source. Coal-fired steam engines meant mills no longer had to be located along streams. Sites along roads, canals, and rail lines became prime industrial locations. With industrial growth came an increase in the scale of operations and a trend toward specialization of industry. Alongside the growth of the large factories in major cities, specialization and experimentation occurred in smaller cities in the construction of special purpose mills, such as cider, snuff, linseed, and gypsum mills.

Industrial development in northeastern Monmouth County for the period 1800-1865 continued to be shaped by the importance of agriculture and forest resources. The area was not really affected by improvements in transportation and technology and immigration, which influenced other

parts of the state. Industry was confined to processing the local product for local use and export. Water power continued to be the main source of energy even while the use of coal was increasing. Numerous sawmills were in operation producing construction material and other products. In general, water-powered industry geared to the processing of agricultural products and wood resources dominated the industrial sector of the local economy.

The early nineteenth century movement establishing turnpike roads in other parts of the state did not occur in Monmouth County. Due to the rural character and consequent lower population density of the area, the financial support to warrant construction and maintenance of this type of road was not available. The next major transportation improvement in the state occurred in the early decades of the century with the development of steam powered boats. Almost concurrent with the introduction of steamboats was the construction of railroads and canals in the other parts of the state. But steam powered boats were able to capture a significant amount of the Monmouth County freight and passenger traffic before the introduction of railroads to the area. A number of towns with favorable port facilities were able to expand as terminals in trade with New York and Philadelphia. Late in the period the increase in freight and passenger transport led to the growth of towns such as Red Bank and Oceanport.

Prior to 1830, present day Oceanport was known as Eatontown dock. In 1844, the Eatontown Steamboat Company was incorporated. The funds financed the building of a steamboat, and docks and wharves were constructed at the head of navigation on the Shrewsbury River. The company later added another steamboat as trade at the port increased (Ellis 1885:890). Freight from all sections of Monmouth County was brought to and stored at Oceanport. By the late 1840's, the development of the shore area for both commerce and recreation led to the creation of the municipality of Ocean Township. The continued growth of the port, before the introduction of railroads, is witnessed by the incorporation of the Oceanport Steamboat Company in 1855 (Ellis 1885:890).

The development of railroads in northeast Monmouth County, like other transportation improvements, occurred late when viewed in light of the history of rail transportation in New Jersey as a whole. The Raritan and Delaware Bay Railroad Company was incorporated in 1854 (Ellis 1885:380). As originally designed, the rail line was to be a link in a coastal route, carrying through traffic between New York and Norfolk, Virginia (Lane 1939:398). This line passes along the southern side of what is now Camp Charles Wood.

The impact of the railroad in northern Monmouth County was felt in a number of areas. The establishment of the line led to the decline of Oceanport as a port of entry and exit for freight (Ellis 1885:890). On the positive side the railroad aided in the growth of the northern shore resort area of New Jersey and the development of the central part of southern New Jersey. The transportation line facilitated lumbering in the pinelands and encouraged the settlement of land adapted for agriculture (Lane 1939:406).

In the third quarter of the nineteenth century a renewed interest in toll roads (turnpikes) occurred in the state. In most cases the new roads consisted of improvements and upgrading of existing roadways. The toll roads of Monmouth County appear to have had a short lifespan as the introduction of railroads in the area quickly dominated the freight and passenger traffic. The turnpikes constructed were primarily short roads aimed at meeting the needs of local traffic. The shipping of agricultural products and the receipts from stage lines constituted the main source of revenue.

The typical New Jersey settlement landscape, at the start of the period 1800-1865, consisted of small towns located in rural settings. But by 1865, New Jersey had become more urban than rural, with suburban communities beginning to form around the major cities (Larrabee 1982:232). Transportation developments and the increasingly crowded conditions of the cities due to immigration were important factors contributing to the growth of the Monmouth County shore as a site of recreation for the masses. The economic potential of the shore area for recreation was exploited very early in the nineteenth century. Prior to the 1830's Long Branch and Tinton Falls were well known for their shore and mineral spring resorts.

In summary, the history of the northern Monmouth County area for the period 1800-1865 has been shaped by the importance of agriculture, forest resources, and the proximity of the area to the shore. Industry was geared to the processing of agricultural and woodland products. Improvements in the transportation network of the area occurred relatively late. The village of Shrewsbury and the industrial center of Tinton Falls did not develop when compared to the commercial and industrial centers of Eatontown, Oceanport, and Red Bank. The latter towns experienced growth in many sectors as they were located near navigable rivers and on the route of the railroads which passed through the region.

Based on the historical background of northeast Monmouth County for the period 1800-1865, the following types of historic cultural resources are most likely to occur on Fort Monmouth. As outlined for the earlier periods the most prevalent sites would be complexes of farmsteads. The roads, railroads, and docking facilities which border or transect the facility may have associated structures for which there is little or no documentation. Types of structures would include, but not be limited to docks, piers, warehouses, and toll houses.

Pre-Military Period (AD 1865-1917-41). During this period the development of northeast Monmouth County resulted in numerous changes to the municipalities in which Fort Monmouth (Main Post) and Camp Charles Wood are located. In contrast, Wall Township, in which the Evans Area is located, has retained its rural character since its formation in 1849. Along the shore of Wall Township (the southern coast line of Monmouth County), a number of communities, (e.g., Belmar, Spring Lake, and Sea Girt), have been created since the late nineteenth century as a result of the growth of the resort and recreation industry (Snyder 1969:186-187).

At the beginning of this period the eastern portion of Fort Monmouth (Main Post) was within the municipal boundaries of Ocean Township and the western portion was located within Shrewsbury Township. In 1873, the Township of Eatontown, containing Eatontown was formed from parts of Ocean and Shrewsbury Townships. At that time the area now occupied by Fort Monmouth (Main Post) was entirely within Eatontown Township. The eastern portion of Fort Monmouth (Main Post) is presently located in Oceanport Borough, which was formed from the northeast section of Eatontown Township in 1920. At present, the western portion of Fort Monmouth is located within Eatontown Borough, which replaced Eatontown Township by referendum in 1926 (Snyder 1969:179).

Prior to 1873 the land now occupied by Camp Charles Wood was located entirely within Shrewsbury Township. After the formation of Eatontown Township in 1873, that portion of the camp east of Hope Road was located in Eatontown while the area west of Hope Road remained in Shrewsbury Township. At present, the eastern portion of the post is in Eatontown Borough and the western portion in the Borough of Tinton Falls (formerly called New Shrewsbury Borough) (Snyder 1969:183).

During the second half of the nineteenth century New Jersey's domestic and industrial built environment, in responses to advances in technology, mechanization, and the ease of transporting construction material, took on a mass produced appearance (see Rutsch 1982:242-243). Mechanization allowed sawmills to produce lumber in standard sizes, and along with the availability of inexpensive nails, a structure could be erected by less skilled carpenters. Innovations in woodworking machines for planing, joining, and molding, led to the mass production of particular styles and the standardization of building techniques (Rutsch 1982:242). Balloon frame construction methods quickly dominated the American landscape from its inception in the 1830's (Fitch 1966, quoted in Rutsch 1982:242). Innovations in technology, such as new smelting techniques, which made possible the large-scale production of steel, advances in lime burning, and the manufacture of brick on a large scale, permitted the construction of multi-storied buildings.

During the late nineteenth and into the early twentieth century, the transportation system of New Jersey expanded to serve the cause of both regional and intra-state growth. "Always the corridor state, New Jersey became the home of a large portion of the railhead facilities of New York Harbor" (Rutsch 1982:245).

In northeast Monmouth County the construction of rail lines in the second half of the nineteenth century and of superhighways in the twentieth were key factors in the change from a rural to a suburban settlement pattern. As noted below, the exceptional transportation facilities were important factors influencing the Army's selection of the areas for a Signal Corps training ground.

In 1868, the New York and Long Branch Railroad Company was incorporated. The railroad, forming the eastern boundary of Fort Monmouth (Main Post), was built through Red Bank and Middletown to the north and crossed Horse Neck to the east of Eatontown on its way to Long

Branch. In 1869 the line was extended from South Amboy to Elizabethport, joining the main line of the New Jersey Central Railroad Company (Ellis 1885:383).

The Raritan and Delaware Bay Railroad Company underwent reorganization in the early 1870's becoming the New Jersey Southern Railroad (Ellis 1885:381, Lane 1939:405). The New Jersey Central Railroad, which had sponsored the construction of the New York and Long Branch Railroad, acquired an interest in the New Jersey Southern by buying up its bonds. "When the New Jersey Southern went into bankruptcy in 1879, it was reorganized by Jay Gould and leased to the New Jersey Central for interest upon its mortgage bonds" (Lane 1939:405). Both railroad lines, the New Jersey Southern and the New York and Long Branch, later passed to the control of the Philadelphia Railroad Company (Ellis 1885:381-383).

The extension of railroads from the New York area to Long Branch for a period of time complimented the use of steamboats as a means of transportation to the northern shore resort area. Apparently, the port facilities at Oceanport and Fort Monmouth continued to be important local passenger and freight terminals. Eventually railroads became the favored means of passage to the shore area. With the development of year-round occupation and suburbanization of the northern Monmouth County area within the last 50 years, the main transportation routes have become the highways constructed within the last 50 years, such as State Highways 35 and 36 and the Garden State Parkway.

Improvements in the local transportation system, especially rail service, during the period 1865 to the present, enabled farmers in New Jersey to quickly transport their goods to urban markets (Rutsch 1982:245). The northeast Monmouth County area remained predominantly rural farmland well into the twentieth century, specializing in poultry and truck farms. Following the pattern established in preceding periods, during the late nineteenth and into early twentieth century, industry and manufacturing in northeastern Monmouth County, with very few exceptions, continued be dependent on the processing of agricultural and forest resources.

A survey of New Jersey's water supply and power, published in 1894, notes the grist and saw mills at Tinton Falls, Eatontown, and on the Shark River were still in operation (Vermeule 1894:47-48). Interestingly, two of the mills are listed as flouring (not grist) mills, which implies that flour for export was being produced on a large scale. The factors which contributed to the demise of these mills are assumed to be increased competition from farms in the Midwest and concurrent changes in the types of agricultural product grown locally. However, the details about when and why these sites and mills ceased operation after 200-plus years are unknown.

During the late nineteenth and early twentieth centuries, the settlement pattern in northeast Monmouth County continued to be predominantly characterized by small towns surrounded by agricultural land.

The recreation and resort industry of the northern Monmouth County coast, as stated earlier, developed early in the history of the area. By 1865 Long Branch was the foremost seaside resort in America, attracting the leading political, theatrical, and social figures of the country (Anon. 1946:72). Major attractions in the Long Branch area were Monmouth Park Race Track and nearby gambling houses.

Fort Monmouth (Main Post). The majority of land owned by the Monmouth Park Association eventually became present day Fort Monmouth (Main Post). Land for the track was purchased in 1866 and the first races were held in 1870. Between the closing of Monmouth Park in 1891 and the establishment of Fort Monmouth in 1917 the land appears to have reverted to agricultural use. Early in 1917, the Army contracted to lease 468 a. formerly part of the racetrack from Melvin Van Keuren of Eatontown (Anon 1946:15). The land leased was the present area of Fort Monmouth (Main Post) bounded on the east by Oceanport Avenue and on the west by State Highway #35. The northern boundary was Parker Creek and Lafetra Brook. All land north of the Long Branch spur of the Central Railroad of New Jersey (formerly the New Jersey Southern) was included in the lease. To the south and west of the railroad track the land continued being farmed by Charles Prothero. In 1917, he had been farming on both sides of the railroad for the previous four years (Anon 1946:15).

Camp Charles Wood. Prior to the development of Camp Charles Wood in 1941, the entire land area of the installation appears to have been part of an exclusive country club. The country club is another example of the long history of the area's use for recreation-related industry. Early in the 1920's Max Phillips purchased the Caleb estate of 250 a. and the Winter farm of 350 a. to build the Sun Eagles Country Club (Strong 1981:2). In the early 1930's the country club was sold by Phillips and became known as the Monmouth County Country Club. Surviving from the Sun Eagles period, in addition to the general layout of the grounds, was the Tudor style club house.

The Monmouth County Country Club offered a variety of recreational possibilities to its members. "In addition to the golf courses,... the club offered tennis courts, a swimming pool, a polo field, as well as trap shooting and trout fishing on club property" (Strong 1981:3). In October of 1941 the Army took control of the Monmouth County Country Club. At this time the club included a restaurant, residence rooms, lounges, bar, ballroom, and offices. Also located on the property was an 18-hole golf course, tennis and badminton courts, and a swimming pool (Strong 1981:1). It is unlikely that any of these facilities have survived without alteration. However, much of what has survived still reflects the original design of the Sun Eagles Country Club, including the layout of the golf course, the positioning of tennis courts, and the location and landscaping of the pool area.

On May 27, 1947, the Sun Eagles Club House, later named the Fort Monmouth Officers Club, was designated Gibbs Hall in memory of Major General George S. Gibbs, Chief Signal Officer from January 1928 to June 1931. The club house structure, with many alterations, is still standing.

Evans Area. The land along the Shark River, in which the Evans Area is located, has served a wide variety of functions prior to its use as a military research station. In 1913, the noted Italian electrical engineer and inventor Marchose Guglielmo Marconi (1874-1937) purchased a 93 a. tract of farmland and orchards from a Mr. Woolly. The site was situated along the high south bank of the Shark River. Known as the Marconi Utilities Telegraph Company of America, with home offices in England, the site was the central headquarters and the location of receiver equipment for commercial transatlantic radio operations (Anon. 1956:26, Zahl 1970).

The initial phase of antennas construction included six masts, each 300 ft. high, crossing present day Marconi Road at a right angle and stretching to the west for a distance of one mile. Eventually as many as 30 antennas were built, some of wood and others of steel. The tallest antennas were in the 400 ft. range (Zahl 1970:NP).

Permanent antennas were also constructed on the roofs of the company's buildings, which included a hotel, two houses for top Marconi officials, and three buildings to house apparatus. The site of the company's transmitting station was in New Brunswick, 40 mi. to the north.

The hotel, presently the Headquarters Building (Figure 1-2c) of the Evans Area, was completed and dedicated by the Marconi Company in 1914. The structure, built of dark red ornamental brick with a lighter tile roof, was intended to be a 45-room hotel for unmarried employees, complete with dining room, smoking room, and a spacious lounge overlooking the Shark River and the Atlantic Ocean.

During World War I operation of the American Marconi Station was assumed by the Navy on orders of President Wilson. At the war's end, the British interests in the company were brought out by Americans, and the Company became part of the Radio Corporation of America. The facility remained active until advances in communications technology made operations obsolete. By 1924 the receiving station in the Shark River was abandoned (Anon. 1965:27).

After the Marconi Company ceased operations, the grounds and empty buildings were the meeting place for various groups and organizations. At one point the former Marconi property was the site of the state headquarters for the Ku Klux Klan (Anon. 1965:27, Zahl 1970). In 1937, the Reverend Percy Crawford, a Protestant evangelist from Philadelphia, purchased the tract for a theological school, named King's College. The school was a protestant, interdenominational, liberal arts and co-educational college. The first classes began in the fall of 1938, and by 1941 the school had an enrollment of 100 students. Due to the lack of facilities as class size grew, the school moved first to Delaware, prior to November of 1941, and finally to a campus near Tarrytown, New York (Zahl 1970:n.p.).

In conjunction with the expansion of Fort Monmouth (Main Post) during the national defense program prior to World War II, the Signal Corps announced the purchase of Kings College in November of 1941. A plan was

advanced to close a temporary radar laboratory at Fort Hancock, Sandy Hook, New Jersey and to expand substantially at the site along the Shark River, near Belmar, New Jersey (Anon. 1965:27, Zahl 1970). Occupancy of the Belmar site started during the winter of 1941-42 under the name of Signal Corps Radar Laboratory.

On March 31, 1942, the new site was designated as Camp Evans Signal Laboratory, commemorating the late Colonel Paul Wesley Evans, a former World War I signal officer. On April 16, 1945 the name of the base was shortened to Evans Signal Laboratory (Zahl 1970).

Military Period (1917-41 - Present). When the United States entered World War I early in 1917, technological advances in arms and armaments had radically changed previous concepts of warfare. The development of aircraft, submarines, and armored land vehicles had altered not only the manner in which war was fought but also the scale of battles. One of the foremost requirements of the new warfare was the need for vastly expanded communications facilities. Since the Civil War, this work had been performed in the American Army by the Signal Corps. On entering World War I the Signal Corps had a total strength of 55 officers and 2530 enlisted men. Since this force was inadequate to perform the wartime duties of signal operations, a rapid expansion of training facilities was recommended by the then Chief Signal Officer, Brigadier General George O. Squier (Anon 1946:15).

To meet the need for communications specialists, training camps for signal troops were established at Fort Levenworth, Kansas; Lea Springs, Texas; Monterey, California; and near Long Branch, New Jersey. On May 16, 1917 the Adjutant General authorized the leasing of 468 a. of the old Monmouth Park property from Melvin R. VanKeuren as a training ground for Signal Corps companies.

The proposed camp site was 42 mi. south of New York City and 2 1/2 mi. from the Nevesink River town of Red Bank. Located on a small peninsula, historically known as Horse Neck, between Parker and Oceanport Creeks, both tributaries of the Smith Shrewsbury River, the site was selected for its excellent transportation advantages. These included two railroads, good highways, and steamboat connections. The New York and Long Branch Railroad formed the eastern boundary of the camp and provided approximately 600 ft. of rail siding. A branch of the Central Railroad of New Jersey (formerly the New Jersey Southern Railroad) formed part of the southern boundary of the camp. After the camp expanded to the south, and before the line was abandoned, the Central Railroad appears to have run through the fort.

Highways in the vicinity of the fort included the county "stone" road (presently State Highway No. 35) on the western boundary and Oceanport Avenue, which runs through the fort and crosses Horse Neck. Docking points for ferry lines were available in Oceanport and Branchport to the southeast of the fort.

Prior to the arrival of troops, work started on June 4, 1917 to prepare the future site of Fort Monmouth. On June 17, 1917 Lieutenant

Colonel Carl F. Hartmann, Signal Corps, assumed command of the camp (named Signal Corps Camp, Little Silver, New Jersey) per G.O. No. 1. On the following day, the first troops arrived. By the end of June 1917, the camp personnel totaled 25 officers and 451 enlisted men.

In July 1917, the first school courses began. Instruction was given in the following subjects: cryptography, the heliographe, semaphore, wig-wag, motor vehicles operation, physical training, dismounted drill, tent pitching, the manual of interior guard duty, map reading, tables of organization of Signal Corps, Infantry, and Calvary, camp sanitation, personal hygiene, and first aid (Anon 1946:17). The first phase of instruction ended in early September 1917, accompanied by a general reassigning of personnel. On September 25, a detachment of radio instructors was formed with special courses being taught in foreign codes and languages to mark the beginning of formal communications instruction (Anon 1946:18).

Twelve buildings were completed by the Quartermaster in September 1917, including an administration building, a hospital ward, motor vehicle sheds and repair shops. Six other structures were finished by the end of October. Even with this construction, some 800 men were housed in tents at this time. The construction program, which began in June, was completed by the end of 1917. A total of 82 single-story frame structures designed for temporary occupancy were built (Anon. 1946:18-19).

As trained troops were being sent to European battle fields, plans were being developed to expand the Signal Corps camp on a semi-permanent basis. On September 15, 1917 the name of the camp was changed to Camp Alfred Vail, in honor of the New Jersey inventor who made both mechanical and financial contributions to wire communications (telegraphy). In addition to training personnel, Camp Alfred Vail was picked to operate a Radio Laboratory for research and development in radio technology. Construction plans called for a wide range of building including radio laboratories and hangars for airplanes.

The task of research and development of electrical and other communications equipment for the United States Army had been the responsibility of the Chief Signal Officer. In 1902, an Electrical Development Division was organized at Washington, D.C. but the facilities of the Signal Corps, working in conjunction with personnel and laboratory facilities from the Bureau of Standards, were inadequate for the radio experimentation necessitated by tank and aerial warfare. On the solicited recommendation of French and British engineers, the War Department made plans late in 1917 to erect the necessary buildings and to furnish equipment and personnel to establish a Radio Laboratory at Camp Alfred Vail.

Construction of the Radio Laboratory was begun in mid-December 1917. In addition to the laboratory buildings, the Heddon Construction Company built four airplane hangars and leveled and drained ground for two flying fields (Anon 1946:21). By April 1918 a total of 45 laboratory buildings were nearly completed (Winter 1926:11).

Early in 1918 the Engineering and Research Division of the Signal Corps moved from Washington, D.C. to a new site at Camp Alfred Vail. Supplies for the radio laboratories were received and personnel of the Air Service began to arrive and were assigned to the laboratories.

The Radio Laboratory research initially centered on vacuum tubes and circuits, the testing of apparatus submitted by manufacturers, and the application of new inventions. Charged with the development of radio equipment for the Army, the Radio Laboratory also conducted experiments to find the uses to which planes could be put in radio communications and aerial photography. The first flight, to test direction finding by radio, was made in May 1918.

During World War I the Radio Laboratory proved to be the most important activity at Camp Alfred Vail. Throughout the war period work was pursued in close liaison with the Overseas Research section of the Chief Signal Office. The unit worked closely in the field with both American and Allied armies and reported on the performance of equipment directly to the Chief Signal Officer. Commissioned personnel traveled constantly between Camp Vail and France with models of new equipment for field and battle trials during 1918 (Anon. 1946:21).

In August and September 1918 the Radio Laboratories reached a high mark in activity: between 90 and 94 airplane flights a week were required to test equipment, with as many as 20 airplanes.

When the Armistice was signed on November 11, 1918, the Radio Laboratories were demobilized. In December, all aeronautical property was shipped from the camp and the officers in the training battalions were discharged. All flying activities at the camp ended and the relative importance of the laboratory declined as Camp Alfred Vail became a discharge center for Signal Corps personnel.

The return of troops from France increased during the winter and spring of 1918-19 and discharge became a major problem. At the conclusion of World War I there were a total of 2,712 officers and 53,277 enlisted men in the Signal Corps. Discharge of all emergency personnel was effected by September 1919 (Anon. 1946:27).

By 1920 the Radio Laboratory personnel at Camp Alfred Vail consisted of two officers, four radio engineers, two civilian assistants, and eight enlisted men. In 1924 only four structures were retained for experimental purposes, although two radio antenna towers and other equipment had been added to the facilities (Anon. 1946:28).

At the end of 1918 Camp Alfred Vail was the best equipped camp of the Signal Corps. In 19 months a total of 129 semi-permanent structures had been erected. Forty-seven of the buildings were related to the Radio Laboratories. Barracks to accommodate 2795 enlisted men, 188 officers and a 40-bed camp hospital were constructed (Anon. 1961:9-10). All buildings were readily accessible by broad, hard-surfaced roads from the Quartermaster's installation located along a railroad spur of the New York and Long Branch Railroad.

To consolidate training activities for Signal Corps installations the Chief Signal Officer moved the Army Signal School from Fort Leavenworth, Kansas to Camp Alfred Vail in October 1919. The school was set up to teach techniques and tactics to all signal units in order to provide competent leaders for these units, and to prepare qualified instructors for the Regular Army, the National Guard, and for Reserve officers. The school was divided into sections for officers and enlisted men. Officers and enlistees from all branches of the service and from all parts of the country were sent to Camp Alfred Vail to attend courses. The four hangars which formerly housed airplanes for the Radio Laboratories were used as classroom space and workshops. Hangar One became the center of radio instruction and remained so throughout World War II.

Between 1920 and 1925 a number of permanent structures and improvements to the post utilities were completed. Construction included a new waterworks and water tower, a permanent flag pole, two sets of radio towers, and a permanent warehouse near the railroad tracks. In addition to the resurfacing of existing roads, two miles of roadway were added to the fort road network. For troop recreation two polo courses and an athletic field were built on fort (Anon. 1946:30, 35). Maintenance to keep the temporary cantonment buildings in serviceable condition was an important task.

In August 1925 Camp Alfred Vail was declared a permanent post and its name was changed to Fort Monmouth according to Office Memorandum No. 64, Office of the Chief Signal Officer. Plans for the construction of a hospital and a set of barracks were drawn by April 1926 and construction was underway in early 1927.

The hospital was styled in a broad H-pattern, and sited south of Parker's Creek, near the west side of Oceanport Avenue. Designed to provide space for 35 beds, laboratories, mess halls, and staff quarters, one wing of the structure was finished on March 24, 1928.

The four barracks of reinforced concrete and brick with slate roofs, along the west side of Oceanport Avenue at the mouth of Oceanport Creek, were completed under contract in April, 1928.

The barracks were designed to house one company each, for a total capacity of 805 enlisted men. Boiler rooms, storage rooms, and workshops were in the basements; offices, day rooms, mess halls, and kitchens took up the first floors; the second and third floors were occupied by squad and washrooms. Porches 10 ft. in width extended the length of the buildings at each floor level (Anon. 1946:36).

A general plan prepared in 1928 called for the abandonment of the area east of Oceanport Avenue, but the proposal was later modified and the acreage east of Oceanport Avenue was retained. The area east of the public road contained the landing field, hangars, and the Quarter Master Area.

Additional permanent-type structures built in the years prior to World War II included the War Department Theatre No. 1, which opened in

1933, and Russel Hall, completed on April 3, 1936. Russel Hall, the Headquarters Building, was erected approximately 300 yd. west of Oceanport Avenue at the longitudinal center of the post. In 1934 the second wing of the hospital was built. Also constructed in the period before 1936 was a bakery, a warehouse, a Quartermaster's garage, a blacksmith shop, an incinerator, an utility shop, a fire station, and a guardhouse.

The new barracks, post theatre and fire stations were located on the former site of the Radio Laboratories. A new Signal Corps laboratory (Squier Laboratory) was built in this period, located to the northwest along Parker's Creek.

Internal improvements to the post included laying concrete pavement to replace the original soil and macadam roads, and the construction of sidewalks and broad intersections. In addition, street lighting, water distribution, and drainage systems were installed on the fort. Also included in the numerous construction projects was the landscaping of grounds (Anon. 1961:20).

After September 8, 1939, when circumstances in Europe caused a state of "limited emergency," facilities at Fort Monmouth underwent a new phase of expansion and construction. Under the national defense program three field laboratories in Monmouth County were acquired and in operation by the end of 1941. These installations included the Coles Area in Lincroft, the Watson Area in Eatontown, and the Evans Area in Wall Township, near Belmar, New Jersey.

In response to a renewed demand for Signal Corps specialists a program for the construction of hundreds of mobilizations type buildings, barracks, and other structures was initiated. Two groups of barracks were constructed on Fort Monmouth (Main Post) between November 1940 and January 1941. One group was erected on the former polo field east of Oceanport Avenue, and the other was located southwest of the present Service Club.

In the days just prior to the United States entrance into World War II, Fort Monmouth acquired a new site for expansion and maneuvers. In October 1941 the former Monmouth County Country Club parcel of land, located two mi. west of Fort Monmouth (Main Post), was purchased, and became known as Camp Charles Wood. Within 90 days construction was completed on 60 barracks, 8 mess halls, 19 school buildings, 10 administration buildings, 6 recreation halls, a post exchange, an infirmary, and a chapel. The camp was dedicated on July 14, 1942 (Anon. 1961:28).

After World War II, Fort Monmouth underwent a period of decline and consolidation of some functions. To centralize work formerly conducted at the Evans, Coles, and Watson areas, and the Squier Laboratories, a new research and development engineering laboratory was built at Camp Charles Wood, a post which was nearly abandoned after the war. Construction of the building, located in the western portion of the camp south of Corregidor Road, was started in 1952. A truncated triangle in shape, the

structure was composed of steel with concrete block outside walls. The first segment of the structure was completed on September 8, 1954 and the Signal Corps Engineering Laboratory was dedicated on September 30, 1954.

The expansion of Fort Monmouth facilities continued in the years after World War II. In December 1951, plans and contracts were let for major construction and maintenance programs. Post World War II permanent construction consisted principally of reinforced-concrete buildings with masonry curtain walls. The following structures were built: a complex of training facilities for the United States Signal Center and School, a 100/200-bed hospital, a field house, six 500 person barracks, central heating plants, a communications building, male and female bachelor officers quarters, a cold storage plant, warehouses, a chapel, an automotive and woodworking shop, a PX shopping center, a guard house, a bowling center, commissary, post office, library, gas station, and a 1000-seat theatre. The Central Jersey Bank and Trust Co. has erected a banking facility on a plot of ground leased from the government for a period of 25 years.

Since the last major construction phase at Fort Monmouth in the 1950's, many of the Fort Monmouth structures have been demolished, modified, or converted to new uses. The former pre-World War II theatre and hospital structures, for instance, have been converted to administrative uses. Likewise, the Squier Laboratory building, used for training purposes during the Signal School years, is now the home of the Communications Systems Agency.

2.3 ARCHEOLOGICAL RESEARCH DIRECTIONS

2.3.1 Regional Concerns

Prehistory. The Paleo-Indian occupations of the Outer Coastal Plan area are so scant as to render any findings significant. All authors of sections dealing with research strategies for prehistory in New Jersey's published survey of archeological resources (Chesler 1982) point out the need for detailed reconstruction of past environments. Refinement of local culture chronology and definition of settlement systems for prehistoric populations are desperately needed not only for interpreting the prehistory of the Outer Coastal Plain in New Jersey, but for understanding of the prehistory of the Mid-Atlantic region in general. Problems of culture change, prehistoric utilization and exchange of raw materials, movement of populations and prehistoric and historic culture contact for the Mid-Atlantic region all require data from New Jersey's Outer Coastal Plain province for solution.

The Colonial Period (AD 1660-1765). Taking into account the particular settlement pattern of northern Monmouth County during the period 1660 to 1765, the following section will be an overview of the archaeological research considerations that might be addressed with potential cultural resources on Fort Monmouth (Main Post), Camp Charles Wood, and Camp Evans. The research directions for this period have been formulated by Peter O. Wacker, a cultural geographer, and are outlined in "New Jersey's Cultural Resources: A.D. 1660-1810" (in Chesler 1982). What follows is

a summary of Wacker's major points and an application of these to our study area.

Wacker notes that New Jersey's historic resources are perhaps the most varied of any of the North American European Colonies. Besides being the most culturally diverse of the colonies, New Jersey also varied the most in its physical setting. "Physiography, soils, drainages, vegetation, mineral resources, and to a certain extent climate, vary remarkably for such a relatively small area" (Wacker 1982:199). These physical factors provided differing sets of economic opportunities between places and through time. Last, but not least of all, changes in technology also affected the manner in which natural resources were valued and utilized for industrial purposes.

The northern Monmouth County area contained a mixture of agglomerated settlements, based on the New England town pattern, and a contrasting pattern of dispersed rural settlement. Historical geographers have defined agglomeration as the tendency to cluster residences and central place functions, such as churches, meeting houses, stores, schools, etc. In contrast, dispersed settlements have residences located far apart. Consequently central place functions are limited and isolated from residences and from each other (Wacker 1982).

As has been shown, Fort Monmouth (Main Post), Camp Charles Wood and the Evans Area are located in what were formerly dispersed farmsteads or woodlots, possibly associated with the outlying plantations of the late seventeenth century town of Shrewsbury. Wacker (1982:206) has emphasized that cultural resources associated with farmsteads, both above ground (architectural), and below (archeological), should be a research and preservation priority. In addition to yielding information about the specific sites, excavation of farm sites can contribute to an understanding of economic and social patterns at higher levels of organization, such as local, state or regional levels.

At the site specific level, cultural resources associated with farmsteads can yield information about:

1. the types of structures and associated outbuildings such as barns, smokehouses, and hay barracks.

2. building techniques used for various structures.

3. positioning in relation to topographic features such as drainage, water supply, and access to transportation.

4. the spatial and functional organization of the farmstead, such as the relationship between the house and the outbuildings. (Wacker 1982:212)

Beyond the interpretation of the physical setting of farmsteads, the data from archeological excavations can be analyzed for evidence of social and economic patterns. For instance, at the local level, information can be gained about the degree to which individuals represent

a distinct cultural group. Alternatively, these data can be contrasted with information from other cultural groups on a local, state, or regional basis. Sample research questions are:

1. Did the Dutch farms of Monmouth County differ in layout from their English counterparts?

2. How did the Dutch of Monmouth County differ from the Dutch enclave of northeastern New Jersey?

3. (Perhaps most important:) Can an ethnic or cultural identity be discerned in the material remains, or were there overriding influences which served to acculturate and bind together diverse segments of a population, leaving behind apparently homogeneous material records?

On the regional level cultural resources associated with farmsteads can provide information about the relationship of dispersed and agglomerated settlements. For example:

1. What influence did villages such as Shrewsbury have on its agricultural hinterland?

2. Was the village and its hinterland part of a larger trading network which included major port cities and manufacturing centers?

Besides farmsteads another important topic of study applicable to Fort Monmouth and its sub-installations is the early colonial transportation system of navigable streams and overland roads. These routes were important factors in the location of various types of sites. Relevant questions include:

1. What portion of the early settlement focused on the waterways as opposed to the roadways?

2. How and when was the overland road system established?

3. To what extent were aboriginal trails incorporated into the European transportation network?

In addition to domestic sites, other cultural features such as docks, wharves and warehouses were located along navigable waterways. Small streams may have been utilized for mill structures, such as sawmills, for which little or no documentation exists. Equally important is the establishment and growth of the overland road system. Besides the study of the road's location and its development, these routes were also factors in the location of domestic, commercial, industrial, and religious sites.

Prerevolutionary Period to the Preindustrial Period (1765-1810). The period 1765-1810 of New Jersey's cultural history has been characterized as a time of growth and development in many sectors of society.

Northeastern Monmouth County, including the Fort Monmouth vicinity, did not share in many of the important developments of the period, such as increased urbanization and domestic manufacturers. The area remained predominantly agricultural, with industrial development geared to the processing of agriculture and forest products. A set of research priorities has been formulated for the period AD 1765-1810 by Peter O. Wacker in "New Jersey's Cultural Resources 1660-1810" (Chesler 1982). Outlined below is a review of the research interests which may be furthered by potential archeological data from Fort Monmouth.

Given the settlement pattern of the general area, the most prevalent type of site would be archeological and architectural remains associated with farm complexes. At the individual site level important areas of research include the physical character and layout of farmsteads. An additional area of research is the relationship of agricultural areas to local, state and regional agglomerated settlements. For example:

1. What was the economic and social relationship of farmsteads with the developing industrial and commercial centers of Eatontown and Tinton Falls?

2. What function did Shrewsbury serve during the period?

As the period saw a growth in population, demographic studies for the various cultural groups of the area are an important research priority. The rise in population no doubt affected agricultural practices. For instance:

1. How did increases in population affect the value and intensity of use of farmland? Were farms becoming smaller in size? Was there emphasis on a single "cash" crop or livestock or was a wide range of products grown and raised?

2. What effect did population growth have on the supply of labor devoted to agriculture? What impact did this have on the practice of slavery?

3. Did growth in population vary according to cultural group?

No major battles or raids associated with the War of Revolution are known to have occurred within the boundaries of the DARCOM installation. The disruption of the economic and social life of the area due to the drawnout hostilities may be discernable indirectly in material remains found on farmsteads. As the war divided the loyalties of the country's inhabitants, any archeological sites which date to the period may contain important information about the area's residents and political divisions among them. An important area of research (using both archeological and documentary evidence) would be to determine whether political allegiance of families can be recognized in material remains. For instance:

1. Did ideology among the different cultural groups of the area vary according to economic status or to cultural background?

2. What was the response of the several cultural groups to the war?

3. Were the Dutch-settled areas more conservative than nearby regions settled by others (Wacker 1982)?

4. What happened to the black slave population during the war years?

Archeological resources for a number of domestic sites may yield comparative data about the economic impacts of the Revolution for local and regional studies. For instance:

1. Was there a major change in the material culture due to the severing of ties with England?

2. Or, is there a more gradual change in the material remains found on domestic and industrial sites?

3. What effects did the war have on domestic manufactures?

4. Are more domestic manufactures present after the war, or does domestic production decline as trade with England resumed (Wacker 1982:212-214)?

Industrial and Urban Period (1800-1865). New Jersey's cultural history of the period 1800-1865 has been characterized as a time of radical change in most sectors of the society. Northeastern Monmouth County, the general area of Fort Monmouth, did not experience changes similar to those which altered the economic and social structure of other areas of the state. But to view the area as static would be a mistake. The area's resources, fertile land, forest resources, excellent water power sites, and a number of port locations were fully exploited. A number of research directions for the period have been suggested by Edward Larrabee in "New Jersey's Cultural Resources A.D. 1800 - 1865" (1982). What follows is a review of those research interests which may be addressed with potential archeological data from Fort Monmouth and its sub-installations.

By the middle of the nineteenth century the state's total population in agriculture declined due to the increased mechanization of farms and the loss of labor to jobs in the cities. An important area of research would be tp detail the impact of mechanization on farm design, size, and land use patterns (Larrabee 1982:223). As the project area has historically contained a mixture of cultural groups, demographic studies are needed to document how the several groups responded to mechanization and out-migration.

In industry, major changes included innovations in technology, the use of coal as a fuel source, and a rise in the production of domestic manufactures. At this point documentary research does not indicate any new factories, or mills were constructed within the boundaries of what is now Fort Monmouth. But the impact of new technology and fuel sources may have made existing mills in the area more efficient, directly affecting the economy of the region. The individual domestic site can provide important data on the growth of American manufactures during the period. For example, archeological collections can offer evidence of a product's

range of distribution, the percentage of domestic versus foreign manufactures, and the acceptance of different types of goods according to economic and cultural groups. Elements of the transportation system on Fort Monmouth may be able to contribute data beyond physical evidence relative to the methods of construction of roads, railroads, and port facilities. An important research direction would be a determination of how the introduction of new roads and rail lines affected the settlement and economic development of local areas. For example: Did land values and types of land use, reflected in different types of structures, change when new routes were built? What input was there from the local community in the selection of routes and the financing of road, railroad, and port construction?

1865-1917 The research directions for this period have been formulated by Edward S. Rutsch and are outlined in "New Jersey's Cultural Resources: A.D. 1865 to the Present" (in Chesler 1982). Rutsch notes that during the second half of the nineteenth century factors lumped together under the general term "Industrial Revolution" assumed more importance than ever before.

During this period the development of northeast Monmouth County resulted in numerous changes to the municipalities in which Fort Monmouth (Main Post) and Camp Charles Wood are located. In contrast, Wall Township, in which the Camp Evans area is located, has retained its rural character since its formation in 1849.

During the second half of the nineteenth century New Jersey's domestic and industrial built environment, in reponse to advances in technology, mechanization, and the ease of transporting construction material, took on a mass produced appearance (see Rutsch 1982:242-243). Innovations in technology, such as new smelting techniques, which made possible the large-scale production of steel, advances in lime burning, and the manufacture of brick on a large scale, permitted the construction of multi-storied buildings.

During the late nineteenth and into the early twentieth century, the transportation system of New Jersey expanded to serve the cause of both regional and intra-state growth.

In northeast Monmouth County the construction of rail lines in the second half of the nineteenth century and of superhighways in the twentieth were key factors in the change from a rural to a suburban settlement pattern. As noted below the exceptional transportation facilities were important factors influencing the Army's selection of the area for a Signal Corps training ground.

In 1868, the New York and Long Branch Railroad Company was incorporated. The railroad, forming the eastern boundary of Fort Monmouth (Main Post), was built through Red Bank and Middletown to the north and crossed Horse Neck to the east of Eatontown on its way to Long Branch.

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In extension of railroads from the New York area to Long Branch for a period of time complimented the use of steamboats as a means of transportation to the northern shore resort area. The port facilities at Oceanport and Port Monmouth continued to be important local passenger and freight terminals.

The Northeast Monmouth County area remained predominantly rural farmland well into the twentieth century, specializing in poultry and truck farms. The raising of livestock, especially beef and thoroughbred horses, continues to be an important activity (Anon. 1968:50).

Two manufacturers unrelated to agriculture were established in the Eatontown area during this period. One of these was, according to Ellis (1885) the Eatontown Hat Factory which was built in 1875 within what is now Camp Charles Wood.

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During the late nineteenth and early twentieth centuries, the settlement pattern in northeast Monmouth County continued to be predominantly characterized by small towns surrounded by agricultural land.

The recreation and resort industry of the northern Monmouth County coast, developed early in the history of the area. One of the greatest draws to Long Branch was the nearby Monmouth Park Rack Track, and the gambling houses of the area. The majority of land owned by the Monmouth Park Association eventually became present day Fort Monmouth (Main Post).

The growth of Monmouth Park peaked in 1890 when the park opened a newly constructed track and steel grandstand to the north of the earlier course. The steel grandstand, the largest in the world, had a seating capacity of 15,000 persons. In addition to the new structures the Monmouth Park Hotel was built (Anon 1946:12).

Overall, the industrial capability of the area had declined since the turn of the century. Recent industrial and commercial development has been confined to municipally zoned areas, such as industrial parks, and along major roads and railroads.

Between the closing of Monmouth Park in 1891 and the establishment of Fort Monmouth in 1917 the land appears to have reverted to agricultural use.

Prior to the development of Camp Charles Wood in 1941, the entire land area of the installation appears to have been part of an exclusive country club. The country club is another example of the long history of the area's use for recreational purposes.

The land along the Shark River, on which the Evans area is located has served a wide variety of functions, including that as a center for trans-Atlantic radio transmission and reception.

After the Marconi Company ceased operations, the site was a meeting place for various groups and organizations. In 1941 the site was

acquired by the Signal Corps for use in electronic research and development (Anon 1965:27). Surviving from the Marconi period is a red brick structure, headquarters for the Evans area, and formerly a hotel for Marconi Company employees.

Research concerns specific to this period of time would include the impact of new building construction methods discussed previously on the potential data base, the impact of the growth of the railroads on the coastal resort areas as well as on the shift from agricultural land to surburban homestead.

2.3.2 Installation-Specific Archeological Research Directions

Analysis of the Redacted - Privac surface collection from Fort Monmouth and of archeological collections in the New Jersey State Museum from neighboring areas indicates on the basis of projectile points which are temporally diagnostic that the Fort Monmouth area has the potential of yielding culture chronology information and settlement system data for Paleo-Indian through Late Woodland periods. The reported occurrence of a shell midden deposit offers the potential for data concerning diet and good preservation of faunal remains.

The absence of any historic archeological data at present precludes discussion of installation-specific archaeological research directions. If in future studies, intact historic archeological sites are found to exist, the data provided in this report concerning the history of the facility area will be useful in conjunction with historic archeological data to develop such directions.

3.0
AN ASSESSMENT OF ARCHEOLOGICAL RESOURCES SURVEY AND PRESERVATION ADEQUACY

3.1 ENVIRONMENTAL CONSTRAINTS TO SITE PRESERVATION

The only major environmental constraint to site preservation on Fort Monmouth has undoubtedly been erosion of soils containing archeological deposits. Without more detailed environmental data, these areas cannot at present be identified. The acidic sandy soils of the area have probably had a damaging effect on the preservation of bone except in situations of deposition in less acidic refuse concentrations or shell midden deposits.

3.2 HISTORIC AND RECENT LAND USE PATTERNS

This section contains information on ground disturbing activities which have occurred within the area presently occupied by Fort Monmouth. As noted in Section 2, the Fort Monmouth site(s) remained agricultural land until the construction of Monmouth Park in 1866 at what is now the Main Post, the construction of the Sun Eagles (later Monmouth County) Country Club c. 1925 at what is now Camp Charles Wood, and the Marconi Company complex in 1913 at what is now the Evans Area.

Subsequent major ground disturbing activities at all three sites have been associated with the construction and, in some cases, demolition of military related structures and facilities, and associated streets and utilities. Maps of the Fort Monmouth site dating from 1919, c. 1922, 1936, and 1944, all of which show individual structures, were the primary sources for evaluating prior land uses on the Main Post. More detailed descriptions of historic and recent land use, and ground disturbing activities are presented in the following sections.

3.2.1 Fort Monmouth (Main Post)

In 1917 construction of Fort Monmouth (Signal Corps Camp, Little Silver, later Camp Alfred Vail) began. The former Monmouth Park racetrack grounds and structures (fire-gutted remains of buildings were standing) were overgrown with briars and poison ivy, and portions of the 468 a. which comprised the original purchase were being farmed (Anon. 1946:16). Within 13 days ground had been cleared and drained for a cantonment which included a tent hospital and an area reserved for

quartermaster's activities. At that time the first troops arrived, and they began constructing the "wooden" cantonment.

For ease of presentation of information on prior ground disturbance, Fort Monmouth (Main Post) has been divided into four subareas (Figure 1-2). Each subarea has been divided into ground disturbance areas (GDA's) (Figures 3-1a - 3-1d). Each GDA within the Main Post is prefixed by the letter M. Historic and modern ground disturbance data for all of Fort Monmouth is presented in Table 3-1.

GDA-M1. This area is occupied by six large barracks (Bldgs. 1200-1205) numerous parking areas, and Hemphill Parade Ground. It has been disturbed by construction of these facilities and the installation of associated underground utilities. A 1951 boundary and utility survey of the area (Dwg. 21-01-02, Sheet 2 of 44), indicates that a "borrow pit" was located in the area now occupied by Hemphill Parade Ground. A softball field has been laid out at the western end of the parade ground. Construction drawings for Barracks 1, 2, and 3 (Bldgs. 1200-1202) indicate that extensive cutting and filling was undertaken in this area to provide an approximately level surface for construction. A portion of each structure has a basement level. All foundation footing extend below pre-construction grade. It is possible that areas of original undisturbed ground surface, covered by fill exist under the buildings. North Drive formerly ran through the area occupied by Bldgs. 1203-1205, and was relocated northward when those buildings were constructed.

GDA-M2. Both the c. 1922 and 1944 maps of Fort Monmouth (Main Post) fail to show any structures within this area. The only feature indicated on the 1944 map is North Drive which was subsequently relocated. A 1951 boundary and utility survey of this area (Dwg. 21-01-02, Sheet 2) also shows the original location of North Drive. Extant structures 1206, 1206A, 1207, 1208, 1209, 1210, and 1220 (boiler plant) and the extant parking lots east and south of the boiler plant were constructed in 1951.

Also shown on the 1951 drawings along the north side of Avenue of Memories were four barracks (Nos. 7-10) identical in style to existing buildings 1200-1205 in GDA-M1. The site of these structures is now occupied by a theater (Bldg. 1215) and the parking lot west of the theater. It is unclear whether or not these barracks were even constructed since they do not appear on a 1969 map (Albert C. Wood Associates 1969) or on the pre-construction site plan for the theater (Plan 3522, 12 July 1966, Office of the Post Engineer).

GDA-M3. The 1919 and c. 1924 maps of the Main Post indicate that a portion of the straightaway for Monmouth Park racetrack ran through this area. No development is shown on the 1944 map. The area is presently occupied by ballfields and a grandstand.

