

Colonial National Monument Parkway (Colonial Parkway)
Running from Jamestown Island to Yorktown, via Williamsburg
James City County, Williamsburg City, and York County
Virginia

HAER No. VA-48

HAER
VA,
100-YORK,
18-

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Engineering Record
National Park Service
Department of the Interior
Washington, DC 20013-7127

HAER
VA,
100-YORK,
18-

HISTORIC AMERICAN ENGINEERING RECORD

COLONIAL NATIONAL MONUMENT PARKWAY (Colonial Parkway)

HAER No. VA-48

Location: The Colonial Parkway begins at Jamestown Island in James City County and journeys via Williamsburg City to its terminus at Yorktown in York County, Virginia.

UTM: See Supplemental Information 1 (Page #9)

Dates of

Construction: Yorktown Cliffs to Hubbard's Lane, York County: June, 1931-October, 1934.
Hubbard's Lane to Governor's Palace, Williamsburg: September, 1935-June, 1937.
Williamsburg Tunnel: March, 1940-May, 1949.
Williamsburg Tunnel to Jamestown: January, 1954-July, 1957.

Present Owner: Mid-Atlantic Region
National Park Service
U.S. Department of the Interior
Customs House
Second and Chestnut Streets
Philadelphia, Pennsylvania 19106

Present Use: Vehicular roadway

Significance: The establishment of the Colonial Parkway in the 1930s made the historic sites at Jamestown, Williamsburg, and Yorktown more accessible to the ever expanding motoring public. The parkway's designers, through the use of a curved three-lane road with an exposed aggregate surface, intended this highway to serve not only as a means for visitors to enjoy the park but also to limit the speed and numbers of vehicles on the road itself. The parkway's bridges and tunnel, all relatively small and sparsely ornamented, reflect the desire of the planners for these structures to complement the natural environment of the Colonial National Historical Park.

Historian: Joseph P. Meko, 1988

The Colonial National Monument came into existence on July 3, 1930, when Congress approved legislation, introduced by Representative Louis C. Cramton of Michigan, which directed the park's creation. December 30 of that year saw Herbert Hoover issue a Presidential Proclamation that formally established the monument. On October 16, 1931, three days before the sesquicentennial of the Battle of Yorktown, Dr. Ray Lyman Wilbur, Secretary of the Interior, dedicated the park. Congress enacted legislation on June 5, 1936, that officially changed the name of the monument to the Colonial National Historical Park.¹

The Colonial Parkway, the 23.24 mile road that connects and unifies the three major historic areas in the park--Jamestown, Williamsburg, and Yorktown--begins at the Visitor Center on Jamestown Island and follows the shore of the James River before heading north to Williamsburg City. After travelling under the restored colonial town, the parkway turns eastward into York County, running along the York River through the U.S. Naval Weapons Station² to its terminus at the Visitor Center in the Yorktown battlefield area. Each of these three historic areas represents one phase in American colonial history. English settlers in the New World established their first colony at Jamestown. Williamsburg, the capital of Virginia during most of its colonial period, marked the growth and maturation of the unrest. Washington's victory over Cornwallis at Yorktown signalled the end of the War of Independence and the close of the colonial chapter in American history. The route of the parkway follows no colonial road; colonial road builders³ would not have chosen to cross marshes and the mouths of creeks³ as the parkway does. Averaging approximately five hundred feet in width for both the roadway and adjoining natural areas, the Colonial Parkway passes other significant colonial historic sites that supplement the three main park areas.

¹Hoover 1930; Wilbur 1932. For additional information on the legislative history of the creation of the Colonial National Monument, see Chatelain 1933; Eckenrode 1933; Haskett 1985, 1; Hatch 1964, 34-38; Hatch 1969, 22-26; Office of the Superintendent, Colonial National Historical Park 1939.

²During the period of the parkway's construction, people referred to this facility as either the "Navy Mine Depot" or the "Naval Mine Depot." The former designation is used in the narrative of this report.

³Hatch 1969, 58.

President Hoover's proclamation contained the initial layout for the Colonial National Monument and its parkway. Planners looked to the Mount Vernon Memorial Highway⁴, finished in 1932 and itself based on the parkways in Westchester County, New York, as a guide for their project.⁵ Instead of following its present course along the shore of the James River to Jamestown Island, the parkway's first formal plan called for a bridge crossing the Thorofare, the inlet of the James bounded by Jamestown Island and the peninsula.⁶ Construction of the Colonial Parkway began in June, 1931; key figures in the initial building phases included Oliver G. Taylor (engineer-in-charge), Charles E. Peterson (landscape architect-in-charge), William H. Smith (associate highway engineer), and William Robinson, Jr. (park superintendent). Although the Bureau of Public Roads exercised immediate project supervision, the National Park Service nevertheless had to approve all plans and accept completed work.⁷

⁴The Mount Vernon Memorial Highway originally traversed the fifteen miles from the Arlington Memorial Bridge in Washington, D.C., to George Washington's residence at Mount Vernon, Virginia. This highway later became part of the George Washington Memorial Parkway. See Nolin 1988.

⁵Shurcliff 1934 compares a proposed traffic oval near the present-day Williamsburg Visitor Center to the traffic circle at the entrance to Mount Vernon. Toms 1931 argues against using small brick-faced arch bridges for the creek crossings of the Colonial Parkway. Like the larger stone-faced bridges of the Mount Vernon Memorial Highway, the proposed Colonial Parkway crossings would require large expenditures of both capital and labor in order to construct stable foundations.

⁶Hoover 1930, map.

⁷Haskett 1985, 1; Newlon 1985a, 3. In a prepared resume on the Williamsburg Tunnel, park superintendent Elbert Cox 1941, 2, described the parkway construction relationship between the National Park Service and the Bureau of Public Roads: "The Public Roads Administration make surveys, prepare plans, specifications, and let contracts for all major construction projects. They act as contracting officer and perform all supervision and inspection of actual construction. National Park Service architects or landscape architects consult with Public Roads Administration Engineers on matters of alignment, design of structure, such as bridges, overpasses and the tunnel portals. After the contract is completed and accepted, administration [and maintenance] of the road is the responsibility of the National Park Service"

Divided into five units, the parkway's first section, the 9.4 miles from Yorktown Cliffs to Hubbard's Lane in York County, a route that cut through the Navy Mine Depot, cost \$1,032,252.16 and required three years and four months to complete. Table 1 (see page 10) further delimits the respective construction activities and their costs.

The next phase of Colonial Parkway construction picked up at Hubbard's Lane and continued to the northeastern outskirts of Williamsburg. The T.E. Ritter Company of Norfolk, Virginia, received the initial contract (Project 1-C-1) for the construction of the parkway from Hubbard's Lane to Capitol Landing Road, a distance of 1.12 miles. Starting work in September, 1935, the Ritter Company finished in June, 1937; the project's final bill totaled \$91,624.99.⁸ A subsequent contract for Project 1-C-3--D-1 extended the parkway from Capitol Landing Road to the Governor's Palace in Williamsburg, a distance of approximately three-fourths of a mile. Two underpasses, one at Capitol Landing Road (Project 1-C-2) and the other at the Chesapeake and Ohio (C & O) Railroad line in Williamsburg (Project 1-D-2), also needed to be built. Charles E. Peterson, the landscape architect-in-charge, designed these brick-faced arch bridges. C.Y. Thomason of Greenwood, South Carolina, commenced building these structures in January, 1936, cold weather having prevented the beginning of construction in December, 1935, the month the contract had been awarded. Thomason finished the single arch bridge at Capitol Landing Road and the double-span triple arch bridge at the C & O Railroad by June of 1937 at a final cost of approximately \$225,000.⁹ Civilian Conservation Corps (CCC) workers planted large numbers of trees and other vegetation along the parkway's roadsides to help restore the natural environment¹⁰

As road construction progressed through York County, planners debated how the Colonial Parkway would move through Williamsburg. Although several routes had been suggested, the highway, park, and government officials involved eventually reached a consensus on a tunnel beneath the restored colonial

⁸Monthly Narrative Reports April and June 1937, 1-3, 7.

⁹Monthly Narrative Reports April and June 1937, 2. For more information on the Capitol Landing and C & O Railroad Underpasses, see the Historic American Engineering Record documentation reports HAER Nos. VA-48-B and VA-48-C, respectively.

¹⁰Hasket 1985, 3.

city.¹¹ The J.G. Attaway Construction Company of Statesboro, Georgia, submitted the low bid for Project 1-D-3, the one-half mile section of the parkway which included the 1183-foot tunnel. Although Attaway received the order to proceed on March 26, 1940, cold weather once again delayed the start of construction. When the tunnel excavations did commence in April, the contractor "soon demonstrated his lack of experience and organization and the insufficiency of equipment to vigorously and properly execute the work involved in his contract."¹² Progress throughout the "cut-and-cover" construction of the tunnel occurred slowly, delayed by several landslides which caused injuries to workers and to buildings in Williamsburg. Despite the contractor's difficulties, the Williamsburg Tunnel reached completion in July of 1942 at a final cost of \$315,705.75.¹³ Because of World War II, which halted all parkway construction, the tunnel did not open to the public until May, 1949. Project 1-D-4, the bridge at Halfway Creek, constituted another project placed in limbo because of the war. Frank T. Wescott of North Attleboro, Massachusetts, to whom the contract had been awarded at a bid of \$169,475, built this bridge from April, 1941, to December, 1942. The Halfway Creek bridge had to wait until the mid-1950s, however, to be connected with the Colonial Parkway.¹⁴

During the late 1930s, officials scrutinized two possible plans for the route from the Williamsburg Tunnel to Jamestown. Tunnel Line Number 1 moved southwest from Williamsburg and slowly curved back eastward to arrive at Jamestown Island.

Tunnel Line Number 2, the present parkway course, took the roadway directly south from Williamsburg to the James River, where it turned west and followed the shore line to Jamestown.¹⁵ World War II postponed construction on the parkway for most of

¹¹No documentation exists regarding who first proposed the Williamsburg Tunnel. See Haskett 1985, 3; Newlon 1985b, 3.

¹²Smith 1943, 10.

¹³ Smith 1943, 6. For more information on the Williamsburg Tunnel, see the Historic American Engineering Record documentation report HAER No. VA-48-D.

¹⁴ Haskett 1985, 3-4.

¹⁵ Monthly Narrative Reports, April and June 1937, map. Newlon 1985b, 3, states that the two suggested roadways together formed a complete circuit whereby motorists could take one route from Williamsburg to Jamestown and return via the other road.

the 1940s; the Korean War did the same for the early 1950s. In order to be ready for the 350th anniversary celebration of the founding of Jamestown, construction on the eleven miles of the Williamsburg-to-Jamestown, portion of the Colonial Parkway began in January, 19. Table 2 (see page 11) summarizes the construction projects on this section of the parkway in addition to various other building activities in the Yorktown area. Although most of these projects had been awarded in 1955 and finished in 1956, the Colonial Parkway did not achieve final completion until July, 1957. As both the population and the traffic in the Tidewater area increased over the next two decades, additional overpasses accommodating Interstate 64, the Virginia State Route 199 bypass, and Broadway Street in Williamsburg took form.¹⁶ The parkway's only subsequent major repair and restoration effort occurred in preparation for the 1981 bicentennial celebration of Washington's victory at the Battle of Yorktown.

Although the Colonial Parkway's main purpose is to provide a vehicular connection between Jamestown, Williamsburg, and Yorktown, travellers are also given numerous scenic views of the Tidewater area. Despite the Recreation Committee of the National Resources Committee's 1939 suggested definition of a parkway as "a strip of public land devoted to recreation which features a pleasure-vehicle road through its entire length, on which occupancy and commercial development are excluded, and over which abutting property has no right of light, air, or access,"¹⁷ designers of the Colonial Parkway nevertheless restricted the number of recreational areas along the road itself, believing that fewer automobiles and people would enhance the park's natural beauty in addition to a visitor's mental transition from the twentieth to the seventeenth and eighteenth centuries.

Even though the parkway carries two-way traffic, the road itself has three lanes; a motorist can thus give any vehicles moving in the opposite direction less attention than if he were travelling on a two-lane highway with two-way traffic. Access to the Colonial Parkway is denied to trucks and limited to a handful of highways¹⁸, thereby further restricting the number of cars in

¹⁶ Haskett 1985, 4-5.

¹⁷ Walters, 1939. For a more detailed analysis of parkways in the United States, see Newton 1971, 596-619.

¹⁸ The only highways that have access to the twenty-three miles of the Colonial Parkway are U.S. Route 17 and Virginia State Route 238 near Yorktown, Virginia State Route 199 in the U.S. Naval Weapons Station and again south of Williamsburg, and

the park. The road surface is indicative of how the parkway neither makes a statement of its own nor detracts from the natural environment. Traffic on the Colonial Parkway must contend with an unlined brown exposed aggregate road surface¹⁹ as well as the parkway's numerous curves. With no billboards to detract from the park's natural scenery, the Colonial Parkway "appears" as a Tidewater country road, a road whose surface and design are meant to inhibit excessive automobile speeds.²⁰

Writing in 1932, Park Superintendent William Robinson gave perhaps the best description of the purpose of the Colonial Parkway:

For most people the study of history has meant pouring over dry and, oftentimes, uninteresting books in a crowded and stuffy class room. When the Parkway is completed, the process can be changed to a short drive by automobile, approximately twenty miles, in which it will be possible to study the whole story of the founding of a colony, its development from the stages of infancy to maturity, and the final struggle to achieve independence in which the forces of all the colonies were united....the story will be impressed upon the visitor who may not care to read in the pages of a book, but who will become enthusiastic and interested when it is presented in this original matter.²¹

The bridges and tunnel along the Colonial Parkway are, like the parkway itself, not meant to be regarded as strictly "functional" engineering achievements.²² Since the parkway's primary purposes are to provide a physical link between the historic sites of Yorktown, Williamsburg, and Jamestown, and to allow motorists to take in scenic Tidewater vistas along the York and James Rivers, the parkway bridges and tunnel are viewed as

the roads that link the parkway to the visitor centers at Williamsburg and Jamestown. I-64 has no access to the Parkway.

¹⁹ The pavement's appearance is "achieved by washing the surface with acid and brushing it to obtain a pebbly effect." Newlon, 1985a, 3.

²⁰ Ricky 1971, 2-4

²¹ Robinson 1932, 4-5.

²² Neither the Colonial Parkway nor any of its bridges is listed on the National Register of Historic Places.

structures that must "fit into" their surroundings as much as possible. Bridges over small bodies of water, such as the structures at College Creek, Felgates Creek, and Jones Pond, have modern reinforced concrete linear spans with low post-and-lintel concrete railings which imitate the design of the wood guardrails found throughout the parkway. These white concrete bridges have no ornamentation; their low railings do not interfere with the motorist's view of the creeks and rivers. Bridges that carry roadways and railways over the parkway, as well as the portals of the tunnel, take the form of structures with reinforced concrete arches covered with "colonial" brick facing.²³

None of the parkway bridges has much "structural sophistication" (for example, an open spandrel) which would draw attention to the bridge and away from the passing scene. These bridges and tunnel portals also lack a "massive" appearance because of their small dimensions. The C & O Railroad Underpass, the largest of the parkway's bridges, measures a maximum of only 216 feet in length (north portal), 106-1/4 feet in width, and has approximately thirty feet in maximum clearance above the roadway. The Williamsburg Tunnel has a length of only approximately one-fourth of one mile, a width of thirty feet for the parkway and two and one-half foot sidewalks on either side, and a maximum clearance of eleven feet ten inches. While these measurements are relatively small when compared to, for example, interstate highway bridges, the bridges and the tunnel on the Colonial Parkway, itself only thirty feet in width, are not so small that they make motorists feel "cramped" or "enclosed" as they journey through, under, and over these structures.

Instead of merging with the surroundings, the restrained polychromatic brickwork and limited exterior decorations (parapets, corbelling, highlighted archway sections) of the tunnel portals and bridges that carry other roads over the parkway, in addition to the simple and short modern concrete spans over the creeks, complement the environment. The Colonial Parkway tunnel and bridges thus reflect a concerted effort by their designers to make the structures straddle the fine line between "blending in and "standing out."

²³ Most of the Colonial Parkway's arched bridges had been constructed in the 1930s. For any parkway building projects undertaken during the 1930s and early 1940s, planners required the use of "colonial" architectural elements such as rounded arches and appropriate brick facings. In a letter to the Boston landscape architect Arthur Shurcliff, Peterson 1931 wrote "As you probably know, we are trying to keep all structures along our Parkway in an American or English architectural character of the pre-1781 period."

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Supplemental Information

1. Colonial Parkway UTM's

LOCATION	UTM	QUADRANGLE
Yorktown	18.366270.4121230	Yorktown
Colonial Parkway and east bank of Felgates Creek	18.359320.4126240	Clay Bank
Williamsburg Visitor Center	18.349400.4126760	Williamsburg
James River Overlook	18.349340.4120510	Hog Island
Jamestown Terminus	18.342120.4119630	Surry

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2. Colonial Parkway Construction Tables

TABLE 1²⁴

UNIT NUMBER	CONTRACTOR	CONSTRUCTION ACTIVITIES	COST
1	Nello D. Tee Durham, N.C.	8.93 miles of grading and drainage	\$219,245.18
	A.N. Campbell & Company, Lynchburg, Va.	Bridges at Navy Mine Depot, Jones Pone, Cub Creek, and Bracken's Pond	
2	Arundel Corporation Baltimore, Md.	Hydraulic fill at Indian Field and Felgates Creeks	197,300.49
3	P.T. Withers, Gastonia, N.C.	5.47 miles of fences and walls for Navy Mine Depot security	23,998.73
4	Sanford and Brooks, Co., Baltimore, Md.	Bridges at Kings, Felgates, and Indian Field Creeks	79,791.15
5	Roberts Paving Company, Baltimore, Md.	9.4 miles paving	420,066.64
TOTAL CONSTRUCTION			940,402.16

Combined with right-of-way acquisition costs of \$16,850 and engineering costs of \$75,000, the total expenditures on the first section of the Colonial Parkway amount to \$1,032,252.16.

²⁴ Haskett 1985, 2. For more information on the Navy Mine Depot Overpass, see the Historic American Engineering Record documentation report HAER No. VA-48-A.

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HAER No. VA-48 (Page 11)

TABLE 2²⁵

PROJECT NUMBER	CONTRACTOR	CONSTRUCTION ACTIVITIES	COST
1-D-12	Malpass Con- struction Co., Norfolk, Va.	Powhatan Creek bridge	-----
1-D-5 1E-1	Nello D. Teer, Durham, N.C.	Hydraulic embankment at College & Mill Creeks, Glebe Gut, Glasshouse Point	\$877,490.00
1-A-1 1-B-10 1-D-8	W.E. Grahm & Sons, Cleveland, N.C,	Grading & drainage at Yorktown and Williamsburg to College Creek	345,510.00
2-A-2	Rea Construction Company, Charlotte, N.C.	Ferry wharf and slip at Glasshouse Point	376,088.10
1-E-5	Rea Construction	Jamestown Is. Bridge	78,591.96
1-D-18	Rea Construction	College Creek bridge	143,150.00
1-D-9 1-E-2	W.H. Scott, Franklin, Va.	Grading and drainage from College Creek to Jamestown Island	170,516.00
1-A-2	Case Construc- tion Corp., Mt. Airy, Md.	Va. Route 238 bridge	143,360.00
1-A-6	Rea Construction	Yorktown Creek viaduct	134,641.40
1-A-3	Rea Construction	US Route 17 bridge	122,464.00
1-D-16	Triotino and Brown, Asheville, N.C.	Grade separation over Tazwell Hall Avenue	130,165.00
1-A-4 1-B-12 1-D-11,1-E-4	Nello L. Teer	Paving remaining sections of parkway	1,621,755.00

²⁵ Haskett 1985, 4-5.

Bibliography

Sources whose entry concludes with a reference to a box number can be found in the respective Colonial National Historical Park boxes in the Office of Cultural Resources Management, National Park Service, Room 4141, 1100 L St. NW, Washington, D.C.

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This report is an addendum to a 15 page report previously transmitted to the Library of Congress in 1988.

LOCATION: The park's interpretive road system encompasses a right-of-way for the Colonial Parkway (HAER No. VA-48) that extends 21.44 miles through James City and York counties, Virginia, and tour roads on Jamestown Island (HAER No. VA-116) and the Yorktown battlefield (HAER No. VA-117), Yorktown vicinity, York County, Virginia.

East end: Yorktown quadrangle, UTM: 18/366250/4121250
West end: Surry quadrangle, UTM: 342400/4119500

DATE OF
CONSTRUCTION: 1931-1957

TYPE OF
STRUCTURE: Vehicular roads and bridges

DESIGNER/
ENGINEER: Eastern Division, Branch of Plans and Design, National Park Service; and the U.S. Department of Agriculture, Bureau of Public Roads, Region 15

OWNER: National Park Service

SIGNIFICANCE: Constructed between 1931 and 1957, the Colonial Parkway links Jamestown Island, Williamsburg and Yorktown, as part of the Colonial National Historical Park. Established in 1930, Colonial National Historical Park was part of the Park Service's efforts to expand its mission to include the preservation and restoration of historic sites in the east. Integral to the park's conception, Colonial Parkway was designed as a scenic drive that incorporated historical and natural features of Tidewater Virginia. At both the Yorktown and

Jamestown termini of the parkway, interpretive tour roads provide a more specialized visitor experience for those sites.

PROJECT
HISTORIAN: Michael Gallagher Bennett, 1995

PROJECT
INFORMATION: Documentation of the Colonial National Historical Park Roads and Bridges took place during the summer of 1995 under the direction of project leader Christopher H. Marston. The HAER field team included supervisor Robert R. Harvey, Iowa State University, landscape architect Magdalena Bielecka, architect Catherine Lee Doar, landscape architect Kevin Doniere, and historian Michael Gallagher Bennett.

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PREFACE

The construction of the Colonial Parkway marks an important change in National Park Service road-building programs. Along with other National Park Service (NPS) parkway projects of the 1930s (including the Mount Vernon and Blue Ridge parkways), the design of Colonial Parkway integrated landscaping ideals developed by the NPS Western Field Office in the 1920s, with parkway construction standards established by the Westchester County, New York, Parks Commission in the early twentieth century.¹

Under Thomas C. Vint, the Western Field Office established a new professional approach to landscape architecture in the National Park Service by developing innovative park design standards that emphasized harmonization with the natural environment. Following the writings of prominent landscape theorists of the nineteenth century such as Andrew Jackson Downing and Frederick Law Olmsted, NPS landscape architects used nature as the central model for their work. Native building materials were utilized to blend structures into the natural surroundings, and special attempts were made to preserve existing conditions rather than alter them. “As far as practicable” was a common qualifier in NPS design specifications.

Concurrent with these changes, highway building practices were evolving, particularly through the work of landscape architect Gilmore D. Clarke, engineer Jay Downer, and others associated with the conception and design of the Bronx River Parkway.² To heighten the safety and pleasure of automotive travel, roads laid out in broad, meticulously planted right-of-ways with limited access to allow for a continual flow of traffic. Commercial development and other intrusions that could distract motorists’ attention from beautiful surroundings were avoided. These linear parks became known as “gardens for machines,” providing radial corridors away from America’s increasingly congested urban areas (primarily in the northeast) for those with the means and time to tour the countryside.

The designers of the Colonial Parkway incorporated these ideals of modern highway design and utilized the region’s material culture traditions as the inspiration for structural features along the road. Culvert headwalls and many bridges, for instance, are clad with hand-made “Virginia style” brick laid in English and Flemish bonds. The pavement was hand broomed and acid washed to expose the extra large aggregate in the concrete, simulating the marl and shell roads built around Yorktown in the eighteenth century. The parkway travels along portions of the James and York rivers to integrate broad vistas of

¹ See HAER No. VA-69, “George Washington Memorial Parkway” (Clara Barton Parkway) (Mount Vernon Memorial Parkway) and HAER No. NC-42, “Blue Ridge Parkway” for additional information.

² See HAER No. NY-327, “Bronx River Parkway Reservation” for additional information.

the waterways vital to the region's historical and geographical development.

The parkway has been a central component in Colonial National Historical Park's interpretive mission since its inception in 1930. It unites the sites of Jamestown, Williamsburg, and Yorktown—three pivotal areas in American colonial history—into the coherent entity of Colonial National Historical Park. Its design, furthermore, provides continuity in the physical transition from one historical era to another. The parkway is one element of the park's interpretive road system that also includes tour roads around Jamestown Island and the Yorktown battlefield.

This overview history is part of a project to document the roads and bridges of the Colonial National Historical Park with measured drawings, photographs, and histories. Five major themes encompass the scope of this study: the historical and geographical development of the tidewater region; the administrative history of the Colonial National Historical Park; the planning of the Colonial Parkway; the engineering of the parkway's construction; and the evolution of the park road system from the completion of the parkway in 1957 to the present.

The staff of the Colonial National Historical Park has been indispensable to this undertaking. In particular the author would like to thank chief historian James Haskett, engineer Roy Bigelow, curator Richard Raymond, cultural resource manager Jane Sundberg, chief of maintenance Skip Brooks, park superintendent Alec Gould and the park's administrative staff.

SIGNIFICANCE OF THE VIRGINIA TIDEWATER

In the language of late nineteenth and early twentieth century antiquarians, Jamestown, Williamsburg and Yorktown were "sacred shrines of national life and liberty."³ The geographic proximity of the three sites, known as the "historic triangle," neatly chronicles three aspects of American colonial history from the first permanent English settlement at Jamestown to the subsequent surrender of a large segment of the British forces in America. In the words of W.A.R. Goodwin, the preservation-minded rector of Bruton Parish church noted for his involvement in the Williamsburg restoration, "Williamsburg is Jamestown continued, and Yorktown is Williamsburg vindicated."⁴

³ William Robinson, Jr., "The Conception, Purpose, and Development of Colonial National Monument," *The Yorktown Book: The Official Chronicle and Tribute Book* (Richmond, VA: Yorktown Sesquicentennial Association, 1932), 103.

⁴ Goodwin's quote comes from an undated letter to Horace Albright in File 630-C2, "Planning the Parkway, 1931," collection of the Colonial National Historical Park.

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Jamestown, Williamsburg, and Yorktown are encompassed within a unified geographic area located between the York and the James rivers. The land is comprised of unconsolidated sediment of boulders, pebbles, sand, clay and marl (a native stone). The transitional zone between water and forest consists of marshes and lagoons, the most prominent features of the Virginia drainage system. These wetlands led to the regional place name “Tidewater” and provide access to an abundance of navigable waterways vital the region’s historical development.⁵

The exploration and settlement of the region was part of a larger continuum of the outward expansion of western European society that accelerated during the late fifteenth century. A combination of commerce and crusade, this movement was primarily predatory in nature, seeking to gain the quickest and greatest return on the investment of money, time, and lives.⁶ In 1606, numerous mercantile ventures in England were consolidated into the Virginia Company and granted a charter to lands along the Atlantic coast of North America.

At a great expense of lives and resources, an English foothold was established in Virginia about 40 miles inland on a swampy yet defensible site along the James River (Powhatan River) in 1607. In honor of King James I, the settlement was named “James Towne” and a fort was constructed. According to cultural geographer D. W. Meinig, “The whole venture was a speculative commercial undertaking: there were no women in these first vessels and the men were all company employees, whose main task was to develop a profitable enterprise, not to initiate a new society overseas.”⁷

A more intensive colonization program emerged by the 1620s with the establishment of subsidiary companies, known as “hundreds.” The founding of separate colonies led to a distinct spatial and social order rooted in the traditions of Anglican England. These colonies, however, lacked any coherent political base and acted as separate entities controlled by certain wealthy families who established the basis of the Tidewater plantation society.⁸ While it remained the capital and primary port of entry for almost a century, Jamestown never developed into anything more than a colonial village.

⁵ William Bullock Clark and Benjamin LeRoy Miller, *Physiography and Geology of the Coastal Plain Province of Virginia*, Virginia Geological Survey, Bulletin No. IV (Charlottesville: University of Virginia Press, 1912), 13-16.

⁶ D.W. Meinig, *The Shaping of America: A Geographical Perspective on 500 Years of History*, Vol. 1 *Atlantic America, 1492-1800* (New Haven, CT: Yale University Press, 1986), 4-8.

⁷ Meinig, 38.

⁸ Meinig, 136-150; David Hackett Fisher, *Albion Seed: Four British Folkways in America* (New York: Oxford University Press, 1989).

By the middle of the seventeenth century, the population had grown to nearly 20,000. A rural commercial society dominated by a small planter class who sought to adopt the cultural life of Stuart England flourished. While tobacco was dominant, efforts to diversify the agricultural base of the region were successful with the infusion of wheat, corn and livestock. Toward the end of the century, however, there was still no regional focus or urban orientation to the landscape. Due to the exhaustive nature of tobacco cultivation, fields and homesteads were discarded as quickly as new ones emerged. Dissatisfied with Jamestown's swampy environment, the capital of Virginia was moved a few miles inland to Williamsburg—the site of an 1632 settlement known as “Middle Plantation”—in 1699. Reflecting the baroque forms of European capitals, Williamsburg was elaborately planned with broad boulevards, open squares, and Georgian inspired architecture.⁹ From its small beginnings, Williamsburg developed into the social, cultural, and political center of greater Virginia.

During the initial phases of settlement in the 1620s, fortifications were established along the peninsula to protect English interests from the retaliations of Indians in the region. One of these forts along the York River was built by French military engineer Nicholas Martiau and became the site of Yorktown. As part of the Act of Ports in 1691, land was purchased, and Yorktown was surveyed to be a shipping and receiving port for the region. The town developed into a thriving tobacco port and received commercial goods from England desired by the emerging elites of the Tidewater. The American Revolution and the Siege of 1781, which resulted in the eventual surrender of the British forces of General Cornwallis on 19 October, curtailed a vigorous commercial trade. After the Siege of 1781, Yorktown became a symbol of American strength, determination and liberty, as well as the recognized site of the end of the colonial era of American history—an era that began with the founding of Jamestown just 20 miles away.¹⁰

PRESERVING VIRGINIA TO PRESERVE AMERICA

On 29 October 1781, just ten days after the surrender of Cornwallis, the American congress passed a resolution to construct “a marble column, adorned with emblems of the alliance” in memorial to the victory at Yorktown. While the monument was not constructed until the centennial of the battle in 1881, Yorktown was already recognized as a site of national significance and various memorial activities occurred in the first half of the nineteenth century. In 1880, Congress authorized the formation of the Yorktown Centennial Commission to plan a celebration and find an appropriate site for the monument to be built under the direction of the Secretary of War. On 19 October 1881, ceremonies

⁹ Meinig, 153-160.

¹⁰ Clyde Trudell, *Colonial Yorktown* (Greenwich, CT: Chatham Press, 1971), 37-56.

were opened by the laying of a marble cornerstone by an order of Masons.¹¹

The monument was constructed fifteen years after the establishment of the Yorktown National Cemetery in 1866. Originally administered by the War Department, the cemetery was set aside for the reinterment of Union soldiers killed during the Civil War. The erection of the Yorktown monument mobilized a local movement to create a historic military park out of the Temple farmstead, the site of the Moore House where the terms of surrender were written in 1781, which would unify the cemetery and the monument into a single reservation.¹² While plans to create a commemorative park continued through the 1880s and 1890s, a bill introduced in 1892 called for the construction of a road to provide access to the sites from the Yorktown wharf.¹³

Despite the commission's inability to gain widespread support in Congress for a military park in Yorktown, the activities surrounding the centennial helped invigorate a regional preservation movement. According to James Lindgren, the dominant motive behind the movement was a "cultural crusade" to promote symbols of Virginia's traditional society during the postbellum period of social, political and economic upheaval. At the forefront of the movement was the Association for the Preservation of Virginia Antiquities (APVA), founded in Richmond in 1889 and modeled after the Mount Vernon Ladies Association (1856). During their first public meeting in 1890, Virginia historian Thomas Nelson Page pleaded with the audience:

Go to Jamestown, the sacredest spot on this continent, with its crumbling or long crumbled wall, its very ground perishing under the advancing tides of our great river; go to Williamsburg, still redolent of the perfumes wafted from the most romantic society which ever existed in this hemisphere, where the echoes have hardly died away of the daring words which called a nation into being; go to Yorktown, where tyranny was smitten down; go to the old graveyards through the length and breadth of this Commonwealth, where sleep in unmarked graves a race the like we shall never see again. What will you find? Desolation and ruin; cowpastures and sheep

¹¹ "Yorktown Monument," unpublished manuscript in file 101 C-2, "History General-1930-November 1952," collection of the Colonial National Historical Park.

¹² The creation of a military park in Yorktown had precedents in other preservation efforts of the late nineteenth century, including the establishment of parks in Antietam (1890), Shiloh (1894), Gettysburg (1895), and Vicksburg (1899). The cemetery was transferred to Colonial National Historical Park in 1933.

¹³ Charles E. Hatch, Jr., "The Evolution of the Concept of Colonial National Historical Park: A Chapter in the Story of Historical Conservation," 28 July 1964, 5-12. Unpublished manuscript in the collection of the Colonial National Historical Park.

walks.¹⁴

For the founders of the APVA, most of whom were women, the deterioration of Virginia's landscape symbolized the eroding of their traditional culture. Guided by a white, conservative and primarily Protestant membership, the APVA created a "civil religion" out of preservation activities in Jamestown and Williamsburg. The distinctions between patriotism, Christianity, and Virginia could not be distinguished. In 1893, the APVA gained control of 22.5 acres on Jamestown Island and sponsored pilgrimages to the site to instill a sense of the sacred in the public. Many of the activities of the APVA, however, were exclusionary. Black groups, for instance, were often denied access to the island.¹⁵

During the tercentennial celebration of the founding of Jamestown in 1907, Page argued, "this country belongs to the English speaking race and the civilization which it represents."¹⁶ Such rhetoric, combined with the use of preservation to promote a traditional way of life, brought criticism to the APVA. Critics of the APVA's moral and inspirational mission argued for a more professional preservation program to actually save and restore historically significant structures. In the early twentieth century a more pragmatic approach toward preserving Virginia's past emerged through the association of heritage with economic growth. For state policy makers, historical tourism became a viable alternative to an industrial base economy.

As early as 1909, the City Council of Williamsburg passed a resolution "to secure an appropriation for the building of a macadamized road connecting the historic places of Jamestown on the James River and Yorktown on the York River, a distance of about 20 miles." Recognizing the historical relationship and geographic proximity of the sites, the council stated that the road should follow "the most convenient and feasible route," and be constructed out of "such materials as may be found most suitable and best fitted."¹⁷ While the road was to promote economic growth in the region, it was presented to Congress as a "military" road, perhaps to help justify its construction. Although the project failed to gain support in Congress, other road-building and preservation plans emerged from the highest levels of the state government in the 1920s. These projects recognized the increasing numbers of Americans

¹⁴ James M. Lindgren, "'For the Sake of Our Future:' The Association for the Preservation of Virginia Antiquities and the Regeneration of Traditionalism," *The Virginia Magazine of History and Biography*, 97 (January 1989): 47.

¹⁵ Lindgren, 57-62.

¹⁶ Lindgren, 72.

¹⁷ Hatch, "The Evolution of the Concept," 27-28; Memorandum by Margaret Ferrell, 24 October 1931, file 501.03, "Newspaper Clippings October 1931-December 1939," collection of the Colonial National Historical Park.

who owned automobiles and had the leisure time to visit sites of historical importance.

In 1926, newly elected Virginia Governor Harry Flood Byrd established the Conservation and Development Commission (CDC) to create an economic stimulation plan for Virginia. Heading up the agency was William Carson, a political activist who had deep roots in the state's Democratic party. In a Jeffersonian attempt to avoid rampant industrialization, Carson and his associates promoted Virginia's cultural and natural resources as agents of economic growth. Carson argued that such an approach could transform the state into a "recreational mecca."¹⁸ In 1929, Governor Byrd was able to proclaim, "America is on wheels and Virginia is now awake to the dollar value of the tourist trade," identifying the state as a "virtual museum of the founding and growth of America."¹⁹ By the 1930s, development programs and a vigorous promotional campaign made Virginia the second leading tourist destination on the east coast behind Florida.

Integral to Virginia's emerging heritage programs were the changing policies of the National Park Service, an agency of the Department of the Interior established in 1916 to administer the nation's parks and national monuments. Under the leadership of Stephen T. Mather and his assistant and eventual successor Horace M. Albright, the National Park Service broadened its holdings and expanded its conservation mission in the East in order to foster greater public and congressional support. This change in policy was hampered by the lack of natural areas that met Park Service standards and the high rate of private land ownership.²⁰

An avenue for eastern involvement emerged by the end of the 1920s as the Park Service's idea of recreation and stewardship began to include the interpretation and preservation of historic sites. This was not a completely new role for the federal government. Since the late nineteenth century the War Department had administered military parks in the east. Horace Albright, who became director of the Park Service in 1929, argued that the Park Service was better equipped to manage historical sites than under the War Department's control.²¹ This policy change proved advantageous to Virginia where a "park movement" was emerging with Carson's efforts to create the Shenandoah National Park

¹⁸ John F. Horan, "Will Carson and the Virginia Conservation Commission, 1926-1934," *The Virginia Magazine of History and Biography* 92 (October 1984): 397.

¹⁹ Horan, 392-397.

²⁰ Barry MackIntosh, *The National Park Service: Shaping the System* (Washington, DC: Government Printing Office, 1991), 18-22.

²¹ MackIntosh, 21; see also Horace Albright with Robert Cahn, *The Birth of the National Park Service: The Founding Years, 1913-1933* (Salt Lake City: Howe Brothers Publishers, 1985), 240-261.

(established in 1926 but not created until 1935).²² The CDC's work with the National Park Service in Shenandoah coupled with the preservation activities just getting underway in Williamsburg reinvigorated the desire to create a historic park in Virginia.

