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CULTURAL LANDSCAPE REPORT FOR COLONIAL PARKWAY

COLONIAL NATIONAL HISTORICAL PARK

Part I: Site History, Existing Conditions & Analysis



U.S. Department of the Interior
National Park Service
Colonial National Historical Park
Chesapeake & Allegheny Systems Office

United States Department of the Interior

NATIONAL PARK SERVICE
Colonial National Historical Park
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IN REPLY REFER TO:

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September 23, 1998

To Whom It May Concern:

Colonial National Historical Park is pleased to present to you the enclosed study entitled *Cultural Landscape Report for Colonial Parkway, Part I: Site History, Existing Conditions & Analysis*. This study was prepared by Patricia O'Donnell with the firm Landscapes, Inc., for the National Park Service.

Sincerely,

Karen G. Rehm
Chief Historian

Enclosure

COLONIAL NATIONAL HISTORICAL PARK

COLONIAL PARKWAY
CULTURAL LANDSCAPE REPORT:
HISTORY, EXISTING LANDSCAPE AND ANALYSIS

Prepared by

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Contract No. 1443CX400095038

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November 1997

Approved by _____
Alec Gould, Superintendent
Colonial National Historical Park

COLONIAL PARKWAY CULTURAL LANDSCAPE REPORT
HISTORY, EXISTING CONDITIONS & ANALYSIS

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TABLE OF CONTENTS

List of Illustrations iii
Acknowledgments xix
Executive Summary xxi

Introduction 1
A. Administrative Data & Regional Context
B. Project Methodology & Scope

Chapter I: History of Colonial Parkway Lands: Presettlement to Early 20th Century 13
Introduction
A. The Prologue to Historic Settlement
B. Regional Historic Overview
C. Glasshouse Point
D. The Neck-of-Land or Main
E. The James City Parish Glebe
F. Archer's Hope with Jockey's Neck
G. Kingsmill Plantation
H. The Barren Neck and Tuttey's Neck
I. The Environs of Williamsburg (Middle Plantation)
J. Force's Quarter, New Quarter, and the Bruton Parish Glebe
K. King's Creek Plantation
L. The Chiskiack or Yorkhampton Parish Glebe
M. Ringfield Plantation
N. Bellfield and the Indian Field
O. Stony Point and Revolutionary War Redoubt
P. Yorktown

Chapter II: Colonial Parkway: Planning & Implementation 167
Introduction
A. Overview of the James-York Peninsula, circa 1930
B. Before the Parkway: Early Initiatives & Origin of the Idea
C. Establishing a Parkway Boundary: July-December, 1930
D. Planning & Construction: Yorktown to Williamsburg 1931-1938
E. Planning: Williamsburg to Jamestown, 1933-49
F. Completion: Williamsburg to Jamestown, 1950-56
G. Stewardship and Changes, 1960-1996

Chapter III: Colonial Parkway: Design & As-Built Character 237
Introduction
A. Context (Spatial Organization)
B. Spatial Character
C. Topography: Hydraulic Fill & Grading
D. Circulation: Alignment
E. Circulation: Surfacing
F. Circulation: Interchanges
G. Circulation: Parking Overlooks, Picnic Areas, Termini

H. Vegetation
I. Shoreline Conditions
J. Drainage Features
K. Structures
L. Small Scale Features
M. Cultural Resources

Chapter IV: Existing Conditions 335
Introduction
A. Spatial Organization/Context
B. Spatial Character
C. Topography
D. Circulation
E. Vegetation
F. Shoreline
G. Drainage Features
H. Structures
I. Small Scale Features
J. Cultural Resources
K. Parkway Uses

Chapter V: Analysis of Character Defining Features & Integrity 399
Introduction
A. Spatial Organization/Context
B. Spatial Character
C. Topography
D. Circulation
E. Vegetation
F. Shoreline
G. Drainage Features
H. Structures
I. Small Scale Features
J. Cultural Resources
K. Parkway Uses

Chapter VI: Significance 435
Introduction
A. Context
B. Statement of Significance for Colonial Parkway

Appendices
Appendix A: Colonial Parkway CLR Drawing Set Sheets 1-27
Appendix B: List of Contributing & Non-Contributing Features app-1
Appendix C: Engineering Data app-3
Appendix D: Repositories Consulted & Outcomes app-13
Bibliography bib-1

LIST OF ILLUSTRATIONS

CHAPTER I FIGURES

Figure I.1 Overview Map of Historic Research Areas, USGS map of Colonial National Historical Park, 1981

Figure I.2 Zuniga, [Untitled chart of Virginia], 1608.

Figure I.3 Detail of Soane, "Survey for Thomas Lord Culpeper," 1683.

Figure I.4 Detail of Desandrouin, "Plan du terein a la Rive Gauche de la Riviere James," 1781a.

Figure I.5 Detail of Kearney, "Virginia Peninsula, 1818, showing Landings and Topography of 1781," 1818.

Figure I.6 Detail of map from James City County Legislative Petitions, 1777-1861:145.

Figure I.7 Detail of Donn, "James River from College Creek to Chickahominy River," 1873-1874.

Figure I.8 Detail of USGS Quadrangle, "Surry," 1907.

Figure I.9 Detail of Herrmann, "Virginia and Maryland, 1670," 1673.

Figure I.10 Detail of Fry-Jefferson, "A map of the most inhabited part of Virginia . . . ," 1751.

Figure I.11 Detail of St. Simone, "Carte de la Campagne de St. Simone," 1781.

Figure I.12 Map from James City County Deed Book 4:792.

Figure I.13 Detail of Berthier, [Untitled map of York and Gloucester], 1781.

Figure I.14 Detail of Desandrouin, "Carte des Environs de Williamsburg," 1781b.

Figure I.15 Detail of Donn map.

Figure I.16 Detail of Smith, "Virginia Discovered and Discribed [sic]," 1610.

Figure I.17 Detail of St. Simone, "Carte de la Campagne de St. Simone," 1781.

Figure I.18 Detail of Freedman's Bureau, "Map showing Position of Government Farms," 1866.

Figure I.19 Detail of USGS Quadrangle, "Hog Island," 1907/1944.

Figure I.20 Detail of Simcoe, "Rebels Dislodged from Williamsburg [Kingsmill] Landing," 1781.

Figure I.21 Detail of Captaine, [Untitled Map of Eastern Virginia], 1781.

Figure I.22 Detail of Desandrouin, 1781b.

Figure I.23 Detail of St. Simone.

Figure I.24 Detail of McAlester, "Sketch of the Battlefield . . ." and "Battlefield and Rebel Works . . . Battle of May 5th, 1862," 1862.

Figure I.25 Detail of Detail of Donn, "James River, Virginia, from Burwell's Bay to College Creek," 1873.

Figure I.26 Detail of USGS Quadrangle, "Yorktown," 1904.

Figure I.27 Detail of McAlester, "Sketch of the Battlefield . . . ," 1862.

Figure I.28 Detail of Anonymous, "Vicinity of Yorktown and Williamsburg," 1871.

Figure I.29 Bland, "A Draft of the City of Williamsburg . . . ," 1699.

Figure I.30 Detail of Desandrouin, 1781b.

Figure I.31 Detail of Desandrouin, 1781b.

Figure I.32 Detail of St. Simone, 1781.

Figure I.33 Detail of Berthier, 1781.

Figure I.34 Detail of Kearney, 1818.

Figure I.35 Detail of Anonymous, 1871.

Figure I.36 Detail of Humphreys, [Yorktown to Williamsburg], 1862a.

Figure I.37 Detail of Humphreys, [Yorktown to Williamsburg], 1862b.

Figure I.38 Detail of Humphreys, [Untitled map of James-York Peninsula], 1862c.

Figure I.39 Detail of Lindenkohl, "Map of Part of Southeast Virginia," 1862.

Figure I.40 Worrett, "Map of Southeast Virginia," 1862.

Figure I.41 Detail of Hare, "Hare's Map of the Vicinity of Richmond," 1862.

Figure I.42 Detail of USGS Quadrangle, "Williamsburg," 1904.

Figure I.43 Detail of Herrmann, 1673.

Figure I.44 Detail of Bache, "York River, Virginia, from Wormeley Creek to Claybank Creek," 1857.

Figure I.45 Detail of Freedmen's Bureau, 1866.

Figure I.46 Detail of Anonymous, "Notes sure les Environs de York," 1781.

Figure I.47 Detail of Hatch, "Lansdowne, York County, Virginia, 1867," Map No. 12 from Ringfield Plantation, 1970.

Figure I.48 Detail of Bache, 1857.

Figure I.49 Morris Company, "Williamsburg," 1918.

Figure I.50 Detail of Smith, 1610.

Figure I.51 Detail of Fry-Jefferson, 1751.

Figure I.52 Detail of St. Simone, 1781.

Figure I.53 Detail of Anonymous, 1871.

Figure I.54 Detail of USGS Quadrangle, "Yorktown," 1904-1905.

Figure I.55 Detail of Fortifications from St. Simone, 1781.

Figure I.56 Detail of Fortifications from Anonymous, "Plan of the Siege of Yorktown," 1781.

Figure I.57 Detail of Fortifications from Anonymous, "Yorktown, Virginia," 1781.

Figure I.58 Detail of Fortifications from Anonymous, "Attaque de la Ville d'York," 1781.

Figure I.59 Detail of Fortifications from Page, "A Plan of the Posts of York and Gloucester," 1781.

Figure I.60 Detail of Bache, 1857.

Figure I.61 Detail of Abbott, "Siege Map of Yorktown," 1862.

CHAPTER II FIGURES

Figure II.1. Portion of Aerial Photograph Composite, showing York County, September 8, 1937. Original Scale 1:20,000. USDA Soil Conservation Service.

Figure II.2. Portion of Aerial Photograph Composite, showing James City County, September 8, 1937. Original Scale 1:20,000. USDA Soil Conservation Service.

Figure II.3. Boundary Map of Colonial National Monument, Virginia, part of the Presidential Procla mation of December 30, 1930. U.S. Government Printing Office, 1931. National Park Service, Colonial National Historical Park.

Figure II.4. Plan and Profile of Parkway Centerline near Bracken's Pond. Colonial NHP Drawing I D#926, sheet 6 of 114, 5/26/31. National Park Service, Colonial National Historical Park.

Figure II.5. Page from "Notes and Photographs of the York River Section of the Proposed Parkway of Colonial National Monument," showing Officers Quarters and proposed route of park way on beach below. National Park Service, Colonial National Historical Park.

Figure II.6. Progress Map, April 1935, showing construction work on Colonial National Monument Parkway, Bureau of Public Roads. National Park Service, Colonial National Historical Park.

Figure II.7. "Station 330 Looking East," #3097. Photograph showing rough grading along parkway in Penniman tract, 1933. Washington Office of Plans & Design. National Park Service, Colonial National Historical Park.

Figure II.8. " Dr Goodwin's Suggested Route," map attached to letter from Goodwin to Albright, 11 August 1931. The map was drawn by Peterson for Goodwin. Goodwin's recommended route is indicated in dark black; the "Shurcliff Line" is somewhat fainter, and is labelled with "Proposed West and North Line;" and the Peterson line is very faintly indicated by pencil marks on the original, which have be highlighted by the author with a dotted line. National Park Service, Colonial National Historical Park.

Figure II.9. Boundary Map of Colonial National Monument, Virginia, part of the Presidential Procla mation of August 22, 1933. U.S. Government Printing Office, 1933. National Park Ser vice, Colonial National Historical Park.

Figure II.10. "Temporary Parkway Terminus, Yorktown, looking toward Parkway," #4929. View east, circa 1937. National Park Service, Colonial National Historical Park.

Figure II.11. "Relationship of Fusilier's Redoubt to End of Colonial Parkway,"#9405. View west, circa 1940. National Park Service, Colonial National Historical Park.

Figure II.12. "ECW--General and Watering Trees, [CCC]Camp #2--on Parkway,"#4035. No date; circa 1935. National Park Service, Colonial National Historical Park.

Figure II.13. "Separation of Lanes at Jones Pond Crossing,"#9739. No date; circa 1940. National Park Service, Colonial National Historical Park.

Figure II.14. "Parkway Station 216, Installation of Sea Wall at Indian Field Bridge," #6342. No date, circa 1937. National Park Service, Colonial National Historical Park.

Figure III.15. "Parkway Station 216, Completed Sea Wall at Indian Field Bridge," #6460. No date, circa 1937. Finished sea wall. CNHP Photo 6460. National Park Service, Colonial Na tional Historical Park.

Figure II.16. Map showing Vint's proposed tunnel routes and parkway route, attached to memo of June 3, 1936. National Park Service, Colonial National Historical Park.

Figure II.17. "Large Oaks in Right of Way of Parkway Location between Williamsburg and Jamestown," #7096. No date; circa 1937. National Park Service, Colonial National Historical Park.

Figure II.18. "Aerial view of Jamestown circa 1948," #16375. Dotted line by authors. National Park Service, Colonial National Historical Park.

Figure II.19. "Progress Photo of North Portal of Williamsburg Parkway Tunnel,"#9062. No date, circa 1941. National Park Service, Colonial National Historical Park.

Figure II.20. "CCC Clearing Operations North of Halfway Creek, March 1941,"# 8680. National Park Service, Colonial National Historical Park.

Figure II.21. View of completed Halfway Creek Bridge, circa 1940, #10705. National Park Service, Colonial National Historical Park.

Figure II.22. Photo showing location of divided roadway section of Colonial Parkway. Note also Route 31 at bottom of photo, leading to new ferry wharf. From *A Report on the 350th Anniversary Celebration of Jamestown.*

Figure II.23. Portion of drawing "Proposed Roadway Crossing to Jamestown Island, February 1950. National Park Service, Colonial National Historical Park (Engineering Office Flat File).

Figure II.24. "Fill at College Creek, Jamestown Island at Upper Left," #COLO-38951.705. No date; circa 1955. Note areas of fill and areas of sand blankets laid down for bridge piling stabilization.

Figure II.25. "Aerial view of Parkway north from River to Williamsburg (College Creek at bottom, Halfway Creek in the middle)," #COLO-38951.701. No date; circa 1955. National Park Service, Colonial National Historical Park.

Figure II.26. "Aerial view of Parkway Terminus at Fusiliers' Redoubt, with section leading to [Yorktown] Visitor Center under construction," #COLO-38951.1762. No date; circa 1956. National Park Service, Colonial National Historical Park.

Figure II.27. "Isthmus Bridge," #COLO-38951.689. No date; 1957. View of Parkway near Jamestown, just after completion. National Park Service, Colonial National Historical Park.

Figure II.28. "Road and Trail System Plan," Drawing Number Col-Pky 3027-A, Sheet 1 of 2, October, 1958. National Park Service, Colonial National Historical Park.

CHAPTER III FIGURES

Figure III.1. Plan showing organization of views in area east of Indian Field Creek. From the Planting and Land Use Management Plan, Pky-Col 3106, Sheet 10, circa 1964. National Park Service, Colonial National Historical Park.

Figure III.2. "Looking Forward along Hydraulic fill from Sta. 172, 3-21-32," # 1401. National Park Service, Colonial National Historical Park.

Figure III.3. "Looking up York River along completed hydraulic fill, Station 172," #1366. No date, circa 1933. Same view as III.2, but with graded roadbed. CNHP Photo 1366. National Park Service, Colonial National Historical Park.

Figure III.4. "Plan for Proposed Hydraulic Fill, Colonial National Monument Parkway, Unit No. II." 1932. Shows proposed sections of fill at Indian Field and Felgates Creeks. National Park Service, Colonial National Historical Park (Engineering Office).

Figure III.5. Photo showing appearance of Hydraulic Fill at Indian Field Creek, # 2976. No date, circa 1935. National Park Service, Colonial National Historical Park.

Figure III.6. Typical Grading Sections, taken from an early version of the Unit I construction drawing set, Drawing ID#926, 5/26/31, sheet 3 of 114. National Park Service, Colonial National Historical Park.

Figure III.7. "Grading Operation on cut slopes, Project 1C1, July 1937,"#5512. National Park Service, Colonial National Historical Park.

Figure III.8. "Parkway near station 540--Slide on fill near Jones Pond," #4780. No date, circa 1935. National Park Service, Colonial National Historical Park.

Figure III.9. "Parkway extension before Planting picture," #4706. No date, circa 1937. View showing steeply sloped cut and fill slopes following rough grading on parkway extension from Hubbard Lane to Williamsburg. National Park Service, Colonial National Historical Park.

Figure III.10. "Aerial view of Fill at College Creek," # COLO-38951.703. 1955. National Park Service, Colonial National Historical Park.

Figure III.11. Fill at Jamestown Island Isthmus, #COLO-38951.683. Circa 1955 National Park Service, Colonial National Historical Park.

Figure III.12. View over parkway shoreline, #COLO-38951.562. No date, circa 1955. National Park Service, Colonial National Historical Park.

Figure III.13. "Parkway Station 544, 'before' planting, looking toward Yorktown," #6087. No date, circa 1935. National Park Service, Colonial National Historical Park.

Figure III.14. "Looking east at Station No. 587, 6-29-39," #7824. National Park Service, Colonial National Historical Park.

Figure III.15. "Parkway Station 148, General View, looking west," #3744. No date, circa 1938. National Park Service, Colonial National Historical Park.

Figure III.16. Comparison of roads designed with or without spiral transitions. From Tunnard, Christopher, *Man Made America: Chaos or Control*, 180.

Figure III.17. "Parkway --After Picture of 2743, Station 482," #4211. No date, circa 1935. Shows smooth curve transitions, without sharp "corners."

Figure III.18. "Planting and Fine Grading, Penniman Tract, Station 438," #2745. No date, circa 1935. Shows a smooth vertical transition over a rise and fall in the terrain, with no bumps or humps in the road. National Park Service, Colonial National Historical Park.

Figure III.19. Diagrams of 3 roads with "bumpy" vertical transitions. From Tunnard, Christopher, *Man Made America: Chaos or Control*, 194.

Figure III.20. "View of Parkway construction with one lane completed," #COLO-38951.561. No date, circa 1955-57. Shows a straight section or tangent on parkway at Jamestown end, near Glebe Gut. National Park Service, Colonial National Historical Park.

Figure III.21. "View west of College Creek along Colonial Parkway," #12840. No date, circa 1955. Shows curving alignment on Jamestown end, prior to surfacing. National Park Service, Colonial National Historical Park.

Figure III.22. "Setting forms on last section into Williamsburg," #6706. No date, circa 1938. National Park Service, Colonial National Historical Park.

Figure III.23. "May 1938 1CD31 Progress Photo, 2 lanes completed," #6835. Note use of reinforcing material in unfinished third lane. National Park Service, Colonial National Historical Park.

Figure III.24. "Extension to Williamsburg, Construction of Parkway Paving: Consolidating and Finishing with Finishing Machine," #6714. No date, circa 1938. National Park Service, Colonial National Historical Park.

Figure III.25. "Final Brooming to Expose Aggregate, Last Section into Williamsburg," #6718. No date, circa 1938. National Park Service, Colonial National Historical Park..

Figure III.26. "May 1935, Section topsoiled, seeded and contoured, Station 315," #1628. Note swale along side of road. National Park Service, Colonial National Historical Park.

Figure III.27. "Station 89 along Parkway," #3370. No date, post 1935. Note seeded swale, catch basin. National Park Service, Colonial National Historical Park.

Figure III.28. Sectional drawing of swale, 1950s construction plans. National Park Service, Colonial National Historical Park (Engineering Office).

Figure III.29. Sectional drawing of swale, 1950s construction plans. National Park Service, Colonial National Historical Park (Engineering Office).

Figure III.30. "Entrance to Marine Barracks. . .," #COLO-38951.557. No date, circa 1932. National Park Service, Colonial National Historical Park.

Figure III.31. "Colonial NHM Parkway, Station 365, Scenic View," #4976. No date, circa 1935. National Park Service, Colonial National Historical Park.

Figure III.32. Brackens Pond Parking Overlook, #4280. No date, circa 1935. Note recently planted Platanus trees, which are extant today. National Park Service, Colonial National Historical Park.

Figure III.33. "Parkway Station 481. Planting and Grading Operations at Jones Mill Pond," #4957. No date, circa 1935. Note parking area, substantially smaller than today's, also guard rail. National Park Service, Colonial National Historical Park.

Figure III.34. "Planting the Overlook [Indian Field Creek] right of Station 280. January 1935,"# 1621. National Park Service, Colonial National Historical Park.

Figure III.35. "Jones Pond Area of Parkway, circa 1957," #13715. Shows changes to original parking areas--curbing, elimination of guard rail, etc. National Park Service, Colonial National Historical Park.

Figure III.36. "Yorktown Visitor Center Parking Lot," #13195. No date, circa 1957. National Park Service, Colonial National Historical Park.

Figure III.37. "Aerial View of Jamestown Parking Lot, circa 1955-57," #COLO-38951.691. National Park Service, Colonial National Historical Park.

Figure III.38. "Parkway, 1937, view of York River, showing tree wells, "# COLO-38951.530. Inset: "Parkway Station 97, typical tree well," 1357. No date, circa 1932. National Park Service, Colonial National Historical Park.

Figure III.39. "Planting Plan for Colonial Parkway" Sheet 14 of 31 (Station Points 270-287), Drawing #COL-1076, August 1934. National Park Service, Colonial National Historical Park.

Figure III. 40 "Load of Parkway Bayberry," #542. No date, circa 1935. Note Navy Mine Depot architecture in back. CNHP Photo 542. National Park Service, Colonial National Historical Park.

Figure III. 41. "Station 544, Planting Picture (see 6087)," #6216. No date, circa 1935 or 1937. CCC crews planting along parkway. National Park Service, Colonial National Historical Park.

Figure III.42. "Station 517. Planting--First growing season, July 1937,"#5519. National Park Service, Colonial National Historical Park.

Figure III.43. "Station 295--Showing Felgates Creek after Transplanting," #4912. No date, circa 1935 or later. National Park Service, Colonial National Historical Park.

Figure III.44. "View of Planting East of Felgates Creek Hydraulic Fill, Station 290," #1625. No date, circa 1935. National Park Service, Colonial National Historical Park.

Figure III.45. "Station 486, February 1935, 'Before' picture," # 1623. No date, circa 1935. National Park Service, Colonial National Historical Park.

Figure III.46. "Station 486, near Jones Pond, 'After' picture," #1624. No date, circa 1935. National Park Service, Colonial National Historical Park.

Figure III.47. Alignment of road at Kings Creek, after planting., #4281. No date, circa 1935. National Park Service, Colonial National Historical Park.

Figure III.48. "Parkway Station 153, General View looking east," # 3745. No date, circa 1937. National Park Service, Colonial National Historical Park.

Figure III.49. "Parkway Station 71, Before Vista Cutting," #7778. No date, circa 1935. National Park Service, Colonial National Historical Park.

Figure III.50. "Parkway Station 71, Vista Cut at Ballard Creek," #7946. No date, circa 1935. National Park Service, Colonial National Historical Park.

Figure III.51. "In the area between Felgate's and Indian Field Creeks, January, 1958," #13131. National Park Service, Colonial National Historical Park.

Figure III.52. "College Creek-Glebe Gut Area, August 24, 1961," #13716. National Park Service, Colonial National Historical Park.

Figure III.53. View of parkway at Felgates Creek, #COLO-38951.511. No date, circa 1957. National Park Service, Colonial National Historical Park.

Figure III.54. "Unidentified curved stretch of Colonial Parkway," #COLO-38951.507. No date, circa 1970. View of flowering trees along parkway. National Park Service, Colonial National Historical Park.

Figure III.55. "Tazewell Hall Overpass, toward Williamsburg proper," #13729. April 1961. National Park Service, Colonial National Historical Park.

Figure III.56. "Va. 238 Overpass," #13728. April 1961. National Park Service, Colonial National Historical Park.

Figure III.57. "View of the new Colonial Parkway extension between Williamsburg and Jamestown, Virginia, where it runs along the James River," #COLO-38951.501. No date, circa 1957. National Park Service, Colonial National Historical Park.

Figure III.58. College Creek Bridge, #COLO-38951.502. No date, circa 1957. Note guard rail, 1950s construction style. National Park Service, Colonial National Historical Park.

Figure III.59. "Unidentified stretch of Colonial Parkway, College Creek to Jamestown section," #COLO38951.514. No date, circa 1957. National Park Service, Colonial National Historical Park.

Figure III. 60. "Proposed Erosion Control--Parkway Bluffs," May 11, 1934. No drawing number. Eastern Division, Branch of Engineering. National Park Service, Colonial National Historical Park (Engineering Office).

Figure III.61. "Erosion Control on the York River Bluffs. Station 60, June 1934," #1493. National Park Service, Colonial National Historical Park.

Figure III.62. "Typical Headwall, Station 535," #1355. No date, circa 1932. National Park Service, Colonial National Historical Park.

Figure III.63. "Parkway Station 105--Overpass at Naval Mine Depot Entrance, Taken from below," #4278. No date, circa 1933. National Park Service, Colonial National Historical Park.

Figure III.64. "Architectural Plans, Underpass at C&O Railroad, Project 1D2. No date, circa 1935. National Park Service, Colonial National Historical Park.

Figure III.65. "C&O Underpass--completed view after road opened to public," #7319. No date, circa 1938. National Park Service, Colonial National Historical Park.

Figure III.66. "View to the east from a point west of Capitol Landing Underpass," #6438. No date, circa 1938. National Park Service, Colonial National Historical Park.

Figure III.67. South Portal of Tunnel, just following completion, # 9064. No date, circa 1941-42.

Figure III.68. View of Tunnel after completion, with asphalt road, prior to completion of parkway, # 10442. No date, circa early 1950s. National Park Service, Colonial National Historical Park.

Figure III.69. "Parkway, 1933, Station 330, Looking East," # 3096. Note construction of bridge railing. Note construction of bridge railing. National Park Service, Colonial National Historical Park.

Figure III.70. Interpretive sign at the Great Oaks parking overlook, showing typical sign form and graphics. From *A Report on the Celebration for the 350th Anniversary of Jamestown.*

Figure III.71. "Parkway Station 160, General View," #4054. No date, circa 1935. National Park Service, Colonial National Historical Park.

CHAPTER IV FIGURES

Figure IV.1. View of Kings Creek and emergent wetland (marsh) from Kings Creek Bridge, 1996. LANDSCAPES LA·Planning·HP.

Figure IV.2. Open area west of Yorktown Terminus, 1996. LANDSCAPES LA·Planning·HP.

Figure IV.3. View of earthworks and Yorktown Visitor Center Entry from Five Points, 1996. LANDSCAPES LA·Planning·HP.

Figure IV.4. View of Brackens Pond, showing blocked views of the York River and Brackens (Roosevelt) Pond, 1996. LANDSCAPES LA·Planning·HP.

Figure IV.5. Enclosure of parkway by bank topography and vegetation, below the Officers Quarters, 1996. LANDSCAPES LA·Planning·HP.

Figure IV.6. Open spatial quality at Indian Field Creek, 1996. LANDSCAPES LA·Planning·HP.

Figure IV.7. View under tall pines along the Bellfield Straight, 1996. LANDSCAPES LA·Planning·HP.

Figure IV.8. Open character at Felgates Creek, 1996. LANDSCAPES LA·Planning·HP.

Figure IV.9. Dogwoods planted in parkway margin, near Kings Creek, 1996. LANDSCAPES LA·Planning·HP.

Figure IV.10. Open view of Jones Mill Pond, 1996. LANDSCAPES LA·Planning·HP.

Figure IV.11. C&O Railroad Underpass, 1996. LANDSCAPES LA·Planning·HP.

Figure IV.12. Enclosure set back from the pavement edge, Williamsburg Traffic Circle, 1996. LANDSCAPES LA·Planning·HP.

Figure IV.13. Views across marsh at Halfway Creek, 1996. LANDSCAPES LA·Planning·HP.

Figure IV.14. Spatial character at College Creek, 1996. Note that some views to the river are blocked by vegetation. LANDSCAPES LA·Planning·HP.

Figure IV.15. Vegetation encloses both sides of the parkway as it approaches Jamestown, 1996. LANDSCAPES LA·Planning·HP.

Figure IV.16. Remaining agricultural land, activities, and viewshed at the lands of the Gospel Spreading Association, 1996. LANDSCAPES LA·Planning·HP.

Figure IV.17. Invasive bamboo in forested margins of parkway (near the Jamestown Island Isthmus), 1996. LANDSCAPES LA·Planning·HP.

Figure IV.18. View of Powhatan Creek bridge and surrounding marsh area, 1996. LANDSCAPES LA·Planning·HP.

Figure IV.19. Open spatial character at the Jamestown Island Isthmus, 1996. LANDSCAPES LA·Planning·HP.

Figure IV.20. Entrance to the Jamestown Visitor Center parking lot, 1996. LANDSCAPES LA·Planning·HP.

Figure IV.21. View of typical "hogback" slope (a cut slope) at Halfway Creek, 1996. LANDSCAPES LA·Planning·HP.

Figure IV.22. View of typical fill slope (right side of photo) in uplands near Kings Creek and Ringfield, 1996. LANDSCAPES LA·Planning·HP.

Figure IV.23. Flat, horizontal topography typical of hydraulic fill, near Indian Field Creek, 1996. LANDSCAPES LA·Planning·HP.

Figure IV.24. Typical horizontal curve along parkway, near College Creek, 1996. LANDSCAPES LA·Planning·HP.

Figure IV.25. Typical vertical curve along parkway, uplands south of Williamsburg, 1996. LANDSCAPES LA·Planning·HP.

Figure IV.26. Typical joint sealant condition, 1996. LANDSCAPES LA·Planning·HP.

Figure IV.27. Degradation in pavement margin and shoulder, where unauthorized U-turns occur, 1996. LANDSCAPES LA·Planning·HP.

Figure IV.28. Vehicle slowing to exit parkway while still in travel lane (near Colonial Williamsburg), 1996. LANDSCAPES LA·Planning·HP.

Figure IV.29. View of typical parking overlook access, at the Isthmus Overlook, 1996. LANDSCAPES LA·Planning·HP.

Figure IV.30. Steep, eroding slope at Jones Mill Pond Overlook, 1996. LANDSCAPES LA·Planning·HP.

Figure IV.31. Upland forest near Route 199 underpass, 1996. LANDSCAPES LA·Planning·HP.

Figure IV.32. Typical shrub area seen between wetlands and mown area, 1996. LANDSCAPES LA·Planning·HP.

Figure IV.33. Parkland (mown turf with trees) along James River, 1996. LANDSCAPES LA·Planning·HP.

Figure IV.34. Groves of trees along the Bellfield Straight, 1996. LANDSCAPES LA·Planning·HP.

Figure IV.35. Wetland marsh near Archers Hope, 1996. LANDSCAPES LA·Planning·HP.

Figure IV.36. Invasive vines and specimen trees near the overlook near Brackens Pond, 1996. LANDSCAPES LA·Planning·HP.

Figure IV.37. Trees in turf providing canopy at Archers Hope Overlook, 1996. LANDSCAPES LA·Planning·HP.

Figure IV.38. Single specimen sycamore at Felgates Creek, 1996. LANDSCAPES LA·Planning·HP.

Figure IV.39. Planted median enroute to Jamestown Island, 1996. LANDSCAPES LA·Planning·HP.

Figure IV.40. Mowing damage under forest edge, 1996. LANDSCAPES LA·Planning·HP.

Figure IV.41. Large mown area, along James River, 1996. LANDSCAPES LA·Planning·HP.

Figure IV.42. Bare soil on slope of overlook, 1996. LANDSCAPES LA·Planning·HP.

Figure IV.43. Bare area and wood chips applied at Archers Hope, 1996. LANDSCAPES LA·Planning·HP.

Figure IV.44. Typical marsh shoreline along the parkway, 1996. LANDSCAPES LA·Planning·HP

Figure IV.45. Mowing occurring within marsh/wetland limit, 1996. LANDSCAPES LA·Planning·HP.

Figure IV.46. Typical area of scarp along James River, 1996. LANDSCAPES LA·Planning·HP.

Figure IV.47. Erosion undermining culvert headwall, in the area near Parkway Drive, 1996. LANDSCAPES LA·Planning·HP.

Figure IV.48. Typical concrete-paved swale, south of Williamsburg, 1996. LANDSCAPES LA·Planning·HP.

Figure IV.49. Typical concrete drainage chute with riprap to prevent erosion/scouring, 1996. LANDSCAPES LA·Planning·HP.

Figure IV.50. Typical brick culvert headwall at Halfway Creek Overlook, 1996. LANDSCAPES LA·Planning·HP.

Figure IV.51. Large bridge culvert at Jones Mill Pond, 1996. LANDSCAPES LA·Planning·HP.

CHAPTER V FIGURES

FigureV.1. Historic (c. 1935) view of Felgates Creek (duplicate of Figure III.48). National Park Service, Colonial National Historical Park.

FigureV.2. Current (1996) view of Felgates Creek. LANDSCAPES LA·Planning·HP.

FigureV.3. Historic (c. 1938) view of Brackens Pond ("Parkway Station 138, General View looking East," #3743. No date.). National Park Service, Colonial National Historical Park.

FigureV.4. Current (1996) view of Brackens Pond. LANDSCAPES LA·Planning·HP.

FigureV.5. Current (1996) view of vegetation enclosing parkway. LANDSCAPES LA·Planning·HP.

FigureV.6. Historic (c. 1970) view of vegetation with sky overhead (duplicate of Figure III.54). National Park Service, Colonial National Historical Park.

FigureV.7. Historic (c. 1938) view of Capitol Landing Overpass (Capitol Landing Underpass--View along Parkway. . .," #8306. No date.). National Park Service, Colonial National Historical Park.

FigureV.8. Current (1996) view of Capitol Landing Overpass. LANDSCAPES LA·Planning·HP.

Figure V.9. Change in pavement color on the parkway, south of Williamsburg, 1996. LANDSCAPES LA·Planning·HP.

Figure V.10. Aerial View of parkway near Station Point 544 in 1953. Virginia Department of Transportation.

Figure V.11. Aerial View of parkway near Station Point 544 circa 1980. National Park Service, Colonial National Historical Park.

Figure V.12. Mowing on steep slope at Bellfield Straight, 1996. LANDSCAPES LA·Planning·HP.

Figure V.13. Historic (c. 1958) view of Bellfield Straight (duplicate of Figure III.51). National Park Service, Colonial National Historical Park.

Figure V.14. Current (1996) view of Bellfield Straight (duplicate of Figure IV.34). LANDSCAPES LA·Planning·HP.

Figure V.15. Historic (c. 1957) view of Archers Hope (duplicate of Figure III.52). National Park Service, Colonial National Historical Park.

Figure V.16. Current (1996) view of Archers Hope. LANDSCAPES LA·Planning·HP.

Figure V.17. Historic (c. 1957) view of the Civil War fort, with no undergrowth (duplicate of Figure III.57). National Park Service, Colonial National Historical Park.

Figure V.18. Current (1996) view of the Civil War fort area, with significant vine undergrowth. LANDSCAPES LA·Planning·HP.

Figure V.19. Historic (c. 1935) view of overlook near Brackens Pond (duplicate of Figure III.32). National Park Service, Colonial National Historical Park.

Figure V.20. Current (1996) view of overlook near Brackens Pond. LANDSCAPES LA·Planning·HP.

Figure V.21. Historic (c. 1958) view of Felgates Creek (duplicate of Figure III. 53). Note trees at bridge abutments. National Park Service, Colonial National Historical Park.

Figure V.22. Current (1996) view of Felgates Creek. Note no trees or plantings at abutments. LANDSCAPES LA·Planning·HP.

Figure V.23. Wind-driven tidal line from Hurricane Fran, 1996. National Park Service, Colonial National Historical Park.

Figure V.24. Debris line showing extent of storm surge during Hurricane Fran, 1996. National Park Service, Colonial National Historical Park.

Figure V.25. Historic (circa 1934) view of bridge railing detail (duplicate of Figure III.69). National Park Service, Colonial National Historical Park.

Figure V.26. Current (1996) view of bridge railing detail of 1980s, which replaced detail of Figure V.25. LANDSCAPES LA·Planning·HP.

Figure V.27. Current (1996) view of typical bridge abutment changes and new guard rail. LANDSCAPES LA·Planning·HP.

Figure V.28. Historic view of 1930s peeled log guard rail ("After Picture of 6086, Station 534," no date, circa 1938. National Park Service, Colonial National Historical Park.

Figure V.29. Historic view showing deteriorating log guard rails ("Dogwood Blooms at a turnout or overlook on the scenic Colonial Parkway. . . ," #COLO-38951.506, 1956). National Park Service, Colonial NationalHistorical Park.

COLONIAL PARKWAY CLR DRAWING SET (Located in Appendix A)

Overall Base Maps at a scale of 1:30,000

Sheet 1	1930 Historic Base Map
Sheet 2	1949 Historic Base Map
Sheet 3	1958 Historic Base Map
Sheet 4	1996 Existing Conditions Map

Period and Existing Conditions Plan and Section Drawings at 1"=50'

Sheet 5	Five Points: 1958/1996
Sheet 6	Brackens Pond: 1949/1996
Sheet 7	Bellfield Straight: 1949/1996
Sheet 8	Felgates Creek: 1949/1996
Sheet 9	Jones Mill Pond: 1949/1996
Sheet 10	Station Point 544: 1949/1996
Sheet 11	Capitol Landing: 1949/1996
Sheet 12	Route 199: 1958/1996
Sheet 13	Halfway Creek: 1958/1996
Sheet 14	Civil War Fort: 1958/1996
Sheet 15	Archers Hope: 1958/1996
Sheet 16	Jamestown Island Isthmus: 1958/1996

Analytical Base Maps at a scale of 1:30,000

Sheet 17	1958 Spatial Organization/Context
Sheet 18	1996 Spatial Organization/Context
Sheet 19	1958 Spatial Character/Views
Sheet 20	1996 Spatial Character/Views
Sheet 21	1958 Built Elements
Sheet 22	1996 Built Elements
Sheet 23	1996 Parkway Cover Types
Sheet 24	1996 Parkway Edge Conditions
Sheet 25	1996 Shoreline Conditions
Sheet 26	1996 Archeological Interest Areas
Sheet 27	1996 Existing Conditions Photo Key Plan

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EXECUTIVE SUMMARY

This Cultural Landscape Report provides a history of the Colonial Parkway and its surrounding landscape, beginning in the 1600s and extending to the present day. The report also describes the parkway's existing conditions in 1995 and 1996. The historic and existing conditions information are then used to assess the parkway's historic integrity and significance.

Prior to the creation of Colonial National Historical Park and Colonial Parkway, the lands of the James-York peninsula witnessed much of this country's important early history. This history is documented in Chapter I , which divides the James-York peninsula into fifteen study areas, and follows the development of each area from first settlement at Jamestown in 1607 to 1930 when Colonial National Historical Park was created. Beginning in the 1600s, the region's land use trends were characterized by settlement and growth, first along the James River, and later inland and along the York River. During most of the seventeenth and eighteenth century, the landscape along the James and York Rivers was sparsely populated, with agriculture as the primary land use. During the American Revolution War, the James-York peninsula was an important strategic battleground, and Williamsburg, the colonial capital, became a focal point in the war. Military activities occurred along the peninsula, earthworks were constructed along the rivers, and in 1781 British and American forces clashed at Yorktown in the battle that decided the outcome of the war.

Following the Revolution, the peninsula recovered slowly. The loss of political influence when the Virginia capital moved from Williamsburg to Richmond and a lessening of agricultural productivity led to the reduction in size of the region's large farms and plantations. The opening of the western frontier also led to out-migration, and during the early 1800s land-use patterns were characterized by increasing numbers of small farmers. The peninsula saw significant military activity during the Civil War and recovery following this war was also slow. During the late 1860s, agricultural productivity declined by more than half and farm size declined by a third to a fifth. By the turn of the century, significant changes were due for the region, and World War I led to the construction of military installations in the region. Military-industrial usage was accompanied by increasing tourism, spurred on by anniversaries of the historic events of 1607 and 1781 and by the restoration of the colonial capital of Williamsburg in the late 1920s under the auspices of John D. Rockefeller.

Such heightened awareness of the region's historic significance also led to the organization of Colonial National Monument (later redesignated Colonial National Historical Park). A major goal of the park was to further commemorate and preserve the history of the James-York peninsula, in particular the sites of the Jamestown settlement of 1607 and the Battle of Yorktown of 1781. A major feature of the new historical park was to be a parkway linking the two sites (and Williamsburg) and providing visitors with a scenic and enjoyable route between them. Chapters II and III provide a detailed account of the planning, design, and construction of this road, named the Colonial Parkway.

The design and construction of the parkway was completed over a period of more than twenty years, between 1930 and 1958, and involved designers from both the National Park Service and the Bureau of Public Roads. Chief among these were landscape architects Charles Peterson and Edward Zimmer of the National Park Service and engineers H. J. Spelman and William H. Smith of the Bureau of Public Roads. From the beginning, the parkway was conceived as a scenic road, using a modern, curvilinear parkway alignment, as had been used in other contemporary parkways. Initial construction—clearing trees, filling marshes, and grading the road bed— began in 1931 on the section of the parkway along the York River between Yorktown and Williamsburg. Planning and construction continued through the thirties, though the routing of the parkway around Williamsburg and south to Jamestown proved difficult to negotiate with the

Colonial Williamsburg Foundation. Eventually, a route tunnelling under the Williamsburg restoration and traversing the James River shoreline to Glasshouse Point was settled upon by the two organizations. In the meantime, however, World War II intervened to divert resources from park building to war activities, and construction on the parkway essentially ceased. Then, in the mid-1950s, Stanley Abbott, landscape architect for the Blue Ridge Parkway, came to Colonial National Park as superintendent. Abbott oversaw the completion of the parkway from Williamsburg to Jamestown, with most of the construction occurring between 1955 and 1957. Completed with funding from Mission 66, the parkway was opened as part of the 350th anniversary of Jamestown.

Upon its completion in 1957, the 23-mile parkway extended from the park's Yorktown Visitor Center to the Jamestown Visitor Center. A composed spatial sequence, the parkway traversed the open York River shoreline, moved through the enclosed, forested uplands around Williamsburg, and then passed along the open shores of the James River. Three lanes wide, the parkway was constructed of exposed aggregate concrete. Its alignment used a series of long curves, with only one straight tangential section along the James River. The parkway's smooth curves were complemented by gently sloping and curving side slopes. In some areas, plantings on these side slopes framed views off the road over the James and York Rivers, while in others, trees and shrubs came to the road margins, creating a canopy of vegetation overhead. Hydraulic fill from the river beds was used to create a roadbed to cross tidal marshes, and creek mouths were crossed with a series of grey concrete bridges. Major crossroads were accommodated with grade-crossing structures constructed as brick-faced concrete arch bridges. These under- and overpasses were designed in a Colonial-revival style, a style also used in the design of the parkway's culvert drainage system. Along the full length of the parkway were a series of parking overlooks with interpretive signage.

Today, the parkway's condition exhibits a high level of continuity with its as-built condition, as described in Chapter IV. The parkway's original alignment and topography remains intact, as do its important bridge and grade-crossing structures. New bridges over the parkway have been constructed in a style similar to that of the original structures, and do not detract from the parkway's original design. However, some changes have occurred, including significant vegetative growth which alters and blocks historic viewsheds. In other areas, changes in local drainage patterns are impacting the original drainage system of the parkway, causing erosion and culvert failure, with localized flooding occurring during major storm events. In other areas, changes to the river shorelines along the parkway have also been documented.

Because of the high level of continuity with the as-built conditions reflected in the parkway's existing conditions, the integrity of Colonial Parkway is judged to be high. This analysis is outlined in Chapter V, while a statement of historic significance is provided in Chapter VI. In summary, Colonial Parkway's significance primarily accrues from its association with landscape architecture as a designed landscape, though it is also significant due to its association with National Park Service design and its association with the historic preservation movement. In particular, however, the parkway embodies the distinctive characteristics of a type of designed landscape, the parkway. Modern parkways were characterized by their curving alignments, limited access, pleasure driving experience, and use of designed plantings and park-like features. All of these features are reflected in the original design and in the current condition of the Colonial Parkway. Because of this, the parkway is assessed as primarily significant under Criterion C, Design and Construction, of the National Register for its association with landscape architecture as an outstanding example of a designed parkway. Its period of significance is 1930 - 1958, the dates of its construction.

INTRODUCTION

A. ADMINISTRATIVE DATA & REGIONAL CONTEXT

The Colonial Parkway, located in York and James City Counties, Virginia, is a cultural, natural and scenic resource corridor that is a part of the Colonial National Historical Park (NHP) administered by the National Park Service (NPS). The parkway corridor is shown on Figure 0.1 and is approximately twenty-three miles in length,[1] running from the parking lot at the Jamestown Visitor Center to the parking lot at the Yorktown Visitor Center. The parkway links three historically significant sites—the early colonial settlements of Yorktown, Williamsburg and Jamestown. These three settlements have long and significant histories that make them important cultural sites and tourist destinations.

Planning for Colonial Parkway began in 1930. The first construction phase, between Yorktown and Williamsburg, was finished by 1937 and the basic design of the entire route was in place by 1939. However, implementation of the rest of the parkway's twenty-three miles went forward at an inconsistent rate. Land acquisition, problems with the routing around Williamsburg, World War II, the Korean War, and the flow of funding were all factors affecting the phasing of the project. The parkway was completed all the way through to Jamestown in 1958. However, construction projects affecting portions of the parkway have continued into the present, with minor construction and repair efforts documented in each decade following the 1950s.

Colonial Parkway was designed and constructed as a curvilinear, scenic route with extensive views over both the York and James Rivers. It is located in a right-of-way averaging 500 feet in width, which passes along river edge beaches and bluffs, through gently rolling woodlands, across tidal wetlands, and through some increasingly developed areas around Williamsburg and at several other points. The parkway corridor also passes and includes portions of a number of historic sites and cultural resources, not all of which are publicly accessible.

Upon its completion from Yorktown to Jamestown, the parkway included such features as concrete bridges crossing tidal areas, modest pull-offs with interpretive signage, larger parking and picnic areas, grade-separated overpasses and numerous brick-faced drainage features. The parkway's 30-foot pavement width was comprised of three 10-foot lanes of reinforced concrete with an exposed aggregate finish. All of these features are still present along the parkway corridor. In recent decades, curbs, guide rails, additional overpasses and upgraded interchanges have also been added along the parkway, often through projects conducted under the auspices of the Federal Highways Administration (FHwA). Primarily a daytime-use tourist route, the parkway is unlit, except for the inside of the Williamsburg tunnel and around the Williamsburg rotary.

According to the 1993 *General Management Plan* (*GMP*), the objective of parkway management is 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 undeveloped vistas of the James and York rivers along the parkway.

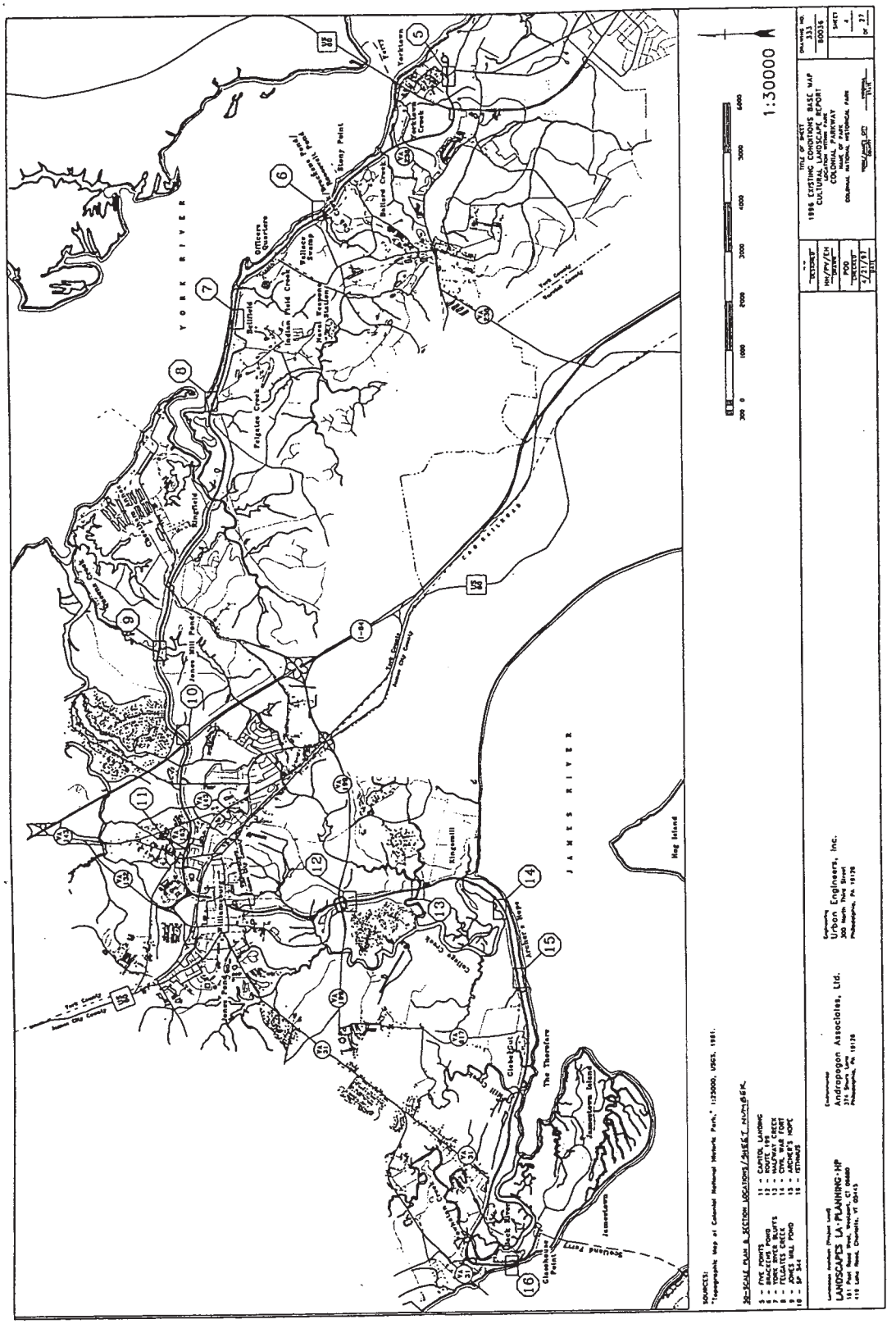


Figure 0.1. Overview of Colonial Parkway in Colonial National Historical Park, 1996.

The GMP also notes that "the primary visitor experience along the parkway involves the 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."[2]

Specific goals set forward in the *General Management Plan (GMP)* require management to:

- retain the "the 'country road' character of Colonial Parkway;"
- reassess the historical significance of the parkway as an example of early twentieth century park planning;
- study effects of visitation and recreational use on designated sites along the Parkway (such as Indian Field Creek, College Creek, Felgates Creek, Archers Hope, and Ringfield); and
- prepare a landscape management and maintenance plan which addresses vistas, cultural and natural scenes and erosion and wetland concerns.

With regards to traffic and safety, management will strive to:

- limit access points;
- reduce commuter traffic;
- study the feasibility and appropriateness of bicycle and/or pedestrian paths in the parkway corridor; and
- redesign the Five Points area.

This *Cultural Landscape Report* achieves some of these goals of the *GMP* and provides information which will aid in meeting others. In particular, this report has focused on documenting and assessing the historic and existing conditions of the parkway. The intent of the report is to contribute both to the reassessment of the parkway's historic significance and to the future management of this important cultural resource.

B. PROJECT SCOPE

1. Scope

Generally speaking, the purpose of a cultural landscape report (CLR) is to document and evaluate the character-defining features, materials, and qualities that make a landscape eligible for the National Register. A cultural landscape report analyzes the landscape's development and evolution, modifications, materials, construction techniques, geographical context, and use over its entire life span. Typically interdisciplinary in character, a cultural landscape report examines historical, landscape architectural, engineering, ecological, and architectural data as appropriate. The level of the investigation in a CLR varies depending on the historical significance and integrity of the landscape, management objectives and other relevant factors. A CLR is generally completed in three parts: Part I includes a site history, a documentation of

existing conditions, and an analysis of character-defining features, based on National Register Criteria. Part II documents a proposed landscape preservation treatment and Part III is a record of that treatment.

This project has executed Part I of the *Colonial Parkway Cultural Landscape Report*. It includes the required site history, documentation of existing conditions, and analysis of character-defining features, as well as a statement of significance. The completion of Parts II and III were beyond the scope of this project, and may be undertaken at some future date. Regardless, the information collected in Part I is still an important management tool. This *Cultural Landscape Report, Part I* reveals that the Colonial Parkway today remains a relatively intact cultural resource, one which expresses the intent and character of its original design. However, the report reveals that several influences are presently or will potentially impact or degrade Colonial Parkway. These influences include expanded urban growth, increased commuter traffic, new recreational uses, changed vegetation, increased drainage flows, eroded shorelines, and highway safety requirements, are presently or will potentially impact Colonial Parkway. This *Cultural Landscape Report, Part I* is a preservation and management tool that will aid in addressing these pressures from a sound basis of research and analysis.

The goals of the Colonial Parkway CLR are:

- To describe as thoroughly as possible, through a combination of narrative and graphics, the historic evolution of the Colonial Parkway as it progressed from pre-settlement through the present day and as boundaries and legislative mandates have changed;

- To document the existing conditions of the cultural, natural and scenic resources along the parkway and evaluate them according to National Register criteria; and

- To provide the Colonial National Historical Park with a basis of information from which to develop an overall management vision and preservation treatment plan for Colonial Parkway.

It is important to note that the historical information provided in this report focuses on Colonial Parkway itself and that the study did not closely examine the history of the creation of Colonial National Historical Park. Although the history of the Colonial Parkway and Colonial National Historical Park are closely related (since the parkway connected key features of the park), the creation of the larger park required a consideration of issues outside of those addressed during the design and construction of the parkway itself. These issues included how to best preserve, restore, or reconstruct historic structures and features such as earthworks; how to best interpret the park to visitors; and the role of history in the National Park Service. Such tangentially related issues were not explored in detail in this study, since it was assumed these would be more appropriately examined in an Administrative History of Colonial NHP.[3] For a brief yet reasonably complete overview of the creation of Colonial National Historical Park and its importance in the American historic preservation movement, we refer the reader to *Preservation Comes of Age: From Williamsburg to the National Trust, 1926-1949*, Volume I, written by Charles B. Hosmer, Jr..

2. Study Boundaries

Because this report focused on the documentation of Colonial Parkway as a cultural resource, the study was predominantly confined the areas within the parkway right-of-way. Included in the study area were the parkway termini (defined as the parking lots at the Jamestown and Yorktown visitor centers) and the

parkway's associated parking overlooks and picnic areas. Because the legal boundary and width of the right-of-way varies along the length of the parkway, field work and mapping of specific sites at the detailed scale of 1"=50' was carried out to a standard width of approximately 300' on either side of the parkway pavement. (These maps, described in greater detail below, are located in Appendix A.)

In addition to documenting the right-of-way, the project also considered the regional context and landscape immediately surrounding the parkway, as it influenced the design and construction of the parkway. This information, however, was collected at a somewhat less detailed level, and is contained in the report in narrative text, reproductions of aerial photographs, and in overall area maps produced at a scale of 1:30,000. (These maps are also located in Appendix A.)

Not included in the study area were the park tour roads, which are not part of the parkway. Also, it should be noted that cultural resources, such as forts and archeological sites, which are located along the parkway and within the parkway right-of-way, and which have their own historical significance, may be discussed in the report and located on maps, but are not individually evaluated according to National Register Criteria. Because of the focus of the project on the parkway as a designed landscape, this evaluation of other adjacent cultural resources was outside of the scope of this project.

C. PROJECT METHODOLOGY

1. Site History

Partly because of their considerable size, documenting the history, evolution, and existing conditions of parkway landscapes can be a considerable assignment. Since parkways rely heavily on borrowed scenery to provide much of their character, documenting the relationship of parkways to their surrounding environments is also important, and adds another layer of complexity to the task. This was particularly true for Colonial Parkway, which is a narrow corridor traversing lands which witnessed the colonial settlement of the United States, the Revolutionary War, and the Civil War. Because the history of these surrounding lands has been largely undocumented, and because this history was of primary importance in establishment of both Colonial National Historical Park and Colonial Parkway, a documentation of the historic land uses surrounding the parkway was deemed an essential component of the task. Therefore, the site history project was divided into two tasks, which required different methodologies and expertise:

- a history of the lands around the parkway, from pre-settlement to the construction of the parkway.

- a history of the planning, design and construction of the parkway itself, from 1930 to the present.

a. History of Colonial Parkway Lands (Chapter I)

The history of the lands around the parkway comprises Chapter I, which was researched and written by historian Martha McCartney. The goal of this chapter is to record the changes in ownership, land use, and to a lesser degree, appearance, which occurred between circa 1600 and 1930, to the lands the Colonial Parkway now traverses. To organize this chapter, the lands between Jamestown and Yorktown are divided into 15 different areas. Each area was based on regionally recognized land divisions such as glebes or plantations, whose boundaries usually extended beyond the narrow parkway right-of-way. Research was

then conducted to determine a chronology of land use and ownership changes. For each of the 15 areas, a detailed historical essay was written, covering the required time period of 1600-1930 and concluding with a succinct commentary (called "Observations") that links the past with the present conditions of the parkway. These essays comprise Chapter I. Introduced with a summary of pre-settlement activity and a regional historical overview, the essays are arranged in sequential geographic order, from Jamestown to Yorktown.

A range of primary and secondary sources, including maps, historic records and other documents, were consulted during this research. Preliminary research included an examination of historical maps in repository at the Colonial Williamsburg Research Archives, the Virginia State Library, the Virginia Department of Historic Resources, the Virginia Historical Society, the Library of Congress, the Army Corps of Engineers Archives, and the National Archives so that culturally sensitive areas could be identified. Maps reproduced in secondary sources such as *The Official Atlas of the Civil War* and the *American Campaigns of Rochambeau's Army* also were utilized. Plat books on file at the courthouses of York and James City Counties and the City of Williamsburg were reviewed in order to locate surveys of the study area. Where map sensitivity permitted the projection of features in the built environment, their presence was noted.

Preliminary research using a limited number of secondary sources was also conducted at the College of William and Mary's Swem Library, using its computer network. Appropriate bibliographical material was accessed through the Swem Index and at the Williamsburg Regional Library and the Colonial Williamsburg Foundation Research Archives. Source works reviewed included the James City County government's collection of essays entitled *Where America Began: James City County 1634-1984*; excerpts from the Colonial Williamsburg Foundation's resource preservation planning document, "Resource Protection Process for James City, York County, Williamsburg and Poquoson, Virginia, Draft Report II;" several reports by the late Charles E. Hatch of the National Park Service, and historical reports and files available at the Virginia Department of Historic Resources. Other published works served as a source of general background information.

Specialized secondary sources, pertaining to the American Revolution and the Civil War, were then examined in an effort to identify areas that were impacted by military activity. Use was made of a computerized data base that is being compiled by the author for the purpose of identifying Virginia's earliest European settlers and the sites they inhabited during the first and second quarters of the seventeenth century.

Abstracts and original versions of land grants and patents were used to document early settlement and development within the study area, for patentees sometimes employed geographical reference points that are still recognizable in the modern landscape. These data were supplemented by records of the colony's general court. A census compiled in 1624 and updated in 1625 provided the names of some European colonists who lived in the area, along with their provisions and possessions. The records of the Virginia Company of London, under whose aegis Virginia was first colonized, also offered many insights into living conditions in the fledgling colony.

Contemporary narratives and accounts were searched for references to people and events that were associated with the study area. Where appropriate, microfilmed documents of the British Public Records Office were used. Data accumulated by the author during previous research projects involving historic settlement in the James and York River basins proved helpful. Use also was made of documentation compiled by National Park Service and Colonial Williamsburg Foundation staff researchers.

Land and personal property tax records, which commence in 1782 and are on file at the Virginia State Library, were used to bridge some of the gaps in James City County's antebellum court records. York and James City County deed and will books and tax rolls also were helpful in gaining insights into land use patterns and in identifying the phases of development that occurred in the study area. Some of these documents were viewed in light of local census records, slave schedules, agricultural census records, social statistics, and other data that pertain to the study area. Certain records groups were useful in making a preliminary assessment of socioeconomic status.

Virginia's tax commissioners, commencing in 1820, began estimating the value of buildings that were on the property they assessed, making note of any new structural features that had been added during the previous year. Assessors, when assigning a value to the buildings that were on a particular parcel, described their collective worth. For example, an assessor might list the value of the improvements on a farm at $800, a figure that would include its dwelling, outbuildings, livestock shelters and slave quarters. On the other hand, he would not include in his estimate roadways, fences or wells. If a new building were added to a parcel within a given year, the assessor typically would list the value of that particular structure, sometimes noting its function. On the other hand, he would reduce a landowner's assessment as buildings deteriorated or were demolished. Occasionally, assessors noted how specific structures were destroyed. Previous research has demonstrated that the total assessed value of a parcel of land is equivalent to approximately one-half of its fair market value.

Faithful transcriptions of the official records of the Virginia government as first a colony and then a Commonwealth were utilized as needed. Records of the Virginia Land Office were reviewed in abstract form and in their entirety when property boundaries required refinement. Attempts were made to determine whether certain individuals associated with properties in the study area had left behind private papers that might be useful in future research.

Data Limitations Given the range of sources consulted, a note should be made regarding data limitations. In general, the availability of documentary records that pertain to the settlement and development of the land through which the Colonial Parkway passes can be characterized as limited but good. Although James City County's antebellum court records were destroyed during the Civil War, when Richmond was burned, a relatively large body of data is available. York County's records essentially are intact.

Virginia's earliest land patents are transcriptions of the original documents, which consisted of loose leaves that were suspended on a string. Not surprisingly, many of the earliest land patents are missing. A careful examination of the 1624 census, the 1625 muster, and other contemporary records reveals that a significant number of colonists' names were omitted from demographic records altogether. Typically, document transcriptions that were made during the late nineteenth and early twentieth century were poorly indexed, necessitating a close reading of those materials.

Because some James City and York County plats are known to be in repository at the Huntington Library (in San Marino, California), the Virginia Historical Society, and the clerk's office in Stafford County, England, tabulations of those record groups were checked.

The importance of the James River in the region's strategic defense, commerce, and trade led to its being mapped carefully by successive generations of military cartographers. These maps range in date from the arrival of the first explorers and settlers, through the Civil War. Undoubtedly, the most remarkable early maps available, which include the study area, were made by French cartographers during the Revolutionary War. Commencing in the mid-nineteenth century, the shoreline of the James and York Rivers was drawn

in great detail by topographic and hydrographic engineers. These shoreline maps were found to provide much useful data on the topography and built environment.

Two properties within the study area, the James City Parish glebe and the Chiskiack or Yorkhampton Parish glebe, were owned by the Established Church until 20-30 years after the American Revolution. As church-owned property was tax free and as vestry records are not available to provide insight into how these tracts were used, relatively little information is extant.

Illustrations Throughout Chapter I, reproductions of historic maps are used to identify specific cultural or geographical features that are mentioned in the text and are contiguous to the Colonial Parkway or lie within its right-of-way. Only the relevant portions of these maps, some of which are quite large, have been reproduced within the report, although full-size copies of maps collected as part of this research effort, are now part of Colonial National Historical Park's archive. Within the report, the historic maps have been labeled with a north arrow and with various place and feature names in order to aid in their legibility. No overall "period" maps of the parkway lands prior to 1930 were created for this project, as the complexity of rectifying historic maps with extant field conditions was beyond the project scope. However, one map has been created which, based on the Chapter I research, notes areas where unexcavated cultural resources may exist within or within close proximity to the parkway right-of-way. This map is included with all other maps produced for this report this report in Appendix A as Sheet 26.

b. Parkway Planning and Construction History (Chapters II and III)

The second task of the site history, outlining the parkway construction history, is undertaken in Chapters II and III, which were written by Heidi Hohmann and Patricia O'Donnell of LANDSCAPES Landscape Architecture•Planning•Historic Preservation. These chapters first outline the planning of the parkway and then outline the design, construction, and the as-built character of the parkway. The research for these chapters was primarily conducted in the archives of Colonial National Historical Park, which has a vast collection of documents, photographs, and drawings from the construction period of the parkway. Other archives and a few individuals were also contacted, for both Colonial Parkway-specific information and for background and contextual information on general parkway design. These archives are listed in Appendix D.

It should be noted that the record on parkway planning, though extensive, is not entirely complete. In particular, the record on the routing of the parkway around Williamsburg and the idea of the parkway tunnel are topics not fully covered in correspondence and park documents. In some cases, key letters and drawing attachments seem to have been lost over time, leaving gaps in the historic record. Because the decision-making processes on these issues occurred over a number of years, it may be possible that letters and meeting memoranda did not always find their way to appropriate files. In addition, some decisions appear to have been made in meetings for which no minutes or records have been located. Another problem is that primary sources sometimes conflict. For example, recollections of Sidney Shurcliff indicate that his father Arthur Shurcliff lobbied for an eastern route around Williamsburg, whereas letters in NPS files dating to the 1930s indicate he was a proponent of a western route.[4] In such cases, the source judged to be the more reliable based on corroborating evidence is given greater credence in the text, and any conflicting views are noted in endnotes.

Two recent studies of the parkway were also closely consulted during the research for Chapters II and III and provided invaluable information. The first of these was the recent List of Classified Structures inventory, conducted by the Mid-Atlantic Office of the National Park Service, which provided technical construction information on individual parkway structures. The second study was the draft "Colonial National Historical Park Roads and Bridges" report produced by the Historic American Engineering Record (HAER).

This project, completed during the summer of 1995 by historian Michael Gallagher Bennett and a team of student landscape architects and architects under the direction of project supervisor Robert Harvey and team leader Christopher Marston, produced a set of parkway and bridge structure record drawings, an overall report on the parkway's planning and construction, and a series of shorter reports on the construction of each structure contributing to historic engineering significance along the parkway. The written reports of the HAER project supplied considerable factual information for Chapters II and III. In an effort to avoid duplication of research work between the two projects, such facts were used as stated and were not always reconfirmed by parallel research. In particular, Chapters II and III of the Colonial Parkway CLR strove to build on and bolster the content of the HAER report. Because the HAER report primarily emphasized the parkway's structural elements, Chapters II and especially III present the parkway from a cultural landscape perspective. This means that additional information on landscape features such as topography, vegetative cover, and designed plantings was presented and situated within a framework organized by parkway character. In particular, this framework considered the overall landscape scale of the parkway as well as the scale of its individual structures, since these aspects were not fully addressed in the HAER report.

Mapping To better understand and present the design of the parkway at both the overall and the detailed scale of its design, the historic research for Chapters II and III was accompanied by an intensive mapping process. Using computer-aided drafting (AutoCAD), two sets of parkway plans were created to illustrate the design and construction of the parkway. The first is a set of 4 overall period maps, 24 x 36 inches in size, which show the full length of the parkway for the years 1930, 1949, 1958, and 1996. These maps were developed as overlays on a 1981 USGS 7.5-minute quadrangle base, which was adjusted for each era, based on information from circa 1910 USGS quadrangles, 1940s and 1950s US Army maps, and 1937, 1953, and 1966 aerial photographs as appropriate. These overall plans are intended to illustrate the general development of the parkway within its region over the 1930 to 1996 period The large scale of these drawings allows them to primarily show the development and implementation of the parkway alignment, as well as changes which occurred to the larger region as a result of and independently of the parkway construction. These changes include alterations to shorelines, changes to view sheds and vistas, the addition of regional transportation routes, the loss of agricultural lands, and increases in urban and suburban development. Drawn at 1:24,000, the maps were plotted at 1:30,000 for full size drawings and are included in this document as 11 x 17-inch reductions. These maps are included in this report as Sheets 1-4 in Appendix A.

Sheets 1-4 were also used as bases for the creation of analytical drawings highlighting the character-defining features of the parkway at the overall scale. A series of shaded overlay maps were created to depict the parkway's existing spatial organization, views and vistas, built elements, vegetation cover types, parkway edge conditions, and shoreline conditions in 1996. The conditions of three of these features--spatial organization, views and vistas, and built elements--were also draw to illustrate the parkway in 1958, and comparisons between the 1996 and 1958 maps shown change over time. Detailed information for the other features in 1958 over the full length of the parkway was not available. The analytical drawings appear in Appendix A as Sheets 17-25.

Recognizing the limitations of the large 1:24,000 scale in showing detail, a means was sought to demonstrate, with greater specificity, the typical character of the parkway's design and construction. This was accomplished by selecting twelve areas along the parkway and illustrating these in plan and section at the more detailed scale of 1"=50'. The use of a smaller scale allows the portrayal of such construction details as curbs, gutters, individual trees, shrub masses, guide rails, and other landscape features which contribute to the parkway's character. Similarly, the use of the section as a drawing convention also provides additional detailed information about the parkway, in particular, its three dimensional, spatial quality and its relationship to the surrounding topography. The twelve areas were carefully chosen in consultation with

park staff to illustrate typical existing and historic conditions along the parkway, and provide a comprehensive portrayal of parkway character. Efforts were made to select areas which portrayed good examples of the parkway's typical grading, alignment, planting design, cover vegetation, etc, as well as to select areas which had changed over time and could thereby represent future management issues.

Once the twelve areas were selected, 50-scale plans and sections were developed to illustrate the areas' existing conditions. These drawings were based on a variety of sources. Documentary sources included the parkway's construction documents and planting plans. Also used were recent aerial photographs, and digital and standard topographical data from the York County, James City County, and Williamsburg offices. Where topographical data was not available, primarily in the area of the Naval Base, where information "blackouts" occur for military reasons, USGS topographical data was used. Extensive field work then occurred to verify information on topography, structures, and vegetative features contained in existing maps and to add information not present on existing maps. Information from the documentary sources and field work was then combined to create a set of existing conditions plans at 1"=50' in AutoCAD.

Once the existing conditions plans were created, they were then used as bases for constructing historic period plans for each of the twelve areas. This information was gleaned from historic photographs, aerial photographs, construction drawings, and planting plans, most of which are contained in the park archives. The resulting historic plans and sections document, to the best of our ability, the character and condition of these twelve areas of the parkway immediately following their construction. Because the parkway was completed in two major construction efforts, this means that approximately one-half of the historic, as-built period plans date to the 1930s, while the other half date to the 1950s.

The 1"=50' existing conditions and historic conditions data was then assembled onto twelve drawing sheets. Each drawing sheet shows the historic, as-built conditions of a section of the parkway paired with its existing conditions in 1996. The side-by-side organization of the historic and existing conditions allows an easy comparison and analysis of the change which has occurred in each area. The twelve areas represented on the drawing sheets are: Five Points; Brackens Pond; Bellfield Straight; Felgates Creek; Jones Mill Pond; Station Point 544; Capitol Landing; Route 199 (Miller's Crossing); Halfway Creek; Civil War Fort (near College Creek); Archers Hope; and Jamestown Island Isthmus. These locations are shown in the numbered octagons shown on Figure 0.1 and also appear on Sheet 4 in Appendix A.

The overall historic parkway plans (Sheets 1-4), the twelve 50-scale plans (Sheets 5-16), and the analysis plans (Sheets 17-25) appear reduced in this report as consecutively numbered drawing sheets in Appendix A. They are also noted in the figure list at the beginning of this document and are referenced by their sheet numbers throughout the report. In addition to the drawing sheets, historic photographs and drawings play a role in providing a graphic representation of the parkway in Chapters II and III.

c. Existing Conditions, Analysis & Significance

The documentation of existing conditions and the analysis of character-defining features was jointly undertaken by Marita Roos and Rolf Sauer of Andropogon Associates; Jim Charles of Urban Engineers; and Heidi Hohmann and Patricia O'Donnell of LANDSCAPES LA·Planning·HP. Andropogon Associates focused on ecological features of the parkway, documenting and analyzing vegetation cover types, hydrology and shoreline conditions, and natural drainage features. Urban Engineers documented and assessed the parkway's engineering, including its alignment, surfacing, design speed, structures, built drainage features, accident levels, and use. LANDSCAPES LA·Planning·HP documented and analyzed context, spatial character, circulation, designed vegetation, and small scale features, and also coordinated the work of Andropogon Associates and Urban Engineers.

The existing conditions documentation, Chapter IV, is the result of extensive field work, which encompassed both mapping and assessing the parkway's current features. As noted above, existing conditions of the parkway were initially documented via the development of the twelve 50-scale existing conditions plan and section drawings. In addition to documenting parkway structures, the drawings also show parkway vegetation and alignments, where applicable. These drawings are referenced by sheet numbers (5-16) in Chapter IV and are located in Appendix A. A number of overall park drawings, at 1:30000 scale, dating to the year 1996, were also created as part of the existing conditions documentation. These drawings illustrate and analyze parkway context, spatial character, built elements, shoreline conditions, and vegetation cover types. Referenced in the text as Sheets 17-25, these drawings are compiled in Appendix A. In addition to drawings, numerous existing conditions photographs are included in Chapter IV. These photographs are keyed to an overall base plan, which is included as Sheet 27 in Appendix A.

The analysis of character-defining features, included as Chapter V, builds directly off the previous chapters by providing a comparison of the parkway's as-built character, discussed in Chapter III, with the parkway's current character, described in Chapter IV. The differences and similarities between the parkway's past and present conditions are elucidated via comparisons of the historic and existing conditions overall 1:30000 scale plans, the historic and existing conditions 50-scale plan and section drawings, and via comparisons of historic photographs with existing conditions photographs taken from the same viewpoints. From these comparisons, an assessment of the parkway's integrity is made, based on the degree to which the parkway's as-built character and design intent is still apparent today. This assessment follows the guidelines, criteria,and procedures set forth in *Bulletins 15* and *16* of the National Register and in the Secretary of the Interior's *Guidelines for the Treatment of Historic Landscapes.*

A statement of the parkway's significance, Chapter VI, follows the assessment of integrity. This statement places Colonial Parkway in context with other modern parkways, describes its significance under National Register Criterion C, Design and Construction, and defines the parkway's period of significance.

d. Appendices

A number of appendices support the main body of the report. These include lists of sources and archives consulted, detailed descriptions of research methodology, and additional information deemed too technical for the narrative portion of the report.

INTRODUCTION: ENDNOTES

[1] The *General Management Plan for Colonial National Historical Park* cites the length as 23 miles, whereas the recent HABS/HAER report cites the length as 21.44 miles.

[2] *General Management Plan for Colonial National Historical Park*, 1993, 20.

[3] It is the authors' understanding that an Administrative History for Colonial National Historical Park is currently underway and is being written by Karen Rehm.

[4] Sidney Shurcliff's recollections, from *Encounters of a Landscape Architect* and quoted in "The Freshest Advices," *Colonial Williamsburg*, Spring 1996, pp 8-14, seem somewhat problematic. Some of the dates for certain incidents are inaccurate when compared to other sources, and his account of the tunnel decision seems simplified. For example, Shurcliff indicates that one climactic meeting decided the issue, whereas correspondence indicates the debate over the tunnel's location and construction occurred over a number of years.

I. HISTORY OF THE COLONIAL PARKWAY LANDS, PRE-SETTLEMENT TO EARLY TWENTIETH CENTURY

Within the narrative that follows, the early history of the landholdings through which the Colonial Parkway passes are addressed sequentially from Jamestown to Yorktown. Each property history concludes with a succinct commentary called Observations that links the past with the present.

Throughout Chapter I, historical maps have been used to identify specific cultural or geographical features that are contiguous to the Colonial Parkway or lie within its right-of-way. Only the relevant portions of these maps have been reproduced within the report as figures.

A. THE PROLOGUE TO HISTORIC SETTLEMENT: THE INDIGENOUS PEOPLES

Literally thousands of years ago, an indigenous population inhabited the region, leaving a faint imprint upon the land. The history of the Indians or Native Americans, though largely unrecorded, is an integral part of the region's heritage that is known to us through archaeology.

1. The Paleo-Indian (before 6500 B.C.)

North America's earliest inhabitants, known as Paleo-Indians, hunted in relatively mobile bands that exploited large game animals. They are believed to have come on the scene during the late Pleistocene period and followed the roving movements of large game, which at times could have included elk, bison and mastodon. It is also likely that they would have availed themselves of the wide variety of plant foods on hand in what was a relatively cool, moist environment. Although some traces of these very early hunters have been found on the James-York peninsula, evidence of their presence is extremely ephemeral. Very few fluted projectile points (the Paleo-Indian's "calling-card") and components of their specialized tools (often crafted from jaspers and cherts) have been found within James City and York Counties and nearby Williamsburg.[1]

2. The Archaic Indian (6500 B.C. - 1000 B.C.)

As the climate warmed during Holocene period, the North American environment changed and new types of natural resources emerged. Small and large game, aquatic species (such as fish and shell-fish) and a greater diversity of plant materials (such as berries, nuts, and roots) became available for human consumption. Archaic period Indians adopted different strategies of subsistence. They foraged for food on a seasonal basis but their movements throughout the countryside were more localized. They began to rely upon local stone materials, such as quartz and quartzite, to make their points and tools. Prehistorians believe that the James-York peninsula was occupied continuously during the Archaic period. However, relatively few Archaic sites have been discovered, for the flooding and erosion of coastal waters and agricultural plowing gradually have taken their toll upon Tidewater Virginia soils.[2]

3. The Woodland Indian (1000 B.C. to 1600 A.D.)

By the Woodland period, the eastern United States had become densely forested. Again, the indigenous population modified its strategy for survival in response to the changing environment. Between 2000 B. C.

and 1000 A. D., the Natives became more sedentary and began making ceramic vessels that they could use for cooking and storage. Because the Indians used clays that were intermixed with a variety of tempering materials and they manufacturedtheir ceramic vessels according to specialized techniques, their wares represent different cultural traditions. Prehistorians subdivide the Woodland period into three time periods (Early, Middle and Late), on the basis of cultural evidence they find at archaeological sites.[3]

a. The Early Woodland Period

Archaeologists believe that pottery-making was introduced into Virginia around 1200 B.C. by people who came from the coast of what became South Carolina and Georgia. Virginia Indians made their pottery from clay they dug along river banks or bluffs. They used water to mix in the crushed shell or rock that kept the body of the vessel from shrinking or cracking during the drying and firing process. Gradually, the Indians learned that they could produce vessels with higher sides by molding their clay into coils they laid one on top of the other, pinched together and then shaped. Later, the Indians began smoothing and shaping the outside of their vessels with a paddle wrapped with cord, fabric or net. After the clay pot dried in the air, it was placed in an open fire to bake and harden.[4]

b. The Middle Woodland Period

Native peoples, by the Middle Woodland period, had become much more numerous. They began living as tribes in scattered hamlets and small villages that were situated along the major streams that extended throughout what became Virginia. It was during the Middle Woodland period that the Natives put aside their spears and began using the bow and arrow to hunt wild game. Small projectile points, attached to wooden shafts with sinew and glue made from animal hooves, formed the tips of arrows that were trimmed with feathers. As time went on, the grooved axe was modified and the celt was developed for heavy woodworking. The availability of more sophisticated tools led to crafts becoming increasingly refined and complex. Distinctive cultural traditions emerged and became more pronounced and trade networks were developed for the exchange of goods. As trade increased, certain families' rank and status within their tribal group became elevated.[5]

c. The Late Woodland Period

By the Late Woodland period, many important changes had occurred that combined to heavily influence the Native American's way of life. Corn or maize had been introduced into the region from Mexico. It adapted well to Virginia's environment and provided the Indians with better nutrition. This, in turn, enabled them to thrive and become more populous. Archaeologists surmise that the Indians' religious ceremonies associated with planting and harvesting corn reflect the crop's importance in Native life. They also speculate that control of the food supply led to the development of societies in which there were differences in the rank or status of various individuals.[6]

Villages replaced the base camps that characterized earlier periods and a surplus of cultivated crops allowed the Indians to store food and remain in one location for longer periods of time. Their social order gradually became more sophisticated, as specific groups of people took on strong identities. Even so, the Natives still followed a seasonal pattern of hunting and gathering. They lived along the banks of tidal waterways during the warm weather and then moved into the interior during the winter, when their gardens were dormant and fishing was less productive. It was in winter that they needed to rely upon stored food and whatever game they could procure.[7]

Late Woodland Indians, unlike their more nomadic forebears, lived in large villages that sometimes included hundreds of people who participated in a complex social, political and economic order. Village residents worked toward their community's support, with tribal leaders coordinating many of the activities in which their people were involved. In chiefdoms, the leaders accepted tribute, which they retained or

redistributed as they saw fit. Ceremonial life was important and creativity flourished. The Late Woodland Indians created symbolic and ceremonial objects of stone, copper and shell that were related to their belief system. The houses in which they lived were relatively substantial and their villages were well organized and sometimes surrounded by a palisade. Beans, squash, and corn were the Late Woodland Indians' principal food crops and as time went on, they began cultivating tobacco. In an Indian village, crops usually were planted by the women and elderly men, who used theslash-and-burn method of clearing the fields in which they planted their crops. The Indians also rotated their use of fields. Virginia's coastal plain offered the Indians a broad variety of fresh and salt-water species of fish and shell-fish upon which to feast. They caught shad and sturgeon and gathered oysters, crabs and other shell-fish from shallow waters. They also harvested oysters in the spring and then dried and stored them for consumption in leaner times.[8]

By 1300 A. D. the Indians of what became Tidewater Virginia were living in sedentary villages that were supported by short term camps for hunting and gathering. They preferred the floodplain and low-lying necks of land that had rich, sandy soil. Within Indian villages, houses were clustered close together or interspersed with fields that were used for gardening. By the late 1500s chiefdoms had developed. The literally hundreds of villages that existed began to compete for territory and economic supremacy. In time, weaker tribes were forced to pay tribute to stronger ones, which guaranteed them protection in times of war.[9]

By the 1400s, when Europeans began documenting their exploratory visits to the New World, the Late Woodland Indians of Virginia's coastal plain had a well developed social order. They spent most of the year in discrete villages that were scattered throughout the region. They spoke the Algonquian language, i.e., the pattern of their dialect was distinctly different than that of the Natives who communicated in the Iroquoian, Sioux and other languages. Virginia's Algonquians shared a common linguistic bond with some of the Native peoples who lived to the north and south.[10] Although European explorers' sketches and written accounts capture a sense of Indian life, it should be remembered that there were numerous differences between the two cultural groups, many of which surely escaped notice or defied comprehension.

4. The Powhatan Indians of Virginia's Coastal Plain

When the first colonists arrived in Virginia in 1607, Indian villages lined the banks of Tidewater's rivers. Much of the region's population was under the sway of a paramount chief named Wahunsunacock or Powhatan, who reigned over 32 sub-chiefdoms or districts that encompassed more than 150 villages of various sizes. These sub-chiefdoms supported Powhatan in times of war and paid tribute to him. Captain John Smith described Powhatan's style of government as monarchical and said that he was an emperor to whom many lesser kings or governors (called werowances) were subservient. Powhatan was said to be tall and well proportioned, "with a sower looke, his head somewhat gray, his beard so thinne that it seemeth none at al." Although he was an estimated sixty years old, he reportedly had "a very able and hardy body to endure any labour."[11]

When the first European colonists ventured into the Powhatan Indian territory that eventually became James City County, it belonged to the Pasbehays, who had a major village at the mouth of the Chickahominy River and two others nearby. Across the James-York peninsula, on the York River, was the village of the Chiskiacks, who, like the Pasbehays, were subservient to Powhatan. Captain John Smith, when making a detailed map of Virginia, identified the Pasbehay and Chiskiack Indian villages within today's James City and York Counties. He observed that Indian men spent most of their time hunting, fishing and engaging in wars, while the women and children made mats, baskets, and pottery and raised the crops upon which their village subsisted. Smith described the Powhatan Indians as generally tall and straight, with black hair and

dusky complexions, and he noted that only rarely did the men have beards. He described the Natives as exceptionally strong and agile and tolerant to even the worst weather.[12]

But there were numerous subtle, more important differences between the Natives and the Europeans. The Indians considered land merely a part of the earth, like the sky, water and the air, and therefore communal or open to all for subsistence. They could not fathom the European concept of owning land. The two cultures also had vastly different views of religion. The Powhatans, while open to accepting the idea of a Christian deity, were reluctant to renounce their own gods. Although Europeans and Indians viewed accumulated wealth as an emblem of socialstatus, the two cultures had a totally different concept of inheritance, for with the Powhatan, it passed through the female rather than the male.[13] In light of the two cultures' differences and their lack of mutual understanding, they were destined to collide.[14]

5. Observations

Archaeological studies within the Tidewater region have demonstrated that locations within 500 feet of streams or wetlands are the most likely to contain prehistoric sites. Within this zone, areas that are well-drained and minimally sloped have the greatest site potential. Archaeological sites also have been found submerged within wetlands, especially tidal marshes. Moreover, areas beyond the wetland margin zone have potential for containing prehistoric sites. Usually, the sites located in such areas tend to consist of small, sparse scatters.[15]

In 1976-1977 archaeological tests were carried out upon a prehistoric site on the northeast side of College Creek's mouth, where evidence of Middle and Late Woodland occupation was present upon a small ridge. It was observed that erosion attributable to tidal action and power-boating were taking a toll upon this site.[16] More recently, a Phase I survey of Jamestown Island has led to the discovery of numerous prehistoric sites throughout the island.

Despite the fact that an abundance of prehistoric sites are believed to be dispersed throughout the Tidewater, the majority of them await discovery. Many may be situated within the right of way of Colonial Parkway. Only through a systematic archaeological survey of the Colonial National Historical Park's landholdings can the distribution of prehistoric and historic sites be ascertained.

B. REGIONAL HISTORICAL OVERVIEW

This introductory section provides a brief overview of regional history from the contact era through the early twentieth century. Detailed history essays addressing each area that the Colonial Parkway traverses follow in sequence from Jamestown to Yorktown. Figure I.1 is a recent map of the Colonial National Historical Park that is labelled to indicate each of areas addressed by their historic names. This overview provides a context for the detailed essays.

1. The Contact Era, Pre-Settlement

The Chesapeake Bay, or Bahia de Santa Maria, was identified by Spanish cartographers early in the sixteenth century and the James River, as one of its major tributaries, likely attracted the attention of early explorers. By September 1570, Spanish Jesuit missionaries had arrived in the Chesapeake. Guided by a

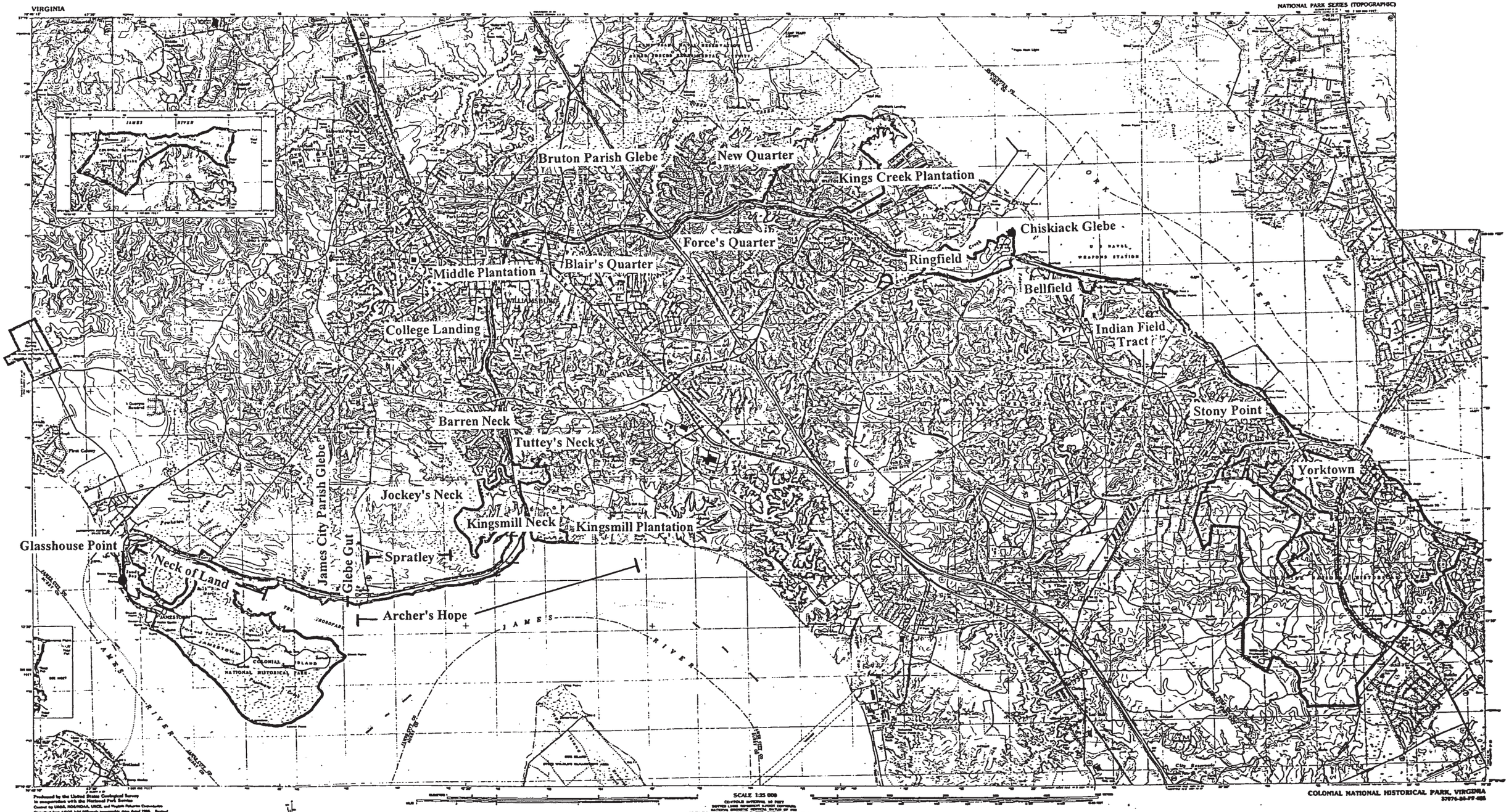


Figure I.1 Overview Map of Historic Research Areas based on USGS map of Colonial National Historical Park

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young Native convert, they intended to bring Christianity to the indigenous population. Scholars believe that the Jesuits, having sailed into the James River, proceeded upstream to the vicinity of College Creek, where they disembarked and trekked overland toward the York River, establishing their mission. Ultimately, however, their efforts proved futile, for the Natives they sought to convert fell upon them, destroying both mission and missionaries[17]

A decade later, the English attempted in vain to establish a colony at Roanoke Island. Under the leadership of Thomas Hariott, they explored northward, concluding that the region near the entrance of the James River was favorable for settlement. Although the Roanoke colony ultimately faded into extinction, nearly three decades later the English returned, proceeding directly to the Chesapeake region. This time, their efforts proved successful.

2. The Settlement Era (to 1699)

On April 26, 1607, Captain Christopher Newport and the three small vessels under his command, sailed into the mouth of the Chesapeake Bay and during the next few days explored its tributaries. On May 12th Newport's men arrived at a point of land they called Archer's Hope, at the mouth of College (Archers Hope) Creek, where they considered establishing their colony. But because the water there was too shallow for their ships to be anchored near the shore, they sailed further upstream to a marsh-rimmed peninsula where they built James Fort and a community later known as James Cittie or Jamestown, the first permanent English settlement in North America.[18]

The struggle to survive proved arduous. The first colonists, and the three supplies of new settlers that followed in their wake, were ill-prepared to live in a wilderness environment and finally were obliged to seek sustenance from the Indians. The winter of 1609-1610, later known as the Starving Time, was particularly arduous. The warmer months brought other hardships, for the marshes around Jamestown were teeming with malaria-bearing mosquitoes and the colonists' drinking water was salty and contaminated.[19] Documentary evidence suggests that during this period, when the colony had a military form of government and its inhabitants lived communally, the settlers made their homes on Jamestown Island, venturing into the mainland to explore, trade with the Indians, and seek sustenance.[20]

In May 1610, Sir Thomas Gates arrived in Virginia, finding a handful of colonists who were "famished and at the point of death." He resolved to load them aboard his ships and evacuate them to Newfoundland, where they could secure nourishment and passage back to England. Only the timely arrival of Lord De La Warr's three ships with new immigrants, supplies and provisions, averted the abandonment of the colony.[21]

In May 1611, Sir Thomas Dale, a military leader and veteran of the Dutch wars, arrived with new settlers, supplies and livestock. Shortly thereafter, he took over the reins of government. Recognizing that major changes were necessary if the settlement was to survive, he immediately instituted martial law, which despite its unpopularity proved to be effective.[22] Dale, though requiring the colonists to work toward their own support and to contribute a proportion of their harvest to the community store, also allowed them to reap the profits of their own labor, once they had fulfilled their communal obligations.[23] Dale also set about establishing several new settlements in the upper reaches of the James River, away from the marshes of Jamestown. It was during Sir Thomas Dale's years of leadership that John Rolfe conducted his tobacco experiments and learned how to grow a palatable and marketable strain of "the weed," an accomplishment that gave rise to Virginia's tobacco economy.[24]

The Virginia Company's Great Charter, written in 1618 and implemented in 1619, brought about sweeping changes, for it included provisions that made private land ownership possible and it authorized the establishment of local representative government. It was also then that the colony was divided into four corporations, one of which was James City. Within each of the colony's corporations, special tracts of land were set aside toward the support of public officials and to reap profits for the Virginia Company's investors. A 100-acre tract also was laid out within each corporation as a glebe for the incumbent minister. The glebe for what became James City Parish was located in the mainland territory known as Archers Hope, north of Jamestown Island's eastern terminus.

The Virginia Company's new land policy (generally known as the headright system) provided an incentive for prospective immigrants to leave overcrowded England to seek their fortunes in Virginia. It also encouraged wealthy investors to underwrite part of the expense of colonization. Under the headright system, so-called Ancient Planters, people who had come to Virginia at their own expense prior to the May 1616 departure of Sir Thomas Dale and had lived in the colony for at least three years, were entitled to 100 acres of land. All those who came to Virginia after Dale's departure, having paid the cost of their own transportation and lived in the colony for three years, were entitled to 50 acres. Investors or adventurers who purchased a share of Virginia Company stock were entitled to 100 acres of land as their first dividend, plus another 100 acres when their first tract was planted. Each person who paid for another's passage to the colony was entitled to 50 acres. Some individuals, by transporting indentured servants to Virginia to work on their plantations, simultaneously were able to fulfill their need for laborand amass substantial amounts of land.[25] It was by means of the headright system that colonists laid claim to acreage within the Neck-of-Land behind Jamestown Island; within Archers Hope at Jockey's Neck, Kingsmill Neck, and Tuttey's Neck; and at other sites within the study area.

The opportunity to reap substantial profits from growing tobacco, a highly marketable commodity, coupled with the prospect of owning land, served to encourage immigration and fuel the spread of settlement. Evidence of how rapidly the colony grew lies in the fact that between 1619 and 1623 a total of 44 grants for "particular" or private plantations were made by the Virginia Company's treasurer.[26] The only particular plantation in close proximity to the study area was Martin's Hundred, which investors claimed they were entitled to land that extended five miles above and five miles below Wolstenholme Town, their initial settlement. The Society of Martin's Hundred's claim, if upheld, would have extended west as far as College Creek, taking in what became known as Kingsmill Neck.

On March 22, 1622, the Indians of the Powhatan Chiefdom launched a concerted attack upon the plantations along the James River. At the end of that day, nearly 350 men, women and children or nearly a third of the colony's population, lay dead. The attacking Natives killed several people in Archers Hope but those who lived at Glasshouse Point, in the Neck-of-Land and Jamestown emerged unscathed, thanks to a timely warning by an Indian convert to Christianity. Some of the inhabitants of Archers Hope perished.[27]

In the aftermath of the massacre, the Indians made sporadic attacks upon outlying plantations. Martial law was declared and the colonists were ordered to withdraw to eight sites that were to be held. This ingathering produced food shortages at Jamestown and fostered the spread of contagious diseases. Later, the colonists made retaliatory raids upon the Indians' villages, burning their homes and destroying their food supply.[28] Eventually, as planters' fears subsided, they began returning to the outlying homesteads they had abandoned. It is likely that many of them returned to the land they had cleared and seated prior to the Indian uprising, instead of setting their sights upon new acreage that had to be stripped of its timber.

Many new immigrants leased land from others while meeting the headright system's residency requirements. Meanwhile, established planters acquired sizeable quantities of acreage by bringing servants to the

colony and placing them upon raw land that needed to be cleared and seated. The population was highly mobile and those who owned parcels of land in two or more outlying areas often shifted their servants from place to place. During the first quarter of the seventeenth century, the community of settlers that resided in Archers Hope occupied an area that extended from Mill Creek to College Creek, taking in the James City glebe. Another group of colonists lived in the Neck Lands (Neck-of-Land) or main, across Back Creek from Jamestown Island. Both communities took on an air of permanency as nuclear families became established and newcomers moved in. Many of the people who lived in the Neck-of-Land and Archer's Hope occupied property that was owned by others. Most of those at the Glasshouse were contractual employees of the Virginia Company.[29]

By 1629-1630, when settlement along the James became sufficiently well established to permit expansion toward the York River, then known as the Pamunkey, the young colony's frontier was extended to encompass the territory known as Chiskiack, named for the Native Americans who were living there when the first colonists arrived.[30] The settlers' presence on the York also was intended to intimidate the Indians, whose population was concentrated near the river's headwaters.[31]

The territory along the lower side of the York River readily attracted settlers and Virginia Land Office records indicate that the earliest patented land was along the banks of the York River and its navigable tributaries, such as Kings, Felgates, Indian Field (Chiskiack), and Wormeley Creeks. The advent of settlement and the impetus provided by the colony's rapidly developing tobacco economy led to the York River's becoming a major conduit of shipping and trade.[32]

In 1630 Captain John Uty (Utie) patented acreage that encompassed the broad expanse of land between the mouths of Queens and Kings Creeks. He made his home at Utimaria Point, at the mouth of Kings Creek. In time, Uty's patent in Chiskiack became known as the Kings Creek plantation. Simultaneously, Captain Robert Felgate patented land that lay between Kings Creek and what became known as Felgates Creek. He, too, established a homestead. Felgate's land passed through the hands of his descendants until 1692, when it was sold to Joseph Ring, whose name the Ringfield or Ring's Neck plantation bears. Meanwhile, John West patented 600 acres on the southeast side of Felgates Creek that evolved into the core of the Bellfield plantation. West, like Uty and Felgate, was one of the first settlers to take up land on the York River and like them, served as justices in the local court, which sometimes convened in their homes. In 1650 West sold his acreage to Edward Digges, a member of the governor's council.

In February 1633 the Grand Assembly set about implementing a proposal that had been made twice before: to construct a palisade across the James-York peninsula between the heads of Queens and College Creeks, traversing a ridge-back that became known as the Middle Plantation. The palisade was intended to cordon off the lower end of the James-York peninsula, reserving it to the exclusive use of the colonists and their livestock, which ranged in the woods.As settlement spread and became more widely dispersed throughout Tidewater Virginia and as the colony's population grew, a need arose for local courts of justice. By 1632 a provision had been made for monthly courts to meet in five locations and in 1634, when the colony was divided into eight shires, each was to have a court. Also established were provisions for each county to have a sheriff and a lieutenant or military commander, who was responsible for organizing the local militia. The Colonial Parkway passes through York and James City Counties, two of Virginia's original shires. As soon as the countryside east of Queens Creek's mouth began to grow populous, a parish was established, which had a minister and a church. The Chiskiack Parish glebe, came into existence by 1637.[33]

A second major Indian uprising occurred on April 18, 1644, and an estimated 400 colonists lost their lives. Especially hard hit were those residing upon the York River frontier. Although the massacre temporarily

quelled the spread of settlement north of the York, by the mid-seventeenth century European colonists were firmly established along both sides of the river and westward into the interior. After the death of the Powhatan Indians' paramount chief, who had led both uprisings, a treaty was signed with them. Under the terms of the October 1646 peace agreement, the Indians ceded to the English the James-York peninsula inland as far as the fall line, as well as territory on the lower side of the James River, down to the Blackwater River. In 1645 and 1646 forts were established at strategic locations at the periphery of this territory, securing it to the colonists. The four strongholds were used for surveillance and trading posts. In 1647 two new check-points were added, one of which was on Captain William Tayloe's plantation between Queens and Kings Creeks, what became known as the Kings Creek plantation.[34]

The spread of settlement inland, accompanied by steady growth in the colony's population, led to Jamestown's decline in size and importance. In 1662 when an act was passed to stimulate its growth and development, it was minimally successful. Because Nathaniel Bacon's followers put Jamestown to the torch on September 19, 1676, three years later Virginia's governor was ordered to see that the community was rebuilt and strengthened.[35] Again, those efforts failed.

A map prepared by Augustine Herrmann (1673) in 1670 indicates that plantations were then scattered along the banks of the colony's four major rivers and across the Chesapeake Bay, on the Eastern Shore. Although Herrmann's rendering is a somewhat schematic representation, the settlement pattern he indicated has been confirmed by archaeological research and the works of other early cartographers.

In 1680, when an act was passed to encourage urban development, Jamestown was one of the twenty sites selected. Another was at Tindall's or Gloucester Point on the north side of the York River. In 1691, when a second town act was passed, a town site was laid out upon the lower side of the York, what became known as Yorktown. Soon after the town site in York County was selected, it was surveyed and laid off into lots in accord with a gridiron plan. The planned community quickly developed into a thriving seaport and became a center of foreign and domestic commerce and trade. It became the seat of the York County court and contained numerous dwellings, a parish church, taverns, warehouses, stores, and other commercial establishments. A ferry plied the York between Tindall's (Gloucester Point) and what became Yorktown even before communities were established at either place. Cooperating forts faced each other across the river, where they could control access to the inland countryside and protect ships at anchor.[36]

By the 1690s some of the colony's officials began clamoring for the capital city to be moved inland to Middle Plantation. Governor Francis Nicholson was an especially vociferous proponent of the move. On May 1, 1699, a group of students from the College of William and Mary appeared before the General Assembly, where they argued the merits of moving the capital to Middle Plantation. They claimed that "great helps and advances [had been] made already towards the beginning of a town," for "a Church, an ordinary, several stores, two Mills, a smiths shop, a Grammar School, and above all the Colledge" already were in existence. They said that students at William and Mary would benefit from being associated with "the selectest and best company that is to be had within the government" and that the faculty and student body, with their servants and attendants, comprised the makings of a small town. One scholar pointed out that Middle Plantation was well situated for trade, since it was served by two navigable creeks, and that it was a healthful seat far enough inland to be safe from enemy invasion. The following month, the assembly passed "An Act Directing the Building [of] the Capitoll and the City of Williamsburgh." The 220-acre town site was situated at Middle Plantation, astride the line between James City and York Counties, and it included acreage on College and Queens Creeks that was slated for development into inland ports to serve the new community. Princess Anne's Port (or College Landing) was located in James City County whereas Queen Mary's Port (or Capitol Landing) was situated in York County. Duke of Gloucester Street, which ran along the ridge-back that divided the drainages of the James and York Rivers and separated the two

counties, formed the central axis of the town, which was to be laid out regularly into lots. The new town was destined for success, for the spread of settlement inland was accompanied by steady growth in Virginia's population. Construction of the colony's new statehouse at Middle Plantation was funded by a special tax on liquor, servants and slaves.[37]

3. Colony to Nation, 1700-1790

Despite the fact that the colony's capital was moved to Williamsburg in 1699, throughout much of the eighteenth century Jamestown continued to serve as a center of commerce and trade. A ferry plied the river to Surry County and nearby tobacco inspection warehouses brought a steady stream of planters into the area. But the new capital city grew and prospered and College Landing became a thriving port that served both foreign and domestic trade. As settlement spread inland, Jamestown and its environs dwindled in importance.[38] During the early eighteenth century, the countryside along the James and York Rivers was sparsely populated. The land along the river banks was considered desirable, for it provided direct access to commercial shipping. In time, many of the smaller tracts that had been patented early on were absorbed into the plantations of Virginia's larger, more economically successful landowners. Inland somewhat away from the waterfront were plantations of substantial size that were interspersed with small and middling farmsteads. Also present were subsidiary farms, such as New Quarter and Force's Quarter, which belonged to wealthy and influential landowners who also controlled river front land. As time went on, the development of inland transportation corridors opened the interior to more widely dispersed settlement.

During the American Revolution, the James-York peninsula was an important strategic battleground and Williamsburg, as the colonial capital became a focal point in the war. In 1775 the British, who seized the military stores in the powder magazine in Williamsburg loaded them aboard ship at Burwell's Ferry. There were military activites on the island throughout the war, but combat occurred there during Noember 1775 when the British attempted to land and were driven off by the colonists garrisoned there. In early July 1781 a military confrontation occurred in the mainland west of Jamestown Island, near Glasshouse Point. A few weeks later, French troops, entering the region as part of the military build-up that preceded the battle of Yorktown, disembarked in Archers Hope, at the mouth of College Creek. Undoubtedly, the region's most distinguished moment in military history came in 1781 when British and Allied forces clashed at Yorktown in a major battle that decided the outcome of the American Revolution. Subsequent to the close of the American Revolution, the James-York peninsula recovered slowly from the effects of war. Some prominent Virginians went heavily into debt in support of the war effort and later suffered the consequences. The relocation of Virginia's capital from Williamsburg to Richmond accelerated the region's decline in population and wealth as political influence shifted inland toward the Piedmont.

4. The Early National Period through the Civil War (1791-1865)

Because Virginians traditionally devoted little attention to soil improvement, years of neglect culminated lessened productivity. As successive generations of old Tidewater families reached maturity and the law of primogeniture became obsolete, farm size was reduced as large estates were broken up and redistributed. The lack of an opportunity to acquire substantial quantities of good, arable farmland, coupled with fluctuations in agricultural prices, led to a general out-migration of Tidewater Virginia's white population during the late eighteenth and early nineteenth centuries. The opening up of western lands and the construction of transportation improvements elsewhere, such as canals, turnpikes and railroads, led to an exodus of Tidewater's native-born population.[39] The relative scarcity of good agricultural lands also discouraged new immigrants from settling in the area. Tax records demonstrate that as time went on, the ranks of the

middle class declined, the number of small farmers increased, and the position of the large landowner solidified. Concurrent with the reduction in farm size came a growth in personal wealth, as demonstrated by increases in the revenues drawn from taxes upon slaves, livestock and personal property owned. Between 1800 and 1830 the number of enslaved blacks in Virginia increased dramatically, as did the number of those who were free.

During the mid-nineteenth century, improved agricultural techniques led to a revitalization of the region's agricultural economy. Whereas the cultivation of tobacco had once played a vital role, emphasis shifted to the production of grain crops. By the time of the Civil War eastern Virginia's agriculture had evolved into a mixed crop system in which grains predominated. Cattle production and other forms of animal husbandry also were on the assent. More sophisticated farming techniques, such as the use of marl to restore soil that had been acidified by long term tobacco production and erosion, became common.

Soon after the Civil War began, the Hampton Roads area was engulfed in armed conflict. Union military leaders were convinced that if they could move up the James-York peninsula from their stronghold at Fort Monroe, they could capture Richmond and bring the war to a timely end. The Confederates, anticipating a drive against their capital before it could be adequately defended, erected fortifications at strategic locations along the James River, hoping to slow the progress of their adversaries. The fortifications on Jamestown Island were considered an integral part of Richmond's defenses and five forts were built there: near the ancient church tower; to its rear, overlooking Back Creek; at Goose Hill; at Black Point; and midway down the island's southerly bank. A large redoubt was built on the Neck-of-Land behind Jamestown Island and earthworks were constructed at Tuttey's Neck. These features, like the forts on Jamestown Island, were important components in the Confederate line. To the north, fortifications built at Fort Magruder and near Jones Pond also were part of the defensive lines of earthworks the Confederates built across the peninsula. In Yorktown the Confederates made use of earthworks that were built during the Revolutionary War. When the attack came, the Confederates were obliged to fall back toward Richmond, but they succeeded in gaining the time they needed to protect their capital. Most of James City County's antebellum court records, which had been taken to Richmond for safekeeping, were destroyed in 1865 when the Confederate capital burned. York County's records were spared, thanks to quick-thinking on the part of the clerk of court.

5. Post Civil War to Parkway Construction (1866-ca. 1930)

After the fall of the Confederacy and the onset of Reconstruction, Virginia recovered slowly from the effects of war. The prospect of famine was very real and for the first six months after the surrender at Appomattox, at least 25,000 Virginians subsisted on army rations. The plight of newly freed blacks on the lower peninsula was especially dire, for during the war, multitudes of runaway slaves fled behind Union lines, often with only the clothes upon their backs. Both during and after the war federal officials struggled to provide food and shelter for these refugees, who flocked to Fort Monroe. By 1866 some of the land along the York River, within the Colonial Parkway's right-of-way, was confiscated by the federal Bureau of Refugees and let to freedmen, who placed their acreage under cultivation. The freedmen typically paid their rent in crop-shares and erected insubstantial cabins upon the parcels they occupied.[40]

During this period, when Confederate currency was worthless and United States money was in short supply in Virginia, agricultural productivity was very limited. This was due in part to the fact that a large proportion of the state's working-age males had been killed or disabled during the war. The loss of slave labor, upon which an estimated half of local farmers had depended bought about major social changes but also economic ones. A visitor from the Midwest commented that local households' "cattle, sheep, hogs and

chickens were eaten by the soldiers, their horses and mules stolen." He said that several years passed until crops could be planted, for farmers had no money to buy seed or agricultural tools. One local man recalled his grandfather's saying that most people were able to farm only part of their land and were obliged to let the remainder grow up in weeds and bushes. Game animals (including predators) multiplied in the underbrush and created problems for those fortunate enough to own poultry and livestock. One contemporary writer noted that in eastern Virginia trade was dead and the population had neither the money nor the will to begin anew.[41] Local court records reveal that many people bought food and supplies on credit and ultimately were forced into bankruptcy.

Agricultural census records reveal that after the Civil War rural families throughout Tidewater began emphasizing animal husbandry or growing fruit and vegetables that could be marketed in urban centers. Many farms were operated by sharecroppers and/or free blacks who after the war stayed on in their old neighborhoods. During the late 1860s agricultural productivity declined by more than half and farm size declined by a third to a fifth. The actual number of local farms increased by 300 percent. The coming of the railroad during the early 1880s opened up new markets for local produce and stimulated the peninsula's agricultural economy.

The onset of twentieth century also brought significant changes to the region, for it was then that tourism began to play an important role in the local economy. As early as 1881, the 100th anniversary of the Yorktown Battle brought a limited boost to the region's economy. However, the 300th anniversary of Jamestown brought thousands of visitors to the area, demonstrating its potential as a tourist mecca. In 1931 the sesquicentennial of the Battle of Yorktown was celebrated and the town received nationwide attention. During the late 1920s and early 1930s nearby Williamsburg was restored to its colonial appearance.

The advent of World Wars I and II heralded the construction of military installations, such as Cheatham Annex and the Yorktown Naval Weapons Station, which exerted a substantial influence upon the peninsula's economy and fueled its development. On August 7, 1918, the United States Navy procured 12,562 acres of York County land for the purpose of storing and testing the mines that were to be used in the North Sea barrage of World War I. In 1919 when the Naval Mine Depot was developed, it was home to one of America's first torpedo shops. In 1920 a pier was built that served naval shipping until World War II.[42]

C. GLASSHOUSE POINT

1. Glasshouse Point: The Settlement Era (to 1699)

In Autumn 1608, when Captain John Smith was president of the colony, a small group of men undertook glass production at a site about a mile above Jamestown, on the western end of the isthmus that connected the island to the mainland. (see Figure I.2). There, at Glasshouse Point, some "Dutchmen" (actually Germans) and Poles who came with Captain Christopher Newport and the Second Supply of new settlers produced "a tryall of glass," a sample of which was sent back to England at the end of the year. Little else is known about this very early attempt at manufacturing, which efforts likely ceased during the winter of 1609-1610, the infamous Starving Time that nearly led to the colony's extinction.[43]

During the late 1610s and early 1620s, when Virginia Company officials sought to demonstrate the colony's potential for producing marketable commodities, a group of investors banded together to underwrite the cost of a glass-making operation. Its principal purpose was the production of glass beads that could be used



Figure I.2. Zuniga, [Untitled Chart of Virginia], 1608.

in trading with the Indians. However, its sponsors also were authorized to produce drinking glasses and other vessels. Provisions, tools and supplies were collected for use by Italian artisans and their helpers, who immigrated to Virginia during 1621. According to Treasurer of the Colony George Sandys, who oversaw the glassworks operation after the death of its leader, Bernardo and Vincentio (Vicencio) built a furnace that was destroyed shortly after its construction. It was repaired by Spring 1623, but the artisans complained that their sand would not run properly. Sandys informed Virginia Company officials that he had sent men to the head of the James River and to the sea shore in search of sand the artisans deemed suitable for glassmaking, but none of it was to their liking. In February 1624, when a census was taken of the colony's inhabitants, the Italians and three others were residing at the glasshouse, but within a year they had relocated to Treasurer Sandys' plantation opposite Jamestown and reportedly were clamoring to go home. Finally, the Italians and their families were allowed to return to England and the furnace they had built stood idle. The west side of the Glasshouse tract abutted the Governor's Land, a 3,000-acre tract set aside in 1619 toward the support of the incumbent governor.[44]

Sir John Harvey, Virginia's governor from 1632 to 1639 and a strong advocate of industrial development, came into possession of the glasshouse tract, which was described as 24 acres. Harvey, who resided at Jamestown, sold the Glasshouse tract to Anthony Coleman whose heirs, Edward and Joseph Knight, assigned it to John Fitchett. Fitchett conveyed the property to John Phipps and his partner, William Harris, who in June 1654 deeded it to Colonel Francis Morrison (Moryson). Morrison repatented the 24-acre tract known as the Glasshouse on September 6, 1655.[45]

During the mid-1670s, when Nathaniel Bacon Jr. led the popular uprising known as Bacon's Rebellion, he marched to Jamestown with his partisans, bent upon a confrontation with Governor William Berkeley. On September 13, 1676, they reached the isthmus that joined Jamestown Island to the mainland. Bacon, upon observing that Berkeley's men had erected a strong and defensible palisade across the island end of the isthmus, had his men build a "French work" near Glasshouse Point. It consisted of a steep embankment mounded from earth, trees and brush, behind which was a deep ditch. One eyewitness estimated that the opposing fortifications were only 500 to 750 feet apart.[46] The next day, when Bacon commenced his siege, he placed several loyalist leaders' wives upon the ramparts of the embankment his men had built and put on display some Indians he had captured, peaceful tributary natives who did not resist his attack. Bacon's supporters prevailed and after the loyalists withdrew, bombarded Jamestown with cannon they seized, destroying many of the capital city's buildings.[47]

In January 1677, after the popular uprising had been quelled, several of Nathaniel Bacon's followers were hauled before a military tribunal, convicted of treason and rebellion, and sentenced to death. Some of the condemned men were "hanged at Bacon's Trench" near Glasshouse Point.[48] A map produced by James City County surveyor John Soane in 1683 indicates that a road then passed by Glasshouse Point and crossed the periphery of the isthmus to Jamestown Island (Figure I.3).

2. Glasshouse Point: Colony to Nation, 1700-1790

By 1702 Glasshouse Point had come into the hands of William Broadribb, whose trustees on June 6, 1708, deeded the 24-acre tract to Joseph Chermaison (Chermerson). On January 12, 1712, Chermaison's widow and executor sold the Glasshouse property to Edward Jaquelin, a successful merchant and planter, who immigrated to Virginia in the late seventeenth century, married a wealthy widow, and purchased her two previous husbands' Jamestown Island property. Jaquelin acquired a leasehold within the Governor's Land that was contiguous to his 24 acres at Glasshouse Point and in 1718 he bought an adjoining privately owned parcel, ca. 26 acres that had escheated to the crown in 1700 and passed through several pairs of hands. It

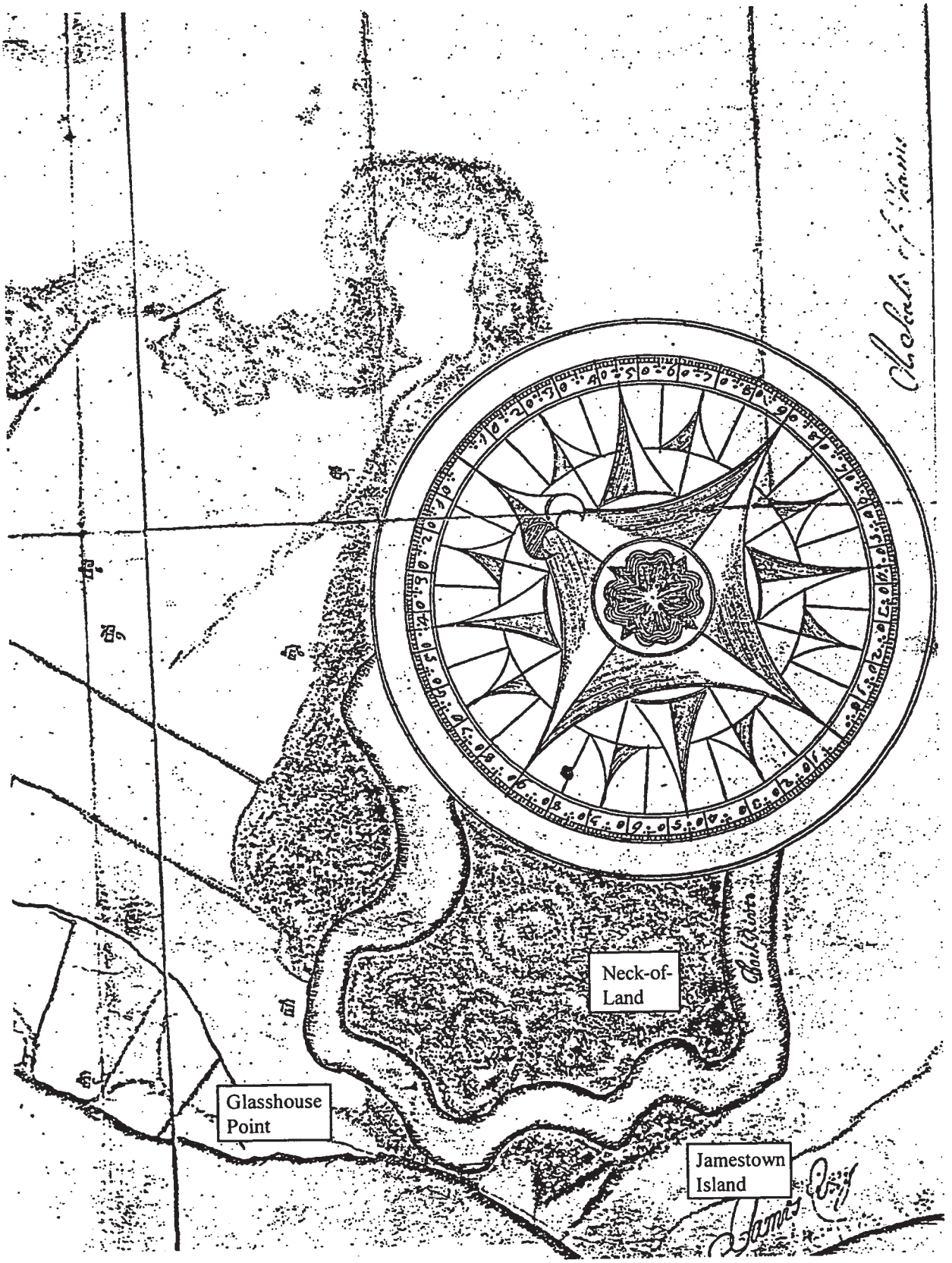


Figure I.3. Detail of Soane, "Survey for Thomas Lord Culpeper," 1683.

was likely around that time that he began developing the three properties into a quarter or subsidiary farm.[49]

In 1734, while Edward Jaquelin controlled much of the western end of Jamestown Island and his farm on the mainland, a group of local citizens asked the House of Burgesses to underwrite the cost of stabilizing the river banks at Sandy Bay, where the James River met Back Creek at Glasshouse Point. The petitioners contended that "great breaches between the river and the creek" made it dangerous to cross to Jamestown Island. The funding request was denied but resurfaced two years later, when a new group of petitioners claimed that the road leading to the public ferry at Jamestown was so badly eroded that it was inundated by the tide regularly. Again, the petition was denied.[50]

In November 1739, when Edward Jaquelin died, life-rights to his landholdings on Jamestown Island descended to his son-in-law, Richard Ambler, a Yorktown merchant. In 1745 Ambler acquired his wife's sisters' reversionary rights to that property, which he enlarged and developed into a family seat, and he obtained his late father-in-law's landholdings on the mainland, which he also used as a subsidiary farm. Ambler, like Jaquelin, entrusted the management of his agricultural operations to an overseer.[51]

In 1748 several local men asked the General Assembly to move the James River ferry's landing to their lots in Jamestown unless Richard Ambler (who had been granted the right to keep the ferry and owned almost all of Jamestown Island's western end) repaired the causeway that linked the island to the mainland. However, Ambler, Jamestown's burgess, protested the proposed move and nothing was done.[52] Official complaints about the causeway ceased for a time, perhaps because Ambler continued to hold office. Also, around 1750 a new church was built on the mainland, which eliminated the need of James City Parish communicants to use the causeway when making a weekly trip to the old church at Jamestown.

In February 1766, when Richard Ambler died, he left his James City County real estate, including Glasshouse Point, his leasehold in the mainland, and his Jamestown Island plantation to his eldest son, John Ambler I, who already was in residence at Jamestown.[53] John, an attorney and the burgess for Jamestown, died in May 1766, outliving his father by only three months. The land he had inherited descended to his brother, Edward, who resided in Yorktown.[54]

Edward Ambler moved to Jamestown Island, which he made his family seat, and succeeded his brother as Jamestown's burgess. But Edward's life, like John's, was cut short and he died in October 1768, leaving a widow and a six-year-old son. An inventory of Edward Ambler's personal estate, compiled in 1769, reflects his immense wealth and suggests that he was a highly successful merchant and planter.[55]

The widowed Mary Ambler stayed on at Jamestown, sharing the family home with her young son. However, in 1779 she was obliged to withdraw further inland to a position of greater safety, for combat associated with the Revolutionary War began taking its toll upon Jamestown Island. It was around that time that the James River ferry's landing site was shifted from Mrs. Ambler's property on Jamestown Island to her farm on the mainland. At her death, the late Edward Ambler's real and personal estate descended to their son, John Ambler II, who came of age in 1783. He inherited the ancestral plantation on Jamestown Island, the leasehold in the mainland, Glasshouse Point and the adjoining ca. 26-acre parcel, and literally thousands of acres in several other counties.[56]

By early Summer 1781, the British army occupied Williamsburg and its environs. Meanwhile, the Allies, under the command of the Marquis de Lafayette lay some 20 miles to the west, just out of reach. Throughout June the opposing armies parried each other's movements. Ultimately, Cornwallis received orders to go to New York. On June 30 he began moving his men to Jamestown so that they could cross the river and

head east to board transport ships at Portsmouth. By July 4, the main body of the British Army was encamped at the Ambler farm on the mainland, preparing to evacuate.[57]

Lafayette received word that the main body of the British Army already had withdrawn across the James and decided to attack whatever troops remained. He failed to perceive that he was being drawn into a carefully contrived trap that had been devised by the British. By early afternoon on July 6, American General Anthony Wayne's men had begun advancing across the mainland in the direction of Glasshouse Point. They encountered British pickets, who fired and then fell back. Through this feigning strategy, the Americans slowly but surely were lured into Cornwallis's trap. A little later, when Lafayette moved to a vantage point on the banks of the James, he realized he had been duped. In an attempt to save his men, who by then were in the enemy's midst, he positioned two battalions where they could cover Wayne's troops' retreat.[58]

When the American advance guard became aware of their vulnerability, they hastily withdrew under the cover of the firepower Lafayette had provided. As darkness fell, both sides retired from the battlefield and Lafayette withdrew further inland, leaving at Green Spring three companies of light infantry. On July 9 the British departed from Jamestown. Lafayette then moved to the Ambler farm, encamping upon the ground his enemies had occupied only two days before.[59] Traces of the July 6, 1781, battle were still in evidence during the 1850s, when historian Benson J. Lossing visited the Ambler farm, noting that its dwelling bore "many bullet marks made there during the battle at Jamestown Ford, on the 6th of July, 1781."[60]

In early September 1781 when French forces arrived at Jamestown Island as part of the military build-up preceding the battle of Yorktown, the Marquis de St. Simone had some of his men encamp at the Ambler farm, near the isthmus that during low tide provided access to the mainland. The Allies left Jamestown on September 4th, wading through waist-deep water at the isthmus, hand-carrying their artillery. St. Simone noted that a bridge built earlier by Cornwallis's men had been destroyed.[61] Maps produced by French cartographers during the American Revolution suggest that the Ambler property on the mainland, which included Glasshouse Point, was well developed (see Figure I.4).[62]

In 1783 Edward and Mary Ambler's son, John Ambler II, came of age and took possession of his inherited landholdings. He became one of eastern Virginia's wealthiest and most productive agriculturists. He lived at Jamestown but entrusted his property to a succession of overseers who managed his large number of slaves and agricultural operations. In 1788, when the publicly-owned acreage in the mainland John Ambler II's forebears had rented from the colonial government reverted to the state of Virginia, he purchased the leasehold that comprised more than 80 percent of his farm known as "The Maine" or "Amblers." Later he gave the farm in its entirety to his daughter, Mary Ambler Smith, who was obliged to sell it when she and her husband, John H., a Williamsburg lawyer, fell upon hard times.[63]

3. Glasshouse Point: The Early National Period through the Civil War (1791-1865)

According to John Jaquelin Ambler, who chronicled his family's history, his father, John Ambler II, built a log-and-stone causeway that connected Jamestown Island with the mainland. A map by James Kearney (1818) suggests that it was near the mouth of Sandy Bay. At least one contemporary account reveals that during the late 1790s the causeway was inundated by the waters of the James at high tide.[64] The precise location of Ambler's causeway is open to conjecture (see Figure I.5).

In 1832, Goodrich Durfey and William Edloe, asked the General Assembly to move the ferry landing from the old Ambler farm on the mainland to Jamestown Island. This, they claimed, would allow steamboats

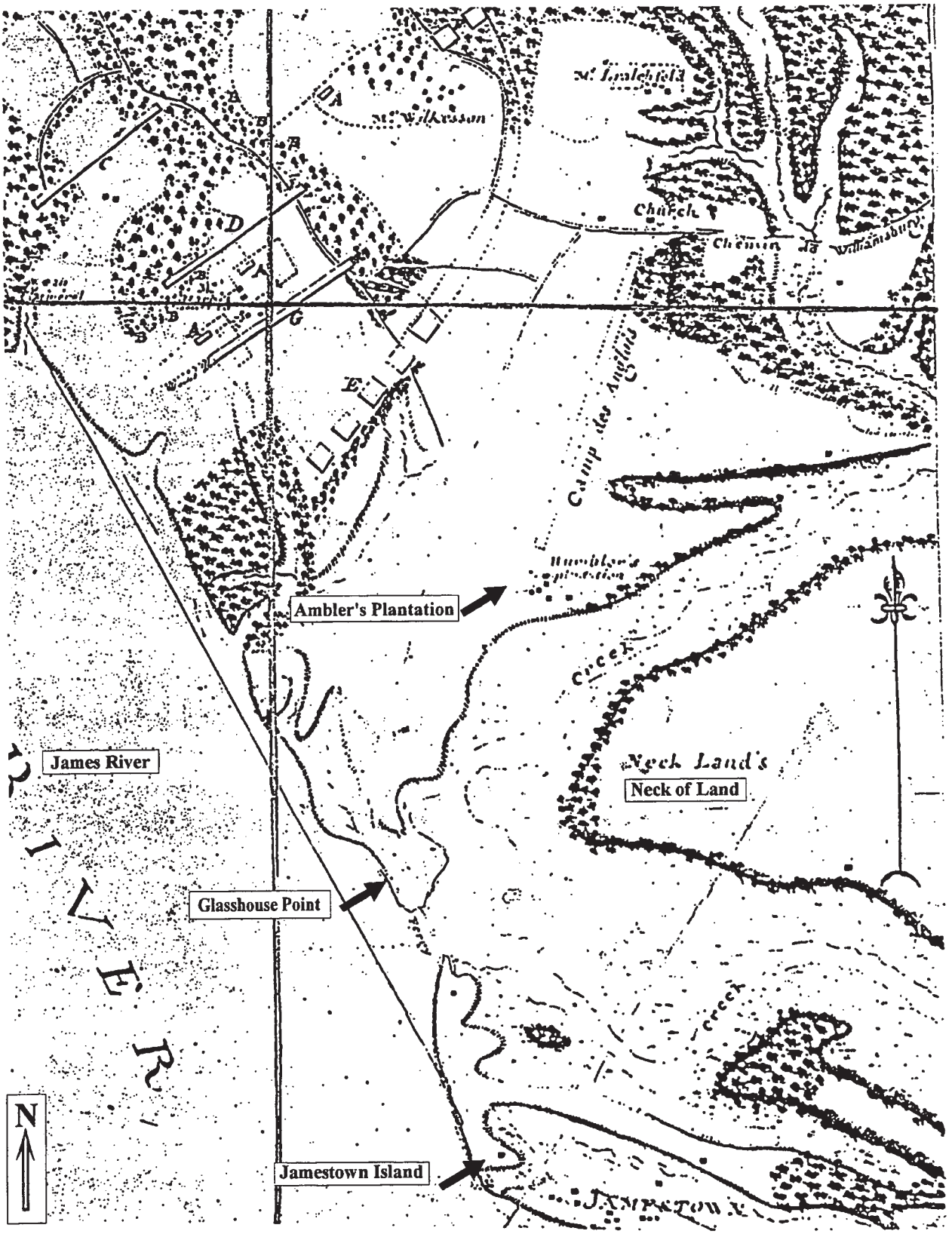


Figure I.4. Detail of Desandrouin, "Plan du terein a la Rive Gauche de la Riviere James," 1781a.