GDA-M4. This area is presently occupied by ammunition magazines, a communications center (Bldg. 1150) and an ADP building (Bldg. 1152). No features are indicated on the 1919, or c. 1924 maps. In addition to existing structures 157, 683, 684, 687, and 688 constructed between 1941 and 1944, the 1944 map of Fort Monmouth indicates three structures

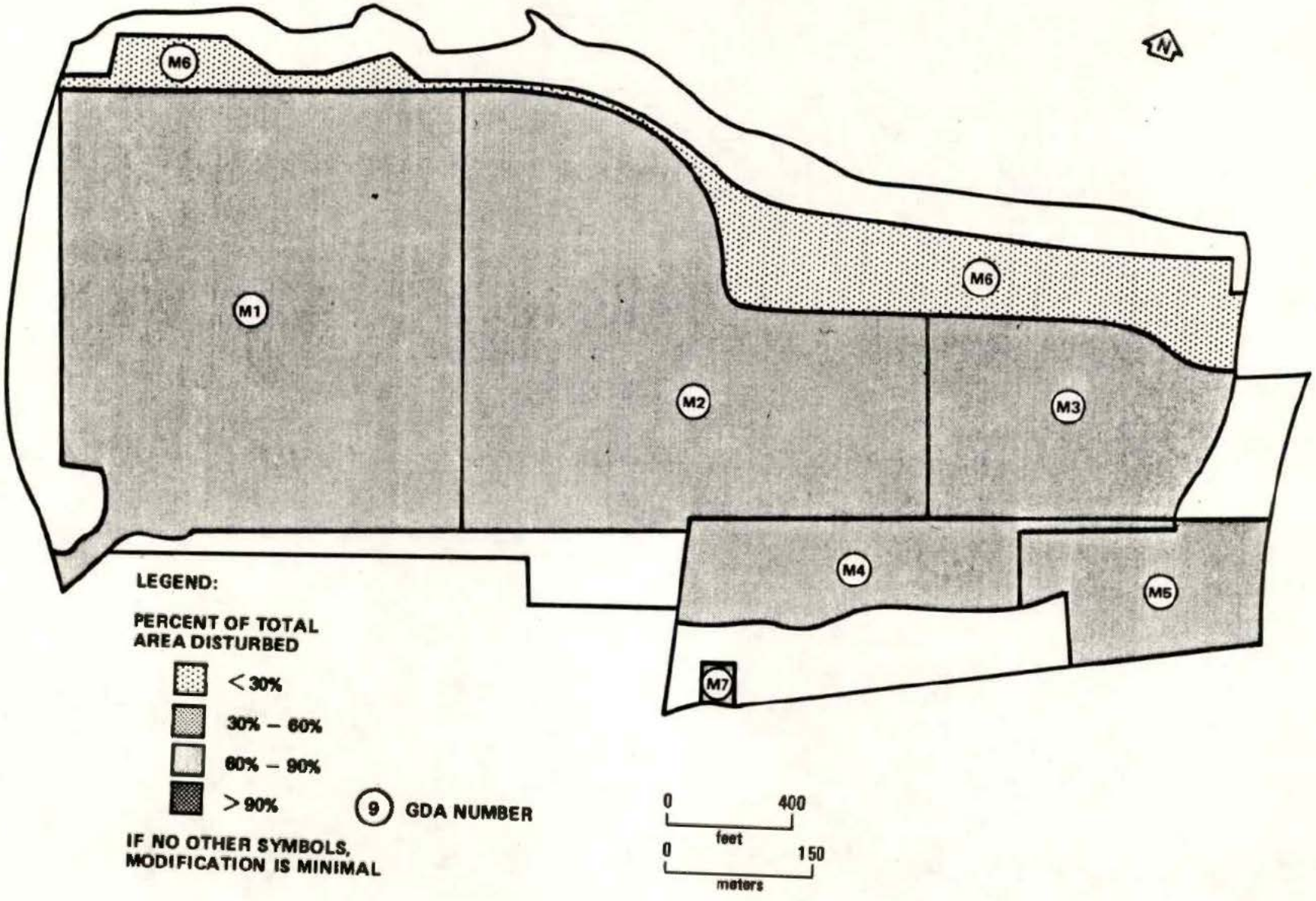

Figure 3–1a. MAP OF HISTORIC AND/OR MODERN GROUND DISTURBANCE THAT MIGHT LIMIT THE PRESENT ARCHEOLOGICAL RESOURCE BASE ON FORT MONMOUTH (MAIN POST), SUBAREA A

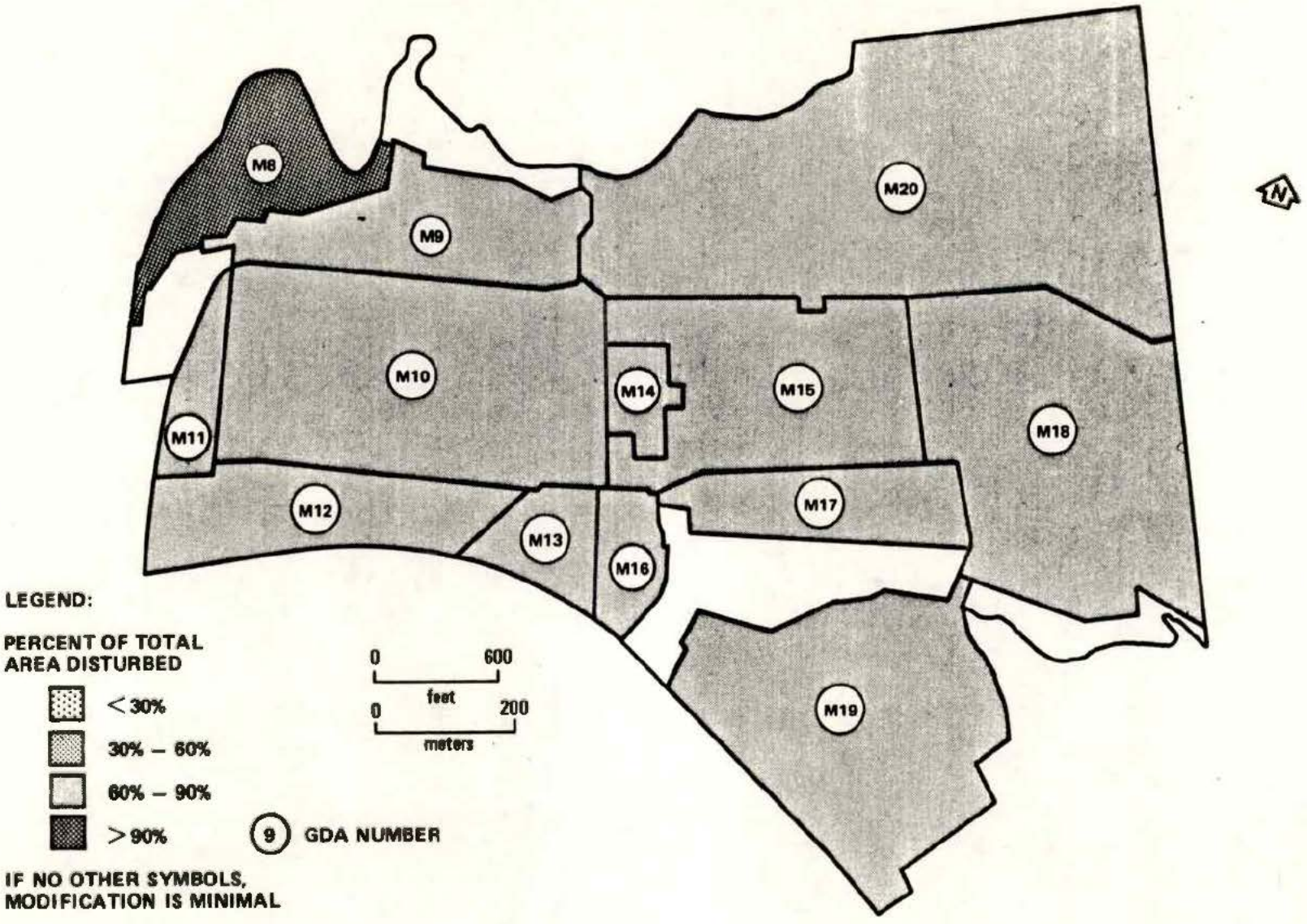

Figure 3–1b. MAP OF HISTORIC AND/OR MODERN GROUND DISTURBANCE THAT MIGHT LIMIT THE PRESENT ARCHEOLOGICAL RESOURCE BASE ON FORT MONMOUTH (MAIN POST), SUBAREA B

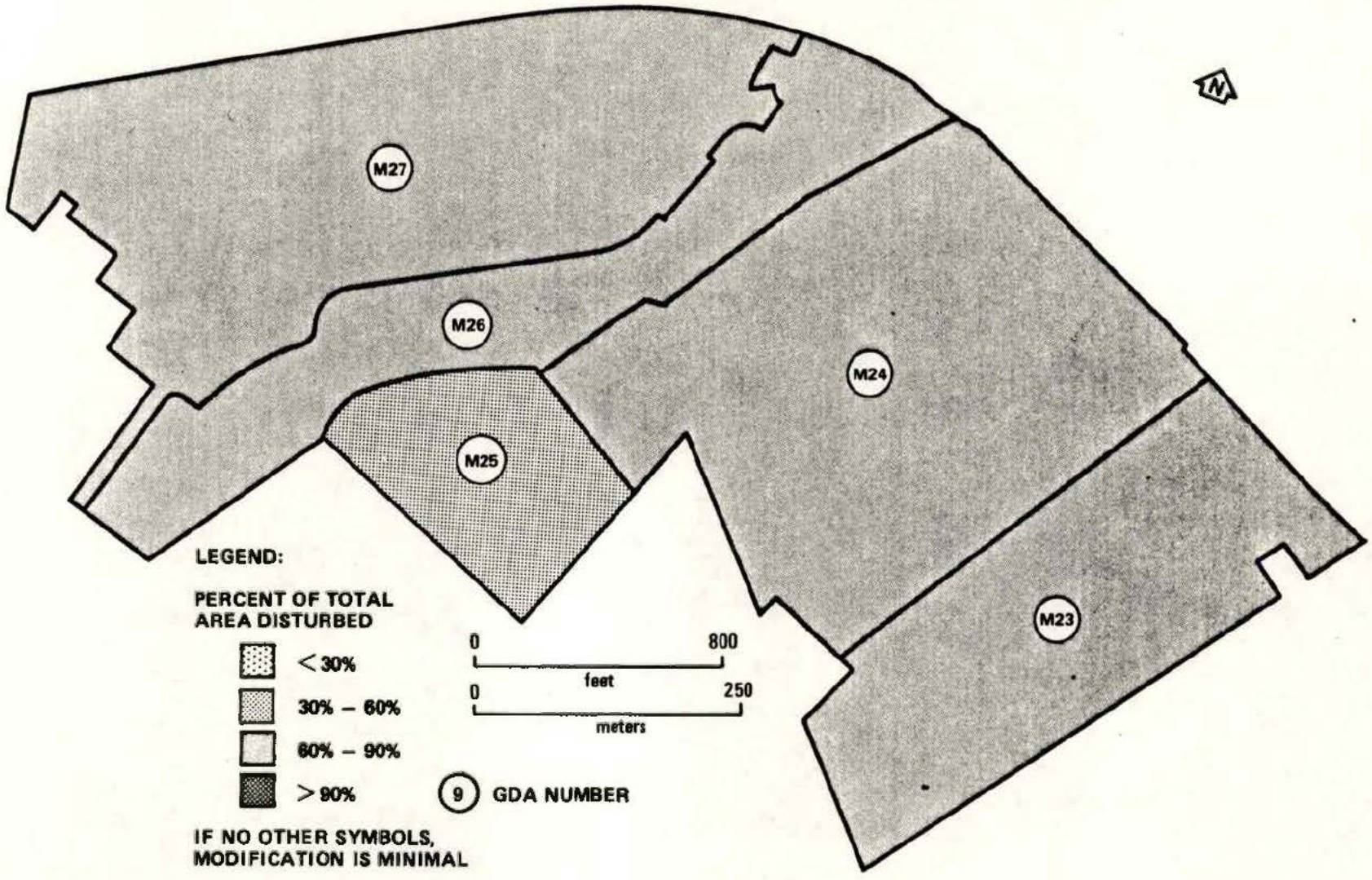

Figure 3–1c. MAP OF HISTORIC AND/OR MODERN GROUND DISTURBANCE THAT MIGHT LIMIT THE PRESENT ARCHEOLOGICAL RESOURCE BASE ON FORT MONMOUTH (MAIN POST), SUBAREA C

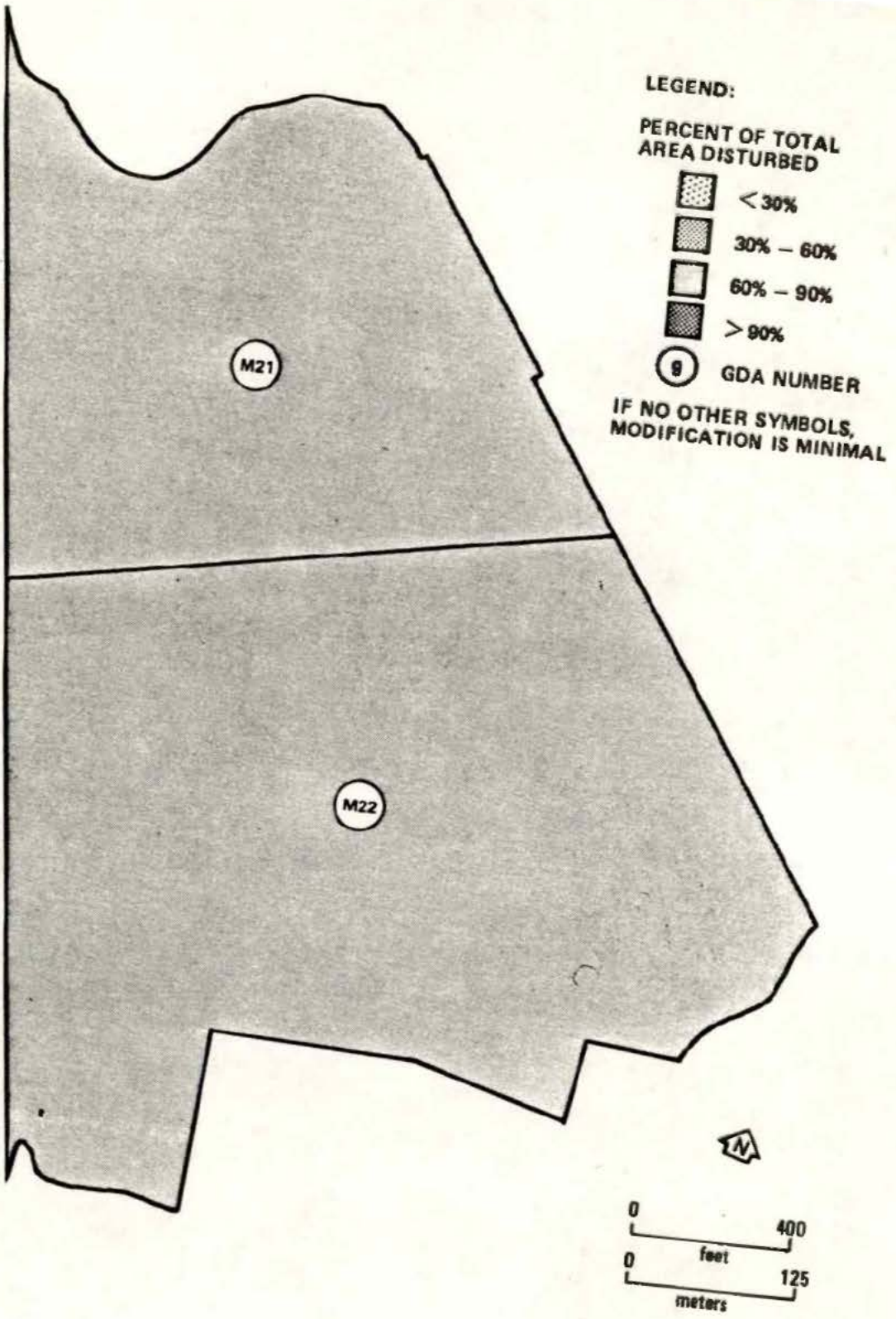

Figure 3–1d. MAP OF HISTORIC AND/OR MODERN GROUND DISTURBANCE THAT MIGHT LIMIT THE PRESENT ARCHEOLOGICAL RESOURCE BASE ON FORT MONMOUTH (MAIN POST), SUBAREA D

Table 3-1. A SUMMARY OF HISTORIC AND MODERN GROUND DISTURBANCE THAT MIGHT LIMIT THE PRESENT ARCHEOLOGICAL RESOURCE BASE AT FORT MONMOUTH (MAIN POST), CAMP CHARLES WOOD AND THE EVANS AREA

GDA No	Type of Disturbance	Date Conducted (yr)	Reference[a]	Area Disturbed (acres)	Estimated Depth Below Surface (ft)	Ratio of Disturbed to Total Area	Location of Disturbed Area					USGS Quad Sheet[d]	Coincidental Sites[e]
							UTM[b]		Legal Reference[c]				
							Northing	Easting	Township	Range	Section		
GDA-M1	Construction of:			39.8		8:10	4462229	579448	Eatontown			L754R	
	Bldgs. 1200-1205	1951	Dwg. 21-01-02 (Sheets 2,4,7,11) (6/20/51)		5-8*		4462435	579761					
							4461806	579719					
							4462084	580003					
	Hemphill Parade Gr.	1951	Dwg. 21-01-02 (Sheets 2,4,7,11) (6/20/51)		NA		4462219	580215					
	underground utilities	var.	MPBIM Dwg. 18-02-01 (Sheets 5-10,15)		5-10								
	associated landscaping	1951	MPBIM Dwg. 18-02-01 (Sheet 14)		NA								
	relocated North Drive	1951	Dwg. 16-06-01 (Sheet 1) (14-11/51)		NA								
	parking lots	1951	Dwg. 16-06-01		1								
GDA-M2	Construction of:			33.2		8:10	4462435	579761	Eatontown			L754R	M7-3
	Bldg. 1215	1967	Dwg. No. 31-01-149,C1, (2/1/67)		NA		4462084	580003					
							4462420	580119					
	Bldg. 1207	1951	Dwg. No. 29-03-01 (11/14/51)		3		4462521	580283					
							4462219	580215					
	Bldgs. 1206 and 1206A	1951	Dwg. No. 29-03-01 (11/14/51)		NA								
	Blds. 1208-1210	1951	Dwg. No. 29-03-01 (11/14/51)		NA								
	underground utilities	var.	MPBIM Dwg. 18-02-01 (Sheets 5-10, 15)		5-10								
	parking lots	NA	MPBIM Dwg. 18-02-01										
GDA-M3	Construction of:			15.2		7:10	4462521	580283	Eatontown			L754R	
	ballfields	1956	IMRP (12/31/82)		1		4462645	580569					
	grandstand	1957	IMRP (12/31/82)		NA								
	sewage pump station	1953	IMRP (12/31/82)		10								
	underground utilities	Var.	MPBIM Dwg. 18-02-01 (Sheets 6-9,15)		5+								

Table 3-1. A SUMMARY OF HISTORIC AND MODERN GROUND DISTURBANCE THAT MIGHT LIMIT THE PRESENT ARCHEOLOGICAL RESOURCE BASE AT FORT MONMOUTH (MAIN POST), CAMP CHARLES WOOD AND THE EVANS AREA (Continued)

GDA No	Type of Disturbance	Date Conducted (yr)	Reference[a]	Area Disturbed (acres)	Estimated Depth Below Surface (ft)	Ratio of Disturbed to Total Area	Location of Disturbed Area: UTM[b] Northing	UTM[b] Easting	Legal Reference[c] Township	Range	Section	USGS Quad Sheet[d]	Coincidental Sitese
GDA-M4	Construction of:			8.1		8:10	4462278	580390				L754R	
	Bldg. 1150	1952	Dwg. No. 38-04-01 (Sheets 3, 22, 23), File Nos. 7529-1048, 67,68. (6/25/52).		8								
	Bldg. 1152	1971	IMRP (12/31/82); Plan Nos. 6555-A (3/25/70), 6555-B (6/5/70)		4+								
	Bldg. 157	1953	IMRP (12/31/82)		NA								
	683-684	1941	IMRP (12/31/82)		NA								
	687-688	1944	IMRP (12/31/82)		NA								
	underground utilities	var.	MPBIM Dwg. 18-02-01		5-10								
	Bldg. 158	pre-1944	Plan No. 502 (6/30/44)		NA								
	35	pre-1944	Plan No. 502 (6/30/44)		NA								
	696	pre-1944	Plan No. 502 (6/30/44)		NA								
	coal bunker	NA	NA		NA								
	Removal of:												
	Bldg. 158	pre-1970	Plan No. 6555-A (3/25/70)		NA								
	35	pre-1952	Dwg. No. 38-04-01 (6/25/52)		NA								
	696	pre-1970	Plan No. 6555-A (3/25/70)		NA								
	coal bunker	pre-1970	Plan No. 6555-A (3/25/70)		NA								
GDA-M5	Construction of:			6.7		7:10	4462423	580636	Eatontown			L754R	28Mo130,
	Bldg. 1122	1971	IMRP (12/31/82) Plan No. 6536-1 (3/23/70)		1								
	Bldg. 1123	1976	IMRP (12/31/82)		NA								
	Bldgs. 1108-1110	1942	IMRP (12/31/82)		NA								

Table 3-1. A SUMMARY OF HISTORIC AND MODERN GROUND DISTURBANCE THAT MIGHT LIMIT THE PRESENT ARCHEOLOGICAL RESOURCE BASE AT FORT MONMOUTH (MAIN POST), CAMP CHARLES WOOD AND THE EVANS AREA (Continued)

GDA No	Type of Disturbance	Date Conducted (yr)	Reference[a]	Area Disturbed (acres)	Estimated Depth Below Surface (ft)	Ratio of Disturbed to Total Area	Location of Disturbed Area: UTM[b] Northing	UTM[b] Easting	Legal Reference[c] Township	Range	Section	USGS Quad Sheet[d]	Coincidental Sites[e]
	Bldgs. 1116-1118	1952	Plan 2784-A(8/31/45)		NA								
	underground utilities	Var.	MPIN Dwg. 18-02-01		5								
	Removal of:												
	Bldgs: 1116-1118	post-1970			NA								
GDA-	Construction of:			14.3		2:10	4462229	579448	Eatontown			L754R	28Mo129,
M6	Bldg. 200	NA	Plan No. 502 (6/30/44)		NA		4462298	579450					M7-1,-2
	Bldg. 200A	c.1945	Plan 2784-A (8/31/45)		NA		4462435	579761					
	tennis courts	1969	IMRP (12/31/82); MPBIM Dwg. 18-02-01 (Sheet 2)		1+		4462420 4462521 4462645	580119 580283 580569					
	electrical lines	var.	MPBIM Dwg. 18-02-01 (Sheets 8 & 9)		5		4462739	580507					
	storm drainage system	var.	MPBIM Dwg. 18-02-01 (Sheet 15)		10								
GDA-	Construction of:			0.3		9:10	4462240	580280	Eatontown			L754R	
M7	Bldg. 1151	1958	IMRP (12/31/82)		NA								
	cul-de-sac	NA	MPBIM Dwg. 18-02-01		1								
GDA-	Construction of:			10.9		10:10	4462645	580569	Oceanport			L754R	
M8	Old Bldg. 284	c.1940	Plan No. 502 (6/30/44)		NA		4462780	580514					
	sanitary landfill	var.	MPBIM Dwg. 18-02-01 (Sheet 2); Plan No. 8552 (12/24/73)		6+*		4463158 4463144	580537 580710					
	underground utilities	var.	MPBIM Dwg. 18-02-01		5-10								
GDA-	Construction of:			17.7		8:10	4462867	580618	Oceanport			L754R	
M9	Bldgs. 145, 288, 289	1941	IMRP (12/31/82)		NA		4463144	580710					
	Bldg. 283	1935	IMRP (12/31/82)		NA		4463261	580970					
	Bldg. 291	1966	IMRP (12/31/82)		NA		4463113	581054					
	Bldg. 296	1970	IMRP (12/31/82); Dwg. File No. 7529-5092 (6/10/69)		NA								
	Bldg. 295	1969	IMRP (12/31/82)		NA								
	Bldgs. 290, 293,	1943	IMRP (12/31/82)		NA								
	Bldg. 292	1944	IMRP (12/31/82)		NA								

Table 3-1. A SUMMARY OF HISTORIC AND MODERN GROUND DISTURBANCE THAT MIGHT LIMIT THE PRESENT ARCHEOLOGICAL RESOURCE BASE AT FORT MONMOUTH (MAIN POST), CAMP CHARLES WOOD AND THE EVANS AREA (Continued)

GDA No	Type of Disturbance	Date Conducted (yr)	Reference[a]	Area Disturbed (acres)	Estimated Depth Below Surface (ft)	Ratio of Disturbed to Total Area	Location of Disturbed Area: UTM[b] Northing	UTM[b] Easting	Legal Reference[c] Township	Range	Section	USGS Quad Sheet[d]	Coincidental Sites[e]
	Bldg. 294	1950	IMRP (12/31/82)		NA								
	Bldg. 697	1942	Dwg. 159 (Office of the Utilities Officer) (3/18/42)		5								
	Bldg. 692	1942	IMRP (12/32/82); Plan 204C (Office of the Port Engineer) (4/25/44)		3								
	Bldg. 198	1952	IMRP (12/31/82)		NA								
	sewage treatment complex (Bldgs. 680)	1940	IMRP (12/31/82)		NA								
	underground utilities	var.	MPBIM Dwg. 18-02-01		5-10+								
	Demolition of:												
	sewage treatment complex	1983	G. Meyers (personal communication 1984)		NA								
GDA-M10	Construction of:			37.1		7:10	4462867 4463113 4462878	580618 581054 581239	Oceanport			L754R	28Mo128, M6
	Bldgs. 600-679, 685,686	c.1941	Plan 502 (Office of Post Engineer) (6/30/44); IMRP (12/31/82)		2								
	Bldg. 278	1943?	IMRP (12/31/82)		NA								
	Bldgs. 616, 620, 671	1967	IMRP (12/31/82)		NA								
	Bldg. 502	1974	IMRP (12/31/82); Dwg. File No. 7529-6252 (9/15/72)		NA								
	Van Kirk Park	c.1941	Plan 502 (Office of Post Engineer) (6/30/44)		NA								
	Dunwoody Park	NA	MPBIM Dwg. 18-02-01		NA								
	underground utilities	var.	MPBIM Dwg. 18-02-01		5-10								
	Removal of:												
	Bldgs. 603, 604, 606, 607, 613, 628-630, 633-644, 646-651, 674	post-1978	NA		NA								
	Bldgs. 554, 612, 626-267, 631-632, 645, 652-654, 660-667, 679, 685	post-1944	NA		NA								

Table 3-1. A SUMMARY OF HISTORIC AND MODERN GROUND DISTURBANCE THAT MIGHT LIMIT THE PRESENT ARCHEOLOGICAL RESOURCE BASE AT FORT MONMOUTH (MAIN POST), CAMP CHARLES WOOD AND THE EVANS AREA (Continued)

GDA No	Type of Disturbance	Date Conducted (yr)	Reference[a]	Area Disturbed (acres)	Estimated Depth Below Surface (ft)	Ratio of Disturbed to Total Area	Location of Disturbed Area						
							UTM[b]		Legal Reference[c]			USGS Quad Sheet[d]	Coincidental Sites[e]
							Northing	Easting	Township	Range	Section		
GDA-M11	Construction of:			4.3		7:10	4462640	580687	Eatontown and Oceanport			L754R	
	amphitheater	1942	Plan 147 (Office of the Utilities Officer) (2/17/42)		2								
	Bldg. 689	1967	IMRP (12/31/82)		NA								
	682	1941	IMRP (13/31/82)		1								
	underground utilities	var.	MPBIM Dwg. 18-02-01		5+								
	Demolition of:												
	amphitheater	pre-1967	NA		NA								
GDA-M12	Construction of:			14.7		8:10	4462545	580690	Eatontown and Oceanport			L754R	M6
	Bldgs. 1100-1107, 1111-1115	1942	Plan 502 (Office of the Post Engineer) (6/30/44); IMRP (12/31/82)		1		4462689	581121					
	Bldgs. 559-561, 563, 564, 695, 94	pre-1944	Plan 502 (Office of the Post Engineer) (6/30/44); Plan 1780 (Office of the Post Engineer) (8/10/48)		4								
	gas station (Bldg. 699)	1953	NA		10								
	Bldg. 565	1963	NA										
	addition to Bldg. 695	1959	Plan 9725 (Office of Post Engineer (4/6/59)		1-3								
	underground utilities	var.	MPBIM Dwg. 18-02-01		5-10								
	Demolition of:												
	Bldgs. 1100, 1101, 1111-1115	post-1978	NA		NA								
	Bldgs. 559-561, 563, 564, 94	post-1978	NA		NA								

Table 3-1. A SUMMARY OF HISTORIC AND MODERN GROUND DISTURBANCE THAT MIGHT LIMIT THE PRESENT ARCHEOLOGICAL RESOURCE BASE AT FORT MONMOUTH (MAIN POST), CAMP CHARLES WOOD AND THE EVANS AREA (Continued)

GDA No	Type of Disturbance	Date Conducted (yr)	Reference[a]	Area Disturbed (acres)	Estimated Depth Below Surface (ft)	Ratio of Disturbed to Total Area	Location of Disturbed Area					USGS Quad Sheet[d]	Coincidental Sitese
							UTM[b]		Legal Reference[c]				
							Northing	Easting	Township	Range	Section		
GDA-M13	Construction of:			5.3		8:10	4462809	581322	Oceanport			L754R	M18-1
	Bldg. 556	pre-1944	Plan 502		NA								
	Bldgs. 557, 557A Bldg. 558	1943	IMRP (13/31/82)		NA								
	Bldg. 274	pre-1944	Plan 502		NA								
	Bldg. 562	pre-1944	Plan 502		NA								
	Bldg. 114	1952	Plan 2776 (Office of the Post Engineer) (5/14/50)		NA								
	underground utilities	var.	MPBIM 18-02-01		5-10								
	Removal of:												
	Bldgs. 556, 274, 562	pre-1978	NA		NA								
	Bldg. 558	post-1978	NA		NA								
GDA-M14	Construction of:			3.2		8:10	4463023	581212	Oceanport			L754R	M6
	Bldg. 500 (Chapel)	1962	IMRP (12/31/82)		NA								
	Bldg. 501	1969	IMRP (12/31/82)		NA								
	parking areas	1962?	-		1-2								
	underground utilities	var.	MPBIM Dwg 18-02-01		5-10								
GDA-M15	Construction of flying field	1919	NA	22.6	0-27	9:10	4462878 4463165 4463366	581239 581513 581449	Oceanport			L75R4	
GDA-M16	Construction of:			4.5		7:10	4462700	581290	Oceanport			L754R	M6
	Bldg. 550	1941	IMRP (12/31/82)		1-2								
	Bldg. 551	1942	IMRP (12/31/82)		NA								
	Bldg. 978	1954	IMRP (12/31/82)		NA								
	modifications to Husky Brook	NA	MPBIM Dwg 18-02-01		NA								
	underground utilities	var.	MPBIM Dwg 18-02-01		5-10								

Table 3-1. A SUMMARY OF HISTORIC AND MODERN GROUND DISTURBANCE THAT MIGHT LIMIT THE PRESENT ARCHEOLOGICAL RESOURCE BASE AT FORT MONMOUTH (MAIN POST), CAMP CHARLES WOOD AND THE EVANS AREA (Continued)

GDA No	Type of Disturbance	Date Conducted (yr)	Reference[a]	Area Disturbed (acres)	Estimated Depth Below Surface (ft)	Ratio of Disturbed to Total Area	Location of Disturbed Area: UTM[b] Northing	UTM[b] Easting	Legal Reference[c] Township	Range	Section	USGS Quad Sheet[d]	Coincidental Sites[e]
GDA-M17	Construction of:			10.2		7:10	4463165	581613	Oceanport			L754R	
	Bldg. 233	1929	Plan 625-541 (1/18/28)		6		4463067	581744					
	Bldg. 234-239	1931	IMRP (12/31/82)		6								
	Bldgs. 240-246	1932	IMRP (12/31/82)		6								
	Bldgs. 247-258	1934	IMRP (12/31/82)		6								
	Bldgs. 331-336	1934	IMRP (12/31/82)		NA								
	underground utilities	var.	MPBIM Dwg. 18-02-01		5-10								
	airfield	1917	Anon. (1946:21); Phillips (1967)		NA								
GDA-M18	Construction of:			35.2		7:10	4463165	581613	Oceanport			L754R	M1,Mb, M21
	Camp Vail Radio Laboratories	1917-1918	Anon. (1946); Phillips (1967); Anon (c.1922)		NA		4463149 4463548 4463366	582119 581814 581449					
	Bldgs. 205-208	1927	IMRP (12/31/82)		NA		4463067	581744					
	Bldgs. 257, 260	1930	IMRP (12/31/82)		NA								
	Bldg. 275	1934	IMRP (12/31/82); Dwg. 30-04-0 (Sheet 3) (1/30/75) (File No. 7529-7577; 95858)										
	Bldg. 282	1935	IMRP (12/31/82)		NA								
	Bldg. 287	1936	IMRP (12/31/82)		NA								
	Bldg. "47" (25)	1917-18	NA										
	Bldg. "35" (26)	1917-18	NA										
	Bldgs. 576-578, 122, 546-548, 579, 580	pre-1944	Plan 502 (Office of the Post Engineer) (6/30/44); Plan 9757 (OPE)(3/7/61)		3								
	Bldg. 286	1936	IMRP (12/31/82): Plan 9622E (Office of the Facilities Engineer) (12/77)		5								
	Bldg. 545	pre-1944	Plan 3512-B (Office of the Post Engineer) (10/4/66)		3.5+								
	underground utilities	var.	MPBIM 18-02-01		5-10								
	Removal of:												
	Radio Laboratories	c.1924?	Anon. (1946);										
	Bldgs. 576-578, 122 545-548, 579	pre-1978	NA		NA								
	Bldg. 580	post 1978	NA		NA								

Table 3-1. A SUMMARY OF HISTORIC AND MODERN GROUND DISTURBANCE THAT MIGHT LIMIT THE PRESENT ARCHEOLOGICAL RESOURCE BASE AT FORT MONMOUTH (MAIN POST), CAMP CHARLES WOOD AND THE EVANS AREA (Continued)

GDA No	Type of Disturbance	Date Conducted (yr)	Reference[a]	Area Disturbed (acres)	Estimated Depth Below Surface (ft)	Ratio of Disturbed to Total Area	Location of Disturbed Area: UTM[b] Northing	UTM[b] Easting	Legal Reference[c] Township	Range	Section	USGS Quad Sheet[d]	Coincidental Sites[e]
	Bldgs. "47" "35"	c.1924?											
	Placement of fill in Myer Park	1938	Plan 11 (Office of Post Quartermaster) (4/21/38)										
GDA-M19	Construction of:			32.0		9:10	4462576 4462647 4462796 4463067	581906 581684 581390 581744	Oceanport			L754R	M10,M13, M14
	Bldgs. 900-917	1941-1943	Plan 502 (Office of the Post Engineer) (6/30/44); IMRP (12/31/82); Plan 4571-B (Office of the Post Engineer) (2/1/52)		0-3								
	Bldgs. 900A-902A, 905A-907A, "918", 919	1943	IMRP (12/31/82)		NA								
	Bldgs. 921-948	c.1943?	Plan 502 (Office of the Post Engineer) (6/30/44)		NA								
	Bldgs. 950, "952," 949, 955-966	c.1943?	Plan 502 (Office of the Post Engineer)		NA								
	Bldg. 973	1950	(6/30/44) IMRP		NA								
	Bldg. 918	1967	(12/31/82) Dwg. File No. 7529-4512		NA								
	Bldgs. 975-976	1954	(7/18/66) IMRP		NA								
	Bldg. 983	1962	(12/31/82) IMRP		NA								
	Bldg. 977	1953	(12/31/82) Dwg. 27-02-01 (Sheet 2) (Corps of Eng.-NY Dist) (File No. 7529-2002)		0-5								
	underground utilities	var.	(1/23/53, rev. 1/3/55) MPBIM 18-02-01		5-10+								
	Removal of:												
	Bldgs. 903, 904 "918," 919, 921-948	post-1954	NA		NA								
	Bldgs. 950-952, 955-966	pre-1954	NA		NA								
	Placement of Sanitary Landfill	c.1949	Plan 2744 (Office of Post Engineer) (9/7/49)										

Table 3-1. A SUMMARY OF HISTORIC AND MODERN GROUND DISTURBANCE THAT MIGHT LIMIT THE PRESENT ARCHEOLOGICAL RESOURCE BASE AT FORT MONMOUTH (MAIN POST), CAMP CHARLES WOOD AND THE EVANS AREA (Continued)

GDA No	Type of Disturbance	Date Conducted (yr)	Reference[a]	Area Disturbed (acres)	Estimated Depth Below Surface (ft)	Ratio of Disturbed to Total Area	Location of Disturbed Area: UTM[b] Northing	UTM[b] Easting	Legal Reference[c] Township	Range	Section	USGS Quad Sheet[d]	Coincidental Sites[e]
GDA-M20	Erection and Removal of Camp Vail structures	1918-c.1928	Anon. 1946:18	68.3		8:10	4463261 4463113 4463628 4463882 4463548 4463366	580970 581054 581197 581515 581814 581449	Oceanport			L754R	M15, M16
	Construction of:												
	Housing and garages (Bldgs. 211-216, 218-230, 265-269, 301-310, 312-328)	1929-1936	IMRP (12/31/82)		5+								
	Bldg. 209	1928	IMRP (12/31/82)										
	Bldg. 259	1938	IMRP (12/31/82)										
	Bldg. 270	1930	IMRP (12/31/82)										
	Bldg. 271	1934	IMRP (12/31/82)										
	B.O.Q. (Bldg. 360)	1956	IMRP (12/31/82); Dwg. 25-26-47, File No. 7529-2465 (3/4/55)		4								
	500 Series Bldgs.	pre-1944	Plan 502 (Office of Post Engineer) (6/30/44)		***								
	B.O.Q. (Bldgs. 361-362)	1965	IMRP (12/31/82)		***								
	B.O.Q. (Bldg. 363)	1968	Dwg. File No. 7529-4022 (3/10/67)		***								
	softball field associated underground utilities	c.1969 var.	IMRP (12/31/82) MPBIN Dwg. 18-02-01		NA 5-10								
	Placement of fill	1918?	Anon. 1946 (18-19); Dwg. File Nos. 1729-4040-4041 (7/14/65)										
	Demolition of: 500 series bldgs.	post-1944	Plan 502 (Office of Post Engineer) (6/30/44)		*								
GDA-M21	Construction of: Camp Vail QM Structures	1918		31.7		8:10	4463882 4464038 4463891 4463548	581515 581815 582163 581814	Oceanport			L754R	M3, M6, M17-1, M17-5,-6,-9,-10,-12,-14,-15,-16
	Bldgs. 401-453	1940-1941	IMRP (12/31/82) Plan 3562-A (Office of the Post Engineer) (2/24/67)										
	Bldgs. 168-171	1943	IMRP Plan 502										
	Bldg. 478	1941	IMRP (12/31/82) Plan 6799 (Office of Post Engineer) (5/16/55)		3								

Table 3-1. A SUMMARY OF HISTORIC AND MODERN GROUND DISTURBANCE THAT MIGHT LIMIT THE PRESENT ARCHEOLOGICAL RESOURCE BASE AT FORT MONMOUTH (MAIN POST), CAMP CHARLES WOOD AND THE EVANS AREA (Continued)

GDA No	Type of Disturbance	Date Conducted (yr)	Reference[a]	Area Disturbed (acres)	Estimated Depth Below Surface (ft)	Ratio of Disturbed to Total Area	Location of Disturbed Area: UTM[b] Northing	UTM[b] Easting	Legal Reference[c] Township	Range	Section	USGS Quad Sheet[d]	Coincidental Sitese
GDA-M22	Construction of: "Flying Field" Camp Vail Quarter Master Dept. Bldg. Signal Corps Radio Laboratory Buildings			55.2		8:10	4463891 4463738 4463149 4463548	582163 582481 582119 581814	Oceanport			L754R	M2,M17-2, -3,-4,-7, -8,-11, M19,M20, M21-1
	Bldgs. 455-476; 488-489	1941	IMRP (12/31/82); Plan No. 3562-A (Office of the Post Engineer) (2/24/67)		3								
	Bldg. 280	1934	IMRP (12/31/82) Plan 110 (Office of Post Quartermaster) (7/19/41)		NA								
	Bldg. 277		Plan 3567-B (Office of the Post Engineer) (2/67)		5								
GDA-M23	Construction of:			22.8		8:10	4462576 4462647	581906 581684	Oceanport			L754R	M9, M12
	Original Bldgs. 1000-1047	pre-1944	Plan 502		NA		4462019	581645					
	Original Bldgs. 808, 809, 875	pre-1944	Plan 502		NA								
	Bldgs. 810, 812	1941	IMRP (12/31/82)		NA								
	Bldg. 886	1943	IMRP (12/31/82)		NA								
	Female B.O.Q. (Bldgs. 1077-1078)	1962	IMRP (12/31/82); Dwg. File No. 7529-3618 (1/6/61) and 7529-3613 (1/6/61)		3								
	Boiler Plant (Bldg. 1076)	1958	IMRP (12/31/82)		NA								
	Hospital (Bldg. 1075)	1961	IMRP (12/31/82); Dwg. File No. 7529-6003 (12/15/71)		NA								
	roadways and parking areas	var.			NA								
	underground utilities	var.			5-10								
	Demolition of: Original Bldgs. 1007-1047, 808, 809, 875	c.1960			NA								

Table 3-1. A SUMMARY OF HISTORIC AND MODERN GROUND DISTURBANCE THAT MIGHT LIMIT THE PRESENT ARCHEOLOGICAL RESOURCE BASE AT FORT MONMOUTH (MAIN POST), CAMP CHARLES WOOD AND THE EVANS AREA (Continued)

GDA No	Type of Disturbance	Date Conducted (yr)	Reference[a]	Area Disturbed (acres)	Estimated Depth Below Surface (ft)	Ratio of Disturbed to Total Area	Location of Disturbed Area					USGS Quad Sheet[d]	Coincidental Sites[e]
							UTM[b]		Legal Reference[c]				
							Northing	Easting	Township	Range	Section		
GDA-M24	Construction of:			32.8		9:10	4462647 4462709 4462292 4462269	581684 581322 581263 581101	Eatontown and Oceanport			L754R	28Mo127
	Bldgs. 800-804	1941-2	IMRP (12/31/82); Plan 502		NA								
	Bldgs. 814-884	1941-3	IMRP (12/31/82); Plan 502		NA								
	Bldg. 886	1943	IMRP (12/31/82)		NA								
	Bldgs. 897-898, 807, 887-891, 824, 893-894	1941-3	IMRP (12/31/82)		NA								
	Railroad sidings	c.1941	Plan 502		0-2								
	Bldg. 1000		Project 68-06 Army and Air Force Exchange Services Sheets RC-1, RA-3 (2/21/69)		4.5								
	Bldgs. 1001-1003												
	Bldg. 1004		Project 68-06, Army and Air Force Exchange Service, Dwg. 68-1762-06 NC, Sheet A5-4; Dwg. File No. 7520-5136 (6/27/69)		3-4								
	Bldg. 1005		Dwg. File Nos. 7529-5204 and 5207 (3/10/69; Rev. 4/10/71)		4								
	underground utilities	var.	MPBIM Dwg. 18-02-01		5-10								
	Demolition of:												
	All 800 Series Bldgs. except 828, 847, 866, 826, 864, 833-835, 875, 861, 851, 845, 880-881, 890, 891, 893, 894, 897, 898, 824	NA	NA		NA								
	Removal of rail siding	NA	NA		0-2								
GDA-M25	Construction of Running Track	1954	IMRP (12/31/82)	10.2	2	4:10	4462269 4462038	581101 581221	Eatontown			L754R	28Mo127 M4,
GDA-M26	Modifications to Husky Brook and Creation of Husky Brook Lake	c.1967	Dwg. File Nos. 4564-4564A (8/8-15/67)	20.0	0-7	8:10	4462709 4461896 4462689	581322 580874 581121	Eatontown and Oceanport			L754R	
GDA-M27	Construction and Demolition of 700 Series Bldgs.	1941	IMRP (12/31/82); Plan 502	37.4		8:10	4462230 4462689	580533 581121	Eatontown and Oceanport			L754R	M5

Table 3-1. A SUMMARY OF HISTORIC AND MODERN GROUND DISTURBANCE THAT MIGHT LIMIT THE PRESENT ARCHEOLOGICAL RESOURCE BASE AT FORT MONMOUTH (MAIN POST), CAMP CHARLES WOOD AND THE EVANS AREA (Continued)

GDA No	Type of Disturbance	Date Conducted (yr)	Reference[a]	Area Disturbed (acres)	Estimated Depth Below Surface (ft)	Ratio of Disturbed to Total Area	Location of Disturbed Area: UTM[b] Northing	UTM[b] Easting	Legal Reference[c] Township	Range	Section	USGS Quad Sheet[d]	Coincidental Sites[e]
GDA-W1	Construction of:			35.8		9:10	4460190	579394	Tinton Falls				L754R
	Original barracks and associated structures	c.1941	Plan 2795A (Office of the Port Engineer) (6/30/44)		NA		4460270	579067					
							4460503	579529					
	Capehart-type housing	1958	Dwg. File No. 7529-2566 (6/26/56); Plan No. 7730 (Office of the Port Engineer) (1/31/56); Dwg. File No. 7529-2602 (12/10/56); IMRP (12/31/82)		3								
	softball fields	1968-70	IMRP (12/31/82)		NA								
	underground utilities	var.	MPBIM		5-10								
	associated roadways	var.	MPBIM		2								
	Demolition of original c.1941 structures	c.1956											
GDA-W2	Construction of:			72.8		8:10	4460270	579067	Tinton Falls			L754R	W9,W10, W11
	Stable complex	c.1941	Plan 2795A (Office of the Post Engineer)		NA		4460393	578532					
							4460579	578563					
	Original school and barracks structures	pre-1941	Franklin Co. (1941: Plate 40) (6/30/44), 7783 (OPE) (1/4/57), 7734 (OPE) (2/17/56), 794 (2/3/47), 7795 (OPE) (3/19/57)		NA		4460634	579225					
							4460919	578742					
	Officer Family Housing (Bldgs. 2231-40, 2260-61)	1956	IMRP (12/31/82)		NA								
	Officer Family Housing (Bldgs. 2262-71, 2274, 2276, 2281-85, 2287, 2289)	1959	IMRP (12/31/82); Dwg. File No. 7529-2713 (4/1/57)		NA								
	NCO Family Housing (Bldgs. 2211-2226, 2241-3, 2245-56)	1960	IMRP (12/31/82); Dwg. File No. 7529-2677 (12/1/58)		NA								

Table 3-1. A SUMMARY OF HISTORIC AND MODERN GROUND DISTURBANCE THAT MIGHT LIMIT THE PRESENT ARCHEOLOGICAL RESOURCE BASE AT FORT MONMOUTH (MAIN POST), CAMP CHARLES WOOD AND THE EVANS AREA (Continued)

GDA No	Type of Disturbance	Date Conducted (yr)	Reference[a]	Area Disturbed (acres)	Estimated Depth Below Surface (ft)	Ratio of Disturbed to Total Area	Location of Disturbed Area: UTM[b] Northing	UTM[b] Easting	Legal Reference[c] Township	Range	Section	USGS Quad Sheet[d]	Coincidental Sitese
	NCO Family Housing (Bldgs. 2100-2115)	1970	IMRP (12/31/82); Dwg. File No. 7529-5012 and 5019 (7/23/69)		3								
	associated underground utilities	var.	MPBIM		5-10								
	associated roadways		MPBIM		2								
	Demolition of original pre and c.1941 structures	c.1956	NA		NA								
GDA-W3	Construction of Bldg. 2700 (Hexagon)	1955	Dwg. File No. 7529-894 (6/30/52); IMRP (12/31/82)	81.4	4	7:10	4460503 4460634 4460919 4460913 4461005 4460906 4461091 4461164	579529 579225 579342 579351 578970 579705 578829 579069	Tinton Falls			L754R	W6, W8
	Bldg. 2705 (Electronic Warfare Lab)		Dwg. File Nos. 7529-5232, 5266, 5248 (5/5/70);		4								
	Bldg. 2525 (Admin. Bldg.)	1942	IMRP (12/31/82)		NA								
	Sewage Treatment Plant	1943	IMRP (12/31/82)		10+								
	Misc. temporary structures	1942	IMRP (12/31/82)		NA								
	underground utilities	var.	MPBIM		5-10								
	Associated roadways, parking areas, and heliports	var.	MPBIM		2								

Table 3-1. A SUMMARY OF HISTORIC AND MODERN GROUND DISTURBANCE THAT MIGHT LIMIT THE PRESENT ARCHEOLOGICAL RESOURCE BASE AT FORT MONMOUTH (MAIN POST), CAMP CHARLES WOOD AND THE EVANS AREA (Continued)

GDA No	Type of Disturbance	Date Conducted (yr)	Reference[a]	Area Disturbed (acres)	Estimated Depth Below Surface (ft)	Ratio of Disturbed to Total Area	Location of Disturbed Area						
							UTM[b]		Legal Reference[c]			USGS Quad Sheet[d]	Coincidental Sites[e]
							Northing	Easting	Township	Range	Section		
GDA-W4	Construction of:			48.6		2:10	4460913	579351	Tinton Falls			L754R	
	Bldg. 2704	1965	IMRP (12/31/82)		NA		4461005	578970					
	associated utilities	var.	MPBIM Dwg. 18-02-01		5-10		4460906	579705					
	roadways	var.	MPBIM Dwg. 18-02-01		2		4461091	578829					
							4461164	579069					
							4461264	578917					
							4461121	579395					
							4461210	579251					
							4461128	579693					
							4461268	579736					
							4461201	579736					
							4461252	579635					
							4461249	579855					
GDA-W5	Construction of:			16.9		7:10	4461043	579517	Tinton Falls			L754R	
	Bldgs. 2500-2509	1942	IMRP (12/31/82)		NA		4461121	579395					
	Other temporary structures	var.	NA		NA		4461210	579251					
							4461128	579693					
	Open storage areas, parking areas, roadways, utilities	var.	MPBIM Dwg. 18-02-01		2-10		4461268	579251					
							4461252	579635					
GDA-W6	Construction of:			51.0		9:10	4461367	577852	Eatontown			L754R	
	Eatontown Gardens family housing complex	1953	IMRP (12/31/82)		NA		4461286	578793					
							4461286	578499					
							4461389	577901					
							4461426	577950					
							4461440	578488					
							4461427	578860					
							4461701	577961					
GDA-W7	Construction of:			3.9		5:10	4460500	578300	Eatontown			L754R	W12,W13
	Warehouse (Bldg. 2600)	NA	Plan 2795A (Office of Post Engineer) (6/30/44)		NA								
	Rail spur	NA	Plan 2795A		2								
	4 tanks		Franklin Survey Co. (1944: Plate 38)		NA								