Appalled at the dilapidated state of the colonial capital by the early 1920s, W.A.R. Goodwin, rector of Bruton Parish church, actively pursued philanthropists to fund a massive restoration of the entire town. While lecturing in front the New York City chapter of Phi Beta Kappa in 1924, Goodwin met John D. Rockefeller, Jr. Accepting an offer from Goodwin, Rockefeller and his son David traveled to Williamsburg for a private tour. By 1926, Rockefeller was so enthused with the idea of restoring the town that he authorized the hiring of an architect to develop site drawings of what the village might become.²³

That same year, Goodwin hired the Boston architectural firm of Perry, Shaw and Hepburn. In order to avoid community suspicions, the architects often did their field work under cover of the night. Such covert actions continued during the early years of the restoration. When Rockefeller began negotiations to purchase his first structure, the Ludwell-Paradise house, he would wire Goodwin about the "antique," and sign the message "David's father." By 1927, Rockefeller decided to undertake a complete restoration of the village, a novel and ambitious preservation project at the time. Goodwin accomplished securing properties and the community's support.²⁴ Because of its geographic proximity and historical relationship to Jamestown and Yorktown, the Williamsburg restoration had a major impact on the development of the Colonial National Historical Park in the 1930s.

In 1928, Kenneth Chorley, head of the Williamsburg restoration and long time Rockefeller associate, visited Horace Albright while he was superintendent of Yellowstone National Park to discuss the work in Williamsburg. Meeting Albright again in Jackson Hole, Wyoming, where Rockefeller was actively pursuing the preservation of the scenic valley, Chorley brought up the idea of creating a historical park in Virginia. Writing to Chorley in 1929, Albright stated, "I am so enthusiastic over this proposed historic park that I can hardly restrain my imagination."²⁵ While Albright and Chorley recognized the possibilities of a Tidewater park, it was William Carson who formalized a plan to unite Jamestown,

²² Horan, 398-403.

²³ George H. Yetter, *Williamsburg Before and After: The Rebirth of Virginia's Colonial Capital* (Williamsburg, VA: The Colonial Williamsburg Foundation, 1988), 49-52.

²⁴ Yetter, 52-58.

²⁵ Albright to Kenneth Chorley, 27 March 1929, file 101 C-2, "History General-1930-November 1952," collection of the Colonial National Historical Park.

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Williamsburg, and Yorktown by a connecting parkway under the stewardship of the National Park Service.²⁶ In a letter to Albright dated 26 March 1929, Carson stated,

These three areas, which are closely adjacent, if combined in an historic national park, or state and national park, would present to the Nation and to the world many of the most salient facts associated with the birth of the Nation and the birth of the Nation's liberties.²⁷

Echoing earlier road-building proposals, Carson continued, "Yorktown and Williamsburg and Jamestown should be connected by a memorial highway," a physical link to the historical triangle.²⁸ In an effort to enlist support for the project, Carson and the CDC organized tours of the peninsula for congressmen and their wives. During November 1929, Carson organized a trip for Albright and Michigan congressman Louis C. Cramton, Chairman of the Sub-Committee of the Committee of Appropriations in the House of Representatives, that included a visit to Governor Byrd in Richmond.²⁹ The idea to create a historical park that celebrated nearly 200 years of America's colonial heritage within a radius of a few miles appealed to Cramton. After the trip, Cramton wrote,

I would like the visitor to Jamestown to be able to drive on to Williamsburg and to Yorktown, without the impression of the early days being driven from his mind by a succession of hot-dog stands and tire signs, etc., along the highways and hence would like a new highway as a part of the new park, on a strip sufficiently wide to protect it by trees shutting out all conflicting modern development, this highway not to be a glaring modern pavement but as much as feasible giving the impression of an old-time road.³⁰

Subsequent meetings between Cramton, Albright and Carson led to the introduction of H.R. 8434, known as the "Cramton Bill," on 10 January 1930. The bill, which called for the creation of Colonial National Monument, received the full support of Virginia representatives. It was believed that the bill's

²⁶ Hamilton Eckenrode, "Origin of the Colonial National Monument," 16 October 1933, file 101 C-2, "History General-1930-November 1952," collection of the Colonial National Historical Park.

²⁷ Verne E. Chatelaine, "The Origin of the Colonial National Monument Idea," 25 March 1932, file 101 C-2, "History General-1930-November 1952," collection of the Colonial National Historical Park.

²⁸ Chatelaine, "Origin."

²⁹ Horan, 403; Albright to Eckenrode, 13 January 1933, file 101 C-2, "History General-1930-November 1954," collection of the Colonial National Historical Park.

³⁰ Eckenrode (1933), n.p.

introduction by a Michigan representative would broaden its national appeal. Initial reactions from the Department of the Interior and the Committee on Public Lands were favorable but local critics quickly emerged, culminating in what is known as the “Williamsburg Revolt.” Led by Judge Frank Armistead and Channing M. Hall, a group of Williamsburg residents, already divided over the Rockefeller restoration, opposed the bill on the grounds that the federal ownership of lands would decrease the taxable property in the city. APVA leaders also had concerns for their land on Jamestown island, which they believed the government would condemn and take.³¹

A series of public meetings through the spring of 1930 resulted in a compromise between the National Park Service, the city of Williamsburg, and the APVA. On 6 May 1930, an amendment was attached to the bill to protect the APVA lands and to provide for only a 200' right-of-way through the city of Williamsburg. Gerald P. Nye of North Dakota brought the revised bill before the Senate, and President Herbert Hoover later approved it on 3 July 1930.³² Appropriations in the bill provided for the establishment of the Yorktown Sesquicentennial Association to organize a national celebration in October 1931 and to fund a preliminary survey of the region. During the fall of 1930, NPS engineer Oliver G. Taylor and landscape architect Charles E. Peterson, formerly of the Western Field Office in San Francisco, undertook the survey.³³ The Taylor/Peterson survey of 1930 established a proposed boundary of the park for President Hoover’s official proclamation of the parks founding in December. The survey was significant for its impact upon later design and alignment decision concerning the parkway and its development into a scenic highway rather than a “country road.”

The creation of the Colonial National Monument marked an important development in Virginia's conservation and preservation movement. It also represents the introduction of the National Park Service into the field of historic preservation. The work of both the Colonial Williamsburg Foundation and the Park Service in the 1930s had a profound effect on the study of American architectural history and historic preservation in America. Architectural historian Dell Upton has written that restoration architects, “helped create the impression that preservation was a highly technical, quasi-scientific enterprise.” He continued:

Williamsburg and Park Service architects synthesized and codified research practices inherited from the previous generation of Colonial Revival architects. They combined the techniques of

³¹ Hatch, “The Evolution of the Concept,” 35; and Chatelaine (1933), n.p.

³² Hatch, “The Evolution of the Concept,” 36-38.

³³ Oliver Taylor, Superintendent’s Monthly Narrative Reports, January - August 1930, file 207.02.3, collection of the Colonial National Historical Park.

physical analysis that men like Isham (Norman Islander Isham) had inherited from English antiquarians, the artful measured drawings of Colonial Revival architects, and careful documentary research. They also created a standardized format, now called a historic structures report, for this total documentation of a building's structural, legal, and sometimes human history.³⁴

Critics have argued that the efforts of the park and Colonial Williamsburg helped perpetuate the myth of a well groomed colonial past. While there is truth in this statement, the work at Williamsburg and Colonial represents innovative approaches toward preservation and interpretation in the 1920s and 1930s. More contemporary scholarship has done much to broaden understanding of the diversity of Virginia's colonial architecture. From this research, new interpretive programs continue to be developed to enhance visitor understanding of American colonial history.

COLONIAL NATIONAL MONUMENT AND THE COLONIAL PARKWAY

On 30 December 1930, President Hoover officially proclaimed the creation of the Colonial National Monument "for the preservation of the historical structures and remains thereon and for the benefit and enjoyment of the people."³⁵ While the language was typical of the National Park Service, being adapted from the 1916 Organic Act creating the bureau, the establishment of the monument represented a marked departure for Park Service conservation efforts. Those officially associated with the monument, particularly director Horace Albright, assistant director Arthur E. Demaray, park superintendent William Robinson, park historians B. Floyd Flickinger and Elbert Cox, and the Eastern Division of the Branch of Plans and Design under Charles E. Peterson, were part of a pioneering effort to develop an interpretive plan that portrayed a broad segment of American colonial history through site preservation and restoration. In 1933 NPS chief historian Verne Chatelaine noted, "This social-political-economic emphasis in (the) Colonial National Monument idea, as contrasted with its military aspects, should receive the widest recognition."³⁶

During spring 1931, three projects dominated work at Colonial, including the often controversial

³⁴ Dell Upton, "New Views of the Virginia Landscape," *The Virginia Magazine of History and Biography* 96 (October 1988): 415.

³⁵ Robinson, "Colonial National Monument, Its Beginning and Present State of Development," *Historical Notes* 1 (January-February 1932): 3.

³⁶ Hatch, "The Evolution of the Concept," 2.

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process of land acquisition, preparations for the sesquicentennial celebration to be held in October, and the planning and construction of the Colonial Parkway to provide a scenic link between Jamestown, Williamsburg and Yorktown.³⁷ In January 1931, regional newspapers published the proposed boundary of the park. It included 2,500 acres around Yorktown, all of Jamestown Island and a 500' right-of-way for the Colonial Parkway to connect them (except through Williamsburg, as mentioned above). From Yorktown, the right-of-way followed the York River to Felgates Creek, where it turned inland toward Williamsburg through the tidewater woodlands. Passing Williamsburg to the east (a spur road would provide access to the town), the parkway turned south through Kingsmill Neck, then followed the James River where it finally connected with the island on its eastern shore.³⁸

Cramton's initial bill allocated \$500,000 for the purchase of land and the development of a suitable infrastructure for the sesquicentennial celebration. Because of the problems during the development of Shenandoah National Park, there was a concern over the process of land acquisition and the hope of avoiding condemnation proceedings.³⁹ On 6 February 1931, money became available to purchase 1,296 acres on the Yorktown battlefield, options for an additional 402 acres in Yorktown, and 230 acres for the parkway right-of-way between Yorktown and Williamsburg.

After the river route was accepted, Albright and Demaray persuaded Secretary of the Interior Ray Lyman Wilbur to approach President Hoover with the idea of routing the parkway through Navy lands. A long time friend of Hoover's, Wilbur got him to transfer 6 miles for a 500' right-of-way along the shoreline through Navy lands without discussing the idea with the Secretary of the Navy. Reportedly, the Navy was unhappy with the transaction, but a provision was included to allow for the closing of the parkway in times of war. Writing to the Secretary of the Navy in 1931, acting Secretary of the Interior Joseph Dixon presented the planning and design of the parkway through Navy lands as a cooperative venture between the Navy and the Park Service.⁴⁰ The two groups did collaborate on the design and construction of a brick wall and sentry box adjacent to the parkway at a new access gate to the marine barracks. Yet, conflicts often arose over issues ranging from the dumping of dredged materials in sensitive areas along the parkway to unsupervised burning on Navy lands.

³⁷ Robinson, 3.

³⁸ "Chart of Colonial Monument Area to Embrace Williamsburg, Jamestown, Yorktown," *Newport News Times-Herald*, 10 January 1931.

³⁹ A.E. Demaray, Assistant Director, National Park Service, in "Historic Virginia Section Planned as U.S. Monument," *The Evening Star*, 11 July 1930.

⁴⁰ Joseph Dixon, Acting Secretary of the Interior to the Secretary of the Navy, 3 July 1931, file 630-C2-44, "Planning the Parkway, 1931," collection of the Colonial National Historical Park.

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In addition to the acquisition from the Navy, the purchase in spring 1931 of the Penniman property, a large track of land between the mine depot and Hubbard Lane that the firm of Curtis and Dozier owned, gained an additional 4 miles of right-of-way. The firm planned to build a new development called Colonial Monument Estates and received assurances from the NPS that access roads to the parkway would be constructed throughout the development. In return, Curtis and Dozier transferred a 500' right-of-way through their property thinking that the parkway would increase the value of their land. While few of the access roads or the homes were ever built due to World War II, the park received 10 miles of the parkway's route free. This allowed parkway construction between Yorktown and Williamsburg to begin in the summer of 1931.⁴¹

On 3 March 1931, an act of Congress enlarged the boundary of the park from 2,500 acres to 4,500 acres and increased the appropriations for the park to \$2 million. J.W. Rader of the Virginia Conservation Commission, under the direction of William Carson, negotiated the land acquisitions.⁴² Field surveys, deed research and interviews with property owners were used to create maps and land descriptions of property within the proposed boundary. Upon approval from the NPS Washington office, appropriations were allocated to purchase tracts of land. Because of the deepening Depression, Hoover's economy program initiated in summer 1931 delayed initial appropriations. If an owner refused the offer, the government had the authority to initiate a declaration of taking to be settled in federal court. Despite attempts to gain the cooperation of the public, the NPS was forced to initiate condemnation hearings in the Eastern District Court of Virginia concerning some tracts.⁴³

Oliver Taylor's Superintendent's Monthly Narrative Reports for the spring and summer of 1931 highlight the extensive planning that went into the 1931 celebration. Preparation of the celebration grounds, the installation of an adequate sewage and water system, comfort facilities, the construction of a "tent city" to house exhibits and dignitaries, and the grading and surfacing of roads by the state occupied the majority of the time. Held between October 16 and 19, the celebration included exhibitions, battle recreations, historical pageantry, patriotic oration and the official dedication of the Colonial National Monument by President Hoover. The NPS and the Yorktown Sesquicentennial Association, whose members included prominent Virginia businessmen, military officers, and state representatives from each of the former thirteen colonies organized the celebration. Despite its regional

⁴¹ Charles E. Peterson, interview with James Haskett, 4 February 1986, "Recollections of the Years 1930-1935," 9-10, collection of the Colonial National Historical Park.

⁴² Taylor, Superintendent's Monthly Narrative Reports, February-March 1931, 5.

⁴³ "Condemnation of Lands In Monument Area to be Put Before Jury on August 10," *Newport News Daily Press*, August 1931, 1-2; and "Economy Program May Curtail Work on National Park," *Newport News Daily Press*, 31 July 1931, 1.

orientation, the celebration was international in scope with both American and European dignitaries in attendance. Ironically, there were parking spaces for 24,000 cars, about one for each of the soldiers involved in the 1781 siege of Yorktown.⁴⁴

On 20 October 1931, the day after the closing ceremonies, William Robinson, a civil engineer from Augusta, Georgia, officially began his tenure as superintendent of Colonial. Oliver Taylor completed his work by clearing and replanting the celebration grounds, and returned to the Washington office.⁴⁵ Robinson was left with the daily administrative responsibilities and was directed to develop an interpretive management plan for the park. Throughout the 1930s, Colonial was a coordinating park for all southern Revolutionary War sites and other eastern historical sites. Funds for road and trail building, maintenance and administration of these parks were funneled through the Yorktown office. These added responsibilities stretched Colonial's already thin resources. Despite the hiring of two historians, B. Floyd Flickinger and Elbert Cox, new historical scholarship developed slowly due to the lack of an adequate research library, the absence of archeological specialists and overriding administrative duties.

In 1933, the park issued its first "Outline of Development," which restated the mission and guiding principles behind park programs. The document recognized the "broad mandate" of the park to preserve and restore the colonial character of the region "to commemorate and interpret the Colonial and Revolutionary periods in the development of the Nation."⁴⁶ The plan articulated the primacy of the cultural landscape of Tidewater Virginia, which would provide visitors a "visualization of the past." The outline argued that the restoration of the area would be based upon documentary and archeological

⁴⁴ *The Yorktown Sesquicentennial Celebration, 1781-1931: Its Purpose and Plans* (Yorktown Sesquicentennial Association, 1931); *Official Program of the Yorktown Sesquicentennial, Yorktown, Virginia, 1931* (Richmond, VA: Yorktown Sesquicentennial Association, 1931); *The Yorktown Book: The Official Chronicle and Tribute Book* (Richmond, VA: Yorktown Sesquicentennial Association, 1932), collection of the Colonial National Historical Park.

⁴⁵ Robinson, Superintendent's Monthly Narrative Reports, October 1931.

⁴⁶ Robinson, "Outline of Development," 12 July 1933, file 600.03.4, collection of the Colonial National Historical Park.

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investigation to insure “strict accuracy.” When information was lacking, the park was to portray “the spirit of the period.”⁴⁷

The “Outline of Development,” identified four individual areas within the Colonial National Monument—Jamestown, Williamsburg, Yorktown, and the Colonial Parkway—that were part of the park’s interpretive mission. Jamestown, the site of the first permanent English settlement in America, was to chronicle the early colonial period, although the island had problems of limited access and few above-ground remains. Williamsburg proved more problematic since its relationship to Colonial was unclear. Consequently, the Park Service left the interpretation of the colonial capital to the Colonial Williamsburg Foundation and John D. Rockefeller, Jr. Yorktown’s primary mission was to commemorate the siege of October 1781 and the subsequent victory of the American Revolution. Secondary consideration was given to the geological history of the Yorktown Cliffs, the role of Yorktown as a colonial port and the Civil War. In fact, the majority of earthworks which surrounded Yorktown were rebuilt during the Civil War on top of Revolutionary-era fortifications. As early as 1931, the park decided to integrate the colonial roads surrounding Yorktown into the park’s road system to provide a way for visitors to experience the cultural and natural resources of the battlefield.⁴⁸

The parkway served a somewhat different role in that it was supposed to tie the three areas together as “a single coherent reservation.”

Its function as a unifying factor transcends mere considerations of transportation. Its location and design should contribute, as far as practicable, to the general commemorative purposes of the Monument.⁴⁹

Exactly how the parkway was to be designed and routed to enhance the “commemorative purposes” of the park was an issue of considerable debate in the early 1930s. There were two general trains of thought concerning the proper character of the parkway. On the one hand were those who advocated the construction of a colonial-style road, following a metes-and-bounds alignment with irregularities of grade and curvature through historical areas. On the other hand, many associated with the Park

⁴⁷ “Outline of Development, 1933,” 44. The work of the park in the 1930s was extremely innovative for its time, and influenced the course of historic preservation in America. Certainly, much of this work was an extension of the restoration of Colonial Williamsburg, which was in its sixth year by 1933. According to Charles Peterson, architects for both the park and Williamsburg often socialized together, sharing ideas, concerns, and experiences in the restoration of Virginia’s architectural history.

⁴⁸ “Outline of Development, 1933,” 44-51.

⁴⁹ “Outline of Development, 1933,” 51.

Service were in favor of constructing a modern highway that incorporated the ideals of contemporary parkway design.

Together, Jamestown, Williamsburg, Yorktown and the parkway were considered dynamic and changing landscapes, with functional public space designed to "avoid the appearances of artificiality and fossilization." Consequently, administrative, circulation and utility needs were met, when possible, through the restoration and reproduction of colonial era structures and roads. Because of the lack of historical research, the "Outline" argued that interpretive planning was difficult without additional documentary and archaeological data being uncovered and analyzed.⁵⁰ As with many national and state parks, Colonial benefitted immensely from the creation of Emergency Conservation Works programs in the 1930s.

On 31 March 1933, under the urging of newly elected President Franklin D. Roosevelt, Congress passed legislation to establish the Civilian Conservation Corps (CCC) to provide emergency relief work and employment opportunities during the Depression. The National Park Service was allocated sixty-two camps, generally made up of 200 men each. In addition to the labor, \$24,000,000 was earmarked for road construction in the national parks.⁵¹ In the spring and summer of 1933, two black CCC companies were established in Yorktown to work on the Colonial National Monument. Eugene A. Grissey supervised Camp Number One (Company 352), in maintaining the Yorktown battlefield area, doing archeological work, and performing the store room tool repair. At Camp Number Two (Company 323), Stewart M. Woodward supervised the crew in parkway work, including the grubbing of the right-of-way, forest improvements (removal of dead trees, underbrush, and other fire hazards), planting, and shore protection (construction of riprap sea walls along the York River).⁵²

High unemployment in York County resulted in a large number of applicants who wanted to join the CCC camps. By October, two additional camps were established at Yorktown bringing the total work force to about 800 men. The CCC camps accomplished a great deal of technical work for the park, and included historical technicians, archaeologists, photographers, artists, carpenters and laborers among their ranks. Camps were built on the Yorktown battlefield site and administered by the chief

⁵⁰ "Outline of Development, 1933," 51.

⁵¹ Memorandum From Director Horace Albright To All Superintendents and Monument Custodians, 9 August 1933, file 101.C2, "History General-1930-November, 1956," collection of the Colonial National Historical Park.

⁵² Robinson, Superintendent's Monthly Narrative Reports, July 1933, 15.

ranger who distributed supplies and equipment to camp supervisors.⁵³ For a decade the CCC actively restored the park's landscape. Much of the innovative work accomplished during the 1930s was done only because of their involvement. Today, the restoration work completed by the CCC holds up better than projects initiated just twenty years ago.

Throughout the 1930s, legislative amendments to the original Cramton bill expanded Colonial's physical boundaries and interpretive mission. On 3 March 1931, the acreage of the Yorktown Battlefield was enlarged from 2,500 to 4,500 acres. By 1933, Colonial had grown to 2690.32 acres, 577 of which were for the right-of-way for the Colonial Parkway between Yorktown and Williamsburg.⁵⁴ On 5 June 1936, furthermore, three sites were authorized for transfer under the administrative control of Colonial: Green Spring's plantation site, Rosewell plantation site, and Carter's Grove plantation. These areas, which were to be linked by scenic parkways, helped fill interpretive gaps that prior to their inclusion neglected the extensive settlement period in the region after 1620 (only Green Spring plantation is part of the park today, and plans to build a spur road to the site were dropped in the 1970s). This amendment also changed the designation of Colonial National Monument to Colonial National Historical Park.⁵⁵

While the administrative and historical staff of Colonial provided the intellectual basis for the park's development, its landscape, and the parkway in particular, were under the control of landscape architects and highway engineers. The parkway, however, was just one part of an integrated circulation system that included tour roads, utility roads and foot trails. Together, these elements provide for visitor movement and historic interpretation within the park.

PLANNING THE COLONIAL PARKWAY AND THE PARK ROAD SYSTEM

The Colonial Parkway is part of an evolutionary change in road-building practices that emerged during the late nineteenth century. In 1893, the Office of Road Inquiry was established in the Department of Agriculture to promote rural road development. The Office of Road Inquiry initiated an education and research program that included the construction of "object-lesson" roads to teach local communities technical methods of road-building. Central to the movement was a social justification that "mud-

⁵³ Robinson, Superintendent's Monthly Narrative Reports, June 1933, 3.

⁵⁴ "Outline of Development, 1933," 25-26.

⁵⁵ George F. Emery, acting superintendent, "Master Plan of Colonial National Historical Park," August 1964, 6-7, collection of the Colonial National Historical Park, Engineer's office, Maintenance Division.

bound” rural residents deserved access to the same political, social and economic opportunities found in urban areas.⁵⁶ Within this ideal, however, roads were simply a means to get from one place to another with the greatest efficiency and safety rather than being designed to be beautiful.

During the early twentieth century there was increasing professionalization of trade groups, who lobbied state and federal legislatures to pass road construction bills. Along with lobbying efforts, many of these groups also built material testing labs to develop standardized construction specifications for roads. Public support and federal spending continued to rise, culminating in what historians have termed the “golden age” of American highway building—the period between 1921 and 1936. Not only was this a time of tremendous growth in terms of road miles built, but also it was a period of cooperation between planners, landscape architects, and engineers who responded to the increasingly dangerous conditions found in urban areas with narrow right-of-ways congested with commercial development, and at-grade rail and vehicular crossings.⁵⁷ Integrating landscape theories from the late nineteenth century with a modern approach to road construction, early twentieth century designers created new types of roadways that emphasized the landscape as much as the pavement.

The intellectual base for parkways derived from the romantic landscape traditions of the urban parks movement of the nineteenth century. Calvert Vaux and Frederick Law Olmsted, designers of New York’s Central Park, coined the term “parkway” in their proposal to link the city’s parks by pleasure roads. Lined with green space, parkways served as linear parks, designed with sequential vistas and a variation of roadside vegetation to heighten the scenic value of public space. Following Olmsted’s and Vaux’s plans, these roads were to be man-made urban landscapes designed to look and feel natural. Parkway accomplished two goals by increasing the amount of land for parks, a primary mission of urban reformers, and creating necessary transportation corridors. Consequently, parkways came to be considered “gardens for machines.”⁵⁸

The Bronx Parkway Commission utilized the distinguishing characteristics of parkway design in the Bronx River Parkway (see HAER No. NY-327) completed in 1923 in Westchester County, New York was the first parkway in the United States for automobile use (see HAER No. NY-327). Begun as a program to cleanup the Bronx River Valley, chief engineer Jay Downer and landscape architect

⁵⁶ Bruce E. Seely, *Building the American Highway System: Engineers as Policy Makers* (Philadelphia: Temple University Press, 1987), 7-15.

⁵⁷ Seely, 67-135; Phil Patton, *Open Road: A Celebration of the American Highway* (New York: Simon & Shuster, 1986), 67.

⁵⁸ Patton, 68-71; Carl Condit, *American Building Art: The Twentieth Century* (New York: Oxford University Press, 1961), 274-280.

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Gilmore D. Clarke designed the original 15 miles of the Bronx River Parkway as a continuous strip of concrete set in a broad, tree-lined right-of-way intended to curtail commercial development. Access to the road, with its gentle sweeping curves, was limited, and most grade crossing were eliminated to create a safe flow of traffic. Primary regard was given to the landscape features of the parkway through the use of native building materials for bridges, extensive planting and selective cutting, and slope maintenance to integrate the roadway with the surrounding environment.⁵⁹ These design principles emphasized unity, variety, and character.

Full scale parkway design in the National Park Service began with the establishment of the Eastern Division of the Branch of Plans and Design under Charles E. Peterson in Williamsburg. Assisted by landscape architect Vivian R. Ludgate and draftsman William M. Haussman, Peterson and the Eastern Division were responsible for numerous projects at Colonial, George Washington's birthplace at Wakefield, Shenandoah National Park, Hot Springs National Park and Acadia National Park. In May 1931, their offices moved to the park administrative building in Yorktown, at which time architect J. R. Thower and landscape architect H. J. Brodrick joined the division. In November 1931, Edward Zimmer came to Yorktown to serve as resident landscape architect for Colonial. In 1933, Peterson and the landscape division were transferred to the Washington office to work on other Park Service projects including Skyline Drive in Shenandoah National Park and the Blue Ridge Parkway.⁶⁰ Although design directives originated in Washington, Zimmer stayed in Yorktown as the resident landscape architect.

The Eastern Division standardized design principles for NPS parkways by integrating the aesthetic and engineering practices developed in Westchester County with the road-building traditions of the Western Field Office of the National Park Service. As an integral aspect of a park's conservation and interpretive program, parkways were designed to harmonize with a region's natural and cultural landscape. Consequently, efficiency and ease of construction were secondary to vista development, landscaping and recreational considerations that furthered the mission of a particular park. The design

⁵⁹ Norman Newton, *Design on the Land: The Development of Landscape Architecture* (Cambridge, MA: Harvard University Press, 1971), 596-615; Clarke, "Is There a Solution for the Through Traffic Problem?," *Parks & Recreation* 3 (July-August 1930): 367-375; Clarke, "Westchester Parkways," *Landscape Architecture*, 28 (October 1937):40-41; George R. Chatburn, *Highways and Highway Transportation* (New York: Thomas Y. Crowell Company, 1923), 382-417.

⁶⁰ Taylor and Robinson, Superintendent's Monthly Narrative Reports, April, May, and November 1931. Peterson was also involved in the founding of the Historic American Buildings Survey (HABS).

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of roadway structures, furthermore, utilized local materials to blend with the surrounding landscape.⁶¹ By the end of 1931, the Colonial Parkway was considered one of the National Park Service's "outstanding" road building projects.⁶²

The Park Service distinguished parkways between the metropolitan type, such as the George Washington Memorial Parkway, and the purely scenic type, such as the Blue Ridge Parkway. While officially Colonial was not designated a metropolitan parkway, regional traffic patterns greatly impacted its design and construction. According to NPS assistant chief architect Dudley Bayliss,

On the metropolitan type there is always justification for construction from existing regional traffic demands. The recreational values of this type of parkway are not to be discounted, but the major considerations are traffic volume and movement. On the pure scenic type, which is still in its infancy, the traffic demands are as yet unknown. It is believed that such a parkway will develop its own traffic not only because of its scenic qualities, but from its design for safe, comfortable driving.⁶³

Primary to the Park Service's road-building program was an interagency agreement with the Bureau of Public Roads (BPR), an agency of the Department of Agriculture, signed on 18 January 1926. The cooperation between Park Service landscape architects and BPR highway and bridge engineers ensured that park roads utilized the most modern highway engineering practices and removed the survey and construction functions from the control of the Park Service. The agreement between the NPS and the BPR also helped integrate park roads into surrounding roadway development. According to Park Service historian Linda McClelland,

The agreement made it possible for the National Park Service to cooperate with state highway departments and the U.S. Forest Service on a general scheme of improvements that would

⁶¹ Linda Flint McClelland, *Presenting Nature: The Historic Landscape Design of The National Park Service* (Washington, DC: US Department of the Interior, National Park Service, 1993), 11-19 and 75-79; Dudley C. Bayliss, "Parkway Development Under the National Park Service," *Parks and Recreation* 20 (February 1937): 255-259; Bayliss, "Planning Our National Park Roads and Our National Parkways," *Traffic Quarterly* (July 1957): 417-440.

⁶² McClelland, 135; Bayliss, "Parkway Development," 258. From the beginning of the project, park staff thought that Colonial was going to evolve into the most popular scenic highway in the country.

result in an interconnected system of highways.⁶⁴

All surveys and plans set forth by BPR field engineers were subject to review and approval by Park Service landscape architects and park superintendents. In 1931, a BPR field office was established in Williamsburg under the direction of senior highway engineer H. J. Spelman and resident engineer William H. Smith. Early that year, the BPR hired between fifteen and twenty men to survey the proposed route for the parkway in order to set concrete right-of-way markers, and develop plans, specifications, and estimates for the first phases of construction. In May 1931, the Washington office approved these plans. Bids were received in Yorktown for construction contracts.⁶⁵ Generally, all bids were opened in Yorktown, although the Department of the Interior's Washington office directed some. As a rule, the low bid received the contract unless none of the bids were acceptable.

With the first 10 miles of the parkway's right-of-way acquired by the summer of 1931, work was divided into five units which extended from an area just south of Ballard Creek to Hubbard Lane, a distance of about 8 miles. From this initial survey it was evident that the parkway was going to incorporate modern highway practices of tangents, sequential radial curves and heavily landscaped slopes. To create a road with a unique character, the pavement was limited to three 10' lanes that were specially treated to expose the aggregate in the concrete. All drainage structures and underpasses were clad in "colonial style" brick.

Unlike most western parks, which incorporate native building materials such as stone and timber into their landscape design, designers of the Colonial Parkway took forms from the material culture traditions of the region. According to Peterson, both Horace Albright and Arthur E. Demaray proposed the use of brick as a primary building material to heighten the "colonial" character of the road.⁶⁶ Certainly, the architectural restoration in Williamsburg had a major impact on the work at Colonial. Many of the physical features of the city, including brick walls with their half-round molded parapets and the characteristic use of English and Flemish bonds, were incorporated into structures along the Colonial Parkway. Because of his work in the west with Chorley and Rockefeller, Albright was always well aware of the architectural restorations in Williamsburg.⁶⁷ Furthermore, Williamsburg

⁶⁴ McClelland, 109.

⁶⁵ Taylor, Superintendent's Monthly Narrative Reports, January - May 1931.

⁶⁶ Interview with Charles Peterson, 13 July 1995.

⁶⁷ According to Peterson's interview with James Haskett in 1986, most of the official discussions between Williamsburg Foundation and Park Service officials occurred at a high level, but many of the architects and landscape architects from both groups spent a considerable amount of social time together.

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Foundation architects and landscape architects often assisted the Park Service on development plans for Colonial. In April 1931, draftsman William M. Haussman drew plans for the treatment of brickwork along the parkway, which Charles Peterson approved.

According to Peterson, the first survey of the area in fall 1930 established the parkway's route. While original plans for the Colonial Parkway called for an interior route along Revolutionary era roads, some considered the problems of the site, including modern development, extensive tangents, and grade crossings, to be deterrents from the aesthetic characteristics of parkway design ideals. After touring the Navy lands with Oliver Taylor, Peterson proposed routing the parkway along the York River to avoid all this "visual junk," as he called it. W.A.R. Goodwin endorsed this route, because he wanted the importance of the rivers in the historical and geographical development of the region emphasized. Peterson referred to the route as a "splendid scenic passage" and pointed out the lack of "artificialities" along the way.⁶⁸ In effect, the route was able to accomplish two goals of the road—to provide a pleasure drive between historic sites while incorporating distinct aspects of the region's natural and cultural landscape.

Laying out the route, however, was difficult due to the lack of adequate maps and the area's swampy environment. There was no existing direct route to Williamsburg along the York River, since no road was ever constructed, or even considered, across the marshlands of Indian Field, Felgate, and King creeks on the lands of the Navy Mine Depot. A mosaic was prepared from aerial photographs taken by Army personnel from Langley Air Force Base, and new maps were made of the area. Commenting on the route Peterson noted,

We had the York River bank to follow and it just so happened by accident or an act of God that the alignment for a long stretch was one single-centered curve. We laid it out so automobilists could see the River but keeping a controlled fringe of trees in between.⁶⁹

With the alignment established between Yorktown and Williamsburg, questions arose about the character of the road between Williamsburg and Jamestown. The debate centered around the issue of whether the road was going to continue as a modern parkway, advocated by Peterson, or as a historical road desired by superintendent Robinson. According to NPS Chief Civil Engineer Frank A. Kittredge, "it seems to me that in a country so full of historical features as Jamestown, Williamsburg and Yorktown, that we can hardly hope to make the connecting roads touch all of the minor historical

⁶⁸ Field Report, Peterson to Albright, 15 October 1930, file 630-C2-44, "Planning the Parkway, 1933-1936," collection of the Colonial National Historical Park.

⁶⁹ Peterson, interview with Haskett, 5.

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points.” With this in mind, Kittredge continued to write, “my recommendation is that the previous plan be continued,—that is, that the road from Jamestown to Williamsburg be a high standard, modern parkway.”⁷⁰ Kittredge argued that by keeping historical roads cleared and marked, visitors would have access to other sites of interest without distracting from the scenic character of the Colonial Parkway.

The BPR’s 1931 plans for the parkway included an alignment devoid of tangents and with all long radius curves superelevated. In response to this plan, Robinson argued for steeper grades and slight irregularities in the alignment to add a “country road” feel to the parkway. Albright, Demaray, Kittredge, Peterson and Spelman rejected the idea and advocated instead for the construction of a modern parkway. In 1933, a conference called by Demaray approved the original BPR proposal to guide future construction, and Spelman was directed to study the costs and requirements of a three lane, concrete road. Prior to the decision to expose the aggregate in the concrete pavement, the landscape division considered various treatments, including the use of dyed concrete to blend the pavement with the natural landscape. The plan also suggested that drainage ditches be constructed just beyond the 30' section of pavement. These were to be backfilled and seeded to bring the vegetation to the edge of the concrete. Curbs and gutters would be used where needed to facilitate surface run-off to protect the foundation of the pavement from saturation.

Planning the parkway’s design progressed concurrently with the development of the parkway’s alignment beyond the York River. As early as fall 1930, Colonial Williamsburg Foundation and Park Service personnel were debating the routing of the parkway in the vicinity of Williamsburg. It is obvious from the correspondence that a major problem concerned the differing ideas as to the role of Williamsburg in the Colonial National Monument, as well as the foundation’s own restoration plans, already well underway. Peterson originally proposed that the parkway would go through Williamsburg by way of Francis Street. Foundation officials quickly rejected this idea because they wanted to keep all traffic away from the historic district. On 10 November 1930, Peterson wrote,

If in the Colonial Monument picture Colonial Williamsburg is to be regarded as an exhibit to which the visits of only professional and other discriminating persons are to be encouraged, then the planning of the Parkway approach to the city should proceed along different lines from those of which I have heretofore considered.⁷¹

⁷⁰ F. A. Kittredge to Albright, 19 June 1933, file 630, “Parkway-Unit V-Surfacing, Access Roads, Parking Areas,” collection of the Colonial National Historical Park, Engineer’s office, Maintenance Division.

⁷¹ Peterson to Albright, 10 November 1930, file 630-C2-44, “Parkway Planning, 1933-1936,” collection of the Colonial National Historical Park.

Writing to William Carson in 1931, Kenneth Chorley stated that the foundation's primary concern was that the parkway not interfere with restoration plans. According to Chorley, however, the route outside of the city limits "does not concern us."⁷² For representatives of the Williamsburg Foundation, the best possible route around the city was away from the restoration to the north and west rather than to the east. Known as the "Shurcliff line" after consulting landscape architect Arthur Shurcliff, the route avoided the property around Bassett Hall, which John D. Rockefeller, Jr. purchased as a private residence. The foundation's desire to avoid Bassett Hall, however, was never used as part of their official position. Instead, they misled the Park Service by advocating a route that incorporated the historic resources north and west of the city, despite the existence of modern development in those areas. In response to Shurcliff's alignment, Peterson stated "such outrageous surroundings are not compatible with the dignity of Colonial National Monument."⁷³

Throughout the 1930s, leaders in the field of highway design and landscape architecture, including both Gilmore Clarke (who also served as a consultant on the Mount Vernon Memorial Parkway) and Jay Downer, addressed the Williamsburg question.⁷⁴ Although there were various proposed routes to by-pass Williamsburg, they were all variations on the "Shurcliff line" north and west and the "Peterson line" south and east. Compounding this problem were the plans of the Virginia Department of Highways to construct a Williamsburg by-pass for the Route 60 highway connecting Richmond and Newport News. Desired by the foundation but not the local merchants of Williamsburg, the by-pass would remove commercial traffic from the Duke of Gloucester Street, the historic main street of the colonial capital.⁷⁵ Commissioner H.J. Shirley of the Virginia Department of Highways challenged both Robinson and Albright about the parkway, often arguing that Route 60 was more important to the region than any "recreational or historic pleasure road."⁷⁶ Without a set route for the parkway, however, the state was unable to proceed with its planned road, slated to intersect with the parkway at some point east of

⁷² Chorley to Carson, 31 October 1931, file 630-C2-44, collection of the Colonial National Historical Park.

⁷³ Chorley to Carson, 31 October 1931.

⁷⁴ See Taylor and Robinson, Superintendent's Monthly Narrative Reports, January-December 1931, for lists of consultants and visitors to the park.

⁷⁵ "Highway Department Will Not Hold By-Pass Hearing," *Newport News Daily Press*, 5 March 1933; and "Says Williamsburg By-Pass Would Not Hurt City Business," *Newport News Daily Press*, 4 February 1933.