Figure I.5. Detail of Kearney, "Virginia Peninsula, 1818, showing Landings and Topography of 1781," 1818.

and ferries to dock more conveniently. The two local entrepreneurs also solicited the right to erect a toll bridge across Back Creek that would link the public roads on the island with the mainland. The late John Ambler II's son-in-law, John H. Smith, whose wife had inherited the Ambler farm and ferry landing, strenuously objected to the change, which threatened to relieve them of the ferry concession. He contended that "the old road on the Jamestown side has been wholly washed away by the river and the place where it ran is now in the river at a distance of 75 or 100 yards from the present shore" and added that "on the opposite side of the creek [where his farm was located] the former road is partly covered by water" and had been abandoned for more than 50 years. Smith also pointed out that his late father-in-law, John Ambler II, had built "a stone bridge [causeway] across the creek at a great distance from the old road, which was good as long as it lasted." The General Assembly, despite Smith's protests, moved the ferry landing to Jamestown Island and approved the toll bridge proposal. The new span, which was in place by January 1833, reportedly stood at the site formerly occupied by John Ambler II's stone-and-log causeway(see Figure I.6).[65]

In 1835, Goodrich Durfey, who invested in the toll bridge, purchased Jamestown Island and substantially enhanced its improvements. A decade later he sold it to John Coke, who then owned the old Ambler farm on the mainland. Coke sold the island within two years but retained his farm called "Amblers" until 1856.[66]

During the early 1850s when historian Benson J. Lossing visited eastern Virginia, he paused at Glasshouse Point and sketched Jamestown Island. He noted that "what was once a marsh" was "now a deep bay, 400 yards wide" and depicted "the remains of a bridge, destroyed by a gale and high tide a few years ago." He stated that in the recollection of one local man, "a marsh, so narrow and firm that a person might cross it upon a fence rail" was located "where the deep water at the ruined bridge now is," a probable reference to the toll bridge erected by Durfey and Edloe in 1832. Lossing predicted that within a few years Jamestown Island would be enveloped by a navigable channel.[67]

4. Glasshouse Point: Post Civil War to Parkway Construction (1866-ca. 1930)

Julianna Dorsey, who bought the Ambler farm from John Coke in 1856 and used the property as collateral to secure her purchase money, was obliged to default upon her mortgage with the result that in 1872 the farm reverted to the ownership of Coke's son and heir.[68] According to a topographic quadrangle sheet prepared in 1873, by that time a bridge had been erected behind the island, connecting it to the mainland (Figure I.7).[69]

In November 1893 Edward E. Barney and his wife, who then owned almost all of Jamestown Island, made an agreement with the Association for the Preservation of Virginia Antiquities (A.P.V.A.), which controlled the remainder, to share the cost of constructing "a wall or some other permanent means of preventing the further washing and caving of the bank" at the western end of Jamestown Island.[70] Although a bridge and causeway were constructed behind Jamestown Island during the 1890s, by 1918 both had become unusable. Virginia's General Assembly made a special appropriation to underwrite the cost of rebuilding them (see Figure I.8).[71]

In 1928 Chesapeake and Ohio Railroad agricultural agent C. J. Jehne purchased 5½ acres at Glasshouse Point, the land upon which glassmaking operations were carried out during the first quarter of the seventeenth century. Jesse Dimmick, then-owner of what he called Amblers-On-The James, discovered portions of four furnaces in which glass had been manufactured during the early seventeenth century. Mr. Jehne donated his land at Glasshouse Point to the James City County 4-H program, which club members used it as a camp until the 1940s. It was then acquired by the National Park Service (NPS). The NPS

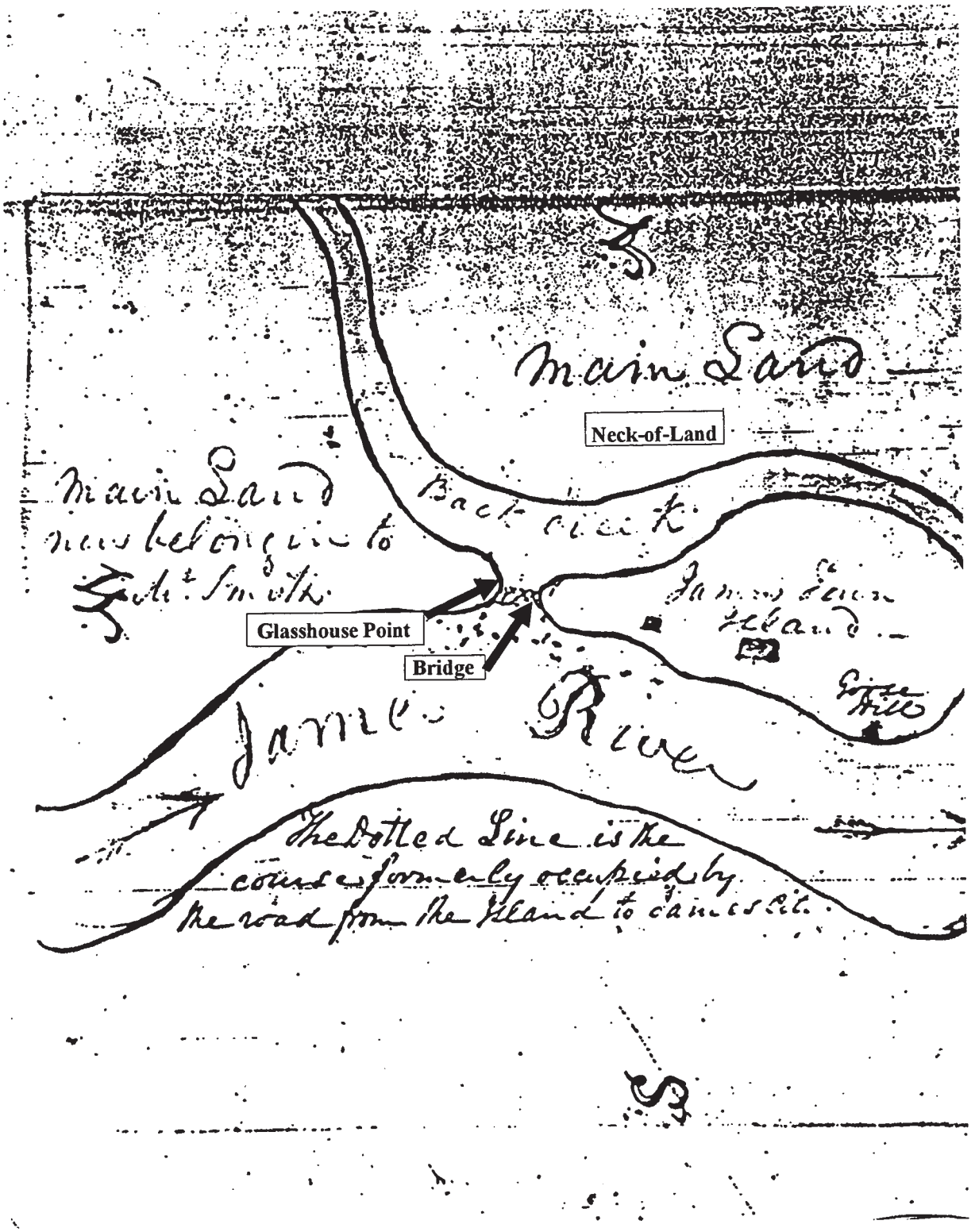


Figure I.6. Detail of map from James City County Legislative Petitions, 1777-1861:145.



Figure I.7. Detail of Donn, "James River from College Creek to Chickahominy River," 1873-1874.

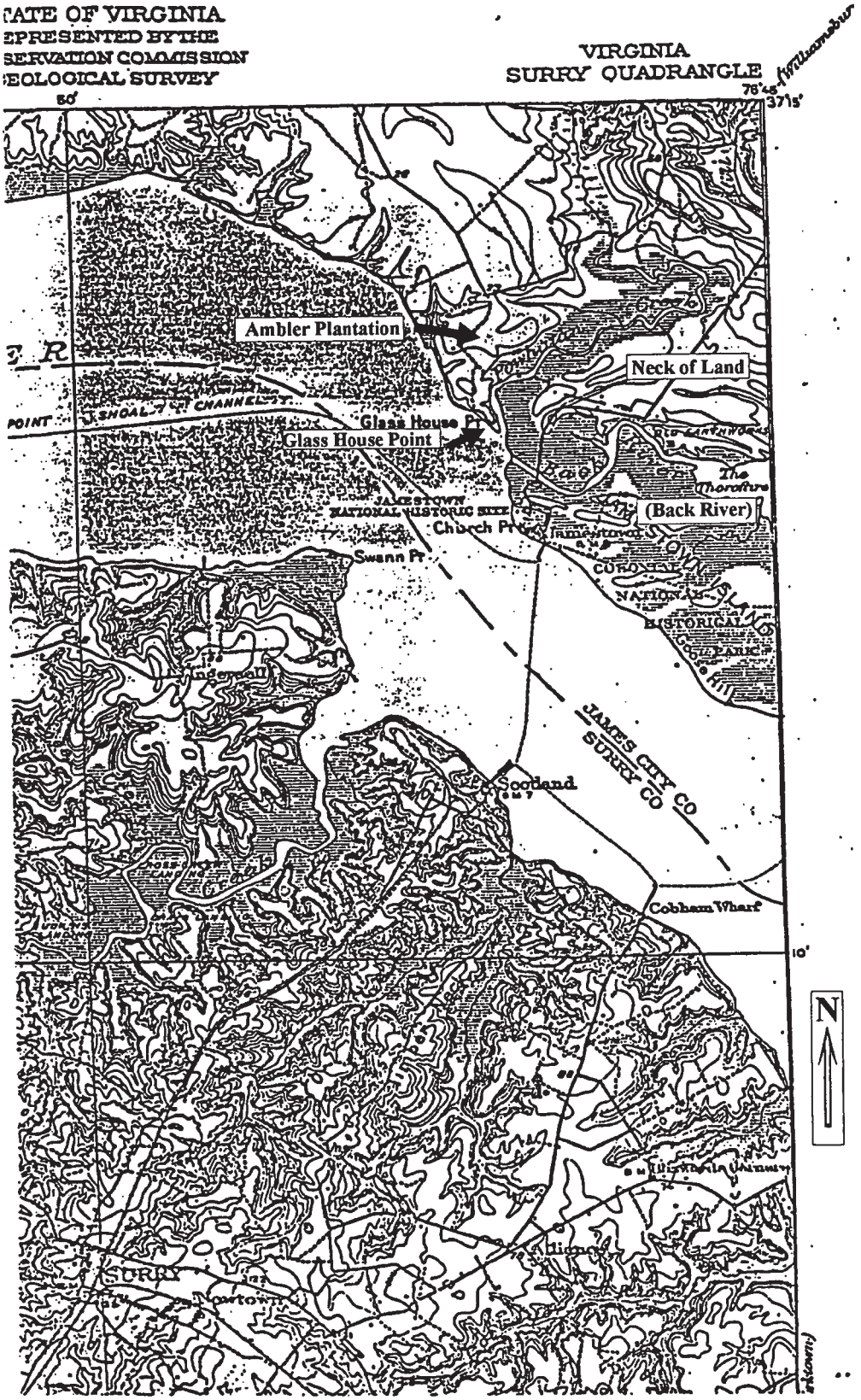


Figure I.8. Detail of USGS Quadrangle, "Surry," 1907.

conducted archaeological excavations at Glasshouse Point during the 1940s and 50s in preparation for a relatively elaborate celebration to be held in 1957 to commemorate the 350th anniversary of the first colonists' landing. Visitor centers were erected by both the state and federalgovernments, the Colonial Parkway was extended, linking Williamsburg to Jamestown, and a causeway was built that connected Jamestown Island to the mainland at Glasshouse Point.[72]

5. Glasshouse Point: Observations

When Virginia's first colonists arrived in 1607, an isthmus connected Jamestown Island to the mainland at what became Glasshouse Point. John Soane's 1683 survey of the Governor's Land reveals that a narrow roadway then traversed the riverside periphery of this isthmus, which probably consisted of marsh and packed sand. By 1734 erosion had taken a toll upon the isthmus, leading some people to claim that great breaches had occurred, making it unsafe to cross to the island. Complaints about the condition of the isthmus persisted and in 1779 Jamestown's public ferry was moved to the mainland. After the close of the American Revolution but before 1798, John Ambler II built a stone-and-log causeway to Jamestown Island. It, like the old isthmus, was subject to inundation. Although the causeway's location is uncertain, an 1818 map and a document accompanying an 1832 legislative petition suggest that it was at the mouth of Sandy Bay, perhaps where the isthmus had been. In 1833 a toll bridge was built, allegedly where John Ambler II's causeway had been. It was ruinous by the 1850s. In 1873 when the James River basin was mapped by topographic engineers, there was open water rimmed by marsh land where the isthmus had been and a new bridge behind Jamestown Island led to the Neck-of-Land. During the late nineteenth and early twentieth centuries, extensive efforts were made to check the erosion at Jamestown Island's western end. It was then that a seawall was built. During the 1930s C.C.C. workers installed rip-rap. A new causeway to the island was built in the 1950s.

Today the National Park Service operates an interpretive facility at Glasshouse Point, where visitors can learn much about the technology of early glassmaking. Although some archaeological excavations have been carried out at the site, much more remains to be done. Future research also should include an intensive investigation of documentary sources associated with the history of this site. Centuries of erosion and construction of the Colonial Parkway, the causeway to Jamestown Island, the 4-H Camp, the Jamestown Festival Park (later Jamestown Settlement) most likely have taken a toll upon some of the archaeological sites that once were in the vicinity of Glasshouse Point.

D. THE NECK-OF-LAND OR MAIN

1. Neck -of-Land: The Settlement Era (to 1699)

The Rev. Richard Buck, rector of the church at Jamestown from 1610 to ca. 1623, was entitled to use of the James City Parish glebe but he owned outright some acreage in the Neck-of-Land behind Jamestown Island, property he had acquired by means of the headright system. On January 20, 1619/20, Buck received a patent for 750 acres in the Neck-of-Land (known colloquially as the Neck O'Land), across Mill Creek from the James City Parish glebe. He and his wife, as Ancient Planters, were entitled to 100 acres each plus 50 acres for each of the 13 others whose passage they had paid to the colony. The Rev. Buck's 750-acre patent abutted east upon Mill Creek, south upon Back Creek, and west upon Powhatan Creek.[73] Buck's attempt to supplement his income by investing in land of his own was common among Virginia clergy, including at least three of his successors in the parish.[74] On December 18, 1620, Buck purchased William

Fairefax's 12 acres on Jamestown Island which contained a dwelling and another house. Court records suggest strongly that the Bucks elected to reside there.[75]

Letters the Rev. Richard Buck wrote to the Virginia Company's treasurer in May and June 1621 reveal that his salary was in arrears and that he urgently needed his pay. He said that his indentured servants' terms already had expired and that he had only one boy to help him work his land. He asked that servants be acquired with some ofhis back-pay. Buck and his family were residing upon Jamestown Island on March 22, 1622, when the Indians of the Powhatan Chiefdom launched a concerted attack upon the plantations along the James River. It is uncertain whether any of Buck's servants were in residence upon his acreage in the Neck-of-Land when the carnage began.[76]
As Virginia planters' fears subsided, they began returning to the outlying homesteads they had abandoned and once again, settlement commenced expanding at a rapid rate. During the 1620s, the population was highly mobile, for new immigrants typically leased land while meeting the headright system's residency requirements. On the other hand, established planters procured additional acreage by importing servants to the colony, using them to meet the seating requirements that pertained to newly acquired land. Many people owned two or more tracts of land and circulated between them. Some people who possessed land on the west side of College Creek also owned property on Jamestown Island and elsewhere. Thomas Harwood, who arrived in Virginia in 1623, within a year was renting acreage in the Neck-of-Land. By 1625 he had relocated to a leasehold on Mulberry Island, near which he later secured a patent.[77] Likewise, Thomas Sulley (Sully), a yeoman and Ancient Planter who resided in the Neck-of-Land during 1624, received a 6-acre parcel on Jamestown Island the following August, part of his first dividend of land.[78]

In May 1625 when a list of patented land was dispatched to England, the late Rev. Richard Buck was credited with 750 acres within the Corporation of James City, acreage that was described as planted. This was his patent in the Neck-of-Land. The 100-acre James City glebe also was attributed to Buck, along with 750 unimproved acres in Archers Hope, the territory that lay to the east of the Neck-of-Land.[79]

Sometime between December 1622, when the Rev. Buck hired a new servant, and February 1624, when a census was made of the colony's inhabitants, Buck and his wife died, leaving behind four minor children and a married daughter who lived locally, plus another daughter in England. By February 16, 1624, all of the Buck youngsters were living in foster homes in Jamestown and guardians had been appointed to protect their interest in their parents' estate. Court records reveal that the Buck estate was substantial and included land, goods, tobacco and livestock.[80]

In February 1624 a total of 25 persons were living in the Neck-of-Land near Jamestown Island. A careful examination of the 1624 census reveals that included in the total were three of the Buck children's five guardians (Thomas Alnutt, Richard Kingsmill, and John Jackson) plus their families and servants, including one black male. As none of the guardians then owned acreage in the Neck-of-Land, their presence suggests strongly that they were occupying the Rev. Richard Buck's 750-acre patent, which a year later was described as planted. Their presence not only would have preserved the Buck children's title to the property but also would have enabled the guardians to reap some personal profits from the land. In 1624 all of the Bucks' minor children were living at Jamestown in the home of Mary Astombe, a widow.[81]

In June 1624 three inhabitants of the Neck-of-Land described an event that took place there in April in the doorway of a house belonging to the late Rev. Richard Buck. The names of eight other Neck-of-Land residents were included in court records dating to November 1624. Richard Kingsmill, a churchwarden as well as guardian to the Buck children, appeared in court several times during 1624 and 1625 to report neighbors for drunkenness and hunting on the Sabbath. He also inventoried estates, witnessed wills, and

conducted other personal business.[82] Kingsmill, an Ancient Planter, served successive terms as a burgess in the colony's assembly, part of which time he was living in the Neck-of-Land.[83]

By February 1625, Thomas Alnutt and John Jackson, two other Buck guardians, had returned to Jamestown. Mara Buck, age 13 in 1625, then was living with an older sister, Bridgett Burrows, though her brother, Gersham, age 10, made his home with John Jackson and his 9-year-old son. Two younger brothers, Benomi (age 8) and Peleg (age 4), lived in Jamestown with Peter Langman, who by 1625 had married the widow with whom the Buckchildren had been staying in 1624. Mara and Benomi Buck were learning impaired.[84]

On February 4, 1625, when a muster was made of the Neck-of-Land's inhabitants, 14 people were present, not counting a recently deceased servant of Richard Kingsmill. Two nuclear families (Kingsmill's and Thomas Benett's) were living there along with three men who headed separate households. Richard Kingsmill was the only one of the Buck children's guardians who had stayed on in the Neck-of-Land. He was credited with five houses, a boat and a substantial herd of livestock. His household, which included his wife, his two children, and four servants, was relatively well provisioned and outfitted for defense.[85] As Kingsmill was the only one in the Neck-of-Land community to whom houses were attributed, the other four households probably occupied dwellings for which he was responsible.

Richard Kingsmill owned an 80-acre tract on Jamestown Island that abutted north and east upon Back Creek. His dwelling, the "Iland [sic] House," lay across the creek from the Rev. Buck's Neck-of-Land patent. Thus, Kingsmill would have been readily able to commute between the two properties by boat.[86]

In August 1626, John Burrows, Mara Buck's guardian and brother-in-law, was granted permission to relocate to the Neck-of-Land to look after her cattle, as long as he maintained his own property on the lower side of the James. In January 1628, Thomas Harwood complained to the colony's General Court that he "was much scanted for want of ground to plant at ye Necke of land, And the Overseers and Guardians [of the Buck estate] refused to let him [rent] any more." As Harwood then was living in Elizabeth City, he apparently had placed servants upon the acreage he was renting from the Buck estate's guardians. In March 1629 John Jackson, Gersham Buck's guardian, was appointed commander of the Neck-of-Land. Though he was a resident of Jamestown during the mid-to-late 1620s, his appointment suggests that he was still fulfilling his trusteeship of the Rev. Richard Buck's estate.[87]

It is not known by whom the Rev. Richard Buck's estate at Neck-of-Land was occupied during the early 1630s, although it is certain that the 750 patent remained intact. Thomas Crump (Crompe), who immigrated to Virginia prior to January 1625 and married to the Bucks' eldest daughter, Elizabeth, patented 500 acres in the Neck-of-Land on September 28, 1635, receiving 50 acres for his own personal adventure and the remainder for having transported 9 persons to the colony. His acreage lay inland and abutted south upon the Rev. Richard Buck's 750 acres, east upon Glebe Land (Mill) Creek and west upon Powhatan Creek. Crump served as a burgess for Jamestown in 1632 and represented the Neck-of-Land community the following year.[88] The Neck-of-Land was populous enough to warrant regular representation in the Grand Assembly and in 1639 a tobacco inspector was assigned to the area.[89]

On September 5, 1636, less than a year after Thomas Crump had patented 500 acres in the Neck-of-Land, he sold his property "together with all houses, etc." to his brother-in-law, Gersham Buck, who had just come of age and as the late Rev. Buck's eldest son, was eligible to take possession of his 750-acre patent. In 1638, when Gersham Buck died, his younger brother, Peleg, inherited his aggregate of 1,250 acres, which he repatented on May 29, 1638. Again, Crump's 500 acres were described as abutting south upon the Rev. Richard Buck's estate.[90] One or both of the Buck brothers may have occupied their late father's property during this period.

Sometime prior to November 1642, Peleg Buck died and his property in its entirety descended to his eldest sister, Elizabeth, Mrs. Thomas Crump. Younger sister, Bridgett, who was then married to William Davis, sued Mrs. Crump in an attempt to claim part of their father's estate because her first husband, John Burrows, had been one of its guardians. On November 29, 1642, the General Court ruled in Mrs. Crump's favor, which action was confirmed by the Grand Assembly. The matter re-surfaced in March 1655 when Bridgett's third husband, John Bromfield, attempted to claim part of the property. Again, the 1642 decision in favor of Mrs. Elizabeth Buck Crump and her heirs was upheld by the colony's assembly.[91]

By November 29, 1654, the Rev. Richard Buck's 750 acres and Peleg Buck's 500 acres had descended throughinheritance to Thomas and Elizabeth Buck Crump's son, John. When he patented 1,500 acres in the Neck-of-Land, he noted that it included his uncle's 500 acres, his grandfather's 750 acres, and 250 acres that he had acquired personally on the basis of 5 headrights. The 500- and 750-acre tracts were described as high land, whereas the 250 acres John Crump claimed on the basis of headrights consisted of marsh land that extended along Glebe Land Creek, in the southeast corner of the original Buck patent.[92]

John Crump bequeathed his 1,500 acres in the Neck-of-Land to his wife and daughter (both of whom were named Elizabeth) in equal shares. However, the widow Elizabeth outlived the daughter and remarried, taking as her husband Mathew Pagge (Page). In 1657, Elizabeth Buck Crump Pagge deeded the 1,500-acre tract to her new husband, who repatented it on March 19, 1662.[93] Through this means, the Neck-of-Land tract came into the hands of the Page family, who retained it for more than 80 years. By 1704 John Page, a descendant, had accumulated 1,700 acres of James City County land, which later dated documents reveal was located at the Neck-of-Land.[94]

A map prepared by Augustine Herrmann (1673) in 1670 indicates that plantations were then scattered along the banks of the colony's four major rivers and across the Chesapeake Bay, on the Eastern Shore. Although Herrmann's rendering is a somewhat schematic representation, it suggests that no major plantation seats were then located within the Neck-of-Land (see Figure I.9). A survey of the Governor's Land tract, which lay to the west of Powhatan Creek, indicates that the periphery of the Neck-of-Land plantation was marshy and covered with vegetative growth (see Figure I.3).[95]

2. Neck-of-Land: Colony to Nation, 1700-1790

After the colony's capital was moved to Middle Plantation (Williamsburg), Jamestown and its environs dwindled in importance. Settlement continued to expand inland, as the population grew and Virginia planters searched for new land upon which to plant tobacco.[96]

In September 1744 Mann Page, Jr., son of the late Mann Page of Rosewell, petitioned the House of Burgesses for permission to dispose of part of his father's entailed lands in order to settle debts against the estate. One of the tracts he wanted to sell was 1,700 acres in the Neck-of-Land at James City.[97] Page, upon receiving the legislature's approval, placed the Neck-of-Land tract on the market, at which time it was purchased by Carter Burwell of Carter's Grove Plantation. Burwell used it as a quarter or subsidiary farm on which crops and livestock were raised. Like Burwell's other ancillary properties, such as New Quarter and Force's Quarter, it was managed by an overseer. In 1756 Burwell bequeathed the property to his son and namesake, Carter Burwell II. As the latter died without legal heirs, the Neck-of-Land plantation descended to his sisters, who in 1777 obtained legal permission sell it so that its proceeds could be divided equitably. Contemporary maps suggest that the Burwell family made no attempt to develop the Neck-of-Land tract into a major plantation (see Figure I.10).[98]



Figure I.9. Detail of Hermann, "Virginia and Maryland, 1670," 1673.

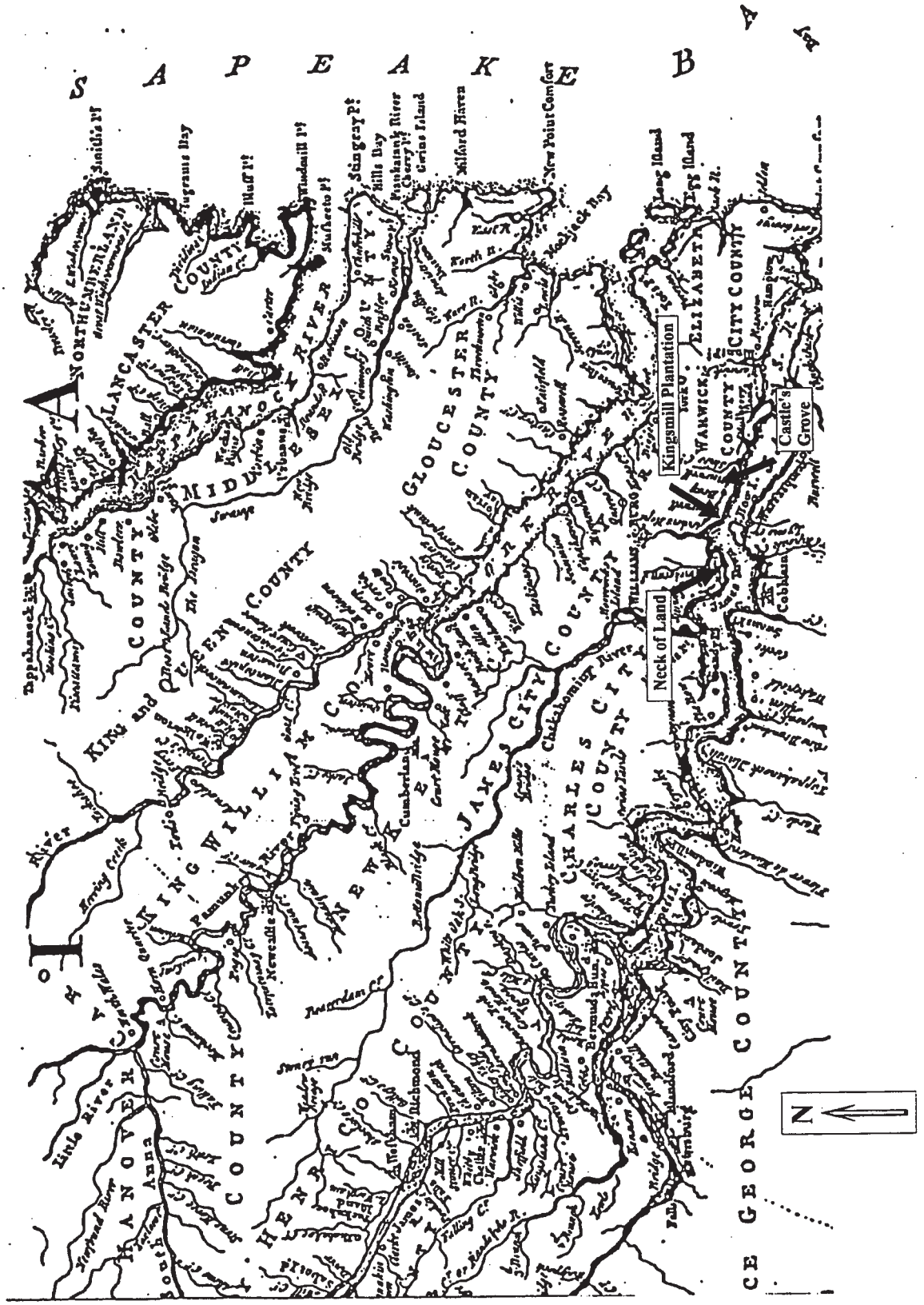


Figure I.10. Detail of Fry-Jefferson, "A map of the most inhabited part of Virginia . . .," 1751.



Figure I.11. Detail of St. Simone, "Carte des Environs de Williamsburg," 1781b.

At the head of Mill Creek was a bakehouse-sawmill complex owned by William Holt, where ships biscuits were produced were sold along with other commodities. A map prepared during the American Revolution by St. Simone (1781) indicates that the Neck-of-Land was wooded, rimmed by marsh and devoid of structural features. His contemporary, Nicholas Desandrouin (1781) identified the area as the Neck Lands and depicted a building that was located within a cleared area overlooking Back Creek (see Figures I.11 and I.4). Although the French encamped on Jamestown Island and the mainland during 1781, no records have come to light suggesting that combat occurred on the Neck-of-Land.

In 1785, William Holt, then owner of the Neck-of-Land plantation, which consisted of 2,000 acres, sold it to John Allen of Surry County, who died in ca. 1799. In 1805, the decedent's Neck-of-Land plantation and 920 acres he had purchased from James Southall were transferred to his brother, William Allen, who already owned the Littletown and Kingsmill plantations, which lay east of College Creek.[99]

3. Neck-of-Land: The Early National Period through the Civil War (1791-1865)

William Allen, who was born in 1768, owned an estimated 30,000 to 40,000 acres of Virginia land and 700 to 800 slaves. He resided in Surry County at Claremont and placed farm managers on his outlying properties to supervise his slaves and care for his crops and livestock. In 1805, the year in which the Neck-of-Land tract was transferred to William Allen, three overseers were in his employ and he was credited with 179 mature slaves plus 37 horses, asses and mules. It is uncertain how Allen's overseers and livestock were then distributed among his James City County properties.[100]

In 1810 when James City County's tax assessors commenced describing the boundaries of the rural tracts they evaluated, William Allen's 2,000 acres in the Neck-of-Land were said to abut west upon Powhatan Creek, east upon Newport (Glebe Land/Coleman/ Mill) Creek, and to border the property of a mulatto named Eliza Allen and the Wilkinson estate (126 acres that had been obtained from William Broadribb, which lay on the east side of Powhatan Creek). Allen's 920-acre Southall tract abutted William Coleman's land at Jockey's Neck and College Creek. William Allen's property was described identically through 1819.[101]

In 1820, when the county tax commissioner commenced listing the value of improvements that were on the tracts he assessed, William Allen's 2,000-acre Neck-of-Land plantation contained $1,200 worth of buildings, a value that remained constant through 1850. Meanwhile, the 126-acre Wilkinson parcel and 920-acre Southall tract were vacant. Thus, Allen's acreage in the Neck-of-Land was the focal point of his farming activities on the west side of College Creek.[102]

William Allen died on November 29, 1831, at age 63. As he had no direct descendants, he left the bulk of his estate (including Claremont) to his great-nephew, William Griffin Orgain, stipulating that he had to adopt Allen's surname. In 1831, the boy was three or four years old and his mother, Martha Griffin Orgain, a widow, was his legal guardian. In 1832, when the late William Allen's estate was appraised, the Neck-of-Land plantation was valued at $19,672, which estimate included its land slaves and livestock. Throughout this period, the farm was entrusted to an overseer. In 1842, Martha Orgain obtained the court's consent to purchase additional land on her son's behalf, using some of the profits from his inherited property. By 1847 she had bought Jamestown Island from John Coke, a 1,702¾- acre plantation that contained buildings worth an estimated $3,900. Throughout this period, land tax records attribute the Allen landholdings in James City County to William Allen's estate.[103]

In 1851 William Griffin Orgain came of age, assumed his uncle's name and took control of his estate. The county tax commissioner reduced the assessed value of the improvements on the 2,000 acre Neck-of-Land tract to $1,000 and combined all of Allen's landholdings on the west side of College Creek into an aggregate of 3,046 acres. Allen also was credited with Kingsmill, which consisted of 2,792 acres, and 1,702 ¾ acres called Jamestown. In 1855 Allen had 58 slaves and 17 horses on his Neck-of-Land tract. In 1857, the assessed value of the improvements on the farm rose from $1,000 to $2,500, a value that remained constant through 1861.[104]

Soon after the Civil War began, the Hampton Roads area was engulfed in armed conflict, as Union leaders were convinced that if they could move up the James-York peninsula from their stronghold at Fort Monroe, they could capture Richmond and bring the war to a timely end. The Confederates, meanwhile, erected fortifications at strategic locations along the James River. Some were built on Jamestown Island and a redoubt was constructed at the periphery of the Neck-of-Land (see Figure I.7).[105] The Union Army began its advance up the James-York peninsula in April and May 1862, creating momentary chaos.

During Spring 1862, when the Union Army under General George B. McClellan seized Williamsburg, the surrounding countryside fell under its control. A telegraph station was erected on Jamestown Island and later, pickets were stationed there to prevent Confederate reinforcements from slipping across the James. A companyof dismounted Union cavalrymen usually was posted on Jamestown Island, supported by a mounted reserve on the mainland. Each evening, a few boards were removed from the plank bridge that connected Jamestown Island with the mainland, to prevent the pickets on the island from being surprised from the rear.[106]

An account of a tragic episode that occurred at William Allen's Neck-of-Land plantation in Autumn 1862 reveals that some of his slaves seized the opportunity to challenge the old social order. In late October, Gilbert Wooten (a free black), three white men, and a young boy set out by boat from Claremont. They came ashore at the western end of Jamestown Island and walked toward the bridge that crossed to the Neck-of-Land. Near the foot of the bridge they were confronted by seven black males carrying guns, reputedly slaves from William Allen's Neck-of-Land plantation. They took the visitors into their custody and according to Wooten, "marched us up the Neck O'Land to the Great House where Mr. Emory used to live," which was then occupied by a slave named Windsor, the insurgents' leader. Wooten later testified that an estimated 100 black men, women and children had congregated at the Neck-of-Land plantation, 15 to 20 of whom were slaves of William Allen. When head overseer, James A. Graves, asked Windsor for permission to return to Claremont or continue on to Williamsburg, he responded by ordering his men to escort their prisoners back to the bridge. According to Gilbert Wooten, Graves antagonized his captors by demanding to know why the season's wheat crop hadn't been threshed, to which one of them retorted that "they would [do it] when they got ready." Graves also remarked that they had burned needlessly the houses on Jamestown Island.[107]

When the group reached the foot of the bridge to Jamestown Island, the blacks reportedly stepped back a few paces and fired upon their prisoners, then rifled their pockets for money. Gilbert Wooten, having been shot and presumed dead, crept away into the marsh, where he hid until darkness fell. Later, he made his way up what he called the Neck-of-Land Creek and sought the assistance of a friend at Green Spring. When Wooten arrived in Surry, he reported the incident to local authorities. Afterward, the episode was recounted in local newspapers.[108]

In 1864 another violent event occurred at the Neck-of-Land. According to one Union Army officer, an inexperienced company of black horse soldiers from the 20th New York Cavalry, mounted upon steeds unaccustomed to gunfire, was sent to Jamestown Island to relieve another unit. Near the foot of the bridge

to the island, they were ambushed by a band of Confederate sharpshooters, who quickly drove them back toward Williamsburg, inflicting many casualties. Military records, however, paint a different picture, for they indicate that the attack was made upon a Union Army ambulance escorted by only three cavalrymen.[109]

4. Neck-of-Land: Post Civil War to Parkway Construction (1866-ca. 1930)

A highly sensitive topographic map, prepared in 1873, depicts the Neck-of-Land in considerable detail. A road then led from the western end of Jamestown Island (near the church ruins) toward the bridge across Back Creek and the Neck-of-Land. It curved east, crossing the higher ground adjacent to the marsh, and then intersected a road (analogous to modern Neck O'Land Road) that ran on a straight course into the mainland. To the west of that intersection formed was a row of five buildings, irregularly situated along the south side of the road from the island. Two additional structures were located to the east of the intersection. Further east and close to the water's edge was a large square redoubt built by the Confederates, as shown in Figure I.7.[110]

In May 1865, William (Orgain) Allen leased his 4,000-acre Neck-of-Land farm to George B. Fields and John and James Clary, who were authorized to repair Allen's tenant houses but not to build additional structures without his permission.[111] After Allen's death in 1875, his vast estate came into the possession of his eldest son, William.[112] In January 1876 the younger William Allen conveyed the 3,191-acre Neck-of-Land farm to his mother, Mrs. Frances A. Allen, via a deed of gift. The tract was described as abutting east upon Coleman Creek and Durfey's Mill Pond, west upon Powhatan Creek, south upon Back Creek, and north upon the Fox and Walker properties.[113] Five years later, in 1881, Mrs. Allen deeded the Neck-of-Land farm to her son, John, who almost immediatelygranted Robert Neville (Nevelle) of Loudon County an option on the property. The sale was consummated in 1886.[114]

In 1887 Neville sold the Neck-of-Land farm to Edward Collings and Isaac A. Braddock, at which time a plat was made of the property, which consisted of 2,098.03 acres (see Figure I.12).[115] In 1889 Braddock and his wife, residents of New Jersey, conveyed the tract to Joseph E. Roberts, who also lived there. A year later, Roberts sold the Neck-of-Land farm to Henry S. Loucheim of Philadelphia.[116] His son, Samuel K., leased the farm to Thomas Shoosmith (Choosmith) of Davisville, Pennsylvania, for five years, with the option of extending the terms of the agreement.[117]

Meanwhile, in November 1892 Edward E. and Louise Barney of Dayton, Ohio, purchased Jamestown Island, which they decided to turn into a major tourist attraction. By that time Virginia's General Assembly already had conveyed the state's interest in the island's ancient church ruins and cemetery to the Association for the Preservation of Virginia Antiquities (A.P.V.A).[118] Articles that appeared in the Virginia Gazette during 1893 reveal that the Barneys intended to build a large, modern hotel and to construct an electric railway that linked Jamestown Island with Williamsburg. They erected a large wharf on the James River that had a warehouse and pavilion and began construction of a bridge and causeway to the mainland, linking the island to the Neck-of-Land.[119]

In February 1900 several local men, incorporated as the board of the Jamestown, Williamsburg and Yorktown Railroad Company, received a charter from the General Assembly. The new company's officers were authorized to purchase or condemn land between Jamestown and Yorktown as the right-of-way for their railroad, a route that logically would have taken the tracks across the Neck-of-Land. A spur line also could be built from the main line to the Kingsmill Wharf. By law, construction had to commence within two years and be complete within five years. The Jamestown, Williamsburg and Yorktown Railroad later

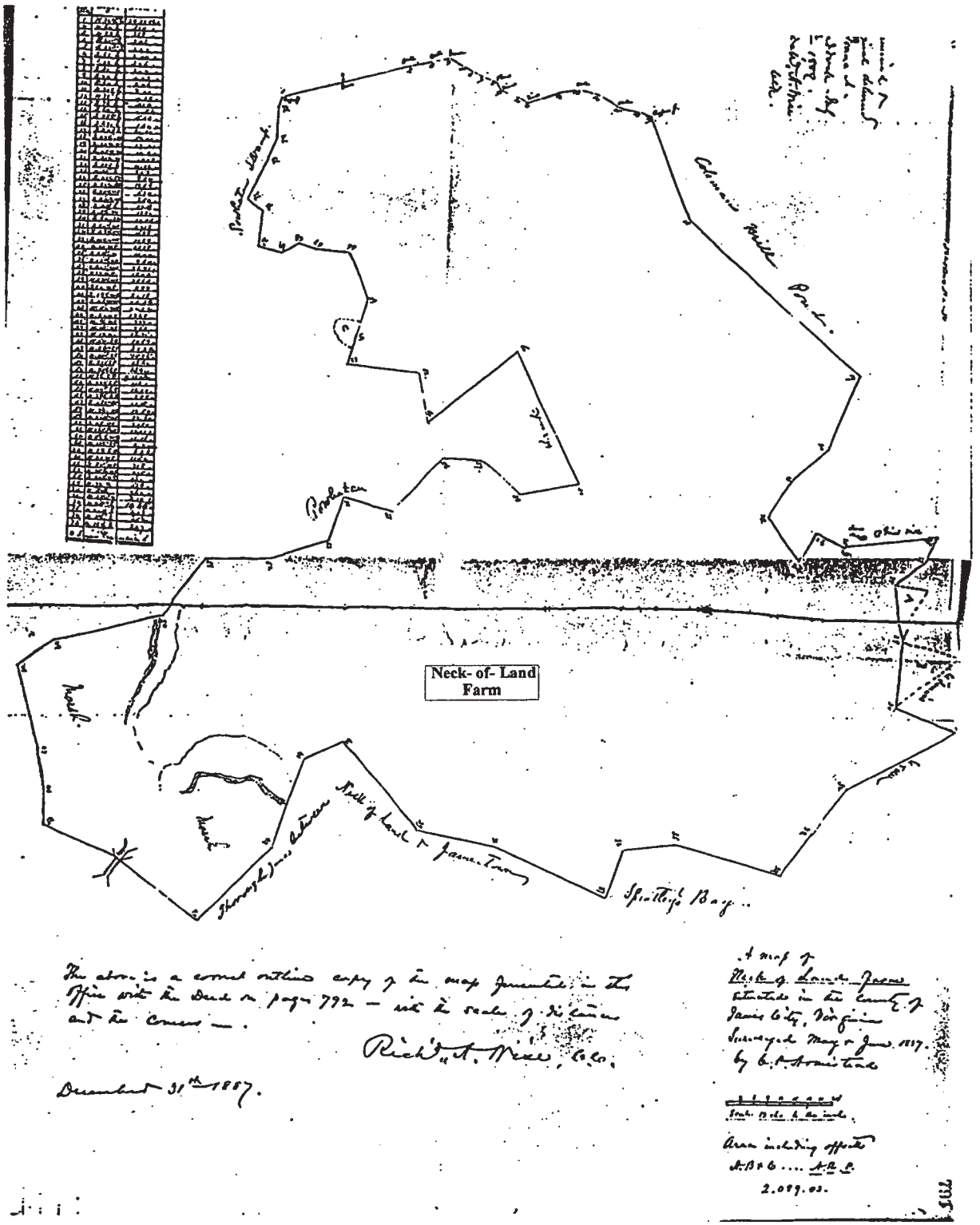


Figure I.12 Map from James City County Deed Book, 4:792, 1887.

consolidated with the Jamestown, Poquoson and Hampton Railroad to form the Jamestown and Old Point Comfort Railroad Company, but the project lost momentum, perhaps because the focal point of the 1907 Jamestown Exposition was near the mouth of the James.[120] In 1918, when the General Assembly began planning for the 300th anniversary of America's first legislative assembly, a special appropriation was made to underwrite the cost of rebuilding the bridge and causeway that had been constructed during the 1890s, which by then were unusable. Again, their terminus was on the Neck-of-Land (see Figure I.8).[121] At the death of Neck-of-Land farm owner Samuel K. Loucheim sometime prior to May 1903, the property descended to his heir, Chandler B. Chapman of Madison, Wisconsin.[122] In 1905 Chandler and his wife subdivided the farm, conveying 200 acres to Edwin Gilley and 300.65 acres to Charles Frank Ayres of Oregon, Wisconsin. Ayres and his wife relocated to the city of Williamsburg within a year of their purchase date.[123] In 1917 the Ayres couple mortgaged two-thirds of their 300-acre tract and sold the remainder to Floyd R. Ayres, who in 1935 purchased the rest of the property from the couple's creditors. Later, Ayres sold 64 acres of the farm to the United States government.[124]

5. Neck-of-Land: Observations

Throughout the seventeenth century the Neck-of-Land behind Jamestown Island was considered a desirable piece of property, probably because of its geological and topographic characteristics which made it ideally suited to agriculture. Although it was close to the James River, it lacked the deep-water access to shipping that might have led to its development into an important plantation. During the late 1650s one of the Rev. Richard Buck's daughters intermarried with the Pages, who were wealthy and prominent. But their interests lay elsewhere and they used the property as a subsidiary farm or leased it to tenants. This pattern persisted until the close of the nineteenth century. Thus, throughout almost all of the Neck-of-Land farm's history it was in the hands of absentee owners.

Up until the mid-twentieth century the Neck-of-Land was rural in character, although a limited amount of residential development lined Neck O'Land Road, which terminates at the Colonial Parkway. More recently, the Neck-of-Land tract has been subjected to suburban development. Despite James City County's governing officials' attempts to control the quality and quantity of growth within their jurisdiction, the Neck-of-Land has lost much of its rural character. These changes exert an impact upon the Colonial Parkway's viewshed.

E. THE JAMES CITY PARISH GLEBE

1. James City Parish Glebe: The Settlement Era (to 1699)

In November 1618 when the Virginia Company of London issued its Great Charter, detailed instructions were provided to Sir George Yeardley, the colony's new governor. One of those directives called for setting aside a 100-acre tract in each of the colony's four corporations that was to serve as a glebe or home farm for the incumbent clergyman. In addition to this stipend, each qualified minister was to have six servants to work his land. James City Corporation's glebe, which was laid out in 1619, lay on the east side of what became known as Mill Creek and eventually extended eastward to what became known as Glebe Gut.[125]

In 1634, when the colony was divided into eight shires and county courts came into existence, some of the responsibility for maintaining public morality was transferred from the Established Church's clergy and

churchwardens to the judiciary. By 1635 vestries (parish officers analygous to those in early seventeenth century England, who had the right to levy church taxes) had been created to serve parishes, which boundaries were set by law. The James City Parish, which church was on Jamestown Island, encompassed a vast territory that initially extended west to the Chickahominy River and east to the plantation called Martin's Hundred.[126]

In 1645 Harrop Parish was created out of the territory between Archers Hope (College) Creek and Martin's Hundred. The Rev. Thomas Hampton, rector of James City Parish from 1640 to 1645, favored Harrop's formation because of "the dangerous times and inconveniences" for the inhabitants' to commute to the parish church at Jamestown. As settlement spread and the population increased, parish boundaries were adjusted accordingly and some of the colony's older parishes were absorbed into newer ones. In 1652 when Surry County was formed out of James City County's southerly territory, James City Parish was reduced in size, for like the county, it lost its land on the lower side of the James River. This would have reduced significantly the financial support the James City Parish received through taxation. James City's size increased slightly in 1720 when it gained the eastern portion of Wallingford Parish, which was dissolved.[127]

The House of Burgesses in 1696 enacted legislation that set the annual salaries of the clergymen and the perquisites that supplemented their income. Parish vestries were ordered to purchase 200-acre glebes and to construct adequate housing for their ministers.[128] It was likely then that James City Parish's 100-acre glebe was enlarged to 200 acres. If the surveyor who delimited its bounds used a convention commonly employed in the seventeenth century, the 200-acre glebe would have extended for 1,650 feet along the river front (the approximate distance between Mill Creek and Glebe Gut) and had perpendicular side lines that ran inland for a mile.[129]

Some Virginia clergy complained that their glebes were unfit for occupancy or lacked houses, orchards and other conveniences. This led them to lease their glebes to tenants and live elsewhere. Such may have been the case with James City Parish rector Francis Bolton, who in 1628 requested (and received) official approval to rent out his glebe. Many burgesses were unsympathetic toward the clergy's complaints and contended that a minister's salary, perquisites and glebe enabled him to earn as good a living as any gentleman seated upon a good plantation with a dozen servants.[130]

2. James City Parish Glebe: Colony to Nation, 1700-1790

In 1724 when the Bishop of London queried Virginia clergy about conditions in their parishes, nearly half of those who responded reported that they had no glebe or had been provided with one that was inadequate or worthless. A considerable number alleged that their vestries failed to maintain adequately the buildings on their glebes. The Rev. William LeNeve of James City Parish, rector from 1722 to 1737, reported that his glebe lacked a dwelling and that the vestry paid him a housing allowance. He said that his parish was approximately 20 miles long and 12 miles wide and had 78 families. LeNeve indicated that approximately 130 people attended the services he conducted in the church at Jamestown. He noted that his parish had neither a school nor a library.[131]

In 1727 the House of Burgesses passed a law requiring Virginia parishes to provide clergy with good, convenient glebes that were at least 200 acres in size and contained adequate housing and outbuildings. Legislation enacted in October 1748 officially defined what constituted an adequate glebe. Each 200-acre glebe was to include "one convenient mansion house, kitchen, barn, stable, dairy, meathouse, cornhouse and garden well paled or enclosed with mud walls," plus other conveniences a vestry deemed appropriate.

Each parish minister was obliged to maintain his glebe properly; if he failed to do so, he or his estate could be sued in order to recover whatever funds were needed to make the necessary repairs. The vestry was to see that the parish glebe was in good condition when a new minister arrived and they were to see that it was kept in good repair during his incumbency.[132]

The availability and affordability of good land within a parish were important considerations, as was the cost of building materials. A vestry, when hard-pressed to meet the financial needs of a rapidly expanding parish, which included the construction of new churches and chapels, typically assigned a lower priority to providing good clergy housing. On the other hand, more populous parishes that included urban communities (for example, Jamestown) had a potentially greater number of people upon whom church dues could be levied. A vestry's financial acumen was important as was its members' desire to attract—and keep—well qualified ministers. When vestries undertook the construction of churches, glebe housing, poorhouses, and other parish facilities, they customarily advertised for workmen. Once a builder was found, a legally binding contract was negotiated and signed. It usually specified the size and fabric of the structure to be built and the character of its architecture. If the job was not completed in a timely and satisfactory manner, partial payment could be forfeited or a severe penalty imposed. Sometimes, contractors were obliged to post a bond to insure completion of their work.

Research on parish glebes in Tidewater Virginia demonstrates that they tended to be at least 200 acres in size but many were as large as 300 or 400 acres. The frequency of clergy complaints about the infertility of their glebes suggests that vestries sometimes bought poor quality land because it was cheap and they needed to conform with the legally required 200-acre minimum. Late seventeenth century glebe complexes, as seen through the documentary record, usually consisted of a frame dwelling, a kitchen and sometimes a barn. By the early-to-mid eighteenth century, most glebes also had a dairy, smokehouse and barn and sometimes, a tobacco house. Most seventeenth century glebe houses were somewhat smaller in size than their eighteenth century counterparts and were likely to be constructed on wooden posts or brick pillars. Later, most glebe houses sat upon brick foundations. Wooden chimneys were relatively common throughout the seventeenth and early eighteenth centuries and vestry records suggest that fires were frequent, often leading to complete destruction of the building and its contents. During the eighteenth century wooden chimneys were supplanted by brick. Many glebe complexes included quarters for the minister's slaves and some had housing for an overseer. An occasional vestry provided its clergy with one or more slaves and some livestock.

A map prepared by Alexander Berthier in 1781 (see Figure I.13*)* indicates that much of the land near the mouth of College Creek was clear and rimmed by forestation and marsh. Allied encampments were situated there in 1781. On the other hand, Nicholas Desandrouin also in 1781 identified the James City Parish glebe (see Figure I.14). Its waterfront acreage was clear but low-lying and marshy, where as the buildings on the glebe were locatedfurther inland, near a road that passed through the Spratley farm toward the tip of Archers Hope point. William Spratley (Sprattley), whose father, John, had acquired 350 acres of local land by 1704, inherited his property in 1728 and retained it throughout the rest of the eighteenth century.[133] A short distance inland was the domestic complex of "Mr. Bland," the Rev. William Bland, the incumbent parish rector, who then owned Jockey's Neck (see Figures I.13 and I.14). Bland, who attended the College of William and Mary and became an ordained Anglican minister in 1767, and by 1769 was serving James City Parish in some capacity. In 1774 he was appointed parish rector and conducted services in the Church on the Main, which was built during the 1750s to replace the old church at Jamestown.[134]

In 1786 when the General Assembly passed the Statute of Religious Freedom, Virginia's state church was disestablished and denied the right of general taxation. Under the new statute, abandoned parish-owned real estate reverted to the state. Vestries were permitted to retain parish glebes only until the incumbent

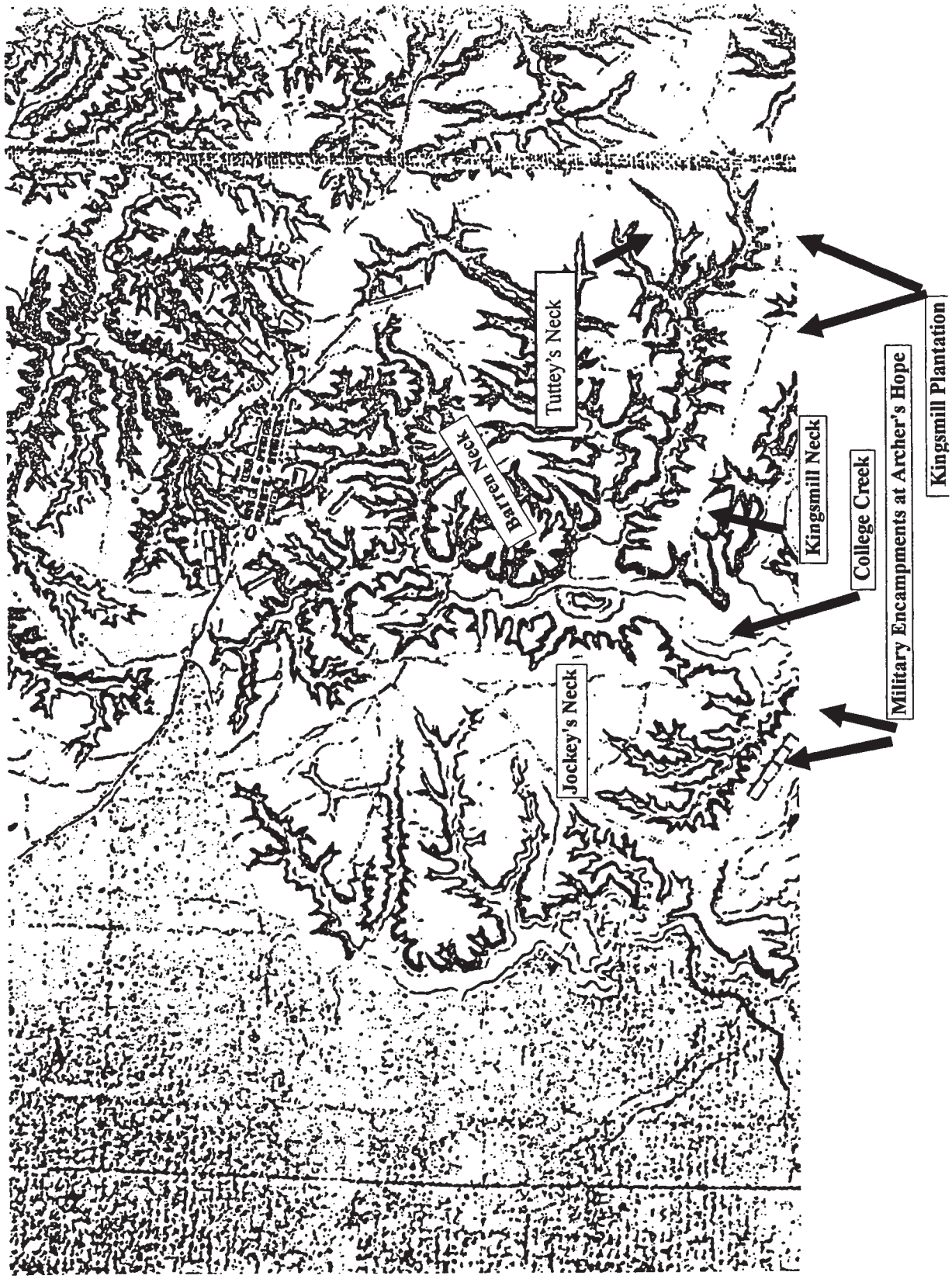


Figure I.13. Detail of Berthier, [Untitled Map of York and Gloucester], 1781.

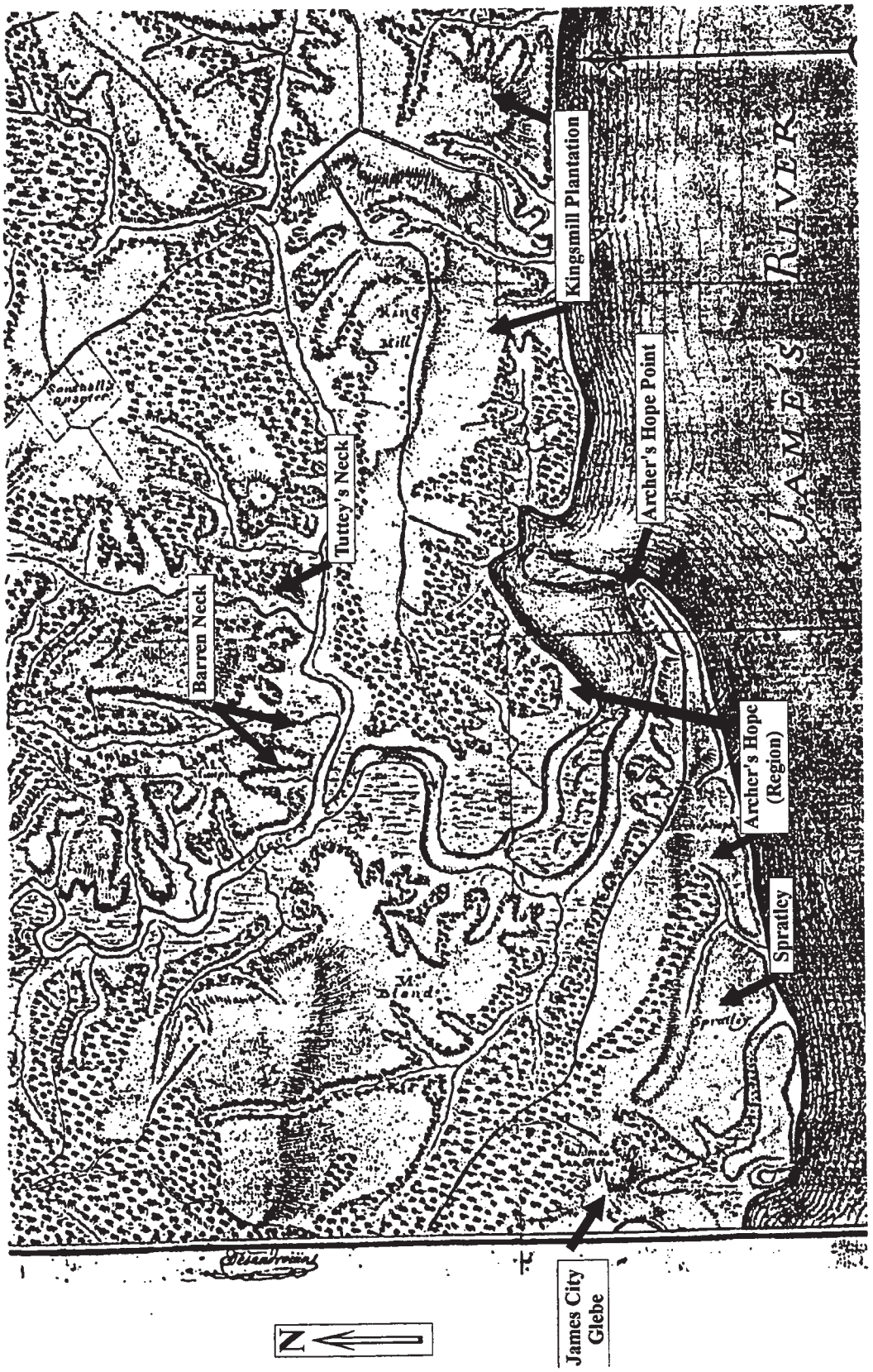


Figure I.14. Detail of Desandrouin, "Carte des Environs de Williamsburg," 1781b.

clergyman's death and then were obliged to offer it for sale to the highest bidder. Money yielded by the sale of parish-owned real estate was set aside for the education of local children or given to county Overseers of the Poor, the officials responsible for providing public welfare.[135]

In 1814 the Rev. John Bracken, rector of Bruton Parish from 1773 to 1818, purchased the 405-acre James City Parish glebe from the state of Virginia. Bracken was a professor at William and Mary and the master of its grammar school and from 1812 to 1814 served as the college's president. He was a former mayor of Williamsburg, where he owned property, and he also had land on the York River.[136]

In 1820 the tax assessor credited the Rev. Bracken's estate with 405 acres that had $100 worth of improvements. He probably used the old glebe as a subsidiary farm or leased it to tenants. The property was identically described and taxed until 1831, at which time Bracken's daughter, Julia Avery, sold off 180 acres. The farm's size diminished still further in 1835 when 100 acres were sold that contained the property's $100 worth of improvements. In 1838, the residual 125 acres (which were vacant) were deeded to John M. Gregory. He retained the property until 1842, when he sold it to William S. Peachy, who conveyed 120 acres to Benjamin E. Bucktrout of Williamsburg in 1846.[137]

Bucktrout combined the 120 acres he purchased from Peachy with the 320-acre Jockey's Neck tract he bought from Thomas Coleman's executors in 1846. Neither farm contained improvements that the county assessor deemed taxable.[138] Bucktrout died in 1847 without having developed his property.[139] His executors disposed of his 440 acres called Jockey's Neck shortly after his death. During 1848 they conveyed to Goodrich Durfey of Williamsburg the decedent's 320 acres (William Bland's Jockey's Neck) and in 1849 they sold him the 120 acres that originally had been part of the glebe. Durfey immediately after purchasing Bucktrout's 440 acres set about developing Jockey's Neck but allowed the glebe tract to stand vacant. In 1851 the tax assessor consolidated both parcels, listing them as 440 acres called Jockey's Neck, and he noted that the improvements on the tract as a whole were valued at $650.[140] From that point on, the land ownership traditions associated with the James City Parish glebe and Jockey's Neck were steadfastly intertwined (see Archers Hope with Jockey's Neck).

4. James City Parish Glebe: Post Civil War to Parkway Construction (1866-ca. 1930)

In 1873 when a topographic map was made that depicted what in 1781 comprised the James City Parish glebe, much of the area was devoid of vegetation. To the east, the Spratley farm largely was cleared but contained acreage that appears to have been planted in orchards. Inland was a redoubt and two chevron-shaped gun emplacements, remnants of the old Confederate line below Williamsburg (see Figure I.15).[141]

5. James City Parish Glebe: Observations

Loss or destruction of the vestry records for the James City Parish prevent us from knowing how its glebe was developed. The Rev. Richard Buck, first parish rector to have use of the glebe, chose to live on Jamestown Island and it appears that many of his successors followed suit, occupying rental property or acreage they owned personally. The original 100-acre parish glebe was doubled in size during the second half of the seventeenth century in response to changing legal requirements regarding clergy support. By the time of the Revolutionary War the tract contained an estimated 405 acres. Its history is that of a subsidiary or tenant farm.

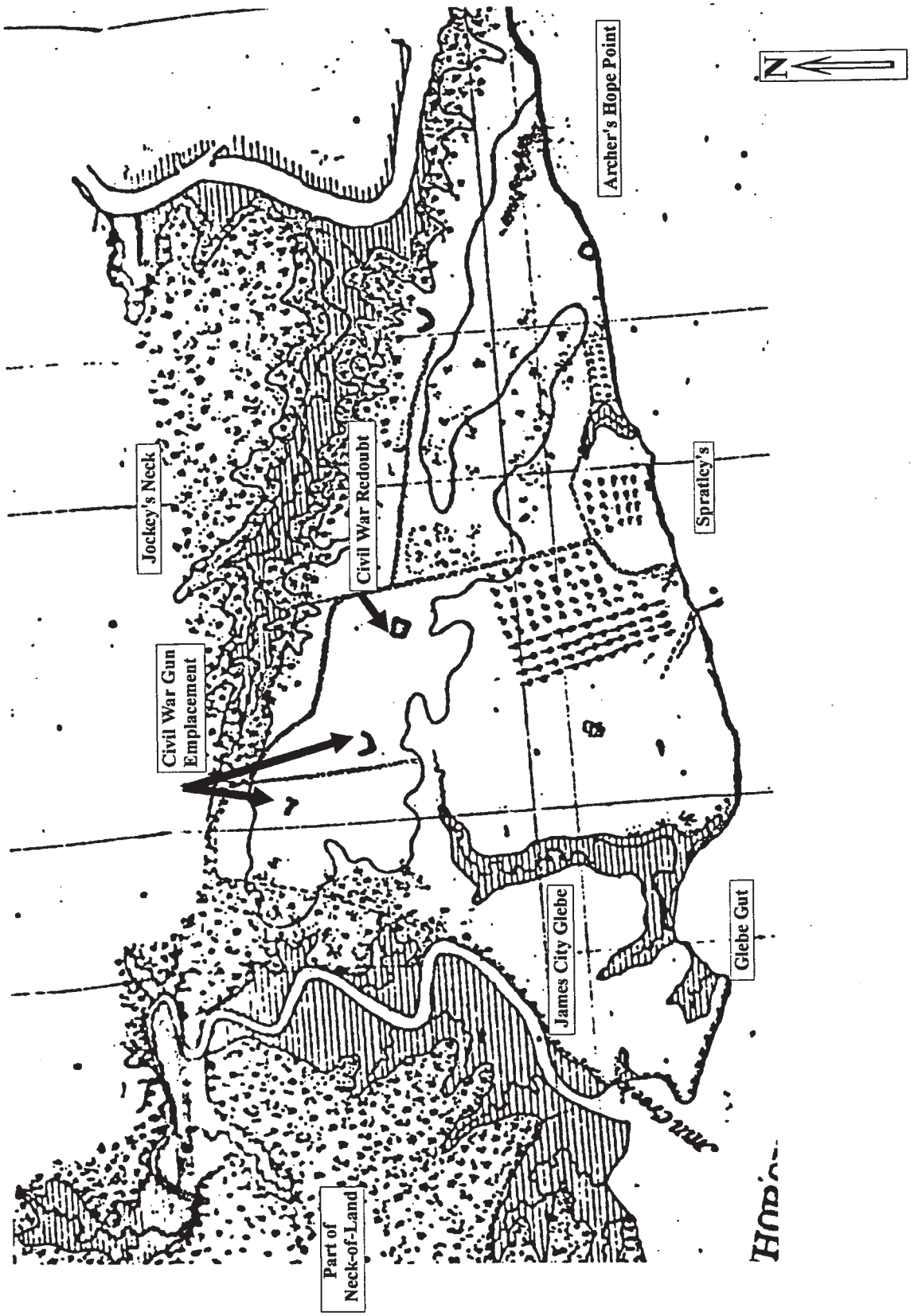


Figure I.15. Detail of Donn, "James River from College Creek to Chickahominy River," 1873-1874.

The James City Parish Glebe, like the Neck-of-Land and Jockey's Neck tracts, constitutes an important part of the Colonial Parkway viewshed. The visibility of the nuclear power plant, which indicates the location of Hog Island provides an opportunity to educate the public about that area's history and the fact that the early colonists viewed the river as a highway, not a barrier. Moreover, the histories of Jamestown Island and Hog Island are closely linked.

F. ARCHERS HOPE WITH JOCKEY'S NECK

1. Archers Hope: Contact Era, Presettlement--The Spanish in Archers Hope

During the 1550s or early 1560s, a Spanish ship visiting the Chesapeake took aboard an Indian boy, reputedly a chief's son, and transported him to Spain where he was converted to Christianity and renamed Don Luis. Later, he traveled to Cuba and St. Augustine, where Jesuit missionaries heard him speak of his native land, which he called Ajacan. It was then they resolved to set sail for the Chesapeake to spread the Christian message, using Don Luis as an intermediary.

In 1570 a Spanish ship bearing eight Jesuit missionaries, Don Luis, and a Cuban boy named Alonzo de Olmos arrived in the Chesapeake Bay or Bahia de Santa Maria. Entering a broad, navigable river, which description fits the James, they continued inland approximately 40 miles to the converted native's homeland. They reached a small stream analogous to College (or Archers Hope) Creek at the eastern end of Jamestown Island and followed it inland. The Jesuits then portaged overland to another navigable stream (comparable to Queens Creek) which took them to a large river, probably the York. At that point they began searching for a suitable place to establish their mission.[142]

The Jesuits learned that there had been six years of famine and death in Don Luis's land and that many Indians had died or left to search for food. By way of the returning ship, the missionaries sent word to St. Augustine that they needed a supply of corn for their subsistence and to dispense to the natives for use in their gardens. This, they felt, would provide them with an opportunity to sow the seeds of Christianity. But a few months later, when a relief ship came, the missionaries were nowhere to be seen and canoes filled with Indian warriors initiated an attack. A native captured in the melee revealed that the Jesuits were dead, although young Alonzo de Olmos was still alive.[143]

In 1572 Cuba's Governor Pedro Menendez de Aviles decided to visit the Chesapeake to search for the Cuban boy and to learn first hand what happened to the Jesuit missionaries. He dispatched a small armed vessel carrying a priest, 30 soldiers, and the Indian captured by the relief ship, to retrace the route taken by the Jesuits. They sailed up the James, entered College Creek, and continued a short distance inland before dropping anchor. When a group of natives came aboard to trade, the Spaniards noticed that one was wearing around his neck a silver paten or flat plate, part of the missionaries' communion silver. The Spanish promptly seized their visitors, weighed anchor, and headed back downstream, fending off attacking warriors along the way. Although the Indians offered to return the Cuban boy, he failed to appear at the appointed time. The Spanish decided to depart, but not before firing an arquebus or cannon into a throng of native onlookers that had assembled on the shore. Later, the Spanish learned that the Indians had taken young Alonzo de Olmos directly to Governor Menendez at the mouth of the James.[144]

Alonzo informed Menendez that Don Luis had discarded his Christian religion as soon as he reached his homeland and fled to his own people. The missionaries, who were left to fend for themselves in the wilderness, built a small hut in which to live and worship and then resigned themselves to great hunger and

inconvenience. Later, they sent word to Don Luis, asking for his help in bringing religion to his people. Although he feigned his willingness to cooperate, ultimately he and his companions fell upon the missionaries and killed them.[145]

Menendez, having failed to capture Don Luis, held an inquisition using Alonzo de Olmos as translator. Although some of the Indians captured at College Creek were deemed innocent and released, the remainder were catechized, baptized and then hanged from the ship's yardarm. The Spanish then weighed anchor, undoubtedly leaving in their wake a legacy of dread and suspicion.[146] The Jesuit mission site, meanwhile, faded into extinction, probably somewhere overlooking the York River, between Queens and Indian Field Creeks.

2. Archers Hope: The Settlement Era (to 1699)--English Colonists

On May 12, 1607, Captain Christopher Newport and the three small vessels under his command arrived at a point of land that extended invitingly from the west side of the entrance to what became known as College Creek. They called the promontory Archers Hope in recognition of Gabriel Archer, who favored establishing a settlement there, for the soil was fertile, game was abundant, and the timber was tall and straight. The colonists paused to examine the site, but because the water was too shallow for their ships to anchor near the shore, they continued on upstream and seated themselves upon a marsh-rimmed peninsula which at high tide resembled an island. There, where the river's channel ran so close to the shore that the colonists could moor their ships to the trees, they established their settlement (see Figure I.16).[147]

In 1619, as soon as the headright system was implemented, William Fairefax laid claim to 200 acres of land within the Corporation of James City on behalf of himself and wife Margery, who were Ancient Planters. Although 12 of Fairefax's 200 acres were on Jamestown Island, his remaining 188 acres were in Archers Hope, then an ill-defined territory that extended eastward from the main or neck lands behind Jamestown Island into the territory beyond College Creek. Fairefax's patent in Archers Hope was adjacent to that of Joakin Andrews and William Capp (Capps) and bordered south upon the James River.[148] Nearby and also fronting upon the James was a patent jointly-owned by Ensign William Spence and John Fowler. All of these individuals were Ancient Planters, who received 100 acres apiece as their first dividend of land.

On March 22, 1622, when the Indians of the Powhatan Chiefdom attempted to drive the colonists from their soil, approximately a third of the colony's population was slain. At Ensign William Spence's house in Archers Hope, his partner John Fowler was killed, along with William Richmond, Alexander Bale, William Fierfax (Fairefax) and a man simply described as "The Tinker."[149]

Although some officials in England attributed the Indian massacre to a judgement of God, others blamed it upon the colonists' sparse and straggling mode of settlement. Virginia's governor and council, meanwhile, resolved to extirpate the Indians and to protect the colonists who had managed to survive. Outlying settlers were ordered to withdraw to one of the eight communities that were held. Jamestown was the nearest position of strength for those who lived in Archers Hope.[150] This in-gathering of refugees proved disastrous, for it created food shortages and spread contagious diseases, especially at Jamestown, the port of entry for new immigrants. Martial law was declared and the commanders of the eight settlements were given absolute power "in all matters of warr." The Natives, meanwhile, continued to make sporadic attacks upon the few plantations that were held, with the result that the colonists not only were demoralized and fearful, but also unable to plant food crops for the months ahead. One man wrote that he and his comrades were "working with our Hoe in one hand, and our Peece or Sword in the other." The colonists' outlying acreage, which had been cleared laboriously, quickly grew up in underbrush.[151]

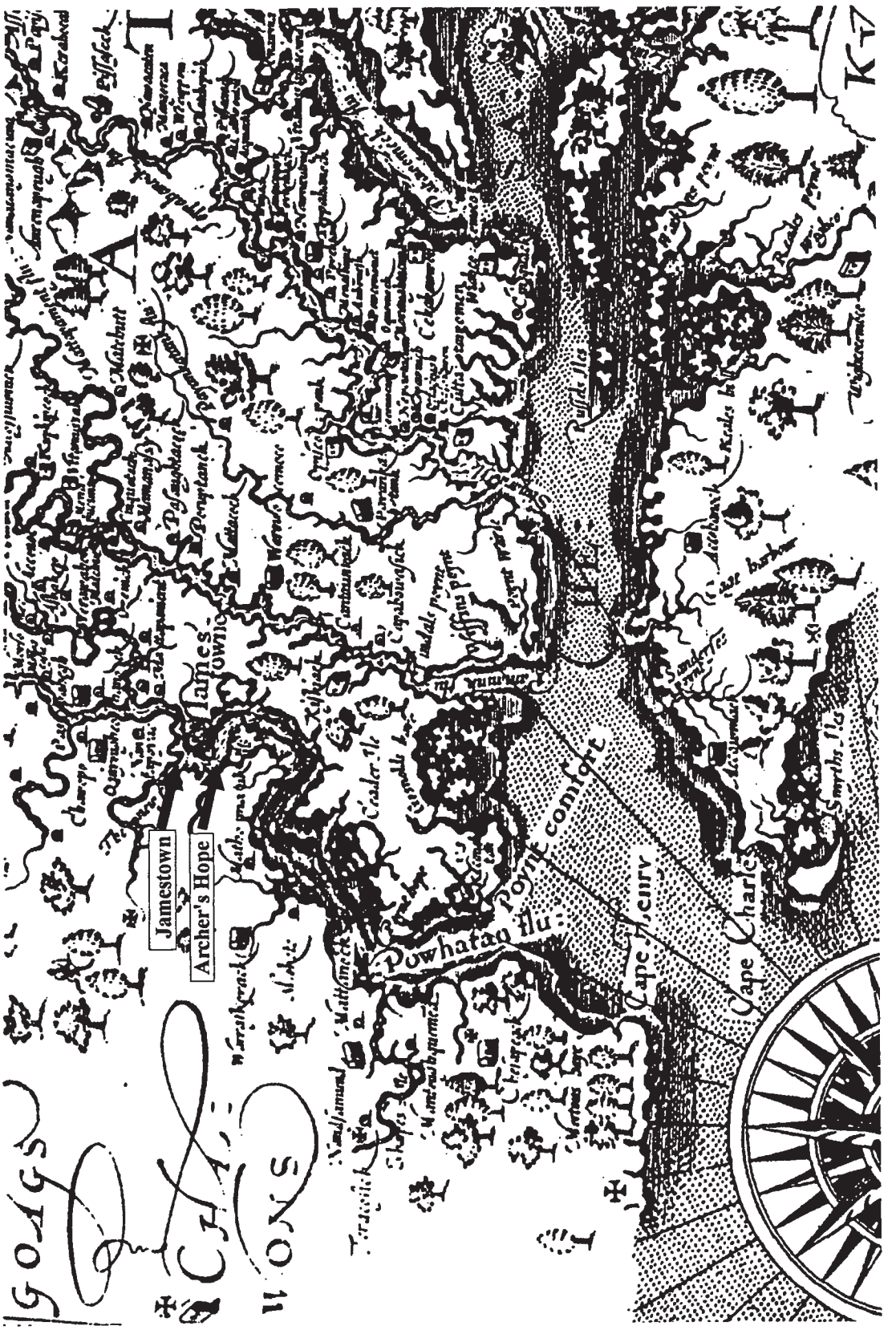


Figure I.16. Detail of Smith, "Virginia Discovered and Discribed {sic}," 1610.

Virginia Company officials, despite risks to the colonists' lives, were anxious for them to return to their homesteads, for they wanted to protect their investment in the colony. By Autumn 1623, as the planters' confidence began to return, they commenced re-occupying to their outlying land claims. Many of these people were armed with outmoded military equipment sent from the Tower of London, but "still of use against a naked People." Regular retaliatory raids were undertaken against the Indians, with the goal of "rootinge them out of places that . . . we may come to live in better securitie, doubtinge not but in time we shall clean drive them from these partes." During these marches against the Indians, the settlers burned their villages and cut down their corn.[152]

By 1624, the colonists' fears had subsided somewhat. The governor issued orders whereby every dwelling was to be palisaded as a defense against the Indians. The Natives' strength had been reduced considerably by the retaliatory raids against them and a bountiful harvest had replenished the food supply. Thus reassured, the settlersbegan taking up the land to which they were entitled under the headright system and further expanded their holdings by bringing servants to Virginia. During this period, the colony's population, which was highly mobile, grew steadily.

Many people owned parcels of land in two or more areas and placed servants or tenants on their outlying tracts. William Fairefax and William Spence, like Richard Kingsmill, owned land in Archers Hope but also had acreage on Jamestown Island. Joachim (Joakin, Jockey) Andrewes (Andrus), who in February 1624 was residing at Jamestown and died later that year, by 1619 owned acreage in Archers Hope that became known as Jockey's Neck. In December 1625, William Claiborne of Jamestown, a member of the council of state, asked the court to award him 250 acres within the precincts of Archers Hope, to the east of Joakin Andrewes' patent but to the west of John Jefferson's.[153] Claiborne's patent lay on the east side of College Creek. Another person who owned land in both Jamestown Island and Archers Hope was Ancient Planter John Johnson. In January 1625 he was allocated 85 acres in Archers Hope but simultaneously took possession of 15 acres on Jamestown Island. In 1624 and 1625, Johnson and his family resided upon the island, but may have begun clearing and planting his acreage in Archers Hope shortly after receiving it. Johnson's land in Archers Hope abutted east upon College Creek, north and south upon two of its lesser branches, and west upon a swamp that lay at the back of his land. His patent also stated that the small stream bordering his property on the south formed the northerly boundary of Ensign William Spence's land. In 1635, when George Holmes patented 150 acres that abutted the west side of Johnson's property, his patent noted that it was next to "the land of John Johnson commonly called Jockey's Neck."[154] This raises the possibility that Johnson acquired the late Joakim Andrewes' land.

The settlers who in 1624 and 1625 lived in Archers Hope occupied territory that extended between what became Mill Creek and College Creek. Later, Archers Hope was defined more broadly and spanned both sides of College Creek. The small community at Archers Hope, which during 1624 and 1625 included 15 to 17 men, women and children, took on an air of permanency as family life became established. They were relatively well armed and supplied with provisions in comparison to some of their contemporaries, probably because of their proximity to Jamestown. Many of those who lived in Archers Hope were occupying land owned by others. If the May 1625 land list is an accurate accounting of the acreage that had been seated, only two tracts in Archers Hope (totaling 400 acres) were planted: the patents of Captain Roger Smith and John Fowler/William Spence. John Johnson's land, Jockey's Neck, was not. As Smith was not formally awarded his land until late in 1625, it is likely that most (if not all) of the 17 settlers listed in the February 1625 muster were occupying the Fowler/Spence property, which consisted of 300 acres. During this period when tensions with the Indians were beginning to ease, Virginia planters (according to law) were encouraged to settle in groups for their own protection but had to build palisades around their homes.

Official records reveal much about the tempo of life in Archers Hope. Thomas Farley, who lived there from 1624 to 1628, occupied 6 of the 300 acres that had been assigned to John Fowler and Ensign William Spence, a tract that by the 1640s bore the name "Archers Hope." Spence and his wife, who were residents of Jamestown, died during 1623, orphaning their four-year-old daughter Sara. In November 1625, the child's guardian was ordered to reimburse Thomas Farley for the cost of clearing and erecting a house upon her land at Archers Hope, upon which he held a six year lease. The dwelling Farley built on the Spence property may have replaced the one in which several people had been slain during the 1622 Indian uprising. Sometime prior to ca. 1632, when Farley died, he acquired land on the east side of Archer's Hope Creek in what became known as Farley's Neck.[155] According to a 1646 court document, the 300 acres patented by John Fowler and Ensign William Spence eventually came into the hands of Roger Webster, who purchased the land from Thomas and Sara Brice, perhaps the former Sara Spence. Webster added another 200 acres to the Fowler-Spence patent via the headright system. In 1646 his daughters, as his heirs, asserted a claim to the enlarged tract. The boundary description of the Webster patent reveals that it fronted upon the James River and abutted north upon the tract called Jockey's Neck.[156]

John Ellison (Elison) and his wife were living in Archer's Hope in February 1624 and were still residing there a year later, with their son George and George Badeley, a servant. Ellison may have been a cow-keeper, for on at least two occasions he made court appearances to attest to the ownership of cattle.[157] By October 1624 Thomas Bransby of Hog Island, a gentleman, had moved to Archers Hope and was appointed its commander. In that capacity he had several angry confrontations with Joseph and Margaret Johnson of Archers Hope, whose domestic disputes were so violent that he complained bitterly about his trouble in "partinge Newgate birdes and Bridewell."[158] The Johnson couple may have occupied John Johnson's 100-acre patent in Archers Hope, for his son and heir, John Johnson II, perpetuated his claim to the land and during the 1650s enhanced its size by means of a headright. In 1662 John Johnson II renewed his patent.[159] His diligence in maintaining his land title suggests that Jockey's Neck was considered a desirable piece of real estate.

During the late 1620s the population of Archers Hope continued to grow. Some of its inhabitants appear to have been especially rowdy and cantankerous. In September 1627 six of its inhabitants were censured by the General Court for living an "unquiet life." Amy, the wife of Christopher Hall, was accused of disturbing the peace and fighting with William Harman, another Archers Hope resident. For her part in the "scoldings, railings and fallings out," she was towed behind a ship in the James and then ducked three times. The Halls and some of their neighbors (John Upton, Robert and Anne Fitt and William Harman) were obliged to post a bond, guaranteeing their good behavior. All of these people moved to Archer's Hope sometime after the 1625 census was compiled. The volatile Amy Hall, who by February 1628 was widowed, again came to blows with her neighbor, William Harman, which led to their arrest. Court testimony reveals that Harman and the late Christopher Hall were joint lessees of a 100-acre tract in Archers Hope. The same day Amy Hall and William Harman were hauled into court, he conveyed to Robert Fitt and David Mannfeild his interest in the leasehold he shared with Mrs. Hall.[160]

Court records suggest that the territory between Mill and College Creeks was a favorable site for the cultivation of tobacco. In 1640 Richard Brewster, John Davis and John Thompson were appointed to view the tobacco grown in an area that included the James City glebe, Archers Hope, Jockey's Neck and the Rich Neck.[161] Thus, the region for which they were responsible extended from the James River inland to the Middle Plantation, later known as Williamsburg.

The boundary descriptions of several seventeenth century patents used Jockey's Neck as a reference point, an indication that it was a well known local landmark. Edward Goldbourne in 1640 sold Robert Miles 100 acres of land in Archers Hope, plus all of its improvements. During the 1640s, Richard Brewster

patented land that lay between the two main branches of Archers Hope Creek (College and Halfway Creeks) in what became known as the Barren or Great Neck. Thomas Pettus, who owned land in what became Kingsmill Plantation, also had 886 acres near Jockey's Neck, abutting the Rich Neck tract, between College and Mill Creeks. By the early 1660s part of Pettus's landholdings had come into the hands of William Wilkers and George Barker. George Marable of Jamestown patented 135 acres in Jockey's Neck in 1699, escheat land formerly belonging to John Wright. Meanwhile, William Marable received the title to a 13-acre, triangular-shaped island that lay opposite the mouth of the nameless tributary of College Creek that formed the southerly boundary of George Marable's Jockey's Neck tract.[162]

Jamestown continued to serve as an important center of commerce and trade, although the colony's capital was shifted from Jamestown to Middle Plantation (Williamsburg) in 1699. A ferry continued to ply the river regularly and nearby tobacco inspection warehouses brought a steady stream of planters into the area. Meanwhile, a fort on Jamestown Island looked out across the river, controlling access to the inland countryside. Even so, the old colonial capital waned in importance as settlement spread inland.[163]

3. Archers Hope: Colony to Nation, 1700-1790

Throughout the early eighteenth century, the Jockey's Neck tract probably was used for agricultural purposes. Arelatively short distance up College Creek was Princess Anne Port (College Landing), one of two inland ports laid out in 1699 to serve the planned city of Williamsburg. Much water traffic passed by Jockey's Neck going to and from the landing, which had a tobacco inspection warehouse and a variety of commercial establishments.

During the second half of the eighteenth century, the countryside near Jamestown Island was sparsely populated and throughout Tidewater, large plantations were interspersed with small and middling farmsteads.[164]

Maps prepared by Revolutionary War cartographers attribute Jockey's Neck to the Rev. William Bland, who in 1774 became rector of the Church on the Main near Jamestown. He had married Elizabeth Yates, daughter of the College of William and Mary's president. He moved to the Williamsburg area by the late 1760s and began serving the James City Parish. During 1768 and 1769 Bland received rent money from William Spratley, whose farm was near Jockey's Neck. This suggests that Spratley was leasing some of Bland's acreage.[165] When the Rev. William Bland became rector of the James City Parish in 1774, he gained the right to use its glebe, near Jockey's Neck.[166]

In 1781 when French cartographers mapped the Williamsburg area, some of them depicted Jockey's Neck's built environment and landscape features. St. Simone indicated that much of its acreage was heavily wooded and rimmed by marsh. Nicholas Desandrouin and Alexander Berthier depicted the Rev. William Bland's domestic complex at Jockey's Neck and identified the James City Parish glebe and the Spratley farm (see Figures I.17, I.14, and I.13).

In 1782, when local real estate tax rolls commenced being compiled, the Rev. William Bland was credited with 266 acres, which later records identify as Jockey's Neck (James City County Land Tax Lists 1782). Although it's uncertain when and how Bland acquired the plantation, he may have inherited it from his wife, who died in 1772. That she was buried in a vault at the Church on the Main two years before her husband became parish rector suggests that she had strong ties to the area. It is likely that Bland lived at Jockey's Neck during his early years in James City Parish.[167]



Figure I.17. Detail of St. Simone, "Carte de la Campagne de St. Simone," 1781.

James City County personal property tax lists for 1782 credit the Rev. William Bland with 6 slaves and 10 cattle. The following year he paid taxes upon the same number of slaves, plus 3 horses and 50 cattle. As he resided in Williamsburg during 1782 and 1783, the adult white male who in 1783 was living at Jockey's Neck most likely was an overseer or farm manager. The quantities of taxable land, slaves and livestock in the Rev. Bland's possession indicate that he was a member of the upper middle class though not exceptionally wealthy.[168] The slaves and livestock on his rural property may have been divided between the Jockey's Neck farm and the James City Parish glebe. As a resident of Williamsburg, Bland also paid taxes there. Between May 1 and December 30, 1785, the Rev. William Bland sold to Dr. James Carter his 266 acres at Jockey's Neck, plus an additional 54 acres. The land transaction was included in the county assessor's tabulation of real estate alterations that occurred during 1785. By 1786 the 320 acres formerly owned by Bland were credited to Dr. Carter. In 1787 when the tract's location was described, it was said to abut College Creek on the south and east and the Lucy Ludwell Paradise estate (Rich Neck) on the west.[169]

Dr. James Carter, a prominent Williamsburg physician, was credited with the Jockey's Neck tract from 1786 through 1819. After his death in late 1794, the property was credited to his estate.[170] Personal property tax lists suggest that Dr. Carter was relatively wealthy. In 1785, the year he purchased Jockey's Neck, he placed 30 adult slaves (age 16 and over) upon the tract along with two white adult males, Robert Taylor and James Bates, presumably farm managers. Dr. Carter also paid taxes upon the 5 horses and 54 cattle he had at Jockey's Neck, his only James City County property. Between 1786 and 1794, he was credited with 20 to 25 slaves and 6 to 10 horses.[171]

4. Archers Hope: The Early National Period through the Civil War (1791-1865)

Between 1795 and 1819, neither slaves nor livestock were credited to the late Dr. James Carter's estate. His executors may have leased the Jockey's Neck farm to a tenant and distributed or sold his personal property. In 1820, Thomas Coleman of Williamsburg bought the Jockey's Neck tract. When the county tax commissioner commenced listing the value of the buildings that were on rural property, he indicated that Thomas Coleman's farm had $200 worth of improvements, none of which were new. They may have been the four-building complex Nicholas Desandrouin (1781) attributed to the Rev. William Bland at the time of the Revolutionary War. The assessed value of Coleman's 320-acre farm and improvements remained constant through 1839, as did its size and boundary description.[172] Kearney's map (1818) indicates that Jockey's Neck largely was cleared (see Figure I.5).

In 1820, when Thomas Coleman's name first appeared in the James City personal property tax records, he was credited with two slaves age 12 or over. Tax records suggest that by 1822, he had begun investing money in slaves and livestock. In 1824 he had 14 slaves at Jockey's Neck and three horses/asses/mules; by 1829 those figures had nearly doubled. As no free white males of tithable age were attributed to Coleman's Jockey's Neck property, he may have had a black overseer or white youth running the farm. In 1835 Coleman's name dropped from James City County's personal property tax rolls, for he was killed when a tornado struck Jockey's Neck and destroyed some of its buildings. Between 1840 and 1845 Thomas Coleman's estate lacked taxable structural improvements.[173]

In 1846, Benjamin E. Bucktrout of Williamsburg purchased the 320-acre Jockey's Neck farm from Thomas Coleman's executors. He also bought from William S. Peachy of Williamsburg a neighboring 120-acre tract which research demonstrates was part of the James City Parish glebe. It, like Jockey's Neck, lacked taxable improvements.[174] With Bucktrout's consolidation of the Peachy and Coleman tracts, the Jockey's Neck farm was enlarged to 440 acres, the size it remained for the next hundred years. Benjamin Bucktrout, however, died in 1847, never having improved the property or placed slaves upon it.[175]

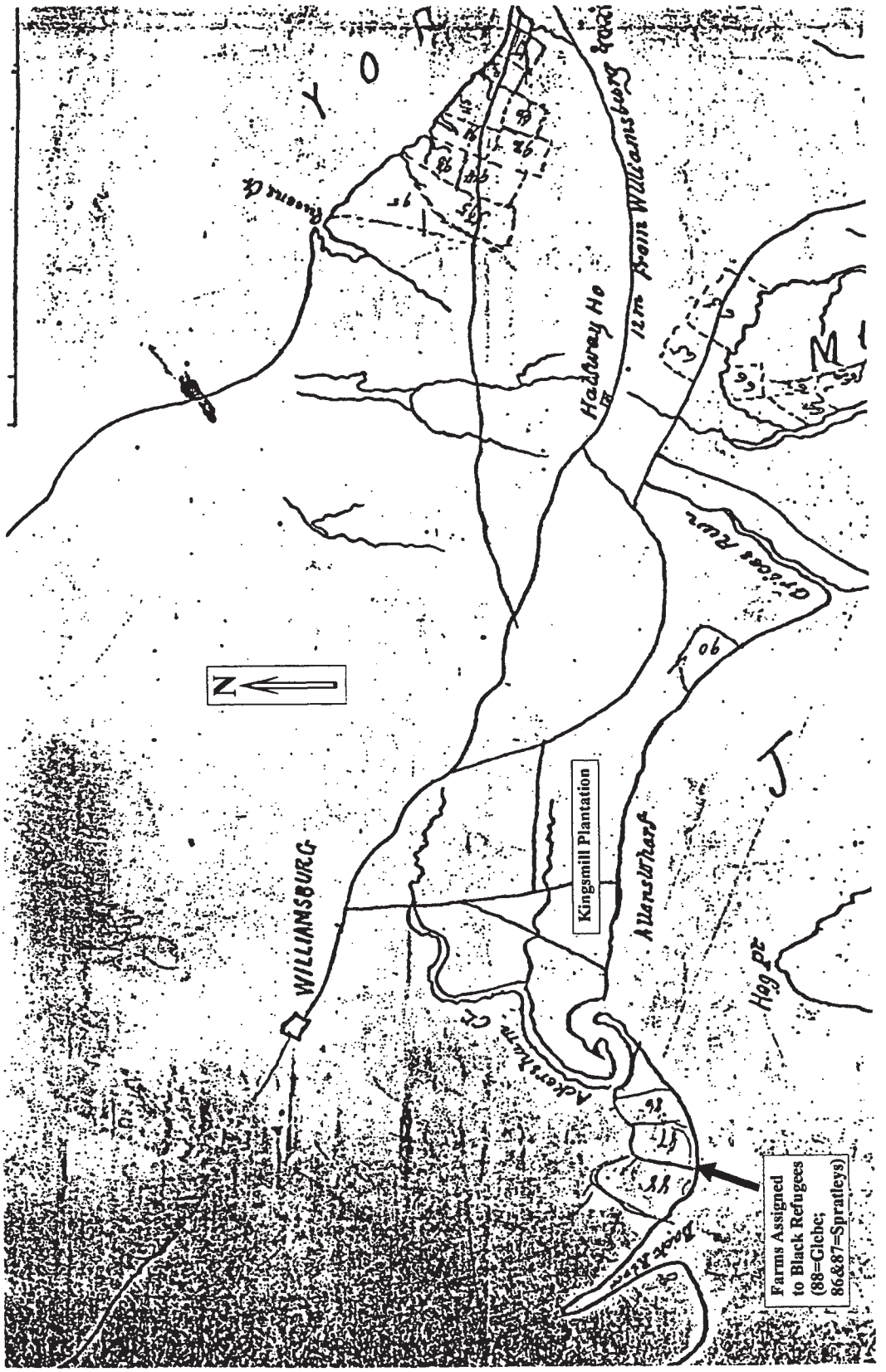
In 1848 and 1849 Bucktrout's executors sold his 440-acre Jockey's Neck farm to Goodrich Durfey of Williamsburg. Durfey, a real estate speculator and recent owner of Jamestown Island, immediately set about developing Bucktrout's property. By 1850 $300 worth of buildings had been erected upon the 320-acre parcel that Benjamin Bucktrout had bought from Thomas Coleman's executors. In 1851 the tax assessor identified Durfey's 440-acre farm as Jockey's Neck and valued its improvements at $650.[176] By the mid-nineteenth century, when Goodrich Durfey bought the Jockey's Neck farm, improved agricultural techniques and crop diversification were very much in vogue. Agricultural census records, compiled for the first time in 1850, suggest that he was an enlightened farmer who availed himself of the latest advances in agriculture. He made a significant investment in farming equipment and during 1849 raised Irish and sweet potatoes, peas and beans, wheat, corn and oats at Jockey's Neck. His livestock included horses, mules, dairy and beef cattle, working oxen and swine. Some of crops and meat produced on Durfey's farm was sold in urban markets.[177]

Goodrich Durfey carried out his farming operations with the use of slave labor. In 1850 he was credited with 11 adult slaves. Within a year that number had increased to 21 and a free white adult male was living at Jockey's Neck, probably an overseer or farm manager. By 1852 Durfey had 34 adult slaves there and a substantial herd of livestock.[178] Between 1853 and 1854 the number of slaves and livestock attributable to Goodrich Durfey was halved and the name of Richardson Durfey, a free white male over age 16, began appearing in the tax rolls directly below his listing. This raises the possibility that Richardson (perhaps a son or younger brother) began serving as Goodrich's farm manager. In 1860 when tax records provided more detailed information on the types of livestock farmers owned, Goodrich Durfey was credited with 35 cattle and 56 hogs and sheep. A year later he had 30 cattle and 100 hogs.[179] These fluctuations suggest that Durfey may have been experimenting with various types of animal husbandry, perhaps trying to determine what would be the most profitable and feasible use of his land.

Between 1851 and 1856 the assessed value of the improvements on Goodrich Durfey's Jockey's Neck farm remained constant at $650 and then in 1857 rose to $900. In 1870 his acreage was credited to his estate and in 1871 the structural improvements on the Jockey's Neck tract were valued at $1,000. This modest elevation may have been attributable to the inflation that was prevalent in Virginia right after the Civil War, rather than the addition of new buildings. The value of the improvements on the Jockey's Neck farm remained constant through 1875.[180] Unfortunately, military cartographers when mapping the College Creek area during the Civil War failed to indicate how Jockey's Neck was developed. During the post-war period three Archers Hope tracts (portions of the James City Parish glebe and Spratleys) were leased to black refugees as shown in a Freedmen's Bureau map of 1866 (see Figure I.18).

5. Archers Hope: Post Civil War to Parkway Construction (1866-ca. 1930)

Goodrich Durfey's estate was divided between his son, Z. G. Durfey and daughter, Elizabeth N. Durfey Southall, who voluntarily partitioned the property. Z. G. Durfey traded his interest in the Jockey's Neck tract for his sister's share of the Newport Mills property at the head of Mill Creek.[181] In 1880 the county tax assessor credited Elizabeth's husband, Travis H. Southall, with the 440-acre Jockey's Neck tract, which then had $800 worth of improvements.[182] In 1885 the Southalls sold Jockey's Neck to L. Tyler Davis of Williamsburg. He retained the farm until the early 1890s, when he sold it to Isaac C. Kellett and Tillie G. Ketter (husband and wife) of Grove, Pennsylvania. In January 1896 the couple sold Jockey's Neck to Lewis Layer of James City County. He and his wife retained the Jockey's Neck farm for two years and then sold it to Isaac Johnson of James City County. Both Layer and Johnson appear to have resided on the farm while owning it. In 1900 the county tax commissioner credited Isaac Johnson with the Jockey's Neck farm, 440 acres that had $800 worth of improvements.[183]



Figurre I.18. Detail of Freedmen's Bureau, "Map showing Position of Government Farms," 1866.

In May 1902, Isaac Johnson and his wife, Elpha, sold Jockey's Neck to Charles E. Dean, who also received a quit claim from H. C. and Mary E. Wilson.[184] Thanks to the fact that Dean and two of his successors died intestate, the ownership of the Jockey's Neck property became fragmented and complex. According to a deed of conveyance prepared on October 15, 1940, Charles E. Dean left as his sole heir Charles E. Thorpe. But Thorpe also tied intestate and his sole heir was a widower named Edgar Thorpe. Edgar Thorpe, like Charles E. Dean and Charles E. Thorpe, made no will and at his death, Jockey's Neck came into the hands of his heirs-at-law: two sisters (Jeanette T. Cowles and Catherine T. Agelasto); three brothers (Oscar, Wheate L. and Welby Thorpe); and the three children of a deceased sister, Cornelia Thorpe (Callie, Albert and Richard H. Thorpe). To complicate matters further, Welby Thorpe had conveyed his 1/6 interest in the tract to Clyde C. Thorpe. On October 15, 1940 all of the Dean and Thorpe heirs listed above conveyed the Jockey's Neck farm to J. W. Avery.[185]

J. W. Avery and his wife, residents of Charles City County, sold Jockey's Neck in less than a year, conveying it to Everett M. Ballard Jr. and his wife, of Richmond. The same day the Ballards bought the property, they conveyed it to George L. Smith of Warwick County. He retained the property very briefly and in December 1942 he sold it to Phillip W. Murray of Newport News.[186] During the early 1950s, Murray added to his landholdings in the area by purchasing from the Waltrip family a 150 acre tract called "Morris's" that was contiguous to Jockey's Neck's western boundary line. He also purchased an additional 8 acres from J. W. and Mildred Jones.[187] A topographic quadrangle sheet published in 1907 and updated in 1944 suggests that the Jockey's Neck tract consisted of predominantly cleared land and had few buildings (see Figure I.19).[188]

5. Archers Hope: Observations

Archers Hope, the development of which played an important role in the early history of Virginia, seemingly was destined to be a subsidiary farm and only during the ownership of the Rev. William Bland was it occupied by someone of prominence. Although the tract lay so far inland that it escaped coverage by nineteenth century topographic engineers, a 1944 quadrangle sheet (See Figure I.19) reveals that it is important to the ColonialParkway's viewshed. Travelers on the parkway have an unobstructed view of Jockey's Neck when they follow Archers Hope point to its tip and cross College Creek; they have a similar experience when traversing Halfway Creek, for the tract is at the terminus of a long vista.

Today, suburban development can be seen at a distance from the Colonial Parkway. Of special concern is the Gospel Spreading Farm, which abuts directly upon the parkway. As the largest privately-owned, undeveloped parcel abutting the Colonial Parkway, its future use is critically important.

An interpretive sign at the Archers Hope overlook makes reference to the Spanish Jesuits' arrival and their construction of a mission. As documentary sources indicate that the mission was located at a site on the York River, the public could be educated more fully by addressing the Spanish Jesuits' story in two segments. A sign placed at College Creek could state when and why the Jesuits came to the region and describe their passage up College Creek. A second sign near the Kings Creek Plantation, Ringfield or Indian Field Creek could state that the mission is known to have been on the York River and it could describe the missionaries' untimely demise. The placement of these signs on two different rivers would give visitors an idea of how far the missionaries traveled inland before becoming established.

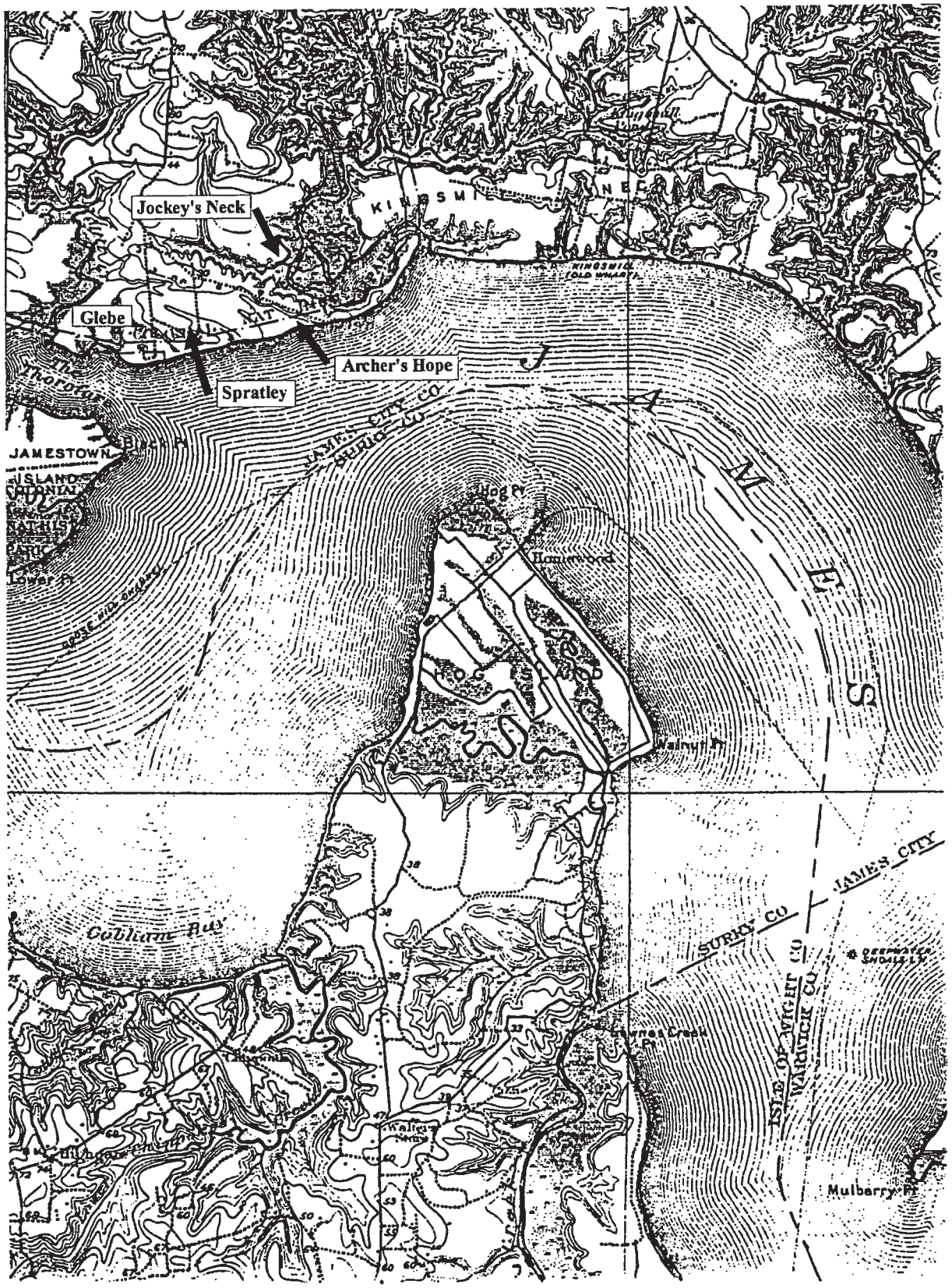


Figure I.19. Detail of USGS Quadrangle, "Hog Island," 1907/1944.

G. KINGSMILL PLANTATION

1. Kingsmill Plantation: The Settlement Era (to 1699)

The land that by the close of the late eighteenth century comprised the Kingsmill Plantation had its origin in numerous lesser-sized tracts that over time were consolidated into a massive estate extending from College Creek to Grove Creek. The westernmost component of the plantation was Kingsmill Neck, through which the Colonial Parkway was built. Further east were the Farley's Neck, Harrop, Littletown, and Utopia properties, which formed the eastern part of the Kingsmill Plantation. Each of these sub-units evolved from patents allocated to Virginia colonists during the first quarter of the seventeenth century.

a. Kingsmill Neck

Richard Kingsmill, from whom Kingsmill Plantation derives its name, owned and occupied an 80-acre tract on Jamestown Island, part of his 100-acre dividend as an Ancient Planter. In February 1624, when a census was made of the colony's inhabitants, Richard Kingsmill was one of the 25 people living in the Neck-of-Land (Neck O'Land) behind Jamestown Island, where he occupied the 750-acre estate of the Rev. Richard Buck on behalf of his orphaned children. Kingsmill and his household were still living there a year later.[189] Richard Kingsmill was a churchwarden of the James City Parish and served successive terms as a burgess in the colony's assembly.[190] In May 1625 he was credited with 500 acres in Archer's Hope, the land that eventually became known as Kingsmill Neck. Surviving records reveal that Richard Kingsmill had begun to clear and plant that acreage by 1626. According to law, he was obliged to have seated his patent by 1630.[191]

b. Farley's Neck

To the east of Kingsmill Neck was Farley's or Farlow's Neck, which name probably is derived from Thomas Farley, who immigrated to Virginia in 1623. In 1625 Farley, his wife Ann, and their servant, Nicholas Shotten, were residing on the west side of Archer's Hope Creek upon the late Ensign William Spence's patent, which he had leased for six years. Farley, whom official records describe as a gentleman, was hauled into court for being habitually absent from church and for hunting hogs on the Sabbath. He also incurred the wrath of neighbor Joseph Johnson by failing to confine his swine. Farley was dead by 1632. A 1646 patent, which identifies land on the east side of Archers Hope Creek as Farley's or Farlow's Neck, suggests that Thomas Farley had a patent there, acreage to which he was entitled under the headright system.[192]

c. Harrop

To the east of Farley's or Farlow's Neck was Harrop, a tract referenced in a 1632 patent for land on the east side of Archers Hope Creek.[193] Although no early patents have come to light that are attributable to someone called Harrop, it may be a corruption of Edward Hartop's name, for he was brought to Virginia by Humphrey Higginson, owner of nearby Tuttey's Neck.[194] Higginson, who by 1637 had acquired the 700-acre Tuttey's Neck tract in the right of his wife, Elizabeth, by 1648 had extended his landholdings southward into the Harrop tract. In 1639, Higginson, Nicholas Commins and Thomas Browne were appointed tobacco viewers for the territory between Archer's Hope Creek and Warhams Ponds (Grove Creek).[195]

In February 1645, Harrop Parish was established by law. It encompassed the land that lay between the east side of Archer's Hope Creek and Wareham Ponds, the westerly boundary line of Martin's Hundred Parish. The Rev. Thomas Hampton, rector of James City Parish, who recommended that Harrop Parish be formed, argued that the "dangerous times" made it difficult for parishioners to commute to church at Jamestown. He most likely was making reference to the April 1644 Indian uprising.[196]

d. Littletown

On December 12, 1625, William Claiborne asked the court at James City to assign him 250 acres in Archers Hope, land that was bound on the west by the patent of Jochim Andrus (Andrews)[197] on the south by the river, and on the east by the patent of Lt. John Jefferson.[198] Claiborne's patent description, which can be linked to the area's topography, closely resembles the 1619 patent of William Fairefax (Wm. fferFax, Fierfax), which also abutted Andrus' land.[199] Claiborne's tract in Archers Hope was included in the May 1625 land list but not described as planted.[200]

By 1648, when Richard Richards patented a 350-acre tract he called Littletown (Little Town), included were Claiborne's 250 acres bordering Andrus' patent, plus 100 acres that Claiborne had acquired from John Commandres. Richards' land was described as abutting west upon the property possessed by Humphrey Higginson, which formerly had belonged to Winster Fax (i.e., William Fairfax), and east upon the 250 acres that had been allocated to Lt. John Jefferson in 1619, which in 1648 were said to be in the possession of Mary Williams. Littletown again was referenced in 1663 when Thomas Williams patented 66 acres to the north of both Littletown and Harrop.[201] By 1660, the Utopia tract, which lay to the east and consisted of two early patents, had been absorbed into Littletown.

e. Utopia

In December 1624, George Sandys, treasurer of the colony, patented 400 acres in Archers Hope, land that was bound on the south by the James River, on the west by the patent of Lt. John Jefferson and on the east by the ponds that separated his acreage from Martin's Hundred, i.e., Grove Creek and its branches. Sandys eventually sold his 400 acres to Edward Grindon (Grindall). After the latter's decease, the property descended to his heir in England, merchant Thomas Grindon, who authorized his attorneys in Virginia to dispose of the tract. In 1638 they conveyed the Sandys patent to John Browning, at which time reference was made to the fact that until recently the acreage had been in the possession of the late John Warham (Wareham), probably a tenant of Edward or Thomas Grindon. At the time John Browning purchased the Grindon tract, it was identified as Hampton Key, which was said to lie within an area known as Mounts Bay.[202]

In 1629 John Browning enhanced the size of his 400-acre plantation by purchasing from John Uty (Utie, Utye) 250 acres that lay immediately upstream, the patent allocated to Lt. John Jefferson in 1619. As Jefferson had abandoned the tract and relocated to the West Indies, Uty had secured the title to it in 1628 by means of a court order.[203] John Browning not only purchased Uty's land on the north side of the James, he also bought his property at Hog Island (called Utopia) that Uty had been occupying personally.[204/205] Uty's land sales coincided with his acquisition of a large patent on the York River, what became known as the Kings Creek plantation.

In 1646 John Browning's son, William, who had inherited his father's land, re-patented it, at which time the 650-acre tract was described as including George Sandys' 400 acres plus the 250 acres that had been allocated to Lt. John Jefferson in 1619.[206] Two years later, in 1648, when Richard Richards patented the Littletown tract (to the west of Browning's Jefferson/Uty patent) the 250 acres John Jefferson had claimed in 1619 was still attributed to him.[207]

f. Consolidation

By the mid-seventeenth century many of the smaller patents that lay along the James River were consolidated into larger holdings. Humphrey Higginson, by the 1640s, had combined Farley's, Kingsmill, and Tuttey's Necks with his Harrop plantation, unifying what eventually became the western part of the Kingsmill Plantation. By 1660 Col. Thomas Pettus, then-owner of the Littletown tract, united it with the Utopia property. Thus, in 1660 the eastern part of the Kingsmill Plantation was consolidated into a solitary unit.

The patents of William Whittaker (1680), John Tullit (1703) and Nicholas Cummings (Commings) used Pettus' property as a reference point, whereas Cummings' land was mentioned in the Pettus grandchildren's 1703 deed of release for the Littletown and Utopia tracts.[208]

Thomas Pettus, who had immigrated to Virginia prior to 1641, married Richard Durant's wealthy widow, Elizabeth. By 1643 Pettus, a member of the Governor's Council, had begun acquiring land. Although precisely how he came into possession of the Utopia and Littletown tracts and the land that lay behind them (1,280 acres in all) is uncertain, in 1660 he was identified as being "of Littletown in Virginia" when he appointed a neighbor at Mulberry Island to act as his attorney. After Col. Pettus' death in ca. 1669, his son, Thomas II, inherited Littletown. Accounts maintained by young Pettus' guardian reveal that tobacco was being cultivated on the plantation with the use of indentured servants and slaves. Thomas Pettus II died in 1691. A partial inventory of his estate reveals that he possessed substantial numbers of horses, cattle, sheep and hogs.[209]

Thomas Pettus II's widow married James Bray II, who took into his possession the decedent's household possessions before they had been inventoried by the estate's commissioners. Bray, whose father came to Virginia in 1657, was a man of wealth and influence. He may have moved to Littletown shortly after marrying Thomas Pettus' widow. During Bray's residency at Littletown he served as a burgess, justice of the peace for James City County, and alderman for the city of Williamsburg. In 1700, when he bought out the Pettus heirs' interest in the Littletown and Utopia tracts, the deed of release he obtained noted that Humphrey Higginson's Harrop land formed its western boundary. In 1704 James Bray II owned an aggregate of 3,500 acres of James City County land, including the Littletown plantation.[210]

James Bray II's November 1725 will reveals that he bequeathed his Littletown plantation to his grandson, James Bray III, who was authorized to take possession of it at age 21. A plantation ledger book, encompassing the years 1736-1744, reveals that Littletown thrived under the skillful management of James Bray III. His Littletown Plantation consisted of his house tract, some outlying quarters, and some acreage in Tuttey's Neck. Although black slaves made up the majority of those who lived at Littletown, at least one tenant and one or more indentured servants also resided there. References to the quarters of Jacko and Deb, who were slaves, suggest that Bray entrusted those properties to their care. He also appears to have employed overseers whose names imply that they were white. A broad variety of crops were raised on the landholdings of James Bray III. The production of an estimated 30,000 lbs. of tobacco (a labor-intensive crop) suggests Bray had a large work force. In addition to his agricultural operations, Bray had at Littletown a water-powered mill where flour and cornmeal were ground and a miller who also was a shoemaker. At Littletown, leather was tanned, bricks were made for sale to others, and cider was mass-produced. Finished and unfinished timber products also were produced and sold.[211]

After the death of James Bray III in 1744, liferights in the property reverted to the ownership of his father, Thomas Bray.[212] When Thomas died in 1751, James III's widow, Frances, came into possession of the Utopia tract (theeastern portion of the enlarged Littletown plantation) and its slaves, whereas the decedent's sister, Elizabeth Bray Johnson, inherited the western portion, which contained James Bray III's residence. Frances Bray married her neighbor, Lewis Burwell IV, who resided at the neighboring Kingsmill Plantation, a short distance upstream.[213] Thus, during the mid-eighteenth century Utopia was disjoined from Littletown and came into the hands of the Burwell family. Maps prepared by Joshua Fry and Peter Jefferson (1751, 1775), John Henry (1770), and Thomas Jefferson (1787) indicate that the seats of the Bray and Burwell manor plantations lay to the west of Grove Creek, whereas another Burwell mansion (Carter's Grove) lay to the east. While Littletown was owned by Elizabeth Bray Johnson and her husband, it most likely was occupied by their tenants or overseers. In 1796, when Utopia and Littletown were acquired by William Allen, the two tracts were rejoined to comprise an aggregate of 1,280 acres. Allen also purchased

the Burwells' landholdings at Kingsmill, with the result that his acreage encompassed the James River's shore line from Grove Creek to College Creek (see Figure I.10).[214]

Lewis Burwell IV's great-grandfather, Lewis Burwell I, immigrated to Virginia in 1656. A wealthy and successful man, he accumulated literally thousands of acres of land in the colony. His son, Lewis Burwell II, followed in his footsteps by continuing to add to the family's landholdings. In his ca. 1710 will, Lewis Burwell II noted that he had purchased the Harrop plantation from Anthony and Eliza Eurenden and the York County land of John Tullitt, whose patent abutted that of Thomas Pettus.[215] At the death of Lewis Burwell II, in 1710, his son and namesake, Lewis Burwell III, inherited acreage at Farley's (Farlow's) Neck, the Harrop plantation and some outlying land used as a subsidiary farm. By January 1734 he was residing in his mansion-house in Farley's Neck, where he appears to have been living since 1725. Lewis Burwell III served as a parish vestryman and as naval officer (or customs agent) for the upper James River district, a lucrative position. Later, he was appointed a justice of the peace and elected a burgess for James City County. From Burwell's Landing a ferry plied the James River to Hog Island.[216] A warehouse and tavern or ordinary also were located there. Lewis Burwell III died in 1744.[217]

Lewis Burwell IV, his father's primary heir, filled his post as naval officer and likewise, served as a parish vestryman, justice of the peace and burgess. He enlarged the landholdings he had inherited through his marriage to Frances, the widow of James Bray III. Through that union Burwell's taxable real estate in James City County expanded from 1,502 to 2,791 acres. Surviving archival records, though sparse, indicate that he employed overseers to help him manage his landholdings. An advertisement placed in the *Virginia Gazette* in 1781 provides a detailed description of the domestic complex constructed by Lewis Burwell III and the 850 acres upon which it was situated. Contiguous to the home tract was another plantation of 1,130 acres, part of the land he had acquired through his marriage to the widow, Frances Bray.[218]

In 1775, nine years before his death, Lewis Burwell IV turned his Kingsmill Plantation over to his son, Lewis Burwell V. Documentary evidence about the younger man suggests that he was somewhat lazy, opportunistic and volatile. He lost his appointment as justice of the peace because he "declined to act" and during a quarrel he plunged a knife into the side of Peyton Randolph. During the Revolutionary War Lewis Burwell V sold supplies and shelter to American troops but also provided commodities to the British. Ultimately, he was obliged to sell the Kingsmill Plantation in order to cover his father's debts. In April 1783 the property was purchased by John Carter Byrd of Charles City County.[219]

During the American Revolution, troops moved through the Burwell plantation on several occasions and combat occurred there. In March 1775 the *Virginia Gazette* announced that "his Majesty's armed schooner MAGDALEN, HENRY COLLINS, ESQ. commander, mounting four carriage guns. . . now lies moored opposite to Burwell's ferry for the purpose of bringing to and searching all vessels."[220] In April the detachment of marines who had removed the gunpowder from the magazine in Williamsburg transported it to Burwell's Landing, where they loaded it aboard the Magdalen. In November 1775 a British sloop that was attempting to search a vessel near Burwell's Ferry was fired upon. At that point, the sloop and three tenders commenced a heavy cannonading, during which the storehouse and ferry house at the landing were struck. Later, American troops built earthen fortifications alongthe bluffs that overlooked the ferry landing. In April 1781 the Queen's Rangers under Lt. Col. John Simcoe shelled and captured the landing and overran its fortifications.[221] Simcoe's men came ashore at Burwell's Landing and on the west side of the small stream now known as Warehams Pond,[222] then moved inland to confront their adversaries (see Figure I.20).[223]

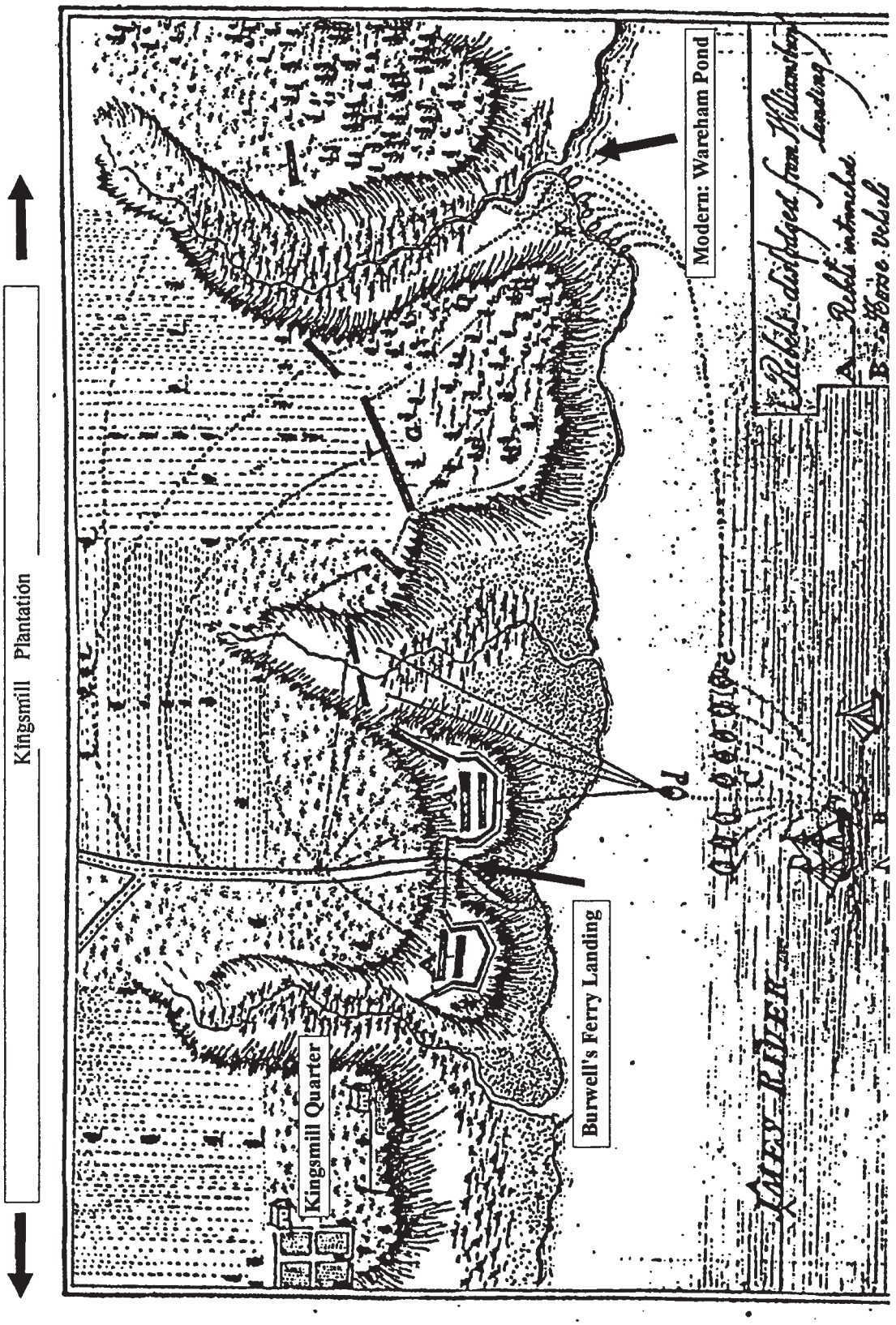


Figure I.20. Detail of Simcoe, "Rebels Dislodged from Williamsburg [Kingsmill] Landing," 1781.



Figure I.21. Detail of Captaine, [Untitled Map of Eastern Virginia], 1781.

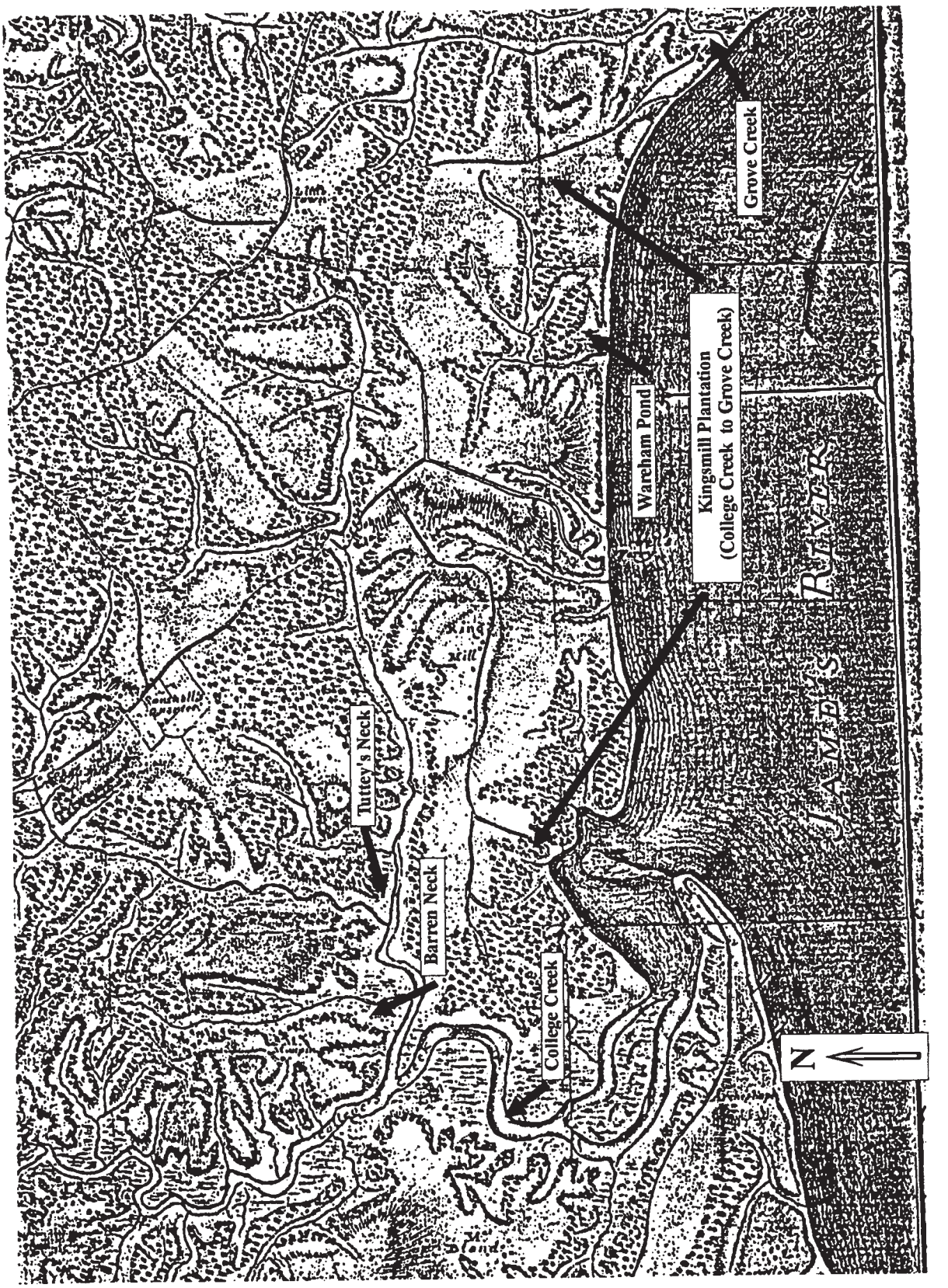


Figure I.22. Detail of Desandrouin, "Carte des Environs de Williamsburg," 1781b.



Figure I.23. Detail of St. Simone, "Carte de la Campagne de St. Simone," 1781.

Maps prepared by Revolutionary War cartographers in 1781-1782 depict and/or identify the Burwell and Bray plantation seats at Kingsmill and Littletown and Nathaniel Burwell's plantation, Carter's Grove (see Figure I.21).[224] The topographically sensitive renderings of Berthier, Desandrouin, and St. Simone provide much information about Kingsmill Plantation's built environment and reveal that it consisted of large, open fields interspersed with woods (see Figures I.13, I.22, I.23). Kearney later made a map on which he identified the ferry at Kingsmill (see Figure I.5).

3. Kingsmill Plantation: The Early National Period through the Civil War (1791-1865)

John Carter Byrd of Charles City County, who purchased the Kingsmill Plantation from Lewis Burwell V in 1783, appears to have been speculating in real estate. Within a few months of receiving an unencumbered title to the tract, he offered it for sale at which time it was bought by Henry Martin of the island of Tortola. Martin commenced repairing the Kingsmill manor house and organizing his farming operations, but died before he had fully paid for the land. Therefore, Byrd retained an interest in the plantation that was equal to Martin's unpaid balance. Byrd, having settled with Martin's executors, again attempted to dispose of the property. In 1793 he conveyed it to Henry Tazewell, a prominent Williamsburg attorney, chief justice of the state's General Court, and a United States senator. Tazewell and his family used Kingsmill as their personal residence.[225]

Henry Tazewell's son, Littleton Waller Tazewell, managed the Kingsmill Plantation during the numerous absences necessitated by his father's political career. Personal property tax rolls for the 1790s reflect the Tazewells' material wealth. Henry Tazewell died in Philadelphia in 1799. In his will he directed his executors to sell much of his real estate except Kingsmill, which was to be retained for his son. Littleton Waller Tazewell, however, chose to reside in Williamsburg, where he practiced law. In 1801 he sold his James City County property (1,500 acres in all) to William Allen of Claremont in Surry County.[226]

William Allen, who was immensely wealthy and owned an estimated 30,000 to 40,000 acres of Virginia land and 700 to 800 slaves, placed farm managers or overseers on his outlying property to supervise his slaves and to care for his crops and livestock. James City's personal property tax lists reveal that in 1805, William Allen had three overseers in his employ and that he owned 179 slaves over the age of 12 and had 37 horses, asses and mules.[227]

According to land tax records for 1813, William Allen owned the Neck-of-Land tract near Jamestown, the 1,280-acre Littletown-Utopia tract, the 1,500 acres called Kingsmill, 920 acres called Southall's, and 12 acres that formerly had belonged to Samuel Tyler. The Littletown-Utopia tract reportedly was bound on the east by the land of Carter Burwell (Carter's Grove). In 1820, when the county's tax assessor commenced recording the collective value of the buildings that stood upon rural properties, he noted that Allen's 1,280 acres (Littletown) had $2,500 worth of buildings, including a mill valued at $1,500. The buildings on Allen's Kingsmill tract were then worth $7,000.[228]

William Allen died on November 29, 1831 at age 63, leaving the bulk of his estate (including Claremont) to his young great-nephew, William Griffin Orgain, with the provision that his surname should be changed to Allen. In 1844 James City County's tax assessor reduced the value of the buildings on the Kingsmill tract from $7,000 to only $1,500, noting that "$5500 [was] taken off for buildings destroyed." Meanwhile, the value of the structures on the 1,280-acre Littletown tract rose from $2,500 to $4,000, including the mill which was still worth $1,500. In 1851 when William Orgain alias Allen took possession of his late great-uncle's landed estate, he had control ofthe Neck-of-Land tract, Jamestown Island, and 2,792 acres at Kingsmill (i.e. the 1,280-acre Littletown tract + the 12-acre Tyler plot + the original 1,500-acre Kingsmill

tract). During the 1850s the total value of the buildings on Allen's Kingsmill property was $4,000. In 1857 the tax assessor added 404 acres to the Kingsmill Plantation's aggregate size, raising its total acreage to 3,196½ acres. The enlarged tract had buildings valued at $7,000. In 1855 there were 84 slaves (over the age of 12) and 22 horses at Kingsmill.[229]

Color-coded maps prepared by Union Army cartographers reveal that the Confederates built earthworks overlooking William Allen's Kingsmill wharf and that after the area fell into Union hands, soldiers encamped along the road to the wharf. Military hospitals also were located on Allen's property at Kingsmill, as shown in Figure I.24.[230] Allen, a major in the Confederate Army, seems to have been despised by some of his slaves, who rebelled shortly after the Union Army moved into James City County. They destroyed some of the buildings on his Jamestown Island plantation and seized control of his Neck O' Land tract, killing his principal overseer. Land tax records reveal that between 1861 and 1865 the value of William Allen's buildings on his 3,196½-acre Kingsmill Plantation dropped from $7,000 to $2,500, at which time the assessor noted that $4,500 had been deducted because of "buildings burnt." Likewise, Allen's buildings on his Neck O' Land and Jamestown farms were said to have been destroyed by fire.[231]

At the close of the Civil War, 187 acres of William Allen's Kingsmill Farm were confiscated and rented to freedmen, who placed the land under cultivation and paid their rent in crop-shares. Likewise, the freedmen rented William Allen's mill for 1/3 of its toll. Official records describe the acreage that the freedmen rented as containing houses, cabins and a mill. A map upon which the freedmen's plots at Kingsmill were marked suggests that their acreage was located in the eastern part of the property near Grove Creek. During 1867 William Allen's confiscated land was restored to him (see Figure I.18).[232]

4. Kingsmill Plantation: Post Civil War to Parkway Construction (1866-ca. 1930)

In 1873, when the land between College and Grove Creeks was mapped in considerable detail by topographic engineers, much of Kingsmill had large agricultural fields bound by forested ravines and open expanses of marsh (see Figure I.25).[233] In 1876, when William Allen deeded his 3,196½-acre Kingsmill Farm to his mother, Frances A. Allen, the property was described as being bound on the north by the Tutter's (Tuttey's) Neck mill pond and creek, Halfway Creek, MacLean's land, Powell's and Williams' landholdings; on the south by the James River; on the east by Williams Run (Grove Creek), the Big Marsh, and property Allen was retaining; and on the west by College Creek. Shortly thereafter, Mrs. Allen sold the Kingsmill Farm to Moses R. Harrell, whose landholdings had included Jamestown Island and Jockey's Neck.[234]

Harrell subdivided the Kingsmill tract and sold off acreage. In 1883 he disposed of 600 acres that abutted north upon the Grove Road (Route 60); east upon part of William Allen's estate and the property of Benjamin Ruffin, Henry Lee and Harrell; south upon the James River; and west upon a road leading from the main road to the James River. A decade later he deeded 2,400 acres called the Kingsmill Farm to Isaac C. Ketler. Between 1901 and 1904 Ketler and his wife began selling off their land. At that juncture, much of the Kingsmill tract came into the hands of the Pew family, who added to their landholdings in the area. A topographic quadrangle sheet published in 1904 suggests that land use patterns at Kingsmill had changed little since 1873 (see Figure I.26).[235] During World War II, the southeastern part of what was once the Littletown/Utopia tract became the military reservation known as Camp Wallace. In 1950 the Pews sold their property to the Thomas M. Brooks Lumber Company, which in 1953 conveyed its 2,644 acres of land to Williamsburg Restoration, Inc., the organization that later sold it to Anheuser-Busch.[236]

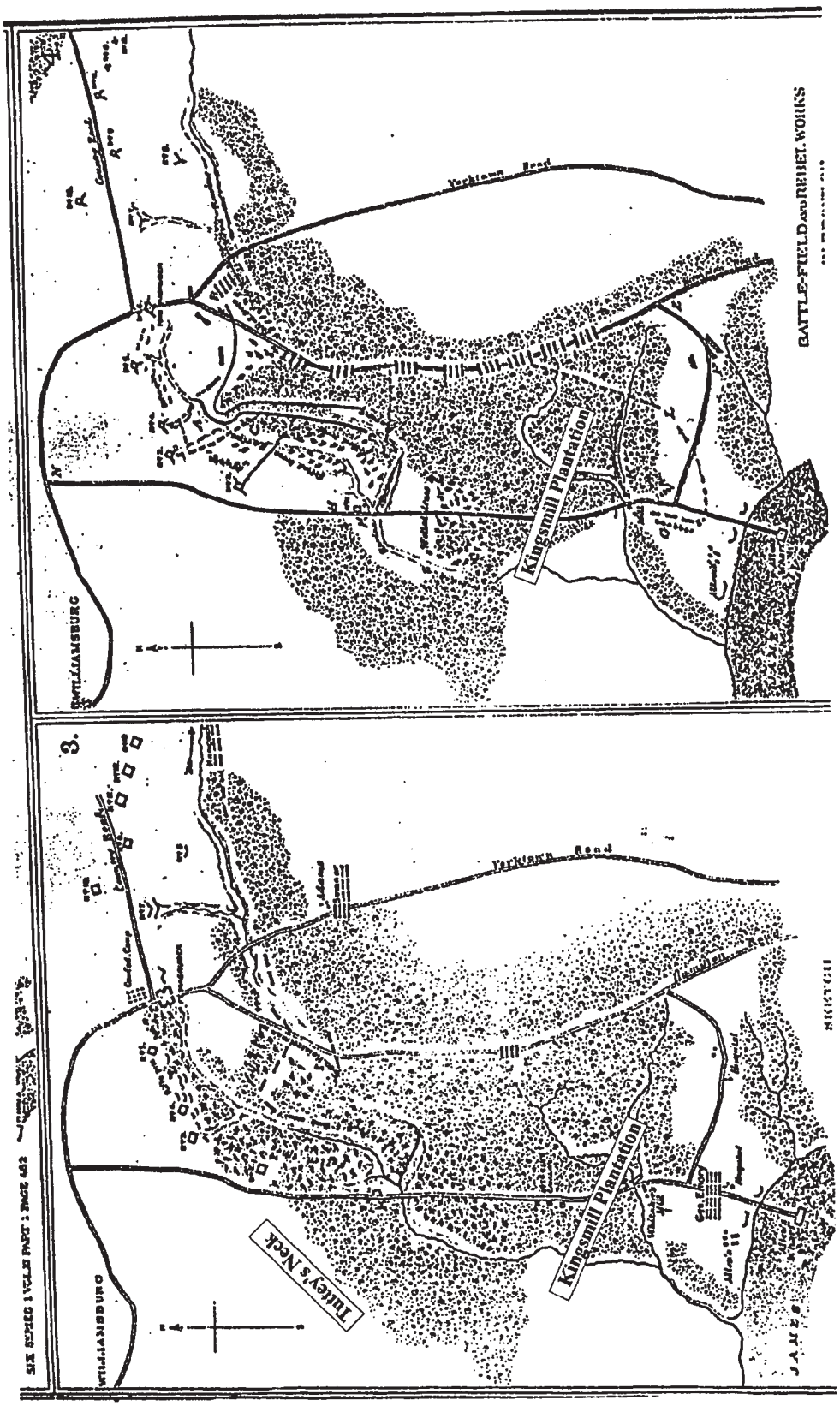


Figure I.24. Detail of McAlester, "Sketch of the Battlefield . . ." and "Battlefield and Rebel Works . . . Battle of May 5th, 1862," 1862.