Table 3-1. A SUMMARY OF HISTORIC AND MODERN GROUND DISTURBANCE THAT MIGHT LIMIT THE PRESENT ARCHEOLOGICAL RESOURCE BASE AT FORT MONMOUTH (MAIN POST), CAMP CHARLES WOOD AND THE EVANS AREA (Continued)

GDA No	Type of Disturbance	Date Conducted (yr)	Reference[a]	Area Disturbed (acres)	Estimated Depth Below Surface (ft)	Ratio of Disturbed to Total Area	Location of Disturbed Area: UTMb Northing	UTMb Easting	Legal Reference c: Township	Range	Section	USGS Quad Sheet[d]	Coincidental Sitese
	Demolition of 4 tanks	NA	NA		NA								
	Removal of rail spur	NA	NA		2								
GDA-W8	Construction of:			9.7		9:10	4461110	578460	Eatontown			L754R	
	Golf course	NA	Plans 6708-F (Office of Post Engr.) (3/11/55, 3/9/59)		NA								
	Family housing	1949-51			7								
	Associated roadways	post-1949	MPBIM Dwg. 18-02-01		2								
	underground utilities	post-1949	MPBIM Dwg. 18-02-01		5-10								
GDA-W9	Construction of:			11.7		1:10	4461096	578798	Eatontown and			L754R	
	underground electrical and sewer lines	NA	MPBIM Dwg. 18-02-01		5-10		4461249	578457	Tinton Falls				
							4461248	578878					
GDA-W10	Construction of:			27.8		1:10	4461017	577811	Eatontown			L754R	W2,W4
	railroad spur line	pre-1861	Beers & Beers (1861)		1		4461367	577852					
							4461286	578499					
							4461389	577901					
GDA-W11	Construction of:			5.7		9:10	4461440	578850	Eatontown			L754R	W1,W16 28Mo132
	Monmouth County Country Club Complex	c.1925	Strong (1981); Plan 7503 (1 of 4) (Office of the Facilities Engr.) (3/11/71)		5-10								
GDA-W12	Construction of:			126.2		9:10	4460410	578442	Eatontown			L754R	
	golf course	c.1925	Strong (1981)		2		4460523	577983					
	carriage factory complex	pre-1873	Beers (1873); Wolverton (1879)		NA		4460698	578024					
							4460816	577756					
	storm sewer	NA	MPBIM Dwg. 18-02-01		5		4460760	578155					
	sanitary sewer	NA	MPBIM Dwg. 18-02-01		5		4460845	578460					
							4460860	578086					
	Demolition of:				NA		4460857	577981					
	carriage factory complex						4460937	577762					
							4460911	578364					
							4460904	578091					
							4461013	578513					
							4461027	578343					
							4461096	578798					
							4461249	578457					

Table 3-1. A SUMMARY OF HISTORIC AND MODERN GROUND DISTURBANCE THAT MIGHT LIMIT THE PRESENT ARCHEOLOGICAL RESOURCE BASE AT FORT MONMOUTH (MAIN POST), CAMP CHARLES WOOD AND THE EVANS AREA (Continued)

GDA No	Type of Disturbance	Date Conducted (yr)	Reference[a]	Area Disturbed (acres)	Estimated Depth Below Surface (ft)	Ratio of Disturbed to Total Area	Location of Disturbed Area: UTM[b] Northing	UTM[b] Easting	Legal Reference[c] Township	Range	Section	USGS Quad Sheet[d]	Coincidental Sites[e]
GDA-W13	Construction of:			15.8		8:10	4460523	577983	Eatontown			L754R	W5, W7, W14, W15, 28Mo131
	B.O.Q.s and mess	c.1942	Plan 6754F (Office of the Post Engr.) (6/30/44)		3		4460585	577721					
	Associated water line	c.1942			5		4460698	578024					
	ice pond	pre-1873	Beers (1873)				4460816	577756					
	new dam	1972	Plan 7593 (Office of the Facilities Engr.) (8/21/72)		8								
	Demolition of:												
	B.O.Q.s and mess	post-1944	Plan 6754F (Office of the Post Engr.) (6/30/44)		NA								
	Filling of ice pond	post-1944	Plan 6754F (Office of the Post Engr.) (6/30/44)		NA								
GDA-E1	Construction of:			3.3		9:10	4448906	580032	Wall			A754R	
	Sewage treatment plant	1942	Plan 6148-STP-L2 (12/3/42)		0-17* 0-10**								
GDA-E2	Construction of:			9.5		5:10	4448880	580180	Wall			A754R	
	Bldgs. 4 and 5	pre-1941	Rowland (1941)		NA								
	Bldgs. 2 and 3	1913	White (1915)		NA								
	drain fields	1942	Plan 6148-STP-L1 (12/3/42)		2								
	Bldg. "7B" (T-9)	1942	Plan 6148-STP-L1 (12/3/42); Plan 546 (Office of the Post Engineer) (6/30/44)		NA								
	Bldg. 190	1947	IMRP (12/31/82)		NA								
	garages (Bldgs. 96,201, 202	pre-1949	IMRP (12/31/82)		NA								
	Bldg. 129	pre-1956	Plan 546-B (Office of the Post Engineer) (1/19/56)		NA								
	underground utilities	var.	MPBIM Dwg. 18-02-01		5-10								
	Demolition of:												

Table 3-1. A SUMMARY OF HISTORIC AND MODERN GROUND DISTURBANCE THAT MIGHT LIMIT THE PRESENT ARCHEOLOGICAL RESOURCE BASE AT FORT MONMOUTH (MAIN POST), CAMP CHARLES WOOD AND THE EVANS AREA (Continued)

GDA No	Type of Disturbance	Date Conducted (yr)	Reference[a]	Area Disturbed (acres)	Estimated Depth Below Surface (ft)	Ratio of Disturbed to Total Area	Location of Disturbed Area: UTM[b] Northing	UTM[b] Easting	Legal Reference[c] Township	Range	Section	USGS Quad Sheet[d]	Coincidental Sites[e]
	Bldg. "7B"	NA	NA		NA								
	Bldg. 129	NA	NA		NA								
GDA-	Construction of:			2.5		8:10	4448397	580336	Wall			A754R	
E3	Diana radar complex	1942	IMRP (12/31/82)		NA								
	underground utilities	var.	MPBIM Dwg. 18-02-01		5-10								
GDA-	Construction of:			11.4		9:10	4449071	579536	Wall			A754R	E8
E4	Civilian housing complex	1942	Plan 6148-CWH-102B (9/15/42); Plan 6148-CWH-105 (8/5/42); Plan 546 (Office of the Post Engineer) (6/30/44);		3		4449076	579672					
							4448916	579706					
	underground utilities	1942			5-10		4448738	579606					
							4448765	579735					
	Demolition of: Civilian housing complex	c.1950	Plan 2767-A (8/5/49)		NA								
GDA-	Construction of:			1.4	NA	5:10	4448954	579747	Wall			A754R	
E5	farm complex	pre-1941	Franklin Survey Co (1941: Plate 11)										
	Demolition of: farm complex	c.1950	Dwg. 2767-A(8/5/49); Plan 546-A (8/10/51)		NA								
GDA-	Construction of:			17.0		8:10	4448620	580072	Wall			A754R	E4-2, E5
E6	Marconi Co. Power Plant	1913	White (1913)		NA		4448768	580020					
							4448708	579937					
	Parking Areas	1942	Plan 6148-CE-103		1		4448604	579794					
	Drain field	1942			2		4448522	579769					
	Bldg. 191	1947					4448530	579798					
	Tower 165	pre-1967	Plan No. 3598 (3/1/67)				4448552	579608					
	Bldg. S-121	pre-1951	Plan 546-A (Office of the Post Engineer)(8/10/51)		3		4448339	579406					
							4448239	579515					
	Bldg. T-90	pre-1949	Dwg. 2767-A(5/8/49)		3		4448393	579690					
	Bldg. T-91	pre-1951	Plan 546-A(Office of the Post Engineer)(8/10/51)		3								
	Demolition of:												
	Marconi Co. Power	pre-1941	Rowland (1941)		?								
	Tower 165	post-1967	Plan No. 3598 (3/1/67)		1								
	Bldg. S-121	post-1951	Plan 546-A(Office of the Post Engineer)(8/10/51)		1								

Table 3-1. A SUMMARY OF HISTORIC AND MODERN GROUND DISTURBANCE THAT MIGHT LIMIT THE PRESENT ARCHEOLOGICAL RESOURCE BASE AT FORT MONMOUTH (MAIN POST), CAMP CHARLES WOOD AND THE EVANS AREA (Continued)

GDA No	Type of Disturbance	Date Conducted (yr)	Reference[a]	Area Disturbed (acres)	Estimated Depth Below Surface (ft)	Ratio of Disturbed to Total Area	Location of Disturbed Area: UTM[b] Northing	UTM[b] Easting	Legal Reference[c] Township	Range	Section	USGS Quad Sheet[d]	Coincidental Sitese
	Bldg. T-90	post-1951	Plan 546-A(Office of the Post Engineer)(8/10/51)		1								
	Bldg. T-91	post-1967	Plan No. 3598(3/1/67)		1								
GDA-E7				20.5		9:10	4448393 4448220 4448115 4447957 4447975 4448163	579690 579518 579657 579843 579854 579935	Wall			A754R	E3-E7
	Construction of:												
	pre-Army bldgs.	pre-1941	Franklin Survey Co. (1941: Plate 11); Plan No. 6148-CE-105 (6/9/42)		NA								
	Bldgs. 398-45, 47-49, 51, 55, 60, 61, 63, 82	1942	IMRP (12/31/82); Plan 6198-STP-LI (12/3/42)		NA								
	Bldg. 83	1943	IMRP (12/31/82); Plan No. 546 (Office of Post Engineer (6/30/44)		NA								
	Grading	1941	Plan Nos. 6148-CE-105 and 106 (6/9/42)		1-3								
	Extant post-1943 Structures	1944-1949	IMRP (12/31/82)		NA								
	Bldgs. 101, 253, 305, 232, 243, 230	c.1949	Plan 546-A (Office of the Post Engineer) (8/10/51)		NA								
	Tower 172	pre-1967	Plan 3598 (3/1/67)		NA								
	underground utilities	var.	MPBIM		5-10								
	Demolition of:												
	pre-Army structures	1942	Plan No. 6148-CE-105 (6/9/42)		NA NA								
	Bldgs. 101, 253, 305, 232, 243, 230, 172	var.	NA										
GDA-E8				26.8	1-2	9:10	4448163 4448363 4448393	579935 580064 579690	Wall			A754R	E4-2 E9
	Construction of:												
	Marconi Co. Hotel	1913	White (1913)		3+								
	Antenna #6	1913	White (1913)		NA								
	Kings College Bldgs.	pre-1948	Plan No. 6148-1060 (6/9/42) (Office of the Quarter Master General)		3+								
	Signal Corps Bldgs.	1941-1951	IMRP (12/31/82); Plan No. 6148-STP-LI (12/3/42)										
	underground utilities	var.	MPBIM										
	farm bldg.	?	Plan No. 6148-CE-104		NA								

Table 3-1. A SUMMARY OF HISTORIC AND MODERN GROUND DISTURBANCE THAT MIGHT LIMIT THE PRESENT ARCHEOLOGICAL RESOURCE BASE AT FORT MONMOUTH (MAIN POST), CAMP CHARLES WOOD AND THE EVANS AREA (Concluded)

GDA No	Type of Disturbance	Date Conducted (yr)	Reference[a]	Area Disturbed (acres)	Estimated Depth Below Surface (ft)	Ratio of Disturbed to Total Area	Location of Disturbed Area: UTM[b] Northing	UTM[b] Easting	Legal Reference[c] Township	Range	Section	USGS Quad Sheet[d]	Coincidental Sites[e]
	Demolition of: farm bldg.	1942	(6/9/42) Plan No. 6148-CE-104 (6/9/42)		NA								
	Grading	1942	Plan No. 6148-CE-104 (6/9/42)		1-2								
GDA-E9	Construction of: Watson Ave.	1942	Plan 6148-CWH-200 (9/14/42)	2.1	10	9:10	4448630 4448627 4448522 4448530	579669 579694 579769 579798	Wall			A754R	
GDA-E10	Construction of:			53.3		2:10	4447957	579843	Wall			A754R	E1,E2
	19th c. farmsteads	pre-1851	Lightfoot (1851)		NA		4447975	579854					E6
	pre-1941 farmstead	pre-1941	Franklin Survey Co. (1941: Plate 11)		NA		4447883	580072					
							4447551	580034					
	Signal Corps structures and associated roadways	post-1941	IMRP (12/31/82); Plan 2767-A(8/5/49); Plan 546-B (Office of the Post Engineer) (1/19/56); Plan 3598 (3/1/67)		3		4447663 4447624 4447824 4448115	579901 579625 579395 579657					
	underground utilities	var.	MPBIM Dwg 18-02-01		5								
	Demolition of: Signal Corps structures		NA		NA								

Notes: a. All plans and drawings on file with the facilities engineer at Fort Monmouth. MPBIM = Master Plan Basic Information Maps; IMRP = Inventory of Military Real Property.

b. UTM Zone 18

c. New Jersey has no range and section designations. Township = township or borough

d. L754R = Long Branch, 7.5 minute, 1954 edition, photorevised 1970; A754R = Asbury Park, 7.5 minute, 1954 edition, photorevised 1981.

e. Site designations beginning with "M," "W", or "E", should be prefixed by "FM"

* Below existing ground surface
** Below original ground surface
*** Extensive fill deposits are located in this area and it is unlikely that disturbance extended much below original ground surface.

(labeled 158, 35, and 696), 200, 350, and 550 ft., respectively, east of Bldg. 683 which are no longer extant. Construction plans for Bldg. 1150 dated June 25, 1952 show Bldg. 696 as a one story, cinder block latrine; the site of Bldg. 35 is shown as a concrete slab; Bldg. 158 is labeled "I sty frame." All these structures would have been located approximately where the parking area north of Bldg. 1152 is presently situated. Also shown on the 1952 drawing is the site of a "coal bunker" located immediately south of Bldg. 696, and an 800 x 350 ft. "conc. slab to be removed" 50 ft. west of Bldg. 1150. The site plan for Bldg. 1150 shows grading associated with construction extended as much as 120 ft. from the structure on the south east and west sides. Building 1152 was constructed in 1971. A site and utility plan prepared in connection with its construction (Plan 6555-A) shows that it is located on what was formerly a small knoll, and that as much as 3 ft. of soil was removed from the site. The same plan also indicates 1-2 ft. of overburden was placed in the area immediately west of the fence surrounding the ammunition magazines.

GDA-M5. This area is presently occupied by Bldgs. 1122, 1123, 1108-1110, and several parking areas. None of the early maps of Fort Monmouth show any structures in this GDA. A 1945 map (Plan 2784A, August 31, 1945) shows Bldgs. 1108-1110, and north of and parallel to them, three non-extant structures labeled 1116, 1117, and 1118. This is the site of existing Bldg. 1123, which was constructed in 1976. A site plan for Bldg. 1122 (Plan No. 6536-1) dated March 23, 1970 shows Bldgs. 1118 and 1119 as being in existence. All references to Bldgs. 1108-1110, 1116-1118 are prefixed with either the letter "T" or "S" indicating they are (were) temporary or semi-permanent structures, suggesting that ground disturbance associated with their construction and later removal may not have been extensive.

GDA-M6. This area includes the portion of the Main Post on the east by Mill Brook on the south by North Drive and on the north by Lafetra Brook (the reservation boundary). The 1919 map of Camp Vail indicates that a barn and a dugout, possibly part of a nineteenth century farm complex (designated FMM-7, see Section 4) were located in this area. The c. 1922 map also indicates the barn (measuring 180 x 60 ft.). A 1944 map indicates Bldg. 200 as being located within this GDA (a 1982 inventory of military real property indicates existing Bldg. 200 was constructed in 1958. The location is approximately the same as that shown on the 1944 map suggesting the inventory may be in error or may be referring to an alteration of the building). A 1945 map of Fort Monmouth shows an approximately 160 x 50 ft. structure labeled 200A located 150 ft. west of Bldg. 200 and a very small unidentifiable feature labeled 200B, 200 ft. northeast of Bldg. 200. Tennis courts were constructed at the extreme western end of the the area in 1969. The only underground utility construction in the GDA consists of electrical lines to service Bldg. 200 and the tennis courts, and a storm drainage system including five headwall structures and open ditches feeding into Lafetra Brook.

GDA-M7. This relatively small area includes Bldg. 1151 (cable house), an associated fenced compound and the cul-de-sac for the access road to the cable house.

GDA-M8. This area is the site of a full sanitary landfill. Visual inspection suggests that current ground surface may be 6 ft. or more above original grade. The extent of disturbance to the original ground surface from landfilling activities is unknown. Examination of early maps of Fort Monmouth indicates a single structure (labeled "284"; not to be confused with existing Bldg. 284) measuring approximately 150 x 50 ft. located approximately 200 ft. east of Bldg. 292. It appears only on the 1944 map. The exact dates of its construction and demolition are not known, nor is its function.

GDA-M9. This area presently contains several general purpose and research and development administration buildings, general storehouses, a general purpose laboratory, and an incinerator. The area between the incinerator and Bldg. 292 is the former site of the installation's sewage treatment plant. Constructed in 1940, that facility was demolished in 1983. The area has been extensively disturbed by the construction of underground utilities. The northwest corner of the track for old Monmouth Park ran through GDA-M9, and presumably some grading was associated with its construction; however, this cannot be documented.

GDA-M10. This area is bounded by Sherrill, Messenger, Saltzman and Malterer Avenues. It constituted a portion of the infield of the old Monmouth Park race track. The earliest maps of Fort Monmouth do not indicate any development in this area. The 1944 map, however, shows a total of 86 structures in this area. Of these, 56 are shown in the 1978 general site map (Master Plan Basic Information Map, Drawing 18-02-01). All of these are labeled as temporary on that map. Twenty-seven of the 56 structures do not appear on the 1982 real property inventory indicating they have been removed. Four semi-permanent buildings (nos. 278, 616, 620, and 671) and one permanent building (no. 502, the main library) were erected subsequent to 1944 and are still extant. Dunwoody Van Kirk Parks, shown on the 1944 map, occupies the extreme northeastern and southeastern, corners, respectively, of GDA-M10. The amount of disturbance associated with landscaping and other improvements is not known.

GDA-M11. The area is bounded by Wilson, Saltzman and Messenger Avenues. It contains Bldgs. 689, 682, and a parking area. Building 689 is presently a bowling center. Prior to its construction in 1967 the site was occupied by an outdoor amphitheater constructed in 1942. Grading plans for the theater indicate that 1 to 5 ft. of soil was moved during construction. The plans also show a series of four 6 in. French drains running in a north-south direction under the theater.

GDA-M12. In the early 1940s a series of 13 temporary structures (Bldgs. 1100-1107, 1111-1115) were built in the western end of this GDA. Seven were demolished sometime after 1978 (these seven appear on current Basic Information Maps but are not listed in current real property inventories). Other non-extant structures which appear the 1944 map of Fort Monmouth include a P.X. (Bldg. 563), also demolished after 1978; two structures labeled "561" were located in what is now the parking area west of the gas station (Bldg. 699); a structure labeled "564" was located immediately south of the gas station; one labeled "560" was located on the present site of Bldg. 565; two small structures labeled

"94" and "559" were located on the open area east of Bldg. 695. An abandoned 2 in. water line is also shown running in an east-west direction through the eastern half of this GDA.

GDA-M13. This area is presently the site of a field house (Bldg. 114), a water storage tank, two pump houses, and a parking lot. Husky Brook flows through an underground culvert constructed in the southeast corner of the GDA. The topographic survey of the field house site made in 1950 indicates the area between the field house and Husky Brook was swamp. The survey also shows numerous small structures (an underground tank, a grease rack, an incinerator, a concrete wash rack, and a shed) which are no longer extant scattered throughout the GDA, and one large (80 x 60 ft.) structure (Bldg. 556) which is no longer extant located along the south side of Saltzman Avenue.

GDA-M14. This GDA is presently the site of the post chapel (Bldg. 500), mental hygiene clinic (Bldg. 501) and two parking areas. The 1944 map of Fort Monmouth indicates that at that time the area was the extreme western end of the "parade grounds." The 1919 map of Camp Alfred Vail indicates that at that time the area was the extreme western end of the "new fighting field."

GDA-M15. This GDA is the site of the present Greely Field. This 1919 map of Camp Vail indicates that at that time the area was an airfield. How long it was used as an airfield has not been determined but 1944 maps label it as "parade grounds." Some disturbance associated with the construction (grading?) and use (especially during muddy conditions) is assumed, but its extent cannot be determined.

GDA-M16. This area includes Bldg. 550, built as a temporary structure in 1941, Bldg. 551 constructed in 1942 and an associated parking lot, and an electrical substation (Bldg. 978). An unknown degree of disturbance was associated with the covering (and routing through a culvert) of Husky Brook, which runs through the southern end of the GDA.

GDA-M17. This area was originally cross-cut by the southern part of the straightaway for Monmouth Park race track, and subsequently was part of the Camp Vail "Flying Field." It is presently the site of 26 structures used as NCO housing and 5 garages. These structures were erected between 1929 and 1934. Basement foundations for the houses extend 6 ft. below existing grade.

GDA-M18. The eastern end of the track for old Monmouth Park race track originally ran through this area. In 1917-1918 the Signal Corps established its Radio Laboratories in GDA-M18. Both 1919 and c. 1922 maps of Camp Vail show the laboratories as consisting of a total of 33 structures within a fenced area west of Oceanport Avenue. Both maps also show two structures south of the radio labs area. The first of these is labeled "47" on the 1919 map and "25" on the c. 1922 map. It is shown approximately 550 ft. WSW of the intersection of Riverside and Oceanport Avenues. The second is labeled "35" on the 1919 map and "26" on the c. 1922 map. It was located approximately 200 ft. WSW of the same intersection. Sometime during the next 10 to 20 years all of these buildings were removed, and the structures presently in the area (Bldgs.

205-208, 257, 260, 275, 282, 286, and 287) were erected. The 1944 map of Fort Monmouth shows all of these structures. In addition it shows numerous non-extant buildings. These include three (labeled "576-578") along the west side of Wallington Avenue in what is now the extreme eastern end of the southwest quadrant of Myer Park; structures labeled "547" and "548" located in the open areas, north and south, respectively, of Bldg. 286; a structure labeled "545" at what is not the southeast corner of the intersection of Wallington and Saltzman Avenues; a structure labeled "579" on the east side of Murphy Drive, east of Bldg. 331; and a structure labeled "546" west of Bldg. 208 and south of Bldg. 206. Bldg. 580 shown on both the 1944 map and current (1978) Basic Information Maps is no longer extant.

In 1938 between 0.5 and 2.0 ft. of fill was placed in the area now occupied by Myer Park and in the area bounded by Wallington, Sanger and Sherrill Aves. and Bldg. 286.

GDA-M19. This area was not part of the original Camp Vail. It was purchased by the Army in after 1940 and incorporated into Fort Monmouth. Approximately 70 structures were built in this area in the early 1940s and are shown on the 1944 map of the Fort. Although several of these buildings are still extant, the majority have been removed. No original plans for these structures were found at Fort Monmouth. However, 1952 plans for an improvement to existing Bldg. 909 (apparently construction of a connection to Bldg. 908) indicate that that structure had 3 ft. deep concrete footings. Bldg. 909 is believed to have been identical to Bldgs. 908-919. (Existing Bldg. 918 was constructed in 1967; it is not the same as Bldg. 918 shown on the 1944 map). Of the six buildings constructed after 1950 (973, 918, 975, 976, 977, 983), three (975-977) are classified as permanent and probably had a greater degree of ground disturbance associated with their construction. The site plan for Bldg. 977 (Guard House) confirms that as much as 5 ft. of soil was moved to level the area prior to construction and construction of fenced exercise yard to the south. The area immediately south of Husky Brook within GDA-M19 is identified as a sanitary landfill on Plan 2744 dated September 7, 1949.

GDA-M20. This area was the site of the majority of the original facilities associated with Camp Vail. In 1917 a total of 82 single-story frame structures design for temporary occupancy were built in GDA-M20 (Anon. 1946:18-19). These structures are shown on the 1919 map of the Camp. By the end of 1918 a former swamp had been converted into four company streets on which were erected 200 tents (Anon. 1961:9-10). The location of these tents is also shown on the 1919 map. The c. 1922 map indicates that a small additional number of buildings had been erected by that time and that the tent encampment was gone. The degree to which the erection and subsequent removal of these facilities disturbed this area cannot be definitely established, but it seems unlikely that any of them had basements. Between 1929 and 1936 officer housing (including detached garages) was constructed along what became Russel, Allen, and Carty Avenues. Two B.O.Q.s were also constructed during this same period; an administration building (Bldg. 209) was erected in 1929.

The 1944 map of Fort Monmouth shows extensive development of the area north and east of Barton, Carty, and Allen Avenues. Between 60 and 70 structures, most measuring approximately 40 x 120 ft. are shown. Almost all have 500 sewer designations. With the exception of Bldg. 209, all of the original structures in this area have been demolished. The exact date of demolition could not be determined, but at least two of these structures (Bldgs. 541 and 537) are shown on the 1967 site plan for Bldg. 363. The area is now occupied by B.O.Q. housing, associated parking areas, a tennis court (which replaced one which was located on what is now the site of the parking area between Bldgs. 361 and 362 and the site of Bldg. 361 itself), a softball field, and several small utility structures.

Boring logs covering the area between Allen Avenue and Parker Creek, and Bldgs. 361 and 259, indicate from 2 to 17 ft. of "fill." This "fill" may be associated with filling of the former swamp noted in Anon. (1946: 18-19).

GDA-M21. This GDA includes the portion of the Main Post east of Oceanport Avenue and north of Leonard Avenue. The earliest identifiable development in this area is a structure belonging P. Cassler (FMM-3) shown on an 1851 map. Its location was along the east side of Oceanport Avenue at the approximate location of existing structures 418 and 422. Horseneck Point Road, which approximately follows what is now Leonard Avenue was in existence by 1871.

The early maps of Camp Vail indicate that nine structures associated with the Quarter Master department were located in the southeast quarter of GDA-M21. None is presently extant, and only three (Bldgs. 56, 61 and 79) were still standing in 1944. Almost all the structures presently within GDA-M21 were constructed in 1940 or 1941. Fifty-three two story barracks were built in the area bounded by Oceanport, Leonard, Hazen, and Burns Avenues. Approximately 14 of these have been demolished, the remainder are presently used as warehouses. Plans for repair work on these structures conducted in 1967 indicates that they typically had concrete footings extending several feet below grade.

Four larger structures (Bldgs. 168-171) were erected north of Hazen Avenue in 1943. Only two are extant. Two fuel storage tanks (Bldg. 71 and 74) were erected on the sites of Bldgs. 168 and 169 in 1969. With the exception of Bldgs. 73 and 75 all of the remaining extant structures in this GDA date to the 1940-1941 building period. Two structures (Bldgs. 66 and 79) located south of Bldg. 481 on the 1944 map of the Main Post were demolished prior to 1974 and one (Bldg. 95) was demolished after 1974.

GDA-M22. This GDA includes that portion of the Main Post southeast of Oceanport and Leonard Avenues. The earliest identifiable construction in this area is a structure labeled "P. Cassler" on an 1851 map located in the general vicinity of what is now Bldg. 498. This 1919 map of the area shows seven structures associated with the Camp Vail Quarter Master Department in the northeast corner of the GDA, and eight structures associated with the Radio Laboratories. One of these (21-1) was at the approximate location of Bldg. 109, the remainder were located east of Oceanport Avenue. Only one of these buildings is still standing.

Originally a hanger for the airfield it has been converted into a print plant. The "Flying Field" associated with the Radio Laboratories was also located in GDA-M22.

The majority of the remaining structures in GDA-M22 were constructed during the 1930s and 1940s. The 1944 map of Fort Monmouth shows at least 24 similar structures in the area bounded by Leonard, Glessner and Tilly Avenues, and the fenceline east of Bldg. 475. Only six of these buildings are extant. Plans prepared in 1967 for the repair of these buildings identifies them as barracks and indicate that they had (have) footings extending several feet below grade. Other c. 1940s structures in GDA-M22 are no longer extant include six buildings (labeled "39-44" on 1944 map) north of Bldg. 66, and two buildings (labeled "111" and "24") between Bldgs. 454 and 142.

GDA-M23. This area includes all of Subarea D southeast of Stephenson Avenue. Other than its possible use as agricultural land, the most active development of this area included the construction of approximately 54 buildings by the Army in the early 1940s. All are shown on the 1944 map of Fort Monmouth. Forth-eight (labeled "1000-1047") of these were in the southwest half of the GDA in the approximate area where the hospital, boiler plant and female B.O.Q. (all constructed between 1958 and 1962) are now situated. Three of the original structures from the 1940s (Bldgs. 810, 812, and 886) are still standing. Site plans for the hospital and Female B.O.Q.'s indicate that extensive grading and landscaping were associated with their construction. The remaining three (labeled "809," "808," and "875" were located on the east side of Stephenson Avenue near Bldg. 812.

GDA-M24. The first identifiable development in this area is shown on the 1944 utility map of Fort Monmouth. That map indicates approximately 71 nearly identical (in size) structures in the area northeast of Cockayne Avenue and Southwest of what was in 1944 a continuation of Alexander Avenue. (What was Alexander Avenue is now the northeast side of the parking area behind the bank and post office). Only 13 of these (Bldgs. 880, 881, 875, 861, 851, 845, 839, 833-835, 847, 866 and 828) were still standing in 1983. The real property inventory for Fort Monmouth indicates that these structures were built in either 1941 or 1943. An additional 12 of the 71 buildings are presumed to have been standing in 1978 since they are shown on current Basic Information Maps which were prepared in that year. In addition to the 71 buildings shown on the 1944 map the current Basic Information Maps show an additional 11 structures northwest of Todd Avenue. According the Fort's real property inventory these were constructed between 1941 and 1943. They do not appear on the 1944 map. At least four of them (Bldgs. 807, 887-889) were no longer standing in 1983. Also built during 1941 and 1942 were five large structures (Bldgs. 800-804), three of which (800-801 and 804) are still extant. A railroad siding ran along the northeast sides of these structures. Present Bldg. 1004 (Shopping Center) is located on the former site of Bldgs. 802 and 803. Other major ground disturbance within GDA-M24 was associated with the construction of four other shopping center structures (Bldgs. 1000-1003), the bank, the post office, and the parking area associated with the shopping center.

GDA-M25. GDA-M25 includes the site of the existing running track (constructed in 1954) and the immediately surrounding area. No structures are shown at this location on any of the early maps of Fort Monmouth. However, the 1944 map labels the area "Training Grounds." No details regarding the construction of track could be located during this study. It is possible that portions of GDA-M25 were disturbed during the construction of Husky Brook Lake which is in adjacent GDA-M26.

GDA-M26. This area includes Husky Brook Lake, the portions of Husky Brook in Subarea D, and the immediately adjacent land. Most of this GDA is believed to have been extensively disturbed by the creation of Husky Brook Lake and the diverting of portions of Husky Brook. These activities were conducted as part of a 1967 inundation project designed by the New York District of the Corps of Engineers. Drawings for the project indicate that Husky Brook, upstream of what is now the Lake was not as of 1967 channeled through an underground culvert as it is at present.

GDA-M27. This area generally corresponds to the portion of Subarea D south of the Jersey Central Power and Light Company right-of-way and north of Nicodeumus Avenue. The 1944 map of Fort Monmouth shows 91 structures, all labeled in the 700s in this area. The 1978 Basic Information Map for the Main Post indicates that 60 were still standing at that time. However, only 17 are listed in the 1983 real property inventory. The others were presumably demolished sometime after 1978.

3.2.2 Camp Charles Wood

In 1941, the Army Signal Corps acquired the property that now constitutes Camp Charles Wood. The approximately 600 a. tract had been largely owned by the Monmouth County Country Club (see Section 2.2.3). An analysis of historic maps indicates that prior to its first use as a country club in the late 1920s several farmsteads and at least one light industry were present. It is likely that prior to its purchase by the Army, and except for those areas developed as a golf course for the country club, most of the site consisted of woodland, pasture, and agricultural fields. Ground disturbance areas which have been delineated at Camp Charles Wood are shown in Figure 3-2.

GDA-W1. This area is bounded by Tinton Bataan and Pearl Harbor Avenues, and Corregidor Road. It is presently used for NCO family housing. Three little league baseball fields and a parking area occupy the south portion of the GDA.

A 1944 post layout (Plan 2795A, Office of the Post Engineer, June 30, 1944) shows 57 structures laid out in roughly parallel rows along Mariveles Road, Olongapo Lane, and Subic Lane. These are labeled as barracks, MCll halls, administrative supply buildings, and latrines.

Five additional structures are shown along the north side of Corregidor Road. The most easterly of these is the largest and is labeled as a theatre. Occupying most of the southern half of the GDA was Colin Kelly Field, a parade ground.

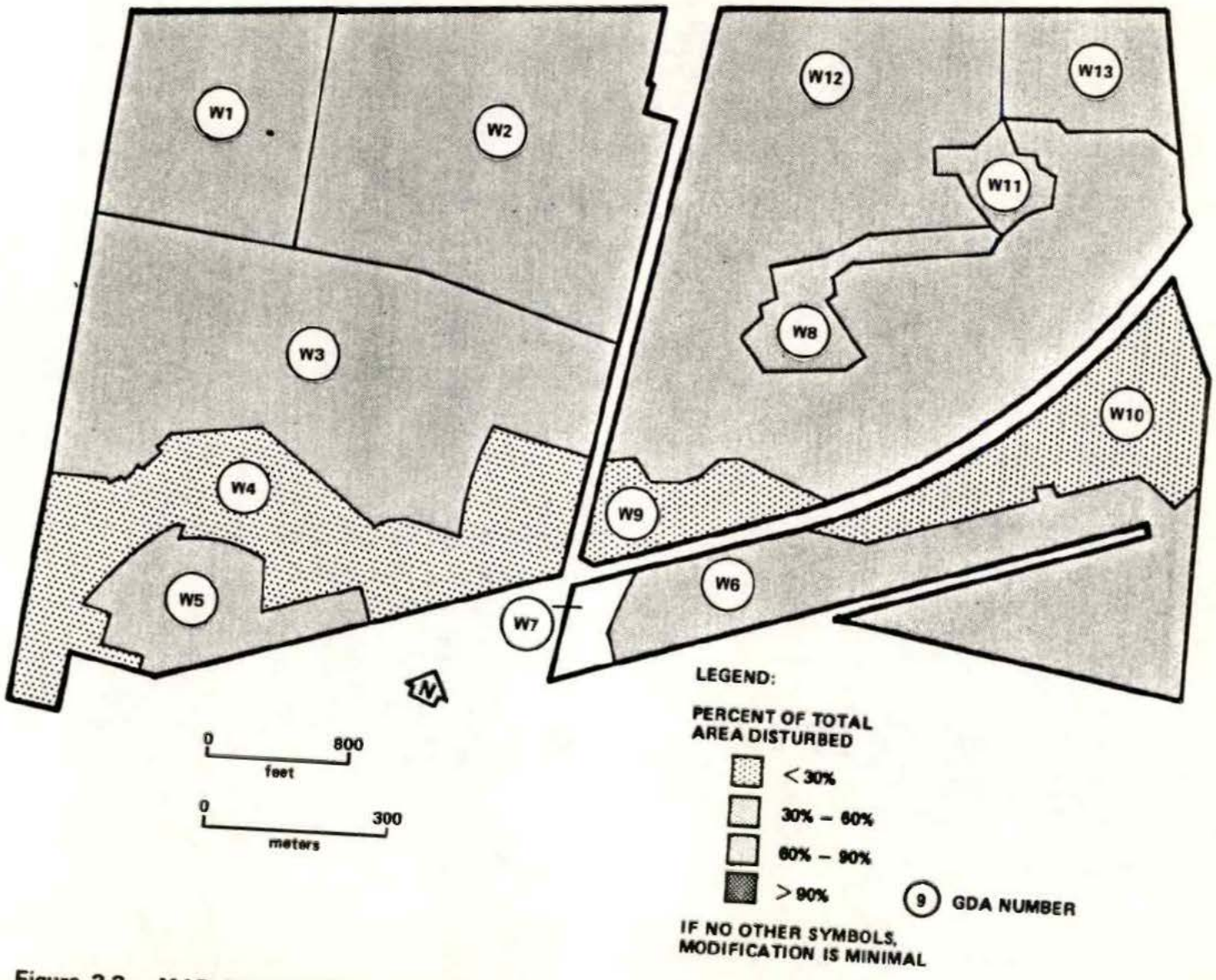

Figure 3-2. MAP OF HISTORIC AND/OR MODERN GROUND DISTURBANCE THAT MIGHT LIMIT THE PRESENT ARCHEOLOGICAL RESOURCE BASE ON FORT MONMOUTH (CAMP CHARLES WOOD)

A 1956 topographic survey of this area (Dwg. File No. 7529-2563) indicates that all structures (except for one, located at the southwest corner of Subic and Bataan) had been removed. Borings taken at the same time (Dwg. File No. 7529-2562) indicate only 4-6 in. of topsoil in the area. This suggests some minor grading may have been associated with the original 1941 construction in the area. By 1958, the 17 existing Capehart type housing units had been constructed in the northern half of the GDA. Grading associated with construction generally did not exceed 1 ft. in depth. Footings averaged a typical 3 ft. deep. Between 1968 and 1970, three ball fields were constructed in the area formerly occupied by Colin Kelly Field.

GDA-W2. This area is bordered by Tinton and Bataan Avenues and Corregidor and Hope Roads. Several structures are shown in the northeastern part of this GDA on a 1941 Franklin Survey Company map. These structures which included a stable complex presumably pre-date the Army's purchase of the property. The 1944 post layout shows a total of 100 structures (including those shown on the 1941 map) in GDA-W2. The only one of these buildings still extant is the chapel (Bldg. 2275, formerly Bldg. 2412). Most the original structures (primarily school buildings and barracks) were located along Bataan Avenue, Wake Road, and Midway Lane. Most of the area between the latter two streets was occupied by Frawley Field, a parade ground. Demolition of all of these structures (except the chapel) appears to have been undertaken in phases during the mid-1950s.

Officer and NCO family housing (primarily Capehart type) was constructed in phases between 1955 and 1970. Borings made in 1968 in the northeast corner of the GDA indicated only 6 in. of topsoil (Dwg. File No. 7529-4765, in August 1968). Another series of borings indicated that 1 ft. of topsoil was present in the southeast corner of the GDA east of Guam Road (Dwg. File No. 7529-3702, January 12, 1957). This area may never have been subjected to disturbance more severe than plowing.

Grading plans (Dwg. File No. 7529-2804, August 5, 1957) for the 1959 construction phase indicate extensive horizontal movement of earth in the area now occupied by the housing constructed in that year. However changes in grade did not exceed 1 ft.

A 1968 site plan for the area re-developed in 1970 (Dwg. File No. 7529-4767, August 15, 1968) shows various parts of the area now occupied by Bldgs. 2111-2115 to have been either cultivated, seeded, or in use as a picnic area. The site plan for this same area (Dwg. File No. 7529-5015, July 23, 1969) shows extensive grading. Grading plans for the area now occupied by Bldgs. 2100-2110 (Dwg. File No. 7529-5013 and 5014, July 23, 1969) show even more extensive grading that included the leveling of several knolls and filling of several swales.

GDA-W3. This area is roughly bounded by Corregidor and Hope Roads, Pearl Harbor Avenue and the north edge of the wooded area which occupies most of the southern portion of Subarea A. It contains almost all of the non-residential and non-recreational facilities at Camp Charles Wood. These include four major structure complexes: the Research and Development Laboratory and Administration Building (Bldg. 2700, the

"Hexagon"), the Electronic Warfare Laboratory (Bldg. 2705), another administration building (Bldg. 2525), and the Sewage Treatment Plant. Parking areas, heliports, sub-stations, and temporary structures are located throughout the area. No major ground disturbing activities could be identified in this area prior to the construction of existing facilities. The area was most probably agricultural land and/or pasture, and/or wooded prior to its development by the Army. An 1889 map (Wolverton 1889) indicates a single structure, probably a farmstead, labeled "S. Smock" at the approximate location where the Hexagon now stands. A structure in the same location appears on the 1941 Franklin Survey map with three other frame structures which may have been outbuildings associated with the farmstead. The pre-construction survey for the Electronic Warfare Lab (Dwg. Files Nos. 7529-5267, 68, and 69, January 1969) labels the site as partially wooded and partially cultivated.

GDA-W4. This area consists primarily of upland and lowland woods. A marshy area, with red maple as the dominant arboreal species occupies the eastern half of the GDA; sweetgum dominates in the central portion, white oak in the west (Dwg. File No. 7529-3871, October 13, 1978). Portions of the area are designated for use as picnicking. Only one major structure, Bldg. 2704, is located in the area. Other disturbance is associated with roadways and utilities. The latter includes a Jersey Central Power and Light Company easement.

GDA-W5. This area, bordering on the southern boundary of Camp Charles Wood, is devoted to storage. A road network providing access to open storage areas surrounds and crosses the GDA. A series of warehouses constructed in 1942 are located along the north side of a railroad spur which parallels the Central Railroad of New Jersey tracks, just north of the installation boundary.

GDA-W6. This area, located on both sides of Pine Brook Road, includes all of the Camp Charles Wood family housing which is south of the Central Railroad of New Jersey tracks. It is defined by fencelines on all sides except along Pine Brook Road. A preconstruction survey made in 1951 described the area as heavily wooded (Pastel 1952). A small, non-extant stream ran northward through the eastern half of the GDA and joined the existing tributary north of Bldg. 3035. It is unlikely that the land was used for any purposes other than agriculture by any of the pre-Army owners. In 1953, the Eatontown Gardens family housing unit was constructed in GDA-W6. The area contains 52 two-story wherry-type residence units and an additional 22 one-story auxiliary structures. A visual inspection of the area suggests that it was graded prior to construction. Nineteenth century atlas maps dating as early as 1861 indicate the Long Branch spur of Raritan and Delaware Bay Railroad (see Section 2.2.3) began and ran across the extreme northeast corner of the GDA. A portion of it is shown on contemporary USGS maps.

GDA-W7. This area is immediately northeast of the intersection of Pine Brook and Hope Roads. It contains a single large, brick, storage building (Bldg. 2600). It is labeled "Warehouse (Old Brickyard)" on the 1944 reservation map (Plan 2795A), and was served by a rail spur shown on the same map. Current maps of Camp Charles Wood no longer show this

spur. The 1944 Franklin Survey Company map of the area shows four tanks on the west side of the spur. These tanks appear on no other maps of the area.

GDA-W8. This area includes the family housing units located in the center of the installation golf course. These buildings, located along Magill Drive were all constructed in 1949 or 1951. Grading plans indicate each building was erected on an individual, artificially elevated rise, with foundations extending approximately 7 ft. below present grade.

GDAs-W9 and W10. These are two areas of lowland woods located north and south, respectively, of the Central Railroad of New Jersey right-of-way. Both are bisected by a small tributary. An easement for the Northeast Monmouth County Regional Sewage Authority runs through the north side of GDA-W9. It contains an 18 in. intercepting sewer. A buried electrical line runs through the southwest quadrant of the same GDA. The Long Branch spur of the Raritan and Delaware Bay Railroad was constructed through the northeast part of GDA-W10 sometime prior to 1861. It is shown as existing on the 1970 photorevision of the Long Branch, New Jersey USGS quadrangle, but does not appear on existing Basic Information Maps.

A brief inspection of this area suggested that there has been periodic dredging of the creek which runs through the area. Spoil from dredging activities appear to line portions of the stream banks. Some disturbance which may have been associated with movement of heavy machinery used for the dredging was also observed.

GDA-W11. This area includes the buildings and immediately surrounding area of what was formerly the Sun Eagles, and later, the Monmouth County Country Club. Included are the clubhouse (Gibbs Hall), swimming pool, tennis courts, a supply building (Bldg. 2019), Bldg. 2067, and several paved parking areas. With the exception of Bldg. 2067, a semi-permanent structure built in 1958, all of the principal features in this GDA pre-date the Army's ownership of the property. A 1944 Franklin Survey Company Map of the area shows three unidentified frame structures located just west of the main building. These are no longer extant. An 1851 map shows a residence belonging to a J. G. Van Derveer at the approximate site of Gibbs Hall.

GDA-W12. This area includes all of the existing golf course with the exception of the north end of the eighth fairway. Extensive grading may have been undertaken in this area to provide some relief for the golf course. A storm sewer and a sanitary sewer force main cross the GDA. Other ground disturbing activities may have been associated with the construction, operation, and demolition of a carriage factory which was located in the vicinity of tenth fairway during the nineteenth century.

GDA-W13. This GDA presently includes a parking area, tennis courts, a lagoon, and a portion of the eighth fairway, all in the extreme northeast corner of Camp Charles Wood. Two 1944 installation maps each show 16 structures in two parallel rows on the south side of Tinton Avenue. One of these is labeled "civilian qtrs" and probably pre-dates the Army's

purchase of the property; one is labeled as a mess and the others are all shown as B.O.Q.s. None of these structures is presently extant. The existing dam which created the lagoon that covers the southern portion of the GDA is a 1972 replacement of a pre-existing dam structure. A diversion channel was excavated and backfilled around the north side of the existing structure. An 1889 map indicates an ice pond due east of the existing lagoon, and a pond is shown at this location on the 1944 maps. It is no longer in existence.

3.2.3 The Evans Area

Information about historic and recent land use at the Evans Area comes principally from analyses of a series of post layout and reservation maps maintained by the Fort Monmouth Facilities Engineer. These show the locations of structures in the years 1941, 1942, 1944, 1949, 1951, 1956 and 1967. Information about the use of the property prior to its purchase by the Army in 1941 is limited to two plans showing a portion of the Evans Area at the time it was purchased by the Marconi Company in 1913 (see Section 2.2.3), and several late-nineteenth century atlas maps. The latter shows three residences, presumably farmsteads, located in what is now the Evans Area. This suggests that prior to its purchase by the Marconi Company most of the area was woodland, pasture, or agricultural fields. Figures 3-3a - 3-3d shows several parts of the Evans Area as having been subjected to only minimal disturbance. These areas have been disturbed in a few instances by activities such as the placement of small temporary structures or the installation of utility lines. However, this represents only a very small percentage of otherwise minimally disturbed parcels.

GDA-E1. This GDA includes the northernmost part of Subarea A. It is presently occupied by the installation sewage treatment plant. Pre-construction grading plans for the plant indicate that extensive ground modification took place within GDA FME-1.

GDA-E2. Two principal permanent structures (Bldgs. 4 and 5) are located in the area east of the Jersey Central Power and Light Company easement which runs through the GDA. These structures are believed to predate the Army's ownership of the property. They are shown on a 1941 blueprint labeled "Kings College Area" and may have been erected by the College during the period (1938-1941) when it occupied the site (see Section 2.2.3). One of these buildings (Bldg. 4) is in the same approximate location as the "operations building" shown on the 1913 map at the Marconi Company property. It may or may not be the same structure. The 1942 plot plan indicates a non-extant structure labeled "7B" immediately west of Bldg. 4. It is labeled as laboratory "T-9" on a 1944 plot plan; it does not appear on later maps. The 1942 plan also shows the 1942 plot plan indicates a sanitary drain field measuring approximately 50 x 25 ft. southeast of Bldg. 5. A larger (120 x 160 ft.) drain field is also shown located immediately southeast of the junction of Marconi Road and the road leading to Bldg. 4.