⁷⁶ See correspondence in file 630-C2, "Planning the Parkway, 1931," collection of the Colonial National Historical Park.

Williamsburg.

Perhaps to avoid continued conflict, the Park Service revised its plans to align the parkway following Shurcliff's suggestions in 1933.⁷⁷ Despite this, the landscape division continued to informally develop plans in the vicinity of Kingsmill Neck south of Williamsburg to take the parkway east of College Creek and along the James River. At the request of the National Park Service, the foundation made the services of Shurcliff available for roadway planning and other landscape work (in particular the development plan for landscaping the Moore House, formerly owned by John D. Rockefeller, Jr. who transferred the house to the National Park Service). Shurcliff would make some significant contributions to the development of the parkway, including the idea of constructing a combined road and rail crossing for the Chesapeake & Ohio (C&O) Railroad underpass, and an underpass at Capitol Landing Road (which also carried Route 60) rather than the original traffic circle proposed by the Park Service. Shurcliff also suggested that the C&O underpass have separate roads for pedestrian and horse drawn traffic and that the parapet walls be high enough to block the sights and sounds of trains. By 1935, Shurcliff had begun to develop plans for numerous open traffic circles on the parkway north and south of Williamsburg to provide connections to the city's road system.⁷⁸ Only one of these circles was constructed. Laid out in the late 1930s, the "Williamsburg Rotary," connected the parkway with Route 132 and provided one major entrance into the city.

In March 1934, land agent J. W. Rader and park superintendent B. Floyd Flickinger, who replaced William Robinson, reached an agreement with Vernon Getty of the Foundation on the transfer of lands to the government for the parkway in the vicinity of Windmill Point between Capitol Landing Road and the C&O rail lines.⁷⁹ Consequently, by 1935 projects were underway for the clearing and grading of the right-of-way between Hubbard Lane and the C&O lines, and plans were being drawn for the underpasses at Capitol Landing Road and the C&O rail lines. Continual planning for the extension of the parkway to Jamestown, however, highlighted the weaknesses inherent in Shurcliff's route as the James River was almost nonexistent from the alignment. By early 1936, a variation of Peterson's

⁷⁷ This issue needs additional research to find answers to some questions that still linger concerning the routing of the parkway around Williamsburg. The correspondence seems to indicate that both Robinson and his successor B. Floyd Flickinger were disinclined to challenge the Colonial Williamsburg Foundation and John D. Rockefeller.

⁷⁸ H. J. Spelman to Albright, 23 January 1933; Arthur Shurcliff to Demaray, 16 March 1934, file 630-C2 "Planning the Parkway," collection of the Colonial National Historical Park. Many of Shurcliff's studies for traffic circles can be found in the architectural archives of the Colonial Williamsburg Foundation Library, Williamsburg, Virginia.

⁷⁹ B. Floyd Flickinger, Superintendent's Monthly Narrative Reports, March 1934, 8.

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original route along the James River returned to the debate with an added element—a tunnel beneath Williamsburg.

The first mention of the tunnel idea can be found in the Superintendent's Reports for April 1936, along with reports of new proposed routes along the James River to the island. In a letter to A. E. Demaray dated 9 May 1936, Flickinger stated,

I understand, confidentially, that the tunnel idea is primarily Dr. Goodwin's, and that there seems to be no appreciable sentiment on the part of the Restoration officials at this time to push the tunnel idea.⁸⁰

While no corroborating evidence has been found to support this statement, other correspondence between Park Service staff note that "prominent" Williamsburg citizens were in favor of the tunnel idea, although no reasons are given as to why. In May 1936, St. Louis planning and traffic consultant Harland Bartholomew was brought in by the foundation to study the plans in relation to Williamsburg's growing traffic problems. Meeting with representatives from both the Park Service and the foundation, Bartholomew recommended the tunnel route as the best possible solution because it created one main entrance to the city, included a direct access to the business district by way of Henry Street, utilized structures already constructed and required less of a right-of-way. One of the negatives pointed out by Bartholomew, however, was that the tunnel would distract from the aesthetics of the parkway.⁸¹ While the idea to construct a tunnel took everybody by surprise, by the end of the year planning for the tunnel was in full swing.

By July 1937, both the Capitol Landing (Route 60) and the C&O railroad underpasses were completed and plans for the completion of the parkway into Williamsburg were accepted and approved in September. Funds, however, were lacking to open bids for contracts, so work along the parkway, except CCC planting operations, slowed considerably between 1937 and 1940.⁸² The delay became a

⁸⁰ Letter found in file 630, part I, "Parkway-Williamsburg to Jamestown," collection of the Colonial National Historical Park, Engineer's office, Maintenance Division. If Goodwin did come forth with the idea to construct a tunnel, it is a testament to his ability to push plans forward in the face of conflict.

⁸¹ Flickinger, Superintendent's Monthly Narrative Reports, May 1936; Harland Bartholomew, "Notes on Williamsburg, May 1936," file 630, part I, "Parkway-Williamsburg to Jamestown," Engineer's Office, Maintenance Division. The correspondence between Park Service officials does not mention that the tunnel would distract from the appearance of the parkway. Instead, it focuses on the public relations problems related to the tunnel construction.

⁸² Flickinger, Superintendent's Monthly Narrative Reports, July-December 1937.

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major public relations problem for the Park Service, as residents of the area called for the quick completion of the road, in particular the paving between Hubbard Lane and North England Street.⁸³ Local speculation concerning the routing of the parkway and the status of the proposed tunnel under Williamsburg became major stories in local newspapers. In response to test borings to take earth samples in 1937, a local paper noted,

Although no announcement has ever been made by the National Park Service as to the route the park will take around or through Williamsburg, it has been accepted locally for some time that the road will continue from its present terminus near the Governor's palace to a point by the Nicholson school, enter a tunnel and passing under the green and Duke of Gloucester and Francis streets, emerge at a point southwest of the city-county court house.⁸⁴

Writing to Director Albright on 12 February 1937, Superintendent B. Floyd Flickinger stated,

Information concerning the proposed tunnel under Williamsburg has now become common knowledge and has become very embarrassing... I feel that the tunnel may prove to be one of our worst stumbling blocks and will probably cause us more trouble than any project we have yet attempted in this park.⁸⁵

Flickinger's letter also suggests that by 1937, the Williamsburg Foundation supported the tunnel idea as a viable alternative to by-pass the city. Not only was the city already in a constant state of construction, but the tunnel effectively removed the parkway from the historic district. Originally intended to unify Williamsburg with Jamestown and Yorktown, the parkway became a means to by-pass the colonial capital of Virginia. Flickinger was in a difficult position as spokesman for the park; he could not be a major player in planning issues since discussions with Colonial Williamsburg generally took place at the highest levels of the Park Service.

For the citizens of Williamsburg the idea of additional disruption to their town created considerable opposition to the project. To proceed with the tunnel plan, Flickinger argued, would result in

⁸³ See the Newport News *Daily Press*, 7 February 1937.

⁸⁴ "Boring Being Made Near Old School Site; Samples of Earth Will Be Taken," Newport News *Daily Press*, 19 November 1937; "Drilling Machine Working On Green," Newport News *Daily Press*, 23 November 1937, "Taking Samples of Earth Again At Court House," Newport News *Daily Press*, 9 December 1937.

⁸⁵ Confidential memorandum to Albright from Flickinger, 12 February 1937, file 630, "Parkway-Hubbard's Lane-Williamsburg," collection of the Colonial National Historical Park, Engineer's Office, Maintenance Division.

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“considerable loss of public support, some of which is very essential to this area.”⁸⁶ Instead, Flickinger advocated the completion of the parkway to North England Street and an end to other construction projects until extensive study and public meetings could produce a plan acceptable to the public. The Park Service did find funds to continue the paving the parkway, disregarding Flickinger’s concerns, and planning continued for the tunnel and the Jamestown extension. In December 1938, a field survey conducted by foundation representatives, Jay Downer and Arthur Shurcliff, NPS representatives V.R. Ludgate and W.G. Carnes, and BPR engineer William H. Smith, established a tunnel route from two earlier proposals. Architectural treatments for the portals were also developed following the colonial forms utilized on both the Capitol Landing and C&O railroad structures.⁸⁷

During this time, Rockefeller was very active in the planning process, often coming to the monthly meetings and developing ideas of his own for the landscape treatment of the parkway in the vicinity of Williamsburg. In February 1939, Flickinger announced his resignation from the park, effective 17 May. Morristown NHP superintendent Elbert Cox replaced Flickinger.⁸⁸ The summer and fall of 1939 were a decisive period for the Colonial Parkway. A centerline for the tunnel was approved, and in September an agreement was reached between the NPS, the city of Williamsburg and the foundation in preparation for tunnel construction and the relocation of utility lines. The following month a declaration of taking was initiated for the lands between Scotland Street and College Creek as part of the efforts to continue construction to Jamestown island.⁸⁹

J.W. Rader was still the primary land agent, but he enlisted the help of Richmond real estate agent Thomas Clark who acted as an expert land appraiser. According to Rader, the process of gaining the right-of-way between Williamsburg and Jamestown was a “highly controversial subject,” due to the already strained relations between the Park Service and the city of Williamsburg. By this time, the government had to pay base damages to land owners on top of the straight land value.⁹⁰ The land agents followed an alignment drawn in 1939 and approved in 1940, which continued south from the tunnel, east of College Creek and along the James River to Glasshouse Point where a recreated isthmus would connect the parkway to its terminus at Jamestown island. Plans called for hydraulic fill to create

⁸⁶ Confidential memorandum to Albright from Flickinger, 12 February 1937.

⁸⁷ Flickinger, Superintendent’s Monthly Narrative Reports, December 1938, 4.

⁸⁸ Flickinger, Superintendent’s Monthly Narrative Reports, February-May 1939.

⁸⁹ Elbert Cox, Superintendent’s Monthly Narrative Reports, June-November 1939.

⁹⁰ Memorandum for the Director, 21 February 1941, file 601.13, “Lands, Parkway Right-of-Way, Williamsburg Tunnel -Williamsburg, Jamestown,” collection of the Colonial National Historical Park.

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the isthmus and suitable road embankments at the mouths of Mill and College creeks and Glebe Gut. The plans also called for the relocation of State Route 31 north of the parkway to a new ferry wharf west of Powhatan Creek. The original Scotland ferry wharf was located on the southwest shore of the island, accessible by a causeway which carried Route 31 over the Back River.⁹¹

One area of particular concern was the right-of-way through the lands of the National Memorial to the Progress of the Colored Race in America (NMPCRA). In 1936, the Elder Lightfoot Solomon Michaux, a prominent African American radio minister and presidential advisor, purchased 500 acres along the James River east of Route 617 where he believed Africans were first brought to America. It was Michaux's dream to develop a self sufficient black community complete with a college, farms, libraries, auditoriums, a radio broadcasting station, homes and recreational facilities.⁹² Michaux's actions raised concerns among Park Service officials about the impact of such a development on the park and the parkway. With a proposed parkway route to Jamestown island established in 1939, Radar and Clarke went to work trying to acquire a right-of-way through Michaux's lands. A central decision was whether or not the park would try to acquire all the riverfront land, or just a suitable 500' right-of-way adjacent to the beach.

NPS Chief landscape architect Thomas C. Vint argued that if possible, the Park Service should gain all rights to the riverfront property and establish a right-to-lease agreement with NMPCRA for their continued use of the beach. This would give the park the opportunity to control any development that might arise adjacent to the parkway.⁹³ Although it is unclear why the decision was made, on 15 July 1940, the Park Service put a bid in for a right-of-way that did not include the riverfront. Michaux, however, neglected to respond to the offer, forcing the government to initiate condemnation hearings in August 1940. In 1941, nearly 11 acres were transferred to the Park Service providing a right-of-way through NMPCRA lands. In 1946, the NPS acquired 19 acres of land from the NMPCRA and the Gospel Spreading Association of God, another of Michaux's organizations.⁹⁴ In 1943, another substantial tract of land was acquired from the Benson-Phillips Company, Inc. by declaration of taking

⁹¹ Drawing Pky-Col 1905, Eastern Office of the Branch of Plans and Design, 1940, collection of the Colonial National Historical Park, Engineer's Office, Maintenance Division.

⁹² "Cooperative Negro Farming Community to be Developed on James City County Site," *Newport News Daily Press*, 22 October 1936; "Michaux Discusses Memorial Planned to Honor Negroes," *Newport News Daily Press*, 23 July 1937.

⁹³ Correspondence concerning Michaux's property can be found in the Colonial National Historical Park Land Records, file "Deed #65 National Memorial to the Progress of the Colored Race in America."

⁹⁴ "Elder Michaux Group Gets \$10,000 for Seized Lands," *Newport News Daily Press*, 24 July 1946.

initiated on 26 August 1942. Comprised of the right-of-way between Glasshouse Point and Route 31, the land included the site of the Route 31 causeway to the Scotland ferry wharf. The NPS rejected later attempts of the Benson-Phillips Company to get a "continuance of use" permit for the ferry causeway.⁹⁵

Bids for the tunnel construction opened in November of 1939, and in December test piles were driven at Halfway, College and Mill creeks.⁹⁶ In 1940, construction began on the tunnel from the south portal northward, and clearing and grubbing operations extended toward Halfway Creek, the location of the next bridge. William G. Fyfe, former engineer on the Blue Ridge Parkway, and landscape architect Robert W. Andrews were transferred to Colonial to oversee work between Williamsburg and Jamestown.⁹⁷ The numerous problems encountered in building the tunnel exacerbated the park's public relations dilemma as residents complained about everything from the muddy conditions to the closure of Duke of Gloucester Street.

While appropriations for paving the tunnel were not part of the construction contract, Cox lobbied for additional funds so the tunnel could open as soon as possible. In a 1941 letter to NPS Director Newton B. Drury, Cox stated that, "I believe that once the tunnel is in use the people who are inclined to criticize it will come to consider it a useful and satisfactory feature."⁹⁸ Barricades were put up to close the portals, but the tunnel was still accessible in the event of an emergency. Acting Superintendent Jean C. Harrington stated, "although it would probably not provide a desirable bomb shelter, in the event of an air raid, we might be condemned if we were to make it unavailable to

⁹⁵ Correspondence concerning the acquisition of the Benson-Phillips Co. property found in Colonial National Historical Park Land Record, file "Deed 74-Benson-Phillips, Co., Inc."

⁹⁶ Cox, Superintendent's Monthly Report, November-December 1939.

⁹⁷ Cox, Superintendent's Monthly Report, January 1941.

⁹⁸ Memorandum for the Director, 14 July 1941, file 630, "Parkway, Williamsburg-Jamestown, Tunnel-General," collection of the Colonial National Historical Park, Engineer's Office, Maintenance Division; and "Highway to Go Under Colonial Williamsburg," *New York Herald Tribune*, 21 October 1941; and "Tunnel May Be Put in Service," *Newport News Daily Press*, 4 August 1942.

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citizens.”⁹⁹ The tunnel did not open to traffic until May 1949 when suitable surfacing, lighting and a ventilation system had been installed.¹⁰⁰

While internal divisions hampered progress on the Colonial Parkway, America's entry into World War II after the bombing of Pearl Harbor placed new demands on Colonial and the entire National Park system.¹⁰¹ In early January 1941, 15 acres of park lands were transferred to the Navy for construction of a housing project in connection to defense expansions of the depot facilities.¹⁰² New utility lines were built across the right-of-way to serve the power needs of the defense build-up, destroying many trees in the process and creating what park landscape architects considered “scars.” In addition, the Navy's requests to train convoy drivers on the parkway were declined until America's declaration of war, which closed the parkway from Jones Mill Pond to the Yorktown terminus between 15 November 1942 and August 1945. The construction of access roads for troop training on the parkway during World War II destroyed much of the landscaping along the parkway in the 1930s. Additional problems stemmed from materials and labor shortages, in part caused by the disbanding of the CCC camps.¹⁰³

At the end of World War II, the park resumed normal activities and began to look forward to future development. In August 1945, the Navy agreed to halt all transports on the parkway and help in the maintenance and re-landscaping of the right-of-way.¹⁰⁴ Without the added labor of CCC camps, landscape architect Ludgate and engineer Smith proposed putting landscaping provisions on construction contracts. Insufficient funding, however, limited the resumption of construction on the parkway. In fact, the only major new construction during the late 1940s was a separated grade

⁹⁹ Memorandum to the Regional Director, 29 May 1943, file 630, “Parkway-Williamsburg to Jamestown-Williamsburg Tunnel-General,” collection of the Colonial National Historical Park, Engineer's Office, Maintenance Division.

¹⁰⁰ “Tunnel Under City May Open Shortly,” *Newport News Daily Press*, 8 August 1948; “Glory Be! Tunnel May Open Shortly,” *Newport News Daily Press*, 26 April 1949; “Williamsburg Tunnel Opened At Ceremony,” *Newport News Daily Press*, 11 May 1949.

¹⁰¹ MackIntosh, *The National Parks*, 44-53.

¹⁰² Cox, Superintendent's Monthly Narrative Reports, January 1941.

¹⁰³ Accounts of the Navy's use of park lands during the war can be found in Superintendent's Monthly Narrative Reports. Additional research is needed to shed more light on the Navy's involvement on the park's landscape, and in particular, the Colonial Parkway. In 1954 the parkway was declared a “Civil Defense Highway.”

¹⁰⁴ Jean Harrington, Superintendent's Monthly Narrative Reports, August 1945-May 1946.

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structure at the intersection of Route 168 (now Rt. 143) and the parkway, built by the Virginia Highway Department, and the paving and lighting of the tunnel prior to its opening in 1949.

Planning for the parkway's extension to Jamestown following the 1939-1940 alignment became increasingly urgent by 1949, and the NPS made it a priority to realize its original plans after nearly twenty years of work. Additional manpower and funds were directed toward Colonial, with Park Service officials like Thomas Vint and Dudley Bayliss spending more time with issues concerning the parkway.¹⁰⁵ In 1949, landscape architect Stanley Abbott was brought to Colonial to study the parkway's terminus at Jamestown Island and to develop a land use plan for the island itself. Abbott had been actively working on the design and construction of the Blue Ridge Parkway prior to his involvement at Colonial. In 1953, Abbott became superintendent of the park and directed the massive redevelopment programs of the mid-1950s.

During the fall and winter of 1949, meetings were held with the Army Corps of Engineers concerning the use of hydraulic fill along the James River. Despite the park's original plan to completely cut off the Back River channel with a reconstructed isthmus, allowances had to be made to keep stream channels clear for recreational and commercial boaters and fishermen. Meetings were also held with the state highway department in conjunction with the relocation of Route 31 in anticipation of the parkway's completion.¹⁰⁶ The first contract to continue the road south of Williamsburg was awarded in January 1952 to the C.H. Lawson Company for grading and the construction of drainage structures from the tunnel to Tazewell Hall Avenue.

Park-sponsored research activities were stepped up in order to develop new interpretive programs for Jamestown Island and the Yorktown battlefield, including construction of historical tour roads. Landscape architect Nelson Royal (in 1953 Nelson was transferred to the Regional office and replaced by Robert L. Steenhagen) and chief historian Charles Hatch collaborated on an interpretive sign program for the park and the parkway. Prisoners at the District of Columbia Department of Corrections at Lorton, Virginia, fabricated the historical markers. The park continued to cooperate with the APVA in the development of interpretive programs on Jamestown Island. As early as 1940, the APVA created a committee concerned with developing a cooperative agreement with the NPS, and the following year a joint admission ticket to the island was initiated.

The increased activity in the 1950s coincided with the impending 350th anniversary of the founding of

¹⁰⁵ Their involvement is chronicled in Edward Hummel, Superintendent's Monthly Narrative Reports, 1948-1952.

¹⁰⁶ Hummel, Superintendent's Monthly Narrative Reports, May-December 1949.

Jamestown in 1957. In November 1952, the Virginia General Assembly appointed representatives to serve on the Virginia 350th Anniversary Commission to facilitate the planning of the celebration. Two years later, the U.S. Congress appropriated funds for the establishment of the U.S. Jamestown-Williamsburg-Yorktown Celebration Commission. Held during the height of the Cold War, the celebration also served as a reaffirmation of American freedoms and the birth of democratic principles.¹⁰⁷

The state organization was responsible for developing a statewide exhibition that would help focus community attention on local history throughout the state. It was also in charge of developing recreational areas not associated with federal programs, such as the Jamestown Festival Park. The federal commission had a different role from either the Park Service or the state, though cooperation was encouraged. Their primary attention was directed toward entertainment, reducing the average visitor to "a hypothetical Mr. Smith, only mildly history-minded and inclined to benevolent domination by his wife and two children aged five and fourteen."¹⁰⁸

On 16-17 June 1954, Superintendent Abbott attended a Congressional Committee hearing of supplemental appropriations for the Department of the Interior for park improvements for 1955-1957 in anticipation of the anniversary. These hearings culminated in the "President's Budget for Parkways, Roads, and Trails, and Buildings and Utilities" put forth in the 1955 budget. Beginning in January 1955, field conferences attended by regional officials of the Park Service were held in Yorktown to review the extensive park construction programs slated for completion between 1955 and 1957.¹⁰⁹ Although it is evident that Colonial would have received additional funds in preparation for the celebration, the motivation for the redevelopment came out of the same thinking that led to the servicewide Mission 66 programs initiated by NPS Director Conrad L. Wirth.

In 1951 Conrad Wirth took over a service whose resources were severely stressed by the postwar increases in visitation and the related automotive travel in national parks. Park appropriations, which

¹⁰⁷ Information from the Superintendent's Monthly Narrative Reports between 1950 and 1954. For an exhaustive review of celebration planning and execution, see U.S. Jamestown-Williamsburg-Yorktown Celebration Commission, *The 350th Anniversary of Jamestown, 1607-1957*, Final Report to the President and Congress, (Washington, DC, 1958).

¹⁰⁸ *Jamestown, 1607-1957*, 33. An interesting avenue of study would be the differentiating themes between the Yorktown celebration of 1931 and the Jamestown celebration of 1957. From the civil religion promoted by people like W.A.R. Goodwin in 1931, to the statistically correct middle class suburban values of the 1950s, the celebrations provide insights into changing cultural values in America.

¹⁰⁹ Stanley Abbott, Superintendent's Monthly Narrative Reports, June 1954 - January 1955.

had been declining in relative terms since the 1930s, could not handle the new demands on housing, sanitation, utilities, and road and trail use. Wirth and his staff devised a ten year development program for American parks in preparation for the NPS fiftieth anniversary in 1966. With the support of Congress, in 1956 appropriations for NPS increased dramatically in order to upgrade park facilities and expand park holdings. Along with additional funds, a new administrative bureaucracy was established to specialize the management of natural, historical and recreational areas under NPS control.¹¹⁰ Because Colonial had redevelopment plans in hand by the time of the Mission 66 directive, it was able to efficiently distribute funds to become the first national park to accomplish its Mission 66 objectives.¹¹¹

Permits for the hydraulic fill and bridges along the James River were given by the Army Corps of Engineers in January 1955. Except for preliminary clearing and grubbing between Williamsburg and College Creek, this was the first step in beginning the parkway extension, since much of the construction was dependent upon the creation of a suitable road grade.¹¹² The grading of the parkway to Jamestown was a massive engineering undertaking that necessitated the movement of over one half a million cubic yards of earth and the dredging of 1.7 million cubic yards of fill. During the spring of 1955, contracts were awarded for the construction of bridges over College, Mill and Powhatan creeks and a bridge along the recreated isthmus linking Glasshouse Point to Jamestown Island. Like the Yorktown end, a variety of views and alignments were incorporated for the motorist's transition from the hills and woods around Williamsburg to the relatively flat shoreline providing wide-sweeping vistas of the river.

Extensive historical research, particularly around the Kingsmill Neck areas of Archers Hope and Papermill Creek, was undertaken to develop historical markers for scenic and interpretive overlooks. Much work went into the interpretation of the extensive settlement period of the mid-seventeenth century to fill gaps in the historical mission of the park. Complementing the historical offerings of this leg of the parkway, a variety of plant life, including pines, hickories, oaks, tulip and beech trees, trailing

¹¹⁰ MackIntosh, *The National Parks*, 62-65.

¹¹¹ It is unclear how much emphasis should be given to Mission 66 programs in relation to projects at Colonial National Historical Park between 1954 and 1957. While additional funds were directed toward Colonial prior to Mission 66, the reinvigorated system certainly carried over into the implementation of new construction projects.

¹¹² Abbott, Superintendent's Monthly Narrative Reports, January 1955.

arbutus, yellow jessamine, and cross vines, and species of galax and mountain laurel not associated with the ecology of Tidewater Virginia, are abundant.¹¹³

The completion of the parkway was just one component of a redevelopment program that included constructing visitor centers in Yorktown and on Jamestown Island, restoring tour roads, upgrading interpretive features and modernizing the park's infrastructure. Central to this program of development was the integration of park facilities through unified education programs, and an enhanced park road system.¹¹⁴ The reevaluation of the park road system was a major step in this direction, with the Colonial Parkway the transitional avenue to provide continuity for visitors as they motored from one historical era to another. Since the 1930s, this continuity was thought to be essential to the visitor's experience of the park. As written in a 1955 edition of *The Commonwealth Magazine of Virginia*,

Even the most impervious Sunday drivers may share with others a little thrill at crossing the trails of Indians, English adventurers, and perhaps Spanish fathers of nearly four centuries ago--and all on a scenic drive as modern as chromium and white-walled tires.¹¹⁵

The modernization and reconstruction of the park's road system was as much in response to the increasing stress of regional development on the park as to the celebration of 1957. Unable to meet initial proposals to remove all through traffic in the Yorktown area, the park sought to cooperate with the state to balance the needs of regional traffic with park use and conservation programs. An integrated circulation system was not developed until the 1950s, although it had antecedents in 1930s and 1940s programs. In the park's first master plan of 1936, it was hoped that all commercial traffic, particularly on Route 238 and U.S. 17, would be rerouted around the park's boundaries. Smaller commuter roads were to be integrated into the historic roads around the battlefield as part of a tour road system.¹¹⁶ As in other parks, different classes of roads served varying functions within the park.

¹¹³ Lon Dill, "Colonial Parkway Extension to Jamestown," *The Commonwealth Magazine of Virginia* 22 (September 1955): 20.

¹¹⁴ Gilmore D. Clarke, who collaborated with the Park Service on parkway design in the 1930s, also served as a consultant to the celebration committees in the 1950s. See report to Director Wirth, 27 December 1954, collection of Colonial National Historical Park.

¹¹⁵ Dill, 21.

¹¹⁶ "The Master Plan, Colonial National Historical Park, Edition of 1936," U.S. Department of the Interior, National Park Service. Drawings NM-COL 1210-1218, collection of the Colonial National Historical Park, Engineer's Office, Maintenance Division.

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BPR engineers and park historians collaborated on field surveys of the battlefield area to identify and map historic road traces to develop tour roads that incorporated significant sites in the battle of 1781. To access more remote areas on the battlefield, foot trails were constructed from parking loops off the tour roads. Two trail units, including a Headquarters loop and Campsite loop, provided over 20 miles of foot trails through the battlefield area. These trails were designed to serve both visitor use and fire control. Developed during the 1930s and 1940s, these roads and trails were upgraded in the 1950s when a similar program was initiated on Jamestown Island (for a more detailed discussion of the tour roads see HAER Nos. VA-116 and VA-117). As part of the redevelopment of Jamestown Island, "wilderness roads" were constructed to the interior of the island. The island road circuit, comprised of two loops, was supplemented with suggestive paintings of settlers by local artists Sidney King mounted at wayside turnouts. These roads were supposed to recreate the primitive isolation of the seventeenth century frontier. According to the park, "The loop roads can be looked upon as an experience in history, leading the most interested visitors deeper in to the thoughtful process of understanding the colony."¹¹⁷

Central to the circulation plan was a desire to control both access into the park and visitor movement while in the park. Consequently, many sections of smaller roads that bisected park boundaries were obliterated, and the portions located on park lands were incorporated into either tour or utility roads. While many routes, including 638 and 704, were removed from the battlefield area in the 1950s, other roads like Route 238 and U.S. 17 were rerouted and expanded, particularly with the construction of the Coleman Memorial Bridge in 1952 carrying U.S. 17 to Gloucester Point.¹¹⁸ Within the evolution of the park's road system, the Colonial Parkway continued to function as a scenic and historical corridor between Jamestown, Williamsburg, and Yorktown. Particularly in relationship to commercial and residential development on the peninsula, the parkway became a unique element to the region's cultural landscape:

It excludes most of the distraction of modern life so much evident in other portions of the peninsula area, and enable the visitor, once he has placed himself in the mood of the historic period, to retain that mood as he motors from Jamestown to Williamsburg to Yorktown.¹¹⁹

¹¹⁷ "Master Plan for the Preservation and Use of Colonial National Historical Park," Mission 66 Edition, April 1961, collection of the Colonial National Historical Park, Engineer's Office, Maintenance Division.

¹¹⁸ Hummel, Superintendent's Monthly Narrative Reports, 1950-1952.

¹¹⁹ "Master Plan, Mission 66 Edition," Chapter 2, 3.

PARKWAY CONSTRUCTION, 1931 TO 1960

The construction of the parkway was a changing and continual process with overlapping contracts, re-engineering and extensive planning. Ideas concerning grading, slope development, and planting evolved as the project began to take shape. Both landscape architects and engineers were cognizant of practical concerns that were not addressed in the original plans and specifications for the parkway. Landscape architects, architects and draftsmen from the Branch of Plans and Design worked closely with foresters, engineers and historians in developing park roads. While BPR engineers were responsible for the design and supervision of parkway construction, landscape architects directed them on the final appearance of the roadway, from how slopes were graded to what type of trees to plant.¹²⁰

The first phase of construction between Yorktown Cliffs, just south of Ballard Creek, and Hubbard Lane, a distance of about 8 miles, was divided into five units. These five contract units, supplemented with landscaping work by the CCC after 1933, set the standards guiding the design principles throughout the construction of the parkway. Unit I included grading, excavating and constructing drainage structures; Unit II covered the hydraulic fill; Unit III involved building a sentry box and wall by the marine barracks of the Navy Mine Depot; Unit IV encompassed building three bridges on King, Felgate and Indian Field creeks; and Unit V paved the roadway (for a discussion of contractors, costs and timetables see original HAER No. VA-48 report). To cut costs on Unit I and II construction, the BPR and the Justice Department worked out an agreement with the state in 1932 to use prison labor from Fort Eustis in grubbing, clean up, and some seeding along the right-of-way. By September as many as forty prisoners were engaged in work on the parkway.¹²¹ This agreement continued until the establishment of CCC camps in 1933.¹²²

Consistent with Park Service standards, special attention was given to the preservation of landscape features along the road. According to Unit I specifications,

¹²⁰ Flickinger Press release, 27 September 1934, file 501.03, "Newspaper Clippings, October 1931-December 1939," collection of the Colonial National Historical Parkway.

¹²¹ Robinson, Superintendent's Monthly Narrative Reports, September 1932.

¹²² Robinson to Peterson, 17 June 1932, in "Planning the Parkway, 1931," collection of the Colonial National Historical Park.

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Any timber or other landscape features scarred or damaged by the contractor's operations shall be removed, neatly trimmed up as required by the engineer, or restored as nearly as possible at the contractor's expense.¹²³

Crews built tree wells around the base of trees located in areas of slope fill to protect the roots during grading work. Contractor camps could only be located within the cleared right-of-way.

Crews removed all trees, stumps, brush, and other "objectionable" matter from the right-of-way within an staked area extending to the width of the slopes of the road. William H. Smith, supervisory engineer, was responsible for clearly marking trees within the slope-zone for preservation. All locust and cedar trees with a diameter of at least 6" were cut to board length and saved for future use. The burning of stumps and brush was also strictly regulated to certain areas, especially through the lands of the Navy Mine Depot. These restrictions, however, did not keep the Secretary of the Navy from complaining to the Secretary of the Interior about burning operations adjacent to the extremely combustible Depot lands.¹²⁴

Following specifications from the BPR, graded sections of 41' in cuts and 38' in fills were established with slopes varying between 2:1 and 5:1. Where cut slopes intersected with level grade ground, edges were rounded to create a more natural transition. According to Unit I estimates, 236,148 cubic yards of excavation and 84,552 cubic yards of borrow, consisting of a sandy loam and clay free of rock, were used. Grades were relatively light, being no more than 5.04 percent, and an alignment was created with a maximum curvature of 5° 15'. All tangents were eliminated, and all curves greater than one degree were superelevated. The elevation of the road grade varied from 11' to 89' above mean sea level.¹²⁵

For all structures in view of the motorist, special attempts were made to recreate the "colonial atmosphere" of the region. While reinforced concrete pipe was used for all pipe culverts of 18" to 24", one length of vitrified clay pipe was attached to both ends to screen the "modern" concrete on the

¹²³ U.S. Department of Agriculture, Bureau of Public Roads, "Special Provisions, Proposal and Contract Forms for Colonial National Monument Parkway, Unit 1," file 630.C2.4, "Planning the Parkway, 1931," collection of the Colonial National Historical Park.

¹²⁴ See correspondence in file 630, "Planning the Parkway, 1931," collection of the Colonial National Historical Park.

¹²⁵ William Smith, U.S. Department of Agriculture, Bureau of Public Roads, "Final Construction Report--1932, Colonial National Monument Parkway Units I and II," 6 May 1933, 3, collection of the Colonial National Historical Park, Engineer's Office, Maintenance Division.

interior walls of the culverts. Drainage structures with required openings greater than 24" were constructed as reinforced concrete arches with spans of 4', 6' and 8'. All exposed concrete surfaces, including culvert headwalls, walls of arches, and bridges were clad with oversized "hand-made Virginia style" brick manufactured by the Jamestown Brick Company of Virginia, following plans drawn by William Haussman in April 1931.¹²⁶

To ensure an antique finish, all clay for bricks was pit-pugged for twelve hours, and was ordered in a variety of shades. The bricks were sand struck and oversized, averaging 2 5/8" x 8 1/2" x 4". The contractor was required to hire only "expert" bricklayers and use both Flemish and English bonds depending upon the location of the structure and the plans drawn under Charles Peterson's supervision for architectural treatments. Beveled and half-round bricks were specially produced for use on all parapet walls parallel to the parkway, and arch rings were pre-molded and delivered on site packed in sawdust for protection. Mortar consisted of one part portland cement, one part lime putty, and three parts salt free sand. Upon completion, brick headwalls and parapets were scrubbed with bristle brushes and a solution of water mixed with 10 percent muriatic acid.¹²⁷

Special attention was paid to bond brickwork to the concrete in order to insure a lasting joint. According to Unit I specifications

Just before concrete is to be deposited against the masonry, the surfaces shall be thoroughly washed with a stream of water from a hose. The brick masonry shall be coated with a mixture of neat cement and water immediately ahead of the placing of the concrete. The concrete backing shall be placed in layers not more than six inches thick. All bonding pockets shall be completely filled and the concrete worked around the projecting headers and thoroughly spaded and worked until it is brought into intimate contact with every part of the back face of the brick.¹²⁸

All stream crossings between Ballard and King creeks were at tidewater level and provided extremely poor foundation materials for drainage structures. Consequently, untreated timber piles of varying lengths were required under the footings for all culverts and bridges. Trenches for culverts were cut to the grade and flow specified in the plans, and were wide enough to allow working space between the concrete and earth. After piles were driven and footings poured, 2" to 3" Wakefield pilings were driven

¹²⁶ Smith, "Final Construction Report," 3-4; and correspondence in "Planning the Parkway, 1931."

¹²⁷ "Special Provisions, Unit I," 15-17.

¹²⁸ "Special Provisions, Unit I," 16.

into the earth and anchored to the concrete by hook bolts. For arch culverts, formwork had to be constructed before concrete could be poured. Generally, only class A and class B concrete was used for the culverts and footings in Unit I construction of the parkway. Once the concrete had set up, the trenches were carefully packed and backfilled.¹²⁹

Along with the ubiquitous culverts, three major structures were constructed as part of the Unit I contract, including a 98' long overpass above the Naval Mine Depot railway tracks (see HAER No. VA-48-A), a 14' arch culvert at Bracken's Pond (HAER No. VA-48-F), and a 18' arch spillway and earthen dam along the Jones Mill Pond (HAER No. VA-48-G). The landscapes around Bracken's Pond and Jones Mill Pond in particular became focal points for vista development, providing views of both marine and freshwater wetlands. Certainly, the most dramatic views along the Yorktown to Williamsburg stretch of the parkway were of the York River where special attempts were made to bring the roadway as close to the water as possible.

The decision to align the parkway along the York River while avoiding interference with Navy properties required the use of hydraulic fill to create a suitable roadway embankment along the confluence of both Felgate and Indian Field creeks with the river. Familiar with the work done along the Mount Vernon Parkway, Peterson called for an embankment 11' above sea level, with a width of 60' by the Navy officer's quarters and 100' by the mouths of the creeks. The 4400' fill along Indian Field Creek, and the 1200' fill along Felgates was to have slopes between 1:25 and 1:30. On 3 June 1931, the Arundel Corporation of Baltimore, Maryland, was awarded the contract for the fill, and work began the following month after dredging permits were obtained from the War Department.¹³⁰

Timber bulkheads were constructed at the location of bridges to be built at both Indian Field and Felgates creeks, and posts were driven at the centerline of the embankment. The bleeding process of hydraulic fill was utilized by which an 18" discharge pipe was placed at the centerline of the embankment and through which dredged material was pumped and allowed to settle naturally. Generally, no material was dredged closer than 500' from the centerline of the embankment. While the material adjacent to Indian Field Creek consisted of coarse sand suitable for fill, material around Felgates Creek was fine and hard to control within the proposed limits, spreading between twenty and

¹²⁹ U.S. Department of Agriculture, Bureau of Public Roads, "Specifications for Concrete," supplement to FR 50 Specifications for Forest Road Construction, February 1931.

¹³⁰ Smith, "Final Construction Report, Units I and II," 6-7.