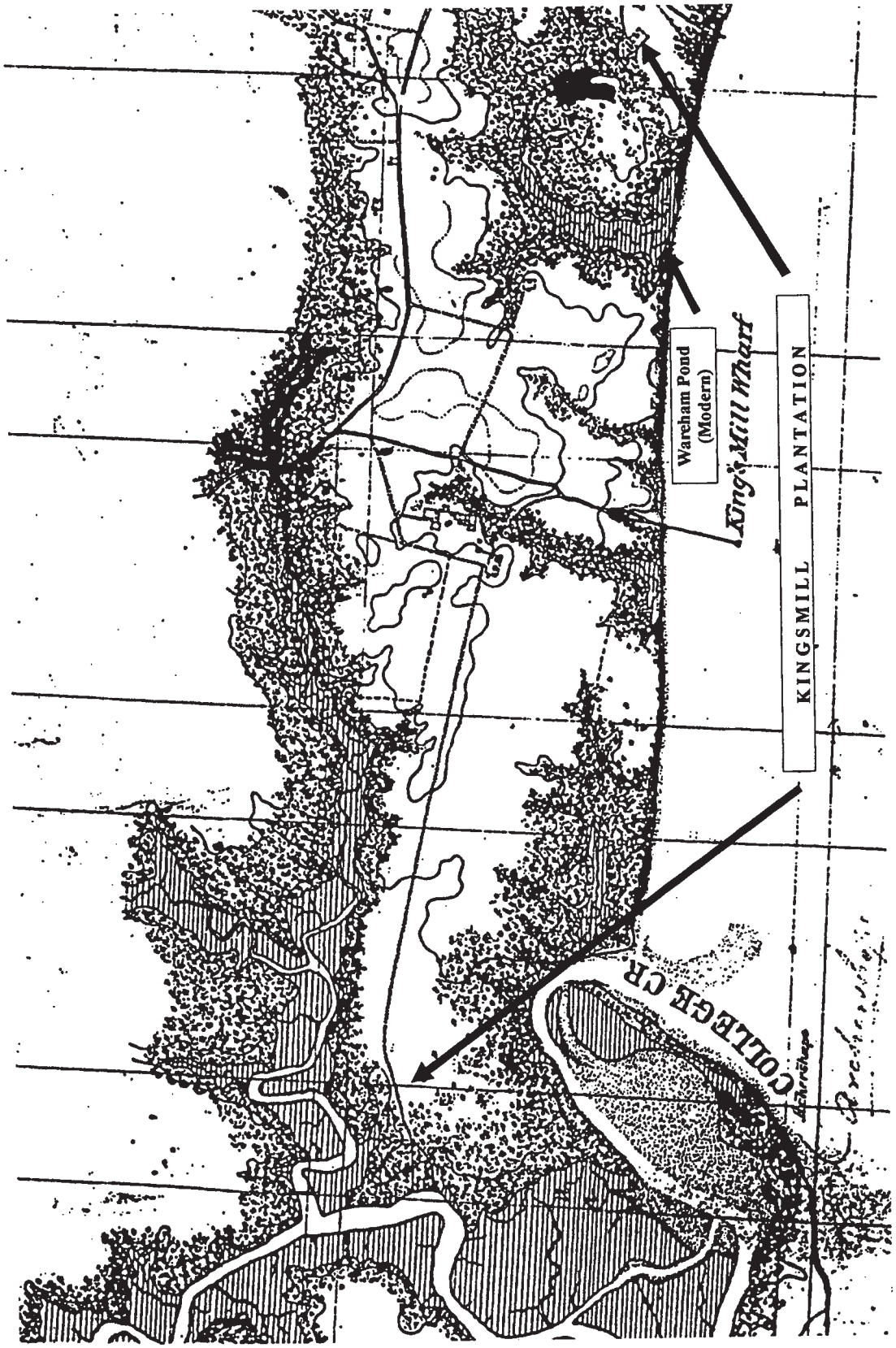


Figure I.25. Detail of Donn, "James River, Virginia, from Burwell's Bay to College Creek, 1873.

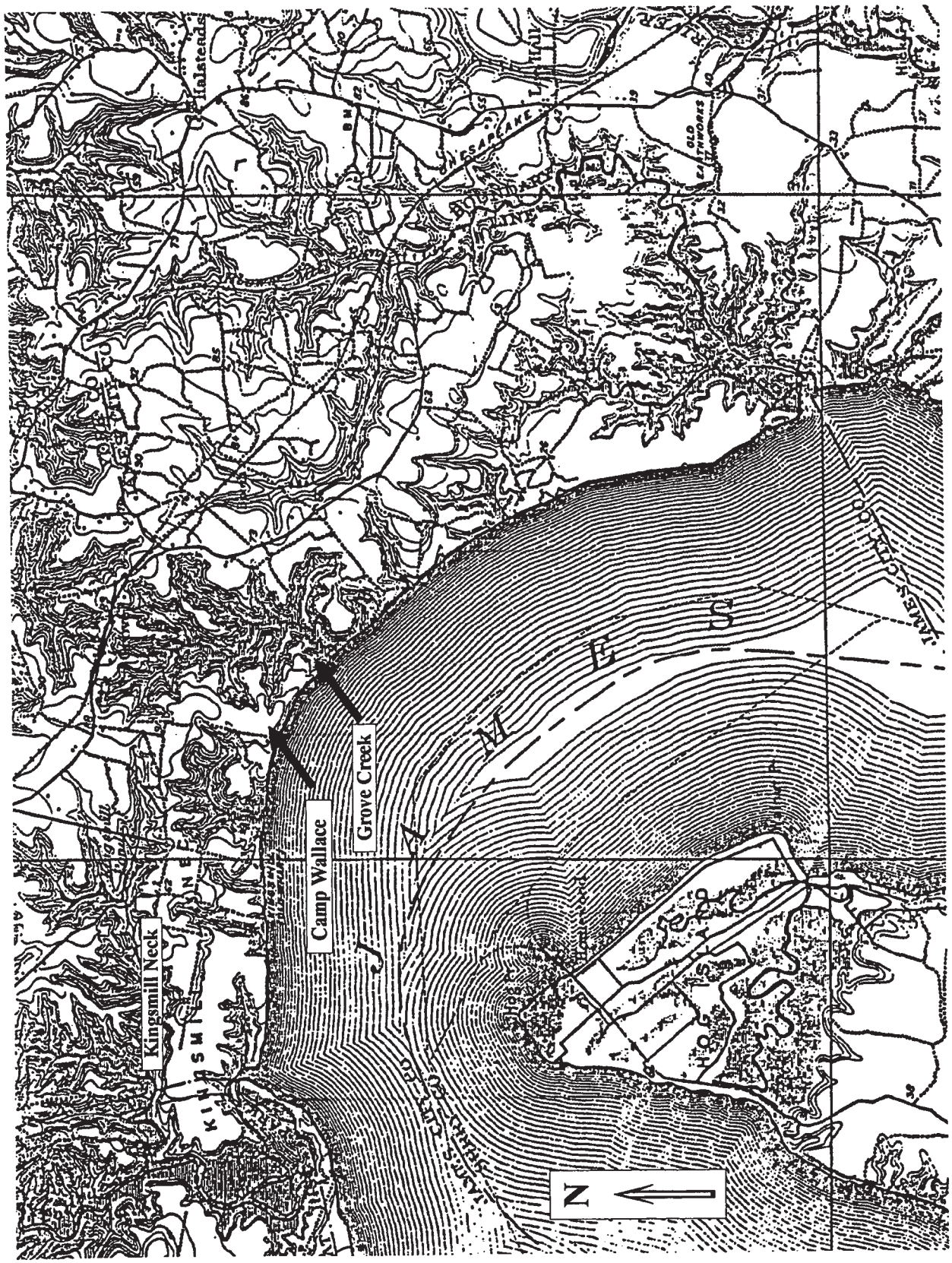


Figure I.26. Detail of USGS Quadrangle, "Yorktown," 1904.

5. Kingsmill Plantation: Observations

Kingsmill Plantation, which has a complex and lengthy history, figured prominently in the Revolutionary and Civil Wars, two pivotal events in America's heritage. The western part of Kingsmill, through which the Colonial Parkway passes, was somewhat remote from the sites selected by the plantation's wealthy owner/occupants for construction of their family seats. Archaeological work at Kingsmill during the 1970s and more recently has documented the plantation's persistent usage. It is likely that other sites on the property remain to be discovered.

There is no evidence suggesting that the area between College Creek and Grove Creek was seated by European colonists prior to the time a muster of Virginia's inhabitants was made in early 1625. This is likely due to the well documented fact that the Society of Martin's Hundred's investors, which included several Virginia Company officials, asserted a legal claim to the vast territory that extended from Skiffs Creek to College Creek.

Today lush vegetation screens from view much of the residential, recreational and industrial development that has occurred within Kingsmill Neck. This greenspace serves as an important buffer zone for the Colonial Parkway.

H. THE BARREN NECK AND TUTTEY'S NECK

1. Barren & Tuttey's Neck: The Settlement Era (to 1699)

On February 6, 1638, Richard Brewster, a gentleman, acquired a patent for 500 acres of land known as the Great or Barren Neck. His property abutted west upon the main part of College Creek, south upon a branch that separated it from Kingsmill Neck, and east upon a branch that parted it from Tuttey's Neck. Brewster, an Ancient Planter, received 100 acres as a personal dividend and the remainder for having transported his wife, two children, brother Henry and four servants to Virginia.[237]

In June 1642 Brewster was obliged to buy out Captain Francis Pott's interest in the Barren Neck, to which he had a legal claim by right of inheritance. According to Captain Pott's case, on June 6, 1632, his brother, Dr. John Pott of Jamestown, the colony's physician, received a patent for 500 acres called the Great Neck alias the Barren Neck by virtue of a court order. At the doctor's death his property descended to his brother, Francis, his legal heir. As soon as Captain Pott's interest in the 500-acre tract was confirmed by the General Court, he immediately conveyed it to Richard Brewster, a gentleman.[238] In 1646 Richard Brewster enlarged his 500-acre Great Neck (Barren Neck) tract through the addition of another 250 acres. References to Brewster's possession of the property persist into the 1670s, after which time it fades into obscurity.[239]

Humphrey Higginson, who by 1637 had acquired the 700-acre Tuttey's Neck tract in the right of his wife, Elizabeth, by 1648 had extended his landholdings southward into the Harrop tract. He combined the Tuttey's, Kingsmill, and Farley's Necks with his Harrop plantation, unifying what eventually became the western part of the Kingsmill Plantation. By 1660 Col. Thomas Pettus, then-owner of the Littletown tract, had united Higginson's holdings with the Utopia property. At Pettus's death in ca. 1669 his property descended to his son, Thomas II, who survived until 1691.[240]

2. Barren & Tuttey's Neck: Colony to Nation, 1700-1790

A map prepared by Nicholas Desandrouin (1781) during the Revolutionary War indicates that the Barren Neck belonged to Mr. Maupin, presumably Gabriel Maupin of Williamsburg. Meanwhile, the history of Tuttey's Neck is more fully documented. Thomas Pettus II's widow married James Bray II, who moved to Littletown shortly aftertheir marriage. During Bray's residency there, he served as a burgess, justice of the peace for James City County, and alderman for the city of Williamsburg. In 1700, when he bought out the Pettus heirs' interest in the Littletown and enlarged Utopia tracts, the deed of release he obtained noted that Humphrey Higginson's Harrop land formed its western boundary.[241]

The quitrent rolls compiled in 1704 attributed to Frederick Jones 300 acres of James City County, which subsequent transactions reveal was in Tuttey's neck. Seven years later, in April 1711, Jones patented another 100 acres in Tuttey's Neck, acreage formerly owned by Mathew Brown (Browne) which had escheated to the crown in 1706.[242] Archaeological excavations conducted at Tuttey's Neck in 1960-1961 by Ivor Noel-Hume of the Colonial Williamsburg Foundation led to the recovery of wine bottle seals bearing Frederick Jones' initials and artifacts dating no later than the first decade of the eighteenth century.[243]

James Bray III, who inherited his grandfather's Littletown plantation, also inherited acreage the elder man had owned in Tuttey's Neck. James Bray III predeceased his father, Thomas, to whom he left liferights in his property. In 1732 a dispute between Thomas Bray and John Randolph was aired before the House of Burgesses. It involved certain lands in which both parties had a legal interest. One of the parcels involved was 300 acres that David Bray's mother, Judith, had purchased from Frederick Jones. According to the terms of the settlement, John Randolph relinquished his claim to three properties, one of which was Tuttey's Neck.[244] Afterward, Tuttey's Neck was incorporated into Kingsmill Plantation. During the Revolutionary War, when military cartographers mapped the area, Tuttey's Neck was densely wooded whereas the Barren Neck was clear and open (see Figure I.22).[245]

3. Barren & Tuttey's Neck: The Early National Period through the Civil War (1791-1865)

During the Civil War, the Confederates under the supervision of Colonel John B. Magruder built three parallel lines of earthworks across the James-York peninsula, taking maximum advantage of the terrain with its numerous creeks and ridges. Benjamin S. Ewell, president of the College of William and Mary and a West Point graduate, designed the line of earthworks built outside of Williamsburg and oversaw their construction. In 1861 General Robert E. Lee ordered Ewell to lay out a line of fortifications at Williamsburg and approved his plan. But Captain Alfred L. Rives, a young engineer sent to demarcate the line, disagreed with the configuration of its western end and when Colonel Magruder arrived to take command of the Department of the Peninsula, he sided with Rives. Ewell commenced construction during the last week of May 1861, severely hindered by shortages of manpower and equipment. Ewell on at least one occasion impressed all able-bodied local blacks, free and enslaved, to work on the project and he sent a request to the Secretary of War for 1,500 slaves from the counties west and south of Richmond. Although the right (eastern) and central portions of the Williamsburg line were completed in less than a year, the left (or western) end was not.[246]

By March 1, 1862, the Confederates' defensive lines were partially complete. Magruder's first line extended between Harwood's and Young's Mills and the heads of the Poquoson and Warwick Rivers, where the intervening solid ground was reduced to a three-mile strip that was flanked by "boggy and difficult

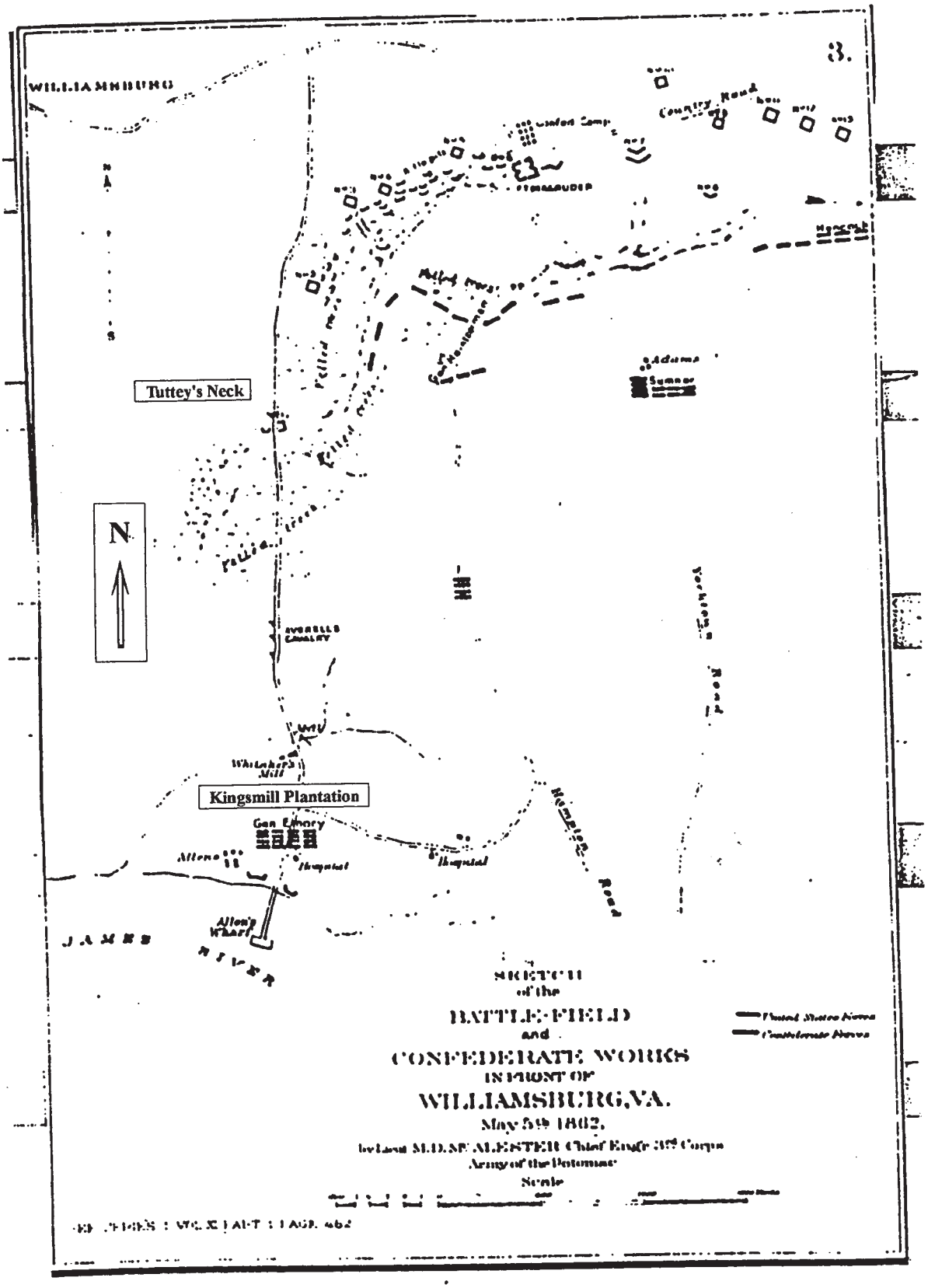


Figure I.27. Detail of McAlester, "Sketch of the Battlefield . . . ," 1862.

streams and swamps." His second ran from Yorktown, along the Warwick River to Mulberry Island, and his third line, which was situated just outside of Williamsburg, included a string of earthworks that stretched out between College and Queens Creeks, with Fort Magruder as its centerpiece.[247]

After the war was over, Magruder said that he considered Jamestown Island his army's right flank and that he had established bases of operation on the Poquoson River and at Deep Creek in order to secure his supply lines if he were attacked by land. Magruder said that he considered the redoubt known as Fort Magruder and the fortifications at Tuttey's (or Tutter's) Neck to be of the utmost importance.[248] Unfortunately, the area was given only schematic coverage by the opposing armies' cartographers (see Figure I.27).[249]

4. Barren & Tuttey's Neck: Post Civil War to Parkway Construction (1866-ca. 1930)

In 1871 when a tract map was made of the local area, William Allen was credited with Tuttey's Neck, whereas someone named Crenshaw had the Barren Neck (see Figure I.28).[250] Tuttey's Neck, which was incorporated into the Kingsmill Plantation in 1732, remained part of the Kingsmill tract well into the twentieth century. The Barren Neck, meanwhile, remained undeveloped rural property.

5. Barren & Tuttey's Neck: Observations

Although archaeological excavations have been undertaken at Tuttey's Neck and its history is relatively well documented, much remains to be learned about it and the Barren Neck. Both areas may contain archaeological sites dating to the seventeenth, eighteenth and nineteenth centuries. Also, any Civil War features that might be present should be documented and preserved.

From the Colonial Parkway it is impossible to discern the vast size of these two necks of land. Both are covered with relatively profuse vegetation that screens from view much of the modern development that has occurred in the Kingsmill planned community and in Kingspoint.

I. THE ENVIRONS OF WILLIAMSBURG (MIDDLE PLANTATION)

1. Williamsburg: The Settlement Era (to 1699)

In February 1633 the Grand Assembly set about implementing a proposal to construct a palisade across the James-York peninsula between the heads of Queens and College Creeks, traversing a ridge-back that became known as the Middle Plantation. The palisade was intended to cordon off the lower end of the James-York peninsula, which was set aside for the colonists' exclusive use. A bounty of fifty acres of land was offered to each man willing to settle between Queens and Archers Hope (College) Creeks. Work on the palisade commenced immediately. Shortly thereafter, a small settlement was established midway between College and Queens Creeks, what became known as the Middle Plantation, later the site of Williamsburg. The palisade at Middle Plantation appears to have been rebuilt at least once.[251] Archaeologists have discovered traces of the palisade on acreage associated with the Bruton Heights School.

In time, Middle Plantation became a relatively populous area, as larger patents were subdivided into smaller ones. On February 8, 1693, King William and Queen Mary granted a charter to the College of William and



Figure I.28. Detail of Anonymous, "Vicinity of Yorktown and Williamsburg," 1871.

Mary to establish "a certain place of universal study, or perpetual college, for divinity, philosophy, languages and other good arts and sciences." The newly created educational institution was endowed with 20,000 acres of land and public revenues (such as the duties upon exported furs, skins, tobacco and imported liquors) were earmarked for its support. On December 20, a 330-acre tract of James City County land was purchased from Thomas Ballard as the site of the new college. It was located west of "the church now standing in Middle Plantation old fields," extended to Archers Hope Swamp (at the head of College Creek), followed the old "road to New Kent" (what eventually became known as Richmond Road) and straddled the forerunner of Jamestown Road. By 1694 a grammar school had opened "in a little School-House" close to the site where the college's main building was to be erected.

In August 1695 the first bricks were laid for what eventually became known as the Wren Building. By 1697 the grammar school was "in a thriving way" and the main college building was "carry'd up one Half of the design'd Quadrangle." Within two years a small community, which consisted of a church, an ordinary, several stores, two mills, and a smith's shop had grown up at Middle Plantation, near the college. In April 1699, after the colony's statehouse was destroyed by fire, the assembly convened in the college building at Middle Plantation. This meeting foreshadowed the removal of the colony's capital from Jamestown.

On May 1, 1699, a group of students from the College of William and Mary appeared before the House of Burgesses, where they argued the merits of moving the capital to Middle Plantation. They claimed that "great helps and advances [had been] made already towards the beginning of a town," for "a Church, an ordinary, several stores, two Mills, a smiths shop, a Grammar School, and above all the Colledge" were in existence. They said that the faculty and student body, with their servants and attendants, comprised the makings of a small town. One scholar pointed out that Middle Plantation was well situated for trade, since it was served by two navigable creeks, and that it was a healthful seat far enough inland to be safe from enemy invasion.

Within a month, the assembly decided to abandon Jamestown and passed "An Act Directing the Building the Capitoll and the City of Williamsburgh." The 220-acre town site was situated at Middle Plantation and straddled the line between James City and York Counties. Duke of Gloucester Street, which ran along a ridge-back that divided the drainages of the James and York Rivers, formed the central axis of the town, which was to be laid out regularly into lots. Provisions were made for Williamsburg to be served by two landings or inland ports. The landing on Queens Creek in York County was to be called Queen Mary's Port, whereas the one on Archers Hope or College Creek in James City County was to be known as Princess Anne's Port. By the 1730s, the sister ports had become known as Capitol Landing and College Landing, in accord with their proximity to two well knownlocal landmarks: the colony's statehouse and the College of William and Mary. The new community was destined for success, for the spread of settlement inland was accompanied by steady growth in Virginia's population. Construction of the colony's new statehouse in Williamsburg was financed by a special tax on liquor, servants and slaves. Theodorick Bland was commissioned to lay out Williamsburg and its sister ports and the roadways that linked them.

In October 1705, when the third in a series of town-founding acts was passed by the colony's assembly, the legislation that had established Williamsburg and its sister ports in 1699 was reaffirmed. The dimensions and layout of Williamsburg and its landings were described in the text of the 1705 act, precisely as they had been given in Theodorick Bland's 1699 survey. Trustees (or feoffees) were appointed and authorized to sell the town's lots. Each lot had to be developed within 24 months of the date of purchase or it would revert to the trustees, who had the right to assign it to someone else. Williamsburg's lots by law were of a proscribed size and restrictions were placed upon the dimensions, character and placement of the buildings that lot-owners could erect. Queen Mary's and Princess Anne's Ports were to be surveyed into lots that

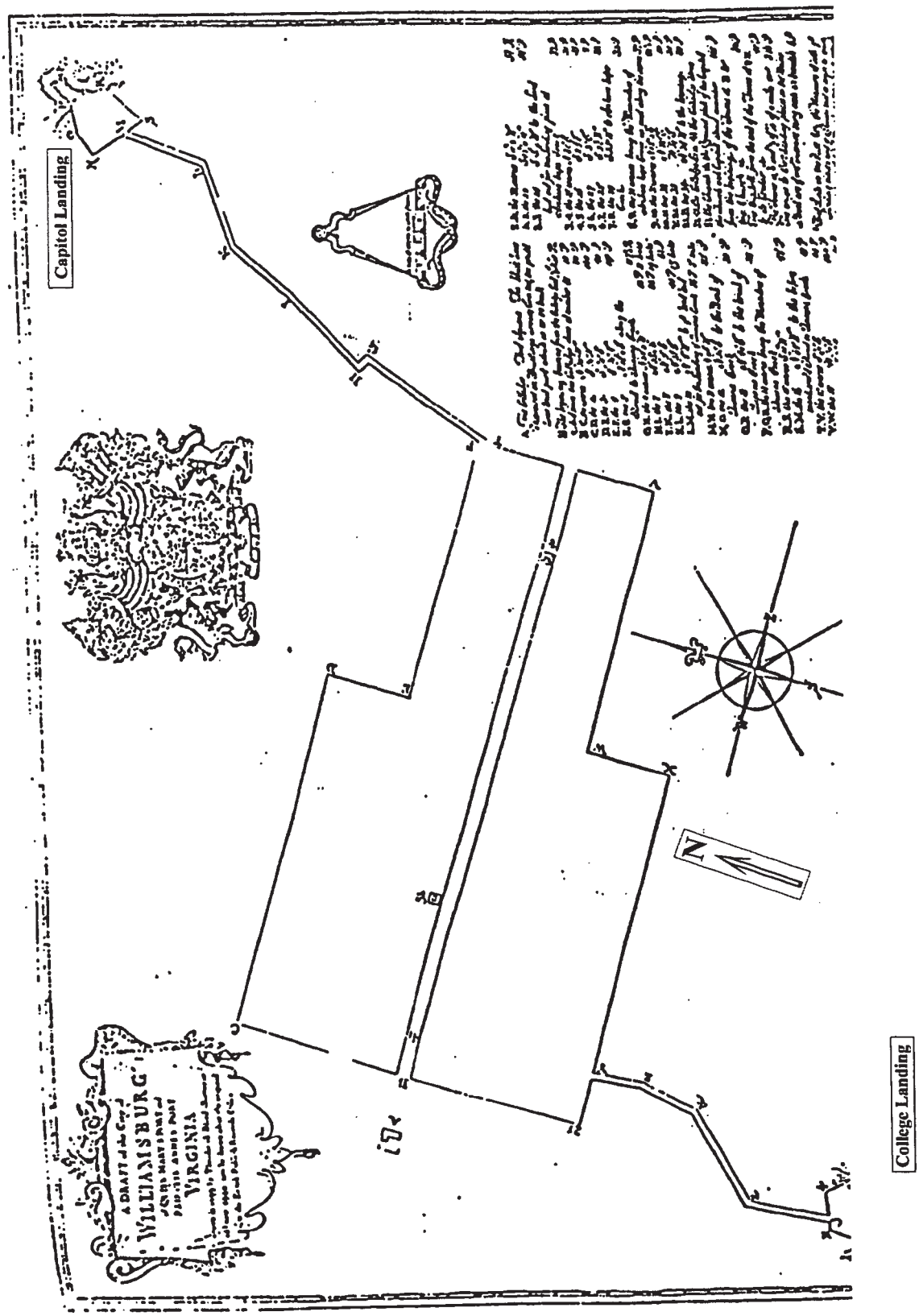


Figure I.29. Bland, "A Draft of the City of Williamsburg . . . ," 1699.

were no more than 60 feet square. "A sufficient quantity of land at each port or landing place" was to be left as a commons (see Figure I.29).[252]

2. Williamsburg: Colony to Nation (1700-1790)

Although Williamsburg's trustees occasionally made reference to a plat depicting the configuration of the lots within its two ports, that document seemingly was lost or destroyed sometime prior to 1774 when surveyor Mathew Davenport was hired to demarcate their lot lines. Merchants, planters, artisans and ordinary-keepers were among those who owned and developed lots in Williamsburg and its sister ports and some people had land in both places. In 1736 the *Virginia Gazette*, a local newspaper, commenced being published. During the second and third quarters of the eighteenth century it was produced by William Parks, Alexander Purdie, Clementine Rind, John Dixon, and others. Parks is believed to have built a mill across one of the branches of College Creek, which in time became known as Papermill Creek.

In May 1776, when British General Henry Clinton invaded North Carolina and Virginia troops were sent to oppose him, there was some concern that Williamsburg might be vulnerable to attack. The concensus was that "getting possession of the Capital would give an air of dignity and decided superiority to the Enemy." Delegates to the Fifth Virginia Convention decided to station "as strong a force as possible" in the city "and its dependencies," which were identified as Jamestown, Yorktown, Burwell's Ferry and Hampton.

On June 12, 1779, the General Assembly voted to shift the seat of Virginia's government from Williamsburg to Richmond, a more centralized location that was presumed safer from enemy attack. On April 7, 1780, the state's executive department ceased transacting business in Williamsburg and on April 24th resumed its duties in Richmond. A week later, the General Assembly held its first session in its new capital city. Relocating the capital had a profound affect upon Williamsburg, for no longer was the old city at the hub of Virginia's social and commercial life. Thus, Williamsburg's decline mirrored that of Jamestown, when the capital was moved in 1699. The 1781 Desandrouin map of the colonial capitol shows the axial pattern of Williamsburg's development at that time, with the irregular topography of the region surrounding it (see Figure I.30).

After the close of the American Revolution, the College of William and Mary entered a period of decline. The Tidewater region's population dwindled and Williamsburg lost much of its vitality. In 1783 one visitor said that the city was "a poor place compared with its former splendor" and that as soon as the capital moved to Richmond, "merchants, advocates, and other considerable residents took their departure as well."

3. Williamsburg: The Early National Period through the Civil War (1791-1865)

During the first half of the nineteenth century, when the local court was in session, people flocked into Williamsburg, often with their families in tow. There, they bartered or bought what they needed, gossiped with friends and neighbors, and socialized. But court days were not all merriment. Eliza Baker, a black woman born in Williamsburg in 1845, recalled that there was a whipping post in the ravine near the corner of Francis and South England Streets. Slave auctions were held on the courthouse green, where blacks were hawked to the highest bidder. One visitor to Williamsburg in 1835 noted that the city then had an asylum, the college, the courthouse, the jail, and Episcopal, Methodist, and Baptist churches. There also were 16 stores, three tanyards, and a saddler's shop and four nearby merchant mills. He described the city's older public buildings as presenting "the appearance of decaying ."



Figure I.30. Detail of Desandrouin, "Carte des Environs de Williamsburg," 1781.

4. Williamsburg: Post Civil War to Parkway Construction (1866-ca. 1930)

After the Battle of Williamsburg and three years of occupation by the Union Army, what General Philip Kearney called the "lovely sweet College town of charming villas & old mansions" was scarred and dilapidated. William and Mary's main building and the Brafferton, which had been gutted, stood as hollow shells: grim reminders of the war. In June 1865, when President Benjamin S. Ewell was able to visit the college campus, he assessed the damage to its buildings and equipment. He concluded that students could be accommodated and tried to garner the support that was needed to restore the college to use.
Despite the strain of Reconstruction, the 1880s and 90s were characterized by immense progress. During 1887 the Peninsula Bank and Trust Company was established in Williamsburg and in 1898-1899 an ice plant was built and a steam laundry became operational. The Williamsburg Knitting Mill, established in 1900, employed approximately 200 people who were involved in manufacturing men's underwear. Modern improvements, such as sewer and water lines, were installed just before World War I, at which time the old community well by the 1770 courthouse was backfilled. One Williamsburg native described the city's appearance during the early twentieth century. He said that there were a few new store fronts along Duke of Gloucester Street and that the old knitting mill near the train depot had been converted into a smoke-belching power plant. Duke of Gloucester Street had neither pavement nor gutters and was described as "a mile long, a hundred feet wide and two feet deep." It was lined with buildings that ranged from the very old to the very new, most of which were somewhat dilapidated. Private residences were intermingled with businesses. Across from the city-county courthouse were buildings that housed the city post office, bank and the offices of several lawyers who handled most local cases. Near the colonial powder magazine, then known as the Powder Horn, were some unpainted shanties that were occupied by blacks. There, Duke of Gloucester Street was a plaque that marked the foundations of the old colonial capitol. At that point, Duke of Gloucester Street flared into a V, which side streets led to Francis Street and Capitol Landing Road. On court days, farmers from the nearby countryside came into Williamsburg to trade and exchange the latest news. Williamsburg's main business, other than serving as the seat of the city and county court and the district court, revolved around the College of William and Mary and the state-run asylum, which in 1894 became known as Eastern State Hospital.

The pace of life in Williamsburg was so notoriously sluggish that a May 14, 1913, editorial in the *Richmond Times-Dispatch* claimed that city residents not only forgot to hold an election, they also failed to budget the $50 it cost to have the town clock wound, in hopes of stopping time. The editorial's writer asserted that the people of Williamsburg "tried abolishing the calendar, but time kept up. Now they will kill time by stopping the clock." He added that "The native Williamsburger never stirs. He never lets his anger be aroused for fear it should arouse the rest of him. He regards a fever as a breach of decorum." Thus, he implied that some of Williamsburg residents rested comfortably upon their ancestral laurels.

After the end of World War I, some Williamsburg residents found it difficult to adjust to the peacetime economy. Local businesses that had experienced a boom during the war, thanks to a strong military presence on thepeninsula, later languished for lack of support. The editor of the *Virginia Gazette* observed that the statewide business depression had suppressed the local lumber industry and other business enterprises.

In 1923 Dr. William A. R. Goodwin, the former rector of Bruton Parish Church, returned to Williamsburg. He observed that many of the city's older buildings were even more dilapidated than he remembered them and that a hodge-podge of modern structures was beginning to obscure what was left. Down the center of Duke of Gloucester Street, which had been paved to accommodate the army convoys that passed through town, was a line of telephone poles festooned with wires. Restaurants, laundries, pool rooms, movie theaters and filing stations were intermingled with aging, sagging eighteenth and nineteenth century houses

and gardens. Goodwin, director of an endowment fund at the College of William and Mary, in 1924 tried to interest John D. Rockefeller Jr. in restoring Williamsburg. Two years later the wealthy philanthropist agreed to allow Goodwin to begin purchasing property on his behalf. Rumors abounded as the townspeople speculated about the source of the Rev. Goodwin's money and what he was going to buy next. To some local people, the infusion of funds was like a dream-come-true, but there were others who genuinely resented the disruption of a cherished way of life. In time, Dr. Goodwin held 37 properties, for which he had expended more than $2,000,000.

As the time approached for architects and contractors to restore Williamsburg's colonial buildings, a public meeting was held to discuss what was going on. Afterward, a corporation was formed to handle business details and teams of architects, archaeologists, historians and other specialists were hired to gather information about colonial life. Shops catering to tourists were built in what became Merchants Square and Williamsburg's streets were paved. In October 1934 the restored colonial city officially opened as a tourist attraction. At that time, the Raleigh Tavern, the capitol, the palace and a few other buildings on Duke of Gloucester Street comprised the main attractions.

5. Williamsburg: Observations

The construction of the Colonial Parkway and its tunnel through Williamsburg undoubtedly took a toll upon some of the archaeological sites associated with seventeenth century Middle Plantation. It is also likely that some of Williamsburg's eighteenth and nineteenth century sites were sacrificed during the excavation, which occurred at a time when archaeological techniques were relatively unrefined.

Today, earth-disturbing activities within the Historic Area are monitored by Colonial Williamsburg Foundation archaeological personnel. However, sites outside of the Foundation's landholdings are less well-protected and a systematic archaeological survey of Williamsburg's undeveloped land never has been undertaken. Although extensive excavations have been carried out at Rich Neck, Port Ann and on South Henry Street (near College Landing), no effort has been made to locate traces of the Williamsburg Palisade line near College and Papermill Creeks and no archaeological tests have been conducted in the vicinity of what is believed to have been William Parks' dam across Papermill Creek. During 1996 the City of Williamsburg funded the production of an electronic cultural resource sensitivity map, intended for use in identifying subsurface cultural features.

J. FORCE'S QUARTER, NEW QUARTER AND THE BRUTON PARISH GLEBE

1. Force's Quarter: The Settlement Era (to 1699)

During the early 1630s settlers began patenting land along Queens Creek. The first land to be claimed lay along the palisade that extended between the headwaters of Queens and College (Archers Hope) Creeks. In 1634 Charles River County, one of Virginia's original shires, was formed out of the vast territory that lay north of the ridgeback that extended up the James-York peninsula. It was in the 1630s that John Hartwell, Richard Jones,Robert Booth, John Bell and William Tayloe (Taylor) patented land between the northerly terminus of the palisade and the mouth of Queens Creek. Inland and adjacent to these patents was the land of Samuel Watkeyes.[253]

In the 1640s Robert Vaulx (Vaus, Vause), a London merchant, came to Virginia with his brothers, James, Humphrey and Thomas. Through land purchases and the headright system they quickly acquired massive amounts of land along both sides of Queens Creek, as well as property north of the York River. It was Robert Vaulx who in 1647 acquired the patents of John Hartwell and John Bell and seven years later, that of Robert Booth. All of these men's landholdings bordered Queens Creek. Vaulx also purchased Samuel Watkeyes' property. Robert Vaulx built a residence on the north side of Queens Creek, a dwelling that became known as Vaulx Hall, which descended to his son.[254]

2. Force's Quarter: Colony to Nation (1700-1790)

The Vaulx Hall plantation passed through a succession of owners during the late seventeenth and early eighteenth centuries and the Vaulx heirs began disposing of their land on the south side of Queens Creek. Between 1697 and 1700 Robert Vaulx sold 250acres to Stephen Fouace (Force) and 100 acres to William Tayloe (Taylor), who owned the Kings Creek Plantation, which extended along the York River from Kings Creek to Queens Creek. Fouace also bought a tract from John Rhodes.[255] In 1704 when a roll of quitrents was sent back to England, Stephen Fouace still had the acreage he bought from Robert Vaulx. Meanwhile, Lewis Burwell II was credited with 2,100 acres that included the 1,750-acre Kings Creek plantation and contiguous acreage that later became New Quarter.[256] By 1723 Fouace's land, which was known as Force's Quarter, and a neighboring tract called New Quarter had come into the hands of Robert "King" Carter of Corotoman, who was related by marriage to the Burwells of the Kings Creek plantation.[257] Contiguous and to the west of Robert Carter's New Quarter tract was the 300-acre Bruton Parish glebe. Bruton Parish, which was established sometime prior to 1674, included territory formerly encompassed by Marston and Middletown Parishes, which had become extinct.[258]

On December 12, 1723, Robert Carter wrote in his diary that he went from Williamsburg to the landing at New Quarter, where he boarded a boat that transported him to the home of his daughter, Elizabeth Burwell, who lived in Gloucester County. Carter owned several subsidiary farms or quarters near Williamsburg, including New Quarter, Force's Quarter, Martin's Hundred, North Wales, Abrahams, Merchant's Hundred, the Mill Quarter, Black Swamp, and the Neck O'Land Quarter. Although few records survive that describe life at New Quarter and Force's Quarter, between 1731 and 1734 both were entrusted to the care of a general overseer or farm manager named William Camp who supervised Carter's gangs of slaves and saw that his crops and livestock were tended.[259]

Robert Carter bequeathed to his grandson and namesake, Carter Burwell, all of his agricultural quarters near Williamsburg. Young Burwell, who assumed control of his inheritance in 1738 at age 21, built the mansion known as Carter's Grove. He retained his grandfather's property up until the time of his death in 1756. Carter Burwell's plantation records reveal that both New Quarter and Force's Quarter were occupied by small numbers of slaves, who toiled under the direction of a resident overseer. Like his grandfather, Burwell placed all of his quarters under the supervision of a general overseer, to whom he issued detailed instructions. Thomas Pike served as Burwell's general overseer from 1742 to 1757.[260]

Overseer Thomas Doswell, who resided at New Quarter, placed an advertisement in the April 17, 1752, issue of the *Virginia Gazette*, asking that his lost horse be returned to him or to Benjamin Davis at Force's Quarter.[261] In the late 1750s an overseer named Robert Bond succeeded Doswell at New Quarter. Carter Burwell's plantation records reveal that New Quarter and Force's Quarter primarily were utilized for the production of livestock, such as cattle, horses, sheep and hogs. Memoranda written by Burwell in 1745 and 1748 indicate that he had barrels of corn delivered to both quarters for the use of his slaves, livestock, and overseers. Plantation records suggest that Carter Burwell was a relatively conscientious slave owner, who



Figure I.31. Detail of Desandrouin, "Cartedes Environs de Williamsburg," 1781.

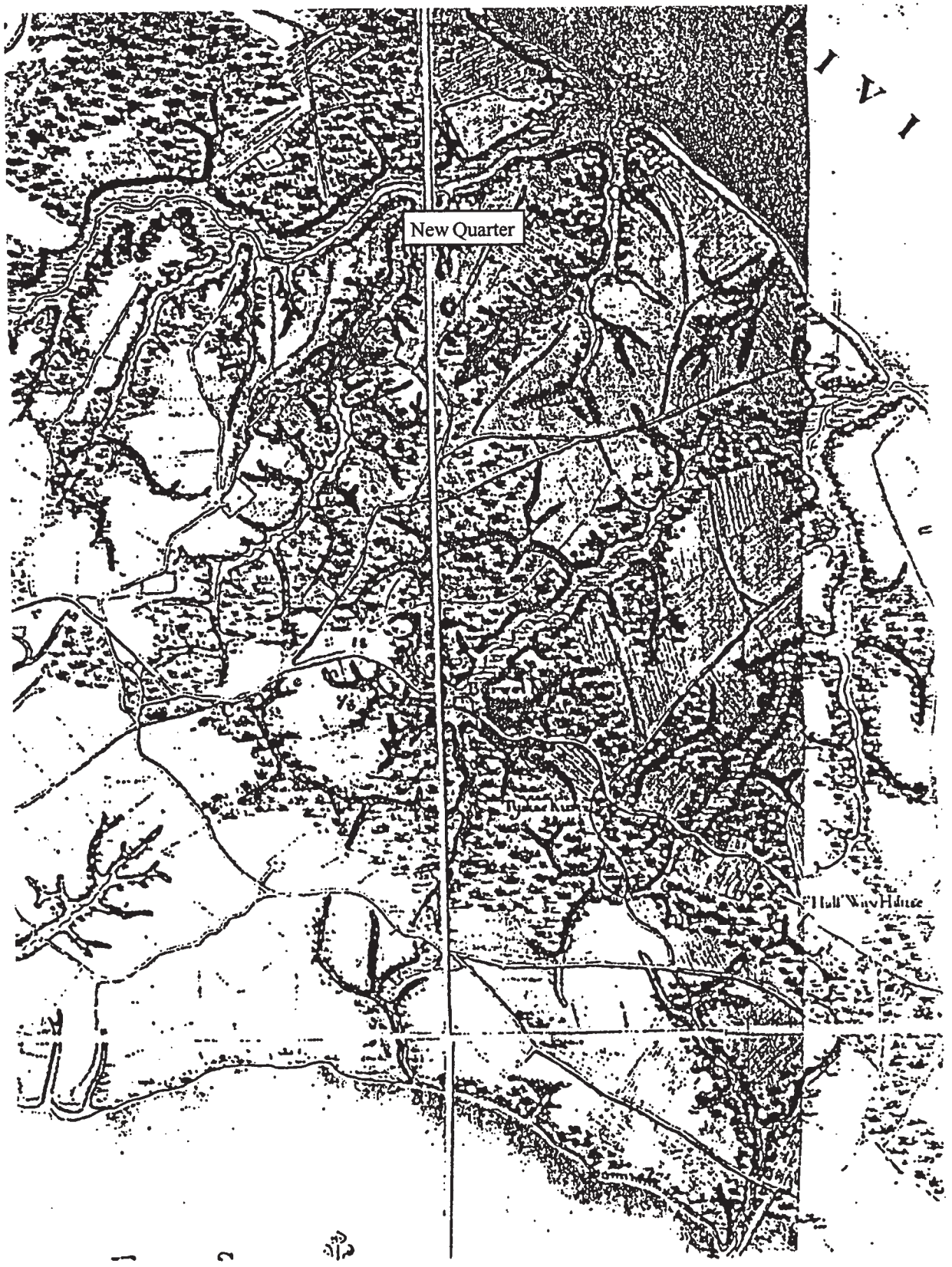


Figure I.32. Detail of St. Simone, "Carte de la Camagne de Sst. Simone," 1781.



Figure I.33. Detail of Berthier, [Untitled Map of York and Gloucester], 1781.

regularly provided his people with essentialclothing and "ruggs" or sleeping pallets. It is likely that both overseers and slaves planted gardens and supplemented their diet with fish, shellfish, game and meat.[262]

In accord with Carter Burwell's May 6, 1756, will, his properties near Williamsburg descended to his son, Nathaniel, whose plantation ledger books document the tracts' agricultural productivity. During the 1770s substantial quantities of wool and tobacco were produced at New Quarter and Force's Quarter, although their primary purpose seems to have been livestock production. Beef, pork, and large quantities of butter were produced at both quarters and sold at market. In 1779 butter production at New Quarter was more than six times that of Burwell's other subsidiary farms.[263]

During the Revolutionary War, when French cartographer Nicholas Desandrouin (1781) made a map of the Williamsburg area, he indicated that a cluster of buildings stood at a site he labeled as Force's Quarter (see Figure I.31). The residence of New Quarter's overseer appears to have been on the upper side of the stream now known as Cub Creek, within the bounds of Cheatham Annex. A road ran from Force's Quarter into both sections of New Quarter, which were linked by a road that extended across a small dam. Near the Burwell property was a quarter owned by John Blair Esquire and the manor plantation of York County Deputy-Sheriff Frederick Bryan, a wealthy and prominent citizen. Desandrouin failed to identify the site of the Bruton Parish glebe. Most of these properties consisted of woodland interspersed with cleared fields. Maps prepared by St. Simone (1781) and Berthier (1781) confirm this interpretation and provide supplementary information about the built environment (see Figures I.32 and Figure I.33).

3. Force's Quarter: The Early National Period through the Civil War (1791-1865)

After Nathaniel Burwell's death, the county tax assessor began attributing his property to his estate. This continued until 1834, when the decedent's property was transferred to Thomas H. Burwell.[264] Meanwhile, after the close of the American Revolution, when Virginia's State Church officially was disestablished, a law was passed that required the sale of parish glebes, upon the death of the incumbent clergyman. In December 1813 the vestry of Bruton Parish and the Rev. John Bracken approached the General Assembly, asking for an exception to the law. In their petition they stated that the glebe was ". . . destitute of any buildings . . . except what have been placed thereon by the present incumbent; that these consist of small Log Cabins for the accommodation of his slaves and are in a state of decay; and that the value of the land would be greatly increased by substantial and permanent buildings which a tenant for life and greatly advanced in years [Bracken] cannot be expected to erect."

For that reason, the petitioners requested permission to sell the glebe even though the incumbent minister, John Bracken, was still alive, allowing him to have enjoy whatever interest was accrued by the funds derived from that sale. Bruton Parish's petition was approved.[265] James Kearney's map (1818) identifies the approximate location of the glebe (see Figure I.34).

Later, New Quarter, much (if not all) of Force's Quarter, and the old Bruton Parish glebe passed into the hands of James W. Custis of Williamsburg, a commissioner of the Eastern State Lunatic Asylum, who owned several large tracts of land along the south side of Queens Creek.[266] A map produced by an anonymous cartographer in 1871 suggests that the configuration of the roads within New Quarter, Force's Quarter and the former glebe was much as it had been nearly a hundred years earlier (see Figure I.35).[267] Throughout the first half of the nineteenth century all three properties continued to be used for agricultural purposes. It was not until Spring 1862, when the James-York peninsula became a combat zone, that its lengthy but seemingly bucolic tradition was broken.

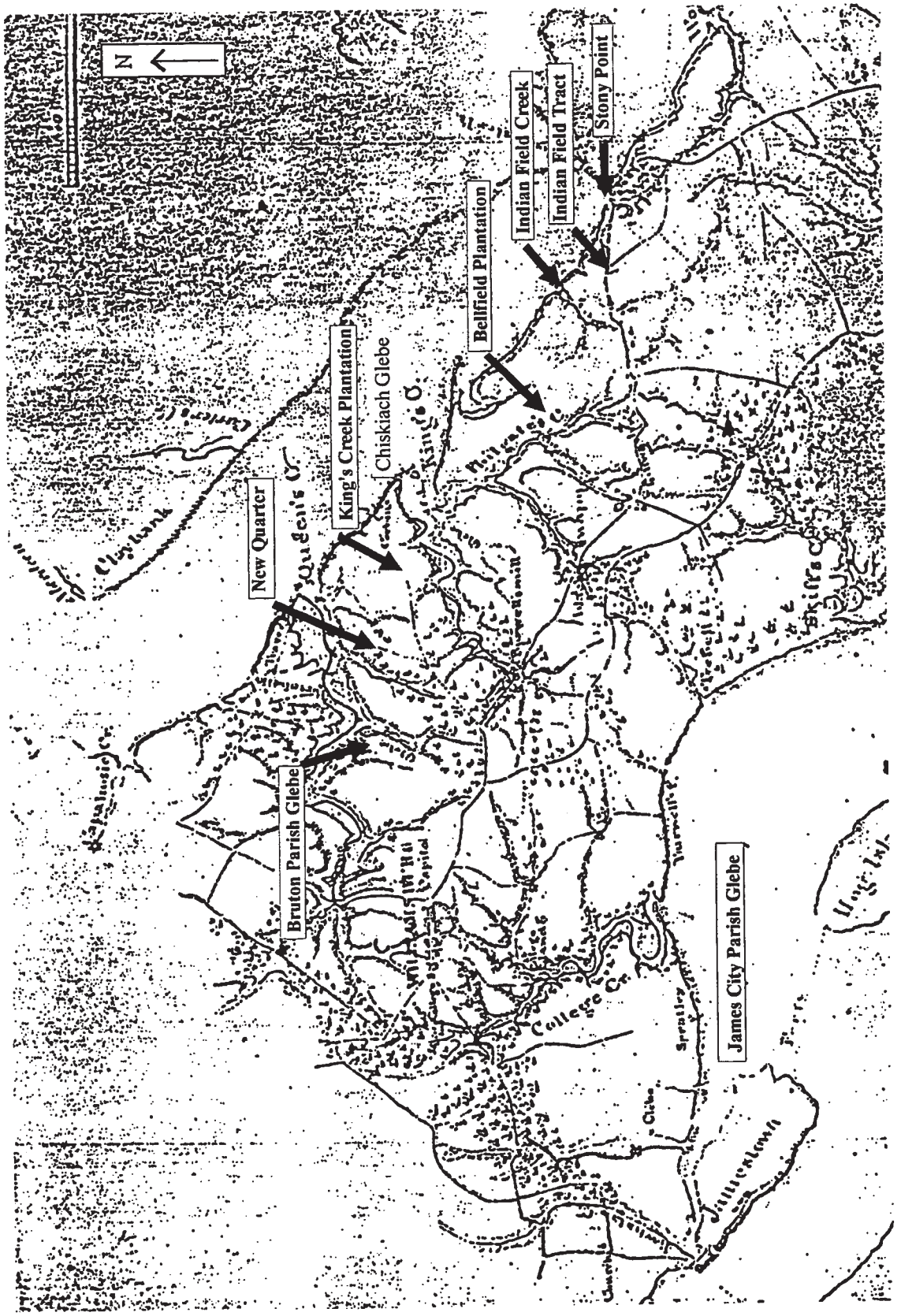


Figure I.34. Detail of Kearney, "Virginia Peninsula, 1818, showing Landings and Togography of 1781," 1818.

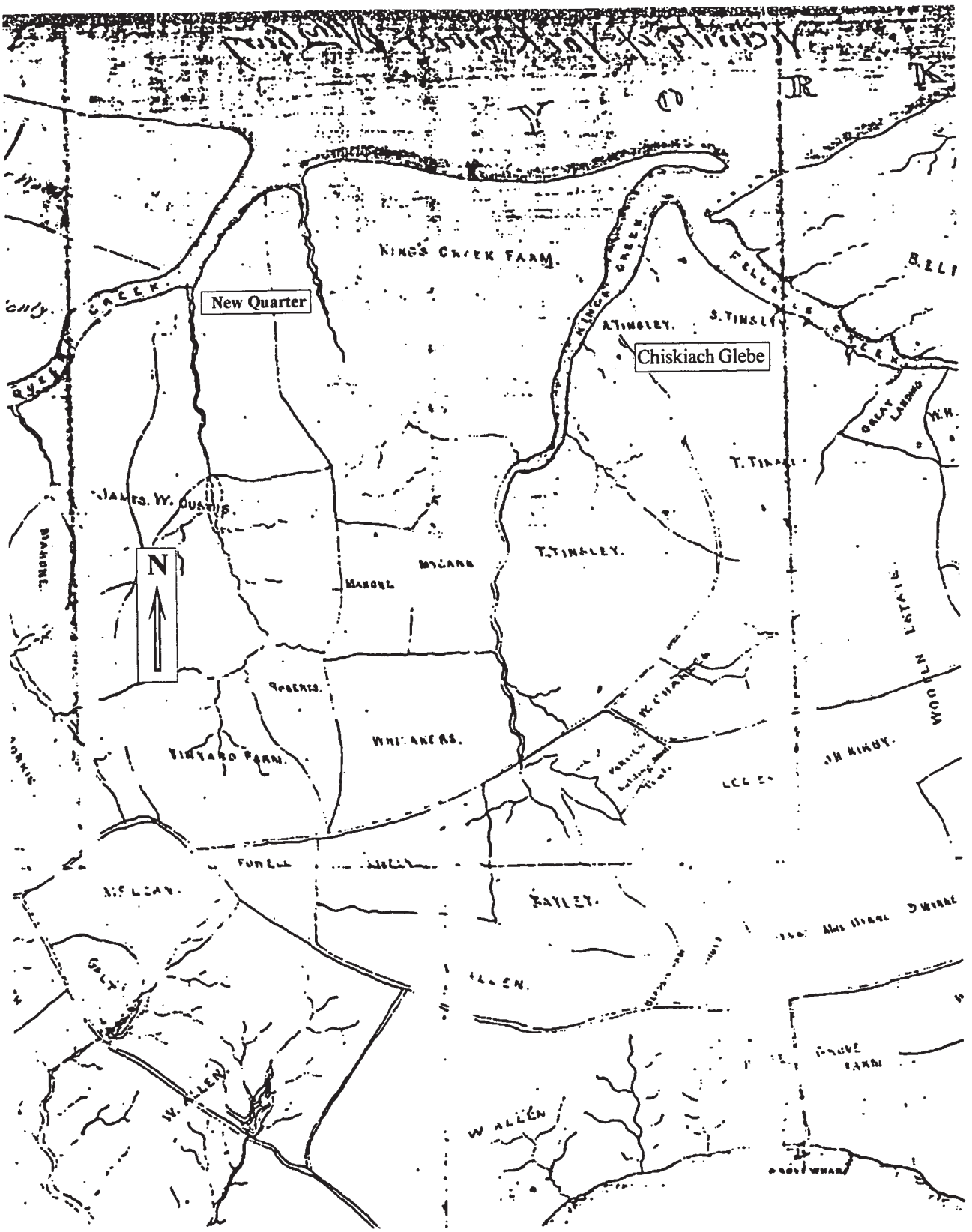


Figure I.35. Detail of Anonymous, "Vicinity of Yorktown and Williamsburg," 1871.

On April 12, 1861, shots fired at Fort Sumter, South Carolina, signaled the beginning of the Civil War. Although the concept of secession had been debated by politicians for several years, few people realized that the issues under dispute would culminate in a long, bloody war. On April 17, 1861, Virginia seceded from the Union and joinedthe Confederacy, which was just taking form. In June, Richmond became its capital. From then on, the focus of the war in the east was on the territory between Richmond and Washington, D. C., the federal capital. The ultimate result was that much of Virginia's countryside was devastated by the war.[268] Early in 1862, Fort Monroe, at the tip of the James-York peninsula, became the Union Army's base of operations in a drive to capture Richmond and bring the war to a timely end. It was a move the Confederates anticipated.

In spring 1862, Virginia's Confederate armies were united under General Joseph E. Johnston's command and General Robert E. Lee was given the task of seeing that Richmond was well defended. His ability to do so proved far more important than anyone could have foreseen, for by the end of the war, seven military campaigns had been launched against the Confederate capital. Initially, the approaches to the city were defended by small bodies of strategically-placed troops. Later, Lee had earthworks built at several sites along the James River. These gun emplacements were intended to prevent Union naval vessels from circumventing any land-based defenses the Confederates built on the peninsula.[269]

In late May 1861, Colonel John B. Magruder assumed command of the forces between Jamestown Island and the York River. It was thanks to his considerable tactical skill that the Union Army's advance was delayed long enough for the Confederates to slip away so that they could defend Richmond. Magruder built three parallel lines of earthworks across the peninsula, which took maximum advantage of the terrain's numerous creeks and ridges. By March 1, 1862, construction of all three of the Confederates' defensive lines was underway and a line of canal boats had been sunk across the Warwick River. Magruder's first line extended from Harwood's and Young's Mills to the heads of the Poquoson and Warwick Rivers, where the intervening solid ground was reduced to a three mile strip that was flanked by boggy and difficult swamps and streams. His second line ran from Yorktown, along the Warwick River to Mulberry Island, and his third line, which was situated just outside of Williamsburg, included a string of earthworks that stretched out between College and Queens Creeks. A large redoubt known as Fort Magruder formed the Williamsburg line's centerpiece. At New Quarter was a redoubt at the extreme end in Magruder's Williamsburg line. A substantial chevron-shaped gun emplacement also was built at a site overlooking Queens Creek.[270] Component of Magruder's Williamsburg line were mapped by Union Army cartographers after the war (see Figures I.36, I.37, I.38, I.39, and I.40).[271]

Union-Major General George B. McClellan headed the Union military forces that participated in what came to be known as the Peninsular Campaign. When he arrived at Fort Monroe, he found only a third of the troops he had requested, thanks to major revisions in military policy. Faced with what he considered a serious shortage of men and the necessity of commencing his campaign, McClellan split his army into two columns, employing a strategy he hoped would prevent the Confederates on the lower peninsula from receiving reinforcements. On April 4, 1862, he and his men slowly began advancing up the peninsula. As the Union Army's approach, many people gathered up their belongings and fled. McClellan's left column moved along the James River as far as the Warwick Court House and then turned inland toward the Halfway House. Meanwhile, his right column set out for Yorktown. McClellan, who was cautious by nature, began his campaign with woefully inaccurate maps and he was hindered considerably by overestimating the strength of his enemy. He quickly discovered that the Confederates had taken elaborate steps to cover their withdrawal up the peninsula.[272]

On April 17, 1862, when General Joseph E. Johnston arrived on the lower peninsula to assume the Confederate command, he appointed General James Longstreet as chief commander of the field, superseding

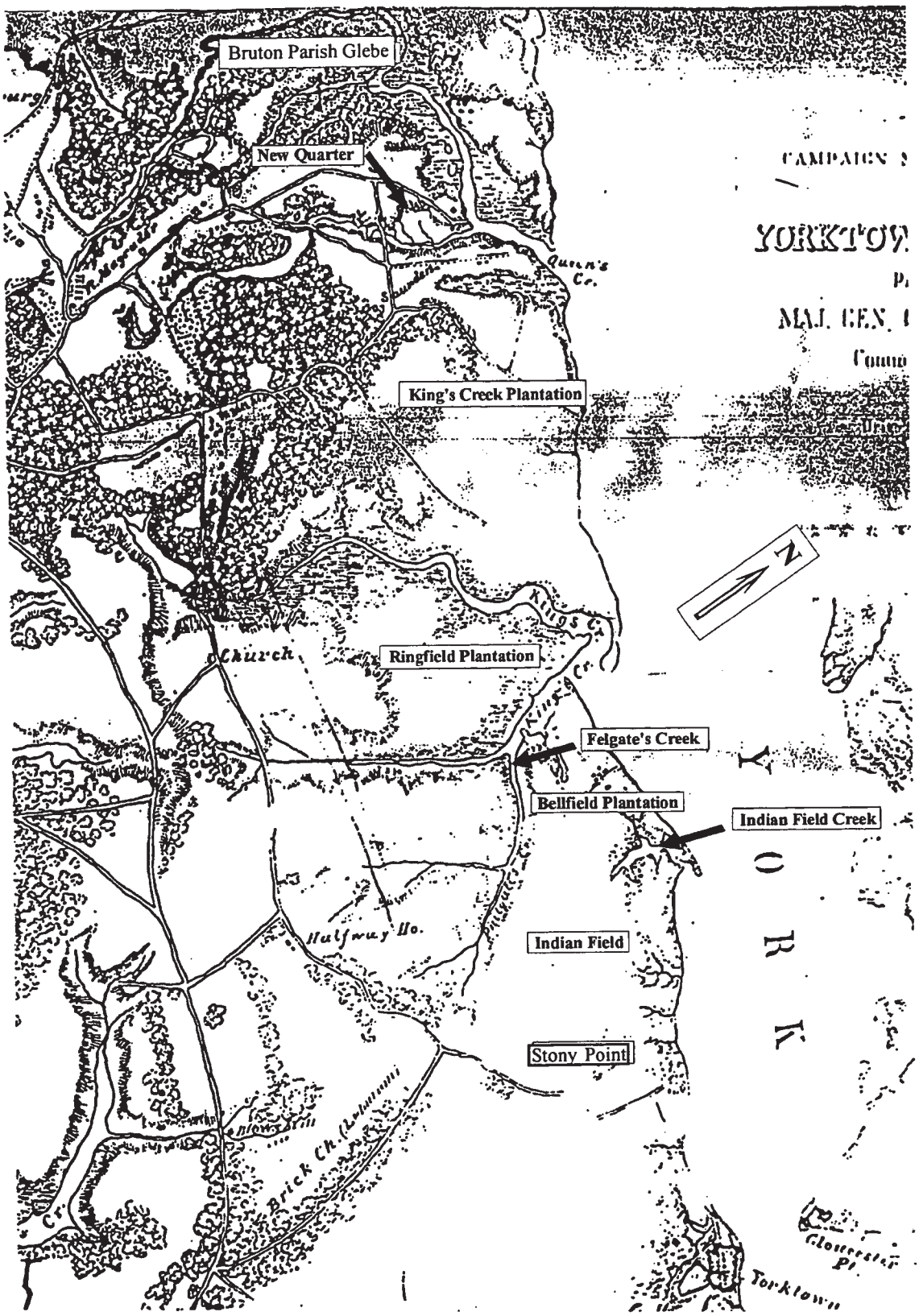
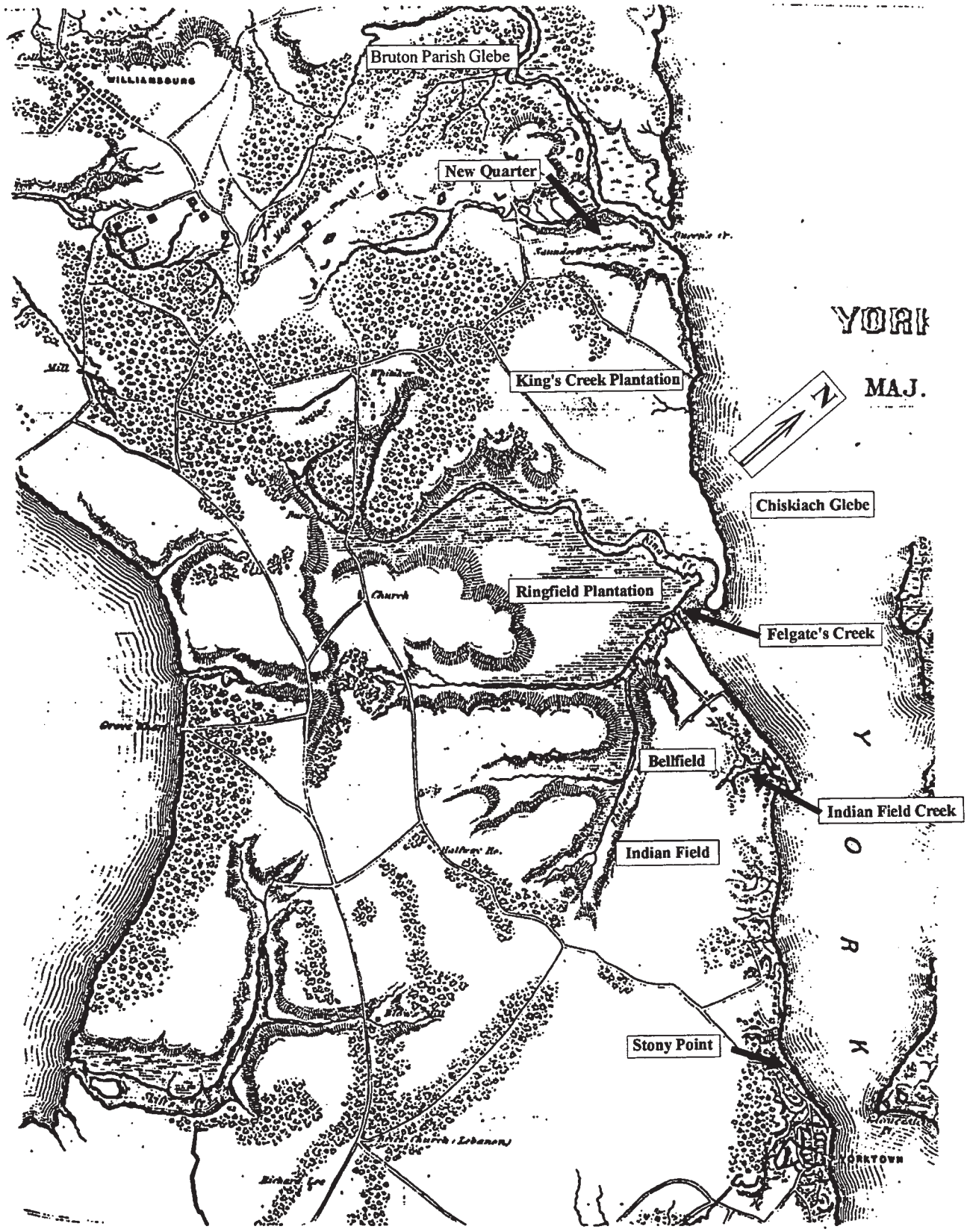


Figure I.36. Detail of Humphreys, [Yorktown to Williamsburg]. 1862a.



Figiure I.37. Detail of Humphreys, [Yorktown to Williamsburg]. 1862b.

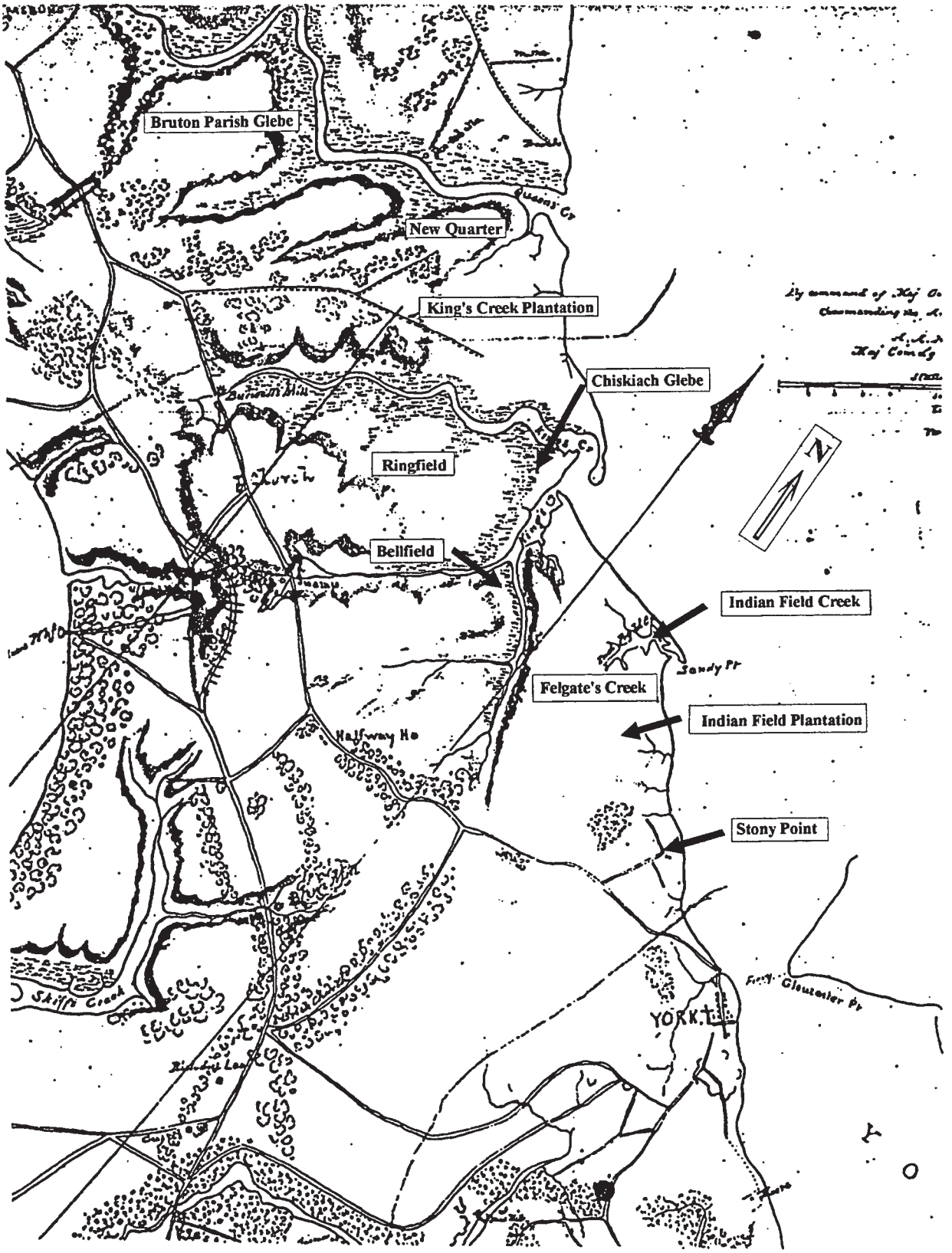


Figure I.38. Detail of Humphreys, [Untitled Map of James-York Peninsula], 1862c.

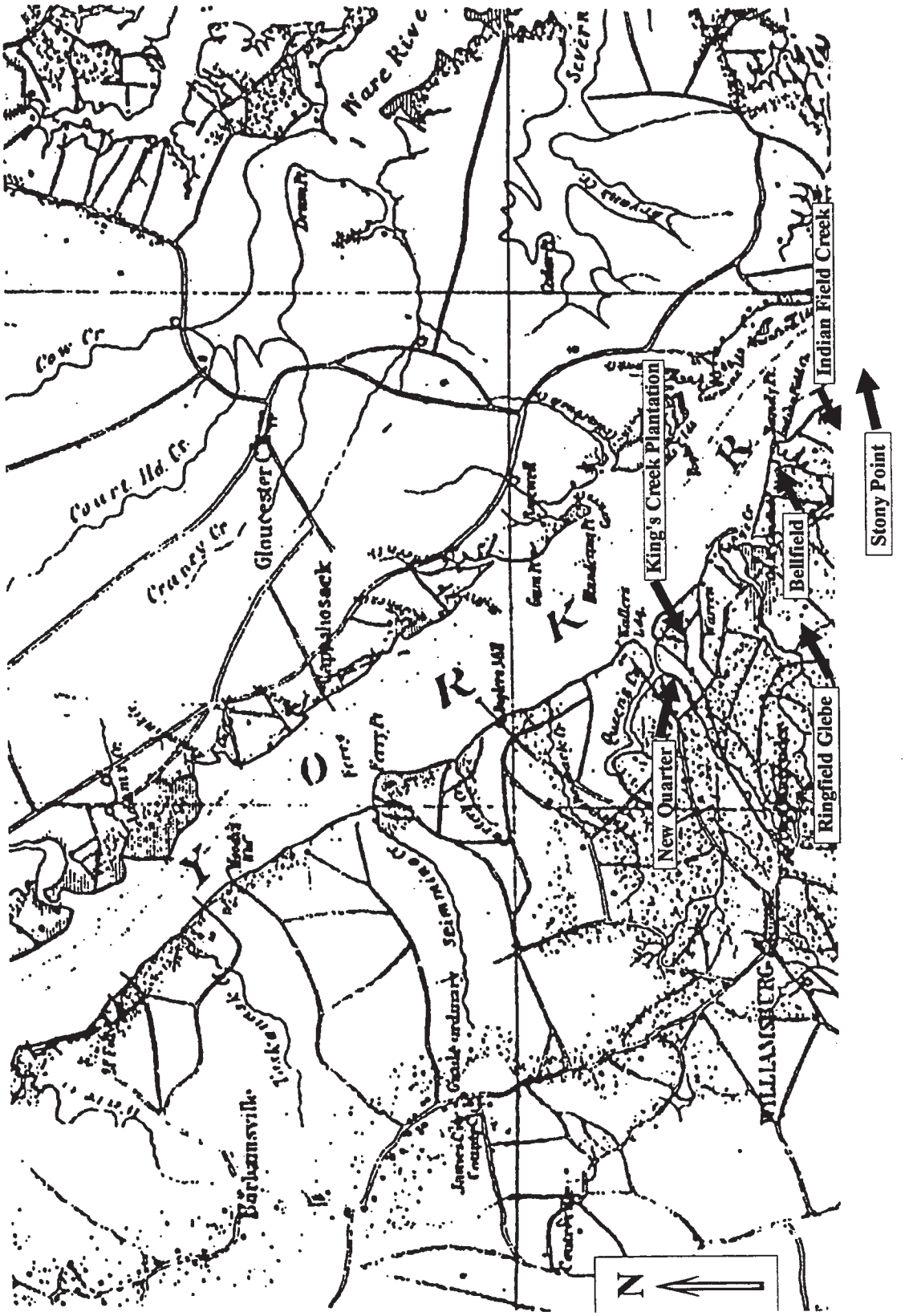


Figure I.39. Detail of Lindenkohl, "Map of Part of Southeast Virginia," 1862.

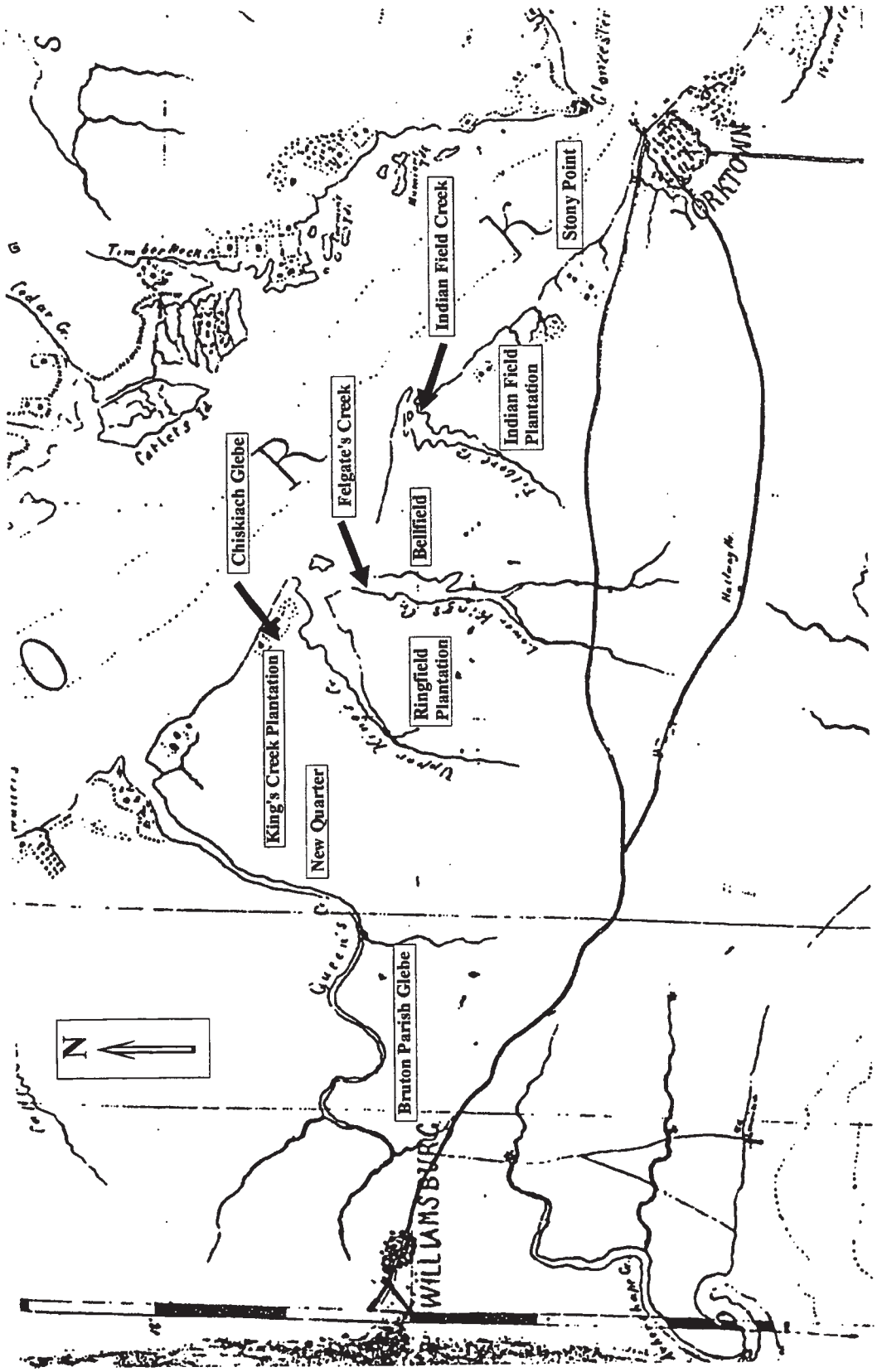


Figure I.40. Worret, "Map of Southeast Virginia," 1862.

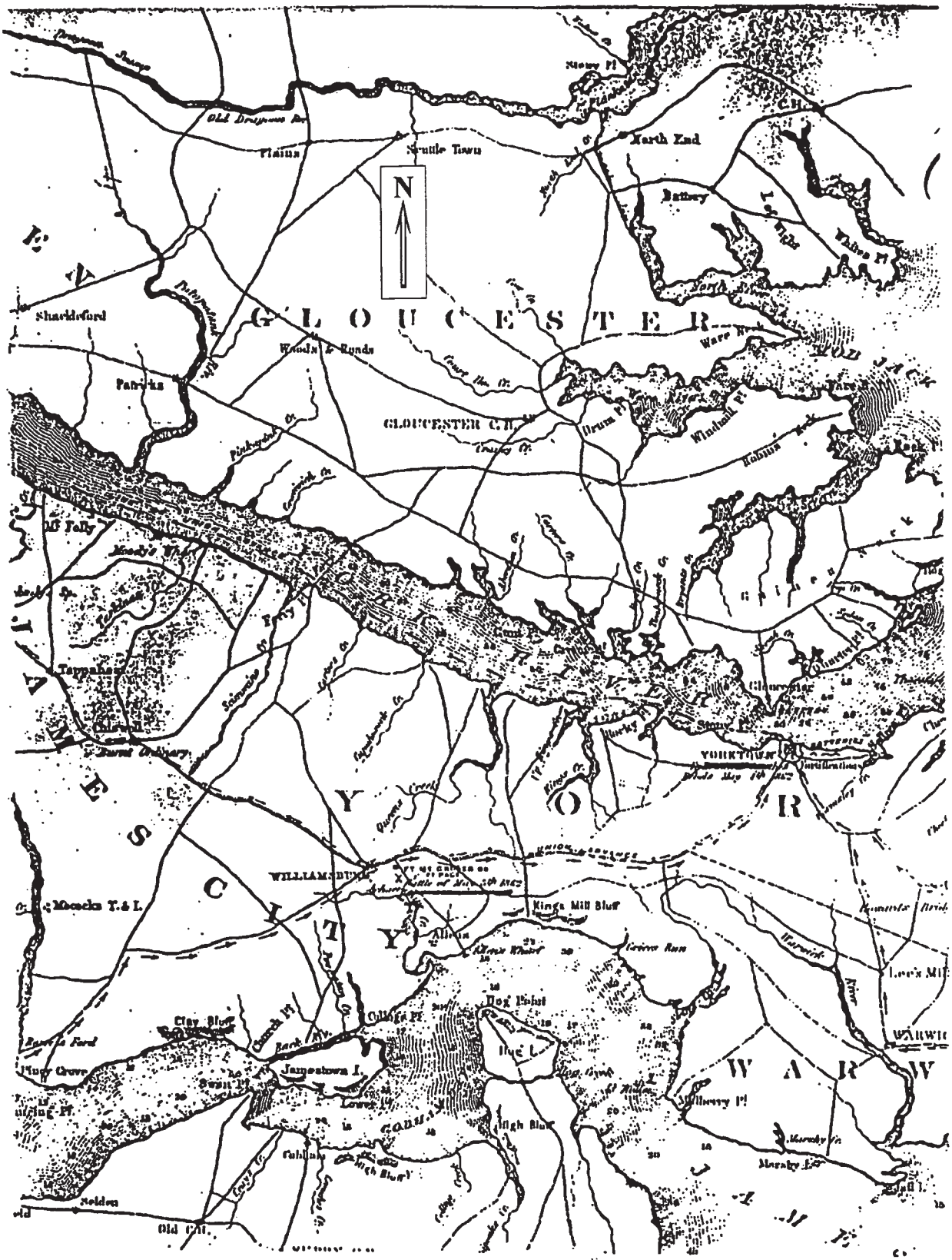


Figure I.41. Detail of Hare, "Hare's Map of the Vicinity of Richmond," 1862.

John B. Magruder, who was by then a Major-General. Johnston, who was wary of attempting to defend the peninsula with 53,000 men (3,000 of whom were sick) in opposition to 133,000 Union soldiers, decided to order a retreat to the outskirts of Richmond. As a result, the Confederates were obliged to abandon their middle position (the Warwick line) and fall back toward Williamsburg, their westernmost and final line of defense. From that point, they commenced a slow withdrawal up the peninsula.[273]

On May 4, 1862, a Union Army brigade moved along the Yorktown Road, reached and then attacked a Confederate cavalry position to the east of Kings Creek. General Johnston, whose men had withdrawn from Yorktown the night before, parried the move by ordering two of Magruder's brigades to occupy Fort Magruder, which they reached by nightfall amid cold, drenching rain. At daybreak on May 5th, the Confederates held the redoubts that flanked Fort Magruder, controlling the road to Yorktown just above its junction with the road to Hampton. Woods and thickets, too dense for artillery to be effective, lined the roads, which the rain had converted into seas of mud. General McClellan was then in Yorktown, as director of the campaign, and Generals Sumner, Heintzelman and Keyes were at the front, just south of Williamsburg (See Figure I.41).[274]

General Hooker, one of General Heintzelman's men, acting as an independent commander, approached Williamsburg and encountered massive resistance at Fort Magruder. Hooker sent out a call to Heintzelman and Sumner for reinforcements or diversionary assistance, but it never reached them and they adopted another course of action. Looking to another part of the field, they decided to circumvent the Confederate left flank, for a Union sympathizer had reported that certain earthworks on the left were unoccupied. Captain Steward of the Engineers Corps and four companies of the 4th Vermont reconnoitered the country-side and learned that a redoubt covering Cub Creek was empty. General Sumner ordered General Winfield S. Hancock to take the redoubt, which he did with the men of the 5th Wisconsin and 6th Maine. Hancock immediately garrisoned it with three companies of the 33rd New York as a rear guard and began moving ahead across an open field. Hancock, who realized that his men were under the guns of another redoubt that lay two-thirds of a mile ahead, moved his troops toward it quietly and took possession of it. He then attempted to engage his enemy in order to drive them from the next two works. The Confederates, who had been preoccupied with Hooker's attack upon Fort Magruder, failed to detect Hancock's maneuver until its dangerous significance was apparent. Although they tried to attack Hancock, as soon as they emerged into an open field, they were cut down by deadly gunfire.

Although the Union Army managed to gain the upper hand, the Confederates continued to hold their line and ultimately, McClellan's men withdrew, believing they were outnumbered. The Confederates' staunch resistance at Fort Magruder enabled the army to make good its retreat, but the Battle of Williamsburg cost many lives. Toward nightfall, as General McClellan approached Williamsburg, the Confederates quietly withdrew toward Richmond. The next day, Union troops swarmed into the city. It was then that McClellan learned that his cautious approach had allowed his quarry to slip away.[275]

4. Force's Quarter: Post Civil War to Parkway Construction (1866-ca. 1930)

James W. Custis of Williamsburg retained New Quarter, Force's Quarter, and the Bruton Parish glebe after the war. They were still in his possession in 1871, when he made a contractual agreement with Ismael Jones, a sharecropper, who eventually bought the property, giving his name to Jones Pond.[276] During the early twentieth century, when the area was mapped by topographic engineers, this portion of the study area was criss-crossed by a network of small roads that followed the backs of ridges. The pattern in evidence was little changed from its appearance in 1781, as demonstrated in a USGS quadrangle dating to 1904 (see Figure I.42).

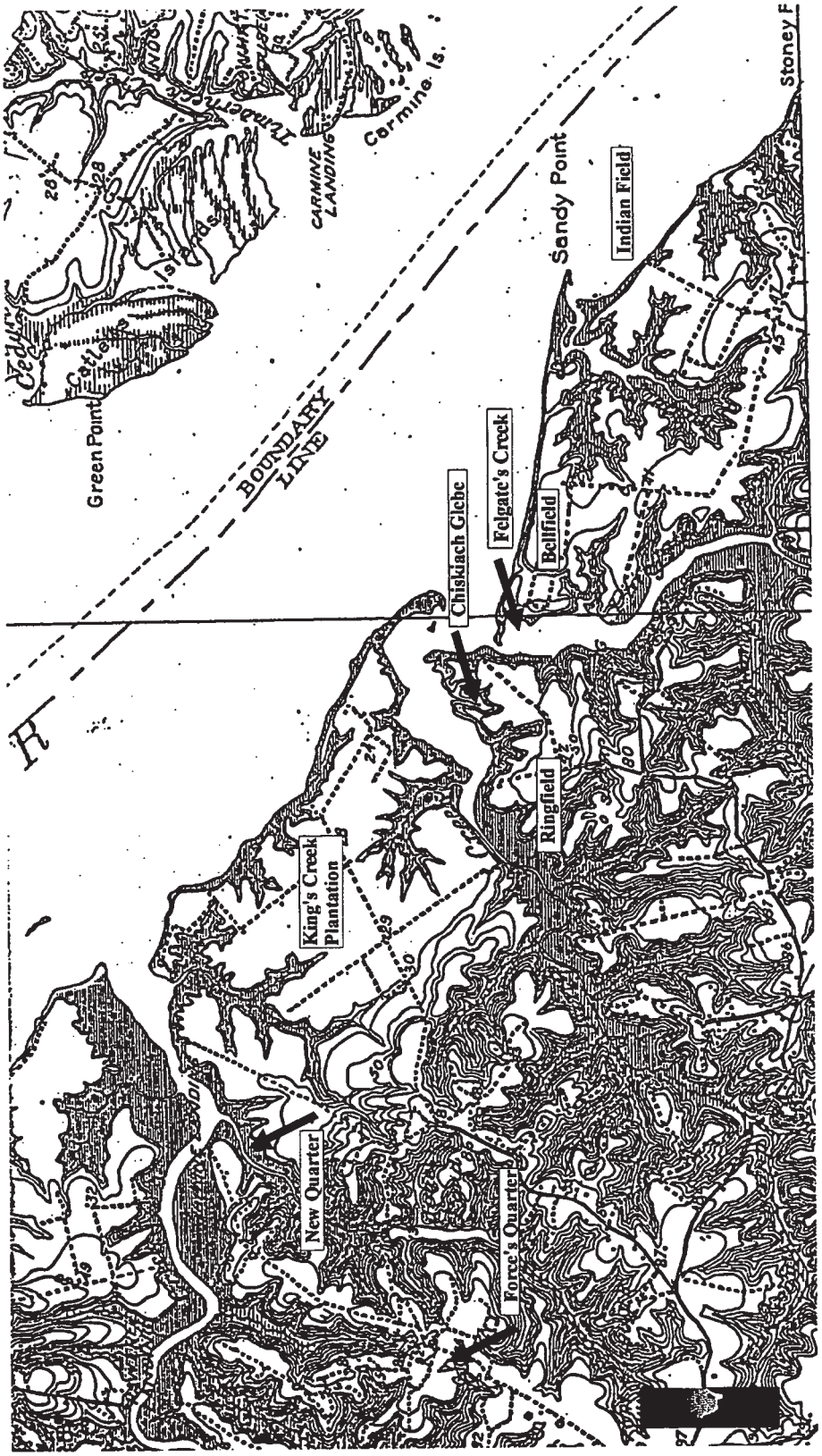


Figure I.42. Detail of USGS Quadrangle, "Williamsburg," 1904.

When World War I broke out and the United States Government took over the DuPont Company's dynamite plant between the mouths of Kings and Queens Creeks and built a powder factory and shell-loading plant, what once had been New and Force's Quarters became federally-owned property. During the 1970s the westerly part of the tract abutting Queens Creek was declared surplus property and given to the government of York County.

5. Force's Quarter: Observations

It is likely that first settlement within in the area that eventually became New and Force's Quarters and the Bruton Parish glebe occurred during the 1630s and 40s. However, all of these properties were destined to becomesubsidiary farms or quarters that were used for agricultural purposes. During the 1970s archaeological survey work was undertaken at New Quarter Park, at which time cultural features associated with the eighteenth and nineteenth centuries were found, including well-preserved Civil War earthworks. Revolutionary War maps reveal that by 1791 the forerunner of the Cub Run dam had come into existence, linking two parts of the Burwells' subsidiary farms and heading toward the mouth of Queens Creek. It is likely that prehistoric and historic sites are yet-to-be-discovered within this large, relatively undisturbed area.

Today, suburban development approaches the Colonial Parkway at Queens Lake, Cobble Creek, Charleston Heights, Queenswood, and Parkway Estates, which construction undoubtedly has taken a toll upon the archaeological sites in their path. More development is likely to accompany growth in the Peninsula's population, especially in York County, where relatively few regulations exist that require the identification and preservation of cultural resources. The presence of New Quarter Park, Cheatham Annex and the Naval Weapons Station has preserved much of the green space through which the Colonial Parkway passes as it meanders toward the York River.

K. KINGS CREEK PLANTATION

1. Kings Creek Plantation: The Settlement Era (to 1699)

On April 8, 1640, Colonel William Tayloe (Taylor) bought a 1,200-acre tract from John Uty (Utie), the son and heir of one of the first settlers to seat land within the Chiskiack territory opened to settlement in 1629. On October 8, 1630, Captain John Uty received a patent for 1,250 acres: 600 acres for his adventure in seating at Chiskiack and another 650 acres for 13 headrights. His patent was on the York River and extended from Queens Creek eastward to what became known as Utimaria Point, at the mouth of Kings Creek.[277]

Captain William Tayloe, a merchant, sold 100 acres of the Uty tract to William Blackley and 50 acres to Henry Corbell (York County Deeds, Orders, Wills 1:71,153). When he made his will, he bequeathed the Uty tract to his wife, Elizabeth, the daughter and surviving heir of Richard Kingsmill of Jamestown Island. Mrs. Tayloe, upon being widowed, married Colonel Nathaniel Bacon, a member of the Governor's Council, Auditor General of the colony from 1675 to 1687, and uncle of the rebel Nathaniel Bacon. Bacon, who lived in a house near Utimaria Point, outlived his wife. He left the Kings Creek plantation to his niece Abigail and her husband, Lewis Burwell II.[278]

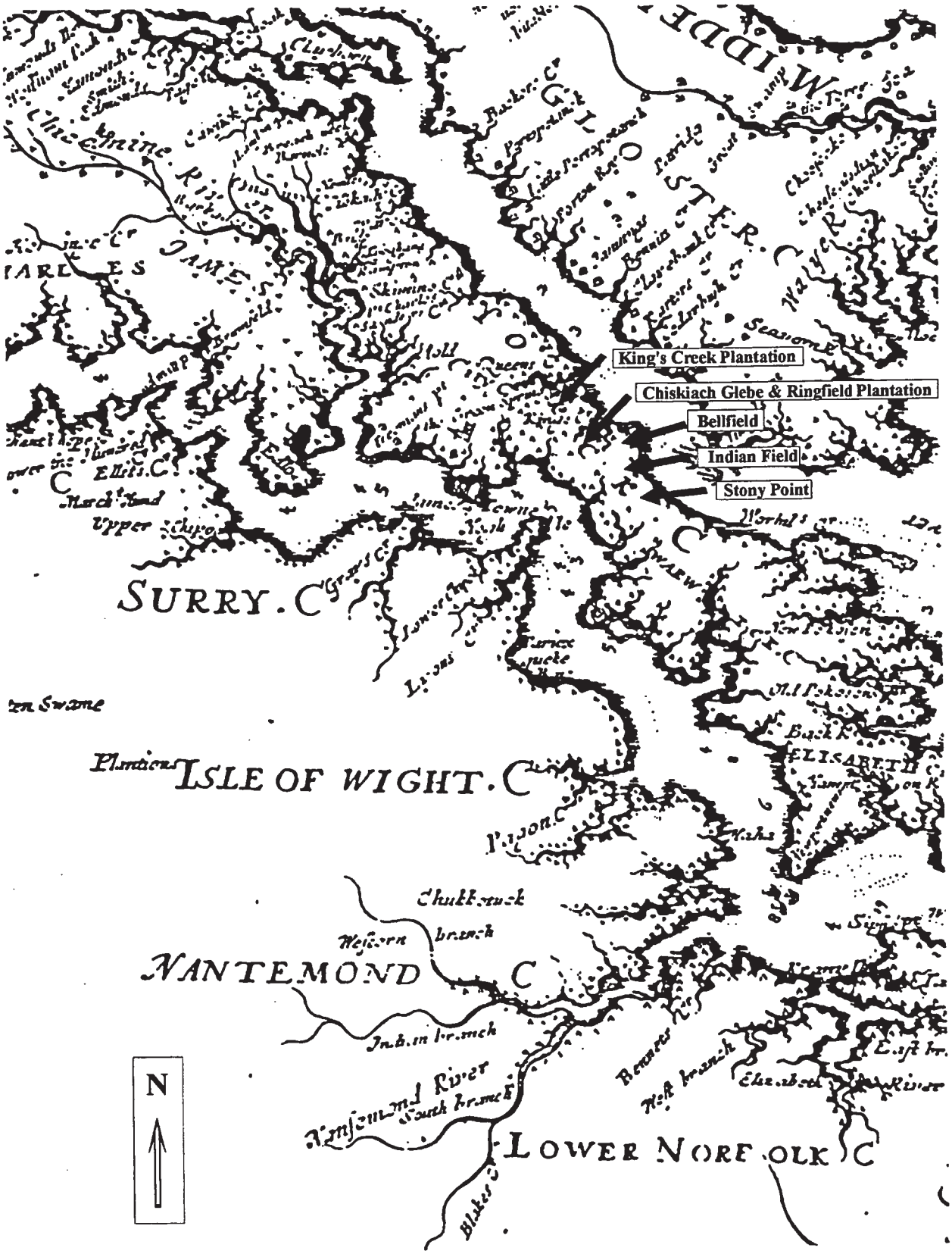


Figure I.43. Detail of Hermann, "Virginia and Maryland, 1670," 1673.

In 1691, after Colonel Bacon's will was recorded, Lewis Burwell II obtained an escheat warrant and acquired a patent for his Kings Creek tract. Meanwhile, William Tayloe of Richmond County, a nephew of the late Colonel William Tayloe and therefore an heir-at-law, also laid claim to the property. On November 23, 1694 Burwell purchased Tayloe's legal interest in the land, thereby nullifying any future claims that he or his heirs might make. Lawrence Smith surveyed the tract, which back line followed branches that extended toward one another from Queens and Kings Creeks.[279] References to the homes occupied by John Uty and his successor, Colonel William Tayloe, suggest that they lived near the mouth of Kings Creek, at Utimaria Point, where Colonel Nathaniel Bacon also chose to reside. Cartographer Augustine Herrmann (1673) indicated there was a plantation in that vicinity (see Figure I.43).

2. Kings Creek Plantation: Colony to Nation, 1700-1790

Lewis Burwell II continued to add to his landholdings along the York River.[280] By 1704 he owned an aggregate of 2,100 acres in York County (1,750 acres of which were encompassed by his Kings Creek plantation) and morethan 3,300 acres in Gloucester. Early on, he lived at Fairfield in Gloucester County and allowed tenants to occupy his York County property.[281] One such individual was Edward Farmer, who on September 25, 1693, gave notice to the York County court that he was preparing to set sail for England and was offering for sale "what Virginia estate I have [such] as horses, mares, cattle, hogs, servants, household stuff, etc. as now at my dwelling house up on Queens Creek in Major Burwell's old field."[282]

Toward the end of his life Lewis Burwell II relocated to the Kings Creek plantation and relinquished Fairfield to his son, Nathaniel, to whom he later bequeathed it. Under the terms of Burwell's October 11, 1710, will, James inherited all of his acreage between Kings and Queens Creeks with the exception of two modest-sized parcels that were bestowed upon James's brother, Nathaniel, to whom the testator also gave his Fairfield estate in Gloucester County.[283]

James Burwell I lived at the Kings Creek plantation in the manor house Nathaniel Bacon Esquire had occupied, making it his family residence. After James Burwell I's death in 1729, his wife married Philip Lightfoot of Yorktown, who oversaw the management of the Kings Creek plantation until his stepson, Nathaniel Bacon Burwell, came of age. Young Burwell died in 1746, having married and produced an heir, James Burwell II.[284]

James Burwell II married Anne Jones, with whom he had five children. His eldest son and principal heir, Nathaniel Bacon Burwell II, was in possession of the Kings Creek plantation in 1781, when the York County tax assessor credited him with 1,800 acres. In 1790 he sold the plantation to John T. Corbin, whose heir, Gawin Corbin, was in possession of it by 1796. Throughout this period, the Kings Creek plantation consisted of 1,800 acres.[285] When French cartographers mapped the area in 1781-1782 they showed the network of roads that ran through the plantation and three clusters of buildings. Desandrouin (1781) showed four structures in a cleared field on the north side of what is now Cheatham Pond. Three of these buildings were close together. Berthier (1781) also depicted the four buildings as well as a solitary one where two roads converged near the head of Cheatham Pond. The site that was most heavily developed, however, was on the west side of Kings Creek's mouth. St. Simone's map (1781) reflects the same patterns of development and corroborates Berthier's depiction of the roads. All three map-makers indicated that the woods had been cleared and that most of the farm (except ravines and marsh land) was devoid of timber. St. Simone used a corduroy-pattern as a means of portraying agricultural fields (see Figures I.31, I.33, and 1.32).

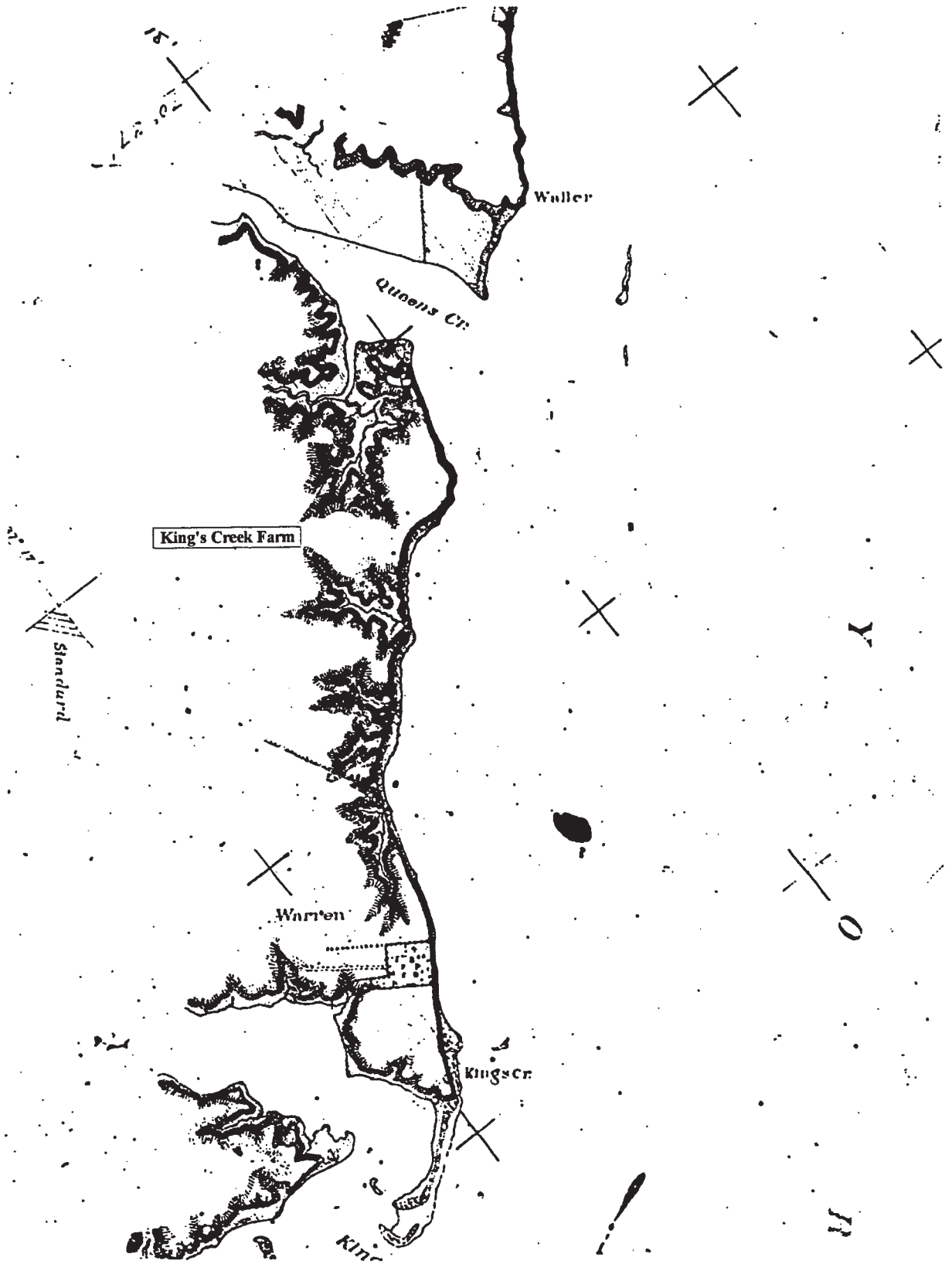


Figure I.44. Detail of Bache, "York River, Virginia, from Wormeley Creek to Claybank Creek," 1857.

3. Kings Creek Plantation: The Early National Period through the Civil War (1791-1865)

In 1807 Gawin Corbin, whom the tax assessor noted resided upon his Kings Creek farm, was credited with 1,665 acres. Kearney (1818) identified the Corbin family home when he made a map of the Chesapeake Bay region (See Figure I.34). Thanks to the fact that Tidewater Virginia planters traditionally paid little attention to soil improvement, by the late eighteenth and early nineteenth centuries the region's agricultural land were depleted of their nutrients, lessening productivity. The lack of an opportunity to acquire substantial tracts of good, arable farmland, coupled with radical fluctuations in agricultural prices, encouraged a general out-migration of Tidewater Virginia's white population. York County by 1830 had suffered a loss of more than 25 percent of the whites it had in 1790. The opening up of western lands and the construction of internal improvements, such as canals, turnpikes and railroads, also led to an exodus of Tidewater natives, who sought economic betterment elsewhere. This trend was accelerated by the scarcity of good agricultural lands in the Tidewater, which discouraged new immigrants from settling there.[286]

In 1820 when the tax assessor began listing the value of structural improvements on local property, those on Gawin Corbin's Kings Creek farm collectively were worth $1,200. In 1825 Richard T. Corbin inherited the farm from Gawin Corbin and a year later, sold it to the Rev. Scervant Jones, a Baptist minister known for his keen wit and business acumen. In 1830 the improvements on the Kings Creek plantation were worth only $200 and the assessornoted that $1,000 had been deducted for the loss of the house.[287]

Tax rolls for 1835 indicate that the value of the older structures on the Kings Creek farm continued to dwindle but that new buildings were added which collective worth was $800. Between 1836 and 1841 the assessed value of the buildings on the Rev. Jones' farm rose to $1,665. In 1845 he sold his Kings Creek property to Thomas D. Warren of James City County, who still owned it at the time of the Civil War. Both Jones and Warren were well-to-do planters who owned between 35 and 37 slaves of prime working age.[288] In 1857 when A. D. Bache prepared a highly sensitive topographic map of the York River drainage, he omitted any structures that may have then been present within the interior of the Kings Creek farm (see Figure I.44).

During the mid-nineteenth century, improved agricultural techniques and reduction in farm size led to a revitalization of the region's agricultural economy. Whereas the cultivation of tobacco once had played a vital role in Tidewater's economy, emphasis shifted to the production of grain crops. By the time of the Civil War, Virginia's agriculture had evolved into a mixed crop system, with grains predominating, especially wheat and corn, followed in importance by potatoes. Livestock production, both for beef and dairy products, and other forms of animal husbandry, also had become more popular. More sophisticated farming methods, such as the application of marl to soil that had been acidified by long-term tobacco production and erosion, became relatively common and crop diversification offset over-dependency upon a single crop's success. In 1850 Virginia was described by its governor as having evolved from a system of large plantations to that of "smaller horticultural and arboricultural farming."[289]

During the Civil War Union Army cartographers made several maps of the James-York peninsula after they already had swept through the area. I. Knowles Hare's rendering (1862) reveals that Union naval vessels passed close to the lower side of the York River while heading toward West Point. A. Lindenkohl's relatively sophisticated map identified the Kings Creek farm as Warren's and indicated that buildings were clustered near the mouths of Kings and Queens Creeks. C. H. Worrett's map, though crude, provides the most detailed coverage of the built environment, for it shows three buildings at the mouth of Queens Creek and a like number at the mouth of Kings Creek (see Figure I.40). In 1862 the seat of the Kings Creek farm was near the mouth of Kings Creek with in an area that largely was cleared. A road entered the property and forked, with a branch extending toward the mouths of Queens and Kings Creeks (see Figures I.36,

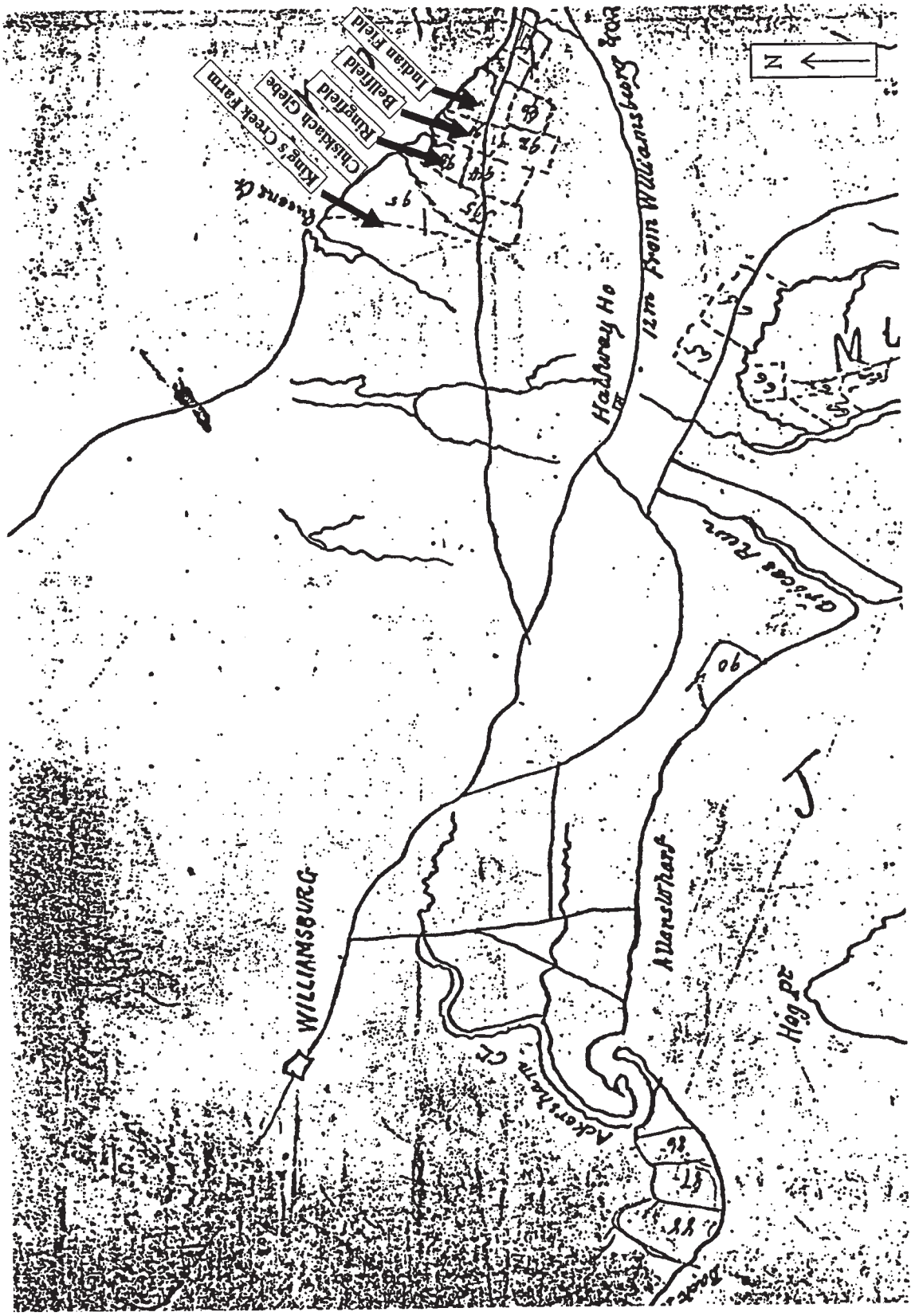


Figure I.45. Detail of Freedmen's Bureau, "Map showing Position of Government Farms," 1866.

I.37, I.38, I.39, and I.40).[290] The vast amount of land encompassed by the Kings Creek farm is graphically apparent on an anonymous map that was done in 1871 (see Figure I.35). Some of its acreage had been assigned to newly freed blacks for subsistence farming, according to a Bureau of Refugees map of 1866 (see Figure I.45).

4. Kings Creek Plantation: Post Civil War to Parkway Construction (1866-ca. 1930)

In 1904, when a USGS topographic map was made that included the Kings Creek farm, much of the tract's interior consisted of cleared fields. Long, straight roads extended through the property and the only development that was in evidence was near the mouth of Kings Creek and near the York River (see Figure I.42). The DuPont Company purchased more than 4,000 acres of York County land overlooking the river and constructed a dynamite plant that was in operation by 1916. When World War I broke out, there was a critical demand for arms and ammunition. Therefore, the federal government took over the facilities and converted them into a powder factory and shell-loading plant. Although DuPont had built homes for its employees, the influx of new workers seeking employment in the government factory proved overwhelming. In time, the facilities at Penniman employed 10,000 people and the community bordering the plant had a population of 10,000 to 20,000. Many of these people lived in "the city of Penniman," which was located near the factory site. At first, workers lived in what one writer described as shanty town comprised of simple shelters built of cardboard and other materials. Others commuted to work by rail. Locally, land prices soared and business boomed. In May 1918 the *Virginia Gazette* reported that the "village" at Penniman was complete and contained hundreds of new buildings and cottages, plus a Y.M.C.A.[291]

In August 1918 the news media reported that the government was expected to engulf almost all of the 11,000 acres of land between Yorktown and Penniman. However, on November 11, 1918, an armistice was signed. As soon as the war ended, so did the demand for artillery shells. Activity at the old munitions factory dwindled. Later, the property was acquired by the United States Navy. When World War II broke out, the Navy constructed its Cheatham Annex on the site once occupied by the city of Penniman. The facility was built for the storage of military hardware and supplies. Enormous warehouses were constructed for the storage of food and supplies, as well as equipment for sale to foreign nations. Although Cheatham Annex is situated next to the Yorktown Naval Weapons Station, there is no official connection between the two military installations.[292]

5. Kings Creek Plantation: Observations

The Kings Creek Plantation was one of the first tracts patented when the territory called Chiskiack first opened to settlement. Afterward it was in the hands of the Burwells and their kin, who retained it for 150 years. From the beginning Utimaria Point (what later was known as Penniman Spit) was the site owner/occupants favored when building their homes. It was there that the Utys, Tayloes, Bacons and Burwells in succession had homes. It is likely that the development of Cheatham Annex's golf course claimed some (or perhaps all) of those sites. Some of the eighteenth and nineteenth century sites at the mouth of Queens Creek may have survived. As the Burwells are known to have leased portions of the farm to tenants, some of the cultural features associated with those individuals may survive. Undoubtedly the most intriguing possibility is that the short-lived Spanish Jesuit mission, established in 1570, may be on the Cheatham Annex property. This hypothesis is based upon the fact that the missionaries traveled down Queens Creek until they reached the York and then settled, probably on the east side in the direction of what by 1607 was known as Chiskiack.

In contrast to the historic scene, today the visitor enjoys forest scenery along this stretch of the parkway while traveling toward the York River. Forest growth now screens much of Cheatham Annex's built environment.

K. THE CHISKIACK OR YORKHAMPTON PARISH GLEBE

1. Chiskiack Glebe: The Settlement Era (to 1699)

According to church historian Charles F. Cocke, York Parish in Charles River (York) County was formed sometime prior to 1638. It was vast in size, for it extended from the Poquoson River, west as far as Morgan's Creek, the western boundary of Captain Francis Morgan's patent. Although locational information on Morgan's Creek's is somewhat vague, it appears to have been the name applied to a small, marshy inlet just west of Roosevelt (Bracken's) Pond. To the west of York Parish was Chiskiack (Kiskiack) Parish. In January 1640 its boundary lines were set by law. They extended from Morgan's Creek upstream to Skymons (Skimino) Creek and ran inland encompassing the Middle Plantation, which later became the site of Williamsburg. A seventeenth century parish church is believed to have been located near the head of Felgates Creek, where a brick structure built in 1700 stood until the mid-nineteenth century.[293]

In 1643, the year Charles River County's name was changed to York, Chiskiack Parish was renamed Hampton. In 1658, Hampton Parish's boundary lines were altered and its size was reduced. Meanwhile, that portion of York Parish which encompassed Middle Plantation was combined with Harrop Parish to form the Middletowne Parish. By 1707 Hampton and York Parishes were relatively small and weak. Therefore the House of Burgesses united them into what was called Yorkhampton Parish. In 1712 the relatively new parish was enlarged to include the territory that previously had been Martin's Hundred Parish.[294]

Although relatively little information is available about the history of the Chiskiack or Yorkhampton Parish, it is certain that by 1637 a glebe or home farm had been laid out for the parish rector, part of his compensation, which was set by law. The glebe was situated at the tip of the point of land formed by the junction of Kings and Felgates Creeks. Captain Robert Felgate's 1637 patent made reference to one of the glebe's boundary lines and a 1638 patent also mentioned the glebe.[295] In 1662 when John Underhill repatented part of the late Robert Felgate's property, reference was made to a branch of Felgates Creek that separated it from "the glebe land of Hampton Parish."[296]

When the colony's laws were revised during the 1660s and updated in 1696 it was specified that each parish glebe had to be at least 200 acres in size and have an adequate house for the minister. A building cartographer Augustine Herrmann (1673) indicated was in the immediate vicinity of the Yorkhampton Parish glebe may represent whatever structures the vestry had erected upon the property (see Figure I.43).

2. Chiskiack Glebe: Colony to Nation (1700-1790)

In 1781 when cartographers mapped the countryside between Williamsburg and Yorktown, one individual identified the site of the Yorkhampton Parish glebe (see Figure I.46). Alexander Berthier (1781) indicated that a cluster of buildings stood upon the tract, which was open and clear (see Figure I.33). St. Simone (1781) indicated the same pattern of development, symbolically indicating that much of the glebe was

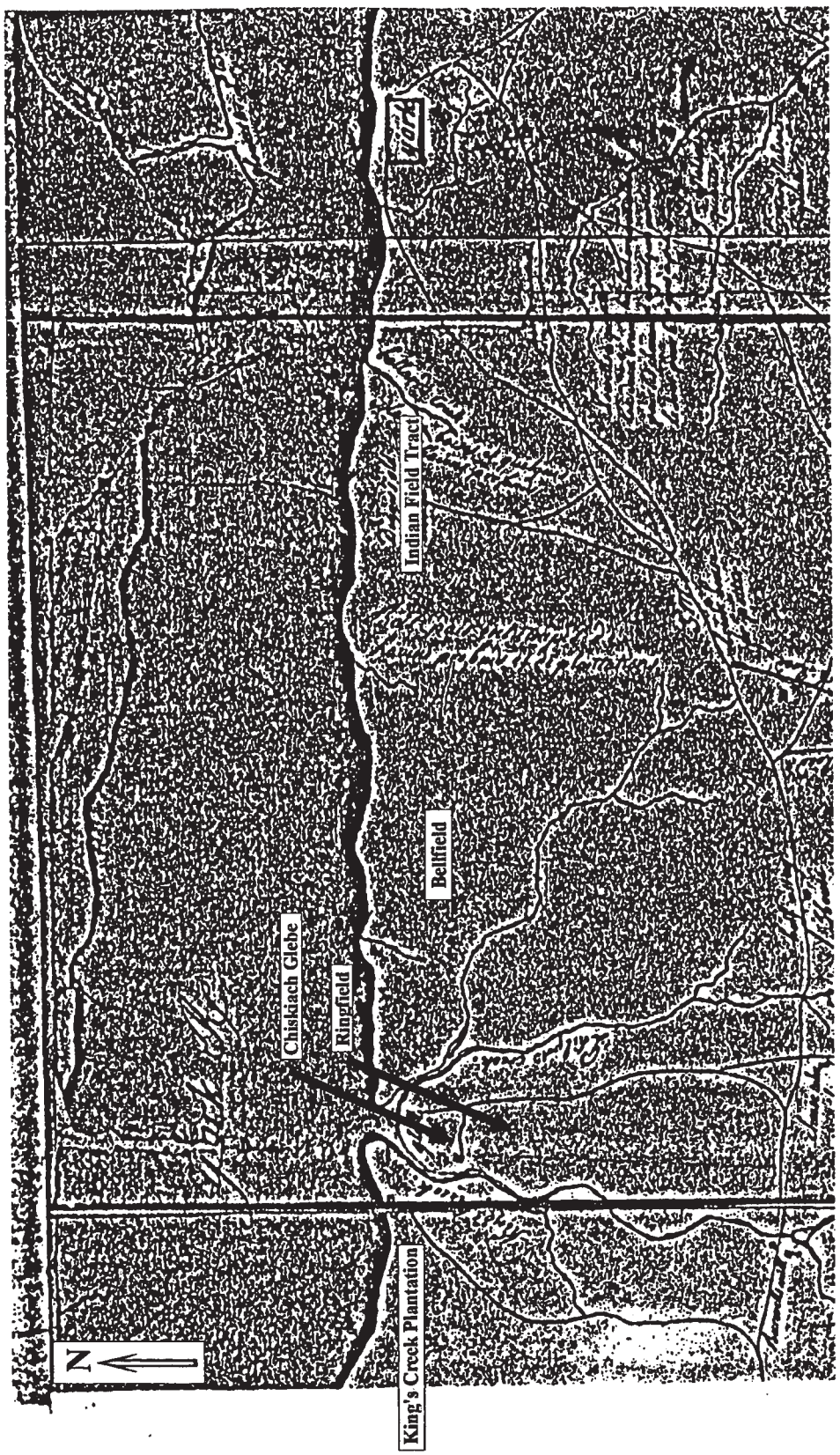


Figure I.46. Detail of Anonymous, "Notes sue les Environs de York," 1781.

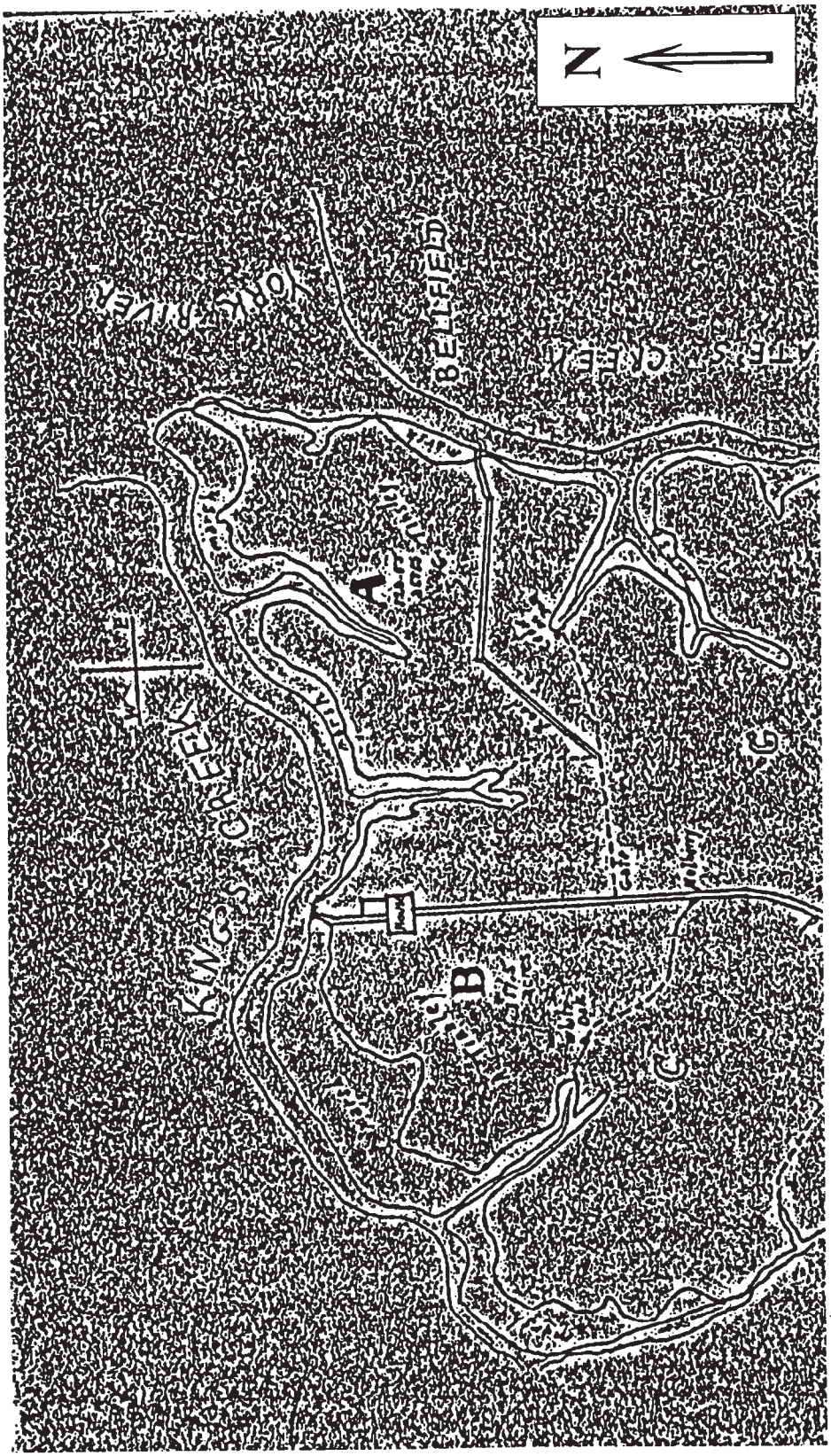


Figure I.47. Detail of Hatch, "Lansdown, York County, Virginia, 1867," Map No. 12 from Ringfield Plantation, 1970.

under cultivation (see Figure I.32). James Kearney (1818) also identified the point of land that constituted the old Yorkhampton Parish glebe (see Figure I.34).

3. Chiskiack Glebe: The Early National Period through the Civil War (1791-1865)

John Bryan, who early in 1803 bought what had been Robert Felgate's patent, which had evolved into the Ring plantation, in October 1804 purchased from the York County Overseers of the Poor the adjoining glebe lands, which then consisted of 150 acres. Felgates and Kings Creeks and the Ring property formed the glebe's boundaries. John Bryan died intestate sometime prior to 1808 and his property descended to his heirs. The glebe and Ring tracts, upon being united, remained joined until 1867 when the estate of owner Thomas Garland Tinsley was partitioned for distribution among his heirs.[297]

4. Chiskiack Glebe: Post Civil War to Parkway Construction (1866-ca. 1930)

The late Thomas Garland Tinsley of Hanover County, who owned 1,284 acres that engulfed almost all of the peninsula between King and Felgate Creeks, called his farm Landsdowne (Landsdown). When his property was surveyed and partitioned so that it could be distributed to the decedent's heirs, Dr. Seaton G. Tinsley was allocated a parcel designated Section A, which was said to consist of circa 120 acres, the old glebe.[298] (see Ringfield Plantation, below.)

Ernest A. Vaughn, whom the late Charles Hatch interviewed in 1959, recalled that between 1905 and 1908 his father leased that portion of Ringfield known as the glebe. He claimed that a house and farm buildings were located in the area set aside for picknicking and that the land now covered with pine forest then was open and under cultivation. He said that the glebe's southeasterly property line was at a point above Burbank Landing on Felgates Creek. Another man Hatch interviewed substantiated Vaughn's recollection that the domestic complex was in the immediate vicinity of the present picnic area (see Figure I.47).[299]

5. Chiskiack Glebe: Observations

Very little archival information is available on the Chiskiack or Yorkhampton Parish glebe, although RevolutionaryWar era maps indicate that a complex of buildings was present at that time. The construction of the Colonial Parkway and the Ringfield Picnic Area probably took a toll upon whatever subsurface cultural features may have been present. However, evidence of prehistoric observation was discovered by NPS archeologists and other sites are probably located in the woodland.
The bluff upon which the Ringfield Picnic Area is situated provides a commanding view. An interpretive sign could inform the public about the glebe and the existence of an Established Church in Virginia during the colonial period.

L. RINGFIELD PLANTATION

1. Ringfield Plantation: The Settlement Era (to 1699)

On April 25, 1632, Captain Robert Felgate received a 350-acre patent for land at Chiskiack, acreage that fronted upon the York River and abutted west upon Kings Creek. The December 7, 1630, court order that

acknowledged Felgate's eligibility for the land noted that his first dividend could be doubled, once his acreage was seated. Felgate, like Captain John Uty, who occupied a tract on the upper side of Kings Creek, and Captain John West, whose patent lay on the lower side of what became known as Felgates Creek, was one of the first settlers to seat at Chiskiack upon the York River frontier.[300] Meanwhile, Captain Tobye (Tobias) Felgate, a mariner, patented 150 acres in Chiskiack, acreage that reportedly abutted east upon the land of his brother, Robert. The Felgate brothers' patents formed the core of what later became the Ringfield plantation.

Robert Felgate came to Virginia in 1628 aboard the *William and John* with his wife Margaret, son Erasmus, and four servants. As Felgate was a burgess and participated in the assembly sessions of 1629 and 1629-1630, he was present when plans were made to colonize the Chiskiack area. Robert Felgate's brother, Tobye, married Elizabeth, Ralph Hamor's widow. Elizabeth Hamor Felgate died sometime prior to 1633 and Tobye Felgate remarried. As his 1635 will made no reference to his Chiskiack patent, he apparently no longer possessed it.[301]

In August 1637 Captain Robert Felgate patented 250 acres of new land, citing the same headrights he had used in 1632. This suggests that he had seated his original 350-acre patent and was asserting a claim to some of the additional land to which he was entitled once that was accomplished. Felgate's 1637 patent made reference to "the Glebeland," the Chiskiack Parish clergyman's home farm that lay to his north, and to John Waine's (Wayne's) acreage, which was to the northwest.[302] This raises the possibility that Tobye Felgate's patent had escheated or been sold and converted into a glebe. Captain Robert Felgate's landholdings increased by 400 acres in March 1639. His land was described as abutting his former dividend and the patent of William Barber. This final acquisition seemingly gave Felgate 1,000 acres in all.[303] The 400 acres may have constituted the inland tract that during the third quarter of the eighteenth century was known as Ring Neck.