Also located within GDA-E2 are two bungalows (Bldgs. 2 and 3) which serve as family quarters. These structures were built by the Marconi Company as homes for company executives. A garage (Bldg. 201) is shown

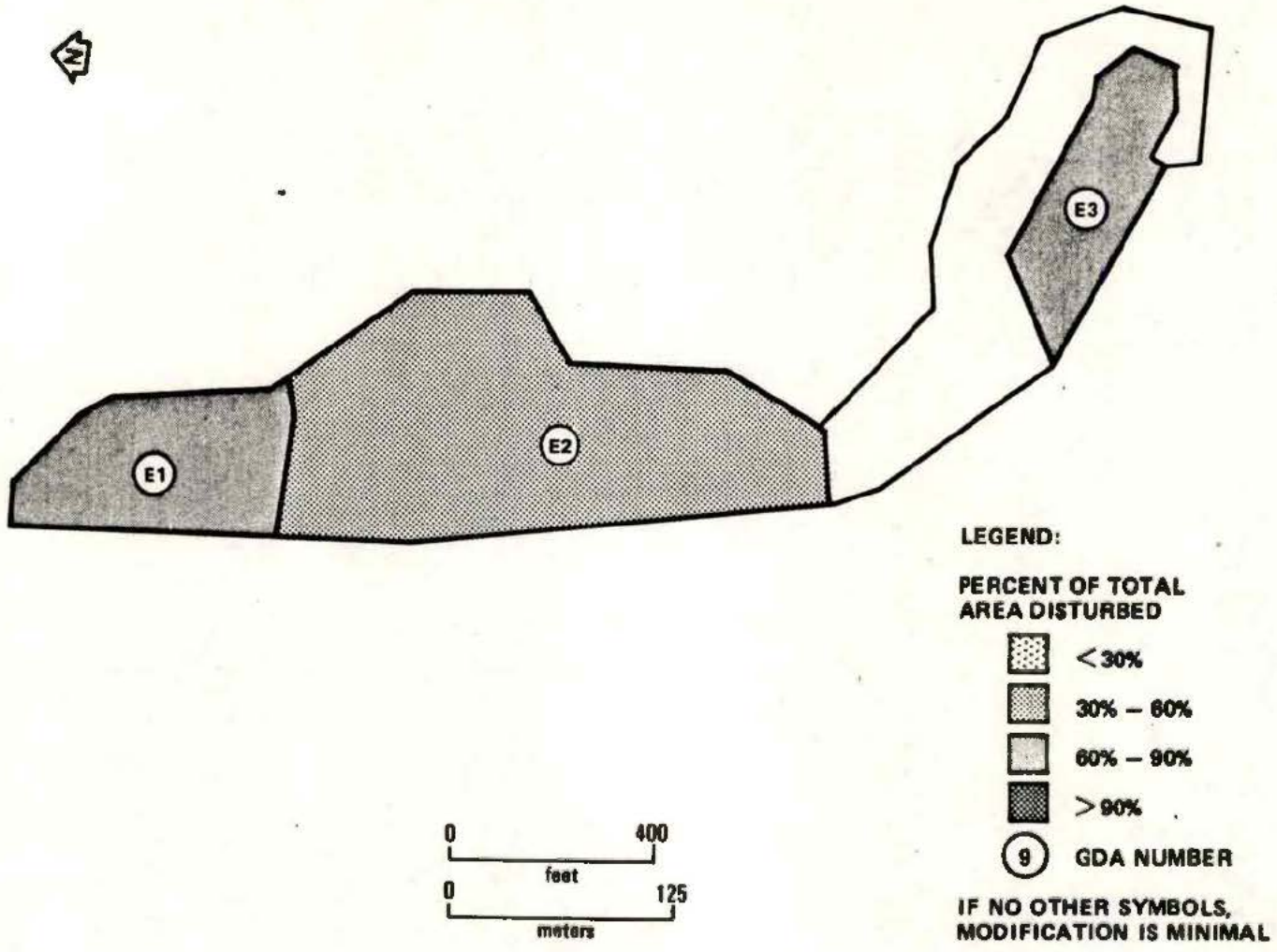

Figure 3–3a. MAP OF HISTORIC AND/OR MODERN GROUND DISTURBANCE THAT MIGHT LIMIT THE PRESENT ARCHEOLOGICAL RESOURCE BASE ON FORT MONMOUTH (EVANS AREA), SUBAREA A

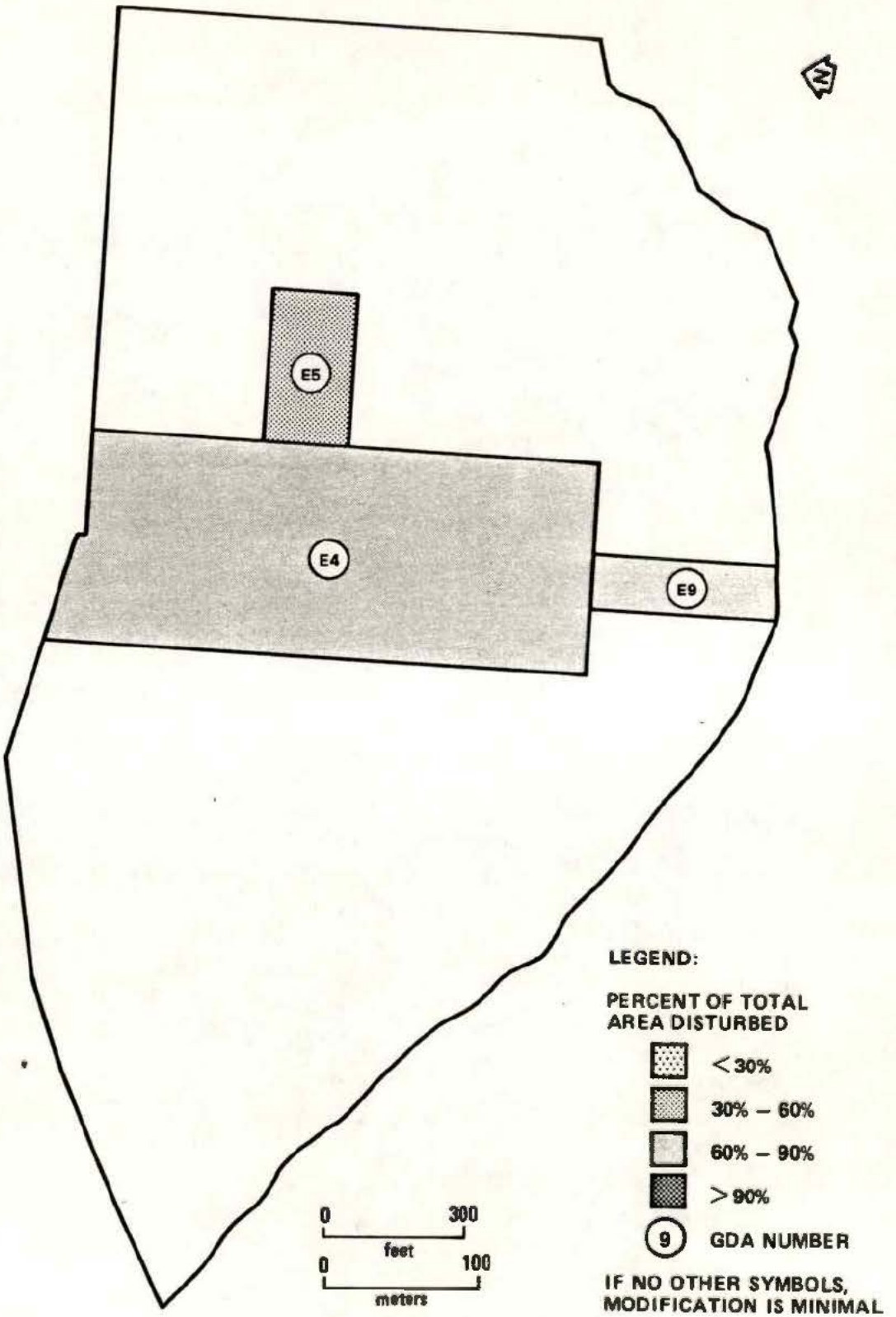

Figure 3–3b. MAP OF HISTORIC AND OR MODERN GROUND DISTURBANCE THAT MIGHT LIMIT THE PRESENT ARCHEOLOGICAL RESOURCE BASE ON FORT MONMOUTH (EVANS AREA), SUBAREA B

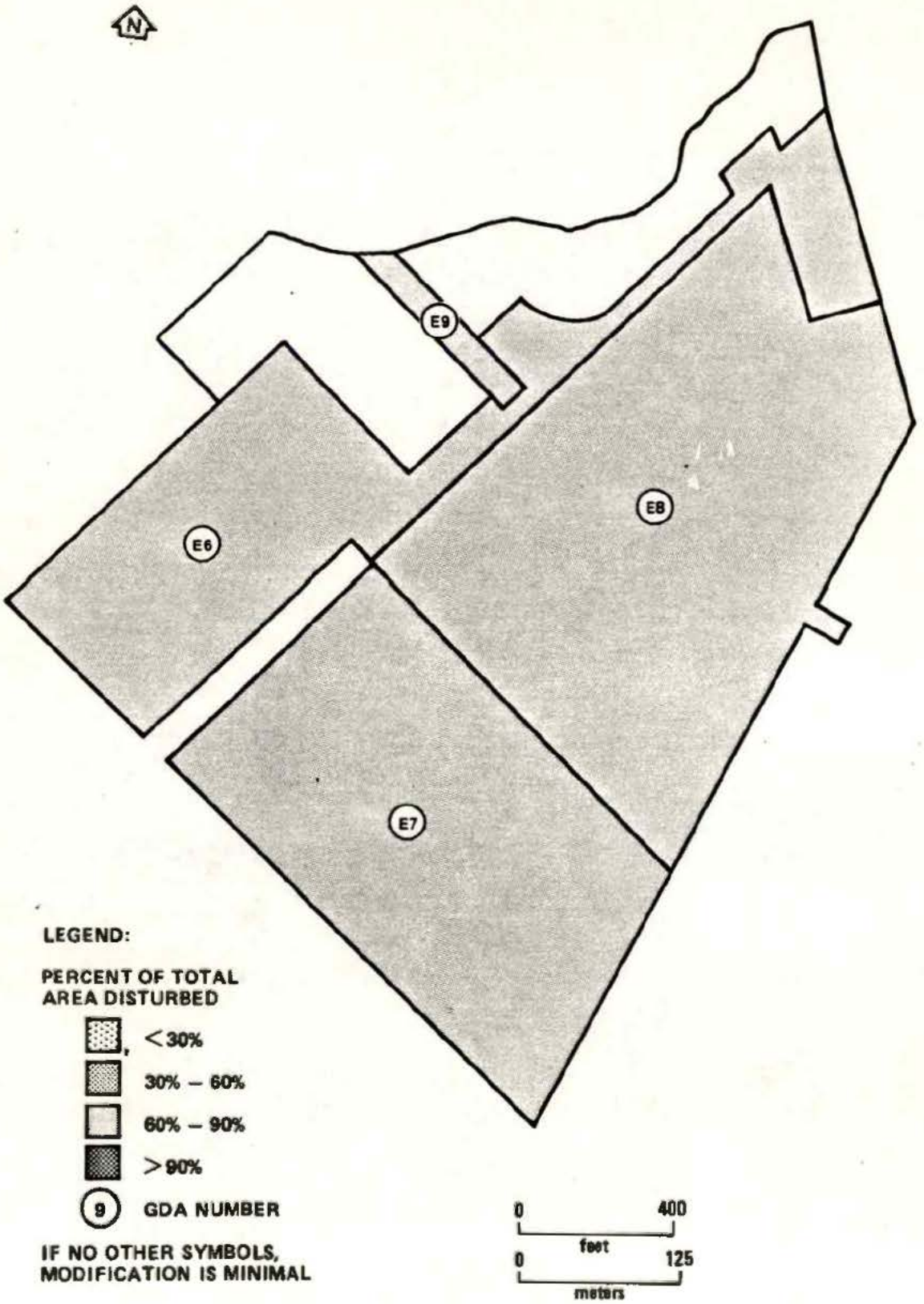

Figure 3–3c. MAP OF HISTORIC AND/OR MODERN GROUND DISTURBANCE THAT MIGHT LIMIT THE PRESENT ARCHEOLOGICAL RESOURCE BASE ON FORT MONMOUTH (EVANS AREA), SUBAREA C

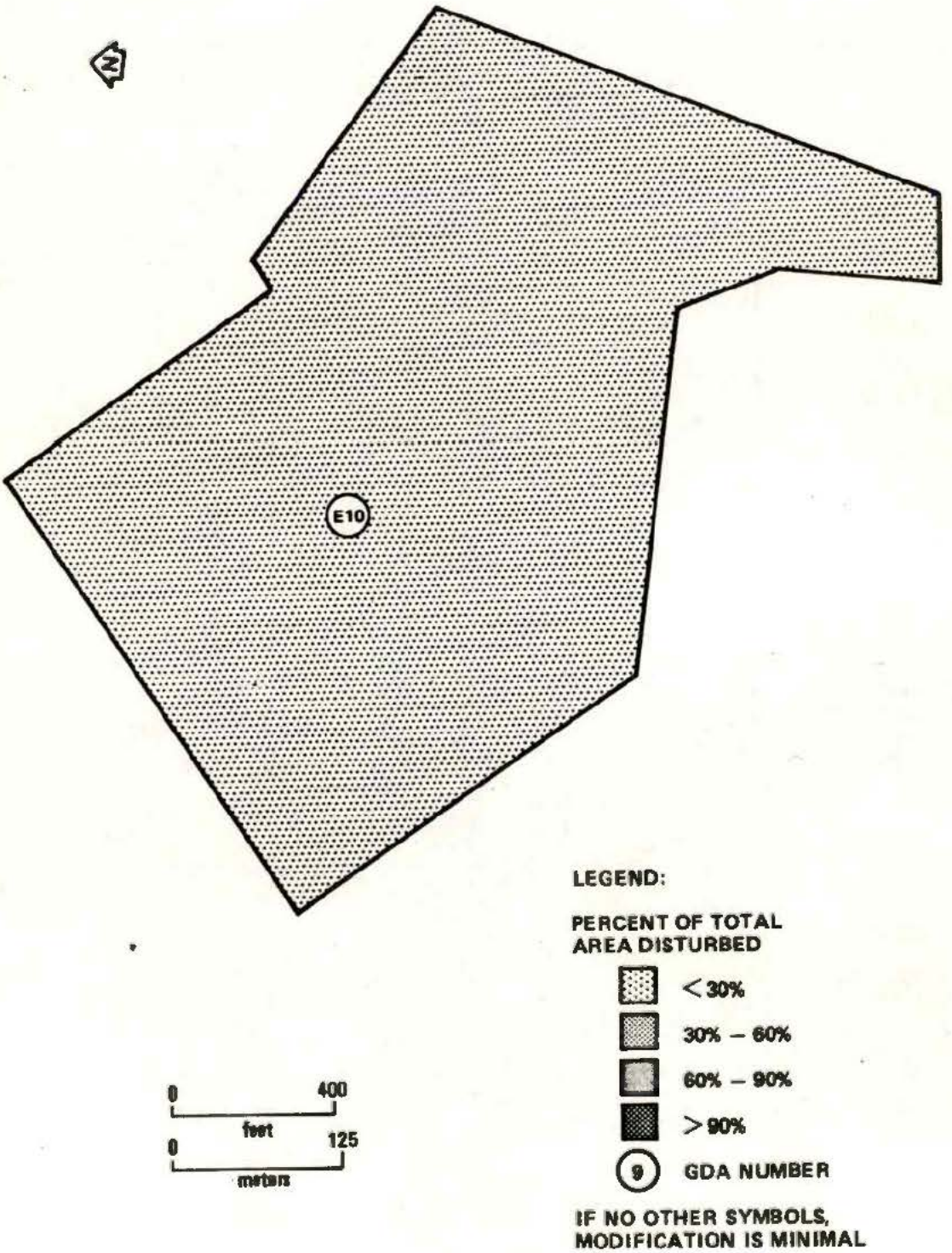

Figure 3–3d. MAP OF HISTORIC AND/OR MODERN GROUND DISTURBANCE THAT MIGHT LIMIT THE PRESENT ARCHEOLOGICAL RESOURCE BASE ON FORT MONMOUTH (EVANS AREA), SUBAREA D

southeast of Bldg. 2 on the 1941 and all later plot plans of the Evans Area. It is possible that this building was also built by the Marconi Company, but this is uncertain. A second garage (Bldg. 202) appears for the first time on the 1944 installation plan, but the real property inventory for the Evans Area indicates it was constructed in 1941. A third garage (Bldg. 96) was built in 1945 according to the real property inventory, but it does not appear on the 1949 installation plan. A small temporary structure (Bldg. 129) is shown on the 1956 plot plan and current Basic Information Maps dated October 1978. However, it does not appear on a reservation map (Plan No. 546) dated June 19, 1978, and it is not listed in current real property inventories.

GDA-E3. This GDA is a fenced area at the southern end of Subarea A. It is the site of the Diana radar complex which presently includes three laboratory buildings and two distribution transformers. Three towers are shown as being located in this area on Basic Information Maps dated 1978, but they are not listed in the current real property inventory.

GDA-E4. This area is the site of a former civilian housing complex built by the Army in 1942. The complex included 22 structures, only four of which (Bldgs. 111, 113, 126 and 127) are still extant (Bldg. 111 was apparently originally designated Bldg. 103). The other 18 structures were demolished sometime between 1949 and 1956. Some of the concrete slabs associated with these buildings were observed during a 1983 site visit. A 1942 location and grading plan for the area indicates that some pre-construction grading generally limited to less than 1 ft. was associated with construction.

GDA-E5. This area was the site of a farm complex which pre-dated the Army's purchase of the Evans Area. A 1941 Franklin Survey Company map shows five frame structures owned by a Lucia A. Driscoll. The structures appear on 1942, 1944 and 1949 plot plans. The 1942 site and grading plan for the area also shows a well in direct association with the largest structure which is labeled "existing residence."

GDA-E6. This GDA includes areas (predominantly paved) currently or previously devoted to parking, and the portion of Monmouth Boulevard within the limits of the Evans Area. Only one structure (Bldg. 191), a distribution transformer, is extant in this area. (It is not, however, shown on the most up-to-date Basic Information Maps). Also included in this area is the site of the former Marconi Company Power Plant. A 1942 plot plan indicates that a sanitary drain field had been constructed at that same location. A pre-construction location and grading plan covering most of GDA-E6 indicates that the area was graded prior to paving, but that disturbance was generally confined to the first foot of soil below original ground surface. A temporary building "T-91" is shown just southwest of extant Bldg. 191 on installation plot plans dating from 1951, 1956 and 1967. A tower, designated "165" appears only on the 1967 plan, approximately 50 ft. southwest of Bldg. 191. A structure labeled "T-90" appears immediately northwest of the site of T-91 on 1949 and 1951 plot plans. Finally, the 1951 plan also shows a semi-permanent structure, "S-121" located approximately 400 ft. south of the site of T-91.

GDA-E7. This area includes the southeast portion Subarea C, and is roughly bounded by Sixth Street (formerly Coolidge Street) and the installation property line. Prior to its purchase by the Army, the only identified structures in the area were four buildings located near the junction of Monmouth Boulevard and Taft Streets. Three of these are shown on a 1941 Franklin Survey Company map; all four are shown on a 1942 location and grading plan (Plan No. 6148-CE-105) with the notation "Existing Bldgs. to be Removed." That same plan, and one covering the adjacent area (Plan No. 6148-CE-106) show that almost all of GDA-E7 was graded. The depth of disturbance associated with this activity extended to as much as 3 ft. below original grade. The majority of the major structures in this area were constructed in 1942 and are shown on the 1942 plot plan. These include Bldgs. 39-45, 47-49, 51, 55, 60, 61, 63 and 82. Subsequent disturbance in GDA-E7 was associated with the construction of additional structures during the later 1940s. Most of these buildings are extant. However, an analysis of plot plans for the period 1942-1978 indicates that several temporary structures have been built and demolished in the GDA. These include six structures shown on the 1951 plot plan and a tower (Bldg. 172) shown on the 1967 plot plan.

GDA-E8. This area contains the majority of structures at the Evans Area. Ground disturbing activities in this area prior to its purchase by the Army included construction of the hotel associated with the Marconi Company facility (extant Bldg. 1), one of the Marconi Company receiving antennas (Mast #6) which is no longer extant and was located at the approximate present-day location of Bldg. 6 and construction of the buildings used by the former Kings College (including present-day Bldgs. 10, 11, 36 and 37; the four largest structures at the Evans Area). Most of the additional disturbance of GDA-E7 was associated with the construction of Signal Corps laboratories, support structures, and roadways and underground utilities, in 1941-1942; most of the remaining extant structures were erected between 1942 and 1951. The 1942 location and grading plan for this area (Plan No. 6148-CE-104) indicates that construction of the Signal Corps buildings in 1942 was preceded by grading of the area. Grading was presumably associated with construction of the Kings College buildings but this has not been confirmed. The 1942 plan also shows a structure labeled "Existing Farm Building in this Area to be Removed..." overlapping what is now the southwest corner of Bldg. 29. The construction date of this building is unknown.

GDA-E9. Portions of this GDA are located in both Subareas B and C. It consists of an approximately 200 ft. wide area centered on Watson Avenue. Extensive cut and fill, involving changes in grade of as much as 15 ft., (cutting extended to 10 ft. below grade, filling to 15 ft. above original grade) took place with this area during the construction of Watson Avenue.

GDA-E10. This GDA is coterminous with Subarea D. It presently consists of the testing and training area at the south end of the Evans Area. Nineteenth century maps covering this area indicate that at least two farmsteads (FME-1, FME-2) were in this area prior to 1851, and were still extant as of 1889. A residence and five associated outbuildings were constructed sometime after 1889, were still extant in 1941, and were demolished prior to 1949. A few temporary storage and laboratory

buildings have been constructed by the Army in this area. Other ground disturbing activities have principally been associated with the construction of road networks and underground utilities.

3.3 PREVIOUS CULTURAL RESOURCE INVESTIGATIONS

No cultural resource investigations have been conducted on Fort Monmouth (Tables 3-2 and 3-3). Although such studies have been carried out in other areas of the Shrewsbury and Shark River drainages, none resulted in the discovery of archeological resources. The Historic America Buildings Survey (HABS) of the National Park Service is presently completing an inventory and evaluation of standing structures at Fort Monmouth. The Monmouth County Park System/Monmouth County Historical Association is currently conducting a survey of standing structures in the county.

3.4 SUMMARY ASSESSMENT OF DATA ADEQUACY, GAPS

The data available are useful in terms of documenting the occurrence of Paleo-Indian through Late Woodland and Historic occupations of Fort Monmouth. The prehistoric data, consisting totally of surface-collected specimens, does not permit characterization of the nature of the prehistoric sites. The absence of field test results likewise makes it impossible to characterize the nature of, or preservation status of, remains in historic sites.

The nature of the presently available data makes it possible to predict where prehistoric remains and historic sites are likely to be located. The data are totally inadequate for predicting where there is likely to be an absence of prehistoric or historic resources.

TABLE 3-2 ARCHEOLOGICAL SURVEYS CONDUCTED ON FORT MONMOUTH (MAIN POST), CAMP CHARLES WOOD AND THE EVANS AREA

Survey Administration					Survey Location						Artifacts		Survey Characteristics					Identified Archeological Resources	
					UTM		Legal Description												
SHPO Survey No.	Survey Institution Firm	Survey Date (yr)	Survey Record Repository	Bibliographic Reference	Northing	Easting	Township	Range	Section	USGS Quad Map	Collection Policy	Curatorial Repository	Survey Type Area	Temporal Coverage	Transect Type, Interval (m.)	Rate (a./person day)	Subsurface Tests	Sites	Isolated Finds, Features

NONE

TABLE 3-3. ARCHEOLOGICALLY RELEVANT RESEARCH INVESTIGATION, EXCLUSIVE OF ARCHEOLOGICAL SURVEYS, CONDUCTED ON FORT MONMOUTH (MAIN POST), CAMP CHARLES WOOD, AND THE EVANS AREA

Study No.	Study Type	Study Date	Institution Agency, Firm	Principal Investigator	Bibliographic Reference	Location						
						UTM		Legal			USGS Quad Map	Associated Archeological Resources
						Northing	Easting	Township	Range	Section		

NONE

4.1 PREHISTORIC RESOURCES

The only known archeological resources from Fort Monmouth are those found by Redacted - Privacy Act between 1947 and 1972. Redacted - Privacy Act reports that all were surface finds. Mr. Redacted - Privacy Act information has been forwarded to the New Jersey State Museum. The Museum has assigned site numbers to each loci identified by Mr. Redacted - Privacy . Information on these sites is presented in Tables 4-1, 4-2, and 4-3.

4.1.1 Fort Monmouth (Main Post)

Prehistoric remains (28-Mo-126) were found along the marsh area at the southern edge of Parker's Creek near Buildings 292, 293 and 289. These include a fully grooved axe, a large jasper biface and ceramics indicating Late Archaic to Middle Woodland occupation. Shell, suggesting the presence of a midden (prehistoric refuse area), has also been observed eroding from the creek bank at this location.

The southern bank of Husky Brook Lake (28-Mo-127) has yielded a small stone "ball," a small stemmed Archaic point and a broad stemmed point. All the known remains indicate a Late Archaic period occupation.

South of Parker's Creek, in the 600 Building area (28-Mo-128), a number of quartz points both triangular and tear drop were found indicating a Late Archaic to Woodland occupation.

Along the south bank of Lafetra Brook (28-Mo-129) a Meadowwood point was found iddicating an Early Woodland occupation.

Near the bowling center (Building 689) (28-Mo-130) between Husky Brook Lake and Lafetra Brook, a stemmed argillite point was found indicating a Late Archaic occupation.

Redacted - Privacy Act also reported finding evidence of a prehistoric occupation in the vicinity of Tindall Avenue, south of the shopping center. This locus has been assigned site number 28-Mo-138. No additional information about it is available.

4.1.2 Camp Charles Wood

Prehistoric remains have been found at two locations on Camp Charles Wood. North of the lagoon along the south side of Tinton Avenue

Table 4-1. PRESENTLY IDENTIFIED ARCHEOLOGICAL RESOURCES ON FORT MONMOUTH (MAIN POST), CAMP CHARLES WOOD, AND THE EVANS AREA; ADMINISTRATIVE DATA

Site Number	Site Recorder	Date of Site Record	SHPO Survey Number	Site Record Repository	Survey Collection Policy[a]	Current Status of Investigation[b]	NRHP Status[c]	State, Local Status	Architectural Association	Bibliographic Reference
28-Mo-126	Redacted - Privacy	1947-72	None	Redacted - Privacy	CD	REF, SCL, D, RAS	INSF	State	None	Redacted - Privacy (personal communication 1983)
28-Mo-127	Redacted - Privacy	1947-72	None	Redacted - Privacy	CD	REF, SCL, D, RAS	INSF	State	None	Redacted - Privacy (personal communication 1983)
28-Mo-128	Redacted - Privacy	1947-72	None	Redacted - Privacy	CD	REF, SCL, D, RAS	INSF	State	None	Redacted - Privacy (personal communication 1983)
28-Mo-129	Redacted - Privacy	1947-72	None	Redacted - Privacy	CD	REF, SCL, D, RAS	INSF	State	None	Redacted - Privacy (personal communication 1983)
28-Mo-130	Redacted - Privacy	1947-72	None	Redacted - Privacy	CD	REF, SCL, D, RAS	INSF	State	None	Redacted - Privacy (personal communication 1983)
28-Mo-131	Redacted - Privacy	1947-72	None	Redacted - Privacy	CD	REF, SCL, D, RAS	INSF	State	None	Redacted - Privacy (personal communication 1983)
28-Mo-132	Redacted - Privacy	1947-72	None	Redacted - Privacy	CD	REF, SCL, D, RAS	INSF	State	None	Redacted - Privacy (personal communication 1983)
28-Mo-138	Redacted - Privacy	1947-72	None	Redacted - Privacy	CD	REF, SCL, D, RAS	INSF	State	None	Redacted - Privacy (personal communication 1983)

[a] CD = Collection of diagnostics without mapping

[b] REF = Site record filed; SCL = surface collected; D = vandalized or damaged without scientific control; RAS = recommended for additional study

[c] INSF = Insufficient information available by which to make a judgement

Table 4-2. PRESENTLY IDENTIFIED ARCHEOLOGICAL COMPONENTS ON FORT MONMOUTH (MAIN POST), CAMP CHARLES WOOD, AND THE EVANS AREA: DESCRIPTION AND EVALUATION

	Unit Age				Unit Description							Evaluation			
	Date		Temporal Unit						Dimension						
Site Number	DM[a]	Years BC/AD	Tradition	Phase (Period)	Artifacts[b]	Features	Depositional Context	Landform	Area (m^2)	Depth (m)	Ascribed Function	Percent Intact	Value Integrity	RV	CR
28-Mo-126	REL	4000 BC - 1000 BC	Native American	Late Archaic	FL				?	?		?	?	2	1
	REL	1000 BC - AD 700	Native American	Early/ Middle Woodland	FL PC				?	?		?	?	2	1
28-Mo-127	REL	4000 BC - 1000 BC	Native American	Late Archaic	FL				?	?		?	?	2	1
28-Mo-128	REL	4000 BC - 1000 BC	Native American	Late Archaic	FL				?	?		?	?	2	1
	REL	1000 BC - AD 1700	Native American	Early/ Middle Woodland	FL				?	?		?	?	2	1
	REL	AD 700- AD 1700	Native American	Late Woodland	FL				?	?		?	?	2	1
28-Mo-129	REL	1000 BC - AD 700	Native American	Early/ Middle Woodland	FL				?	?		?	?	2	1
28-Mo-130	REL	4000 BC - 1000 BC	Native American	Late Archaic	FL				?	?		?	?	2	1
28-Mo-131	REL	NA	Native American	NA	FL				?	?		?	?	2	1
28-Mo-132	REL	AD 700 AD 1700	Native American	Late Woodland	NA				?	?		?	?	2	1
28-Mo-138		NA	Native American	NA	NA				?	?		?	?	2	1

Notes:

a DM = dating method; REL = relative dating based on artifact attributes
b FL = flakes lithics; PC = prehistoric ceramics

Table 4-3. PRESENTLY KNOWN ARTIFACT, ECOFACT, OR DOCUMENTARY COLLECTIONS FROM ARCHEOLOGICAL RESOURCES ON FORT MONMOUTH (MAIN POST), CAMP CHARLES WOOD, AND THE EVANS AREA

Site Number, Name	Collection Location		Collection Characteristics					
			Artifact		Ecofact		Documentary	
	Curatorial Repository	Accession Number(s)	Brief Description	Size/No.	Brief Description	Size/No.	Brief Description	Size/No.
28-Mo-126	Private collection of Redacted - Privacy	Not assigned	lithics, ceramics	20+	-	0	-	0
28-Mo-127	Private collection of Redacted - Privacy	Not assigned	lithics	10+	-	0	-	0
28-Mo-128	Private collection of Redacted - Privacy	Not assigned	lithics	5+	-	0	-	0
28-Mo-129	Private collection of Redacted - Privacy A	Not assigned	lithics	2+	-	0	-	0
28-Mo-130	Private collection of Redacted - Privacy	Not assigned	lithics	1+	-	0	-	0
28-Mo-131	Private collection of Redacted - Privacy	Not assigned	lithics	2+	-	0	-	0
28-Mo-132	Private collection of Redacted - Privacy	Not assigned	lithics	5+	-	0	-	0
28-Mo-138	Private Collection of Redacted - Privacy	Not Assigned	NA	NA	-	0	-	0

(28-Mo-131) a black chert biface was recovered which is not temporally diagnostic.

South of the lagoon near the officer's club (28-Mo-132) a triangular point was recovered indicating a Woodland occupation. The natural spring in the area of the officer's club (Gibb's Hall) increases the probability of prehistoric remains.

4.1.3 Evans Area

There are no known prehistoric period sites located within the Evans Area.

4.2 HISTORIC PERIOD RESOURCES

Numerous potentially identifiable, but not presently recorded archeological resources on Fort Monmouth are listed in Table 4-4.

4.2.1 AD 1660-1765

At the present level of investigation the following potential archeological sites dating to the period 1660-1765 are highly speculative. Primary resource documentation will be required for each site before accurate statements can be made as to the location and types of specific cultural resources that may exist in these areas. Before detailing those potential sites for which documentation is available, it should be noted that there may be historic sites existing in the project areas for which there is little or no documentation.

Roads and navigable streams are especially important as potential locations for unknown sites. Navigable streams such as the portions of Parker and Oceanport Creeks which border the eastern portion of Fort Monmouth may contain domestic, commercial (i.e., warehouses), and transportation related sites, such as docks or wharves. Likewise, the northeastern portion of the Evans Area along the Shark River may contain historic sites for which there is little or no record.

The brooks and creeks which run through Fort Monmouth may be the sites of water powered industry, such as saw or grist mills. Within the boundaries of Fort Monmouth (Main Post) these streams include Lafetra and Mill (also known as Wampum, in Eatontown) Brooks, tributaries of Parker's Creek, and Husky Brook, a tributary of Oceanport Creek. On Camp Charles Wood, there are two unnamed streams which are tributaries of Wampum Brook. Finally, within the Evans Area an important water course is Laurel Gully Brook, a tributary of Shark River.

Early roadways may also point to sites for which little documentation exists. The "Old Squan Road" in Eatontown appears to have had the same route as present-day State Highway 35. As State Highway 35 forms the western boundary of Fort Monmouth (Main Post) important cultural remains such as domestic sites or elements of the original road itself may be present. The route of this road also appears to have passed east of Camp Charles Wood and west of the Evans Area.

Table 4-4. POTENTIALLY IDENTIFIABLE BUT NOT PRESENTLY RECORDED ARCHEOLOGICAL RESOURCES ON FORT MONMOUTH (MAIN POST), CAMP CHARLES WOOD, AND THE EVANS AREA

Site Number, Name[a]	Reference	Description	Research Value CR[b]
FMM-1	Lightfoot 1851 Beers and Beers 1861 Beers 1873 Rose 1878 Wolverton 1889	Site of pre-1851 commercial structure 'Drummond, Haynes & Co.'	2
FMM-2	Lightfoot 1851 Beers and Beers 1861 Beers 1873 Rose 1878 Wolverton 1889 Anon. 1919	Site of pre-1851 'P. Casler' residence	2
FMM-3	Lightfoot 1851 Beers and Beers 1861 Beers 1873	Site of pre-1851 'P. Casler' residence	2
FMM-4	Lightfoot 1851 Beers and Beers 1861 Beers 1873 Rose 1878 Wolverton 1889	Site of pre-1851 'G.A. Corlies' residence, later the 'Superintendents Office', Monmouth Park	2
FMM-5	Lightfoot 1851 Beers and Beers 1861 Beers 1873	Site of pre-1851 - 'J. White' residence	1
FMM-6	Beers 1873 Rose 1878 Wolverton 1889	Route of pre-1873 road 'Horseneck Point Road'	2
FMM-7	Beers 1873 Wolverton 1889 Anon. 1919	Site of possible pre-1873 'E.C. Fiedler' farm complex	2
FMM-8	Rose 1878 Wolverton 1889	Site of pre-1878 'E.C. Fiedler' residence	1
FMM-9	Beers 1873 Wolverton 1889	Site of pre-1873 'Williams' residence	2
FMM-10	Beers 1873 Rose 1878 Wolverton 1889	Site of pre-1873 'T.T. Williams' residence	2

Table 4-4. POTENTIALLY IDENTIFIABLE BUT NOT PRESENTLY RECORDED ARCHEOLOGICAL RESOURCES ON FORT MONMOUTH (MAIN POST), CAMP CHARLES WOOD, AND THE EVANS AREA (Continued)

Site Number, Name[a]	Reference	Description	Research Value CR[b]
FMM-11	Beers 1873 Rose 1878 Wolverton 1889 Anon. 1919	Grounds & structures associated with Monmouth Park racing association 1866-1893	2
FMM-12	Beers 1873 Rose 1878 Wolverton 1889	Site of pre-1873 'F.S. Chanfrau' residence	2
FMM-13	Rose 1878	Site of pre-1878 'M. Ferrence' residence	2
FMM-14	Rose 1878 Wolverton 1889	Site of pre-1878 'Oceanport' railroad depot	2
FMM-15		Camp Alfred Vail Sites	
FMM-15-1	Anon. 1919 Anon. c.1922	Site of Bldg. #1 'Headquarters'	1
FMM-15-2	Anon. 1919 Anon. c.1922	Site of Bldg. #2 Unidentified	1
FMM-15-3	Anon. 1919 Anon. c.1922	Site of Bldg. #3 'Guard House'	1
FMM-15-4	Anon. 1919 Anon. c.1922	Site of Bldg. #4 'Hospital'	1
FMM-15-5	Anon. 1919 Anon. c.1922	Site of Bldg. #5 'Bakery'	1
FMM-15-6- FMM-15-8	Anon. 1919 Anon. c.1922	Site of Bldgs. #6, #7, #8 (Unidentified)	1
FMM-15-9-FMM-15-14	Anon. 1919 Anon. c.1922	Site of Bldgs. #9,#10,#11 #12,#13,#14 unidentified (Barracks?)	1
FMM-15-15	Anon. 1919 Anon. c.1922	Site of Bldg. #15 Unidentified	1

Table 4-4. POTENTIALLY IDENTIFIABLE BUT NOT PRESENTLY RECORDED ARCHEOLOGICAL RESOURCES ON FORT MONMOUTH (MAIN POST), CAMP CHARLES WOOD, AND THE EVANS AREA (Continued)

Site Number, Name[a]	Reference	Description	Research Value CR[b]
FMM-15-16- FMM-15-18	Anon. 1919 Anon. c.1922	Site of Bldgs. #16,#17,#18 'Stables'	1
FMM-15-19	Anon. 1919 Anon. c.1922	Site of 'Corral'	1
FMM-15-20- FMM-15-21	Anon. 1919 Anon. c.1922	Site of Bldgs. #20,#21 - unidentified	1
FMM-15-22- FMM-15-30	Anon. 1919 Anon. c.1922	Site of Bldgs. #22,#23,#24 #25,#26,#27 #28,#29,#30 unidentified (Barracks?)	1
FMM-15-31- FMM-15-34	Anon. 1919 Anon. c.1922	Site of Bldgs. #31,#32,#33 #34 - unidentified	1
FMM-15-35- FMM-15-40	Anon. 1919 Anon. c.1922	Site of Bldgs. #36,#37, #38,#39 #40,#41 unidentified (Barracks?)	1
FMM-15-41- FMM-15-46	Anon. 1919 Anon. c.1922	Site of Bldgs. #42,#43,#44 #45,#46,#47 unidentified	1
FMM-15-47- FMM-15-50	Anon. 1919	Sites of 3 buildings unidentified	1
FMM-15-51	Anon. c.1922	Site of Pigeon Feed House	
	Anon. 1919	Site of unidentified bldg.	1
FMM-15-52	Anon. c.1922	Site of Pigeon Coop	
	Anon. 1919	Site of unidentified bldg.	1
FMM-15-53	Anon. 1919 Anon. c.1922	Site of 'Septic Tank'	1
FMM-15-54	Anon. 1919	Site of unidentified bldg. north of septic tank	1
	Anon. c.1922		

Table 4-4. POTENTIALLY IDENTIFIABLE BUT NOT PRESENTLY RECORDED ARCHEOLOGICAL RESOURCES ON FORT MONMOUTH (MAIN POST), CAMP CHARLES WOOD, AND THE EVANS AREA (Continued)

Site Number, Name[a]	Reference	Description	Research Value CR[b]
FMM-15-55, FMM-15-69	Anon. 1919 Anon. c.1922	Site of Bldg. #65, - unidentified	1
FMM 15-56-FMM-15-58	Anon. 1919 Anon. c.1922	Sites of Bldgs. #66, #67, #68, 'R.O.T. Bat'. Site of Bldg. #66, #67, #68, unidentified	1
FMM-15-59-FMM-15-60	Anon. 1919 Anon. c.1922	Site of Bldgs. #73,#74 'R.O.T. Bat.' Bldg. #73 Unidentified	1
FMM-15-61-FMM-15-64	Anon. 1919 Anon. c.1922	Site of Bldgs. #75,#76, #77 #78 unidentified	1
FMM-15-65	Anon. 1919 Anon. c.1922	Site of 'Y.M.C.A.' Bldg. #84	1
FMM-15-66	Anon. 1919 Anon. c.1922	Site of unidentified Bldg. 'Construction Office'	1
FMM-15-67	Anon. 1919 Anon. c.1922	'Site of Bldg. #49 Site of 'School'	1
FMM-15-68-FMM-15-69	Anon. 1919 Anon. c.1922	Site of Bldgs. #50,#51 - unidentified	1
FMM-15-70	Anon. 1919 Anon. c.1922	Site of 'Flag Pole'	1
FMM-15-71	Anon. 1919 Anon. c.1922	Site of Bldg. #69	
FMM-15-72	Anon. 1919	Site of Tent 'Head-quarters'	1
FMM-15-73	Anon. 1919	Site of Tent 'Barracks'	1

Table 4-4. POTENTIALLY IDENTIFIABLE BUT NOT PRESENTLY RECORDED ARCHEOLOGICAL RESOURCES ON FORT MONMOUTH (MAIN POST), CAMP CHARLES WOOD, AND THE EVANS AREA (Continued)

Site Number, Name[a]	Reference	Description	Research Value CR[b]
FMM-15-74	Anon. 1919	Site of 'Field Battalion' Tents	1
FMM-15-75	Anon. 1919	Site of unidentified Feature	1
FMM-15-76	Anon. c.1922	Site of 'Incinerator'	1
FMM-15-77-FMM-15-78	Anon. c.1922	Sites of 2 'Water Tanks'	1
FMM-15-79	Anon. c.1922	Site of 'Plumber & Electrician's' Bldg.	1
FMM-15-80	Anon. c.1922	Site of 'Red Cross' Bldg.	1
FMM-15-81	Anon. c.1922	Site of Bldg. #86 'K. of C.' (Knights of Columbus ?)	1
FMM-15-79-15-87	Anon. 1936	Sites of 9 unidentified Bldgs. near Radio Laboratory Hangars, Squier Laboratory, and along Parker Creek	1
FMM-16		Camp Alfred Vail-Post Garage Sites	
FMM-16-1	Anon. 1919	Site of Bldg. #35	1
	Anon. c.1922 Anon. 1936	Site of Bldg. #35 Unidentified Bldg.	1
FMM-16-2	Anon. 1919 Anon. c.1922	Site of Bldg. #48 Bldg. #48	1
FMM-16-3-FMM-16-6	Anon. 1919 Anon c.1922	Site of Bldgs. #57,#58,#59 #60	1
	Anon 1936	Unidentified	
FMM-16-7	Anon. 1919 Anon. c.1922	Site of Bldg. #70	1

Table 4-4. POTENTIALLY IDENTIFIABLE BUT NOT PRESENTLY RECORDED ARCHEOLOGICAL RESOURCES ON FORT MONMOUTH (MAIN POST), CAMP CHARLES WOOD, AND THE EVANS AREA (Continued)

Site Number, Name[a]	Reference	Description	Research Value CR[b]
FMM-16-8	Anon. 1919 Anon. c.1922	Site of Bldg. #85	1
FMM-16-9	Anon. 1919	Site of unidentified Bldg.	1
	Anon. c.1922	'Wash Stand'	
FMM-16-10	Anon. 1919	Site of unidentified bldg. motor transportation	1
	Anon. c.1922	Bldg. #87 (Altered ?)	
	Anon. 1936	Unidentified Bldg.	
FMM-16-11	Anon. c.1922	Site of unidentified Bldg.	1
FMM-16-12	Anon. c.1922	Site of Bldg. #89	1
FMM-17		Camp Alfred Vail-Quarter Master Department Sites	
FMM-17-1- FMM-17-5	Anon. 1919 Anon. c.1924 Anon. 1936	Site of Bldgs. #52,#53,#54 #55, #56 Q.M.D.	1
FMM-17-6	Anon. 1919 Anon. c.1922	Site of Bldg. #61	1
	Anon. 1936	Unidentified Bldg.	
FMM-17-7	Anon. 1919 Anon. c.1922	Site of Bldg. #63	1
FMM-17-8- FMM-17-9	Anon. 1919	Site of Bldgs. #71,#72	1
	Anon. c.1922		
FMM-17-10- FMM-17-14	Anon. 1919	Sites of 5 unidentified bldgs.	1
	Anon. c.1922 Anon. 1936	Site of bldgs. #79,#80, #81,#82,#83	

Table 4-4. POTENTIALLY IDENTIFIABLE BUT NOT PRESENTLY RECORDED ARCHEOLOGICAL RESOURCES ON FORT MONMOUTH (MAIN POST), CAMP CHARLES WOOD, AND THE EVANS AREA (Continued)

Site Number, Name[a]	Reference	Description	Research Value CR[b]
FMM-17-15	Anon. 1919	Site of unidentified Bldg.	1
FMM-17-16	Anon. c.1922	Site of 'Coal Bins'	1
FMM-17-17	Anon. 1936	Sites of 4 unidentified bldgs. Quarter Master area	1
FMM-18	Anon. 1919 Anon. c.1922	Site of 'Old Pump Station'	1
FMM-19		Radio Laboratories Sites	
FMM-19-1- FMM-19-3	Anon. 1919	Sites of 3 Radio Laboratories Bldg. #1,#2,#3	1
	Anon. c.1922	Site of Hangar #101,#102, #103	
	Anon. 1936	Site of 'Signal Corps School'	
FMM-19-4	Anon. 1919	Site of Bldg. #8	1
	Anon. c.1922	Site of unidentified bldg.	
FMM-19-5	Anon. 1919	Site of Bldg. #9	1
	Anon. c.1922	Site of Bldg. #109	
FMM-19-6	Anon. 1919	Site of unidentified building south of bldg. #4	1
FMM-19-7	Anon. c.1922	Site of Bldg. #154 'School Headquarters'	1
FMM-19-8	Anon. 1919	Site of 'Flying Field' east of Oceanport Avenue	1
FMM-20-1	Anon. 1919	Site of Bldg. #10	1

Table 4-4. POTENTIALLY IDENTIFIABLE BUT NOT PRESENTLY RECORDED ARCHEOLOGICAL RESOURCES ON FORT MONMOUTH (MAIN POST), CAMP CHARLES WOOD, AND THE EVANS AREA (Continued)

Site Number, Name[a]	Reference	Description	Research Value CR[b]
FMM-20-2	Anon. 1919	Site of unidentified bldg. near Bldg. #10 R. L.	1
FMM-21		Radio Laboratories Sites	
FMM-21-1	Anon. 1919	Site of Bldgs. #11 Near Q.M.D.	1
FMM-21-2-FMM-21-14	Anon. 1919	Sites of Bldgs. #12,#13, #14,#15,#16,#17,#18, #19,#20,#21,#22,#23,#24	1
	Anon c.1922	Bldgs. #112,#113,#114,#115 #116,#117,#118,#119,#120 #121,#122,#123,#124	
FMM-21-15	Anon. 1919	Unidentified Bldg. east of Bldg. #53	1
FMM-21-16-FMM-21-23	Anon. 1919	Site of Bldgs. #26 #27 #28 #29 #30 #31 #32, #33	1
	Anon. c.1922	Bldgs. #126,#127,#128, #129,#130,#131,#132, #133,	
FMM-21-24 .	Anon. 1919	Site of Bldg. #34 'Head-quarters'	1
	Anon. c.1922	Bldg. #134 'Head-quarters'	
FMM-21-25-FMM-21-27	Anon. 1919	Site of Bldgs. #35,#36, #37	1
	Anon c. 1922	Site of Bldgs. #135,#136 #137	
FMM-21-28	Anon. c.1922	Site of unidentified building north of Bldg. #121	1

Table 4-4. POTENTIALLY IDENTIFIABLE BUT NOT PRESENTLY RECORDED ARCHEOLOGICAL RESOURCES ON FORT MONMOUTH (MAIN POST), CAMP CHARLES WOOD, AND THE EVANS AREA (Continued)

Site Number, Name[a]	Reference	Description	Research Value CR[b]
FMM-21-29- FMM-21-36	Anon. 1919	Site of Bldgs. #39,#41, #43,#45,#47,#49,#51, #53	1
	Anon. c.1922	Bldgs. #139,#141,#143, 145,#147,#149,#151 #153	
FMM-21-37	Anon. 1919	Site of Bldg. #57 [?]	1
	Anon. c.1922	Bldg. #25 [?]	
FMW-1	Lightfoot 1851 Beers and Beers 1861 Beers 1873	Site of pre-1851 'J. G. Van Derveer' residence	2
FMW-2	Beers & Beers 1861 Beers 1873 Wolverton 1889	Route of Long Branch spur of Raritan & Delaware Bay Railroad, pre-1861	1
FMW-3	Beers 1873; Wolverton 1889	Site of Pre-1873 'Carriage Factory'. Later owned by 'W. L. McDonald' (3 Structures)	3
FMW-4	Wolverton 1889	Site of pre-1889 unidentified structure	1
FMW-5	Wolverton 1889	Site of pre-1889 'V. Van Doren' structure	1
FMW-6-1	Wolverton 1889	Site of Pre-1889 'S. Smock' farmstead-main structure?	2
	Franklin Survey Co. 1941 (Plate #40)	Unidentified frame structure	
FMW-6-2	Franklin Survey Co. 1941 (Plate #40)	Site of frame building-possibly an outbuilding associated with 'Smock' farmstead (FMW-6-1)	2