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thirty times as wide as it was deep. According to Charles Peterson, the result was “the most wonderful beach anyone had ever seen.”¹³¹

Although attempts were made to conserve the natural environment, any time fill is used to close stream mouths, a alteration of the environment will result, often with negative consequences. Not only did the fill bury many trees, but by cutting off the stream channels, the water level on the inland side of the fill began to rise. Consequently, the Arundel Corporation was directed to dig out trees and provide additional drainage in specified areas in the spring of 1932. Peterson also directed engineer Spelman to level and shorten the slopes of the embankments to bring the road closer to the water.¹³²

With the fill complete along the York River, planning continued for the construction and landscaping of a brick wall and sentry box in front of the Marine barracks. In an attempt to separate the Mine Depot from the parkway, the Navy erected a wire fence along the right-of-way monuments about 250' from the centerline of the road. A landscape plan was developed to screen the barracks from motorist's view and provide a new access to the parkway through a brick gate and sentry box. Under Peterson's direction, the Branch of Plans and Design drew up a plan for a colonial style brick structure. The plans for the fence called for a 6' barbed wire fence along the right-of-way line supported by iron posts set 10' apart. To screen the fence, posts and arms were painted green, and the Navy assisted in the planting of shrubs and marsh grasses. Constructed by the P. T. Withers Company of Gastonia, North Carolina with hand labor between 1932-1933, the fence included double swing gates to allow access to the parkway in case of emergency.¹³³

The sentry box and gate were constructed only 21' from the edge of the future pavement. Superintendent Robinson reluctantly signed the plans, because he believed the wall was too close and would inhibit the chance of future development of bridle trails or the possible expansion of the right-of-way. Instead Robinson called for the brick structure to be built at least 50' from the pavement, at a higher elevation to block the view of the barracks from parkway motorists.¹³⁴ In spring 1930,

¹³¹ Peterson, interview with Haskett, 7 May 1986, 5; Smith, “Final Construction Report,” 6-7.

¹³² Peterson to Spelman, 7 January 1932, “Unit II” file, collection of the Colonial National Historical Park, Engineer’s Office, Maintenance Division.

¹³³ Smith, “Final Construction Report 1933-Colonial National Monument Parkway-Unit III,” collection of the Colonial National Historical Park, Engineer’s Office, Maintenance Division.

¹³⁴ Robinson to Albright, 6 May 1932, file 630, “Unit III,” collection of the Colonial National Historical Park, Engineer’s Office, Maintenance Division.

however, NPS chief landscape architect Thomas Vint reviewed the plans on the ground with Peterson and approved the location.¹³⁵

Planning continued for three bridges over Indian Field, Felgate, and King creeks, and the extension of the parkway toward Capitol Landing Road in Williamsburg and to the Royal Welsh Fusiliers' Redoubt near Yorktown. Grading also continued between King Creek and Hubbard Lane, where the slopes were moved back from the centerline of the road to create a broader surface for the roadway and shoulders.¹³⁶ Peterson also directed the seeding of slopes once the proper grade was attained to "freeze" the contours. Edward Zimmer, under the direction of Peterson, laid out a landscaping plan in 1932 that recommended grassing the slopes along the parkway using a mixture of seed: 20 percent orchard grass, 15 percent Timothy, 20 percent Korean Lespedza, 20 percent Domestic Italian Rye, 10 percent Kentucky Blue Grass, 10 percent Red Top, and 5 percent sheep feces.¹³⁷

Maintenance became an issue for park staff as soon as construction began on the parkway. Culverts and other drainage features had to be cleared regularly and replaced if faulty, slopes damaged by heavy rains had to be remodeled, and fill settlement often required stabilization and regrading. Park and BPR staff from the region as well as staff from both Washington offices made monthly surveys of the parkway. Any problems encountered were reported to the resident engineers and landscape architects. Tours of the road were also given on a regular basis to representatives of the Colonial Williamsburg Foundation, including John D. Rockefeller Jr., officials of the state highway administration and the Virginia Conservation and Development Commission.¹³⁸

By 1933 bridges had been built at Indian Field (HAER No. VA-48-H), Felgate (HAER No. VA-48-I), and King (HAER No. VA-48-J) creeks, which was the final step before the first section of the parkway could be paved and opened to traffic. Originally, there were two alternative designs for the Unit IV bridges put forth by the BPR. Alternative One was a reinforced concrete deck slab, wide enough for a 30' roadway and two 2' sidewalks, constructed on steel I-beams on concrete bents and piers. Alternative two, considered the low cost model, utilized a reinforced concrete deck slab on steel

¹³⁵ Correspondence of Vint can be found in file 630-Parkway, "Boundary Fence Between U.S. Navy Mine Depot and Parkway Right-of-Way, Unit III," collection of the Colonial National Historical Park, Engineer's Office, Maintenance Division.

¹³⁶ Robinson, Superintendent's Monthly Narrative Reports, March - April 1932.

¹³⁷ "Recommendations for Grassing Parkway Slopes," 12 July 1932, file 630-C-2-48, "Landscaping the Parkway, 1931-1932," collection of the Colonial National Historical Park.

¹³⁸ For accounts of visitors to the park see the Superintendent's Monthly Narrative Reports.

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I-beams supported by a timber trestle. There was also an ongoing debate between the landscape architects as to the final treatment of the structures. Initial plans called for sand-blasting the handrails and staining the concrete brown to simulate a wood finish. These plans were dropped, and the all concrete alternative was adopted. It was thought that the concrete would blend with the pale color of the hydraulic fill.¹³⁹

Stanford & Brooks Company of Baltimore, Maryland, was awarded the contract and began construction in October 1932. To facilitate construction, a floating concrete plant was constructed for work on the center footings and piers while a land plant handled the abutments and decks. Heavy winds and surf hampered progress on the pile-driving, erection of cofferdams and excavations of abutments. When completed, however, the low-level bridges allowed for extensive views of both the inland marshes and the York River. Characteristic of Park Service bridges, their simple unadorned design fit into the surrounding landscape and did not distract from visitors' experience of the Tidewater environment. Final inspection of the bridges was made in September 1933, during which Edward Zimmer noted

The three bridges built under this contract are extremely well executed and I believe the best examples of concrete construction to be seen in this part of the country. The contractor's superintendent is to be commended for his excellent and thorough interpretation of the plans.¹⁴⁰

With all grading and drainage features completed by the end of 1933, BPR engineers and Park Service landscape architects focused upon paving the road. Although Albright approved \$150,000 from the Emergency Relief Appropriations for paving in 1932, the park decided to delay paving to allow the hydraulic fill to settle and to study the available types of paving material that would best suit the character of the parkway. NPS engineer Frank Kittredge wrote:

I am wondering if eventually we might not want to lay a concrete foundation on top of the crushed rock base, and then pave the road with brick. Brick was certainly an old time product,

¹³⁹ Robinson, Superintendent's Monthly Narrative Reports, August - October 1932; and correspondence in file 630-C-2-48, "Landscaping the Parkway, 1931-1932," collection of the Colonial National Historical Park.

¹⁴⁰ This note is included in the U.S. Department of Agriculture, Bureau of Public Roads, "Final Construction Report, Project No. 1, Colonial Parkway, Unit IV Bridges," 13 December 1933, collection of the Colonial National Historical Park, Engineer's Office, Maintenance Division.

and I believe would harmonize, so far as I know landscape ideas. Vitrified brick are very durable, and will last for generations under automobile traffic if well laid.¹⁴¹

Historical research played a role in developing a suitable pavement for the parkway. Diaries of eighteenth century travelers to Yorktown comment upon the high quality of roads in the area, which were surfaced with a mixture of marl (a native stone) and shells. Robinson and resident engineer Spelman discussed the idea of paving the parkway with a marl and shell topping with a cement binder to prevent dust. While they decided that a marl and shell road could not hold up under the stresses of a modern highway, Robinson continued to search for an acceptable alternative, "which would (more) nearly simulate a colonial road than would concrete."¹⁴² In the interim, a gravel and slag base course was laid upon the graded surface and topped with oil to provide a suitable road grade for passage of construction vehicles. BPR engineers thought the use of the road for two or three years would produce the needed settlement to pave such a new road.

The inspiration for the finish of the parkway's pavement most likely came from Williamsburg, where restoration architects experimented with brushing the concrete to expose the gravel and stone aggregate. Robinson and Peterson were aware of this operation by 1932, and at some time a decision was made to adopt this method, although it was by no means a simple task.¹⁴³ On 4 May 1934, the Roberts Paving Company of Salisbury, Maryland, won the contract for the 9.4 miles of the parkway between Ballard Creek and Hubbard Lane. Sub-contractors were responsible for the pre-paving grade work, establishment of seven overlooks, and construction of guardrail along certain sections of the road.

A light skimmer was used to re-grade the roadway surface, and additional gravel was laid to create a two course sub base between 9" and 1' deep. Marl for the concrete pavement was quarried out of a local "gravel pit" near Yorktown.¹⁴⁴ Modified rails comprised the form work for the 10' x 40' sections of the pavement. Once the pavement had set, the rail forms were removed and a cork filler was poured in the 40' longitudinal joints. Final grading prior to the pouring of concrete created a specially shaped surface 8" deep at the edges and 6" deep at the center. All sections of the parkway not

¹⁴¹ Kittredge to Robinson, 13 August 1932, file 630, "Parkway-Unit V-Surfacing, Access Roads, Parking Areas," collection of the Colonial National Historical Park, Engineer's Office, Yorktown, Virginia.

¹⁴² Robinson to Kittredge, 5 August 1932, file 630, "Parkway-Unit V-Surfacing, Access Roads, Parking Area."

¹⁴³ Robinson to Kittredge, 5 August 1932.

¹⁴⁴ Flickinger, Superintendent's Monthly Narrative Reports, September 1934, 12.

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superelevated were crowned with a slope not more than 1-1/4" from the centerline. Approximately 2" below the surface of the pavement, a reinforcing mat comprised of No. 00 and No. 5 gauge steel was laid. Painted and oiled 5/8" smooth wooden dowels fitted with metal expansion sleeves were placed 3 1/2" below the surface at the transverse joints of each section. Cut to a length of 4', four dowels were used at the joint. At the approach slabs to bridges and access roads, special 9" concrete headers and construction joints were built to handle the added stress.¹⁴⁵

Utilizing a Rex paving machine, cement, aggregate and sand were mixed on site and poured in the center lane first beginning on 15 June 1934. Under the close watch of landscape architects Edward Zimmer and James H. Brooks, a water hose was used to flush out the cement in order to expose the aggregate. BPR engineer Spelman, however, prohibited the use of this method after he determined that it was excessively destructive to the concrete. Directed by Zimmer and Spelman, the contractor switched to a mixed aggregate of 75 percent large stones and 25 percent small stones (compared to a 60/40 ratio used before), and a brooming operation commenced soon after the concrete was poured.¹⁴⁶ The concrete was first brushed with stiff wire brushes, after which the mortar was broomed away from the surface. A mixture of water and 10 percent muriatic acid was used to clean the cement from the exposed aggregate. This labor intensive method proved more successful in creating a fairly uniform finish, and was tentatively recommended for acceptance by engineers Spelman and Smith, as well as the landscape division.¹⁴⁷

By August, however, Smith began questioning the whole operation of exposing the aggregate and called for a complete inspection of the pavement laid thus far. Not only was it considered excessive in labor time spent, but Smith also identified numerous minor defects in the construction (particularly the joints) and appearance.¹⁴⁸ Although common by the 1950s, the use of exposed aggregate in the 1930s was a novel and ambitious undertaking. Despite Smith's desire to abandon the exposed aggregate finish, the

¹⁴⁵ U.S. Department of the Interior, National Park Service, "Colonial National Monument Parkway, Unit No. 5, Paving and Incidental Construction," collection of the Colonial National Historical Park, Engineer's Office, Maintenance Division.

¹⁴⁶ In August 1934, the Roberts Paving Company was allowed to use Piscataway Creek gravel for the aggregate in the parkway's pavement.

¹⁴⁷ Flickinger, Superintendent's Monthly Narrative Reports, June 1934, 13; James H. Brooks, Junior Landscape Architect, to Peterson, 20 June 1934, file 630, "Parkway-Unit V Surfacing, Access Roads, Parking Area.," collection of the Colonial National Historical Park.

¹⁴⁸ Smith to Spelman, 8 August 1934, file 630, "Parkway-Unit V-Surfacing, Access Roads, Parking Area.," collection of the Colonial National Historical Park.

paving continued and was completed by the end of October 1934. Only finishing work, including grinding down high spots, replacing defective workmanship and pouring the expansion joints, remained.¹⁴⁹

While paving continued, planting activities intensified, particularly after the establishment of CCC camps in 1933. Funds for plant material were allocated as part of Emergency Conservation Works programs. Following Zimmers' 1932 planting plan, trees such as pines, cedars, dogwoods, redbuds, tulip and beech were purchased from local suppliers and planted to create the desired landscaping effect. Many existing trees were moved into more appropriate locations. This process of planting and transplanting vegetative cover became officially known within the NPS as "landscape naturalization." Planting became a higher priority of the NPS in the late 1920s after the hiring of junior landscape engineer Ernest Davidson. In 1929, Davidson submitted a report on planting operations that received considerable support within the Service. Additional appropriations were sought to plant vegetation for both beautification and maintenance (to curb slope erosion for instance).¹⁵⁰

Concurrent with planting operations, dead wood, brush and any other fire hazards were removed from the forest floor and replaced by a stable understory consisting of small dogwoods, bayberry, sumac and a variety of other shrubbery. Agreements were made with adjacent landowners to trade trees from their land in exchange for minor grading and surfacing of roads on their property.¹⁵¹ In 1938, over 200,000 trees had been planted between Yorktown and Williamsburg, the highest percentage of which were dogwoods. Locally, the parkway became known as "dogwood drive."¹⁵²

Crews were also active in both selective and vista cutting along specified areas of the parkway. Particular attention was paid to creating a pine canopy over the road to form a shaded drive for motorists. Well pruned trees framed the viewsheds. Fundamental landscaping principles of unity, variety and character guided the development of the parkway to create a road of beauty as well as utility.¹⁵³ Planting operations, however, also caused considerable damage to the roadway as

¹⁴⁹ Flickinger, Superintendent's Monthly Narrative Reports, October 1934.

¹⁵⁰ McClelland, 149-153.

¹⁵¹ Flickinger, Superintendent's Monthly Narrative Reports, December 1935, 12.

¹⁵² Press release from Colonial National Historical Park, 16 April 1938, file 871, "Virginia Conservation Commission," collection of the Colonial National Historical Park.

¹⁵³ H. K. Bishop, "Tourist Parkways," in "Discussions on Highway Location," *Transactions of the American Society of Civil Engineers* 96 (1932): 477-480; and George R. Chatburn, "Highway Esthetics," in

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simultaneous work crews often cluttered the parkway with trucks, equipment and men. In 1934, BPR engineers complained to superintendent Flickinger about excessive damage done to the parkway's gravel and earth shoulders by CCC trucks.¹⁵⁴

Other landscaping features completed with the paving of the road were the installation of peeled locust log guardrails, timber tree enclosures, log curbs, and parking overlooks. While initial plans called for concrete guardrails molded to look like wood, the rustic architecture common in western parks was utilized. The lintels were generally 8" wide, supported by 10" wide, 1'-8" high posts. The subcontractor was not able to find enough locust to finish the job, so cedar logs were substituted where necessary. Generally, guardrails were constructed around overlooks, along steep embankments, and along bridge toe walls and culvert parapets. In all, seven overlooks were constructed between Yorktown and Williamsburg during the first phases of construction.¹⁵⁵

With the paving and planting of the parkway as far as Hubbard Lane nearly complete by early 1935, clearing to Capitol Landing Road and negotiations for the right-of-way to the C&O Railroad were well underway. Land parcels between .10 and 22 acres were acquired from both private and public property owners. Access rights into Williamsburg proper were attained in 1935, and plans were drawn for underpass structures at Capitol Landing and the C&O Railroad (see HAER Nos. VA-48-B and VA-48-C). In 1936-1938, there were four major projects completed along the parkway, including the two underpass structures, the grading, drainage and paving between Hubbard Lane and North England Street, and the extension of the parkway to a new terminus comprised of a traffic U and parking area by the Royal Welsh Fusiliers' Redoubt in Yorktown.

The grading and paving contractor, T.E. Ritter Company, Inc., followed the same standards of alignment and grade established between Yorktown and Hubbard Lane. Cross sections called for a 44' wide roadway with slopes in cuts and fills varying from 2:1 to 5:1. The greatest degree of curves was 3 percent, and all grades were under 5 percent, except for a 400' section with a 5.7 percent grade. Along with pipe culverts, four arch culverts were built with spans of 4' and 6' with brick-clad headwalls. Because of the terrain, excavations were comparatively heavy, requiring the stockpiling of about

Highways and Highway Transportation (New York: Thomas Y. Crowell Company, 1923), 382-421.

¹⁵⁴ Smith to Flickinger, 4 January 1934, file 630, "Parkway-Unit V-Surfacing, Access Roads, Parking Area."

¹⁵⁵ Flickinger, Superintendent's Monthly Narrative Reports, 1934-1935; and plans for Unit V paving and incidental construction, drawing 1086-D, Eastern Division of the Branch of Plans and Design, 5 September 1933.

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20,000 cubic yards of soil.¹⁵⁶ As mentioned earlier, the Colonial Williamsburg Foundation directed many landscape features of this section of the parkway. From the design and treatment of underpasses to the planting and view shed development, Arthur Shurcliff and others associated with the restoration played an important role in shaping the character of the road in the vicinity of Williamsburg.

Park Service resident landscape architects experienced high turnover rate. By the time the parkway approached Williamsburg, Zimmer had been transferred to the Washington office, later to become chief of the Eastern Office of Design and Construction (EODC), and was replaced by James Brooks. In 1938, associate landscape architect Ray A. Wilhelm replaced Brooks. Other landscape architects involved in the parkway included landscape foreman Eugene R. DeSilets, who oversaw planting and other work until 1938 when he was transferred to the Natchez Trace Parkway. Like Zimmer, DeSilets went on to become head of the EODC and later President of the American Society of Landscape Architects.¹⁵⁷

Due to a lack of funds that slowed progress on the parkway during the late 1930s, more of the landscape architect's time was spent directing maintenance crews along completed sections. Trees had to be pruned, culverts needed clearing, and mudjacking operations were required to level pavement where sinking had occurred. Typical of engineering practices on hydraulic fill, mudjacking became a yearly task of the park as early as 1937 to stabilize and protect the pavement. The operation consisted of pumping "grout," a mixture of soil, cement, and water, through bored holes in the pavement. The sections were raised to the desired level, and the grout hardened to retain the road grade.¹⁵⁸

Once the parkway was completed to North England Street, planning for the tunnel and right-of-way access south of Williamsburg was well underway. In March 1940, CCC forces began to strip the sod along the tunnel route and to move telephone lines. Construction of the tunnel proceeded south to north by the "cut and cover" method. A large trench was dug on a curve of 1° 45'. The trench averaged 50' wide, although in many places the width doubled due to numerous cave-ins that caused considerable damage to structures and many injuries to workers. Extensive shoring, comprised of timber sheeting

¹⁵⁶ Smith, "Final Construction Report, Project 1C1, Colonial National Historical Park," 15 September 1937, collection of the Colonial National Historical Park, Engineer's Office, Maintenance Division.

¹⁵⁷ Cox, Superintendent's Monthly Narrative Reports, October 1938; and Peterson, interview with James Haskett, 12.

¹⁵⁸ Mudjacking operation were generally reviewed in the Superintendent's Monthly Narrative Reports, but for a more detailed account of the work see Glenn Farrar, U.S. Department of the Interior, National Park Service, "Mudjacking, Yorktown-Jamestown Section of Parkway," 24 February 1959, collection of the Colonial National Historical Park, Engineer's Office, Maintenance Division.

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and steel H-beams, was needed to stabilize the trench walls and nearby structures. Under the tunnel footings, an 18" cast iron sewer was placed in a 2' x 2' reinforced concrete box. The tunnel's footings were built upon hard marl without the use of piles. Numerous underground springs that were encountered during digging were siphoned by piping and underdrains. All excavated material was spread on the grubbed right-of-way between Williamsburg and Halfway Creek.

A concrete mixing plant was constructed adjacent to the trench and fitted with an elevated shaft to empty concrete into chutes attached to the tunnel's form work. With the footings of the south portal complete by July, concrete for a 30' horizontal span tunnel arch was poured in 30' sections. The steel forms for the arch were comprised of "arch rib trusses spaced 30" center to center with 30" x 30" steel plates, inside and outside, and tied with 1" x ½" flat steel tie bars." Once set, the concrete was waterproofed with hot tar, fabric and asphalt plank, and encased with 12" of gravel sheathing. In order to reopen streets effected by the cut as soon as possible, backfill operations began on completed sections before the entire cut had been made to the north portal (for additional construction details see HAER No. VA-48-D).¹⁵⁹

In November, a CCC crew began work on the first extension of parkway work south of Williamsburg, beginning clearing and grubbing operations between Papermill and Halfway creeks.¹⁶⁰ Through 1940 and early 1941, the right-of-way to Halfway Creek was cleared and marked but progress on the tunnel was exceedingly slow due to poor supervision and numerous problems. In January, NPS engineer William G. Fyfe was transferred to Colonial from the Blue Ridge Parkway to oversee parkway construction.¹⁶¹ The slow progress on the tunnel worsened as increased defense activity in the region drained manpower and materials from the project.

By April 1941, piles were being driven for a bridge over Halfway Creek, but the contractor, Frank T. Wescott of North Attleboro, North Carolina, experienced similar difficulties in finding materials and labor. The turnover of landscape architects continued in June with the replacement of Ray A. Wilhelm, who was transferred to the Great Smoky Mountains National Park, by Robert W. Andrews from Region I. Although these changes may have affected other work at Colonial, they do not seem to effect

¹⁵⁹ Cox, Superintendent's Monthly Narrative Reports, March-August 1940; Smith, "Final Construction Report, Project 1D3, Colonial National Historical Park, Williamsburg Tunnel, James City County, Virginia," 15 June 1943, collection of the Colonial National Historical Park, Engineer's Office, Maintenance Division.

¹⁶⁰ Cox, Superintendent's Monthly Narrative Reports, November 1940.

¹⁶¹ Cox, Superintendent's Monthly Narrative Reports, January 1941.

the progress of the parkway which continued to be an independent construction project run by the BPR.

Backfilling operations at the tunnel were completed by February 1942, and remaining CCC forces began to replace the topsoil along the path of the cut. The Colonial Williamsburg Foundation was responsible for landscaping the area, and chief architect A. E. Kendrew developed plans to screen the north portal with trees and shrubs for visitors on Nicholson Street.¹⁶² During the spring, brickwork continued on the north portal and excavations around the north approach. A final inspection of the tunnel was made in September, and it was approved. The following year a temporary gravel surface was placed on the tunnel road bed. Halfway Creek Bridge was completed and accepted in December 1942 (see HAER No. VA-48-K for bridge construction details).¹⁶³ Except for an underpass structure at Route 168 east of Capitol Landing Road, built by the state in 1948, these two projects mark the last major construction operation on the parkway until the final completion of the road between 1955 and 1957 (Route 168 became Route 143 when Interstate 64 was built in 1964).

As noted earlier, planning for the parkway's extension continued during the early 1950s. War again, this time in Korea, limited funding available to the park for new construction projects. One exception was the bridge over Powhatan Creek just east of Glasshouse Point. An appropriation for the bridge's construction was made in 1950 and plans were drawn and approved. When bids were returned in September, however, the lowest came in at \$100,000 over the engineer's estimate, and all bids were rejected which delayed the construction of the bridge for five years. In 1951, BPR survey crews began to place concrete right-of-way markers between Williamsburg and College Creek, and between Route 31 and Powhatan Creek. Plans were also prepared in consultation with A. E. Kendrew of Colonial Williamsburg on a connection with Tazewall Hall Avenue south of the tunnel.

Begun in February 1952, the C. H. Lawson Company of Williamsburg was awarded the contract for the grading, drainage, and temporary paving with hot asphalt through the tunnel to Tazewall Hall Avenue.¹⁶⁴ In November, the extension was open to public transportation but the connection was only temporary; a concrete arch underpass replaced it in 1957.

¹⁶² Memorandum to Regional Director, Region One from park superintendent Elbert Cox, 29 June 1942, file 630, "Parkway, Williamsburg-Jamestown, Williamsburg Tunnel-General," collection of the Colonial National Historical Park, Engineer's Office, Maintenance Division.

¹⁶³ Cox, Superintendent's Monthly Narrative Reports, April-December 1942.

¹⁶⁴ Smith, "Final Construction Report, Project 1D13, Colonial Parkway," collection of the Colonial National Historical Park, Engineer's office, Maintenance Division.

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When Stanley Abbott became park superintendent in 1953, he was the first landscape architect to fill that position. He would have a major impact upon the completion of the parkway and was responsible for continuing the design principles established in the 1930s. The following year, resident landscape architect Nelson Royal was transferred to the EODC and replaced by Robert L. Steenhagen. In September 1954 it was announced that Warren Lewis, associated with the Blue Ridge Parkway like Abbott, would set up an office as field representative of the EODC with temporary assistance from Edward Deetz. Abbott, Steenhagen and Lewis provided the professional guidance for the massive redevelopment projects of the mid-1950s.¹⁶⁵

The impetus for the completion of the parkway was the increased funding through Mission 66 programs in 1956 and 1957. More than \$4.5 million in heavy construction funds went into the completion of the parkway complex between 1954 and 1958.¹⁶⁶ The first project toward this end began in 1954 with the contract for the construction of Powhatan Creek Bridge. The bridge was the first of four bridges (not counting Halfway Creek) constructed between Williamsburg and Jamestown Island in the 1950s. It was the only remaining bridge that did not require hydraulic fill before it could be built. Built by the Malpass Construction Company, the structure is a 725' reinforced concrete girder bridge supported by concrete bents and piers. Initial excavations and the placement of footings proceeded at an extremely slow rate due to marshy conditions encountered at the site. A temporary railroad trestle was constructed parallel to the bridge to facilitate the movement of equipment to specific sites along the structure. When completed in April 1956, the low level concrete bridge matched the character of other parkway bridges along the rivers, providing extensive views of the surrounding landscape.¹⁶⁷

There was a concerted effort to coordinate concurrent construction projects for the park and the parkway. In January 1955, a two day field conference was held at Yorktown during which the entire staff was briefed about projects slated for the next two years. That same month, the Park Service received permits from the Army Corps of Engineers for the hydraulic fill and bridges at College and Mill creeks and between Glasshouse Point and Jamestown Island.¹⁶⁸ The parkway was also affected by other interpretive projects being planned at the same time. The Eastern Office of Design and

¹⁶⁵ Most of this information is taken directly from Hummel and Abbott, Superintendent's Monthly Narrative Reports, 1951-1954; September report of the landscape architect's office filed on 5 October 1954, A-2827, "Monthly Reports (park engineers) January 1954-December 1957," collection of the Colonial National Historical Park.

¹⁶⁶ *Jamestown, 1607-1957*, 42.

¹⁶⁷ Emery, "Completion Report of Construction Project Bridge, Powhatan Creek," collection of the Colonial National Historical Park, Engineer's office, Maintenance Division.

¹⁶⁸ Abbott, Superintendent's Monthly Narrative Reports, January 1955.

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Construction planned additional overlooks, parking and picnic areas, and prepared historical markers. A new visitor center in Yorktown, furthermore, necessitated the extension of the parkway from its terminus west of the Royal Welsh Fusiliers' Reoubt behind Yorktown to the river bluffs east of the town where the new complex was built.

Regular meetings were held to monitor the progress of construction. The contract for hydraulic fill went to the Nello L. Teer Company, and the contract for grading and drainage for the entire parkway was awarded W.H. Scott, Inc. of Franklin, Virginia. These projects proceeded concurrently, with grading taking place between Williamsburg and College Creek and toward the Yorktown terminus so as not to interfere with fill operations. Grading continued to follow standards established in the 1930s except for the use of two long tangents at the parkway's approach to both College and Mill creeks. All grading work and the construction of drainage features along the entire route were complete by September 1956.

The bleeding process was used for fill operations, but more substantial bulkheads were constructed due to problems encountered along the York River. Glebe Gut discovered high quality fill along the James River, prompting the engineers to construct a mile-long discharge pipe along the shoreline to Mill Creek. Completed between April and March 1955, over 2 miles of roadway embankments were created with two dredges and a 28" pontoon discharge pipe pumping over 1.6 million cubic yards of fill. Creek channels were kept open prior to filling by timber bulkheads at the location of the bridges.¹⁶⁹

The Rea Construction Company of Charlotte, North Carolina was the most active contractor on the project, building the concrete deck bridges at College and Mill creeks and the isthmus (see HAER Nos. VA-48-M, VA-48-N, and VA-48-P respectively). The Rea Company also constructed the brick veneered bridges over U.S. 17 (HAER No. VA-48-R) and Yorktown Creek (HAER No. VA-48-Q) on the Yorktown extension of the parkway. The only remaining bridge was the concrete arch, brick veneered underpass at Route 238 near Yorktown constructed by the Case Construction Company of Mount Airy, Maryland. All of these structures were completed in 1956.

On 24 May 1956, bids were opened for the paving of the parkway, the final and largest contract for the road's completion. The \$1.6 million contract was awarded to the Nello L. Teer Company (the company which received the first contract in 1931), and work began on 26 June 1956. The entire contract included paving the parkway, access roads, interchanges, parking areas, and picnic sites, the laying of base stone, and the construction of curbs, parking areas at both visitor centers. Eleven overlook parking areas were integrated into the Jamestown end of the road, and seven were repaved

¹⁶⁹Emery, "Completion Report of Construction Project-Hydraulic Embankments and other work," collection of the Colonial National Historical Parkway, Engineer's Office, Maintenance Division.

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on the Yorktown end. The maximum degree of curvature was $16^{\circ} 30'$ with a maximum grade of 4.9 percent, and a design speed of 50 miles an hour.

The bulk of the contract involved the construction of about 10 miles of 30' wide reinforced exposed aggregate concrete to match the pavement on the completed portions of the parkway. Two Butler batch concrete plants were erected at station 970 and between Mill Creek and Glasshouse Point. Aggregate was acquired from Dutch Gap, roughly 30 miles up the James River, and delivered to the site by barge. Except for bridge sections and parking areas, the pavement between Glasshouse Point and Williamsburg was completed in December 1956. Progress slowed considerable during the first three months of 1957 due to snow, ice, heavy rains and a nationwide cement strike. In order to complete the parkway by the beginning of the celebration on 1 April, the contractor was forced bring in floodlights for nighttime work.

The structure of the pavement was different than the original pavement laid in 1934-1935. A uniform 12" base course of gravel underlay a uniform 7" concrete pavement. Sections were 10' wide, but 60' long with 2' steel dowels every 1' along the length of the longitudinal joints, and three 40" tie rods for the transverse joints of each 10' wide section. A reinforcement mat comprised of No. 6 wire and No. 2 steel bars was set approximately $1 \frac{1}{4}$ " below the surface of the pavement. The individual sections were not flush, but fit together with a tongue-and-groove key joint. The center section was crowned to produce a slope of 1" per 1' from the centerline of the pavement to its edges. Between fifteen and twenty men were employed at all times hand brooming the surface to expose the aggregate, after which an acid was applied for cleaning. As with the first sections of the parkway, exposing the aggregate caused considerable difficulty and anxiety on the part of engineers and contractors.¹⁷⁰

During completion of the paving contract, substantial settlement occurred in areas of fill which did not receive adequate set up time. Severe undulations and cracking were evident in many areas, particularly around the mouth of Mill Creek. Temporary patching with bituminous concrete was put in place for the duration of the celebration. During the following summer in 1958, the park completed mudjacking operations, but they failed to attain the desired grade. It was not until 1960 that a proper road grade was created, and the damaged sections were replaced.¹⁷¹ In 1958-1959, the M.E. Howard

¹⁷⁰ Information concerning the paving of the parkway from, U.S. Department of the Interior, National Park Service, "Final Construction Report, Colonial Parkway, Project 1A4-B12-D11-E4"; U.S. Department of Commerce, Bureau of Public Roads, "Plans for Project No. 1A4-B12-D11-E4-Paving," February 1956, collection of the Colonial National Historical Park, Engineer's Office, Maintenance Division.

¹⁷¹ "Final Construction Report, Colonial Parkway, Project 1A4-B12-D11-E4" and "Plans for Project No. 1A4-B12-D11-E4-Paving."

Construction Company was awarded a contract to regrade slopes between Williamsburg and Jamestown and the new Yorktown terminus, an area of heavy cuts. Excessive erosion had occurred where slopes were too steep, necessitating the flattening of slopes and the modification of drainage structures. Small scrapers with a 7.5 cubic yard capacity were used to level the slopes, after which they were rolled by a sheepfoot roller, fertilized, and seeded.¹⁷²

Between April and June 1957, 5,192 linear feet of treated timber guard rails were constructed along the new section of road by the R. B. Richie Company. Different from the round log rails along the Yorktown end of the road, the new rails had 5" x 7" cut timber beam on a 1'-1/2" x 1' post, connected with two 5/8" x 14" steel carriage bolts. The rails were about 1'-8" high and were set in the shoulders 5' from the pavement.¹⁷³ Shoulders were seeded and landscaping crews, under the direction of park landscape architects Warren Lewis and Robert Steenhagen, planted numerous pines, hickories, oaks, tulip and beech trees, along with numerous vines, shrubs and flowers. For the first time, an integrated system of interpretive markers, thirty-two in all, were erected between Jamestown and Yorktown. These cast aluminum markers attempt to fill the historical gaps between 1607 and 1781, focusing primarily on the settlement and plantation period of the region's history. On 27 April 1957, the entire parkway was opened from terminus to terminus, completing a historic link twenty-six years in the making.¹⁷⁴

THE COLONIAL PARKWAY, 1950s TO 1990s

The 1964 edition of the Master Plan for Colonial National Historical Park stated, "The park is in a growing area that is fast becoming urban and suburban with resulting pressures and complexities." Yearly visitation to the park had risen from 367,000 in 1935 to over 6 million in 1964, while the populations of both James City and York counties grew steadily. Under Stanley Abbott, who remained superintendent until 1965, park responsibilities expanded to include a greater involvement in state and county zoning decisions. Subsequent superintendents, including Lawrence C. Hadley (1966-1968),

¹⁷² U.S. Department of Commerce, Bureau of Public Roads, Region 15, "Final Construction Reports-Colonial Parkway-Project 1A8-D20-E8," 25 March 1965, collection of the Colonial National Historical Park, Engineer's Office, Maintenance Division.

¹⁷³ U.S. Department of the Interior, National Park Service, "Completion Report of Construction Project 1A7-B14-D19," 14 May 1958, collection of the Colonial National Historical Park, Engineer's Office, Maintenance Division.

¹⁷⁴ *Jamestown, 1607-1957*, 53; Dill, "Colonial Parkway Extension to Jamestown," 19-20; Information concerning activities during 1957 is limited due to the fact that the park is missing its Superintendent's Monthly Reports for that year.

James W. Corson (1968-1972), and James R. Sullivan (1972-1981), made additional land acquisitions and gained scenic easements between Yorktown and Jamestown to provide buffers along park lands.¹⁷⁵

Regional road-building projects necessitated the construction of additional grade separated structures to limit public access. More significant was the need to rehabilitate much of the parkway's infrastructure to meet the increasing safety standards of the Federal Highway Administration (FHWA). By continuing to treat the parkway as a scenic corridor which incorporates cultural and natural resources of Tidewater Virginia, the park often came into conflict with the FHWA concerning safety regulations and their effects upon the parkway's landscape. The Park Service argued the unique characteristics of park roads were integral to visitor experience, necessitating the retention of the integrity of the original design unburdened with such features as lane striping and excessive use of guardrails.

Attempts to limit public access to the parkway continued after the 1957 celebration. In 1957, Troitino & Brown, Inc. of Asheville, North Carolina constructed a concrete arch, brick veneered underpass structure designed by the regional office of the Bureau of Public Roads to replace the at-grade connection with Tazewell Hall Avenue (this structure is now known as the Newport Avenue Bridge, HAER No. VA-48-U).¹⁷⁶ The following year, a short section of asphalt road connecting Francis Street with the parkway just south of the tunnel was removed. William E. Hodge stripped, regraded and replanted the whole area to recreate a "natural" appearance.¹⁷⁷

Another area of concern for the park was the rapidly growing Queen's Lake development about 4 miles northwest of Williamsburg between the parkway and the York River. In September 1960, the Park Service constructed two collection roads in the area that funneled traffic onto Route 716 (Hubbard Lane) in order to eliminate several at-grade crossings. State Route 716 became the only commercial and residential throughway into Queen's Lake, and it remained a grade crossing with the parkway until 1964. The secondary Route 641 connected Route 168 with the Cheatham Annex of the Naval Weapons Station. In 1962, a major contract was awarded to the Ferguson Corporation, Newport News, Virginia, for the construction of two separated grade structures for Routes 716 and

¹⁷⁵ See Park Master Plans, 1961 and 1964.

¹⁷⁶ Glen C. Farrar, U.S. Department of the Interior, National Park Service, "Completion Report, Concrete Arch Overpass Structure and Other Work," 17 September 1959, collection of the Colonial National Historical Park, Engineer's Office, Maintenance Division.

¹⁷⁷ Farrar, "Completion Report of Construction Project-Elimination of Francis St. Access," 1 April 1959, collection of the Colonial National Historical Park, Engineer's Office, Maintenance Division.

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641 over the parkway, the relocation of two secondary state routes, and the relocation of a portion of the railroad into Cheatham Annex.

It took two years to complete the project at a cost of about \$500,000. The Route 716 (Hubbard Lane) bridge was constructed as a three-span, reinforced concrete deck bridge with brick parapets and brick faced wingwalls. The bridge measures 47'-7" out-to-out, and has a 89' through span and 3' parapets. The Route 641 structure is a more substantial bridge crossing both Route 641 and the U.S. Navy railroad. The bridge measures 41'-4" wide, has a 163'-6" span and 3' parapets. To supply the Queen's Lake development, water mains and other utility conduits were constructed into the bridge decks. All brickwork followed the same standards established in the 1930s. With the completion of the project officials of the Bureau of Public Roads observed

The completed project is a contribution to the program of human values, as well as in terms of Service values. By providing an underpass at both locations, the former hazardous grade crossings have been eliminated. The improvement will benefit the residents of the local area in safety and in elements of time. Tourists will enjoy more freedom of space in their travels on the Colonial Parkway.¹⁷⁸

In 1965 the Federal Highway Administration completed two separated grade structures for east and west bound traffic on Interstate 64, a major east-west corridor intersecting with the Colonial Parkway about ½-mile east of the Route 716 (Hubbard Lane) Bridge. The following year, a bridge and interchange were constructed at Miller's Crossing, south of the Williamsburg tunnel, to replace a grade crossing built in the 1950s. Along with removing the grade crossing, the bridge provided a safe connection to the Great Neck Picnic Area northwest of the crossing and commercial access across the parkway from Route 619 to the new Kings Point subdivision. During the winter of 1964-1965, the Bureau of Public Roads prepared plans, and the Eastern Office of Design and Construction designed the architectural details. The Malpass Construction Company of Norfolk, Virginia completed the concrete arch, brick veneered bridge in 1966. With the completion of the bridge (HAER No. VA-48-Z), the Park Service received release agreements of access to the parkway from landowners on the western side of the right-of-way.¹⁷⁹

¹⁷⁸ U.S. Department of Commerce, Bureau of Public Roads, Region 15, "Final Completion Report, Colonial Parkway, Project No. 1B11," collection of the Colonial National Historical Park, Engineer's office, Maintenance Division.