Captain Robert Felgate's plantation on the York River was the focal point of his investment in Virginia. In 1633 he began serving as a justice of the peace and on two or more occasions, the court convened in his home. The justices also met at the houses of John Uty, Richard Townsend, Nicholas Martiau, Christopher Wormeley and William Prior. However, around 1641 they began meeting in the French Ordinary. Margaret Felgate predeceased her husband and Robert married John Adkins' widow, Sibella.[304]

On September 30, 1644, when Captain Robert Felgate made his will, he left liferights in his estate to his widow, Sibella, whom he designated his executrix. After Sibella's death, Felgate's plantation in Virginia was to go to hisgrandson, Thomas Newton, who was then living in Holland. If Thomas failed to attain his majority, the property was to go to grandson Thomas Burton. In the event that both of the testator's grandsons failed to survive, his property was to go to the children of his brother, William. Robert Felgate freed Mary Hayes, an indentured servant, to whom he bequeathed 60 acres of land, four cattle, some tobacco and enough corn "to keep her." He died sometime prior to 1651, at which time his widow, Sibella, was identified as the wife of Nicholas Martiau. Robert Felgate's will was not presented for probate until September 1655.[305]

Neither of the late Robert Felgate's grandsons outlived the widowed Sibella Atkins Felgate Martiau, for his plantation on Felgates Creek came into the hands of nephew William Felgate Jr. William Jr., a resident of York County and a local justice of the peace, married the widowed Mary Bassett, who had a daughter and a son. When he prepared his February 9, 1659, will, he left to his stepson William Bassett 100 acres that were "part of the Lands I am now possest of." William Felgate Jr.'s will was presented for probate in 1660.[306]

The widowed Mary Bassett Felgate married surveyor John Underhill less than a year after her former husband's death.[307] In October 1660 Underhill took the late William Felgate Jr.'s place in the local court. In 1662 he repatented the 250 acres that Robert Felgate had claimed in 1637. As Underhill used his own headrights, it appears that he was asserting a legal claim of his own to a Felgate tract that might lapse for lack of development.[308] Augustine Herrmann's map of Virginia (1673), though schematic, suggests that two houses were located upon the Felgate property, on the banks of Kings and Felgates Creeks (see Figure I.43).

On November 20, 1672, John Underhill of York County made his will and by January 13, 1673, he was dead. He left his widow, Mary, liferights to "the plantation whereon I now live with all the land running to the swamp and between this and Mr. Baskernyles." At Mary's decease, the property was to revert to his son, John II. If he left no heirs, then it would go to his other sons and their children.[309] According to the late Charles Hatch, John Underhill probably was interred upon his plantation, for fragments of his tombstone reportedly were seen in the graveyard at Ringfield in 1893. It had armorial bearings and an inscription which stated that Underhill had immigrated to Virginia from the city of Worcester in England.[310]

The much widowed Mary Bassett Felgate Underhill probably continued to occupy the old family seat. At her death, John Underhill II inherited his father's property. He survived until at least April 1692, when his name appeared in the records of the York County court. He seems to have been a highly successful planter, for in 1690 he patented more than 2,000 acres of land in New Kent County on the basis of 47 headrights.[311] In 1693 an inventory of the late John Underhill II's estate was filed with the York County court. At that time, Joseph Ring I received letters of administration that authorized him to undertake the management or disposal of the decedent's estate.[312]

Joseph Ring I, a merchant, began serving as a burgess in 1684 and was elected many times thereafter. He played an active role in the community and seems to have been an intelligent and respected citizen. In 1691 he was called upon to inventory the estate of the widow of Edward Digges of Bellfield and in 1692 he witnessed the will of Colonel Nathaniel Bacon of the Kings Creek plantation. In 1686 he made repairs to the French Ordinary, in which the York County court was then kept, and he served on the Committee of Public Claims when the last statehouse was built at Jamestown. He was in the House of Burgesses in 1690-1691 when a petition was sent to King William and Queen Mary, asking them to establish a college in Virginia.[313]

Sometime before 1688 Joseph Ring I married Sarah, the daughter of Edmund and Mary Kemp Berkeley. Mary, upon being widowed, married John Mann of Gloucester County, across the river from Ringfield. This link to the Pages would have enhanced her son-in-law's political influence. In 1699 Joseph Ring I was recommended for appointment to the Governor's Council, but was passed over. He died on February 26, 1703, at the age of 57, leaving a widow and four young children. His will, dated December 3, 1698, conveyed to his wife, Sarah, liferightsin "ye house and plantation whereon I now live." After her decease, it was to descend to their son, Joseph II and his heirs. The testator stipulated that when Joseph II reached age 21, he could reside upon the property in which his mother had liferights. If he wanted to live independently, he could occupy "that part where Moody did lately live & of him lately purchased by me." Joseph II also was to have the land and building known as the French Ordinary and his father's lot at Yorktown. Son Isaac was to have land near the beaver dams, which his father had purchased recently from Nicholas Harrison. In May 1702 Joseph Ring I added a codicil to his will, providing for his newborn daughter and disposing of some land he had acquired since making his 1698 will.[314]

2. Ringfield Plantation: Colony to Nation, 1700-1790

On August 24, 1704, a detailed inventory was made of the late Joseph Ring I's estate. It made reference to his home farm and two quarters, one of which was called the Beaver Dam plantation (the tract he left son Isaac) and the other, a patent he had on the Mattaponi River. Both quarters had slaves and livestock and probably were managed by an overseer. The home farm, which consisted of 630 acres, had structures Ring identified as the "Great House" and "the Old House," suggesting that he had built a new home to replace an older one. Likewise, there was an "old store" and a new one, both of which contained merchandize. Also present were a spring house, a smith's shop, a granary, stable and kitchen.[315] Joseph Ring I's "Great House" probably was built between 1693, when he acquired the Underhill property, and 1698, when he made his will. The late Charles Hatch believed that Ring most likely was buried in the garden of his new house, which 225 years later was marked by a pile of brick rubble. He noted that there is no evidence to indicate that Joseph Ring I ever used the names "Ringfield" or "Ring's Neck" for his plantation.[316]

The widowed Sarah Berkeley Ring married Joseph Walker, a Yorktown merchant, and in 1704, when a quitrent roll was compiled, he was credited with 615 acres in York County, the Ring estate. The Walkers produced three children and may have occupied the late Joseph Ring's plantation until son Joseph II came of age. In 1723 when Joseph Walker made his will, he and his wife were living in Yorktown. In 1712 Joseph Ring II sold his stepfather a Yorktown lot next door to one he already owned and five years later he conveyed to Walker the French Ordinary, then occupied by Andrew Lester.[317]

Joseph Walker bequeathed a third of his personal property to his wife, who retained her life interest in the Ring plantation by virtue of her first husband's will. He left his daughters money and slaves and gave his son Matthew, a minor, the rest of his real and personal estate. If Matthew produced no heirs, the testator's property reverted to his daughters and their heirs. Daughter Mary was to get his land on Wormeley Creek, whereas daughter Judith would inherit the French Ordinary tract, Basses (which adjoined it), and his acreage called Sabrill and Stockner. The late Joseph Walker's will was presented for probate in December 1723. It is uncertain how much longer his widow, son Matthew Walker, or stepson Joseph Ring Jr., survived.[318]

Joseph Walker's daughter, Mary, seems to have outlived her brother Matthew, for she inherited some of her late father's property in the upper reaches of Kings and Felgates Creeks, acreage then called the Ring Neck. It was situated inland, somewhat behind the Ring plantation home tract, and presumably once was owned by Joseph Ring. In time, Mary Walker married Charles Carter of Cleve, the third son of Robert Carter of Corotoman. She died at a relatively early age, leaving her father's land to her children. In 1762, when Charles Carter made his will, he designated his brother, Landon, as guardian to his and Mary's minor children. Landon Carter's diary for the years 1700-1773 and 1776-1777, contains occasional references to the farm he called Ring Neck and the overseers he employed to manage it. During John Broughton's term as overseer at Ring Neck, tobacco, corn, wheat and livestock were raised. His replacement, John Self, grew corn, flax, cotton, peas, tobacco and livestock. Carter noted in his diary that in 1777 Self then had 10,000 tobacco hills and 120,000 corn hills on the property. He regretted Self's conversion to the Baptist religion and his zeal in sharing it with Carter's slaves. For this reason, Carter termed him "a religious villain."[319]

Meanwhile, Elizabeth Ring, the daughter of Joseph Ring I and his wife Sarah, seems to have outlived her mother, brother Joseph II and sister Sarah, and through the right of descent, inherited her father's plantation at the mouth of Kings Creek. In ca. 1713 she married John Wormeley of Rosegill in Middlesex County, a son of Ralph Wormeley. They produced ten children, six of whom survived. After Elizabeth was wid-

owed, she was left fee simple ownership of 630 acres in York-Hampton Parish in York County. She outlived her husband by 15 years.[320]

In March 1743 when Elizabeth Ring Wormeley made her will, she bequeathed her ancestral plantation to her son John Wormeley II and his heirs. He never resided upon the property but operated it as a working farm. In 1769 he sought the House of Burgesses' permission to dock the entail upon the land, so that he could dispose of it. Approval having been gained, in September 1770 John Wormeley II and his wife Anne deeded the Ring plantation to Hallcot and John Pride Jr., James Pride's trustees. James Pride, a Yorktown resident, was a merchant, local court justice, and naval officer for the York River. He also was a real estate speculator who owned land in James City and New Kent Counties and had a dwelling, warehouse, shop and pump-house in Yorktown. In 1767 he was arrested for having a warrant served upon burgess Edward Ambler while the assembly was in session, a time when members enjoyed immunity to prosecution. For this offence, Pride was reprimanded and ultimately put in jail, where he was obliged to subsist on bread and be deprived of pen, ink and paper. James Pride kept the Ring estate for a little over two years and probably rented it to a tenant or placed an overseer, slaves and livestock upon the tract. In 1772 he sold it to Dr. William Pasteur, a Williamsburg surgeon.[321]

Dr. William Pasteur, who was married to the daughter of William and Mary president William Stith, was elected a Williamsburg alderman in 1773; in 1775 he served as mayor. He appears to have taken up residence at Ringfield around 1778, employing an overseer to manage his agricultural operations. Pasteur quickly assumed an active role in community affairs and was appointed a county justice. In 1779 he placed an advertisement in the *Virginia Gazette*, offering oysters for sale at his landing.[322]

Some of the maps prepared by military cartographers during the American Revolution shed light upon how Dr. William Pasteur's Ringfield property was developed. Alexander Berthier (1781) indicated that a road extended toward the tip of the neck of land between Kings and Felgates Creeks (see Figure I.33). At the terminus of that road was a cluster of three buildings, likely those situated upon the York-Hampton glebe. To the west and overlooking Kings Creek was another cluster of buildings that were located upon Dr. Pasteur's property. St. Simone suggested an almost identical pattern of development (see Figure I.32). Both map-makers indicated that the neck of land was cleared of its timber except for the periphery of the streams that formed its boundaries. An anonymous French cartographer's simplified map showed roads and local landmarks in the countryside between Williamsburg and Yorktown, including the site of the old glebe, at the tip of the neck of land (see Figure I.46). James Kearney (1818) identified the glebe land but showed no building upon the property (see Figure I.34).

Dr. William Pasteur ultimately returned to Williamsburg. It appears that he, like other prominent Virginians who staunchly supported the American Revolution, suffered from financial hardships in the aftermath of the war. In 1785 he tried to sell his 630-acre plantation on Kings Creek, which reportedly contained "a large elegant, two-story brick house with 9 rooms and 10 closets." As Pasteur was unsuccessful in disposing of the property, in 1787 he borrowed money from his sister-in-law, Mary Stith, using the Ring farm as collateral. Dr. Pasteur died in 1791 without repaying his debt and his widow died the following year. Therefore, Mary Stith filed a claim against the Pasteurs' estate. On December 20, 1802, Dr. Pasteur's administrator was obliged to sell the Ring property at a public action, at which time it was purchased by John Waller of York County, the high bidder.[323]



Figure I.48. Detail of Bache, "York River, Virginia, from Wormeley Creek to Claybank Creek," 1857.

3. Ringfield Plantation: The Early National Period through the Civil War (1791-1865)

John Waller sold the Ring plantation to John Bryan[324] only four months after purchasing it and made a handsomeprofit. In October 1804 Bryan bought the adjoining 150-acre York-Hampton glebe from the York County Overseers of the Poor.[325] Its boundaries were defined by Kings and Felgates Creeks and John Bryan's farm. Bryan died intestate sometime prior to January 1808, with the result that his widow, Dorcease, received her dower share and the remainder of his property passed to his sons John F. and Frederick. An inventory of the late John Bryan's estate and the estate sale that came afterward offers many insights into the decedent's farming operations.[326]

In 1820 the Bryan brothers sold their interest in their father's farm to the Rev. Scervant Jones, noting that their mother retained her dower interest in the property, which amounted to one-third. Jones, when purchasing the Bryan farm and former glebe, agreed not to take possession of the land until after Dorcease Bryan's decease.[327] Five years prior to the time the Rev. Jones bought the Bryan farm and the glebe, he purchased neighboring Bellfield, which lay to the east across Felgates Creek. In 1828 the Rev. Scervant Jones received an unencumbered title to the Bryan property.[328] He died sometime prior to 1854 and his property came into the hands of Thomas Garland Tinsley of Hanover County, who owned 1,200 acres that engulfed almost all of the peninsula formed by Kings and Felgates Creeks. He called his farm Landsdowne. At Tinsley's death, Landsdowne was partitioned and divided among his children.[329] A. D. Bache's map (1857a) shows how steeply the creeks' banks descended to the sandy shore, but omits any buildings that may have been present (see Figure I.48).

During the Civil War Union Army cartographers made several maps of the James-York peninsula. I. Knowles Hare's rendering (1862) reveals that Union naval vessels passed close to the lower side of the York River, in view of Landsdowne (see Figure I.41). A. Lindenkohl's topographically sensitive map omitted any structural features the Landsdowne tract may have had, as did his contemporaries' (see Figure I.39). In his maps, A. A. Humphreys applied the name Kings Creek to that portion of Felgates Creek which was nearest to the York River, reserving the name "Philgates" for the branch that ran inland behind Bellfield (see Figures I.36, I.37, and I. 38).[330] In 1862, C. H. Worrett called Felgates Creek "Lower Kings Creek" and identified Indian Field Creek as "Filbert Creek" (see Figure I.45). None of these maps shed any light upon how the Tinsley farm was developed.

4. Ringfield Plantation: Post Civil War to Parkway Construction (1866-ca. 1930)

In 1866 some (if not all) of the late Thomas Garland Tinsley's Landsdowne tract was in the hands of black refugees, who used it for subsistence farming (Figure I.45). An 1867 survey of the late Thomas Garland Tinsley's property defined its nine sub-units. Section B, which encompassed 117½ acres, contained the old home site, whereas Section A included much of the old glebe. Dr. Alexander Tinsley, the decedent's son, inherited Section B plus Section E, approximately 120 acres that lay further inland. Meanwhile, Dr. Seaton G. Tinsley (Alexander's brother) was assigned Section A, the old glebe (see Figure I.35).[331] Landsdowne's vast size is evident on a tract map of the region that was done in 1871, upon which the Tinsley heirs' landholdings are identified. Alexander was in possession of the house tract that bordered Kings Creek whereas his brother Seaton had the old glebe fronting upon Felgates and Kings Creeks, according to a map created in 1871(see Figure I.35).

The late Charles Hatch surmised that Alexander Tinsley, who was living in York County by 1871, may have taken up residence in the old homeplace before actually receiving an unencumbered title to it. In October 1874 Dr. Alexander Tinsley moved to West Virginia and traded his property called Ringfield to F.

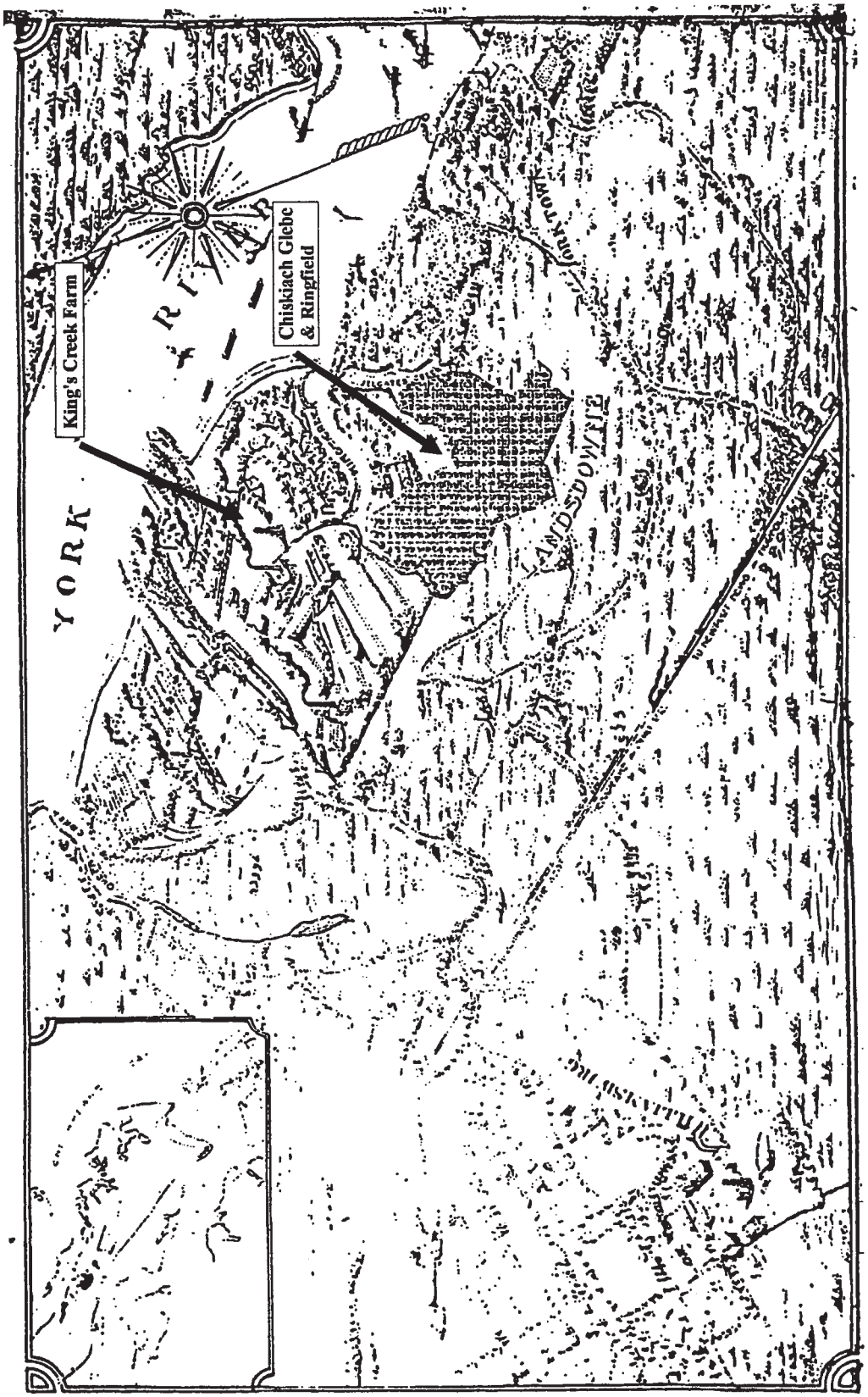


Figure I.49. Morris Company, "Williamsburg," 1918.

Lewis and Edward I. McCullen in exchange for some land in Baltimore. In December 1874 they sold Dr. Tinsley's portion of Landsdowne to Thomas and Richard Sewell Jr.[332] The Sewells seemingly never occupied the property and used it as collateral when obtaining mortgage money.[333]

On February 7, 1883, a special commissioner of the York County court conveyed the Sewells' 300 acres at Landsdowne to Robert F. Cole, their creditor, who bought their interest in the property at a public auction.[334] In1885 Robert F. Cole sold the tract to Julius Helm, who took possession of it on January 1, 1886, and used it as collateral when financing his purchase. Julius and his partner, Gustav Helm, occupied the property for more than 30 years, during which time they enhanced its size. Julius Helm defaulted on his mortgage to Robert F. Cole, with the result that 280 acres were split off and sold to Bernard Gunst of New York. Gunst, in turn, conveyed the tract to Gustav Helm.[335] He and his wife mortgaged the farm several times in succession, using it as collateral each time they enhanced its size; finally, they accumulated 707 acres in all (York County Deed Book 23:382;29:99; 31:233; 33:584).

Charles H. Mast, who rented the Helms' property and lived in its dwelling, said that during his residency hay, corn and potatoes were produced on the farm, which also had a good apple orchard. He indicated that there was a small landing on Kings Creek that served oyster and fishing boats. Mast indicated that much of the farm was open and under cultivation. Earnest A. Vaughn, who lived nearby, said that between 1905 and 1908 his father rented what had been the old glebe. He recollected that the house and farm buildings on the tract were located near the site of the modern Ringfield picnic area and that the property extended inland to a point above Burbank Landing on Felgates Creek.[336] A USGS topographic quadrangle sheet prepared in 1904 depicts the farm roads which extended toward Kings and Felgates Creeks, near which were solitary buildings. These buildings appear to have been located at the sites where structures stood at the time of the Revolutionary War (see Figure I.42).

A 1918 map, which shows the powder factory and shell-loading plant that became known as Cheatham Annex, identifies the Helm farm as "Yorkview" and indicates that the southerly part of the tract had been subdivided into tiny lots. This was likely a proposed subdivision which development was considered as a means of relieving the severe housing shortage created by an influx of workers to Cheatham (see Figure I.49).[337] In 1918 Gustav Helm decided to dispose of his portion of the Landsdowne estate, including the old Ring place and glebe. On March 3, 1918, he sold it to D. L. Flory, who retained it for two years and then deeded it to the United States Government as part of the Naval Mine Depot.[338] The old Ring house became the residence of the first inspector of ordnance, who moved to new quarters on the Indian Field tract in October 1920. On December 14, 1920, the old house burned.[339]

5. Ringfield Plantation: Observations

The Felgates and their successors, the Rings, appear to have occupied a house tract that overlooked Kings Creek, not far from the site occupied by a colonial graveyard. To the east, abutting the York River and Felgates Creek was the Chiskiack (later, York-Hampton) glebe, which had come into existence by 1637. It, like the Ring tract, would have been developed, for it served as the home farm of the incumbent parish clergyman or his tenant. In 1804 the glebe was incorporated into what had been the Ring tract.
The parkway was constructed through the Ring tract. It is likely that cultural features await discover on the Ring and glebe tracts and the inland acreage associated with the Ring property. However, the construction of the Ringfield picnic area and its access roads may have obliterated some of the sites that once were present. The remains of the late seventeenth century basement and the cistern still survive.



Figure I.50. Detail of Smith, "Virginia Discovered and Discribed [sic]," 1610.

M. BELLFIELD AND THE INDIAN FIELD

1. Bellfield: The Settlement Era (to 1699)

In 1607, when Captain Christopher Newport and his men explored the wilderness that was to be colonized, they made note of the Indian villages that were situated along the banks of the major streams. Later, Captain John Smith(1610) prepared the well known map upon which he identified these sites (see Figure I.50). The Chiskiack Indians' village was located in the immediate vicinity of what became known as Chiskiack (later, Indian Field) Creek, seemingly on the west side of its mouth. The Chiskiacks' territory extended along the lower side of the York River within the James-York peninsula. They were likely descendants of the Natives who interacted with the Spanish Jesuit missionaries in the 1570s.

In the wake of the March 1622 Indian uprising, the Chiskiack, like other Natives who were part of the Powhatan Chiefdom, were subjected to the retaliatory raids undertaken by the colonists for the expressed purpose of eradicating them and driving them from their land. Undoubtedly, the presence of the Chiskiack, who were a relatively short distance from Jamestown and Martin's Hundred, made the colonists uneasy. In 1624 Virginia's government officials considered constructing a palisade from Martin's Hundred to Chiskiack, but the colonists were still recovering from the massacre and no action was taken. In 1627 the idea of running a palisade across the James-York peninsula resurfaced, but again nothing was done.[340] Finally, in 1630 a concerted effort was made to colonize the territory known as Chiskiack and in 1633 work commenced on the construction of a palisade between the heads of College and Queens Creeks. It is likely that the Chiskiack Indians left their homeland around the time Captains John West, John Uty, Robert Felgate and others moved in and began establishing homesteads. The Chiskiack relocated to the Middle Peninsula and seated themselves on the lower side of the Piankatank River's mouth, where they remained until the third quarter of the seventeenth century.

On October 8, 1630, Captain John West received a patent for 600 acres of land at Chiskiack for having been one of the first adventurers to enter and seat purposefully within the area being colonized. His patent extended eastward along the York River from the mouth of Kings Creek to a point just west of Bracken's Pond and the tract assigned to Captain Francis Morgan. At first, Felgates Creek was known as West's.[341] By 1632 the territory called Chiskiack was populous enough to warrant representation in the colony's assembly. In 1633 Captain John West and the others who first settled in Chiskiack began serving as justices of the peace or commissioners, taking office as soon as local courts were established.[342]

Captain John West, whose brother, Sir Thomas, was the second Lord Delaware, immigrated to Virginia during the first quarter of the seventeenth century. He was born in Hampshire, England, and was a graduate of Cambridge. At first, he settled in the vicinity of Westover plantation, which his brothers had seated. After the 1622 Indian uprising, Captain John West led some of the retaliatory marches that were undertaken against the Indians. In 1629 and 1630 he and Captain Robert Felgate, who became his neighbor in Chiskiack, served together in the colony's assembly. In 1632 West was awarded 2,000 acres of land for having fathered "the first born Christian at Chiscaysck."[343]

Captain John West took an active role in public life. He was a member of the Governor's Council and during the 1630s, when Sir John Harvey was thrust from office, he served as interim governor. Because West was a county justice of the peace, the York County court convened at his home numerous times during the 1630s and 40s.[344] It is uncertain where Captain John West's dwelling was located within his original 600-acre patent. He may have seated himself near the mouth of Indian Field Creek in an area previously cleared by the Chiskiack Indians, or perhaps established a home near his neighbor, Captain

Robert Felgate, in the vicinity of the site later occupied by the Digges'. After Captain John West sold his land at Chiskiack, he moved to a 1,550-acre tract he patented in the point formed by the junction of the Pamunkey and Mattaponi Rivers. West died in 1659, leaving as his heir son and namesake, John. The younger John West (who also became a captain) took an active role in public life and became a New Kent County justice and burgess. He was married to Unity Croshaw of York County, with whom he had three sons and a daughter.[345] West also had a son with Cockacoeske, the Queen of the Pamunkey Indians, whose paternity generally was acknowledged by the English.

In September 1650, Edward Digges I, whose father, Sir Dudley Digges, had been a member of the VirginiaCompany of London, purchased Captain John West's 1,250-acre plantation in Chiskiack. In 1654, while Virginia was under the Commonwealth government, Edward Digges I served as a councilor. On March 31, 1655, the members of Virginia's assembly chose him as governor and successor to Richard Bennett. Digges, who was popular and played an active role in politics, went to England on behalf of the Virginia government. He also was a highly successful planter, who patented land in Surry, New Kent and Gloucester Counties. A special strain of tobacco produced upon Digges' York River plantation was noted for its mild flavor and aroma and therefore was highly saleable. In 1724 Hugh Jones, when describing the role tobacco played in Virginia's economy, mentioned the "famous crop known by the name of the E Dees," which was grown at what he called Digges Neck.[346]

Edward Digges I's success in agriculture also extended to silk-production. During the 1650s he planted mulberry trees upon his property in accord with detailed instructions he received from experts in England. He brought two Armenians to Virginia to oversee his attempts at silk-making, which were successful. In 1671 the colony's assembly awarded Digges 100 pounds sterling in recognition of his efforts in promoting silk production.[347] In 1670 when Augustine Herrmann made a map of Virginia, he indicated that a house was located on the east side of Felgates Creek's mouth and that several others were situated along the shore line within the bounds of what eventually became Bellfield (see Figure I.43).

A late seventeenth century court document suggests that Edward Digges I's wife, Elizabeth, was the sister of Colonel John Page. The Digges couple produced 13 children, only three of whom outlived their mother. In August 1669, when Edward Digges I was in England and preparing to set sail for Virginia, he made his will. He died on March 15, 1675. He designated his wife, Elizabeth, as his executrix and bequeathed her 1,200 pounds sterling. The couple's eldest son, William, was to assume control of their York River plantation when he reached age 24. The other children received legacies of money, slaves, and personal belongings. Elizabeth Digges continued to occupy the property she and her late husband had shared and was still in residence 16 years later when she died. By that date, only sons William, Dudley and Edward were alive.[348]

In November 1691 Captain Francis Page, the widower of Edward and Elizabeth Digges' daughter, Mary, asked the local court to partition his mother-in-law's estate so that his daughter could receive the share to which her mother was entitled. In response to Captain Page's petition, Mrs. Elizabeth Digges' estate was inventoried in preparation for distribution to her heirs. The men who catalogued her personal belongings did so on a room-by-room basis, a listing that sheds a great deal of light upon the family's material culture and personal wealth. It also reveals that the Digges plantation was divided into three subsidiary farms: the Home Quarter, the Indian Field Quarter, and the New Ground Quarter. The Home Quarter was operated in tandem with the manor plantation and had 18 slaves (including one Indian), plus 80 equines and 60 head of cattle, whereas the Indian Field Quarter had 12 slaves and 11 cattle and the New Ground Quarter lay elsewhere. All of the Digges' subsidiary farms were sparsely outfitted with the barest essentials, such as iron pots for cooking. Tobacco and corn were among the crops being grown upon the Digges property

when the inventory was taken. Elizabeth Digges, like her husband, was interred in the family burial plot near the Bellfield House Site.[349]

William Digges, who came into legal possession of his father's landholdings at age 24, in 1671 served as a York County justice of the peace. He became the captain of a troop of horse soldiers and during Bacon's Rebellion, staunchly supported Governor William Berkeley. He fled to Maryland when Bacon's followers seemingly got the upper hand, but later returned to Virginia where he remained until 1679. He married Elizabeth, the daughter of Henry Sewell of Patuxent, Maryland, and stepdaughter of Charles Calvert, the third Lord Baltimore and in 1691 when Elizabeth Digges died, William was living in Maryland. There, he became a member of the governor's council, held the rank of colonel, served as Maryland's deputy-governor, and acquired a considerable amount of real estate. William Digges' 1694 will, which was presented for probate in 1698, distributed his property among his ten children. He entrusted to his executors the management of his York River plantation, along with its mill, slaves and livestock. The proceeds of the plantation's agricultural and milling operations were to go toward hisdaughters' support until they were grown and married. Ultimately, however, William Digges' York River plantation was to go to his son, Edward II, and his slaves and livestock were to be distributed among all six of his sons.[350]

By the time Edward Digges II inherited his father's 1,250-acre plantation on the York River, he already was well established in Maryland. Therefore, on September 22, 1699, he conveyed the tract and its improvements to his uncle, Dudley Digges. Present at the time of the sale were 11 slaves and 36 cattle. The deed of conveyance recited the plantation's descent from Captain John West's 1,300-acre patent and noted that the water grist mill called Digges Mill had been built by Edward Digges I.[351]

2. Bellfield: Colony to Nation (1700-1790)

Dudley Digges, who was born in ca. 1665, was only ten years old when his father, Edward I, died and probably spent his youth on the ED plantation with his mother, Elizabeth. He married Susannah Cole, the daughter of Colonel William Cole of Warwick County, who owned the 1,350-acre Boldrup plantation. Between 1695 and 1697 Dudley Digges served as a burgess representing Warwick County. Later he became a councilor and the colony's auditor and surveyor-general. The 1704 quitrent rolls reveal that Digges was one of the region's larger landowners. He made his will on January 13, 1711, and died five days later, leaving a widow and four children, three of whom were minors.[352]

Cole Digges, Dudley and Susannah's eldest son, assumed control of the ED plantation at his father's death. He also inherited Boldrup from his maternal grandfather and had the Denbigh plantation. He became active in political life and served as Warwick County's burgess in 1715 and 1718. As a militia colonel, he commanded the units in Elizabeth City, Warwick and York Counties. He also became a councilor and served on the Board of Visitors for the College of William and Mary. Cole Digges owned lots in Yorktown, where he carried on an active mercantile business, and he had property in Williamsburg. He married Elizabeth Power of York County, the daughter of Dr. Henry Power. Cole and Elizabeth Power Digges produced two daughters and three sons.[353]

When Cole Digges died in 1744, his grandfather's ED plantation descended to eldest son, Edward III, who became a York County justice, militia officer and burgess. In 1739 Colonel Edward Digges III married Nathaniel Harrison's daughter, Anne, and may have moved to the ED plantation around that time. In 1746 he initiated a friendly suit against Thomas Nelson, his brothers' guardian, hoping to force distribution of the late Cole Digges' personal estate. One man who testified in court stated that Cole Digges intended for Edward III to have "the plantation whereon he . . . now lives and the Plantation in the Neck in the county

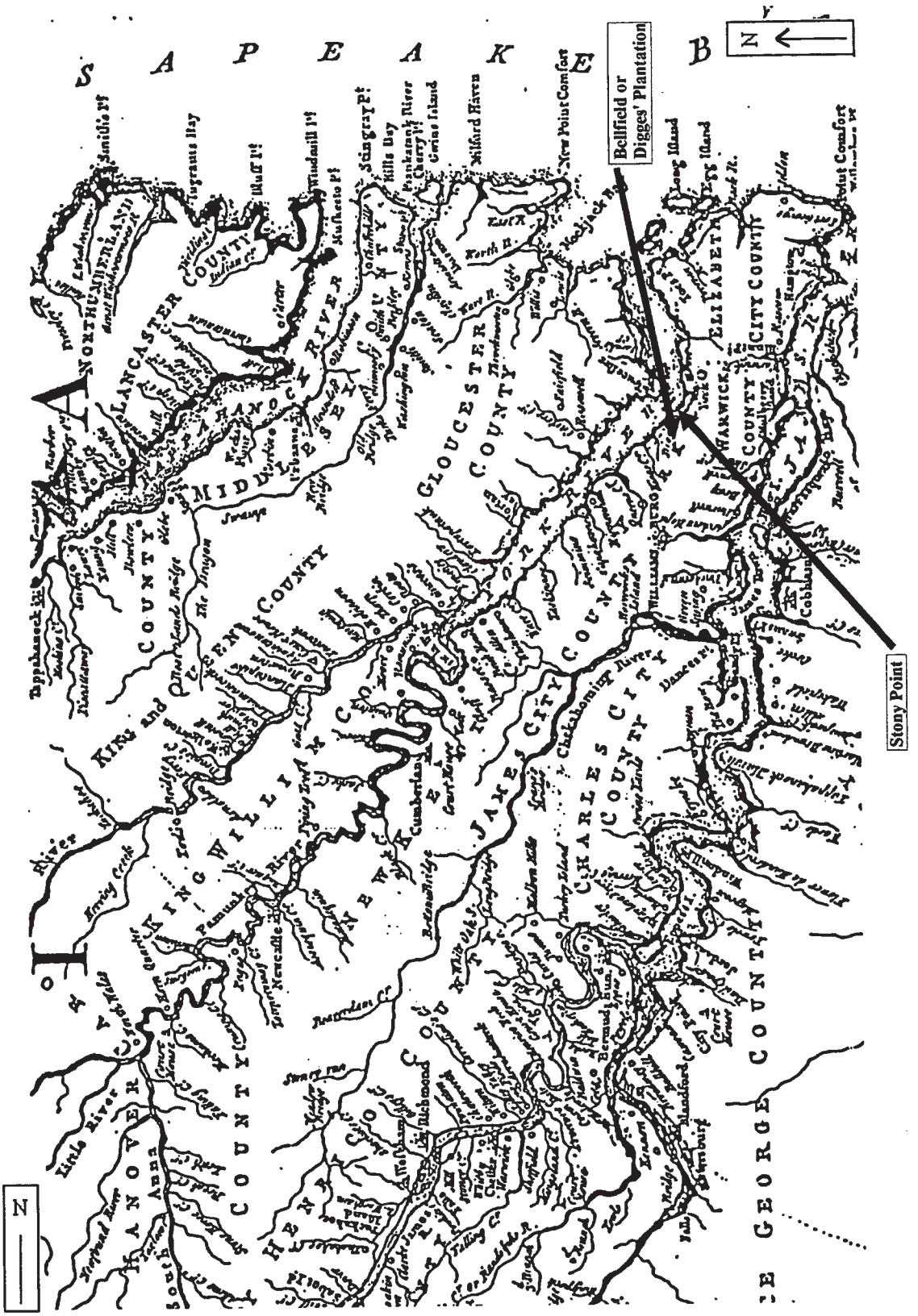


Figure I.51. Detail of Fry-Jefferson, "A map of the most inhabited part of Virginia . . . ," 1751.

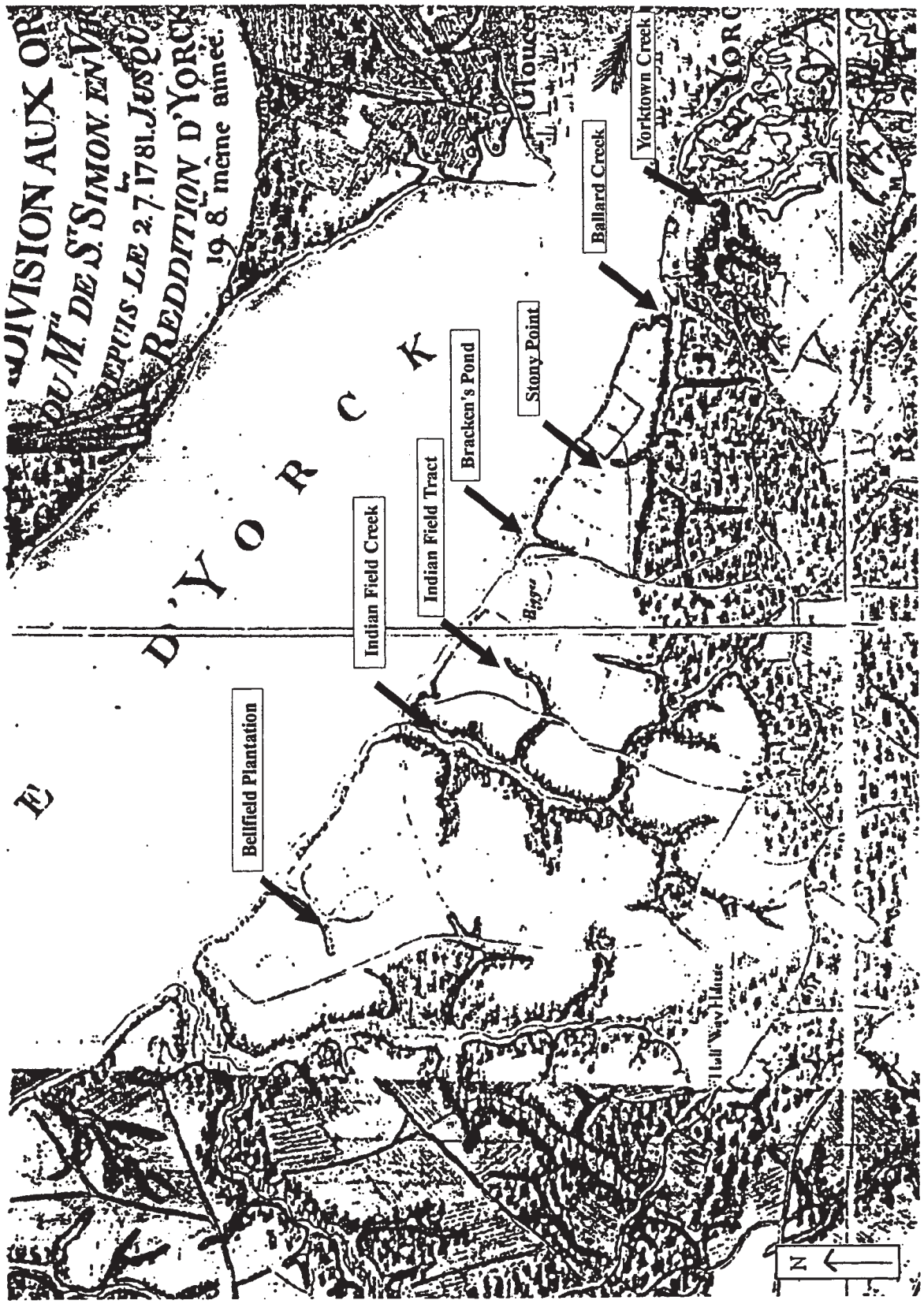


Figure I.52. Detail of St. Simone, "Carte de la Campagne de St. Simone," 1781.

of York commonly called the E.D. Plantation," along with all the personal property that was present. It was noted in the court minutes that Edward had resided upon the York River plantation prior to his father's death.[354]

Edward III and Anne Harrison Digges produced 13 children while they lived upon his York County plantation. He grew tobacco, including the famous strain known as E Dees, and served as a burgess from 1734 to 1755. When Edward III died in 1769, his wife, Anne stayed on in the home they had shared. In 1767, when Edward Digges III made his will, he left the bulk of his York River plantation to son William Jr. However, he left to son Cole Digges II a 200-acre tract "being **between** the place where I now live and the plantation known by the name of the E. D. Plantation." Thus, the testator appears to have been residing upon a site that was somewhat removed from the original ancestral seat. The maps that Joshua Fry and Peter Jefferson (1751) made between 1751 and 1775 suggest that Edward Digges III and his family resided upon the Indian Field tract, not at the Bellfield House Site, for the Digges plantation's principal seat was just west of Ballard Creek (see Figure I.51). In 1781 an anonymous cartographer called the site "Digges Old House" (see Figure I.35). Thus, it appears that sometime prior to 1746, when court testimony made reference to Edward Digges III's having a separate residence, and 1767 when he made his will, he erected a new home upon the York County property he stood to inherit. Mrs. Anne Harrison Diggesdied in 1775. The appraisal of her personal estate reflects the family's considerable wealth.[355]

Shortly after Edward Digges III's death, son William Digges Jr. began taking an active role in public life. In 1771 he was involved in the construction of a warehouse at the Capitol Landing near Williamsburg and in 1773 he became a York County justice, serving a term a sheriff. He married his first cousin Elizabeth, the daughter of his uncle William Digges of Warwick County, and produced several children. William Digges Jr. and his sons took an active role in the American Revolution, serving on the Committee of Safety and attending the Virginia Conventions of 1775-1776. In 1782 he became a magistrate and county lieutenant.[356]

Alexander Berthier's sensitive topographic map of 1781 indicates that a cluster of buildings enveloped by a well defined yard was situated near the mouth of Felgates Creek, overlooking the York River. To the southeast and somewhat inland were three other buildings (see Figure I.33). On the east side of Indian Field Creek was a large structure enclosed by a yard, probably the Digges mill. Further east was yet another complex of buildings. A network of small roads linked various parts of the Digges plantation, which included numerous necks of land that were defined by small streams and/or ravines. St. Simone (1781), like Berthier, indicated that much of the Digges property was clear and open (see Figure I.52). He, like Berthier, showed a complex of buildings near the mouth of Felgates Creek and he placed another group of structures on the east side of Indian Field Creek, just west of Bracken's Pond. It was here that he placed the name "Digges," implying that it was the family seat. As noted previously, another cartographer indicated that this was the site of "Digges old house" (see Figure I.35). According to Charles Hatch, during the siege of Yorktown, the Digges plantation served as an interim supply depot and meeting place for the Allies.[357]

After the close of the American Revolution, William Digges Jr. experienced financial hardships, like many others who had supported the war effort. On November 16, 1785, he and his wife Elizabeth conveyed 400 acres of their farm to Thomas Nelson, their trustee, in order to borrow funds. The Digges couple identified the acreage they were mortgaging as "the old House Tract," to which they added as much of a tract called "Colliers" as was needed to make up 400 acres. The day after William Digges Jr. used "the old House Tract" as collateral in securing a loan, he deeded 1,156¾ acres of Bellfield to his son, Dudley Digges Jr. He did so as a means of preserving his wife's life-rights to the property, keeping it from his creditors. But a few months later William had his trustee, Thomas Nelson, dispose of the acreage he had mortgaged, the "old House Tract" supplemented with land from "Colliers." The 402-acre tract was purchased by the

Rev. John Bracken, rector of Bruton Parish.[358] Then, William Digges Jr. sold to Benjamin C. Waller 447½ acres called Bellfield, which acreage lay on the east side of Indian Field Creek and extended downstream interfacing with the Rev. John Bracken's western line.[359]

The land sales William Digges Jr. and his wife undertook during 1786 are highly significant to understanding the developmental sequence that occurred upon the Bellfield and Indian Field tracts. The Digges' disposal of their "old House Tract," which was located on the east side of Indian Field Creek, implies that they had a newer (or perhaps better) home elsewhere on their property. Moreover, the elaborate efforts William made to preserve his wife's life-interest in the western part of his property reflects something beyond a sentimental attachment to it. That, when viewed in light of William Digges Jr.'s reference to the "old House Tract" and the cartographic evidence that is available, suggests strongly that he and his wife had abandoned the old dwelling on the Indian Field property in favor of another one, probably in the western part of his plantation. Whether the Digges couple built a new home or refurbished and modernized the residence Edward Digges I had occupied between 1650 and 1675 is uncertain.[360]

William and Elizabeth Digges' financial problems apparently worsened, for he took legal action to negate the deed he had made with his son. This enabled him to mortgage Bellfield. On January 22, 1787, the Digges' conveyed their 1,156¾-acre "Bellfield Estate" to William Waller of Hanovertown in order to secure a loan.[361] But within a year the Digges' sold Bellfield to Waller, which transaction occurred on January 1, 1788.[362] Bellfield was thendescribed as being bound by Felgates Creek, the York River, Francis Lee's property, the Potter estate, and two components of Bellfield that already had been sold off: the acreage conveyed to Benjamin C. Waller and to the Rev. John Bracken. The 1,156¾-acre Bellfield tract William Waller bought included Digges Mill and the two-acre mill seat that straddled Indian Field Creek.[363] After William Digges Jr. disposed of Bellfield, he relocated to Warwick County, which he represented in the House of Delegates in 1790-1791 and 1802-1805 and served as county sheriff.[364]

3. Bellfield: The Early National Period through the Civil War (1791-1865)

William Waller of Hanovertown, the merchant who bought Bellfield from William Digges Jr. made it available to his son, William M., who moved there with his wife Elizabeth. At the death of William Waller, Bellfield descended to son William M. and daughter Lucy. An inventory of the late William Waller's estate in York County reveals that Bellfield was an active working farm, which had 48 slaves, 85 sheep, 70 cattle, 3 yoke of oxen, 71 hogs and 4 work horses. William M. Waller purchased his sister's interest in Bellfield and became its sole proprietor. Simultaneously, his wife, Elizabeth, bought the decedent's household furnishings.[365]

William M. Waller and his wife resided at Bellfield until 1815, when they sold their 772-acre home tract between Felgates and Indian Field Creeks to the Rev. Scervant Jones of Yorktown. The sale also included Waller's one-fourth interest in the water grist mill that adjoined the Bellfield estate. Waller stipulated that an old burial ground "near the House on the said land" was still being used as a graveyard and that at no time was it to be cultivated or destroyed.[366]

The Rev. Jones, when executing a deed of trust to secure his purchase money, described the 772 acres he was buying as "the well known estate called Bellfield." He made reference to three natural boundaries (the York River and Felgates and Indian Creeks) and a large ditch that separated his property from that of Thomas Mutter, which was called Indian Fields.[367] The Rev. Scervant Jones probably never occupied the Bellfield property, for his presence is well documented elsewhere. In 1820 Jones purchased the enlarged Ringfield tract (i.e., the Ring estate and what had been the old Chiskiack glebe) from the sons of John

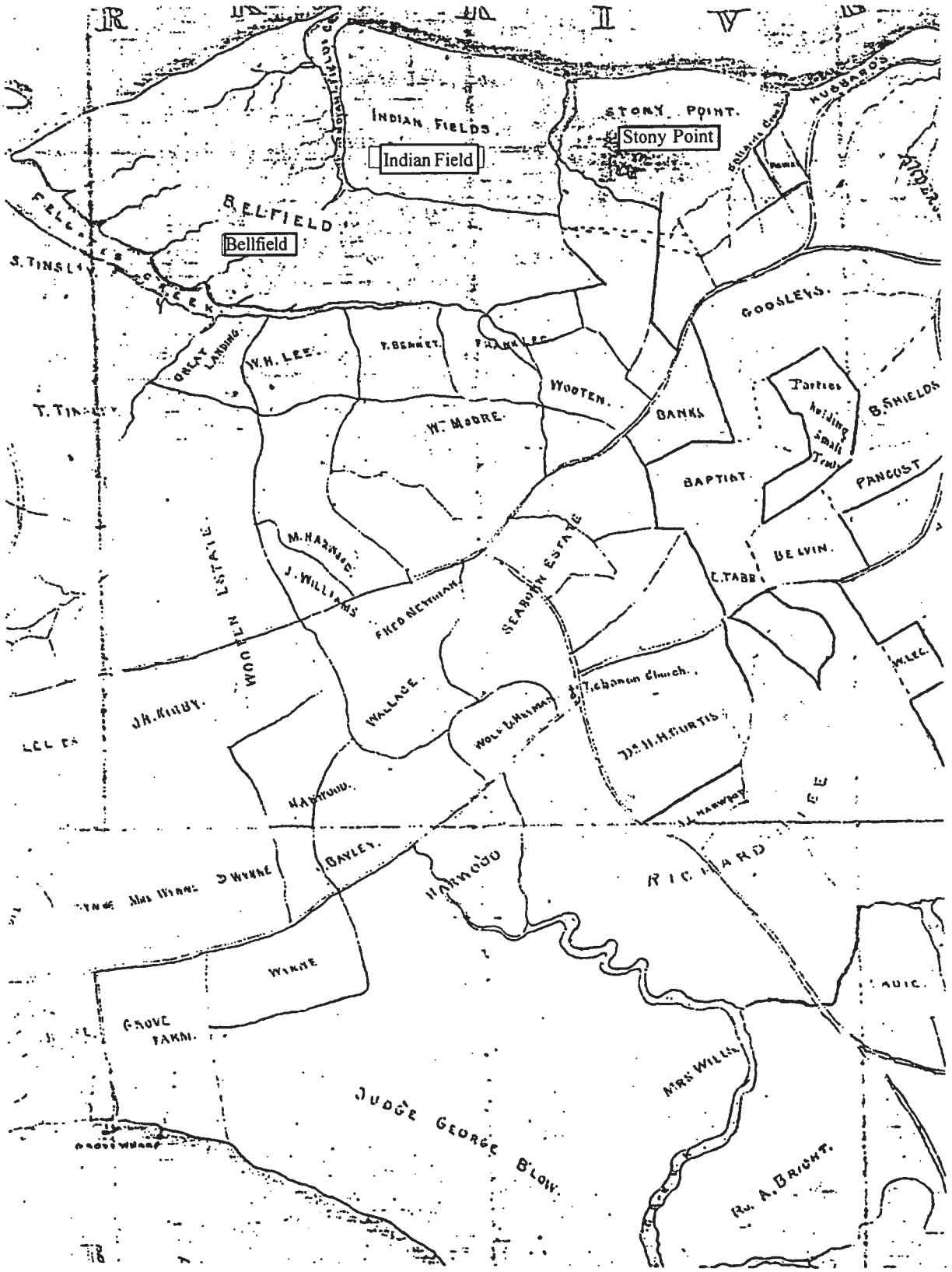


Figure I.53. Detail of Anonymous, "Notes sure les Environs de York," 1781.

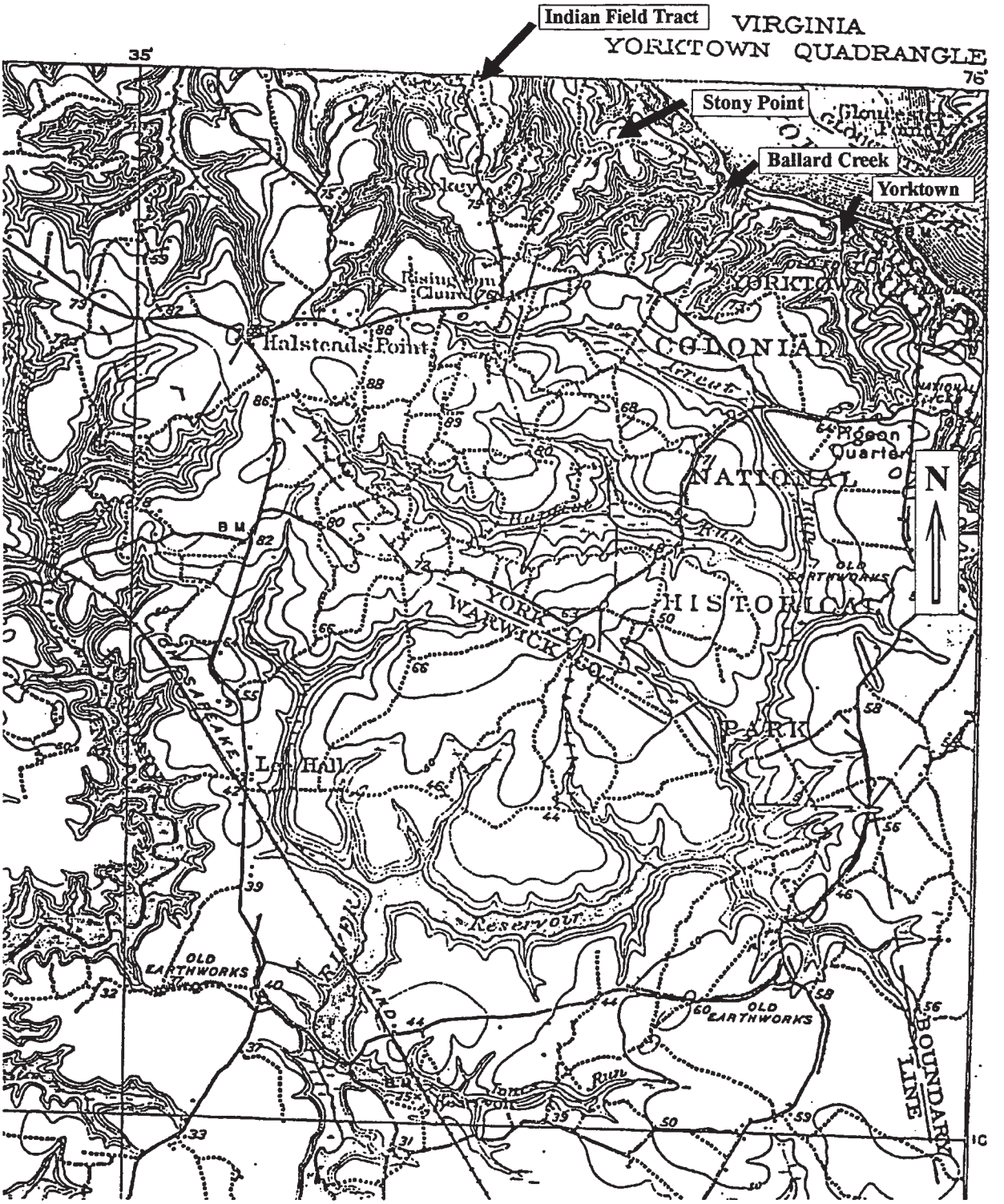


Figure I.54. Detail of USGS Quadrangle, "Yorktown," 1904-1905.

Bryan, whose widow retained a life interest in the property.[368] This gave the Baptist minister control of all the land between Kings and Indian Field Creeks.

In September 1829 the Rev. Scervant Jones sold Bellfield to Richard R. Corbin of Gloucester, who took up residence upon the property. But by March 1830 he conveyed what he described as Bellfield's 800 acres to Colonel Robert McCandlish of Williamsburg. Both deeds made reference to the disposal of the grantor's interest in Digges Mill and the need to preserve the graveyard.[369] McCandlish continued to reside in Williamsburg and appears to have used Bellfield as a second home. He purchased the components of the Indian Field tract that William Digges Jr. had sold off during the 1780s and reunited them with Bellfield. In 1833 he bought another share of the gristmill on Indian Field Creek.[370]

In 1857 when a topographic map was made of the York River basin, the name of Colonel R. McCandlish was placed by what appears to have been a relatively elaborate domestic complex located midway between Felgates and Indian Field Creeks, at a site where the National Park Service has preserved the remains of one or more of Bellfield's houses and a graveyard. To the east, midway between Indian Field Creek and Bracken's Pond was another complex of buildings. It was situated in the immediate vicinity of what one Revolutionary War cartographer identified as "Digges Old House" (see Figure I.48).[371]

During the Civil War Union Army cartographers made several maps of the James-York peninsula. I. Knowles Hare's rendering (1862) indicates that Union naval vessels passed close to the lower side of the York River (see Figure I.41). A. A. Humphreys (1862a, 1862b, 1862c) depicted the cluster of buildings that overlooked the York River between Kings and Indian Field Creeks (see Figures I.37, I.36, and 1.38). C. H. Worrett's simplifiedrendering (1862) showed two clusters of houses that were in the same relative positions in which A. D. Bache placed them in 1857 (see Figure I.40). Lindenkohl attributed the buildings between Felgates and Indian Field Creeks to Colonel McCandlish (see Figure I.39).

4. Bellfield: Post Civil War to Parkway Construction (1866-ca. 1930)

In 1871 an anonymous cartographer (1871) prepared a tract map that included portions of York and James City Counties (see Figure I.53). He labelled the Bellfield and Indian Field tracts, indicating that Bellfield then extended eastward behind the Indian Field. The boundary line between the two is likely the "long ditch" to which the Rev. Scervant Jones referred in his 1815 deed, which then separated Bellfield from the Indian Field tract.

As Colonel Robert McCandlish died intestate, his property descended to his legal heirs: Robert, Howard S., Mary and Thomas P McCandlish. They had his landholdings partitioned so that they could be distributed equitably. In 1878 son Robert McCandlish, who lived in Middlesex County, deeded his interest in the Bellfield tract to his future wife, Nannie, as part of a premarital agreement. During the early 1890s York County's tax commissioner noted that three-quarters of Colonel Robert McCandlish's estate was still intact, although Howard S. McCandlish then owned the remainder.[372]

In 1904 Bellfield's four subunits were defined as consisting of 287 acres, 241 acres, 200 acres and 195 acres. According to Charles Hatch, Mary McCandlish's share of Bellfield (200 acres called Lofty's Field) abutted Felgates Creek and the York River and encompassed the Bellfield house site. The share that belonged to Nannie E. McCandlish, son Robert's wife, consisted of 387 acres that fronted upon the York River and extended from the Bellfield house site to Indian Field Creek, including Sandy Point. Inland on Indian Field Creek was the 241-acre farm that had been allocated to Howard S. McCandlish. It extended between the heads of Indian Field and Felgates Creeks and contained a farm manager's house and a

wheat barn. By 1904 Thomas P. McCandlish's share of the farm was in the hands of George W. Ripley.[373] When topographic engineers mapped the Bellfield and Indian Field tracts during the early twentieth century, they indicated that small roads extended toward the river front, linking various portions of the farm (see Figures I.42 and I.54).[374] A man whose father leased nearby Ringfield during the early twentieth century recalled that Bellfield was a fertile, productive farm where wheat and corn thrived. He spoke of the abundance of oysters that were available nearby.[375]

In 1918 when the United States Government acquired land for what became the Naval Mine Depot, the Bellfield and Indian Field tracts were absorbed into the new facility. During World War I an airfield was built at Bellfield, which served as an aviation training camp. According to Charles Hatch, the old Bellfield home was standing in 1918 when the government took over the property. Finally, in 1925 the navy razed the building, which was considered a fire hazard. One man recollected that the old house was a two-story frame building that was surrounded by outbuildings including a kitchen, stable, overseer's quarters, smokehouse, and slave quarters.[376]

The cemetery near the Bellfield house site contains the tombs of Edward Digges, deceased 1675; Susannah Cole Digges, deceased in 1708, and her husband, Dudley Digges, who died in 1711; and Cole Digges, deceased in 1744. Graves of McCandlish family members reportedly are located in an area to the west of the Digges tombs.[377]

5. Bellfield: Observations

Archival research on the Bellfield and Indian Field tracts indicates that members of the Digges family constructed homes in at least two sites upon the property. Edward Digges I, who purchased Captain John West's land in 1650, may have elected to occupy West's residence, which would have been 20 years old, or built a home of his own. It is likely that Edward Digges I's dwelling was located in relatively close proximity to what is now called the Bellfield House Site, for he was interred nearby in what became a family cemetery. Edward Digges I's son, William, and grandson Edward II were absentee owners who resided in Maryland.

In 1699 Edward Digges II sold his York County estate to his uncle Dudley Digges, who with his wife, Susannah, took up residence at Bellfield. They may have built a new home rather than occupying his father's old dwelling, which (if it still existed) would have been 50 or more years old and been subjected to a quarter century of absentee ownership. If so, Dudley may have constructed a home on the east side of Indian Field Creek, at a site William Digges Jr., some 80 years, later described as the "Old House Tract." The possibility also exists that Dudley Digges' son Cole, who in 1711 moved to the property he inherited, built the dwelling on the east side of Indian Field Creek.

During the mid-1780s, when William Digges Jr. was obliged to dispose of the property he had inherited, he sold his land on the east side of Indian Field Creek (the "Old House Tract") and tried to retain the western part of the Bellfield property for his wife's use, probably because it contained their dwelling. This raises the possibility that William Digges Jr. and his wife built a new home in the immediate vicinity of what is known as the Bellfield House Site or refurbished Edward Digges I's old home. Subsequent owners of Bellfield, such as Colonel Robert McCandlish and Richard R. Corbin, lived there as well.

Construction of the Colonial Parkway and development of the Naval Weapons Station may have obliterated all traces of the Digges family's domestic complex on the east side of Indian Field Creek. On the other hand, the residence of Edward Digges I (and perhaps that of Captain John West) probably was

located near the site of the old family graveyard, near which subsequent generations of the Digges family constructed a new home or refurbished the original ancestral home. Intensive archaeological and archival research on the Bellfield and Indian Field tracts would be required to potentially answer some of these questions.

Within this section of the Colonial Parkway an interpretive sign erroneously informs the visitor that Powhatan's village, Werowocomoco, lies just across the river. However, at least three historical maps prepared between 1607 and 1610 demonstrate clearly that Werowocomoco was located several miles up-stream at Purtan Bay, across from James City County's westernmost boundary line (see Figures I.2 and I.50). The present sign, which is misleading, should be removed. It could be replaced one that accurately describes Werowocomoco's location or that of Capahosick, an Indian village that does, indeed, lie directly across the river.

N. STONY POINT AND REVOLUTIONARY WAR REDOUBT

1. Stony Point: The Settlement Era (to 1699)

In 1639 Captain Richard Townsend (Townscend) patented 650 acres of land that extended along the York River between Martiau's (later, Smith's and then Yorktown) Creek and Townsend (later, Ballard) Creek, acreage his son and heir, Francis Townsend repatented in 1652.[378/379] Captain Townsend was awarded his land because he was one of the first adventurers to seat land in Chiskiack.

Upstream and contiguous to Richard Townsend's western boundary line at Ballard Creek was the patent of William Prior (Pryor), who in 1635 received 300 acres because of his adventure to Chiskiack plus another 200 acres on the basis of headrights. Prior's land extended west as far as Prior's Creek, now known as Bracken's Pond, enveloping Stony Point.[380] Immediately above Prior's patent was that of Francis Morgan, whose land extended from Bracken's Pond westward to a small, now-nameless stream that during the 1630's was known as Morgan's Creek, where it interfaced with Captain John West's patent.[381]

Richard Townsend, William Prior and Francis Morgan were among the first to settle in the region. They began serving as justices of the peace or commissioners as soon as local courts were established. Court convened for the first time at William Prior's house on July 28, 1636 and was held there several times during 1637 and 1638. Prior was still holding office in 1641. He continued to enhance the size of his landholdings in York County and in 1646 laid claim to 650 acres of new land on the basis of 13 headrights. This suggests that he was a highly successful planter.[382] On January 21, 1647, William Prior, a gentleman, made his will. Within four days, he was dead. He designated his daughters Mary and Margaret as his executors and left them the bulk of his estate. To eldest daughter Margaret he left his interest in the ship Honour, money and the land on which he was then living. He bequeathed the rest of his land to his daughter Mary and both girls were to share equally in the residue of his estate. Prior left sums of money to Richard Kemp's wife, Thomas Harwood and Jasper Clayton's children. Harwood and Thomas Harrison, the overseers of William Prior's will, rented his homeplace with its land, improvements and fishing rights, to Richard Bernard for three years. While renting the Prior plantation, Bernard was to build "at his own cost" a sufficient dwelling that measured 18 to 20 feet by 40 feet and to see that it was maintained. He also was to keep up the dwelling, quartering house (probably the residence of slaves or indentured servants) and tobacco house that already stood upon the Prior plantation and to keep its fences and gardens in good repair.[383] Although little genealogical information is readily available on William Prior and his family, it appears that one of William's daughters married Thomas Edwards.[384]

By the third quarter of the seventeenth century William Prior's acreage had come into the hands of Thomas Ballard I, who by 1668 was living in York County. A 1682 reference to Ballard's plantation indicates that it was "by the riverside." At the death of Thomas Ballard I, his landholdings descended to his son and namesake, Thomas II. He was relatively short-lived and on September 26, 1706, prepared his will, which was presented at court on June 18, 1711. Thomas Ballard II left to his eldest son Matthew the plantation he (the testator) occupied, which extended from the creek that defined the northwest limits of the Warners' land (Ballard Creek) upstream to Colonel Digges' land at Bellfield.[385] Thus, by the early eighteenth century, all of William Prior's patent and at least the eastern part of Francis Morgan's patent had been absorbed into the home tract occupied in succession by Thomas Ballard I and II and Matthew Ballard.

Meanwhile, the waterfront land between Yorktown and Ballard Creeks that Richard Townsend patented during the second quarter of the seventeenth century descended to Robert Townsend. In 1694 his wife Mary and son Robert Jr. sold it to Mildred Warner (the daughter and heir of Elizabeth Read) and her husband, Augustine. After the Warner couple's deaths, the Townsend patent descended to their three daughters: Mildred (the wife of Lawrence Washington); Elizabeth (the wife of John Lewis); and Mary (the wife of John Smith). As Mildred and Lawrence Washington died before 1709, when her parents' estate was distributed, their son John inherited her share. The Lewis and Smith couples sold part of their land to William Buckner shortly after obtaining an unencumbered title to it.[386]

Augustine Herrmann's map (1673) indicates that plantations were then scattered sparsely along both sides of the York River, which drainage had become relatively populous (see Figure I.43). In 1691 when Yorktown was established on a 50-acre site to the east of Yorktown Creek, it rapidly developed into a center of commerce and trade.

2. Stony Point: Colony to Nation (1700-1790)

As Yorktown's population grew, its boundaries were expanded somewhat, but there is no evidence to suggest that development intruded into the area west of Yorktown Creek. William Buckner erected a windmill on a high bluff overlooking the river, a toll mill that served the people of Yorktown and its environs. It stood upon the east side of Yorktown Creek. The maps prepared by Joshua Fry and Peter Jefferson between 1751 and 1775 suggest that the river frontage between Yorktown Creek and Bracken's Pond contained no major plantation seats (see FigureI.51).[387] In 1781, when military cartographers prepared highly detailed maps of the countryside between Williamsburg and Yorktown, a wealth of information on the built environment became available. Alexander Berthier (1781) indicated that a cluster of buildings then stood upon the east side of Indian Field Creek's mouth, perhaps in association with Digges Mill. He also showed the large redoubt that stood just west of Yorktown Creek (see Figure I.33). St. Simone (1781) depicted a large enclosed area and a cluster of buildings midway between Ballard's Creek and Bracken's Pond. It was located upon what had been the Ballard plantation. The countryside between Ballard and Felgates Creeks was clear and open (see Figure I.52).

Undoubtedly, York County's most distinguished moment in history came in 1781 when the British and Allied forces clashed at Yorktown in a major battle that decided the outcome of the American Revolution. In August 1781 the British marched to Yorktown, where they set about constructing fortifications that Charles Lord Cornwallis believed were critical to his army's defense. Earthworks were erected on both sides of the river to protect the shipping that supported Cornwallis's army and entrenchments on the Gloucester side provided the British with a potential overland escape route. Gradually, the Americans and their French allies began to draw in toward Yorktown as part of a general military build-up.[388] Cartographers



Figure I.55. Detail of Fortifications, from St. Simone, "Carte de la Campagne de St. Simone, 1781.



Figure I.56. Detail of Fortifications, from Anonymous, "Plan of the Siege of Yorktown," 1781.



Figure I.57. Detail of Fortifications, from Anonymous, "Yorktown," 1781.

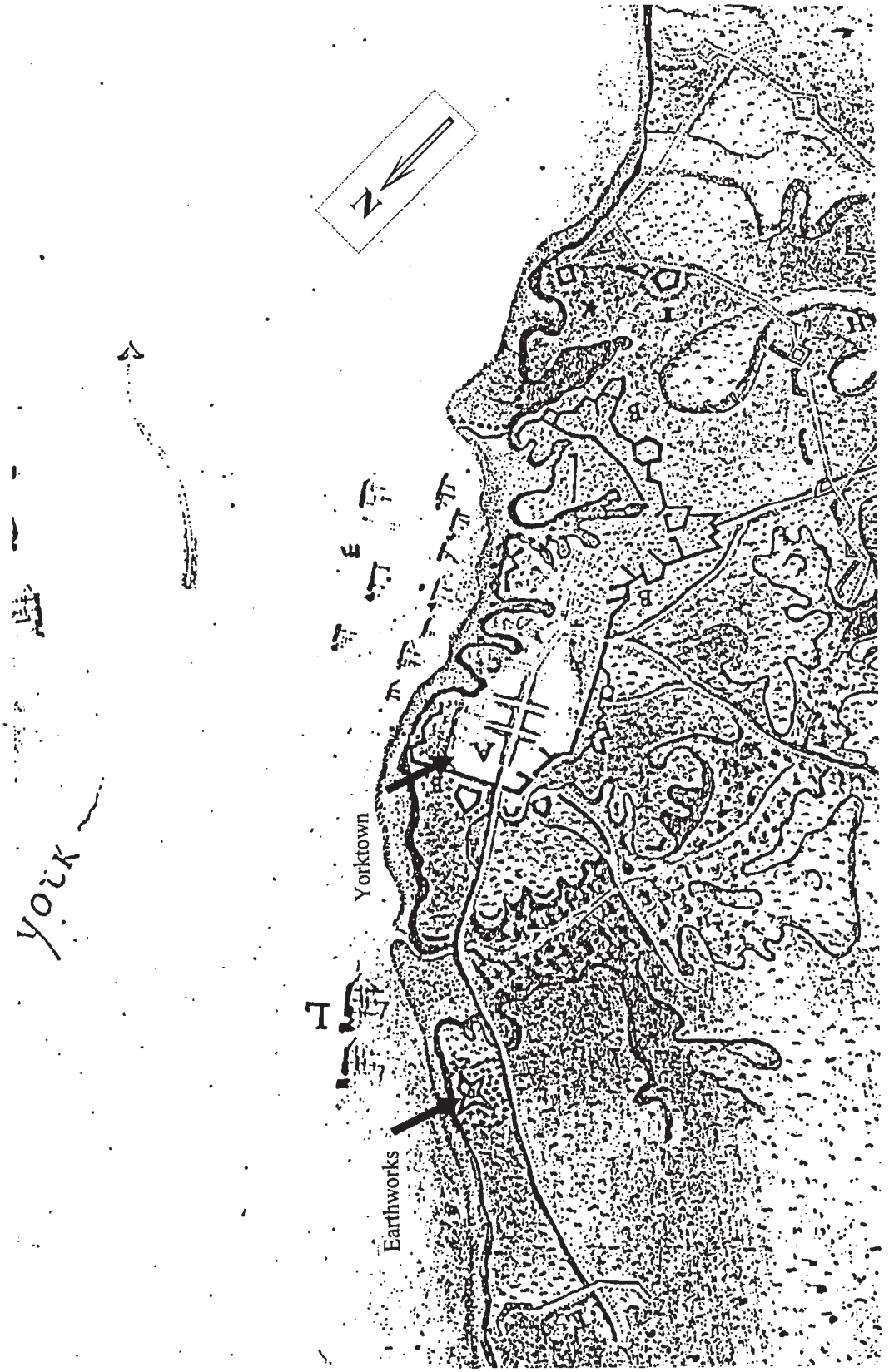


Figure I.58. Detail of Fortifications, from Anonymous, "Attaue de la Ville d'York," 1781.

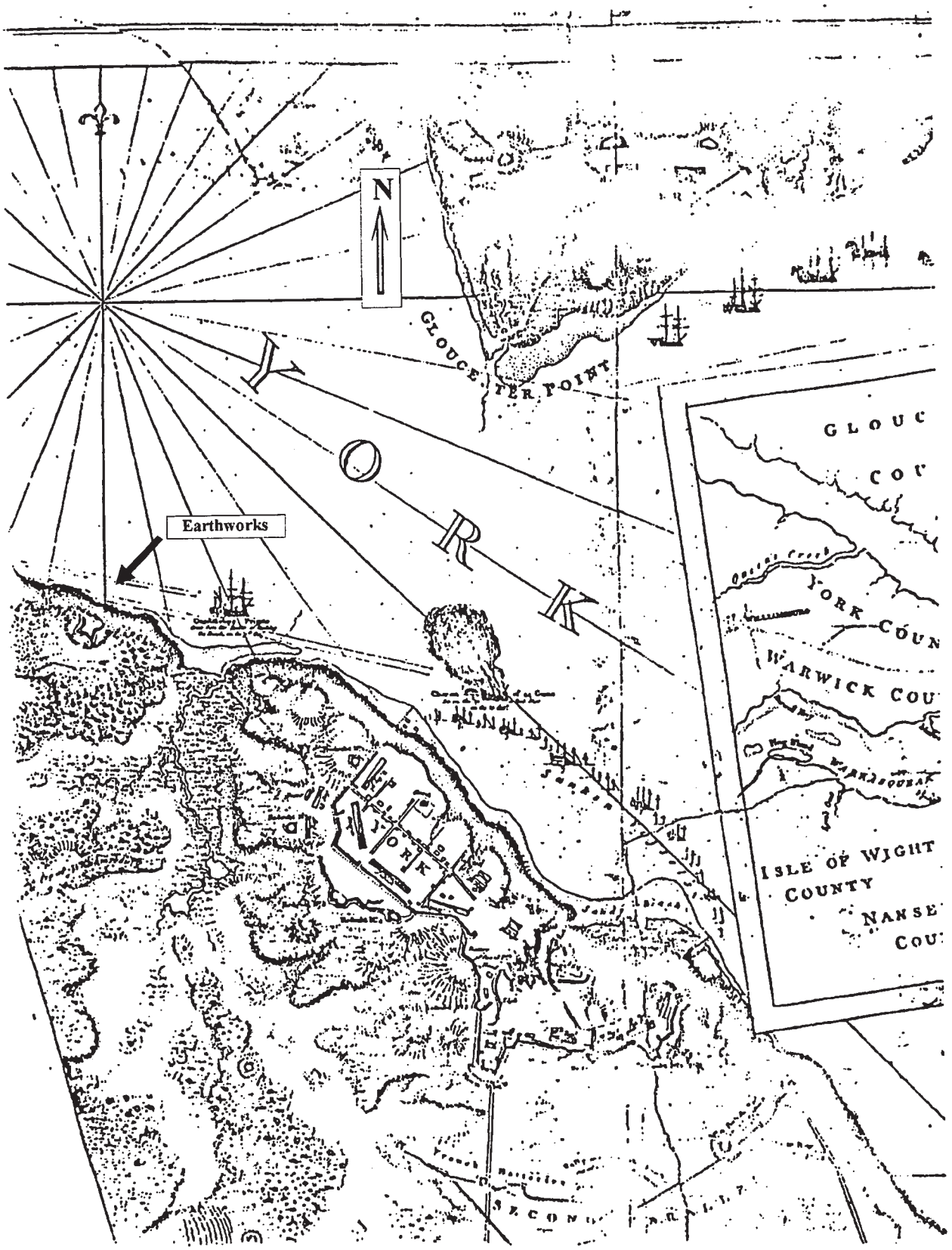


Figure I.59. Detail of Fortifications, from Page, "A Plan of the Posts of York and Gloucester," 1781.

who mapped the area after the war showed the complex earthworks that stood upon the west side of Yorktown Creek (see Figures I.55, I.56, I.57, I.58, and I.59).[389]

During the fourth quarter of the eighteenth century Corbin Griffin began accumulating acreage between Brackens Pond and Yorktown Creek. Between 1779 and 1790 he purchased 50 acres from James Vaughan, 80 acres from James Tool, 63 acres from William Reynolds, and 393 acres from James Young. The Young and Reynolds tracts were described as part of the plantation that once belonged to Thomas Ballard I and II, which James Young's mother, Anne, had inherited from her father, Matthew Ballard.[390]

3. Stony Point: The Early National Period Through the Civil War (1791-1865)

During the early-to-mid 1790s Corbin Griffin of Yorktown began transferring his real and personal property to his son, Thomas. Between October 1792 and October 1795 he gave Thomas two components of the Ballard plantation: 100 acres called Charles Quarter that had a house with a brick chimney and an adjoining 393-acre tract that was vacant. Thomas Griffin, in turn, began acquiring acreage adjacent to the land his father had given him. On April 16, 1798, he bought 211¾ acres from the Rev. John Bracken, part of the 402 acres the minister had purchased from the trustee of William Digges of Bellfield. It reportedly abutted the old Ballard plantation.[391] Thus, Thomas Griffin united the easternmost portion of Bellfield plantation with the Ballard tract. By 1803, he had amassed 707½ acres that comprised the Stony Point tract. At Corbin Griffin's death in ca. 1813, son Thomas inherited the rest of his estate. In 1820 when the county tax assessor began recording the value of structural improvements that stood upon local property, none worthy of taxation were situated upon Thomas Griffin's 707½ acres of rural land.[392] The absence of buildings is apparent on James Kearney's map of 1818, which suggests that much of the Stony Point tract was open and clear (see Figure I.34).

In 1824 Thomas Griffin sold 696 acres of Stony Point to James Gibbon, who within two years constructed a domestic complex on the property that had an estimated worth of $500.[393] Gibbon may have experienced some financial difficulties, for in 1828 he sold Stony Point and its improvements to Richard Randolph, who mortgaged the property when borrowing his purchase money.[394]

In 1838 Randolph sold Stony Point to Cary Wilkinson. The acreage was described as consisting of the 696-acre house tract that Randolph had bought from James Gibbon plus an additional 900 acres that lay further inland and formerly had belonged to Corbin Griffin. The following year the $500 building that James Gibbon had erected upon Stony Point in 1826 was destroyed, probably by fire. In 1841 Wilkinson mortgaged his acreage, conveying it to Robert McCandlish, his trustee. This probably enabled him to erect one or more new buildings upon his 696¾-acre house tract, for in 1841 the tax assessor noted that $696 worth of new improvements were present.[395]

In April 1843 Cary Wilkinson sold 800 acres to William H. Shield, noting that it included his 696¾-acre house tract and its improvements. When the tax assessor visited that year, he wrote in his record book that Shield was occupying the property. In May 1847 William H. Shield conveyed his 800 acres called Stony Point to George J. Warner, who quickly mortgaged the property to obtain his purchase money. In less than two years, Warner deeded Stony Point to John R. Coupland (Copeland), who like all five of his immediate predecessors, mortgaged the farm to make his purchase. He transferred to Washington Rowe 60 acres of waterfront land between Ballard and Yorktown Creeks, "known as a part of Stony Point," which Rowe's executor conveyed to Robert Anderson in 1852.[396] In 1857 when topographic engineers mapped the York River basin, they identified Stony Point by name and indicated that it belonged to someone named Copeland.

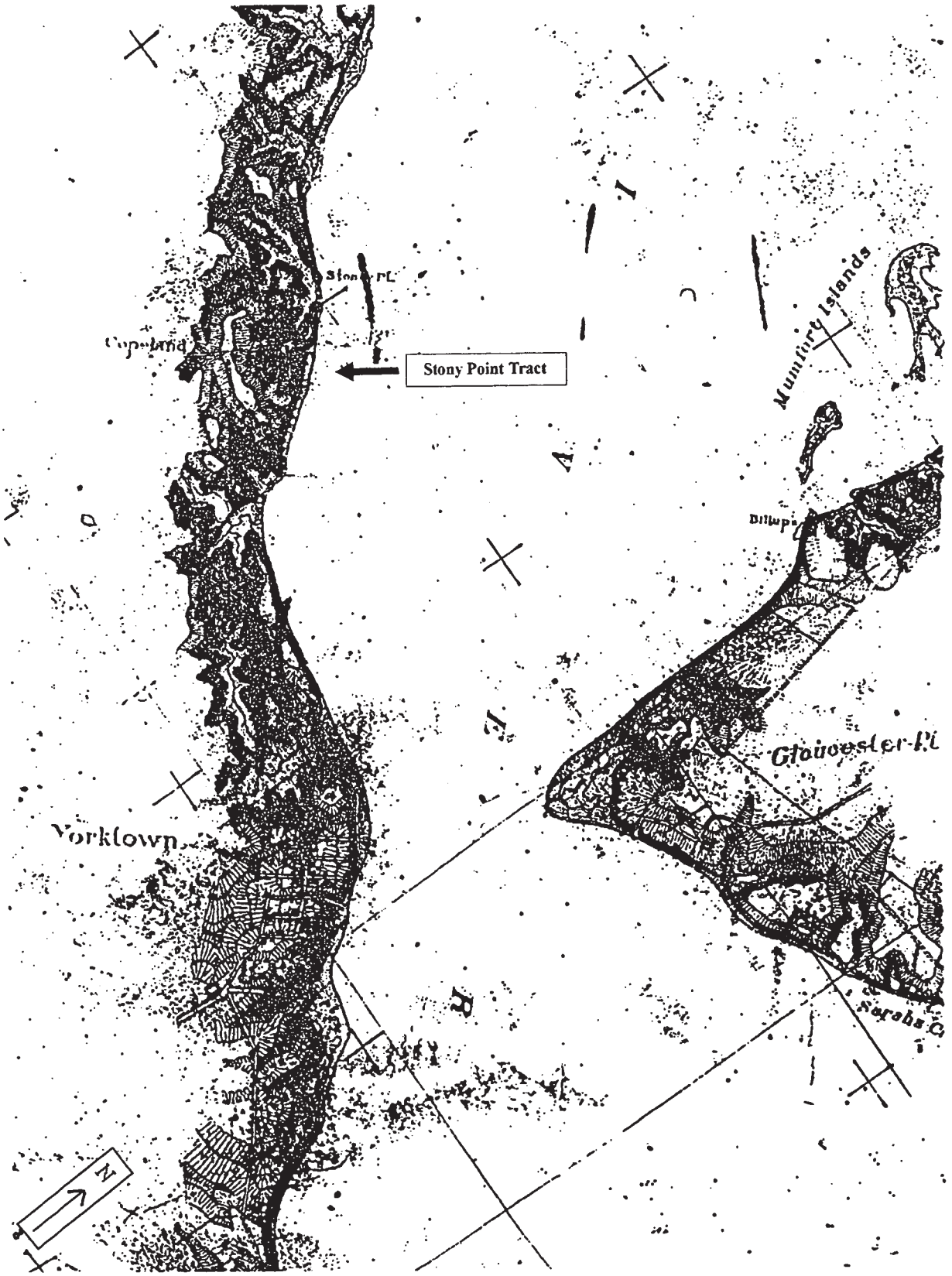


Figure I.60. Detail of Bache, "York River, Virginia, from Wormeley Creek to Claybank Creek," 1857.



Figure I.61. Detail of Abbott, "Siege Map of Yorktown," 1862.

The area was rugged and characterized by steep embankments, through which were cut small streams (see Figure I.60).[397]

In May 1859, two years before the outbreak of the Civil War, John R. Coupland sold 560 acres of Stony Point to Thomas H. Harris, the tract's river front land. Coupland was credited with the remainder of Stony Point through 1861.[398] One Union Army cartographer indicated that naval vessels passed close to the lower side of the York River and showed a network of roads that led toward Stony Point. Worrett's highly schematic map places a cluster of buildings midway between the river and the road to Williamsburg, whereas Lindenkohl's more sensitive rendering attributes the structures to Copeland. A map by Lt. Henry L. Abbot of the Union Army (1862) reveals that relatively few changes were made to the old Revolutionary War earthworks at Yorktown when they were refurbished during the Civil War (see Figures I.61, I.41, I.36, I.38, I.40, and I.39).[399]

4. Stony Point: Post Civil War to Parkway Construction (1866 to ca. 1930)

After the close of the Civil War, portions of Stony Point were leased to newly freed blacks for subsistence farming as shhown in a Freedmen's Bureau map from 1866 (see Figure I.45). Between 1869 and 1873 John R. Coupland sold four large lots to Thomas James, William S. Christian, John Morris, and Moses R. Harrell, what remained of his Stony Point tract. By that date E. C. Darlington was in possession of the Stony Point acreage Coupland had sold to Thomas H. Harris in 1859.[400] A tract map prepared in 1871 identifies Stony Point and the 60 acres John R. Coupland sold to Washington Rowe in 1852, which then were owned by James Hubbard (see Figure I.53).[401]

When topographic engineers from the USGS mapped the area in 1904-1905, they depicted the old road that crossed Yorktown Creek on its way to Yorktown and showed the minor roads that led into the Stony Point property (see Figures I.42 and I.54). In 1918, when the United States Government purchased the acreage that was developed into the Naval Mine Depot, the bulk of Stony Point became part of that military reservation.

5. Stony Point: Observations

The waterfront land between Yorktown Creek and Bracken's Pond first was occupied during the 1630s and portions of it were in use for agriculture during the eighteenth and nineteenth centuries. It is uncertain where Richard Townsend and the Ballards built their homes. However, eighteenth and nineteenth century maps indicate that the development that occurred within what became known as Stony Point was relatively close to the York River. Therefore, it is likely that construction of the Colonial Parkway and the facilities of the Naval Weapons Station have taken a severe toll upon whatever cultural features were present. However, some archaeological remains may survive within undisturbed areas.

Today's visitor to this portion of the Colonial Parkway is confronted with modern development that is intermingled with the natural environment: the Navy's facilities on the waterfront and the Coleman Bridge, which extends across the river to Gloucester Point.

I.16 YORKTOWN

1. Yorktown: The Settlement Era (to 1699)

In 1630 Captain Nicholas Martiau patented 600 acres along the lower side of the York River that extended west, terminating at what became known as Yorktown Creek. In 1639 when his patent was enlarged to 1,300 acres, it was noted that he had received 600 acres for his adventure in establishing a homestead in Chiskiack and the remainder on account of 14 headrights.[402] Martiau's property eventually came into the hands of Benjamin Read. In 1691, when the Virginia assembly passed a new act promoting the development of ports and towns in the colony, 50 acres were purchased from Benjamin Read's son, George, for use as a town site. The tract was located on the lower side of the York River opposite Gloucestertown, established in 1680. Surveyor Lawrence Smith laid out the new town site and subdivided it into half-acre lots in accord with a gridiron plan. Yorktown quickly developed into a thriving seaport and became a center of foreign and domestic commerce and trade. It also served as the seat of the York County court and had a parish church, dwellings, taverns, warehouses, mercantile and other commercial establishments.

2. Yorktown: Colony to Nation (1700-1790)

A tobacco inspection warehouse was in operation at Yorktown throughout the eighteenth century, bringing a steady stream of planters into the area, and a ferry plied the river to Gloucestertown. Forts faced each other across the York River, controlling access to the inland countryside. So important were these fortifications to the colony's defense that they were rebuilt repeatedly during the seventeenth, eighteenth and nineteenth centuries. During the fourth quarter of the eighteenth century, Yorktown's bounds were expanded and some new lots were laid off and sold. Yorktown's commercial facilities were in continuous use throughout the eighteenth century.[403]

During the colonial period, the land outside of the legal limits of Yorktown remained rural. Large plantations lined the banks of the river and less affluent planters' farms typically lay somewhat further inland, where there was ready access to a network of primitive roads. The site of Yorktown and its sister port, Gloucestertown, were shown on numerous cartographers' maps, for both were well known landmarks and important communities.

The Yorktown area's most important moment in history came in October 1781, when British and Allied forces clashed in a major battle that decided the outcome of the American Revolution. Yorktown, which was held by the British, was bombarded by Allied forces during a siege that brought about surrender. Later, leaders from the opposing sides met at the Moore House, where the British signed articles of capitulation. Thanks to the importance of the Battle of Yorktown, military map-makers both during and after the war carefully sketched the position of fortifications, the ground over which the opposing armies moved, and sometimes included roads, buildings and landscape features within the war zone.[404]

3. Yorktown: The Early National Period through the Civil War (1791-1865)

Subsequent to the close of the American Revolution, Yorktown and its environs recovered slowly from the effects of war. One visitor described the town as extensively damaged, not only by the siege but by the armies that had occupied it during and after the war. The community never recovered its old vitality. Some of its more prominent citizens had gone heavily into debt in support of the war and afterward suffered the consequences. Foreign trade was disrupted severely. The relocation of Virginia's capital

from Williamsburg to Richmond also served to accelerate Yorktown's decline, for the Tidewater region's political influence diminished as did its population and wealth.During the Civil War the Confederates, when resisting their enemy's advances, used some of the earthworks that had been erected during the American Revolution. Later, Union military leaders modified them or constructed their own.[405] During the war, Yorktown was photographed and described by news correspondents (see Figures I.55 and I.61).

4. Yorktown: Post Civil War to Parkway Construction (1866-ca. 1930)

After the surrender at Appomattox, Virginia recovered slowly from the effects of the war. Agricultural productivity was very limited and inflation was prevalent. In 1880 the population of Yorktown consisted of 250 people, two-thirds of whom were black. A map prepared for the centennial of the American Revolution suggests that the town was less extensively developed than it had been in the 1860s. During the early twentieth century it remained a small community with a very limited economy. In 1931, when the sesquicentennial was celebrated, Yorktown's historical significance received nationwide recognition.[406]

5. Yorktown: Observations

Some of Yorktown's eighteenth century buildings have been restored and the archaeological remains of many others survive. In recent years there has been a groundswell of interest in improving the appearance and viability of Yorktown's waterfront and enhancing the community's role in the tourist industry.

CHAPTER I: ENDNOTES

[1] Robert R. Hunter Jr., "Phase I Archaeological Survey of the Hunt Brooks, Inc. Development, James City County, Virginia" (Williamsburg, 1988), 6-7.

[2] Hunter, "Hunt Brooks," 8-9; Christopher McDaid *et al.*, "A Phase I Cultural Resource Survey of the Undergraduate Housing Project, College of William and Mary, Williamsburg" (Williamsburg, 1991), 7.

[3] Hunter, "Hunt Brooks," 10-11; McDaid *et al.*, "Undergraduate Housing," 8.

[4] Keith T. Egloff *et al.*, *First People: The Early Indians of Virginia* (Richmond, 1992), 23.

[5] Egloff *et al.*, *First People*, 25.

[6] *Ibid.*, 24-25.

[7] Hunter, "Hunt Brooks," 10-11; McDaid *et al.*, "Undergraduate Housing," 8.

[8] Egloff *et al.*, *First People*, 26.

[9] *Ibid.*, 37.

[10] Bruce G. Trigger, ed., *Handbook of North American Indians: Northeast* (Washington, D.C., 1978), 70-74, 240, 253.

[11] Egloff *et al.*, *First People*, 42-43.

[12] *Ibid.*, 41.

[13] *Ibid.*, 42-43. For example, Powhatan's chiefdom could descend to his next oldest brother or the son of his eldest sister, but not to his own children.

[14] Located in James City County's York River State Park is the Croaker Landing Archaeological Site, which is on the National Register of Historic Places and the Virginia Landmarks Register. The Croaker Landing site contains evidence of aboriginal occupation that spans a period of approximately 2,500 years. It was likely a small campsite that was culturally associated with other Native American sites in the region (Keith T. Egloff, The Croaker Landing Archaeological Site National Register Nomination [Richmond, 1980].

[15] Dennis Blanton, personal communication.

[16] Reinhart [1977].

[17] Lewis and Loomie 1953; Sauer 1975:282; Quinn 1977:202.

[18] Smith 1610, 1910:xc, 49-51; Sams 1929:807-810; Quinn 1977:202.

[19] Tyler 1907:5-23,127,140-141; Bruce 1907:39-42; Smith 1910:161,235; Tate and Ammerman 1979:96-125.

[20] Hatch 1957:35.

[21] Wharton 1957:12-13; Meyer and Dorman 1987:140.

[22] Bruce 1907:43.

[23] Rolfe 1971:7-9.

[24] Tyler 1907:24.

[25] Robinson 1957:21-22.

[26] Craven 1957:45; McIlwaine 1934:xvii; Robinson 1957:21-22.

[27] Smith 1910:362.

[28] Kingsbury 1906-1935:III:443,460-461,556-557.

[29] Although patents issued to some of the people named in the 1625 land list have been lost, none dating to 1625 or earlier have come to light which owners' names were not included. This suggests that the May 1625 land list was a relatively accurate tabulation.

[30] Shea 1983:46-62; Hall 1636; Smith 1610.

[31] Hening 1809-18923:I:208-209.

[32] Hening 1809-1823:I:205; Virginia State Library 1965:16.

[33] Craven 1970:166-170; Billings 1975:43-44; Robinson 1957:27; Bruce 1898:120.

[34] Hening 1809-1823:I:323-329,348,354; Virginia State Library 1965:28.

[35] Hening 1809-1823:II:172-174; Reps 1972:65.

[36] Reps 1972:62-86.

[37] Reps 1972:141-142, 147-150.

[38] Hening 1809-1823:II:256; McIlwaine and Kennedy 1905-1915:1659/60-1693:47; Reps 1972:62-86.

[39] Madison 1807; Boye 1825.

[40] Bureau of Refugees 1862-1866:38-40; Freedmen's Bureau 1866.

[41] Majeske 1980:29,56.

[42] Clingan 1961:1,13,23.

[43]Smith 1986:I:180-181, 233-234; Zuniga 1608 (Figure I.2).

[44] Hotten 1980:180, 235; Harrington 1972:7-12; Hudson 1957:23.

[45] Virginia Land Office Patent Book 3:26,367-368.

[46] Washburn 1972:80-83; Andrews 1967:130-131; Force 1963:I:11:24; III:8:21.

[47] Force 1963:I:9:8; Tyler 1906:156; Andrews 1967:71; McIlwaine 1905-1915:1659-1693:69-70.

[48] Hening 1809-1823:II:547-549; III:569; Force 1963:I:9:10;10:4; Washburn 1957:84-91.

[49] McIlwaine et al. 1905-1915:1695-1702:219; Tyler 1896:51-53, 243; Chermaison 1712; Ambler Manuscript #45, #71, #77, #84, #86, #99.

[50] McIlwaine et al. 1905-1915: 1727-1740:216,276.

[51] Ambler Manuscripts #53, #106, #107, #123; York County Wills and Inventories 21:278-282; John H. Smith et al. 1745; Ambler 1826; Williamsburg-James City County Tax Lists 1768-1769.

[52] McIlwaine et al. 1905-1915:1727-1740:216,276; 1742-1749:300,305,310.

[53] Ambler Papers, #115, #116, #123; York County Wills and Inventories 21:278-282

[54] York County Wills and Inventories 21:386-391; Stanard 1925:187; McIlwaine et al. 1905-1915: 1766-1769:13.

[55] Ambler 1769.

[56] Ambler 1826

[57] Maxwell 1851:186; Hatch 1945:170-196.

[58] Hatch 1945:170-196; Maxwell 1853:202-203.

[59] Hatch 1945:170-196.

[60] Lossing 1851-1852:240-240.

[61] Hatch 1945:37-38.

[62] Desandrouin 1781a

[63] Ambler 1826.

[64] James City County Land Tax Lists 1783; Ambler Family 1770-1860; James City County Personal Property Tax Lists 1782-1798.

[65] James City County Legislative Petitions 1832-1833. (Figure I.6).

[66] James City County Land Tax Lists 1821-1857; Deed Book 1:170,172.

[67] Lossing 1850-1851:II:240-241.

[68] James City County Deed Book 2:477-478.

[69] Donn 1873.

[70] James City County Deed Book 3:475-477; 5:503-505; National Park Service Land Records File 8-127; James City County Plat Book 2:6.

[71] James City County Deed Book 22:59, 61; Bottom 1918:429; Virginia Gazette, May 26, 1921.

[72] Billings 1990:110-111; Virginia Gazette, August 23, 1957; July 7, 1972; Cotter 1958:100-102.

[73] Virginia Land Office Patent Book 3:306.

[74] Nugent 1969-1979:I:109; McIlwaine 1934:152.

[75] Nugent 1969-1979:I:109; McIlwaine 1934:152.

[76] Kingsbury 1906-1935:III:443,460-461,556-557.

[77] McIlwaine 1934:159; Meyer and Dorman 1987:362.

[78] Nugent 1969-1979:I:3; Hotten 1980:247; Meyer and Dorman 1987:54.

[79] Kingsbury 1906-1935:IV:555-556.

[80] Hotten 1980:175,225; McIlwaine 1934:17,36,47,86.

[81] Hotten 1980:175, 178-179,225.

[82] McIlwaine 1934:16-17,27,33,44,54-55,103,144,150,161,173,184,192.

[83] Goodwin 1958:i-ii.

[84] Hotten 1969:270; Meyer and Dorman 1987:32-33.

[85] Meyer and Dorman 1987:36-37.

[86]Goodwin 1958:iv-v; Nugent 1969-1979:I:125,394.

[87] McIlwaine 1934:109,117,159,192.

[88] Hening 1809-1823:I:178,203; Virginia Land Office Patent Book 1:287.

[89] Meyer and Dorman 1987:223-224.

[90] Nugent 1969-1979:I:83; Virginia Land Office Patent Book 1:532-533.

[91] Hening 1809-1813:I:405.

[92] Meyer and Dorman 1987:225; Nugent 1969-1979:I:299; Virginia Land Office Patent Book 3:306.

[93] Meyer and Dorman 1987:225; Virginia Land Office Patent Book 6:298; Nugent 1969-1979:II:76.

[94] Wertenbaker 1922:213.

[95] Soane 1683.

[96] James City County 1984; Hening 1809-1823:II:256; McIlwaine and Kennedy 1905-1915:1659/60-1693:47; Reps 1972:62-86.

[97] Hening 1809-1823:V:278.

[98] Stephenson 1964:259-265; Henry 1770; Fry and Jefferson 1755.

[99] James City County Land Tax Lists 1783-1805; Goodwin 1958:59; Stephenson 1964:259-265.

[100] Goodwin 1958:59.

[101] James City County Land Tax Lists 1783-1819.

[102] James City County Land Tax Lists 1820-1850.

[103] Goodwin 1958:61-62; James City County Land Tax Lists 1832-1851.

[104] Goodwin 1958:62; James City County Land Tax Records 1851-1861.

[105] Donn 1873-1874.

[106] McClellan 1989:265; Cronin [1862-1865]:172-172.

[107] Palmer 1875-1893:XI:233-236.

[108] Palmer 1875-1893:XI:233-236.

[109] Cronin [1862-1865]:249-250; U.S.W.D. 1891:I:42:II:696-697. (This citation was provided by David Riggs of the National Park Service.)

[110] Donn 1873-1874.

[111] James City County Deed Book 2:198-199.

[112] Goodwin 1958:63.

[113] James City County Deed Book 3:147-148.

[114] James City County Deed Book 4:52-53,611-613.

[115] James City County Deed Book 4:790-792.

[116] James City County Deed Book 5:260-261,266,287.

[117] James City County Deed Book 5:681.

[118] James City County Deed Book 3:475-477; 5:503-505; National Park Service Land Records File 8-127; James City County Plat Book 2:6.

[119] Virginia Gazette, July 23, August 18, 1893; January 26, May 6, July 13, 1894.

[120] O'Bannon 1900:398; 1902:736.

[121] James City County Deed Book 22:59, 61; Bottom 1918:429; Virginia Gazette, May 26, 1921; USGS 1919.

[122] James City County Will Book 8:608.

[123] James City County Deed Book 9:573,576;10:377-378,547,551.

[124] James City County Deed Book 17:418-424;28:329;35:243.

[125] Brydon 1947:83; Hatch 1957:35-38,92; Parks 1982:276; Robinson 1957:21-22; Desandrouin 1781.

[126] Goodwin 1927:76.

[127] Cocke 1964:62-64.

[128] Hening 1809-1823:III:152.

[129] Many of Virginia's seventeenth century land patents were laid out in poles measuring 16.5 feet. According to a convention that was commonly used, a surveyor treated as his base line the banks of a river or creek, which he viewed as a straight line. He then projected the patent's side boundaries by drawing a line at a right angle to each end of that base line. Such side lines typically extended inland for a distance of one mile. Thus, a two-acre patent was equivalent to 16.5 feet of river frontage by one mile measured inland (Bruce 1896:I:537-538).

[130] McIlwaine 1934:174; McIlwaine et al. 1905-1915:1695-1702:9.

[131] Perry 1870:264-266.

[132] Hening 1809-1823:VI:89-90; Brydon 1947:89-90.

[133] Smith 1957:84; Parks 1982:270.

[134] Meade 1966:113, 168-170; James City County Personal Property Tax Lists 1768-1769.

[135] Shepperd 1970:I:311.

[136] Flournoy 1968:268; Palmer 1875-1893:IX:153.

[137] James City County Land Tax Lists 1820-1846.

[138] James City County Land Tax Lists 1820-1846.

[139] James City County Land Tax Lists 1846-1847; Personal Property Tax Lists 1846-1847.

[140] Tyler 1892:31; James City County Land Tax Lists 1848-1851.

[141] Donn 1873-1874.

[142] Lewis et al. 1953: 38,185,191.

[143] Lewis et al. 1953:89-92,121.

[144] Lewis et al. 1953:107-109,121.

[145] Lewis et al. 1953:118-120,133-134,137.

[146] Lewis et al. 1953:121.

[147] Smith 1610; 1910:xc, 49-51; Percy 1965:16.

[148] Nugent 1969-1979:I:109.

[149] Kingsbury 1906-1935:III:570.

[150] Kingsbury 1906-1935:III:612-613; IV:524; Smith 1910:584.

[151] Shea 1983:27-30; McCartney 1984:52-54.

[152] McCartney 1984:54.

[153] McIlwaine 1934:79; Hotten 1980:174,221; Nugent 1969-1979:I:109.

[154] McIlwaine 1934:19,35; Nugent 1969-1979:I:4,25,30.

[155] McIlwaine 1934:76,107,178.

[156] Nugent 1969-1979:I:161.

[157] McIlwaine 1934:40,55,60,76.

[158] McIlwaine 1934:70,123,133.

[159] Nugent 1969-1979:I:241,472.

[160] McIlwaine 1934:153,166.

[161] Bruce 1897-1898:120.

[162] Nugent 1969-1979:I:25, 30, 80-81, 124, 142, 159, 162, 174, 486, 495; III:33, 170, 250.

[163] James City County 1984; Hening 1809-1823:II:256; McIlwaine and Kennedy 1905-1915:1659/60-1693:47; Reps 1972:62-86.

[164] Henry 1770; Fry and Jefferson 1755.

[165] James City County Personal Property Tax Lists 1768-1769.

[166] Meade 1966:113,168-170.

[167] Meade 1966:168-170.

[168] James City County Land Tax Lists 1782-1783; Personal Property Tax Lists 1782-1782.

[169] James City County Land Tax Lists 1785-1787.

[170] James City County Land Tax Lists 1785-1819.

[171] James City County Personal Property Tax Lists 1785-1794.

[172] James City County Land Tax Lists 1820-1839.

[173] James City County Personal Property Tax Lists 1820-1835; Land Tax Lists 1820-1845.

[174] James City County Land Tax Lists 1846.

[175] James City County Land Tax Lists 1846-1847; Personal Property Tax Lists 1846-1847.

[176] James City County Land Tax Lists 1848-1851.

[177] James City County Agricultural Census 1850.

[178] James City Personal Property Tax Lists 1850-1852.

[179] James City County Personal Property Tax Lists 1850-1861.

[180] James City County Land Tax Lists 1857-1875.

[181] James City County Deed Book 3:137-138.

[182] James City County Land Tax Lists 1880.

[183] James City County Deed Book 4:507; 5:488,513; 6:89-90,436-437; Land Tax Lists 1885-1900.

[184] James City County Deed Book 8:308; 9:220,590.

[185] James City County Deed Book 32:511-513.

[186] James City County Deed Book 33:550-552; 34:497-498.

[187] James City County Deed Book 39:310; 43:146; 45:7; 50:297.

[188] U.S.G.S. 1944.

[189] Goodwin 1958:iv-v; Nugent 1969-1979:I:125,394; Hotten 1980:175,178-179,225; Meyer and Dorman 1987:36-37; McIlwaine 1934:17,36,47,86.

[190] McIlwaine 1934:33,44,54-55,103,144,150,161,173, 184,192; Goodwin 1958:i-v.

[191] Nugent 1969-1979:I:125,394. He and a partner, John Jackson, also held the patent to a cluster of small islands near the mouth of the Chickahominy River.

[192] McIlwaine 1934:76,107,178,201; Nugent 1969-1979:I:2,4,161.

[193] Nugent 1969-1797:I:15,80.

[194] Nugent 1969-1979:I:15,80.

[195] Bruce 1898:120.

[196] Hening 1809-1823:I:298,317.

[197] This property should not be confused with Andrus' Jockey's Neck tract, which was located on the west side of College Creek.

[198] McIlwaine 1934:79.

[199] After Fairfax died at Ensign William Spence's house during the 1622 massacre.

[200] Nugent 1969-1979:I:109.

[201] Nugent 1969-1979:I:80-81,166,178.

[202] Nugent 1969-1979:I:4,105,168.

[203] Nugent 1969-1979:I:168; Kingsbury 1906-1935:IV:556.

[204] Nugent 1969-1979:I:168.

[205] Later, in 1703, when the grandchildren of Thomas Pettus executed a deed of release for what they described as the Littletown and Utopia tracts, they applied the name "Utopia" to John Uty's property on the north side of the James (see ahead). It is the earliest known date at which the name Utopia was used in connection with the Jefferson/Uty patent.

[206] Nugent 1969-1979:I:168.

[207] Nugent 1969-1979:I:178.

[208] (Nugent 1969-1979:II:207; Stephenson 1964:352; Goodwin 1972:8.

[209] (Nugent 1969-1979:I:137;II:25,207; Kelso 1984:35-36; McIlwaine 1934:253,259,276; Henrico County Miscellaneous Court Records I [1650-1717]:73-74.

[210] (Goodwin 1958:57; Kelso 1984:37,39.

[211] (McClure 1977:41-47,65-74; Kelso 1984:39-40.

[212] In 1732 a legal dispute between Thomas Bray and John Randolph was settled by the House of Burgesses. The suit involved certain lands in which John Randolph had an interest, property Bray was attempting to claim under the will of David Bray. According to the terms of the settlement, Thomas Bray deeded to John Randolph land in Martin's Hundred that the late David Bray had purchased from Aristotle, Thomas, Edward and John Thorp Grice, William Fuller, and Charles Barrett (in Barrett's Neck) and John Randolph relinquished his claim to three properties: Tuttie's Neck, the acreage that David Bray Jr. had purchased from the Bryans and the land that Angelica Bray had owned in York County (Hening 1809-1823:IV::370-376). In 1732 Thomas Bray received permission to sell some of the real estate he had been allocated in order to purchase more slaves (Winfree 1971:381-384).

[213] Burwell's cousin, Nathaniel Burwell, then resided at Carter's Grove, which lay to the east of the Utopia tract. A land transaction that occurred in 1700, when Pettus descendants sold the Littletown and Utopia tracts to James Bray, reveals that the dividing line between Thomas Pettus' land (later, the easternmost portion of Kingsmill Plantation) and what became Carter's Grove was Grove Creek, then known as the Wareham River. Pettus' acreage abutted "easterly by a small branch of James River call'd Warehams River which divides these Lands from the Land of Mr. William Whitaker And Westerly by a line of old marck's trees that begins at an old marckt Lucus [locust] upon the bank of James River ner Harrup house, which runs North Easterly cross the head of a small Branch into the woods and divides These bargained premisses from the Land Late of Coll. Higginson known by the name of Harrups. . . and Southerly by The Main River, And North into the woods cross the Main Road which goes from Middle Plantation towards the ffrench ordinary to the lands of Thomas Buck and the Land Late of Harrison or Cumins [Nicholas Cumins]." Subsequent land transactions, consistency in the size of the combined Littletown and Utopia tracts (which were unified by 1660), and a plat prepared in 1874 singly and collectively suggest that the easternmost branch of Grove Creek, which by 1854 formed the westerly boundary line of the Red House tract, a subunit of Carter's Grove, traditionally served as the boundary between what became the Kingsmill and Carter's Grove Plantations (Stephenson 1964:305-310;352,493).

[214] Kelso 1984:40; McClure 1977:19.

[215] Goodwin 1972:xx; Nugent 1969-1979:II:207.

[216] Ferry service was available at the site until at least 1785.

[217] Kelso 1984:41-45.

[218] Goodwin 1958:57; McClure 1977:20; James City Land Tax Lists 1782-1783; Kelso 1984:46-48.

[219] Kelso 1984:46-47; Goodwin 1958:34; Hening 1809-1823:IX:226-227.

[220] Kelso 1984:50.

[221] Kelso 1984:49-51.

[222] This body of water, which name is of recent origin, should not be confused with Warehams River or Creek, the name by which Grove Creek was known during the seventeenth and eighteenth century.

[223] Simcoe 1781.

[224] Captain, 1781.

[225] Goodwin 1958:35-36,41.

[226] Goodwin 1958:52-54.

[227] Goodwin 1958:56,59.

[228] Goodwin 1958:lvii-lviii.

[229] Goodwin 1958:lxv,62,64-65; James City County Land Tax Records 1851-1861.

[230] (Humphreys 1862; McAlester 1862a, 1862b.

[231] Palmer 1875-1893:XI:233-236; James City County Land Tax Lists 1860-1865.

[232] Bureau of Refugees 1862-1866:38,40; Freedmen's Bureau 1866.

[233] Donn 1873.

[234] James City County Deed Book 3:146; Goodwin 1958:64.

[235] U.S.G.S. 1904.

[236] Goodwin 1958:60-63; James City County Deed Book 6:236,260,270, 309-310, 357, 359, 361, 363, 366-367, 529; 43:288, 306-307; 48:349; 50:447; 124:650; 131:295.

[237] Nugent 1969-1979:I:80-81.

[238] Nugent 1969-1979:I:142-143.

[239] Nugent 1969-1979:I:174.

[240]Nugent 1969-1979:II:207; Stephenson 1964:352; Goodwin 1972:8.

[241] Goodwin 1958:57; Kelso 1984:37,39.

[242] Nugent 1969-1979:III:120.

[243] Noel-Hume 1961:35-36.

[244] Hening 1809-1823:IV::370-376; McClure 1977:41-47,65-74; Kelso 1984:39-40.

[245] Desandrouin 1781.

[246] Chapman 1984:125,127-132.

[247] Webb 1881:47-49,71.

[248] U.S.W.D.:1887:I:IX:38-39,43.

[249] McAlester 1862.

[250] Anonymous 1871.

[251] Hening 1809-1823:I:208-209; Nugent 1969-1979:I:22,89,91,94,143, 160-161.

[252] Hening 1809-1823:III:419-431; Bland 1699.

[253] Virginia State Library 1965:30; Nugent 1969-1979: I:100,114,117.

[254] Nugent I:166,216,277-278,284,344,410.

[255] York County Deeds, Administrations, Bonds 1:241-244.

[256] Burwell's wife, Abigail, inherited the Kings Creek tract from her uncle, who had married William Tayloe's widow and heir.

[257] Stephenson 1964:2,299.

[258] Cocke 1964:176-177.

[259] Stephenson 1964:45-47,232.

[260] Stephenson 1964:232,261,311-313.

[261] Hunter 1752.

[262] Stephenson 1964:295-296,311-313.

[263] Stephenson 1964:311-313.

[264] York County Land Tax Lists 1782-1834.

[265] Tyler 1920-1921: 192-193.

[266] York County Land Tax Lists 1783-1845; Deed Book 15:100,395; 16:41,100.

[267] Palmer 1968:XI:227-228; Anonymous 1871.

[268] Catton 1960:59,62,75; Wiley 1964:12,26.

[269] Miller 1911:X:305-306; National Park Service 1990:5; U.S.W.D. 1891:Ser.I:II:III:387; Long 1971:163.

[270] Webb 1881:47-49,71.

[271] Humphreys 1862a, 1862b, 1862c; Lindenkohl 1862; Worrett 1862.

[272] Webb 1881:37-45,55-56,60-62.

[273] Johnson et al. 1956:II:160-199.

[274] U.D.C., n.d.:2-3; Webb 1881:78-81; U.S.W.D. 1891:Ser.I:XI:I:581; Hare 1862.

[275] U.D.C., n.d.:2-3; Webb 1881:78-81; U.S.W.D. 1891:Ser.I:XI:I:581.

[276] Anonymous 1871; York County Deed Book 18:69,216.

[277] Nugent 1969-1979:I:22,90-91,122.

[278] York County Deeds, Orders, Wills I:71,153; 9:113.

[279] Nugent 1969-1979:II:396; York County Deeds, Orders, Wills 1:401.

[280] York County Deeds, Orders, Wills 1:280-282,301-302; 11:464.

[281] Simpson et al. 1984:14; Wertenbaker 1922:210,234.

[282] York County Deeds, Orders, Wills 1:401.

[283] York County Deeds, Orders, Wills 14:60-64; Simpson et al. 1984:14.

[284] Simpson et al. 1984:13-15,17.

[285] York County Land Tax Lists 1781-1796; Simpson et al. 1984:17.

[286] CWF 1986:195-203, 241-244.

[287] York County Land Tax Lists 1807-1830.

[288] York County Land Tax Lists 1835-1850; Personal Property Tax Lists 1836-1850.

[289] CWF 1986:195-203,241-244.

[290] Humphreys 1862a, 1862b, 1862c; Lindenkohl 1862; Worrett 1862.

[291] Godson et al., *William and Mary*, 505; *Virginia Gazette*, May 18, 1918.

[292] CWF 1986:438-444; *Virginia Gazette*, July 6, 1916; March 28, May 30, August 29, 1918; Clingan 1961.

[293] Cocke 1964:170-173; Nugent 1969-1979:I:95.

[294] Cocke 1964:172-175.

[295] Nugent I:14-15, 70, 91.

[296] Nugent 1969-1979:I:401.

[297] York County Deed Book 7:404,443; 9:52; 10:421.

[298] York County Deed Book 17:418-419.

[299] Hatch 1970:63.

[300] Nugent 1969-1979:I:14-15.

[301] Hatch 1970:8-14.

[302] Nugent 1969-1979:I:14-15,71,91.

[303] Nugent 1969-1979:I:121.

[304] Hatch 1970:14.

[305] York County Deeds, Orders, Wills 1:1633-1657, 1691-1694:267; 3:1657-1662:183; Nugent 1969-1979:I:210.

[306] York County Deeds, Orders, Wills 3:1657-1662:183.

[307] Underhill, whose name appears as a headright in patents dating to 1649, prepared a survey of a tract on Jamestown Island (Nugent 1969-1979).

[308] Hatch 1970:21.

[309] York County Deed Book 5:1672-1676:37.

[310] Hatch 1970:24.

[311] Nugent 1969-1979:II:349.

[312] Hatch 1970:25; Torrence 1985:432.

[313] Hatch 1970:26-29.

[314] York County Deeds, Orders, Wills 12:1702-706:105-107.

[315] York County Deeds, Orders, Wills 12:1702-706:277-280.

[316] Hatch 1970:35.

[317] Hatch 1970:36-40.

[318] Hatch 1970:36-40.

[319] Hatch 1970:45-47.

[320] Hatch 1970:42; Hening 1809-1823:VIII:452-454.

[321] York County Deeds 8:1769-1777:327; James City County Land Tax Lists 1782-1790; Hatch 1970:42-43,49-50.

[322] Hatch 1970:51-53.

[323] York County Deed Book 6:350; 7:404.

[324] Bryan was the son of York County Deputy-Sheriff Frederick Bryan, who during the eighteenth century owned a plantation near the New Quarter and Force's Quarter tracts. The Bryan plantation domestic complex is on the National Register of Historic Places.

[325] York County Deed Book 7:443; 9:49.

[326] York County Deed Book 10:1811-1824:1-4.

[327] York County Deed Book 9:49.

[328] York County Deed Book 9:52; 10:421.

[329] York County Deed Book 17:418-419.

[330] 1862a, 1862b, 1862c.

[331] York County Deed Book 17:418-419; Hatch 1970:Map No. 12.

[332] York County Deed Book 18:549,551.

[333] Hatch 1970:59.

[334] York County Deed Book 20:151.

[335] York County Deed Book 20:151,357,593-594.

[336] Hatch 1970:62-63.

[337] Morris 1918.

[338] York County Deed Book 35A:527,538.

[339] Hatch 1970:65-66.

[340] Hening 1809-1823:I:130.

[341] Hening 1809-1823:I:257; Nugent 1969-1979:I:20,24,29-30,80, 136; McIlwaine 1934:479.

[342] York County Deeds, Orders, Wills 1:23,27-30,32,35-39,41-42,47,51,80; 2:146,153.

[343] Kingsbury 1906-1935:III:89,335-336; McIlwaine 1934:11.

[344] McIlwaine 1934:481.

[345] Hatch 1970:21.

[346] Jones 1956:72-73; Hatch 1970:22.

[347] Hatch 1970:29, 32.

[348] Hatch 1970:32-34.

[349] York County Deeds, Orders, Wills:1691-1694:161-165; Hatch 1970:35.

[350] York County Deeds, Orders, Wills 11:1698-1702:51,229; Hatch 1970:35-36.

[351] York County Deeds and Bonds 1:202.

[352] Hatch 1970:44-46.

[353] Hatch 1970:47-49.

[354] Hatch 1970:49-53.

[355] York County Deed Book 6:314; Wills and Inventories No. 22:1771-1783:323,354-358; Hatch 1970:55,59.

[356] Hatch 1970:61.

[357] Hatch 1970:65.

[358] Bracken is the person for whom Bracken's (Roosevelt Pond) is named.

[359] York County Deed Book 6:293,314,327-329,332-334,357-358.

[360] It should be noted that the Digges-Bracken transaction and the Digges-Waller land sale establish Bracken's Pond as the Rev. John Bracken's easternmost boundary line. Bracken later sold the easternmost part of his 402 acres to Thomas Griffin, at which time it was incorporated into Stony Point (see STONY POINT).

[361] Waller was the son of Benjamin Waller, a burgess, councilor and member of the Virginia Conventions (Hatch 1970:69).

[362] York County Deed Book 6:293,314,334,357-358.

[363] York County Deed Book 6:360; 8:377; 11:374.

[364] Hatch 1970:68.

[365] York County Wills and Inventories No. 23:1783-1811:531,533; Deed Book 8:377.

[366] York County Deed book 8:377.

[367] York County Deed Book 8:350; 9:405; 11:68.

[368] York County Deed Book 9:49.

[369] York County Deed Book 11:68,110.

[370] York County Deed Book 11:494.

[371] Bache 1857; Anonymous 1781.

[372] York County Deed Book 21:194; 22:477; 26:256,261; 37:205; Land Tax Lists 1893.

[373] York County Deed Book 18:429; 25:412; 26:209, 256; 37:205.

[374] USGS 1904, 1904-1905.

[375] Hatch 1970:85-86.

[376] Hatch 1970:85-87.

[377] Hatch 1970:91-94.

[378] Nugent 1969-1979:I:120,271.

[379] A few early patents also apply the name Townsend Creek to Yorktown Creek. This is due to the fact that Townsend-alias-Yorktown Creek marked the eastern limits of Richard Townsend's patent, whereas Townscend-alias-Ballard defined its western limits.

[380] Nugent 1969-1979: I: 26, 57, 63, 120, 218; Patent Book 1:223,427.

[381] Nugent 1969-1979:I:95.

[382] York County Deeds, Orders, Wills 1:23,27-30,32,35-39,41-42,47,51,80; 2:146,153.

[383] York County Deeds, Orders, Wills 2:202-205,318.

[384] York County Deeds, Orders, Wills 3:152-153.

[385] York County Deeds, Orders, Wills 6:430; 14:89-90,92.

[386] York County Deed Book 7:257; 10:69,470,501; 12:314-315; 13:180-181; 14:97.

[387] Fry and Jefferson 1775.

[388] Sands 1983:40-53.

[389] St. Simone 1781; Anonymous 1781b, 1781c, 1781d; Fage 1781.

[390] York County Deed Book 6:56,182-183,448; 7:10.

[391] York County Deed Book 6:332-333; 7:58,163-164,225; 8:125.

[392] York County Land Tax Lists 1782-1820.

[393] According to one local historian, it was Gibbon who gave Stony Point its name, for he was a Revolutionary War veteran who in 1779 led an attack upon a British fortress at Stony Point, New York (Clingan 1961:21).

[394] York County Deed Book 9:468,471; 11:8,76; Land Tax Lists 1824-1840.

[395] York County Deed Book 7:270,272; 8:198; 12:446; 13:104; Land Tax Lists 1838-1841.

[396] York County Deed Book 13:438; 14:253,255,413; 15:1,3,297; Land Tax Lists 1843-1850.

[397] Bache 1857.

[398] York County Deed Book 16:306; Land Tax Lists 1850-1861.

[399] Hare 1862; Humphreys 1862a, 1862b; Worrett 1862; Lindenkohl 1862.

[400] York County Deed Book 17:223-224; 18:344; 19:472.

[401] Anonymous 1871.

[402] Nugent 1969-1979:I:120-121.

[403] Reps 1972:62-86.

[404] Sands 1983:40-53.

[405] St. Simone 1781; Abbot 1862.

[406] Hatch 1973:87-88.

II. COLONIAL PARKWAY: PLANNING AND IMPLEMENTATION

A. OVERVIEW OF THE JAMES-YORK PENINSULA, CIRCA 1930

A distinct picture of the condition of the James-York peninsula prior to the construction of the parkway emerges from the historical information of land use and ownership changes provided in Chapter I. This picture was of a region still predominantly rural, shaped by traditional human settlement patterns and agricultural activities. Despite the advent of some industrial activities initially associated with the DuPont Company's dynamite factory (circa 1916), which later became a federal powder factory and shell-loading plant, the region maintained its ties with earlier ways of life, which created a land use pattern which included open fields, marshes, forests, a network of local roads, and a few population centers.

This description is borne out by graphic documentation dating from 1900 to the mid 1930s, which includes USGS maps, aerial photographs, and ground level photographs. As seen on Sheet 1, the 1930s overall base map (located in Appendix A), settlement of the area was sparse. Major concentrations of buildings are shown confined to the towns of Williamsburg and Yorktown. Some structures are also seen clustered at old plantation sites, grouped at road intersections or strung along the region's major thoroughfares. These major roads included, at this time, US Route 60, which linked Williamsburg northwest to Richmond and southeast to Norfolk, and Route 17, which ran north to Gloucester and south to Newport News from Yorktown. The other major transportation route shown on Sheet 1 is the Chesapeake and Ohio (C & O) Railroad, parallelling Route 60.

Interestingly, Sheet 1 also shows that prior to the parkway construction, no direct local route existed which linked the three primary historical sites of Jamestown, Williamsburg, and Yorktown. Instead, a network of local paved and unpaved roads connected pockets of structures with other small settlements, with agricultural fields, and with river landings in the region. According to Sidney Shurcliff, who drove these roads for his father, Colonial Williamsburg landscape architect Arthur Shurcliff, the roads in the area included "regular dirt roads and passable farm roads but also abandoned farm roads and cattle-driving runs."[1] Some of the roads dated to historical times, while others were of more recent vintage; but, according to Shurcliff, it was difficult to tell, in part because of the poor state of the roads:

> There were dozens of usable road sections, which by various combinations could comprise at least twenty possible and alternate old routes to Jamestown. Still worse, since many of the roads were of clay with little or no gravel on top, they tended to become quagmires when wet, and as soon as a quagmire became impassable, the farmers had developed the habit of driving out into a field to detour around it. This had produced many mere tracks that falsely appeared to be old roads.[2]

Figures II.1 and II.2, aerial photographs of James City and York Counties, reveal that agriculture remained an important land use through the early years of parkway construction, in areas where it had occurred traditionally. Large areas indicated as farm and field in the aerial views are tracts along the James River located north of Glasshouse Point, at the Neck of Land, at Archers Hope/Spratley's Farm, and at Kingsmill. Smaller fields are also shown at Barren Neck and Tuttey's Neck. Along the James, agriculture still seems to appear at the former Kings Creek Plantation and at Ringfield, where once again open fields are shown. As noted in Chapter I, deeds and personal recollections indicate that crops on these farms included hay, corn, potatoes, and apples. In addition, some fishing and harvesting of oysters occurred off such properties, from landings such as existed at Kings Creek.



Figure II.1. Portion of Aerial Photograph Composite, showing York County, September 8, 1937. Original Scale 1:20,000. USDA Soil Conservation Service.

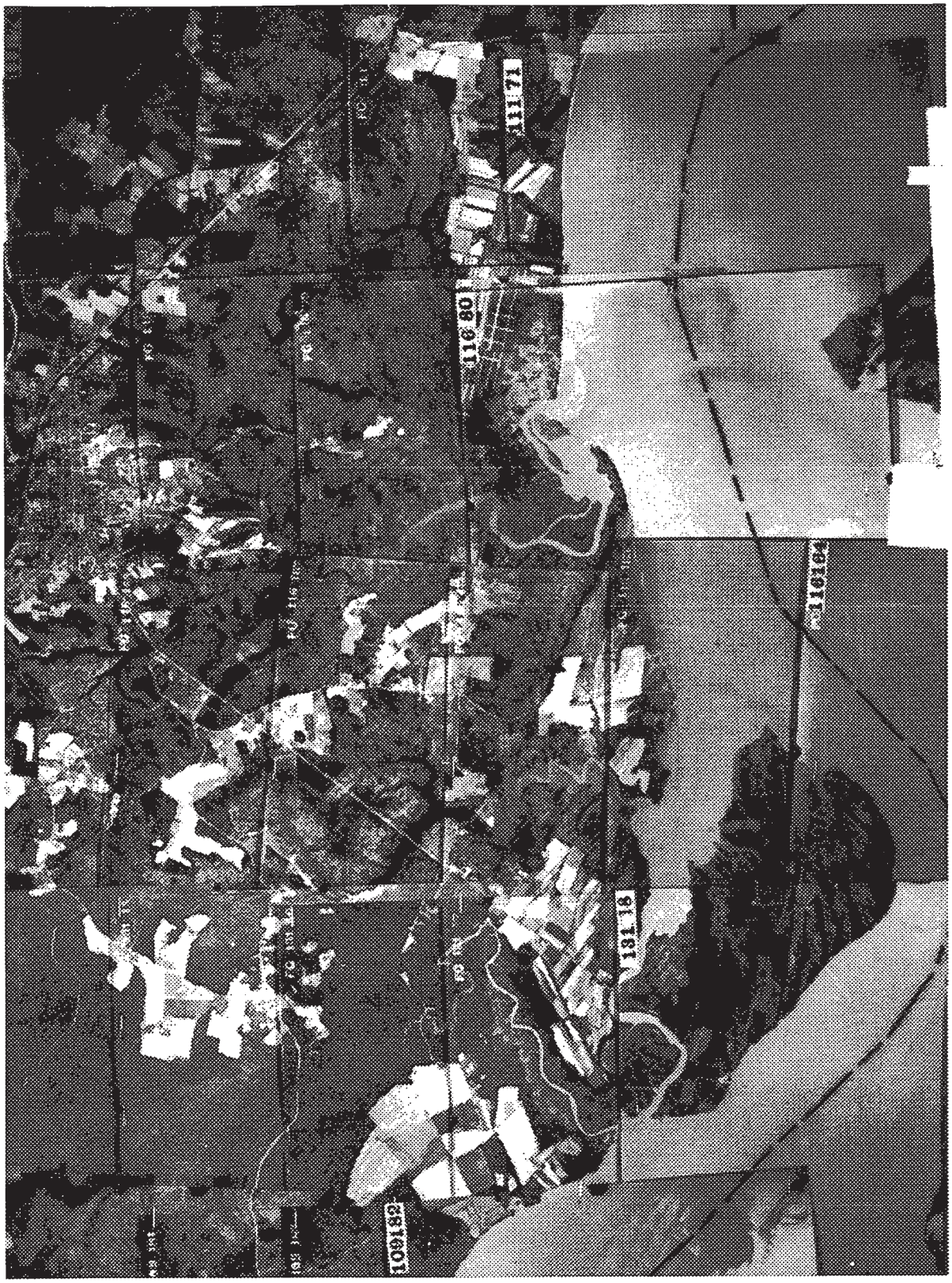


Figure II.2. Portion of Aerial Photograph Composite, showing James City County, September 8, 1937. Original Scale 1:20,000. USDA Soil Conservation Service.

The aerial photographs (Figures II.1 and II.2) also reveal that much of the region was undeveloped land such as forest and marsh. Large expanses of marsh are shown at Mill and College Creek and at Kings, Felgates, and Indian Field Creek. In addition, large areas of marsh were located at Jamestown Island, which, according toUSGS maps of the time, was connected to the mainland only by a small bridge across the Back River. In contrast to the open agricultural lands and marshes, the inland uplands were forested, some with "cathedral woodlands," others with regrowth forests.[3] Photographs in the 1933 "Outline of Development" document the rural nature of the area, showing scenes of small rowboats at College Landing, open views of tidal marshes, and old road traces in dense forest.

Despite the rural nature of the area, some development was beginning to occur in the early 1930s, due in part to military growth during and following World War I. As noted in Chapter I, this industrial activity included the military's Cheatham Annex (the former DuPont dynamite factory) and the Naval Mine Depot, which the US Government created in the early 1920s on a portion of the former Landsdowne estate. Both facilities were accessed by spurs off the C&O Railroad and contained military functions such as munitions storage and loading, staff housing, and aviation facilities. As development occurred in the outlying areas, it also occurred in fits and starts in the City of Williamsburg. Although World War I and the strong military presence on the peninsula served to fuel the Williamsburg economy, a statewide business depression occurred in the peacetime years immediately following.

Thus, prior to the parkway's construction, the region could broadly be characterized as a rural landscape, in which the seeds of modern development were beginning to stir. However, this description leaves out one vital aspect of the area, the fact that within the rural landscape, numerous historical ties to the area's colonial landscape and early occupation remained as a physical presence. These ties existed in the form of extant historic structures in Williamsburg, remaining foundations of plantations and homesteads such as Green Spring, and earthworks. In addition, the historical significance of the region, with Jamestown Island as the first settlement site, Williamsburg as the site of the former capitol, and Yorktown as the site of the final battle of the Revolution, began to be realized by the citizens of the region. This preponderance of physical features and local pride coupled with a growing national impetus to preserve the United States' physical historic heritage led to the formation of such groups as the Association for the Preservation of Virginia Antiquities (APVA) in the late nineteenth century. In the 1930s, it would lead to the restoration of Colonial Williamsburg and the creation of Colonial National Historical Park, a part of which, of course, would be the construction of Colonial Parkway.

B. BEFORE THE PARKWAY: EARLY INITIATIVES AND THE ORIGIN OF THE IDEA

Colonial Parkway is, at its most basic level, a road connecting the three significant historical sites of Jamestown, Williamsburg, and Yorktown. As far as is known, the earliest precedent for linking the three sites via a roadway was a resolution passed by the City Council of Williamsburg in the early twentieth century. On January 9, 1909, the council moved 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." The road was to follow "the most convenient and feasible route" and be constructed of "such materials as may found most suitable and best fitted."[4] This resolution led to the introduction of a bill in the U.S. Congress requesting $100,000 to build a "military road" from Yorktown to Jamestown.[5] Unfortunately, the road never received federal support, and nothing was constructed out of these efforts.[6]

However, at the same time, awareness of the area's historic and military legacy had been increasing over the years. In 1881, work was finally begun on the construction of the Yorktown Monument. This was followed by successive proposals throughout the 1880s and 1890s to make the Yorktown's Temple Farm, where the terms of surrender were drawn up, a national historic military park.[7/8] In 1889 the Association for the Preservation of Virginia Antiquities (APVA), was founded and in 1893 the organization purchased 22 acres on Jamestown Island. This led to an APVA-sponsored Jamestown Sesquicentennial Celebration in 1907. Meanwhile, the commemoration of other, more recent military sites was gaining popularity across the state, as evidenced by the creation of military parks in Antietam (1890), Shiloh (1894), Gettysburg (1895), and Vicksburg (1899).Efforts at commemorating Yorktown were renewed in the twentieth century with successive Congressional measures introduced in 1921, 1925 and 1927 to create a Yorktown National Military Park. Sadly, these efforts were, like their forerunners, unsuccessful.