Table 4-4. POTENTIALLY IDENTIFIABLE BUT NOT PRESENTLY RECORDED ARCHEOLOGICAL RESOURCES ON FORT MONMOUTH (MAIN POST), CAMP CHARLES WOOD, AND THE EVANS AREA (Continued)

Site Number, Name[a]	Reference	Description	Research Value CR[b]
FMW-6-3	Franklin Survey Co. 1941 (Plate #40)	Site of frame building-possibly an outbuilding associated with 'Smock' farmstead (FMW-6-1)	2
FMW-7	Wolverton 1889	Site of 'Ice Pond' owned by 'W. L. McDonald'	2
FMW-8	Franklin Survey Co. 1941 (Plate #40)	Site of pre-1941 unidentified frame structure possibly associated with 'Smock' farmstead (FMW-6)	1
FMW-9-1	Franklin Survey Co. 1941 (Plate #40)	Site of pre-1941 unidentified frame structure	2
	Post Engineer, #6754F, 6/44 (Rev. 9/52).	Bldg. # 2152 'Guest House'	
FMW-9-2	Franklin Survey Co. 1941 (Plate #40)	Site of pre-1941 unidentified frame structure	1
	Post Engineer Dwg. #6754, 6/44 (Rev 9/52)	Bldg. # 2153 'P.X.'	
FMW-10	Franklin Survey Co. 1941 (Plate #40)	Site of pre-1941 unidentified frame structure	1
FMW-11-1	Franklin Survey Co. 1941 (Plate #40)	Site of pre-1941 unidentified frame structure	1
	Post Engineer, #6754f, 6/44 (Rev. 9/52)	Bldg. # 2154 'Blacksmith shop & stable'	
FMW-11-2	Post Engineer, # 6754f, 6/44 (Rev. 9/52)	Site of Bldg. # 2155 'Paint Shop'	1
FMW-11-3	Franklin Survey Co., 1941 (Plate #40)	Site of Pre-1941 unidentified frame structure	1

Table 4-4. POTENTIALLY IDENTIFIABLE BUT NOT PRESENTLY RECORDED ARCHEOLOGICAL RESOURCES ON FORT MONMOUTH (MAIN POST), CAMP CHARLES WOOD, AND THE EVANS AREA (Continued)

Site Number, Name[a]	Reference	Description	Research Value CR[b]
	Post Engineer, #6754F, 6/44 (Rev 9/52)	Bldg. #2156 'Stable'	
FMW-11-4	Franklin Survey Co. 1941 (Plate #40)	Site of Pre-1941. Unidentified frame structure.	1
	Post Engineer #6754F, 6/44 (Rev 9/52)	Bldg. #2157 'Stable'	
FMW-11-5	Franklin Survey Co. 1941 (Plate #40)	Site of Pre-1941 unidentified frame structure	1
	Post Engineer #6754F, 6/44 (Rev 9/52)	Bldg. #2158, 'Stable Vet. Hospital'	
FMW-11-6	Franklin Survey Co. 1941 (Plate #40)	Site of Pre-1941 unidentified frame structure	1
	Post Engineer #6754F, 6/44 (Rev. 9/52)	Bldg #2159 'Stable Office'	
FMW-11-7	Franklin Survey Co. 1941 (Plate #40)	Site of pre-1941 unidentified frame structure	1
FMW-11-8	Franklin Survey Co. 1941 (Plate #40)	Site of pre-1941 unidentified frame structure	1
FMW-12	Franklin Survey Co. 1941 (Plate #38)	Site of pre-1941 railroad spur to vicinity of Bldg. #2600	1
	Post Engineer #6754F, 6/44 (Rev. 9/52)	Spur of 'Central Railroad of New Jersey'	
FMW-13	Franklin Survey Co. 1944 (Plate #38)	Site of 4 tanks in vicinity of Bldg. #2600-Camp Charles Wood	1
FMW-14	Franklin Survey Co. 1944 (Plate #38)	Site of unidentified frame bldg.	1

Table 4-4. POTENTIALLY IDENTIFIABLE BUT NOT PRESENTLY RECORDED ARCHEOLOGICAL RESOURCES ON FORT MONMOUTH (MAIN POST), CAMP CHARLES WOOD, AND THE EVANS AREA (Continued)

Site Number, Name[a]	Reference	Description	Research Value CR[b]
FMW-15	Franklin Survey Co. 1944 (Plate #38)	Site of unidentified frame bldg.	1
FMW-16-1	Franklin Survey Co. 1944 (Plate #38)	Site of unidentified frame bldg.	1
FMW-16-2	Franklin Survey Co. 1944 (Plate #38)	Site of unidentified frame bldg.	1
FMW-16-3	Franklin Survey Co. 1944 (Plate #38)	Site of unidentified frame bldg.	1
FME-1	Lightfoot 1851 Beers and Beers 1861 Beers 1873 Wolverton 1889	Site of pre-1851 'Allen' residence	2
FME-2	Lightfoot 1851 Beers and Beers 1861 Beers 1873 Wolverton 1889	Site of pre-1851 'J Stanton' residence	2
FME-3	Lightfoot 1851 Beers and Beers 1861 Beers 1873 Wolverton 1889	Site of pre-1851 'J Bennet' residence	2
FME-4-1	J.G. White Engineering Corp. 1913	Site of Marconi Co. receiving antenna 'Mast #6'	2
FME-4-2	J.G. White Engineering Corp. 1913	Site of Marconi Co. 'Power Plant'	3
FME-5	Franklin Survey Company 1941	Site of unidentified Pre-1941 frame structure	1
FME-6-1	Franklin Survey Company 1941 (Plate #11)	Site of unidentified pre-1941 frame structure - residence (?) owned by 'George E. Rogers'	1

Table 4-4. POTENTIALLY IDENTIFIABLE BUT NOT PRESENTLY RECORDED ARCHEOLOGICAL RESOURCES ON FORT MONMOUTH (MAIN POST), CAMP CHARLES WOOD, AND THE EVANS AREA (Continued)

Site Number, Name[a]	Reference	Description	Research Value CR[b]
FME-6-2 - FME-6-6	Franklin Survey Company 1941 (Plate #11)	Site of 5 unidentified pre-1941 frame structure outbuildings (?) owned by 'George E. Rogers'	1
FME-7-1 - FME-7-3	Franklin Survey Company 1941 (Plate #11); plan 6148-CE-105 (6/9/42)	Site of 3 pre-1941 unidentified structures (1 frame, 1 stone or concrete, 1 stucco)	1
FME-7-4	Plan No. 6148-CE-105 (6/9/42)	Unidentified pre-1941 structure	1
FME-8-1 - FME-8-5	Franklin Survey Company 1941 (Plate #11)	Site of 5 Pre-1941 frame structures owned by 'Lucia A. Discoll' (Residence and Outbuildings)	2
	Department of the Army, Signal Corps Enigneers, 8/5/49	Shows sites of 5 'Farm Buildings'	
FME-9	Plan No. 6148-CE-104 (6/9/42)	Unidentified pre-1941 farm building	1

Notes:

[a]Designations assigned for this study; prefix FMM indicates site is on the Main Post; prefix FMW indicates site is located on Camp Charles Wood; prefix FME indicates the site is on the Evans Area.

[b]Confidence Rating (CR): 1 = resource has little research value or the information about it is unreliable, 2 = resource may have research value and the information about it is probably reliable, 3 = resource may have research value and the information about it is reliable.

The earliest documented potential site on Fort Monmouth may be the residence of Thomas Eaton, who built a grist mill on Wampum Brook in the late 17th Century. Franklin Ellis, in the History of Monmouth County (1885), notes that "Thomas Eaton built a house on the site of E.C. Fielder's residence, and lived there until his death" (Ellis 1885:876). The locations of at least three structures owned by E.C. Fielder are depicted on atlases of the area for 1873, 1878, and 1889. One of these structures is located on the south side of Lafetra Brook within Fort Monmouth (Main Post). An early map of Camp Alfred Vail (1919) (later renamed Fort Monmouth (Main Post)) also shows an "old barn," "well" and possible dugout cellar in the same area of Lafetra Brook.

The Eaton family, important in the local politics of eighteenth century Eatontown, appear to have owned other parcels of land on Horse Neck (the stretch of land on which the majority of Fort Monmouth (Main Post) is situated). Ellis notes that the residence of Dr. John Lewis was the "old house built by Joseph Eaton" (Ellis 1885:877). The Lewis house is located on Horse Neck Point, to the east of present day Fort Monmouth (Main Post), outside its boundaries, and is shown in atlases of 1851 and 1861.

Another possible historic site within Camp Charles Wood is the grist mill built and operated by Thomas Eaton. The mill was built soon after Eaton settled in the area around 1670, and eventually passed to his son, John Eaton, who added a fulling mill on the same stream around 1715 (Ellis 1885:878). Ellis states that the fulling mill was built "...near the center of the pond [for the mill which was in operation in 1885], the old mill being a little further up the stream" (Ellis 1885:878). If this is so, the grist mill, which was in operation into the third quarter of the eighteenth century, may have been located to the west, on that part of the stream located in Camp Charles Wood. A new mill was built to the east of the remains of the fulling mill sometime before 1850 and continued in operation into the late nineteenth century (Ellis:1885:878). The dam for this new mill appears to have raised the water level in the pond, inundating the remains of the fulling mill. The Eatontown plate of the Wolverton Atlas (1889) also shows a second pond on the east border of present day Camp Charles Wood. The pond is identified as an "Ice Pond" owned by a W.L. McDonald. At this time the relationship of this pond to the seventeenth century Eaton grist mill is unknown. This pond may be related to late nineteenth century utilization of the stream such as a battery pond for the grist mill.

Cultural resources from one other early eighteenth century domestic site may exist on Fort Monmouth. Salter, in The History of Monmouth and Ocean Counties (1890) notes that a man named Hulett from Rhode Island lived at Horse Neck about the year 1734 (Salter 1890:308). Interestingly, present day Lafetra Brook is listed as "Hulid Run" on a Revolutionary War-era map.

No information has been found about the early settlers of the present day Evans Area. To the north and west of the installation a large tract of land was purchased by David Knott in 1749 and remained in the family, apparently until the early nineteenth century (Ellis 1885:809). The main

settlement in the area occurred to the north and west of the Evans Area in Hopeville (also known as "Chapeltown") (Ellis 1885:809).

4.2.2 1765-1810

A listing of cultural resources within the boundaries of Fort Monmouth for this period is impossible without more detailed documentary research. The secondary documentation examined in the course of research for this project does not provide the necessary information, such as land ownership or the location of structures. No references or graphic representations have been found which refer specifically to land within the installations. While cultural resources associated with the potential sites listed for the previous period may be extant, it cannot be assumed these sites continued in use during this period.

4.2.3 1800-1865

The following list of potential historic archeological sites for the period 1800 - 1865 is based for the most part on cartographic evidence. Additional primary resource documentation will be needed to make specific statements about the exact location of sites, approximate dates of construction and demolition, and the types of cultural resources which may be associated with each site.

In addition to published atlases and maps, survey returns for a number of roads in the vicinity of Fort Monmouth have been examined. This documentation provides information relative to the construction of new roads and the upgrading of existing routes. As the development of the transportation network is a vital factor in the location of domestic, commercial, and industrial sites a brief review of those historic roads or railroads will be given for each installation. Finally, it must be emphasized the historic roads and rail lines have intrinsic value as sites. Portions of the present route which have undergone episodes of filling to raise grades, or sections of older routes which have been vacated, may contain important information about early road and railroad construction techniques and associated cultural remains.

Fort Monmouth (Main Post). The development of the local road system in and around Fort Monmouth (Main Post) accompanied the growth of Oceanport as a commercial terminus in the second quarter of the nineteenth century. Oceanport Avenue, the southern part of which is within the confines of Fort Monmouth (Main Post), cuts across Horse Neck in a northwest-southeast direction. According to survey returns the road was established in 1833 (Monmouth County Road Returns, Book D, p.60). Main Street of Oceanport, which extends south and west to Eatontown and forms part of the southern boundary of Fort Monmouth (Main Post), appears to have been established earlier in the nineteenth or late eighteenth century. By 1851, residential and commercial structures lined both sides of the northeast end of Main Street (see Lightfoot map of 1851). Docks and warehouses were located to the east of the point where Oceanport Avenue crosses Oceanport Creek. A number of domestic structures were located along the northern side of Main Street. More detailed research is needed to document the early subdivision and development of the land

which now borders Fort Monmouth (Main Post). Research may provide information about possible earlier structures which preceded the nineteenth century developments.

In conjunction with the growth and development of Oceanport a number of structures were built on Horse Neck along Oceanport Avenue. The 1851 Lightfoot map, while incorrectly identifying Horse Neck, depicts five structures (FMM-1 - FMM-5) which may be possible historic archeological sites within the present day boundary of Fort Monmouth (Main Post). Located at the southwest end of Oceanport Avenue north of Oceanport Creek is a commercial structure labeled "Drummond, Haynes & Co." (FMM-1). To the east of this structure and Oceanport Avenue, on the north bank of Oceanport Creek is a structure labeled "P. Casler" (FMM-2). Another "P. Casler" structure is located on the northeast side of Oceanport Avenue, south of Parker's Creek (FMM-3). The fourth site is located in the southwestern section of Fort Monmouth (Main Post) and is labeled "G. A. Corlies" (FMM-4). The fifth, and final site (FMM-5), is located to the northwest of the Corlies site and is labeled "J. White". No structures are shown in the northwestern portion of present day Fort Monmouth (Main Post) on the 1851 map.

The above noted structures are again depicted in approximately the same locations on the 1861 Beers and Beers Map of Monmouth County, two of the potential sites having apparently changed ownership or tenancy. Along Oceanport Creek the structure previously labeled "Drummond, Haynes & Co." is now "P. Casler" (FMM-1). The structure to the east of Oceanport Avenue is now listed as "Mrs. Price" (FMM-2). The remaining sites (FMM-3, 4, 5) retain their inital designations. As on the earlier map, no structures are shown in the northwestern portion of present day Fort Monmouth (Main Post) north of the Mill Brook.

A spur of the Raritan and Delaware Bay Rail Road which ran from Eatontown to Long Branch by way of Oceanport was built on a right-of-way which was later surrounded by Fort Monmouth (Main Post). No support structures associated with the railroad are depicted within the installation on the 1861 Beers and Beers Map of Monmouth County.

Camp Charles Wood. Present day Tinton Avenue, which forms the northern boundary of Camp Charles Wood, has historically been the main road between Tinton Falls and Eatontown. The road was in existence prior to 1812, as evidenced in a survey for the widening of the road filed in that year (Monmouth County Road Returns, Book B, p. 156). The general route of the road is depicted on Revolutionary War-era maps. Based on evidence from the Lightfoot map of 1851 and the Beers and Beers map of 1861, only a single structure appears to have been located within the present day boundaries of the Charles Wood area prior to 1865. Along the south side of Tinton Avenue, near the eastern border of the Charles Wood area, a site labeled "J.C. Vandeveer" (FMW-1) is listed on both maps. In addition to this structure, the only other major construction activity in the area was the building of the main line of the Raritan and Delaware Bay Rail Road. The route of track crosses what later became the eastern boundary of the installation and runs along the southern extent of the base. No structures associated with the railroad are depicted on either map.

Evans Area. In the vicinity of Camp Evans the main route east from Chapeltown (also known as Hopewell, and at present Glendola) to the coast, was present day Belmar Boulevard. Belmar Boulevard runs in a southeast direction from Chapeltown east along the south shore of the Shark River. Near the intersection of present day New Bedford Road with Belmar Boulevard, the road forms the southern boundary of Camp Evans. Survey returns indicate a date of construction for the road in the late 1840's (Monmouth County Road Returns, Book E, p.19).

Both the Lightfoot map of 1851 and the Beers and Beers map of 1861 denote three potential archaeological or architectural sites within the boundaries of the installation. On the 1851 map the most southern of the structures is labeled "J.M. Allen" (FME-1). To the northwest the next structure is noted as "J. Stanton" (FME-2). The final site, located further to the northwest, is labeled "J. Bennet" (FME-3). On the Beers and Beers map of 1861 the three structures are in the same approximate locations. While the designations for the first two sites remain the same, the third site is labeled "J. Radford"(?).

4.2.4 1865-1917

The following list of potential historic archaeological and architectural sites for the period AD 1865 to 1917 is based on cartographic and documentary evidence. In addition to published atlases and maps, survey returns for a number of the roads in the vicinity of Fort Monmouth have been examined. Additional primary resource documentation will be required in order to make specific statements about the exact location of sites, approximate dates of construction and demolition, and the types of cultural resources which may be associated with each site.

Fort Monmouth (Main Post). The expansion of the local transportation network accompanied the growth of Eatontown and the Atlantic Coast resorts especially Long Branch, in the second half of the nineteenth century. On Fort Monmouth (Main Post), a road was laid out between 1861 and 1873 which extended the entire length of Horse Neck, from State Highway #35 to the point. While appearing untitled on historic period maps, a present day road map lists the eastern-most portion of the route as Horseneck Point Road. The post-1890 development of the Horse Neck peninsula by the Monmouth Park Association, and the subsequent construction of Fort Monmouth (Main Post) appears to have vacated the portion of the Horse Neck Road west of Oceanport Avenue.

A number of cultural resources associated with the pre-military road system may be extant on Fort Monmouth (Main Post). A portion of Horseneck Point Road (FMM-6) and additional segments of farm roads appear on a 1919 map of Camp Alfred Vail, later renamed Fort Monmouth. At the point where the road intersects Mill Brook, the 1919 map notes the stream as passing under the road in a arched brick culvert. As the old roadway and the culvert are entirely within Fort Monmouth (Main Post) and since the road has been upgraded, what remains of the earlier features is unknown.

In addition to the overland road network two railroad lines provided easy access to the Fort Monmouth (Main Post) area. The New York and Long Branch Railroad which was constructed in the late 1860's currently forms the eastern boundary of the post. While no support structures associated with the railroad are shown on the historic maps additional research may indicate that land adjacent to the railroad track and within Fort Monmouth (Main Post) was developed. The Long Branch spur of the New Jersey Southern Railroad (presently the Central Railroad of New Jersey, formerly the Raritan and Delaware Bay Railroad) extended throughout the southern portion of Fort Monmouth. With the construction of the Main Post, all but approximately 500 ft. of the track in the southern part of the fort has been removed.

Based on cartographic evidence a single railroad related structure was located within the bounds of present day Fort Monmouth near the intersection of Main Street and the railroad. The structure (FMM-14) is labeled as a 'depot' on the Oceanport plate of the Rose Atlas of the New Jersey Coast (1878). On the Monmouth Park plate in Wolverton's Atlas of Monmouth County (1889) the structure is identified as Oceanport Station. Archaeological remains of the structure may be extant. At this time the dates for the demolition of Oceanport Station and the removal of the railroad track are unknown.

Based solely on evidence from the 1919 Map of Camp Alfred Vail the "Monmouth County Electric Railroad" line extended along the east side of Long Branch Boulevard, presently State Highway #35, and the western border of Fort Monmouth (Main Post). Associated cultural resources, such as the track spurs or support structures, may have been located within the present day bounds of Fort Monmouth (Main Post). At the moment very little is known about the history of this railroad line, which may possibly have been a intercity trolly service.

Prior to the establishment of Fort Monmouth (Main Post) and the short period in which Monmouth Park was in operation the project area under consideration appears to have been used for agricultural purposes, and consisted of numerous farmsteads. A total of six historic sites (FMM-7, 8, 9, 10, 12, 13), possible farmstead complexes, are noted on historic maps of the period.

The first possible site (FMM-7) is listed as 'E.C. Fielder' on both the county plate of the Beers Atlas of Monmouth County (1873) and on the Shrewsbury plate of Wolverton's Atlas of Monmouth County (1889). The site was located along the south bank of Lafetra Brook to the east of present day State Highway #35. In the same general area, the Camp Alfred Vail map (1919) depicts four historic features. Along the brook is a rectangular "dugout" cellar hole (FMM-7-1), which may be the remains of a house. To the southwest is located a rectangular 'old barn' (approximately 180 x 60 ft.) with an associated 'well' (FMM-7-2) to the south. Between the barn and well is a untitled road which extends to a complex of structures to the southwest. An unidentified structure (FMM-7-3) is depicted to the northwest. At this level of investigation it is uncertain if the above noted structures are outbuildings of a farm complex or a separate farmstead.

An additional historic structure listed as 'E.C. Fielder' appears on the Eatontown plate of the Beers Atlas of Monmouth County (1873) and on the Rose Atlas of the New Jersey Coast (1878) to the southeast of the intersection of Horseneck Point Road and State Highway #35. On the less detailed Shrewsbury Township plate of the Wolverton atlas (1889) the above noted structure is not depicted, but an untitled structure is shown to the north of Horseneck Point Road. The location of this potential site (FMM-8) would have been within what later became Fort Monmouth (Main Post). At first impression, the Shrewsbury Township plate appears to be in error, but the possibility of this site being a part of the E.C. Fiedler farmstead depicted on the more detailed historic maps cannot be ruled out. On the Eatontown plate of the Wolverton atlas (1889) the Fielder farmstead complex consists of eight separate structures. Interestingly, the property is listed as "E.C. Fielder sold to Monmouth Park Association." Additional sites and land owned by the Monmouth Park Association will be discussed below. On the 1919 map of Camp Alfred Vail a total of seven structures (including one residence and four barns) are shown in the area of the farmstead formerly owned by E.C. Fielder. These structures are all located outside Camp Alfred Vail and do not appear to correspond in location to the complex of structures noted on earlier historic maps.

The third possible historic domestic site (FMM-9) is a structure labeled "Williams" on the Monmouth County plate of Beers Atlas of Monmouth County (1873), and located on the north side of Main Street of Oceanport, west of the New Jersey Southern Railroad. The structure is again represented, but unlabeled, on the Oceanport plate of the Beers Atlas (1873) as within the bounds of Monmouth Park. The structure is depicted on the Oceanport plate of the Rose Atlas (1878) but not on the Monmouth Park plate of the Wolverton atlas (1889).

A fourth possible domestic site (FMM-10) was located to the north of the last site according to graphic documentation. The site is listed as 'T.T. Williams' on both the Oceanport plate of the Beers atlas (1873) and the Oceanport plate of the Rose atlas (1878). On the Oceanport plate of the Wolverton atlas (1889) a total of three structures are depicted and again labeled "T. T. Williams". All three structures appear to be within the bounds of Fort Monmouth (Main Post).

The fifth possible historic domestic site (FMM-12) was located to the northeast of the intersection of Broad and Main Streets in Oceanport. On the Oceanport plate of the Beers atlas (1873) the site is the easternmost of two structures owned by "F.S. Chanfrau". The structure appears to have been part of Monmouth Park on the Monmouth Park plate of Wolverton's Atlas of Monmouth County (1889). The location of the potential site is within the current bounds of Fort Monmouth (Main Post).

The sixth, and final, possible domestic site (FMM-13) dating to the period A.D. 1860 to the present is labeled as "M. Ferrence" on the Oceanport plate of the Rose atlas (1878). The structure was located to the north of the New Jersey Southern Railroad and west of Oceanport Station. The site is within the bounds of Fort Monmouth (Main Post). No reference to the site is found in the Wolverton atlas (1889).

Thoroughbred horse racing at Monmouth Park (FMM-11) was an important element of the recreation and resort industry of northern Monmouth Country in the second half of the nineteenth century. The park was advantageously located near Long Branch, then the foremost seaside resort in America. Additional factors contributing to the success of Monmouth Park were the road, railroad, and steamboat connections with the populated urban centers of Newark and New York to the north.

Prior to 1866, a portion of the land on which Monmouth Park was built belonged to the Corlies estate. In 1866, "the estate was bought by Rienhard R. Hulett, who on the 13th of September 1867 sold one hundred and twenty-eight acres, with dwelling house, barn, and wagon house, ... to J. McB. Davison and J.F. Chamberlain, who fenced the grounds and laid out a race-track of one mile circuit" (Ellis 1885:892). The land was then purchased in 1870 by the Long Branch and Sea-Shore Improvement Company, which carried out the building of sheds, outbuildings, stables, grandstand, and clubhouse and held the first race on July 4, 1870 (Ellis 1885:892, Wilson 1953:561).

The Oceanport plate of the Beers Atlas of Monmouth County (1873) shows a total of 32 structures within the boundary of Monmouth Park. In addition, to the mile race course, a steeple chase course existed on the park grounds. Besides the "Spectators Stand" and the "Club House" only one other structure is identified. The structure is located to the west of the grandstand and is listed as "W.E. Raynor". This may be the dwelling house of the Corlies estate (FMM-4). A structure owned by "G.A. Corlies" appears on the Lightfoot map (1851) and the Beers and Beers Atlas of Monmouth County (1861) in the same approximate location. In addition to the construction of numerous buildings, landscaping of the park was accomplished. The 1873 map shows that the portion of Husky Brook which passed through the northern part of the park was dammed to create a lake.

The property owned by the Long Branch and Sea-Shore Improvement Company was bought by David D. Withers of New York when the company experienced financial problems (Ellis 1885:892). The property purchased by Withers was in turn conveyed to the Monmouth Park Association, which was incorporated in May of 1878. The capital stock of the Association was owned by August Belmont, David D. Withers, and Pierre Lorillard, of New York City, George Peabody Wetmore of Newport, and George Lorillard of Islip (Ellis 1885:892).

The Oceanport plate of the Rose Atlas of the New Jersey Coast (1878) depicts a total of 36 structures associated with Monmouth Park. The layout and configuration of structures is similar to that depicted on the above cited 1873 Map of Monmouth Park.

Throughout the 1880's the Monmouth Park race track drew larger and larger crowds as the number of races per season reached new highs. By 1888 the track property was expanded to a total of 640 a. (Wilson 1953:566). The race track was advantageously located near the New Jersey Southern Railroad and the New York and Long Branch Railroad (both owned at this time by the Pennsylvania Central Railroad of New Jersey).

Another branch of the New Jersey Southern Railroad to Sandy Hook with connections to New York by ferry service was also available (Anon. 1946:22).

The expansion and transformation which occurred at Monmouth Park in the 1880's is well illustrated on the Monmouth Park plate of Wolverton's Atlas of Monmouth County (1889). A total of 91 structures, of which 39 are numbered, were located throughout the park. While the numbered structures appear to have been stables, the functions of the various remaining buildings are difficult to surmise. Only a few structures and the one mile race course correspond in location with earlier maps. In addition to the "Grand Stand," which appears to have been expanded, the structure formerly listed as "W.E. Raynor" is here labeled as the "Superintendents Office." This structure and three possible outbuildings within a bounded lot may be the buildings associated with the "G.A. Corlies" estate (FMM-4).

The expansion of Monmouth Park in the 1880's took advantage of the improved railroad service of the area. As depicted on the Wolverton map of 1889, a turntable and terminal track lines connecting with the Pennsylvania Central Railroad of New Jersey were built on park property. These features were constructed to the north of the grandstand and artificial lake. The rail terminals were connected to the grand stand by a covered walkway.

The growth of Monmouth Park peaked in 1890 when the park opened a newly constructed track and steel grandstand to the north of the earlier course. The steel grandstand, at that time the largest in the world, had a seating capacity of 15,000 persons. In addition to the new grandstand, the Monmouth Park Hotel was built (Anon. 1946:12). At this stage of the research the exact location of the hotel is unknown. The new race course constructed in 1890 was located to the north of the Long Branch spur of the New Jersey Southern Railroad between Husky Brook and Parker's Creek. A number of features possibly associated with the course are discernible on the Map of Camp Alfred Vail (1919). In addition to the western section of the oval racetrack, a "judges stand" is located near what would have been the northeast bend of the track. Also, possibly associated with Monmouth Park are two "old cellar remains" located to the northeast and northwest of the judges stand. The northeast cellar measures 50' x 210 ft. and the northwest 30 x 85 ft. Both structures are noted as having had chimmeys.

The new race track was in operation for only a year when a successful attempt was made to end the gambling in New Jersey attendent with horse racing. The park was closed under the authority of a 1877 law that classed betting booths with disorderly houses. By the summer of 1891, the Monmouth Racing Association had moved the races to Jerome Park in New York (Wilson 1953:567). In 1893, three bills favorable to betting were passed by the state legislature but vetoed by the governor. In 1897, a constitutional amendment was adopted which forbade gambling or bookmaking in the state. While horse racing was not illegal "the prohibition of gambling, brought about the same result" (Wilson 1953:567).

The majority of the land owned by the Monmouth Park Association on which the race tracks, railroad lines, and support structures (including those buildings which predated the racetrack) were constructed, is now the property of Fort Monmouth (Main Post). The history of Monmouth Park presented here is a bare outline of the company and the park's impact on the local area. Additional research is needed before definitive statements can be made about the location and disposition of structures and land associated with the park.

Camp Charles Wood. At the start of this period (1865 to 1917) the main road in the Camp Charles Wood area was Tinton Avenue (the main route between Eatontown and Tinton Falls). Not until the second half of the nineteenth century were any additional overland routes constructed to augment Tinton Avenue. Early in the second half of the nineteenth century the main line of the Raritan and Delaware Bay Railroad was constructed through the area west of Eatontown, with a spur extending to Long Branch built prior to 1861. After the introduction of the railroad a number of roads were laid out in the area. Based on cartographic evidence the routes of present day Hope, Maxwell, and Pine Brook Roads were established in the late 1870's and early 1880's. No cultural resources associated with the roads appear to be within the boundary of Camp Charles Wood. These roads form the north, east, and south boundaries, respectively, of the installation. The route of the Long Branch spur of the Raritan and Delaware Bay Railroad was located within the bounds of Camp Charles Wood (FMW-2).

Besides the railroad spur, a single potential railroad related structure (FMW-4) associated with the New Jersey Southern Railroad may be within Camp Charles Wood. The county map in the Beers Atlas of Monmouth County (1873) notes a "depot" to the west of the main track of the railroad, near its intersection with the Long Branch spur. This would place the site within the present boundary of Camp Charles Wood. On a more detailed map (the Eatontown plate of the same atlas) the station is located outside the boundary of the installation to the east and south of the railroad spur. Eatontown Station is again depicted in the same general area on the Shrewsbury plate of the Wolverton Atlas of Monmouth County (1889).

Turning to industrial sites, potential archeological and architectural remains of the Eatontown Hat Factory (FMW-3) may be located within the bounds of Camp Charles Wood. According to Franklin Ellis, the Eatontown Hat Factory, built in 1875, was not a success and the building was rented to W.L. McDonald, who manufactured carriages (Ellis 1885:885). In contradiction to the preceding reference, the Eatontown plate of the Beers Atlas of Monmouth County (1873) locates three structures, listed as the W. L. McDonald carriage factory, west of the intersection of the New Jersey Southern Railroad and the Long Branch spur. In the Eatontown "Business Notices" accompanying the plate, W.L. McDonald is listed as a manufacturer of heavy and light carriages. The reason for the discrepancy in dates is unknown. Based on cartographic evidence the original hat factory was established sometime prior to 1873.

After the close of the carriage factory the buildings were unoccupied until November of 1880. At that time, W.B. Huey and William G. Harsin,

"who had been manufacturing in Newark, rented the old Eatontown Hat Factory [from W.L. McDonald] west of the railroad, and fitted it up for their purposes" (Ellis 1885:805). After the destruction of the factory by a fire in 1881 a 'Building and Improvement Company' was set up by a number of citizens to maintain manufacturing in Eatontown. The company constructed a factory to the south of the railroad intersection that was rented to W.B. Huey & Co. to continue their work. At the time of writing Ellis notes the factory employed 110 people (Ellis 1885:885). The second hat factory was located to the the southeast of the prior factory and outside the boundary of Camp Charles Wood on the Wolventon Atlas (1889). The property in which the carriage factory was built continued to be owned by W.L. McDonald. A dammed stream on the McDonald property is listed as a "Ice Pond" (FMW-7) in the Wolverton atlas (1889). This may indicate the pond was used to manufacture ice for a time.

For the period 1865 to the present only two potential historic farmstead sites may be located within the bounds of Camp Charles Wood. In the western portion of the installation, south of Tinton Avenue, a structure labelled "G. Smock" (FMW-6) is depicted on the Monmouth County plate of the Beers Atlas (1873). On the Shrewsbury plate of the Wolverton Atlas (1889) the structure is listed as "S. Smock". The second possible site (FMW-5), located along Maxwell Road on the eastern side of Camp Charles Wood, is labelled "V. Vandoren" on the Wolverton atlas (1889). This potential site does not appear on the more detailed Eatontown plate of the same atlas. The "V. Vandoren" site may in fact be the previously referenced Vanderveer structure incorrectly labelled and misplaced on the map. The Vanderveer site (FMW-1), which dates prior to 1851, is depicted on the Beers Atlas of Monmouth County (1873) to the north west of the carriage factory. The site of the Vanderveer structure is located within the bounds of present day Camp Charles Wood.

As outlined in Section 2.3, the land on which Camp Charles Wood is situated changed from agricultural to recreational purposes early in the 1920's. At this time, Max Phillips purchased farms and constructed the Sun Eagles Country Club. Phillips eventually sold the property early in the 1930's and the club became known as the Monmouth County Country Club. Plates #38 and #40 of the Franklin Survey Company's Plat Book of Monmouth County, New Jersey (1941) provides excellent graphic evidence of the area owned by the Monmouth County County Club, now occupied by Camp Charles Wood, just prior to the purchase and development of the property by the Signal Corps.

According to the plat book, the Monmouth County Country Club extended over the major portion of present-day Camp Charles Wood. The club was bounded by Tinton Avenue on the north, Maxwell Place on the east, and by present day Pearl Harbor Avenue on the west. The southern boundary of the club was the right of way for the southern division of the Central Railroad of New Jersey. Land west of Hope Road, which roughly bisects Camp Charles Wood, is listed on Plate #40 of the 1941 Plat Book of Monmouth County, New Jersey as being owned the Monmouth County Country Club Racing Association.

A total of 23 structures are represented on plates #38 and #40 as being owned by the Monmouth County Country Club. Only four of the

structures are currently standing and functioning as part of Camp Charles Wood. The structures, which may actually date to the period when the property was owned by Max Phillips, are the officers club - Gibbs Hall (Bldg. 2000), the swimming pool (Bldg. 2000), the Casino (Bldg. 2018), and Bldg. 2044 - the function of which is presently unknown.

Gibbs Hall, located in the northeast section of Camp Charles Wood, appears to correspond with the site of the pre-1851 'J. G. Vanderveer' structure (FMW-1), based on cartographic evidence. At this level of investigation it is not known if there is any relationship between the two structures.

A 1944 Post Layout and Reservation Map of Camp Charles Wood (Plan #546) indicates that, besides Gibbs Hall, 11 pre-1941 structures owned by the Monmouth County Country Club were temporarily utilized by the Signal Corps before being demolished. Before listing the nine potential sites which were adapted by the Army, the 11 pre-1941 structures which were apparently demolished prior to 1944 will be discussed.

All structures owned by the Monmouth County Country Club and presumably demolished by the Army have been given site numbers. Archeological remains may exist for these potential sites even though extensive construction programs have occurred at Camp Charles Wood.

Plate #38 of the 1941 Plat Book of Monmouth County, depicts three frame structures within 100 ft. to the north and west of Gibbs Hall (Bldg 2000). The potential sites have been designated FMW-16-1 - FMW-16-3. The structures, formerly owned by the Monmouth County Country Club, appear to have been outbuildings of Gibbs Hall, and have been replaced by a parking lot.

Two additional frame structures located along Tinton Avenue, northeast of Gibbs Hall, are represented on Plate #38. No information regarding the function of the buildings has been obtained. Potential archeological sites associated with the structures have been designated FMW-14 and FMW-15 (Figure 4-4). The 1944 reservation maps of Camp Charles Wood, indicate that a series of buildings (2001-2016) were constructed by the Army in the area. A cable house also appears to have been constructed in the area of FMW-#15. Since 1944, the buildings constructed by the Army have been demolished.

To the east of Pearl Harbor Road, the western boundary of Camp Charles Wood, and approximately 1600 ft. south of Tinton Avenue a total of three frame structures are noted on plate #40 of the 1941 map. The complex of structures is in the same approximate location as the 'S. Smock' farmstead site noted on historic maps of the area. The three structures may represent the domestic residence and two outbuildings. The three potential sites have been designated FMW-6-1, FMW-6-2, and FMW-6-3.

Two phases of construction have occurred in the area of the sites FMW-6-1 - FMW-6-3. The 1944 post layout and reservation map of Camp Charles Wood notes a number of structures in the '2300' series (Bldgs.

2329-2330, 2362-2363, and Bldg. 2353) in the area. These buildings were constructed in the early 1940's. More recently, the area was chosen for the construction of a research and development engineering laboratory (Bldg. #2700) which was started in 1952.

A pre-1941 unidentified frame structure was located on the south-west corner of the inter-section of Hope Road and Hemphill Road. Construction of a group of barracks (the 2000 series) in the early 1940's appears to have resulted in the demolition of the structure. Archeological remains of the structure (designated FMW-10) may be extant.

The final pre-1941 sites, demolished by the Army, are two frame structures (designated FMW-11-7 and FMW-11-8) which were part of a complex of eight frame buildings. A total of six frame structures in the group were adapted for military purposes.

The eight frame structures were located approximately 700 ft. west of Hope Road and 900 ft. south of Tinton Avenue in the western portion of Camp Charles Wood. According to the 1944 base map of Camp Charles Wood, the area and structures were being used as a paddock and stable area for the Signal Corps - probably the same function the structures served when the property was owned by the Monmouth County Country Club Racing Association. In addition to two fenced paddocks, six structures were adapted by the Army, including a blacksmith shop and two stables (Bldg. 2156, 2157, and 2158), a stable office (Bldg. 2159), and a paint shop (Bldg. 2155). Building 2158 also functioned as the veterinary hospital. The potential archeological remains of these structures have been designated sites FMW-11-1 - FMW-11-5 (Table 4-4).

To the northwest of the stable area and approximately 100 ft. south of Tinton Avenue two frame structures are represented on plate #40 of the Franklin Survey Company, Plat Book of Monmouth County (1941). The structures are listed as a 'Guest House' (Bldg. 2152) and a 'P.X.' (Bldg. 2153) on the 1944 reservation map of Camp Charles Wood. These potential archeological sites have been designated FMW-9-1 and FMW-9-2. Subsequent to the demolition of these buildings, family housing structures in the '2200' series were built in the area.

The last pre-1941 structure adapted for military purposes and no longer extant was a frame structure located to the southwest of Bldg T-2337 (the post theater). The unidentified frame structure is represented on Plate #40 of the Plat Book of Monmouth County (1941), and may be an outbuilding associated with the complex of frame structures located to the west. On the 1944 reservation map of Camp Charles Wood, the structure is listed as the 'telephone exchange' (Bldg. #2354). The location of the structure is a presently paved parking lot. The potential archeological site has been designated FMW-8.

Only one structure is depicted on the property of Camp Charles Wood south and east of the Central Railroad of New Jersey on plate #38 of the Franklin Survey Company's 1941 map. To the northeast of the intersection of Pine Brook Road and Hope Road is an unidentified brick structure. East of the structure is a railroad spur from the main track of the

southern division of the Central Railroad of New Jersey. Located to the north of the building are four circular structures, possibly water tanks. No information regarding the function or ownership of the building is noted on the map. On the reservation map of Camp Charles Wood (1944), the building is listed as Bldg. 2600 a 'warehouse (old brickyard)'. The railroad spur is shown on the 1944 map, while the tanks to the north appear to have been demolished. Currently, only the brick structure is standing (Bldg. 5-2600), and functioning as semi-permanent storage. Potential archeological remains of the railroad spur and the tanks have been designated FMW-12 and FMW-13-1 - FMW-13-4, respectively.

Evans Area. Developments of the transportation network in the Evans Area for the period 1865 to the present consisted of the establishment of two new routes. Present-day Brighton Avenue, which forms the northern boundary of the installation, was laid out sometime in the late 1870's or early 1880's according to cartographic evidence. Marconi Road, extending along the south bank of the Shark River within the installation, was laid out in 1900 according to survey returns (Monmouth County Road Returns, Book K, p. 212).

The Wall Township plates of both the Beers, Atlas of Monmouth County (1873) and the Wolverton, Atlas of Monmouth County (1889) depict the sites of apparently three farmsteads which may be within the current boundaries of the Evans Area. The three sites, for which potential archeological and architectural remains may be extant, are in the same approximate locations as those sites listed for the Evans Area in the period 1810-1865 (see Section 4.2.3). On both maps the most southern site is listed as 'J.M. Allen' (FME-1). To the northwest of the Allen structure is the 'G. Wooley' site (FME-2). The last potential site is located to the northeast of the Wooley site and is labelled 'R.B. Campbell' (FME-3).

Surviving from the period when part of the Evans Area was owned by the Marconi Company (1913-1924) are a number of standing structures that have been adapted to suit the Army's needs. The former Marconi hotel, a red brick structure, is now the administration building (Bldg #1). The two cottages and detached garages built for Marconi officials, east of the hotel, are functioning as family housing (Bldgs. 2, 3, T-201, & T-202).

Not all of the structures built by the Marconi Company in the early 1900's appear to be standing. A topographic map of the area entitled Contour Map Showing Location of Building's Station No. 6 Marconi Wireless Telegraph Company (1913), by the J.G. White Engineering Corporation shows three sites for which potential archeological remains may exist.

The first site (FME-4-1) is the location of a receiving antenna, designated 'Mast No. 6' on the 1913 plan. The tower structure, apparently steadied by guide wires, was located approximately 260 ft. to the northwest of the northwest corner of the hotel. Potential sub-surface remains, such as a foundation, may be extant.

Located approximately 100 ft. to the northwest of the antenna was the site of the Marconi Company's power plant, a 100 x 30 ft. structure.

There are no standing remains associated with this potential site (designated FME-4-2).

Another site (FME-4-3), the operating building, appears to have been located below the steep embankment and along the shore of the Shark River, approximately 650 ft. northeast of the antenna. Potential subsurface remains of this 100 x 30 ft. structure may exist.

Plate #11 of the Franklin Survey Company's Plat Book of Monmouth County, New Jersey published in 1941 contains important cartographic evidence of land ownership, types of construction materials, and the locations of structures that existed on the property of the Evans Area just prior to its purchase and development by the Signal Corps. According to the map, parcels of land adjacent to the Evans Area at this time were in the process of changing from rural agricultural land to suburban tract developments. To the east of the installation, a number of frame structures were built as part of 'Shark River Manor'. Land south and west of what would later become the Evans Area, while still undeveloped, is entitled 'Imperial Park' on the map.

A total of 11 structures are depicted as part of Kings College on the Franklin Survey Map (1941), 10 of which are still standing and have been converted to military purposes. Besides, the former Marconi Company's employee hotel and cottages (with detached garages), Kings College also owned two brick and two frame structures in the area of the Marconi powerplant, northwest of the hotel. The two brick building, currently designated Bldgs. 6 and 7 are used as research and development laboratories. A frame structure to the south of building #7 has apparently been demolished. Subsurface remains of this structure may exist (FME-5). The second frame structure noted above is located approximately 350 ft. south of Bldg. 7. The building, currently designated Bldg. T-31, is still standing and is functioning as the post fire station.

Two additional Camp Evans area structures located to the south of the Marconi Company's operating building, were owned by Kings College. Both of the structures are extant. The northern-most structure, a research laboratory (Bldg. 4) is noted as being brick, while the other (Bldg. #5) is stuccoed.

At this level of investigation it is not known if the Kings College-era structures represented on the Franklin Survey maps date to the Marconi Company's ownership of the property or to the time period in which the area was owned by Kings College. The former possibility, that the structures are related to the Marconi Company, seems more plausible based on the similarity of construction materials.

In addition to the above listed buildings, three complexes of structures are noted on Plate #11 of the Franklin Survey Map (1941) as being on land now within the Evans Area. In the area now occupied by Bldg. S-43, currently an administration building (see Figure 1-4c), three structures - one frame, one stone on concrete, and one stucco - are represented on the 1941 map. These structures, and a fourth shown on a

1942 grading plan, (FME-7-1 - FME-7-4) may have been outbuildings associated with the "G. Woolley" farmstead (FME-2) apparently located in this area. As noted in Section 2.2.3, the Marconi Company purchased land from Woolley in 1913. At this time it is not known if any structures were located on the transferred lot. The Woolley structure dates prior to 1851.

The second complex of structures, possible a farmstead, was located to the southwest of Bldg. T-91 in the southeast section of the Evans Area (see Figure 1-4d). A total of six frame buildings, on a 3 a. lot of land, are listed as being owned by 'George E. Rogers' on the 1941 map. As there does not appear to have been any subsequent use of the area by the military, potential archeological and architectural remains may be present. The potential sites have been assigned numbers FME-6-1 - FME-6-6.

The third, and final, complex of structures was located approximately 300 ft. south of Brighton Avenue and 500 ft. east of Watson Avenue (Figure 1-4b). A total of five frame structures on a 34 a. lot are listed as being owned by 'Lucia C. Driscoll' on the 1941 map. The structures were standing after the land was purchased and developed by the Signal Corps. A 1944 Post Layout and Reservation Map Camp Evans (Plan #546) shows four of the buildings as being numbered 150, 151, 152, and 153. While the buildings are no longer standing, sub-surface remains associated with the structures may be extant. The potential archeological sites have been numbered FME-8-1 - FME-8-5.

4.2.5 Military Occupation

The following is a brief outline of those Fort Monmouth structures, support facilities, and activity areas for which subsurface archeological remains may be extant. A listing of the potential sites can be found in Table 4-4.

In order to systematically list the sites of potential cultural resources this section will be divided into three time periods which approximate the major phases of construction at Fort Monmouth (Main Post), the Evans Area, and Camp Charles Wood prior to 1950. The time periods are;

1. Camp Alfred Vail and The Radio Laboratories (1917 - 1923)

2. Fort Monmouth (Main Post) (1924 - 1936)

3. Fort Monmouth (1937 - 1950) including the Evans Area and Camp Charles Wood.

Camp Alfred Vail and The Radio Laboratories c. 1917 - c. 1924. According to documentary sources, a total of 156 single-story frame structures were built between June and December 1917 on the property owned by Camp Alfred Vail. The wooden structures of the encampment, designed for temporary occupancy, were in all probability built on concrete slab or masonry block foundations without basements. The main portion of the camp was

located to the south of Parker's Creek and west of Oceanport Avenue on the site of Monmouth Park's c. 1890 grandstand and paddock area (FMM-15-1 - FMM-15-87). In addition to barracks, (FMM-15-9 - FMM-15-14, FMM-15-22 - FMM-15-30, FMM-15-35 - FMM-15-40) and a tent encampment area, individual structures for a headquarters (FMM-15-1), hospital (FMM-15-14), guard house (FMM-15-3), and a bakery (FMM-15-5), were erected.

To the north and east along the west side of Oceanport Avenue was located the motor transportation department (FMM-16-1 - FMM-16-12). Further to the east, along the New York and Long Branch Railroad siding, the Quarter Master's Department warehouses were located (FMM-17-1 - FMM-17-17).

The Radio Laboratories were situated along both sides of the southern extent of Oceanport Avenue. Along the east side of the road were built four airplane hangars and the original flying field (FMM-19-1 - FMM-19-8). Opposite the hangars, on the western side of Oceanport Avenue the laboratory structures were constructed (FMM-21-2 - FMM-21-37) and surrounded by a fence. To the west of the lab area a "new" flying field was in operation by 1919.

None of the 107 structures and support facilities, which are potential archeological sites, built on Camp Alfred Vail during the period c. 1917 - c. 1923 are extant (see Table 4-4). Subsequent construction of Fort Monmouth (Main Post) facilities resulted in the demolition of all of the buildings.

Likewise, the majority of the structures built for the Radio Laboratories were demolished prior to 1924. A total of 47 potential sites have been identified (Table 4-4). Structures surviving for this period include Bldg. # 104, the print plant (formerly Hangar #4), and Bldg. 142, the box and crate shop, as denoted on the most recent site plan of Fort Monmouth (Main Post) (Figure 1-2d).

Fort Monmouth (Main Post) 1924-1936. After Camp Alfred Vail was declared a permanent post of the Signal Corps in 1925, a plan to establish lasting facilities on the post was initiated. Structures from this period include a complex for troop barracks, and the old hospital, both located along the west side of Oceanport Avenue. The barracks, currently designated Bldgs. 205-208, retain their original function, while the hospital (Bldg. 209) has been converted to administrative purposes.