¹⁷⁹ Lawrence Hadley, Superintendent's Monthly Narrative Reports, May 1966; and Memorandum to the Director of the Southeast Region from park Superintendent James Corson, 16 May 1970, file "Williamsburg Southern By-Pass," collection of the Colonial National Historical Park, Engineer's Office, Maintenance Division.

At the time of the completion of the bridge, however, the Virginia Highway Department began planning for a divided four-lane southern by-pass of Williamsburg to connect Route 31 with Interstate 64. Preliminary surveys in 1968-1969 identified the Miller's Crossing site as the best alternative alignment for crossing the parkway. Proposals drawn by the state utilized the existing Miller's Crossing Bridge to carry one direction of traffic and entailed the construction of another bridge to carry two lanes in the opposite direction. Extensive planning was completed during the following two years to come up with an acceptable traffic pattern that would retain safe access for residents.¹⁸⁰

Plans completed in 1970 called for the modification of the wingwalls and parapets of the existing Miller's Crossing Bridge and the construction of a new identical bridge to the north to become the west bound lane. Park representatives accepted the proposal with conditions, including that the load bearing of the Miller's Crossing Bridge not be altered and that renovations "should not affect or change the appearance of the existing arch span type structure which is faced with colonial type handmade brick."¹⁸¹ In response to the state's plans in 1972, the NPS regional director observed

Aesthetically it will give the impression of an historic structure in a proper combination of structural concrete and brick masonry using brick that resembles closely the old fashioned hand-made brick, Virginia style. We are confident that the State will provide proper supervision on this project to assure the highest quality workmanship and performance by the contractor to the satisfaction of the National Park Service.¹⁸²

Completed in the mid-1970s, the 199 bridges are one of two double bridge complexes along the parkway (along with Interstate 64). Another important area on the parkway was the grade crossing at Parkway Drive between Route 143 and Capitol Landing Road. It was one of the original through streets in the vicinity of Williamsburg given rights of access when the right-of-way was acquired. Prior to the construction of a separated grade crossing, the intersection was considered one of the more dangerous along the parkway. In 1971, the FHWA prepared plans for the structure with architectural details provided by the EODC following the specifications set for the original Miller's Crossing Bridge

¹⁸⁰ See file "Williamsburg Southern By-Pass," collection of the Colonial National Historical Park, Engineer's Office, Maintenance Division.

¹⁸¹ Memorandum to the Director of the Southeast Region from superintendent James Corson, 16 March 1970, in file "Williamsburg Southern By-Pass," collection of the Colonial National Historical Park, Engineer's Office, Maintenance Division.

¹⁸² Ralph D. Maxwell, Acting Superintendent, to Charles E. Owen, state highway engineer, 12 June 1972, file "Williamsburg Southern By-Pass," collection of the Colonial National Historical Park, Engineer's Office, Maintenance Division.

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of 1966. The Luke Construction Company of Norfolk completed the bridge (see HAER No. VA-48-AA) in 1972.¹⁸³

The 1970s marked an era of increased concern for the conditions of Park Service roads. In 1972, the FHWA National Safety Council prepared its report on "Safety and Risk Management in Selected Areas of the National Park System," which identified three primary issues: road surface and shoulder conditions, signs and lane striping. In response to the report, road rehabilitation became a top priority in the Park Service and each park was directed to establish a prioritized road inventory form from which a ten year construction program could be developed.¹⁸⁴ Many of the bridges along the parkway, particularly at Felgate, Indian Field, and King creeks, were singled out as priority sites because of structural deterioration which had occurred since they were built in 1933. While plans were prepared, no restoration work was completed until 1980 when all the bridges between King Creek and Ballard Creek were rehabilitated prior to the bicentennial of the 1781 siege.

In December 1976, Colonial National Historical Park was instructed to "proceed immediately" with plans to stripe the parkway.¹⁸⁵ In response to the directive, James Stewart, Director of Planning and Development for the Washington office, questioned the motivation for striping of the parkway and other park roads, and called for a differentiation in the classification of park roads and other Federal Aid Highways. Stewart was able to successfully reformulate the standards of park roads to preserve their character for future park visitors. In so doing, the maintenance of park landscapes that enhance the recreational experience became part of the Park Service's conservation programs. In a 1977 letter, Stewart stated, "Perhaps we need to remind ourselves again that the character and uniqueness of areas of the National Park System are conveyed to an appreciative public."¹⁸⁶

In the mid-1970s, rehabilitation and maintenance continued to be a primary goal of the park, although limited construction funds hampered progress on many projects. A proposal to repair the pavement, primarily the joints, between Yorktown and Glasshouse Point was rejected in 1974. In 1975, the Arch

¹⁸³ Corson, Superintendent's Monthly Narrative Reports, 1971-1972; U.S. Department of Transportation, Federal Highway Administration, "Colonial Parkway, Plans as Constructed, Project 1C5, Colonial Parkway-Parkway Drive interchange," collection of the Colonial National Historical Park, Engineer's Office, Maintenance Division.

¹⁸⁴ Memorandum to all Regional Directors from the Director of the National Park Service, 12 April 1974, file D-30, "Colonial Parkway-General 1972-1977," collection of the Colonial National Historical Park.

¹⁸⁵ Memorandum to superintendent of Colonial from the Mid-Atlantic Region, 18 January 1977, file D-30, "Colonial Parkway-General 1972-1977."

¹⁸⁶ Letter from James Stewart, 10 January 1977, file D-30, "Colonial Parkway-General 1972-1977."

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Construction Company received a contract to repair the reinforced concrete at College and Yorktown creek bridges and complete structural work on College and King creek bridges. College Creek in particular had extensive damage to its abutments due to washed out fill. This project, however, was later abandoned due to lack of funds. Mudjacking was a yearly maintenance operation along the parkway, taking five to six years to complete the entire route. FHWA inspection engineers noted that the concrete on the older section of the road held up considerably better than the newer 60' sections between Jamestown and Williamsburg.¹⁸⁷

In preparation for the upcoming bicentennial of the siege of 1781, a new rehabilitation emphasis emerged. For the parkway, two major projects were undertaken, including extensive bridge repair along the York River and the development of a new land use and maintenance plan by the NPS Denver Service Center. While Indian Field and King creeks received new deck slabs and modified post and lintel guardrails to match bridges on Jamestown side, the entire structure at Felgate Creek was replaced due to extensive deterioration of the substructure. In anticipation of the construction of bike trails along the parkway, a 8' wide bike lane was built into the new structure. The contractor, J. Lawson Jones Construction Company, was awarded a \$90,000 bonus for completing the work early. The incentive was devised to push the completion of the project prior to the bicentennial. Work on all the bridges was completed on 16 October 1980.¹⁸⁸

The land use plans spurred a new emphasis upon the maintenance of the parkway as a scenic corridor, and furthered the calls of past land use plans which emphasized landscape variety. Meticulous specifications were prepared to guide the mowing, selective cutting, planting, and the disposal of debris away from the view of motorists. Various trees were identified for exposure, and special attention was placed on creating layers of vegetative cover along the slopes of the road. Many lower branches of trees close to the road, for instance, were thinned to provide views of the understory behind them. Overgrown vistas were reopened, and a great deal of scrub growth was removed around guardrails, culverts and bridges. In particular, mowing operations were modified to allow for the growth of the Yorktown Onion, a local native allium prized for its giant purple heads. Prior to the plans, the existing conditions were noted:

¹⁸⁷ Memorandum to the Director of the Mid-Atlantic Region from the Superintendent of Colonial, 17 June 1975, file D-30, "Colonial Parkway-General 1972-1977," collection of the Colonial National Historical Park. No bike trail has been constructed as of 1995.

¹⁸⁸ J. B. Curd, U.S. Department of Transportation, Federal Highway Administration, "Final Construction Report, Project 1B27, Colonial Parkway," collection of the Colonial National Historical Park, Engineer's Office, Maintenance Division.

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Along several sections of Colonial Parkway, particularly the Yorktown to Williamsburg portion, uncontrolled plant growth has created long dark tunnels & covered former and potential vistas. This "tunnel" effect is aesthetically unpleasing, as well as being a safety hazard under certain circumstances.¹⁸⁹

Between fall 1980 and spring 1981, 1-1/4 mile of curbing was constructed at various locations along the parkway between Yorktown and Jamestown to combat the increasing drainage problems caused by the development of the Peninsula region. Following the FHWA's *Standard Specifications for Construction of Roads and Bridges* (FP-70), concrete curbing with a 15" depth and a 3" reveal, and concrete waterway runoffs were constructed on the low side of curves where erosion had become a major maintenance problem. The contractor, AA Builders of Virginia, worked from site to site, digging the curb trench, building the curbs and runoffs, seeding, and finishing, prior to moving to the next specified location. Park Service personnel familiar with the drainage problems identified all the sites.¹⁹⁰

After proposals for major rehabilitation of the parkway's bridges and pavement were rejected through the 1970s, plans were again prepared after an "Engineering Study Report for the Colonial Parkway." Undertaken by the Federal Highway Administration in 1984, the document argued that "the Colonial Parkway needs to be rehabilitated to prolong its useful life and reduce more costly future repairs."¹⁹¹ The report identified a number of areas that needed immediate attention before serious problems arose, including slab repair, extensive joint repair, shoulder regrading, and bridge restoration. Minor work was also identified for the Jamestown island loop road to strengthen the bridges in anticipation of tour bus traffic on the circuit.

The massive ten-year, nearly \$10 million rehabilitation project was divided into three phases: phase I comprised the area between Miller's Crossing and Cheatham Annex (1986-1987); phase II covered the Jamestown end (1989-1990); and phase III incorporated the Yorktown end (1993-1994). Only phase II involved extensive bridge work since the bridges along the York River were upgraded in 1980-1981. Phase I through Williamsburg was divided into four sections to minimize the impact upon

¹⁸⁹ U.S. Department of the Interior, National Park Service, "Land Use and Maintenance Plans-Colonial Parkway," collection of the Colonial National Historical Park, Engineer's Office, Maintenance Division.

¹⁹⁰ Roy Bigelow, U.S. Department of Transportation, Federal Highway Administration/U.S. Department of Interior, National Park Service, "Final Construction Report, Project 1A14, B28, C9, D37, Colonial Parkway," collection of the Colonial National Historical Park, Engineer's Office, Maintenance Division.

¹⁹¹ U.S. Department of Transportation, Federal Highway Administration, "Engineering Study Report for the Colonial Parkway in the Colonial National Historical Park," collection of the Colonial National Historical Park, Engineer's Office, Maintenance Division.

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tourist traffic in the city. Each pavement slab was given a number corresponding to plans that identified whether the slab would receive a full or partial replacement. Additional drop inlets and other erosion control devices such as concrete gutter swells and shoulder edge drains were installed, shoulders were regraded, and joints were either replaced or cleaned and sealed. Culverts were cleaned and upgraded with regrading at both the inlet and outlet ends to remedy erosional problems. Steel backed, 2'-3" post and rail timber guardrails were built at numerous areas along the route. According to Superintendent Alec Gould, the FHWA wanted to construct additional linear feet of guardrail, but the park protested on the grounds that it would ruin the road's scenic qualities.

Pavement repair operations varied depending upon the type of slab and the extent of the deterioration. As stated earlier, pavement slabs were constructed differently between the older Yorktown section and the new section on the Jamestown side. For partial depth replacements, a vertical saw cut was made parallel to the joints to a depth of 1 1/2" to 4". The area was sandblasted to remove all loose particles and patched with epoxy, bonding grout, and portland cement concrete. Full depth repairs were also made in a similar manner, although a full saw cut was made through to the gravel sub base. Where pavement slabs were 60' long, most transverse expansion joints were removed to a distance of 20' on either side to create three 40' slabs. This operation effectively removed pressure on the joints and decreased slab movement, hastening deterioration. All joints, except for filled transverse expansion joints, were fitted with backer rods and filled with a silicon sealant.¹⁹²

According to park civil engineering technician Roy Bigelow, it was necessary to replace almost all joints on the Jamestown end of the parkway where slabs were a uniform 7" thick and 60' long. Bridge work included in Phase II work varied depending upon the needs of individual bridges. All deteriorating concrete was replaced, and joints were repaired. Structural inspections identified areas of potential problems that were alleviated, the bridges were painted and their parapets were modified to accept new guardrails. Some sections of the pavement between Jamestown and Williamsburg were replaced with a concrete mixed with white rather than yellow or brown sand. Consequently, many slabs have a gray tint different from existing pavement. The exposed aggregate finish was attained through a number of methods, including hosing, brooming and the application of a retardant that inhibited setting of the top layer of cement which could be washed off later.

Unlike the Williamsburg Phase of the restoration of the parkway, both the Jamestown and Yorktown ends were closed to traffic completely for the duration of the contract. Despite the protests of local

¹⁹² Bigelow, "Final Construction Report, Project 1B30, C10, D38"; FHWA, "Plans for Proposed Project PRA-COL 1A15, B3"; FHWA, "Plans for Proposed Project PRA-COL 1D39, E12"; FHWA, "Plans for Proposed Project 1B30, C10, D38," collection of the Colonial National Historical Park, Engineer's Office, Maintenance Division.

citizens and county administrators, Superintendent Gould argued that keeping one lane open would result in higher costs, additional time and greater danger to motorists and workers. The rehabilitation was not universally accepted as a worthwhile project. A 1994 editorial by W.C. O'Donovan called for the suspension of the final phase because he believed it was "unnecessary and will hurt tourism, which makes this community hum." To O'Donovan, the restoration of the parkway was an example of excessive government waste. O'Donovan continued to write,

Not since Gen. Washington deployed the troops in 1781 has it become so important for people to get from Williamsburg to Yorktown. At this rate, they'll have more detours than he did.¹⁹³

Despite the protests, the restoration was a major success in terms of retaining the integrity and life of the Colonial Parkway. Efforts were made to continue the design standards established in the 1930s to preserve the parkway as a significant cultural artifact of the Colonial National Historical Park. The roadway's physical characteristics are just one aspect of the overall parkway landscape. During the 1970s, 1980s and 1990s, the park actively pursued the establishment of scenic easements and buffer zones between the parkway corridor and the adjacent property to protect the surrounding viewsheds. The park superintendent and staff attended many meetings and talked with local officials and adjacent landowners to ask for consideration of parkway values when developing or zoning adjacent lands.

A 1971 Interpretive Prospective for the parkway states, "The chief interpretive experience of the Parkway should remain the experience of driving this well-planned and lovely road." The document highlighted the need to preserve the "ambience" of the parkway, namely its overall physical environment. In 1973, the Park Service rejected a request from Anheuser-Busch, Inc. to construct an access road to the Colonial Parkway in the vicinity of their Kingsmill Neck development east of the parkway. It seems that Anheuser-Busch would have thrown their political weight into the fight had it not been for the Watergate scandal and the resignation of President Richard Nixon.¹⁹⁴

The following year, the National Park Service received a 51-acre scenic easement from Anheuser-Busch covering the marshlands along Halfway Creek east of the parkway. The easement stipulated that no permanent structure could be constructed in the area without the written permission of Colonial National Historical Park. It also noted that no tree more than 4" in diameter could be cut without the

¹⁹³ Editorial found in Phase III file, collection of the Colonial National Historical Park, Engineer's Office, Maintenance Division; see also Ronnie Crocker, "Part of Parkway to Close," *Newport News Daily Press*, 14 December 1988.

¹⁹⁴ Chester L. Brooks, Regional Director of the NPS Northeast Region, to Henry Cashen, 15 August 1973, collection of the Colonial National Historical Park, Land Records.

consent of the park.¹⁹⁵ That same year, on 1 July, a fee simple parcel of 130 acres and an easement of 284 acres were acquired on the south side of the James River on Swann's Point. This park gained this land from Frank Von Schilling in an attempt to preserve the viewshed from the island. Virginia Department of Transportation (VDOT) plan to construct a bridge from the ferry wharf across the river to Surry county to handle the increasing numbers of commuters using the ferry threatened the viewshed.¹⁹⁶ Despite the protest from VDOT, who argued that the NPS agreed to the future construction of a bridge when Route 31 was relocated for the completion of the parkway in the 1950s, the park used the deed to block the construction. The park argued that the deed's intent was to preserve

the natural features, and scenic values on the north bank of the James River from intrusion, noise, vibration, pollution and the attendant additional vehicle traffic which would be generated by the operation, construction, and maintenance of any bridge.¹⁹⁷

With the threat of construction of a bridge adjacent to Jamestown Island averted, the park increased its efforts to obtain easements on lands along the parkway. In 1975 a three-way "exchange agreement" was orchestrated between Colonial NHP, the Colonial Williamsburg Foundation and York County. As part of the agreement, the foundation received title to park lands near the intersection of Route 143 and the parkway, while York County received a parcel north of Williamsburg along Route 60 for the construction of a new high school. As part of the agreement, a buffer zone was established between the parkway and the foundation's new lands by Route 143. In return, the park gained acquired 312 acres west of the parkway from Halfway Creek south to the confluence of College Creek and the York River.¹⁹⁸ The massive wetlands area is one of the more striking vistas along the parkway and adds greatly to the park's stewardship of the region's natural resources.

¹⁹⁵ "Deed of Easement," 14 May 1974, Land Records, Deed 270-273, collection of the Colonial National Historical Park.

¹⁹⁶ "Deed 251, Von Schilling," Land Records, collection of the Colonial National Historical Park.

¹⁹⁷ "Path to James Span Strewn with Obstacles," *Newport News Daily Press*, 2 November 1986. During the early 1990s, VDOT continued to push its plan to construct a bridge to take the place of the ferry. An ad hoc group, the James River Crossing Coalition, was formed by various local agencies and organizations including Colonial NHP. After a giant public information campaign, it became clear to the Commonwealth Transportation Board that public opinion was overwhelmingly against the bridge, so it decided not to build the structure. As of 1995, a plan exists to construct a bridge further north of the island, but still in the island's viewshed.

¹⁹⁸ Correspondence and deeds of easement found in Land Records, "Deed 270-273," collection of the Colonial National Historical Park.

During the late 1970s, the park moved to acquire the remaining riverfront holding of the Gospel Spreading Association. The initial declaration of taking in 1941 failed to gain lands along the beach despite the warnings of Thomas Vint and others. Through the 1950s, 1960s and 1970s, the group developed the land with a church, dormitories, auditoriums, dinning hall, museum, motel, sports facilities, and a beach and pier. A farm north of the parkway was also utilized. A cattle underpass was even built just west of the farm. The development had two access roads to the parkway and was considered a major scenic obstacle to motorists on the parkway. During the 1960s, Stanley Abbott spent a great deal of money planting trees and other vegetation to screen the development from view without much success.

In 1976, a Declaration of Taking was initiated for the 11 acres of land comprising the development. In 1979, title to the land was transferred to the government despite the protests of some members of the Gospel Spreading Association. As part of the purchase, a fifteen-year use permit was granted to the association, after which they had to vacate the property. Attempts of the association to continue using the land beyond the fifteen years failed. The removal of the development (often considered an “amusement park” by park officials), was an important goal for Colonial considering the mission of the Colonial Parkway. On 20 October 1992, a cooperative agreement between the park and the Association led to the erection of an historical marker, modeled after the existing markers along the parkway, in memory of the Elder Lightfoot Solomon Michaux. In August 1993, the Gospel Spreading Association peacefully vacated the property. The following year the development was torn down, and the land was re-planted providing open views of the James River.¹⁹⁹

In addition to the issues already mentioned, two other threats were averted in the 1990s. In the early 1990s, the Navy proposed the construction of a mammoth industrial pier off of Sandy Point between Indian Field Creek and the north pier of the Naval Weapons Station. This project would have seriously marred vistas and increased traffic on the parkway. The park was able to mobilize local support against the project, particularly in York County. Despite the impact a large construction project would have on the local economy, the York County board of supervisors issued a statement that as a visual/ industrial intrusion, the new pier would produce a negative impact upon life in the county and would be a drain on County finances. In the face of this opposition, the Navy announced

¹⁹⁹ Alec Gould, Superintendent, interview with author, 9 August 1995; Land Records, “Deed 65, National Memorial to the Progress of the Colored Race in America, Inc.,” and “Deed 343-Gospel Spreading Association,” collection of the Colonial National Historical Park. Plans are still on the table for an African American theme park to be constructed north of the parkway between Mill and College creeks. These plans have received the endorsement of prominent political figures, including former Virginia Governor Douglas Wilder.

alternative plans to construct the pier in Earl, New Jersey.²⁰⁰

The greatest current threat to the parkway, as of 1995, is the Page Landing Development north of the parkway and west of Route 682, where proposals have been drawn to build between sixteen and twenty homes just 85' from the parkway's pavement. When the original 500' right-of-way was acquired in the 1940s, it included a substantial tract of wetlands along the James River that could not be built upon. Consequently, when road was constructed in the 1950s, it was moved further north of the river, just 85' from adjoining property. Unfortunately for the park, Atlantic Homes purchased the adjacent property and began developing the land as "Page Landing at Jamestown" in the 1980s.

During the early 1990s, the National Park Service actively pursued the acquisition of additional land to provide an adequate buffer between park lands and the new development. While Atlantic Homes was willing to sell the 20-acre tract, the park was bound to a stipulation in the 1938 act enlarging the boundary of the park that stated any future enlargements along the parkway could only be made through an act of Congress. Because of time limitation, the park approached the Conservation Fund, a non-profit organization, concerning the purchase of the land. The fund was reluctant to make the purchase, however, because of uncertainty that Congress would authorize the addition and allocate funds to repay them. The mobilization of local support, and assurances from Congressmen, however, calmed fears, and the Conservation Fund bought the land just before construction was to begin.

In June 1993, Congressman Bateman introduced legislation to enlarge the boundary of the park and allocate monies to purchase lands from the Conservation Fund (H.R. 2478). Park Superintendent Alec Gould was called to present a testimony before the House subcommittee on National Parks, Forests and Public Lands. Although the House passed the legislation, the Senate did not. The Conservation Fund borrowed the money to purchase the land, and is threatening to sell the land back to the developer to pay back its loans. Currently, Virginia senators Charles Robb and John Warner and Congressman Bateman are working together on the authorization bill and getting an \$950,000 appropriation through Congress.²⁰¹

²⁰⁰ Gould.

²⁰¹ During the author's interview with Alec Gould, he provided documentation from his personal files.

CONCLUSION

Over the past twenty-five years the park has been very aggressive in its attempts to both limit access and fight encroaching visual threats to the Colonial Parkway. Although the park's first articulation of the problems related to regional growth were made in the 1960s, these problems have continued and worsened. Visitation also continues to rise, topping 8 million in 1992, with the associated impact on park resources including the Colonial Parkway. The park's primary concern is the protection of the historical integrity of the roadway. In many places a 500' right-of-way is not considered effective. It is increasingly difficult to ensure the continuity in transition vital to the parkway experience in the midst of growing traffic levels. NPS looks to York County, the City of Williamsburg, James City County and adjacent land owners to assist with the protection of the visual and physical resources of the parkway environment beyond the right-of-way. In the 1993 General Management Plan, the park restated its mission to

Maintain the Colonial Parkway for safety while retaining the integrity of its design as a scenic roadway. Protect the historic sites, the landscapes, and the underdeveloped vistas of the James and York rivers along the parkway.

The primary visitor experience along the parkway involves enjoyment of the parkway and its surroundings. It is best enjoyed as a limited access road with low to moderate traffic levels and little or no congestion.²⁰²

As of 1995, the park is reassessing the historical and cultural significance of the parkway with the hopes of preparing a nomination form for inclusion on the National Register of Historic Places. An updated land use and management plan will also be prepared to guide efforts to preserve natural and cultural resources along the parkway. New vistas will be identified, and additional planting will further screen areas of visual intrusion. The park is also studying the feasibility of treating the parkway as a multi-use corridor with both bike and foot trails following the original intention of the park in the 1930s. Despite these efforts, it is the policy of the park that the motorist is primary on the road, and trails that would inhibit the view from a automobile will be rejected.

The parkway has served as a scenic pleasure road for sixty years. For the most part the experience of driving along the road today is the same as it was in 1935 when the Yorktown section of the parkway was first opened to traffic. The current character of the road is evidence of the stewardship of park officials who continue to preserve the original mission and design specifications established in the

²⁰² U.S. Department of the Interior, National Park Service, *General Management Plan*, Colonial National Historical Park, September 1993, 20.

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1930s. From the open vistas of the rivers, to the shady interior of the woodlands, the parkway still provides continuity to the transition from Jamestown island to Yorktown.

The recent change in the perspective of how the parkway is evaluated marks an important development in the historical evolution of the road. During the parkway's first fifty years of use, it was looked upon as a scenic drive that incorporates the natural and cultural resources of Tidewater Virginia. As such, the parkway was a means of experiencing the regional environment. Although the parkway continues to serve this function, today the parkway itself is considered a primary resource of the park, worthy of protection to maintain its integrity. It is more than just trees and vistas that need to be conserved; it is also pavement, curbs, guardrails, and bridges. With continued vigilance, and cooperation with local communities, the park is actively trying to preserve one of the most significant cultural artifacts in the national park system.

APPENDIX I

Park Superintendents, Colonial National Historical Park (1931-1995)

Oliver Taylor *(acting)	1 January 1930 - 19 October 1931
William M. Robinson, Jr.	20 October 1931 - 8 August 1933
B. Floyd Flickinger *(acting)	9 August 1933 - 10 December 1933
B. Floyd Flickinger	11 December 1933 - 16 May 1939
Elbert Cox	17 May 1939 - 1 November 1942
Jean C. Harrington *(acting)	2 November 1942 - 4 March 1946
Jean C. Harrington	5 March 1946 - 30 June 1946
Edward A. Hummel	1 July 1946 - 31 October 1952
Stanley W. Abbott	18 January 1953 - 30 December 1965
Lawrence C. Hadley	16 January 1966 - 27 January 1968
James W. Corson	11 February 1968 - 9 July 1972
James R. Sullivan	23 July 1972 - 16 January 1981
Richard H. Maeder	19 April 1981 - 28 March 1987
David L. Moffitt	29 March 1987 - 9 September 1989
James N. Haskett *(acting)	10 September 1989 - 7 October 1989
Frank Alexander Gould	8 October 1989 - Present

APPENDIX II

COLONIAL PARKWAY SPECIFICATIONS - EXISTING CONDITIONS

Location:	York and James City Counties, Virginia
Length:	21.44 miles from the Jamestown National Historic Site to the Yorktown Battlefield. Colonial Williamsburg is near the midpoint of the parkway.
Terrain:	Flat to gently rolling. Parkway passes through wetlands and woodlands and two primary developed areas (Williamsburg and Yorktown).
Function:	Scenic drive and access road to several major historical sites. The Yorktown end is also used for regional commuting.
Right-of-Way:	Parkway is located within a narrow corridor averaging 500'.
Cross Section:	Three 10' lanes (30'), with 5' to 7' stabilized vegetated shoulder (5' in cuts, 7' in fills). The center lane is used for passing, and has a parabolic crown surface.
Pavement:	Reinforced concrete with exposed aggregate finish between 7" and 8" thick. A 9" to 12" sub-base underlies pavement.
Design Speed:	Varies between 35-40 m.p.h. along the Yorktown section of the parkway, to 50 m.p.h. along the Jamestown section.
Pulloffs:	There are seventeen at-grade parking pulloffs and recreational overlooks.
Curbs:	6,600 linear feet of low reveal (3") concrete curbs, and eleven paved water runoffs (does not include curbing along parking areas).
Lighting:	There is no lighting along the parkway except for inside the Williamsburg Tunnel and around the Williamsburg Rotary.
Trails/Paths:	Currently there are no foot or bike trails along the parkway corridor. This issue is primary concern for park administrators.

Access: There are ten at-grade intersections and seven grade-separated interchanges.

Grade Intersections:

1. Route 238 at Yorktown
2. Naval Weapons Station
3. Bellfield Plantation
4. Ringfield Picnic Area
5. Cemetery Access
6. Penniman Lake Access
7. The Rotary-Rt. 132
8. Historic Williamsburg Exit (Parkway Drive)
9. Maintenance Area near Jamestown
10. Jamestown Tour Road (at Tollbooth)

Grade Separated Interchanges:

1. U.S. Route 17 over Parkway
2. Route 238 over Parkway
3. Cheatham Annex (Rt. 199)
4. Queens Lake Road (Rt. 716)
5. Route 163 over Parkway
6. Newport Avenue over Parkway
7. Miller's Crossing (Rt. 199) over Parkway

Accident Rate: There is an average of fifty accidents a year, with few fatalities.

According to a 1985 engineering study, the parkway would not meet today's design standards.

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Drawings and Plans

Note: The majority of plans cited are in the individual structure reports that accompany this overview.

The following abbreviations will be used to designate the agency responsible for drawings and plans:

NPS	U.S. Department of the Interior, National Park Service
BPR	U.S. Department of Agriculture (later Commerce), Bureau of Public Roads
FHWA	U.S. Department of Transportation, Federal Highway Administration
VDOT	Virginia Department of Transportation

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HAER No. VA-48

(Colonial National Monument Parkway)

Yorktown to Jamestown Island

Yorktown vicinity

York County

Virginia

ADDENDUM TO

COLONIAL NATIONAL MONUMENT PARKWAY

(Colonial Parkway)

Yorktown to Jamestown Island

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Jack Boucher, Photographer, September 1995.

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Bill Faust, Photographer, Spring 1997.

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COLONIAL PARKWAY

COLONIAL NATIONAL HISTORICAL PARK, VIRGINIA

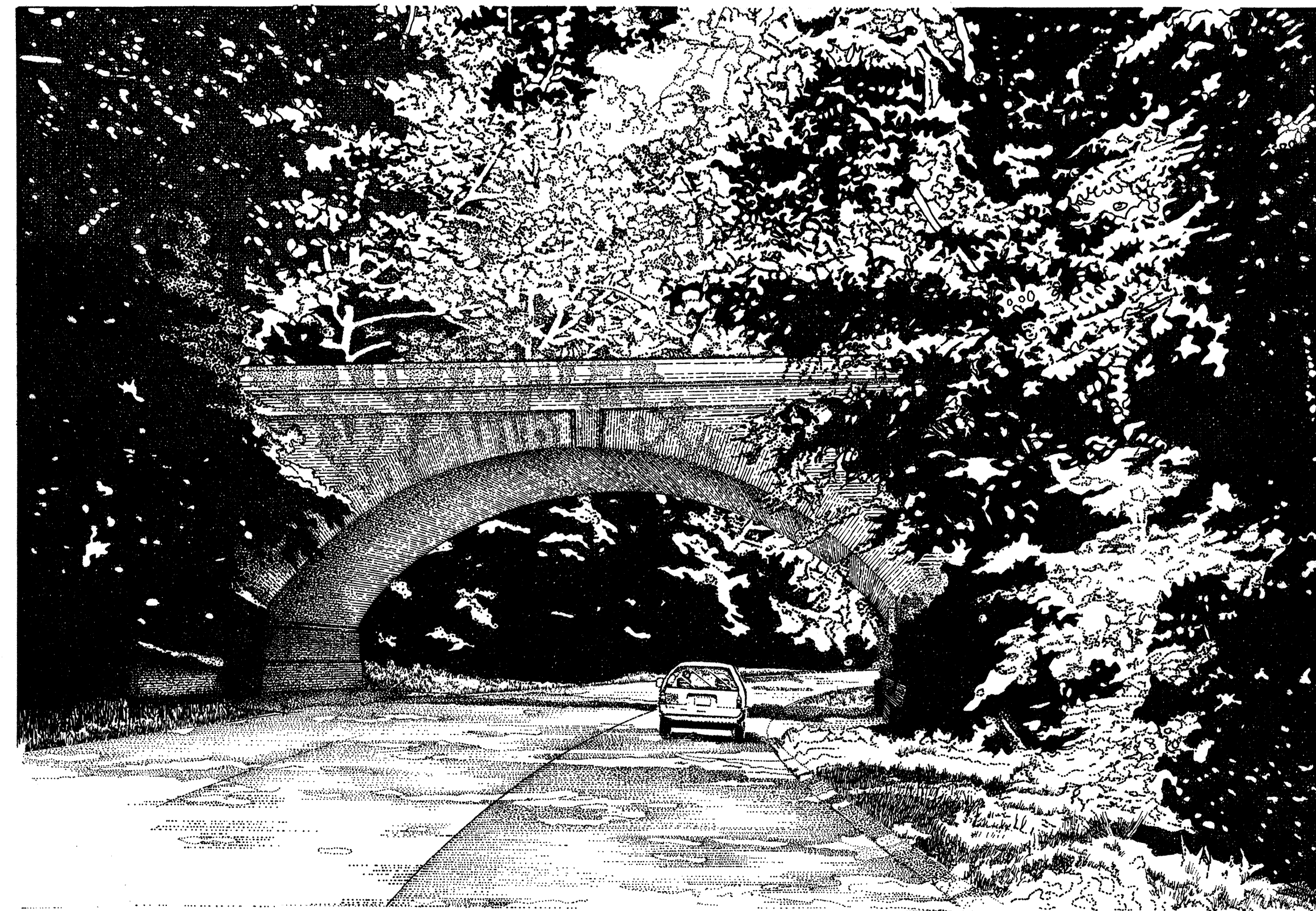
1931



Established in 1930, Colonial National Historical Park is a 10,221 acre unit of the National Park Service located on the "Lower Neck" of Virginia between the York and the James rivers. The region is characterized by marine and freshwater wetlands, although there are also a variety of pine and hardwood forests, agricultural fields, rivers, ponds, and coastal bluffs. But it is not nature that attracts most visitors to the park; it is the history and cultural landscape of Tidewater Virginia. Within an area of about twenty miles a visitor can see the sites of Jamestown, the first permanent English settlement in North America founded in 1607; Williamsburg, Virginia's colonial capital between 1699 and 1780; and Yorktown, an important colonial tobacco port and site of the surrender of General Cornwallis' forces in 1781.

The historical relationship and geographic proximity of this "historic triangle" has attracted the attention of historians and antiquarians since the late nineteenth century. In the language of Victorian America, Jamestown, Williamsburg, and Yorktown were "sacred shrines" of the American experience. Since the 1880s and 1890s, civic groups such as the Association for the Preservation of Virginia Antiquities (APVA) actively pursued the conservation of the colonial landscape as a symbolic reminder of Virginia's traditional society. By the 1920s, however, communities and state agencies like the Virginia Conservation and Development Commission under William Carson began to promote heritage as a way to foster economic growth.

The 1920s marked a period of expansion for the National Park Service under Stephen Mather and Horace Albright. In an attempt to gain broader public and congressional support, NPS administrators increased activities in the east. In 1930, Congress authorized the establishment of a historical park to include Jamestown Island and the Yorktown battlefield, with ties to Williamsburg which was being restored with funds from John D. Rockefeller, Jr. Originally designated as a national monument (later becoming a national historical park in 1936), the park represents one of the National Park Service's first ventures into the field of historic preservation where many of the standards that guide programs today were developed.



COLONIAL PARKWAY CROSSING UNDER PARKWAY DRIVE BRIDGE

The original bill, written by Congressman Louis Cramton of Michigan, included the construction of a "Colonial Parkway" to link the sites and provide a scenic corridor for the increasing numbers of motoring visitors to America's national parks. By the 1920s, automobile access was a primary concern for Park Service administrators and landscape architects who had to develop plans which balanced use and conservation. In 1926, an interbureau agreement between the NPS and the Bureau of Public Roads, an agency of the Department of Agriculture, provided parks with the most modern engineering practices available through their direct supervision of construction projects. From this point on, the development of park roads and bridges was a collaborative effort between NPS landscape architects and BPR highway engineers.



Along with other NPS parkways constructed in the 1930s, the Colonial Parkway marks an important development in Park Service road-building programs. The Eastern Division of the Branch of Plans and Design under Charles E. Peterson, and the engineers of the BPR integrated parkway design principles standardized in Westchester County, New York, with the Park Service's own traditions of landscape architecture. The Colonial Parkway is a continuous strip of concrete with gentle sweeping curves set in a broad, tree-lined right-of-way devoid of commercial development. Primary regard was given to landscape features along the parkway through the creation of vistas, extensive planting, and slope beautification. Taking their form from the region's material culture, most bridges and drainage structures were clad with hand-made "Virginia style" brick. The roadway's pavement was limited to 30' width, and specially "broomed" to expose the aggregate to recreate the feel of a country road. Together, these design features were incorporated to provide continuity to the historical experience as visitors motor from one period of American colonial history to another.