However, the tide was about to change, primarily due to the converging motivations of three organizations, the Virginia Conservation and Development Commission, the Colonial Williamsburg Foundation, and the National Park Service. By the end of the 1920s, these three organizations had collaborated in devising a plan to develop the historic resources of the Jamestown-Williamsburg-Yorktown area as a "historical park." All three groups saw benefits in developing the area as a tourist destination. The Virginia Conservation and Development Commission, headed by William Carson, was interested in developing the state's economy through the promotion of recreational tourism. The Williamsburg Foundation, the nation's largest historic restoration project, was ostensibly interested in preserving the history of the area, but likely also saw benefits in increased development around their own project. The National Park Service, seeking to expand their conservation mission, saw the venture as a prototype for a new class of National Parks, one that would further their congressional and public support in the populated regions of the east.

As best as can be determined from extant correspondence, the idea of creating Colonial National Monument was first suggested by Kenneth Chorley to Horace Albright, who was then occupying a dual role, acting as both the Assistant Director in the Field and the Superintendent of Yellowstone National Park. In July of 1928, Chorley, while on a visit to Yellowstone to discuss the work in Williamsburg with the Assistant Director, apparently mentioned the idea of creating a "historic park" encompassing Yorktown, Williamsburg and Jamestown.[9] It is possible the conversation was repeated in Jackson Hole, Wyoming, when the two met again during Rockefeller's campaign to preserve the Teton mountains.[10] However, it is known that the idea resurfaced, this time from an independent source, on March 26, 1929, when William Carson, unbeknownst to Chorley, wrote a letter to Albright, suggesting "there should be created an historic national park in Virginia including Jamestown, Williamsburg and Yorktown."[11] Carson further explained to Albright why the National Park Service should be interested in such a park:

> 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.[12]

Albright, hearing the suggestion a second time, reacted favorably, as is shown in his correspondence to Chorley:

> Dear Kenneth:
>
> Here is a curious coincidence.
>
> The last time I saw you confidentially broached the Jamestown, Williamsburg, Yorktown idea. Now, this morning, I received a letter from Mr. W. E. Carson, the head of the State Commission on

> Conservation and Development, in which he makes an almost identical proposition, except that he is not bringing in the idea of connecting roads or parkways.
>
> I am so enthusiastic over this proposed historic park that I can hardly restrain my imagination. Unquestionably it will become the most famous park in the world almost immediately upon its establishment. I can not think of a more interesting and worth while object to work for than this idea. Of course, I shall continue to keep absolutely silent on the subject, but give me a hunch as to what I should say to Carson.[13]

Beyond the fact that it shows Albright's own keen interest in the idea of a historic park, this correspondence is perhaps significant in that it may be the first reference to the creation of a parkway in conjunction with theproposed park. The letter also indicates that the parkway idea was possibly initiated by Kenneth Chorley. Other researchers have, however, attributed the road idea to William Carson.[14]

Albright apparently submitted a memorandum to the Secretary of the Interior expressing an interest in the creation of the new park, and received a favorable response.[15] Preliminary steps in organizing legislation were soon underway. In the summer of 1929, Chorley once again visited Albright in Yellowstone, possibly to further discuss the creation of the park, and in November, Albright visited Williamsburg, in the company of Carson, Goodwin, and Louis Cramton, a Congressman from Michigan. Cramton, Chairman of the Subcommittee of the Committee of Appropriations in the House of Representatives, had been a close personal friend of Stephen Mather and involved in numerous bills creating national parks.[16] Albright himself later recalled Cramton as the one who introduced the parkway idea during this visit in a meeting in Goodwin's office:

> Mr. Cramton took a piece of paper--it was just like a sheet of paper here on his desk--and he was just sort of thinking out loud. He sketched out a park at Yorktown and the park at . . . Jamestown. And here was Williamsburg in the middle where we were sitting at the time in the George Wythe House, in Dr. Goodwin's office; and he connects them up with a parkway. . . . I say that's where it was started, that day. . . . It's the first time it really took form, the Colonial National Monument embracing Yorktown, Williamsburg, and Jamestown.[17]

Cramton was taken with the idea of the park and an associated parkway. Following the visit, he 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.[18]

By December, a bill for the creation of the Colonial National Monument was well underway, with George Moskey from the Interior Department, NPS Assistant Director Arthur Demaray, and Congressman Cramton doing most of the writing. Cramton introduced the bill (H.R. 8424, 71st Congress, 2nd Session) on January 10, 1930, Although the Virginia congressmen fully supported the bill, based on a suggestion by Carson, they did not sponsor the bill in order that it would not seem to be "too local and Virginian" but would have more widespread appeal. The "Cramton Bill," as it became known, received favorable reactions from the Department of the Interior and the Committee on Public Lands. However, despite the endorsement of the Virginia congressmen, reaction in their districts was mixed. In particular, a group of Williamsburg residents, led by Judge Frank Armistead and Channing Hall, opposed the bill on the grounds that it would remove from taxation a large portion of property and would disrupt the life of the local communities.[19] The

APVA was also concerned, since they believed the creation of the park would mean the loss of their lands on Jamestown island to the federal government.

Opposition was countered by a series of public meetings held through the spring of 1930 and a compromise was finally reached when an amendment limiting the parkway right-of-way to 200 feet through the city of Williamsburg and protecting the APVA lands was added to the bill. The revised bill passed the House and the Senate and was finally signed into law on July 3, 1930 by Herbert Hoover. The bill included appropriations for a survey of the area to establish a proposed boundary for the park and parkway, as well as for the establishment of an association to organize a Yorktown Sesquicentennial Celebration at the new park in October of 1931.

C. ESTABLISHING A PARKWAY BOUNDARY: JULY-DECEMBER, 1930

1. Park and Parkway Beginnings

Almost immediately following the signing of the bill on July 3, Assistant Director A. E. Demaray was sent to the area on July 16 to begin organizing the park.[20] By this time the National Park Service realized that the groups associated in the push for park legislation would be crucial in the implementation of a physical park presence, if not over the long term, then at least until the Yorktown Sesquicentennial Celebration in 1931. These groups included the APVA, the Williamsburg Foundation, the Virginia Conservation and Development Commission, and a newly formed group, the National Sesquicentennial Celebration Commission. During his visit, Demaray therefore met with representatives of all of these groups. The rest of the time was spent on an aerial surveillance of Yorktown, Williamsburg, and Jamestown from a Langley Field dirigible, followed by a ground investigation that was as extensive as time would permit. From the visit, Demaray was impressed with "the importance of making the improvements for the Sesquicentennial Celebration of such a character as would benefit the park."[21] At the same time, however, Demaray realized that many of these improvements would be completed on a fast track, since the 3-day celebration planned to commemorate October 19, 1931, was less than a year and a half away. The pressure was clearly on the National Park Service, for as Demaray noted, "it would be unfortunate if inadequate preparations were made, as. . . .the Park Service would be held responsible and receive a heavy blow to its prestige if the celebration were a fiasco."[22]

From Demaray's memo, it is clear that the parkway, though yet to be fully envisioned, was an integral part of the plan for the park. As the physical link tying the three sites together, knowledge of its route and boundaries would, at the very least, be needed for a boundary declaration in the Monument's upcoming Presidential Proclamation. An, almost as quickly, it would be needed for continuing construction of the park. Therefore, a survey of the park and parkway was recommended as the first work to be done:

> Nothing can be done toward laying out the boundaries of the Monument and preparing a draft of proclamation establishing the exterior lines for presentation to the President and the Secretary of the Interior until a survey can be made. A survey on a scale of 1 inch to four hundred feet should be made. . . . Topography also should be shown, but [is] not absolutely essential for establishing monument lines. . . .The proposed parkway should be laid out with the assistance of a Park Service landscape engineer. The approaches to Williamsburg must be worked out with the assistance of the Williamsburg Holding Corporation.[23]

It is interesting to note that even before the survey, the parkway's Williamsburg approach was already realized to be a potential problem. This realization foreshadowed the future troubles the National Park Service would face in routing the Parkway around Williamsburg.

To supervise the survey, and to generally supervise the birth of the Colonial National Monument, the NPS called on Oliver "O. G." Taylor. Taylor had formerly been Park Engineer at Yosemite Park, where he had worked with both Albright and NPS Chief Engineer Frank Kittredge. For the work on Colonial National Monument and Colonial Parkway, Taylor was probably recommended because of his "road experience in Yosemite, combined with his appreciation for the harmonious."[24] In January of 1930, Taylor had been transferred back East to draw up plans and surveys for the restoration of Wakefield, George Washington's birthplace, another new National Monument.[25] However, when it was seen how much work would be required for the Colonial National Monument start-up, Taylor was transferred to Yorktown. The fact that the NPS chose Taylor, a man well-versed in road building and engineering practices of the time, to lead the effort, rather than one perhaps more skilled in negotiation and ambassadorial skills, may be some indication of the priority the NPS was placing on the construction of park infrastructure, as proof of adequate National Park Service activity on the Colonial National Monument for the Sesquicentennial Celebration. At any rate, Taylor, whose title at the Monument variously appears in documents as "Engineer-in-Charge" or "Acting Superintendent," participated in Demaray's July, 1930 field trip. Taylor began work in earnest shortly thereafter, setting up park headquarters in an old Yorktown hotel.

However, Taylor's work focused on the purchase of land for the park and on planning for the Sesquicentennial. Therefore, the bulk of surveying and planning for the parkway route fell to Charles Peterson. Peterson had previously been a landscape architect in the NPS San Francisco Office of Design and Construction, where he had worked under Chief Landscape Architect Thomas Vint on parks in the West. One of just two full-time National Park Service staff sent east to work on the new historical parks, Peterson, with both architectural and landscape architectural skills, had originally been slated to work on the restoration of Wakefield. Yet when he arrived in Washington, it was determined that he would be sent instead to Yorktown to focus on Colonial National Monument's more pressing needs. Peterson arrived in September and decided to live in Williamsburg, where he "rented a room on Duke of Gloucester Street across from the Capitol and was witness to a great deal of activity on the part of the Williamsburg Restoration."[26] He commuted to Yorktown in a second-hand Model A Ford.

2. Initial Ideas about the Parkway Route

Working with Taylor, Peterson apparently assessed Colonial National Monument's field conditions quite quickly. He began to arrive at conclusions about a potential parkway route almost immediately. Soon after he arrived, he toured the three sites by car with Taylor on September 27, 1930. Based on his own account of the trip, his immediate impressions of the area led to some quick, but firm, convictions about the best possible route of the parkway:

> When O.G. drove me to Yorktown for the first time to look it over. . .We started back on the State Highway, parallel to the railroad spur that led into the Naval Mine Depot. Passing the Marine guard at the gate I asked, "What's in there?" and O.G. said, "That's just a Navy operation; I don't think you'd find it interesting. . .we can go in if you like." I said, "Yes, let's go in." So we drove along the River up to where the road ended at the Naval Officer's Quarters. It soon struck me that this was where the Parkway ought to go; not through the middle of the woods. The more I studied this, the more obvious that was.[27]

Peterson wrote a memo about this trip and his first ideas about the parkway route. Although no copy of this memo, which was sent to Assistant Director Demaray and forwarded to Louis Cramton, has been located, Cramton's 14 October 1930 response to Peterson's ideas was found in park files. Cramton's response is interesting, because it records some of the earliest ideas about the specific desired physical character of the parkway. Unlike earlier parkway descriptions, it goes beyond the idea that the parkway should connect the three sites. The letter reveals both Peterson's and Cramton's ideas for the road. Cramton's ideas, coming from the Colonial National Monument bill's sponsor, would certainly have held some weight with Albright, Demaray and others involved in directing the development of the park. And if all of his ideas were not ultimately implemented, at the very least, those not implemented would be debated for many years to come.

However, Cramton's ideas and Peterson's first impressions of a potential parkway route generally seemed to overlap. Peterson, for example, seems to have suggested that the route be simple and emphasize the scenic and historic qualities of the region. Cramton agreed, responding:

> Very generally I am in accord with the discussion contained in the enclosure from Mr. Peterson under date of September 27, 1930. . . I appreciate the force of his paragraph with reference to the importance of keeping the parkway free from unnecessary distractions and endorse the general policies that he sets forth.
>
> Without at all presuming to pass upon the proposed location of the road between Williamsburg and Yorktown, I may say that the suggestion he makes for a riverside drive seems to have a great deal to commend it. I have been interested in the oral statement you have made with reference to the same subject and with reference to the proposed skirting of Williamsburg to the west and north with this highway; also the suggestion that the highway should consist of two one way drives, and that in certain portions of the parkway the drives should in each case be near the outer edge of the strip. I would only suggest a word of caution in this--thatunless we have full control of the adjacent lands the very purpose of the parkway may be defeated by putting the drive near the outer rim. It would not seem sufficient to have assurances from a municipality or a county as to erection of commercial structures, unsightly signboards, etc., along the parkway edge.[28]

The suggestion (apparently Peterson's) that the roadway be a divided roadway is an interesting one, given that in 1930, the use of a center-strip or divider between traffic lanes was not a common practice, and was disputed in traffic engineering circles.[29] Cramton's response to this, that the scenic surrounds of the parkway could be compromised by running the lanes too close to the outside property boundary, possibly shows that Cramton had working knowledge of roadway design. At the very least, it illustrates a certain level of prescience about the kinds of problems housing and tourist developments pose for scenic areas. Indeed, in later years, such development, combined with the parkway's narrow right-of-way, would create major viewshed problems for the parkway.

Clearly inspired by Peterson's commentary, but reluctant to say too much because he feels the development of the parkway is long off, Cramton goes on to describe his vision of the parkway's physical characteristics, including its surfacing, alignment, and architectural treatment:

> So far as the surface of the road is concerned that is not a matter of immediate concern as the construction of the road is a matter for future determination. However, may I say that my position is not one necessarily of objection to a hard surfaced road. I am very definitely opposed, however, to a glittering ribbon of white cement stretching straight away for any long distances. This road must be limited to tourist and sightseeing traffic and barred to ordinary commercial use. It seems to me that a proper surface can be acquired without the use of cement, but in any event no glittering conspicuous ribbon should be established. Furthermore, while abrupt curves are neither desir-

> able or necessary, a road with some winding, leaving something constantly to the expectation of what the next curve will bring forth, is very desirable in any scenic highway.
>
> With reference to the crossing of creeks: The use of brick arch bridges sounds good and I have no doubt that when the actual construction is undertaken the spirit of the thing will be properly expressed in the bridges. It occurs to me that paved fords such as we find in Rock Creek Park would be very desirable in two or three cases, and when the time comes, I will be glad if consideration can be given to that.[30]

Cramton's description makes clear that the idea of using brick for the parkway's structures originated quite early and can probably be attributed to Peterson. Similarly, the use of concrete for surfacing also originated early in the design process. However, Cramton is not without his doubts, which would be reiterated by others over many years. In particular, the surfacing and color of the road would be a continuing issue until the first sections of the Parkway were paved in 1935. On the other hand, it seems quite clear that the concept of a modern, tourist sightseeing highway, with a curving alignment, was intended by both Peterson and Cramton from the beginning.

It is also therefore notable that Cramton never mentions the road following a "historic" alignment, an idea which would be proposed later, by others. Cramton instead had his own ideas on how the parkway should handle historic sites, as revealed in the same letter:

> I have noted with great interest the suggestion of Mr. Carson in his letter of October 4, and on other occasions, for the erection of statues of historic figures along this parkway. Possibly because of my visit to Berlin and my drive along the parkway there in which the Emperor Wilhelm had erected a very disturbing line of statues of his ancestors, it has made me unduly fearful of this idea. In any event, the character of the development of the parkway is a matter for the future and very possibly may require many years to fully work out. It does seem to me that some development of points of particular significance may early seem important. In other words, while a line of statues may not be most desirable, the occasional special treatment of points of particular interest may be worthwhile.[31]

Although Cramton sounds almost horrified about Carson's idea for commemorative statues along the parkway, this idea was not entirely off base for its time. Late twentieth and early twentieth century battlefield commemoration efforts often included included the placement of memorial markers along tourist roads designed for viewing the battlefield. This type of memorial road had been implemented at Civil War battlefields such as Gettysburg and at Revolutionary battlefields such as Saratoga. When seen as an extension or enlargement of these twentieth century efforts, Carson's idea does not seem quite so outlandish. However, it appears that the memorial statue idea was never suggested more than a few times, as it has not been seen in other correspondence.

Strangely enough, Cramton's letter is the only record, outside of the Colonial National Monument Subcommittee hearings, of his views on the development and design of the parkway. It appears his influence on the project waned soon after this letter, since it reveals that Cramton had been defeated for renomination. He anticipated leaving Congress on March 4, 1931, though his devotion to the project was still, at this point, strong:

> I am very anxious before the 4th of March to see an appropriation made by Congress for the purchase of the necessary lands in the Yorktown battlefield and for the proposed parkway. I also want to see some provision made for development and maintenance of the areas. Both because of the Sesquicentennial next October and because of my early retirement from Congress it seems to me that before the first of December next the desired areas to be determined upon, options for the bulk of such land secured and the presidential proclamation issued.[32]

That a presidential proclamation was needed to establish the new park's boundary was an idea not lost on Taylor and Peterson. They had, in the meantime, been busy advancing the survey and progressing on a preliminary route for the parkway, which was not an easy task. Available maps--USGS quadrangles--were inadequate for the job, and the area was covered with woods, briar patches, and large swampy areas which prohibited access and detailed investigation. Peterson called on aviators as Langley Field to fly the area and take a series of aerial photographs, which were assembled into a mosaic for planning purposes.[33] A base map was developed, and numerous photographs of the area, illustrating the proposed route, were also taken.[34]

3. Proposed Routes and a Boundary for the Presidential Proclamation

On 15 October 1930 Peterson prepared a detailed report to Horace Albright, summarizing the conclusions of the parkway work up to that point, with the intent of answering "the fundamental questions regarding the location of the parkway" for the purposes of the Presidential Proclamation.[35/36] The report analyzed the regional road systems and recommended a parkway route which had been marked out in the field. The proposed route ran from Glasshouse Point, through the woods south of Williamsburg to Francis Street. It followed the length of Francis Street through Williamsburg, and from there went under the C& O Railroad to Kings Creek. Finally, it headed for the river, travelling the shoreline until it met the main street of Yorktown, which it followed through the town.

Although this route would not be the one recommended in the Presidential Proclamation, Peterson's description of it bears a closer examination because many of his suggestions would ultimately be followed. The report is also the most complete known document of the time which summarizes Peterson's views, in his own direct and authoritative tone, which belied his youthful age. Most importantly, however, the report brings up contentious issues which would reappear as the parkway developed further.

Peterson began his report with a caveat about the routing around Williamsburg:

> I am herewith offering my solution of the problem made after a somewhat detailed investigation in the field of the various factors controlling its design. I believe that the layout here presented affords the best means ofworking out this rather involved situation. I do, however, make an important reservation: That, whereas, the approach to the colonial section of Williamsburg is of vital importance to the restoration work being done there, it will probably be necessary to make some adjustments in the alignment to carry out the best interests of those concerns.[37]

This concern echoes Demaray's of three months earlier, and demonstrates the National Park Service's growing concern about the Williamsburg interface. It is interesting that although the park and parkway were established in order to unify the three historic sites, and although the Williamsburg Foundation was a strong supporter of the original idea, the closer the National Park Service came to Williamsburg, the more standoffish the Foundation became. But despite the caveat, the report progresses with a sanguine tone. After assessing the regional road system and recommending routing changes to enable the parkway's construction, Peterson notes that the parkway should be "laid out according to a good parkway design and [prohibit] commercial vehicles. According to Peterson a "good parkway design" was a scenic, completely new parkway alignment. He went to great pains to discredit the idea of following the historic road:

> There are two plausible alternative policies for the location of the road; the scenic routing and the routing along the historic way. All other things being equal, I certainly would be inclined to follow the ancient road, but existing conditions discount the value of such a scheme.[38]

Peterson discounted the historic road because its route was "conjectural" in some places; was "too crooked to be followed with a modern road" in other places; and because it contained "railroad grade crossings and. . . an unsightly colored neighborhood" in still other places.[39] Peterson concluded:

> . . .it is self-evident that most, if not all [of the historic road] cannot be used as the location for the new parkway. Consider then how this matter is to be presented to visitors. Granting that is this monument is to receive the popular attention that our western monuments do, the majority of our visitor will come from a considerable distance--from the far regions of Virginia and the other 47 states. Such visitors would not know whether or not they were travelling a historic route. The most truthful sign that could be posted would be "This is in part (or as nearly as can be determined) the old road to Jamestown." What value is there in that?[40]

In contrast, Peterson felt his proposed route would be a "splendid scenic passage" with "no artificialities in evidence," and "no intersections with public roads" to intrude on the pleasure-seeking tourist. In other words, he felt that a "historic route" did not preclude the creation of a modern park infrastructure. Admitting an influence from the Williamsburg Foundation's historian, W. A. R. Goodwin, Peterson also noted that the river views afforded along the York River would impress upon tourists "the importance of these great tidal streams in the colonial culture." Even though the document was meant only to help establish the parkway boundary, Peterson at this point was already lobbying for a modern, scenic parkway alignment.

More interesting perhaps was Peterson's contention that the parkway should be a chronological experience for visitors, and that the design of the road must encourage this:

> I think that every visitor should be urged to start the Colonial story at the beginning by entering Jamestown by some road distinctly as an approach and leaving by way of the monument Parkway. If the Colonial National Monument visitors were to begin at Williamsburg, for instance, and travel the Parkway to Jamestown and later double back on the way to Yorktown, they would be in the disconcerting position of listening to a story begun in the middle and working both ways.[41]

And despite his initial caveat, Peterson felt strongly that Williamsburg was an essential component of the parkway experience:

> I have one deep conviction, at any rate, that the Parkway should not merely be a pleasant road fromJamestown to Yorktown, with a detour into Williamsburg. The visitors whom we carry on the parkway are a class select because they have chosen to spend some time on historical objects and should not be routed as if it were hoped they would not come into Williamsburg.[42]

This report shows that in 1930, the National Park Service was still clearly dealing with the broader concerns--social and political--of laying out the parkway, and that physical character concerns, such as surfacing and style of structures, would, as Cramton had predicted, become an issue somewhat later in the development process. Instead, the National Park Service, and Peterson in particular, had to initially grapple with the idea of just what a "historic park"--a brand-new animal--was. The concept of the historic park had implications for design and use that the National Park Service had not, while in the business of creating the scenic, natural-resource-based Western parks, encountered before. Although the experience of the National Park Service in the west was useful--as can be seen in Peterson's national perspective of the visitor population cited above--it was not always completely transferrable, resulting what seems almost to be a rationalization, on Peterson's behalf, of the choice of the scenic route of the parkway over that of an "historic" route. In addition, the National Park Service at this early point was beginning to realize that, despite their initial collaboration and interest in preservation and tourism, the groups involved in the creation of the park--especially the National Park Service and the Williamsburg Foundation--did not necessarily have the same goals in mind and could, in fact, be viewed as occasional competitors.

Only a few letters have been located documenting the reaction of Albright, Demaray, and other upper-level NPS staff of Peterson's proposed parkway route. From these, it appears that the route between Williamsburg and Yorktown, especially the section along the Yorktown River, was favorably perceived. In contrast, the route between Jamestown and Williamsburg was ill-favored, primarily because the Williamsburg Foundation, represented in the correspondence of this time by Kenneth Chorley and W. A. R. Goodwin, did not approve of the route. Although concerned about the route along College Creek (for reasons that are not exactly clear) their major complaint was the parkway's proximity to the Restoration area. The current route, they felt, in the words of Arthur Shurcliff, their landscape architect, created "a Chinese wall through the middle of the Restoration," ruining the effect of their work.[43] They therefore countered Peterson's route with a proposal that the parkway approach be routed to the west and north of Williamsburg, along historic road traces and through an African-American neighborhood.[44]

As evidenced in correspondence, Peterson was piqued by this commentary on his route, feeling that there was an undemocratic undertone to the Williamsburg group's proposals. In a Memorandum to Albright dated 10 November 1930, Peterson implied that he had been misled about the proposed intentions of the creation of the Monument and the Parkway:

> 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.
>
> In such a case I entirely agree with the expressed opinion of the Restoration people that the main line of the parkway should not touch the Colonial section of the City. However, I do not hold with the proposal to traverse the Neo-Hamitic district north of the Colonial section crossing the railroad tracks at Boundary Street.
>
> Such outrageous surroundings are not compatible with the dignity of Colonial National Monument. Presumably that was based on the idea that the Parkway would run along the line of the ancient road. In view of the fact that the Parkway is denied the use of the historic entrance to the City nearly all of the value is instantly precluded of an historic route. . . .
>
> The whole situation is entirely dependent upon what is to be taken as the major premise. Will it be the desire of the Park Service to have every tourist see Williamsburg or only those who are especially equipped toappreciate it? Everything at the moment hinges upon this decision. My purely personal preference would be to pass by outside of the Colonial City.[45]

This memorandum shows that Peterson was concerned about the access of the working class to the park, the parkway, and to Colonial Williamsburg. He was, in a sense, asking a vital question of the National Park Service administrators: Would the new historical parks be designed only to appeal to those who could easily appreciate culture and history? Which model would the National Park Service follow? That of their own, western parks, designed to appeal to a broad citizenry, or that of the private corporation of Colonial Williamsburg? By stating that he would personally prefer to bypass Williamsburg entirely, Peterson indicated that he sided with a more democratic model. Of course, it is somewhat ironic that despite these high minded statements, his own biases of other races were evident, in his indication that an African-American neighborhood would be "outrageous surroundings" for a national monument.

Yet faced with the proposition of presenting a park boundary by December, Peterson was in the business of trying to find an acceptable route for the parkway. He therefore followed his short tirade with two new alternatives for the also disputed Jamestown to Williamsburg route:

> There remain two feasible alternatives in the neighborhood of College Creek--one proceeding up the west side of the creek and the other up the east side. The first is Dr. Goodwin's line which coincides with a considerable part of the surveyed line which I recommended in my report of October 15. The other line is one which crosses the "Thorofare" from the lower end of Jamestown Island, follows the shore of the James River along Spratley's Farm, past the historic site of Arche's [sic] Hope, down the spit at the mouth of College Creek, across the creek, across Kingsmill Neck, mounting the opposite ridge and just passing Williamsburg to the east via the railroad pass which I have previously recommended, thence following the surveyed line to Yorktown. . . .I feel that the Restoration people will approve the Kingsmill Neck route, which will balance the James River at one end against the York River at the other.[46]

It appears that some form of approval, tentative or otherwise, was received from the Williamsburg Holding Corporation on the Kingsmill route, for this was the route used to establish the park boundaries in the Presidential Proclamation signed into law by Herbert Hoover on December 30, 1930. The map attached to the proclamation is included here as Figure II.3, and shows the parkway route running from the east end of Jamestown island across the Thorofare to the banks of the James River, crossing the mouth of College Creek and running past the eastern side of Williamsburg. From there it moves quite directly to the bank of the York River to meet with the northern side of the Yorktown Battlefield. The law provided that the Secretary of the Interior could acquire the indicated lands for the parkway through whatever means, with one provision: sections of the proposed parkway crossing the Navy lands could be closed during times of war by joint order of the Interior and Navy department.

Thus, the final product of the two-year effort of creating the park resulted in a proposed boundary and a tentative routing of the parkway. The first major planning effort had been completed, and the task of designing and constructing the actual parkway could begin, pending both funding and land acquisition. However, despite the location of a boundary on a map, the planning process and interaction with partnering organizations indicated that ongoing negotiation and discussion with the likes of the APVA and the Williamsburg Foundation regarding the parkway route would be required. In fact, though construction on one section of the parkway would proceed almost immediately, negotiations on the larger route would continue as if the lines had never been drawn on the map at all.

Following the initial establishment of the parkway boundaries, the work of physically constructing the parkway began. If the path of creating and establishing the park and parkway had been a short one, requiring only about two years, the physical construction of the parkway would prove to be a much longer process, occurring over the next twenty some years. Although the actual construction work occurred in two majorbursts, one lasting from about 1931 to 1937 and another from about 1953 to 1957, in the three decades following the creation of the park, the design of the parkway was constantly being worked on. If the work was not actual construction work, then it encompassed additional planning, land acquisition, and design of the individual features of the parkway. The next sections of this chapter elucidate these continuing efforts.

D. PLANNING AND CONSTRUCTION: YORKTOWN TO WILLIAMSBURG

1. Refining the Alignment: Ballard Creek to Hubbard Lane

Design and construction began on the Yorktown end of the parkway. Although the parkway, at least in Peterson's mind, had been conceived of as a chronological experience progressing in correct historical order from Jamestown to Williamsburg to Yorktown, the consensus over the Yorktown end of the route

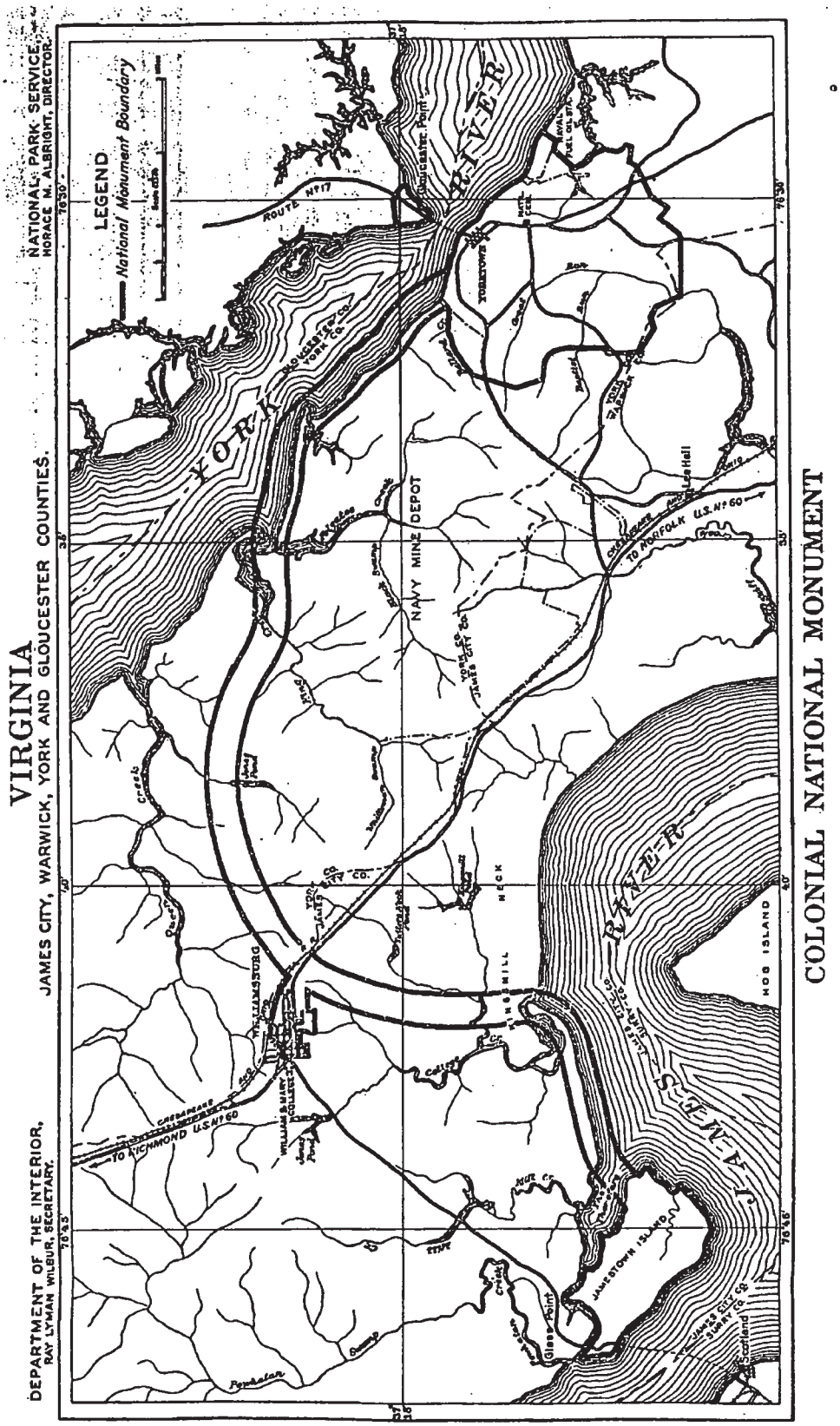


Figure II.3. Boundary Map of Colonial National Monument, Virginia, part of the Presidential Proclamation of December 30, 1930. U.S. Government Printing Office, 1931. National Park Service, Colonial National Historical Park.

and the impending Sesquicentennial Celebration probably both combined to encourage development of the Yorktown end first. In fact, correspondence reveals that design between Yorktown and Williamsburg began even before the signing of the Presidential Proclamation in December of 1930.[47]

The first tasks of design were refining the route, and staking the parkway centerline along this route. Peterson, still with the title Junior Landscape Architect, continued in his role as the "point-man" for the parkway design, since much of Oliver Taylor's time and energy were being consumed in the planning of the Sesquicentennial. Joining Peterson in the National Park Service's recently created Eastern Division of the Branch of Plans and Design[48] to work at Colonial National Monument were Landscape Architect Vivian Roswell "Lud" Ludgate and Junior Architect William M. Haussman. Architect J. R. Thrower and Landscape Architect Harold J. Brodrick also joined the office, but participated on the project in only minor ways. In November 1931, Edward St. Clair Zimmer arrived on the scene. Zimmer eventually became Colonial National Monument's resident landscape architect and had increasing responsibility for the parkway after 1933, when Peterson and the Landscape Division were transferred to Washington.

Following the Presidential Proclamation, the National Park Service designers were joined by the engineers of the Bureau of Public Roads (BPR), who provided important technical expertise on construction. In 1926 the National Park Service had established an interagency agreement on road-building with the BPR, in which the Bureau provided the most modern highway engineering services, while National Park Service landscape architects collaborated closely with them in the planning, grading, and planting of the road to achieve a superior aesthetic effect. All plans and specifications were developed by the BPR, but were subject to approval by the National Park Service's landscape architects and superintendents. Once plans were approved, the BPR would then continue to bid the road projects and supervise their construction and completion for the National Park Service. Working on Colonial Parkway for the BPR were Senior Highway Engineer H. J. Spelman, and Project Engineer William H. Smith. Interestingly, in contrast to the National Park Service Staff, who were more likely to be promoted, given increasing responsibilities in other parks, or shifted to other regions entirely, both Smith and Spelman would retain a longer term, in-field relationship with the parkway project until construction was officially completed in 1957.

The BPR field office was established in Williamsburg in early 1931, and between fifteen and twenty men were hired to survey the proposed route and to prepare parkway plans and specifications. The survey procedure required significant clearing of trees and brush along the route, staking a centerline and setting concrete right-of-way markers to indicate where land takings would be required. Survey information collected for plans along the parkway was primarily limited to the elevation of the proposed parkway centerline and basic geographic features, such as shorelines or tidal marshes. In addition, every fifty feet, surveyors determined cross-sectional elevations for a width of about fifty feet on either side of the centerline. From this information, a plan, a profile, and a series of cross sections of the existing terrain in the right of way were developed. From these, the horizontal and vertical alignment of the roadway--the three-dimensional location of the road in the x, y and z planes of space--could be determined. The amount of earth which needed to be moved by cutting soil away or filling to build up areas (colloquially known as "cuts" and "fills") could also be determined.

Figure II.4 is an example of a plan and profile developed from this information for a section of the parkway around Brackens Pond. It serves as an example of how the parkway was designed. The plan view on this sheet shows the proposed horizontal alignment (location in the x and y axes of space) superimposed over the site's existing conditions, which include an old road trace (dotted line) and a few marshy areas. The line of alignment on the plan indicates the designer's desire for the road's direction. The profile below the plan shows the elevations of the horizontal route, both its existing elevations and proposed elevations (with an exaggerated vertical scale). The proposed elevations, or road's proposed vertical alignment (its location in

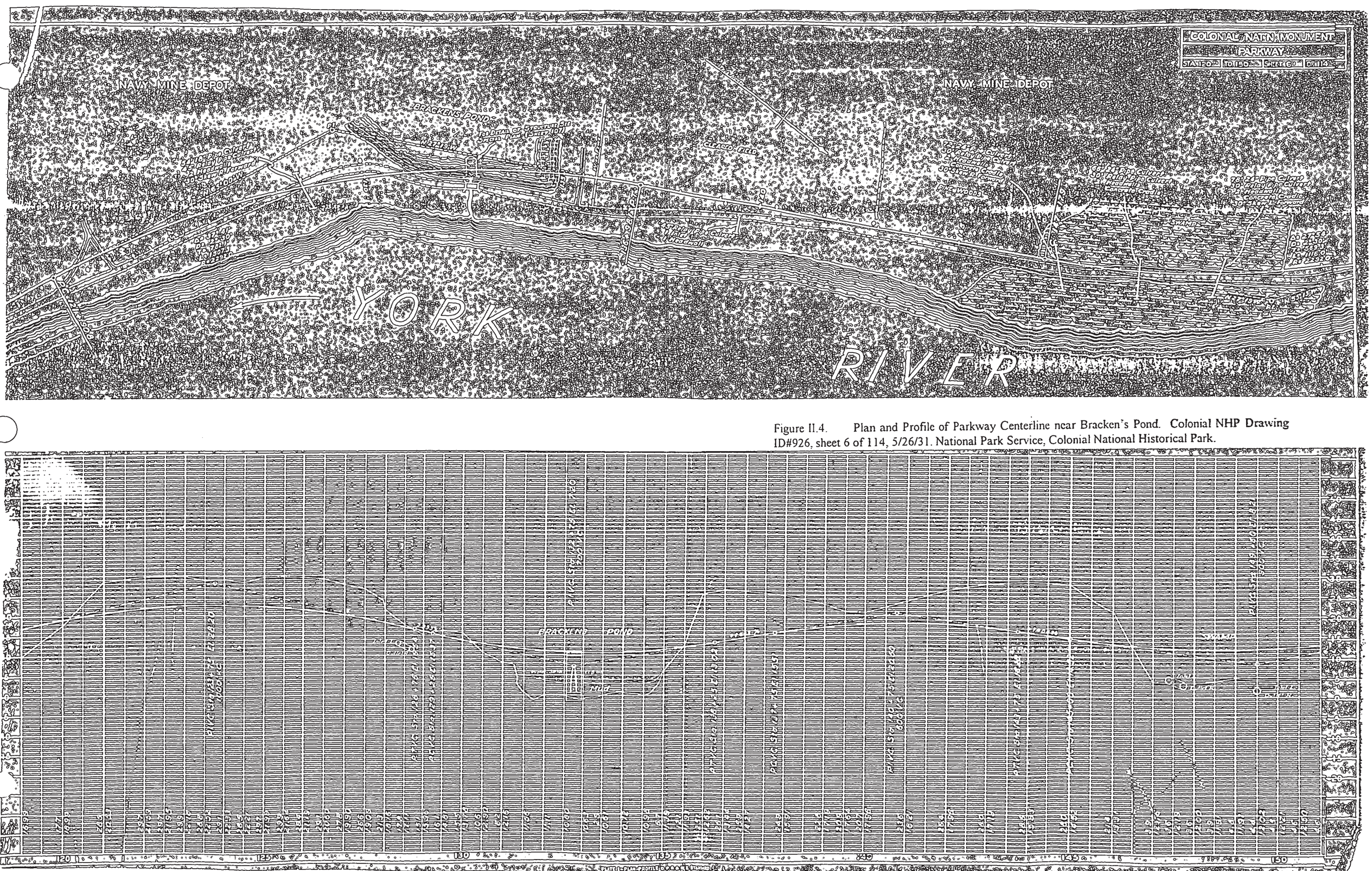


Figure II.4. Plan and Profile of Parkway Centerline near Bracken's Pond. Colonial NHP Drawing ID#926, sheet 6 of 114, 5/26/31. National Park Service, Colonial National Historical Park.

the z axis of space) create a smooth curve on the drawing, indicating the designers' desire for a smooth uphill and downhill driving experience. In contrast, the site's existing terrain is shown as a jagged, irregular line, indicating the "bumpiness" of the terrain. The differences between the lines indicate the amount of earth to be cut away or filled in to produce the desired smooth uphill and downhill along the desired horizontal route. In addition to pinpointing the location and elevation of the route, the plan and profile of this section also serve to show proposed locations for pipe culverts and their associated headwalls, as well as the location of the Brackens Pond combined bridge and dam structure. This drawing, along with its accompanying 113 sheets (most of which were road cross sections) was then taken into the field, and the elevations and curves it designated were surveyed and marked on stakes. The grading operator would then move the earth to meet the stakes, creating the rough grading and layout of the parkway alignment.

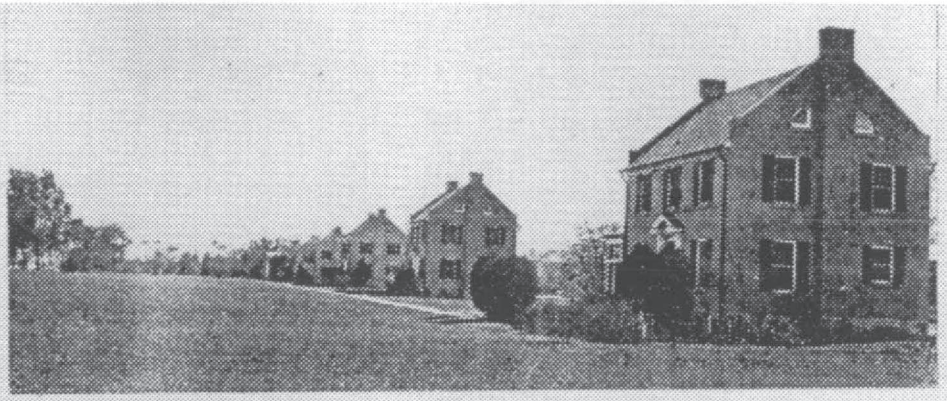
Following standard engineering practices, no detailed topographic plans for the entire parkway were developed. However, for crucial areas, such as where large arch culverts or bridge structures were to be designed, Peterson and the Landscape Division requested that contour base maps be prepared to allow the development of detailed grading plans for these areas. In addition, Peterson often requested that the survey crews provide information such as the locations of tidal marsh water boundaries, large trees, and remnant fortifications. Much to Peterson's concern, the BPR survey crews caused some destruction of the area as they crashed through tangled underbrush and slogged through great swampy areas. On several occasions Peterson complained about their lack of concern for site features, as indicated in this letter of 8 April 1931 to BPR Engineer Toms:

> In walking through the area of our right-of-way in the Penniman Tract, I have noticed there are a great many trees which were chopped down by the axemen on your survey party. I would like to request that more care be taken with the work so that further damage to the vegetation will be obviated.[49]

Working quite quickly, by May of 1931 the Bureau of Public Roads (BPR) and the Landscape Division had developed a set of plans and specifications for the grading and drainage of the parkway from Ballard Creek west of Yorktown to Hubbard Lane, just east of Williamsburg. The refined alignment ran from Ballard Creek along the York River to Brackens Pond, where fill and a small bridge were required to cross the swampy area. Reaching the lands of the Navy Mine Depot, the parkway hugged the York River shoreline, crossing the Navy pier railroad spur with an overpass and moving along the flat shoreline and beach directly below the row of Navy Officers Quarters. Figure II.5 is a page from a short report discussing the route of the parkway in this area.

The acquisition of the right-of-way along the Navy's shoreline had been accomplished by a bit of National Park Service sleight-of-hand. Instead of approaching the Secretary of the Navy, Albright and Demaray persuaded Secretary of the Interior Ray Lyman Wilbur to ask his long-time personal friend President Hoover to transfer six miles of a 500-foot right-of-way along the shoreline directly to the parkway[50]. Once the deed was accomplished, the Navy was unhappy, but agreed to collaborate on the design as long as certain conditions were met. These conditions included: 1) the NPS providing adequate fencing along the right-of-way to discourage trespassers in the Navy lands; 2) permitting the Navy police to patrol the parkway; allowing the Navy to close the parkway in times of endangered national security; and 3) in the interest of public safety and"safe transportation of explosives," providing a separate crossing of Felgates Creek for Navy trucks.[51]

From the beach below the Officers Quarters the parkway route travelled along the shoreline across a tidal marsh at the mouth of Indian Field Creek. It was proposed to create a roadbed across this marsh by partially filling it and leaving an open channel to be crossed with a short bridge. The fill material would be dredged from the bottom of the York River and built up across the creek mouth using large tubes to place



At the point where the parkway comes abreast of the Officers' Quarters the road can



be easily shifted to the beach below, where it will be out of sight and sound.

Figure II.5. Page from "Notes and Photographs of the York River Section of the Proposed Parkway of Colonial National Monument," showing Officers Quarters and proposed route of parkway on beach below. National Park Service, Colonial National Historical Park.

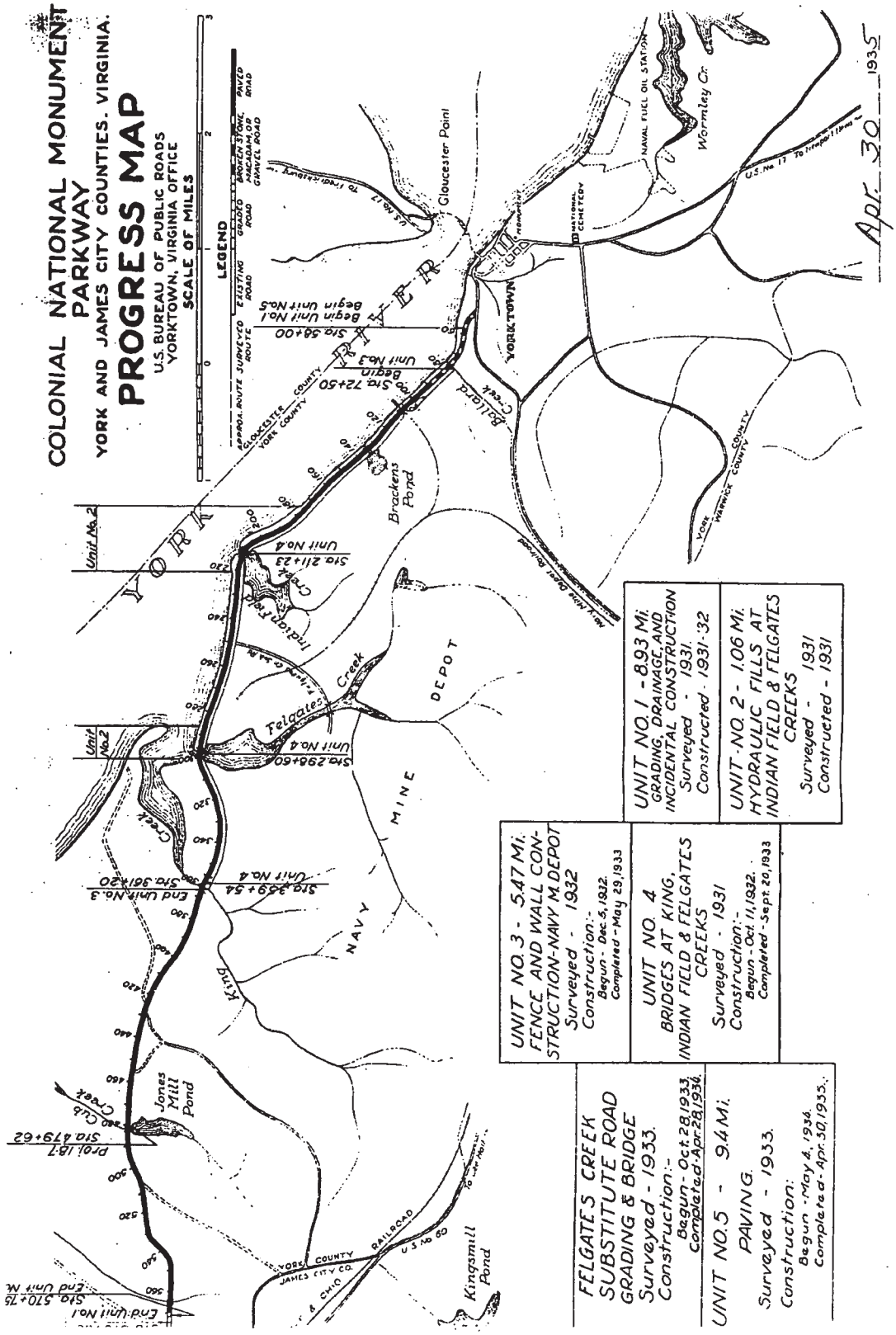


Figure II.6. Progress Map, April 1935, showing construction work on Colonial National Monument Parkway, Bureau of Public Roads. National Park Service, Colonial National Historical Park.

the slurry of sand, gravel and water. Moving further west along the York River frontage, this same process of "hydraulic fill" and another bridge were proposed for the crossing of the marsh area at Felgates Creek.

Leaving Navy lands and moving inland, the parkway route then crossed another marshy area at Kings Creek with a proposed bridge. From there it moved through a large area known as the "Penniman Tract." This stretch of right-of-way--about four miles--was donated to the Parkway in December of 1930 by Jim Dozier.[52] Dozier anticipated that the property value of the land, a former lumber company holding, would increase following the development of the parkway, and was hoping to build a housing development--Colonial Monument Estates--on either side of the right of way.[53] To facilitate this future development, Dozier made a condition of the donation that the National Park Service would construct a series of at-grade access roads into the land beyond the parkway. In addition, Dozier granted the NPS permission to cross another water body, Jones Mill Pond, by running the parkway right-of way over the dam embankment he had constructed to create a fishing pond. The dam precluded the need to construct another bridge over the adjacent ravine and marshy area. From Jones Mill Pond, the parkway continued winding through the Penniman tract until it reached Hubbard Lane, a road on the outskirts of Williamsburg's developed area. Figure II.6 shows the entirety of the Ballard Creek to Hubbard Lane section of the Parkway.

2. The Design Process

As noted earlier, the actual "design" of the parkway had begun even before the establishment of the parkway boundary, though much of this "design" had simply been the exchange of ideas in meetings and correspondence between high level National Park Service Administrators, the NPS field staff, collaborating organizations, and the congressional sponsors of the bill. Now came the task of resolving conflicting conceptions of the parkway's physical character, and solidifying these ideas the form of construction drawings, plans, and specifications. This task primarily fell to Spelman and Smith of the BPR, who presided over the technical aspects of grading, drainage, and structural engineering and Peterson, whose staff presided over the details of alignments, fine grading, planting design, and the architectural design of structures. This division of work is not only clearly represented in the correspondence regarding the parkway design and construction, but is evidenced in the drawings produced by the two offices. In general, the BPR drawings are restricted to road profiles and cross-sections, and structural drawings for bridges and culverts, whereas drawings produced by the Landscape Division include a greater range of sketches, illustrative elevations, planting plans, and grading plans for specific areas. The process between the two offices was collaborative; official correspondence and drawings were exchanged between them on a daily basis, and they often conducted field work together. However, this did not mean that the process was not contentious--correspondence indicates that disputes often occurred, over issues such as delayed drawing submittals from the BPR, differing opinions on construction methods, or costly detailing proposed by the Landscape Division. Disputes over the design were often handled by the higher level National Park Service Administrators, such as Chief Landscape Architect Vint, Chief Engineer Kittredge, Assistant Director Demaray, and Director Albright, all of whom remained in close contact with park and parkway developments. However, they were not always happy to act as arbiters, as demonstrated in this portion of a letter from Demaray to Albright. The letter was written following Demaray's resolution of a dispute over the architectural detailing of the parkway structures:

> It seems to me that where we have sufficient time to adjust these matters of design, there ought to be considerable give and take between our landscape department and the engineers [of the BPR]. There ought not to be differences of opinion constantly put before the Director for decision. While I realize the troubles wehave had and are having with engineers along these lines, they are in the long run malleable where designs structurally sound are involved. Our landscape division should recognize this, and make concessions.[54]

The process of design also occurred over a number of years, essentially until the completion of the Ballard Creek-Hubbard Lane section. During this time, design ideas were consistently being tested, tried in the field, revised, and often questioned again before their final implementation. For example, the question of what the roadway's surface would be was considered numerous times, but would not be finally resolved until it was determined by field testing during the implementation of the paving contract in 1934. On the other hand, some decisions--such as the use of a brick for architectural structures--were agreed upon quite early, and only needed to be worked out in a method satisfactory to all parties involved. Still other elements of the design--such as the appearance of the hydraulic fill areas--were developed spontaneously, as a result of field conditions.

At any rate, despite the contentious nature of the players involved, or perhaps because of it, by the end of the first major construction push to Hubbard Lane, which lasted until 1935, a clear design aesthetic was in place along the entire completed section of the parkway. This aesthetic, or attitude toward the surrounding landscape, was expressed in the use and detailing of numerous features, which will be outlined in greater detail in the following chapter. These features included the parkway's characteristic alignment, grading, surfacing; structural elements; and use of plants; it also included its characteristic use viewsheds, its overall spatial quality and sequencing. The sensitive orchestration of these individual features created a singular entity--the parkway--which uniquely fit the surrounding landscape. These design elements were all in place by 1935, and would be consistently applied to the rest of the parkway over the ensuing twenty years

3. The Construction Process

Construction of the Parkway between Ballard Creek and Hubbard Lane occurred over approximately 4 years between 1931 and 1935. The majority of the work was divided into 5 "Units" which, overall, cost $1,032,252.16.[55] These Units are outlined on Figure II.6, a construction progress report from 1935. All of the construction projects were bid, awarded and supervised by the Bureau of Public Roads, although NPS staff was involved in oversight and approving the acceptance of the work.

Work began in the spring of 1931 with the rough grading of the parkway between Ballard Creek and Hubbard Lane. This work, known as "Unit I" was guided by a set of drawings similar to that shown in Figure II.4, and included clearing, grading, and the construction of drainage features, such as pipe culverts with brick-clad concrete headwalls and brick-clad, concrete arch culverts. Unit I also included the construction of a brick-clad concrete bridge over the Navy Mine Depot Overpass, plus two dam/bridge structures at Brackens Pond and Jones Mill Pond. Therefore, in addition to plans, profiles, and cross sections, the Unit I drawings contained architectural drawings for these structural elements as well. Figure II.7 shows a section of the parkway following the completion of the rough grading.

Unit II, the hydraulic fill of Indian Field and Felgates Creeks, occurred almost concurrently with Unit I. Once the roadbed and fill were in place, work proceeded on Unit IV, the construction of the bridges across Indian Field, Felgates and Kings Creeks in 1932-1933. In 1934, Unit V was undertaken. This work included final grading of the roadbed in preparation for surfacing and the actual pouring of the concrete pavement. Following the paving, the roadside slopes received a final grading and topsoiling, followed by seeding with grass and implementation of the planting plans by Civilian Conservation Corps (CCC) crews under NPS supervision. Planting, however, focused on the section between Ballard Creek and Felgates Creeks.



Figure II.7. "Station 330 Looking East," #3097. Photograph showing rough grading along parkway in Penniman tract, 1933. Washington Office of Plans & Design. National Park Service, Colonial National Historical Park.

4. Extending the Parkway: Hubbard Lane to Williamsburg and Beyond

Even as construction was begun on the Ballard Creek-Hubbard Lane section of the parkway in 1931, planning for the extension of the parkway route into Williamsburg and beyond continued. However, the consensuswhich had been so quickly reached over the route of the first section proved elusive for the balance of the Parkway. In some respects, the routing between Hubbard Lane and Ballard Creek had been an overly simplified process, since the two major property owners whose lands had been taken for the parkway right of way--the Navy and Jim Dozier--were willing to meet the National Park Service's needs. In contrast, as the Parkway moved toward the more populated area of Williamsburg, the routing of the Parkway became much more of a political issue--with respect to both the local community and the Williamsburg Foundation. Although the Foundation had been an active lobbyist for Colonial National Monument, and believed strongly in the importance of revealing the historic connection between the three sites, when it came time to implement the actual linkage, their previous enthusiasm slackened.

Often the Foundation's comments on the parkway route concerned the historic content of proposed route.[56] It appears that Arthur Shurcliff, the Foundation's own landscape architect, initially was a proponent of a historical alignment for the roads connecting Williamsburg to Jamestown and Yorktown, as based on the recollections of his son, Sydney:

> . . . it devolved upon my father, as landscape architect for the Williamsburg restoration, to advise Mr. Rockefeller and his staff, headed by Kenneth Chorley, how best to connect Williamsburg with both these destinations, but especially Jamestown, because it had been the first capital. My father, quite naturally, had become a great stickler for historical accuracy, even in the matter of road alignment.[57]

Sydney was sent to Williamsburg by his father to research these historical routes between the Williamsburg and Jamestown, but found little correlation between routes on historical maps and existing routes in the field.[58] This apparently reduced the Foundation's concern for the use of historical routes to guide the parkway route.

In addition, it appears the Foundation's resistance to the parkway route was also based on concerns that the parkway would adversely affect both the visual environment of the Restoration and its tourist visitation. There was apparently continuing worry that tourists would "gaze from their cars directly into the restoration on each side, without even slowing down."[59] How much of this concern about the visitorship was an issue of social status, as Charles Peterson often implied in his correspondence, is difficult to say.

The concerns of the Foundation were generally taken very seriously by the National Park Service, especially by Albright and others at the upper levels of the NPS administration. Of course, part of the Foundation's influence on the NPS planning process was due to the fact that the Williamsburg Restoration was, by and large, John D. Rockefeller Jr.'s personal project, and the fact that Rockefeller, working with Horace Albright, had been previously influential in other NPS work.[60] Through this connection Rockefeller ensured that the Williamsburg Foundation's needs and opinions would be expressed and carefully considered by the National Park Service. Rockefeller's connections also led to the involvement of a number of nationally-renowned landscape architects to examine the routing of the parkway. In addition to the prominent Arthur Shurcliff, there were a landscape architect and chief engineer from the Westchester County Park Commission, Gilmore Clarke and Jay Downer. Clarke and Downer were considered experts in parkway design because of their work on the Bronx River Parkway, the Saw Mill River Parkway and others. Later, landscape architect Harland Bartholomew would also be called in to examine traffic issues in the area around Williamsburg proper.

As far as can be told from available correspondence, the earliest involvement of Shurcliff, Clarke and Downer dates to the spring and summer of 1931.[61] By this time, the drawings for the Parkway between Ballard Creek and Hubbard Lane were well underway, and thought was being given to extending the work toward Williamsburg. However, despite the boundary indicated on the Presidential Proclamation of December 30, 1930, in actuality, a route through Williamsburg had in no way been established, primarily due to the Foundation's concerns. As noted earlier, the Foundation found three areas along the Williamsburg-Jamestown route particularly problematic: The intersection of the Parkway with the east side of Williamsburg; the alignment along the James River; and the crossing to Jamestown at the east end of island, over the Thorofare. It appears that the Foundation had Shurcliff look over the proposed route and make a counter-proposal for a new route. This route, known afterwards as the "Shurcliff line," or the West and North Line, headed almost due west from Hubbard Lane, moving around Williamsburg on the north, where it also crossed under the C & O Railroad line.[62] From there it gave wide berth to William and Mary College, circling around College Pond (also known as Jones Pond or Matoaka Lake) and heading southwest towards Jamestown Island. At this point, Shurcliff proposed that the old isthmus at Glasshouse Point be reconstructed to provide access to the Jamestown Settlement site.[63] Shurcliff's proposed route can be seen on Figure II.6, a map which accompanied a letter from Goodwin to Albright which explained his opinions on the parkway route.

Although it is unclear what the official National Park Service response to Shurcliff's proposal was, Peterson, at least, had very mixed feelings. Partly he believed the northern route around Williamsburg was unattractive, partly he felt his--and indeed the whole parkway team's-- judgement was being called into question, and partly he felt a new route would put extra burden on the parkway design and construction staff. And all parties were concerned that the delay in decision-making would slow the construction of the U.S. Route 60 Williamsburg Bypass. Peterson complained to Albright:

> If part of the Bureau study means running the Shurcliff line all the way to Jamestown via Glass Point, it is going to take a lot of time before they will be able to report on the problem. Personally, I do not think that the Parkway Route in its relationship to Williamsburg is going to be decided on soon enough so that the State can complete its Bypass Road in time for the Sesquicentennial unless some new element of speed enters the picture.[64]

However, Peterson also hoped that outside help would solve the issue. In the same letter he notes that Clarke and Downer will be arriving to give their opinions on the roadway.

> I had a letter yesterday from Major Clarke in which he states that he expects to be down to Williamsburg June 12th and 13th bringing Mr. Jay Downer, if possible. I hope that they can make this trip and that if their visit coincides with yours, a decision can be reached at that time. Parenthetically, I understand the Mr. Downer draws a lot of water with Mr. Rockefeller and feel that his visit is going to promote the East of Williamsburg scheme greatly.[65]

Although Clarke and Downer made the visit, which was also attended by Albright, Demaray, Spelman, and Shurcliff (and possibly Chorley and O.G. Taylor), little was resolved.[66] Clarke and Downer did not, in fact, promote Peterson's east of Williamsburg scheme. Instead, additional studies of the route were ordered, which occurred over the summer. At least 4 "new" alternatives drawn up, but these were all simply minor variations of the Shurcliff line north and west or the Peterson line south and east.[67] The argument grew a little testy when Rockefeller, after being chauffeured by Arthur Shurcliff over the route, made a favorable gesture toward using the Shurcliff line. When Peterson found out, he furiously fired off the following letter to Albright. In the letter, he argues that the National Park Service should base its actions on its own experience and not, he implies, be swayed by wealth and power:

> I note that Mr. Shurcliff has conducted Mr. Rockefeller around the Field and has shown him advantages and disadvantages of the two routes. On the other hand, there were quite a number of things that were not shown and explained to Mr. Rockefeller, the chief of which is the point of view of the operator who must dispatch and control all tourist traffic. I should very much like to show Mr. Rockefeller over the ground myself sometime. Certainly no other agency has handled as much tourist automobile traffic as we have, and if by this time we cannot make a reasonable prediction of how the visiting automobilist is going to act, then we have learned nothing from our experience in the West.
>
> I realize that Mr. Shurcliff has made a great many detailed studies of the various phases of public and private activities in Williamsburg. These are very impressive as shown in a neat portfolio, but as a matter of fact toone who knows how Williamsburg carries on this mass of information points more to the advantage of the east of Williamsburg scheme than it does to the west of Williamsburg scheme. I have lived in Williamsburg now for nine months and believe that I have the feel of the place probably even better than Mr. Shurcliff who has inspected certain parts of Williamsburg, driven by a chauffeur, only several days at a time at intervals covering three years or so. Mayor Coleman, who certainly does know Williamsburg and yet has the advantage of much experience in the outside world, holds the same viewpoint I do.

> Mr. Shurcliff has also visited the pyramids in Egypt and subsequently had published in the London Times an account of how these pyramids could be dressed up and made to look really nice.[68]

The dispute continued through the summer, with Downer and Clarke seemingly siding with the Shurcliff line.[69] In August, Williamsburg Foundation Historian W. A. R. Goodwin, a man respected by both sides, tried to develop a compromise route which emphasized the historic aspects between Williamsburg and Jamestown.[70] Goodwin's route, along with Peterson's and Shurcliff's, is shown on Figure II.8. Although the Goodwin Route was an effective compromise on the southern leg, running midway between the Peterson and Shurcliff lines on the Jamestown approach, it favored the west and north route around the city. Goodwin said the route around the city was "reached out of our conviction that Mr. Shurcliff is a supreme authority on urban and suburban traffic problems" and had the "additional advantage of approaching Williamsburg near the College which was erected six years before the removal of the capital."[71] However, with the respect of hindsight, it appears that the Foundation had an ulterior motive in promoting the Shurcliff route. During the early 1930s, the property of Bassett Hall, located east of Williamsburg, had been purchased as a private residence for Rockefeller.[72] Apparently Peterson's route ran directly through the property, and it seems the Foundation was unwilling to let the parkway disturb the property of their benefactor. However, although National Park Service correspondence notes that "the Bassett tract may be fraught with right-of-way problems,"[73] no direct references are ever made to Rockefeller's residence there. The Foundation, too, never officially put forward Bassett Hall as their reason for opposing the Peterson route.

In the meantime, the Virginia State Highway Department , trying to build the bypass around Williamsburg for Route 60 between Richmond and Newport News, had entered the fray. The inability of the National Park Service to decide on a parkway route was hindering the plans for their road, which would have to cross the parkway at some point. H. J. Shirley, engineer for the Virginia Department of Highways began writing letters to the National Park Service, deploring the delay and arguing that Route 60 was more important to the region than any "recreational or historic pleasure road."[74]

By October of 1931, the National Park Service gave in to the pressure from both Williamsburg and the State. They accepted the Shurcliff route and the BPR began surveying the Shurcliff line from Hubbard Lane to College Pond, just beyond William and Mary.[75] As part of this work, based on Shurcliff's suggestions, additional investigations were undertaken, regarding the feasibility of creating a divided parkway into Williamsburg and of building two underpasses, one for the C & O Railroad, and one for the State Bypass at Capitol Landing.[76] Furthermore, the National Park Service made the choice of the Shurcliff Route official by altering the park boundary under a new Presidential Proclamation, signed by Franklin Roosevelt on 22 August 1933. The map with the revised boundaries included in the proclamation is shown here as Figure II.9.

With the route apparently settled, work proceeded on extending the parkway into Williamsburg. In the late fall of 1931, the National Park Service attempted extend the Unit I grading contract to include the section from Hubbard Lane to the State Bypass, but funding was not available for the work.[77] Although plans had been developed, the work had to wait until 1936, after the completion of all work on the Ballard Creek to Hubbard Lane section. In the meantime, plans were developed for the two underpass structures. Both the C& O Underpass and the Capitol Landing Underpass, designed without interchange ramps, were intended to separate local traffic arteries from the Parkway's tourist traffic. Although Arthur Shurcliff is often given credit for the design of the structures, architectural drawings for both bridges were developed in Peterson'sLandscape Division Office. Their brick-clad, concrete arch design was an extension of the design ideas behind the drainage structures, and it is likely that Peterson, whose own alignment had in-

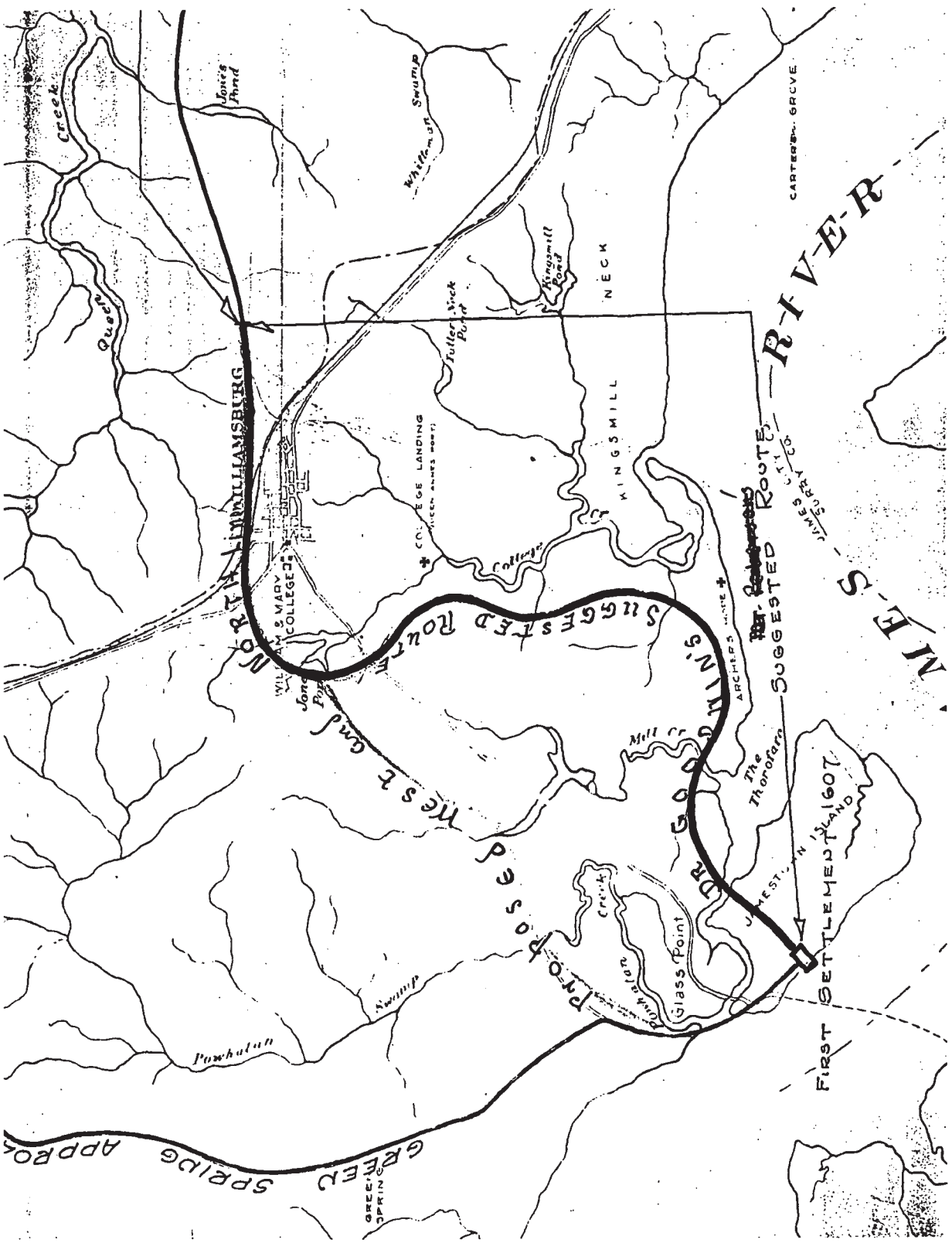


Figure II.8. " Dr Goodwin's Suggested Route," map attached to letter from Goodwin to Albright, 11 August 1931.The map was drawn by Peterson for Goodwin. National Park Service, Colonial National Historical Park.

cluded a railroad underpass, had concurrently and independently pondered the idea of underpass design for the parkway.

When the bridge designs were finished in 1935, rough grading of the road could begin. This was, of course, preceded by clearing the woods, work done by Civilian Conservation Corps (CCC) crews under NPS supervision. Along with the grading, construction began on the underpasses, with the arches first being poured and the masonry work occurring later. Begun in 1936, the two bridges were completed by the summer of 1937, allowing the paving contract for the extension to be awarded in January 1938. By the beginning of 1939, with planting between Felgates Creek and Williamsburg completed by the CCC crews, the new parkway was open all the way from North England Street in Williamsburg to a "temporary terminus" just east of Ballard Creek.

5. Yorktown Temporary Terminus

The Yorktown end of the Parkway did not pose the same set of problems as the Williamsburg end did. Funding, not politics, was the issue at Yorktown. The original NPS plan had proposed that the parkway extend from Ballard Creek along the York River Bluffs, access the main street of Yorktown from the northwest, and proceed southeasterly toward the Yorktown monument, beyond which the administrative headquarters and visitor facilities would be located.[78] However, with over a million dollars spent on the first section of parkway, it soon became apparent that funds for facilities at Yorktown would not be available in the near future. Therefore, in the late 1930s, it was decided that a temporary terminus would be completed not far east of Ballard Creek, at a point near the remains of a large, star-shaped fortification known as the Fusiliers Redoubt.

A large, open field located along the top of the York River Bluffs with a river view, the site was probably chosen because its view and historical significance provided an appropriate stopping point for tourists. In addition, the site's level character and an existing access road meant that little excavation or grading would be required to create a suitable parking area. Consequently a long, U-shaped turnaround was inscribed on the field, with the extant fortifications located close to the end of the U. The temporary road bed was graded, surfaced with gravel and then treated with asphalt; little effort was made to the road conform to the alignment standards of the rest of the parkway, and it was a crooked and steep stretch of road.[79] Because it was a temporary facility, the area was seeded with rye grass and little other landscape treatment was undertaken following its completion in 1937.[80] As seen in Figure II.10, a photograph of the terminus taken shortly after its construction, the site appears large and rather desolate, with a line of telephone poles situated between the parking area and the view over the bluffs. Figure II.11 is a view taken somewhat later, looking east toward Yorktown, with the remains of the redoubt seen on the left. By this time, the telephone poles have been removed, and park interpretive signs have been added to the scene. The area remained in use as the parkway terminus until the late 1950s.

6. Maintenance Operations

Maintenance operations began on the completed sections of the parkway almost as soon as they were completed, or, in some cases, even before they were completed. In the almost two years following the rough grading of the road, for example, CCC crews were often involved in regrading or shoring up eroding cut and fill slopes. Clearing underbrush along the graded right-of-way was another common activity, as was watering trees and shrubs following their planting, as seen in Figure II.12.

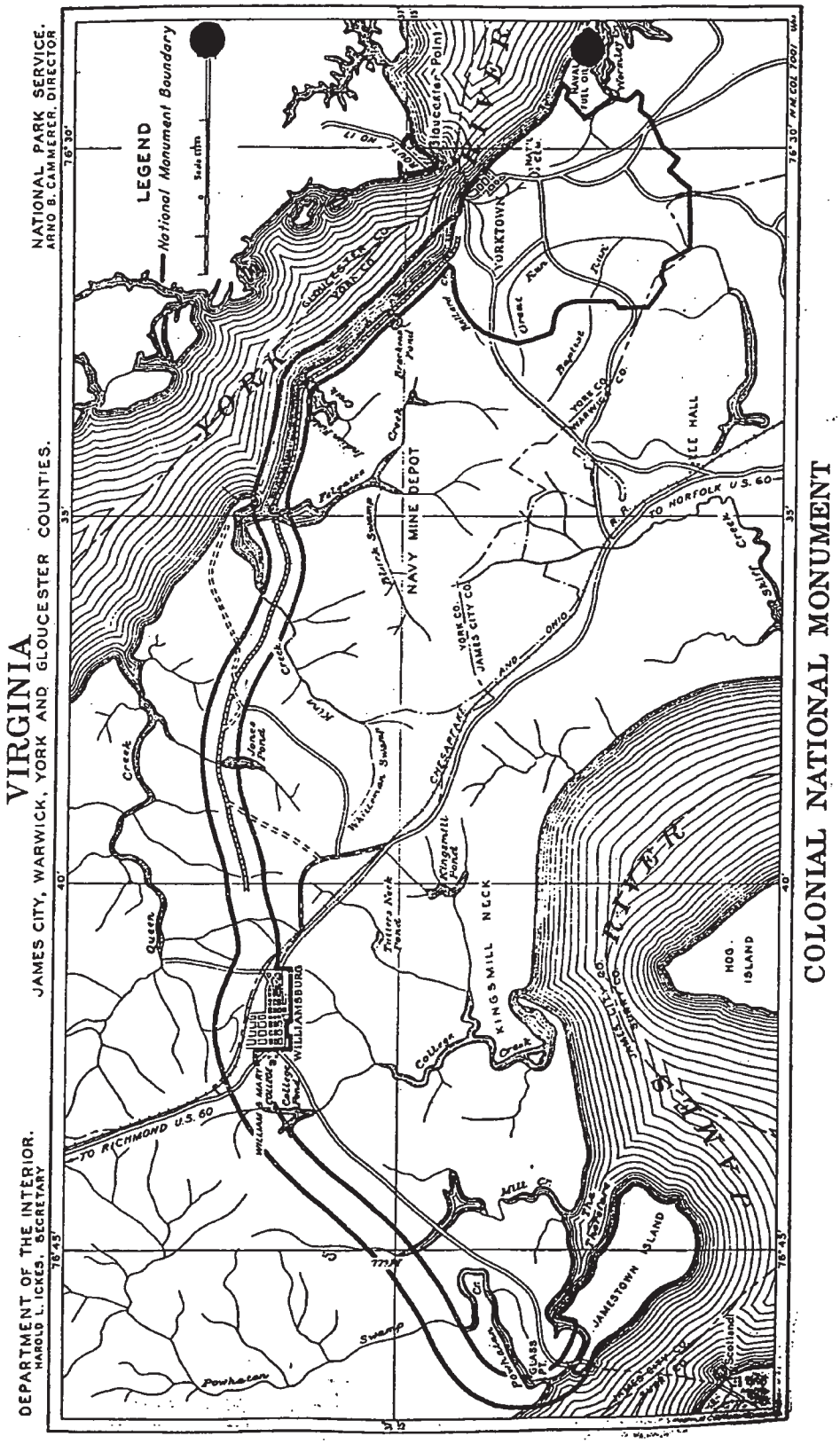


Figure II.9. Boundary Map of Colonial National Monument, Virginia, part of the Presidential Proclamation of August 22, 1933. U.S. Government Printing Office, 1933. National Park Service, Colonial National Historical Park.

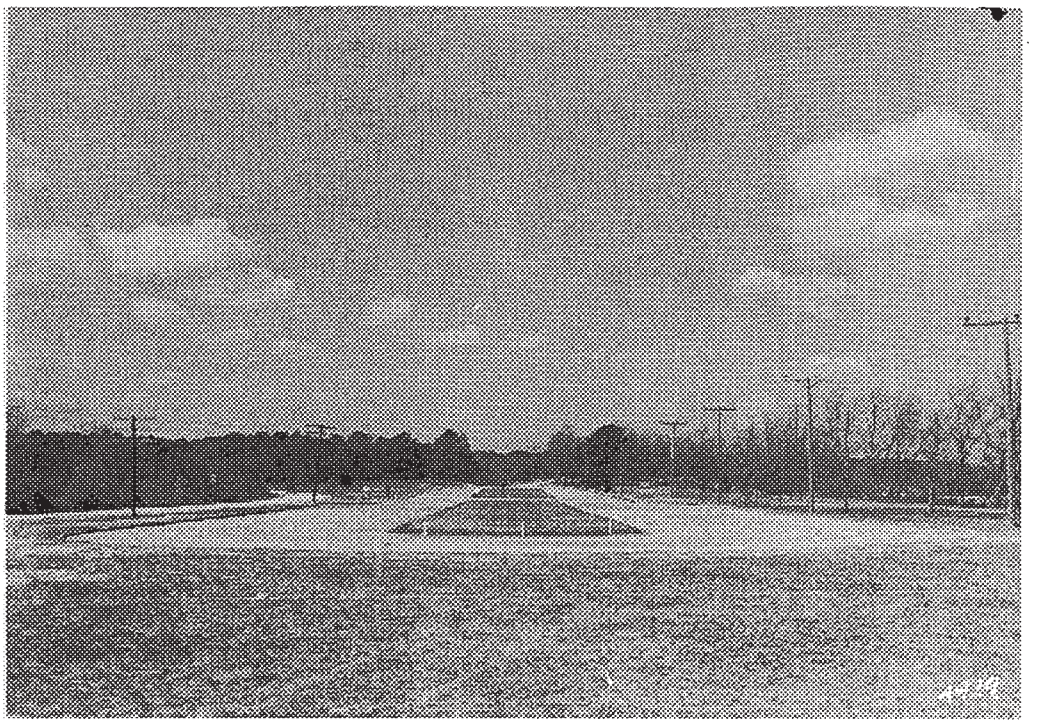


Figure II.10. "Temporary Parkway Terminus, Yorktown, looking toward Parkway," #4929. View east, circa 1937. National Park Service, Colonial National Historical Park.

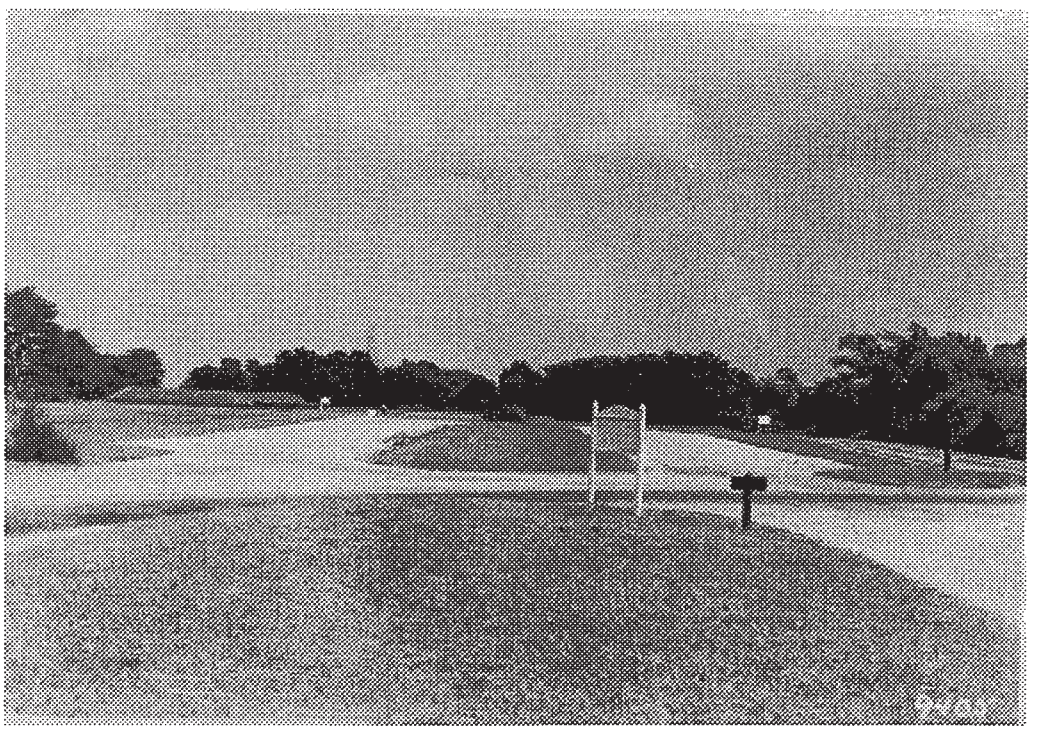


Figure II.11. "Relationship of Fusilier's Redoubt to End of Colonial Parkway,"#9405. View west, circa 1940. National Park Service, Colonial National Historical Park.

Maintenance also occurred on the completed roadway itself. Even as new sections of pavement began to be laid on the Hubbard Lane-Williamsburg section of the road, repairs to the old pavement began. Around 1937, it was noticed that certain slabs of the original pavement were beginning to sink relative to their neighbors, as shown in Figure II.13[81] this not only caused an unpleasant ride, but also separated the joints between the paving, causing additional problems as water collected under the pavement. The park response to this problem was to instigate a campaign of mudjacking, which apparently was a common engineering practice on roadsbuilt on hydraulic fill. Mudjacking involved pumping a mixture of soil, cement, and water through holes bored in the pavement, which raised the sunken slab until it met the level of the surrounding road surface.[82] When the mixture dried and solidified, a new, firm foundation was established under the pavement and held the road at the desired level. Mudjacking became almost an annual occurrence along the parkway route in the years following 1937.

Another avenue of maintenance for the park was the maintaining the York River shorelines, where wind and tides caused erosion. The edges of the hydraulic fill at Indian Field and Felgates Creek were particular problem areas, since the fill process had altered the drainage patterns in the area. Tides which had once spread throughout the tidal marshes were now channeled into the narrow streams under the bridges, and the wave action carved away at the grading around the bridge abutments. To remedy this situation, riprap was placed along the edges of the fill in these areas in 1937, as seen in Figures II.14 and II.15. Riprap--large pieces of stone placed along the edge of a drainage channel to accept and dissipate the carving action of water--is a common engineering solution to water erosion. At Indian Field and Felgates Creek, both natural stone and blocks of concrete acquired from the demolition of building in Yorktown were used to line the creek channels under the bridges. It was hoped that the wave action of the York River would dissipate on the new, rocky edge and prevent erosion. However, erosion in these areas would continue to be a problem throughout the parkway's history, prompting additional application of stones at later dates.

E. WILLIAMSBURG TO JAMESTOWN: PLANNING 1933-1949

1. Extending the Alignment, 1933-1939

a. Reconfirming Parkway Character

Following the decision in 1932 to proceed with the route around the north and west of Williamsburg, it might have been expected that the rest of the parkway alignment would simply fall into place, continuing along the Shurcliff line to Glass House Point and Jamestown Island. However, in early 1933 a new rash of questioning began about the routing of the parkway between Williamsburg and Jamestown.

Part of the continuing routing discussion occurred because of the opinions of the park's Superintendent, William Robinson, who made it known around 1933 that he was not happy with the design of the parkway. His feelings may partly have stemmed from the fact that he had not been involved with the initial layout of the road. It is also quite well-documented that Robinson, "a lone operator"[83] who had not previously worked for the National Park Service, had trouble getting along with his staff, and more importantly for the Parkway, the staff of the Landscape Division Office, Peterson in particular.[84] But there was probably a philosophical basis for his opinions on the parkway design as well. Robinson, a civil engineer with a strong interest in history, placed a much higher emphasis on the historic and commemorative aspect of the parkway than on the scenic aspect, since he felt its raison d'etre "transcend[ed] mere considerations of transportation."[85] Following the completion of the Ballard Creek-Hubbard Lane section, Robinson noted that since construction had begun "before the Monument was organized on a permanent basis and prior to the addition of an historical section to the Service" the routing of this section along the York River, had been an unfortunate necessity. In contrast, he believed that had it been routed inland, along road traces which had

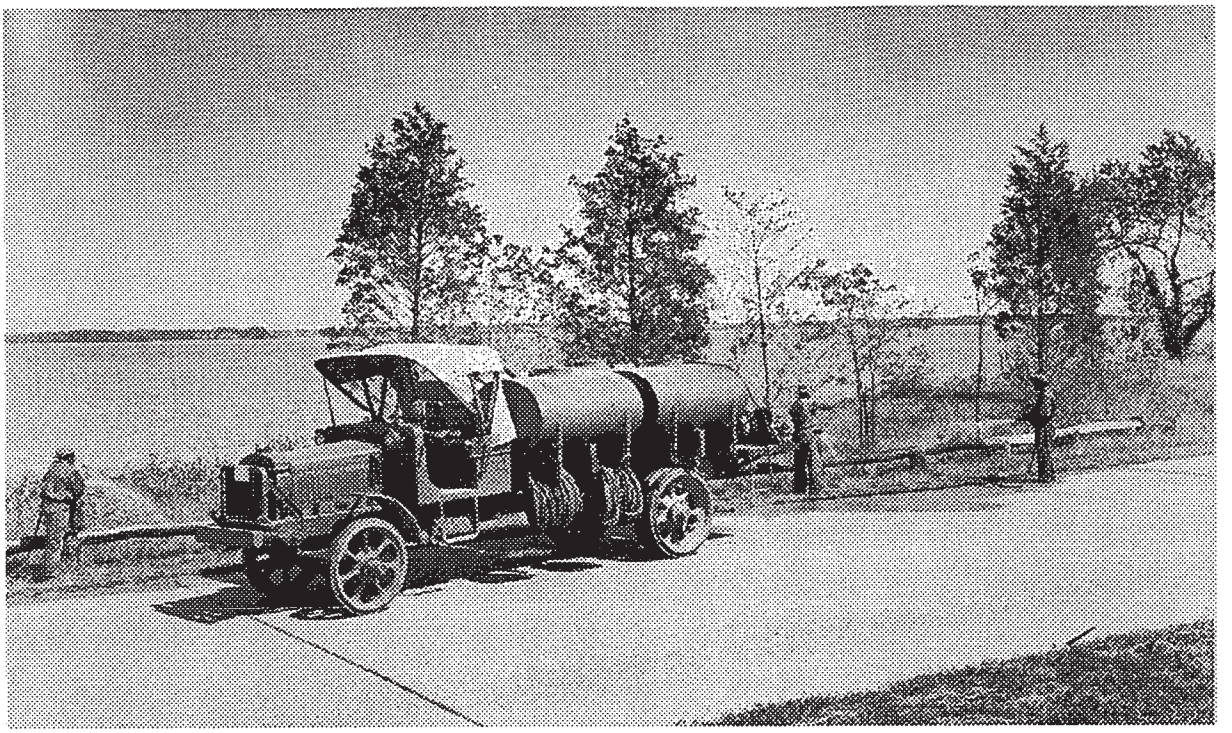


Figure II.12. "ECW--General and Watering Trees, [CCC]Camp #2--on Parkway,"#4035. No date; circa 1935. National Park Service, Colonial National Historical Park.



Figure II.13. "Separation of Lanes at Jones Pond Crossing,"#9739. No date; circa 1940. National Park Service, Colonial National Historical Park.



Figure II.14. "Parkway Station 216, Installation of Sea Wall at Indian Field Bridge," #6342. No date, circa 1937. National Park Service, Colonial National Historical Park.

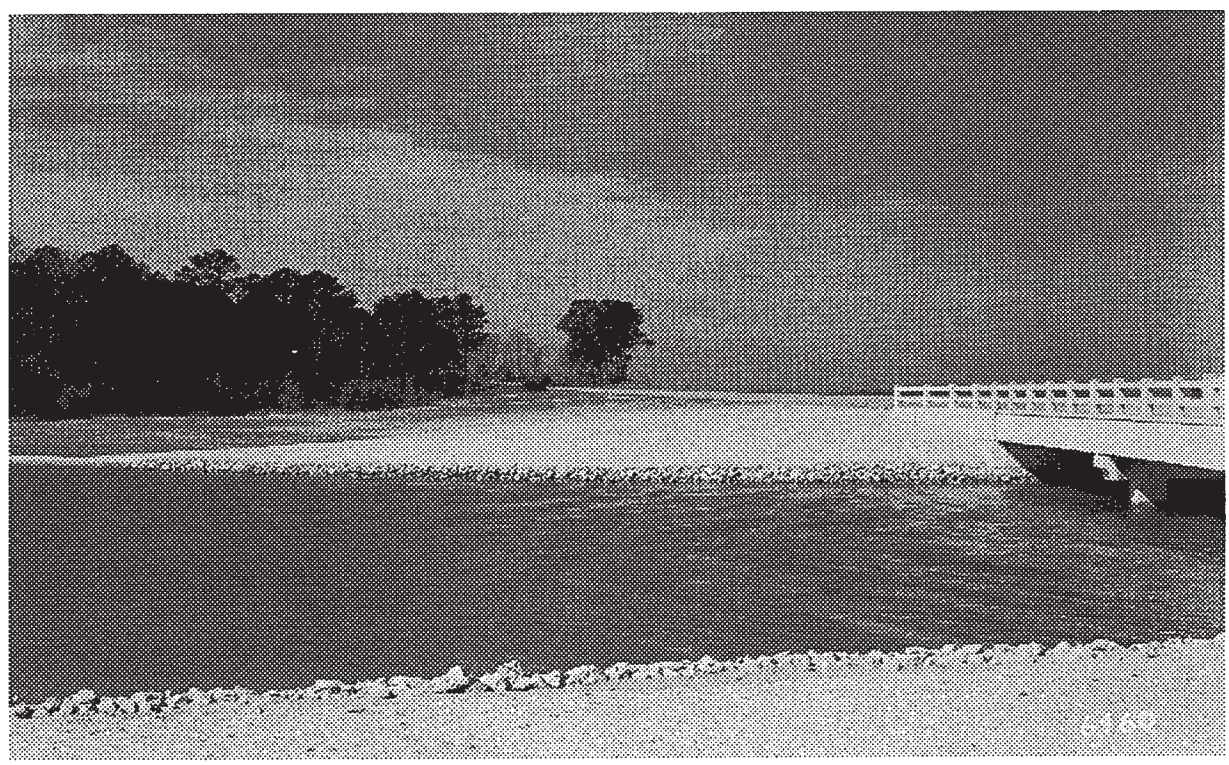


Figure III.15. "Parkway Station 216, Completed Sea Wall at Indian Field Bridge," #6460. No date, circa 1937. Finished sea wall.CNHP Photo 6460. National Park Service, Colonial National Historical Park.

"fallen into public disuse but [were] still travellable," such a parkway would have been "a distinct historical asset to the Monument."[86]

Unfortunately, he found the modern alignment of the parkway an even greater problem:

> The section of the Parkway from Hubbard's Lane to the Yorktown Cliffs was laid out and constructed along the lines of the most modern highway practices and consistent with the best Park Service traditions. The gradients are very low and the curves flat with resultant heavy cuts and fills. At the present time, therefore, the road structure dominates the landscape with an air of modernity which is foreign to the Colonial character ofthe Monument and is only slightly counteracted by the culverts and roadside structures having been done in Colonial type brick, laid in the traditional Flemish bond. [87]

However, he also thought all hope was not lost in trying to achieve a more "accurate" Colonial effect, if, in the final paving the alignments were "waved or wobbled a bit from the true, straight lines and flat curves."[88]

Robinson felt quite strongly that the errors made on the Yorktown end should not be repeated in the continuation of the road to Jamestown. After months of vocal lobbying, he was given the chance to lay down his opinions in a management document, the 1933 "Outline of Development."[89] In this document, Robinson describes all the historical sites his proposed parkway will touch upon as it follows "old roads, or traces thereof." Moreover,

> the gradients, alignment, and road sections of the Colonial roads will, in general be closely adhered to, as this section of the Parkway is not intended to be a speedway or pleasure boulevard, but rather a convenient way for the visitor to see the historic landmarks that lie along the road and to absorb the Colonial feeling of the landscape. To receive the maximum benefit and enjoyment of a trip through this picturesque and sacred area, the speed of the traveller should not exceed 25 miles an hour. The roadway will, therefore, not require the refinements of low grades and flat curves so characteristic of modern highway practices; and the sharper curves and steeper grades of former days will not be a handicap to the genuine sightseer.[90]

Despite the appearance of the idea in an official report, it appears the Robinson's desire to change the character and modern alignment of the parkway's second half was considered, but rejected by the National Park Service Administration. Called out from San Francisco to review the issue, Chief Engineer Frank Kittredge told Albright that the previous roadway design should be adhered to:

> There is much to be said in favor or routing the highway along the old historical routes as presented by Superintendent Robinson.
> However, after an analysis of the problem, 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 many minor historical points.
>
> With this in mind, my recommendation is that the previous plan be continued,--that is, that the road from Jamestown to Williamsburg be a high standard, modern parkway.[91]

The matter of the road's character was further settled when Robinson was removed from the Superintendency,[92] since his replacement, former park historian B. Floyd Flickinger, was less inclined to lobby the issue. However, the discussion about the routing between North England Street and Jamestown continued, despite the revision of the park boundary along the Shurcliff line. Doubts about the appropriateness of the western route around the city and the fact that the Shurcliff line completely avoided the James River shoreline probably fueled the continuing studies of the route.[93] Then, in the spring of 1936, the roadblock

to determining an alignment to Jamestown was removed with the generation of the idea to tunnel the parkway under the Restoration.

b. Planning the Tunnel

Credit for the tunnel idea has been difficult to ascribe to any single individual. The first references to it occur in the Superintendent's Monthly Report for April 1936 and in a 1936 letter from Flickinger to Demaray, in which Flickinger mentions that Goodwin was responsible for the idea:

> 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.[94]

Sidney Shurcliff, the son of Arthur Shurcliff, recalls that his father, the Foundation's landscape architect, came up with the idea in an effort to smooth the conflict over the east or west routing around Williamsburg:

> My father watched with apprehension as the battle lines were drawn. There had to be a compromise, he felt, or there would be disaster. After some weeks of intense thought he had a plan drawn up in our office showing the parkway passing through Williamsburg just where Peterson wanted it, *except it was in a tunnel*, a third of a mile long.[95]

Although no other information has been located to confirm either Goodwin or Shurcliff as the idea's originator, most secondary sources report that both sides, including Shurcliff and Peterson, quite quickly fixed upon the idea as the solution to a long-standing problem.[96] The tunnel, in effect, eliminated the both sides' major sticking points. For the Foundation, the tunnel removed the parkway almost entirely from the Restoration; it would be out of sight and out of mind. For the National Park Service, the tunnel, running almost due south under Williamsburg, made a link to the scenic James River shoreline much more feasible. It appears the matter was finally settled in May of 1936, when Harland Bartholomew, a St. Louis landscape architect and traffic planner working on Williamsburg's traffic problems, was called in to study the matter. In a meeting with the NPS and the Restoration, Bartholomew presented a study of his findings, in which he agreed that the tunnel was the best solution. From a traffic control standpoint, Bartholomew noted the tunnel route had major advantages: First, it created one main entrance to the city, second, it provided direct access to the Williamsburg business district up Henry Street, and third, it required the acquisition of less right-of-way through the city.[97] Although Bartholomew was worried that a tunnel might detract from the aesthetics of the parkway, this did not seem to be a major concern of either the National Park Service or the Foundation.[98]

Both the NPS and the Foundation endorsed Bartholomew's recommendations for the tunnel. Following the meeting, the Bureau of Public Roads examined two potential routes leading from the C & O Underpass, then under construction, through Williamsburg:

> Assuming a tunnel route, the Bureau has made a preliminary survey of such a route which runs southwesterly from the C & O Underpass across Town and comes out in the ravine between the Insane Asylum and the new Court House and west of the new Hotel.
>
> An alternate tunnel route appears to be feasible which runs southeasterly from the C & O Underpass and would probably provide a shorter tunnel. It comes out in a ravine east of the Hotel site and west of the Bassett Hall property. This route may require more right-of-way acquisition and possibly would go under an old house or two.[99]

In both cases, the tunnel's "most logical route" was directly "under the area of the Restoration."[100]

But fixing the tunnel route also required the finalization of the parkway route to Jamestown. In the week following Bartholomew's presentation, Chief NPS Architect Thomas Vint made a "complete study of the area on the ground" and made a recommendation to Arno Cammerer, who in 1933 had succeeded Albright as Director, on the final routing for the parkway:

> The routing for the parkway from the parkway Terminal at Jamestown Island [should] follow the existing road (Route 31) for a distance of about one mile thence along the shore of the James River to Kings Mill Neck, and thence across to Williamsburg. This route gives more of the James River and the best view of Jamestown Island. . . . This is along the general route of the first line recommended for the parkway between Jamestown and Williamsburg, except that it would connect with a tunnel rather than a crossing east of Williamsburg. . . . I discussed the question of this general route with Mr. Chorley of the Restoration and with Superintendent Flickinger, and I believe neither one of them offered any particular objections.[101]

Vint attached a map of this route to his memo to Demaray, and it is shown here as Figure II.16. The map shows the two proposed tunnel routes and a proposal for relocating the Jamestown Ferry to Glasshouse point, in addition to the route to Jamestown. Somewhat ironically, as Vint noted, his proposed route was essentially that initially proposed by Peterson, except for the crossing on the east end of Jamestown Island. Although no official action was apparently taken on the routing, it clearly influenced later discussions, since it essentially embodies the constructed parkway route.

By the end of the 1936, surveying for the tunnel had commenced. However, despite the new planning activity, the National Park Service made no announcements of their intentions for constructing the tunnel and continuing the parkway, even as the C & O and Capitol Landing underpasses were completed in the summer of July of 1937. The reasons for the silence is not exactly clear, although restricted federal funding had, at this point, slowed design and construction work in both the park and on the parkway significantly. Rumors about the eventual route of the parkway through the Williamsburg abounded, however, and eventually the tunnel idea was leaked to the local press. Flickinger was concerned that the National Park Service would be caught in a public relations maelstrom over the tunnel with Williamsburg citizens tired of having a city that looked like a construction site. He wrote to Director Cammerer, informing him of this problem:

> As you well know, in addition to the desire of very prominent persons in this section to have the road completed into Williamsburg, there is also tremendous pressure being brought to bear to have the road completed to Jamestown. Any discussion of this part of the project naturally raises the question of how we are going to get from our present terminus at North England Street to Jamestown. 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. As you know, the tunnels have been proposed, and very strongly advocated, by the Williamsburg Restoration. . . .
>
> It is very evident to me, from my recent experiences that the tunnel proposal will become the subject of controversy between the Williamsburg Restoration and the citizens of Williamsburg. I feel that it would be very detrimental for the National Park Service to become involved in this matter because the minute we subscribe to the tunnel as the solution of our Williamsburg Parkway traffic problem, I feel that we will suffer considerable loss of public support, some of which is very essential to this area.[102]

Flickinger went on to state that he thought the tunnel idea should be shelved until the local community was less volatile, stating that the National Park Service should:

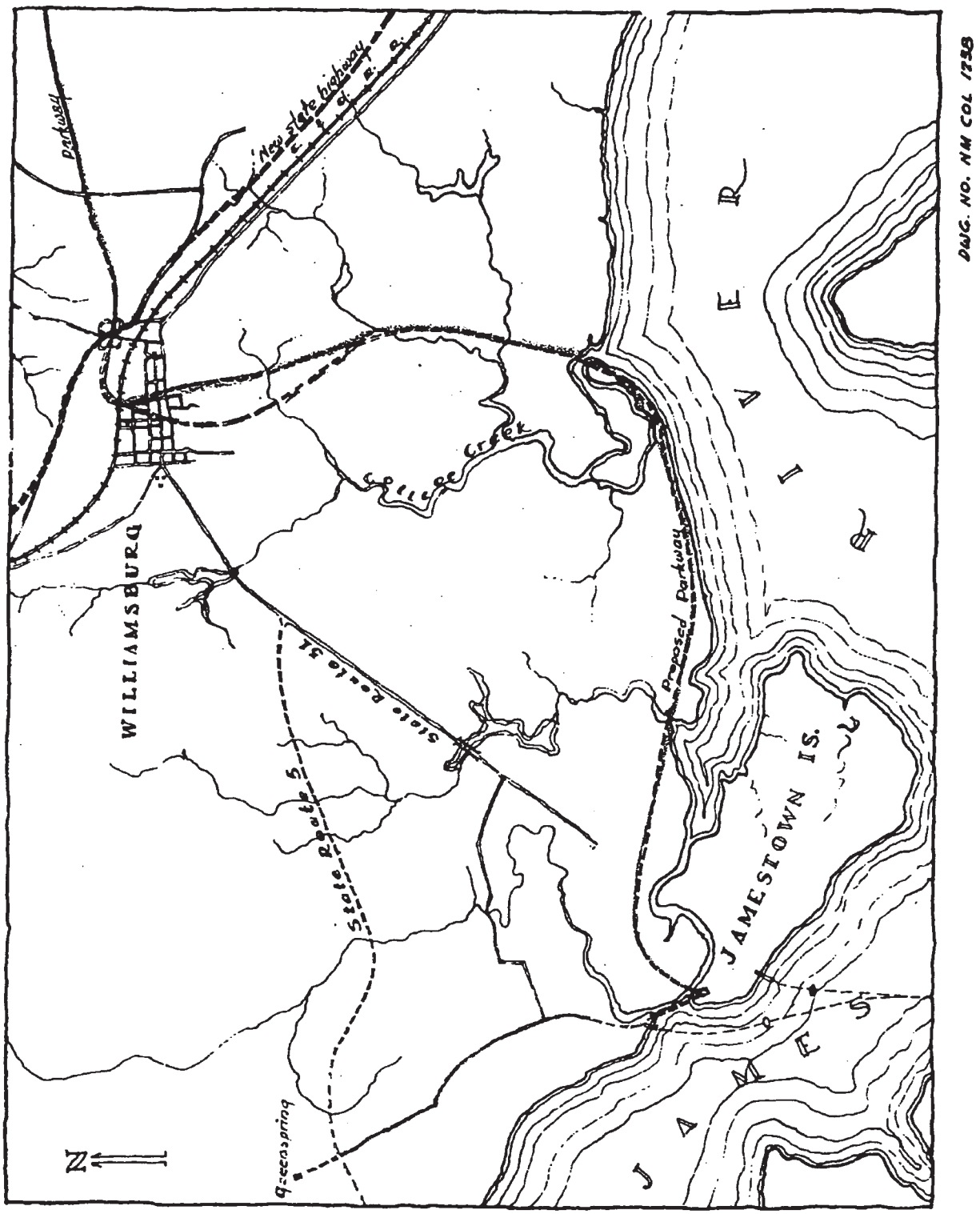


Figure II.16. Map showing Vint's proposed tunnel routes and parkway route, attached to memo of June 3, 1936. National Park Service, Colonial National Historical Park.

> complete the Parkway to North England Street and allow the question of traffic in Williamsburg to be suspended for an indefinite period for further study, then resume the Parkway at some point near the Williamsburg Inn which will be agreeable to the Williamsburg Restoration, and continue to Jamestown. The advisability and desirability of the tunnel should then be made the subject of a study over a period of years and then, if found necessary, could be constructed.[103]

Flickinger's concerns were ignored, and planning for the tunnel continued. In December of 1938, a firm tunnel alignment was established at a meeting in the field between Jay Downer and Arthur Shurcliff from the Williamsburg Foundation, Vernon R. Ludgate and W. G. Carnes from the National Park Service, and William Smith for the Bureau of Public Roads.[104] The preferred tunnel alignment was the eastern route shown on Figure II.16. It was approved by the NPS in 1939, allowing lands acquisition for the tunnel right-of-way and tunnel design to proceed accordingly.

c. Finalizing the Route to Jamestown Island

In 1937, when the park's name was changed to Colonial National Historical Park, the proposed park boundary was once again revised to permit the acquisition of park lands along the James River shoreline, in accordancewith Thomas Vint's 1936 recommendations on the parkway route.[105] The congressional bill authorizing these changes also authorized a change in the acquisition of lands for the parkway. In contrast to the two earlier bills which specified a right of way of 500 feet, the new congressional bill specified that the parkway right of way between Williamsburg and Jamestown would *average* not more than 500 feet. This change in thinking was probably partially based on cost, since funds were tight. The Acting Chief of NPS Planning W. G. Carnes noted that "there may be stretches where a right-of-way of 300 feet would suffice, where as there will be other places where in order to acquire all the land between the roadway and the water front, it may be desirable to have a right-of-way of say 600 or 700 feet."[106] Although the expanded right of way would prove effective in some locations, the narrower right-of-way in others would later prove to be a problem as development encroached on the parkway.

By the summer of 1938, the BPR was back in the field surveying, flagging the centerline, and marking the potential right-of-way limits for the parkway in the woodlands south of Williamsburg.[107] Smith and Spelman of the BPR were now collaborating primarily with Resident Landscape Architect R. A. Wilhelm, as they scouted the best route. Discoveries such as the "Great Oaks" near Paper Mill Creek, shown in Figure II.17, influenced the route. By 1939 the general alignment of the parkway between Williamsburg and Jamestown was set. It would move south from Williamsburg, through the "valley" of low topography of Paper Mill Creek and on to Halfway Creek, which it would cross via a bridge. From there, the parkway proceeded to the mouth of College Creek, which it would cross on a roadbed of hydraulic fill. The parkway would then continue along the James River shoreline. Only one question remained to be answered: How would it access Jamestown Island?

The original Peterson line had approached the island over the Thorofare, but this route no longer coincided with the Park Service's new desire of "controlling the entire waterfront between Mill Creek and Jamestown Island."[108] The route had also been rejected by NPS engineers, who thought:

> It does not seem practicable to locate the parkway across the wide-open channel between the mainland and Jamestown Island. Such a roadway would obstruct the natural waterway and would always be a source of very heavy maintenance cost just as long as the road was kept in operation.[109]

Two alternatives were under consideration. The first was to use the route shown in Vint's map, Figure II.16. This route used the existing access road (Route 31), through the swamp just east of Powhatan Creek, as shown in Figure II.18, an aerial view of Jamestown island taken before the parkway was constructed.



Figure II.17. "Large Oaks in Right of Way of Parkway Location between Williamsburg and Jamestown," #7096. No date; circa 1937. National Park Service, Colonial National Historical Park.

The second alternative was to follow the suggestion of the Shurcliff line, which advocated recreating the historic connection between Glasshouse Point and the island (shown as a dotted line on Figure II.18). Although this access line was located "more or less along the line which was traveled by the early residents of the island," it was initially felt that "to endeavor to restore this strip of land would involve great expenditure and heavy maintenance forever."[110] However, the historical idea was compelling, and by the summer of 1939 there was a

> unanimous decision to recommend an alignment which would carry the location of the Parkway to Glass House Point and from there to a parking area on the Jamestown Island by way of a two lane road over an hydraulic fill which will recreate Jamestown to a peninsula as it was in historic times. . . .It was believed that the recreation of the physical aspect of Jamestown Island, i.e., the construction of a fill which would again make it a peninsula, and the elimination of all commercial traffic from the Island, are desirable from an historical standpoint, and also in consideration for the possible future development in the vicinity of the early Colonial settlement.[111]

Attached to the memorandum approving this decision was a map indicating the route of the parkway. Thus, although it occurred in a piecemeal fashion over nearly ten years, by 1939, the route of the parkway had been essentially decided upon. Given the length of the parkway and the cast of characters involved in the decisions over the years, achieving the routing was no small feat.

2. Planning and Construction during and after World War II, 1939-1949

Having a plan, however, was not the same as having a parkway, and there were many hurdles yet to overcome. Lands for the right of way still had to be acquired, and political pressures and public opposition had also increased in the surrounding communities. The Park Service would soon be paying base damages to land owners, in addition to the land value, when acquiring the right of way.[112] Other technicalities of the surrounding land use would have to be worked out; for example, it was recognized that the recreation of the Jamestown isthmus would require the relocation of both the Jamestown-Scotland Ferry and a three-mile portion of Virginia State Highway No. 31.[113] Funding sources from within the Park Service were also less than they had been in the early thirties, with the result that construction on the parkway met a general slowdown. Furthermore, after 1939 human and material resources which once fueled public construction projects nationwide were increasingly shunted into the industrial and military activities of World War II. Colonial National Historical Park, due to its proximity to the Naval Base, was particularly affected by the war effort. In the late 30s and early 40s, the park's CCC camps were slowly disbanded, resulting in the loss of an important parkway labor force. Shortly thereafter, a Naval base camp was established on park grounds, and military training occurred on the parkway. Vegetation along the completed end of the parkway was cut down for utility lines, and eventually, the parkway was completely closed to public traffic between 1942 and 1945. Because of these events, little physical work was accomplished on the parkway between 1939 and 1949. The major efforts during this decade are outlined below.

a. Land Acquisition

As more detailed alignment studies of the Jamestown route continued, the acquisition of lands for the right of way became an increasingly important issue, one which would make or break the NPS desire to control the scenic James River shoreline. Land acquisition activities proceeded under the supervision of J. W. Rader, the NPS land agent, and T. W. Clark, a land appraiser from Richmond. After the tunnel right-of-way through Williamsburg was acquired (despite tensions between the city of Williamsburg and the Park Service), they initiated a taking for the right of way between Scotland Street and College Creek. Next, they focused on the James River shoreline. Particularly problematic was gaining the right-of-way through the lands of the National Memorial to the Progress of the Colored Race in America (NMRPCA), a group led by the Elder Lightfoot Solomon Michaux. Hoping to establish a self-sufficient black community on the lands where he believed the first Africans had been brought to the colonies, Michaux had purchased 500 acres along the James River. He was not interested in selling his lands to the Park Service. In August of 1940, after Michaux rejected an offer for the right of way, the government initiated condemnation proceedings, with the result that 11 acres were transferred to the Park Service. Another 19 acres were eventually received from the NMPCRA and the affiliated Gospel Spreading Association of God in 1946. When these takings were combined with the takings from the Benson-Phillips Company, Inc. in 1943, most of the right of way along the James River had been acquired. When, in 1947, the 4-H Club campsite and Dimmick tract were acquired in the vicinity of Glasshouse Point, the purchase of right-of-way was finally completed.[114]

b. Construction Activities

The major construction activity of the late 1930s was the construction of the tunnel. By 1939, drawings had been completed for its construction. In keeping with the design of the other parkway structures, the portals of the concrete tunnel were clad in Colonial brick. However, the "Colonial" facade hid a major, modern engineering effort --the construction of the tunnel's 30-foot wide concrete arch structure. Begun at the southern end in 1940, the tunnel was not completed until the spring of 1942. The project was plagued by poor supervision, frequent cave-ins of the trench around the arch, and unavailability of workers and materials due to World War II. As shown in Figure II.19, the tunnel construction created a large gash through the middle of Williamsburg, hindering traffic despite attempts by the Park Service to sequence the work for minimal disruption.

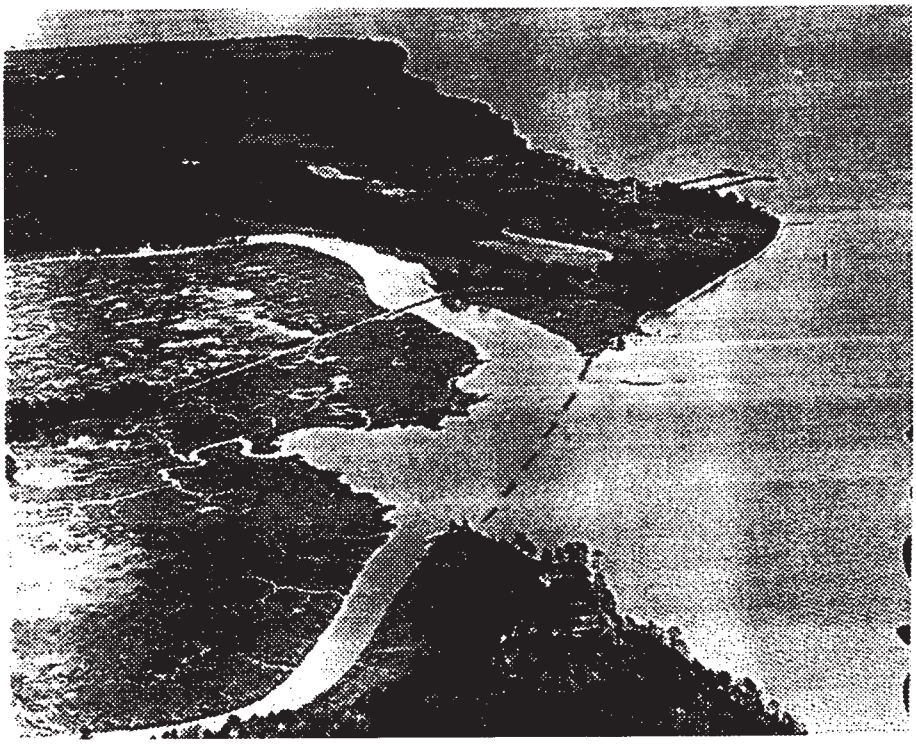


Figure II.18. "Aerial view of Jamestown circa 1948," #16375. Dotted line by authors. National Park Service, Colonial National Historical Park.



Figure II.19. "Progress Photo of North Portal of Williamsburg Parkway Tunnel,"#9062. No date, circa 1941. National Park Service, Colonial National Historical Park.

Although its final inspection occurred in September of 1942, the tunnel was not immediately opened for publictravel. Funds for paving the tunnel had not been included in the original appropriations for the construction. Though Superintendent Elbert Cox lobbied the NPS Director for additional monies for paving, they were not forthcoming.[115] Instead, gravel was laid down as a temporary surfacing and barricades were placed in front of the portals. In 1949, following the installation of paving, lighting and a ventilation system, the tunnel finally opened.

The other major construction effort undertaken during the pre-war and war years was the construction of Halfway Creek Bridge. Included as part of the alignment studies worked on by R. A. Wilhelm in January of 1940, the design of the bridge, executed by the Public Roads Administration (formerly the BPR) was clearly based on the concrete bridges previously constructed at Kings, Indian Field and Felgates Creeks. Actual construction work began in November 1941 after the CCC crews cleared the parkway alignment to reach the bridge site, as shown in Figure II.20. The following spring, piles were driven for the bridge, though difficulties were encountered due to the variation of soils in the marsh below. The marshy conditions also hampered the setting of the concrete footings. Progress was also slowed by a regional loss of workers as they enlisted in the war effort, and the bridge was not completed until December of 1942, when final grading around the abutments took place.

The construction of Halfway Creek Bridge marked the end of major activity on the parkway construction, as World War II commanded the entire nation's attention. Because of the war, additional grading of the roadbed to the bridge was deferred, and the structure, isolated in the woods, became known as the "bridge to nowhere," as is seen in Figure II.21 [116] More than a decade would pass before the parkway would be constructed into the woods to meet it.

c. Continued Planning

With war time enlistment, park staff experienced a high turnover at this time. A new superintendent, Jean Harrington, and a new resident landscape architect, Walter Sheffield, were in place on staff by 1942. Yet despite staff changes, and diminished prospects for funding, planning of a minor nature continued. This included investigation of the riverbeds at College and Mill Creeks for their suitability for dredging, [117] and some minor archeological work along the proposed new parkway route.[118] Minor refinement of the alignment also continued.[119]

One of the more interesting planning ideas generated during this time was the idea of creating a bicycle path along the new section of the parkway. The idea was originally suggested by Kenneth Chorley and E.G. Swem of the Williamsburg Foundation in 1942.[120] For the next four years the inclusion of this feature of the parkway was discussed in correspondence, though it never appeared on any drawings. It was generally described as either a concrete-surfaced path or a dirt-surfaced path separated from the roadway by a strip of turf. The Williamsburg Foundation was particularly enthusiastic about the bike path because of the recreational possibilities it provided. They enlisted the support of the College of William and Mary in lobbying the Park Service for the bike path.[121] However, the NPS, particularly the Regional Office, was not as enamored of the project, for varied reasons. First, it was felt that the topography leading in and out of Williamsburg was too varied and steep; second, it was not clear that the bike path would "justify the expense of construction;" and third, the Halfway Creek Bridge had no provision for a bicycle lane.[122] The Regional Director wrote:

> My own comment is that a bicycle path will likely be an expensive investment which will not be used to any extent by park visitors. It will require additional design to the parkway which cannot be done at a reasonable cost. Its use very likely will be restricted in a great part to students of William and Mary College at Williamsburg.[123]

It appears that such opposition to the idea slowly killed it, although references to it continue into 1946. Although the idea would be raised again, in the 1970s, it would have little immediate impact in the completion of the parkway.

Following the conclusion of the war and the reopening of the parkway in 1945, planning resumed slowly. In addition to continued work on land acquisitions as noted above, alignment studies continued, with some larger efforts occurring near the end of the 1940s. In 1948, a new underpass designed by the Virginia Highway Department was completed at Route 168, east of Capitol Landing. This construction marked the beginning of increased road development in the area, a result of local population and economic growth. The new underpass, though not designed by the Park Service, was another brick-faced concrete arch, in keeping with the other structures along the parkway.

1949 marked a year of increasing activity, beginning with the springtime opening of the tunnel, an event that was greeted with some delight by the citizens of Williamsburg.[124] Sheet 2 (located Appendix A) is an overall map of the parkway, showing the extent of the parkway in 1949, following the opening of the tunnel. Drawings for rough grading between Williamsburg and College Creek were also completed, and work proceeded with the Army Corps of Engineers on the investigation of the use of hydraulic fill along the James River. Most interesting, however, was the visit in 1949 of landscape architect Stanley Abbott. During this visit, Abbot, who had been superintendent at the Blue Ridge Parkway and in charge of its design and construction, toured the park and parkway and produced a study for the development of the Jamestown terminus. This work heralded his work on a much larger project at Colonial National Historical Park in the coming years: The completion of parkway construction.

F. WILLIAMSBURG TO JAMESTOWN: THE COMPLETION OF THE PARK WAY, 1950-1965

1. Mission 66 and Stanley Abbott

Despite the increasing activity on the parkway in 1949, efforts to complete the parkway took some years to gain momentum. This was due, in part, to the minor disarray the entire National Park Service found itself in following the war, as it searched for a new direction, one different from both the years of productive Public Works projects and the years of pinched war-time appropriations. In addition, the advent of the Korean War in 1950 put a slight damper on Park Service activities as the country focussed once again on a foreign war.[125] Yet within the NPS there was some impetus by the 1950s to complete the parkway begun more than twenty years earlier, and funds were shunted toward Colonial National Historical Park when possible. For example, in 1952, construction resumed when the short section of the parkway from the southern tunnel portal to Tazewell Hall Avenue was graded and paved with a temporary asphalt finish under the supervision of William Smith and the Public Roads Administration.[126]

Efforts, however, did not truly accelerate until Stanley Abbott became Superintendent of CNHP in 1953. At this point, the park had realized that changing conditions in the surrounding communities were putting increased pressures on the park and parkway. The increased military activity had increased the local population; new industries, such as a large oil refinery on the York River, were moving into the area; and new traffic patterns, such as the creation of the Coleman Bridge, were being established.[127] The park and



Figure II.20. "CCC Clearing Operations North of Halfway Creek, March 1941,"# 8680. National Park Service, Colonial National Historical Park.

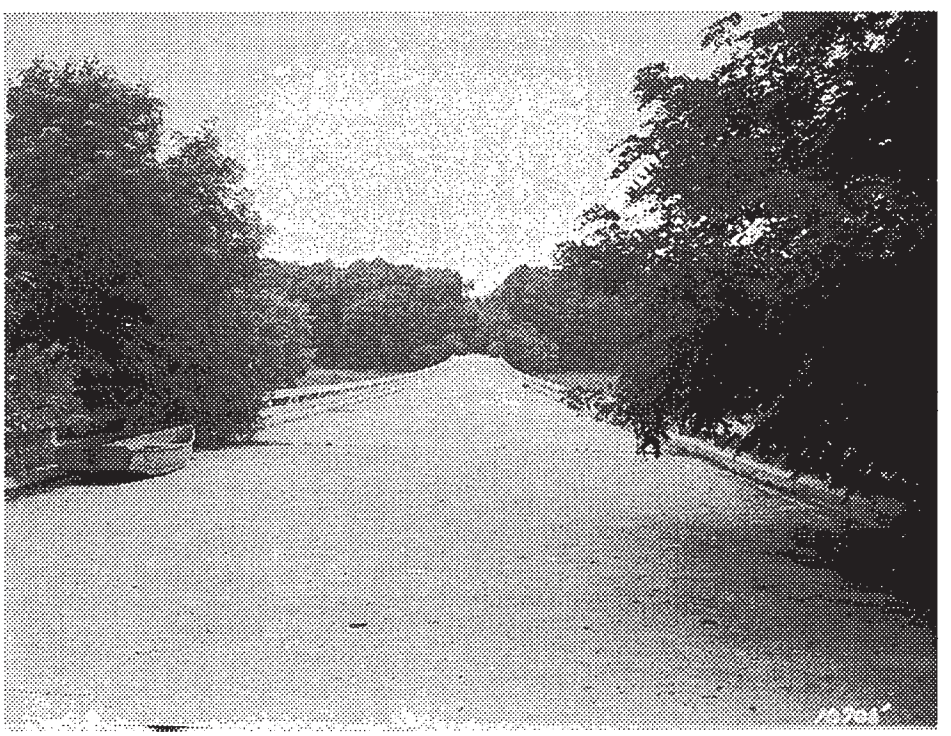


Figure II.21. View of completed Halfway Creek Bridge, circa 1940, #10705. National Park Service, Colonial National Historical Park.

parkway needed to be completed if they were to be integrated into the surge of development. Furthermore, increased automobile tourism, fueled by post-World War II prosperity, was stretching the use of existing park facilities. Abbott, known for his abilities to manage large and difficult projects, was brought in to invigorate the process of upgrading the park.

The choice of Abbott for Superintendent also signaled the importance of completing the parkway in the scheme of park development. Abbott was the National Park Service's resident parkway expert. Abbott had gained parkway design experience while working under Gilmore Clarke in the Westchester County Park Commission. In 1935, when he moved to the National Park Service and began work on the Blue Ridge Parkway, his work came into its own. The design of the Blue Ridge Parkway turned out to be a pioneeringeffort in parkway design, since a project of such length and complexity had heretofore not been attempted. The construction of the road, which covered hundreds of miles of mountainous terrain, was a difficult process, requiring not only technical design skills, but also public relations skills, as thousands of acres of right-of- way had to be acquired. The process resulted in the creation of new development technique, the scenic easement, in which landowners were compensated not for their land, but for its use and for its maintenance in traditional, scenic land uses. Abbott was pulled away before the completion of the Blue Ridge Parkway to oversee the design of the Mississippi River Parkway. Although the latter project was eventually concluded to be unfeasible, and abandoned, Abbott's reputation had in no way been diminished when he became Superintendent at Colonial National Historical Park.

Abbott's skills in managing large projects would soon be put to good use, as two events merged in creating great impetus for the completion of the parkway. The first of these was the impending 350th Anniversary of the Jamestown Settlement in 1957. By 1954 both a state and a federal commission--the Virginia 350th Anniversary Commission and the Jamestown-Williamsburg-Yorktown Celebration Commission--for organizing celebration events and facilities had been established. The commissions, and a related non profit corporation, the Virginia 350th Anniversary Corporation, planned a large slate of pageantry and capital improvements for the entire region. The redevelopment work at Colonial NHP--the building of the Jamestown and Yorktown Visitors Centers and the completion of the parkway--were considered to be an important element of the work, to be funded by the federal government. Although a good portion of this funding--$2,076,974.33--came from special federal appropriations for the park and the celebration, the vast majority of the $7,543,640.59 spent on park and parkway construction came from a source unrelated to the anniversary events.[128] This source was the Park Service's own massive redevelopment program, Mission 66, the other great force behind the completion of the parkway.

Mission 66 was the brainchild of Park Service Director Conrad Wirth, a landscape architect who had taken that position in 1951. Wirth realized that the Park Service was insufficiently staffed and funded for the increasing numbers of visitors who were flocking to parks as they put their new-found post war leisure time and prosperity to use. By 1955, the national park system was receiving 50,000,000 visitors annually, in facilities that had been planned for only 21,000,000, and Wirth was tired of the Park Service's constant "patching, and then placing patches on the patches."[129] He therefore launched Mission 66, a ten-year campaign to improve the national parks by the year 1966. Wirth estimated that $786,545,600 would be spent along the way.[130]

With its development plans in hand in 1955 because of the impending celebration, Colonial NHP was well-positioned to receive the first of the Mission 66 funding to reach the parks. Although the first construction contract on the Parkway extension--the bridge over Powhatan Creek-- had already begun with other funding in August of 1954, the balance of the parkway construction would benefit from Mission 66 funding. More than 4.5 million dollars would be spent on parkway construction alone in the years between 1954 and 1958.[131]

In addition to Abbott, the other individuals largely responsible for the completion of the parkway were William Smith and H. J. Spelman, who continued on in their roles of resident engineer and supervisory engineer for the Bureau of Public Roads. Spelman was at this time stationed in the Roanoke office of the BPR and supervised from a distance, while Smith was the on-site engineer, living near Jamestown in NPS buildings.[132] Two new NPS landscape architects, Robert Steenhagen and Warren Lewis also joined the design team. Steenhagen, who transferred into the park in 1954, was Colonial NHP's resident landscape architect, replacing Nelson Royal, who had held the position in the early 1950s.[133] Warren Lewis, a representative of the Eastern Office of Design and Construction, filled the role that Peterson had played during the 1930s, and had a field office set up in the area. Lewis, like Abbott, also brought his experiences working on the Blue Ridge Parkway to Colonial NHP. In addition, Edward Zimmer, who had been Colonial NHP's resident landscape architect in the 1930s, was also involved in the project, reviewing it at a higher level now that he had been promoted over the intervening years to Thomas Vint's old position as Chief of the Eastern Office of Design and Construction.

In contrast to the work in the 1930s, the completion of the parkway was crammed into a relatively short period of time between 1954 and 1957. Although much of the impetus behind the speedy completion of the work was due to the impending Jamestown Anniversary Celebration, the relatively quick completion of the project in comparison to the 1930s may also be attributed to other factors. First, by and large the route and alignment of the Jamestown section had been absolutely decided upon by 1954, eliminating the amounts of time spent in the 1930s on alignment studies. Only a few areas were sticking points, and these were relatively minor in contrast to the machinations that occurred around the Williamsburg alignment. Second, there were few major design decisions to be made. Following Flickinger's departure in 1933, the modern appearance of the road's alignment was no longer questioned, eliminating the discussion of the road's appearance. The selection of Abbott, bred and raised on modern parkway alignments, was a further confirmation of this, if one were needed. Although no formal statement of his intent has been located, Abbott was also, apparently, a proponent of the design vocabulary of brick culverts, brick overpasses, hydraulic fill, and concrete bridges that had been established in the 1930s. This meant that little deliberation was needed between the designers in the design of individual features such as culverts and bridges, since only minor modifications or small improvements to these designs were required. In other words, with the alignment and the physical character elements of the parkway both pretty well set, the most important task of the design team was to simply fit the appropriate elements to the specifics of their proposed locations on the new alignment. In fact, according to Robert Steenhagen, the plans for the parkway were taken "off the shelf" and implemented for construction with very little additional review.[134]

2. Design and Construction 1954-1957

Since land acquisitions were more or less complete by 1947, the parkway alignment was essentially staked and in place by the early 1950s. Two sections were to be implemented: the Williamsburg to Jamestown section, and the completion of the route from the old parkway terminus at Fusiliers Redoubt to the Yorktown Visitor Center on the bluffs southeast of Yorktown. The only major design question in the alignment was the route at the Jamestown terminus. As seen in Figure II.13, the existing road in this area, Route 31, which accessed the Jamestown-Scotland Ferry Wharf, was a major problem, since it cut through the middle of the historic Jamestown site, separating the holdings of the NPS and the APVA.[135] Moving this road to provide parkway access to Jamestown island proved to be controversial with the surrounding community, and it was not until the 1950s that it was decided that the ferry wharf would be moved upstream, off the island beyond Glass House Point. Despite public protest in December of 1954, it was also decided to dead-end Route 31 at the parkway right of way, limiting public access to the parkway.[136] With the ferry gone, the

parkway could continue across the rebuilt isthmus to the proposed new Jamestown Visitor Center. Figure II.22 shows the final resolution of this area. Of particular interest in this photo is the divided parkway alignment at the entrance to the Jamestown area shown at the top of the page, and the location of Route 31 leading to the new ferry wharf at the bottom of the page.

With the route finally established, structures were designed. In keeping with the earlier design, the Yorktown stretch required the design of three brick-clad concrete structures including a viaduct over Yorktown Creek, a bridge over Route 17 leading to the Coleman Bridge, and an underpass at Route 238. On the Jamestown end, only one new brick structure was built, an underpass at Tazewell Hall. However, four new bridges crossing the tidal marshes were required, at College Creek, Mill Creek, Powhatan Creek, and Glasshouse Point. Although studies of these bridges had been worked on earlier, as shown in Figure II.23, a drawing for the Jamestown Isthmus Bridge, designs were not finalized until 1954. Like the tidal marsh bridges on the Yorktown end, the new bridges had concrete railings. However, they were of a new design, with lower, more streamlined railings over which motorists could view the open expanses of river and marsh. According to Robert Steenhagen, the new bridge railing design was the result of Abbott's insistence that visitors be able to "see over, not through" the bridges. [137] Therefore, instead of repeating the three-rail railing used previously, the "Natchez Trace Railing," designed by Edward Zimmer for the Natchez Trace Parkway, was used. With the exception of Powhatan Creek, the bridges were all to be situated on new areas of hydraulic fill, for which constructionspecifications also were developed.

Work on the hydraulic fill was some of the first construction work to get underway. In the spring of 1954, Abbott and Steenhagen inspected the three areas of proposed fill at Jamestown Island, Mill Creek, and College Creek, and conferred with the Army Corps of Engineers. Permits were obtained in the spring of 1955, and work proceeded rapidly as embankments were built and dredging was begun. By November, the fills were completed with only some final dredging of the creek channels to be completed.[138] This time, due to prior investigation and knowledge gained from the previous fill projects, there were no surprises about the wide spread of the fine white sand fill. As shown in Figure II.24, an aerial photograph of the parkway right-of-way, the new fill created wide, white, sandy beaches.
Bridge construction can also be seen in Figure II.24. Construction on the bridges began in 1954 with the Powhatan Creek Bridge. Although this bridge did not require any hydraulic fill for its completion, problems were soon encountered in locating a firm foundation for footings in the marshy soils beneath it. Work proceeded slowly, and in the meantime the contracts for the other three bridges were bid, let, and begun in the summer and fall of 1955. The projects at Mill and College Creek also ran into trouble when their open stream channels began silting in; work was suspended while remedial dredging took place.[139] Then, additional problems were encountered at Mill Creek, where no bearing soils were found, even when pilings were dug 70 feet deep. After reviewing the problem, Spelman suggested that a sand blanket 8-10 feet deep be used to stabilize the pilings, which were also increased in number. The Powhatan Creek Bridge was finished in April 1956, with the Glass House Point (Isthmus) Bridge following in September. Mill and College Creeks were completed soon after, in early 1957.