In 1929, another group of permanent buildings were constructed after the Army transferred most of the administrative activities and personnel of the Signal Corps to Fort Mommouth. Built during this phase of construction was the Headquarters Building (Bldg. 286 - Russel Hall), a new Radio Laboratory (Bldg. 283, presently a research and development administration building), a Post Theater (Bldg. 275, presently the post Museum), a Fire Station and Guard House (Bldg. 282), and numerous officer's quarters and family housing. Along the New York and Long Branch Railroad a number of Quarter Master warehouses were built (Bldgs. 279, 280, 281 and 286).

In summary, the majority, if not all, of the approximate 102 permanent buildings constructed during the period 1924-1936 are still standing. Cartographic evidence suggests that the temporary buildings constructed during the period have been demolished. Temporary structures were built in the Quartermaster's area and in the vicinity of Squier Laboratory. No information about the exact dates or method of construction and demolition of these nine buildings (designated FMM-15-79 - FMM-15-87) has been reviewed.

Table 4-4 lists the sites of potential archeological remains for structures built in the period 1924-1936.

Fort Monmouth 1937-1950. During World War II the facilities of Fort Monmouth underwent a new phase of construction and expansion. Under the national defense program three Field Laboratories in Monmouth County were acquired in the fall of 1939: the Coles Area in Lincroft, the Watson Area in Eatontown and the Evans Area in Wall Township, near Belmar, New Jersey. The base continued to expand in the early 1940's as a 600+ a. parcel of land two miles west of Fort Monmouth (Main Post) was acquired in late 1941 and became known as Camp Charles Wood.

Potentially identifiable archeological resources associated with demolished structures for the period 1937-1950 will not be assigned individual site numbers due to their recent formation. The sites of potential archeological resources are listed in Table 4-4. An understanding of this recent land use and the extent to which these activities have impacted potential historic and prehistoric archeological resources is essential to any planned archeological fieldwork. The subsurface impact associated with these activities has been covered in Section 3.2.

Fort Monmouth (Main Post). To meet the need for housing and training of Signal Corps specialists, hundreds of mobilization - type facilities were constructed in the early 1940's at Fort Monmouth (Main Post). The temporary single story frame buildings were constructed on concrete platforms with crawlspaces.

On the former polo field east of Oceanport Avenue the '400' series of buildings were constructed between November, 1940 and January, 1941. Since 1944, a total of 33 of the 101 barracks have been demolished. The sites of former buildings in the '400' series are presently vacant as no subsequent construction has occurred in the area. Structures remaining from this phase of construction are now functioning as general purpose administration buildings and warehouses. Other buildings in the '400' series are currently used as vehicular, electrical, and field maintenance shops.

Located to the east of Oceanport Avenue, and along the south bank of Parker's Creek, a total of 96 buildings were constructed in the early 1940's. Designated the '500' series, only 10 of the buildings are presently standing. Three post-1950 structures have been built in the former area of the '500' hundred series.

Located to the west of Squier Laboratory and along the south bank of Parker's Creek a total of 92 structures were built in the '600' series.

Sixty-six of the structures, built in the first five years of the 1940's are still standing. Presently, the buildings are used as warehouses, storehouses, administrative purposes, enlistees barracks, and enlistees dinner halls. Very little subsequent construction has occurred on the former sites of structures.

Southwest of the '600' series of buildings, and to the south of the former right of way of the New Jersey Central Railroad, a total of 92 buildings in the '700' series were constructed in the early 1940's. Fifty-nine of the structures are currently standing. No subsequent construction has occurred on the sites of demolished structures. Standing structures are currently used for storehouses, maintenance shops, administration, and for a child support center.

In the area southwest of the '700' series, south of Husky Brook, a total of 85 buildings were constructed in the '800' series prior to 1944. A total of 27 of the structures are currently standing. Standing structures are now functioning as warehouses, storehouses, a dental clinic and a medical administration building. Additional construction of a post office, bank, and shopping center has taken place since 1950.

The '900' series of buildings were located to the north and east of the '800' series. A total of 66 buildings were constructed in the early 1940's, of which 20 structures are still extant. Standing structures are now used as vehicle and electrical maintenance shops, general and applied instruction buildings, and warehouses. Construction of new storage facilities have taken place since 1950 on the site of former '900' series buildings.

To the south of the '800' series of buildings along Main Street of Oceanport a total of 48 buildings in the '1000' series were constructed in the early 1940's. None of the structures is currently standing. Construction of a bachelor (female) officer's quarters, a hospital and a boiler plant has taken place in the area since 1950.

Between the '600' and '700' hundred series of buildings, south of Saltzman Avenue a total of 19 buildings in the '1100' series were constructed prior to 1944. Sixteen of the structures are still standing, and are currently used for warehouses. A single structure has been built in the area since 1950.

Camp Charles Wood. Immediately after the Signal Corps purchased the former Monmouth County Country Club parcel of land in October 1941 a program of construction was started. Within 90 days more than 100 structures were erected on Camp Charles Wood. Included in the development were barracks, mess halls, schools, recreation halls, as well as administration buildings, a post exchange, an infirmary, and a chapel. By 1944, prior to the end of World War II, approximately 330 structures had been built, according to a 1944 Post Layout and Reservation Map of Camp Charles Wood (Plan #546).

In general, the eastern portion of Camp Charles Wood (the area east of Hope Road) was not utilized by the Army to the same degree as the

western portion of the camp. In addition to adopting Gibbs Hall for an officers' club, a number of landscape features appear to have been retained by the Army. Possibly surviving from the Monmouth County Country Club-era is the golf course and the road network.

A total of 58 structures were built in the '2000' series on Camp Charles Wood, with the majority constructed in the eastern portion of the camp. To the northeast of Gibbs Hall, a complex of 18 structures were located adjacent to Tinton Avenue. Another 22 buildings were erected southwest of Gibbs Hall. The third major group of structures in the '2000' series was built along Hemphill Road to the west of Hope Road. A total of 12 structures were situated to the north and south of Hemphill Road. The remaining 6 structures were scattered over the eastern part of Camp Charles Wood.

Of the 58 structures built in the '2000' series, 24 buildings have been demolished since 1944. No subsequent construction has occurred in the sites of the demolished structures. Potential archeological remains may be extant for all of the demolished buildings.

The '2000' series of buildings on Camp Charles Wood consisted of 62 structures adjacent to the south of Tinton Avenue and north of Midway Lane in the western portion of the camp. Structures in the series served various functions: barracks, mess halls, and administration. None of the buildings is currently standing and subsequent to their demolition, officers' family housing was constructed in the area.

In the northwest corner of the base, south of Tinton Avenue and east of Pearl Harbor Road a total of 57 structures were constructed in the '2200' series. None of the structures, which were used as barracks, mess halls, and administration, is standing. After the demolition of the buildings in the early 1950's officers' family housing was constructed in the area.

The '2200' series of buildings on Camp Charles Wood consisted of 61 structures, the majority of which were located in the western portion of the base south of Colin Kelly Field. In addition to serving as barracks, mess halls, and administration a number of store houses, officers' quarters and two post theaters were built in the '2300' series. Only a single structure survives from this phase of construction, building T-2337, a post theater. Subsequent to the demolition of the temporary buildings a research and development laboratory and administration building (2700) was constructed in the area.

A total of 37 structures was built in the '2400' series on Camp Charles Wood. Situated to the south of Midway Lane the buildings functioned primarily as Signal Corps schools. Additional structures in the series included an infirmary, a PX, a firehouse, a dental clinic, a bowling alley, and a chapel. Only the chapel (Bldg. T-2412) is still standing. Subsequent to the demolition of the buildings in the early 1950's, officers' family housing was constructed in the area.

Buildings in the '2500' and the '2600' series, located in the southeast section of Camp Charles Wood, did not function as barracks or

school facilities, and therefore, a higher percentage of the structures have survived since the end of World War II. Structures in these groups served as radio laboratories, the post engineer's shops, the sewage treatment plant, and a Quarter Master's area along the siding of the Central Railroad of New Jersey. A total of 40 of the 75 structures built prior to 1944 have survived. No subsequent construction has occurred on the sites of the 35 demolished structures. Potential cultural resources associated with all of the major structures may be extant.

Evans Area. The Evans Area of Fort Monmouth was acquired by the Signal Corps as part of the national defense program of the late 1930's. Occupancy and the construction of facilities at the installation was initiated in November of 1941. Based on the 1944 Post Layout and Reservation Map Camp Evans (Plan #546) at least 155 structures, in addition to a number of existing farm structures and buildings surviving from the Marconi Company, were operational in approximately 2-1/2 years.

The main segment of the Evans Area was located at the south and west of the administration building (Bldg. 1 - the former Marconi Company hotel), between Monmouth Boulevard and Ridge Road. Besides laboratories, warehouses, and utility structures, a number of radar antenna shelters, accompanied by heater buildings and transformer vaults, were rapidly constructed. To the northwest along Watson Drive a second area included offices, recreational halls, a cafeteria, a PX, a well house, and a reservoir. To the south and east of the Marconi Hotel, along the east side of Marconi Road a research and development area, containing four unidentified structures, is indicated on the 1944 base map.

The above noted development area of the Evans Area, was the site of the Project DIANA radar antenna. In 1946, a team of U.S. Army Signal Corps researchers made the first radar contact with an extraterrestial body, when radio signals were bounced back from the moon. The 100 ft. antenna which transmitted the signal consisted of a steel tower topped by a double size SCR-271 radar set. The accomplishment marked the beginning of space-age communications and electronics. The experiments proved that radar pulses of sufficient energy could be emitted into space and returned through the earth's magnetic field. The achievement provided a basis for later research into communication with space vehicles, control of extra-atmospheric missiles, and the development of a global communicatidns network for telephone and telegraphic transmissions (National Register Nomination Form, Project DIANA Site, 1976).

A total of 22 Evans Area structures have been demolished since 1944, 19 of which were located in the Watson Drive area. No subsequent construction has occurred in the area. The original Project DIANA antenna has also been demolished, while the four unidentified structures on the 1944 map appear to be standing.

5.0

AN ASSESSMENT OF THE SIGNIFICANCE OF THE ARCHEOLOGICAL RESOURCE BASE AT FORT MONMOUTH (MAIN POST) CAMP CHARLES WOOD AND CAMP EVANS

5.1 THE SIGNIFICANT RESOURCE BASE

A summary of the archeological resource base at Fort Monmouth is presented in Table 5-1.

5.1.1 Prehistoric Archeological Resources

Because of the scanty, unquantifiable data presently available concerning known prehistoric sites within the study area, it is difficult to definitively assess their significance. All available data are the result of unsystematic surface collecting and therefore it is not possible to consider extant infrasite structure (i.e., presence or absence of stratigraphic distinctions in cultural deposition, storage pits, hearths) as a criterion for significance.

Within the area of Fort Monmouth, Site 28-Mo-126 is a multi-component Late Archaic through Middle Woodland site, which could therefore at minimum yield information about these prehistoric periods. Since there is also evidence of a shell midden deposit at this site, there is the potential for yielding evidence concerning prehistoric diet. Site 28-Mo-127 which yielded only Late Archaic material in surface collecting could be of particular significance for functional analyses of activities if it is indeed a single-component site. Such analyses are difficult if not impossible for most known sites because the Late Archaic material is mixed stratigraphically with material from other occupations and most tools are not stylistically recognizable by period.

Sites 28-Mo-128, 129 and 130 all have the potential of yielding information useful in understanding the prehistory of the area, but we do not have sufficient data at present to say more. This is also true of Sites 28-Mo-131, 132 and 138.

5.1.2 Pre-Fort Monmouth Sites

There are no known historic period archaeological resources at Fort Monmouth. However, the former locations of numerous structures and

Table 5-1. SUMMARY OF SIGNIFICANT ARCHEOLOGICAL RESOURCES ON FORT MONMOUTH (MAIN POST), CAMP CHARLES WOOD, AND THE EVANS AREA

Temporal Unit	Thematic Unit	Resource Type	Type Occurrence: Known Occurrences (no.)	Type Occurrence: Potential Occurrences (no.)	Type Occurrence: Other Likely Occurrences	Socio-cultural Assn.	Landform Assn.	Physical Integrity	Research Value[a]	RV CR[b]	Socio-cultural Value[c]	SCV CR[b]
Prehistory	Native American Subsistence and Settlement	NA	8	0	+	Native American		?	3	3	3	2
19th Century	Agricultural	Farmstead	0	17	+	American		?	3	2	3	2
	Commercial	NA	0	1	-	American		?	2	2	2	2
	Transportation	Road	0	1	+	American		?	1	1	1	2
		Railroad Depot	0	1	-	American		?	1	2	1	2
		Railroad ROW	0	1	-	American		?	1	2	0	2
	Industrial	Carriage Factory	0	1	-	American		?	3	3	3	2
		Ice Pond	0	1	-	American		?	1	2	1	2
	Recreation	Race Track	0	1	-	American		?	2	2	3	2
20th Century	Agricultural	Farmsteads		3+	-	American		?	3	2	2	1
	Transportation	Railroad ROW	0	1	-	American		?	1	3	0	2
	Industrial	Powerhouse	0	1	-	American		?	3	2	3	2
		Radio Antenna	0	1	-	American		?	2	2	2	2
	Military	Admin. Bldgs.	0	3	-	American		?	1	2	2	1
		Guard house	0	1	-	American		?	1	2	2	1
		Hospital	0	1	-	American		?	1	2	2	1
		Other Medical Buildings	0	1	-	American		?	1	2	2	1
		Bakery	0	1	-	American		?	1	2	2	1
		Barracks	0	15	-	American		?	1	2	2	1
		Stables	0	7	-	American		?	1	2	2	1

Table 5-1. SUMMARY OF SIGNIFICANT ARCHEOLOGICAL RESOURCES ON FORT MONMOUTH (MAIN POST), CAMP CHARLES WOOD, AND THE EVANS AREA (Continued)

Temporal Unit	Thematic Unit	Resource Type	Type Occurrence: Known Occurrences (no.)	Type Occurrence: Potential Occurrences (no.)	Type Occurrence: Other Likely Occurrences	Socio-cultural Assn.	Landform Assn.	Physical Integrity	Research Value[a]	RV CK[b]	Socio-cultural Value[c]	SCV CK[b]
		Stable Office	0	1	-	American		?	1	3	2	1
		Corral	0	1	-	American		?	0	3	0	1
		Pigeon Feed House	0	1	-	American		?	0	3	1	1
		Pigeon Coop	0	1	-	American		?	0	3	1	1
		Septic Tank	0	1	-	American		?	0	3	0	3
		Coal Bins	0	1	-	American		?	0	3	0	3
		Recreation Buildings	0	1	-	American		?	1	3	1	1
		Tent Camp	0	2	-	American		?	2	2	1	1
		Tent HQ	0	1	-	American		?	1	2	1	1
		Incinerator	0	1	-	American		?	0	3	0	1
		Water Tanks	0	2	-	American		?	0	3	0	1
		Motor Pool Structures	0	12	-	American		?	1	3	1	1
		Airfields	0	1	-	American		?	1	3	1	1
		Airplane hangers	0	3	-	American		?	1	2	1	1
		Quarter master buildings	0	16	-	American		?	1	3	1	1
		Pump station	0	1	-	American		?	1	3	0	1

Table 5-1. SUMMARY OF SIGNIFICANT ARCHEOLOGICAL RESOURCES ON FORT MONMOUTH (MAIN POST), CAMP CHARLES WOOD, AND THE EVANS AREA (Concluded)

Temporal Unit	Thematic Unit	Resource Type	Type Occurrence: Known Occurrences (no.)	Type Occurrence: Potential Occurrences (no.)	Type Occurrence: Other Likely Occurrences	Socio-cultural Assn.	Landform Assn.	Physical Integrity	Research Value[a]	RV CR[b]	Socio-cultural Value[c]	SCV CR[b]
		Laboratory buildings	0	41	-	American		?	1	3	2	1
		Post exchange	0	1	-	American		?	1	3	1	1

a. This is a subjective summary assessment of the overall research value (RV) of the resource class. It is an evaluation of the class' quality of preservation, representation of activity diversity or uniqueness, and temporal distinctiveness or reflection of diachronic relationships. It incorporates the need to avoid triviality, but to acquire what may be redundant data so as to discern patterns among those data. Based on these research values, the resource class under discussion is ranked from 0 (no value) to 5 (highest value), including "NA" if such an evaluation is believed to be impossible given the available information.

b. The Confidence Rating (CR) is a further evaluation of the preceived reliability of the research (RV) or sociocultural (SCV) values of the resource class. The following code records a judgement of that reliability, based on the available information: (1) the judgement is more guess than science, and likely not to be reliable; (2) the judgement is moderately reliable; (3) the judgement is most likely reliabile.

c. This is a subjective summary assessment of the overall sociocultural value (SCV) of the resource class. It is an evaluation of the social, religious, or political importance of the resource to a contemporary community, from 0 (no value) to 5 (highest value).

transportation routes have been identified during this study (Table 4-4 and Section 4). Whether or not any of these potential sites have any significant archaeological manifestations is unknown at this time due to the subsequent development of the property by the Army and the lack of archaeological test data.

The degree of prior ground disturbance at Fort Monmouth (Table 3-1) is difficult to assess. The nature, and depth of subsurface disturbances on the installation is extremely idiosyncratic, varying from area to area. This is a consideration because the archaeological significance of any potential site is directly related to physical integrity. For purposes of assessing the significance of the following sites, it is assumed that each site possesses some degree of physical integrity.

Based on documentary and cartographic evidence at least 29 potential non-military-related historic sites may be located on Fort Monmouth property. The sites cover a wide variety of functions and are representative of the historical development of the region. Potential historic sites within the boundaries of Fort Monmouth (Main Post), Camp Charles Wood, and the Evans Area, include 20 possible residential farmsteads, 4 transportation related sites, 4 industrial sites, 1 commercial site, and 1 recreational/resort site.

Residential Farmsteads (FMM-2 - FMM-5, FMM-7 - FMM-10, FMM-12 - FMM-13, FMW-1, FMW-5 - FMW-6, FMW-8, FME-1 - FME-3). Twenty residential farmstead sites were apparently established on what is now Fort Monmouth property over a wide date range. Nine of the sites (FMM-2 - FMM-5, FMW-1, FME-1 - FME-3) were extant prior to 1851, and another five (FMM-7,9,10,12, FMW-3) were set up prior to 1873. Three (FME-6 - FME-8) appear to date from the twentieth century. While none of the sites are attributable to the late seventeenth or early eighteenth centuries, the dates of the earliest settlement in the area, documentary evidence indicates a late seventeenth century domestic site may be within the bounds of Fort Monmouth (Main Post) (Section 2.2.3).

Additional documentary research will be needed to acquire basic information concerning these sites, such as dates of construction and demolition. All of these sites together with associated remains of outbuildings (barns, sheds, ice-houses, etc.) and features (wells, privies, etc.) have the potential for providing information about lifestyles of northeast Monmouth County-area rural residents over the time periods the farmsteads were in operation.

Pertinent questions pursuant to farmsteads based on the research priorities outlined in New Jersey's Archaeological Resources From The Paleo-Indian Period To The Present: A Review of Research Problems And Survey Priorities (Chesler 1982) have been presented in Section 2.3.1.

More specific research questions could probably be developed through additional documentary research into the history of the individual land parcels and their occupants and after an initial evaluation of archeological deposits.

There is nothing presently known about any of these potential archeological sites to suggest that they are in any way unique or even atypical. Similar sites of comparable age may be quite common in the northeastern Monmouth County area. However, any well provienced assemblages from these sites will probably contain data useful in interpretation of the region's culture history. When viewed in light of the few domestic sites that have been archeologically investigated in the region, the potential sites on Fort Monmouth may provide excellent comparative data as well as enlarge a meager resource base. In the absence of detailed documentary and archeological data, evaluations in terms of National Register of Historic Places criteria cannot be made at this time.

Commercial Sites (FMM-1). FMM-1 is the site of a structure which may have been a commercial building dating prior to 1851. The structure may be associated with the development of Oceanport as a steamboat terminal in the first half of the nineteenth century. In situ archeological and architectual remains when combined with documentary evidence may provide detailed information relating to the function and the time period the structure was in use. Any physical remains of the structure would be of potential local significance.

Transportation Sites (FMM-6, FMM-14, FMW-2). The railroads and inter-city trolleys developed late in northeastern Monmouth County when compared with other areas of New Jersey. Railroad and trolley lines connected the local area with regional and urban manufacturing and commercial centers. The sites of the following transportation related structures and routes, which have been incorporated into Fort Monmouth, may contain information about methods of construction for depots (FMM-14), railroads (FMW-2), and roads (FMM-6). In no way are these sites unique or atypical. Any physical remains of these structures or related features (such as track or track bed) would be of local significance.

Industrial Sites (FMW-3, FMW-7). As outlined in Section 2.2.3 few industrial concerns were established in northeastern Monmouth County. When compared to other parts of the state in the late nineteenth century, the area's industrial development is not notable. On a local level the Eatontown Hat Factory (later the site of a carriage factory, FMW-3) was an important attempt by local citizens to attract and financially maintain industry in the Eatontown area. Additionally, since similar sites (hat or carriage factories) have not been excavated in the state, the site may contain potential information for the interpretation of America's technological and industrial history.

At this level of inquiry the significance of site FMW-7, a pre-1889 ice pond, is difficult to assess. Additional documentary research will be needed to determine if an associated ice factory and support structures were erected in the area.

Monmouth Park (FMM-11). The last pre-Fort Monmouth site to be discussed is the thoroughbred race track, Monmouth Park -- a complex of structures (including grandstands, stables, etc.), railroad terminals, and race

courses -- which was in operation between the years 1870-1893. Monmouth Park reached a peak in size and number of days devoted to racing in the late 1880s. The park association owned a total of 660 a., the majority of which was later purchased by the Army and is now the site of Fort Monmouth (Main Post). The Monmouth Park plate of Wolverton's Atlas of Monmouth County (1889) depicts a total of 91 structures, including stables, grandstand, and miscellaneous untitled support structures. The park had railroad connections with the Long Branch and New York Railroad. Railroad related structures on park land included a turntable and passenger terminals.

Monmouth Park was an important factor in the post-Civil War revival of thoroughbred horse racing in America. Located near Long Branch, the most fashionable resort community in the country, the race track offered the longest racing season and some of the biggest prizes of the sport. Additionally, a number of important personages in the history of the sport, such as August Belmont, David Withers and Pierre Lorrilard, were financial backers of the association (Longrigg 1972, Monmouth Park Jockey Club 1954, Vosburgh 1922).

Potential archeological resources on Fort Monmouth (Main Post) property associated with Monmouth Park are unlikely to yield data relevant to the development or the layout of structures in the park. However, remains may be significant by virtue of their association with an important local institution and with persons significant in American history.

Marconi Company Sites (FME 4-1, FME 4-2). These two potential sites represent the sites of a receiving antenna mast and a power plant which formed part of the original installation of the Marconi Utilities Telegraph Company of America. Aside from information which might be learned about the construction and operation of these facilities, sites may be potentially eligible for the National Register by virtue of their association with a person who made significant contributions to science and commerce.

5.1.3 Fort Monmouth (Camp Alfred Vail) Sites 1917 to the Present

Due to, the relatively recent date of construction for the majority of Fort Monmouth's structures, (including the structures built on Camp Alfred Vail prior to 1925), and the wealth of documentary resources relevant to the built environment, archeological remains of demolished structures are unlikely to yield any significant information about the history of the installation. Camp Alfred Vail is notable for research in avionics which established the feasibility of the airplane as a versatile piece of military equipment.

Documentary resources, including base maps, architectural drawings, real estate records, and photographs will provide information concerning dates and methods of construction, and the function of structures over time. Also, documentary resources may yield information about the physical layout of the installations at different time periods.

In contrast to potential archeological remains associated with individual structures, there may be deposits on Fort Monmouth which can yield information about the day to day lives of the individuals stationed at Camp Alfred Vail and Fort Monmouth. Sites of concentrated refuse associated with mess and barrack facilities, for example, may contain large quantities of food and personnel refuse. Based on the assumption that higher ranked individuals were given certain privileges in the armed forces, these resources may reflect differences in rank. These differences should be reflected in archeological collections from which one may possibly determine the variety of foodstuffs consumed by officers versus enlisted men, or the amount and variety of personnel items associated with different ranks.

The data from these types of deposits can be compared with other branches of the military, over time, and for different geographical areas.

5.2 IDEAL GOALS AND OBJECTIVES

At the present time, only potential archeological resource locations have been identified at Fort Monmouth. Although the New Jersey State Museum files record the presence of several prehistoric sites within the Fort's boundaries, the reliability of this information is unknown. Documentary studies have indicated the potential for the presence of numerous historic period sites, including both sites pre-dating the military use of the area, and sites associated with the military. However, because of the nature and possible degree of prior ground disturbance the existence and integrity of many of these sites is questionable.

For the above reasons, the initial objectives of any additional archeological investigations at Fort Monmouth should be to: a) clarify and delineate in greater detail, through field testing, the extent of prior ground disturbance at the Fort, and b) locate and determine the integrity of any sites identified in this report as being of potential significance. A more detailed discussion of goals and objectives would be premature in the absence of more data. Once the extent of the actual archeological resource base at Fort Monmouth has been established, it should be reviewed in terms of the research issues identified earlier to determine how it should be utilized and managed.

6.1 FACILITY MASTER PLANS AND PROPOSED IMPACTS

Information presented in this section is based upon two sets of data provided by Fort Monmouth: a) large-scale maps of the Main Post and Camp Charles Wood showing the approximate locations of some construction projects proposed for fiscal years 1984, 1985 and 1986, and b) descriptions of construction projects proposed for fiscal years 1984-1989. It should be noted that no descriptions of some projects noted on the maps, and no locations for some of the projects for which descriptions are available, were available when this section was prepared.

6.1.1 Fort Monmouth (Main Post)

The Office of the Fort Monmouth Facilities Engineer has identified the proposed general locations of 26 projects involving new construction or ground disturbance associated with modifications to existing facilities at the Main Post (Figure 6-1). They have also provided descriptions of 17 of these projects, and seven additional projects for which no locational data have been provided. Proposed construction start dates, when these have been provided, are shown on Table 6-1.

Physical Fitness Center (Figure 6-1, 1) (Project No. 016300). This structure will be permanent and is to contain a gymnasium, swimming pool, locker rooms, special events areas, storage, and minimum administrative areas. Special foundations and site improvements will be required.

Military Personnel and Finance Administration Building (Figure 6-1, 2) (Project No. T01700). This will be a two-story masonry type building containing approximately 15,000 ft.^{2}. Demolition of two temporary structures (less than 50 years old) will be required.

Communications Equipment Facility Addition (SATCOMA) (Figure 6-1, 3) (Project No. 2M0185). This will be a permanent two-story structure with appended reception lobby of approximately 20,560 ft.^{2}. Storm drainage, sidewalks, and other site improvements will be required.

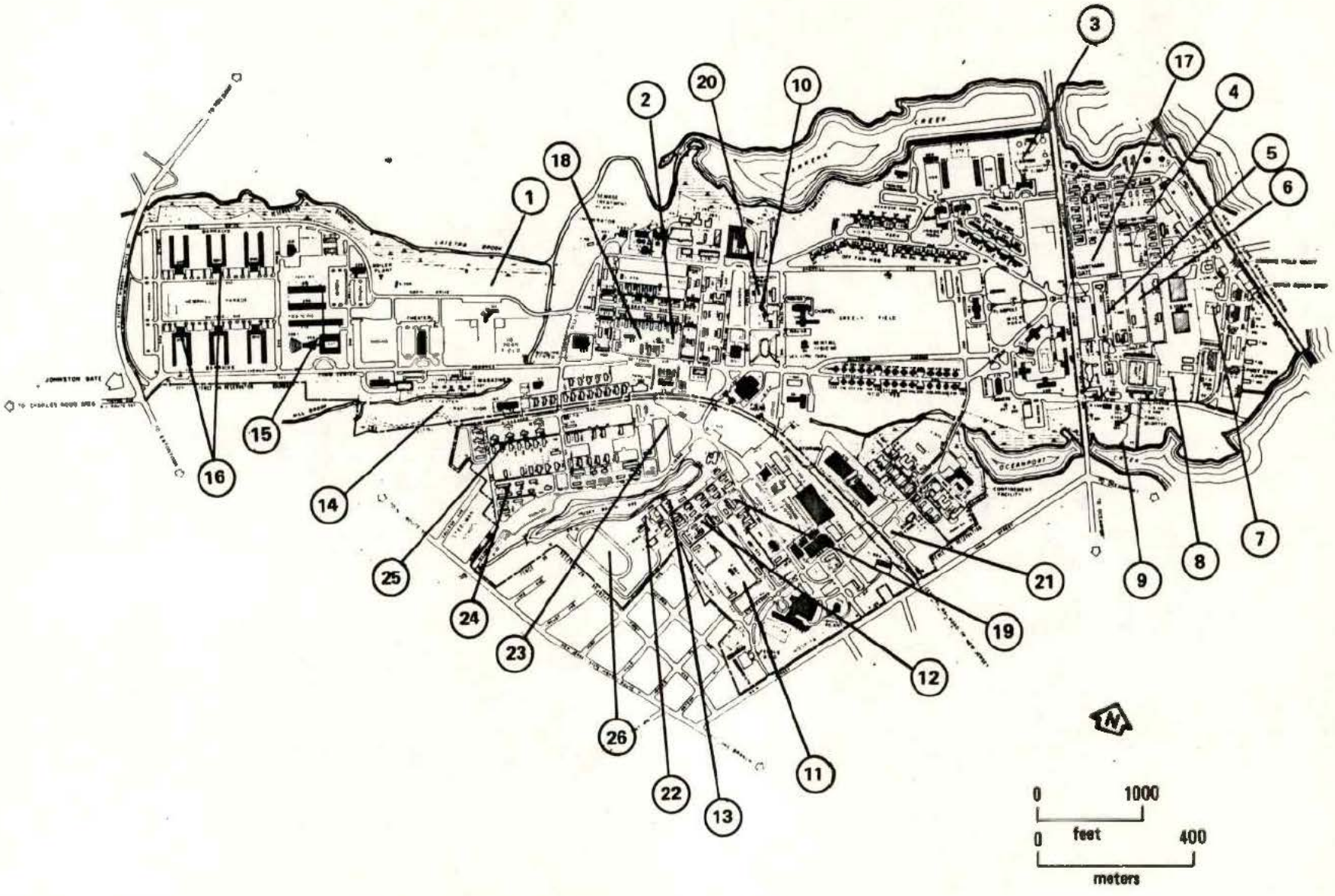

Figure 6-1. A MAP OF AREAS OF ONGOING OR PLANNED ACTIVITIES ON FORT MONMOUTH (MAIN POST) THAT COULD AFFECT ARCHEOLOGICAL RESOURCES

Table 6-1. A SUMMARY OF ON-GOING AND PLANNED ACTIVITIES AT FORT MONMOUTH THAT COULD AFFECT ARCHEOLOGICAL RESOURCES

Activities						Associated Resources				Impacts[c]		
Description	Date*	Area[a]	Size (a.)	Estimated Depth Below Surface (ft.)	Ratio of Disturbed to Total Area	Resource Class	Resources Known or Predicted[b]	NRHP Status[c]	Other Value	Direct	Indirect	Mitigation Options[c]
Construct MEDDAC Logistics Administration Center	4/89	M24	NA	NA	NA							
Construct child support center	4/86	M24	NA	NA	NA							
Construct recreation building	FY86	M24	NA	NA	NA							
Modernization of electrical distribution system	4/85	South of GDA-M4	NA	NA	NA	Prehistory	+	INSF				
						19th century recreation racetrack	FMM-11	INSF				
Installation of general instruction building air conditioning	4/85	M2	NA	NA	NA	19th century recreation racetrack	FMM-11	INSF				
Modernize bldgs. 1200 and 1204	4/87	M1	NA	NA	NA	19th century recreation racetrack	FMM-11	INSF				
Construct warehouse and open storage	4/89	NA	NA	NA	NA							
Construct controlled humidity warehouse	4/86	M21	NA	NA	NA	19th century recreation racetrack	FMM-11	INSF				
Construct Consol R&D Complex	4/86	NA	NA	NA	NA							
Construct tactical equipment shop	4/85	NA	NA	NA	NA							
Construct fallout shelter	4/87	NA	NA	NA	NA							

Table 6-1. A SUMMARY OF ON-GOING AND PLANNED ACTIVITIES AT FORT MONMOUTH THAT COULD AFFECT ARCHEOLOGICAL RESOURCES (Continued)

Activities						Associated Resources				Impacts[c]		
Description	Date	Area[a]	Size (a.)	Estimated Depth Below Surface (ft.)	Ratio of Disturbed to Total Area	Resource Class	Resources Known or Predicted[b]	NRHP Status[c]	Other Value	Direct	Indirect	Mitigation Options[c]
Construct outdoor swimming pool	4/87	NA	NA	NA	NA							
Construct post headquarters building	4/87	NA	NA	NA	NA							
Construct veterinarian facility	4/87	NA	NA	NA	NA							
Construct HISA HQ	NA	M10	NA	NA	NA							
Construct community center	NA	M24	NA	NA	NA	19th century, transportation roadway	FMM-6	INSF				
						recreation racetrack	FMM-11	INSF				
Construct mobilization processing center	NA	M10	NA	NA	NA	19th century recreation racetrack	FMM-11	INSF				
Construct preventive medicine facility	NA	M10	NA	NA	NA							
Construct drug and alcohol abuse center	NA	M24	NA	NA	NA							
Conversion of track and field facility	NA	M25	NA	NA	NA	Prehistory Native American	28-Mo-127	INSF				
Construct NCO Club	NA	NA	NA	NA	NA							
Construct youth center	NA	NA	NA	NA	NA							

Table 6-1. A SUMMARY OF ON-GOING AND PLANNED ACTIVITIES AT FORT MONMOUTH THAT COULD AFFECT ARCHEOLOGICAL RESOURCES (Continued)

Activities						Associated Resources				Impacts[c]		
Description	Date*	Area[a]	Size (a.)	Estimated Depth Below Surface (ft.)	Ratio of Disturbed to Total Area	Resource Class	Resources Known or Predicted[b]	NRHP Status[c]	Other Value	Direct	Indirect	Mitigation Options[c]
Construct vehicle maintenance shop	NA	NA	NA	NA	NA							
Construct physical fitness center	4/1987	M6	NA	NA	NA	Prehistory Native American	28-Mo-129	INSF				
						19th century recreation racetrack	FMM-11	INSF				
Construct military personnel and finance administration building	4/87	M10	NA	NA	NA	19th century transportation roadway	FMM-6	INSF				
						19th century recreation racetrack	FMM-11	INSF				
Construct Communications Equipment Facility (SATCOMA)	4/86	M20	NA	NA	NA	19th century recreation racetrack	FMM-11	INSF				
Construct coal-fired central heating plant	4/88	M21	NA	NA	NA	19th century recreation racetrack	FMM-11	INSF				
Construct GP maintenance shop and motor pool	4/87	M22	NA	NA	NA	19th century recreation racetrack	FMM-11	INSF				
Construct general purpose warehouse	4/87	M22	NA	NA	NA	19th century recreation racetrack	FMM-11	INSF				
Construct facilities engineer complex	4/89	M22	NA	NA	NA	19th century recreation racetrack	FMM-11	INSF				
Construct printing plant	4/87	M22	NA	NA	NA	19th century recreation racetrack	FMM-11	INSF				

Table 6-1. A SUMMARY OF ON-GOING AND PLANNED ACTIVITIES AT FORT MONMOUTH THAT COULD AFFECT ARCHEOLOGICAL RESOURCES (Concluded)

Activities						Associated Resources				Impacts[c]		
Description	Date*	Area[a]	Size (a.)	Estimated Depth Below Surface (ft.)	Ratio of Disturbed to Total Area	Resource Class	Resources Known or Predicted[b]	NRHP Status[c]	Other Value	Direct	Indirect	Mitigation Options[c]
Recreation pier improvements	4/85	M22	NA	NA	NA	Prehistory 19th century	+ +	INSF INSF				
Construct guest house	4/85	M10	NA	NA	NA	19th century recreation racetrack	FMM-11	INSF				
Construct expanded R&D facility and research park	4/87	W3	NA	NA	NA	Prehistory	+	INSF				
Construct pulse power test center	4/84	W4	NA	NA	NA							
Construct R&D motor park	4/89	W5	NA	NA	NA							
Construct R&D warehouse	NA	W6	NA	NA	NA							

* Projects not considered firm in any one year.

a Ground Disturbance Area.

b + = positive chance

c INSF = Insufficient information available by which to make a judgement

Coal-Fired Central Heating Plant (Figure 6-1, 4) (Project No. T01810). This will be a permanent facility with a generation capacity of approximately 200 MBTUH. Associated construction will include a rail spur, a paved coal storage yard, access roads, storm drainage, and utility lines.

General Purpose Maintenance Shop and Motor Pool (Figure 6-1, 5) (Project No. T01800). The maintenance shop will consist of block curtain walls. Special pits and foundations will be required for capital equipment. Approaches and parking areas will be paved. The motor pool will include a 3200 ft.^{2} administration/dispatch/classroom building; gasoline and diesel fuel tanks, pumps and islands; a 320 ft.^{2} oil storage building; an all-weather wash building capable of accommodating 32 passenger buses; 20,500 ft.^{2} area paved with asphaltic concrete. Associated storm drainage and utility lines will also be constructed. Construction will be preceded by demolition of 28,380 ft.^{2} of temporary structures erected c. 1940-1941.

General Purpose Warehouse (Figure 6-1, 6) (Project No. T00340). This will be a permanent structure with a reinforced concrete floor. Associated construction will include gates and fencing, and relocation of existing buried utilities. Construction will be preceded by demolition of two semi-permanent structures built in 1943 totaling 84,751 ft.^{2}, and 20 temporary buildings totaling 69,641 ft.^{2} constructed c. 1940-1941.

Facilities Engineer Complex (Figure 6-1, 7) (Project No. T00220). This project will include construction of an administration building, multiple shop buildings, lumber and pipe storage, paint storage, and a vehicle shed. Associated construction will include underground utilities, fencing, and paving. Demolition of 50,000 ft.^{2} of temporary buildings will be required.

Printing Plant (Figure 6-1, 8) (Printing Plant T01020). The proposed printing plant will be a one-story general type industrial building with a heavy duty reinforced concrete floor. Associated construction will include fencing and a parking area for 40 vehicles. Demolition of 12,693 ft.^{2} of temporary buildings will be required.

Recreation Pier Improvements (Figure 6-1, 9) (Project No. 160000). This project includes improving an existing marina by constructing a permanent sales/storage/administration building, extension of a waterfront bulkhead, construction of a launching ramp, and the installation of fencing and underground utilities.

Guest House (Figure 6-1, 10) (Project No. N/A). This permanent structure will contain 59 guest rooms. Associated construction will include walks, curbs, paving, landscaping, and installation of underground utilities.

MEDDAC Logistics Administration Center (Figure 6-1, 11) (Project No. T01840). This will be a single-story permanent building aggregating 7500 ft.^{2}. Construction at the proposed location will require demolition of two temporary buildings (7,740 ft.^{2}).

Child Support Center (Figure 6-1, 12) (Project No. 015100). This will be a permanent, single-story facility providing space for day child care for 152 children. Also constructed will be a partially paved, landscaped and equipped play yard, mechanical room, parking for 35 vehicles, sidewalks, fencing, and landscaping.

Recreation Building (Figure 6-1, 13) (Project No. 015200). This will be a permanent-type structure. Associated ground disturbing activities will include utilities connections, paving, construction of walks, curbs, and storm drainage, and other site improvements.

Electrical Distribution System Modernization (Figure 6-1, 14) (Project No. 012900). This project includes construction of a primary electrical substation with switching station to service the west end of the Main Post. The project will require the installation of a new underground distribution system from the new switching station to various buildings in the western part of the Main Post.

General Instruction Building Air Conditioning (Figure 6-1, 15) (Project No. 014800). Most work associated with this project will be on the interior of an existing structure. However, it does include construction of pads and fencing around exterior air conditioning machinery and transformers.

Modernize Buildings 1200 and 1204 (Figure 6-1, 16) (Project No. 012400). This project principally involves interior modifications. It also includes the rearrangement of water, sewer, and gas lines, limited paving and curbing, and landscaping.

Controlled Humidity (Mobilization) Warehouse (Figure 6-1, 17) (Project No. 2M0188). This will be a permanent type warehouse providing a storage area for prepositioned equipment for 6000 troops.

Warehouse and Open Storage (Project No. T01740). This project includes construction of three permanent type warehouses (each of 7680 ft.^{2}) a 7000 yd.^{2} open storage area, and demolition of 16,500 ft.^{2} of temporary buildings.

Consol R&D/Readiness Complex (Project No. T01680). This project will consist of construction of a multi-storied laboratory/administrative center. Associated with the project is the demolition of 126,000 ft.^{2} of buildings, and construction of utility lines, paving, walks, curbs, storm drainage, and landscaping.

Tactical Equipment Shop (Project No. 015900). This project will involve construction of a permanent vehicle maintenance facility. It will include construction of utility lines, fencing, paving, parking areas, and other site improvements.

Fallout Shelter (Project No. T01790). The project includes construction of a twin multiple arch shelter with a 4 in. concrete floor and concrete footings and a minimum of 1.5 ft of earth cover on top.

Outdoor Swimming Pool (Project No. T01510). A 63 x 82 ft. swimming pool with a 10 ft. wide concrete pavement around three sides and a 20 ft wide paved area at one end will be constructed. Associated construction will include fencing, lighting, and a 30 car parking area.

Post Headquarters Building (Project No. T01690). This will be a two story masonry building with a paved parking area for 100 cars. Utilities, sidewalks, and landscaping are included.

Veterinarian Facility (Project No. N/A). This will be a prefabricated steel building constructed on a concrete slab. Construction will include landscaping and minimum exterior paving and curbing.

Other Projects. Projects shown on Figure 6-1 for which no descriptive data are available and which are likely to involve ground disturbance include construction of HISA HQ (Figure 6-1, 18), a community center (Figure 6-1, 19), a mobilization processing center (Figure 6-1, 20), a preventive medicine facility (Figure 6-1, 21), a drug and alcohol abuse center (Figure 6-1, 22), an NCO club (Figure 6-1, 23), a youth center (Figure 6-1, 24), a vehicle maintenance shop (Figure 6-1, 25), and conversion of the track and field facility (Figure 6-1, 26).

6.1.2 Camp Charles Wood

The Office of the Fort Monmouth Facilities Engineer has identified the proposed locations of four proposed projects which will involve ground disturbance at Camp Charles Wood (Figure 6-2). Descriptions of two of these, and a third project whose exact location is unavailable, were provided during the preparation of this report.

Pulse Power Test Center (Figure 6-2, 1) (Project No. 014600). This project includes construction of a 60 x 120 ft. pre-engineered steel structure and an adjoining two-story 50 x 150 ft. slab on grade lab building. Included as part of the project is construction of a fenced outdoor substation/yard.

R&D Motor Park (Figure 6-2, 2) (Project No. T00640). This will be a metal wall building constructed on a concrete slab. The project also includes construction of two gas pumps on an island, a two vehicle wash rack, and a fenced hardstanding area.

C4 RD&S Facility, Phase I (Project No. T01960). This will be a permanent structure housing the Software Development Support Center. Associated construction will include storm drainage, roads, parking areas, walks, and other site improvements. (This project may be the same as the one labeled "Expanded R&D Facility and Research Park" on master plan maps provided by the Fort Monmouth Facilities Engineer. The location of that project is shown as item 3 on Figure 6-2.)

R&D Warehouse (Figure 6-2, 4). No description of this project was available for incorporation into this study.

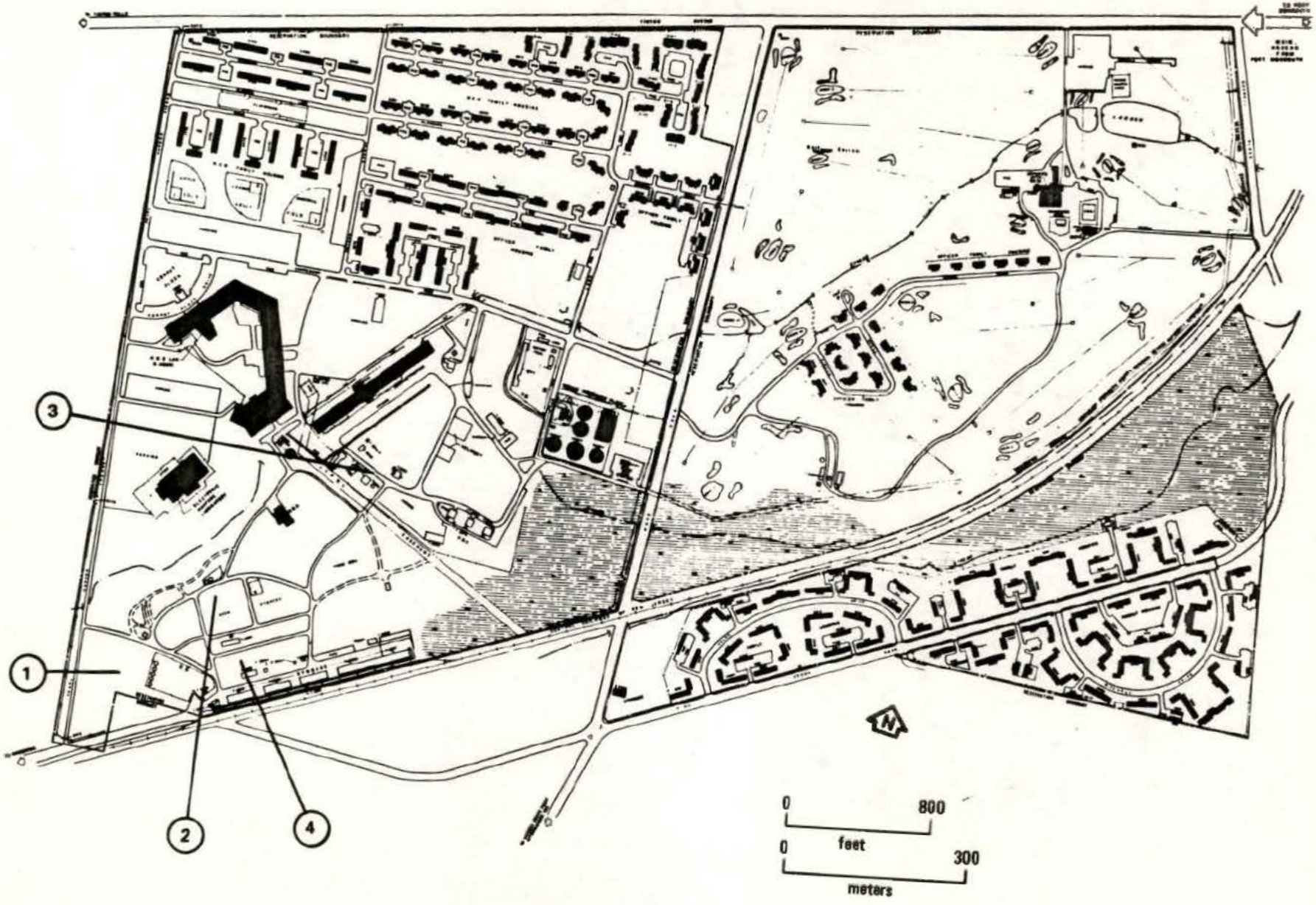

Figure 6-2. A MAP OF AREAS OF ONGOING OR PLANNED ACTIVITIES ON FORT MONMOUTH (CAMP CHARLES WOOD) THAT COULD AFFECT ARCHEOLOGICAL RESOURCES

6.1.3 The Evans Area

The Office of the Fort Monmouth Facilities Engineer provided no information regarding proposed future construction at the Evans Area. Discussions with installation personnel indicated that a large amount of small-scale ground disturbance occurs in the various test areas. This is the result of the burying of small electrical lines and the installation and subsequent removal of temporary test equipment.

6.2 APPROPRIATE ARCHEOLOGICAL MANAGEMENT GOALS WITHIN FORT MONMOUTH

6.2.1 General Facility Planning Needs

The analysis of prior land use and ground disturbance presented in Section 3 indicates that most of the Main Post and Camp Charles Wood, and large portions of the Evans Area, have been disturbed to some extent. However, the exact degree of disturbance in any specific location is almost impossible to evaluate for much of the installation. For this reason it is possible that ground disturbing activities in the vicinity of any of the potential sites listed in Table 4-4 may reveal either archeological remains associated with non-extant military structures and/or activities, or remains of structures or activities associated with the pre-military use of the site. The latter are most likely to occur, in the case of historic period sites, at the approximate locations given for such sites in Table A-1; previously unrecorded prehistoric sites are mostly likely to occur in areas where prior ground disturbance has been minimal and which are associated with factors conducive to aboriginal use or settlement (e.g., bodies of water).