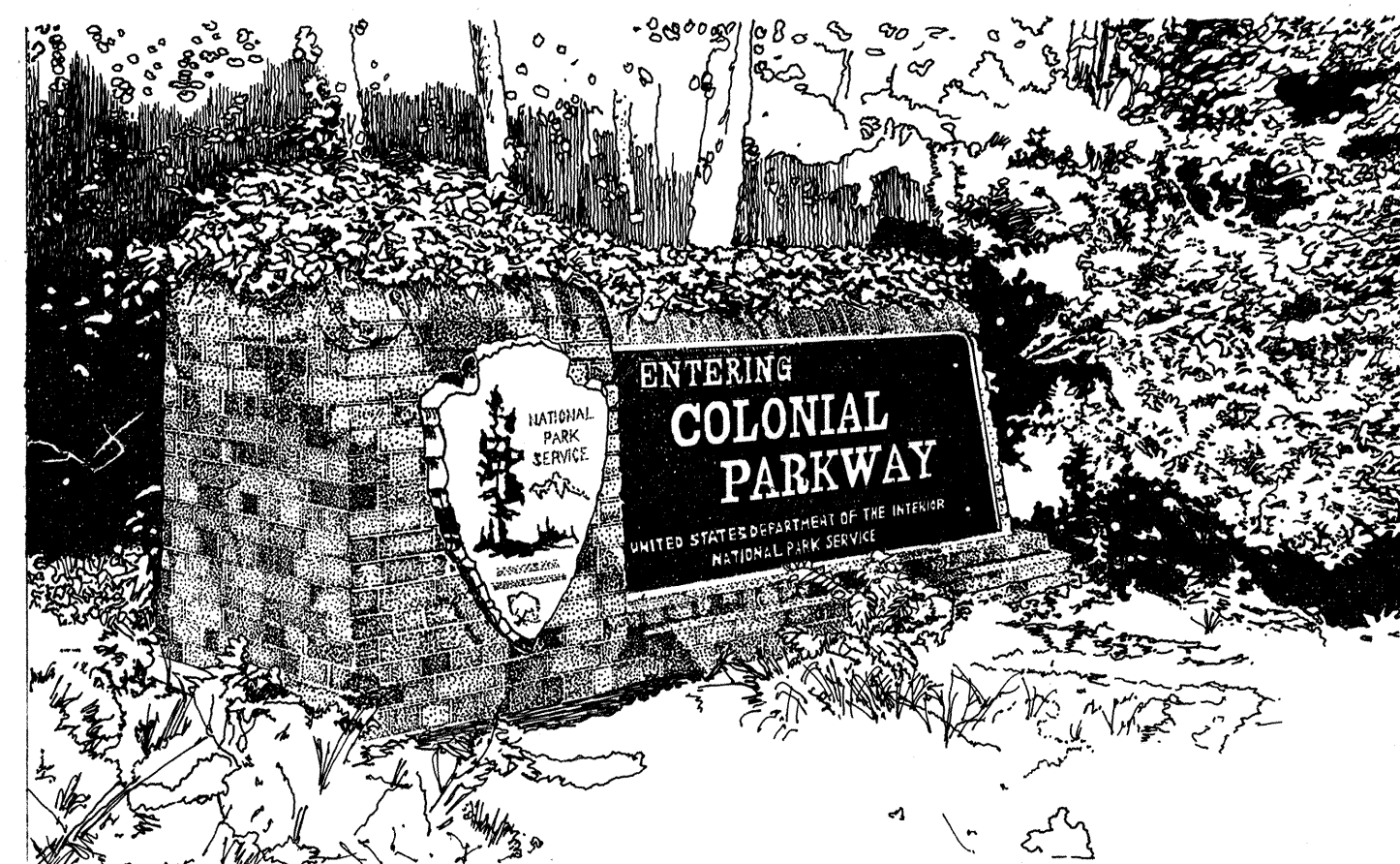
Completed in 1957, the Colonial Parkway is the unifying component of the Park's road system that includes interpretive tour roads on Jamestown Island and the Yorktown Battlefield. The two tour roads provide visitors with a more specialized and personal experience of the island and the battlefield through roadside exhibits and historical markers.

Documentation of the Colonial National Historical Park Roads and Bridge was undertaken by the Historic American Engineering Record in the Summer of 1995 under the direction of project leader Christopher H. Marston. The HAER recording team included field supervisor Robert R. Harvey, Iowa State University; ICOMOS landscape architect Magdalena Bielecka, The Center for the Preservation of Historic Landscapes, Warsaw, Poland; architect Catherine Lee Doar, Varina, Virginia; landscape architect Kevin Doniere, Cincinnati, Ohio; and HAER historian Michael G. Bennett. Large format photography was prepared by Jack Boucher, HABS staff photographer.

Historic site symbols are based on publication, "Colonial Parkway," U.S. Government Printing Office, 1965 of-789-013.

Note: See also HAER No. VA-116, Jamestown Island Loop Road.
HAER No. VA-117, Yorktown Battlefield Tour Roads.

DEVELOPMENT OF THE PARKWAY



COLONIAL PARKWAY ENTRANCE MARKER

The development of the Colonial Parkway encompassed a twenty-six year construction history marked by routing conflicts, war, limited funding, and land acquisition problems. Between 1931 and 1937, the road was completed from Ballard Creek, near Yorktown, to Williamsburg. The only major construction between 1937 and 1955 was a tunnel under the restored capital, and a bridge over Halfway Creek. The parkway was completed during an extremely active period between 1955 and 1957 in preparation for Jamestown's 350th anniversary.

KEY TO STRUCTURES

KEY TO STRUCTURES	DATE
1. Ballard Creek Culvert	1931
2. Bracken's Pond Culvert	1931
3. Navy Mine Depot Overpass	1931, 1966, 1980
4. Jones Mill Pond Dam	1932
5. Indian Field Creek Bridge	1933, 1980
6. Felgates Creek Bridge	1933, 1980
7. King Creek Bridge	1933, 1980
8. Capital Landing Underpass	1936
9. C & O Railroad Underpass	1937
10. Williamsburg Tunnel	1942
11. Halfway Creek Bridge	1942
12. U.S. Rt. 143 Bridge	1948
13. College Creek Bridge	1956
14. Mill Creek Bridge	1956

DATE

HAER No.

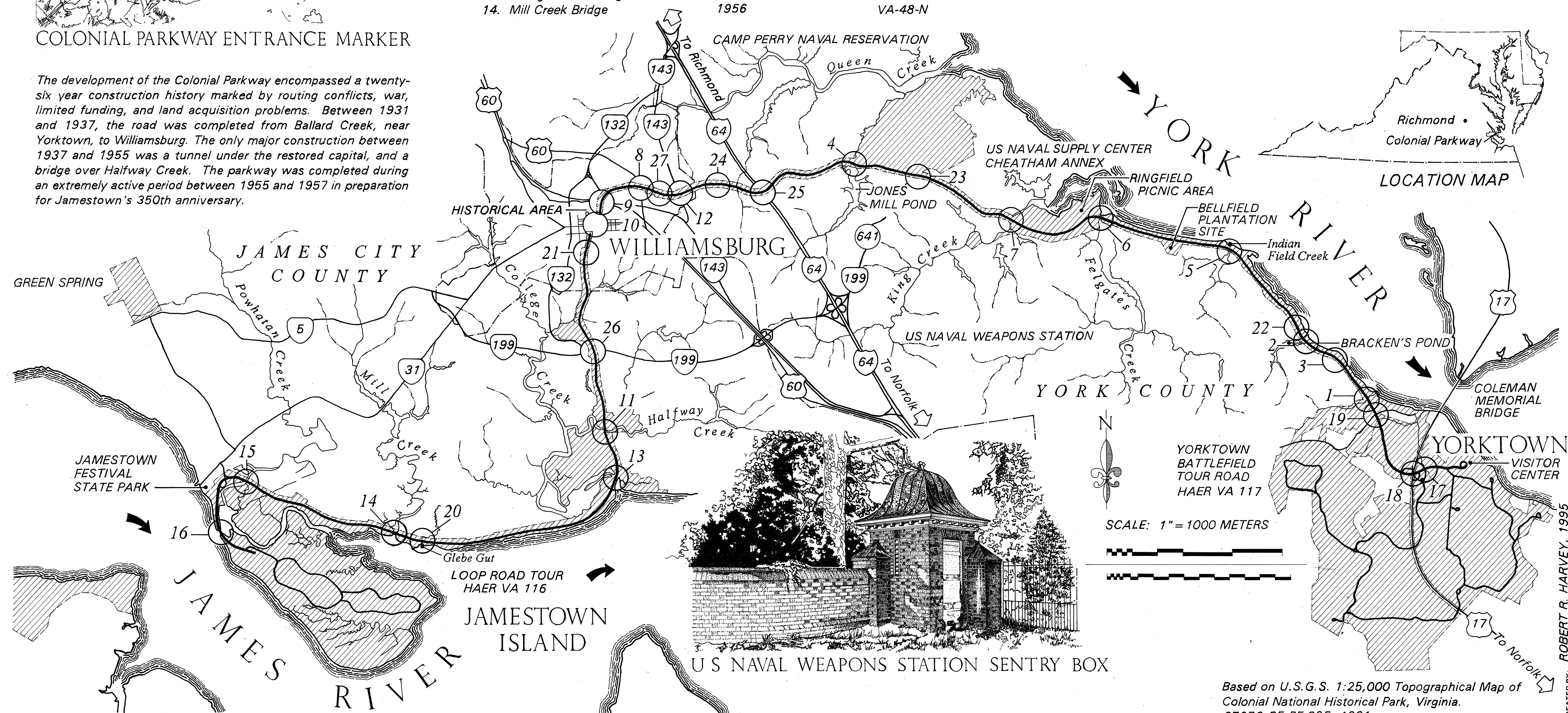
VA-48-E
VA-48-F
VA-48-A
VA-48-G
VA-48-H
VA-48-I
VA-48-J
VA-48-B
VA-48-C
VA-48-D
VA-48-K
VA-48-L
VA-48-M
VA-48-N

KEY TO STRUCTURES

KEY TO STRUCTURES	DATE
15. Powhatan Creek Bridge	1956
16. Isthmus Bridge	1956
17. Yorktown Creek Bridge	1956
18. U.S. Route 17 Bridge	1956
19. VA Route. 238 Bridge	1956
20. Glebe Gut Bridge	1956
21. Newport Avenue Bridge	1957
22. North Pier Bridge	1962
23. VA Rt. 641 Bridge	1964
24. Hubbard Lane Bridge	1964
25. I-64 Bridge	1965
26. VA Rt. 199 Bridge	1966, 1973
27. Parkway Drive Bridge	1972

HAER No.

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VA-48-P
VA-48-Q
VA-48-R
VA-48-S
VA-48-T
VA-48-U
VA-48-V
VA-48-W
VA-48-X
VA-48-Y
VA-48-Z
VA-48-AA



Based on U.S.G.S. 1:25,000 Topographical Map of Colonial National Historical Park, Virginia. 37076-B5-PF-025, 1981

DELINEATED BY: ROBERT R. HARVEY, 1995
COLONIAL NHP
ROADS & BRIDGES RECORDING PROJECT
UNITED STATES DEPARTMENT OF THE INTERIOR

YORKTOWN VICINITY

COLONIAL PARKWAY
YORKTOWN TO JAMESTOWN ISLAND
YORK COUNTY

VIRGINIA

SHEET
2 of 9

HISTORIC AMERICAN
ENGINEERING RECORD
VA-48

IF REPRODUCED, PLEASE CREDIT: HISTORIC AMERICAN ENGINEERING RECORD, NATIONAL PARK SERVICE, NAME OF DELINEATOR, DATE OF THE DRAWING

BUILDING THE PARKWAY

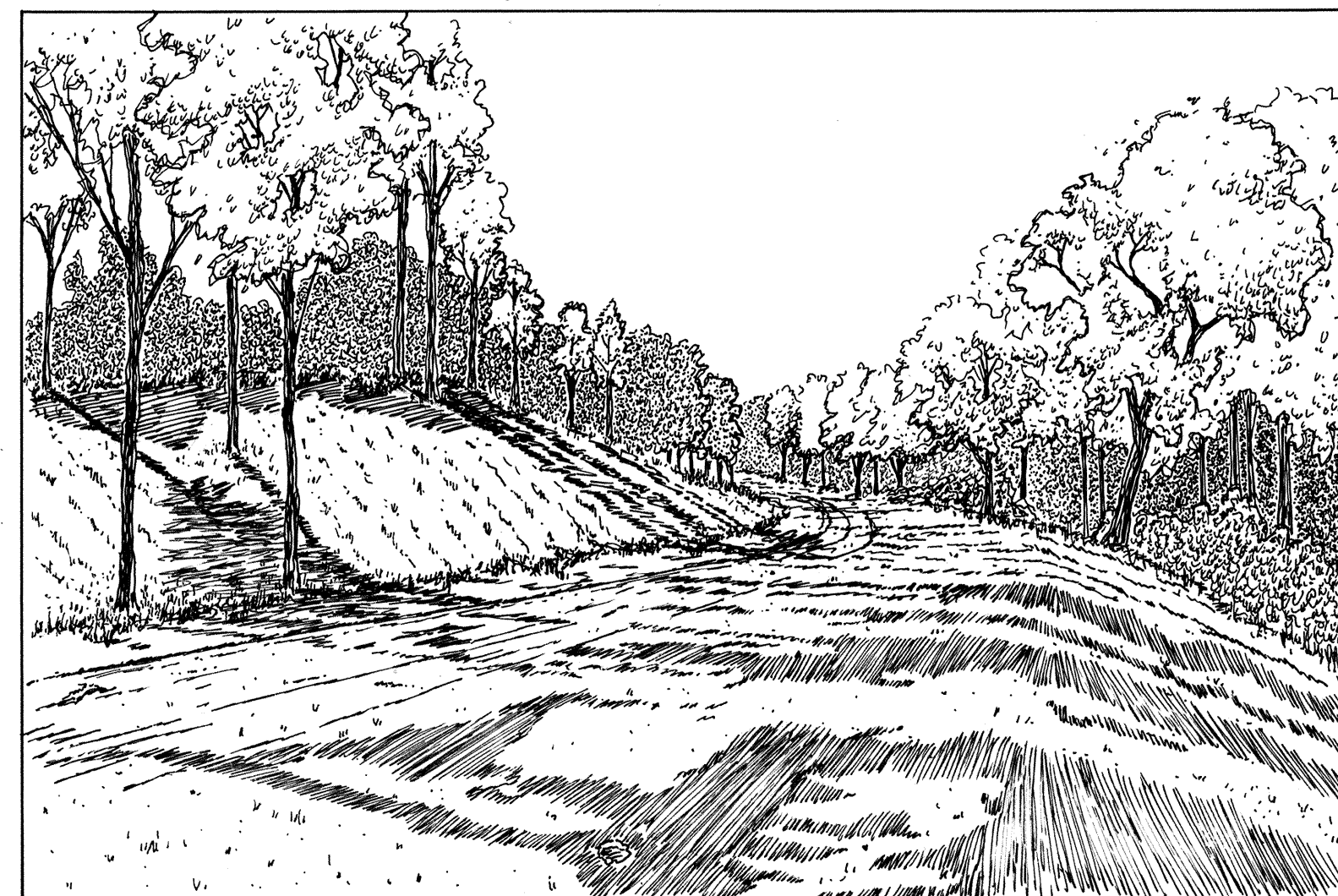
CLEARING & GRUBBING

After the road alignment was approved, Bureau of Public Roads survey teams set stakes along the location of the road's slopes, and all ground cover was cleared to a distance of 5' beyond the stakes. Directed by the landscape architects, the supervisory engineers were responsible for marking certain trees for preservation. All locust and cedar trees with a minimum diameter of 6" were cut to board length and saved. All other material cleared was burned at night in specified areas.



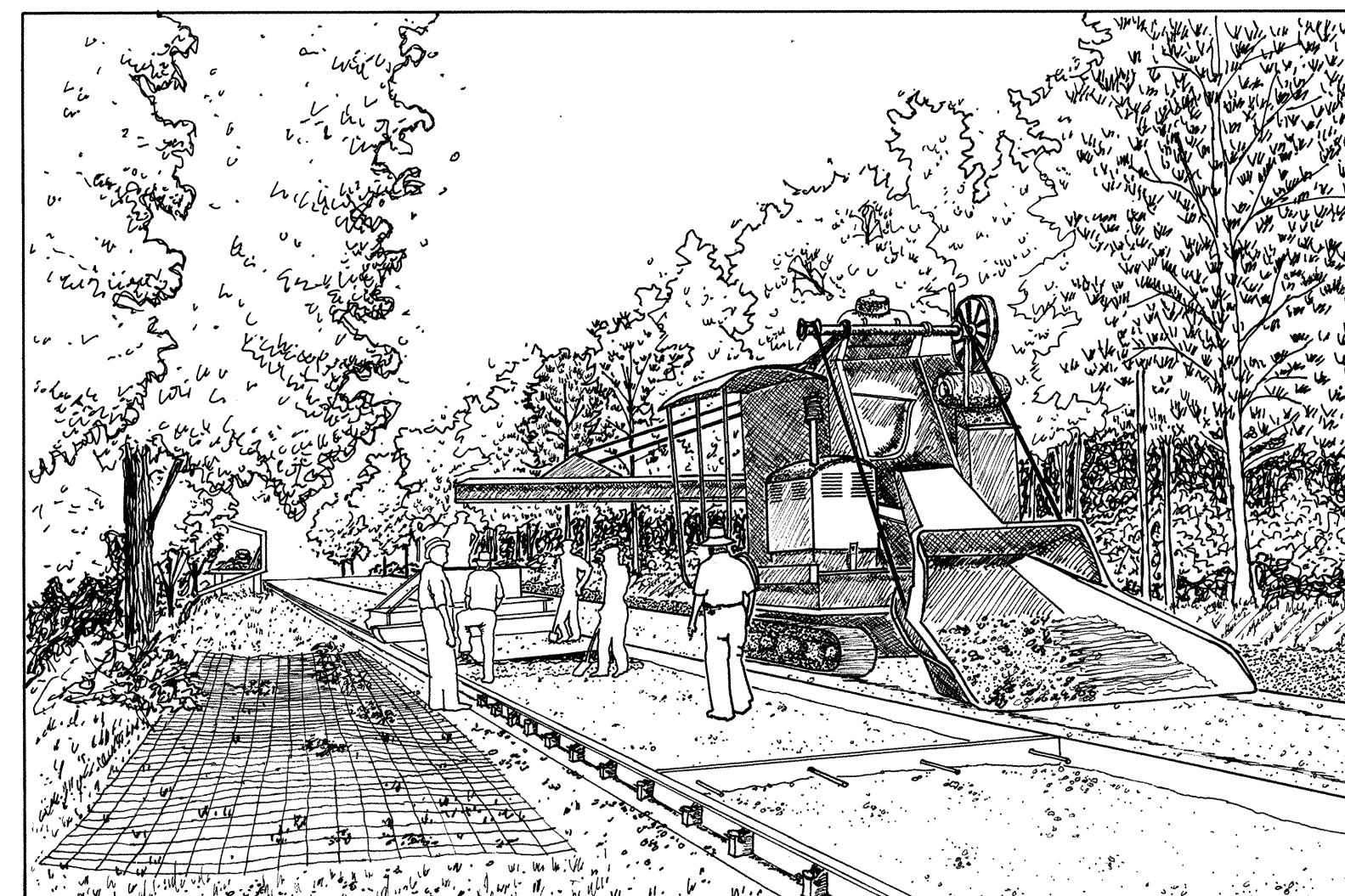
SLOPE DEVELOPMENT

Landscape architects gave special attention to the development of vegetated slopes along the Colonial Parkway to set the road into the landscape. Tree stumps along slope areas were left below the surface to help stabilize the embankments. A varying grade between 2:1 and 5:1 was used, but the engineer was responsible for on-site supervision to adjust the slopes to local conditions. Following detailed plans from the landscape division, the proper grade was attained, and crews seeded the slopes to stabilize the earth before beautification.



PAVING

A two course subgrade between 9" and 12" thick underlies most of the pavement along the parkway. Form work and reinforcement mesh were constructed for the concrete sections, which were 10' wide and between 40' and 60' long. Concrete was mixed with a local aggregate (primarily marl) and poured first in the center 10' wide crowned section. Special treatments, including hosing, brooming, and acid washes were used to expose the aggregate and create the feel of a "country road." (see drawing No. 6 for detail).

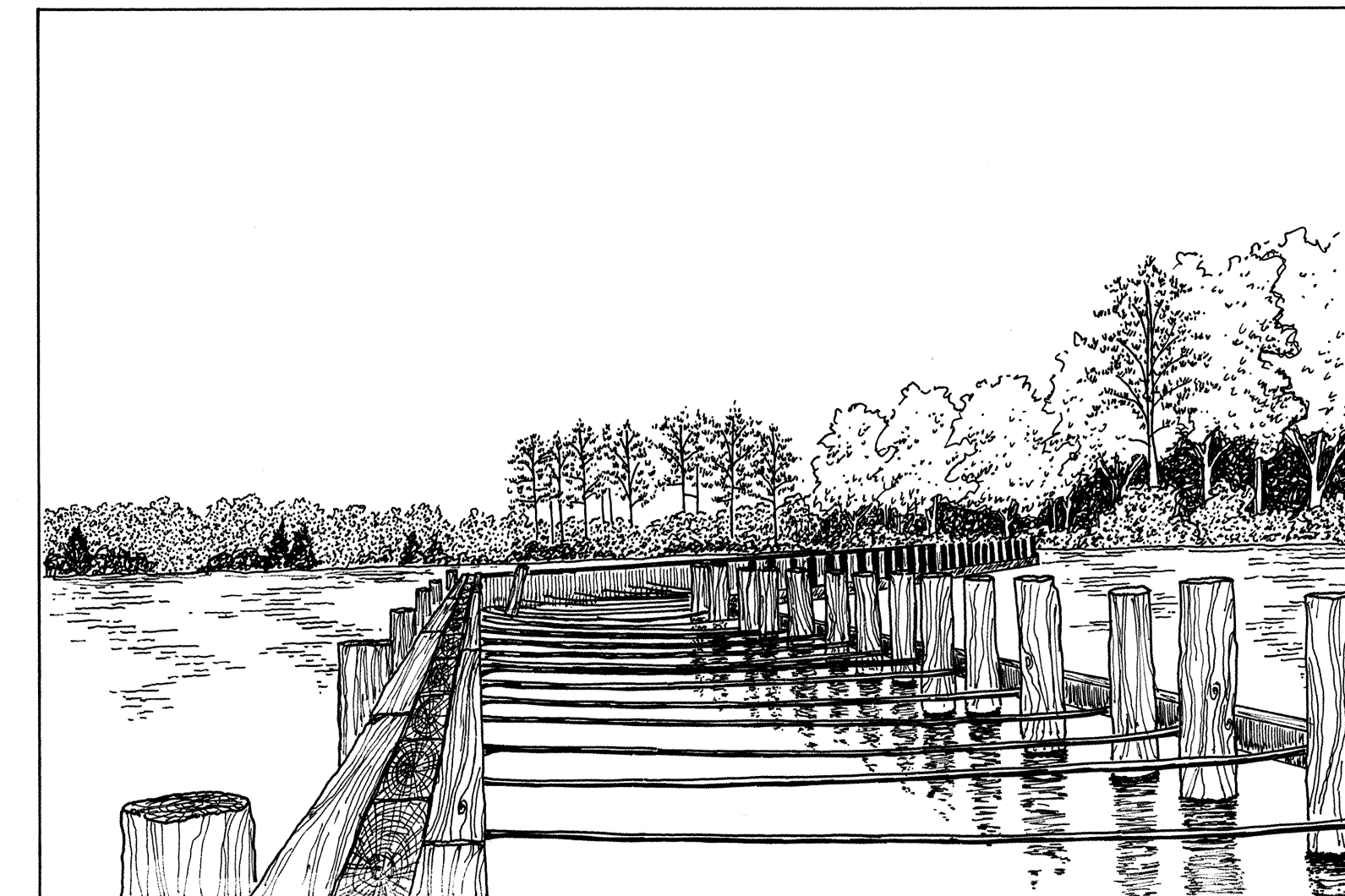


EXCAVATION & GRADING

With the right-of-way cleared and grubbed, the bedding for drainage structures was excavated, and the roadway, overlooks, and parking areas were graded in accordance with the specifications on the plans. Topsoil was removed from the area to be paved, and stored for replacement upon slopes for planting. Drainage structures were constructed and backfilled, and a suitable subgrade was attained. Excavated earth was used to create embankments, and to top areas of hydraulic fill.

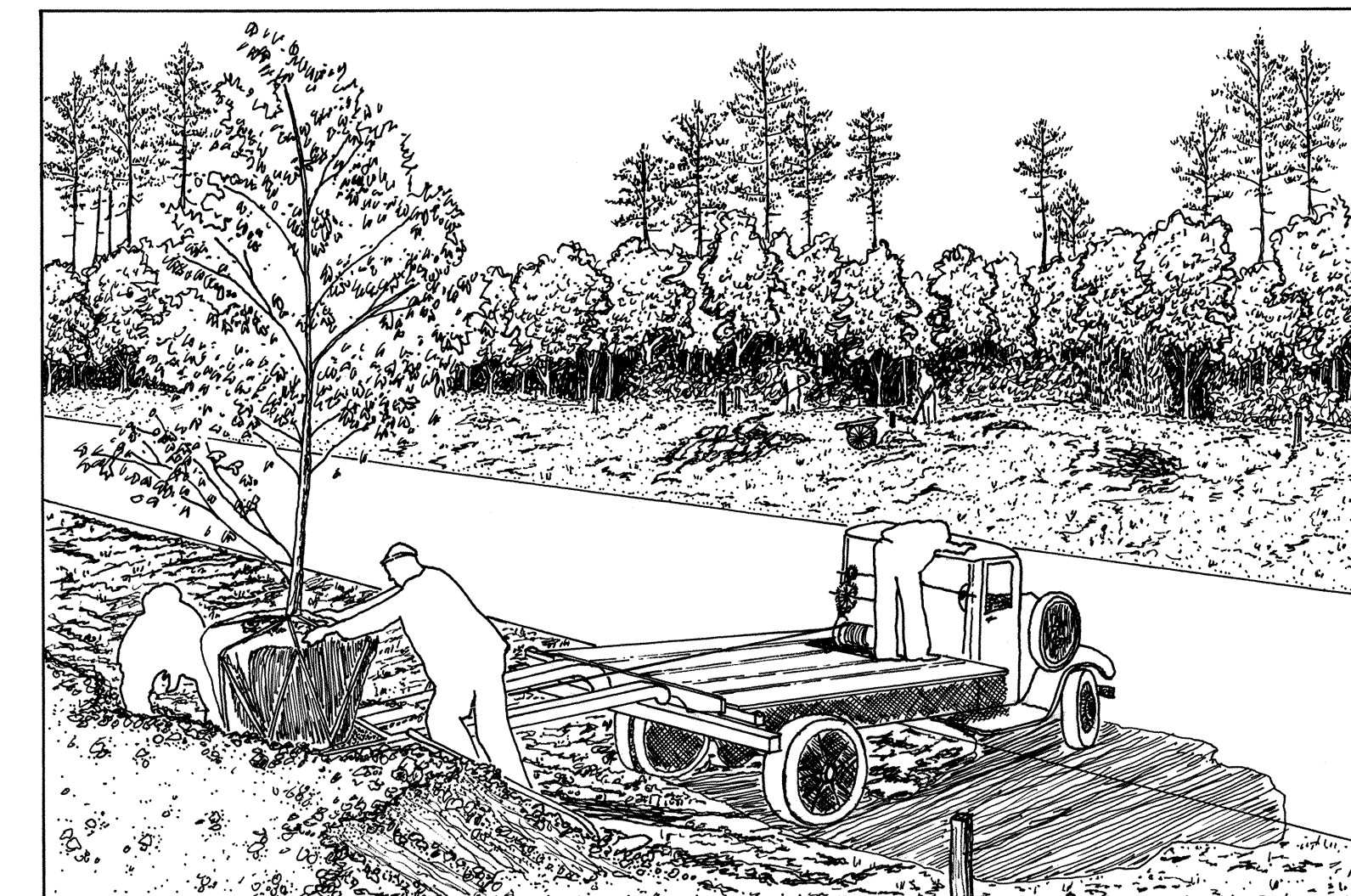
HYDRAULIC FILL

The decision to align the parkway along the York and James rivers necessitated the extensive use of hydraulic fill to create a suitable road grade at a minimum elevation of 11' above sea level. Timber bulkheads were constructed to stabilize the fill material dredged from specified areas along the river bed. Utilizing the bleeding process of hydraulic fill, a discharge pipe was placed at the centerline of the embankment through which dredged material was allowed to run out and settle naturally.



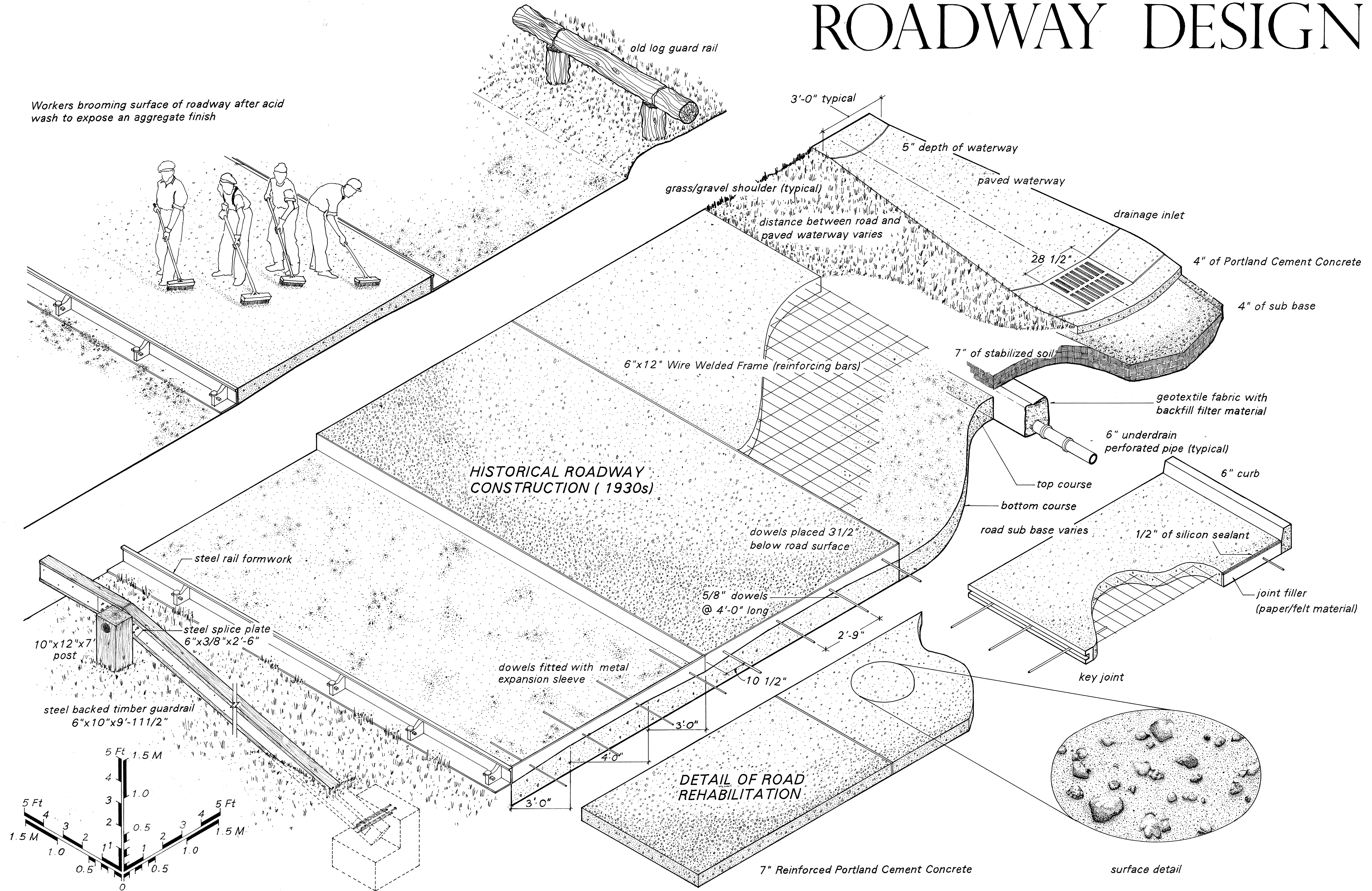
PLANTING

The primary planting season along the Colonial Parkway usually extended from the fall to early winter. New trees, such as pines, dogwoods, and cedars, were planted along the road, and many existing trees were moved to create balance and variety to the roadscape. While funds for purchasing plant material were allocated to the CCC camps through Emergency Conservation Works programs, deals were often made with local landowners to donate trees in exchange for the grading and surfacing of roads on their property.



ROADWAY DESIGN

Workers brooming surface of roadway after acid wash to expose an aggregate finish



DELINATED BY: Kevin Doniere, 1995
COLONIAL NHP
ROADS & BRIDGES RECORDING PROJECT
UNITED STATES DEPARTMENT OF THE INTERIOR

YORKTOWN VICINITY

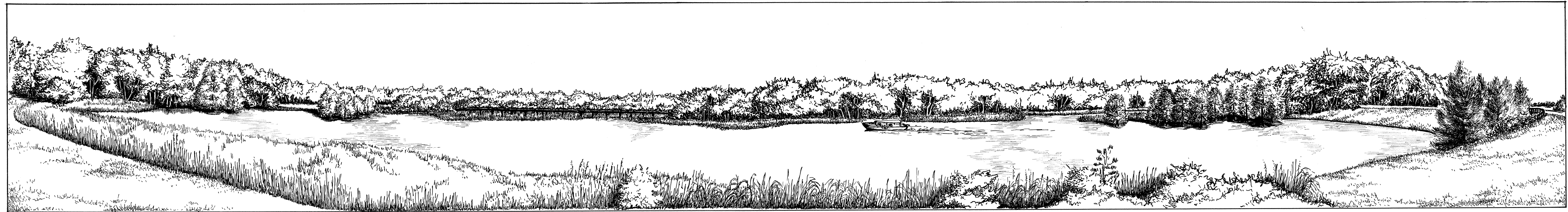
COLONIAL PARKWAY
YORKTOWN TO JAMESTOWN ISLAND
YORK COUNTY

HISTORIC AMERICAN
ENGINEERING RECORD
VA-48

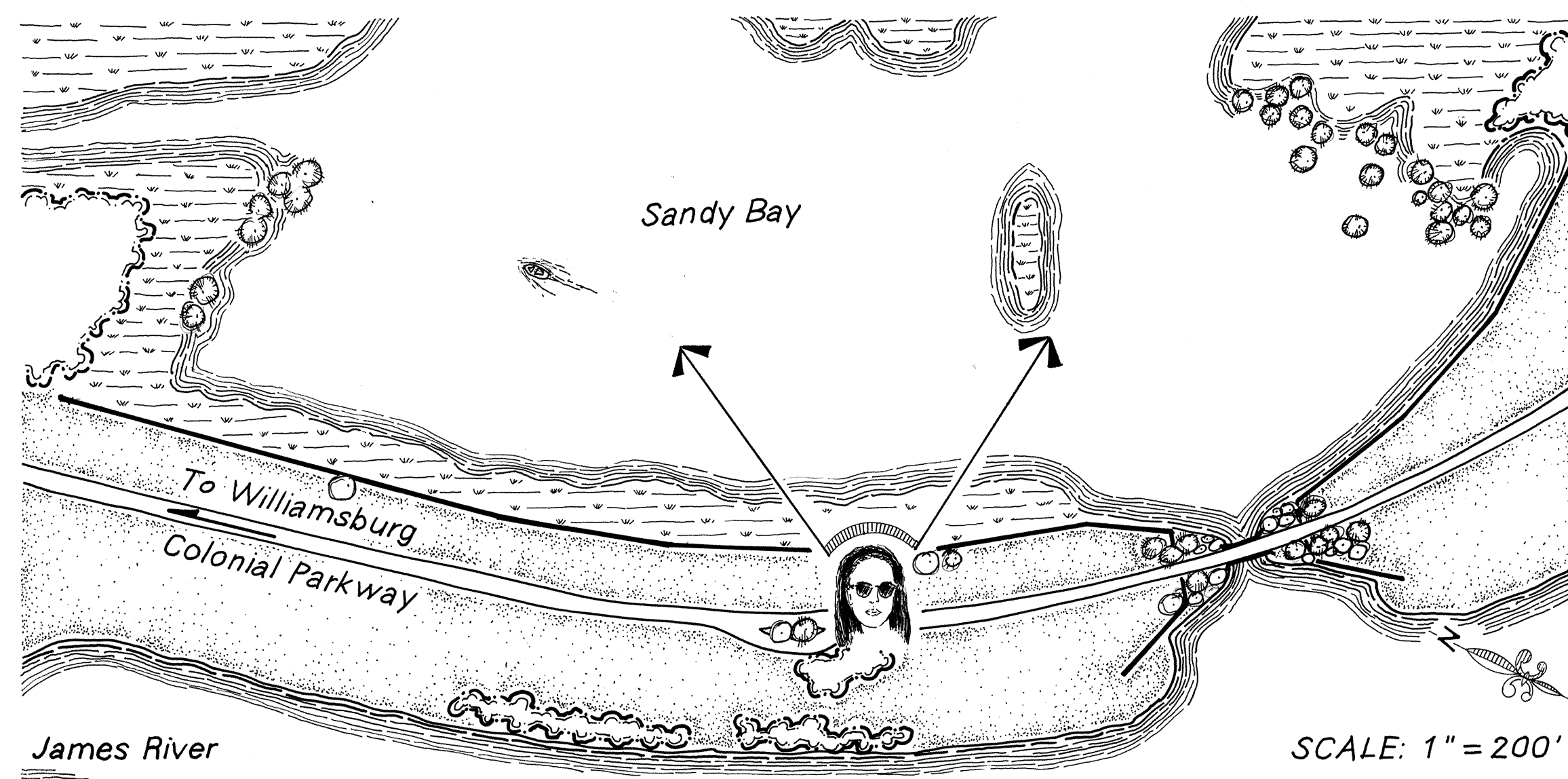
SHEET
4 of 9

VIRGINIA

IF REPRODUCED, PLEASE CREDIT: HISTORIC AMERICAN ENGINEERING RECORD, NATIONAL PARK SERVICE, NAME OF DELINEATOR, DATE OF THE DRAWING