The grading contracts for the parkway completion were begun as the bridges were still being completed. They were awarded in two pieces, one comprised of grading from the Fusiliers Redoubt to Yorktown plus the stretch from Williamsburg to College Creek, which contained the asphalt section of road near the tunnel as well as the Halfway Creek Bridge access. The other was the grading of the rest of the parkway from College Creek to Jamestown. The two projects were bid in the late summer and early fall of 1955.[140] As before, the grading packages included clearing, the cutting of slopes and the construction of the pipe culverts and brick arch culverts similar to those specified in the 1930s. Figures II.25 and II.26 are aerial views respectively showing rough grading in progress near Halfway Creek and Yorktown. Rough grading was completed by November 1955, and Abbott could happily report that it was possible to drive the entire

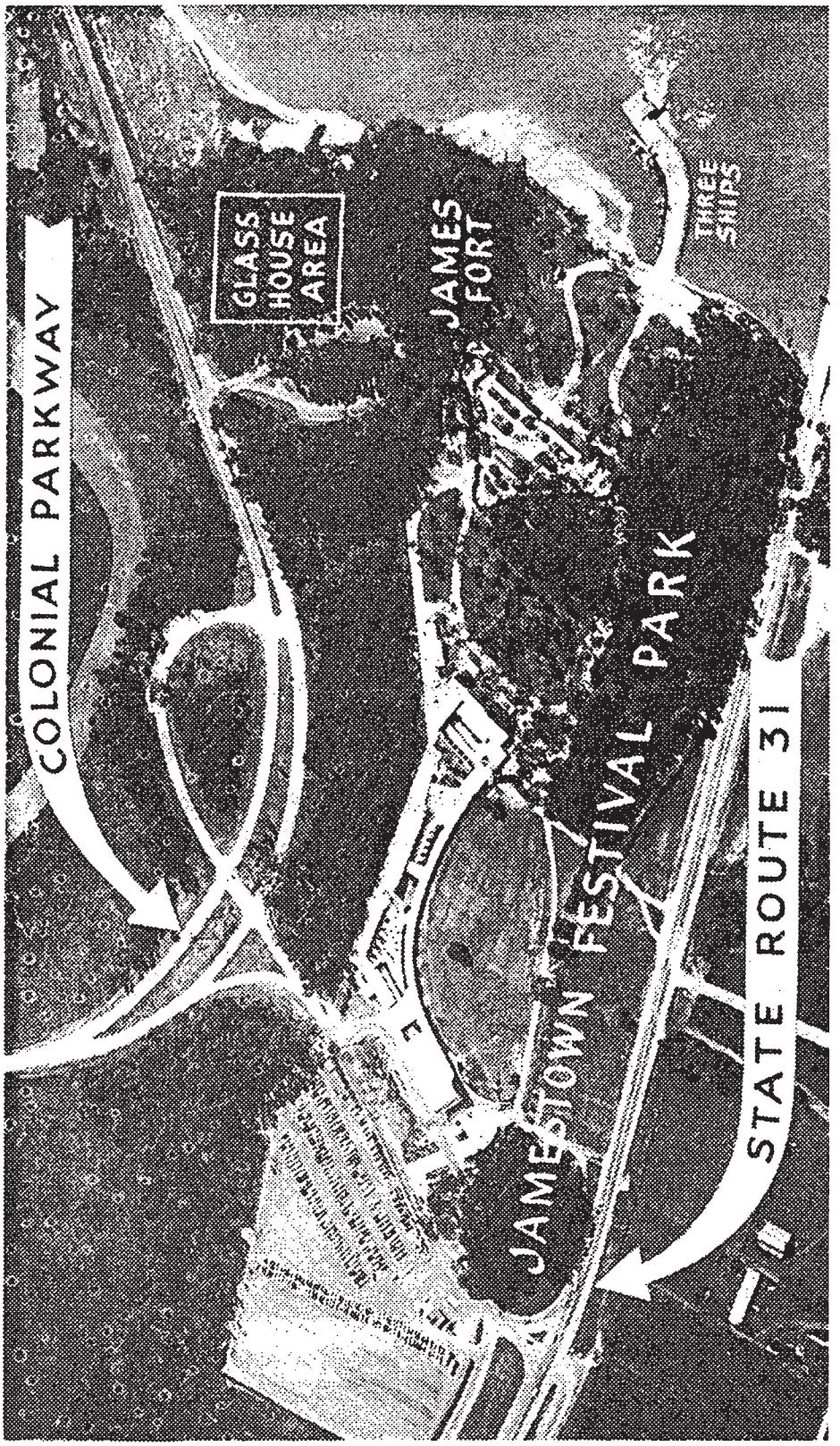


Figure II.22 Photo showing location of divided roadway section of Colonial Parkway. Note also Route 31 at bottom of photo, leading to new ferry wharf. From *A Report on the 350th Anniversary Celebration of Jamestown.*

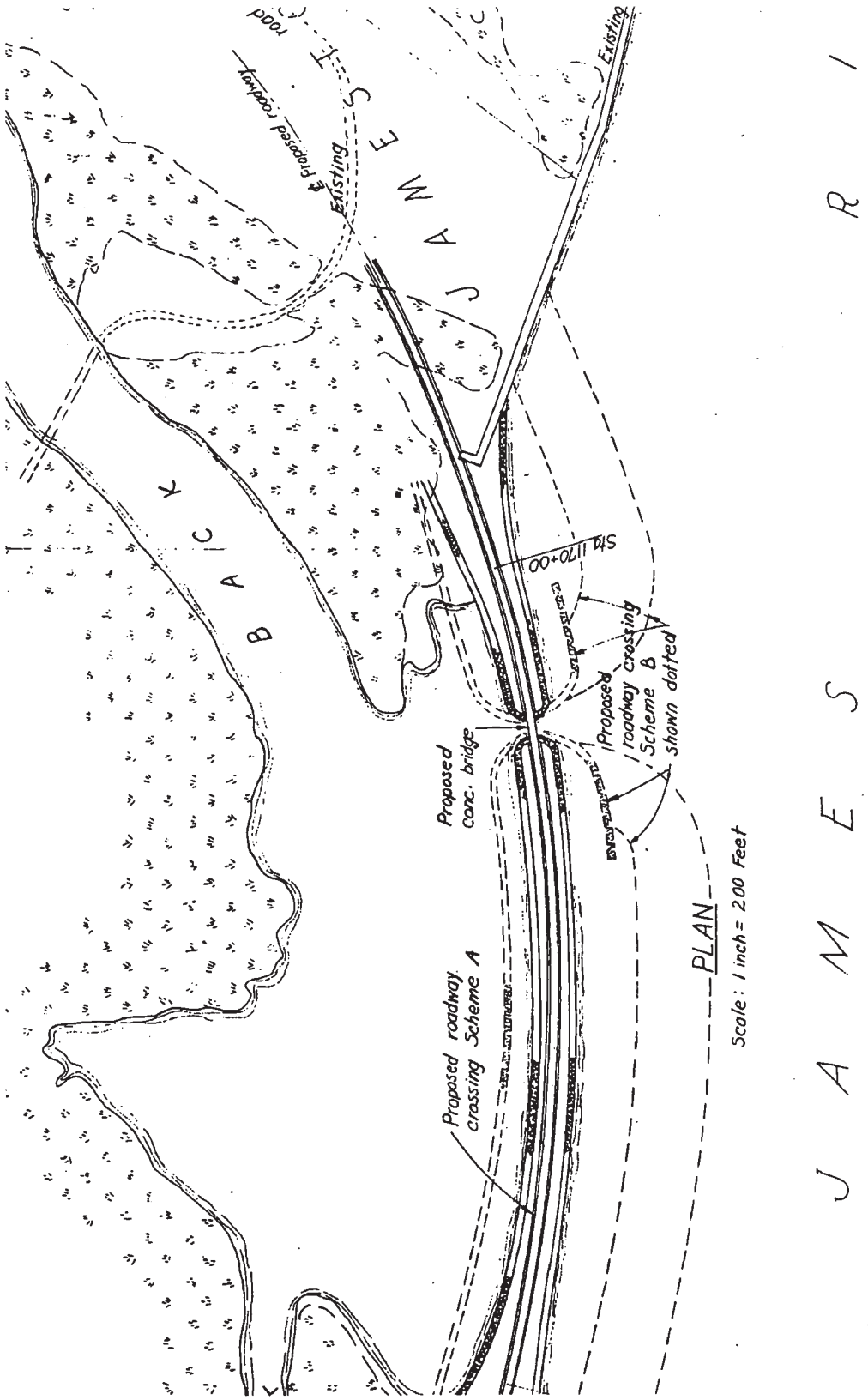


Figure II.23. Portion of drawing "Proposed Roadway Crossing to Jamestown Island, February 1950. National Park Service, Colonial National Historical Park (Engineering Office Flat File).

length of the road (except for bridge gaps) on the rough grade more than a year before the parkway was scheduled to open.[141] However, another year would pass before final grading, part of both contracts, would be completed in the following September in preparation for paving.[142]

The paving of the road began in May 1956. According to Steenhagen, there was some discussion among the designers about paving the parkway with bituminous concrete, if not permanently, at least temporarily, especially across the areas of hydraulic fill, where buckling was likely to occur as the fill settled. However, Abbot was insistent about maintaining the exposed aggregate finish.[143] To make the paving process easier, the paving contractor, Nello Teer, proposed that the exposure of the aggregate be accomplished using mechanical means--brushes on belts. However, after a brief try, it was determined that the results were inferior, and workers were sent back to broom the excess concrete off by hand.[144]

Paving operations progressed reasonably quickly until December. At this time they slowed significantly, due to inclement weather and a nation-wide cement strike. The final pouring was a race to meet the April 1 deadline with the contractor working by night under floodlights to complete the work in time for the celebration.[145] Paving was followed by hurried implementation of planting plans designed by Lewis and Steenhagen. New parkway interpretive signs were also constructed for and put in place at the parking areas. Despite the rush, the Jamestown section opened on time for the celebration, as shown in Figure II.27. The Yorktown terminus was completed a few weeks later, and the entire parkway opened end to end on April 27,1957. Figure II.28 is a contemporary map showing the extent of the parkway and locations of associated features, such as parking areas, shortly after the construction was completed. Sheet 3, located in Appendix A, is an overall base map of the parkway dating to 1958 showing similar features. When compared with Sheets 1 and 2, which respectively show the same region in 1930 and 1949, the development of the parkway over time in the James-York peninsula may be seen .

3. Post-construction Additions and Repair, 1957-1965

After the opening of the parkway to its Jamestown terminus, a number of minor construction projects brought the parkway to full completion. These projects included the construction of about 200 feet of guardrail on the new section and the placement of the aluminum interpretive markers on the full length of the parkway. In 1958, the settling of fill created some unevenness in the pavements and mudjacking was once again undertaken to lift settled pavement sections. A significant portion of the 1957 plantings failed to take, and replacement plantings, using the original planting plans as a guideline, occurred in the late 1950s.

Slopes along the parkway were also regraded. According to Robert Steenhagen, the side slopes along the parkway were laid in at a slope of 2:1 under the original contract, much to the dismay of Abbot.[146] When erosion began to occur on several areas of slopes between Williamsburg and Jamestown following completion of the parkway, a new contract was let to regrade the side slopes at the 3:1. This work was apparently completed by 1960.

Another project undertaken in the years immediately following 1957 was the construction of the Ringfield picnic area on the Yorktown end of the parkway. It seems that Abbott, who enjoyed outdoor recreation, was "a great picnicker," and was the force behind the addition of this facility.[147] Prior to its creation, motorists would pull off the parkway and picnic right along the roadside; this facility provided a designated area for such activities. As can be seen from Figure II.22, where the picnic area can be seen in relation to the rest of the parkway, the design of this facility, with its curving loops, followed standard NPS guidelines.



Figure II.24. "Fill at College Creek, Jamestown Island at Upper Left," #COLO-38951.705. No date; circa 1955. Note areas of fill and areas of sand blankets laid down for bridge piling stabilization.

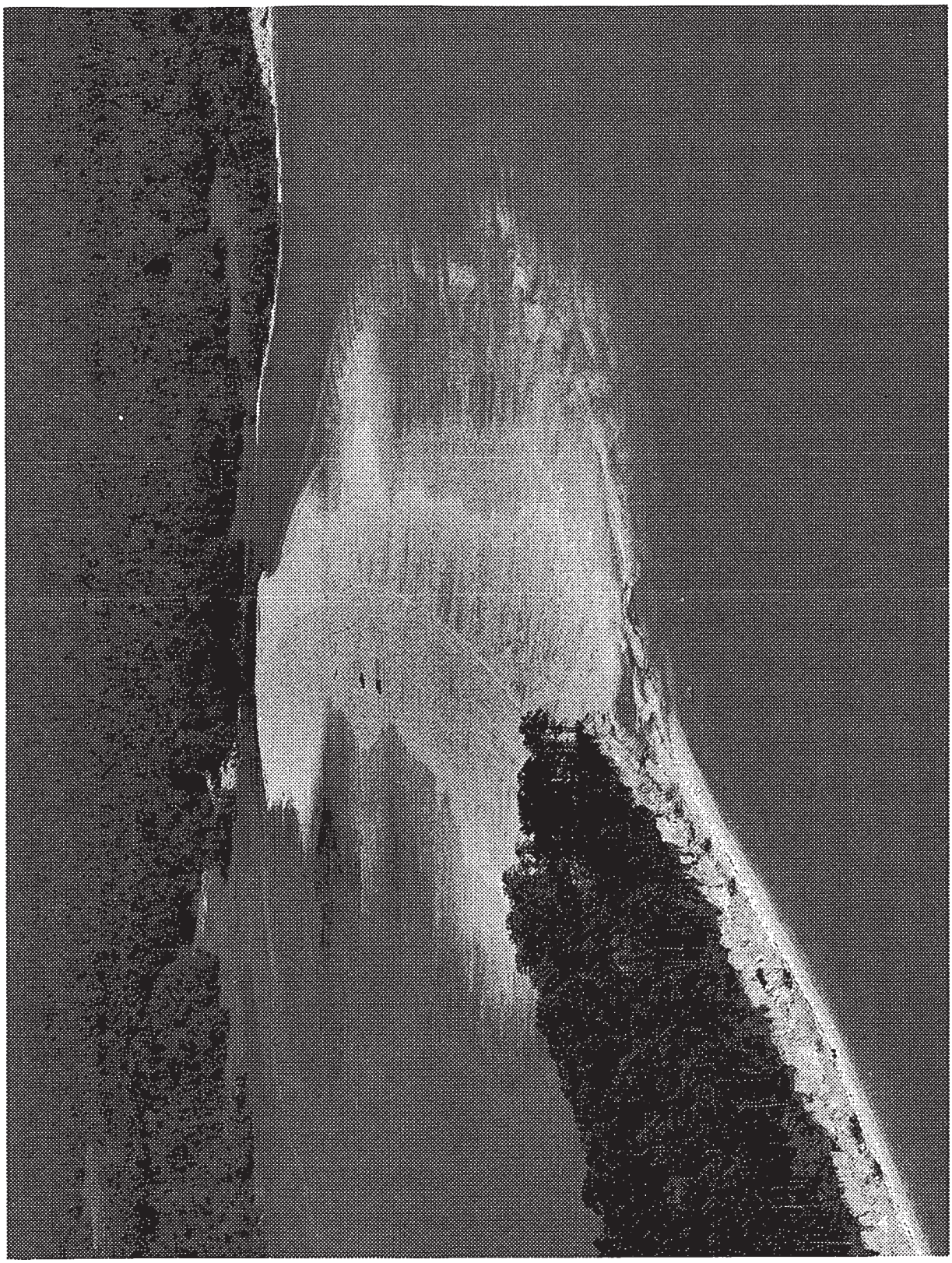


Figure II.25. "Aerial view of Parkway north from River to Williamsburg (College Creek at bottom, Halfway Creek in the middle)," #COLO-38951.701. No date; circa 1955. National Park Service, Colonial National Historical Park.



Figure II.26. "Aerial view of Parkway Terminus at Fusiliers' Redoubt, with section leading to [Yorktown]Visitor Center under construction," #COLO-38951.1762. No date; circa 1956. National Park Service, Colonial National Historical Park.

What may be considered the final phase of construction activity was completed in 1964 with the development of Colonial Parkway's "Planting, Land Use, and Maintenance Plans." These plans, which provided guidance for parkway plantings, mowing, and vista clearance, were created by Steenhagen and Abbott. Modelled after similarly titled plans created for the management of the Blue Ridge Parkway, these plans, sometimes called "PLUMs," were meant to provide for long term maintenance along Colonial Parkway. To accomplish this, the 45 sheets comprising this set of plans defined mowing boundaries for turf areas and boundaries of vista clearance in some detail. Areas for infill and screen plantings along the entire length of the parkway from the Yorktown parking lot to the Jamestown parking lot were also delineated on the plans. Interestingly, relatively small numbers of plants are shown on each sheet, with the proposed plantings generally matching existing plantings in species composition. These plans also showed locations for directional, regulatory and interpretive signs. Approved in the fall of 1965, the work of implementing the Planting, Land Use and Maintenance Plans apparently went forward soon after. It is unclear how long the plans were used as a maintenance guide; however, a new set of PLUMs for Colonial Parkway were drafted and approved in the 1970s.

G. STEWARDSHIP AND CHANGES, 1960-1996.

Colonial Parkway had scarcely been completed before changes began occur. Following on the heels of post-construction mudjacking, slope regrading, and replanting was the design of two collector roads paralleling the parkway near Queen's Lake to eliminate a number of at-grade road crossings within the former Penniman Tract. The goal of constructing these two collector roads was to eliminate a number of at-grade crossings where accidents were occurring as automobiles attempted to cross the parkway. The two collector roads funnelled traffic onto Hubbard Lane (also known as Route 716).[148] Because Hubbard Lane itself was an unsafeat-grade crossing, this roadway configuration did not last for long. In 1962, work began on a design for grade separations at this intersection as well as at Route 641. These overpasses were constructed in 1964, and occurring at the same time as this work was the relocation of two secondary state routes and the relocation of the railroad spur into Cheatham Annex.[149] The two bridges were concrete, though their parapets were faced in Colonial Brick to be in keeping with the rest of the Colonial Parkway Bridges. On and off ramps accessing the bridges were also constructed.

New underpasses were also constructed in the mid-1960s. In 1965, a double bridge underpass was constructed by the Federal Highway Administration (FHwA), the successor organization to the Bureau of Public Roads, to accommodate Interstate Highway 64 as it passed over Colonial Parkway. As before, efforts were made to make sure these underpass bridges were constructed to match the design of earlier underpasses. Therefore, the two I-64 bridges were designed as concrete arches faced in brick with proportions similar to those of earlier bridges. However, the use of brick on the new bridges was simpler than on the original underpasses: For example, no decorative brickwork or limestone keystones were used. In keeping with the desire for limited access, the I-64 bridges were also constructed with out on and off ramps, preventing highway access to the parkway. The construction of these ridges was completed in 1965.

Another brick-faced underpass was constructed in 1966, this time along the Jamestown end of the parkway, at Miller's Crossing. This underpass, which included off and on ramps, was constructed to eliminate an at-grade crossing. The new interchange provided access to the Great Neck Picnic Area, another picnic area constructed during the Abbot years, and to commercial ventures located at Kings Point. Once again, this work was not undertaken by the NPS, but by local road agencies, though the NPS strongly influenced the bridge designs.[150]

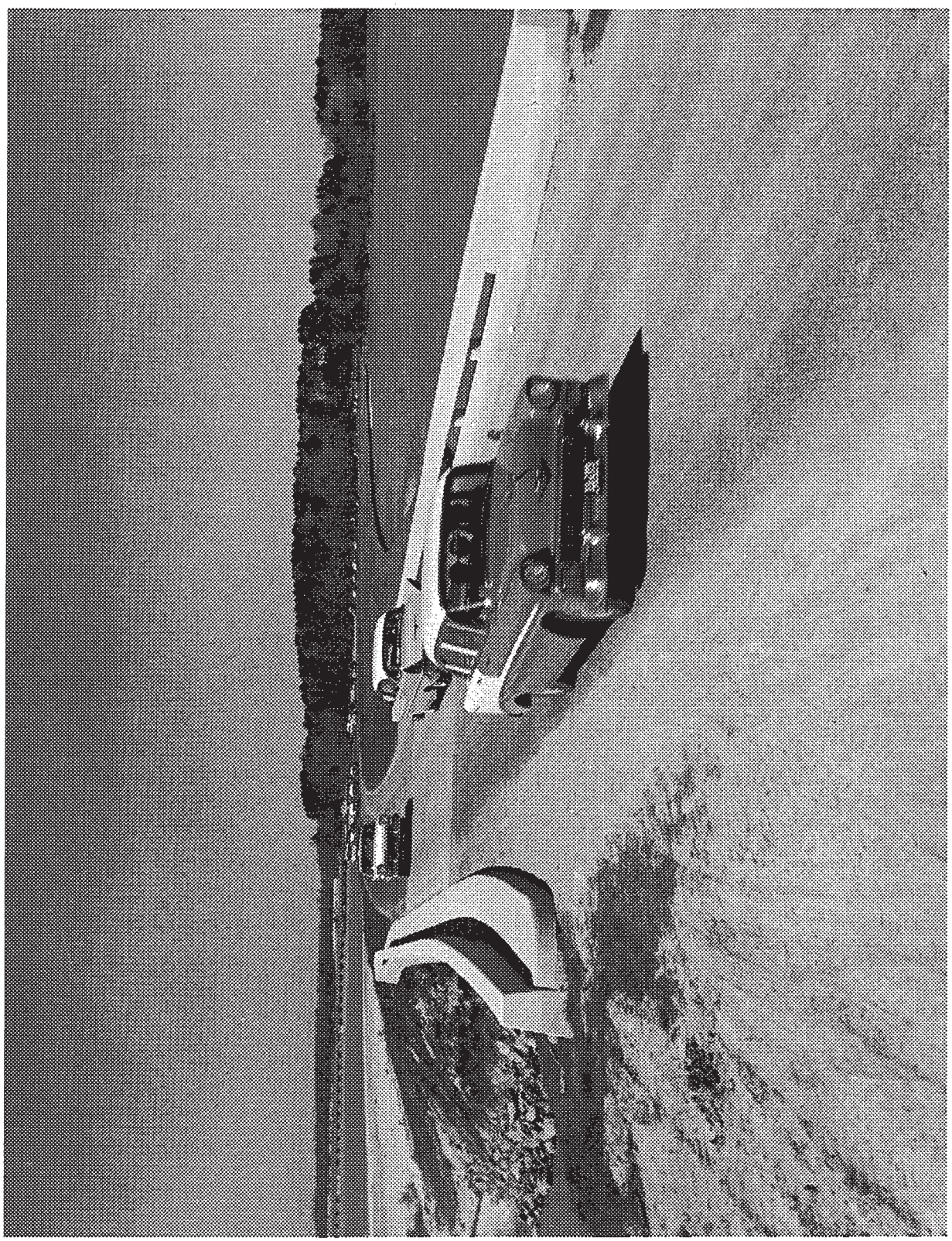


Figure II.27. "Isthmus Bridge,"#COLO-38951.689. No date; 1957. View of Parkway near Jamestown, just after completion. National Park Service, Colonial National Historical Park.

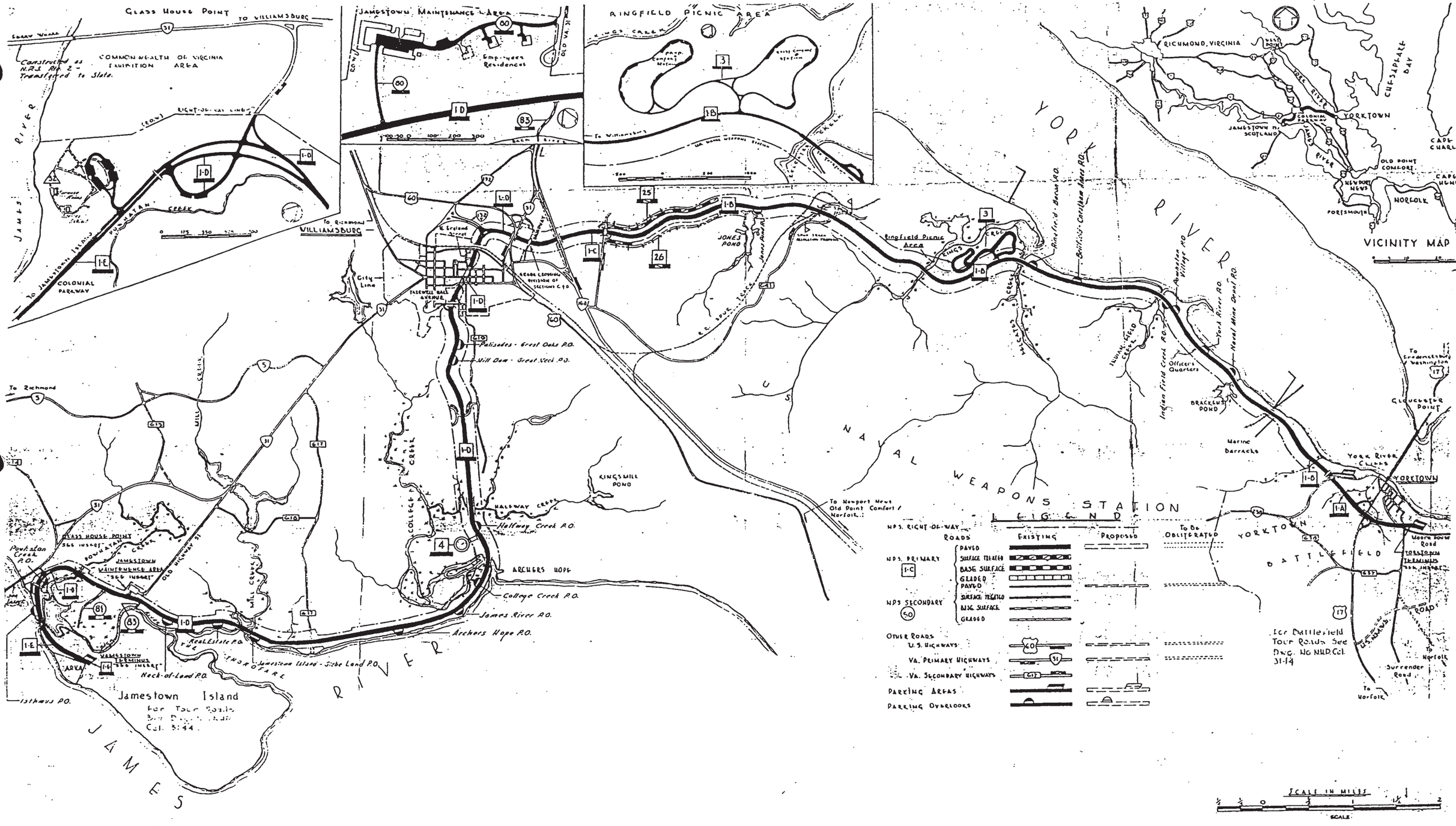


Figure II.28. "Road and Trail System Plan," Drawing Number Col-Pky 3027-A, Sheet 1 of 2, October, 1958. National Park Service, Colonial National Historical Park.

Continuing growth in the region fueled the construction of other roads required to created a modern transportation network. Between 1968 and 1970, the Virginia Highway Department came up with plans to create Route 199, a divided, four-lane bypass around Williamsburg to connect Route 31 with I-64. Because Miller's Crossing was seen as the best location for this road to cross the parkway, it was proposed to build an identical bridge directly north of the of existing bridge.[151] Once again, the NPS successfully lobbied to have the new bridge constructed to be compatible to the existing bridge, and a design identical to the original was selected by the Virginia Highway Department. However, because of the angle of the new road, the original bridge had to be slightly relocated and rebuilt at the same time as the new bridge was being constructed. This work took some time to shepherd to completion; it was not until the mid-1970s that the new road and the new bridges were completed.[152] In the meantime, another underpass was also designed and constructed--the Parkway Drive bridge north of the C&O Underpass. This bridge was also based on the original 1966 bridge at Miller's Crossing, and was completed in 1972.

1972 also marked the assessment of Colonial Parkway by the FHwA for safety, as part of a larger survey of NPS roads. The results of this analysis was published in a document entitled "Safety and Risk Management in Selected Areas of the National Park System." Three primary safety issues were identified: road surface and shoulder conditions; signage; and lane striping. In addition, the bridges at Felgates Creek, Indian Field Creek, and Kings Creek were singled out as priority sites for repair, since structural deterioration since 1933 had taken some toll on their stability. However, no major work on the bridges occurred until 1980.[153]

Even as the NPS worked to eliminate access roads, requests were made by the surrounding community for new parkway access points. In 1973, the NPS rejected requests from Anheuser-Busch to allow parkway access from their property in the Kingsmill Neck area.[154] The increasing development around the parkway therefore led to the NPS seeking protective scenic easements along the parkway, to maintain the borrowed forest scenery surrounding the parkway. In 1973, a 51-acre scenic easement was acquired from Anheuser-Busch in an effort to protect the Halfway Creek marshlands on the east side of the parkway.[155] This was followed in 1975 by a 311-acre scenic easement on the west side of the creek, acquired through a three-way exchange between the National Park Service, the Williamsburg Foundation, and York County.[156] Other lands acquired as sceniceasements included a 130-acre area on the south side of the James River at Swann's Point, received from Frank von Schilling in 1973.[157]

The 1970s also saw another major lands acquisition along the parkway--the Gospel Spreading Association lands located south of the parkway along the James River at Archers Hope. In 1976, a Declaration of Taking was initiated for eleven acres in this area, and in 1979 these lands were transferred to the federal government, despite protests by the Gospel Spreading Association. In response to the complaints, the Gospel Spreading Association was granted a fifteen-year use permit. In 1993, the lands became federal property. In 1994, the Gospel Spreading Association facilities on this property, seen in Figure XX, were torn down. However, to commemorate the activities of the group, in 1992 a historical marker about the group's founder, Elder Lightfoot Solomon Michaux, was erected at the Archers Hope parking overlook in 1992.

Maintenance activities continued to be a major portion of the work along the parkway throughout the 1970s. Some maintenance involved bridge work: In 1975, reinforced concrete was repaired at the College Creek and Yorktown Creek bridges and structural concerns addressed at the College Creek and Kings Creek bridges.[158] Other work included roadway and safety monitoring, which resulted in recommendations to repair the concrete surface, particularly the joints, in 1974 and to stripe the parkway, in 1976. Both proposals were ultimately rejected, the former due to lack of funds and the latter due to arguments that striping the parkway would alter its appearance.[159] Vegetation replacement was also a major focus in the 1970s. In

1974, plantings along the entire parkway were surveyed and a planting plan developed. This plan primarily added new flowering trees such as redbud (*Cercis canadensis*), dogwood (*Cornus florida*), and shadbush (*Amelanchier canadensis*) along the parkway's wooded edge. It appears these were added to replace lost trees and to bolster the seasonal display of flowering trees along the roadway. Some new species not previously planted along the parkway were also proposed and planted, including sourwood (*Oxydendron arboreum*) along the forest edges, daylilies (*Hemerocallis fulva*) at bridge abutments, and daffodils (*Narcissus psuedonarcissus*) in planting beds at the Williamsburg rotary.[160] Some screening was also planted, such as a mass of junipers (*Juniperus virginiana*) to try and hide the Gospel Spreading Association facilities along the James River. Other plantings of shade trees--
oaks and sweet gums (*Quercus palustris* and *Liquidambar styraciflua*) occurred at new bridge structures such as the Route 199 bridges.

The 1974 planting plan also documents a route for a proposed bicycle path. Although never constructed, the outline of the route on this plan, shows that the proposal was seriously considered by the NPS. According to Robert Steenhagen, former Colonial NHP landscape architect and, in 1974, a team manager in the Denver Service Center and participant in the development of the planting plan, the bike trail was developed partly due to pressure by the Colonial Williamsburg Foundation. Apparently, at this time, the Foundation was seeking new ways to help disperse visitors within the tourist area, and lobbied to some degree for a bike trail along the parkway.[161]

As shown on the planting plan, the bike trail was to run between the Williamsburg rotary and Yorktown, parallelling the parkway. Although the route hugged the river shore where possible, the planned trail attempted to utilize existing bridge structures where possible. The continuing intent of the bike trail is evidenced by the fact that when 1980s bridge rehabilitations occurred, additional area of bridge or sidewalk and bike railings were provided. However, the plan was never fully implemented. The reasons for this may have included unavailability of funds and more pressing maintenance needs elsewhere on the park and parkway. In addition, the simple line of the route on the plan belied the large amount of grading and associated construction and visual impacts within the road margin which would have been required to implement the parkway. These impacts would have been greatest in the folded terrain between Kings Creek and Williamsburg.

The 1980s saw a resurgence in funding for parkway maintenance, partly due to the bicentennial anniversary of the 1781 siege. For example, 1980 saw the development of a new Parkway Land Use and Maintenance Plan, which addressed vegetation and vista management along the parkway.[162] Another result was the FHwArehabilitation of the structurally deteriorated bridges between Kings and Ballard Creeks. The forty-odd year old Indian Field Creek and Kings Creek bridges were rebuilt with new slabs and modified post and lintel guide rails. These new railings matched the "Natchez Trace" railings of the bridges on Jamestown side. In contrast, the bridge at Felgates Creek was entirely replaced. According to Colonial NHP staff, in addition to structural deterioration, the replacement was driven in part by safety concerns, since the bridge had been the site of a series of fatal and less serious accidents involving visitors travelling from Yorktown.[163] The bridge's new design included the lower railing and an eight-foot-wide bike lane built into the structure.

Bridge work was followed in the by the construction of one and a quarter miles of curbing distributed along the length of the parkway.[164] Constructed between the fall of 1980 and the spring of 1981, the new curbing was intended to help achieve better drainage off the parkway. Increasing water was flowing into the parkway right-of-way, due to increased development, particularly in the uplands around Williamsburg. The curbing was constructed to be 15 inches deep with a 3-inch reveal at the parkway margin. To direct the water caught by the curbs off the parkway, concrete drainage channels were also designed and constructed along the parkway. work.

This critical bridge repair work was followed in 1984 by a full overview by the FHwA of the parkway's engineering condition. The review resulted in an "Engineering Study Report for Colonial Parkway," which identified slab repair, joint repair, shoulder regrading, and bridge restoration as necessities for parkway longevity. The report proposed that a 10-year project be undertaken to address these concerns along segments of the parkway. The project was then implemented in three phases: In 1986-1987, Phase I work was undertaken between Miller's Crossing and Cheatham Annex; in 1989-90, Phase II work proceeded on the Jamestown end; and in 1993-94, Phase III work occurred on the Yorktown end. The work in each phase included a variety of repair activities. The concrete slabs were repaired or replaced and the joints between them were also replaced. Concrete gutter swales and shoulder edge drains were constructed in many areas and culverts were cleaned an upgraded. Where necessary, some regrading of roadside shoulders and stabilization with gravel also occurred. Steel-backed, post-and-rail timber guide rails were also built along much of route, though the overall extent of guide rail installed along the road was reduced following lengthy in-field consultation between FHwA and NPS staff. Phase II also encompassed the rehabilitation of the bridges on the Jamestown end of the parkway, which included repairing deteriorating concrete, fixing concrete joints, repainting, and modifying bridge parapets for guide rails. Although successful overall, the projects were somewhat marred by the use of white sand in the concrete for the repair of the roadway between Jamestown and Williamsburg, which resulted in a patchwork appearance in the concrete along this stretch.[165]

In the years following the completion of the Phase III work, little major construction or rehabilitation of the parkway has been undertaken. A detailed description of the parkway's 1996 existing conditions occurs in Chapter IV.

CHAPTER II: ENDNOTES

[1]. Sidney Shurcliff, *Encounters of a Landscape Architect,* quoted in "The Freshest Advices," *Colonial Williamsburg,* Spring 1996, 8.

[2]. Sidney Shurcliff, *Encounters of a Landscape Architect,* quoted in "The Freshest Advices," *Colonial Williamsburg,* Spring 1996, 8.

[3]. Flickinger, Floyd, "Outline of Development, Colonial National Monument," United States Department of the Interior, 1933, 163.

[4]. Charles Hatch, "The Evolution of the Concept of Colonial National Historical Park: A Chapter in the Story of Historical Conservation," 28 July 1964, 27-28; Haskett, James, "The Colonial Parkway," nd, 1. Both documents are unpublished manuscripts in the collection of Colonial National Historical Park.

[5]. Jim Haskett, "The Colonial Parkway," unpublished article in Administrative Files in CNHP Theater, 1. As noted in Haskett, it is unclear why the project was promoted to Congress as a military one when the sites were clearly historic ones.

[6]. Jim Haskett, "The Colonial Parkway," unpublished manuscript in CNHP administrative files, 1.

[7]. Verne Chatelaine, "The Origin of the Colonial National Monument Idea," unpublished manuscript dated 25 March 1932, CNHP file 101 C-2 "History General--1930-November 1952.

[8]. Michael Bennett, Colonial National Historical Park, Roads and Bridges, HAER No. VA-115, unpublished draft manuscript of the Historic American Buildings Survey, Summer of 1995, 11.

[9]. Chatelaine, "The Origin of the Colonial Monument Idea," 8.

[10]. Bennett , "Colonial National Historical Park Roads and Bridges, HAER No. VA-115," 19. There is no footnote citing the document from which this information was drawn.

[11]. Letter from William E. Carson to Horace Albright, 26 March 1929, quoted in Chatelaine, "The Origin of the Colonial Monument Idea," 6.

[12]. *Ibid.*, 4.

[13]. Letter from Horace Albright to Kenneth Chorley, 27 March 1929 quoted in Chatelaine, "Origin of the Colonial Monument Idea," 7.

[14]. Michael Bennett's history for HABS/HAER credits Carson with the idea of building a road, based on a quote credited to Carson, in which he wrote, "Yorktown and Williamsburg and Jamestown should be connected by a memorial highway." Although Chatelaine's "The Origin of the Colonial National Monument Idea" is cited as the source of this quote, I have been unable to find it. It is possible, however, that Bennett's copy of Chatelaine is a revised version of the copy I have, as there are at least 3 copies of this document in the Colonial National Historical Park files.

[15]. Chatelaine, "The Origin of the Colonial Monument Idea," 9.

[16]. Newton, Design on the Land, 537.

[17]. Albright, quoted in Hosmer, *Preservation Comes of Age*, 496.

[18]. Hamilton Eckenrode,"Origin of the Colonial National Monument," 16 October 1933, CNHP file 101 C-2, "History General--1930-November 1952, np, quoted in Bennett, "Colonial National Historical Park, Roads and Bridges," 19.
[19]. Chatelaine, "The Origin of the Colonial National Monument Idea," 10.

[20]. Memorandum to the Director from A. E. Demaray, 16 July 1930, CNHP file, Planning the Parkway--1930.

[21]. Ibid.

[22]. Ibid.

[23]. Ibid.

[24]. Letter from William M. Robinson, Jr., to F. A. Kittredge, Chief Engineer, National Park Service, 5 August 1932, CNHP Engineering Office File 630--Unit V--Surfacing.

[25]. Charles B. Hosmer, Jr., Preservation Comes of Age, Volume 1 University Press of Virginia: Charlottesville, 1981, 485.

[26]. "Recollections of the Years 1930-35 at Jamestown, Williamsburg, and Yorktown Virginia," unpublished draft manuscript dated 5/7/86, developed from a taped interview of Charles E. Peterson, FAIA, conducted 2/4/86 by James Haskett and transcribed by Hilda Sanchez, 3.

[27]. "Recollections of the Years 1930-35 at Jamestown, Williamsburg, and Yorktown Virginia," interview of Charles E. Peterson by James Haskett, 2.

[28]. Copy of Letter from Louis C. Cramton to Arthur E. Demaray, 14 October 1930, in CNHP file Colonial Park--Establishment.

[29]. Norman Newton, Design on the Land, Harvard University Press: Cambridge, 1971, 608-9.

[30]. Copy of Letter from Louis C. Cramton to Arthur E. Demaray, 14 October 1930, in CNHP file Colonial Park--Establishment.

[31]. Copy of Letter from Louis C. Cramton to Arthur E. Demaray, 14 October 1930, in CNHP file Colonial Park--Establishment.

[32]. *Ibid.*

[33]. Peterson interview with James Haskett, p 4. Apparently Peterson was working on both the Yorktown Battlefield boundaries and the parkway boundaries at this time. An aerial mosaic of the battlefield has been seen by the authors in the CNHP archives, but no mosaic of the entire parkway area has been located. A search at VDOT, which holds an extensive aerial photograph collection has been targeted for the 1930s.

[34]. Anonymous (presumably Taylor or Peterson), "Notes and Photographs of the York River Section of the Proposed Parkway of Colonial National Monument," nd, CNHP file Planning the Parkway 1932-36. Although there is no date on this document, the contents are photographs of the parkway route before construction, and the nature of the notes (some being "confidential") indicates that the date of the document is quite early in the routing process, circa late 1930, early 1931.

[35]. "Report to the Director Re: Routing of the Colonial National Monument Parkway," from Charles Peterson to Horace Albright, 15 October 1930, CNHP file Planning the Parkway--1930.

[36]. It is doubtful that this report would have considered any of Cramton's comments, which had been written just a day earlier.

[37]. Charles Peterson, "Report to the Director," 15 October 1930, CNHP file 630-Planning the Parkway--1930, np.

[38]. Ibid.

[39]. Ibid.

[40]. Ibid.

[41]. Ibid.

[42]. Ibid.

[43]. Melanie Simo, "An Interview with Sidney N. Shurcliff on Arthur A. Shurcliff, 1980" Boston: The Hubbard Educational Trust, 1992, 19.

[44]. Charles Peterson, Memorandum to the Director, 10 November 1930, CNHP file Planning the Parkway 1930.

[45]. Ibid.

[46]. Ibid.

[47]. Letter from Charles Peterson to the Director (Horace Albright) 10 November 1930, CNHP file Planning the Parkway--1932-36.

[48]. Also known as the "Landscape Division"--Yorktown Office. This office was initially responsible for planning of the eastern parks, including Wakefield (the George Washington Birthplace), Shenandoah National Park, Hot Springs National Park, and Acadia National Park.

[49]. Letter from Charles Peterson to Mr. Toms, 8 April 1931, CNHP file Planning the Parkway 1931.

[50]. Bennett, "Colonial National Historical Park, Roads and Bridges, HAER No. VA-115, 25.

[51]. Letter from Ernest Lee Jahncke, Acting Secretary of the Navy, to Horace Albright, Director of the National Park Service, 20 June 1931, in CNHP file Planning the Parkway 1931. Given that the Presidential Proclamation included the clause about closing the parkway, it is assumed that the transfer of the right-of-way occurred prior to December 30, 1930, unlike other land acquisitions, which occurred after the proclamation. Charles Peterson recounts that "What I am proudest of is that I initiated the idea of taking the York River shoreline along the Navy Mine Depot and through the Penniman Tract. . .The close and clever cooperation of several people (Arthur Demaray and Will Carson made it possible to get a start on construction before there was money to buy right of way. It was all done in secrecy and the Navy was furious--but too late.

[52]. Letter from Charles Peterson to Horace Albright, February 23, 1993, (received by mail from Jane Sundberg).

[53]. Letter from J. M. Dozier, President of Colonial Monument Estates, Inc. to B. Floyd Flickinger, Superintendent of Colonial National Monument, 28 February 1934. CNHP Engineering Office File 630--Unit V--Surfacing.

[54]. Memorandum for the Director and the files, from Arthur Demaray, 28 May 1931, CNHP file Planning the Parkway--1931, 4.

[55]. James Haskett, The Colonial Parkway, CNHP Administrative Files, in Theater, 2.

[56]. Letter from Wm. A. R. Goodwin to Horace Albright, 11 August 1931, CNHP file Planning the Parkway--1931.

[57]. Sidney Shurcliff, *Encounters of a Landscape Architect,* quoted in "The Freshest Advices," *Colonial Williamsburg,* Spring 1996, 8. Sidney Shurcliff reports that this research occurred in the summer of 1932. However, he also indicates that in 1932, the National Park Service was "talking about acquiring" the lands for the park. Since these lands had already been acquired in 1932, it would seem that Shurcliff's dating of his recollections are slightly off.

[58]. Sidney Shurcliff, *Encounters of a Landscape Architect,* quoted in "The Freshest Advices," *Colonial Williamsburg,* Spring 1996, 8.

[59]. Sidney Shurcliff, *Encounters of a Landscape Architect,* quoted in "The Freshest Advices," *Colonial Williamsburg,* Spring 1996, 12.

[60]. Hosmer, *Preservation Comes of Age.*

[61]. Taylor, Superintendent's Monthly Reports for May and June, 1931.

[62]. Sidney Shurcliff recalls that his father "had developed a new and better concept which in time he persuaded the Park Service to accept. Since the old route had partially washed away, he argued, why not build an entirely new one from the west end of Jamestown Island, following along the shore of the scenic James River for at least three miles, and then turning inland to Williamsburg, instead of sacrificing all that potentially beautiful riverside drive by striking immediately inland from Jamestown. . . . Mr Rockefeller and his advisors wanted the parkway to bypass Williamsburg, preferably at the east end, because the College of William and Mary already occupied the west end. Peterson replied quite rightly that throughout the colonial period Williamsburg had always been approached from Jamestown at its west end, and to approach it now from the east would be totally in violation of authenticity." Sidney Shurcliff, Encounters of a Landscape Architect, quoted in "The Freshest Advices," *Colonial Williamsburg,* Spring 1996, 13. This recollection directly contradicts other primary sources. A letter from Goodwin to Albright dated August 11, 1931

reports the official position of the Foundation: ". . . the route proposed west and north of Williamsburg, and favored by Mr. Arthur A. Shurcliff, as it relates itself to the integrity of the Restoration and the traffic problems in Williamsburg, is the best route. This conclusion is reached out of our conviction that Mr. Shurcliff is a supreme authority on urban and suburban traffic problems. This rout into Williamsburg has the additional advantage of approaching Williamsburg near the College which was erected six years before the removal of the capital" (p 2). In addition, Sidney Shurcliff's recollection also contradicts Peterson's statements of his preferred access around the east of Williamsburg: "at age 25 or so [I was] pitted against all the Rockefeller lieutenants and authorities, including. . . Arthur Shurcliff . . . who wanted the Parkway to go on the north side of town. . . . I wanted to go by the east side where it could come up in a quick curve from Jamestown Island . . ." from Interview of Charles Peterson by James Haskett, Draft typescript, dated 5/12/86, p 6. See also texts associated with endnotes 45 and 46 and Figure II. 1.

The authors' interpretation is that Arthur Shurcliff's major influence on the eventual Williamsburg-Jamestown route was the parkway's crossing to Jamestown island at the west end of the island. None of Peterson's original routes had suggested this possibility. However, there is no indication that Shurcliff actively promoted the river's edge routing; Goodwin and Peterson seemed to have been stronger proponents of this idea (see text associated with endnote 46).

[63]. Letter from Wm. A. R. Goodwin to Horace Albright, 11 August 1931, CNHP file Planning the Parkway--1931. The line of the Shurcliff Route is taken from a map produced in this report as Figure II.6, drawn by Charles Peterson, attached to this letter which indicates the West and North Route (the proposed Shurcliff Route), the Goodwin Route, and, faintly, the Peterson Route.

[64]. Letter from Charles Peterson to Horace Albright, 26 May 1931, CNHP file Planning the Parkway--1931.

[65]. Ibid.

[66]. Letter from Jay Downer to Horace Albright, 22 June 1931, CNHP file Planning the Parkway--1931.

[67]. Letter from H. J. Spelman to A. E. Demaray, 27 October 1931, CNHP file Planning the Parkway--1931 and Bennett, "Colonial National Historical Park, Roads and Bridges, HAER No. VA-115, 49.

[68]. Letter from Charles Peterson to Horace Albright, 23 June 1931, CNHP file Planning the Parkway--1931.

[69]. Letter from Charles E. Peterson to the Author, 16 February 1996.

[70]. Letter from Wm. A. R. Goodwin to Horace Albright, 11 August 1931, CNHP file Planning the Parkway--1931.

[71]. Letter from Wm. A. R. Goodwin to Horace Albright, 11 August 1931, CNHP file Planning the Parkway--1931

[72]. Letter from Charles E. Peterson to the Author, 16 February 1996, also Bennett, "Colonial National Historical Park, Roads and Bridges, HAER No. VA-115, 49.

[73]. F. A. Kittredge, "Report covering Trip to Yorktown-Colonial National Monument, June 16 and 17," to the Director, 19 June 1933, CNHP Engineering Office File Parkway--Unit V--Surfacing.

[74]. Bennett, "Colonial National Historical Park, Roads and Bridges, HAER No. VA-115, 50.

[75]. Letter from H. J. Spelman to A. E. Demaray, 27 October 1931, CNHP file Planning the Parkway--1931.

[76]. Ibid.

[77]. Ibid.

[78]. William Robinson, "Outline of Development, Colonial National Monument," 1933, 196.

[79]. William Robinson, "Outline of Development, Colonial National Historic Park," 1933, 193.

[80]. B. Floyd Flickinger, Superintendent's Monthly Report for February, 1937, 6.

[81]. Bennett, "Colonial National Historical Park, Roads and Bridges, HAER No. VA-115, 94-95.

[82]. Bennett, "Colonial National Historical Park, Roads and Bridges, HAER No. VA-115, 94-95.

[83]. Hosmer, *Preservation Comes of Age,* Charlottesville, University Press of Virginia, 1981, 503.

[84]. Hosmer, *Preservation Comes of Age,* Charlottesville, University Press of Virginia, 1981, 506 and "Recollections of the Years 1930-35, an Interview with Charles Peterson.

[85]. William Robinson, "Outline of Development, Colonial National Historic Park," 1933, 51.

[86]. Robinson, "Outline of Development, Colonial National Historic Park," 1933, 186.

[87]. William Robinson, "Outline of Development, Colonial National Historic Park," 1933, 193.

[88]. Ibid.

[89]. Hosmer, *Preservation Comes of Age,* Charlottesville, University Press of Virginia, 1981, 509.

[90]. Robinson, "Outline of Development, Colonial National Historic Park," 1933, 183.

[91]. Letter from F. A. Kittredge to Horace Albright, 19 June 1933, CNHP Engineering Office File 630, Unit V--Surfacing.

[92]. For reasons unrelated to his opinions on the Parkway, according to other sources: Hosmer, 508-509 and "Recollections of the Years 1930-35, an Interview with Charles Peterson," 14.

[93]. Bennett, "Colonial National Historical Park Roads and Bridges, HAER No. VA-115, 52.

[94]. Letter from B. Floyd Flickinger to A. E. Demaray, 9 May 1936, CNHP Engineering Office File 630--Williamsburg to Jamestown quoted in Bennett, "Colonial National Historical Park Roads and Bridges, HAER No. VA-115, 52. I was unable to locate this letter in the location noted by Bennett.

[95]. Sidney Shurcliff, *Encounters of a Landscape Architect*, quoted in "The Freshest of Advices," *Colonial Williamsburg*, Spring 1996, 13. Shurcliff's account, contained in a series of fond recollections about his father's career, is tinged with filial pride in his father's professional achievements and may be somewhat biased toward his father as the progenitor of the tunnel. His account implies that the matter was cleared up in a single confrontative meeting between the NPS and the Foundation and Rockefeller, but correspondence indicates that the debate over the routing continued for months.

[96]. Melanie Simo, "An Interview with Sidney N. Shurcliff on Arthur A. Shurcliff, 1980" Boston: The Hubbard Educational Trust, 1992, 19.

[97]. Memorandum from Thomas Vint to the Director "Report on Extension of Colonial National Monument Parkway in Vicinity of Williamsburg and Jamestown," June 3, 1936, 1-3. A copy of this memo was provided to the authors by Robert Steenhagen from his personal files. Also Bennett, "Colonial National Historical Park Roads and Bridges, HAER No. VA-115, 52-53. However, the authors were unable to locate Bartholomew's notes on the project in the location noted by Bennett. An inquiry to Bartholomew's successor firm and to his archives at Washington University in St. Louis did not turn up a copy of his planning work for this brief study or his more extensive work for Williamsburg.

[98]. Memorandum from Thomas Vint to the Director "Report on Extension of Colonial National Monument Parkway in Vicinity of Williamsburg and Jamestown," June 3, 1936, 1-3.

[99]. Memorandum from Thomas Vint to the Director "Report on Extension of Colonial National Monument Parkway in Vicinity of Williamsburg and Jamestown," June 3, 1936, 4.

[100]. Memorandum from Thomas Vint to the Director "Report on Extension of Colonial National Monument Parkway in Vicinity of Williamsburg and Jamestown," June 3, 1936, 4.

[101]. Memorandum from Thomas Vint to the Director "Report on Extension of Colonial National Monument Parkway in Vicinity of Williamsburg and Jamestown," June 3, 1936, 5-6.

[102]. Letter from B. Floyd Flickinger to Horace Albright, 12 February 1937, CNHP Engineering Office File 630--Williamsburg to Jamestown.

[103]. Ibid.

[104]. Flickinger, Superintendent's Monthly Report for December 1938, 4.

[105]. Letter from W. G. Carnes, Acting Chief of Planning to R. A. Wilhelm, Resident Landscape Architect, 20 August 1938, CNHP Engineering Office File 630--Williamsburg to Jamestown.

[106]. Ibid.

[107]. Ibid

[108]. Memorandum from R. Wilhelm to W. H. Smith, 31 August 1938, CNHP Engineering Office File 630--Williamsburg to Jamestown.

[109]. Letter from F. A. Kittredge to Horace Albright, 19 June 1933, CNHP Engineering Office File 630, Unit V--Surfacing.

[110]. Ibid.

[111]. Memorandum for the Director, approved by Elbert Cox, Thomas Vint, and Francis Ronalds, 29 June 1939, CNHP Engineering Office File 630--Williamsburg to Jamestown.

[112]. Bennett, "Colonial National Historical Park Roads and Bridges, HAER No. VA-115, 57. The HAER history provides a more complete picture of the series of land acquisitions and deed transfers for the parkway. Because efforts were made to not duplicated the HAER research, this information is simply summarized in the following paragraphs. The reader should refer to the HAER report, and to the CNHP files on lands acquisitions for further information.

[113]. Memorandum for the Director, approved by Elbert Cox, Thomas Vint, and Francis Ronalds 29 June 1939, CNHP Engineering Office File 630--Williamsburg to Jamestown.

[114]. Jamestown-Williamsburg-Yorktown Celebration Commission, The 350th Anniversary of Jamestown 1607-1957, Final Report to the President and Congress, Government Printing Office, 1958, 42.

[115]. Elbert Cox, Memorandum for the Director, 14 July 1941, CNHP Engineering Office file 630--Parkway, Williamsburg-Jamestown, Tunnel-General.

[116]. Jamestown-Williamsburg-Yorktown Celebration Commission, The 350th Anniversary of Jamestown 1607-1957, Final Report to the President and Congress, Government Printing Office, 1958, 41.

[117]. Elbert Cox, Superintendent's Monthly Reports for January and February, 1940, 4 and 4, respectively.
[118]. Cox, Superintendent's Monthly Report for October 1940, 3.

[119]. Walter Sheffield, Memorandum for the Regional Chief of Planning, 3 April 1943, CNHP Engineering Office file 630--Parkway, Williamsburg-Jamestown.

[120]. J. C. Harrington, Memorandum for the Regional Director, Region , 2 December 1944, CNHP Engineering Office file 630--Parkway, Williamsburg-Jamestown.

[121]. Letter from John E. Pomfret, President of William and Mary College to J. C. Harrington, 17 April 1946, CNHP Engineering Office file 630--Parkway, Williamsburg-Jamestown.

[122]. Thomas Allen, Regional Director, Memorandum for the Director, 13 December 1944, CNHP Engineering Office file 630--Parkway, Williamsburg-Jamestown.

[123]. Ibid.

[124]. "Glory Be! Tunnel May Open Shortly," *Newport News Daily Press*, 26 April 1949; also "Williamsburg Tunnel Opened at Ceremony," *Newport News Daily Press*, 11 May 1949.

[125]. Jamestown-Williamsburg-Yorktown Celebration Commission, *The 350th Anniversary of Jamestown 1607-1957, Final Report to the President and Congress*, Government Printing Office, 1958, 42.

[126]. Information in the previous three sentences is from Bennett, "Colonial National Historical Park Roads and Bridges," HAER No. VA-115, 63-64.

[127]. Jamestown-Williamsburg-Yorktown Celebration Commission, *The 350th Anniversary of Jamestown 1607-1957, Final Report to the President and Congress*, Government Printing Office, 1958, 15.

[128]. Jamestown-Williamsburg-Yorktown Celebration Commission, *The 350th Anniversary of Jamestown 1607-1957, Final Report to the President and Congress*, Government Printing Office, 1958, 40. The general information about the Commissions is drawn from pages 15-37.

[129]. Norman T. Newton, *Design on the Land*, Boston: The Belknap Press of Harvard University Press, 1971, 552.

[130]. Norman T. Newton, *Design on the Land*, 552.

[131]. Jamestown-Williamsburg-Yorktown Celebration Commission, *The 350th Anniversary of Jamestown 1607-1957, Final Report to the President and Congress*, 42.

[132]. Telephone interview with Robert Steenhagen by Heidi Hohmann, April 5, 1996.

[133]. According to Steenhagen, Nelson Royal left Colonial NHP because he didn't get along with Abbott. Royal transferred to the Philadelphia office of the NPS in 1954.

[134]. Telephone interview of Robert Steenhagen by Heidi Hohmann, April 5, 1996.

[135]. Jamestown-Williamsburg-Yorktown Celebration Commission, *The 350th Anniversary of Jamestown 1607-1957, Final Report to the President and Congress*, 16.

[136]. Abbott, Superintendent's Monthly Report for December 1954, 2.

[137]. Telephone interview with Robert Steenhagen by Heidi Hohmann, April 5, 1996.

[138]. Superintendent's Monthly Reports, March through October, 1955.

[139]. Stanley Abbott, Superintendent's Monthly Reports, November and December, 1955, both 7-8.

[140]. Abbott, Superintendent's Monthly Reports for August and September, pages 4 and 4 respectively.

[141]. Abbott, Superintendent's Monthly Report for November, 1955, 7.

[142]. Abbott, Superintendent's Monthly Report for September 1956, 8.

[143]. Telephone interview with Robert Steenhagen by Heidi Hohmann, April 5, 1996.

[144]. Telephone interview with Robert Steenhagen by Heidi Hohmann, April 5, 1996.

[145]. Jamestown-Williamsburg-Yorktown Celebration Commission, *The 350th Anniversary of Jamestown 1607-1957, Final Report to the President and Congress*, 42-43.

[146]. Telephone interview with Robert Steenhagen by Heidi Hohmann, April 5, 1996.

[147]. Telephone interview with Robert Steenhagen, April 5, 1996.

[148]. Bennett, "Colonial National Historical Park Roads and Bridges," HAER No. VA-115, 110.

[149]. Bennett, "Colonial National Historical Park Roads and Bridges," HAER No. VA-115, 111.

[150]. Bennett, "Colonial National Historical Park Roads and Bridges," HAER No. VA-115, 111.

[151]. Bennett, "Colonial National Historical Park Roads and Bridges," HAER No. VA-115, 112-113.

[152]. Bennett, "Colonial National Historical Park Roads and Bridges," HAER No. VA-115, 112.

[153]. Bennett, "Colonial National Historical Park Roads and Bridges," HAER No. VA-115, 115.

[154]. Bennett, "Colonial National Historical Park Roads and Bridges," HAER No. VA-115, 123.

[155]. Bennett, "Colonial National Historical Park Roads and Bridges," HAER No. VA-115, 124.

[156]. Bennett, "Colonial National Historical Park Roads and Bridges," HAER No. VA-115, 125.

[157]. Bennett, "Colonial National Historical Park Roads and Bridges," HAER No. VA-115, 124.

[158]. Bennett, "Colonial National Historical Park Roads and Bridges," HAER No. VA-115, 116.

[159]. Bennett, "Colonial National Historical Park Roads and Bridges," HAER No. VA-115, 116 for the information on pavement repair and 115 regarding striping.

[160]. "Planting Plans, Colonial Parkway," Drawing 333/41026, sheets 1-13.

[161]. Telephone interview with Robert Steenhagen by Heidi Hohmann, April 5, 1996.

[162]. Bennett, "Colonial National Historical Park Roads and Bridges," HAER No. VA-115, 117-118.

[163]. Colonial NHP Staff, Review Comments on Draft Colonial Parkway Cultural Landscape Report, October 3, 1996, 10.

[164]. Bennett, "Colonial National Historical Park Roads and Bridges," HAER No. VA-115, 118.

[165]. Bennett, "Colonial National Historical Park Roads and Bridges," HAER No. VA-115, 119-121.

III. PARKWAY DESIGN AND AS-BUILT CHARACTER

INTRODUCTION

In the previous chapter, the discussion of the parkway planning and construction process provided a view of the parkway's design as an element in the larger physical landscape of Jamestown, Yorktown, and Williamsburg. This discussion also elucidated the political, interpersonal, and inter-organizational decisions that influenced the design of the parkway, in particular its alignment along the York and James Rivers. Although this predominantly chronological discussion provides valuable information about the design of the parkway, it does not provide a detailed or structured presentation of the resulting, as-built character of the parkway's design. To provide this information, and better understand the parkway's design intent and the resulting as-built character of the road, it was determined that it would be useful to break the parkway down into its character-defining features and examine these more closely on an individual level. The intent of this chapter then, is twofold: to determine the designers' intentions for the parkway's features and to determine the character of the parkway—what it looked like, what it felt like—after the design was implemented on the site.

To these ends, the chapter is organized into individual sections, each referring to a specific feature of the parkway's design. These features are:

- Spatial Organization/Context
- Spatial Character
- Topography
- Circulation—Alignment, Surfacing, Interchanges, Parking Overlooks
- Vegetation
- Shoreline
- Drainage Features
- Structures
- Small Scale Features
- Cultural Resources

In general, each feature section begins with a design history describing the design process during both the 1930s and the 1950s. This is then followed by a description of the feature's resulting as-built conditions, which is generally assumed to be after 1958. The design history describes how the feature was designed, what the designer intended and how the feature was subsequently constructed. Because many design decisions were made in the field, the construction process was deemed an important part of this design history. Information for the design history is primarily drawn from historical documents. Because few straightforward accounts of the design process or statements of design intent for features were located, information was gleaned from day-to-day correspondence about the parkway, from construction completion reports, and from iterations of design and construction drawings. Quotes from historical documents and design drawings are used as illustrations where appropriate.

The information on the resulting as-built character of features was drawn from the design histories and from a close examination of historic photographs and in-field conditions. Where possible, photographs showing as-built conditions were compared to design plans or statements of intent for confirmation. However, some design work, such as planting, was done in the field, with little or no prior or subsequent graphic documentation. In these cases, photographic documentation alone was used to determine both design intent and resulting character, requiring some speculation. Effort has been taken to identify such specula-

tion from fact. Where appropriate, photographs are included so that the reader can test the suppositions of the authors.

It should be noted that in general, more information is given on the design of the features during the 1930s design and construction periods. To some degree, this is due to the fact that photographic and written documentation of the completed parkway is greatest for the years between 1930 and 1939. However, it is also due to the fact that, in most cases, only minor change occurred in the design of features in the 1950s. In general, as the following sections reveal, design decisions made in the 1930s were consistently carried forward to the 1950s, with few exceptions. This uniformity of design concepts resulted in a consistency of character between the two eras and along the entire length of the parkway.

A. SPATIAL ORGANIZATION/CONTEXT

As noted in Chapters I and II, prior to construction of the parkway, the James-York peninsula was a predominantly rural landscape. The landscape was characterized by its agricultural fields, which generally existed on the more level topography adjacent to the river shorelines; marshes, which existed in the dendritic forms of the peninsula's lowland drainage channels; and forests, which existed on the folded terrain of the uplands between the two rivers. By the time the parkway was completed in 1958, this surrounding landscape context had changed somewhat from the conditions which existed in the 1930s. In general, the rural landscape was becoming more developed and less rural. Sheets 2 and 3, the 1949 and 1958 Historic Base Maps, document this growing development as the parkway was constructed in the James-York peninsula. Viewed chronologically, the two sheets show increasing urban and suburban development, particularly in and around Williamsburg and Yorktown. The drawings show the expansion of both city grids and an overall increase in residential subdivisions in the outskirts around the towns. Williamsburg in particular shows great growth between 1930 and 1958, as evidenced by the appearance of suburban communities to the north, northeast and southwest on the 1958 base map.

The construction of the parkway occurred concurrently with other changes in the region's transportation network. In addition to the parkway, linking the three historic sites, Routes 143 and 132, linking Williamsburg to points north, are shown on the 1958 base map. Similarly, as residential density increased south of Williamsburg, Route 31 gains an increasing importance on the 1958 base map. Another change is shown in the elimination of the network of roads crossing the peninsula, in part due to the blocking of movement along these roads by the limited access parkway.

The growth shown by a comparison of Sheets 1, 2 and 3 was fueled in part by Williamsburg's and Colonial National Historical Park's increasing importance as tourist destinations. However, growth of the military economy in the region likely had a greater impact. This fact is evidenced by the increase in structures adjacent to the Naval Mine Depot and southwest of Yorktown over time years. Regional lands devoted to military, suburban, and urban land uses in 1958 are shown on Sheet 17, 1958 Spatial Organization/Context. Sheet 17 also shows that by the end of the parkway's completion, agricultural lands were playing a role in the parkway viewshed only along the James River. However, despite losses in agricultural lands, Sheet 17 also indicates that development had not generally occurred in areas immediately adjacent to the parkway. Therefore, at the time of its completion, the parkway was still situated within a rural landscape, surrounded by broad areas of forest and regrowth forest. As noted in Chapter II, the intent of the parkway design was to take full advantage of the scenic aspects of the peninsula's rural, undeveloped landscape. The parkway achieved this fully by encompassing the scenic passages of both the James and York River shorelines and the forested uplands in between.

B. SPATIAL CHARACTER

1. Overall Spatial Character

The following sections will reveal that the process of designing and constructing Colonial Parkway wasaccomplished by the design of a series of elements, each carefully developed within certain design parameters. However, the design process also included the orchestration of these individual elements into a holistic landscape composition. In the case of Colonial Parkway, this orchestration clearly resulted in a landscape which was more than the simple sum of its parts. When considered together, and when situated in the distinct context of the James-York peninsula, the individual landscape elements of grading, alignment, vegetation, structures, and small scale features all combined to create the complete and unique spatial experience and character of Colonial Parkway.

Admittedly, the complete experience of driving the Colonial Parkway in its as-built condition in 1958 is difficult to ascertain today, since changes along the parkway and to the region have occurred. This research effort, not surprisingly, also uncovered no firsthand, specific descriptions of the experience of driving the parkway. However, using photographs, aerial photographs, planting plans, and management plans, conclusions may be drawn about the parkway's overall spatial character in the years immediately following its construction.

Considered broadly, the spatial experience of driving the parkway was comprised of moving from flat, low, and open river shore to higher, undulating and enclosed forested terrain and vice versa. Beginning at the Yorktown end, in its as-built condition, the parkway moved from the relatively open Yorktown Battlefield, to the open views along the Bellfield Straight, through the enclosed woodland spaces around Williamsburg, and then back out into the openness of the James River shoreline. Moving in the opposite direction, the experience of travelling from Jamestown to Williamsburg was actually quite similar, as open landscape changed to constricted landscape and returned to open landscape; in other words, the similar qualities of the James and York Rivers caused a mirroring of the driving experience around Williamsburg.

This overall spatial sequence (of transitioning from open to closed conditions and back again) was essentially defined by the routing of the parkway, as described in Chapter II, and was much the result of Peterson's efforts as mediated by the various routing disputes. However, the overall routing only partially created the parkway's spatial character, which was further enhanced by the design of the roadway itself. In other words, within the larger parkway spatial sequence, the road was designed as a series of smaller, individual spatial events which amplified and enhanced the characteristics of the routing's surrounding landscape. These local or immediate spatial characteristics were created through grading, planting, alignment, and utilizing views and vistas. For example, the experience of driving along the flat, open York River at Indian Field Creek was enhanced by the utilization of steep inland topography to focus views on the river, which views were then framed by planted vegetation. In a similar fashion, the experience of moving through the forest in the Penniman Tract was enhanced by clearing understory vegetation to allow views into the cathedral forests and by planting vegetation up to the road margin to provide a strong sense of enclosure around the roadway. Other spatial passages were defined by the use of structures, such as along the James River, where the series of low concrete bridges over unbounded tidal marshes unified this stretch of the parkway as a flat, open expanse of land, water, and sky.

The sequence of these individual spatial passages of the parkway in their as built conditions is perhaps best shown on the "Planting, Land Use and Maintenance" plans dating to circa 1964 and may also be seen in photographs dating to immediately following parkway construction and planting. In 1958, the parkway contained a number of areas with distinct, identifiable spatial qualities. These conditions of openness and

enclosure and view and vista were analyzed and are presented on Sheet 19, the map showing 1958 Spatial Character. The following paragraphs, which consider the parkway sequentially, beginning at Yorktown, provide a verbal depiction.

A first zone of spatial character existed between Yorktown and Indian Field Creek, an area whose character could be defined as enclosed. Originally a forested area, the sense of enclosure was further enhanced by the grading of steep side slopes against the parkway margin. Views in this area were minor, confined to flowering trees in immediate road margins or in front of the driver; no distant views were afforded. This high level of enclosure persisted until Indian Field Creek, where a wide expanse of open area occurred. To maintain this open quality, no vegetation was permitted to grow. Planting plans for this area state "allow no regeneration" and vegetation for the area shows only some canopy trees facing the steep topography in front of the Officers Quarters, and some trees framing larger views.

These long river views were a key component of the spatial character along the York River. Such long views were generally absent in the parkway's upland areas and therefore also served to differentiate the rivers and forests along the parkway. In general, views and vistas were consciously designed in conjunction with the parkway alignment. According to Robert Steenhagen, Abbott designed the parkway vistas to project off the tighter parkway curves "like spokes off a wheel."[1] This type of design can be seen in Figure II.1, a plan for the area just east of Indian Field Creek, in which designated views and vistas are shown off the curve of the parkway. Such a configuration of views also existed at Felgates Creek and along the Bellfield Straight, between Indian Field and Felgates Creeks. There, on a bluff above the York River, vistas were viewed between the columnar trunks and under the canopy of tall pines. In this location, alignment, views, vistas, topography and vegetation all combined to create a passage of spatial character unique along the length of the parkway.

After the openness of the York River, the parkway returned to an enclosed spatial character between Kings and College Creeks. Yet once again, within the enclosed character, variations existed. In general, the enclosure of the stretch of road between Kings Creek and Williamsburg was enhanced by graded side slopes with vegetation planted close to the pavement edge. However, notation on the 1964 Planting Land Use and Management plans indicate that the enclosing wall of vegetation, though close to the road, was visually permeable, due to understory removals. Views, however, were short, confined by vegetation, topography and alignment, with the exception of major long viewsheds created at Kings Creek and Jones Mill Pond.

In contrast, the uplands between Williamsburg and Jamestown are shown on the 1964 plans and appear to be less enclosed. The forest line is further back from the roadside edge, and the graded side slopes are shown much less densely planted than on the Yorktown side of Williamsburg. Notations on the plans indicate "specimen trees" on the side slopes, giving an impression that this area was more park-like than forest-like in appearance. Although this difference in spatial character between the two upland areas may have been due to the fact that the Jamestown plantings were younger, due to their more recent planting, it may also have been due to a shift in design intent for spatial character which occurred between the 1930s and 1950s. Charles Peterson comments that in the 1930s, his intent for the parkway's upland wooded areas

> was that the roadside slopes should be treated in such a way that eventually forest trees would come right down to the Parkway shoulders and eventually complete a canopy overhead.[2]

From another standpoint, Robert Steenhagen recalls that in the 1950s, Abbott was trying to create a more open landscape. Steenhagen maintains that the goal of the 1950 designers was to prevent the parkway

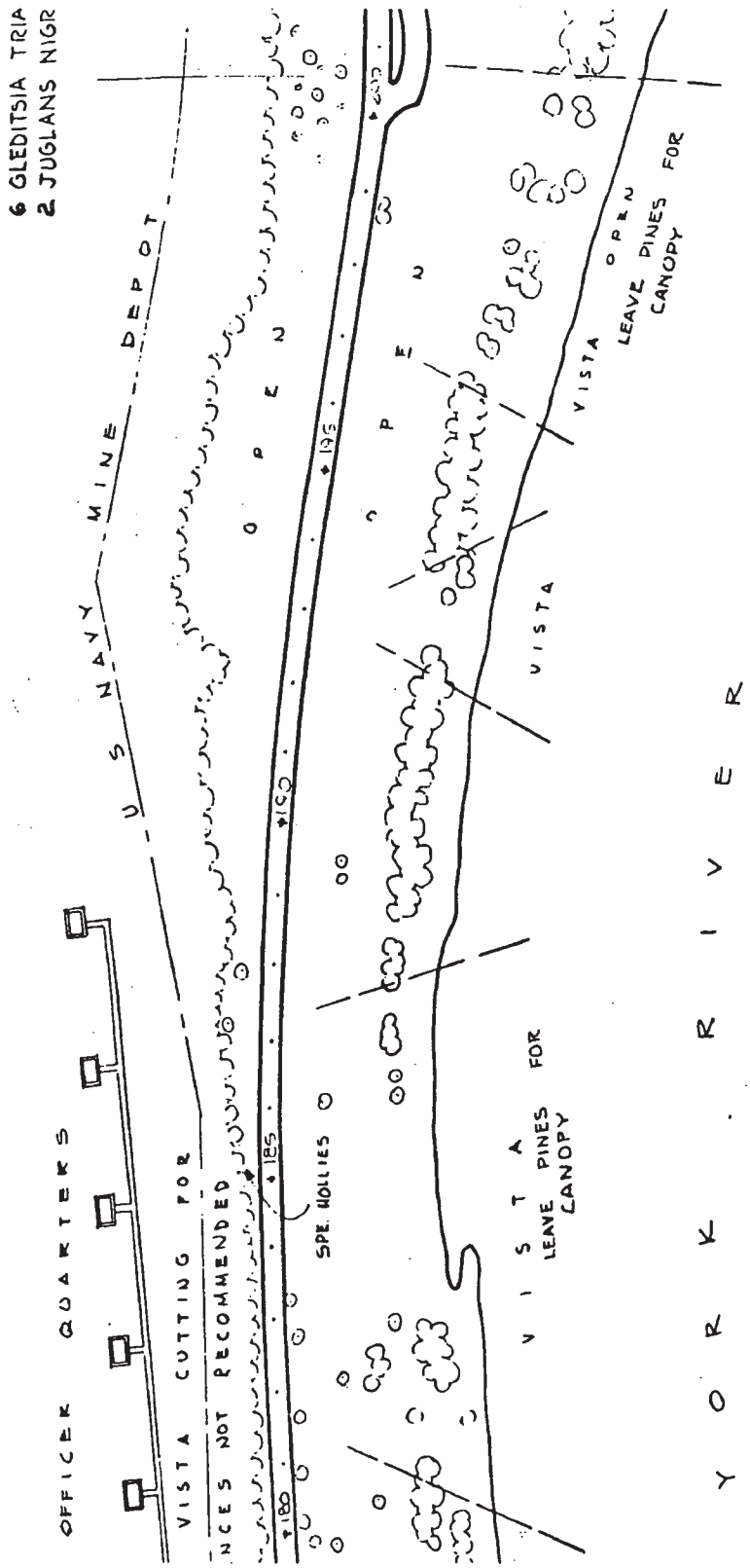


Figure III.1. Plan showing organization of views in area east of Indian Field Creek. From the Planting and Land Use Management Plan, Pky-Col 3106, Sheet 10, circa 1964. National Park Service, Colonial National Historical Park.

from becoming a "green tunnel."[3] These differences in design intent may have accounted for the differences in the character of enclosure between the two upland sections of the parkway seen on the 1964 plans.

As the parkway left the uplands for the James River shoreline at College Creek, it once again assumed an open spatial character, similar to that of the York River. Wide open vistas, across both inland marshes and the river were organized around the curves of the road and structured by tree and shrubs, similar to their organization at Indian Field and Felgates Creek. In contrast, along straighter sections of the road at Mill Creek and Archers Hope, denser vegetation on the inland side of the road served to emphasize the oblique, angled views over the river. This organization of viewsheds was similar to that at Bellfield Straight, although the more level topography, closer to the water level, along this section of the James River lent a significantly different feeling to the parkway.

Between Mill Creek and the Isthmus, a greater degree of enclosure was afforded by taller vegetation along the Back River. However, a completely open spatial character occurred at the Isthmus, where river and sky could be viewed unimpeded by any trees or shrubs.

These varied spatial passages and viewsheds within the overall sequence of enclosure and openness along the parkway were created by unique combinations of grading, alignment, and vegetation. These landscape features are discussed below to more fully explicate the details contributing to the parkway's overall spatial character.

C. TOPOGRAPHY: HYDRAULIC FILL & GRADING

1. 1930s: Yorktown to Jamestown

Once the routing of the parkway had been set, grading was required to fix the approximate alignment of the road. In general, the grading of the parkway was designed as a reflection of the varied natural topography of the James-York peninsula. Along the peninsula's level, terraced river shores, the parkway grading was flatter and straighter while in the dissected uplands, the parkway was more steeply graded and curving, with significant cuts and fills required to navigate drainage basins and slopes. In other words, the grading techniques fitted the parkway to the landscape and were repeatedly used along the length of the parkway. These constructed topographic features became an important part of the parkway's design vocabulary.

Parkway grading began in the summer of 1931 with the creation of the roadbeds across the mouths of the Indian Field and Felgates Creek, both of which drained into the York River. A process known as "hydraulic filling," in which sand and gravel from the nearby river bed was excavated by river dredges, was deposited along the parkway alignment to create a firm roadbed above the mean tide level. The substrate dredged from the riverbed—a slurry of sand, gravel, and water--was placed in the desired location using large pipes. As the material flowed out of the pipes, it slowly built up and the water drained away, and a natural-looking land form was shaped. The use of hydraulic fill to create a roadway embankment, had previously been undertaken for Mount Vernon Parkway along the Potomac River in Virginia, and according to Charles Peterson, this project influenced the use of the technique at Colonial.[4] In fact, the dredge used for the work, known as the "General" was a sister to, and exactly like the one used on the Mount Vernon Parkway.[5] Once dredging permits were received from the War Department, the two sections of hydraulic fill at Colonial Parkway were bid out as a contract separate from other grading work.

Contract plans and elevations reveal that the hydraulic fill embankments at Felgates Creek and Indian Field Creek, 1200 and 4400 feet long respectively, were set at an elevation of 11 feet above the mean tide. The placement of the fill was carried out by dredging material from the river floor from a distance not less than 500' from the centerline of the embankment. Using an 18" discharge pipe placed at the centerline of the proposed parkway embankment, the material was allowed to flow out and settle naturally. However, the material, especially Felgates Creek, did not behave as it had along the Potomac, a great surprise to everyone. Charles Peterson later recalled:

> We hadn't counted on the slopes of the hydraulic fill when the stuff came out of the pipe full of water. We assumed an angle of repose of about 1 to 5 about the same as along the Potomac where coarse gravel came up from the bottom. But on the York River with sand as fine as table sugar it spread out twenty or thirty or forty times as wide as it was deep; a gleaming white sand, the most wonderful beach anyone had ever seen.[6]

Figure III.2 is a photograph showing the appearance of the hydraulic fill at Felgates Creek soon after its completion. In this view, the wide expanse of white sand, without any vegetation, has an open, barren appearance. However, Figure III.3, which shows the same area with a road bed graded in, gives a better view of how the fill looked after settling and further manipulation had occurred.

By today's standards, the awarding of contracts and dredging permits without testing the material's suitability in the first place is somewhat surprising and attests to a different standard of environmental assessment than is currently required in projects of this scope. However, it also speaks a bit to the contradictory mindset of the National Park Service engineers and landscape architects of this era, who made major environmental changes while believing, quite genuinely, that they were protecting the natural environment. For example, in response to a Navy request to do some additional dredging along the York River in conjunction with the hydraulic fill project, the NPS responded:

> The desire of the National Park Service is to have the natural conditions along this scenic parkway disturbed as little as possible. It is hoped the natural drains and marshes can be left in their natural condition, where they are within view of the Parkway. The proposed filling in of the swamp will make an artificial condition that is undesirable so far as our interests are concerned.[7]

In contrast to this statement, the NPS actions at Felgates Creek and Indian Field Creek were causing precisely the same problems they had expressed concern about with the Navy. Hydraulic fill was spreading out, filling marshes, and smothering trees and other vegetation important to the proposed scenic qualities of the parkway. Efforts were taken to reverse this effect:

> As discussed with you and Mr. Smith in the Field yesterday, it is understood that a dike construction will be made at the approach to the Indianfield [sic] Creek crossing to restrain the hydraulic fill from spreading to a slope of 25 to 1, thus destroying a great deal of valuable tree and brush covering on the roadside. A 2 to 1 slope would be ideal but if the spread of the slope is confined to 50 feet a satisfactory landscape effect will not be precluded.[8]

Another problem ensued when the hydraulic fill narrowed the mouth of Indian Field Creek, and caused the inland water levels to rise, again drowning a considerable number of trees. In addition, the spreading out of the fill and the changing drainage patterns at the creek mouths altered the relationship of the roadway with the water's edge. Upon inspecting the fill in this location, Albright in particular was unhappy with the great distance the water seemed from the road. He requested that "study be made of the land side of the hydraulic fills across Indian Field and Felgates Creeks to see if some means could be worked out to steepen the slopes, reduce the barren sandy area and bring the water surfaces nearer the road."[9] Peterson



Figure III.2. "Looking Forward along Hydraulic fill from Sta. 172, 3-21-32," # 1401. National Park Service, Colonial National Historical Park.



Figure III.3. "Looking up York River along completed hydraulic fill, Station 172," #1366. No date, circa 1933. Same view as III.2, but with graded roadbed. CNHP Photo 1366. National Park Service, Colonial National Historical Park.

requested that the contractor perform these alterations, causing a protest from William Robinson, who had recently been appointed Superintendent of the Park after Oliver Taylor's departure from the post following the Sesquicentennial Celebration. Robinson wrote:

> I feel constrained to suggest that it may be unwise to tamper materially with the conditions for stability which nature has imposed upon the slopes. I understand that the Bureau of Public Roads has secured the advice of the Army Engineers and that the latter do not regard the contraction of the fills to the width desired by Mr. Peterson to be practical. The action of the wind and tides, very probably, will accomplish a small part of what Mr. Peterson wishes, but to attempt to do more than those natural forces will do themselves may result in material damage.

Robinson's idea was squelched by Demaray, who noted that he would be "glad to be advised what is being done to meet the Director's request," and the contractor was requested to fix the slopes. As shown in Figure III.4, typical sections for the fill, the final proposed top width of the embankment ranged 100 feet at the mouth of Felgates Creek to 60 feet at the bluff in front of the Officer's Quarters east of Indian Field Creek; and both sections were to slope down to the water at a grade not steeper than 1:25 nor flatter than 1:30.[10] As shown in Figure III.5, a photograph of the Indian Field Creek area, this gave the fill areas a broad, flat open appearance, especially near the bridges, where there was no forest edge or embankment to visually enclose the area.

However, as Robinson had predicted, wind, water, and tides continued to work on the edges of the hydraulic fill. In the years between 1935 and 1937, erosion altered the shoreline, especially around the two bridges. To prevent the bridge abutments from losing structural integrity, it was decided to stabilized the fill edges (or shoreline edges, as they were called by this time) with the application of riprap. As Figures II.14 and II.15 show, this was done a number of times, with increasing amounts of riprap needed to counteract the effects of the tide. The riprap seawall gave the edges of the hydraulic fill a more dominant visual edge than the original beach-like shoreline, and eliminated the hydraulic fill's smooth transition from shore to water. Yet the treatment was necessary to stabilize the shoreline and forestalled major bridge repairs until the 1980s.

Following the completion of the hydraulic fill, contracts were let for the grading of the parkway between Ballard Creek and Hubbard Lane in the fall of 1931. Large amounts of earth were moved during this work: More than 200,000 cubic yards of earth were excavated from the right of way, and an additional 84,000 cubic yards of fill were brought in to raise the level of the roadbed in low areas, such as along Brackens Pond, at Jones Mill Pond, or across the ravines in the Penniman tract. The profile at the bottom of Figure II.4, which shows the difference between the existing grades and the proposed parkway elevation gives a good idea of how much fill was brought in at Brackens Pond.

As indicated by the amount of earth excavated from the roadbed and brought in as fill, the grading of the parkway to achieve the desired vertical alignment required significant cuts and fills along the horizontal alignment, particularly in the area between Kings Creek and Hubbard Lane. Figure III.6 shows a number of typical grading sections for the roadway. In addition to showing the road crown and superelevated curves, this drawing, part of the Unit I contract, also shows side slopes of cut and fill at a slope of 2:1. The appearance of such cut and fill slopes created by this steep grading were of concern to the NPS landscape architects, who desired that the roadsides not look overly engineered. This was accomplished by, where possible, limiting cuts and fills so that minimum clearing would be necessary, allowing mature vegetation to approach the pavement edge. In other areas, where cuts and fills caused the removal of vegetation, they sought to decrease the steepness of the side slopes following the initial grading. This was accomplished by regrading the slopes to make them less steep, a process referred to in correspondence as "laying back" the

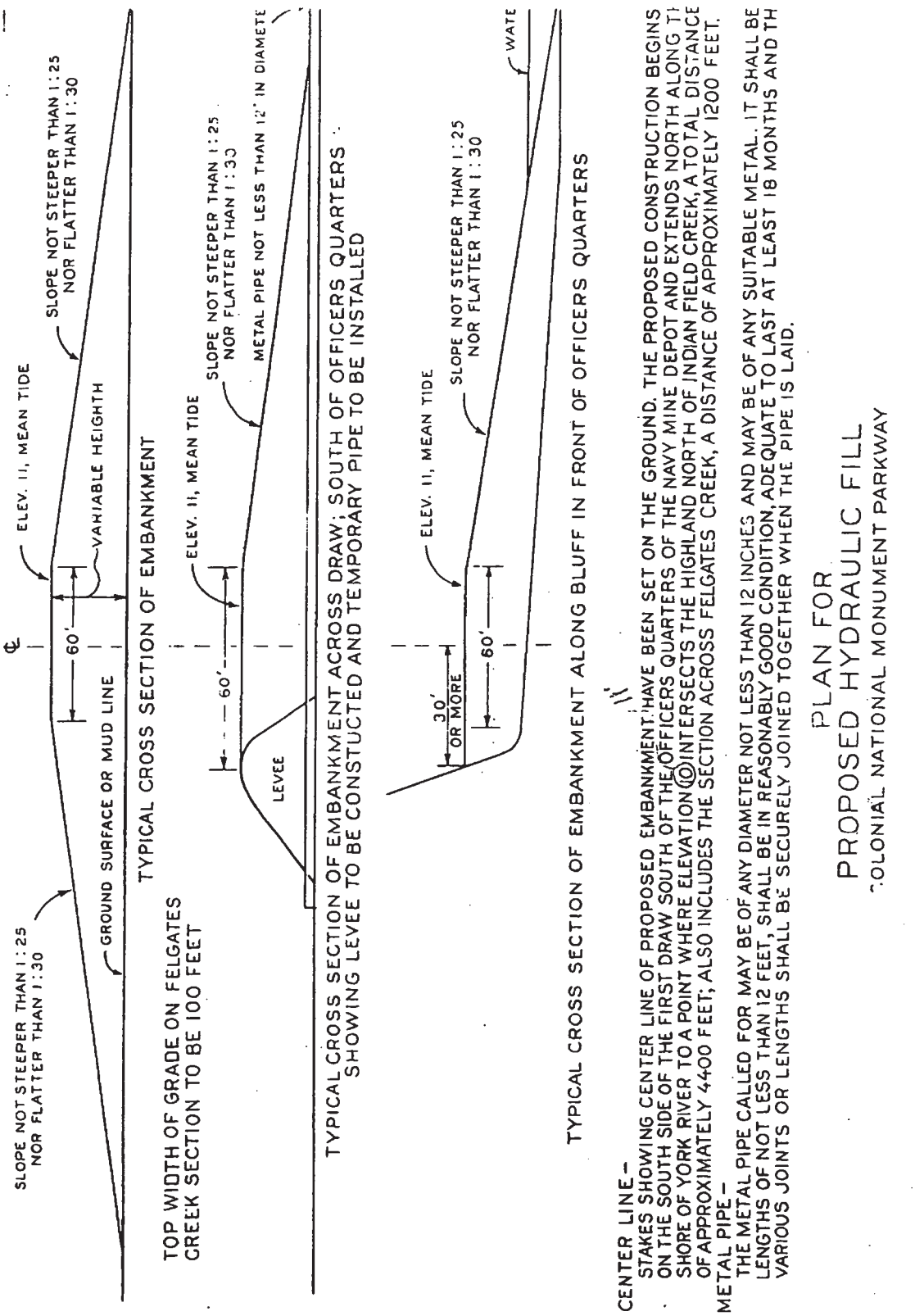


Figure III.4. "Plan for Proposed Hydraulic Fill, Colonial National Monument Parkway, Unit No. II." 1932. Shows proposed sections of fill at Indian Field and Felgate's Creeks. National Park Service, Colonial National Historical Park (Engineering Office).



Figure III.5. Photo showing appearance of Hydraulic Fill at Indian Field Creek, # 2976. No date, circa 1935. National Park Service, Colonial National Historical Park.

slopes. Laying back created slopes with a 3:1 or 4:1 or shallower gradient. Figure III.6 shows a labor crew laying back a slope while a series of much steeper slopes appear further up the parkway. In addition to providing a less engineered appearance, the laying back of the "hogbacks," as the steep slopes were sometimes called, reduced erosion and provided an area for plantings that would blend with the vegetation beyond the road prism.[11] The character of these slopes may be seen on the period plans and sections of Jones Mill Pond and Station Point 544 (Sheets 9 and 10 in Appendix A).

Achieving the proper side slopes required significant in-field design and supervision of the grading contractors. The Superintendent's Monthly Reports between 1932 and 1934 indicate a number of instances in which the NPS Landscape Division requested the BPR engineers and contractors to "lay back" additional side slopes. These requests were not always favorably received, because they resulted in change orders, additional expense, or excess borrow with no place to dispose of it. Simpler solutions to improve the roadside appearance—such as simply regrading the top of the slope to blend in with the existing vegetation—were therefore sought out by the BPR. This is demonstrated in a BPR letter responding to landscape architect Zimmer's request for slope laybacks ranging from 3:1 to 6:1 at 34 points along the parkway between King's Creek and Hubbard Lane.[12] Smith is polite, but is unwilling to accede to all of the proposed work:

> I have made a field inspection of the entire area under consideration and in general would say that between Kings Creek and Jones Mill Pond there appears to be no reason why your wishes in respect to the flattening of slopes and obliteration of old roads cannot be complied with. I think, however, that a maximum slope of 4:1 is all that can be obtained without additional clearing. In a few instances the desired result will be obtained by merely grading for the OG [sic] curve [at the top of the slope] which as yet has not been done by the Contractor.

> Between Jones Mill Pond and Hubbard's Lane quite a different condition pertains due principally to the fact that we will have considerable waste material to dispose of from the cut in which the shovel is now working. . . .On this section I would therefore suggest that the flattening of slopes be limited to the placing of any additional excavation within a maximum overhaul distance of say 1000 feet. . . .
>
> Your suggested additional work as modified by me as outlined will cost roughly estimated $4000.00 which of course will have to be covered by an Extra Work Order.[13]

To this letter Smith attached a modified schedule of work which reduced the areas of slopes to be flattened from 34 to 14, with a maximum layback of 4:1 compared to Zimmer's maximum of 6:1.

Despite the areas modified by laybacks, the steepness of roadside slopes continued to be a problem, especially in the months immediately following the completion of the grading in July of 1932. Since spreading topsoil and seeding the roadside was delayed until the fall, heavy rains that summer consistently washed out areas of cut and fill, clogging culverts with silt and eroding the parkway's side slopes.[14] BPR crews were forced to clean out the culverts, erect temporary barricades to prevent wash-outs, and remodel eroded slopes.

In fact, erosion proved to be a continuing problem along the parkway in the early years. Some fill areas had not been sufficiently compacted and were unstable over the first few years. Figure III.8, for example, shows a major fill slide along the embankment at Jones Mill Pond. Such slides were caused by a combination of steep slopes, unstable fill soils, inadequate drainage and water seepage between filled and existing soils. A lack of vegetation covering the finished slopes due to delays in planting also contributed to erosion and slippage.

Grading on the Hubbard Lane to Williamsburg section of the parkway did not occur until 1938. The delay on the work was due partly to more restricted funding, and partly due to the fact that the road builders had to wait for the two underpasses over the road to be constructed. As before, significant excavation was required to grade the road into Williamsburg, due to the area's folded topography and drainage ways crisscrossing the route. Side slopes on cut and fill varied from 2:1 to 5:1. Figure III.9 is a photo of the rough grading in this area, showing a steeply sloped cut on the inside of a curve, with a less steeply sloped fill slope on the outside of the curve.

2. Williamsburg to Jamestown

The second phase of construction for the parkway also began with the filling of the creek mouths using hydraulic fill. However, the hydraulic filling of the 1950s provided few of the surprises that the 1930s fill efforts had, primarily because of the experience gained in the earlier project. In addition, it appears that preliminary investigations of the fill material were more rigorous. The fill projects at 3 locations—Jamestown Island, Mill Creek, and College Creek—began in 1954 and were essentially finished by 1955.[15] As before, the fills impacted a wide area and created large, sandy beaches, as seen in Figures III.10 and III.11. The 1958 period plan of the Jamestown Island Isthmus, Sheet 16 also demonstrates the flatness and openness of the hydraulic fill.

Because completing the parkway included building the Yorktown terminus as well as the roadbed itself south of Williamsburg, the grading contracts for the parkway completion were bid in two pieces. One portion was comprised of roadbed and side slope grading from the Fusiliers Redoubt to Yorktown plus the stretch from Williamsburg to College Creek, which contained the asphalt section of road near the tunnel as

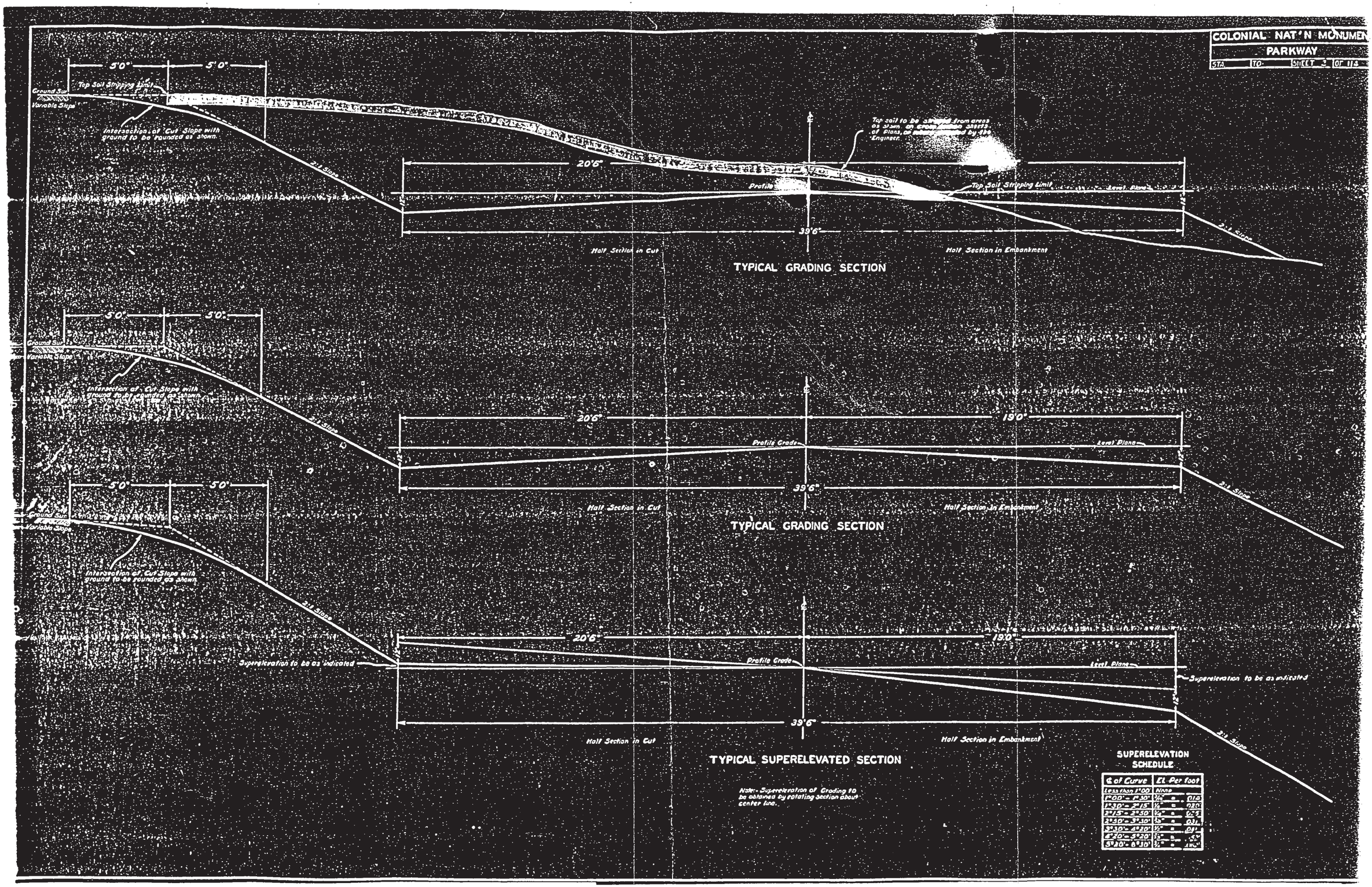


Figure III.6. Typical Grading Sections, taken from an early version of the Unit I construction drawing set, Drawing ID#926, 5/26/31, sheet 3 of 114. National Park Service, Colonial National Historical Park.



Figure III.7. "Grading Operation on cut slopes, Project 1C1, July 1937,"#5512. National Park Service, Colonial National Historical Park.



Figure III.8. "Parkway near station 540--Slide on fill near Jones Pond," #4780. No date, circa 1935. National Park Service, Colonial National Historical Park.



Figure III.9. "Parkway extension before Planting picture," #4706. No date, circa 1937. View showing steeply sloped cut and fill slopes following rough grading on parkway extension from Hubbard Lane to Williamsburg. National Park Service, Colonial National Historical Park.

well as the Halfway Creek Bridge. The other was the grading of the parkway roadbed and side slopes from College Creek to Jamestown. The two projects were bid in the late summer and early fall of 1955, and proceeded at a rapid pace.[16]

As before, the grading contract packages included clearing, excavation of cut and fill slopes, and drainage work. The cuts and fills followed the grading principles of the 1930s, and once again, steep slopes were created along the side of the parkway, especially in the areas near Yorktown and Halfway Creek. However, because of the "fast track" nature of the project, the extensive laying back of slopes of the thirties was not immediately undertaken. Instead, about a year later, the badly eroding slopes were regraded.[17] The 1958 period plan of the Halfway Creek Area, Sheet 13 (in Appendix A), shows the angle of these slopes following their regrading and planting. Other slope stabilization projects included, in 1955, the stabilization of the banks of the James River, where erosion was impacting the bluffs.[18]

3. Topography: As-Built Character

As the design and construction process occurred, a distinct vocabulary of grading features resulted in the parkway's as-built condition. The first of these was the broad, relatively flat fill condition where the parkway crossed creek mouths. Wide, flat, open areas with broad views over the peninsula's creeks, marshes, and the two rivers were created by the hydraulic fill. This effect is clearly shown in Figure III.12, a photo taken along the Jamestown end, and Figure III.3 (above), taken along the Yorktown end. In addition, the fill areas were notable for their relative flatness, especially in contrast to the rest of the parkway. This quality is notably demonstrated on the period plans for the Felgates Creek and Isthmus areas of the parkway, Sheets 8 and 16 (see Appendix A). The placement of a flat area at the water's edge

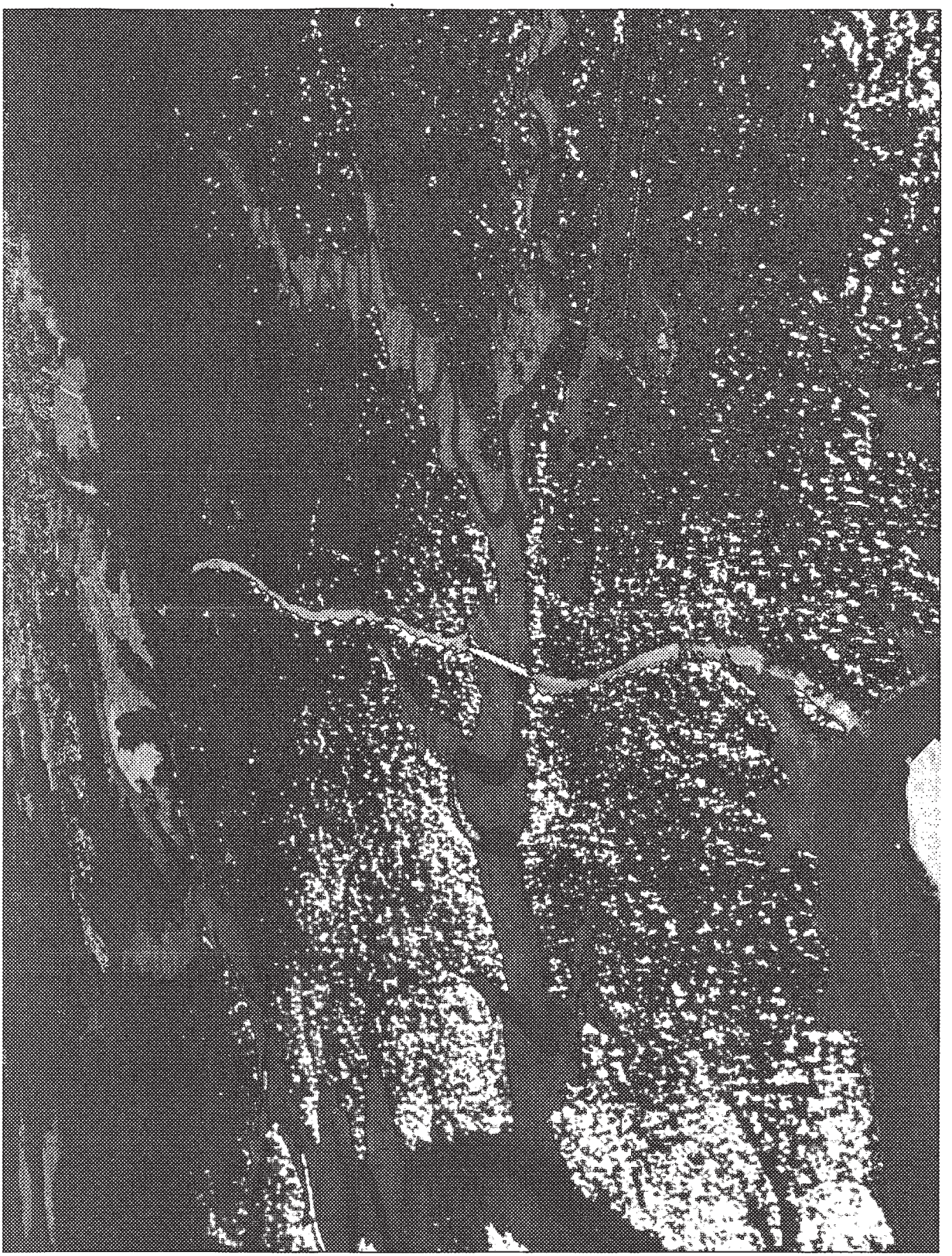


Figure III.10. "Aerial view of Fill at College Creek," # COLO-38951.703. 1955. National Park Service, Colonial National Historical Park.

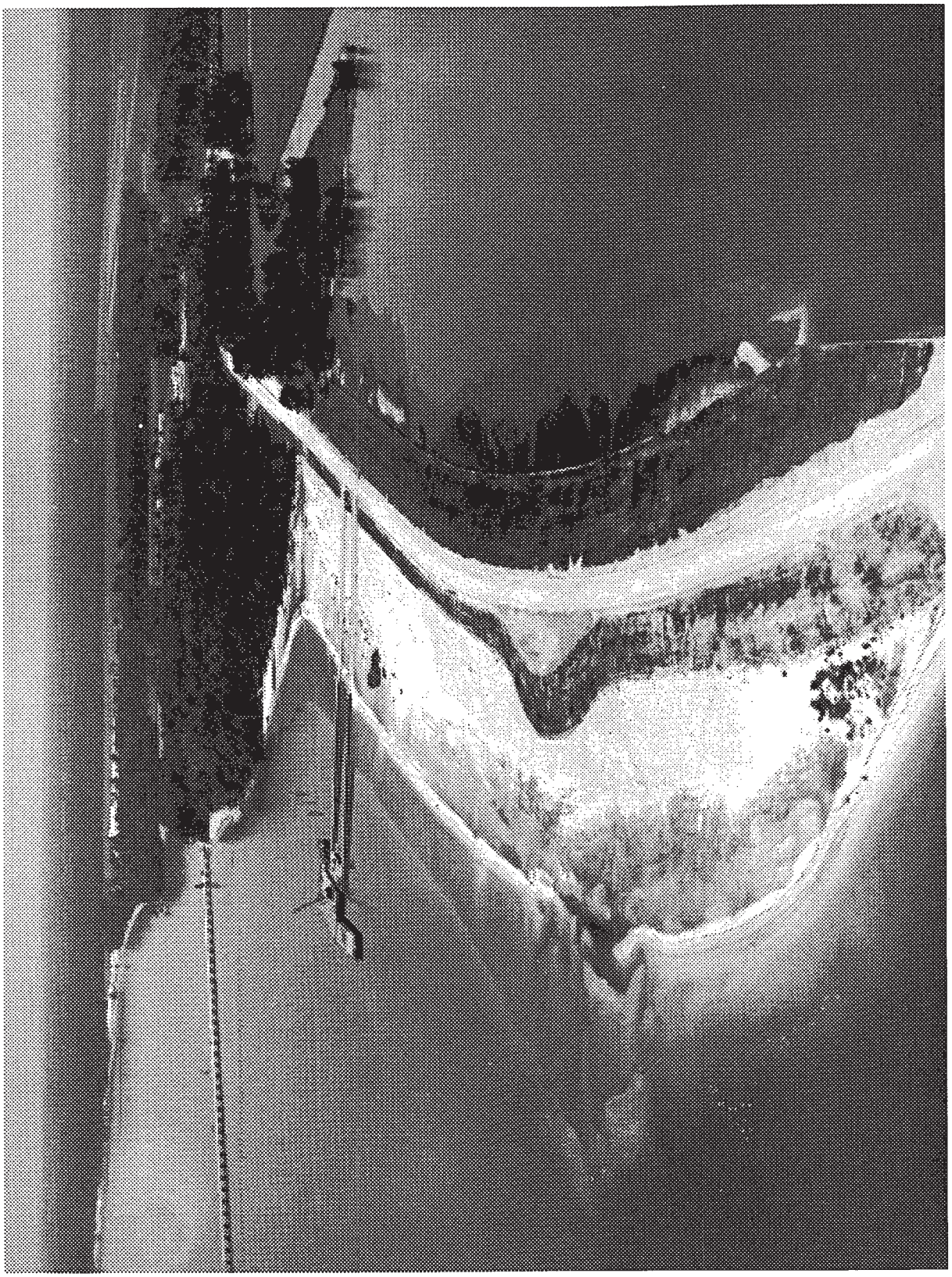


Figure III.11. Fill at Jamestown Island Isthmus, #COLO-38951.683. Circa 1955 National Park Service, Colonial National Historical Park.

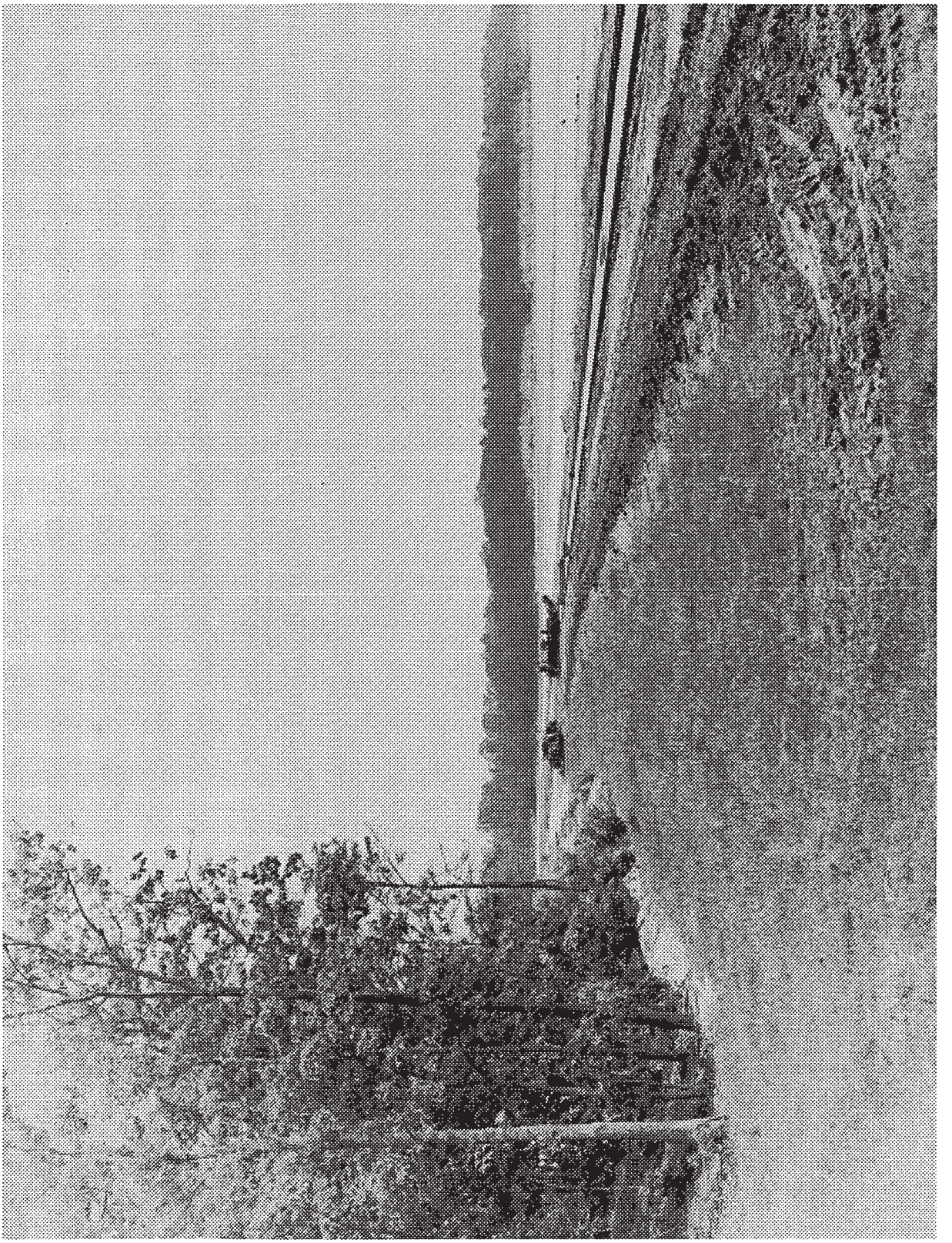


Figure III.12. View over parkway shoreline, #COLO-38951.562. No date, circa 1955. National Park Service, Colonial National Historical Park.

gave a visual effect that the roadbed and the water surface merged in one plane and the parkway visually expanded to encompass a much wider viewshed. This gave a feeling not so much of travelling within a linear corridor, as of hovering above the terrain. That this was an important, designed effect is shown by the fact that Horace Albright requested, on more than one occasion, that the water's edge be brought closer to the road. In addition, the road curvatures along the fill sections had very wide radii, providing an impression of straightness. This combination of a nearly straight pavement on a topographically flat area further enhanced the open character of the hydraulic fill areas. Over time, the blending of pavement, land, water and sky was reduced somewhat, as the beach like edges of the hydraulic fill were reinforced with riprap. The riprap armature gave a visually apparent edge to the hydraulic fill, eliminated the original beach-like shoreline, and disrupted the smooth transition from shore to water that had previously existed.

Characteristic cut and fill slopes also emerged as elements in the parkway's as-built vocabulary of design elements. As noted above, these side slopes varied in steepness from 2:1 to 5:1, with 3:1 and 4:1 slopes predominating. These side slopes often differed from those indicated on construction drawings, since lay backs were made after the initial grading. A comparison of parkway cross sections at Jones Mill Pond, Station Point 544, Capitol Landing, and Halfway Creek, shown in Sheets 9, 10, 11, and 13 (see Appendix A), indicate the consistency of these slopes along the full length of the parkway. These characteristic side slopes helped to give the curving line of the road a three-dimensional, volumetric quality. For example, in some areas, cut slopes provided the edge of the parkway's volume of space, making the road feel enclosed by land form and enframed by the surrounding landscape, as shown in Figure III.13. Figure III.14 shows how the parkway's side slopes enhanced the winding feeling of the road by visually emphasizing the radius of the curve. In other areas, as shown in Figure III.15, the grading of the road provided for sloped embankments falling away from the pavement on either side, giving the parkway the feeling of moving over lower terrain. In these ways, the road's cuts and fills helped to give the alignment a clear visual definition which enhanced the experience of driving the parkway.



Figure III.13. "Parkway Station 544, 'before' planting, looking toward Yorktown," #6087. No date,circa 1935. National Park Service, Colonial National Historical Park.



Figure III.14. "Looking east at Station No. 587, 6-29-39," #7824. National Park Service, Colonial National Historical Park.



Figure III.15. "Parkway Station 148, General View, looking west," #3744. No date, circa 1938. National Park Service, Colonial National Historical Park.

D. CIRCULATION: ALIGNMENT

The resulting character of the parkway's design was due in great part to the design of its alignment. One aspect of alignment, the parkway's route, has been partially discussed in the preceding chapter. The route of the parkway is, in a sense, the alignment of the parkway taken on a broad scale, that is, what terrain it moves through, where it goes, and how it gets there. For the Ballard Creek to Hubbard Lane section of the parkway, Peterson's choice of the route along the York River with its broad water vistas, followed by an inland, wooded route through the Penniman Tract was important in defining the ultimate character of the parkway. The "views over many miles of picturesque shoreline that rival or even surpass those of the Potomac"[19] helped ensure that the parkway's function as a scenic link between the sites would influence its design and construction.

Furthermore, the scenic vistas, combined with a lack of historic road traces along the Yorktown end of the route, helped to push the design of the entire parkway toward a "modern" alignment. This "modern" alignment was a new alignment, independent of any historic road traces. Correspondence reveals that among the decision-makers involved in the Parkway design—Peterson, Spelman, Demaray, and Albright—a modern parkway alignment was the only alignment they ever seriously considered. Their preference for a modern alignment was based on their desire to build enduring infrastructure, on their experiences building roadways in the Western parks, and on their realization of the coming importance of the automobile in both the mind of the American citizen and the development of the National Park System. Despite the fact that Colonial NHP was to be a "historic" park, they realized that an unpaved, dusty, crooked "historic" road would not, in the long run, be widely appealing for the tourist on a pleasurable and educational excursion.

Thus it was decided that Colonial Parkway would be a modern road designed in a modern manner. Designed to accommodate large flows of tourist automobile traffic, the parkway's alignment was based on the most up-to-date roadway engineering practices. Of these practices, the most crucial aesthetically was the use of a continuous curvilinear alignment. This alignment indicated that the horizontal alignment would created by using mostly curves to create a sinuous route which was a pleasure to drive. "Straight" segments were designed as "flat" curves (i.e., with very large radii) with tangents (straight sections) of roadway to be avoided. Horizontal curves (moving left or right in the x and y axes of the world) and vertical curves (changing from up hill and down hill) would be smooth, gentle, and also a pleasure to drive. Such standards were in use in other contemporary parkway projects such as the Westchester County Parkways in New York and the federally-funded Mount Vernon Parkway in Washington D.C. The methodology used to survey and construct the road was also "state of the art" and included such "modern" techniques as aerial photogrammetry to map the route and the use of machines for paving, grading, and dredging.

It is not easy to say, at least in the early years of the park, who exactly the proponents of the "historic" alignment were, though it is likely that Carson, with his ideas of memorial statues, was one. The letters of the Williamsburg Foundation are surprisingly quiet on the subject, mentioning historic roadways only when the Foundation objected to the parkway's Williamsburg approach.[20] As far as can be told from park files, the major proponents of an alignment following historic road traces were the National Park Service's own historians, who brought the subject up definitively in 1933, after the first section of the parkway was substantially complete.[21]

1. 1930s: Alignment from Yorktown to Williamsburg

Although discussions about a "historical alignment" lingered for many years, a detailed, modern alignment of the road, using a continuous curvilinear alignment with few or no tangents, was in fact designed from the outset of the project. A 7 November 1930 memo from Peterson to Albright indicates that alignment details were being designed even before the park boundaries had been determined for the Presidential Proclamation of December 1930. As indicated below, the concern was not about creating a historic parkway, but rather about creating a roadway sympathetic to the landscape and topography:

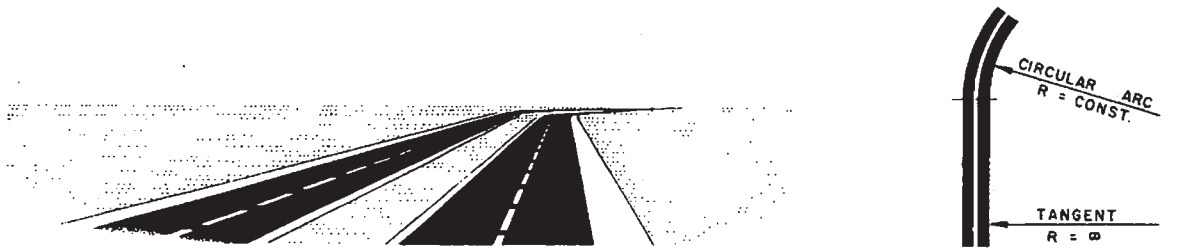
> Certain people with whom I have talked appear to be apprehensive that I am recommending for the Parkway that type of highway which idealizes the tangent, banging straight across country with heavy cuts and fill. Nothing could be farther from my intention or preference.
>
> What I recommend for alignment is a continuous series of reverse curves of long radii not less than (say) 300 feet. The maximum grade would be five percent with no vertical curves with radii under (say) 600 feet. Such a road would be scenically interesting, safe for motorists and of standard high enough so that the tendency would not be to scrap it in a few years. Such are the requirements, as I see them, of any parkway that is expected to perpetuate a significant idea.[22]

Peterson later recounted that the landscape itself was part of the inspiration for the use of long radii in the design of the alignment, saying "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."[23] And in fact, the grading and paving plans for the parkway (such as Figure II.4) show that the resulting horizontal alignment of the Yorktown end did indeed follow these principles for wide radii and smooth curves. In the completion report for the road surfacing, the BPR wrote:

> No pains nor expense were spared to obtain most modern alignment of pavement from the standpoint of both appearance and riding qualities, tangents being practically eliminated by the use of transition spirals to all curves over 1 degree. Similarly all curves over 1 degree were superelevated.[24]

The superelevations and the fact that the maximum curvature of the road was only 5 degrees, 15 minutes assured a smooth and easy driving experience.[25] Superelevations, or the raising of the elevation of outside of the curve of the road, took advantage of a vehicle's centrifugal force to make it easier for the driver to stay in his or her lane when navigating a curve. The use of transition spirals, or the use of a curving radius transitioning between curves, helped in a similar manner. A spiral transition allows a centrifugal force to increase and decrease gradually as a vehicle enters and leaves a curve. This not only helped the driver to maintain a uniform speed, but also gave the road a sinuous appearance, without any sharp breaks or bends in the road. The difference between a road with and without spiral transitions is seen in Figure III.16. The road without a spiral transition appears to turn sharply in the distance, while the road with the spiral transition curves without a visual seam. As seen in Figure III.17, a view of the parkway alignment after construction, horizontal curves on the parkway were executed quite flawlessly.

The gentle winding curves of the horizontal alignment were complemented by smooth transitions in the vertical alignment, so much so that in driving between Yorktown and Williamsburg, one does not perceive the almost 100 vertical feet the parkway actually traverses. Figure III.18 shows a smooth vertical transition in grade along the parkway, executed without bumps or breaks as shown in Figure III.19. The final construction report for grading and drainage reveals that the maximum grade of the parkway between Yorktown to Hubbard Lane was 5.04%.



The Tangent and the Circular Arc.



The Tangent and the Spiral Transition.

Figure III.16. Comparison of roads designed with or without spiral transitions. From Tunnard, Christopher, *Man Made America: Chaos or Control*, 180.



Figure III.17. "Parkway --After Picture of 2743, Station 482," #4211. No date, circa 1935. Shows smooth curve transitions, without sharp "corners." National Park Service, Colonial National Historical Park.



Figure III.18. "Planting and Fine Grading, Penniman Tract, Station 438," #2745. No date, circa 1935. Shows a smooth vertical transition over a rise and fall in the terrain, with no bumps or humps in the road. National Park Service, Colonial National Historical Park.

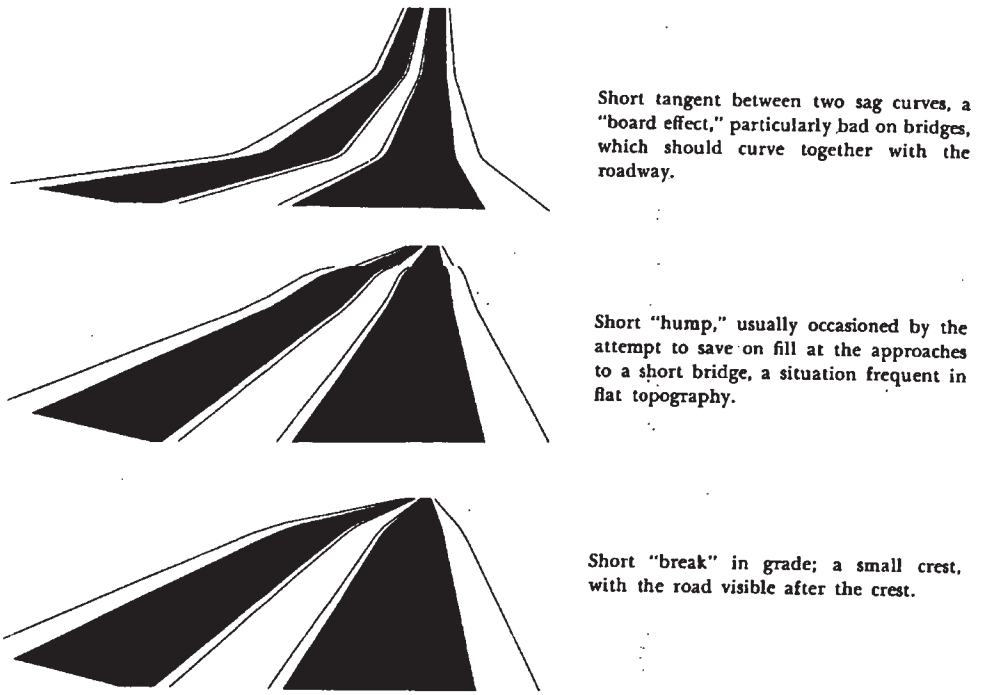


Figure III.19. Diagrams of three roads with "bumpy" vertical transitions. From Tunnard, Christopher, *Man Made America: Chaos or Control*, 194.

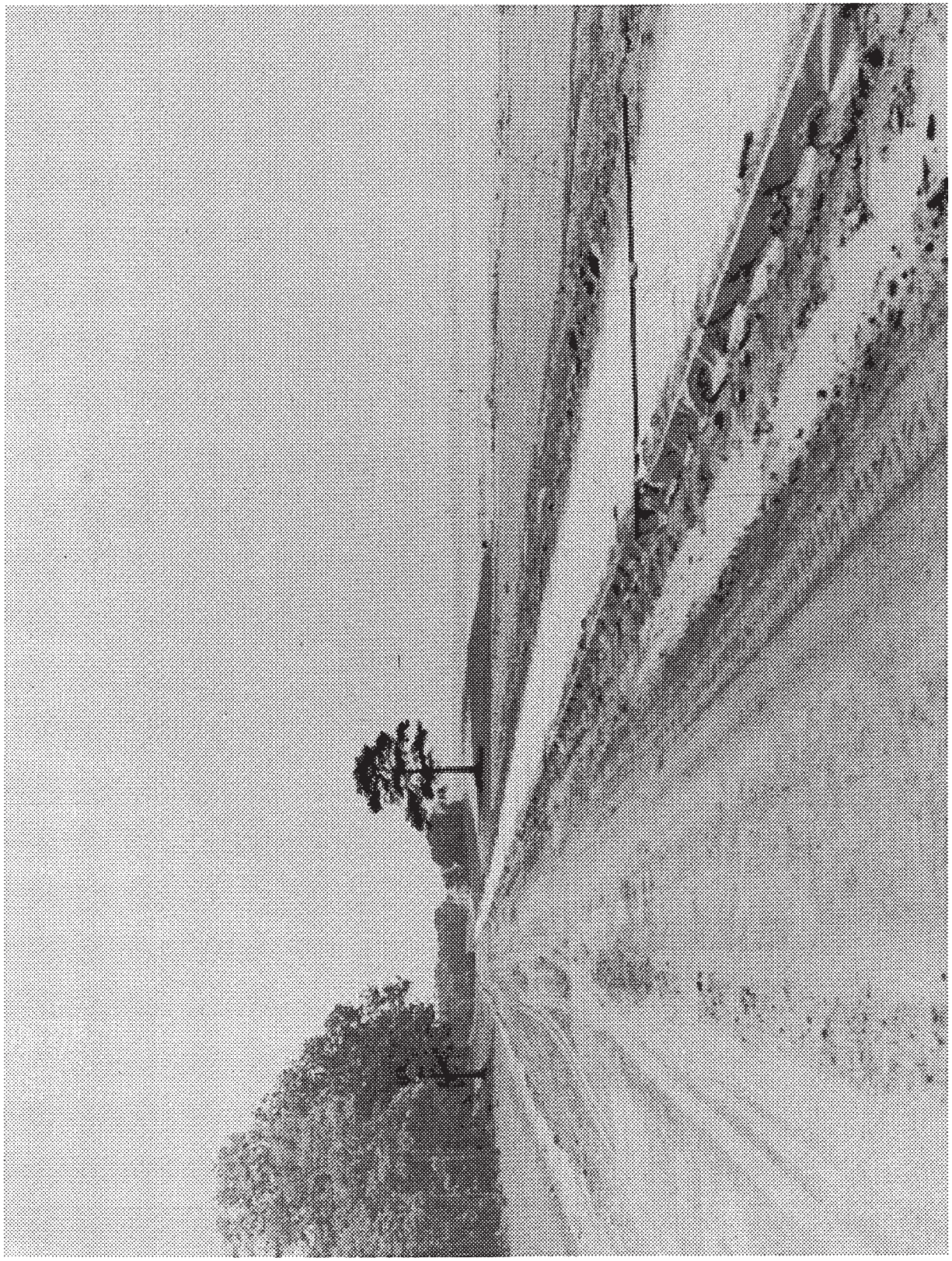


Figure III.20. "View of Parkway construction with one lane completed," #COLO-38951.561. Nodate, circa 1955-57. Shows a straight section or tangent on parkway at Jamestown end, near Glebe Gut. National Park Service, Colonial National Historical Park.

The parkway extension from Hubbard Lane to Williamsburg was surveyed and plans for the alignment were created reasonably quickly, following the acquisition of land in parcels from adjacent property owners.[26] The design of this stretch of alignment proceeded as it had for the initial section. Once again, a centerline was staked and cross-sectional data taken every 50 feet along the right of way, which essentially ran west from Hubbard Lane and terminated just north of Williamsburg on North England Street. Although Arthur Shurcliff recommended that the parkway become 2 divided lanes for this section, a single 30' concrete pavement surface was designed, and a roadbed 44' across was graded. The road's horizontal and vertical alignments followed the principles which had been applied in the design for the earlier construction, utilizing a series of long reverse curves, no tangents, and smooth vertical transitions. The smooth horizontal curves of this section of road are exemplified by those seen in the period plan of Station Point 544 on Sheet 10 (see Appendix A). Overall, the Hubbard Lane to Williamsburg section of the parkway had a maximum curvature of 3% and a maximum grade of 5.7%.

2. 1950s: Williamsburg to Jamestown

Between Williamsburg and Jamestown, the parkway's vertical and horizontal alignments were generally guided by the 1930s standards. One notable divergence was the use of two tangent (straight line segments) in the design of the alignment. In the construction of the previous sections, very wide radius curves had been used. The two tangents in the new Jamestown alignment were located along the banks of the James River. Figure III.20 shows one of these sections just prior to its final paving.[27] One other exception to the adherence to the 1930s design standards was the division of the road into two lanes separated by a grassy divider near Glasshouse Point, where traffic became complicated at the entrance to the isthmus.[28] A similar divided roadway was also designed at the Williamsburg Rotary, also for safety reasons and traffic flow.

Rough grading on the Jamestown section of the parkway was finished by November 1955, and Abbott could happily report that it was possible to drive the entire length of the road (except for bridge gaps) on the rough grade more than a year before the parkway was scheduled to open.[29] However, another year would pass before final grading, part of both contracts, would be completed in the following September in preparation for paving.[30] In the final analysis, the new section of parkway, from Williamsburg to Jamestown, had a maximum curvature of 16 degrees 30 minutes, a maximum grade of 4.9 percent, and a design speed of 50 miles per hour.

3. Alignment: As-built Character

As seen in photographs of the parkway following its completion, such as Figure III.13, the alignment of the parkway was characterized by a sinuous form. Over the entire length of the parkway, the design consistently adhered to low curvature and grade standards with maximums of about 15 degrees and 5% respectively. Horizontal curves smoothly transitioned from direction to the next and vertical curves moved smoothly from one topographic condition to the next. As seen in Figures III.15 and III.21, the use of these smooth curves was consistent on both ends of the parkway, providing an essential unity between the two sections. As Louis Cramton had hoped, the gently winding road did indeed make the motorist wonder what "the next curve will bring forth."



Figure III.21. "View west of College Creek along Colonial Parkway," #12840. No date, circa 1955. Shows curving alignment on Jamestown end, prior to surfacing. National Park Service, Colonial National Historical Park.

E. CIRCULATION: SURFACING

1. 1930s: Yorktown to Williamsburg

Once the topographical work of grading and hydraulic filling had been completed on the first section of the parkway, in the summer of 1932, thoughts turned toward surfacing the road. However, work on this aspect of the parkway was delayed nearly two years, until the spring of 1934. This was due initially to slow progress on the bridges over Kings, Indian Field and Felgates Creeks. This was not an entirely unfortunate situation, because it was felt that allowing additional settling of the roadbed would provide a better foundation for the pavement.[31] Peterson and Kittredge in particular felt strongly about "the great likelihood of further settlement of this road taking place, and therefore the desirability of postponing the laying of so rigid a pavement as concrete."[32] In the interim, it was decided that a base course of crushed stone would be laid down on the road bed and oiled so that the road could be used for construction traffic.[33]

Letters written at the completion of the grading project reveal that initially there was an assumption in the National Park Service that the parkway surfacing would be concrete. In fact, $150,000 had been allotted from the Federal Emergency Relief Appropriation for "concrete paving on the Colonial National Monument" at the start of the new federal fiscal year in July 1932. The idea of concrete paving probably came from two sources: from the earliest parkway discussions, when Louis Cramton described "a concrete ribbon" and from contemporary road building practices, since several "modern" automobile parkways had been constructed of concrete.