The known and potential archeological resource base at Fort Monmouth is such that a total survey of the Fort is neither necessary nor warranted. Full-scale field surveys should be limited to a) areas identified as having had no or only minimal prior ground disturbance (which are not for other reasons unlikely to contain archeological remains) and b) areas where future construction is planned and which also correspond with the locations of potentially significant known or potential archeological resources.

All areas (included within numbered GDA's in this study) in which future major ground disturbing activities are planned should also be subject to limited (as opposed to full-scale) archeological field investigations whose primary purpose would be to confirm the extent of prior ground distubrbance. If such testing revealed areas of no or minimal disturbance a full-scale field survey should be implemented in those specific areas. Limited testing should also be conducted at the locations of identified potential archeological sites which are likely to be significant.

Because a complete survey of Fort Monmouth is not recommended, several procedures need to be instituted to increase the degree of protection offered to previously unidentified archeological resources at the Fort. First, all military and civilian personnel should be required to report the discovery of any archeological remains and advised that the

removal or disturbance of such remains from installation property is prohibited. In connection with this military police and other security personnel should be trained to enforce, as per AR 420-40, laws that protect historic and archeological properties and, as per AR 190-31, measures to be taken to reduce and eliminate illegal activities affecting such properties. Second, all existing easements through Fort property should be reviewed and, if necessary, modified to incorporate provisions which provide for the protection of archeological resources in these areas which might be affected by activities undertaken by the easement holders. Third, procedures for handling unanticipated discoveries of archeological remains need to be developed and instituted. Finally, a procedure should be established to formalize a regularly scheduled review of changes in the Fort's Master Plan to ensure that such changes do not in turn necessitate modifications in this archeological management plan.

6.2.2 Project Specific Resource Protection or Treatment Options

Table 6-1 contains a summary of planned future development at Fort Monmouth. The majority of proposed projects (for which location data are available) are in areas which are believed to have been subjected to considerable prior ground disturbance, and which do not correspond with the locations of any potential archeological resources as identified on Figures A-1a-A-1d. Projects which are exceptions to this with recommended protection or treatment options are discussed below.

Physical Fitness Center. This project will be located in GDA-M6, an area which is believed to have been subjected to only minimal disturbance. A known prehistoric archeological site, 28-Mo-129, is believed to be located in this same general vicinity. An archeological field investigation, incorporating a subsurface testing program, should be conducted at this location no later than summer, 1985. This will ensure that adequate time is available for additional archeological studies if any are necessary prior to the 1987 construction start date. If the presence of 28-Mo-129 or other potentially significant sites is confirmed, project modification is recommended to avoid or minimize ground disturbance which might affect such sites.

HISA HQ and Military Personnel and Finance Administration Building. These two projects will be located in GDA-M10, in an area which was formerly the site of several temporary structures erected in 1944. Remains of such structures would not be significant. However, the former right-of-way of a pre-1873 road, Horseneck Point Road, ran through this area. It is possible that pre-twentieth century structures may have been located adjacent to this feature. An archeological field study incorporating sub-surface testing should be conducted at the proposed construction sites.

Recreation Pier Improvements. This project, located in GDA-M22 on the north shore of Oceanport Creek, is in an area which because of its physiographic setting, may contain archeological remains associated with aboriginal settlement along, or use of, the creek. In addition, as noted in Section 4.2 early historic period archeological resources for which there is no documentary evidence may also be found in this area. The exact nature of disturbance associated with the construction of the

existing pier is not known. An archeological field investigation should be made of this area to evaluate the extent of prior ground disturbance and determine the presence or absence of previously unidentified archeological remains.

Electrical Distribution System Modernization. The primary component of this project is construction of an electrical substation in an area south of Mill Brook which appears to have been subjected to only very limited prior disturbance. The lack of prior disturbance and the location of the project area adjacent to Mill Brook means that this site is one of relatively high archeological potential. An archeological survey of this area, including subsurface testing, should be conducted immediately since the start of construction is anticipated in April 1985.

Conversion of the Track and Field Facility. Details regarding this project are not available. It is located in GDA-M25 which is believed to be only moderately disturbed, most disturbance having been associated with construction of the existing track in 1954. Prehistoric archeological site 28-Mo-127 is reported to be located just east of the track. An archeological survey to assess the extent of prior disturbance and determine the presence or absence of archeological remains should be conducted at least 18 months prior to the start of any ground disturbing activities.

Pulse Power Test Center. This project will be located in GDA-W4 at Camp Charles Wood. GDA-W4 is believed to have been subjected to only minimal prior ground disturbance. An intermittent stream currently runs through the area in close proximity to the location of the proposed project. An archeological survey including sub-surface testing should be made of the project site at least 18 months prior to the start of pre-construction site preparation.

6.2.3 Summary of Recommended Management Directions and Priorities for Effective Compliance and Program Development.

The following list represents archeological resource management tasks which should be undertaken at Fort Monmouth:

- Archeological surveys of the sites of proposed future construction projects which are located in areas of minimal prior ground disturbance or which are located in areas where potential archeological sites have been recommended. These areas include the proposed sites of a physical fitness center, HISA HQ, a military personnel and finance administration building, recreation pier improvements, electrical distribution system modernization, track and field facility improvements and a Pulse Power Test Center. With the exception of the last which is located at Camp Charles Wood, all are proposed for the Main Post.

- Archeological surveys should be conducted in areas identified in this report as having had no or only minimal (<30 percent) prior ground disturbance and which are not for other reasons (i.e.,

wetlands) unlikely to contain archeological remains. See Section 3.2 for description of these areas.

- Limited archeological survey of all other sites of proposed future development for the primary purpose of confirming and documenting prior ground disturbance.

- Limited archeological testing of locations of identified potential archeological sites likely to be significant for the purpose of confirming their locations and estimating their physical integrity.

- Institute an education program for installation personnel which includes a) training military police and other security personnel on the need to enforce the laws manadating the protection of historic and archeological properties, b) advising all personnel of the Army's historic preservation responsibilities and the need to report the discovery of archeological finds to the Facilities Engineer.

- Develop a formal emergency discovery procedure to deal with the accidental discovery of archeological materials during construction or operational activities.

- Develop a procedure for the periodic update of this archeological management plan (or Historic Preservation Plan developed from it) as necessitated by changes in the Fort's Master Plan.

- Review and modify, as necessary, all existing easements through Fort Monmouth property to ensure that they include provisions for protecting archeological properties within the easement areas.

6.3 ESTIMATED SCOPES OF WORK AND COST LEVELS FOR PRESENTLY IDENTIFIABLE MANAGEMENT NEEDS

This section contains preliminary scopes-of-work for each of the various components of the archeological management program outlined in Section 6.2.3. Certain specifications are common to many of the recommended work scopes and unless specific mention is made in a particular scope for variations in these, it should be assumed that they apply in all cases.

- All work should conform to the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation.

- All personnel must meet the minimum qualifications established in AR 420-40C for the positions they will hold.

- All excavation units should be of a depth sufficient to reach sterile Pleistocene deposits or confirm prior disturbance.

- o All excavated material, except that from excavation within clearly disturbed areas, should be screened through 1/4 inch hardware cloth.

6.3.1 Archeological Survey of Selected Future Construction Sites

Scopes-of-work described in this section cover archeological surveys of the sites of proposed future development for which locations are available, and which are in areas believed to have had only minimal prior ground disturbance and/or where potential archeological sites have been identified. No detailed data on the actual sizes of construction areas are available. For this reason best-guess estimates have been made based upon available project descriptions. All projects are in areas which are presently sodded or whose surface is otherwise obscured. More detailed scopes-of-work would be inappropriate in the absence of more detailed project descriptions. Costs are for identification surveys only, and do not include work associated with gathering detailed data of the kind normally needed to support requests for formal determinations of National Register eligibility, or work associated with mitigation (data recovery). The scope of such work on a given project is dependent upon the results of the identification surveys recommended here. In addition, estimated costs do not include costs for heavy equipment rental (e.g., backhoes) which may be required if survey areas, contrary to the assumption made here, are either paved or covered with extensive overburden deposits.

It is recommended that conduct of the archeological investigations suggested below be incorporated into any scope-of-work for detailed construction project design which may be let by the Department of the Army as part of a request for bids. This would insure that input from archeological studies is incorporated into project design. It would also help to insure that funding will be available for such studies. Six proposed projects have been identified at the Main Post, and one at Camp Charles Wood, which will be located in areas believed to have had only minimal prior disturbance.

The Physical Fitness Center. The Physical Fitness Center will be located in GDA-M6 on the north side of North Drive in an area where a prehistoric archeological site (28-Mo-129) may exist. It is estimated that less than four a. of ground will be disturbed. Testing for archeological resources should be accomplished through a series of sub-surface shovel tests placed at approximately 15 m intervals to ensure the discovery of previously unreported small sites. These should be supplemented with excavation of several 1 m square test units in the portion of the area believed to contain 28-Mo-129. The exact location of these supplemental tests should be determined in the field by the field director.

Archeological testing at the site of the proposed Physical Fitness Center would include 11 person-days of field time, two days for laboratory analyses, and six days for report preparation. Out-of-pocket expenses including travel, reproduction, and graphics preparation are estimated at $450. Total cost of archeological investigations at the site of the proposed Physical Fitness Center should range from $5500-$6500.

HISA HQ and Military Personnel and Finance Administration Building. The proposed HISA Headquarters and the proposed Military Personnel and Finance Administration Building will be located adjacent to one another, north of Saltzman Avenue in GDA-M10. The total area involved is estimated at two a. Several temporary structures were formerly located in this area but have been demolished. These are not considered significant but their construction and demolition is assumed to have resulted in disturbance of the immediate vicinity. Since the exact locations of the proposed projects are not available it is not possible to determine if, or to what extent, project locations correspond with disturbed areas.

Archeological field surveys should be designed to both define previously disturbed areas and identify any archeological resources which might be extant. Historic period resources are most likely to be located adjacent to the former Horseneck Point Road (FMM-6) which ran through the area.

Subsurface testing should consist of a limited number of shovel tests placed at the discretion of the field director in such a manner as to confirm prior disturbances and identify undisturbed portions of the project area. Additional shovel or auger tests should be located at approximately 3 m intervals perpendicular to the estimated location of the Horseneck Point Road ROW, for the purpose of confirming the road's location. Once the road's position has been established a third series of tests at 10 m intervals should be made parallel and adjacent to the roadway's former location. These should be confined to the portion of the road's ROW passing through the project area.

Prior to any fieldwork documentary research, emphasizing analysis of road returns data for Horseneck Point Road, and assessors records should be undertaken.

Archeological work within this area is estimated to include 2 person-days for archival research, 5 person-days of field time, 1 day of laboratory time, and 6 days for report preparation. Out-of-pocket expenses are estimated at $500. Total cost of this work should range from $5000-5500.

Recreation Pier Improvements. This project is estimated to involve less than one acre of land for buildings and a maximum of 400 ft. of bulkhead construction. Reasons for recommending an archeological survey for this project are described in Section 6.2.2. Such a survey should include shovel testing at 10 m intervals throughout the direct impact area, including along the portion of the shoreline adjacent to proposed bulkhead construction. At least two 1 m^2 test units should also be excavated if shovel testing reveals areas which have not been subject to any prior ground disturbance. The small interval for shovel tests is necessary to insure that small prehistoric activity sites which might have been associated with utilization of marine resources at Oceanport Creek are located if present.

In the event that prehistoric occupation surfaces are identified in the 1 m^2 test excavations, bulk soil samples should be collected for pH and flotation analyses to evaluate the likelihood for recovery of

small-scale floral and faunal remains.

Archeological work within this area should involve 7 person days of field time, 1 day for laboratory work, and 3 days for analysis and report preparation. Out-of-pocket expenses are estimated at $450. Total cost is estimated to range from $3500-$4000.

Electrical Distribution System Modernization. It is estimated that this project will include disturbance of approximately one acre in an archeologically sensitive area (see Section 6.2.2) and an estimated 2500 ft. of trenching through areas that have been subjected to varying degrees of prior disturbance. The one acre area that will be the site of electrical substation construction should be shovel-tested at 20 m intervals. Shovel testing along proposed underground cable routes should be at intervals of 20 m to 50 m depending upon the degree of prior disturbance. Work effort should involve 3 person-days of field time and 4 days for all analyses and report preparation. Out-of-pocket expenses should approximate $300. Total costs should range from $2000-2500.

Conversion of Track and Field Facility. No details regarding this project are available. It is estimated that less than two acres will be impacted. Sub-surface testing (both shovel tests and 1 m test excavations) should be undertaken throughout the impact area. One meter square test units should be located in areas showing the least prior disturbance near both Husky Brook and the reported location of 28-Mo-127. The remainder of the area should be shovel tested at 20 m intervals. Associated work effort is estimated to be identical with that for proposed recreation pier improvements - $4000-4500.

Pulse Power Test Center. This proposed project will be located in what is believed to be a relatively undisturbed area in the extreme southwest corner of Camp Charles Wood. An estimated three acres of land will be involved, plus an unknown amount of trenching beyond the three acre area for the installation of underground utilities.

An archeological field investigation consisting of shovel tests at 20 m intervals throughout the impact area is recommended. This study should require 3 person-days of field time and 3 days for report preparation and analysis. Out-of-pocket expenses should approximate $150. Total cost should range from $1500-$2000.

6.3.2 Archeological Surveys of Minimally Disturbed Areas

Analyses of prior land disturbance at Fort Monmouth (as summarized in section 3.0) and observations made during site visits have suggested that there are several areas at the Main Post, Camp Charles Wood and the Evans Area which have no, or only minimal, prior ground disturbance. By virtue of this fact, these areas are among those most likely to contain archeological remains whose existence has not been suggested in documentary sources.

Main Post. Minimally disturbed areas recommended for archeological survey include the area between the Nealis Avenue parking lot and the reservation boundary, the area south of the Avenue of Memories between

the Main Gate and Bldg. 1150, GDA-M6 located north of North Drive, the area south of GDA-M4 between Mill Brook and the reservation boundary, the area between Mill Brook and Wilson Avenue and north of the Avenue of Memories, the area between GDA-M9 and Parker's Creek, and the area between the Gosselin Avenue housing complex and Oceanport Creek (Husky Brook). With the exception of the first two, all are in relatively close proximity to bodies of water. The total acreage involved is approximately 60. Potential prehistoric archeological site 28-Mo-129 is believed to be located in the eastern end of GDA-M6. Two loci associated with a potential historic period archeological site (FMM-7) also exist within GDA-M6. Potential prehistoric site 28-Mo-126 is believed to be located along the edge of the undisturbed area north of GDA-M9.

Ground surfaces in all areas are obscured by vegetation making subsurface testing necessary. A 30 m shovel test interval is recommended for areas near bodies of water (with the exception of the eastern portion of GDA-M6 and the southern portion of the area north of GDA-M9 where a 10 m interval is recommended) and a 50 m interval for all others. In addition a series of judgementally placed shovel tests should be placed at the locations which documentary research has indicated may have been the sites of nineteenth century structures. The field director should have the discretion to modify the test interval in all areas if field conditions warrant. An estimated 23 person-days (including 12 field days) would be required to complete the survey and associated analyses and reports. Out-of-pocket expenses including travel and living expenses, and report preparation and reproduction are estimated at $1500. Total cost should range from $7500-$8500.

Camp Charles Wood. Areas believed to be less than 30 percent disturbed include GDA's W4, W9, and W10 totaling approximately 100 a. All of GDA's W9 and W10, and the eastern one-third of GDA-W4 are lowland forest dominated by red maple and dissected by Wampum Creek. The remainder of GDA-W4 is a combination of upland and lowland woods with white oak and sweetgum predominating. A portion of this area is a designated picnic ground. Within the lowland areas surface visibility is moderate to poor. Pedestrian survey should be undertaken during a season when vegetation is at a minimum. Surface inspection should be supplemented by small subsurface tests (shovel tests) located at the discretion of the field director in apparently undisturbed areas of high ground and areas which because of their geographic setting would have been suitable for short-term habitations by aboriginal groups. Shovel tests in areas of upland woods comprising the western portion of GDA-W4 should consist of shovel tests placed at approximate 30 m intervals. In addition the current condition of potential site FMW-2, a rail spur, should be evaluated, and additional shovel tests should be made at the presumed location at FMW-4 to determine if any remains are extant.

All excavated material should be either screened through 1/4 inch hardware cloth or carefully troweled through to retrieve any artifactual material which may be present. In lowland areas, maps should be prepared delineating the areas where surface inspection was the primary survey technique employed.

An estimated 24 person-day effort would be required to complete the survey of minimally disturbed areas at Camp Charles Wood. This includes 16 days of field time with the remaining 8 being devoted to analysis and report preparation. Out-of-pocket expenses are estimated at $2000. Total cost should range from $8000 - $10,000.

Evans Area. Minimally disturbed portions of the Evans Area include 5 a. east of Marconi Road, the majority of the Test Area north of Monmouth Boulevard (exclusive of GDA's E4, E5 and E9) including approximately 60 a. to the north of Laurel Gully Brook and 10 a. to the south, and the entire southern Testing and Training Area which comprises GDA-E10 and consists of approximately 53 a. The first of these areas is predominantly wooded and will require sub-surface testing to identify archeological resources; the second is mixed open and wooded land, with ground visibility in the open areas ranging from poor to moderate. Potential archeological sites FME-1, FME-2 and FME-6 are located within GDA-E10.

Pedestrian survey should be the first order survey technique in both Test Areas. This should be supplemented with shovel tests at 30 m intervals in all areas with no or poor surface visibility, and shovel tests placed on a judgemental basis, as deemed appropriate by the field director, along Gully Brook and the presumed locations of potential sites in GDA-E10. Such tests should be located in areas which because of their geographic setting or other factors would have been preferred for either short- or long-term occupation by aboriginal groups. All subsurface tests should be of sufficient depth to either document prior disturbance (of particular importance in the southern Test Area where numerous small-scale undocumented ground disturbing activities are reported to have taken place) or reach sterile Pleistocene deposits. Maps showing which survey techniques were used in which portions of the survey area should be included in the reports presenting the results of the survey.

Total work effort is estimated at 55 person-days for field work and an additional 27 days for report preparation and analysis. Out-of-pocket expenses are estimated at approximately $6000. Total cost for the scope-of-work described here should range between $23,000 - $28,000.

6.3.3 Archaeological Reconnaissance of Future Development Sites in Areas Believed to be Disturbed

The majority of the future development projects described in Section 6.1 and listed in Table 6-1 will be located in areas believed to have been previously disturbed and where no potential archeological sites have been identified. However, because of the suspected locus-specific nature of the ground disturbance at Fort Monmouth it is possible that small relatively undisturbed areas exist within the larger previously disturbed Ground Disturbance Areas identified in Section 3.0. For this reason it is recommended that a limited archeological reconnaissance be made of all such future construction sites for the express purpose of documenting the absence and/or low probability for the presence of archeological resources. The projects for which a reconnaissance is recommended are numbered 3-8, 10-13, 15-17, and 20-25 on Figure 6-1, and 2-4 on Figure 6-2. (Six additional projects described in Section 6.1.1 for which no

locational data are available are not included.) It is estimated that each of these projects will involve an average of one acre or less.

An archeological reconnaissance at these sites should consist of a visual inspection by a professional archeologist for the purpose of making a preliminary evaluation of the extent of any landscaping, grading, or filling which may have taken place at each project site, and to identify any area where there appears to have been no or only minimal disturbance. Small subsurface tests (shovel tests) should be made in areas which are characteristic of the site for the purpose of examining the soil profile for indications of grading, filling or other disturbance. Additional shovel tests, if required, should be placed in areas which in the opinion of the field director do not appear to have been disturbed. The exact number of such tests will depend upon site specific conditions.

Reconnaissance testing at the 20 project sites identified above should require an estimated 12 person-days of field time and an additional 12 days will be required for data analysis and report preparation. Out-of-pocket expenses including travel, living, report production should approximate $1850. Total cost for the reconnaissance should be $7500 - $8000.

6.3.4 Archeological Testing of the Locations of Potential Archeological Sites

A total of 54 potential archeological sites and site complexes were identified in Section 4 (see Table 4-4). These include 8 prehistoric sites (6 at the Main Post and 2 at Camp Charles Wood). The remaining potential sites date to the historic period and are primarily the sites of nineteenth century farmsteads and industries, or sites associated with the twentieth century military use of the Fort. Of these historic period sites and site complexes, 21 are located at the Main Post, 16 at Camp Charles Wood, and 9 at the Evans Area. Archeological investigations at these locations should initially be limited to determining whether remains of any of the potential sites which have been identified in this report are extant, and if so, establishing their exact locations and boundaries.

Prehistoric Sites. Of the 8 potential prehistoric sites identified at Fort Monmouth, only one, 28-Mo-129, is located in an area believed to be only minimally disturbed. A second, 28-Mo-126 may be totally or partially within either GDA-M9 or the undisturbed area to the north. At each of the 8 locations involved a visual inspection should be made by a professional archeologist (if not previously conducted as part of the work recommended in Section 6.3.3). This should be supplemented by subsurface tests (shovel or auger, as appropriate) at the presumed locations of each site for the purpose of exposing soil profiles which can, in turn, be used to evaluate the extent and limits, if any, of prior ground disturbance.

If these tests reveal undisturbed areas, supplemental tests should be made at regular intervals (10 m or less) until evidence of the site is encountered or until the field director is satisfied that the reported

location is incorrect. If evidence of the site is found its boundaries should be determined by excavation of additional shovel and/or auger tests. These should be supplemented by excavation of a minimum of one 1 m square test unit for the purpose of obtaining an artifact sample and bulk soil samples.

An estimated 35-40 person-days would be required to complete the work described. This includes an estimated 20-25 person-days of field time. Out-of-pocket expenses should be approximately $5000. The total cost for the work described should be $14,000 - $16,000.

Farmstead Sites. The inspection of historic maps of the area now occupied by Fort Monmouth indicate that in the nineteenth and early twentieth centuries that numerous farmstead structures and structure complexes were located on what is now the Fort. They have been designated as potential sites and are listed on Table 4-4. Ten are located at the Main Post (FMM-2 - FMM-5, FMM-7 - FMM-10 FMM-12, FMM-13), eight at Camp Charles Wood (FMW-1, FMW-5 - FMW-6, FMW-8) and eight at the Evans Area (FME-1 - FME-3, FME-5 - FME-9).

Additional investigation into these sites should include both documentary and field phases. Chains of title for each site should be developed to identify former owners and occupants and assist in refining site location data, differentiating between residences and out-buildings, and delineating property lines (site boundaries).

Field studies should include a) surface reconnaissance of the vicinity of each potential site location for the purpose of identifying depressions or surface remains which might represent cellar holes or other features and b) assessing the degree of grading, filling, and landscaping at each location. Unscreened auger tests should be made in those areas believed to be disturbed for confirmation purposes. Shovel tests should be excavated on a judgemental basis in minimally disturbed ares where surface indications were observed or where documentary research indicated the potential for the presence of features. Analyses should include an estimate of the feasibility and cost/effectiveness of phosphate or resistivity testing for the purpose of locating the sites of wells, privies, or trash deposits.

Approximately 40 person-days of effort, including 10 days for archival research, would be required to complete the work described. Out-of-pocket expenses are estimated at $2500. Total costs should range from $12,000 - $14,000.

Military Sites. The locations of more than 150 structures and features associated with Camp Vail were identified in Section 4.0 (see Table 4-4). All have been assigned relatively low resesrch value, and almost all are located in areas believed to have been extensively disturbed. Although sites of concentrated refuse associated with Camp Vail would be significant, if located, extant examples are not likely to be found in the disturbed areas where most of the potential military sites are located. No additional investigation of these sites is recommended.

Commercial, Industrial, and Transportation Sites. These sites include the location of a commercial structure associated with Drummond, Haynes and Company (FMM-1), Horseneck Point Road (FMM-6), Monmouth Park race track (FMM-11), Oceanport railroad depot (FMM-14), a rail spur (FMW-2), a carriage factory (FMW-3), an ice pond (FMW-7) and sites associated with the Marconi Company (FME-4). Investigation of the road and rail spur has been recommended as part of other investigations (see Sections 6.3.1 and 6.3.2). Archeological remains of the Monmouth Park race track are unlikely to exist and the significance of any remains that do is believed to be minimal (see Section 5.1.2). No additional work is recommended on these potential resources.

Archival investigations emphasizing title research and checks of assessors records should be undertaken in connection with FMM-1 - FMW-3 and FMW-7. A subsurface testing program should be undertaken at the locations of FMM-1, FMM-14, FMW-3 and FME-4. This should consist of judgementally placed shovel tests in areas which surface indications suggest have been subject to the least disturbance for the purpose of determining if remains of these sites are extant. In the case of FMW-7 tests should be placed aroung the periphery of the former ice pond site to determine if associated structures existed.

A total of 28 person-days will be required to confirm the presence or absence of archeological remains associated with these sites. Total estimated cost is $9000 - $11,000, including approximately $2500 in out-of-pocket costs.

6.3.5 Education Programs

During any orientations for newly assigned personnel or employees, mention should be made of DARCOM's historic preservation responsibilities. In addition, all contractors, Army personnel, dependents and visitors should be advised to immediately report the discovery of any archeological remains to the Director of Engineering and Housing and/or the Facilities Engineer (who should, in turn, notify DARCOM and the State Historic Preservation Officer). These same individuals should also be advised, as per AR 420-40-1.4f(5), that unauthorized collection of archeological and cultural materials is a felony and subject to prosecution. Any installation publications concerning rules and conduct at Fort Monmouth should be reviewed to include these requirements and warnings.

In addition, in accordance with AR 420-40-1.4e(11), military police and other security personnel should be trained to enforce laws protecting historic and archeological properties.

It is estimated that revision of installation publications will require one day of a professional archeologist's time at an estimated cost of $500. Unestimated expenses would include publication costs and time expended by installation personnel during briefings and orientation.

6.3.6 Emergency Discovery Procedures

Procedures for dealing with the discovery of historic properties

(including archeological sites) are detailed in AR 420-40-4.10. In the event of a discovery the installation commander (or his designee) should contact the Department of the Interior's Departmental Consulting Archeologist, and simultaneously notify DARCOM and the State Historic Preservation Officer.

To assist Fort Monmouth in conducting in the shortest time possible any archeological evaluations and/or necessary data recovery activities which may be required as a result of an emergency discovery, it is recommended that the Fort enter into an on-call services agreement with an institution or firm which can provide professional archeological consulting services. At the option of the Fort, a contract for these services could be issued on either a sole-source or competitive basis. In the case of the former, approximately three days of installation personnel time would be required. In the latter case, a greater but unknown amount of installation personnel time would be required to prepare and issue a formal Request-for-Proposal and to evaluate responses.

6.3.7 Review and Modification of Easements

Several utility companies currently have easements through portions of Fort Monmouth. Documents relating to these easements should be reviewed and, if necessary, revised to include provisions requiring an evaluation of the need for archeological investigations by the easement holders prior to initiating any ground disturbing activities. The easements should also be modified to include a requirement that Fort Monmouth be immediately notified in the event that an easement holder or an easement holder agent discovers any archeological remains.

At the Main Post easements include a 15 ft. wide and approximately 1000 ft. long easement to the Northern Monmouth County Regional Sewage Authority, a 20 ft. wide and approximately 1000 ft. long easement to the Northeast Monmouth County Regional Sewage Authority, and a 25 ft. wide and approximately 3000 ft. long easement to the Eatontown Sewerage Authority. Easements at Camp Charles Wood include several held by the Jersey Central Power and Light Company. These include a 50 ft. wide easement along the western edge of the installation, 15-25 ft. wide easements bordering the Central Railroad of New Jersey Right-of-Way, approximately 1900 ft. of a 50 ft. wide easement running across the southwest part of the installation. Other easements include road and drainage easements held by the Borough of Eatontown, a 20 ft. wide easement held by the Northeast Monmouth County Regional Sewage Authority which runs across the eastern half of the installation, and a 10 ft. wide easement held by the Eatontown Sewerage Authority.

An unknown amount of Fort Monmouth personnel time would be required to review these easements and negotiate any changes with the easement holders.

7.0
SUMMARY

All major, and what is believed to be a large majority of minor, information sources likely to have data relating to the archeology of the areas occupied by the Main Post of Fort Monmouth and the Fort's Camp Charles Wood and Evans Area sub-installations were reviewed for this study. That review indicated that several prehistoric sites are known to exist on the Main Post and Camp Charles Wood. Although the majority of land at all three installations has been disturbed to some degree, previously unknown prehistoric sites may exist in undisturbed areas.

The review also indicated that there was a limited nineteenth century use of all three areas, primarily as farmsteads. Prior to its purchase by the Army the Main Post was the site of Monmouth Park Racetrack. Remains of the track and associated structures, as well as remains associated with Camp Vail (the original Signal Corps installation at Fort Monmouth), may be extant. At the Evans Area, archeological remains of structures associated with the Marconi Company may also be present. At all three installations remains of non-extant mid-twentieth century military structures, principally of temporary and semi-permanent types, are likely to exist, but such remains are not likely to be of historic or archeological significance.

Among the institutions consulted as part of the basic data gathering for this overview were: Fort Monmouth (Historical Office and Office of the Facilities Engineer), the New Jersey State Museum, the New Jersey State Historic Preservation Officer, and the Monmouth County Historical Society. Historical societies in the municipalities of Allentown, Atlantic Highlands, Colts Neck, Eatontown (Historical Committee and Historical Committee Association), Fair Haven, Farmingdale, Hazlet, Holmdel, Howell, Keyport, Little Silver, Long Branch, Madison, Matawan, Middletown, Monmouth Beach, Neptune Township, Ocean Township, Ocean Grove, Oceanport, Pleasant Valley, Red Bank, Shrewsbury, Spring Lake, Tinton Falls, Wall, and West Long Branch, were also contacted.

Other institutions consulted were the deserted village of Allaire, Inc., Sandy Hook Veterans Historical Society, Twinlight Historical Society (Freehold), Union Landing Historical Society, the National Museum of Racing, Inc. (Saratoga Springs, N.Y.), the Hall of Fame of the Trotter (Goshen, N.Y.), the American Museum of Natural History, the Museum of the American Indian-Heye Foundation, the New York Public Library (Map Division), and the Navy and Old Army, Still Photo, and

Modern Military History branches of the National Archives. In addition, the "America: History and Life" data base of Lockheed's Dialog Information Retrieval Service which contains abstracts from more than 2000 history journals was consulted.

One visit was made to the Main Post, Camp Charles Wood, and the Evans Area by all the authors. Susequent visits were made by Bianchi and Klein for the purpose of conducting a detailed review of construction plans and drawings maintained by the Facilities Engineerng Division.

Several archeological survey programs are recommended for Fort Monmouth. These are designed to confirm the existence of known and potential archeological sites and assess the degree of prior disturbance at the sites of proposed future development.

Also recommended is an education program for Fort personnel, especially law enforcement personnel, and development of a plan to deal with emergency discoveries of archeological resources. Subsequent recommendations for the management of archeological resources at Fort Monmouth are dependent upon the results of the studies proposed here.

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APPENDIX A

This appendix contains information on the location of known and potential archeological resources on Fort Monmouth (Main Post), Camp Charles Wood, and the Evans Area. This information should be considered confidential and not for general public release.

Table A-1. LOCATIONAL DATA, KNOWN AND POTENTIAL ARCHEOLOGICAL RESOURCES ON FORT MONMOUTH (MAIN POST), CAMP CHARLES WOOD AND THE EVANS AREA

Site Number[a]	UTM[b] Northing	UTM[b] Easting	UTM[b] Ref.	Legal Reference Township or Boro	USGS Quad Map[c]	USGS Quad CR[d]
KNOWN RESOURCES:						
28-Mo-126	4463100	580930	ECO	Oceanport	L754R	3
28-Mo-127	4462160	581120	ECO	Eatontown	L754R	3
28-Mo-128	4462850	580900	ECO	Oceanport	L754R	3
28-Mo-129	4462740	580530	ECO	Eatontown	L754R	3
28-Mo-130	4462500	580700	ECO	Eatontown	L754R	3
28-Mo-131	4461740	578780	ECO	Oceanport	L754R	3
28-Mo-132	4461480	578660	ECO	Oceanport	L754R	3
28-Mo-138	4462250	581440	ECO	Oceanport	L754R	3
POTENTIAL RESOURCES						
M1	4462708	582280	ECO	Oceanport	L754R	3
M2	4463093	582310	ECO	Oceanport	L754R	3
M3	4463507	581923	ECO	Oceanport	L754R	3
M4	4462123	581125	ECO	Eatontown	L754R	3
M5	4462151	580766	ECO	Eatontown	L754R	3
M6NW	4461933	579575	ECO	Oceanport and	L754R	3
M6NE	4463338	581984	ECO	Eatontown	L754R	3
M6SE	4463303	582002	ECO	Eatontown	L754R	3
M6SW	4461901	579584	ECO	Eatontown	L754R	3
M7-1	4462671	579964	ECO	Eatontown	L754R	3
M7-2	4462604	580170	ECO	Eatontown	L754R	3
M7-3	4462707	580401	ECO	Eatontown	L754R	3
M8	4462130	579608	ECO	Eatontown	L754R	3
M9	4462120	581840	ECO	Oceanport	L754R	3
M10	4462089	581960	ECO	Oceanport	L754R	3
M11	*	*	ECO	Oceanport and Eatontown	1754R	3
M12	4462031	581645	ECO	Oceanport	L754R	
M13	4461803	581330	ECO	Oceanport	L754R	3
M14	4461614	581711	ECO	Oceanport	L754R	3
M15-1	4463275	581337	ECO	Oceanport	L754R	3
M15-2	4463205	581290	ECO	Oceanport	L754R	3
M15-3	4463378	581320	ECO	Oceanport	L754R	3
M15-4	4463175	580773	ECO	Oceanport	L754R	3
M15-5	4463083	580686	ECO	Oceanport	L754R	3
M15-6	4463393	581122	ECO	Oceanport	L754R	3
M15-7	4463175	581246	ECO	Oceanport	L754R	3

Table A-1. LOCATIONAL DATA, KNOWN AND POTENTIAL ARCHEOLOGICAL RESOURCES ON FORT MONMOUTH (MAIN POST), CAMP CHARLES WOOD AND THE EVANS AREA (Continued)

Site Number[a]	UTM[b] Northing	UTM[b] Easting	UTM[b] Ref.	Legal Reference Township or Boro	USGS Quad Map[c]	USGS Quad GR[d]
M15-8	4462951	580734	ECO	Oceanport	L754R	3
M15-9	4463261	580970	ECO	Oceanport	L754R	3
M15-10	4463259	581017	ECO	Oceanport	L754R	3
M15-11	4463256	581042	ECO	Oceanport	L754R	3
M15-12	4463176	580996	ECO	Oceanport	L754R	3
M15-13	4463177	581033	ECO	Oceanport	L754R	3
M15-14	4463185	581060	ECO	Oceanport	L754R	3
M15-15	4463051	580588	ECO	Oceanport	L754R	3
M15-16	4462940	580509	ECO	Oceanport	L754R	3
M15-17	4462984	580505	ECO	Oceanport	L754R	3
M15-18	4463021	580501	ECO	Oceanport	L754R	3
M15-19	4462926	580312	ECO	Oceanport	L754R	3
M15-20	4463138	581102	ECO	Oceanport	L754R	3
M15-21	4463162	581164	ECO	Oceanport	L754R	3
M15-22	4463105	580819	ECO	Oceanport	L754R	3
M15-23	4463187	580829	ECO	Oceanport	L754R	3
M15-24	4463197	580865	ECO	Oceanport	L754R	3
M15-25	4463202	580915	ECO	Oceanport	L754R	3
M15-26	4463210	580948	ECO	Oceanport	L754R	3
M15-27	4463096	580855	ECO	Oceanport	L754R	3
M15-28	4463114	580882	ECO	Oceanport	L754R	3
M15-29	4463119	580923	ECO	Oceanport	L754R	3
M15-30	4463135	580963	ECO	Oceanport	L754R	3
M15-31	4463339	580898	ECO	Oceanport	L754R	3
M15-32	4463314	580952	ECO	Oceanport	L754R	3
M15-33	4463431	580995	ECO	Oceanport	L754R	3
M15-34	4463229	581229	ECO	Oceanport	L754R	3
M15-35	4463304	581046	ECO	Oceanport	L754R	3
M15-36	4463302	581072	ECO	Oceanport	L754R	3
M15-37	4463310	581101	ECO	Oceanport	L754R	3
M15-38	4463231	581053	ECO	Oceanport	L754R	3
M15-39	4463194	581133	ECO	Oceanport	L754R	3
M15-40	4463211	581166	ECO	Oceanport	L754R	3
M15-41	4463313	581369	ECO	Oceanport	L754R	3
M15-42	4463292	580789	ECO	Oceanport	L754R	3
M15-43	4463299	580926	ECO	Oceanport	L754R	3
M15-44	4463310	581018	ECO	Oceanport	L754R	3
M15-45	4463328	581089	ECO	Oceanport	L754R	3
M15-46	4463197	581208	ECO	Oceanport	L754R	3
M15-47	4463348	581332	ECO	Oceanport	L754R	3

Table A-1. LOCATIONAL DATA, KNOWN AND POTENTIAL ARCHEOLOGICAL RESOURCES ON FORT MONMOUTH (MAIN POST), CAMP CHARLES WOOD AND THE EVANS AREA (Continued)

Site Number[a]	UTM[b] Northing	UTM[b] Easting	UTM[b] Ref.	Legal Reference Township or Boro	USGS Quad Map[c]	USGS Quad CR[d]
M15-48	4463533	581161	ECO	Oceanport	L754R	3
M15-49	4463451	580937	ECO	Oceanport	L754R	3
M15-50	4463409	581169	ECO	Oceanport	L754R	3
M15-51	4463439	581184	ECO	Oceanport	L754R	3
M15-52	4463251	581454	ECO	Oceanport	L754R	3
M15-53	4463328	580735	ECO	Oceanport	L754R	3
M15-54	4463337	580713	ECO	Oceanport	L754R	3
M15-55	4463155	580687	ECO	Oceanport	L754R	3
M15-56	4463332	581562	ECO	Oceanport	L754R	3
M15-57	4463372	581542	ECO	Oceanport	L754R	3
M15-58	4463355	581603	ECO	Oceanport	L754R	3
M15-59	4463323	581681	ECO	Oceanport	L754R	3
M15-60	4463360	581710	ECO	Oceanport	L754R	3
M15-61	4463269	581278	ECO	Oceanport	L754R	3
M15-62	4463222	581365	ECO	Oceanport	L754R	3
M15-63	4463157	580739	ECO	Oceanport	L754R	3
M15-64	4463341	580996	ECO	Oceanport	L754R	3
M15-65	4463324	581448	ECO	Oceanport	L754R	3
M15-66	4463331	581314	ECO	Oceanport	L754R	3
M15-67	4463359	581270	ECO	Oceanport	L754R	3
M15-68	4463376	581173	ECO	Oceanport	L754R	3
M15-69	4463184	581349	ECO	Oceanport	L754R	3
M15-70	4463235	581583	ECO	Oceanport	L754R	3
M15-71	4463093	580759	ECO	Oceanport	L754R	3
M15-72	4463493	580984	ECO	Oceanport	L754R	3
M15-73	4463518	581070	ECO	Oceanport	L754R	3
M15-74	4463520	581176	ECO	Oceanport	L754R	3
M15-75	4463195	580648	ECO	Oceanport	L754R	3
M15-76	4463289	580677	ECO	Oceanport	L754R	3
M15-77	4463186	580932	ECO	Oceanport	L754R	3
M15-78	4463311	581168	ECO	Oceanport	L754R	3
M15-79	4463255	581304	ECO	Oceanport	L754R	3
M15-80	4463234	581441	ECO	Oceanport	L754R	3
M15-81	4463380	581774	ECO	Oceanport	L754R	3
M16-1	4463564	581799	ECO	Oceanport	L754R	3
M16-2	4463588	581690	ECO	Oceanport	L754R	3
M16-3	4463631	581808	ECO	Oceanport	L754R	3
M16-4	4463671	581770	ECO	Oceanport	L754R	3
M16-5	4463714	581744	ECO	Oceanport	L754R	3
M16-6	4463767	581710	ECO	Oceanport	L754R	3

Table A-1. LOCATIONAL DATA, KNOWN AND POTENTIAL ARCHEOLOGICAL RESOURCES ON FORT MONMOUTH (MAIN POST), CAMP CHARLES WOOD AND THE EVANS AREA (Continued)

Site Number[a]	UTM[b] Northing	UTM[b] Easting	UTM[b] Ref.	Legal Reference Township or Boro	USGS Quad Map[c]	USGS Quad CR[d]
M16-7	4463599	581844	ECO	Oceanport	L754R	3
M16-8	4463649	581832	ECO	Oceanport	L754R	3
M16-9	4463647	581671	ECO	Oceanport	L754R	3
M16-10	4463584	581832	ECO	Oceanport	L754R	3
M16-11	4463836	581666	ECO	Oceanport	L754R	3
M16-12	4463533	581773	ECO	Oceanport	L754R	3
M17-1	4463581	582328	ECO	Oceanport	L754R	3
M17-2	4463531	582441	ECO	Oceanport	L754R	3
M17-3	4463555	582417	ECO	Oceanport	L754R	3
M17-4	4463561	582407	ECO	Oceanport	L754R	3
M17-5	4463593	582348	ECO	Oceanport	L754R	3
M17-6	4463620	582307	ECO	Oceanport	L754R	3
M17-7	4463567	582355	ECO	Oceanport	L754R	3
M17-8	4463519	582406	ECO	Oceanport	L754R	3
M17-9	4463636	582279	ECO	Oceanport	L754R	3
M17-10	4463574	582299	ECO	Oceanport	L754R	3
M17-11	4463539	582314	ECO	Oceanport	L754R	3
M17-12	4463611	582278	ECO	Oceanport	L754R	3
M17-13	4463541	582385	ECO	Oceanport	L754R	3
M17-14	4463596	582299	ECO	Oceanport	L754R	3
M17-15	4463614	582267	ECO	Oceanport	L754R	3
M17-16	4463650	582256	ECO	Oceanport	L754R	3
M18-1	4462164	580724	ECO	Oceanport	L754R	3
M19-1	4463243	582087	ECO	Oceanport	L754R	3
M19-2	4463244	582087	ECO	Oceanport	L754R	3
M19-3	4463189	582120	ECO	Oceanport	L754R	3
M19-4	4463202	582124	ECO	Oceanport	L754R	3
M19-5	4463262	582105	ECO	Oceanport	L754R	3
M19-6	4463124	582167	ECO	Oceanport	L754R	3
M19-7	4463131	582195	ECO	Oceanport	L754R	3
M19-8	4463306	582246	ECO	Oceanport	L754R	3
M20-1	4463205	582561	ECO	Oceanport	L754R	3
M20-2	4463217	582559	ECO	Oceanport	L754R	3
M21-1	4463513	582488	ECO	Oceanport	L754R	3
M21-2	4463061	582068	ECO	Oceanport	L754R	3
M21-3	4463005	582095	ECO	Oceanport	L754R	3
M21-4	4463056	582045	ECO	Oceanport	L754R	3
M21-5	4462990	582070	ECO	Oceanport	L754R	3
M21-6	4463059	581972	ECO	Oceanport	L754R	3
M21-7	4462949	581999	ECO	Oceanport	L754R	3

Table A-1. LOCATIONAL DATA, KNOWN AND POTENTIAL ARCHEOLOGICAL RESOURCES ON FORT MONMOUTH (MAIN POST), CAMP CHARLES WOOD AND THE EVANS AREA (Continued)

Site Number[a]	UTM[b] Northing	UTM[b] Easting	UTM[b] Ref.	Legal Reference Township or Boro	USGS Quad Map[c]	USGS Quad CR[d]
M21-8	4463017	581908	ECO	Oceanport	L754R	3
M21-9	4462898	581994	ECO	Oceanport	L754R	3
M21-10	4462980	581853	ECO	Oceanport	L754R	3
M21-11	4462914	581941	ECO	Oceanport	L754R	3
M21-12	4462963	581769	ECO	Oceanport	L754R	3
M21-13	4462885	581883	ECO	Oceanport	L754R	3
M21-14	4462940	581710	ECO	Oceanport	L754R	3
M21-15	4462969	582148	ECO	Oceanport	L754R	3
M21-16	4462882	581636	ECO	Oceanport	L754R	3
M21-17	4462842	581876	ECO	Oceanport	L754R	3
M21-18	4462848	581597	ECO	Oceanport	L754R	3
M21-19	4462865	581842	ECO	Oceanport	L754R	3
M21-20	4463047	581859	ECO	Oceanport	L754R	3
M21-21	4462787	581716	ECO	Oceanport	L754R	3
M21-22	4463084	581803	ECO	Oceanport	L754R	3
M21-23	4462813	581709	ECO	Oceanport	L754R	3
M21-24	4463180	581849	ECO	Oceanport	L754R	3
M21-25	4462775	582060	ECO	Oceanport	L754R	3
M21-26	4462793	581628	ECO	Oceanport	L754R	3
M21-27	4462706	581600	ECO	Oceanport	L754R	3
M21-28	4462928	581901	ECO	Oceanport	L754R	3
M21-29	4462717	581747	ECO	Oceanport	L754R	3
M21-30	4462696	581744	ECO	Oceanport	L754R	3
M21-31	4462789	581825	ECO	Oceanport	L754R	3
M21-32	4462773	581966	ECO	Oceanport	L754R	3
M21-33	4462869	582003	ECO	Oceanport	L754R	3
M21-34	4462846	581999	ECO	Oceanport	L754R	3
M21-35	4462847	582042	ECO	Oceanport	L754R	3
M21-36	4462942	582107	ECO	Oceanport	L754R	3
M21-37	4462570	581989	ECO	Oceanport	L754R	3
W1	4460475	578203	ECO	Eatontown	L754R	3
W2	4460544	577826	ECO	Eatontown	L754R	3
W3	4460522	578002	ECO	Eatontown	L754R	3
W4	4460801	577937	ECO	Eatontown	L754R	3
W5	4460207	578043	ECO	Eatontown	L754R	3
W6-1	4461332	579520	ECO	Tinton Falls	L754R	3
W6-2	4461333	579522	ECO	Tinton Falls	L754R	3
W6-3	4461295	579495	ECO	Tinton Falls	L754R	3
W7	4460278	578011	ECO	Eatontown	L754R	3

Table A-1. LOCATIONAL DATA, KNOWN AND POTENTIAL ARCHEOLOGICAL RESOURCES ON FORT MONMOUTH (MAIN POST), CAMP CHARLES WOOD AND THE EVANS AREA (Continued)

Site Number[a]	UTM[b] Northing	UTM[b] Easting	UTM[b] Ref.	Legal Reference Township or Boro	USGS Quad Map[c]	USGS Quad CR[d]
W8	4461199	579274	ECO	Tinton Falls	L754R	3
W9.1	4460535	578953	ECO	Tinton Falls	L754R	3
W9.2	4460570	578950	ECO	Tinton Falls	L754R	3
W10	4460745	578773	ECO	Tinton Falls	L754R	3
W11-1	4460726	578954	ECO	Tinton Falls	L754R	3
W11-2	4460757	578964	ECO	Tinton Falls	L754R	3
W11-3	4460769	578994	ECO	Tinton Falls	L754R	3
W11-4	4460802	578986	ECO	Tinton Falls	L754R	3
W11-5	4460799	578967	ECO	Tinton Falls	L754R	3
W11-6	4460788	578946	ECO	Tinton Falls	L754R	3
W11-7	4460825	578937	ECO	Tinton Falls	L754R	3
W11-8	4460838	578952	ECO	Tinton Falls	L754R	3
W12	4461598	578531	ECO	Eatontown	L754R	3
W13	4461504	578570	ECO	Eatontown	L754R	3
W14	4460229	578320	ECO	Eatontown	L754R	3
W15	4460125	578089	ECO	Eatontown	L754R	3
W16-1	4460498	578270	ECO	Eatontown	L754R	3
W16-2	4460489	578248	ECO	Eatontown	L754R	3
W16-3	4460456	578239	ECO	Eatontown	L754R	3
E1	4447627	579615	ECO	Wall	A754R	3
E2	4448088	579600	ECO	Wall	A754R	3
E3	4448213	579806	ECO	Wall	A754R	3
E4-1	4448652	580003	ECO	Wall	A754R	3
E4-2	4448705	579962	ECO	Wall	A754R	3
E5	4448651	579221	ECO	Wall	A754R	3
E6-1	4447859	579809	ECO	Wall	A754R	3
E6-2	4447826	579845	ECO	Wall	A7545	3
E6-3	4447842	579864	ECO	Wall	A754R	3
E6-4	4447887	579831	ECO	Wall	A781R	3
E6-5	4447877	579856	ECO	Wall	A781R	3
E6-6	4447864	579837	ECO	Wall	A781R	3
E7-1	4448239	579561	ECO	Wall	A781R	3
E7-2	4448253	579544	ECO	Wall	A781R	3
E7-3	4448236	579539	ECO	Wall	A781R	3
E7-4	4448213	579546	ECO	Wall	A781R	3
E8-1	4448998	579712	ECO	Wall	A781R	3
E8-2	4449021	579657	ECO	Wall	A781R	3
E8-3	4449031	579664	ECO	Wall	A781R	3

Table A-1. LOCATIONAL DATA, KNOWN AND POTENTIAL ARCHEOLOGICAL RESOURCES ON FORT MONMOUTH (MAIN POST), CAMP CHARLES WOOD AND THE EVANS AREA (Concluded)

Site Number[a]	UTM[b] Northing	UTM[b] Easting	UTM[b] Ref.	Legal Reference Township or Boro	USGS Quad Map[c]	Quad CR[d]
E8-4	4449002	579630	ECO	Wall	A781R	3
E8-5	4449025	579635	ECO	Wall	A781R	3
E9	4448439	579761	ECO	Wall	A781R	3

a. Designation assigned for this study; prefix FM preceeds all site numbers

b. UTM Zone 18, ECO = Envirosphere Company

c. L754R = Long Branch, 7.5 minute, 1954 edition, photorevised 1970
A781R = Asbury Park, 7.5 minute, 1954 edition, photorevised 1981

d. The Confidence Rating (CR) is an evaluation of the perceived reliability of the site locational data: (1) the information is more guess than science, (2) the judgment is moderately reliable, or (3) the information is most likely reliable.