LOOKING EAST INTO SANDY BAY



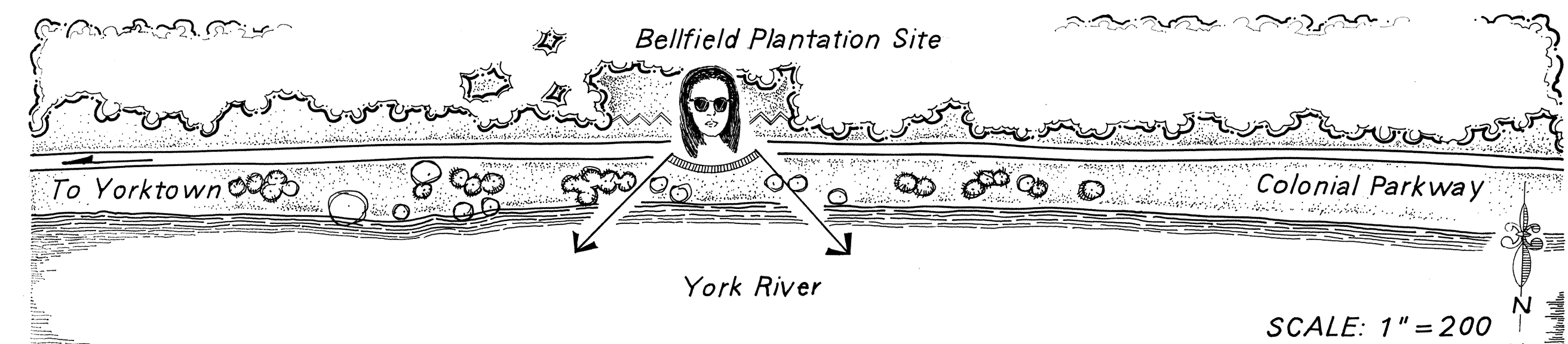
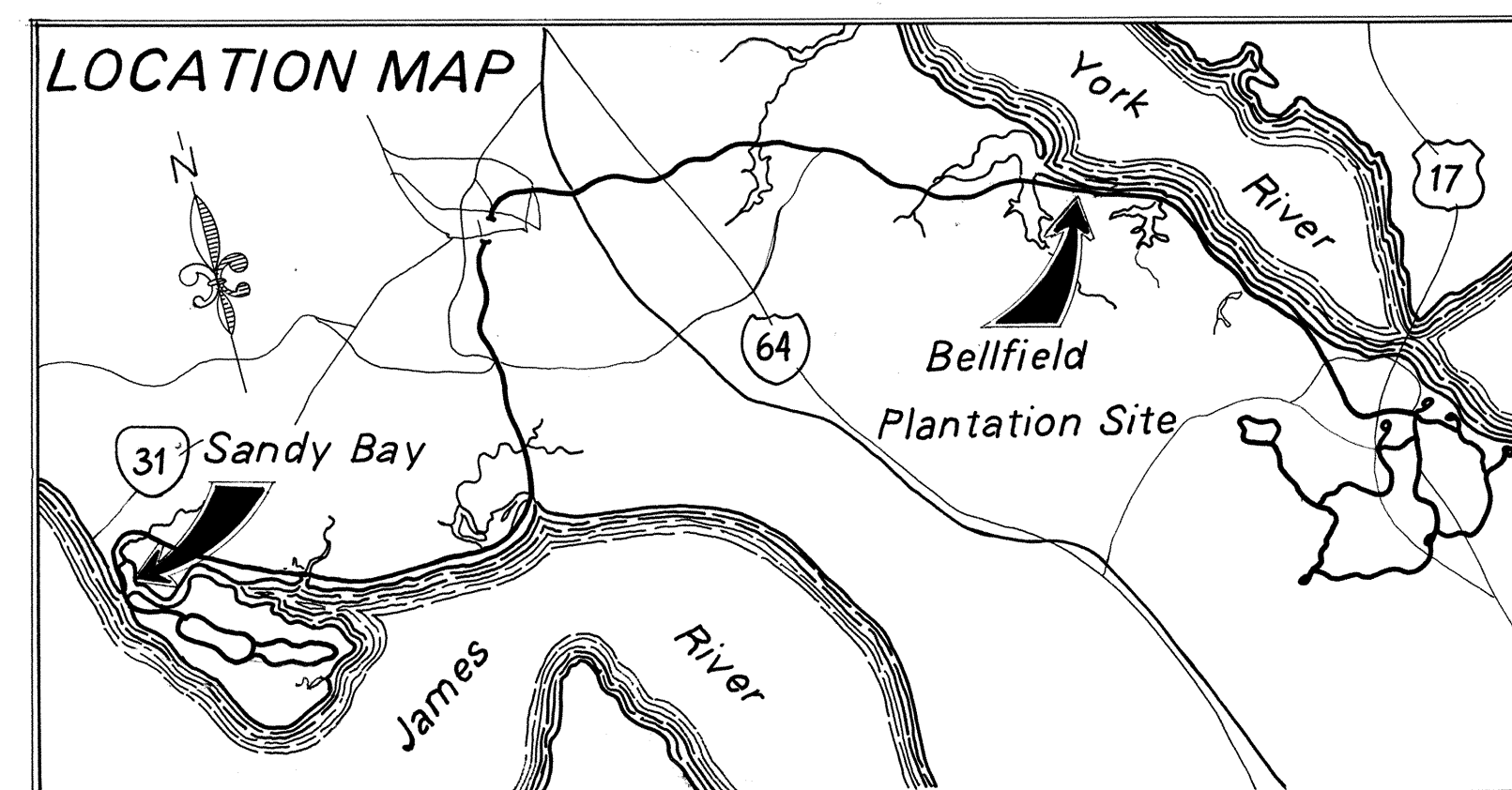
LIST OF PLANT MATERIAL	
Botanical Name	Common Name
JAMES RIVER	
<i>Juniperus virginiana</i>	RED CEDAR
<i>Lonicera japonica</i>	HONEYSUCKLE
<i>Myrica cerifera</i>	SOUTHERN BAYBERRY
<i>Pinus taeda</i>	LOBLOLLY PINE
<i>Platanus occidentalis</i>	SYCAMORE
<i>Quercus alba</i>	WHITE OAK
<i>Taxodium distichum</i>	BALDCYPRESS
YORK RIVER	
<i>Celtis occidentalis</i>	COMMON HACKBERRY
<i>Cornus florida</i>	FLOWERING DOGWOOD
<i>Juglans nigra</i>	WALNUT
<i>Juniperus virginiana</i>	RED CEDAR
<i>Liriodendron tulipifera</i>	TULIP TREE
<i>Platanus occidentalis</i>	SYCAMORE
<i>Robinia pseudoacacia</i>	LOCUST
<i>Sassafras albidum</i>	SASSAFRAS

JAMES RIVER

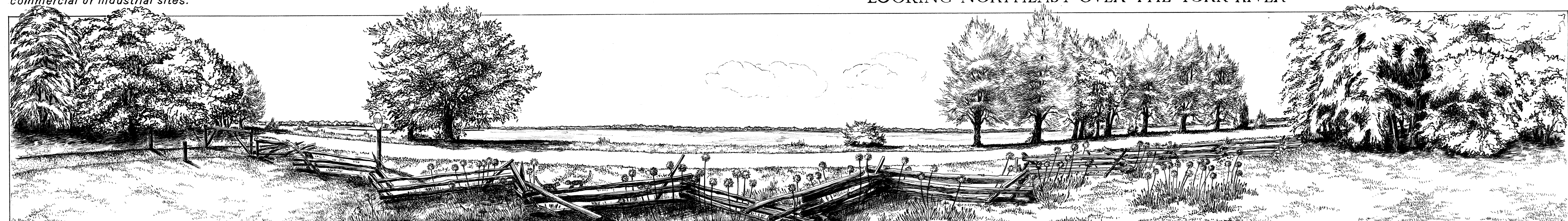
PARKWAY VIEWS

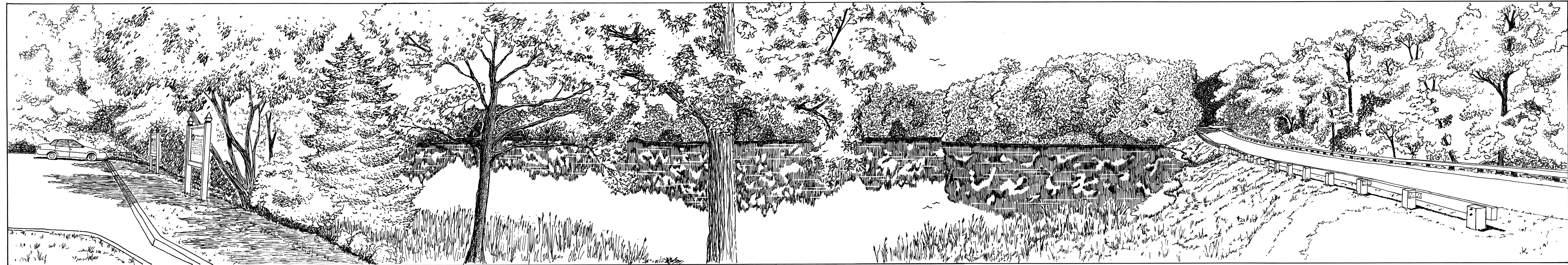
YORK RIVER

Integral to the natural and historical development of Tidewater Virginia, the York and the James rivers broaden the interpretive and scenic qualities of the Colonial Parkway. The decision to align the parkway along the river banks provided landscape architects the opportunity to develop dramatic open views of the rivers. These vistas, or unified landscape compositions framed by natural features, were also developed for inward views of marshes and ponds. Land management plans guide maintenance crews in the selective cutting of vegetation to open viewsheds and highlight exotic and flowering trees along the parkway. Just as significant, however, is the use of vegetated screens to hide views not related to the overall feel or intent of the parkway, such as commercial or industrial sites.



LOOKING NORTHEAST OVER THE YORK RIVER

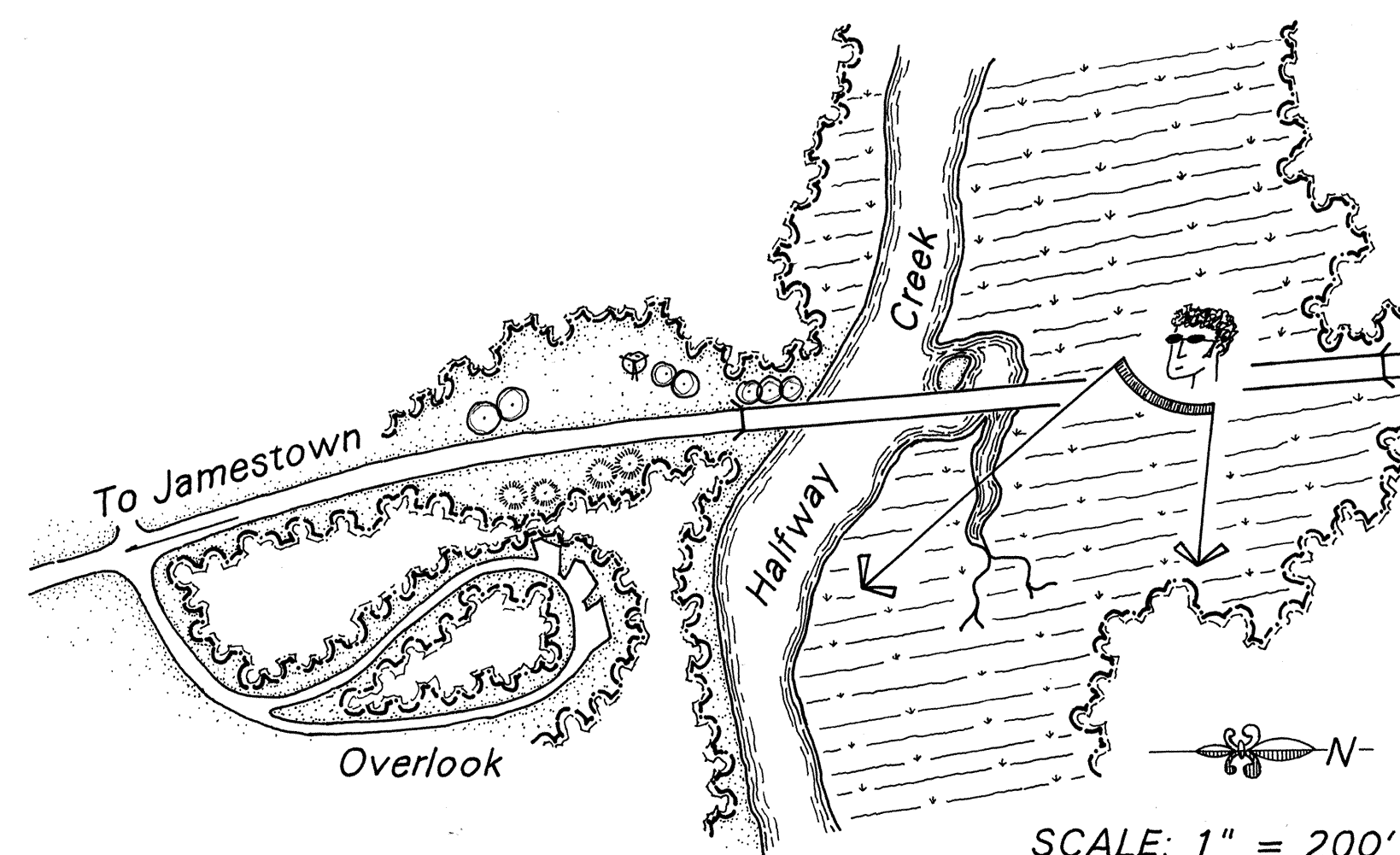




LOOKING WEST INTO JONES MILL POND

LIST OF PLANT MATERIAL
HALFWAY CREEK

Botanical Name	Common Name	Botanical Name	Common Name
<i>Carya ovata</i>	HICKORY	<i>Pinus sylvestris</i>	SCOTCH PINE
<i>Castanea dentata</i>	CHESTNUT	<i>Prunus serotina</i>	BLACK CHERRY
<i>Cornus florida</i>	DOGWOOD	<i>Quercus sp.</i>	OAKS
<i>Juglans nigra</i>	WALNUT	<i>Robinia sp.</i>	LOCUST
<i>Liriodendron tulipifera</i>	TULIP TREE	<i>Sassafras albidum</i>	SASSAFRAS

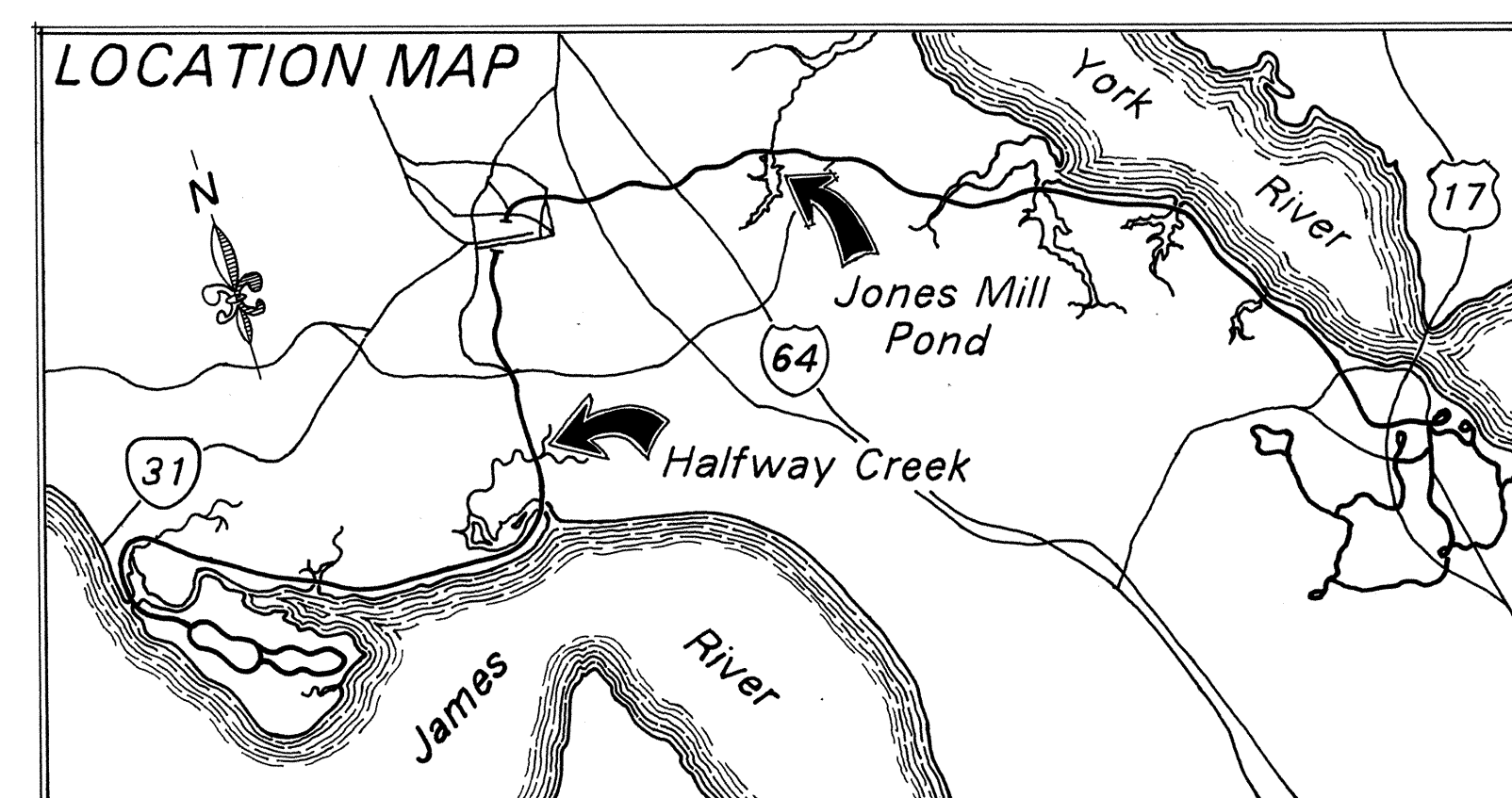


SCALE: 1" = 200'

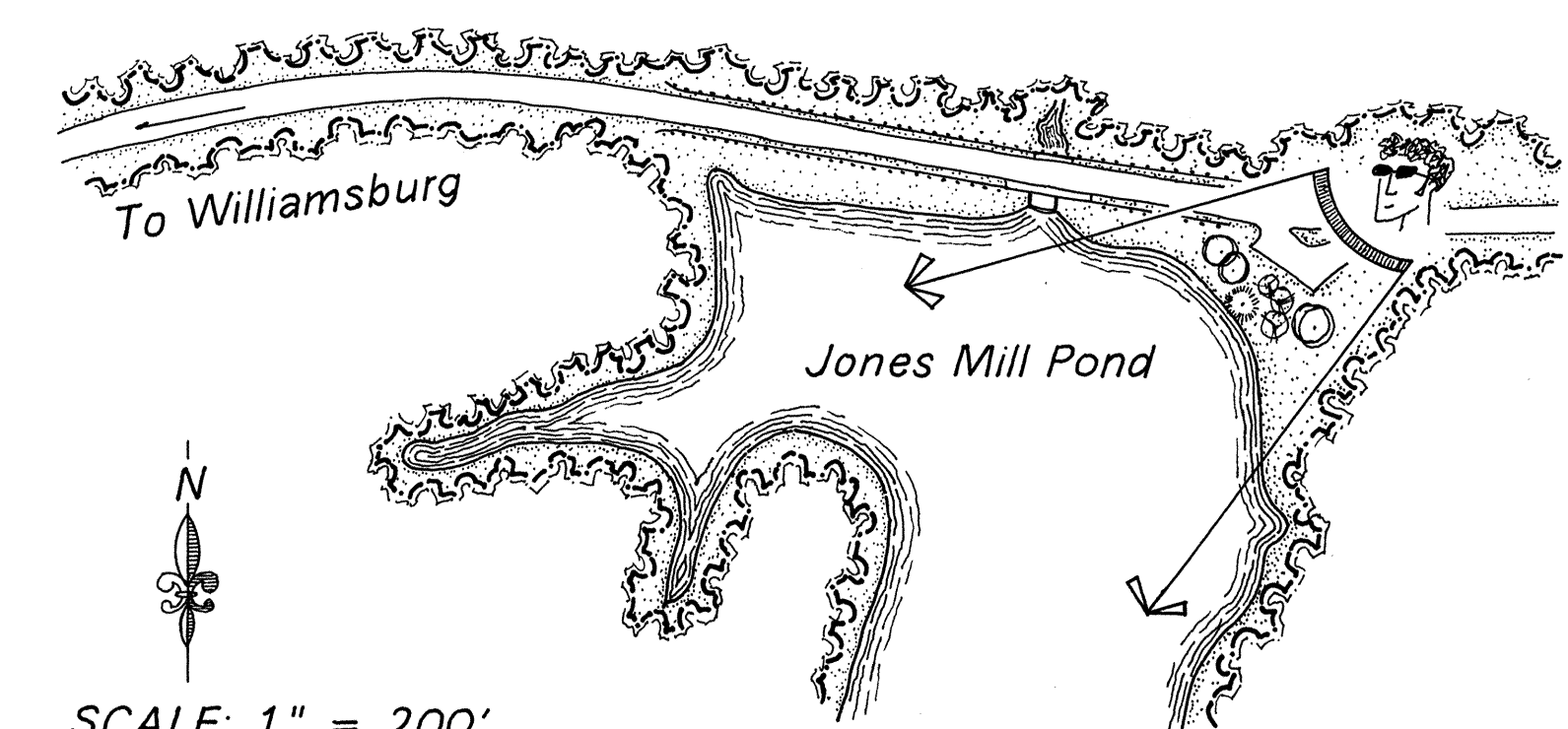
LOOKING EAST OVER HALFWAY CREEK

PARKWAY VIEWS

JONES MILL POND



HALFWAY CREEK

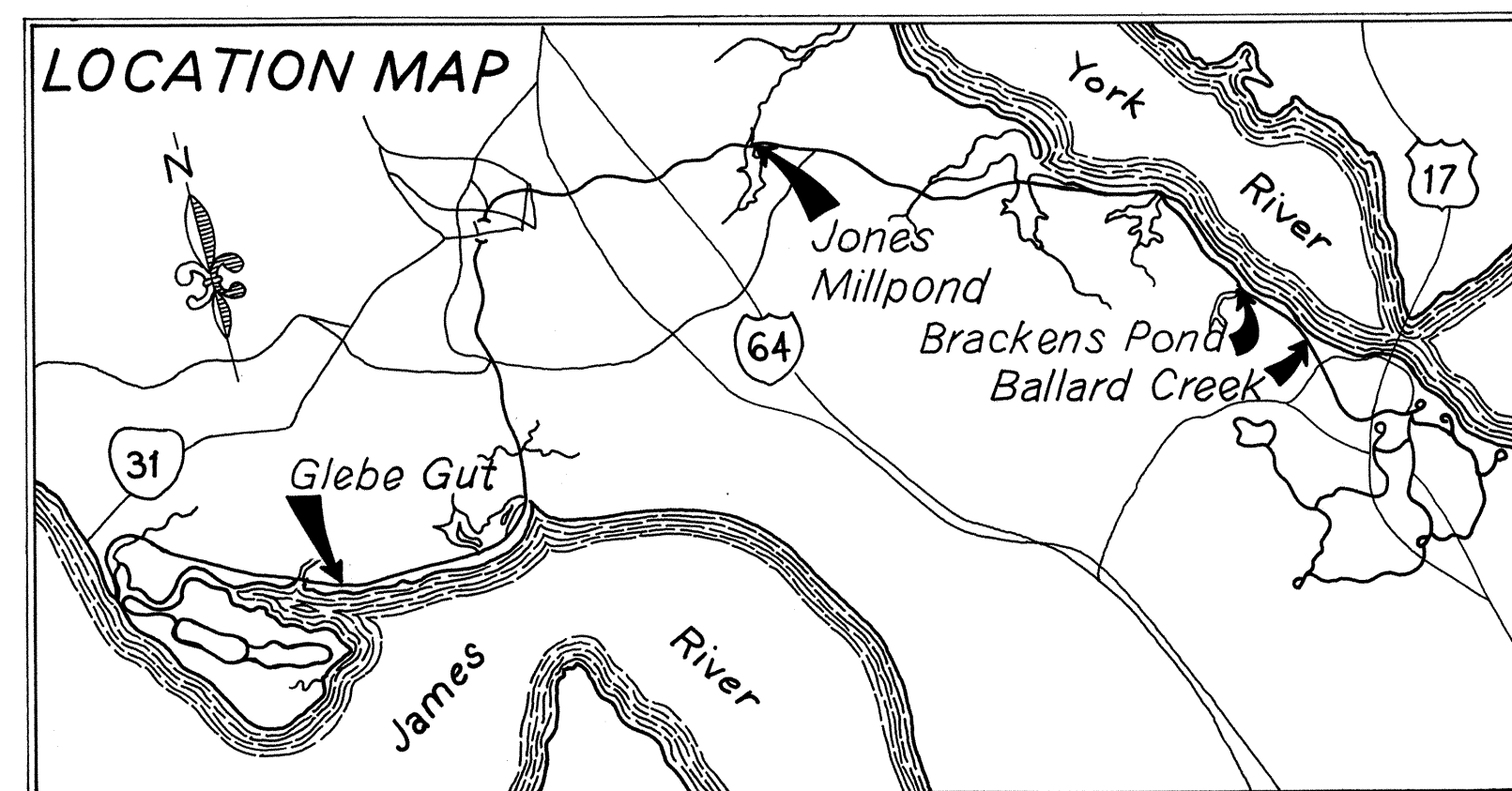


SCALE: 1" = 200'

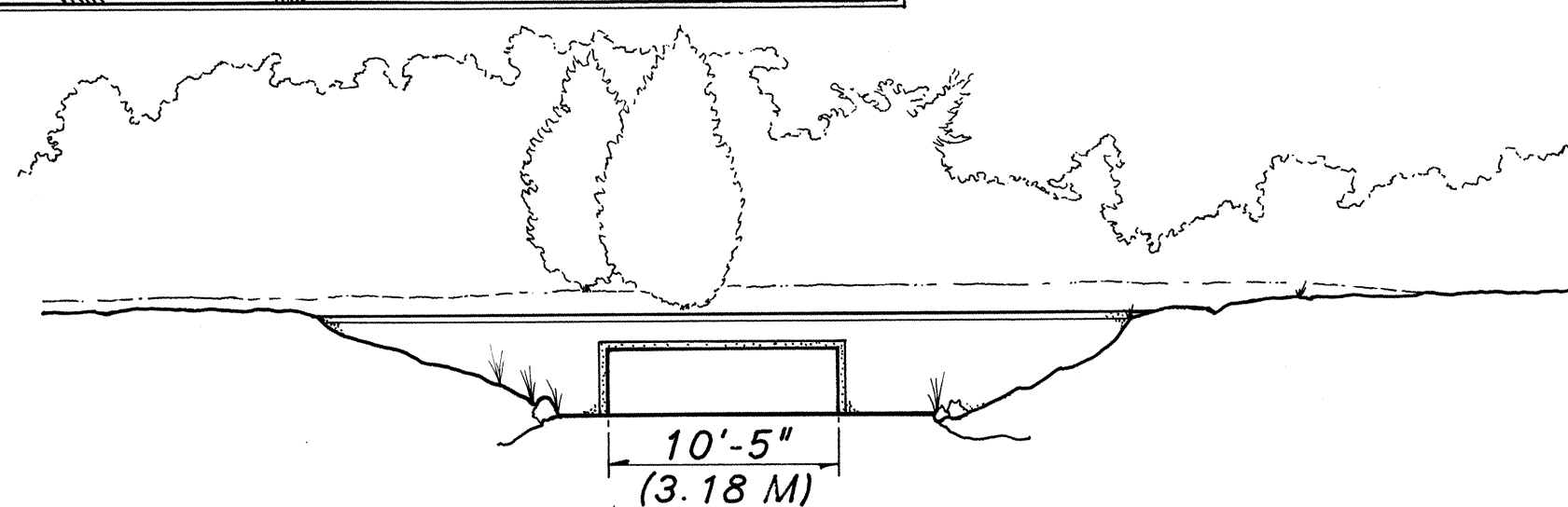
LIST OF PLANT MATERIAL
JONES MILL POND

Botanical Name	Common Name
<i>Acer saccharum</i>	SUGAR MAPLE
<i>Cercis canadensis</i>	REDBUD
<i>Fagus grandifolia</i>	BEECH
<i>Juniperus virginiana</i>	RED CEDAR
<i>Kalmia latifolia</i>	MOUNTAIN LAUREL
<i>Liquidambar styraciflua</i>	SWEETGUM
<i>Myrica cerifera</i>	SOUTHERN BAYBERRY
<i>Pinus taeda</i>	LOBLOLLY PINE
<i>Platanus occidentalis</i>	SYCAMORE
<i>Quercus sp.</i>	OAKS

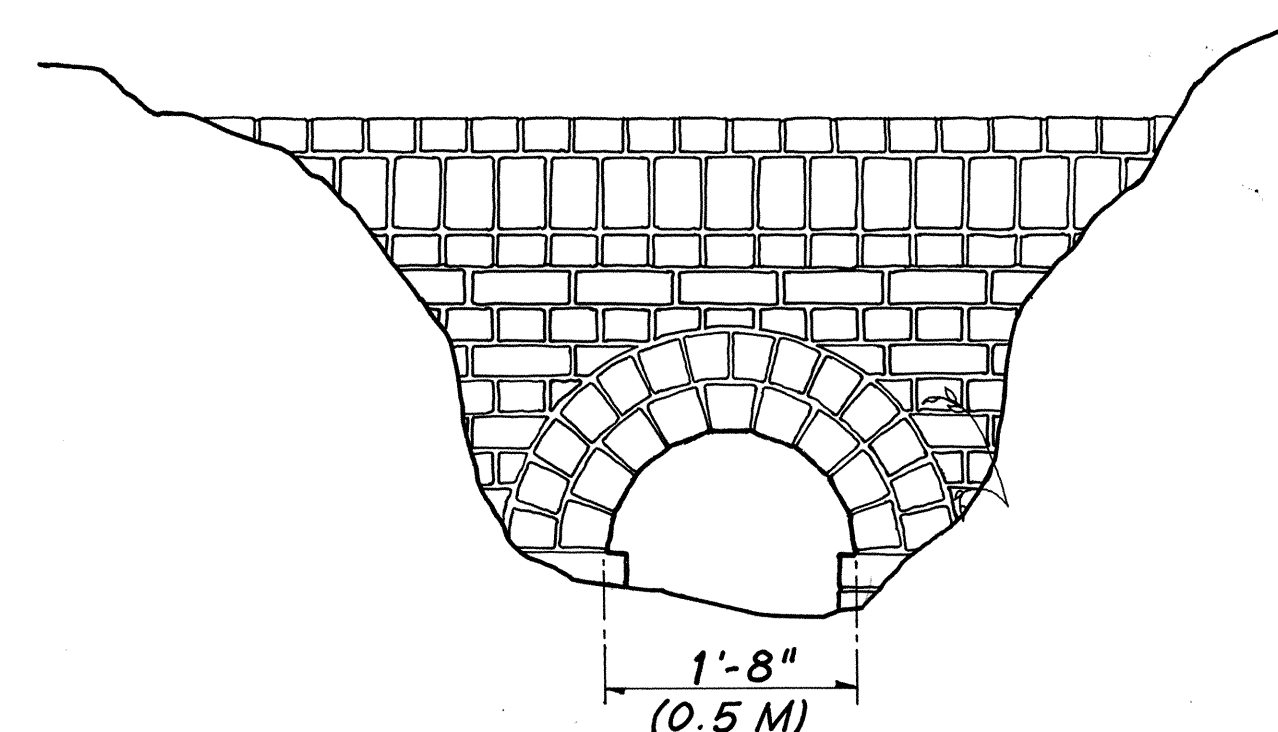
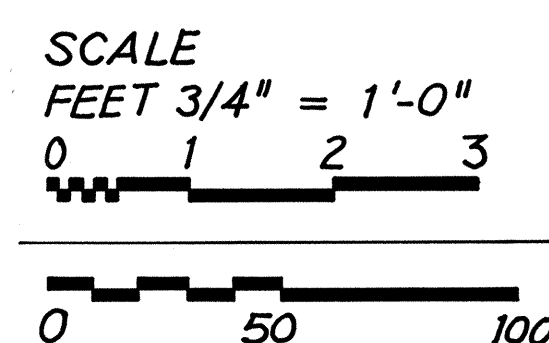
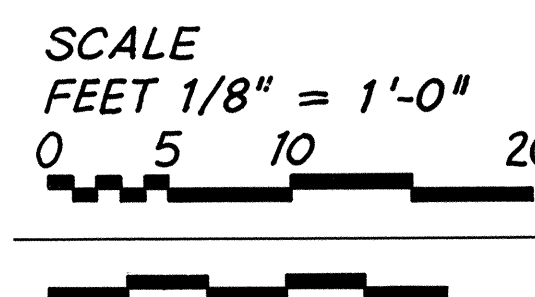




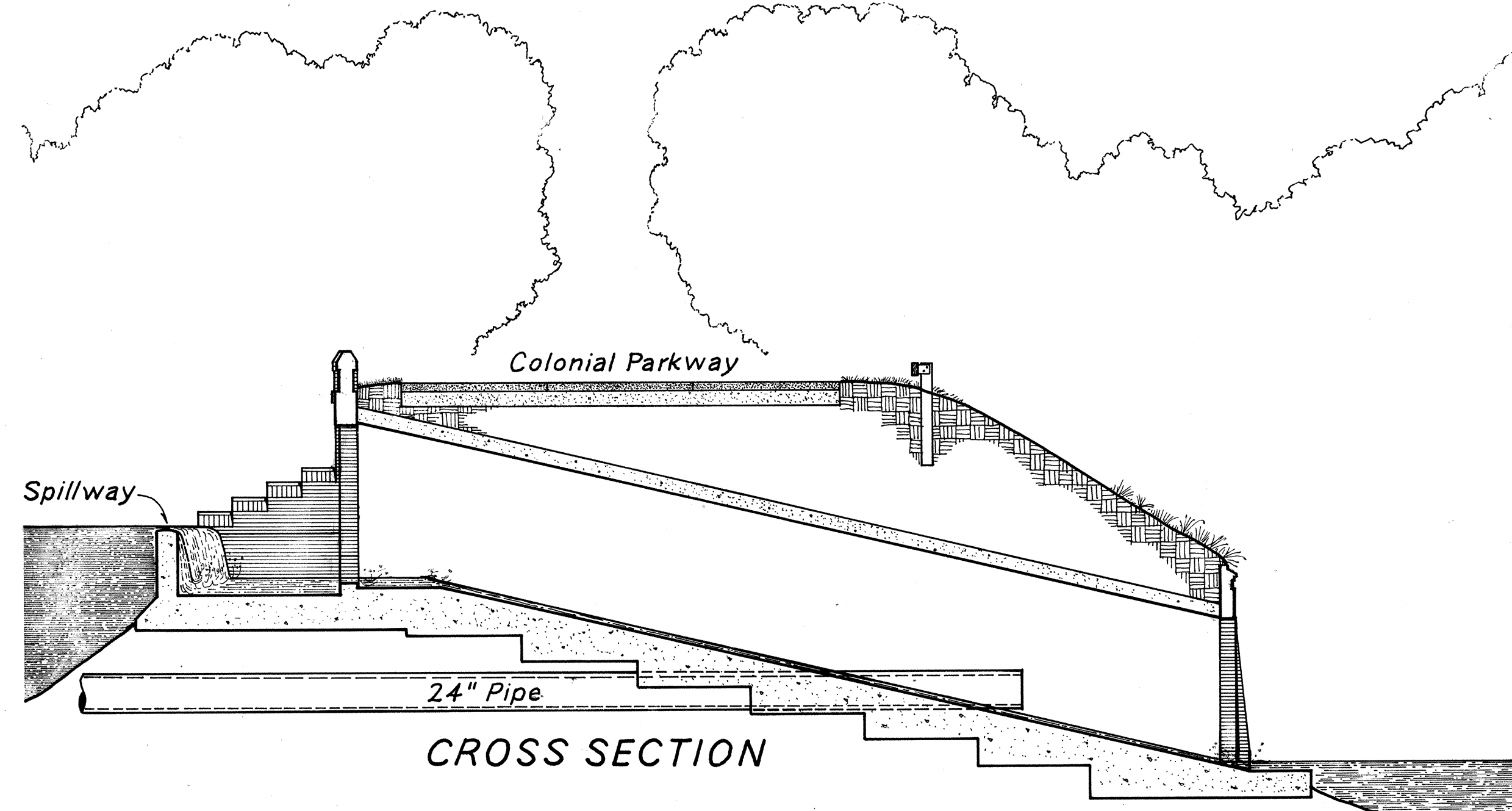
CULVERTS AND DAMS



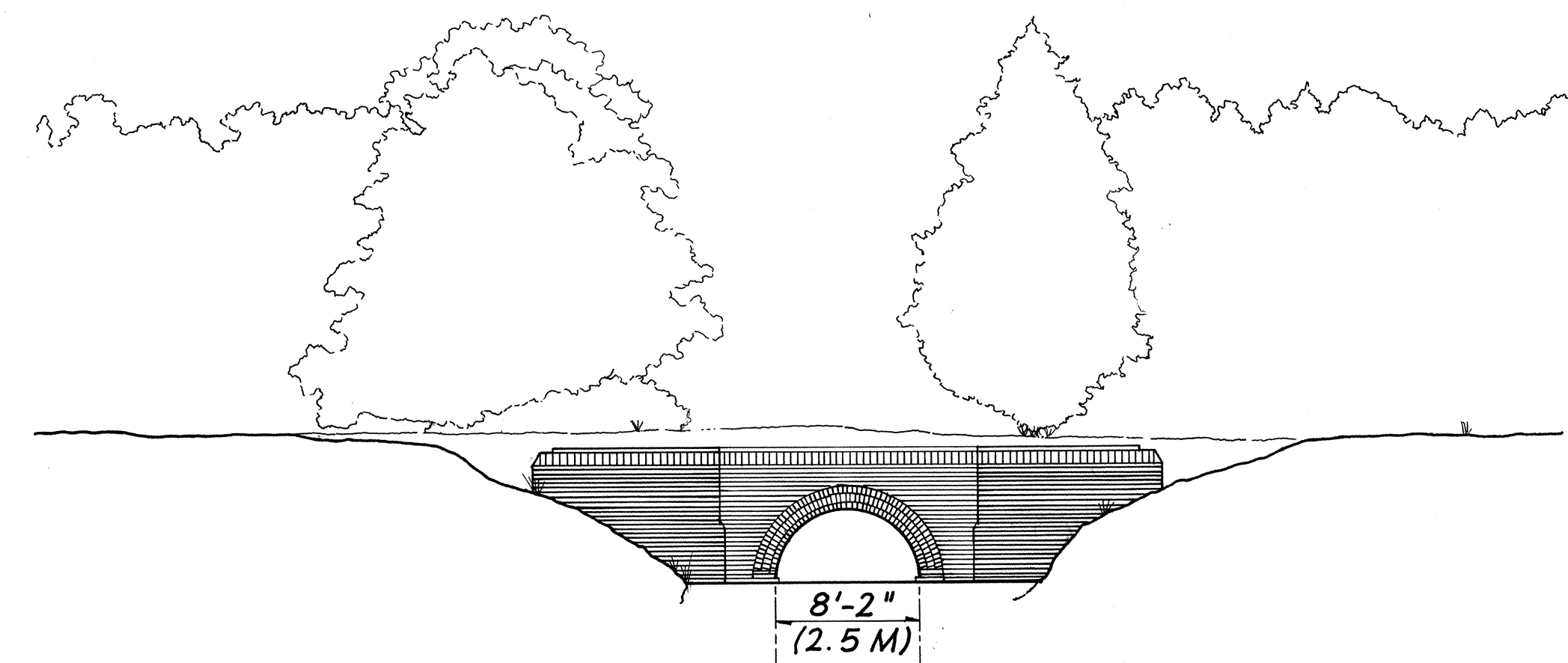
GLEBE GUT CULVERT
HAER No. VA-48-T



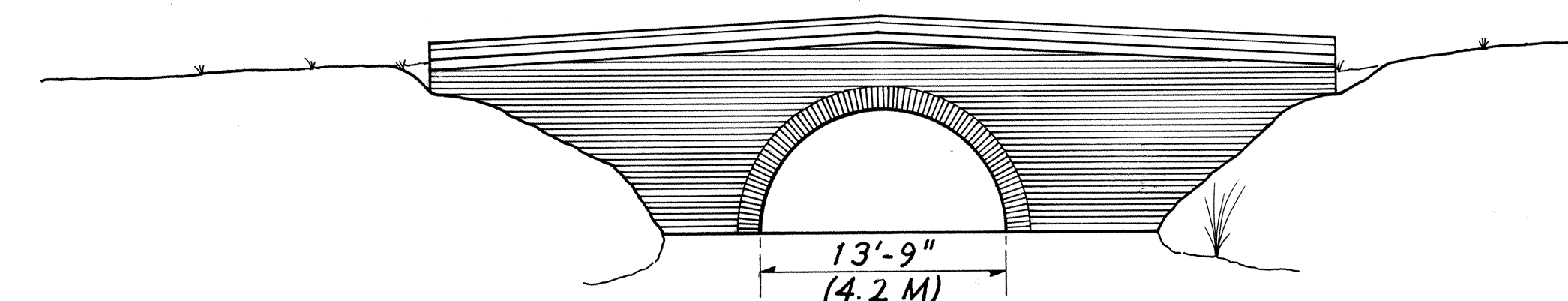
TYPICAL BRICK HEADWALL FOR CONCRETE CULVERT