However, in August 1932, Colonial National Monument Superintendent William Robinson wrote a letter to the National Park Service's chief engineer, Frank Kittredge, relieved about the postponement of the sur-

facing and questioning the use of concrete as the paving material. Not knowing he was opening a Pandora's box of discussion about the surfacing, Robinson revealed his dislike of the proposed concrete surfacing. His dissatisfaction was due primarily to its non-historical appearance:

> . . .I have been in hopes that we might be able to find some character of hard surfacing which would more nearly simulate a colonial road than would concrete. I understand that the Williamsburg Restoration people are considering a concrete paving for Williamsburg with the surface brushed so as to expose as much of gravel aggregate as possible.
>
> I have toyed in my own mind with the idea of a shell marl road with some kind of cementing binder to prevent dust. I discussed this idea with Mr. Spelman recently. He was of the opinion that no one had, as yet, designed a shell road which was dustless. Some of the Eighteenth Century travelers who visited Yorktown have commented in their letters and diaries on the fine quality of roads here. I would suppose that the roads in those days must have been made of shell and marl, but of course they were not subjected to such disintegrating forces as the suction caused by rapidly turning motor vehicle wheels, though undoubtedly the abrasive action of metal tired wheels of old carts and wagons was very great.[34]

Kittredge responded quite positively, agreeing that:

> . . .the delay will give an opportunity to make a better study of the most logical kind of paving. I rather doubt whether the marl or shells will be sufficiently durable for a concrete paving, and a rough concrete pavement is bad, no matter how it looks. 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 and [sic] old time product, 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.[35]

The Bureau of Public Roads was summarily requested to do some further research into the matter, and by December of 1932 Spelman and Smith had determined that two paving types would be the most appropriate for Colonial Parkway. Their choices were either "reinforced concrete and local gravel or marl with a bituminous surface treatment."[36] Their reasoning was based on an analysis of cost (namely the expense of shipping surfacing materials to the road site) and of traffic requirements. Macadam or stone roads were eliminated from consideration almost immediately because of the remoteness of the job site from supply sources. Concrete was acceptable because aggregate and cements were readily available and could be cheaply delivered by water. But Spelman felt that a marl road treated with a bituminous surface would be the cheapest, because local marl, dug from pits on NPS-owned land or pits in James City County, could be delivered to the job without rail or water shipments.[37]

In Spelman's mind, the differences between the two road types were minimal. He believed that either type of road could be engineered to provide "equally good riding qualities" for the proposed parkway traffic, since trucks would be banned, leaving only automobiles and "balloon-tired motor buses." Although settlement, he thought, would not be an issue because of the postponement of paving, he did note that the surface-treated marl type would "lend itself more readily to repair or readjustment in case settlement does occur." Yet he also felt that maintenance costs would be higher on the marl and bituminous surface than on the concrete, because "great skill in workmanship will be required. . .to keep the road to a suitable high standard of riding surface," including "scarifying, reshaping and retreading."[38] Although he felt an NPS crew could handle the maintenance of a "fool-proof" concrete road, Spelman proposed that if a bituminous surface were chosen, an agreement between the National Park Service and the State Highway Department should be worked out. Interestingly, one final consideration Spelman brought up was that constructing a marl and bituminous surface would probably require the employment of more local workers

than a concrete surface would. He wrote that "Specifications might provide that all loading of gravel and marl in the pits should be done without the use of power equipment and this work. . .[and] would provide a considerable number of men with employment on the job."[39] Given that this was in the midst of the Depression, employment potential was likely no small consideration.

Yet Spelman realized that the selection of the pavement would, ultimately, be dependent on the appearance of the road, and tried to clarify what each type would look like. He noted that the marl and bituminous surface idea had achieved favor with some, who "suggested that the 'gravelly' appearance of the surface treated type provides a more Colonial atmosphere than the concrete type," but felt that "this advantage is, however, more fancied than real because. . .it will probably be impossible to retain that appearance for long."[40] He noted:

> It should be possible in the original construction to approach a gravel appearance to the road after it is first built, but under traffic the bituminous material will come through bringing the customary black appearance.[41]

But, at the same time, Spelman admitted a concrete pavement might not have an adequate appearance. He was particularly concerned that concrete road would produce "glare" in the eyes of the drivers, though he thought a brush finish on the concrete could eliminate this problem.[42]

In either case, Spelman recommended that the surfacing be either 22 feet or 30 feet wide, a decision he left to the National Park Service without stating a clear preference. He did, however note that were a 22 foot width selected, a later widening could "undoubtedly be done with greater ease and less objectionable appearance with the surface treated type than with the concrete type."[43]

After Spelman laid out all of the road issues, a heated debate occurred in the National Park Service, beginning in early 1933. Robinson felt that a 30-foot roadway should be built if funds were available, but protested the use of local marl for the roadway on the basis that excavation of pits on NPS land would adversely impact historical and archeological resources. Peterson, who by this time had been transferred to Washington, D.C., noted from afar that he concurred with Robinson on the use of marl from NPS lands. However, he equivocated on the choice of surface material. To Peterson, the color of the road surface was the most important issue:

> I would be glad to see a gravel or marl surface on this road if such a surface can be executed without great expense. I think it would look better if the same type of surface were used over the entire road. If it were determined by great odds that a concrete road were the only feasible type this would not bother me providing it could be treated with a darkening agent such as occasionally has been used for this purpose.
>
> Regarding the width of the surfacing, the wider the pavement the better the road will look, especially because the graded section is approximately forty feet.[44]

Six months later, when a decision on these issues had still not been made, Spelman, concerned about getting a contract out to bid, requested that the NPS come to a decision soon. To these ends, he made his viewpoint a bit clearer. Citing a recent decision to extend overall parkway construction from Hubbard's Lane to Williamsburg and an anticipating an increased traffic volume over the road because of this decision, Spelman recommended that a concrete, rather than a marl, road be built:

> Because of the lesser maintenance cost and the increased traffic volume and under the changed conditions, it is thought that the concrete type should be selected at this time. Although the 22

> foot width would carry the anticipated traffic for some time to come, yet, with consideration being given to the fact that the parkway will carry both persons desiring to travel at slow speeds to look at the interesting scenic and historic spots, and those desiring to travel only between the three principal areas, three lanes of traffic would provide more adequately, safely and comfortably for this mixed traffic. The grading and bridges already completed are of sufficient width to accommodate a 30-foot pavement, and for all of these reasons it is thought that such width might well be adopted at this time.[45]

After discussion between Peterson, the Director's office, and the Monument staff, the NPS recommended that the BPR go ahead with Spelman's recommendation. Superintendent Robinson, however, still had some reservation about Spelman's vision of the road, and was reluctant to give up the idea of a marl surface:

> While I do not subscribe to the speedway theory of the Parkway, I feel that the road should be 30 feet wide to take care of the anticipated large, though I trust, leisurely moving traffic. I favor concrete because of its greater durability. . . .The simulation of a marl road may be obtained economically by brooming the surface and proper selection of the aggregates and color of the cement.[46]

Robinson's suggestion of an exposed aggregate concrete surface was surely influenced by the road work of the Williamsburg Restoration going on concurrently on Duke of Gloucester Street in Williamsburg. The BPR, however, resisted specifying this surface finish, despite Peterson's endorsement of the idea. Spelman insisted that the exposed aggregate on Duke of Gloucester Street was an "experiment" and an unproven technique, and instead recommended "a plain 'broom finish' similar to that used on the Mount Vernon Memorial Highway."47 Yet eventually, under pressure from the Park Service, the BPR specified an exposed aggregate finish, with the coarse aggregate specified as local gravel.

In the meantime, plans had been developed for the contract bid by the BPR. Although Peterson, was still approving the BPR plans for the NPS Landscape Division, his office was now in Washington, removing him somewhat from the immediate design work. Correspondence between Spelman and Peterson during this time gives an impression that Peterson, now working on projects all over the east coast, was not keeping up with the drawing reviews required by the BPR work, causing a few delays.[48] The new plans showed some regrading of the roadbed, which had settled in the past 2 years. Alterations to the bridge alignments at Kings, Indian Field, and Felgates Creek also required that some adjustments be made in the curvatures of the centerline. In addition, guard rail and parking areas were designed for bid under the paving contract. Many of these details, discussed in greater detail below, were developed by landscape architect Edward Zimmer in combination with Peterson's office.

Paving operations began at Ballard Creek in May of 1934 and continued until October when the contractor reached Hubbard Lane. The first steps in the process were regrading the roadbed and laying down additional gravel, creating a two-course subgrade nine inches to one foot deep. Three concrete lanes, each 10 feet across, and 8", 6", and 8" thick, respectively were then poured. As shown in Figure III.22, modified rails were used as form work for the lanes. The concrete was reinforced with a mat of no.00 and no.5 gauge steel 2" below the surface of the concrete; the matting can be seen in Figure III.23. Bituminous expansion joints were constructed between the lanes longitudinally and every 40' transversely, and wooden dowels fitted with metal expansion sleeves were used to reinforce the joints. As shown in Figure III.24, the concrete was poured using a Rex paving machine and the center lane of the road was poured first, for a distance long enough to allow it to cure 14 days. Then, the paving machine was placed in the center lane (on one inch boards) while pouring the outside lanes.[49]



Figure III.22. "Setting forms on last section into Williamsburg," #6706. No date, circa 1938. National Park Service, Colonial National Historical Park.

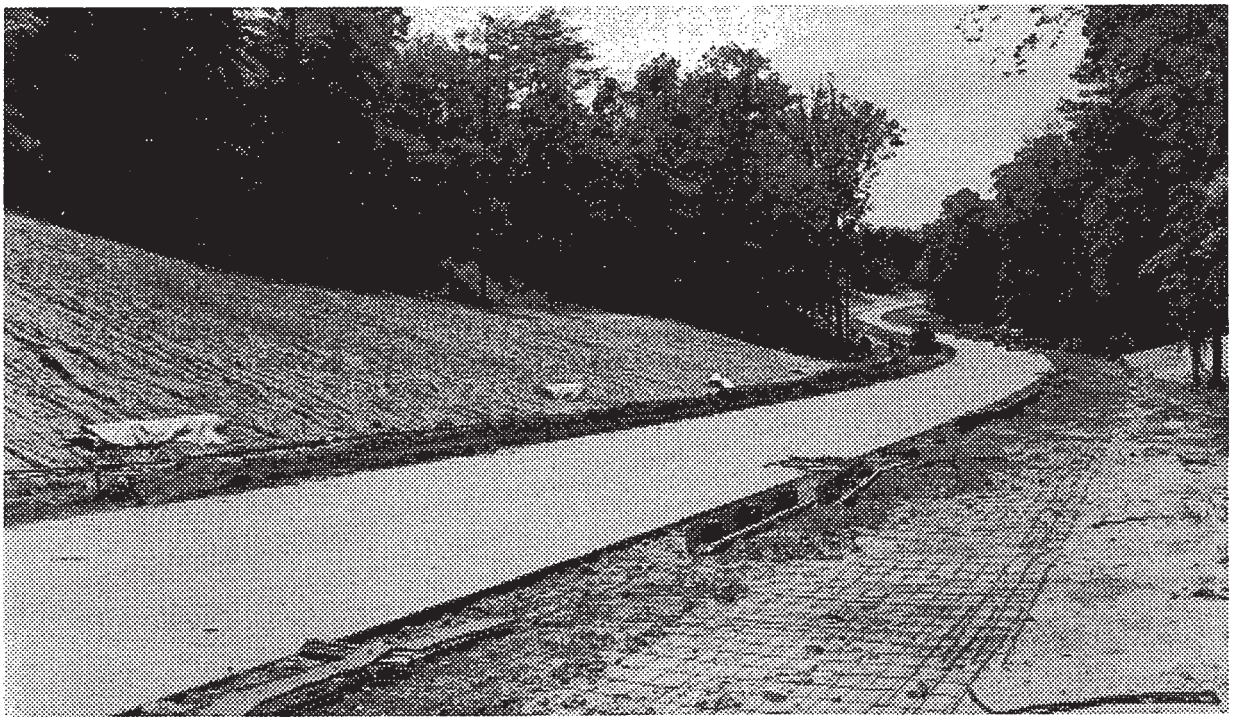


Figure III.23. "May 1938 1CD31 Progress Photo, 2 lanes completed," #6835. Note use of reinforcing material in unfinished third lane. National Park Service, Colonial National Historical Park.

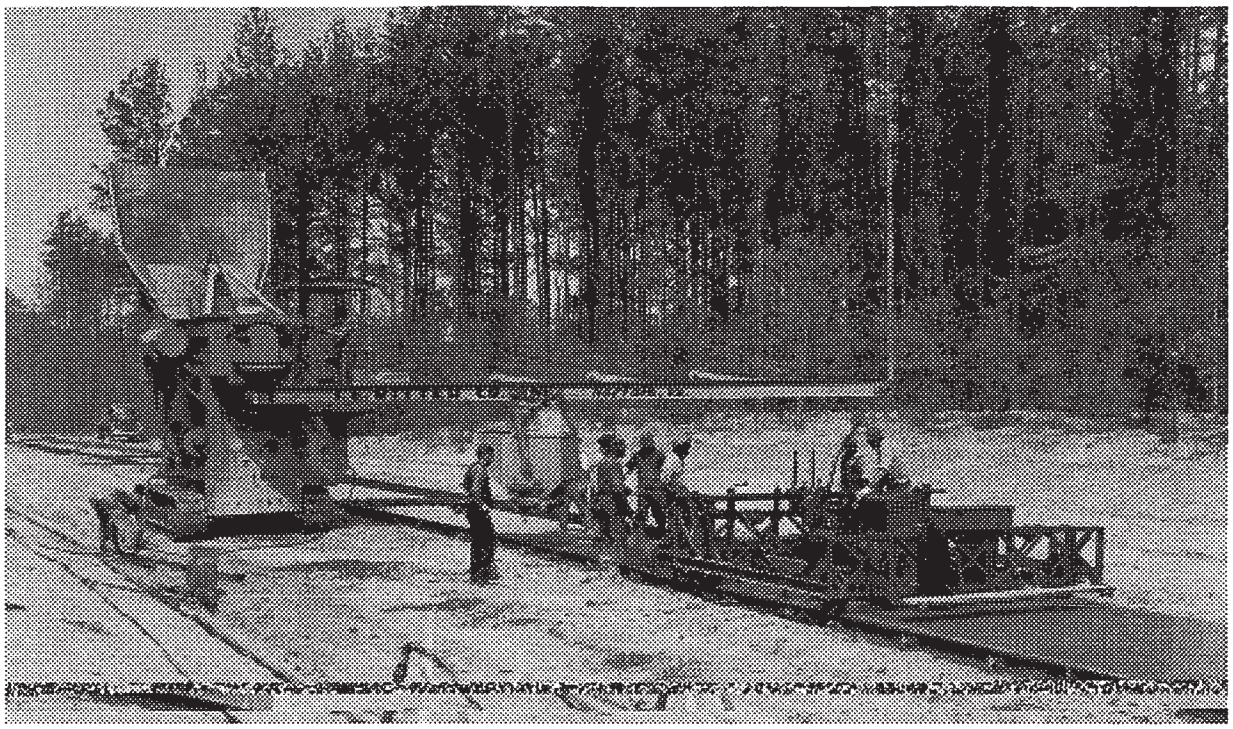


Figure III.24. "Extension to Williamsburg, Construction of Parkway Paving: Consolidating and Finishing with Finishing Machine," #6714. No date, circa 1938. National Park Service, Colonial National Historical Park.



Figure III.25. "Final Brooming to Expose Aggregate, Last Section into Williamsburg," #6718. No date, circa 1938. National Park Service, Colonial National Historical Park..

The first day of pouring concrete was critical as the field test of the exposed aggregate finish, and it was not entirely satisfactory. The initial mix of aggregate had been 60% large (#4-1") gravel and 40% small (1-2"), and resident landscape architect Edward Zimmer requested that water from a hose be used to flush away the mortar and expose the aggregate. However, this method was "deemed very detrimental to the concrete" and Spelman ordered it discontinued.[50] The next day was spent trying alternatives. The percent of large to small gravel was raised to 75% and 25% respectively, and it was decided that brooming the surface with a stiff wire brush 2 to 4 hours after pouring to remove mortar adhering to the gravel surface was the best exposure technique. Brooming was, however, by no means a precise operation, dependent on the drying time of the concrete; if done too early, the gravel was dislodged from the surface, if done too late, the gravel was not sufficiently exposed. About 16 men at any one time were employed at brooming, with long-handled brooms, making three successive passes over an area to expose the proper amount of aggregate. Figure III.25 shows a crew at work brooming the center lane along a stretch of the parkway. After brooming, the concrete cured for 72 hours. To clean the mortar off the gravel, the concrete was washed with a 10% solution of hydrochloric acid for three minutes and rinsed with water. [51]

Despite the refinements, Spelman continued to be concerned with the uniformity of the surface achieved, though he admitted some were due not to method, but to "occasional carelessness, adverse conditions, finishing too late in the evening, and weather."[52] Problems included areas which were off color and limestone gravel being eaten away by the acid wash, leaving pits in the surface. Another problem was that edges and corners were "not up to standard," because the clean sharp edges were ruined by the brooming crews walking on the "green" concrete.[53] In his completion report, Spelman recommended that in future pourings these corner intersections therefore be specified as rounded, horizontally to the same radii required for other joints and edges. [54]

Although the results of the finish may not have been all they expected, the NPS and the BPR were still quite delighted with the finished surfacing, especially given the fact that exposed aggregate concrete, which would become commonplace in the 1950s, was a new technology. A few bragging rights were in order, and the completion report of the paving unit proudly proclaimed:

> Recent tests have demonstrated that a Safe Driving Speed of 60 miles per hour can be maintained throughout this entire project. This particularly high rate of speed is practical and safe mainly on account of the almost perfect friction factor obtainable by the use of the Exposed Aggregate type of finish.[55]

From this statement, it seems that if Superintendent Robinson did not subscribe to the speedway theory of the Parkway, then at least the Bureau of Public Roads did!

The surfacing contract was finished in the early winter of 1934, with a final shaping of the roadside shoulders and grassy swales to catch water draining off of superelevated curves. Figures III.26 and III.27 show two types of swales constructed along the parkway. Of the two, the simple roadside swale was most commonly used; the swale with a catch basin appears to be designed for areas of the Yorktown River Bluffs, to reduce surface erosion on the top of the bluff edge. It appears that most of the road drainage was intended to surface flow off the road, as there are no indications of curbs or paved gutters in the construction drawings or specifications for this section of the Parkway. The only reference located to curbing is in a 1933 memorandum from Kittredge to the Director:

> . . . it is suggested that the low curb or the slightly depressed rounded gutter be planned for just outside the 30-foot strip throughout the length of this project each in its appropriate area in order to take care of road surface run-off and to protect the pavement foundation from saturation.

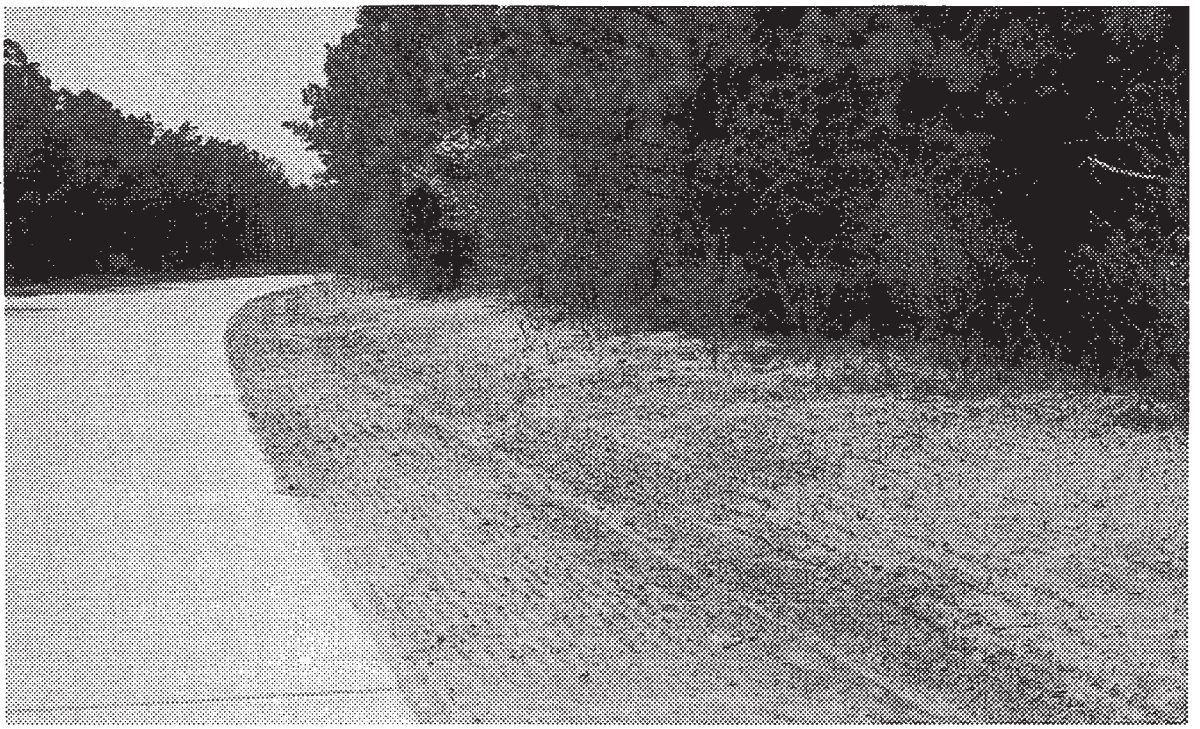


Figure III.26. "May 1935, Section topsoiled, seeded and contoured, Station 315," #1628. Note swale along side of road. National Park Service, Colonial National Historical Park.

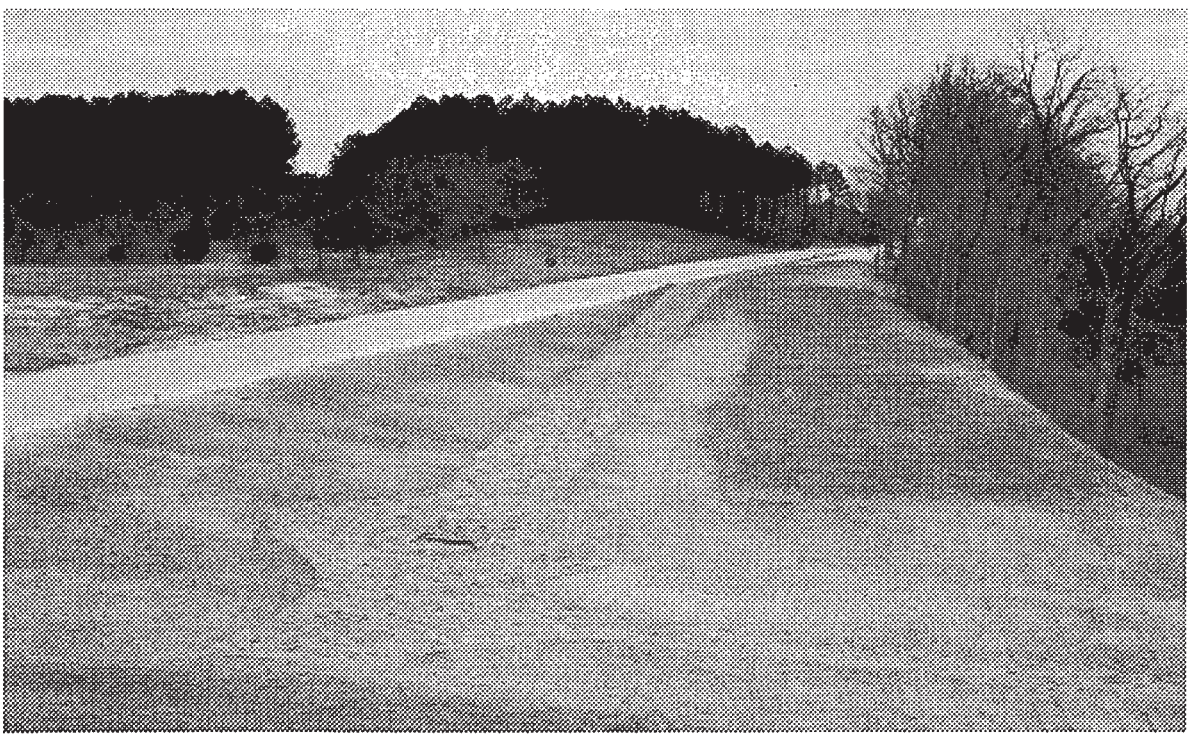


Figure III.27. "Station 89 along Parkway," #3370. No date, post 1935. Note seeded swale, catch basin. National Park Service, Colonial National Historical Park.

> Various types of curb and gutter were proposed in my plan as presented to you at Washington and also one given to the Bureau of Public Roads at San Francisco.[56]

However, there is no clear evidence that this type of curbing was implemented along the parkway in the 1930s.

2. 1950s: Williamsburg to Jamestown

The paving techniques pioneered in the first paving contract predominantly followed when the parkway extension between Hubbard Lane and Williamsburg was paved in the late 1930s. In contrast, when paving work resumed on the Jamestown end, nearly 20 years after the first surfacing contract was awarded, the work proceeded in a manner slightly different from that used before. A layer of gravel 12" thick was laid along the finished grade atop which a uniformly thick, 7" concrete roadway was poured. The center section, however, was crowned to produce a crown of 1" :1' across the full width of the pavement. As in the 1930s, the road was poured as three lanes 10' wide, but the slabs were now longer, being 60' in length. Whereas the 1930s slabs had been poured to be flush along their length, in the 1950s, they were fitted with a tongue and groove key joint and further connected with 2' steel dowels placed every foot along their length. On their 10' wide ends, the slabs were connected with 3 40" tie rods. Overall reinforcing, placed 1-1/4" below the concrete surface, was also different from that used in the 1930s, consisting of No. 6 wire and No. 2 steel bars.

The exposed aggregate finish, however, was produced by the same labor-intensive method of hand brooming and acid wash used before, and once again provoked some anxiety on the behalf of the contractors.[57] According to Robert Steenhagen, the contractor originally intended to use a mechanical device—brushes on belts—to expose the aggregate. However, the results on a trial patch were inferior, and the rest was completed by hand.[58] Although the paving progressed reasonably quickly between May and December of 1956, work slowed in the following months due to inclement weather and a nation-wide cement strike. The final pouring was conducted under floodlights as the contractor raced to meet the deadline for the Jamestown Celebration.

In addition to paving the roadway, the paving contract included the pavement for the parkway's new parking areas, interpretive areas, picnic sites, interchanges, and access roads, as well as the construction of two road elements not used in the 1930s construction, curbing and concrete-paved drainage swales. Whereas the earlier, 1930s construction had emphasized the sheet flow of water, it had not in all cases been effective: problems with excessive surface flow had caused roadside washouts, slope creep, and erosion. The addition of these two features to the road cross section were a logical decision to better manage the flow of drainage off the parkway, although they contributed to a minor character change. Figures III.28 and Figures III.29 are construction drawings showing planned swales for the parkway. Although concrete and sodded swales have been found along the parkway, the stone-paved swales do not appear to currently exist. Whether these were ever implemented has not yet been determined.

One other area where a minor character change occurred was at the terminal ends of both parkways, which were paved in a chip sealed asphalt, rather than concrete. Although this was not as noticeable on the Jamestown end, where the asphalt began at the entrance to the developed area, just prior to the isthmus, it was more evident at the Yorktown end, where the bridge over Route 17 was paved in asphalt. More research is needed to establish why concrete was not extended into both developed areas; it is presumed that asphalt was perhaps cheaper.

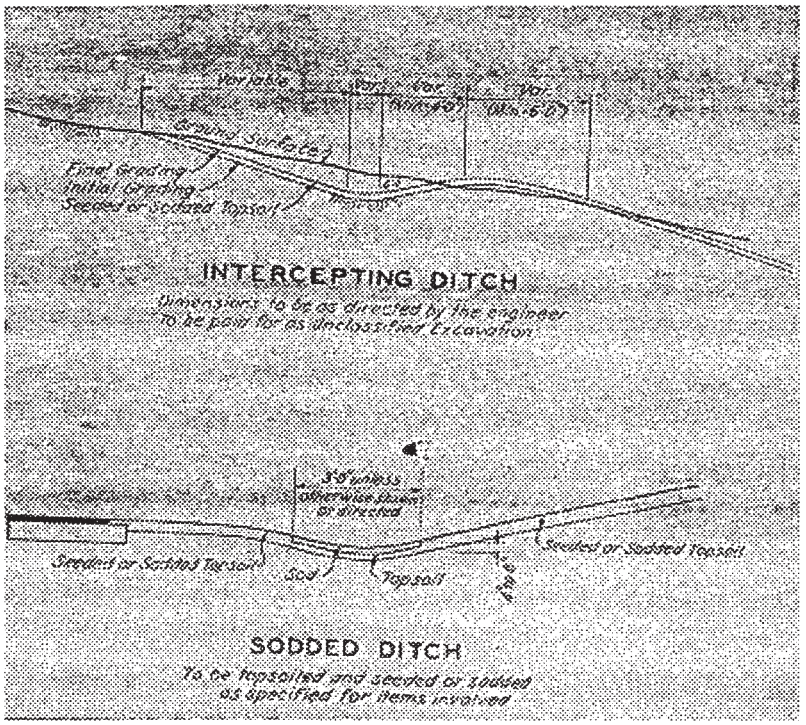


Figure III.28. Sectional drawing of swale, 1950s construction plans. National Park Service, Colonial National Historical Park (Engineering Office).

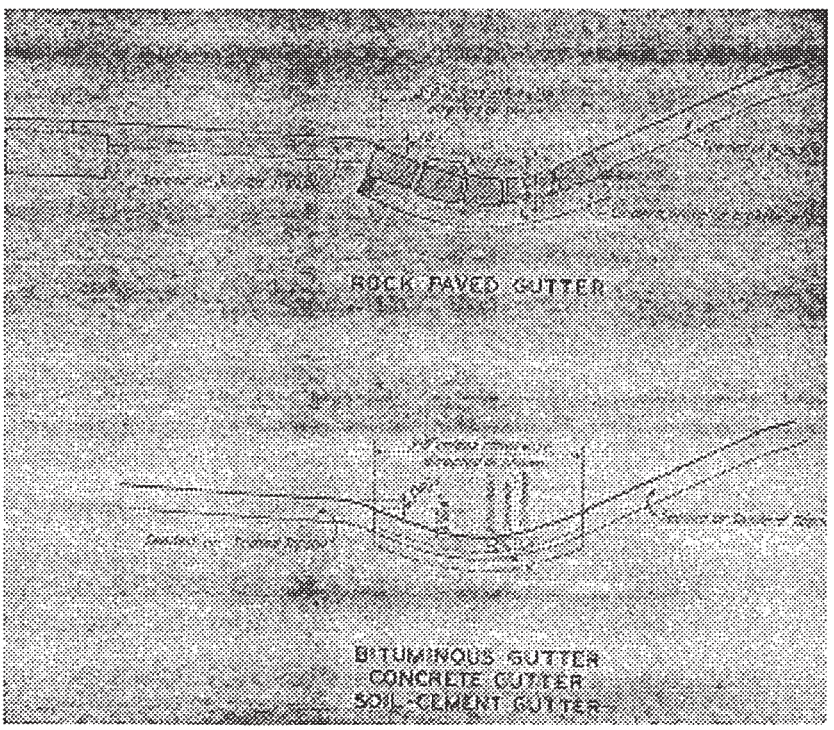


Figure III.29. Sectional drawing of swale, 1950s construction plans. National Park Service, Colonial National Historical Park (Engineering Office).

3. Surfacing: As-built Character

As shown in photos of the completed parkway, such as Figures III.13 and III.15, the finished pavement was an integral part of the overall character of the roadway. The color was perhaps most distinctive: It was light enough to contrast with the darker roadside vegetation, accentuating the curving lines of its alignment as it moved through the woodlands. However, because of the darker aggregate finish, the surface was not bright, glaring, or overly reflective. In fact, in areas of hydraulic fill, the parkway's local aggregate was an excellent match with the sandy colors of the fill soils, further unifying the parkway with its surroundings. Another important characteristic of the parkway surfacing was the generous width of the road and its lack of striping. It does not appear that striping was ever considered for the road at any time during the construction phases.

F. CIRCULATION: INTERCHANGES

1. 1930s: Yorktown to Williamsburg

Because Colonial Parkway was designed as a limited access road, little effort was made, at least in the early days of design and construction, to plan for automobile traffic to access the parkway at locations other than Yorktown, Williamsburg, and Jamestown. More attention was paid to designing ways to get automobiles over and under the parkway than on the parkway. Therefore, when the parkway's first section between Ballard Creek and Hubbard Lane was completed, the road simply dead-ended at the construction termini. A major access point was provided at the Navy's Marine Barracks in the form of the Colonial style gateway, seen in Figure III.30. All other Navy roads were terminated before they could reach the parkway.

A number of at-grade crossings also existed. These were generally implemented where a pre-existing public road, such as access to Cheatham Annex, crossed the new parkway. Efforts were made to eliminate pre-existing private access roads where possible. However, as a condition of the gift of the 500-foot right-of-way known as the Penniman tract, former landowner Jim Dozier required that the NPS provide "suitable motor vehicle connecting and cross roads" across the full parkway right-of-way at various locations along the parkway.[59] Dozier's interest in access roads was purely fiscal, since his corporation, Colonial Monument Estates, Inc., hoped to develop residential neighborhoods which could access the parkway. Although these neighborhoods were never built, the access roads were constructed and functioned for at least a few years. A view of some of these access roads may be seen in Figure II.31.

By 1938, when the parkway extension from Hubbard Lane into Williamsburg was completed, two official access points were added: The temporary Yorktown Terminus at the Fusiliers Redoubt and the Williamsburg Rotary. An access ramp was also provided at the C & O bridge crossing. By 1949, another access point had been added at the completed tunnel. All of these access points and the at-grade road crossings may be seen on an examination of the 1949 Historic Base Map, Sheet 2 (see Appendix A). Altogether, about 15 at-grade access points existed along the parkway in 1949.

2. 1950s: Williamsburg to Jamestown

No at-grade access points existed along the Williamsburg to Jamestown section of the parkway following its construction (though at grade access was provided to the James River shore lands held by the Gospel



Figure III.30. "Entrance to Marine Barracks. . .," #COLO-38951.557. No date, circa 1932. National Park Service, Colonial National Historical Park.



Figure III.31. "Colonial NHM Parkway, Station 365, Scenic View," #4976. No date, circa 1935. National Park Service, Colonial National Historical Park.

Spreading Association and to the NPS maintenance area). The fewer number of intersections occurred primarily because the parkway was routed down the College Creek drainage basin, where few roads pre-existed the parkway. Any extant cross roads in the basin and all other roads along the James River shore were terminated at the parkway right of way. Therefore, access to the parkway was provided only at Jamestown and via interchange ramps at the Tazewell Hall Underpass, which was constructed in 1957 to eliminate the at-grade crossing of the parkway by Tazewell Hall Avenue.

In the meantime, work had occurred along the Yorktown end to eliminate existing at-grade road crossings, which were perceived as a safety hazard. In 1948, the Route 238 underpass was constructed, followed by the Route 143 underpass, neither of which provided access ramps. At- grade crossings in the Penniman tract were eliminated through the construction of two collector roads which channelled traffic to a crossing point at Hubbard Lane.

3. Interchanges: As-built character

By 1958, when the parkway was completed, the following access points existed: at grade access at the Yorktown terminus; ramp access from Route 17; at grade access from the Fusiliers Redoubt; at grade access at the Marine Barracks; at-grade access to Cheatham Annex; at-grade access at Hubbard Lane; ramp access via the C& O Underpass to North England Street; ramp access at Tazewell Hall Avenue; at grade access at the Jamestown entry.

G. CIRCULATION: PARKING OVERLOOKS, PICNIC AREAS, TERMINI

1. Parking Overlooks

Parking overlooks were another aspect of the parkway's circulation system. The design of these features was implemented using standard NPS design procedures. This meant that their design was not part of the road design as completed by the Bureau of Public Roads, but rather were implemented following road construction under the advice of the NPS landscape architects. A quotation from the standard NPS procedure for landscape architects in designing parking overlooks (used on the Blue Ridge Parkway contracts) sheds some light on the procedure:

> Provision for parking overlooks has been made in the contract but seldom is a plan included. During excavation you are to investigate those sites proposed on the plan and, if you are convinced that a parking overlook is desirable, request topography. . . from the Engineer over which you prepare a design. . . . If any other site appears worthy of an overlook, the same procedure should be followed.[60]

Although the designation of points of historical and scenic interest had been a part of the earliest parkway plans, the design of the parkway parking overlooks followed the procedure described above. On the Ballard Creek-Hubbard Lane section of the parkway, the parking overlooks were designed well after the road alignment and grading had been implemented. This, combined with the fact that interpretive signs were not part of the overlooks until the 1950s clearly indicates that interpretive concerns *per se* did not guide the ultimate route of the parkway.

The topic of parking overlooks first appears in correspondence in the fall of 1932, when BPR engineer Spelman requested that Peterson identify possible locations for their construction. This apparently occurred prior to the laying down of the base course of gravel atop the recently graded road bed. Peterson complied and chose eight sites for overlooks. These were: 1) Just west of Bracken's Pond; 2) Between Wallace Swamp and the Officers Quarters; 3 & 4) Between Indian Field Creek and Felgates Creek; 5 & 6) At both ends of Kings Creek Bridge; and 7 & 8) At both ends of Jones Mill Pond. About these sites, Peterson wrote:

> While this may seem to be a small number of parking areas, it is to be remembered that the road shoulders are wide enough to accommodate a parked car at any point, and special paved areas need be provided only at very special points. When the Parkway has been in operation some time, it may become evident that additional parking facilities will be needed at definite places. Our policy in this case comes from the idea that the primary purpose of the Parkway is to provide communication between historic centers in Williamsburg and Yorktown and not to furnish a recreation unit for local people.[61]

Peterson's choice of these areas was based more on the scenic qualities and convenience of access of these areas than on their interpretive potential. Therefore, his recommendations were passed to Assistant Park Historian Elbert Cox, who inspected the areas in the field with a number of park rangers.[62] As he reviewed the areas, Cox tried to assess "the view or scenic element, the historical and the geologic factors" of the proposed sites. In general, Cox felt that Peterson's selection of sites 2, 7, and 8 were good ones, especially at the westernmost end of the Jones Mill Pond where "visitors should be permitted to see this very fine example of an old fortification," accessible if a short footpath were to be built. In contrast, Cox believed sites 1, 3, 4, 5, and 6 offered no particular charms other than being easily accessible to the road. He also suggested that a few additional sites be considered: the hydraulic fill area at Indian Field Creek, which would "afford a wonderful view in every direction, and would in no way constitute a fire hazard; a point opposite the road into Bellfield, which would again afford a view and would make the tombs and ruins of Bellfield accessible; and Felgates Creek hydraulic fill, which, located near some fossil beds would offer "considerable possibilities for ranger-naturalist activities.[63]

How closely Peterson followed these suggestions is not exactly clear, but the following spring Edward Zimmer was put to work pacing parking overlooks in the field.[64] By September 1933 the plans for seven overlooks had been drawn up. The resulting in-field manifestations of these drawings are illustrated in Figures III.32, III.33, and III.34, views of the Brackens Pond, Jones Mill Pond, and Felgates Creek overlooks. The as built conditions of these parking overlooks are also seen in the period plans on Sheets 8, 9, and 10, respectively (see Appendix A). The curvilinear forms of the parking overlooks were based on standard Park Service overlook design. A planted divider, in most cases, separated the parking area from the main road for safety reasons.

The parking overlooks were bid as part of the Unit V contract, since they were part of the final grading and surfacing of the section. Peterson had, however, encouraged the BPR to postpone surfacing the parking overlooks, claiming "there might be profit in laying down marl temporarily until we can see about what usage the public is going to give the individual layouts"—arguing, in effect, for motorists to influence the ultimate design of the overlooks. But the BPR, pressing on, specified that they be surfaced with plain concrete using the same exposed aggregate finish as the rest of the parkway. The thickness of the concrete in these areas was to be 7" thick, and the expansion joints were carefully designed with smooth radii like the rest of the parkway.

In contrast to the 1930s, in the 1950s it appears that substantially more work was focused on the design of the parking overlooks. This may have been due to the fact that by the 1950s, the historical research and

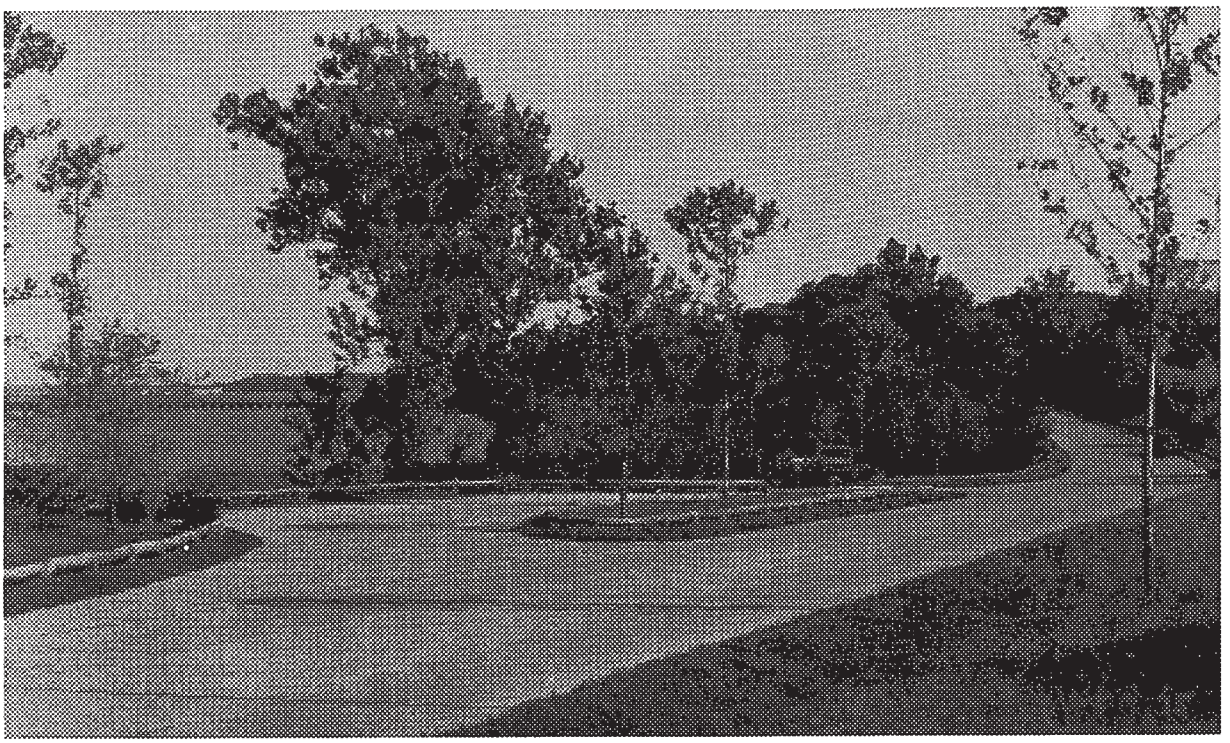


Figure III.32. Brackens Pond Parking Overlook, #4280. No date, circa 1935. Note recently planted platanus trees, which are extant today. National Park Service, Colonial National Historical Park.

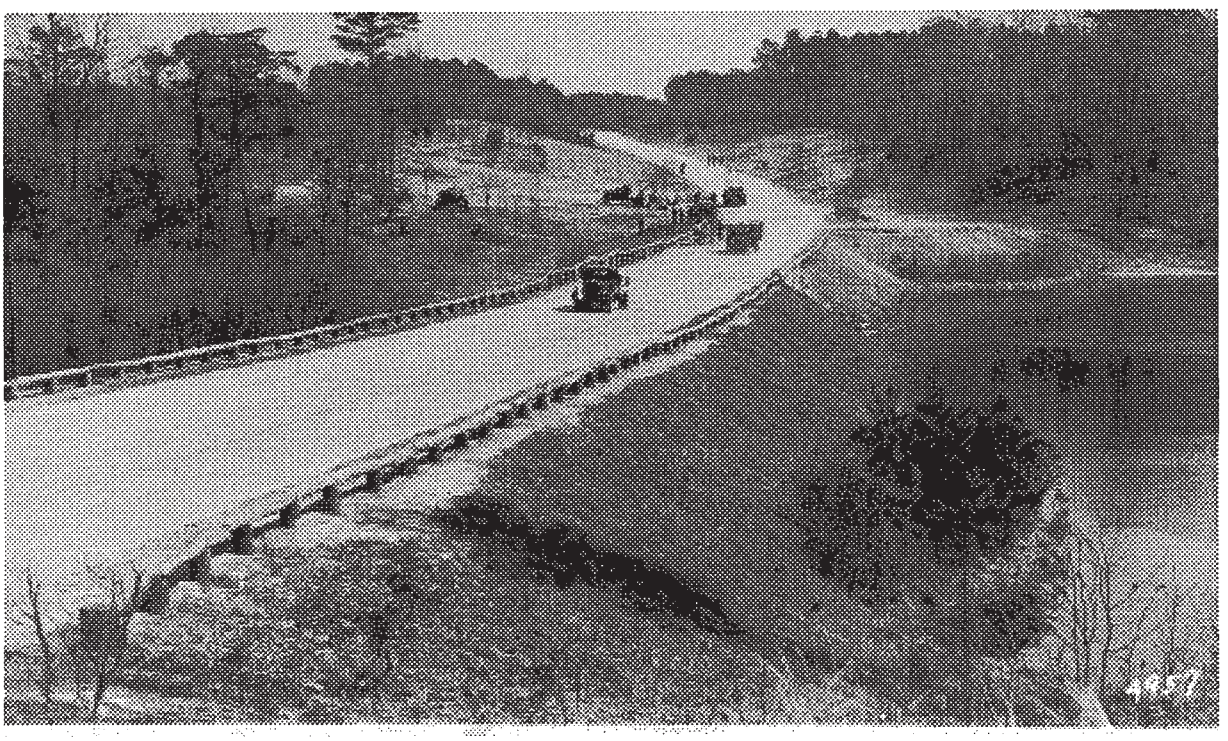


Figure III.33. "Parkway Station 481. Planting and Grading Operations at Jones Mill Pond," #4957. No date, circa 1935. Note parking area, substantially smaller than today's, also guard rail. National Park Service, Colonial National Historical Park.

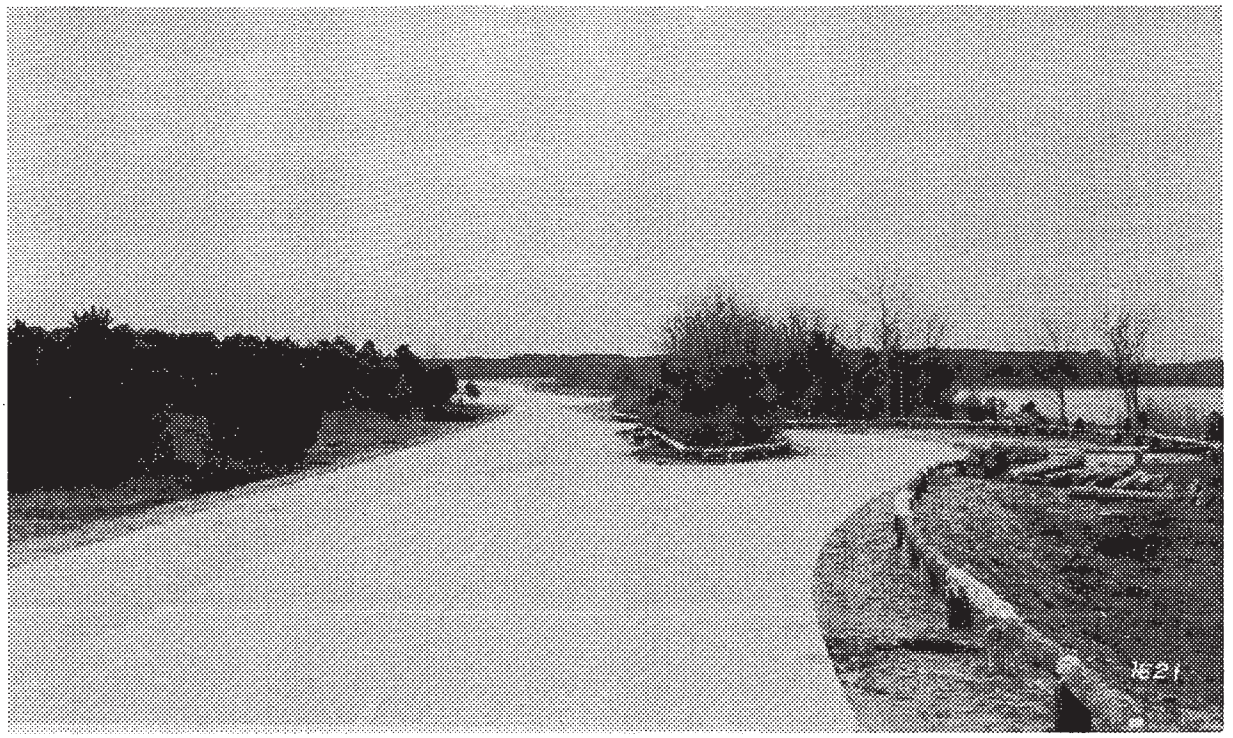


Figure III.34. "Planting the Overlook [Indian Field Creek] right of Station 280. January 1935,"# 1621. National Park Service, Colonial National Historical Park.



Figure III.35. "Jones Pond Area of Parkway, circa 1957," #13715. Shows changes to original parking areas--curbing, elimination of guard rail, etc. National Park Service, Colonial National Historical Park.

interpretation divisions at the park were more established and were accepted as an integral part of the park's educational mission. This was no minor triumph—in the 1930s, rangers attempting interpretive programs reported that they had simply watched cars whiz past.[65] By the 1950s, however, National Park visitors expected the NPS to provide some level of recreational and educational opportunity. The development plans for Colonial NHP had specific ways of meeting these expectations. In addition to new Visitor Centers, a system of interpretive roads were designed at both the Yorktown Battlefield and Jamestown Island. For the parkway itself, the parking overlook concept initiated in the 1930s was also expanded to include interpretive signage.

Sites for the signs and parking overlooks were chosen by the park historians and landscape architects in 1955. Robert Steenhagen recalls that siting of the overlooks occurred during the staking for the parkway.[66] According to Steenhagen, this was the "fun part" of the construction process, as the locations of the overlooks and parkway vistas along the roadway were envisioned, sketched, and finalized. Following the selection of the sites, the help of the BPR was enlisted to survey topography and draft plans. Nine new parking overlooks were between Williamsburg and Jamestown were designed in 1955, but this count had expanded to twelve by the fall of 1956 .[77] At the same time, signs for the overlooks were designed and minor revisions were made to the layouts of the seven existing areas between Williamsburg and Yorktown. All nineteen areas were included as part of the surfacing contract and are indicated on Figure II.28. In contrast to the 1930s-designed overlooks, the new parking overlooks tended to have fewer plantings in their islands, as shown in the redeveloped parking area at Jones Mill Pond in Figure III.35. The period plan on Sheet 10 (see Appendix A) shows similar characteristics in the parking overlook at the Isthmus. Another new aspect of the parking overlooks in the 1950s curbing was now used around the edges of the overlooks, a car-management technique which had not been utilized earlier. Based on photographs of the construction efforts, it appears that the signs were one of the last things to be installed along the parkway just prior to the 1957 Celebration. In all, 32 interpretive signs were erected in overlooks along the parkway.[68]

2. Picnic Areas

A picnic area at Ringfield was also constructed as part of the interpretive and recreational plans for the parkway in the 1950s. Located just east of Indian Field Creek , the picnic area was typical of most NPS picnic areas, with two winding loop roads leading to individualized picnic sites.[69]

3. Termini

Although it is not the intention of this report to go into the design of the park's visitor centers, some mention must be made of the parkway's two ending points. Throughout much of the 1930s, the Yorktown end had been comprised of the large open field and parking area at the Fusiliers' Redoubt, while the Jamestown end had simply dead-ended into Williamsburg at North England Street or, for a while, Tazewell Hall. With the completion of the parkway, this would all change, with two new terminal developments with visitor centers planned for Jamestown and Yorktown. These termini both had entrance points clearly marked with signs and gateways, indicating the end of the parkway. However, because most visitors did not exit their cars at the two planned entrances but rather in the parking lots of the visitor centers, these lots became, in effect, the end points of the parkway experience.

The Yorktown parking lot (Figure III.36) was entered via a short access road, which passed through a worm fence, a fortification remnant, and a wooden gate marked with the NPS arrowhead. The parking lot

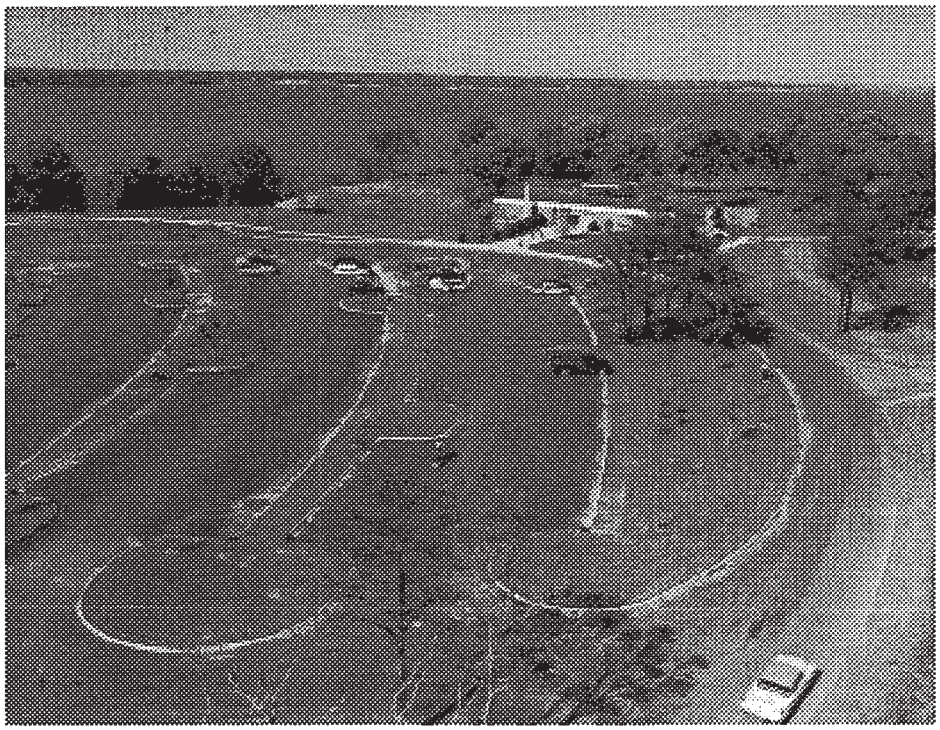


Figure III.36. "Yorktown Visitor Center Parking Lot," #13195. No date, circa 1957. National Park Service, Colonial National Historical Park.

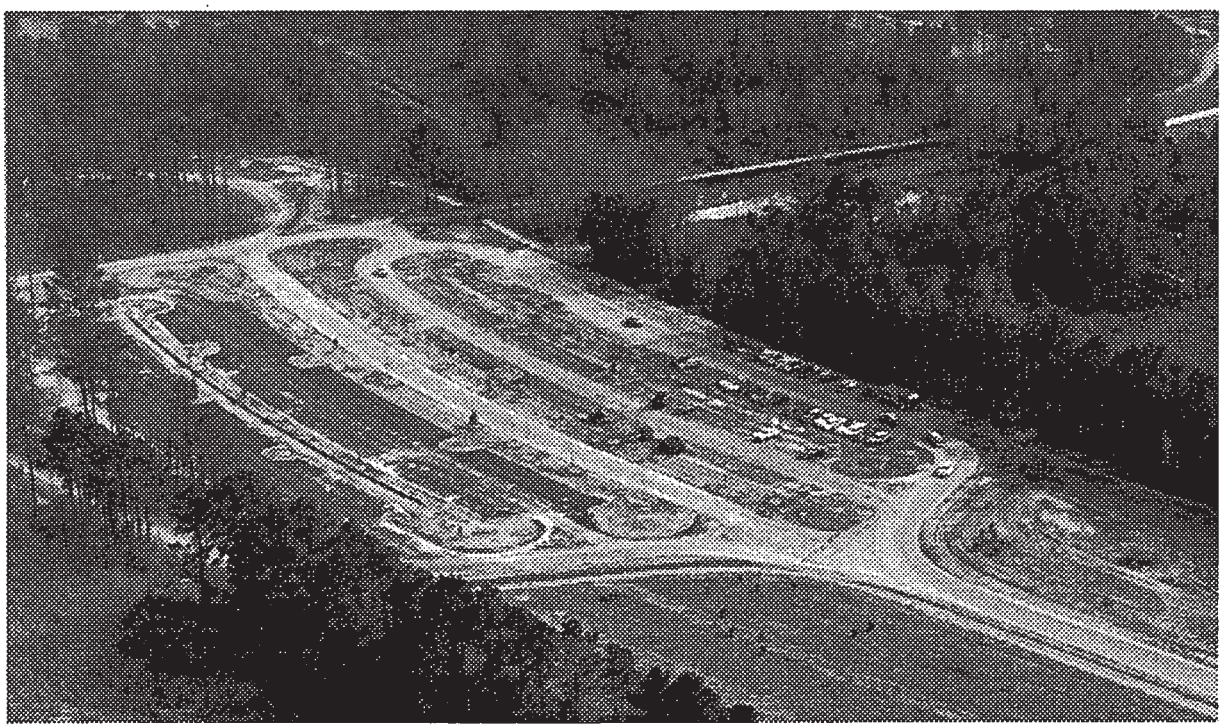


Figure III.37. "Aerial View of Jamestown Parking Lot, circa 1955-57," #COLO-38951.691. National Park Service, Colonial National Historical Park.

was designed in a circular shape reminiscent of the curvilinear forms used at the Halfway Creek Picnic Area and the Ringfield Picnic Area, the smooth forms reiterating some of the rounded forms associated with "streamlined" automobile design of the day. The planting plan for the Yorktown parking lot was carefully designed, with both an overhead canopy layer composed of new and existing trees and a shorter shrub layer providing shade and a feeling of enclosure. Generous parking islands indicate that space and number of cars were not a major concern to the designers.

The Jamestown parking lot (Figure III.37) in contrast, was much larger than the Yorktown parking lot, and maintained a somewhat more "impersonal" quality. Designed to be altered as changes were made to the Visitor Center area, it featured predominantly straight rows for efficient use of space. However, the parking islands were quite large and the planting plan reveals that a preponderance of shade trees were designated to provide a dense canopy over the lot during warm Virginia summers.

H. VEGETATION

Following the completion of the paving, work commenced on the planting of the roadway. Although little correspondence has been found directly iterating design goals for the planting design of the parkway, drawings, photographs, and recollections reveal that there were clear design concepts for the parkway plantings. Some of these goals were related to an aesthetic based on the site's native vegetation, while other goals were more concerned with the shaping of the parkway's scenic experience.

1. Pre-Parkway Vegetation

The existing vegetation of the Colonial National Monument was well-documented during the park's first century with three major plant association identified by park foresters—a mixed pine forest with loblolly and scrub pine predominating; the mixed hardwood forest with sweet gum, red oak, black oak, white oak, and tulip poplar predominating; and a mixed pine and hardwood forest combining species of the prior two groups. Understory in both forest types included smaller trees such as holly, cherry, dogwood, and ironwood as well as shrubs and vines such as bayberry, Virginia creeper, and greenbriar. In addition to the forest areas the parkway crossed vast stretches of tidal marsh containing bayberry, saltbush, and marsh grasses. The existing vegetation was particularly impressive in the spring, when even untutored eyes saw the wide variety of species in the area. In the spring of 1931 Oliver Taylor, in a Superintendent's Monthly Report, commented:

> Dogwood and Redbud were in bloom during the latter part of the month. In the large timbered area adjacent to Yorktown the white and pinkish blossoms are very striking as one drives along the old unimproved Colonial roads where there are no habitations . . . . At the end of the month the area around the Moore House at Yorktown and the Monument grounds at Jamestown had a solid carpet of buttercup blooms.[70]

Correspondence shows that the NPS landscape architects were very aware of the existing vegetation along the parkway and took great pains to preserve it whenever possible. As noted earlier, survey crews were chastised for cutting down more trees than necessary, and as road grading proceeded, tree preservation continued. During the clearing and grubbing of the Penniman tract, for instance, Peterson sought to clarify to field personnel that clearing did not mean a wholesale execution of trees:

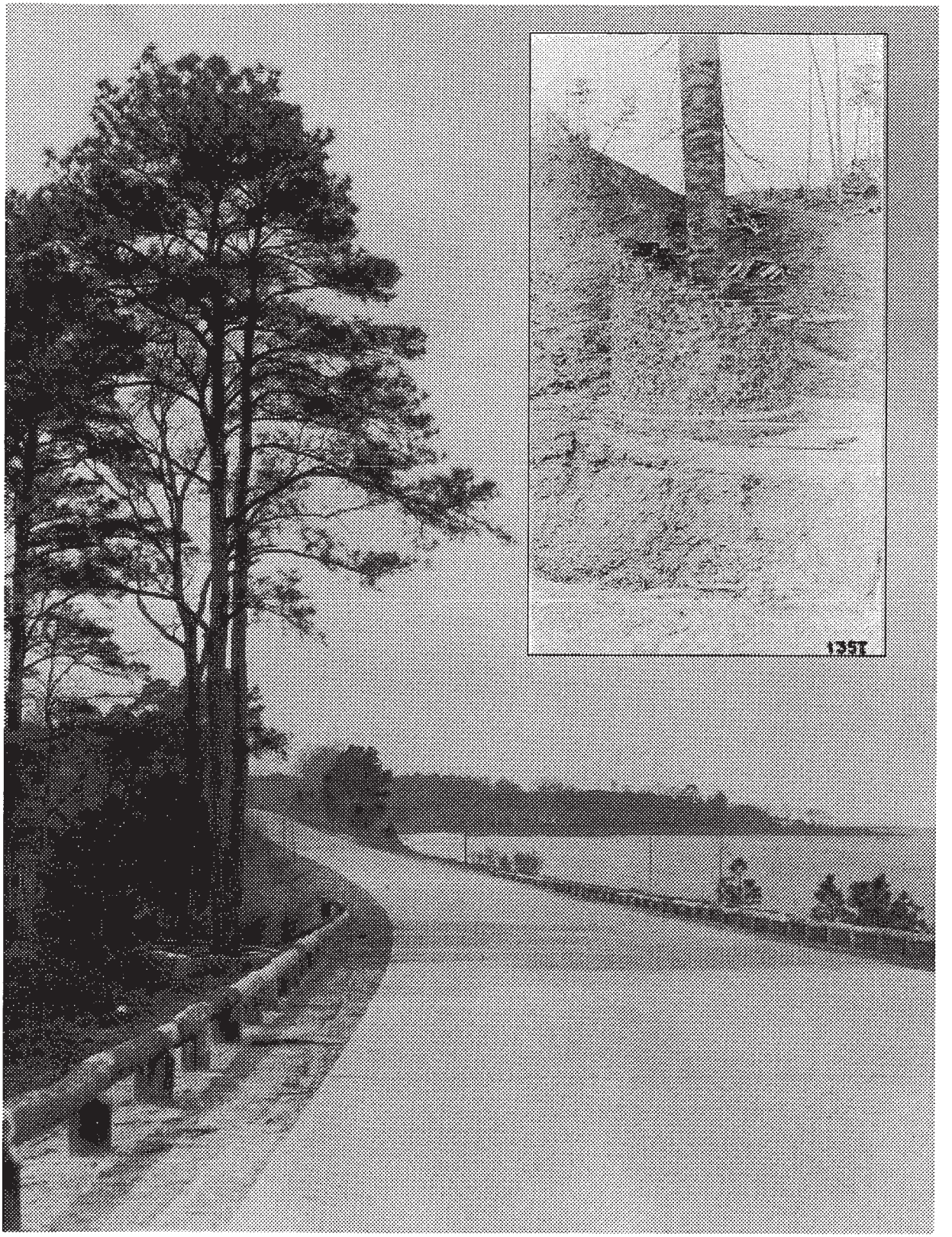


Figure III.38. "Parkway, 1937, view of York River, showing tree wells, "# COLO-38951.530. Inset: "Parkway Station 97, typical tree well," #1357. No date, circa 1932. National Park Service, Colonial National Historical Park.

> On the plan, there is a line marked "Clearing Line"; this is not intended as a line to work to in clearing and grubbing, but merely a prediction of what trees will have to go. In general, every tree that stands approximately on the finished grade, should stay.[71]

In other words, the forest surroundings of the parkway were viewed as important to the overall design of the road, and preservation of these areas was therefore paramount to prevent a "naked road" and excessive replanting. For similar reasons, tree wells (Figure III.38) were designed for trees in other sections of the Parkway where grading would add soil over the roots of important trees or groups of trees. This approach is also shown in the fact that efforts were taken to preserve trees in the swamps around Indian Field and Felgates Creek where hydraulic fill and raised water levels were smothering them. Much of this work, and work known as "Slashings Clean Up," where fire hazard dead wood and brush were cleared from the surrounding forest understory, was accomplished by prison labor in the early 1930s. By the mid and late 1930s, however, the establishment of CCC camps provided the labor for most of the parkway planting and clearing work.

2. 1930s: Yorktown to Williamsburg

Planting work did not occur immediately following the completion of the pavement. Instead, slopes were stabilized with a turf grass cover after the first grading operation was completed in 1932. This stabilization consisted primarily of topsoiling or fertilizing along the length of the parkway and then seeding grass to prevent erosion of the carefully modelled side slopes. [72] The grass mixture approved for this process was 20% Orchard grass; 20% Domestic Italian Rye; 20% Korean Lespedeza; 15% Timothy; 10% Kentucky Blue Grass; 10% Red Top; and 5 % Sheep Fescue. Although a few shrubs were planted around the Naval Officer's Quarters, a large scale planting of the Yorktown section of the parkway was not undertaken until after the paving contract was completed in 1934.

Planting plans for the Ballard Creek-Hubbard Lane section of the road were drawn up in 1934 by Edward Zimmer, and were approved by Charles Peterson. The plans begin at a Ballard Creek, west of Yorktown and continue to Hubbard Lane. The sheets are divided into two project sets. The first set of project sheets, shown as approved on October 25, 1933, includes the Marine Barracks, Brackens Pond, Wallace Swamp, and Indian Field Creek areas and terminates before Felgates Creek. The second area, shown as a proposed project only, covered an area from east of Felgates Creek to Hubbard Lane. The first and approved planting project, shown on sheets 1 to 14, is drawn at a greater level of detail than the second project. The first project shows planting area outlines, specific trees placement, groundcover beds, and comments indicating design intent. These sheets also contain plant lists, each of which indicates the plantings to be implemented within two station points (100 feet). The sheets of the second, proposed project are much less detailed and appear to be preliminary guidelines. Though some of the sheets show individual plant locations, more often they simply give a plant list to be planted within two station points without detailing specific locations. However, it appears that these plans were used for implementation as drawn, since no later planting plan superseding these sheets has been located.

The approved planting plans (Ballard Creek to Felgates Creek) use several types of annotations to direct the work. Existing planting is shown and sometimes labeled as individual trees or as masses of single or several species. On some sheets, thinning or clearing of existing plants is noted. For example, sheet 11 notes: "Sta. 227+50 to sta. 230 Clean out all low growth obstructing the view;" sheet 12 notes: "Station 239 to 240 selective cutting of Locust to open Pine group & add 1 Platanus occidentalis (4' to 5') at station 239;" and sheet 14 notes: "Cut out existing Locust leaving several of best specimens." On a few sheets, the rearrangement of existing plantings within new bed outlines is called for, as shown on sheet 14 (Figure

Screen planting to consist of:-
75 Pinus virginiana
50 Pinus taeda
60 Quercus (in variety)
35 Liquidambar styraciflua
20 Liriodendron tulipifera
25 Platanus occidentalis

OPEN FIELD

SUMAC - BAYBERRY - BRIERS

OLD FENCE ROW OF LOCUST AND WILD CHERRY to be thinned out leaving good specimens

Available material to be moved from here and used in screen planting

MIXED PINE - CEDARS - BAYBERRY

Rearrange existing line - evergreen material to be secured from near near fence - to this add:-
50 Quercus (in variety)
15 Platanus occidentalis
25 Liquidambar styraciflua
40 Cornus florida
60 Cercis canadensis

Road to be eliminated & screen planting put in thereof.

SMALL SCATTERED CEDARS

Speciman group:-
15 Quercus (in variety)
6 Platanus occidentalis
6 Liriodendron tulipifera
12 Cornus florida

Existing material to be thinned & rearranged in bay - additional material to be secured from back position as noted.

CEDARS

SUMAC

SCATTERED CEDAR, PINE, BAYBERRY

Rearrange existing & add 20 Cornus florida

Add deciduous trees close to road

Add individual roadside specimen trees & rearrange existing shrubbery

bayberry

Rearrange bayberry and add 20 Cornus florida

Specimen deciduous trees to overhang road

PINE GROVE

BEECH PLUM

Specimen trees

Add bayberry, cornus & cercis to face of existing planting

Extend planting over slope toe as indicated

LOCUST GROVE

SASSAFRAS - LOCUST - WILD CHERRY

BRIERS

Cut out existing locusts leaving several of best specimens

On right of parkway sta. 270 to sta. 272 cut out all but best of locusts and replace with material similar to opposite side.

Thin out poor material & increase existing specimen groups with additional trees.

Y O R K R I V E R

Frame overlook with:-
8 Juniperous virginiana
12 Pinus virginiana
10 Quercus rubra
3 Platanus occidentalis
3 Liriodendron tulipifera
20 Cornus florida
40 Myrica cerifera

To right of parkway - selective cutting to remove defective trees and undesirable varieties.
Add to existing:-
12 Juniperous virginiana
25 Quercus (in variety)
20 Platanus occidentalis
10 Liriodendron tulipifera
30 Cornus florida
100 Myrica cerifera

Des. JRD
Trap. JRD
Ck. by. [illegible]
Revised

U.S. DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
COLONIAL NATIONAL MONUMENT
PARKWAY PLANTING PLAN
STATION 270+30 TO 284
EASTERN DIVISION, BRANCH OF PLANS & DESIGN

Date Aug. 1934
Dwg. No. COL-1076
Sheet No. 14

Figure III.39. "Planting Plan for Colonial Parkway" Sheet 14 of 31 (Station Points 270-287), Drawing #COL-1076, August 1934. National Park Service, Colonial National Historical Park.

III.39). The sheets indicate that much of the material planted along the parkway was collected from the road margin or other nearby areas. For example, sheet 4 shows a plant material list with ten species collected and one purchased, as follows:

Collected:	49	*Juniperus virginiana*/Red Cedar	8-12'	
	7	*Pinus virginiana*/ Scrub Pine		5-10'
	136	*Pinus taeda*/Loblolly Pine	5-10'	
	69	*Cornus florida*/Flowering Dogwood		5-7'
	210	*Myrica cerifera*/Southern Waxmyrtle		3-5'
	95	*Baccharis halimifolia*/Groundsel Bush		3-4'
	95	*Prunus maritima*/Beach Plum		3-4'
	14	*Salix*/Native Willow		10-15'
	6	*Quercus rubra*/Red Oak	10-12'	
	4	*Quercus phellos*/Willow Oak		10-12'
Purchased:	35	*Rhus copallina*/ Shining Sumac		2-3'

No other sheets show a summary list such as this one, although each plant group is labeled by species and count.

Design guidance is also clearly given on the plans. Bed outlines and individual tree locations show placement and spatial intent and occasional view lines show visual relationships. Notes on the plans also reveal specific design intent and plant use. For example, annotations show that existing vegetation was meant to be an integral part of the design, after some manipulation:

> Existing material to be thinned & rearranged in bay—additional material to be secured from back position as noted.

> Thin out poor material & increase existing specimen groups with additional trees.

Visual relationships along the parkway, in the form of long and short views and broad vistas were an important element of the parkway design, and were created or enhanced by vegetative framing or screening. This is clear in the following comments noted on the plans:

> Arrange in this area as to screen old road & unite existing planting.
> Bring Foliage to edge of parkway with [plant list].
> Clean out all low growth obstructing the view.
> Opposite sta. 227 to enframe view [plant list].
> Frame overlook with [plant list].
> At side of overlook to confine view[plant list].
> To obscure reverse curve ahead [plant list].
> Keep this material within limits shown so as not to obscure foliage line and field behind.

Filling in existing open areas with additional plantings was another intended planting effect used throughout the plans. The word "face" is often used to describe this work, and appears to refer to filling in the foreground of existing vegetation with groups of flowering trees or shrubs:

> Face bay with 35 Cornus florida &20 Cercis canadensis to give mass effect.
> Face opposite sides with Prunus maritima.
> Face with dogwood & bayberry.
> 15 Myrica cerifera, bayberry, is to be used to face down pine grouping.

Specific plants were often intended to repeatedly create a distinct visual effect. For example, particular shrubs, such as bayberry, were shown used to create mass or volume. A groundcover was used to create a smooth plane of vegetation under specimen trees. Flowering trees were used to lighten and provide interest against a forest edge. Marsh grasses were shown used to vegetate fill areas below the tide line. The following notes are typical examples of how vegetation was intended to appear:

> [Plant list] use as undergrowth planting mainly in background.
> [Plant list] as accent against and with pines 60 Prunus maritima.
> Group at entrance 60 Myrica cerifera, as ground cover so as not to obstruct visibility 70 Lonicera virginiana.
> To cover mud flats (high and low tide) 1000 marsh grass (stolons) Interspersed at high tide line with 150 Hibiscus moscheutas.
> General Note: All plant mass indications are approximate. Small tree groups should be detached irregularly giving an interesting foliage line.
> General Note: Plant masses to be more dense near the bluffs than in areas near pavement.
> Note: From the area indicated detach small groups as accents in meadow.

The 1935 planting plans show a considerable use of native plant materials with only a few exotics. As noted on the plans, a large number of the plants used along the parkway appear to have been collected from nearby areas. This may have been due in part to the availability of labor but limited funding for plant purchases, which would have made collecting plant materials from surrounding forests the most convenient method for implementation. Yet an aesthetic use of native materials was also at work in the minds of the designers. Trees appear to have been often chosen to blend with the surrounding canopy or to match trees in the area when they were placed at new features. This would create an effect of unified forest. The design approach taken in the understory, shrub and vine planting, however, was not intended to simply mimic the mixed native woodland planting. Rather, the species used were arranged in large groups as masses and drifts. This spatial organization is quite different from the organization of plants in native forests, and was clearly intended to shape volumes of space around the ribbon of parkway pavement, to frame views, and to emphasize built features. Such design goals are especially apparent in the massing of native shrubs at the ends of bridges and vines and shrubs in the parking islands.

Evergreen plantings were also put to use along the parkway. On the plans, junipers and cedars are often indicated along the river edges for structuring and framing views and vistas, as reflected on the period plan of Brackens Pond (Sheet 6 in Appendix A). These species and pines (*Pinus virginiana* and *Pinus taeda*) were also used for screening. This is particularly noted in the area of the Navy Mine depot, where the designers were screening Navy fences and facilities. Pines were also noted for use as a dark, dense back drop for flowering trees.

Although it is not explicitly stated on the plans, the planting palette of the 1930s indicates that seasonal effects were also on the minds of the designers. On most of the sheets, spring flowering trees figure strongly in the designs. The flowering species indicated were predominantly dogwood and redbud. American holly and mountain laurel were also included, but it appears they were used more for evergreen screening and vegetative massing than for seasonal interest. Large bands of flowering trees were used for planting in front of existing tree lines and new plantings of forest trees. Interestingly, a typical grouping of new plantings would include about even numbers of large shade trees and flowering trees, as evidenced in the following typical list to be planted between Station Point 245 and 250: 15 sycamores (*Platanus occidentalis*) 15 sweet gum (*Liquidambar styraciflua*), 25 dogwood (*Cornus florida*), and 30 (*Myrica cerifera*). The flowering trees would face the plantings, providing spring highlights. Although a corresponding autumn effect is not clearly noted on the plans, species used in the palette, such as dogwood, sweet gum, and red maple, would have also provided some brightly colored fall leaves.

Implementing the planting plans for Ballard Creek to Felgates Creek began in the late fall of 1933 and continued into 1934 and 1935. The drawn out nature of the process seems to be due to inclement weather, the slowness of the work force, and lack of funding for the planting work. Most plant materials were transplanted from elsewhere in the park, purchased from local nurseries, or moved from local residents' properties in exchange for grading work or surfacing of access roads.[73] As has been indicated previously, a great deal of the parkway planting was done in the field, and the park landscape architect (then Edward Zimmer) was required to supervise the selection, movement and transplanting of the materials, as indicated by this note:

> All specimen trees on this sheet to be selected & located in the field by the Landscape Inspector.

Figure III.40 gives an indication of the amount of effort required to move the large number of plants around the field. Figure III.41 also shows that most of the work was conducted by large CCC crews. The crews sometimes caused problems as they moved *en masse* down the parkway: In January, Spelman complained to Superintendent Flickinger:

> It has been noted that the operations of the CCC forces engaged in tree planting work along the parkway are considerably marring the appearance of the shoulders and to a lesser extent obstructing the free flow of the drainage. This condition is caused principally by trucks and equipment driving over and along the shoulders, which at this season easily cuts up same.[74]

Disputes also arose over the nature of plantings. The most infamous of these disputes occurred over the planting of the hydraulic fill areas. Whereas the landscape architects desired to create a naturalistic effect using tall pines and low understory, Floyd Flickinger, then superintendent of the park, disagreed with the effect.[75] The dispute was eventually reviewed by the NPS Director, and Flickinger's request to condemn the trees won, despite the fact that the pine plantings had been approved as part of the plan. Charles Peterson noted, that the eventual result of the administrator's planting "design" was, to his mind, unfortunate:

> The long leaf pine were planted to soften the effect of the big new white hydraulic fill. We were imitating the natural growth found on sand spits around the Chesapeake where you look through the boles of trees at distant water views. The bayberries and pencil wood also planted were the characteristic understory.
>
> Only two or three small pines had been transplanted by the CCC boys as an experiment. They were then yanked out (with Mr. Cammerer's approval). But the understory grew to huge size—as can be seen today—and the effect is peculiar and unsatisfactory.[76]

Based on data from the Superintendent's Monthly Reports, planting on the second section (Felgates Creek to Hubbard Lane) of the completed parkway was not finished until early in 1938, with the bulk of tree moving and transplanting occurring in the spring and fall of 1937. It appears that the preliminary plans were used as a basis for the planting work, with most detailed design decisions as to massing and drifting of plants being made in the field. The landscape work also included replacing failed plantings in the section completed earlier and repairing slopes which had slumped due to erosion. The latter was particularly necessary at Jones Mill Pond, where the downstream dam had begun to slide.[77] In addition, grading of gutters or swales along the edge of the pavement and soil preparation were required in most areas prior to planting, since the side of the road had lain fallow for a number of years.[78]

It seems that planting on the parkway extension between Hubbard Lane and Williamsburg, which had been paved in 1938, simply repeated the methods used between Ballard Creek and Hubbard Lane. Be-



Figure III. 40 "Load of Parkway Bayberry," #542. No date, circa 1935. Note Navy Mine Depot architecture in back. National Park Service, Colonial National Historical Park.



Figure III. 41. "Station 544, Planting Picture (see 6087)," #6216. No date, circa 1935 or 1937. CCC crews planting along parkway. Figure III.13 shows same area prior to planting operations. National Park Service, Colonial National Historical Park.

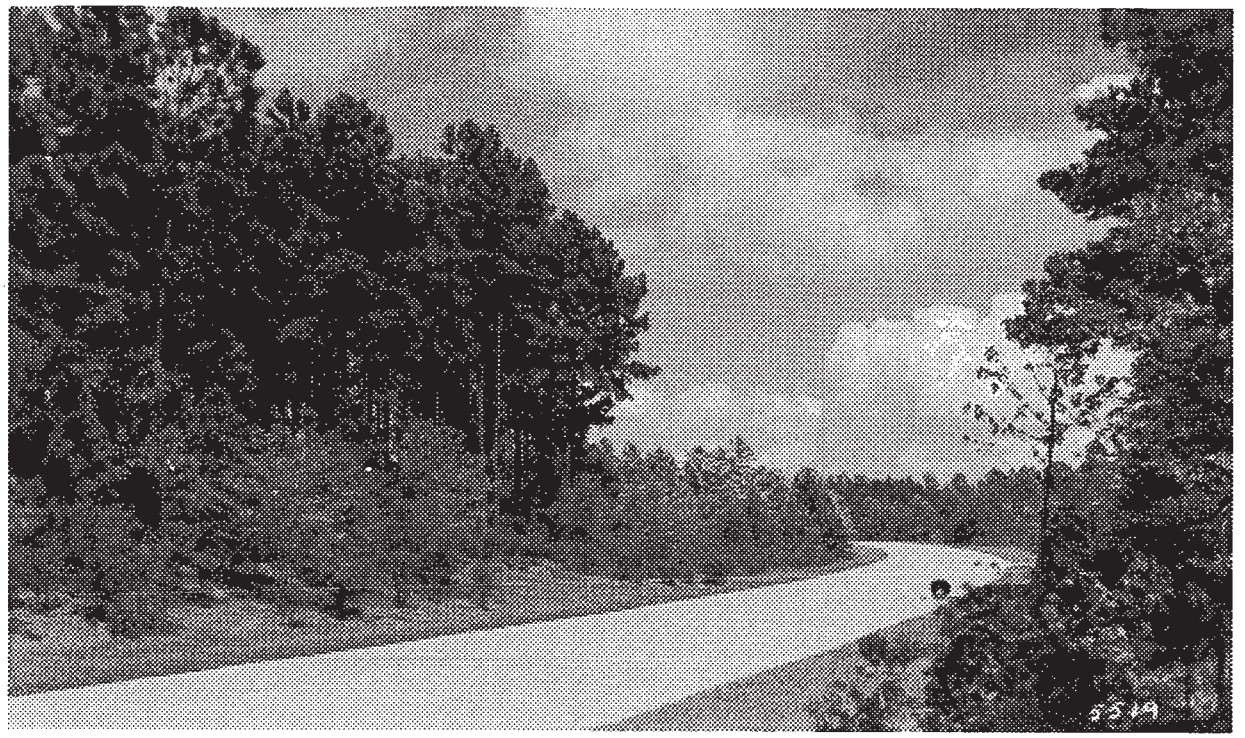


Figure III.42. "Station 517. Planting--First growing season, July 1937,"#5519. National Park Service, Colonial National Historical Park.

cause no planting plans exist for this portion of the parkway, it is surmised that most of the planting decisions were made in the field, following the design principles established previously. The Superintendent's Monthly Reports of 1938-39 also reveal that failed plantings on the original section of the parkway were replaced around the same time as the Hubbard Lane-Williamsburg stretch was being planted. Poor weather would often hinder both planting and replanting activities, which again involved transplanting trees from elsewhere in the Park:

> On the Parkway, wet conditions throughout the length of the area being planted made the moving of large plants inadvisable. Small plantings have been completed as far as possible and activities transferred to replacement plantings. . .[79]

2. 1930s Plantings: As-built Character

Although written descriptions of the planting work is scarce, a large photographic record of the planting in the late 1930s exists in the park archives. These photographs indicate that much of the planting for the entire length of the Yorktown to Williamsburg section was completed as indicated on the planting plans. For example, Figure III.42 shows low shrub and plantings massed along the roadside slope, with one large transplanted tree occurring on the opposite line of the curve, as a marker to guide the eye. Figure III.43 shows a mass of low plantings around the Felgates Creek parking area, provided to act as a buffer between the parked cars and the roadway. This planting, also shown in a period plan of the area (Sheet 8 in Appendix A), is particularly interesting since this dense planting around overlooks is not in use along the parkway today. In contrast, Figure III.44, further east from Figure III.43, shows a planting of clustered canopy trees. Although it is difficult to determine what species these trees are, they are clearly intended to grow in as a volumetric mass in the foreground of the slope and curving road behind them.

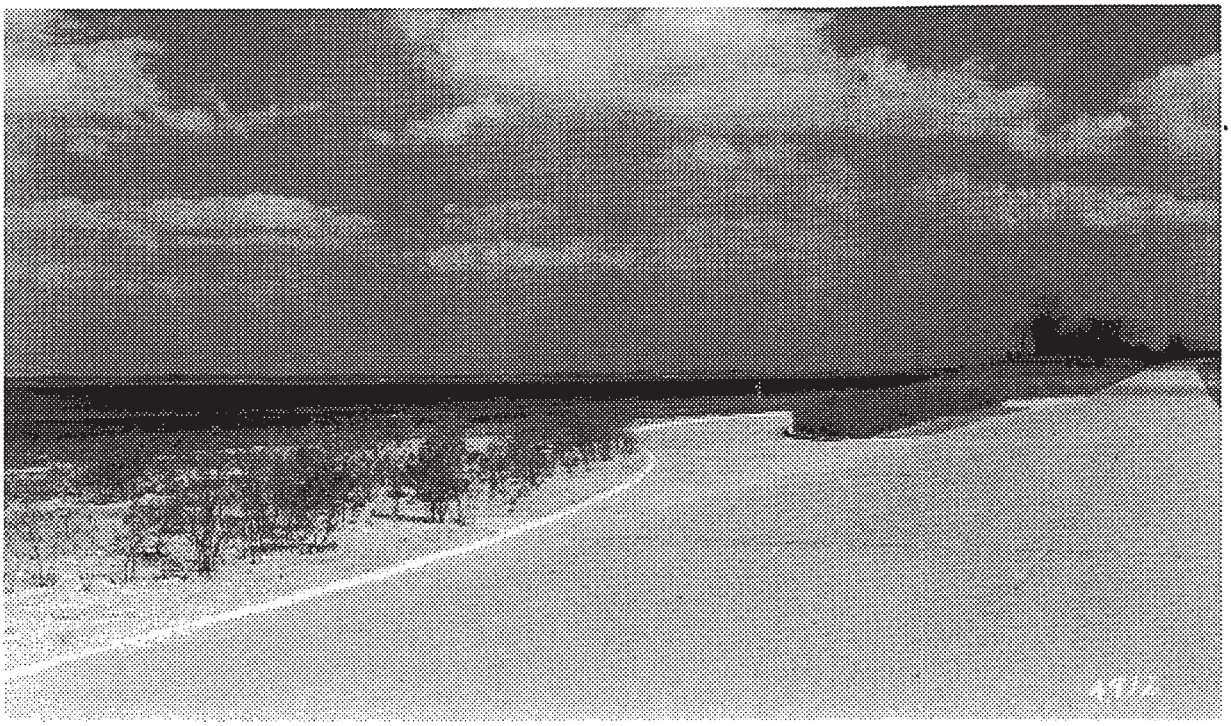


Figure III.43. "Station 295--Showing Felgate's Creek after Transplanting," #4912. No date, circa 1935 or later. National Park Service, Colonial National Historical Park.



Figure III.44. "View of Planting East of Felgate's Creek Hydraulic Fill, Station 290," #1625. No date, circa 1935. National Park Service, Colonial National Historical Park.



Figure III.45. "Station 486, February 1935, 'Before' picture," # 1623. No date, circa 1935. National Park Service, Colonial National Historical Park.

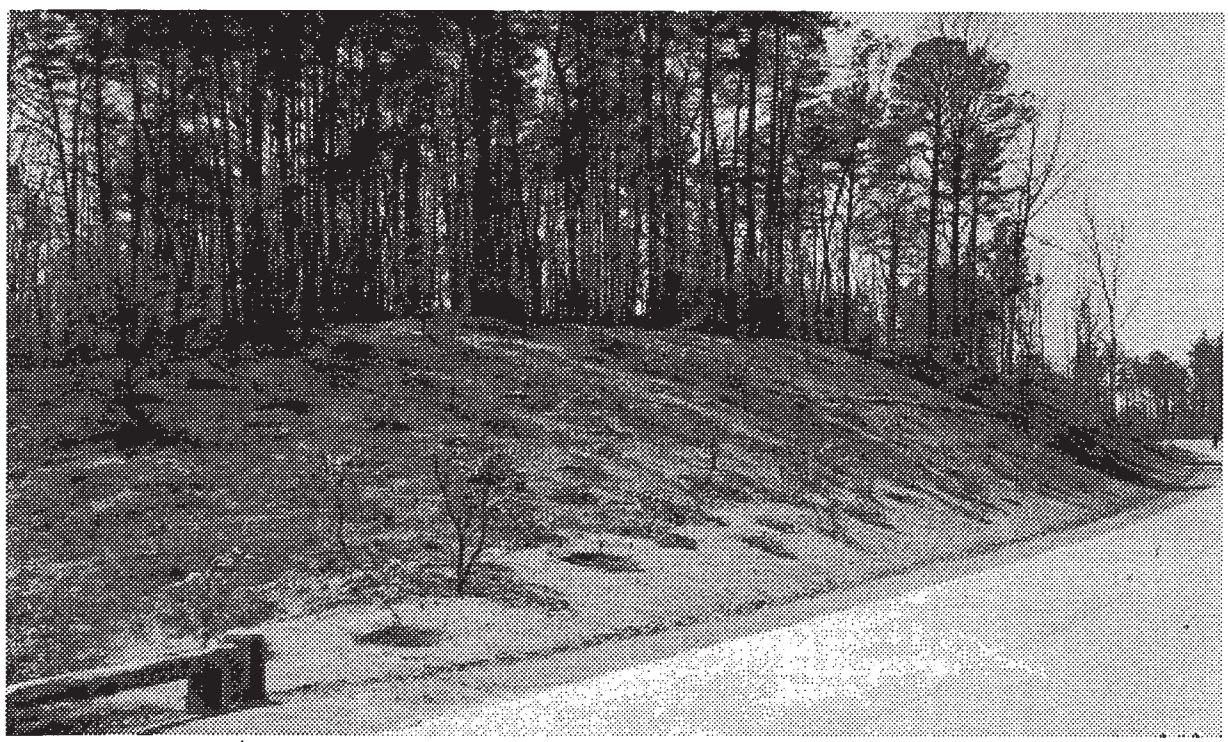


Figure III.46. "Station 486, near Jones Pond, 'After' picture," #1624. No date, circa 1935. National Park Service, Colonial National Historical Park.

Figures III.45 and III.46 also provide an interesting record of the desired parkway planting effect. Located in the vicinity of Jones Mill Pond, these two figures are "before and after" photos of the same site. Figure III.46 shows the intent of the designers to completely vegetate this steep cut slope. Interestingly, the predominant plant materials appear to be shrubs, so that the eventual effect of the planting would be a lower mass backed by the larger deciduous trees of the original forest. Also intriguing is the method of planting shown here, where each plant is located in a large saucer-shaped depression. These depressions may have been intended to catch water running down the steep slopes. Figures III.47 and III.42 show the effect of the understory facing plantings a short time after construction, when they have filled out and form a medium height transition to the woodland edge behind. Unfortunately, none of these photos illustrate the seasonal effect of spring blooming dogwood, redbud, and shadblow (*Amelanchier canadensis*) along these slopes which is shown on the planting plans.

Although little information on the planting and management of turf is provided on the plans, historic photographs give some idea of the appearance of turf in the 1930s. As evidenced by photos and by the turf mix specified in the original seeding of the parkway, an area of shorter turf was clearly meant to abut the pavement. This is seen in Figures III.17 and III.42. However, a variation of height in the turf along the parkway can be seen in the historic photographs a number of historic photos, such as Figures III.32, III.48, and III.15. These and other parkway photos show a general pattern of trimmed turf (3-4 inches) closer to the road, with taller grass, 6-12 inches, being found in the following areas:

- behind guard rails (either directly behind or a little down slope);
- behind the grassy swales next to the road ;
- underneath plantings of shrubs and young trees; and
- in areas abutting forest.

Interestingly, in some photos, such as Figure III.17, grass appears to be short half-way up the "hogback" slopes, with taller grass above. However, little is known about the turf maintenance regimes and whether this was an intentional effect or not.

In addition to planting, landscape work included the creation of vistas by cutting vegetation along the parkway. Vistas were cut to view open areas of marsh, swamp, or river. Areas indicated for vista cutting included Brackens Pond, Jones Mill Pond, and Kings Creek. Figures III.49 and III.50 are "before and after" images of the clearing at station point 71, near Ballard Creek at the starting point of the first constructed section of the parkway. As shown in these figures, the intent of vista clearing was not always intended to create a dramatic vista. In this case an opening in the trees is created, with a small view over some lighter-colored marsh grass. However, the importance of these actions was that they created an opening along the inland edge of the parkway, bringing a view of light and sky to the motorist. This type of clearing created a pattern of alternating light and shade along the parkway, with light piercing the dark wall of vegetation on the inland side. Also interesting in Figure III.50 is the planting of two deciduous trees in front of the opening just created by the vegetation removals. It would appear that these trees were intended to eventually both frame the view and provide canopy directly over the road.

It therefore appears that much of the design intent indicated on the 1930s planting plans was indeed achieved in the plantings along the Yorktown to Williamsburg stretch of the parkway. Based on current conditions, many plantings still remain (this issue is explored further in the existing conditions and analysis chapters). However, in the years following the plantings, changes did occur. These included some destruction of the plantings by military activity during World War II, when the parkway was closed to civilian traffic. In addition, it is clear that changes, especially in the mowing and maintenance of the pavement margins, occurred along the Yorktown end in the late 1950s and early 1960s, following the completion of

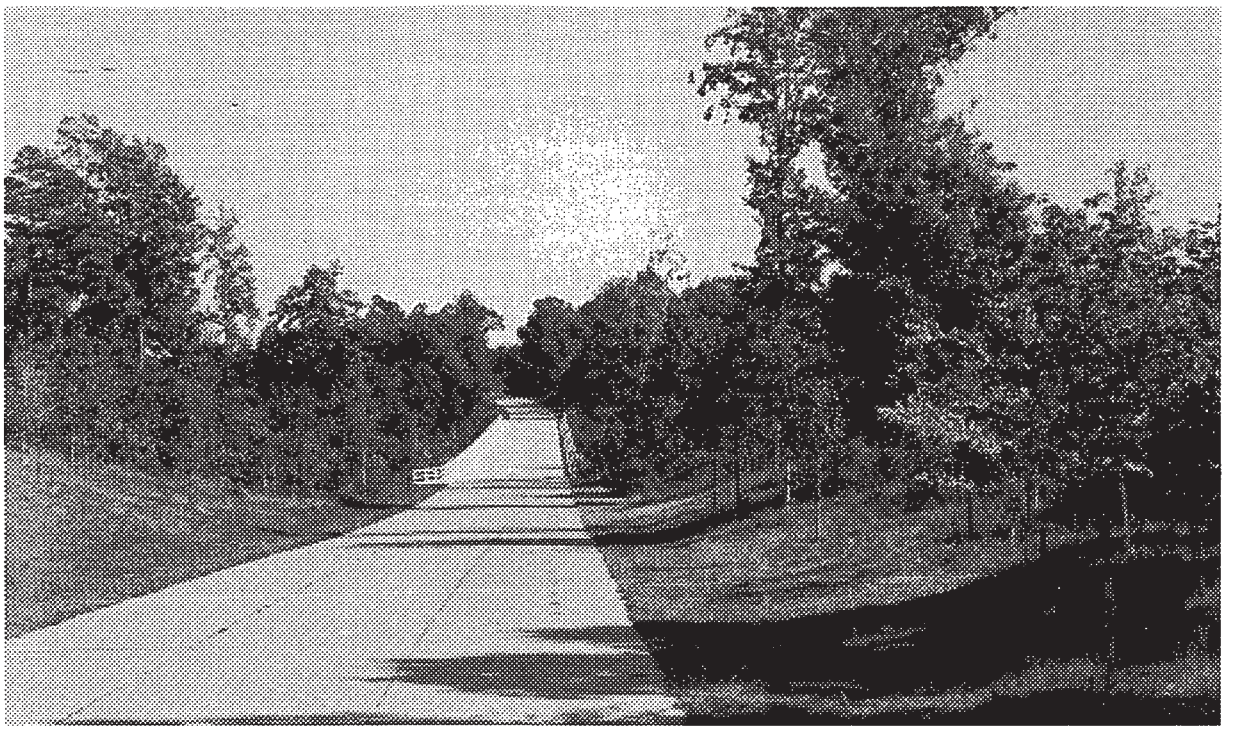


Figure III.47. Alignment of road at Kings Creek, after planting., #4281. No date, circa 1935. National Park Service, Colonial National Historical Park.

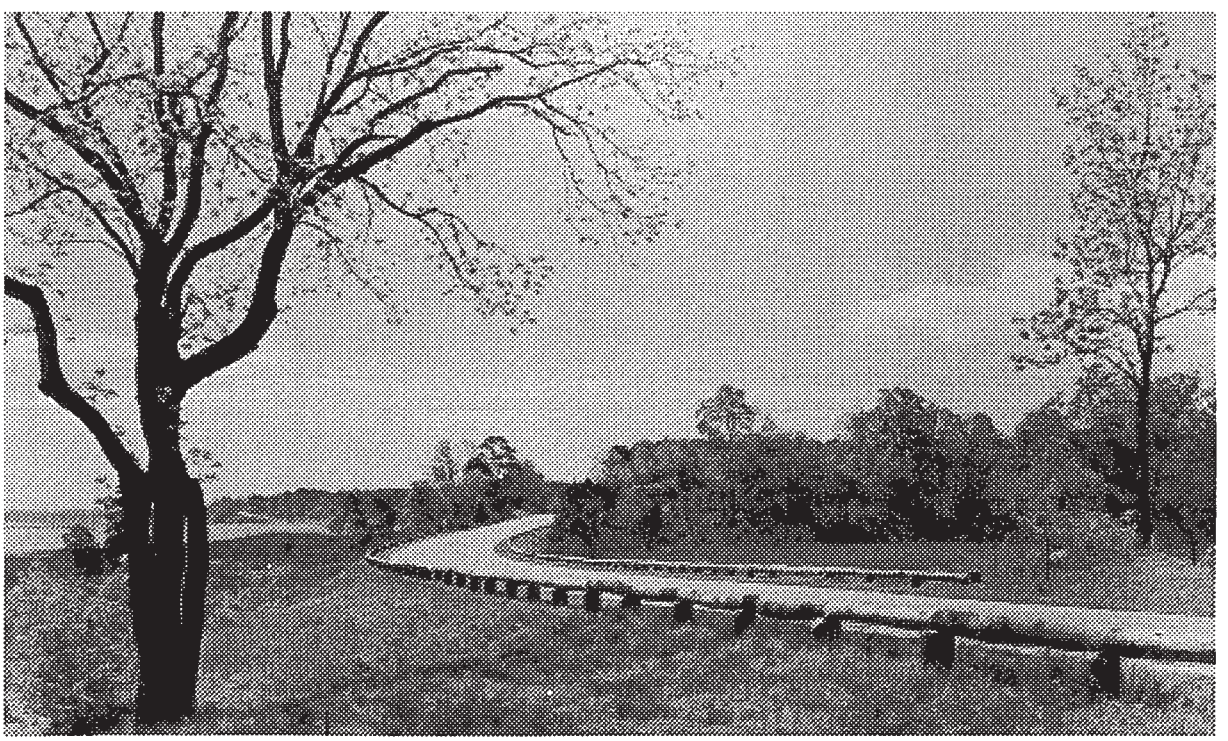


Figure III.48. "Parkway Station 153, General View looking east," # 3745. No date, circa 1937. National Park Service, Colonial National Historical Park.



Figure III.49. "Parkway Station 71, Before Vista Cutting," #7778. No date, circa 1935. National Park Service, Colonial National Historical Park.



Figure III.50. "Parkway Station 71, Vista Cut at Ballard Creek," #7946. No date, circa 1935. National Park Service, Colonial National Historical Park.

the parkway. For example, Charles Peterson noted that his design intent of having " forest trees . . . come right down to the Parkway shoulders and eventually complete a canopy overhead" was never realized because the park staff "continued to maintain grass slopes."[80] This and other changes are described in greater detail below under the 1950s planting.

3. 1950s: Williamsburg to Jamestown, 1957-58

During the 1950s construction period, consideration of the parkway planting did not occur until the end of the project, partly because of the delays in the paving contract. The first references to parkway planting appear in the December 1956 Superintendent's Monthly Reports, in the accounting section. Two types of planting development—clearing and selective cutting of views and planting plans—are respectively listed as being 20% and 4% complete, just 5 months prior to the parkway's slated opening.

But work progressed quickly, and one month later, in January, 1957, an overall parkway planting plan was complete and approved by Abbott. The plans, drawn up jointly by Robert Steenhagen, the park landscape architect at the time, and Warren Lewis, a landscape architect with the Eastern Office of Design and Construction who was the NPS liaison with the Bureau of Public Roads, cover the corridor from the Williamsburg interchange to the Neck of Land parking overlook in 11 sheets. A second set of 5 sheets covered the Yorktown parking lot and visitor's center to just west of the Route 238 underpass. These two sets of drawings cover recently constructed parkway segments, with the exception of the Jamestown parking lot area. In comparison to the planting plans produced in the 1930s, the 1957 plans, done at half the scale of the 1930s plans, are much less detailed than the first set of 1930s planting plans. In general, however, the 1950s plans are comparable to the second set of the 1930s plans in that they show the proposed massing of plants along the parkway. The broad intent of spatial design can be surmised from these plans, but little specific information is given, other than the species and numbers of plants planted.

In general, the planting sheets show an existing vegetation line with new plantings arrayed along the leading edge of this line. This arrangement seems to indicate that the new plants would be used to "face down" existing vegetation, as had been done in the 1930s. Other plantings are shown as free standing individuals or groups in the cleared margins of the parkway. Several sheets show plant lists and locations for them to be spread between, likely subject to field placement. In general, trees in these plans are favored over shrubs and vines. Overall, it also seems that fewer plants were used. Missing from the 1950s plans seems to be the use of masses of shrubs and grasses as space-shaping volumes; rather, it seems they were used primarily to face down the edges of existing vegetation.

The species used in the 1950s were generally consistent with those on the 1935 plans, and once again followed a predominantly native plant palette. Robert Steenhagen, park landscape architect at the time, recalls that the use of native plants was based more on a "NPS aesthetic" about planting than anything else—he referred to this planting aesthetic as "the bible."[81] Steenhagen also recalls that information on existing plant species in the road margins, collected during a pre-construction plant inventory, was used to determine where certain species should be placed so that existing and new plantings would seamlessly transition.[82] He remembers that the blending of existing and new plantings was important because the clearing for construction had created a harsh line of vegetation, like a hedge row. The NPS wanted to eliminate the hard edge and replace it with a smoother, more curvilinear line which smoothly transitioned from lawn to understory to canopy. According to Steenhagen, Edward Zimmer, Chief of the Eastern Office of Design and Construction, provided useful advice on how to utilize plants from the surrounding areas in the planting effort, based on his previous parkway planting experiences in the 1930s.

Although the planting plans concentrated on the Williamsburg to Jamestown section and on the new Yorktown terminus, the most detailed plan shown was that for the traffic circle which led to Colonial Williamsburg and its large visitor center. Although numerous traffic circles for this area had been planned in the 1930s and 1940s, it was not until the completion of the parkway that this traffic circle was graded, paved, and planted. The plan for this area shows new plantings of five types of smaller trees—shadblow, dogwood, redbud, blue beech and black locust. Canopy trees include white, scarlet, red and black oaks, tulip tree, sweet gum, American beech, American plane tree, black gum and honey locust. American holly (14 count) and loblolly pine (35 count) serve as the only evergreen tree species used. Shrub masses are shown as groups of individual and two or three species. Several large ground cover areas, planted to English ivy *(Hedera helix)*, are also noted at the points and edges of the traffic island. This detailed planting plan indicates the importance accrued to the careful planting of this highly visible, heavily used intersection. The complex planting of the area may also have helped to highlight its significance and counteract the "by-passing" of Williamsburg effect that some felt the construction of the tunnel had caused. Similar detailed plantings were drawn up and implemented at the Jamestown entry road and the Yorktown visitor center. These plantings exhibit some new species as well, including inkberry (*Ilex glabra*) and beautyberry (*Callicarpa americana*).

The Superintendent's Monthly Reports and the Landscape Architect's Monthly Reports reveal that much of the planting work for 1957 was done speedily and in the field.[83] Not all of it was completed in time for the opening celebration, and some plantings failed and were replaced. The replacement plantings were implemented using a revised copy of the original 1957 plans, and occurred in early 1958. The notations on the revised plans indicate that the second planting was not simply a replanting of failed specimens, although this was true in many cases. In some cases new plantings were added (e.g., shrub plantings under established trees) and in some cases dead plantings were not replaced.

Replacement plantings continued in the following years. Some are noted on the 1964 Planting, Land Use and Maintenance Plans, which also indicated a mowing and clearing regime (described in greater detail below). In 1974 a new parkway Planting Plan was implemented. This plan primarily added new clumps of flowering trees such as dogwood and redbud to enhance the spring bloom effect along the parkway. Evergreens—hollies, mountain laurel, junipers—were also added. The plan is most notable in that some clumps of new flowering species not seen in previous plantings, such as golden rain tree (*Koelreuteria paniculata*), fringe tree (*Chionanthus virginicus*) and hawthorn (*Crataegus phaenopyrum*) were also planted. Blooming groundcovers, such as daffodils (*Narcissus pseudonarcissus*) and daylilies (*Hemerocallis fulva*) were planted, too, at the Williamsburg rotary and Capitol Landing Bridge, respectively. In a major departure from previous planting plans, very few shrubs were planted. For example, along the entire parkway, only 34 bayberries were planted, in contrast to the hundreds planted in the 1930s and 1940s. This change in planting was likely due to a changing aesthetic which valued flowering trees over shrubs.

The 1980s saw an updating of the Planting, Land Use and Management Plan. Other work included the replanting of flowering trees, especially along the Kings Creek portion of the Parkway, and some evergreen screening planted by boy scouts on the Jamestown end of the parkway.

4. Plantings: As-built Character

The as-built character of the parkway plantings after 1957 is recorded in a number of photographs. Another useful source is the 1964 Planting and Land Use Management Plans (PLUMs), which were developed for the parkway under Abbott's direction.[84] These drawings further defined the vegetation of the patterns as established in the 1950s, and in a sense, serve as a snapshot of the desired parkway landscape

as it was maintained under Abbott's superintendency. The set of sheets includes the entire parkway from the Yorktown to Jamestown parking lots, and shows desired planting effects, vistas, and mowing regimes. Relatively small numbers of plants to be added are shown on each sheet, indicating that the plantings were likely refinements of existing plantings (or that budgets were modest). Combined with photographs from the 1950s, these plans give a relatively clear picture of the parkway in its as-built condition.
The major feature shown on the plans is the forest edge, which undulated against the pavement edge. In general, from the plans, it appears that in the 1950s, the edge of the vegetation along the Yorktown end was closer to the road and more strongly defined. In contrast, along the Jamestown end, the edge of forest was farther away from the pavement. This was surely due in part to the more mature plantings along the Yorktown end of the parkway; as these plantings grew, the vegetation began to more strongly define the parkway as a volume of space. This is particularly clear in Figure III.51, a view of Bellfield Straight. Here the growth of tall pine trees on either side of the road corridor defines a tall, cathedral like space around the roadway. The wall of vegetation on the inland side is quite dense and visually solid, while on the York River side, the vegetation is visually permeable, with ample views afforded between the column-like trunks of the tall pines. In some areas, however, the forest edge bounded the space less strongly, as shown in Figure III.35, a view near Jones Mill Pond, where no overhead canopy existed.

In contrast, a somewhat different effect was achieved on the Jamestown end near Halfway Creek. This can be seen in the 1958 period plan and section view of the Halfway Creek area on Sheet 13 (see Appendix A). From this plan, one can see a slightly different planting aesthetic, with clumps of low, flowering trees situated on the grassy road side slope. This is also seen in Figure III.21, a view of vegetation bordering the road just past College Creek. Although the vegetation defines and circumscribes the area in the view, a grassy foreground leads the eye into the space. According to Robert Steenhagen, this creation of larger spaces around the pavement was part of a distinct planting aesthetic, one which held that the parkway should not simply be a "green tunnel."[85] Instead, a more undulating pattern of forest and lawn and light and shade would be provided along the parkway. The implementation of this aesthetic is demonstrated in the 1964 Planting Land Use and Maintenance Plans (PLUMs) where mowing, pruning, and clearing are indicated to maintain a curvilinear forest edge and to prevent forest growth all the way down to the pavement edge. This aesthetic was a clear departure from Peterson's wish to have vegetation at the pavement margin—and may therefore account for Peterson's complaint decrying too much maintenance by park staff (see endnote 80 of this chapter).

The variety of visual experience along the parkway in the 1950s was also diversified by the use of vegetation in the more open areas along the river shores. In contrast to the wooded uplands were areas such as Glebe Gut (Figure III.52). Along the open shores, plantings clustered around parking overlooks created the feeling of an oasis in the flat, wide open spaces of the James River. Yet another effect was achieved at Felgates Creek (Figure III.53) where the sandy hydraulic fill area is shown transformed into a pastoral landscape, where shade from specimen trees dapples a sunny lawn.

Other planting effects were achieved through the use and management of specific plant materials. Spring flowering trees were used for seasonal effect, as borne out by park photos such as Figure II.54. Driving the parkway to observe the display of flowering trees in the spring became a local tradition in the 1960s and 1970s. The Planting, Land Use and Maintenance Plans (PLUMs) show new additions of flowering trees along the length of the parkway, and Robert Steenhagen recalls increasing "the number of flowering trees for aesthetic value." It is likely the new plantings also replaced declining trees in some locations. The PLUMs also indicate detailed, traditional foundation-type plantings at the Yorktown and Jamestown Visitor Centers, the Williamsburg rotary, and at bridge abutments. As shown in Figures III.55 (Tazewell Hall) and III.56 (238) abutment plantings framed the bridges and softened the architecture, helping them to merge them into the surrounding landscape.



Figure III.51. "In the area between Felgate's and Indian Field Creeks,January, 1958," #13131. National Park Service, Colonial National Historical Park.

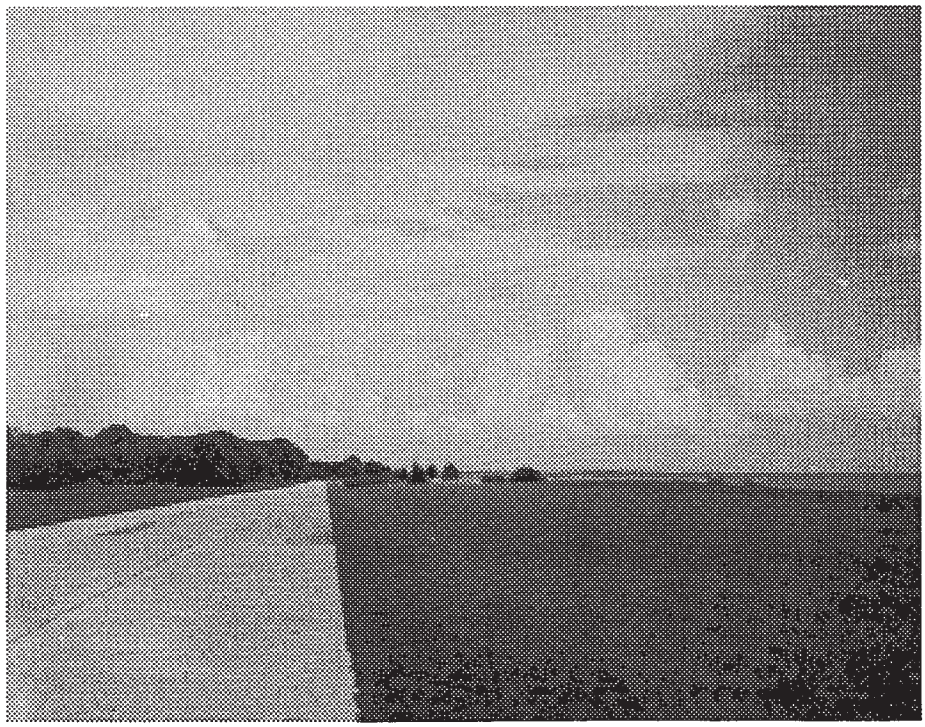


Figure III.52. "College Creek-Glebe Gut Area, August 24, 1961," #13716. National Park Service, Colonial National Historical Park.



Figure III.53. View of parkway at Felgates Creek, #COLO-38951.511. No date, circa 1957. National Park Service, Colonial National Historical Park.

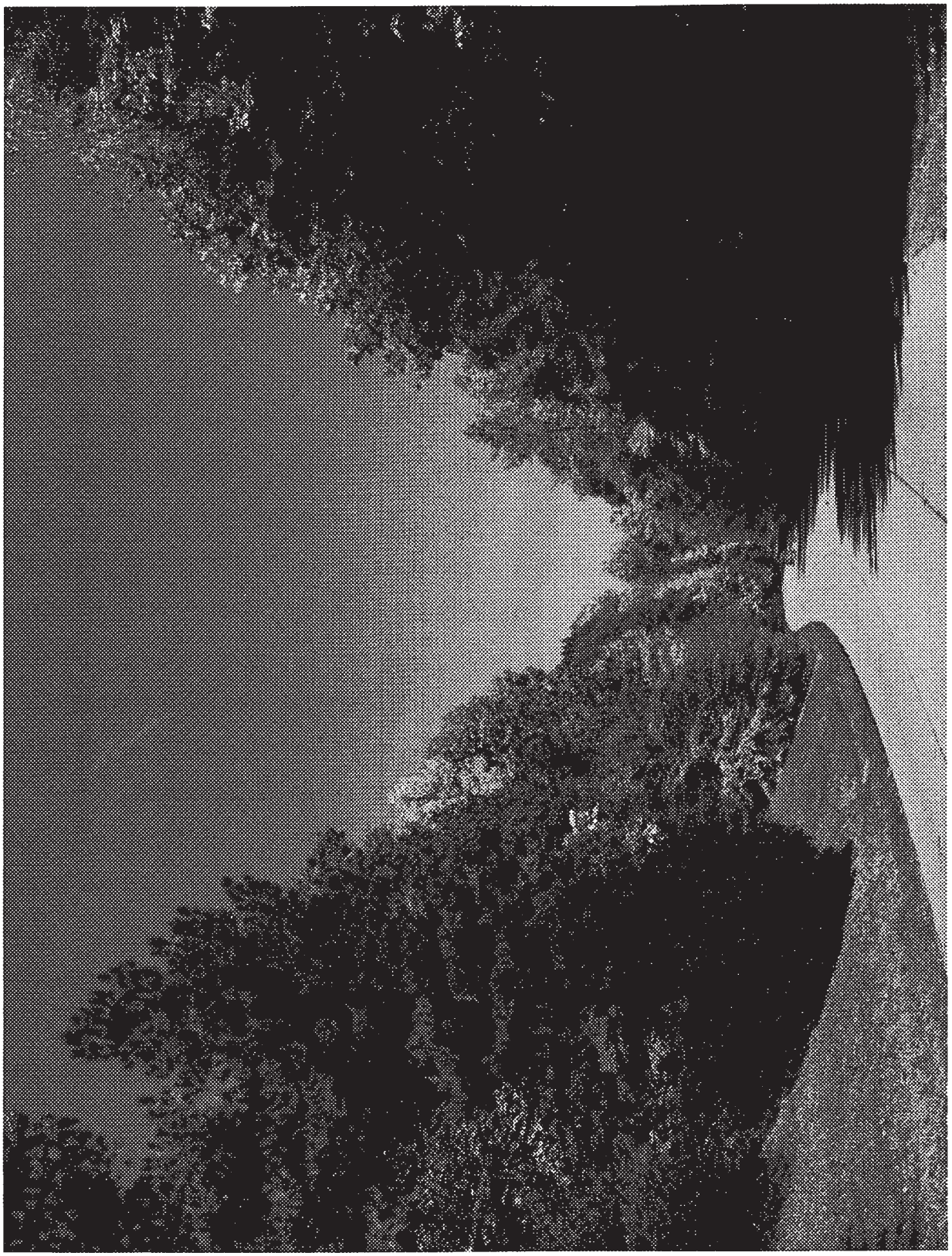


Figure III.54. "Unidentified curved stretch of Colonial Parkway," #COLO-38951.507. No date, circa 1970. View of flowering trees along parkway. National Park Service, Colonial National Historical Park.



Figure III.55. "Tazewell Hall Overpass, toward Williamsburg proper," #13729. April 1961. National Park Service, Colonial National Historical Park.

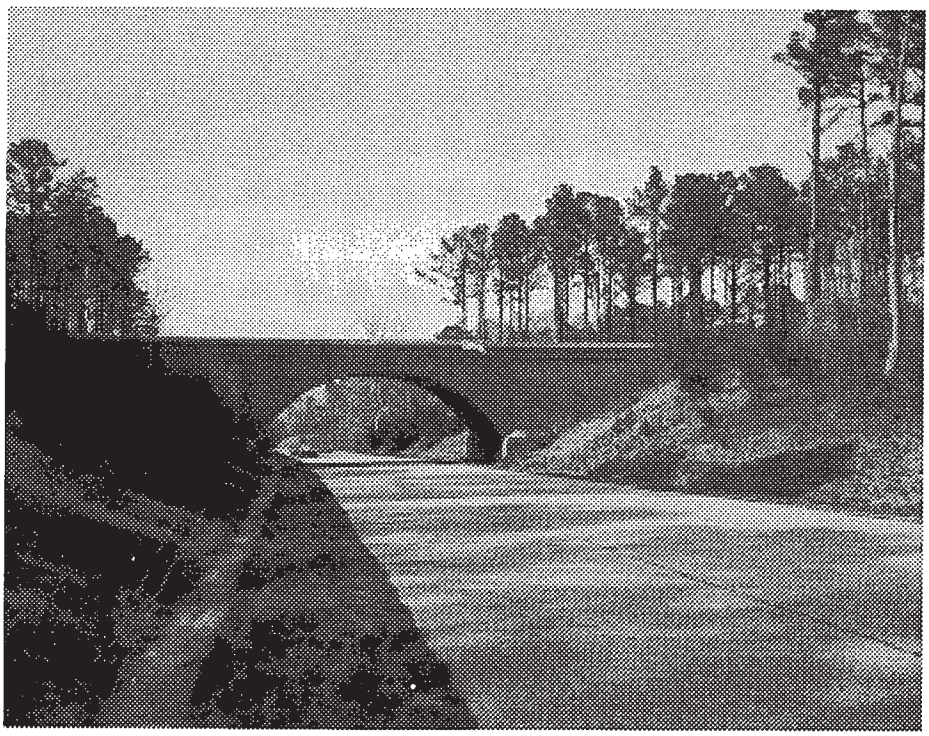


Figure III.56. "Va. 238 Overpass," #13728. April 1961. National Park Service, Colonial National Historical Park.

The Planting, Land Use and Maintenance Plans also include notes directing vine removal, vegetation thinning, and tree clearing. These directions for vegetation management indicate a level of fine tuning of the vegetation primarily for visual purposes of shaping the woodland edges, opening understory or screening visually intrusive elements beyond the parkway right-of-way. For example, the plans commonly note "Keep Understory Clear;" "Thin Material for Transition;" "Thin Understory;" "Hold Hedge Row for Screening;" and "Clear Vista." These directions were intended to create distinct visual effects. Of these effects, vistas, organized "like spokes off a wheel," were very important. Vegetation served to channel views, and often thinning a dense wall of vegetation to transition into an open view was required to create the spoke effect. Thinning and clearing the understory created other visual effects: Along the river shores, it allowed for open vistas to river or marsh to be viewed under canopy, such as at Bellfield Straight (Figure III.51) or through canopy (Figure III.57, which shows the area around the Civil War Fort, also illustrated on Sheet 14). In contrast, in the wooded uplands, understory thinning created a more visually permeable edge, permitting the motorist to view into the forest, expanding the perceived volume of the road. This effect contrasted with other areas, where the forest, with understory, functioned as a visually impermeable edge along the roadside (Figure III.35).

The PLUMs also provide information on how the grass along the parkway margins was maintained. Robert Steenhagen recalls that he always envisioned the parkway edge as a mowed area, and the PLUMs reflect this aesthetic. In general, the plans show curvilinear mow lines (usually "S" curves) in front of vegetated edges, creating a lawn edge which often widened to create small "bays" of lawn.[86] According to Robert Steenhagen, the mow lines and directions on the plans were established in reference to both the tree line and the pavement edge, and were created by "going out with the mowers and staking" them or "riding the mowers with the guys." In a few areas, notes also indicate mowing within the woodlands to create a "park-like" appearance of specimen trees in lawn. However, chief among the goals of mowing was to maintain the curvilinear forest edge by preventing regeneration of understory. In recent years driving the parkway when visiting his son in Virginia, Steenhagen reports that it seems the mowing edge has pulled closer to the road and "should be more sculpted."

Photographs indicate that these mowing goals were, by and large, implemented. Grass seems to have been maintained at a relatively short height, about two to three inches. This is shown in a pair of photos taken by Charlie Hatch in the early 1960s, and another photo from the early 70s, in which no tall grass at all is seen, not even against the forest edge. Another photo of Bellfield Straight taken in the 50s also shows a very short, two- to three-inch, grass ground plane. However, some photographs also show a variation in grass height. These include a circa 1959 photograph of the College Creek area, where tall, ten- to twelve-inch grass is found directly behind the guard rail, adjacent to a clipped area; and the pastoral view of Felgates Creek from circa 1960, where very short, two- to three-inch grass gives way to a tall grass zone which abuts the York River.

Even with the guidance of the PLUMs, it is likely that grass height varied over the year, based on season, rainfall, mowing tools, and mowing budgets. Seasonal variation is definitely noted in the photographic record, particularly during the spring, when longer growth (12 to 24 inches) is seen in areas where the Yorktown Onion is in bloom. Some erosion and bare spots are also noted in historic photos. For example, one photo of the Kings Creek Area (Figure III.47) shows eroding bare patches near the top of a hogback slope and one photo from the Jamestown end of the parkway (Figure III.59) also shows bare areas, this time on the sandy hydraulic fill. It is possible that these conditions were caused by slope erosion and poor soils, respectively.

It is likely that the as-built conditions of parkway vegetation likely varied from year to year, depending on maintenance regimes and weather. However, photographs and plans give a reasonably clear image of the

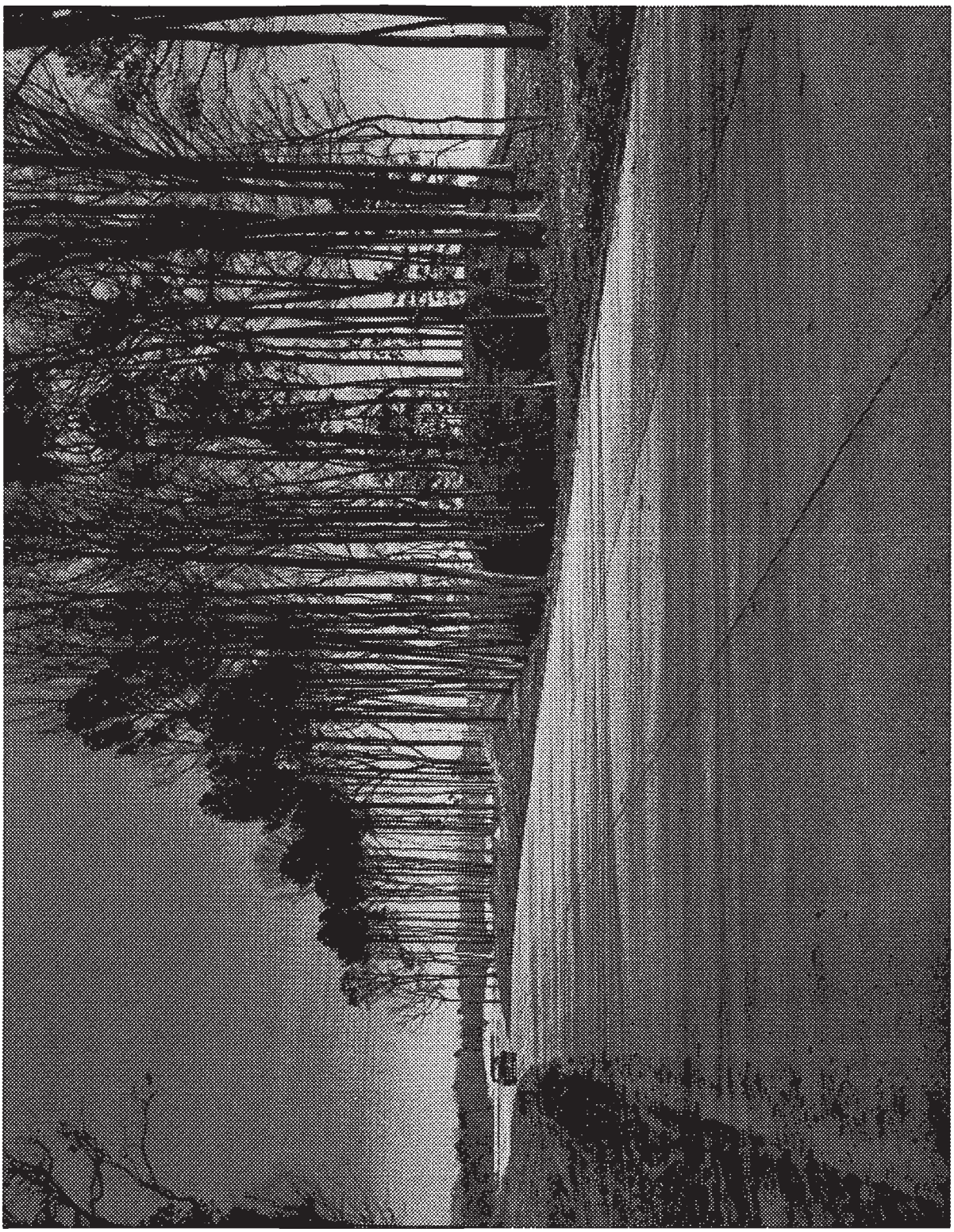


Figure III.57. "View of the new Colonial Parkway extension between Williamsburg and Jamestown, Virginia, where it runs along the James River," #COLO-38951.501. No date, circa 1957. National Park Service, Colonial National Historical Park.

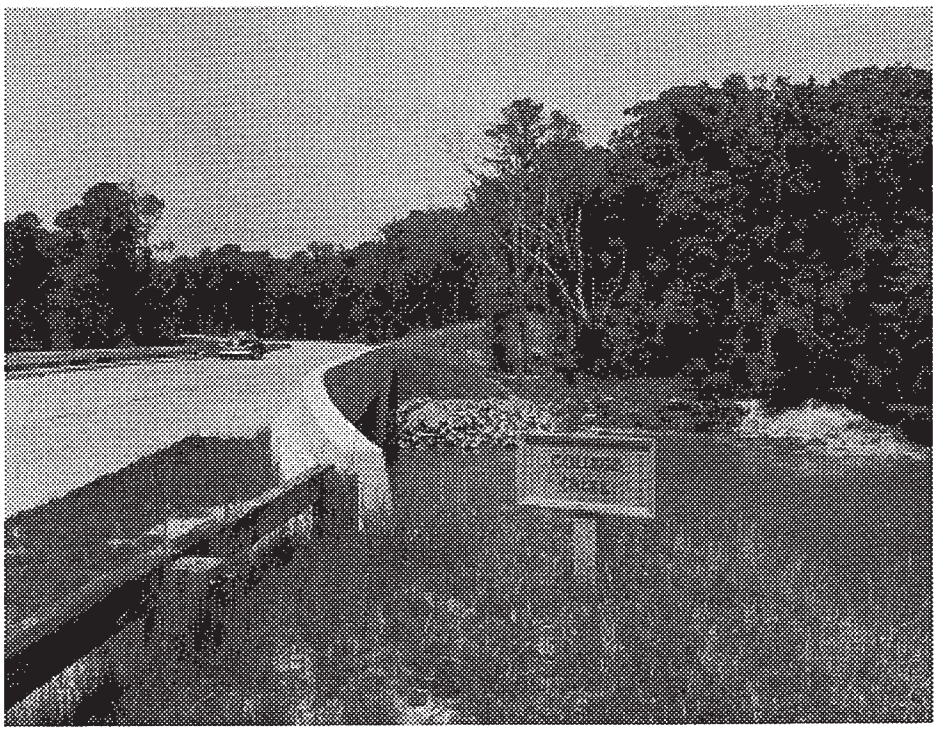


Figure III.58. College Creek Bridge, #COLO-38951.502. No date, circa 1957. Note guard rail, 1950s construction. style. National Park Service, Colonial National Historical Park.



Figure III.59. "Unidentified stretch of Colonial Parkway, College Creek to Jamestown section," #COLO38951.514. No date, circa 1957. National Park Service, Colonial National Historical Park.

parkway in the decade following its completion, as detailed above. Since the mid to late 1960s, however, changes have occurred, due to growth, death maintenance, and weather. Some plantings have died and been replaced or not replaced, while other plantings have flourished and spread. Invasive and exotic vegetation has invaded. These changes will be explored and assessed in greater detail in Chapters IV and V.

I. RIVER SHORELINE

1. 1930s: York River Shoreline

Because of the chosen route along the York River, the river shoreline factored heavily in the design of the parkway as a scenic element as a source of views and vistas. Achieving the route and the proposed vistas, however, eventually required a high degree of manipulation of the shoreline, predominantly in the areas where the hydraulic fill occurred. As described above, the hydraulic filling altered the river shoreline in two major ways. First, it narrowed the mouths of Indian Field and Felgates Creeks, and second it created wide, sandy beaches at the mouths of the creeks, along the York River shoreline. This reconfiguration of the shoreline may be seen in a comparison of the 1930 and 1949 Historic Base Maps of the peninsula (Sheets 1 and 2 in Appendix A), which shows the expansion of shoreline in these two areas.

This reconfiguration not only changed the shoreline's appearance, but also changed the tidal relationships between the two creeks and the river. With their narrowed creek mouths, tidal flows were altered, with less water entering and exiting the marshes. As noted above, this initially resulted in high inland water levels, which drowned trees surrounding Indian Field and Felgates Creek. Over time, however, it created somewhat greater problems, as the altered river currents began to erode the edges of the hydraulic fill. Between 1935 and 1937, the sandy beaches created by the hydraulic fill began to show erosion impacts. Although marsh grasses protected the river side of the beaches in some locations, the smooth beach edges eroded, becoming sharp drop-offs. To prevent the fill areas, especially around the bridge abutments, from washing away, riprap was installed around the edges of the creek mouths. The large blocks of stone and concrete (some of which came from a demolished hotel in Yorktown) were applied a number of times. Figures II.14 and II.15 show the results of this riprap work.

One eroding area in particular caused great concern among the National Park Service engineers in 1933. Following the grading of the roadbed, strong, wind-whipped tides of the York River caused major erosion along the Bellfield Straight between Indian Field and Felgates Creek. Although the roadway at this point was located high above the River, the erosion was significant enough that the engineers feared it might continue, undermining the stability of the earth beneath parkway until it fell into the river some 50 feet below. Therefore, in 1933, prior to the final paving of the parkway, a modified sea wall was constructed along the York River for nearly 5000 feet. Figure III.60 shows the details of its construction. Implemented by Civilian Conservation Corps (CCC) labor, the sea wall was constructed as a steep, battered, wood-reinforced earthen wall, with riprap placed at the bottom of the wall to absorb the immediate impact of the waves. As shown in Figure III.61, a photograph taken after its completion, honeysuckle "wattles" were planted over the seawall. As they grew, the honeysuckle plants created a dense surface, impervious to wind and wave action and preventing soil movement. When it became covered by vegetation, the slope appeared quite natural, belying what was, in actuality, a major engineering structure. This feature is shown following on the period plan and section of the Bellfield Straight area (Sheet 7 in Appendix A).