* Site FMM-11 is the site of the former Monmouth Park race track. Its location is coterminous with subareas A, B, and C at the Main Post (Figure 1-2).

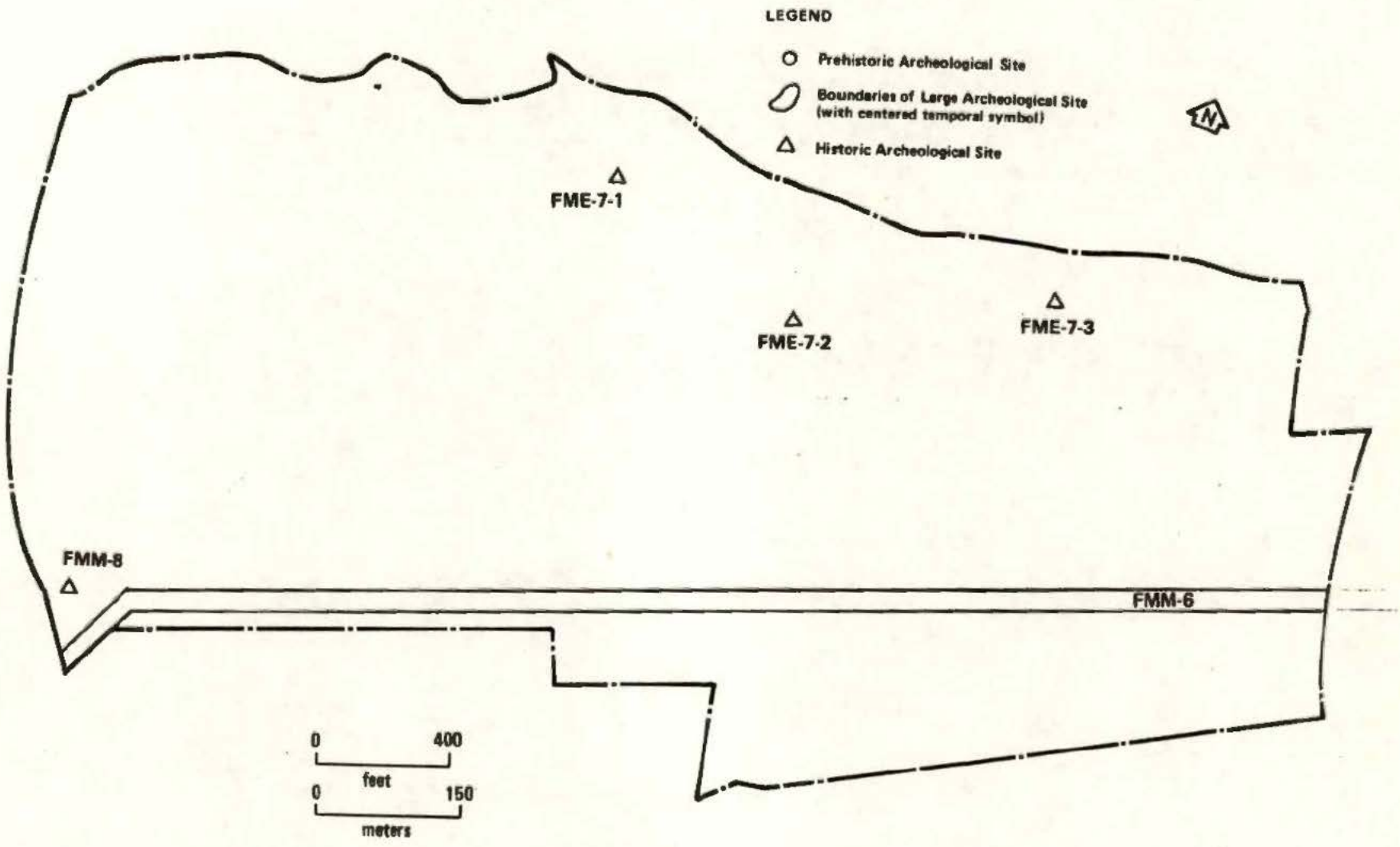

Figure A-1a. MAP OF POTENTIAL ARCHEOLOGICAL RESOURCES ON FORT MONMOUTH (MAIN POST), SUBAREA A

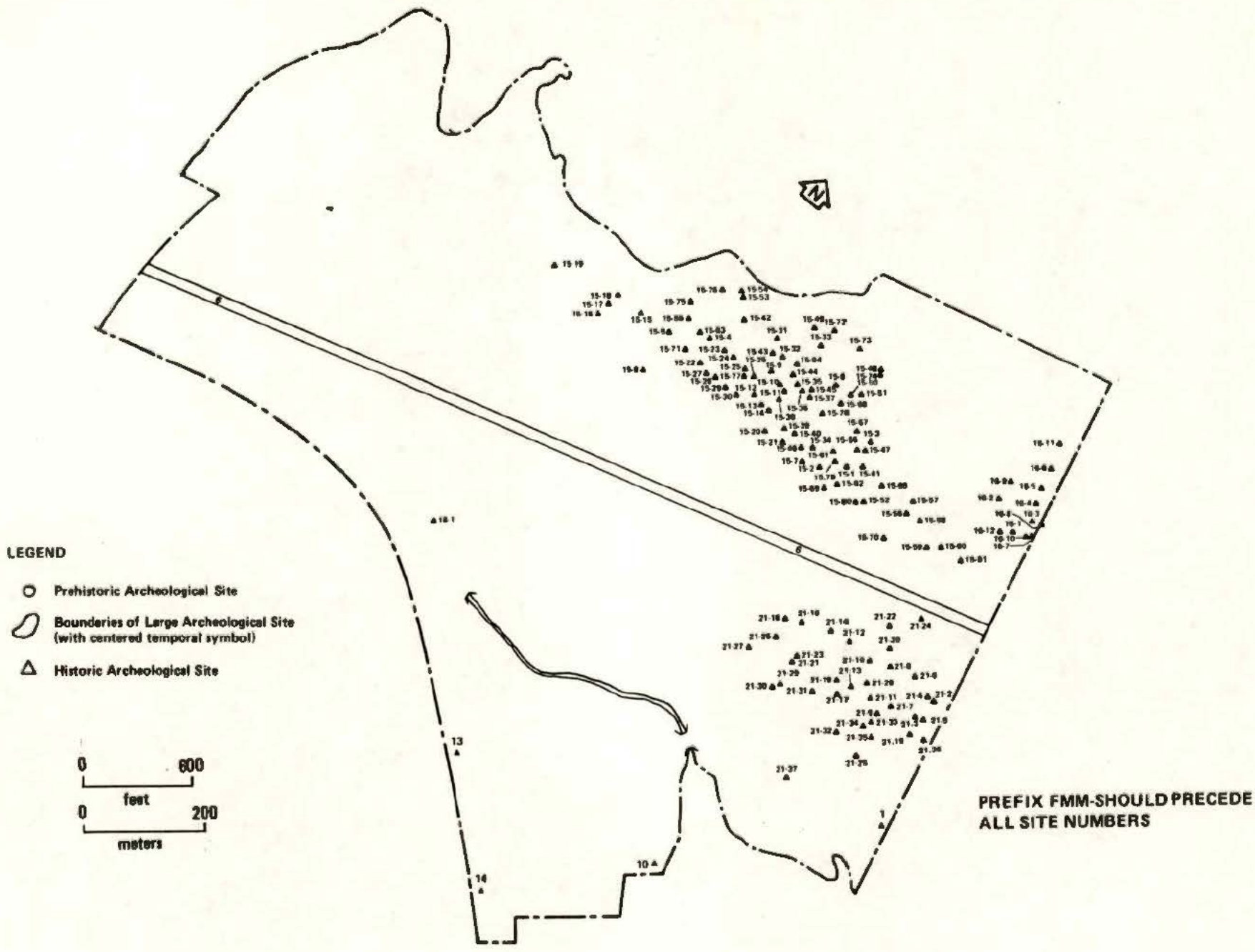

Figure A-1b. MAP OF POTENTIAL ARCHEOLOGICAL RESOURCES ON FORT MONMOUTH (MAIN POST), SUBAREA B

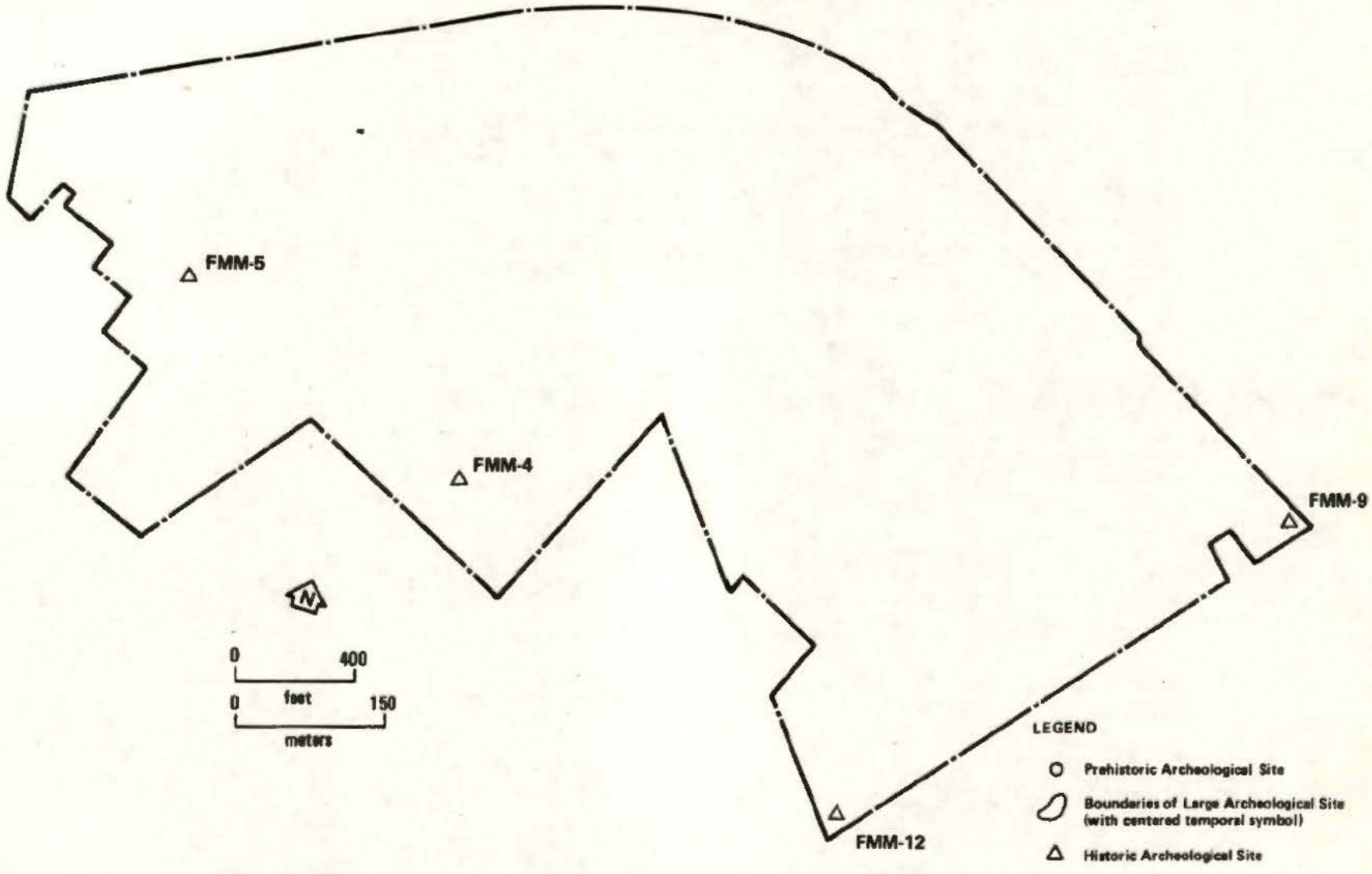

Figure A-1c. MAP OF POTENTIAL ARCHEOLOGICAL RESOURCES ON FORT MONMOUTH (MAIN POST), SUBAREA C

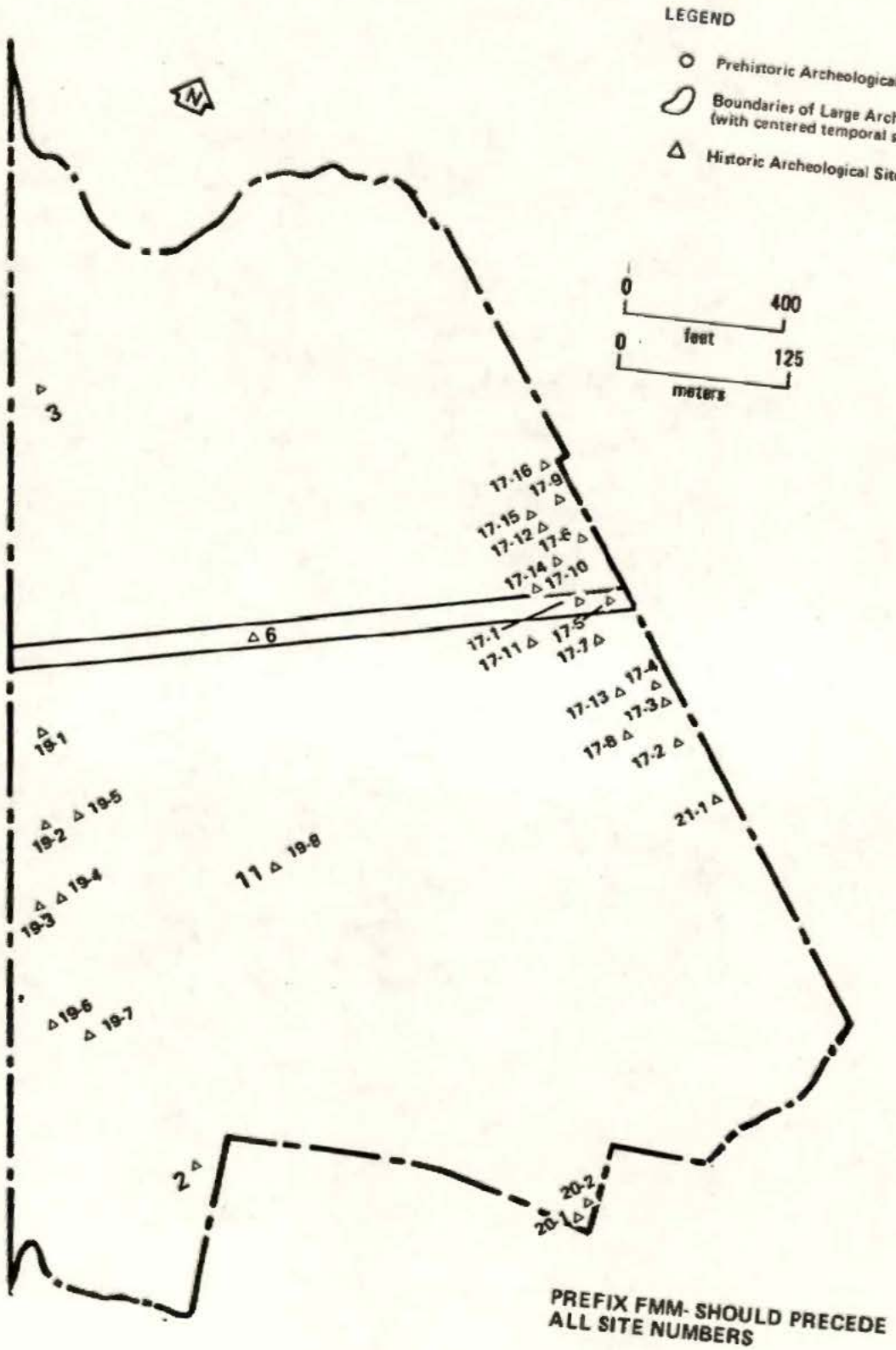

Figure A-1d. MAP OF POTENTIAL ARCHEOLOGICAL RESOURCES ON FORT MONMOUTH (MAIN POST), SUBAREA D

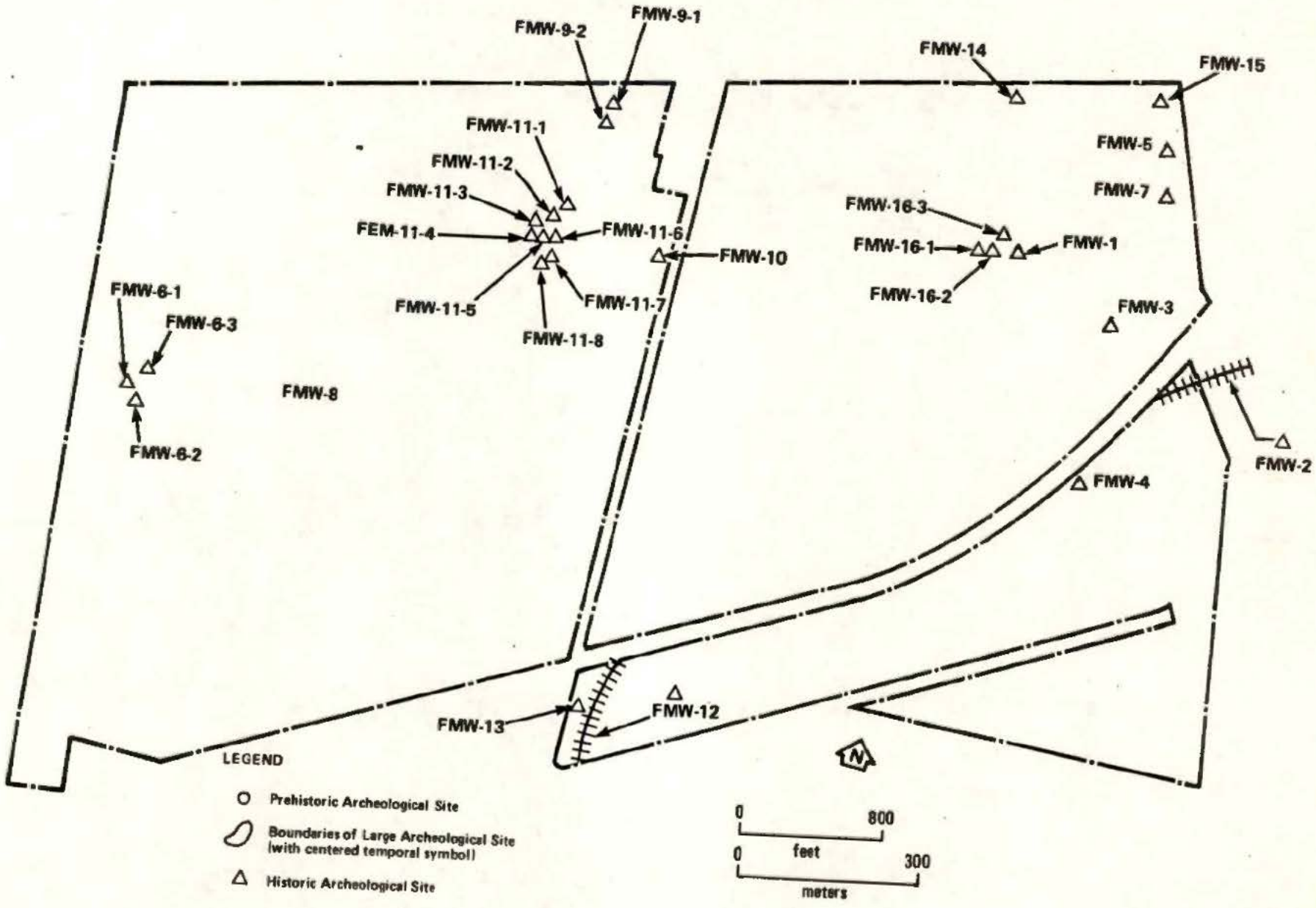

Figure A-2. MAP OF POTENTIAL ARCHEOLOGICAL RESOURCES ON FORT MONMOUTH (CAMP CHARLES WOOD)

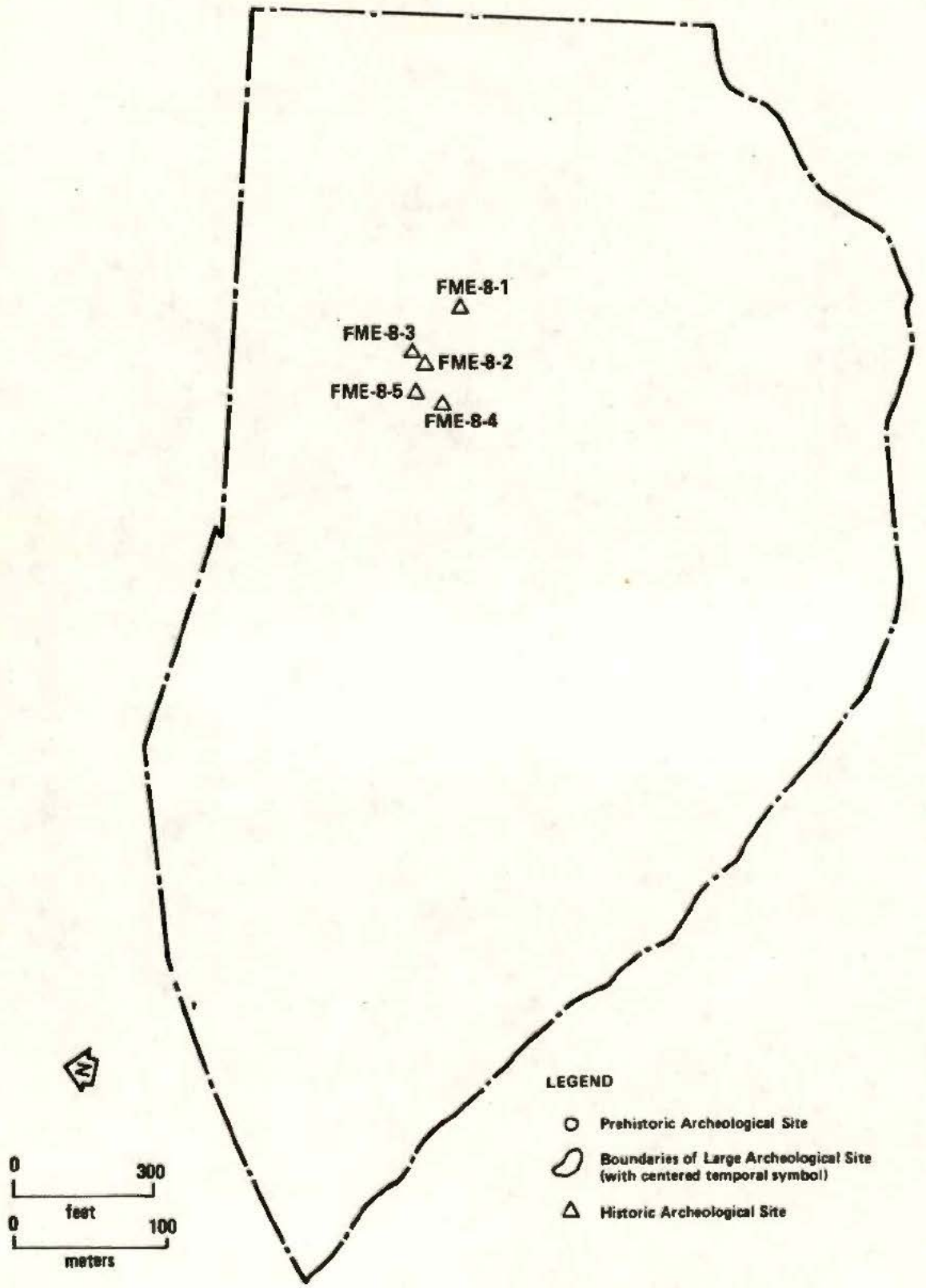

Figure A-3a. MAP OF POTENTIAL ARCHEOLOGICAL RESOURCES ON FORT MONMOUTH (EVANS AREA), SUBAREA B

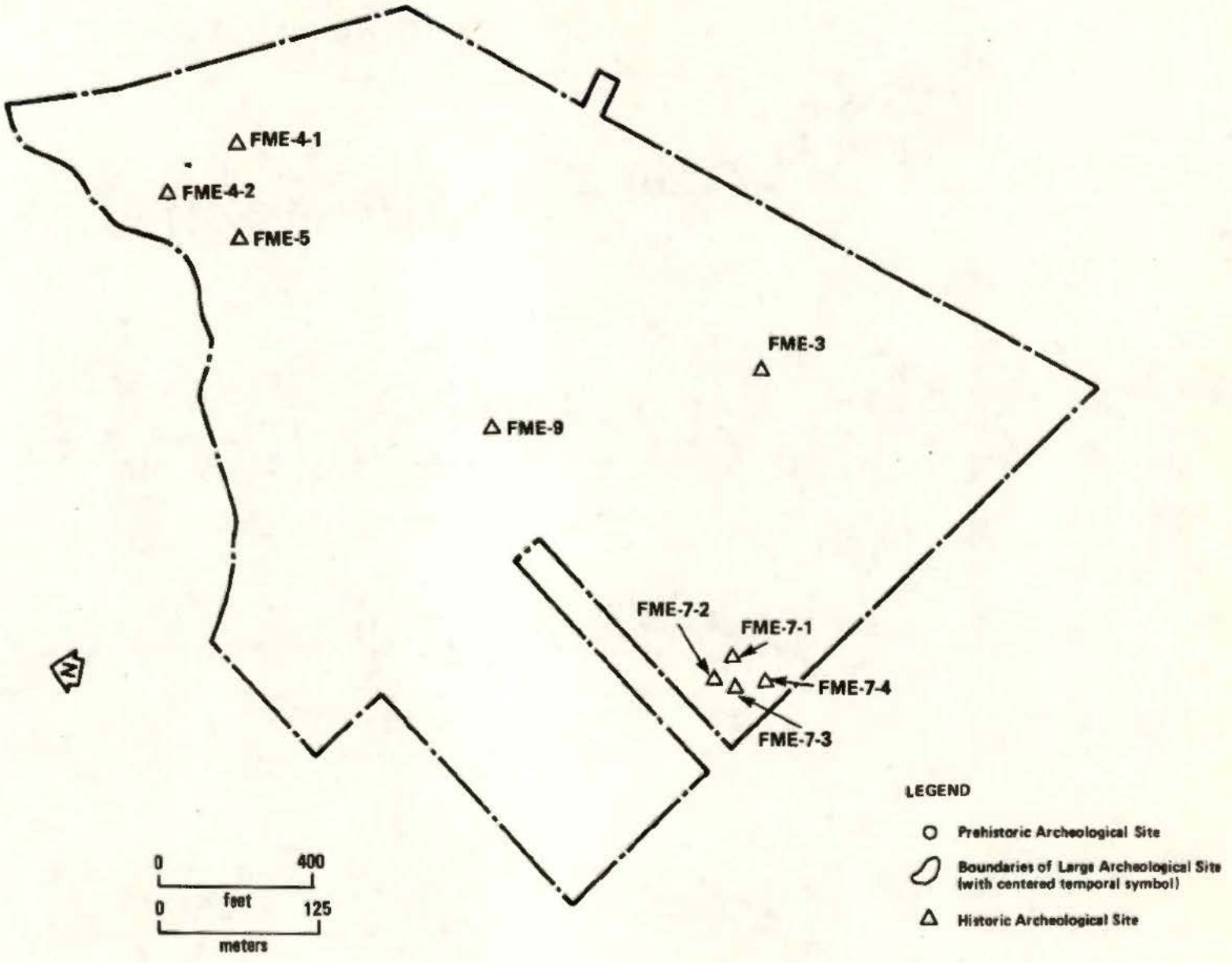

Figure A-3b. MAP OF POTENTIAL ARCHEOLOGICAL RESOURCES ON FORT MONMOUTH (EVANS AREA), SUBAREA C

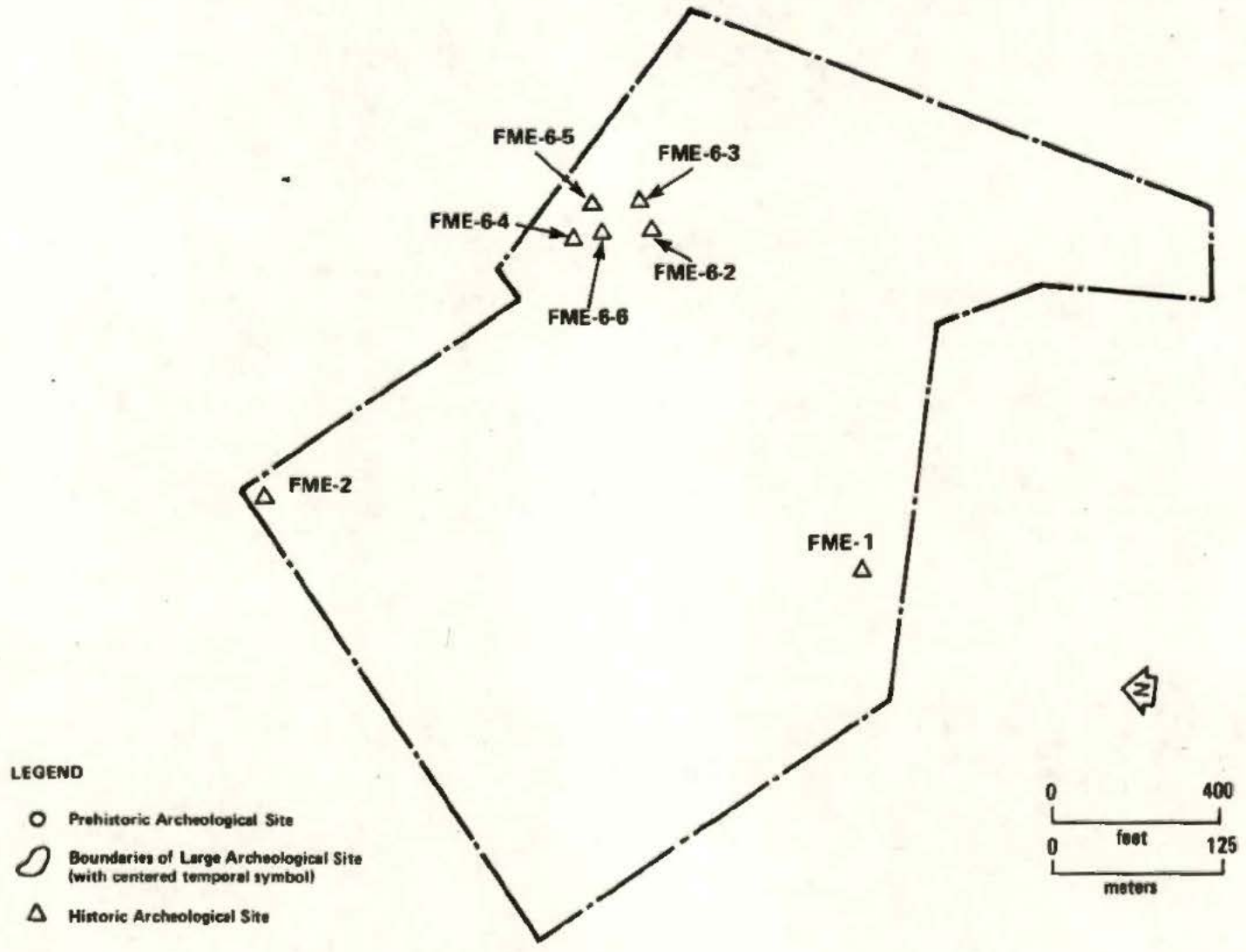

Figure A-3c. MAP OF POTENTIAL ARCHEOLOGICAL RESOURCES ON FORT MONMOUTH (EVANS AREA), SUBAREA D

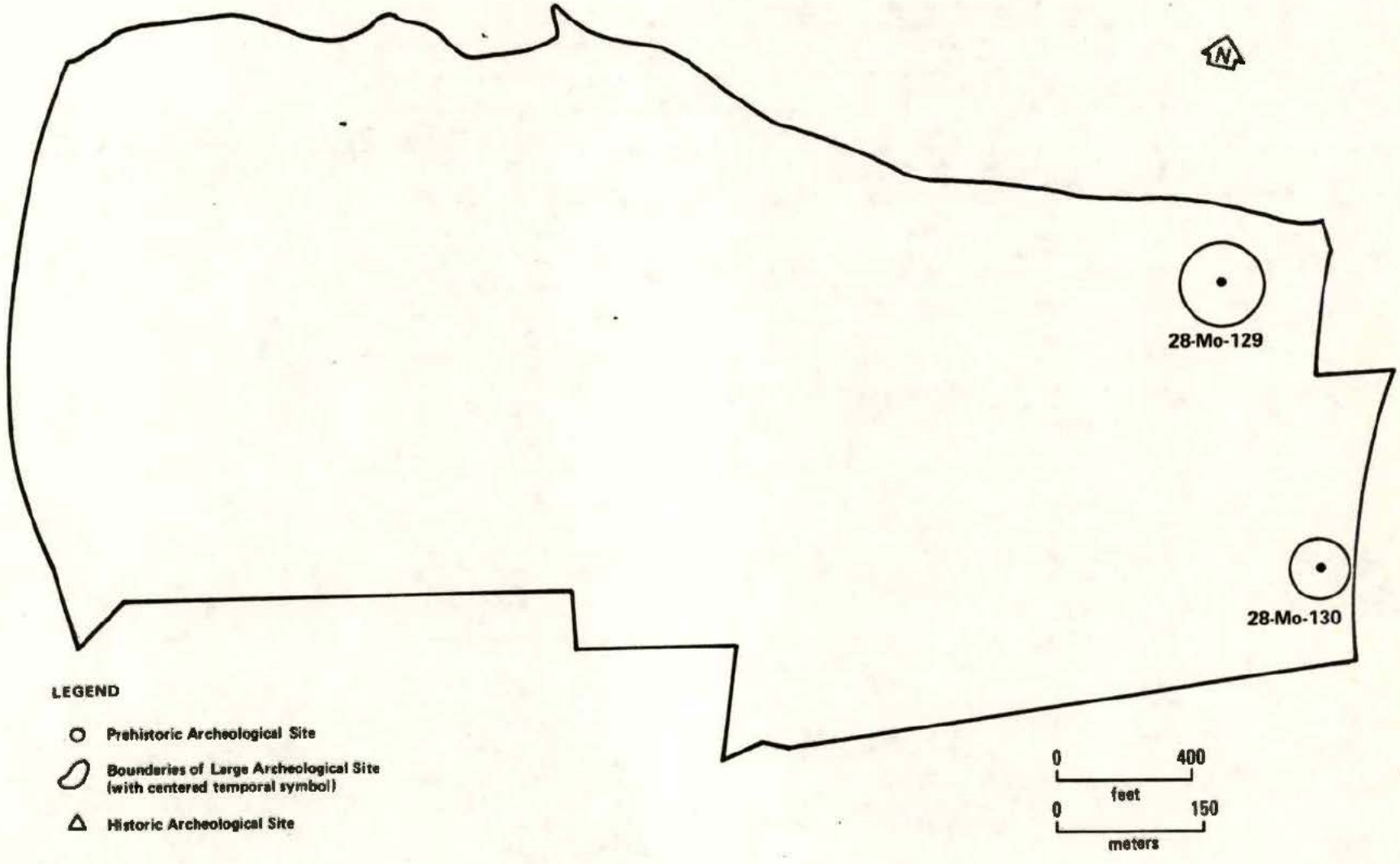

Figure A-4a. MAP OF KNOWN ARCHEOLOGICAL RESOURCES ON FORT MONMOUTH (MAIN POST), SUBAREA A

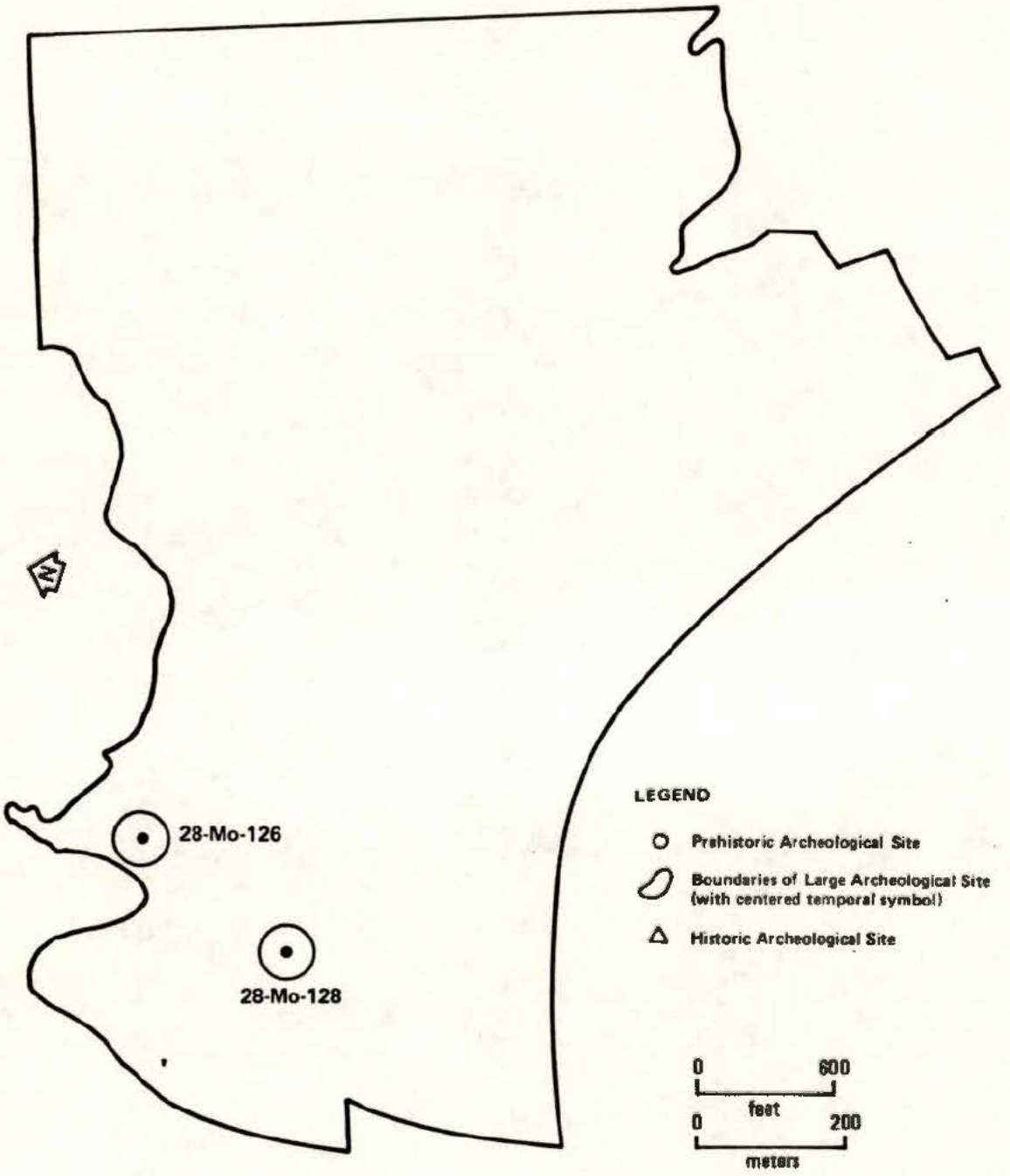

Figure A-4b. MAP OF KNOWN ARCHEOLOGICAL RESOURCES ON FORT MONMOUTH (MAIN POST), SUBAREA B

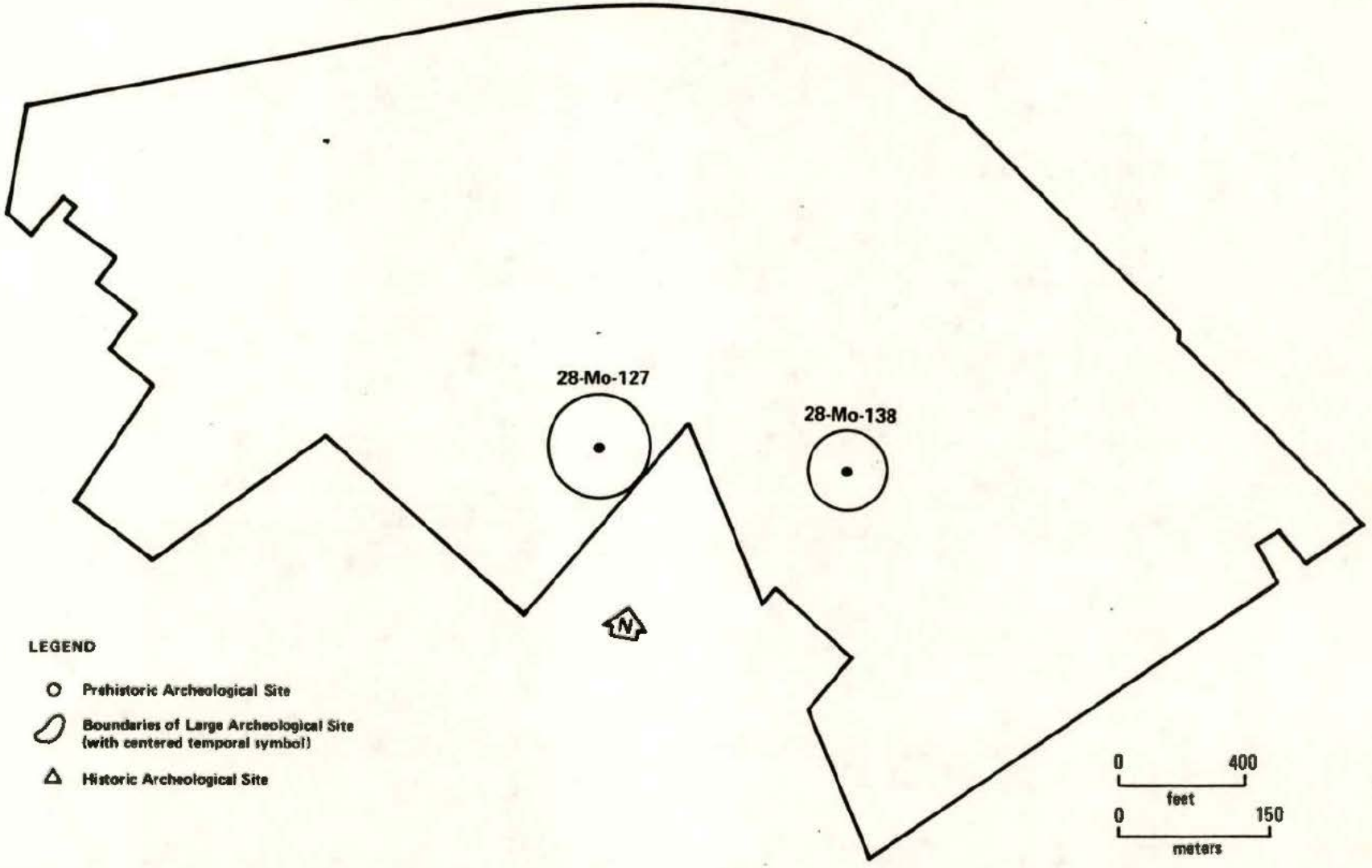

Figure A-4c. MAP OF KNOWN ARCHEOLOGICAL RESOURCES ON FORT MONMOUTH (MAIN POST), SUBAREA C

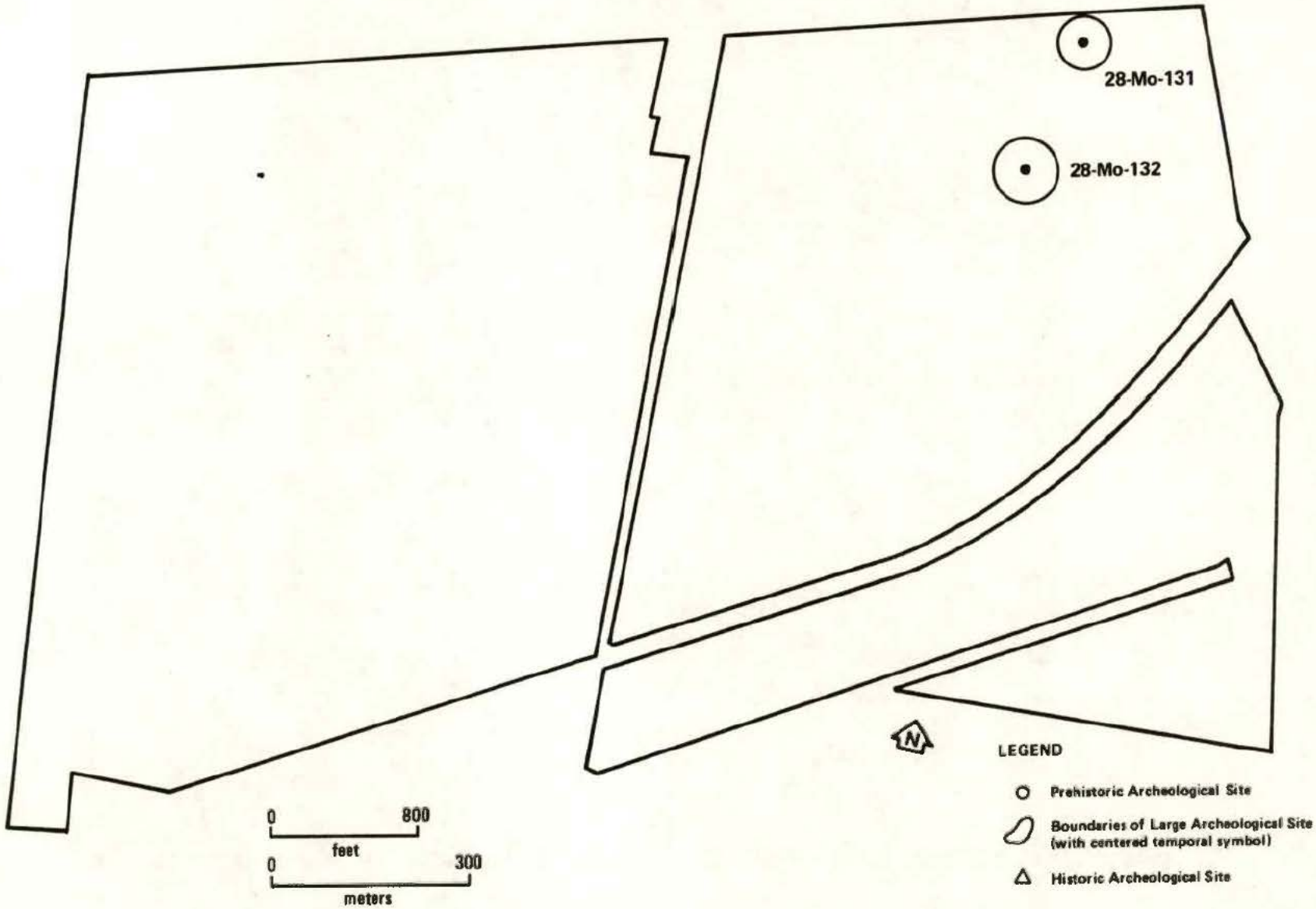

Figure A-5. MAP OF KNOWN ARCHEOLOGICAL RESOURCES ON FORT MONMOUTH (CAMP CHARLES WOOD)