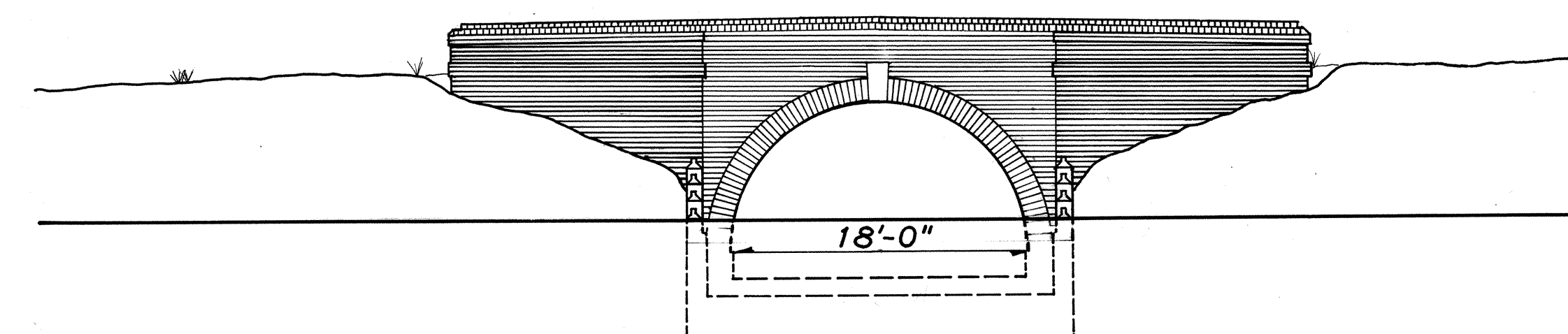
CROSS SECTION



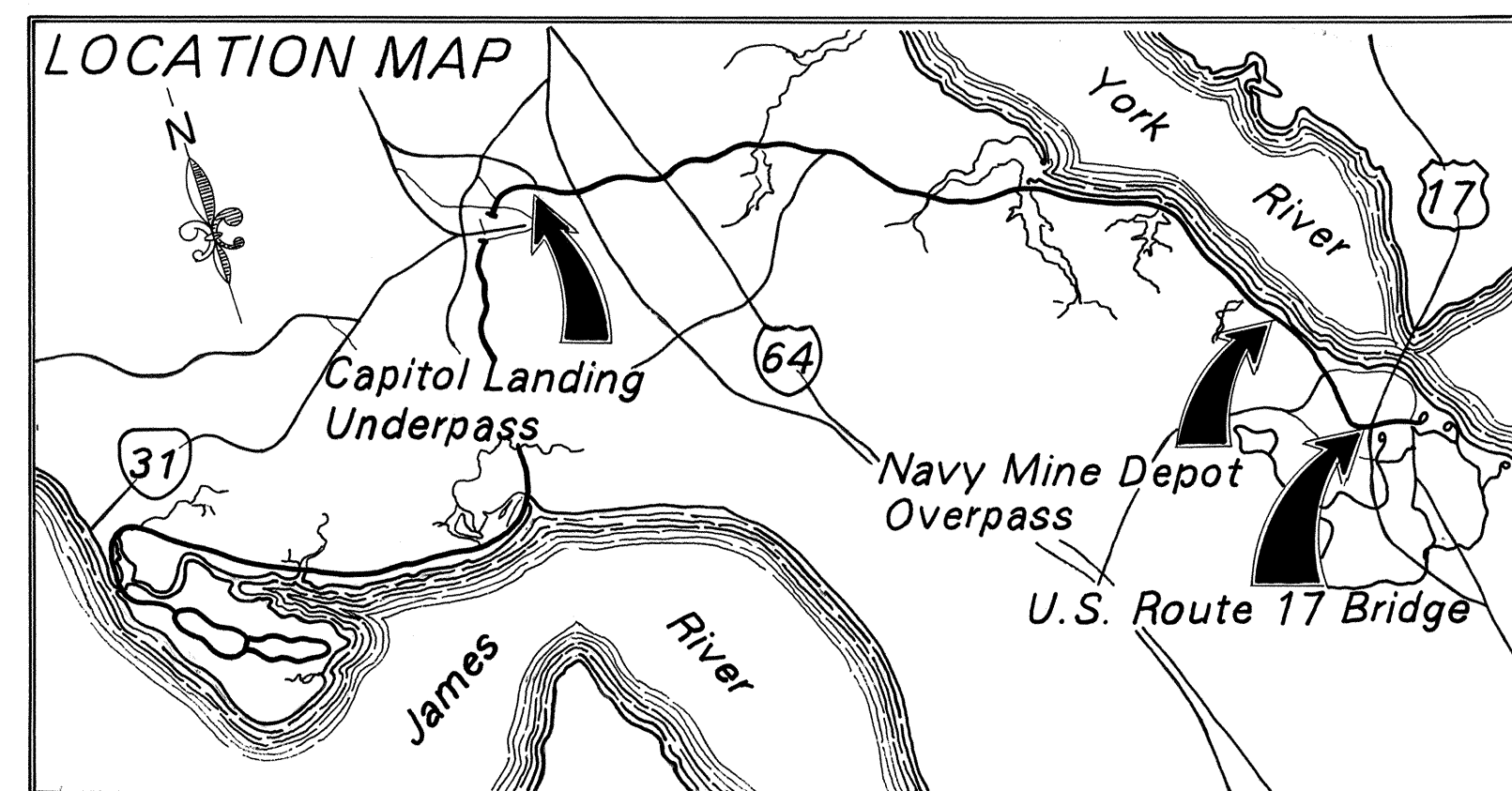
BALLARD CREEK CULVERT
HAER No. VA-48-E



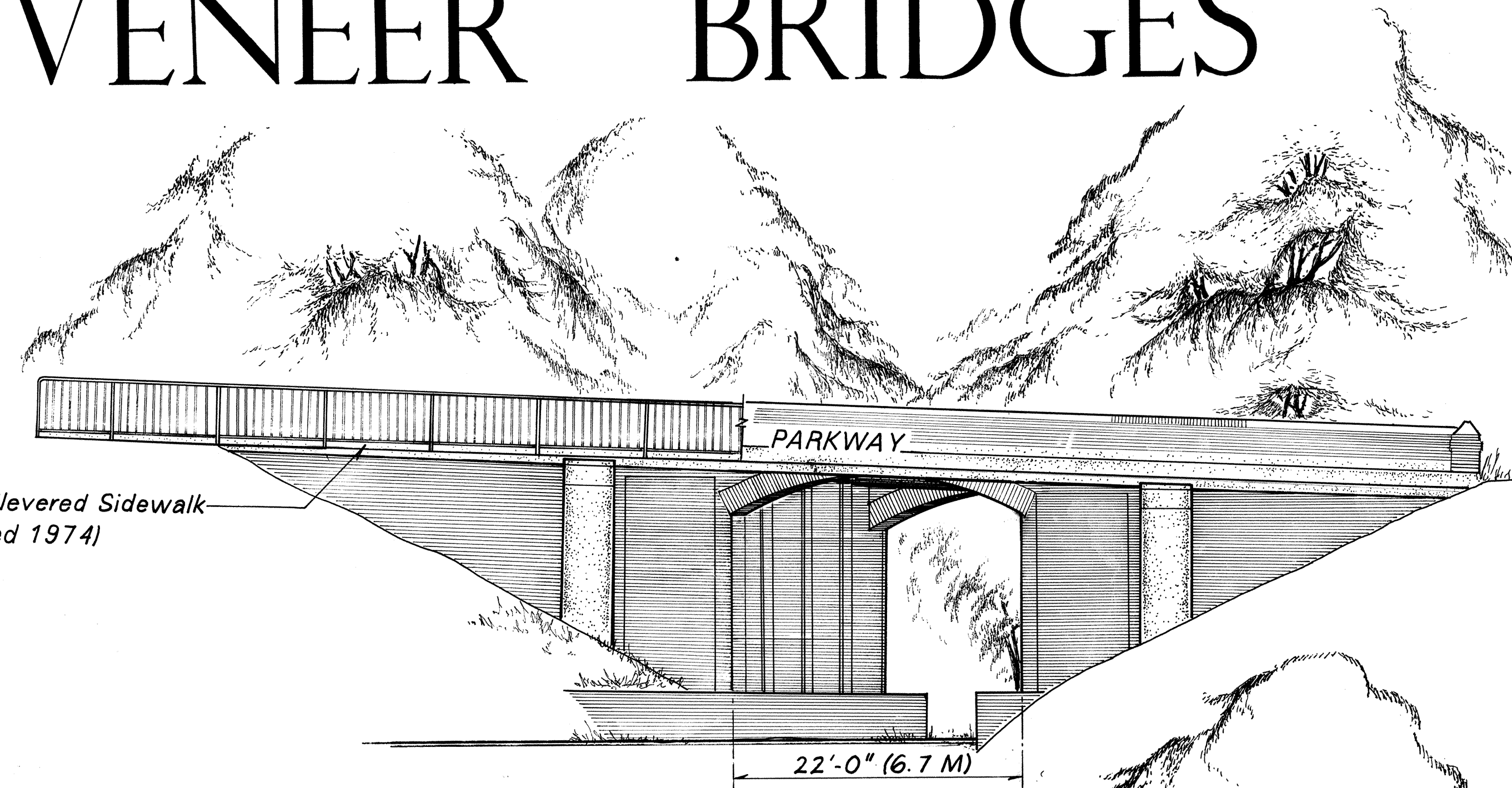
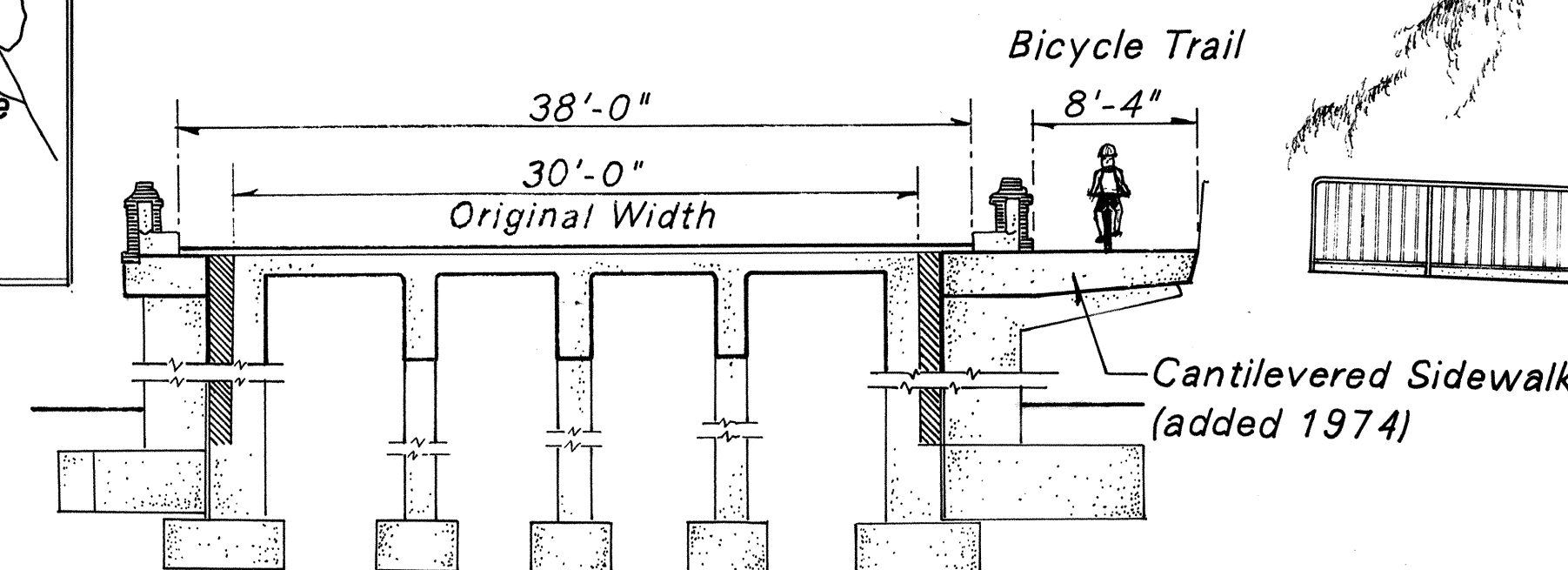
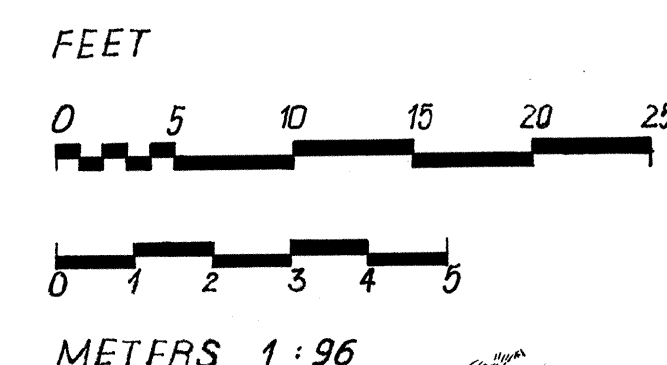
BRACKENS POND CULVERT
HAER No. VA-48-F



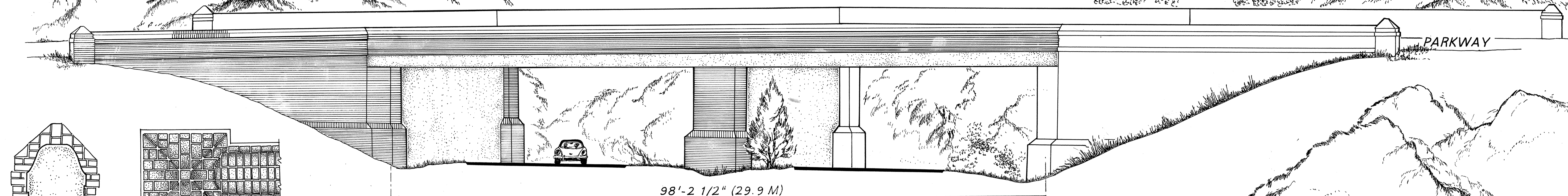
JONES MILLPOND DAM
HAER No. VA-48-G



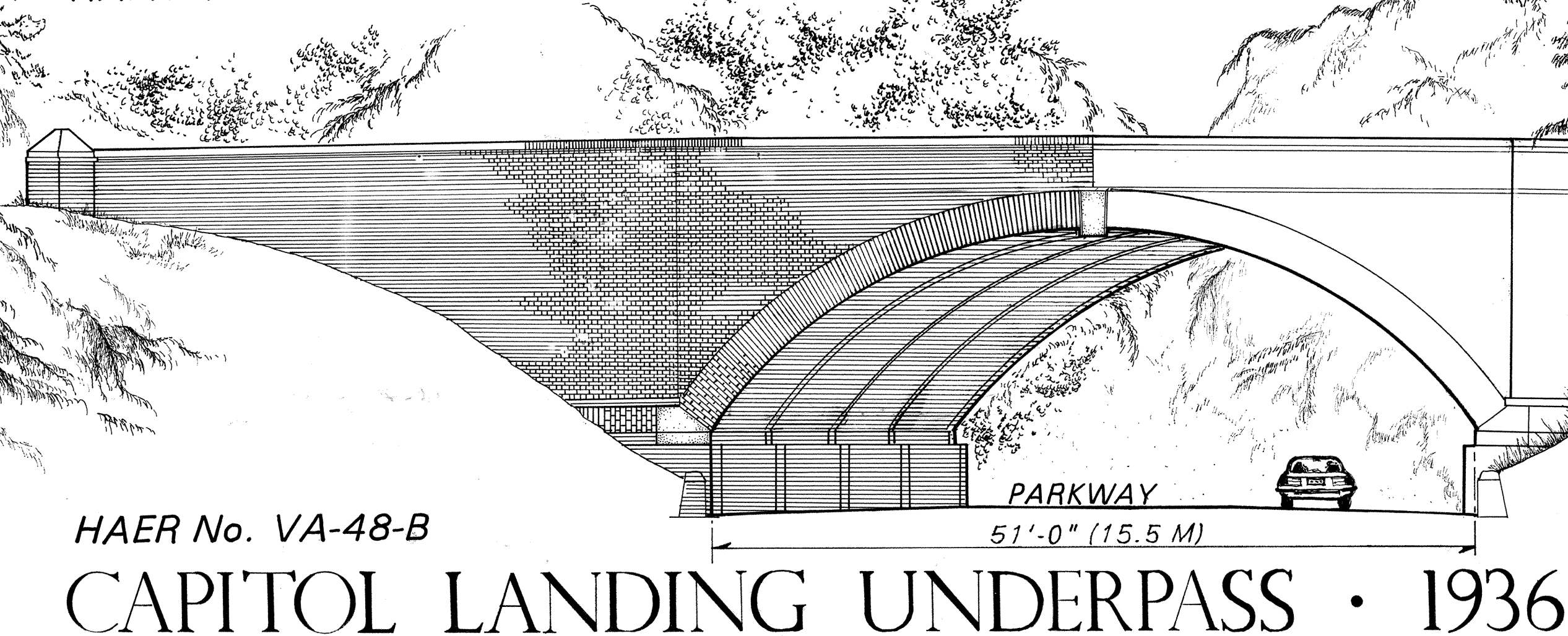
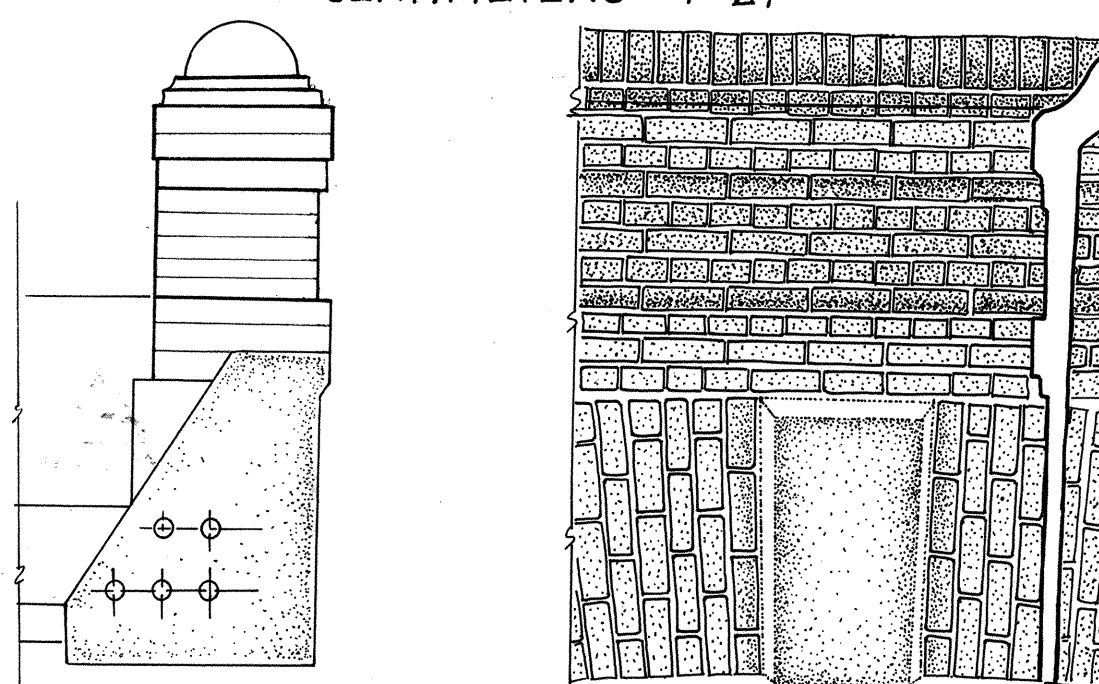
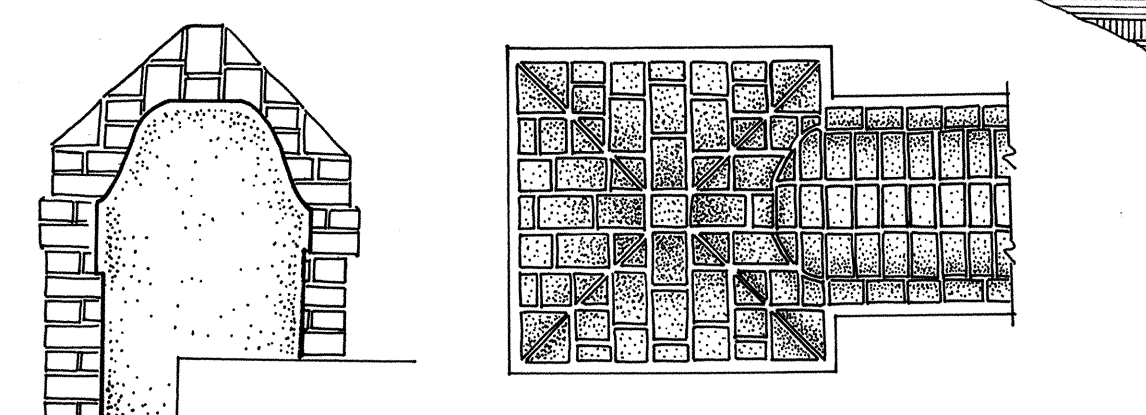
SCALE
for bridges and section 1/8" = 1'-0"



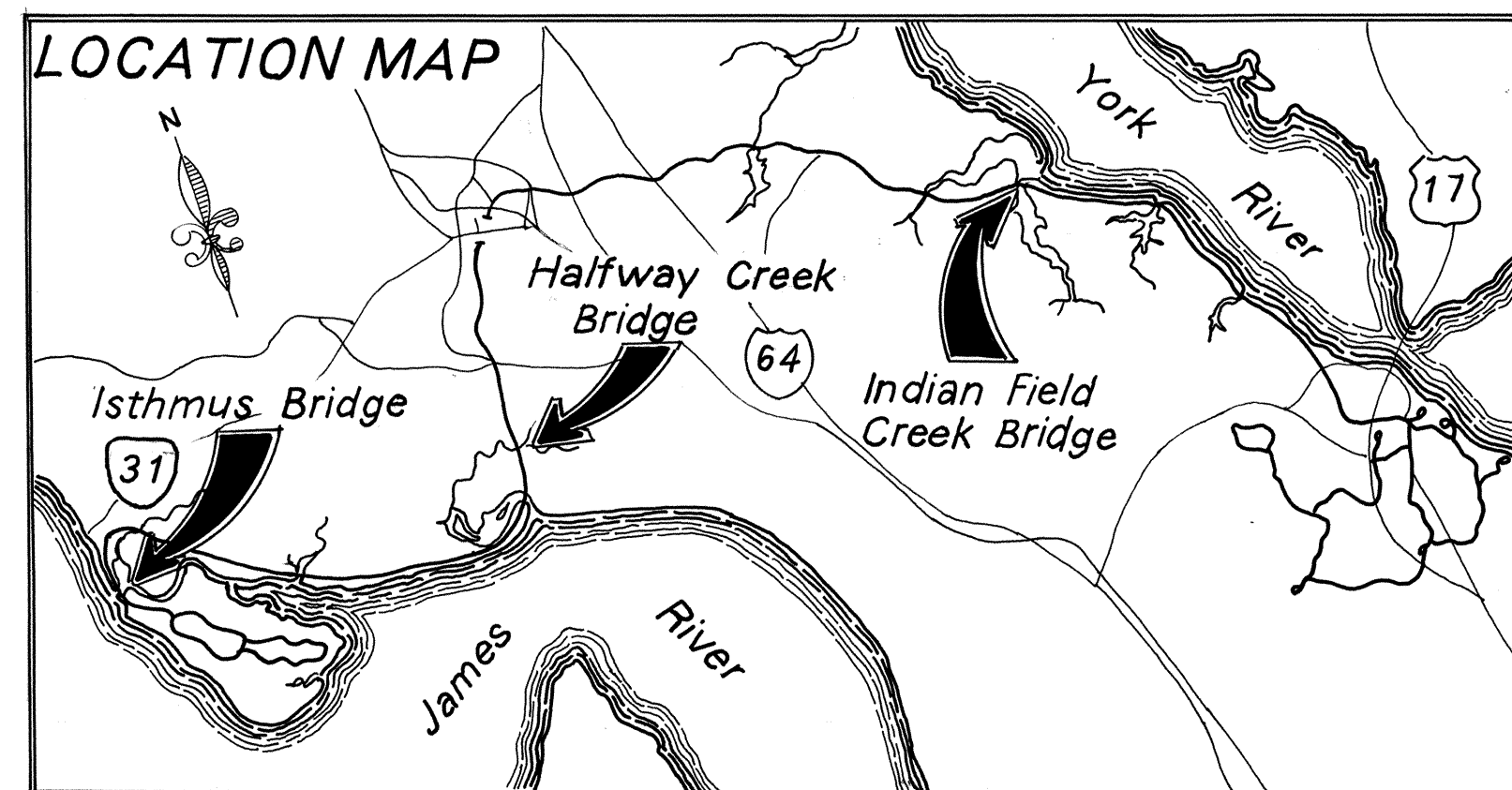
NAVY MINE DEPOT OVERPASS • 1931
HAER No. VA-48-A



U.S. ROUTE 17 BRIDGE • 1956
HAER No. VA-48-R

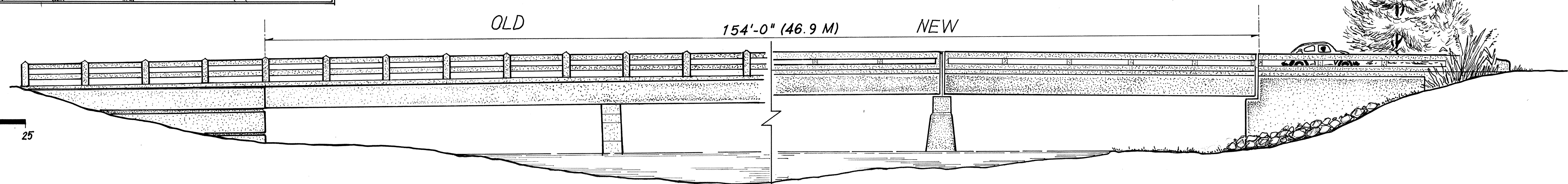


HAER No. VA-48-B
CAPITOL LANDING UNDERPASS • 1936



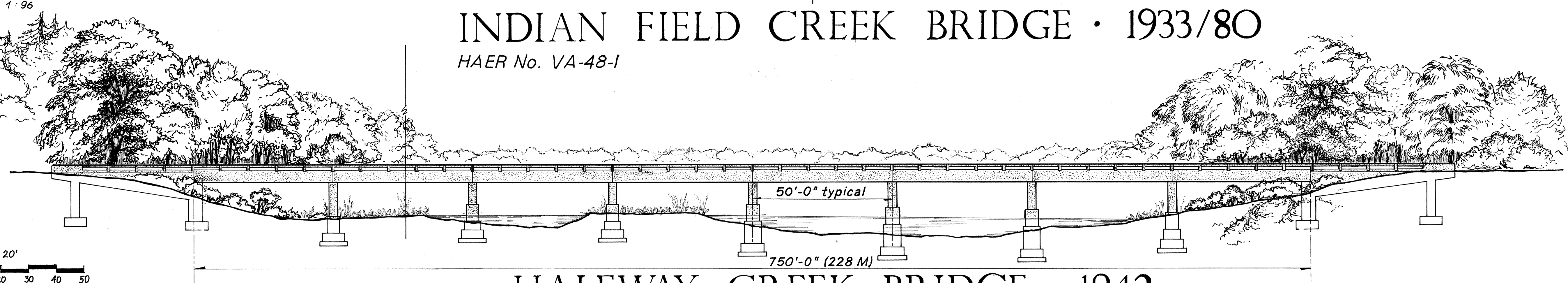
CONCRETE BRIDGES

SCALE
FEET 1/8" = 1'-0"
0 5 10 15 20 25
METERS 1:96



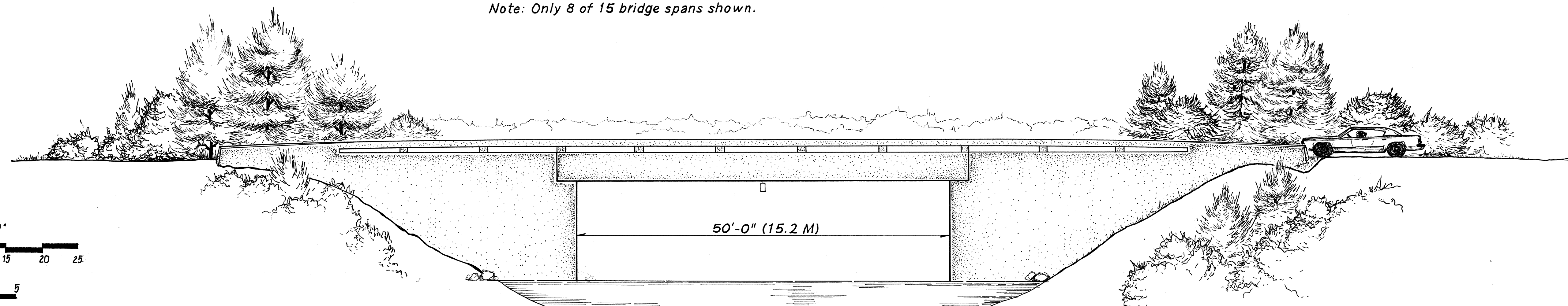
INDIAN FIELD CREEK BRIDGE • 1933/80
HAER No. VA-48-I

SCALE
FEET 1" = 20'
0 10 20 30 40 50
METERS 1:240



HALFWAY CREEK BRIDGE • 1942
HAER No. VA-48-K
Note: Only 8 of 15 bridge spans shown.

SCALE
FEET 1/8" = 1'-0"
0 5 10 15 20 25
METERS 1:96



ISTHMUS BRIDGE • 1956
HAER No. VA-48-P



Large tree on grassy hill (M)

ODAK

2892 ODAK

2892 ODAK

481111











HAER No. VA-48-1







HAER No. VA-48-4



HAIR No. 104-48-5

BOUCHER A 58

HAER No. VA-48-6





BOUCHER A 51

HAER No. VA-48-7

SPEED
LIMIT
45



BOUCHER MSS



ENTERING
COLONIAL
PARKWAY
UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

HAER No. VA-48-9

BUCHER A 61

HAER No. VA-48-10









BOUCHER A 69

HAER No. VA-48-15





52. V. 48. 16



HAER No. VA-48-16





ENCLOSURE B 6

RESTRICTED AREA
EXPLOSIVE
NO PASSING BEYOND
THIS POINT WITHOUT
AUTHORITY

INER No. 17A-46-17





HAER No. VA-48-20









HAER No. VA-48-24



21 1000000

HAER No. VA-48-25



HAER NO. VA-48-26

21 11 1948

HAER No. VA-48-27



BOUCHER B 24



HAER No. VA-48-28



HAER No. VA-46-29

BOUCHER 8 25



HAER No. VA-18-30





BOUCHER B33



HAER No. VA-40-33



BOUCHER 8/41



HAER No. VA-48-35

TOUCHER B 40



H&ER No. VA-48-36





HAER No. VA-48.38

oucher B-49



HAER No. VA-48-89





HAER No. VA-46-41

BOUCHER B 54



HAER No. VA-18-42.





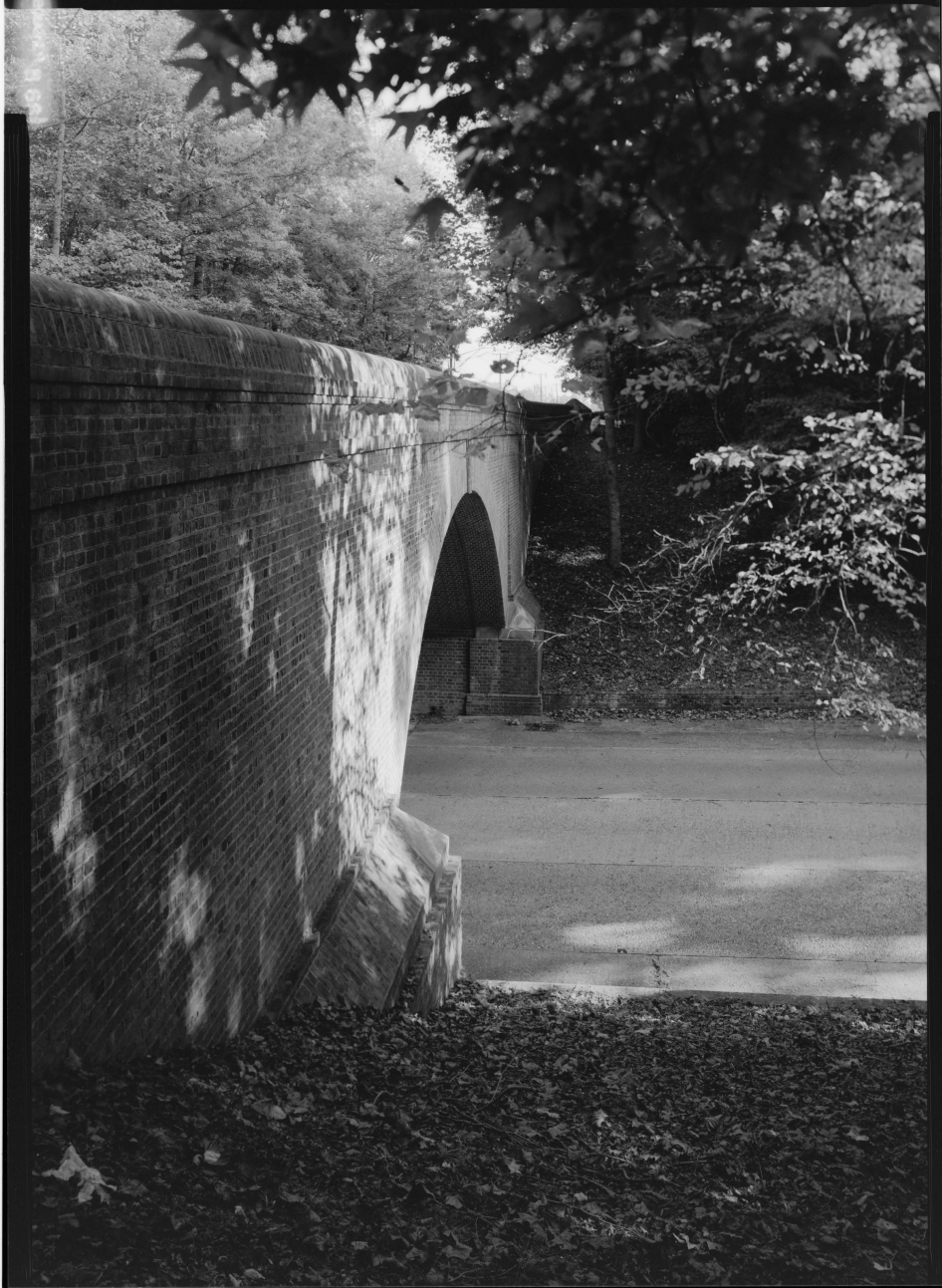
BOCHER B 80

JHAER No. VA-48-74

62 B 62

HAER No. VA-48-45







64 5 1960

HAER No. VA-4847





HAER No. VA-46.49



HAER No. 1A-48-00





HAER No. VA-48-52.



Route 199 EAST
Kingspoint
Carters Grove



MARK No. 0140-54







H.A.E.R. No. VA-48-57



HAER No. VA. 46-58

HAER No. VA-48-59

BOUCHER PHOTOGRAPHY
HARRIS



EBOUCHER, J. 23
HABS 1. 23

HAER No. VA-48-60



EBUCHEN
HABES
F110



HAUSE No. VI-48-61



HAER No. WA-48-G2



HAER No. VA-48-63



EBROUCHER F. 33
7885



EBROUHEN P. 32
MASS.



MASS. NO. PA. 48-66



EBROUCHER
HABS F 40

HAER No. 1A-13-63



HAER N. 17-46-69