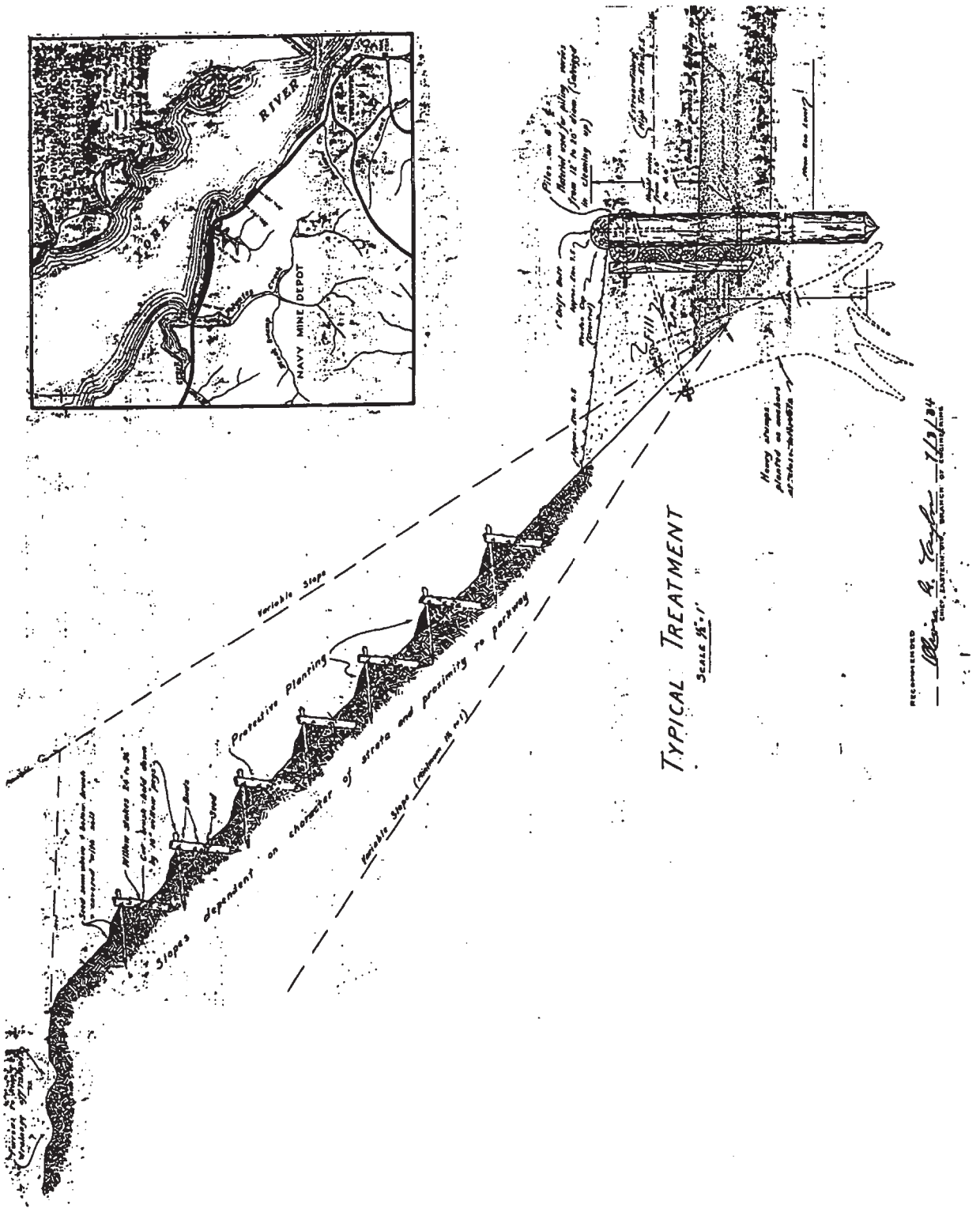


Figure III. 60. "Proposed Erosion Control--Parkway Bluffs," May 11, 1934. No drawing number. Eastern Division, Branch of Engineering. National Park Service, Colonial National Historical Park (Engineering Office).

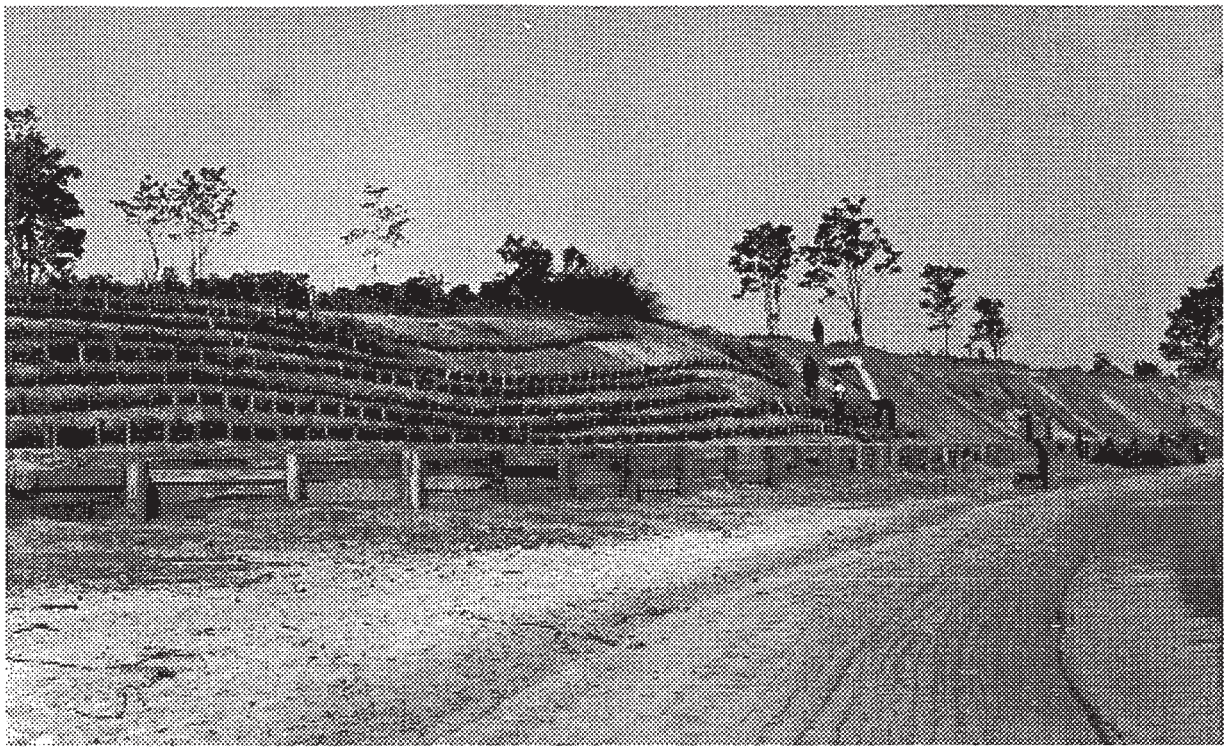


Figure III.61. "Erosion Control on the York River Bluffs. Station 60, June 1934," #1493. National Park Service, Colonial National Historical Park.

Although the riprap effectively countered the effects of wind and wave action, the armored shoreline had an appearance quite different from either its original estuarine vegetated shore or its sandy hydraulic fill beach. In addition, the combination of the hydraulic fill and the armored shoreline edge would have implications for inland marsh areas dependent on tidal flooding. These longer term effects are described in greater detail in Chapters IV and V.

2. 1950s: James River Shoreline

The 1950s construction period saw shoreline impacts similar to those of the 1930s. Hydraulic filling at College Creek, Mill Creek, and the Jamestown Island Isthmus in particular altered the configuration of the shorelines. These changes may be seen in a comparison of the 1949 Historic Base Map and the 1958 Historic Base Map (Sheets 2 and 3 in Appendix A), which show the wide, dendritic creek mouths of these areas blocked by narrow islands of fill. Figures III.10 and III.11 also show the extent of shoreline alteration caused by the filling.

As before, the hydraulic fill changed the appearance of the shoreline, with vegetated marsh edges replaced by sandy beaches on which little vegetation grew. The narrowing of the creek mouths also decreased the tidal recharge occurring in the interior marshes and the currents in the James River. Erosion along the new sandy beaches also became a problem as it had in the 1930s, and riprap was used to stabilize these river edges, particularly around bridge abutments, as shown in Figure II.27, a view of the Jamestown Island Isthmus and Figure III.58, a view of College Creek. The relatively early date of these figures, circa 1958, indicates that preventing erosion in such areas was an issue of concern soon after, if not before, construction was completed.

3. As-built Character—River Shorelines

Some portions of the York and James River shorelines were left in their natural conditions. For example, shoreline conditions at Brackens Pond (Sheet 6 in Appendix A) on the York River and at the Civil War Fort (Sheet 14) were not altered greatly during parkway construction. In such areas, natural processes such as marsh grass regeneration and erosion continued to occur. In contrast, other portions of the shorelines were completely new and artificially constructed, predominantly at the mouths of creeks where hydraulic filling occurred. These new shorelines were often unstable, and methods—mostly riprap armoring— to stabilize them were initiated soon after both phases of construction were completed. Thus, the as-built condition of the river shorelines along the parkway were a combination of native conditions, beach created by hydraulic fill, and riprap-armored edge.

J. DRAINAGE FEATURES

1. 1930s: Yorktown to Williamsburg

In the 1930s the parkway was designed with a drainage system to carry water off and under the roadway. The system was a relatively simple one from an engineering standpoint. Techniques of surface drainage, that is, the parkway's crown and superelevations, were used to carry water off the parkway. Where necessary, grass-surfaced roadside swales carried this water parallel to the roadway until a natural drainage way (stream or ravine) was reached. To carry water under the parkway, a pipe culvert system was used. In general, the pipe culvert system generally responded to the overall drainage patterns of the York-James peninsula. As noted earlier, the peninsula's exhibited a pattern of dendritic stream channels draining north to the York River and south to the James River. Significant drainage basins over which the parkway route was designed included Ballard Creek, Cub Creek (also known as Brackens Pond or Roosevelt Pond), Indian Field Creek, Felgates Creek, Kings Creek, and Queens Creek. Although bridges were designed to carry the parkway over the major open channels of these waterways, at the smaller tributaries, a different strategy was used. In these locations, the natural drainage channel was filled in by the parkway roadbed, with a culvert and pipe installed in the fill to allow the water to flow unimpeded under the parkway. As will be described in greater detail below, from an architectural standpoint, these culverts were designed as concrete pipes with brick-faced concrete headwalls. Culverts were designed at almost all low points where fill occurred along the parkway route. Channels with both constant and intermittent drainage flows were culverted.

2. 1950s: Williamsburg to Jamestown

In the 1950s, the drainage features used in the 1930s were generally duplicated along the Williamsburg-Jamestown stretch of the parkway. The parkway's crown and superelevations drained water off the road surface, swales carried water parallel to the road, and culverts carried stream flows underneath the road. The major drainage basins over which the parkway crossed included Paper Mill, College, Mill and Powhatan Creeks and Glebe Gut; in general, however, more culverts were required to carry water under the parkway in the more highly dissected uplands south of Williamsburg than along the length of the James River.

A few new drainage features were added to the parkway's design vocabulary in the 1950s, however. For example, design drawings indicate that stone-lined and concrete-lined swales were specified for use along the parkway, although the precise locations of such swales are not indicated on drawings. In addition, a

subsurface drainage system, utilizing catch basins and underground piping, was installed in the area around the Williamsburg Rotary and Tunnel, where surface drainage was unlikely to be able to quickly drain water off this segment of the parkway situated in a flat area with a dearth of utilizable natural drainage ways.

3. Drainage Features: As-Built Character

Because of the consistent use of the surface drainage and pipe culvert features, the as-built character of the drainage features of the parkway was relatively uniform along its full length.
In fact the overall result of the use of these systems, in which water consistently flowed underneath the parkway, was that the parkway took on the characteristic of a dam across the peninsula's natural drainage channels. Whereas prior to the parkway's construction, these streams ran relatively unimpeded, after construction, the streams were filled by the roadbed and their drainage flows channelized to a much greater degree at the point of each culvert. In general, the dam effect of the parkway was greatest in the upland areas of the parkway, between Felgates Creek and College Creek, where the greatest amount of filling of drainage ways was necessary to carry the parkway over the variable terrain.

K. STRUCTURES

From a functional standpoint, parkway structures fall into three main categories: Drainage features, which carry water under the road; overpasses and bridges which carry the road over interruptions such as streams, ravines, marshes, and roads; and underpasses, which carry other roads over the parkway. The locations and elevations of these structures were important to the design of the parkway. For example, drainage elements and overpasses helped to set vertical elevations and therefore had a key role in the maintaining the low radii of the parkway's horizontal and vertical alignments. The route of the parkway—for example, in the area of Williamsburg—was also influenced by the most convenient places to site overpasses such as the C & O Railroad and Route 238 overpasses. In addition, the designers also realized that the outward physical appearance of these structures would be crucial in setting the aesthetic tone of the parkway. Much effort therefore went into their design, with the BPR handling the structural design and the NPS handling the architectural treatment of these elements.

Initially, two major styles of structures were developed—brick clad concrete structures of varying sizes, which were generally drainage features and overpasses, and concrete bridges with larger spans over tidal marshes. The brick clad structures eventually expanded to include the parkway underpass structures. Curiously, these two categories evolved into radically different designs, the former being more traditional, based on brick Colonial architecture and the latter being more "modern," seemingly based on contemporary "form-follows-function" ideals. Yet however different these styles were, both fit their sites and combined to create a single, imageable aesthetic for the Parkway.

1. Brick-clad structures—Drainage structures, Overpasses, and Underpasses

a. 1930s: Yorktown to Williamsburg

The initial use of brick on the parkway was predominantly confined to the construction of the parkway drainage infrastructure. This included many pipe culverts with brick-clad headwalls, ranging from 18-24 inches in diameter; reinforced concrete arches, also clad with brick, with spans ranging from 4-6 feet; and two larger drainage features—a 14-foot arch culvert at Brackens Pond and an 18-foot arch spillway and



Figure III.62. "Typical Headwall, Station 535," #1355. No date, circa 1932. National Park Service, Colonial National Historical Park.

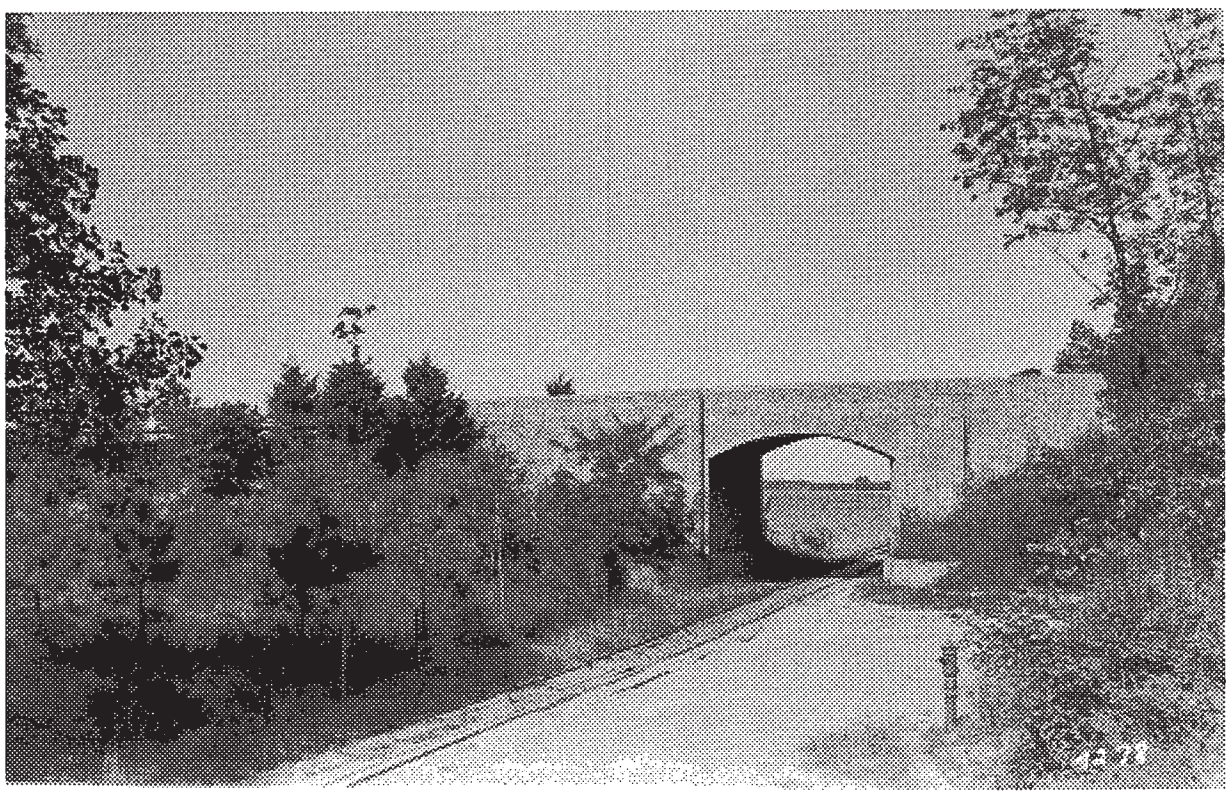


Figure III.63. "Parkway Station 105--Overpass at Naval Mine Depot Entrance, Taken from below," #4278. No date, circa 1933. National Park Service, Colonial National Historical Park.

earthen dam along Jones Mill Pond, both of which again were clad as brick. Figure III.62 shows a typical brick arch headwall. Engineered as an integral part of the alignment, these drainage structures were all constructed as part of the initial grading and drainage contract for the parkway, Unit I, which commenced in 1931. The only non-drainage structure included in this package, and constructed with brick cladding, was a 98-foot long overpass crossing the Naval Mine Depot railroad, which led to the Naval Mine Pier (Figure III.63).

Although it has been said that the use of Colonial-style brickwork on these parkway structures was inspired by the material culture of the region, it is difficult to say exactly who was responsible for the idea. Perhaps it was simply an obvious choice. However, the restoration work at Colonial Williamsburg was certainly an influence, especially given that most of the National Park Service architects and landscape architects socialized with the designers at the Restoration. And the idea was clearly generated by the National Park Service, rather than the BPR, whom correspondence reveals was much more concerned with structural integrity and expense of construction.

Regardless, the designs for the arches and culvert headwalls were initially drafted by the Landscape Division in the Spring of 1931, under the supervision of Peterson. The BPR had already prepared designs, which Peterson felt were not very satisfactory "from the architectural standpoint," since their proposed brickwork was not accurate to Colonial styles.[87] He therefore set his own draftsmen on the job, and the office came up with new designs. Although the headwall designs were quite simple, the arch culvert designs were a bit more complex, using both English and Flemish bonds and beveled and half round bricks on parapet walls parallel to the parkway, and would clearly be expensive to build. The BPR claimed that Peterson's plans were not structurally sound, and requested they be revised. Then, eager to get a contract bid underway, they simply folded their original plans into the drawing bid set and claimed that Peterson's revised drawings arrived after the deadline for completion.

Peterson was furious at this turn of events, partly because he had been circumvented and partly because he believed that the "departure from ordinary engineering practice is the only thing that can make this project down here really unique and worth talking about on that account."[88] He therefore took the matter up with Associate Director Arno Cammerer, since Albright was out of the office. Pressured by the impending contract deadline, Cammerer reluctantly took the side of Peterson, and inserted Peterson's plans into the drawing set. However, Cammerer told Albright he was not sure it was worth the extra time and money:

> While I approved the brick masonry facing at an estimated extra cost of $42,000, I still think that in some places this could have been and can in the future be eliminated without endangering the artistic appearance of structure. . .This is, therefore, a matter to be considered by Mr. Peterson, and to be kept in mind for future units, also bearing in mind that this approval of extra brick facing is not for such structures on the entire parkway at this time. . . .The economical end of any project is most thoroughly involved in any landscape work. . . . While the ideal should be aimed at, due recognition should be given to the necessity for acceptance of less ideal things because of circumstances.[89]

Peterson won the battle, although some minor revisions would be made on the design of both the arch culverts and the headwalls would occur once the project was underway. Most important, however, was that despite Cammerer's sentiments to the contrary, the use of brick on the Unit 1 structures would in fact set a precedent for all similar construction on the rest of the parkway. This would not only include the immediate design and construction of the Navy Mine barracks fence, but later, the design of the bridge overpasses, which would become one of these most important character elements of the entire parkway. Construction on the culverts and brick arches began quickly after bidding, in the summer of 1931. Al-

though construction went reasonably smoothly, problems arose in the area between Ballard and Kings Creeks, where it was found that blue clay underlaid most of these areas, providing a poor foundation. Consequently, untreated timber pilings were added under the locations of all culverts, with Wakefield pilings then installed between the culvert's poured concrete footing and the timber piles.[90] In the case of the Navy Mine Depot Overpass and Bracken's Pond Bridge, timber piling was installed and new foundations drawn up, adding $3,000 in construction costs to the Navy Mine Depot Overpass alone. Perhaps to compensate for these increases, the size of the pipe culvert headwalls was redesigned to be smaller, decreasing the construction cost of that work by $5,000.[91]

The brickwork on all the structures was carefully specified. Based on the National Park Service's experiences at nearby Wakefield, Peterson suggested that the oversized "hand made Virginia-style" brick for the project could be made on the construction site by the contractor, perhaps at a significant cost reduction from purchasing it from a manufacturer.[92] However, the brick, sand struck and produced in a variety of shades, was eventually supplied by the Jamestown Brick Company, although it was made from local clays.[93] The brick was laid as a thin veneer, backed by concrete, and the joints were carefully pointed, using mortar made of one part portland cement, one part lime putty, and three parts salt-free sand.[94] The finished brickwork was scrubbed with bristle brushes and a dilute solution of hydrochloric acid to clean any remaining concrete residue from the brick face.

The next section of the parkway, Hubbard Lane to Williamsburg, presented a new set of architectural challenges, in the form of structures required to carry traffic *over* the parkway. For clarity's sake, these are referred included the C & O Railroad Underpass, which carried both rail traffic and street traffic over the parkway, and the Capitol Landing Underpass, which carried the intersecting traffic of the Capitol Landing Road and the Virginia State Bypass.

The use of such underpasses, or separated grade crossings as they are also called, was a common feature in parkway design of the time. The use of underpasses to separate different types and directions of traffic dated back to nineteenth century park design, being first used in the United States in Central Park, where park bridges were designed to allow park traffic to flow over city traffic crossing from one side of the park to the other. Such underpasses were soon being used in parkways, where they eliminated at-grade crossings of major transportation routes, with two important results. First, access of vehicles to the parkway was limited to points precisely designed for access, and second, parkway traffic was allowed to flow unimpeded, as right and left hand turning traffic was eliminated. In other words, the design of separated grade crossings allowed two types of traffic patterns—for example, one local and slower moving, one regional and faster moving—to exist simultaneously and not interfere with each other. The two underpasses initially designed for Colonial Parkway served precisely this purpose: Railroad traffic, Williamsburg automobile traffic and state highway traffic was effectively made separate from the predominantly tourist traffic running between Yorktown and Jamestown. Of course, the separated grade crossings also served to isolate both the city of Williamsburg and the Restoration from the parkway, but, as we have seen, this was in keeping with the goals of the Williamsburg Foundation, if not the National Park Service.

Although the idea of the C & O underpass has been credited to Arthur Shurcliff, as noted, the use of such features was common in Parkway design and Charles Peterson often spoke of constructing an underpass at the proposed C & O crossing on his proposed east and south route around Williamsburg. However, the idea that this underpass have separate arches and paths for pedestrian and horse-drawn carriages does seem to be Shurcliff's, although the National Park Service files are filled with numerous design sketches. With respect to the Capitol Landing Underpass, drawings in the park archives indicate the National Park Service originally intended this interchange to be a traffic circle. It seems that Shurcliff, upon seeing the designs, proposed that it too be an underpass structure, though the NPS and BPR together produced the

actual construction drawings. Drawings such as Figure III.64 for the C& O Railroad Underpass were first started in early 1932, and continued to be developed through 1933. Construction began around 1936, with both bridges completed in 1938.

The design of the two bridges continued in the mode that had been established for the parkway's drainage structures, establishing a remarkable unity in the design of the parkway's architectural features. Like the drainage structures, the new bridges were constructed of concrete and clad in brick. As before, much of the brick was specially ordered and manufactured, as, for example, in the parapets of the bridges. However, unlike the drainage structures and Navy Mine Overpass, both the new underpass bridges were somewhat more exuberant in form, reflecting the types of grade crossing structures built for parkways in other parts of the country. The arched openings, for example, were less the rigid semi-circular arches seen in colonial architecture, but more complex in shape, their smooth curves echoing the curvatures of the roadway itself.

Both bridges had special detailing. The C & O Underpass, Figure III.65, was a wider structure with two separate traffic lanes, one for the railroad and one for the street traffic running parallel. Because of its width, a light well was also designed into the structure to allow light to reach the road surface below.[95] The bridge's large central arch for parkway traffic was framed by two smaller arches for the pedestrian and carriage traffic, and brick medallions ornamented the bridge wall. The Capitol Landing bridge, Figure III.66, a single-arch structure, was simpler, though its abutments were detailed with limestone cornerstones and the top of the arch crowned with a limestone key.

The grading around the two bridges was also specially designed, to give the appearance that the bridges were set into the landscape. Grading plans were developed for both areas. Retaining walls were designed into the abutments of the Capitol Landing underpass to help hold back the steep topography of the area. At the C & O underpass, the grading was somewhat simpler due to the flatter terrain of the area, though grading helped to accommodate the paths accessing the side the smaller framing arches.

Plantings around the bridges were designed to complement the structures. It appears that Shurcliff was again involved in the design of the bridge surrounds, especially the C & O underpass because of its proximity to the Restoration. Photographs of the C & O underpass during and after construction, for example, show a small pond and turreted building nearby. Although it is uncertain whether these were designed as part of the bridge surrounds, they were a feature which nicely complemented the pedestrian path passing through the western arch of the bridge. Drawings from the National Park Service files reveal that the low plantings designed around the C & O bridge were meant to anchor the structure to the ground plane, yet not be so dense as to hid the bridge from view. Rather, the plantings simply framed the larger view of the impressive structure. Similarly, photos of the Capitol Landing bridge reveal little planting around this bridge, allowing the smooth sweep of curving road to play unimpeded off the arch of the bridge opening.

b. 1940s: The Tunnel

The design of the tunnel was a further extension of the concrete construction/brick detailing design pioneered on the drainage structures and overpasses. Following the completion of the two underpasses, the tunnel became the major construction activity of the late 1930s and early 1940s. By 1939 drawings had been completed for its construction. In keeping with the design of the other two underpasses, the tunnel was a 30' horizontal span concrete arch structure, and its north and south portals were clad in Colonial brick. But the "Colonial" facade hid a major modern engineering effort. Construction began at the southern end in 1940 with the digging of a large trench, averaging 50' wide. The sides of the trench were stabilized, footings were poured, and steel form work for the arch constructed. Concrete was poured in



Figure III.65. "C&O Underpass--completed view after road opened to public," #7319. No date, circa 1938. National Park Service, Colonial National Historical Park.



Figure III.66. "View to the east from a point west of Capitol Landing Underpass," #6438. No date, circa 1938. National Park Service, Colonial National Historical Park.

30' sections, which were then waterproofed with hot tar, fabric, and asphalt plank. A 12"-thick layer of gravel was poured around the structure, and then backfilling commenced. To minimize disturbance of the city above, the sections were completed sequentially, and completed sections were backfilled even before the entire trench had been cut. All in all, the tunnel took until the spring of 1942 to complete, since the project was plagued with poor supervision, cave-ins, and unavailability of workers and materials due to World War II. Brickwork on the north and south portals was the last part of the structural work to be completed. Some plantings were also executed in the area, primarily consisting of a plan for screening the north portal from Nicholson Street with trees and shrubs. Some additional plantings in the area were also put in by the Williamsburg Foundation.[96] Figures III.67 and III.68 are photographs of the tunnel taken during and after its construction.

c. 1950s: Williamsburg to Jamestown

The design of structures during the 1950s construction era generally followed the design concepts developed in the 1930s. Drainage structures, underpasses, and overpasses continued to be designed as brick-faced concrete arches. In particular, two brick underpasses were designed for the parkway's completion in 1958. The first was an underpass at Tazewell Hall, near Williamsburg, with the second at the Yorktown extension, over Route 238 (Figures III.55 and III.56). Both underpasses were designed as concrete arch structures clad in Colonial-style brick, with special brick detailing at the parapets and abutments. In addition to the two underpasses, two other brick structures were built along the Parkway, a bridge over Yorktown Creek and a bridge over Route 17. In a sense, these two structures were the counterparts of the Naval Mine Depot overpass and the Bracken's Pond Bridge and Dam, which had been built in the 1930s. Larger structures built over areas that were not open tidal marshes or hydraulic fill, the two new structures adopted the brick vocabulary of the drainage features and underpasses. However, the more expensive brick detailing on these new structures was predominantly confined to their parapet walls—-the portions which would most be in view to the motorist crossing them. Their longitudinal faces, in contrast, were much less elaborately designed than those implemented in the thirties. This was presumably done to conserve funds on areas not viewed by tourists.

The Tazewell Hall Underpass, begun in April 1956, was an interesting development in the design of the underpasses because it was the first to also function as a traffic exchange point. The Williamsburg Foundation graciously donated the lands required for the access ramps to the National Park Service, and the underpass provided convenient access to and from the Williamsburg area. Earlier underpasses, in contrast, had provided no access to the parkway, and had served simply as traffic separators. However, it appears that numerous accidents with at-grade access roads had made the National Park Service more attuned to the issues of traffic access, and actions were being taken to regulate it better.[97] In addition to creating safer, separated grade exchanges such as the Tazewell Hall Underpass, old access roads along the Yorktown end (originally created to access Jim Dozier's ultimately unimplemented Colonial Monument Estates) were eliminated. Similarly, requests for new access roads were denied, with collection roads and parkway access points being carefully developed for new housing subdivisions.[98] This type of planning for parkway access began a trend which would become a consistent management policy for the parkway.

d. Post-1958 Brick-clad Structures

Following the completion of the parkway, additional underpasses were added to the parkway in the 60s, 70s, and 80s, including two double bridges, the 199 underpass and the I-64 underpass. Although somewhat simpler in their detailing than the first underpasses, these bridges are remarkable in that, built by agencies other than the National Park Service, they none-the-less adhered to the design principles developed in the 1930s. The type and color of brick used on these structures, however, appears to be slightly different than that used on the other structures.



Figure III.67. South Portal of Tunnel, just following completion, # 9064. No date, circa 1941-42. National Park Service, Colonial National Historical Park.

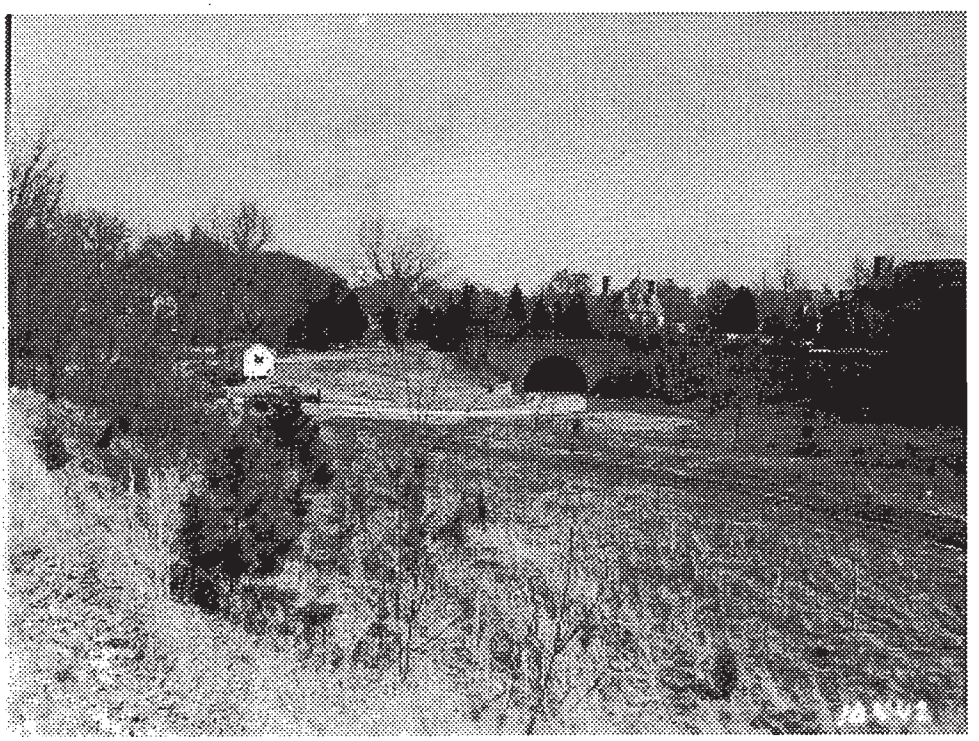


Figure III.68. View of Tunnel after completion prior to completion of parkway, # 10442. No date, circa late 1940s/ early 1950s. National Park Service, Colonial National Historical Park.

As increasing growth and development has occurred in the area, additional underpass structures have also been added, including ones at Hubbard's Lane and Parkway Drive. An interesting outcome of the increased number of overpasses is that the experience of driving the parkway has become a more staccato one, punctured by the whir of bridges passing overhead.

2. Tidal Marsh Bridges

a. 1930s: Yorktown to Williamsburg

In contrast to the brick-veneered drainage structures, the bridges spanning the tidal marshes of Kings Creek, Indian Field Creek, and Felgates Creek were of a much less elaborate design. From the beginning the bridges were viewed as an important part of the project, because of the extensive amount of swampy area the parkway crossed where fill would not be possible. In early design discussions, it was generally agreed that for Colonial Parkway it would be necessary "that bridges be longer and fills shorter than on other similar projects."[99]

One of the likely "other similar projects" was Mount Vernon Memorial Highway. Just prior to the design of the bridges, Arno Cammerer sent Peterson a publicity brochure for the parkway, with a recommendation that one of the bridges might be a useful example for Colonial NHP. However, Peterson wrote back that he had seen the bridge, but that it was not particularly relevant to the project at hand:

> About a month ago in company with Mr. MacDonald, Major [Gilmore] Clarke and other Bureau of Public Roads officials, I inspected the Memorial Highway including the concrete bridge over the old railroad cut jest south of Alexandria. This structure merely spans an abandoned artificial cut overgrown with small trees near the most disreputable quarter of Alexandria, and I do not consider that the problem there in anyway resembles any of the problems that we have on the propsoed [sic] Colonial National Monument Parkway.[100]

It seems that Peterson may have been grappling with the issue of how to place a bridge in the much more scenic environment of Virginia Tidewater marshes, and felt that a bridge over a railroad cut was no comparison to what he was designing.

Scenic considerations were not the only issues in the construction of the bridges. The proposed long bridges over the marshes would require significant piling to ensure stability, and the swampy environment would make maneuvering construction equipment difficult. Cost was also an issue. Accordingly, in the fall of 1931, as the hydraulic fill was being completed, a decision was reached "to adopt a low cost wooden trestle type of structure for the bridges over Kings, Indian Field and Felgates creeks."[101]

In actuality, two alternative bridge designs were developed by the BPR engineers and the NPS landscape architects. One was the low-cost model, a reinforced, 30-foot concrete deck slab plus two, 2-foot sidewalks on steel I-beams, supported by the aforementioned timber trestle. The other bridge, in contrast, supported the reinforced concrete deck slab with steel I-beams on concrete bents and piers. A series of elevations were drawn up by the Landscape Division, as they sought an appropriate architectural treatment for the bridge railings; these ranged from wood to metal to concrete. Eventually, a concrete railing, sandblasted and stained brown to resemble wood, was adopted for the railing, and both alternative structures were sent out for bid. However, after the bids came back, it was decided that the all concrete bridge would be built, rather than the timber trestle. In addition, it was agreed that the concrete railing would not be stained, but would be maintained in its original state to better blend in with the pale hydraulic fill. Figure III.69 gives an excellent view of the bridge railing adopted as the design.

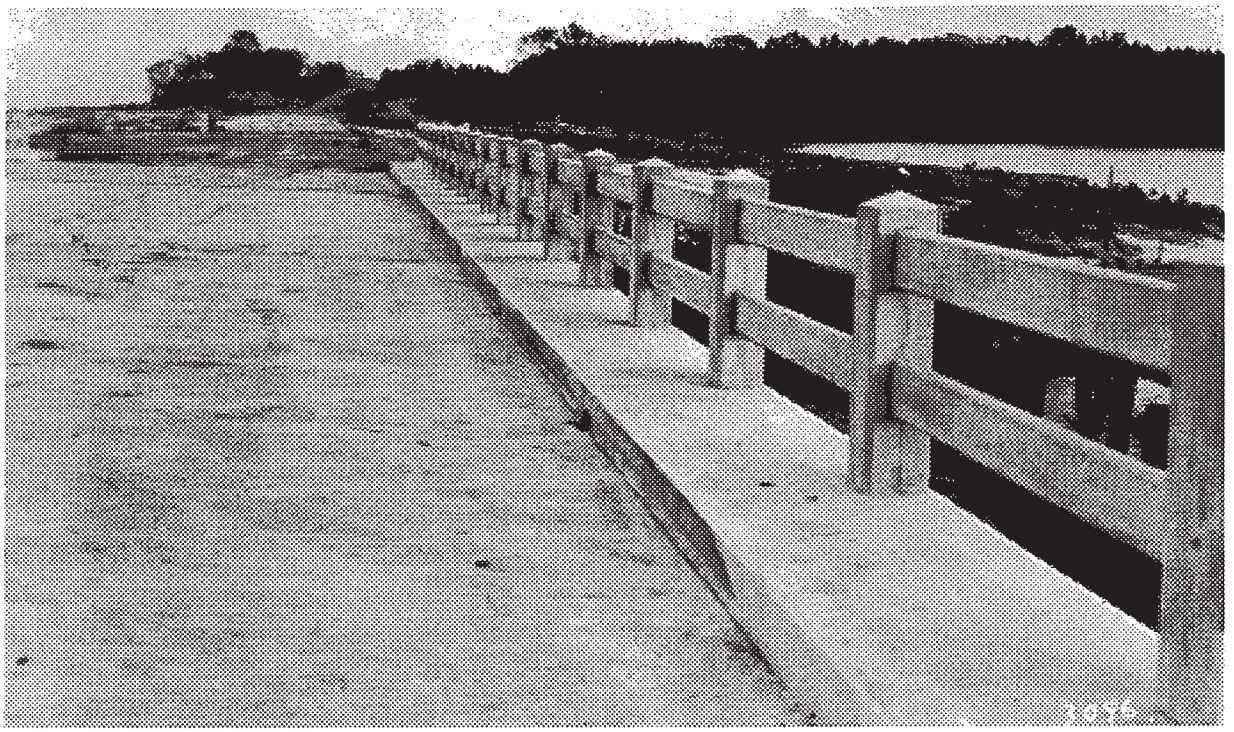


Figure III.69. "Parkway, 1933, Station 330, Looking East," # 3096. Note construction of bridge railing. Note construction of bridge railing. National Park Service, Colonial National Historical Park.

Construction on the three bridges began in 1932. Each bridge required the driving of piles for cofferdam and pier foundations, excavations for the abutments, and significant concrete pouring. [102] At Indian Field and Felgates Creek a floating concrete plant facilitated pouring the center footings and piers. Winds and tides at these locations proved a problem to construction, by blowing the floating equipment around and generally bringing work to a standstill. Despite these problems, the bridges were well constructed and the National Park Service was pleased. Upon final inspection, Edward Zimmer declared that "[t]he 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."[103]

Figure III.47 is a view of the resulting bridge and landscape composition at Kings Creek. The road alignment blends effortlessly into the bridge, and the railings merely serve to subtly emphasize the line of the road. This result is also shown in Figure III.53, a view of Felgates Creek, circa 1950. The view here is a pastoral one, with the railings of the bridges looking like simple fence post in the landscape.

b. 1950s: Williamsburg to Jamestown

Halfway Creek Bridge (Figure II.21) was the first bridge completed on the Jamestown end, and its construction, was clearly based on the bridges previously constructed at Kings, Indian Field and Felgates Creeks. Like these bridges, it was low and had a similar concrete railing with two horizontal elements. Constructed in 1942, the marshy conditions of Halfway Creek hampered the setting of the concrete footings. In the 1950s, four new bridges were designed to cross the tidal marshes on the Jamestown end of the parkway. These bridges at College Creek, Mill Creek, Powhatan Creek, and Glasshouse Point were designed as the counterparts of the bridges previously built on the Yorktown end. However, the design of these bridges, shown in Figure II.27, was slightly different than those built in the thirties. Their railings

became even lower, with a single horizontal element between the motorist and the view. In addition, the bridge flared out more at the abutments, appearing to embrace the road. A side walk was also added on the inland side of the bridges, and like those, had low, streamlined railings over which motorists could view the open expanses of river and marsh.

Construction on the bridges began in 1954 with the Powhatan Creek Bridge, while drawings for the others were being developed. Although the Powhatan Creek Bridge did not require any hydraulic fill for its completion, problems were soon encountered in locating a firm foundation for footings in the marshy soils beneath it. Work proceeded slowly, and in the meantime the contracts for the other three bridges were bid, let, and begun in the summer and fall of 1955. The projects at Mill and College Creek also ran into trouble when their open stream channels began silting in; work was suspended while remedial dredging took place.[104] Then, additional problems were encountered at Mill Creek, where no bearing soils were found, even when pilings were dug 70 feet deep. After reviewing the problem, Spelman suggested that a sand blanket 8 to 10 feet deep be used to stabilize the pilings, which were also increased in number. The Powhatan Creek Bridge was finished in April 1956, with the Glass House Point Bridge following in September. The Mill and College Creek Bridges followed soon after, in early 1957.

3. Other Architectural Features

The Colonial brick detailing influenced the architecture in one other area of the parkway—the Navy Mine Depot, in a matter that was mutually agreeable to both the Navy and the National Park Service. When the National Park Service laid out the parkway route, by and large, areas of contemporary habitation had been avoided, lending a scenic and in the eyes of some, historic environment. However, this was not possible in the area around the Naval Mine Depot, where a number of non-historic structures were well within view of the parkway. Though some of these, such as the Officer's Quarters, were not particularly offensive, others, such as the Captain of the Marine's house, were viewed as major visual intrusions on the parkway route. The National Park Service considered these visual intrusions with some desperation: with respect to the Marine Barracks, a large and not particularly distinguished building, a confidential report on the parkway noted: "We can not entirely avoid seeing this building and should pray that it be removed later."[105]

Having lost, through political subterfuge, 6 miles of river frontage, the Navy, though polite, was similarly not enthused at having the National Park Service for a neighbor. To minimize their interaction with the public, the Navy requested that a number of private navy access roads paralleling the parkway be built and a fence be erected along right of way. It appears that Spelman, considering the use of brick elsewhere along the parkway, realized that a brick wall could be constructed along to screen the operations of the Navy and would at the same time be in keeping with the rest of the parkway design.[106] Spelman proposed the idea to Peterson, and plans were soon developed for Colonial-style wall across the open areas and a brick sentry gate (Figure III.30). A green-painted wire fence was proposed for the boundary line in wooded areas. Superintendent Robinson protested the plans, which he felt placed the wall too close to the pavement edge, precluding any future development of bridle paths or trails. However, both the Navy and Chief NPS Landscape Architect Thomas Vint approved the plans, and construction began in the fall of 1932.[107] In the meantime, the National Park Service tried to stymie all other private Navy access roads. They won on all cases except for one, and a road and bridge paralleling the parkway at Felgates Creek was constructed in 1933[108]

4. As-built Character—Structures

As the designers had originally predicted, the structures of the parkway were an important visual element of the parkway. In contrast to the other features discussed to this point, which all contributed to the volumetric, or spatial character of the parkway, the structures, relatively small elements in the 22-mile right-of-way, provide a strong "stylistic" aspect of character. This is, not meant of course, to underemphasize the importance of drainage and bridge structures as the parkway's infrastructure.

However, the character of the two bridge types, brick and concrete, create a striking opposition contrast that contributes to the parkway character. The brick structures, heavy, low and sturdy, respond to the cultural materials of the region. Often built into their surrounding slopes, the structures are also well grounded, relating to the topography. In contrast, the tidal marsh bridges, with their long, low lines are less dug into their surroundings, and seem to skim above the marshes, providing a marked contrast to chunkier, more compact form of the brick arch structures. This design of the concrete bridges was uniquely attuned to the open expanses of the tidal marshes they crossed: the low railing blended in with the surroundings and allowed motorists and unimpeded view of the inland waterway of Kings Creek and the expanse of the York River at Indian Field and Felgates Creek. In other words, if the brick structures expressed the historic traditions of Colonial Virginia, then the tidal marsh bridges, with their sleek, almost aerodynamic form, expressed the new world of the automobile and the tourist experience. Together, the two types of bridges, in structural form and use of materials helped the parkway marry the past with the present.

L. SMALL SCALE FEATURES

1. Guard Rails

a. 1930s: Guard Rails

Like the parking overlooks, the parkway guard rails were specified as part of the Surfacing contracts for the parkway's construction in the 1930s. Guard rails were implemented on the full length of the parkway from Ballard Creek to Williamsburg. One of the "finishing touches" of the roadway design, the guard rails were similar to those used along roads in national parks in the west. Although originally designed as concrete railings molded to look like wood, itself was eventually specified. Made of peeled locust and cedar logs (because of their resistance to decay), the railings were 8 inches wide and were supported by posts 20 inches high. Primarily placed to promote safety, the guard rails were "constructed around overlooks, along steep embankments, and along bridge toe walls and culvert parapets."[109]

Yet, as seen in Figure III.48, the guard rails were also meant to contribute to the overall aesthetic appearance of the parkway, by emphasizing, with a vertical element, the roadway's smooth, curvilinear alignment. The Landscape Division made this point very clearly to the Bureau of Public Roads, whom, they gently implied, simply plopped guard rails on the construction plans with little concern for aesthetics:

*The guard rail as shown on the paving plans, while advantageously located to safeguard traffic, does not in all instances express or harmonize the Parkway alignment and landscape aspect of the roadsides. To achieve the maximum benefit from the guard rail, slight additions and subtractions of length are all that is necessary. These changes are only considered for a few of the locations and can best be done in the field while work is in profess. As the total length of guard rail would not be materially increased or decreased, it is thought that exact data need not be shown on the contract plans.[110]

Although specifications required that the guard rails be stained brown after their construction, it was decided, after in-field inspection, that the natural weathering process of the wood produced a better effect.[111]

Interestingly, for the Hubbard Lane to Williamsburg section of the parkway, it appears that guard rails were placed at their locations based on in-field design decisions. Although they consistently appear in parkway photographs as an element of the roadway, they are not clearly shown on the plans of this area. Guard rails appear in period plans of Brackens Pond, Felgates Creek, and Jones Mill Pond (Sheets 6, 8, and 9 in Appendix A); the guard rails are placed in these and other plans based on photographic documentation.

b. 1950s: Guard Rails

Following the completion of the 1957 paving, guard rails were also installed along the new sections of the road. Much of this work occurred after the official opening of the road on April 27, 1957.[112] Instead of using the "traditional" log guard rail, a timber-beam guard rail was designed as part of the parkway's construction documents and used along the James River portion of the parkway. This guard rail design was almost two feet tall, and was set back from the roadway by approximately 5 feet. Since guard rail locations do not appear on construction documents, it appears that their locations were determined in the field by the BPR. The only photograph showing a 1950s style guard rail located in this research effort is Figure III.58.

c. Guard Rails: As-built condition

It therefore appears that following final construction, guard rails were a standard feature of the parkway, though their exact locations at the time are unknown. Strangely enough, guard rail locations do not appear on the 1964 Planting and Land Use Plans, although these plans do indicate, in some detail, signs and other small scale features. It appears that over time, guard rails deteriorated and were then not replaced. Eventually, by the late 1970s, it seems that guard rails vanished from the parkway. In the 1990s, a square, steel-backed timber guard rail from the Federal Highways Administration (FHwA) was installed along the parkway. The design of this guard rail differed quite drastically from the 1930s style guard rail, but bore some similarity to the 1950s guardrail shown in Figure III.58. Discussions between FHwA engineers and NPS staff reduced the proposed amount of guard rail significantly.

2. Interpretive Signs

Although interpretive signage had been developed within the park proper very early on, it did not appear along the parkway until it the 1950s, when one to two signs were located at each parking overlook. Although Robert Steenhagen is generally given credit for the 1954 design of the signs, he recalls the design effort as more of a group process.[113] Steenhagen notes that the sign's distinctive silhouette, with the pyramidal finials, was a joint effort between Abbott and himself; it also bore a strong similarity to other interpretive signs in use in the park in the 1950s (which Abbott had also worked on). The signs were designed as wood frames with anodized aluminum panel inserts. These panels, as shown in Figure III.70, were cast to appear as if they were woodcarvings and were constructed by prison labor at the Lorton Reformatory.

In contrast to other park interpretive signs, such as the oil painting signs on the tour roads, the parkway signs were predominantly narrative text. The signs' letters were of a size to be easily read from inside an automobile, and the typeface used was an original design by Steenhagen. The interpretive texts were written by Charles Hatch, park historian, in conjunction with other interpretive staff. Each sign also

contained a circular graphic. Signs on the Yorktown end used a cannon and dogwood symbol design; signs around Williamsburg had a town crier design; and signs on the Jamestown end had a ship design. The symbols were an idea of Abbott's; after he had sketched the cannon and ship symbols, he asked Colonial Williamsburg to choose a symbol for the signs around the Williamsburg zone, and they selected the town crier.

Steenhagen then worked up the three sketches for use on the signs. The motifs were designed as bas reliefs and the text was also raised; the bas-relief format was used to make the signs easier to maintain. Prior to casting, a full-size layout was drawn for each sign, and the 19 signs were cast over a period of months, five at a time. After casting, the signs were painted, based on a three-color scheme—charcoal, grey, and cream—chosen by Abbott. The sign manufacturing technique was so successful that similar signs were created for other parks in the region, such as those at Fredericksburg and Spotsylvania.

As noted above, one to two interpretive signs were installed at each of the parking overlooks, and became an important part of the driving experience of the parkway.

3. Other signs

A variety of other signs existed along the parkway, though these features tended to change more rapidly than other features. In the 1930s, small, two- to three-foot "Keep off the shoulder" signs were in use for some period of time. This sign can be seen in Figure III.71 (Note: the text is not readable in the screened photo in this report, but may be seen in a close examination of the original in the park archives). Strangely enough, no regulatory signs, other than stop signs at-grade crossings, seem to have been used on the parkway during this period, since none are seen in photographs. One unique sign appeared in the 1940s, a "Parkway Closed" sign, used to prevent civilian traffic during the parkway's use by the Navy.

Following its completion in the 1950s, it appears a few more sign types were in place along the parkway. One of these was a locational sign, such as seen in Figure III.59. Though quite small, this sign uses a typeface and color scheme similar to those of the larger interpretive signs, and indeed, may have been based on that design. Some of these locational signs (e.g., Indian Field Creek, Felgates Creek, etc) appear on the 1964 Planting Land Use and Maintenance Plans. Other sign types documented on these plans include regulatory (e.g., speed limit) signs; deer crossing signs; and directional signs, indicating names of cross routes and how to get to Jamestown, Williamsburg, and Yorktown are. Little photodocumentation of signage has been located.

The amount of signage increased and waned a number of times in the years after 1965, usually based on perceived safety hazards and the need for directing visitors. Brown and white signs typical of those used at most NPS sites, were added in the 1970s.

4. Tree Wells

Tree wells were utilized during the 1930s period of construction, and were built of brick, matching the use of brick in other parkway structures. The purpose of the tree wells was to retain and protect trees around which extensive grading had occurred. A view of a tree well is shown in Figure III.38. As far as is known, tree wells were not used during the 1950s construction period.

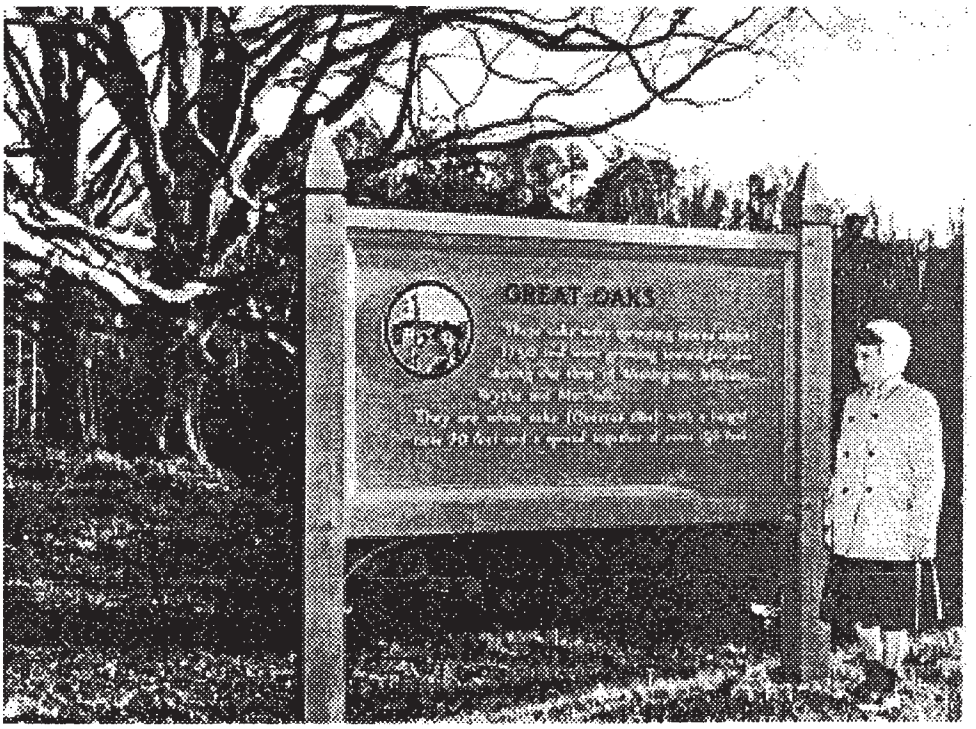


Figure III.70. Interpretive sign at the Great Oaks parking overlook, showing typical sign form and graphics. From *A Report on the Celebration for the 350th Anniversary of Jamestown.*



Figure III.71. "Parkway Station 160, General View," #4054. No date, circa 1935. National Park Service, Colonial National Historical Park.

M. CULTURAL RESOURCES

From the outset of parkway construction, it was recognized that numerous cultural resources—archeological sites, plantation building foundations, Native American settlements—existed along the parkway route. However, it does not appear that these resources played a major role in determining the ultimate routing or alignment of the parkway. Rather, it appears that such resources were incorporated into interpretive overlooks if they were sited within view, and if not, were left alone.

In the 1930s, a number of sites along the parkway were recognized as historically significant. These included the Fusiliers Redoubt; the Indian Settlement (Chiskiack) at Indian Field Creek; Fossil beds at Felgates Creek; the Bellfield plantation site; the Ringfield plantation site; and the fortification west of Jones Mill Pond.[114] However, none of these areas were developed during this time as interpretive areas; nor does it appear that historical or archeological research of these sites was conducted in conjunction with the construction of the parkway.

In contrast, by the 1950s, the awareness of the value of cultural resources along the parkway was greatly heightened. Archeologists walked the parkway route with the landscape architects and engineers prior to construction, and as a result, eight settlement and plantation sites were identified as potentially containing archeological resources. Six of these sites were later investigated.[115] In addition, archeological concerns sometimes played a small role in the refinement of the parkway alignment. For example, discussion was made of altering the alignment at the Civil War Fort just west of College Creek to better preserve this fortification.[116] The final routing around (and through) this fortification is shown on Sheet 14 in Appendix A.

Information on these cultural resources was also incorporated into the interpretive information on the signs at the parking overlooks. On the Yorktown end, these sites included those noted in the 1930s: the Fusiliers Redoubt; the Indian Settlement (Chiskiack) at Indian Field Creek; the Bellfield plantation site; the Ringfield plantation site; and the fortification west of Jones Mill Pond. On the Jamestown end, recognized resources included a mill dam at Paper Mill Creek; the Civil War fort; and Glasshouse Point; in addition, other settlements recognized to have occurred at various locales (Archers Hope, Glebe Gut, College Creek) were also described.

CHAPTER III: ENDNOTES

[1] Robert Steenhagen, telephone interview with Heidi Hohmann, April 5, 1995.

[2] Charles Peterson, correspondence with authors, February 16, 1996.

[3] Robert Steenhagen, telephone interview with Heidi Hohmann, April 5, 1996.

[4] "Recollections of the Years 1930-35," interview of Charles Peterson with James Haskett, draft typescript, 5/7/86, 5.

[5] Bureau of Public Roads, "Progress Report on Colonial Nation Parkway at Yorktown, Va. During the Month of August 1931, CNHP file Planning the Parkway--1931.

[6] "Recollections of the Years 1930-35," interview of Charles Peterson with James Haskett, draft typescript, 5/7/86, 5.

[7] Letter from Oliver G. Taylor to Rear Admiral M.D. MacDougall, 3 September 1931, CNHP Engineering Office File 630--Unit II, Hydraulic Fill.

[8] Letter from Charles Peterson to H.J. Spelman, 12 June 1931, CNHP Engineering Office File 630--Unit II, Hydraulic Fill.

[9] H.J. Spelman, "Progress Report on Colonial National Monument Parkway at Yorktown, Virginia during the month of October, 1931," 9 November 1931, CNHP file Landscaping the Parkway 1931-32, 3.

[10] This information came from the drawing "Plan for Proposed Hydraulic Fill" in CNHP Engineering Office File 630--Unit II, Hydraulic Fill. Although Michael Bennett has claimed this is the original design specification for the fill slopes, they do not coincide with the recollected ratios of Charles Peterson, and actually correspond more closely to what was finally achieved in the field. A closer look at the correspondence should resolve this issue.

[11] The use of the word hogback appears in Robinson, "Outline of Development," 193.

[12] Letter from Charles Peterson per E.S. Zimmer to W.H. Smith, 31 March 1932, CNHP file Landscaping the Parkway, 1931-32.

[13] Letter from Wm. H. Smith to Charles Peterson, 7 April 1932, CNHP file Landscaping the Parkway--1931-32.

[14] William Robinson, Superintendent's Monthly Report for July 1932, 5.

[15] Superintendent's Monthly Reports, March through October, 1955.

[16] Abbott, Superintendent's Monthly Reports for August and September, pages 4 and 4 respectively.

[17] Bennett, "Colonial National Historical Park Roads and Bridges, HAER No. VA-115," 105.

[18] Abbott, Superintendent's Monthly Report for November, 1955, 7.

[19] Anonymous, "Notes and Photographs of the York River Section of the Proposed Parkway of Colonial National Monument, np, CNHP file Planning the Parkway—1932-36.

[20] Charles Peterson, Memorandum to the Director, 10 November 1930, CNHP file Planning the Parkway, 1930.

[21] Chatelaine, "The Origin of the Colonial National Monument Idea," also Robinson "Outline of Development," 193.

[22] Letter from Charles Peterson to the Director (Horace Albright), 10 November 1930 in CNHP file Planning the Parkway—1932-36.

[23] "Recollections of the Years 1930-35," interview of Charles Peterson with James Haskett, draft typescript, 5/7/86, 5.

[24] Bureau of Public Roads, Completion Report, Colonial National Monument Parkway Unit V - Paving (Project 1B). CNHP Engineering Office File 630—Unit V—Surfacing.

[25] William Smith, U.S. Department of Agriculture, Bureau of Public Roads, "Final Construction Report—1932, Colo-

nial National Monument Parkway Units I and II," 6 May 1933, 3, CNHP Engineering Office File 630—Unit II.

[26] Bennett, "Colonial National Historical Park, Roads and Bridges, HAER No. VA-115, 92.

[27] Bennett, "Colonial National Historical Park Roads and Bridges, HAER No. VA-115," 102. Bennett says the tangents were located before Mill and College Creeks. This does not seem correct, and needs to be confirmed by closer examination of construction drawings.

[28] Abbott, Superintendent's Monthly Report for December, 1955, 7.

[29] Abbott, Superintendent's Monthly Report for November, 1955, 7.

[30] Abbott, Superintendent's Monthly Report for September 1956, 8.

[31] Letter from William M. Robinson, Jr., to F.A. Kittredge, Chief Engineer, National Park Service, 5 August 1932, CNHP Engineering Office File 630—Unit V—Surfacing.

[32] Letter from F.A. Kittredge to William M. Robinson, Jr., 13 August 1932, CNHP Engineering Office File 630—Unit V—Surfacing.

[33] Letter from F.A. Kittredge to William M. Robinson, Jr., 13 August 1932, CNHP Engineering Office File 630—Unit V—Surfacing.

[34] Letter from William M. Robinson, Jr., to F.A. Kittredge, Chief Engineer, National Park Service, 5 August 1932, CNHP Engineering Office File 630—Unit V—Surfacing.

[35] Letter from F.A. Kittredge to William M. Robinson, Jr., 13 August 1932, CNHP Engineering Office File 630—Unit V—Surfacing.

[36] Letter from H.J. Spelman to A.E. Demaray, 9 December 1932, 2, CNHP Engineering Office File 630—Unit V—Surfacing.

[37] Letter from H.J. Spelman to A.E. Demaray, 9 December 1932, 2.

[38] Letter from H.J. Spelman to A.E. Demaray, 9 December 1932, 3-4.

[39] Letter from H.J. Spelman to A.E. Demaray, 9 December 1932, 5.

[40] Letter from H.J. Spelman to A.E. Demaray, 9 December 1932, 5.

[41] Letter from H.J. Spelman to A.E. Demaray, 9 December 1932, 4.

[42] Letter from H.J. Spelman to A.E. Demaray, 9 December 1932, 5.

[43] Letter from H.J. Spelman to A.E. Demaray, 9 December 1932, 5.

[44] Letter from Charles Peterson to Horace Albright, 20 January 1933, CNHP Engineering Office File 630—Unit V—Surfacing.

[45] Letter from H.J. Spelman to A.E. Demaray, 6 July 1933, 2, CNHP Engineering Office File 630—Unit V—Surfacing.

[46] Letter from William M. Robinson, Jr., to Horace Albright, 10 July 1933, 2, CNHP Engineering Office File 630—Unit V—Surfacing.

[47] Letter from H.J. Spelman to C.E. Peterson, 11 September 1933, 2, CNHP Engineering Office File 630—Unit V—Surfacing.

[48] Letter from H.J. Spelman to C.E. Peterson, 11 September 1933 and Letter from C.E. Peterson to H.J. Spelman, 9 September 1933, CNHP Engineering Office File 630—Unit V—Surfacing.

[49] Information in this paragraph is drawn from Bennett, "Colonial National Historical Park, Roads and Bridges, HAER

No. VA-115, 86-88, and Bureau of Public Roads, "Completion Report, Colonial National Monument Parkway Unit V - Paving (Project 1B5), 2, CNHP Engineering Office File 630—Unit V—Surfacing.

[50] Spelman, H.J, in "Superintendent's Monthly Report" for June 1934, 3.

[51] Bureau of Public Roads, "Completion Report, Colonial National Monument Parkway Unit V - Paving (Project 1B5), 2 CNHP Engineering Office File 630—Unit V Surfacing.

[52] Spelman, H.J, in "Superintendent's Monthly Report" for June 1934, 3.

[53] Spelman, H.J, in "Superintendent's Monthly Report" for June 1934, 6.

[54] Bureau of Public Roads, "Completion Report, Colonial National Monument Parkway Unit V - Paving (Project 1B5), 6, CNHP Engineering Office File 630—Unit V Surfacing.

[55] Bureau of Public Roads, "Completion Report, Colonial National Monument Parkway Unit V - Paving (Project 1B5), 2 CNHP Engineering Office File 630—Unit V Surfacing.

[56] F.A. Kittredge, "Report covering Trip to Yorktown-Colonial National Monument," June 16 and 17, 19 July 1933, CNHP Engineering Office File Parkway—Surfacing, Unit V.

[57] Information in this paragraph is drawn directly from Bennett, "Colonial National Historical Park Roads and Bridges, HAER No. VA-115," 103-105.

[58] Robert Steenhagen, telephone interview with Heidi Hohmann, April 5, 1996.

[59] Arno Cammerer, Letter to Superintendent Floyd Flickinger, April 4 1934.

[60] "General Memorandum of Guidance for Project Landscape Architects on Contract Grading Projects," Blue Ridge Parkway, National Park Service, U.S. Department of the Interior, October 6, 1948, 5.

[61] Letter from Charles E. Peterson to H.J. Spelman, 7 November 1932, CNHP Engineering Office file 630—Unit V, Surfacing.

[62] Letter from Elbert Cox to William Robinson, 15 November 1932, CNHP Engineering Office file 630—Unit V, Surfacing.

[63] Letter from Elbert Cox to William Robinson, 15 November 1932, CNHP Engineering Office file 630—Unit V, Surfacing.

[64] Letter from Charles Peterson to W.H. Smith, 28 June 1933, CNHP Engineering Office file 630—Unit V, Surfacing.

[65] Hosmer, *Preservation Comes of Age*, 504.

[66] Robert Steenhagen, telephone interview with Heidi Hohmann, April 5, 1996.

[67] Abbott, Superintendent's Monthly Reports for December 1955 and September 1956, 7 and 8 respectively.

[68] Bennett, "Colonial National Historical Park Roads and Bridges, HAER No. VA-115," 106.

[69] Abbott, Superintendent's Monthly Reports for August and September 1956,6 and 8 respectively.

[70] Oliver Taylor, Superintendent's Monthly Report for April 1931, 9.

[71] Letter from Charles E. Peterson to Mr. H.J. Spelman, 14 July 1931, CNHP file Planning the Parkway 1931.

[72] Memorandum from Charles Peterson to H.J. Spelman 12 July 1932, CNHP file Landscaping the Parkway 1931-32.

[73] Flickinger, Superintendent's Monthly Report for December 1935, 12, cited in Bennett, Colonial National Historical Park Roads and Bridges, HAER No. VA-115, 90.

[74] Letter from Wm H. Smith to B. Floyd Flickinger, 4 January 1934, CNHP Engineering Office File 630—Unit V—Surfacing.

[75] In the Peterson interview with Haskett, which relates this story, it is unclear what exactly the Superintendent found so awful about the pine plantings. It is also implied that the trees were condemned partly out of a minor vendetta Flickinger held against the NPS architects over the construction of the Superintendent's House.

[76] "Recollections of the Years 1930-35 at Jamestown Williamsburg and Yorktown, Interview of Charles E. Peterson by James Haskett, draft typescript 5/7/86, 19.

[77] Flickinger, Superintendent's Monthly Report for December 1937, 4.

[78] Flickinger, Superintendent's Monthly Report for March 1937, 6.

[79] B. Floyd Flickinger, Superintendent's Monthly Report for February, 1937, 6.

[80] Letter from Charles Peterson to the Author, 16 February 1996.

[81] Robert Steenhagen, telephone interview with Heidi Hohmann, April 5, 1996. It's not clear to the author if this referred to a specific NPS guideline or document on planting; however, Steenhagen noted that the NPS emphasis on the use of native plant materials in design declined a little after Thomas Vint retired from the Service.

[82] Robert Steenhagen, telephone interview with Heidi Hohmann, April 5, 1996.

[83] The Landscape Architects Monthly reports for 1954-58 are in the CNHP File Engineer's Monthly Reports. Curiously, no other Landscape Architect's Monthly Reports have been located in *any* archives for any other years of the Parkway's planning.

[84] Robert Steenhagen, telephone interview with Heidi Hohmann, April 5, 1996.

[85] Robert Steenhagen, telephone interview with Heidi Hohmann, April 5, 1996.

[86] Robert Steenhagen, telephone interview with Heidi Hohmann, April 5, 1996. Steenhagen used the word "bay" to describe the grassy area.

[87] Memorandum to H.J. Spelman from C.E. Peterson, 23 May 1931, CNHP file Planning the Parkway 1931.

[88] Letter from Charles E. Peterson to Arno B. Cammerer, 22 June 1931, CNHP file Planning the Parkway 1931.

[89] Arno Cammerer, "Memorandum for the Director and the files," 28 May 1931, CNHP file Planning the Parkway 1931.

[90] H.J. Spelman," Progress Report on Colonial National Monument Parkway at Yorktown, Va., During the Month of August 1931," 1-2, CNHP file Planning the Parkway, 1931 and Bennett, "CNHP Roads and Bridges, HAER No. VA-115," 78.

[91] H.J. Spelman," Progress Report on Colonial National Monument Parkway at Yorktown, Va., During the Month of August 1931," 1-2, CNHP file Planning the Parkway, 1931.

[92] Letters from Charles Peterson to W.H. Smith, 3 June 1931, and to Arno Cammerer, 22 June 1931, CNHP file Planning the Parkway, 1931.

[93] H.J. Spelman," Progress Report on Colonial National Monument Parkway at Yorktown, Va., During the Month of August 1931," 3, CNHP file Planning the Parkway, 1931.

[94] Bennett, "CNHP Roads and Bridges, HAER No. VA-115," 77.

[95] Flickinger, Superintendent's Monthly Report for February 1937, 6.

[96] Information in this paragraph is predominantly drawn from Bennett, 94-98.

[97] Abbott, Superintendent's Monthly Report for August 1954, 3.

[98] Referenced in Abbott, Superintendent's Monthly Report for July 1955, 3.

[99] Thomas Vint, "Memorandum for the Files," 25 February 1931, CNHP file Colonial Monument—Establishment.
[100] CNHP Engineering Office File 630—Unit V Surfacing.[0]. Letter from Charles E. Peterson to Arno B. Cammerer, 22 June 1931, CNHP file Planning the Parkway 1931.
[101] H.J. Spelman," Progress Report on Colonial National Monument Parkway at Yorktown, Va., During the Month of October, 1931," 3, CNHP file Landscaping the Parkway, 1931-32.

[102] Robinson, Superintendent's Monthly Report for December 1932, 9.

[103] "Final Construction Report, Project No. 1, Colonial Parkway, Unit IV Bridges," 13 December 1933, CNHP Engineering Office file Unit IV, Bridges," quoted in Bennett, "CNHP Roads and Bridges, HAER No. VA-115," 85.

[104] Stanley Abbott, Superintendent's Monthly Reports, November and December, 1955, both 7-8.

[105] Anonymous, "Notes and Photographs of the York River Section of the Proposed Parkway of Colonial National Monument, np, CNHP file Planning the Parkway—1932-36.

[106] Letter from Charles Peterson to H.J. Spelman, 22 June 1931, CNHP file Planning the Parkway—1931.

[107] Bennett, "CNHP Roads and Bridges, HAER No. VA-115," 81.

[108] This project remains something of a mystery as I discovered it rather late and have found little documentation of it. It does not have an official unit or project number and was known as the "Felgates Creek Substitute Road Grading and Bridge." It was begun October 28, 1933 and was completed April 28, 1934. Apparently it is the bridge located further up the mouth of the creek, and is not on NPS lands.

[109] This quote and information in prior three sentences from Bennett, "CNHP Roads and Bridges, HAER No. VA-115," 92.

[110] Letter from Edward Zimmer to William H. Smith, 9 September 1933, CNHP Engineering Office file 630—Unit V, Surfacing.

[111] Letter from James H. Brooks, Jr., to Charles Peterson, 10 January 1933, CNHP Engineering Office file 630—Unit V, Surfacing.

[112] Abbott, Superintendent's Monthly Report for December 1956, 6.

[113] Robert Steenhagen, telephone interview with Heidi Hohmann, April 5, 1996. The rest of the information on interpretive signs is drawn from this conversation.

[114] Letter from Elbert Cox to William Robinson, 15 November 1932, CNHP Engineering Office file 630—Unit V, Surfacing.

[115] Refer to Archeology Project 116, 1954-56. A number of entries on this project are listed in the Jamestown Archives, under COLO- J-46036 FCAB 1 FCDR DFF1; COLO- J-46036 FCAB 1 FCDR DFF4; COLO- J-46036 FCAB 1 FCDR DFF6; COLO- J-46036 FCAB 1 FCDR DFF9; COLO- J-46036 FCAB 1 FCDR DFF10.

[116] Walter Sheffield, Memorandum for the Regional Chief of Planning, 3 April 1943, CNHP Engineering Office File 630—Williamsburg to Jamestown.

IV. EXISTING CONDITIONS

INTRODUCTION

This chapter describes the existing conditions of Colonial Parkway in the years 1995-1996. The information in this chapter was primarily based on field work conducted in the fall of 1995 and the spring of 1996. As was Chapter III, this chapter is organized around the landscape's character-defining features. These features are based on the Secretary of the Interior's *Standards for the Preservation of Historic Properties* and *Guidelines for the Treatment of Cultural Landscapes* and include :

- Spatial Organization/Context
- Spatial Character
- Topography
- Circulation—Alignment, Surfacing, Interchanges, Parking Overlooks
- Vegetation
- Shoreline
- Drainage Features
- Structures
- Small Scale Features
- Cultural Resources
- Parkway Users

The current condition of these features is described in some detail in the following text. The organization of this chapter around these features parallels the organization of Chapter III, allowing an easy comparison of the character of the parkway's landscape features in their as-built condition, circa 1958, and today. This comparison allows an assessment of continuity and change along the parkway, and is accomplished in Chapter V: Analysis of Character-Defining Features and Integrity.

The chapter is illustrated with a 1996 Existing Conditions Overall Base Map, which appears as Sheet 4 in the drawing set in Appendix A. A series of existing conditions plans and sections for 12 representative areas along the parkway has also been created, and these appear on Sheets 5 through 16. Finally, photographs of the parkway's current conditions also accompany the text. These figures are also keyed to a 1996 overall base map appearing as Sheet 27 in Appendix A.

A. SPATIAL ORGANIZATION/CONTEXT

Colonial Parkway extends across the full breadth of the York-James peninsula, along the western shore of the Chesapeake Bay. As the parkway crosses the peninsula, it winds through a variety of topographic conditions, moving from the low-lying wetlands along the James River to the ravine-dissected uplands around Williamsburg, and from there to the flatter and higher bluffs along the York River. The spatial qualities of each of these areas are characterized by their associated cover types, with wetland vegetation and open fields prevalent along the river edges while pine, hardwood, and mixed pine/hardwood forests predominate in the uplands around Williamsburg. Cover types are described in greater detail in Section E: Vegetation.

The area surrounding the parkway is also characterized by its various land uses. Agricultural land uses occur in the area north of the James River between Mill and College Creeks. In contrast, a number of state and federal facilities dominate the Yorktown end of the parkway. The largest of these is the U.S. Navy Yorktown Naval Weapons Station, a 10,624-acre site bounded by Colonial Parkway and US I-64. This facility supports a variety of Navy activities, including weapons storage, shipping, and Navy residences. Another Navy site is located at Cheatham Annex, an area north of the parkway and Felgates Creek. The Commonwealth of Virginia Emergency Fuel Storage Facility is also located at Cheatham Annex.

Surrounding the balance of the parkway are a range of semi-rural, suburban and urban residential land use patterns. These land uses, highlighted on Sheet 18, 1996 Spatial Organization, and are a result of the steady population growth in this area since the end of World War II. In the past decade, York and James City Counties' growth rates were, respectively, 20 and 67%, with no indications of abatement. Residential developments have therefore grown in the areas surrounding the parkway. For example, dense residential communities associated with Yorktown and Newport News are located south and east of the parkway and Yorktown Battlefield. However, the densest development around the parkway has occurred near the City of Williamsburg, where suburban residential subdivisions associated with the city directly abut the parkway boundary on both north and south sides of the city. These residential areas include the developments at Queens Lake, Charleston Heights, Kingspoint and Kingsmill on the James. In addition, new facilities of William and Mary College have recently been built adjacent to the parkway in the area just south of Williamsburg. Finally, other substantial suburban housing density has developed along Routes 5 and 31 southeast of Williamsburg. This development includes the area known as Page's Landing, located off Route 31 at Powhatan Creek. Portions of this development are visible from the parkway, as is a private marina, which provides docks, moorings, and local boating access to the James River via the channel under the isthmus bridge.

The overall pattern of residential, commercial, and urban development around the parkway is part of a larger regional development pattern which extends to the cities of Newport News, Hampton, Gloucester, Richmond and beyond. A network of regional highways, which include US I-64 and Virginia Routes 199, 60, 31, 143 and 17, connect the communities of the Peninsula to the larger region. All of these roadways cross over or intersect with Colonial Parkway, linking it to the regional traffic patterns. Since an average of 175,000 commuter vehicles are driven over the parkway each month,[1] it is clear that the combination of increased population growth and highway network has impacted the use of the parkway. This is particularly evident in the area between Williamsburg and Yorktown, where access to the north-south interstate route and to the George P. Coleman Memorial Bridge are provided quite close to the parkway. Another transportation link to the larger region is the C&O Railroad, which runs northwest-southeast through the Peninsula, with spurs accessing the Naval Weapons Station and Cheatham Annex.

B. SPATIAL CHARACTER

1. Corridor Landscape

Colonial Parkway may be considered a corridor landscape which connects the three important historical sites of Jamestown, Williamsburg and Yorktown (see Sheet 4, 1996 Existing Conditions, in Appendix A). The NPS stewards significant portions of two of these sites, the Yorktown Battlefield and Jamestown Island, and the parkway's termination points are the parking lots of the two NPS Visitor Centers at these sites. The third site, Colonial Williamsburg, is located at the middle of the parkway, and is owned and

operated by the Colonial Williamsburg Foundation. Although the parkway travels under Colonial Williamsburg and does not provide direct access to the restored, historic property, the parkway does, however, provide access to the Colonial Williamsburg Visitor Center, located just off the parkway's interchange with Va. Route 132.

The parkway corridor is a significant portion of the whole of Colonial National Historical Park, containing about 1,500 acres of the park's total acreage and extending for 23 miles between the Yorktown and Jamestown Visitor Centers. The width of the parkway corridor varies, but averages approximately 500 feet over the entire length of the road. In general, this corridor is composed of the 30-foot-wide (three-lane) concrete road bed surrounded by a varying-width strip of mowed lawn, which is either enclosed by forest edge or bordered by a field, marsh, or river view. Despite, or perhaps because of, the relative narrowness of the right-of-way, the parkway corridor maintains a distinct identity, one quite separate from the surrounding residential, military, suburban, and urban developments. This distinctiveness and separateness results from a number of factors of the parkway's design.

The first of these is the visual and spatial construction of the corridor. Along much of the roadway, especially in the areas north/northeast and south of Williamsburg, forest vegetation screens adjacent development from view, separating the parkway corridor from its neighboring land uses. In some areas such vegetative screening is enhanced by graded slopes on either side of the road, which further help buffer the road from sound and visual intrusions. This combination of grading and vegetative screening effectively gives the motorist a sense of driving through a woodland despite the fact that adjacent development may be within 200 or 300 feet of the roadway. Such buffering is particularly effective on the north side of the parkway at Queens Lake, where mid-level forest vegetation screens intrusions at the eye level of the motorist. Screening is less effective along the south edge of this same stretch of the parkway, where forests are less wide and have little understory vegetation and where houses can be seen between the tree trunks. A similar effect occurs on the south end of the parkway where houses along Route 682 in the Page's Landing development visually intrude along the parkway, especially in the fall and winter after leaf drop.

A second important factor in creating the parkway's singular identity is that its materials and resulting appearance are unique and distinctive when compared with other roads in the area. The concrete aggregate surface, the Colonial-style brick underpasses, and the clean aerodynamic form of the tidal marsh bridges all serve to create a unique image of the parkway, an image quite separate from other regional roads, and in fact, from other parkways nationwide. Furthermore, the parkway is situated in a landscape with its own, distinct aesthetic qualities, some of which are shown in Figure IV.1, a typical view from a parkway bridge.

The separateness of the parkway corridor from the surrounding area is further enhanced by the parkway's limited access. Limited access, via grade-separated exchanges, was a tenet of the original design that has only been strengthened in the intervening years. Today, access to and from cross streets is provided at only twelve points along the corridor, eight of which are grade separated, utilizing bridges and ramps. At-grade access therefore only occurs at Jamestown, at the Colonial Williamsburg Visitor Center, and at Yorktown—the three historic settlements the parkway was originally intended to link—and at the Fusiliers Redoubt overlook—which accesses Route 238. The decreased amount of access in general and the lack of at-grade access in particular have also served to discourage commuter traffic while at the same time have provided a smooth traffic flow and an uninterrupted driving experience for visitors travelling between Jamestown and Yorktown. However, growth in the region has continually pressured the continuity of the driving experience, as adjacent residential developments have tried to develop parkway access at grade and within close proximity to their entrances. One effective tool for managing such desired access has

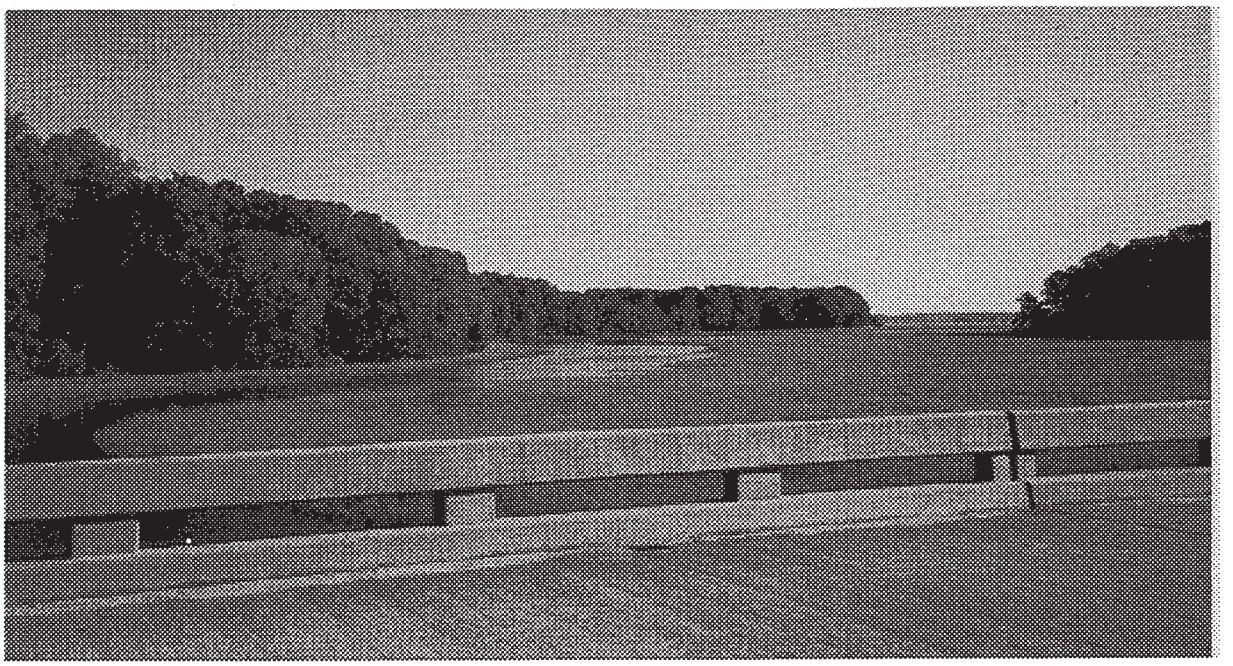


Figure IV.1. View of Kings Creek and emergent wetland (marsh) from Kings Creek Bridge, 1996. LANDSCAPES LA·Planning·HP.

been to construct collector roads paralleling the parkway. These roads collect residential subdivision traffic and direct it to existing access points. One such collector road is seen on the existing conditions plan for Station Point 544 (see Sheet 10 in Appendix A).

Finally, the parkway corridor's perceived separation and uniqueness must also be attributed to the fact that the York and James River shorelines are adjacent to the parkway for long stretches of road. The visual and physical connections to these broad river vistas are available nowhere else along the Peninsula. Furthermore, the inland sides of the parkway along both rivers—the well-screened Naval Weapons Station on the York River and the large zone of agricultural land, held by the Gospel Spreading Association, north of the parkway along the James River— are also visually harmonious. Presenting woodlands, fields, and marshes, the inland views do not detract from the scenic aspect of the two river shorelines. In fact, the combined shoreline and inland views, over property which is not under Colonial NHP ownership, can be considered the parkway's "borrowed scenery," which provide much of its overall character of depth and breadth. The large number of viewsheds and vistas are illustrated the 1996 Spatial Character/Views Plan (see Sheet 20 in Appendix A).

2. Spatial Enclosure

Although the parkway has a distinct identity separate from the surrounding landscape matrix of semi-rural, suburban, and urban development, within the parkway corridor spatial character varies. This spatial character is defined by a number of elements, including:

- the width of mown area on either side of the pavement;
- the amount, density, and height of the vegetation bordering the pavement and mown area; and

- the varied, expansive and discrete views and vistas of the landscapes surrounding the parkway.

These individual elements vary greatly along the parkway, and combine to create a number of spatial enclosure types which exist within the corridor. These spatial enclosure types are usually related to the surrounding landscape and its views, vegetative cover, and topography, and are perhaps best considered by describing the parkway as a sequential experience, from one end to the other. The following is a narrative description of the spatial character of the parkway driven from Yorktown to Jamestown (in the sequence of construction), with graphic representation of this description provided by Sheet 20, the 1996 Parkway Spatial Character/Views plan.

The parkway is initially defined by the spatial character of the Yorktown Visitor Center's parking lot, a space bounded and canopied with trees. This is followed by a short segment of road crossing the Yorktown Battlefield area, whose character is primarily open. As seen on the existing conditions plan for the Five Points area (see Sheet 5), little vegetation defines the road here, with the exception of the gateway cluster of trees which constrict around the road where the park entrance crosses the earthworks. Figures IV.2 and IV.3 show the openness of this area south and east of the parkway.

After leaving the Yorktown area, the parkway moves through forested uplands. This section of the parkway extends to the entrance of the Fusiliers Redoubt Overlook (which is also the connection to Route 238 and the Yorktown Victory Center) and is characterized by a relatively wide swath of lawn on cut slopes, with forested edges beginning at the top of the roadside slope, where it blends into the original grade. Because the forested edge is offset some feet from the pavement edge, sky can be perceived above the road, lending a feeling of enclosure to the sides but not overhead. This sense of enclosure by offset forested walls is disrupted only at the bridges crossing Yorktown Creek and Route 17, which are somewhat more open areas but provide no compelling views or vistas.

The next zone of parkway enclosure occurs from Ballard Creek, past the Naval Weapons Station piers and the Brackens Pond overlook to the entrance of the Naval Weapons Station. This zone is varied in nature, but is characterized by a forest edge standing close to the road on the south/southwest side of the parkway, and by filtered views through trees and understory to the river on the north/northeast side of the parkway. The road is situated about 15-20 feet above the elevation of the water, and this zone marks the first point along the parkway that the York River is actually perceptible. The loading and unloading activities on the Weapons Station pier may be viewed from here, though this scene is screened by vegetation from some vantage points. Although views inland to the Weapons Station, Ballard Creek, Brackens Pond (also known as Roosevelt Pond), and interior marshes exist, they are partially blocked by scrubby vegetation. This is clearly shown in the existing conditions plan for Brackens Pond (Sheet 6 in Appendix A), which indicates a band of vegetation growing between the roadbed and the pond. Figure IV.4, a view of Brackens Pond, also shows the views in this area. In general, the filtered views to the river are the dominant viewshed elements along this stretch of the parkway.

As the parkway approaches the entrance to the Naval Weapons Station, it drops down in elevation, closer to the water line, to cross an area of hydraulic fill below the Naval Weapons Station Officers Quarters, which are situated atop a bluff bordering the parkway. Figure IV.5 shows the steep bank and close proximity of the Navy fence line along the Officers Quarters area. This portion of the parkway, which extends to the Indian Field Creek Bridge, is characterized by its wide open views of the York River across the level surface of hydraulic fill. However, a wide band of low-growing shrubs, along with pine, juniper, and locust trees at the water's edge, screen these river views at the outcropping of land known as Sandy Point. Meanwhile, the other side of the road is strongly edged by the bluff of the Weapons Station as well as by

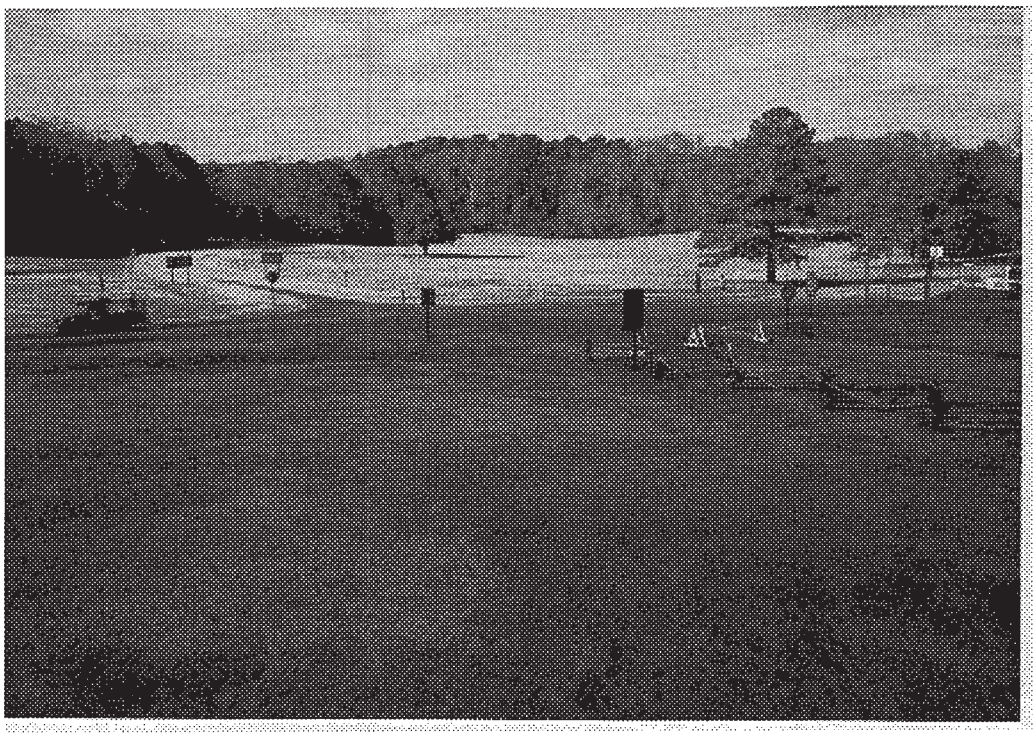


Figure IV.2. Open area west of Yorktown Terminus, 1996. LANDSCAPES LA·Planning·HP.



Figure IV.3. View of earthworks and Yorktown Visitor Center Entry from Five Points, 1996. LANDSCAPES LA·Planning·HP.

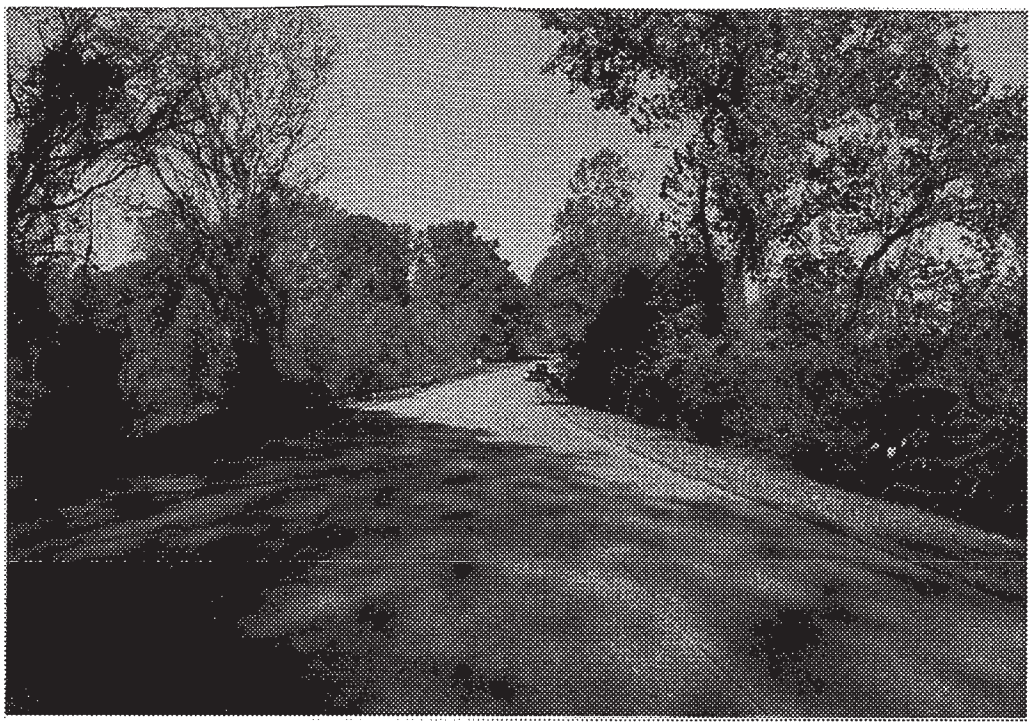


Figure IV.4. View of Brackens Pond, showing blocked views of the York River and Brackens (Roosevelt) Pond, 1996. LANDSCAPES LA·Planning·HP.



Figure IV.5. Enclosure of parkway by bank topography and vegetation, below the Officers Quarters, 1996. LANDSCAPES LA·Planning·HP.

a fence and by vegetation (primarily locust trees) growing at the base of the slope. As the parkway moves towards Indian Field Creek, the stand of locusts gives way to a denser band of pines, junipers, bayberry, and saltshrub, which block the inland views of the Indian Field Creek wetlands. The area immediately surrounding the bridge, however, has expansive views of both the York River and the marsh, as seen in Figure IV.6.

Between Indian Field and Felgates Creeks, the zone of parkway known as the "Bellfield Straight" has a particularly distinctive spatial quality provided by a combination of alignment, topography, vegetation, and viewshed. As seen in Figure IV.7, the road here is long and straight, in contrast to the gently curving corridor previously experienced. It is also situated on a bluff about 25-30 feet above the York River, which provides an expansive prospect of the river and river activities. Yet this view is not wide open; rather, the prospect is viewed through the columnar trunks of tall (50-80 foot) pines, giving the feeling of viewing the river from a shady, columned loggia. On the inland side, the road is bounded by tall, dark, mixed evergreen and deciduous forest, which, together with the tall pines on the river side, provide an almost complete overhead canopy, creating a tunnel-like view down the road ahead. The density of the forest on the inland side of the road also serves to direct the eye of the motorist to the sunlit river beyond, further enhancing the overall effect of the prospect over the river. This spatial quality of Bellfield Straight is demonstrated in the existing conditions plan and section on Sheet 7 (see Appendix A).

This sense of prospect and enclosure along the parkway is followed by a more open spatial character at Felgates Creek, as shown in Figure IV.8. Here the parkway route returns to the elevation of the river. Although views of the river and marshland might be expected, the existing conditions plan and section of Felgates Creek (Sheet 8) shows that many of this section's river views are blocked by vegetation—bayberry, juniper, pines—growing at the water's edge. However, the flatness of the hydraulic fill, and the exposure to the wind and wide sky provide a distinct sense of openness and expanse in this area. Yet this spatial quality lasts only briefly as the parkway leaves the York River shore and moves through the uplands leading into Williamsburg.

Between Felgates Creek and Williamsburg, the spatial character of the corridor is tightly enclosed, with a strong forest edge on both sides of the road. The almost-closed canopy above the road provides a dappled shade along the rolling drive—a contrast to the bright, open flatness of the parkway along the river. The typical quality of the upland parkway, with forest edge and canopy, is shown on the existing conditions plan and section for Station Point 544, near the I-64 overpass (see Sheet 10). The section shown in this figure indicates how the parkway corridor narrows along this segment of the parkway, resulting in a strong sense of enclosure. However, it should be noted that the character of this wooded frame varies subtly throughout the uplands, as the forest edge varies in its relation to the pavement edge. At times the forest edge moves closer to the pavement, providing a complete canopy over the road, creating the feel of a wooded tunnel. At other times, it moves farther away, creating an undulating edge of forest around sloping lawn areas. Views along this stretch of the parkway are primarily perspectival, down the road ahead, and are highlighted in areas by flowering trees such as dogwood and redbud at the roadside edge, as shown in Figure IV.9. The enclosure of the corridor is broken only at two points: at the King Creek Bridge—where the road briefly opens up to expansive views of tidal marsh and sky—and at Jones Mill Pond, where mowing around the overlook, dam, and pond's edge provides an open vista over mirror-like water. This opening is shown on the existing condition plan and section view of the parkway at Jones Mill Pond (see Sheet 9), and in Figure IV.10, a photo of the area.

Between Jones Mill Pond and Williamsburg the continuing enclosure of the parkway by forest is punctuated by six underpasses. These bridges lend a particular spatial character to this zone, as one repeatedly moves under this series of brick arches. In general, the forest edge remains close to the edge of the

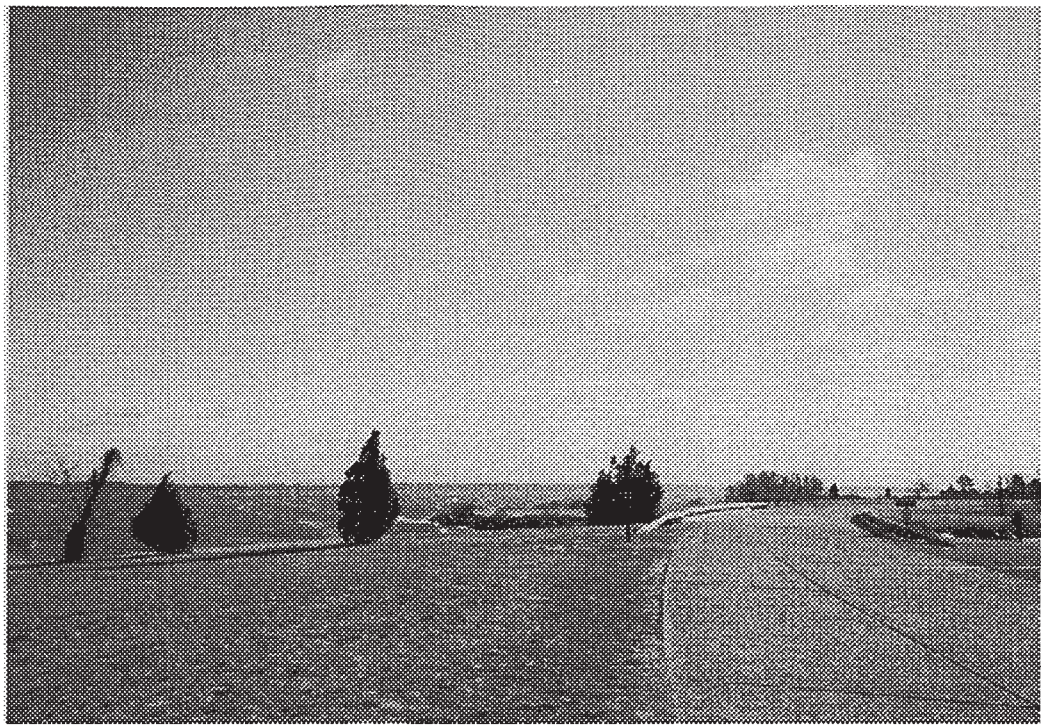


Figure IV.6. Open spatial quality at Indian Field Creek, 1996. LANDSCAPES LA·Planning·HP.



Figure IV.7. View under tall pines along the Bellfield Straight, 1996. LANDSCAPES LA·Planning·HP.



Figure IV.8. Open character at Felgates Creek, 1996. LANDSCAPES LA·Planning·HP.



Figure IV.9. Dogwoods planted in parkway margin, near Kings Creek, 1996. LANDSCAPES LA·Planning·HP.

pavement throughout this segment of the parkway. Vegetation even grows right up to the bridges, with dense plantings abutting the parapet walls of the underpasses, as shown in the existing conditions plan and section of Capitol Landing (see Sheet 11). One break in the canopy occurs at a power cut between the Hubbard Lane and Parkway Drive overpasses, where a lack of tall canopy provides a moment of brighter light along the corridor.

Beyond the Capitol Landing Bridge, the parkway proceeds under the C&O Underpass, seen in Figure IV.11. This underpass serves regional rail and vehicle routes. As the parkway approaches the City of Williamsburg, the wooded edge moves back from the pavement edge, opening the corridor at the traffic circle leading to the Colonial Williamsburg Visitor Center. The traffic circle, framed on all sides by dense understory and canopy vegetation, and on the east side by hilly topography, briefly lends a bowl-like spatial character to the corridor, as seen in Figure IV.12. This character, however, quickly attenuates as the road passes into the total enclosure of the Williamsburg tunnel.

As the parkway enters and leaves the tunnel, sloping topography on both sides of the road once again provides an enclosed feeling to the corridor. As the road continues between Williamsburg and College Creek, the character of the parkway is quite similar to the area northeast of Williamsburg, with wooded forest edges bounding both sides of the road. Views are again primarily down the length of the road, though a few areas provide short lateral views to wetlands. The Great Oaks parking overlook, for example, provides a small, more open zone with a short, terminated view. Otherwise, the only major opening in the walls of vegetation bounding the parkway occurs at the tidal marsh crossing of Halfway Creek Bridge. The expansive views afforded by this bridge are shown in Figure IV.13.

In contrast to the Yorktown uplands, relatively fewer areas in the southern zone of uplands are completely enclosed by canopy; this may in part be due to the younger age of the vegetation within the right of way on this more recently constructed part of the parkway. In addition, some cut slopes along the road, such as those at Halfway Creek are less forested than similar slopes on the earlier section of the parkway. This can be seen by comparing the existing conditions plan of Halfway Creek with the existing conditions plan of Station Point 544 (see Sheets 13 and 10). While both sections of road have the typical "hogback"-shaped cut roadside slopes, the slopes at Station 544 are significantly more forested, lending a greater sense of forest and enclosure. Another difference between the two sections of the parkway is that the stretch south of Williamsburg has significantly fewer underpasses. As a result, the Jamestown end of the parkway lacks the repetitive visual and audial experience of passing under bridges.

As the parkway approaches College Creek, its spatial character becomes more open, and the corridor affords wide views to the James River and the College Creek tidal marsh (see Figure IV.14). The existing conditions plan of Archers Hope (see Sheet 15) gives an idea of the open quality of the James River frontage of the parkway. This open spatial quality, with exposure to wind and light, generally characterizes the stretch of parkway running from College Creek to Mill Creek, just as a similar open spatial quality characterizes the stretch of parkway between Brackens Pond and Felgates Creek. In fact, despite local variations in spatial quality, the two halves of the parkway complement each other, with their enclosed woodland and open river characters mirroring each other around the locus of Williamsburg.

In contrast to the Yorktown end of the parkway, the parkway along the James is set further back from the river, so that the river is viewed over a larger expanse of open, mowed land, much of which is hydraulic fill. Dense understory vegetation in the forests and at the water's edge obscures the river views and views of inland marsh in numerous locations around College Creek, Archers Hope, and Mill Creek. This vegetation encloses the parkway on both sides, as seen in Figure IV.15. However, as shown in Figure IV.16, broad views of both the river and the inland agricultural landscape are achieved around the lands owned by the



Figure IV.10. Open view of Jones Mill Pond, 1996. LANDSCAPES LA·Planning·HP.

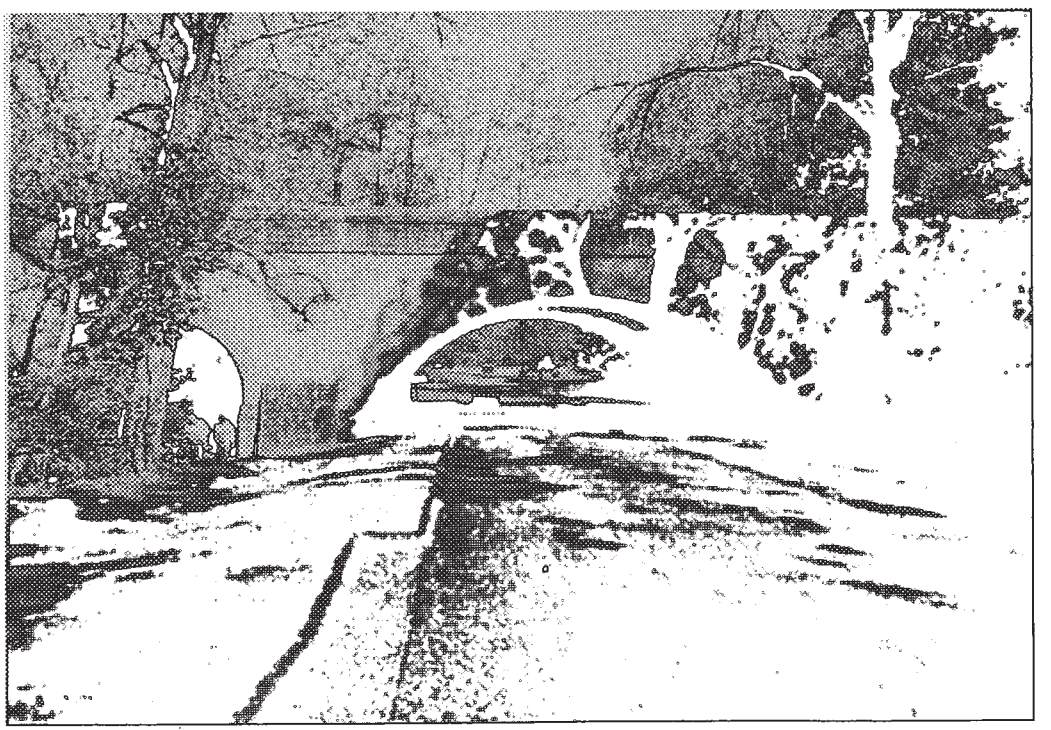


Figure IV.11. C&O Railroad Underpass, 1996. LANDSCAPES LA·Planning·HP.



Figure IV.12. Enclosure set back from the pavement edge, Williamsburg Traffic Circle, 1996. LANDSCAPES LA·Planning·HP.

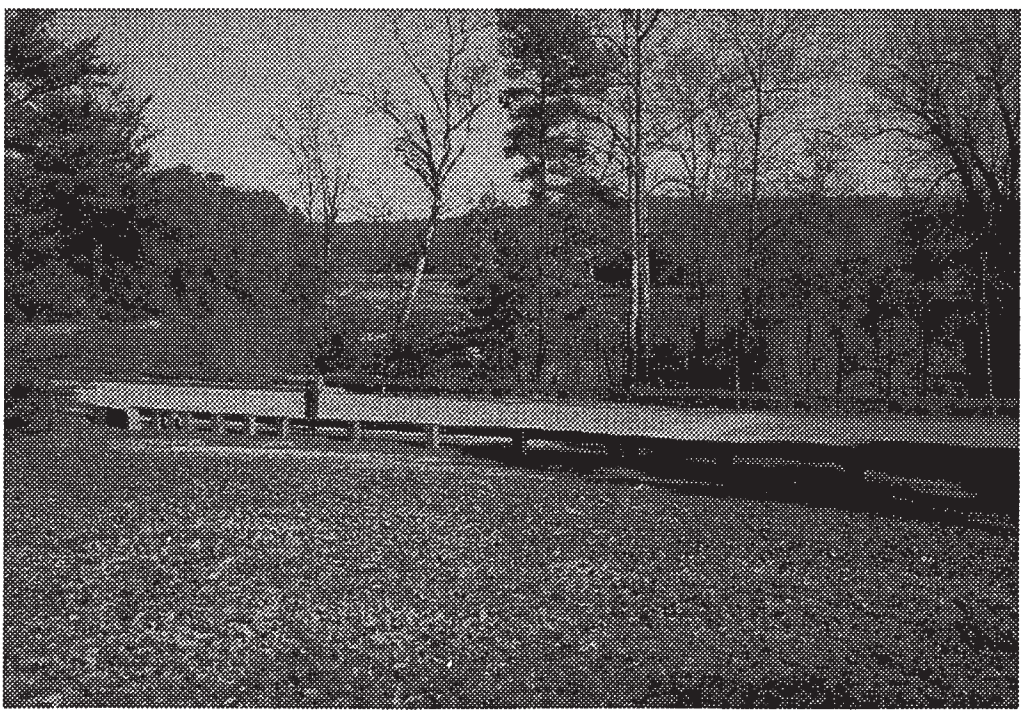


Figure IV.13. Views across marsh at Halfway Creek, 1996. LANDSCAPES LA·Planning·HP.

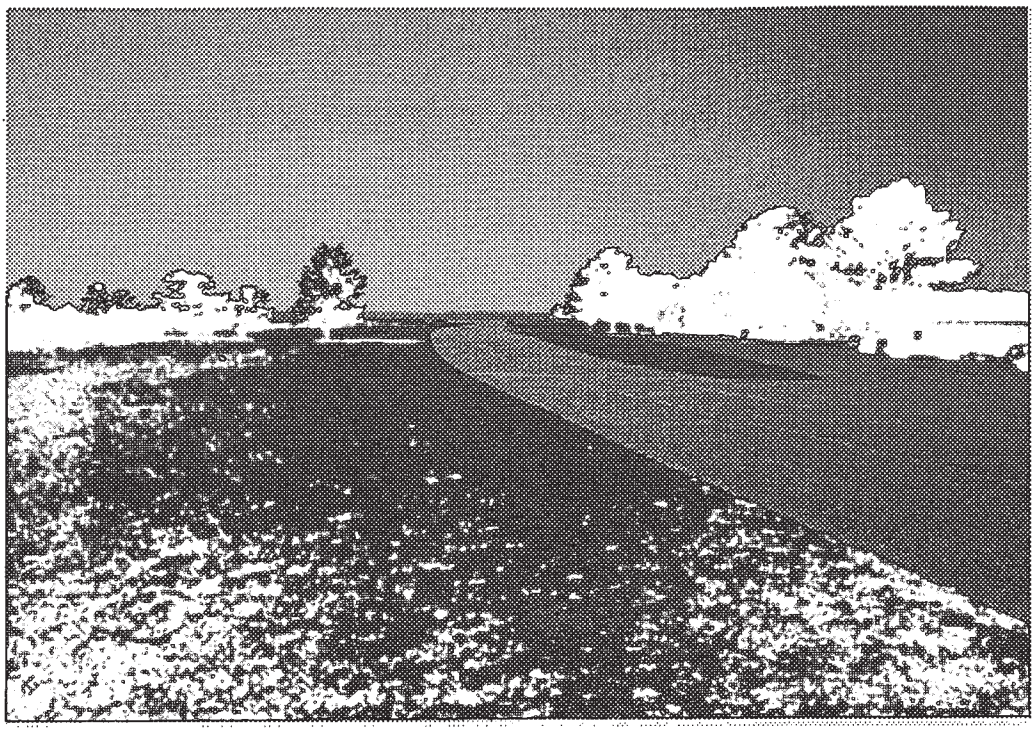


Figure IV.14. Spatial character at College Creek, 1996. Note that some views to the river are blocked by vegetation. LANDSCAPES LA·Planning·HP.



Figure IV.15. Vegetation encloses both sides of the parkway as it approaches Jamestown, 1996. LANDSCAPES LA·Planning·HP.

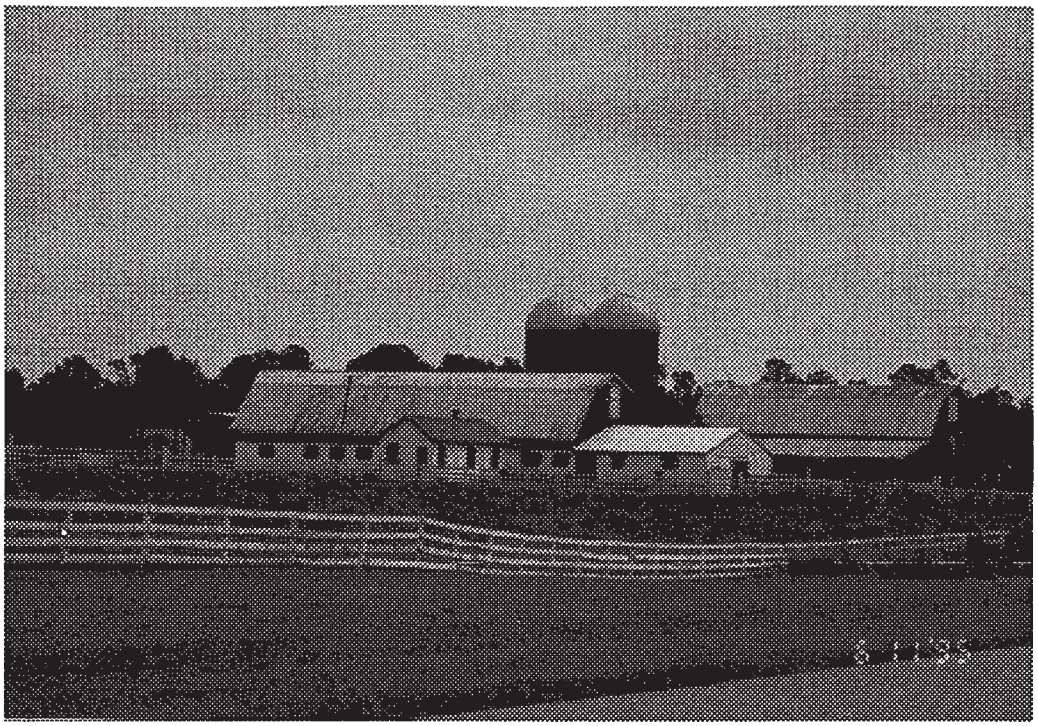


Figure IV.16. Remaining agricultural land, activities, and viewshed at the lands of the Gospel Spreading Association, 1996. Urban Engineers.

Gospel Spreading Association, where open fields predominate. In this area, the elevation of the parkway and surrounding area are also quite close to mean sea level, with the result that the prospect views attained on the Yorktown end are not achieved here.

Between Mill Creek and the entry station to Jamestown Island, vegetative buffers obscure most views of the river and the marsh area on the north side of Jamestown Island. Dense vegetation, some of it invasive species such as bamboo and honeysuckle (see Figure IV.17), comes close to the road, affording a strong sense of enclosure, particularly between Mill Creek and the Jamestown maintenance yard. This enclosure breaks momentarily as the parkway crosses Powhatan Creek. The Powhatan Creek Bridge provides broad views of the marsh, as shown in Figure IV.18, as well as of the commercial marina located just east of Route 31. After the bridge, vegetation quickly encloses the parkway until well past the entry gate toward the isthmus.

Because of its length and narrow width, the Jamestown Island Isthmus provides the unique spatial experience of traversing a narrow spit of land with water on both sides. This open spatial quality is illustrated on the existing conditions plan of the area (see Sheet 16) Though some vegetation has grown up along the edge of the James River, wide views of the river and its traffic provide interest for motorists. With the horizontal backdrop of the Jamestown Island marshes on the other side of the road, the full 180 degrees of sky overhead (Figure IV.19) may be perceived. Once it crosses the isthmus bridge and enters the parking lot of the Jamestown Visitor Center, the parkway again becomes enclosed. The parking lot, shown in Figure IV.20, is surrounded by forest vegetation and is canopied by trees in wide islands. Similar in spatial composition to the Yorktown parking lot, it provides shady contrast to the openness of the isthmus.



Figure IV.17. Invasive bamboo in forested margins of parkway (near the Jamestown Island Isthmus), 1996. LANDSCAPES LA·Planning·HP.

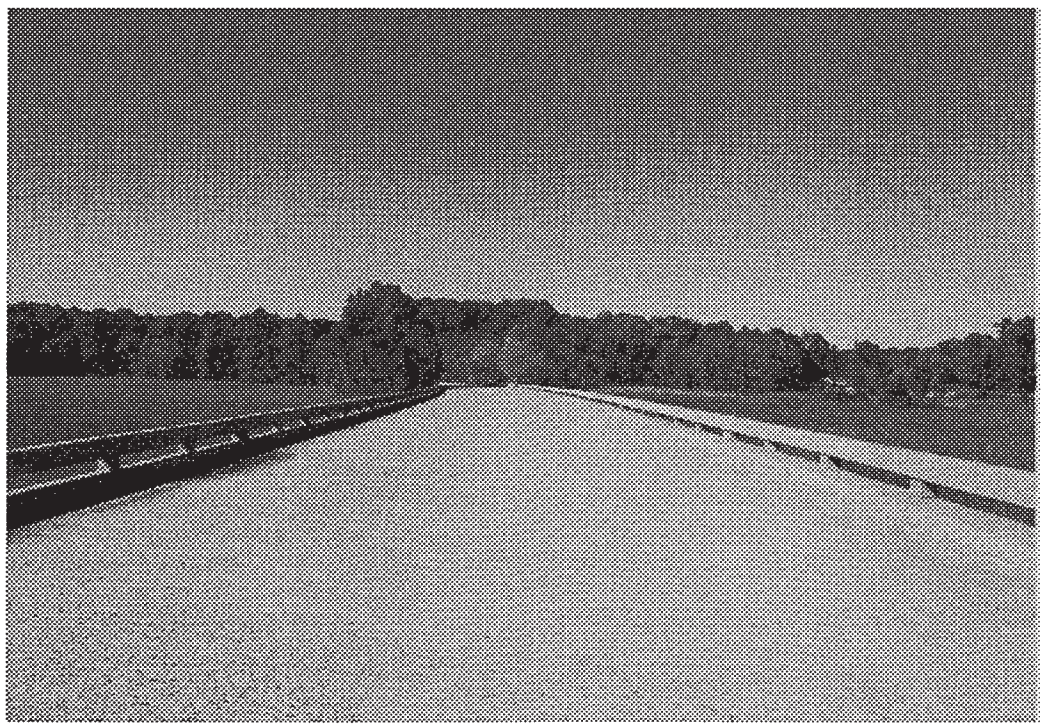


Figure IV.18. View of Powhatan Creek bridge and surrounding marsh area, 1996. LANDSCAPES LA·Planning·HP.

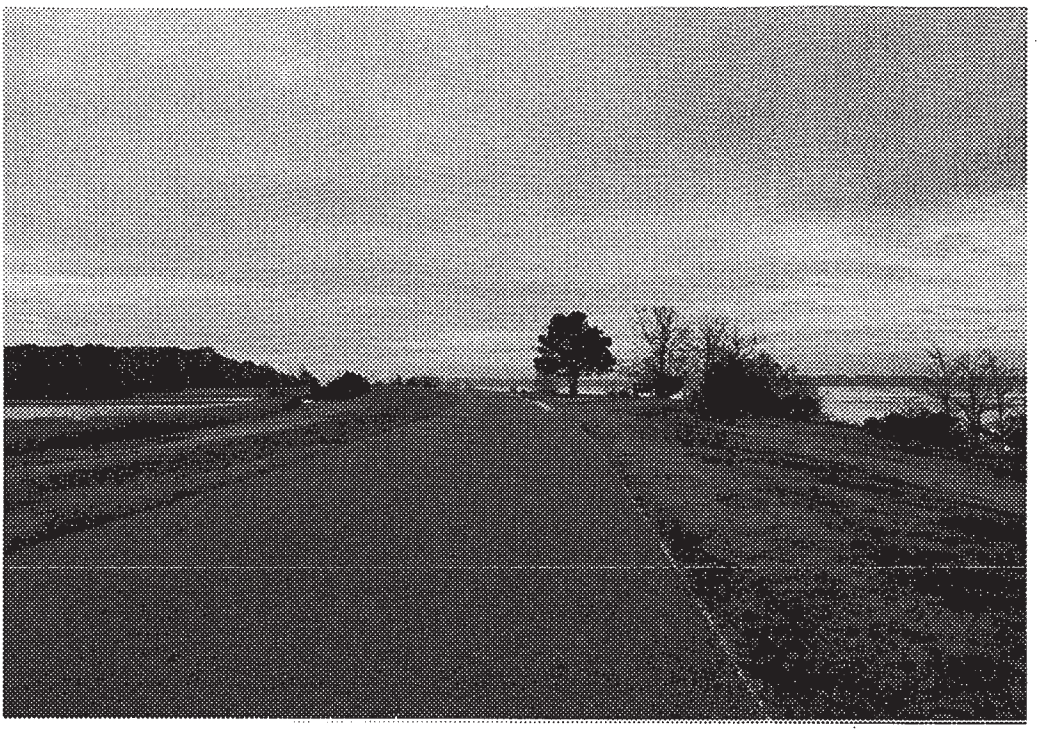


Figure IV.19. Open spatial character at the Jamestown Island Isthmus, 1996. LANDSCAPES LA·Planning·HP.



Figure IV.20. Entrance to the Jamestown Visitor Center parking lot, 1996. LANDSCAPES LA·Planning·HP.

The 1996 Spatial Character Plan, Sheet 20, is a graphic representation of this description of the parkway's various levels of enclosure and the significant views and vistas available from the road.

C. TOPOGRAPHY

1. Overall topography

Colonial Parkway passes through the full range of topography that characterizes the James-York Peninsula.[2] This topography ranges from flat, low-lying wetlands to steep bluffs. Beginning at the eastern end, between Yorktown and Williamsburg, the parkway moves through what is predominantly an upland dissected by a series of creeks flowing northeast to the York River. The Yorktown terminus of the parkway is situated at the highest point, within a broader area known as the "Grafton Flat." The Grafton Flat area includes the Yorktown Battlefield, as well as the bluffs overlooking the River on which the Yorktown Visitor Center is located, at an elevation of 50 to 60 feet above mean sea level. This area also contains a number of sinkholes, or shallow depressions, one of which is located near the beginning of the parkway, northeast of its intersection with Route 17.

Between Route 17 and Kings Creek, the parkway crosses a series of broad, flat terraces which run parallel to the river and range in elevation from about 10 to 50 feet. These terraces are divided by creeks and low-lying tidal marshes. The parkway crosses these low points on a combination of hydraulic fill and bridges. Between Kings Creek and Williamsburg, local variation in the topography increases, ranging from 30 to 80 feet as the uplands become more intricately dissected by dendritic stream channels. These channels, which lie in deeper ravines, are shown on Sheet 4, the 1996 Existing Conditions Map, in Appendix A. Hills and stream valleys appear on either side of the parkway along much of the route into Williamsburg.

After tunneling under Williamsburg, the parkway heads south, continuing across a flat terrace at an elevation of about 80 feet. This upland terrain is, like the area east of Williamsburg, intricately dissected by stream channels, most of which drain southeast to the James River. Because of the designers' desire to limit cuts and fills in this area, the parkway route follows the lower-lying stream valleys of College Creek and its tributaries. As a result, higher topography is found on either side of the road, with landform giving a strong sense of enclosure to the parkway. Between Halfway Creek and College Creek, the parkway traverses a lower terrace at an elevation of about 49 feet. This relatively flat area contains numerous broad, shallow sinkholes.

The parkway crosses College Creek on a flat spit of hydraulic fill. It continues toward Powhatan Creek across another series of low terraces which run subparallel to the James River. Low ridges, running east and west, surmount these terraces, with about 5 to 10 feet of relief between ridges and troughs. Because of the low elevation of this area, much of this section of the parkway, especially across creek mouths, crosses low, flat topography created by the parkway's hydraulic fill. One of the most distinctive of these areas is the isthmus, a thin, flat stretch of land, with an elevation that rises only slightly above sea level.

2. Topography of the Parkway Corridor

The engineering and construction of Colonial Parkway did, naturally, change the surrounding topography of the area to some degree. At an overall scale, the parkway's most important changes to area topography

were two-fold. First, the parkway created new stretches of land by hydraulic fill processes; this occurred primarily at creek mouths, such as at Indian Field, Felgates, and College Creeks and at the isthmus. Secondly, since the parkway crosses the watersheds of both the York and James Rivers, in many areas where the parkway was built on fill, the parkway created a raised section of topography which functions as a land dam across the dendritic stream channels of the Peninsula. This issue is more completely explored in Section G: Drainage.

Other changes to the area's topography caused by the creation of the parkway were mostly *local* topographic effects—that is, the changes occurred within close proximity to the roadway and only rarely beyond the limits of the parkway corridor and Colonial National Historical Park boundary. These local effects were also, for the most part, quite consistent along the length of the parkway and generally reflected the topography of the surrounding landscape. In other words, because the parkway's construction responded to local topography, a series of new, parkway topographic features were introduced along the parkway and consistently reappear within the corridor as the parkway crosses similar topographic conditions. These topographic features fall into two broad categories: the parkway's characteristic grading, especially the angles of the parkway's cut and fill side slopes, and the parkway's low elevation, flat sections, built on hydraulic fill.

The side slopes along the parkway give the corridor much of its character, and their number and steepness were determined by the vertical and horizontal alignment of the road. In general, the parkway side slopes, whether on cut or fill, are quite steep, ranging from 2:1 to 6:1. Most have a strong, manipulated appearance, and in many cases, the intersection of the side slope with the natural terrain is quite evident. Many of the side slopes, such as those seen in Figure IV.21, are curving surfaces because of the parkway's winding horizontal alignment. The typical arched forms of the side slopes enhance the curvilinear and sinuous appearance of the road since they draw the viewer's eye around the curves of the road. This element of the design is a key difference between parkways and modern highways, which, with faster speeds, require straighter alignments and eschew curves and curving side slopes.

Colonial Parkway's side slopes are most distinctive and prevalent in the dissected uplands between Kings Creek and College Creek, where there are rapid and extreme changes in local elevations as the parkway crosses ravines. Fill slopes, in which the slopes descend from one or both sides of the parkway, are common in areas where the land was built up (filled) to allow the parkway to traverse ravines or low spots. An extreme example of a fill slope is seen on the existing conditions plan of Jones Mill Pond (see Sheet 9). Here, steep fill side slopes descend from either side of the road as it crosses the pond's mouth. Such fill slopes provide the motorist with a feeling of skimming above the local topography. Another example of a typical fill slope is seen in the right-hand side of Figure IV.22, a photograph of the parkway near the Ringfield Plantation site. Most fill slopes across ravines are well-vegetated. Because of their vegetation and because their steepness is similar to that of the surrounding ravine slopes, these slopes tend to blend into the original topography.

In contrast to the parkway's fill slopes, cut slopes are found in areas traversing zones of rising topography, such as where one terrace transitions to another. In many cases, slopes then ascend from both sides of the road, providing a strong sense of enclosure by landform. This typical condition is seen in the 1996 existing conditions plan and section of Halfway Creek area on Sheet 13. These steep, gently curving side slopes were called "hogbacks" by the parkway's original designers, and to this day retain the appearance of the smooth, sloping flank of an animal.

The other characteristic topographic feature of the parkway are long, flat, low-elevation sections created by hydraulic fills. Like the creation of cut and fill slopes in areas of great topographic variation, the engi-



Figure IV.21. View of typical "hogback" slope (a cut slope) at Halfway Creek, 1996. LANDSCAPES LA·Planning·HP.



Figure IV.22. View of typical fill slope (right side of photo) in uplands near Kings Creek and Ringfield, 1996. LANDSCAPES LA·Planning·HP



Figure IV.23. Flat, horizontal topography typical of hydraulic fill, near Indian Field Creek, 1996. LANDSCAPES LA·Planning·HP.

neering of this new topography is a design response to the low topography and marshy nature of the original river shorelines. The resulting flat, open nature of the new land, as seen in Figure IV.23, make it seem to be a horizontal extension of the surrounding landscape into the open rivers. Areas with these characteristics include the shoreline below the Officers Quarters, the flats around Indian Field Creek, the flats around Felgates Creek (Sheet 8) on the eastern end of the parkway, and at the mouths of College Creek, Glebe Gut, Mill Creek, and the Isthmus (Sheet 16) on the western end of the parkway.

D. CIRCULATION

1. Alignment

On one level, the alignment of the parkway may be described as its overall route between Yorktown and Jamestown. This route, described in some detail above, proceeds along the shoreline of the York River, across the Peninsula's uplands to Williamsburg, from where it traverses more uplands, and finally proceeds along the James River to Jamestown Island. However, the route of the parkway is but one aspect of its alignment. The other aspects are its horizontal and vertical alignments. Horizontal alignment is the design of a roadway's centerline as curve and tangent (straight) sections, or more generally, the location of its centerline in the x and y axes of the world. Vertical alignment is the fitting of the chosen horizontal alignment to the elevations of the landscape as a series of uphill and downhill curves and tangents. Or, taken more generally, vertical alignment is the location of a roadway's centerline in the z axis of the world. Both the horizontal and vertical alignments use the geometries of single radius curves (arcs), variable

radius curves (spirals), and tangents (straight lines) to create a three-dimensional roadway. The characteristics of Colonial Parkway's vertical and horizontal alignments are discussed below.[3]

a. Horizontal Alignment.
When a roadway changes direction, either a single radius horizontal curve (an arc) or a variable radius curve (a spiral) are used to provide drivers a safe, continuous operation at a speed matching the general conditions for that highway. Horizontal curves are used on slower speed roads while spiral curves are used on higher speed roads. Today's high speed interstate highways require spiral curves, since the combination of high speed and sharp curvature can result in vehicle occupation of adjoining lanes. In such instances, spiral transition curves make it easier for a drivers to confine his or her vehicle to its own lane. Colonial Parkway's horizontal alignment, however, uses a combination of both single radius horizontal curves and spiral curves. This is due to the relatively low design speeds of the parkway.

The available record drawings for the Colonial Parkway indicate the existing horizontal curves have radii ranging from 520.87 feet to 12,272.70 feet.[4] All horizontal curves are in conformance with present day standards of the American Association of State Highway Transportation Officials (AASHTO). Figure IV.24 is a photograph of typical horizontal curve on the parkway. In general, the parkway's horizontal alignment is characterized by long-radius, "flat" horizontal curves in place of straight tangent sections. This is particularly evident along the Yorktown end of the parkway, where seemingly "straight" sections of roadway, such as the Bellfield Straight, are actually long, very large radius curves. Spiral transition curves, which provide safer driving conditions for tighter curves at higher speeds, are also documented along the parkway. Interestingly, most of these are found between Jones Mill Pond and Jamestown, with no spiral curves appearing between Yorktown and Kings Creek.

Superelevations of curves, in which the exterior radius of the roadway is at a higher elevation than centerline radius, is another feature of the horizontal alignment. Like spiral transitions, the superelevation of curves allows vehicles to move around curves more safely at higher speeds. Some, but not all, of the shorter radius curves are superelevated; across the length of the parkway the maximum superelevation rate is 8.3 percent.

A complete list of the existing horizontal curve data and existing horizontal spiral curve data has been compiled and is included in this report as Appendix C.

b. Vertical Alignment.
The purpose of the vertical alignment is to effect gradual change between tangent grades (slopes) on the parkway. This is accomplished by the use of a vertical curves, of which there are two types: crest vertical curves ("hills") and sag vertical curves ("valleys"). According to today's standards, minimum crest vertical curves are designed for general appearance and to provide a safe stopping sight distance. In contrast, four different criteria are used in establishing lengths of sag vertical curves: headlight sight distance, rider comfort, drainage control and general appearance. Of these, headlight sight distance is generally the controlling factor in determining the length of sag vertical curves, and on long sag vertical curves in curbed sections the gradient must be checked to assure no ponding on the roadway. [5]

As described in Section C: Topography, the topography through which Colonial Parkway moves may generally be characterized as rolling terrain, with short and mild grades. Because of this, the parkway contains numerous sag and crest vertical curves, yet they generally transition between relatively gentle slopes. The available record drawings for the Colonial Parkway indicate the existing longitudinal roadway slope varies from 0.0 percent (level grade) to only 5.66 percent and the rate of vertical curvature, for both

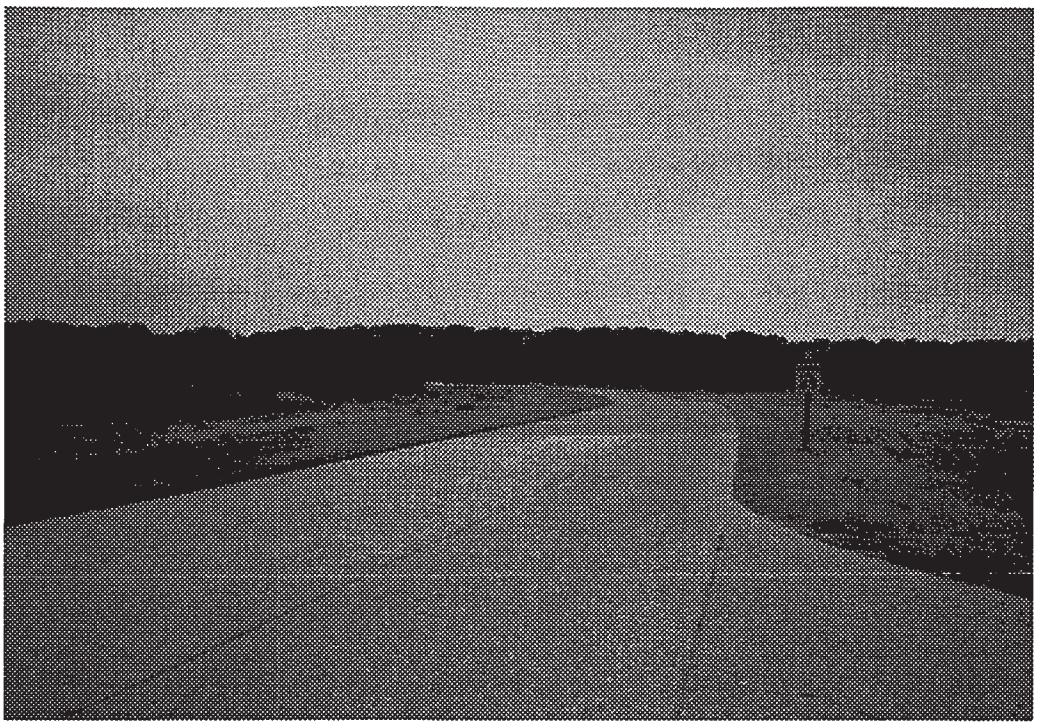


Figure IV.24. Typical horizontal curve along parkway, near College Creek, 1996. LANDSCAPES LA·Planning·HP.



Figure IV.25. Typical vertical curve along parkway, uplands south of Williamsburg, 1996. LANDSCAPES LA·Planning·HP. d2

sag and crest vertical curves, ranges from 70.9 to 598.4.[6] These figures indicate that roadway slopes are generally not particularly steep and that transitions between downhills are gentle and smooth, as shown in Figure IV.25, a typical sag vertical curve. In general, the parkway's vertical curves conform to present-day AASHTO standards. However, one vertical curve, at Station 778+25 has a design speed of 40 miles per hour, and a posted speed of 45 miles per hour.[7] A complete tabulation of vertical profile data has been compiled and is included in this report in Appendix C.

2. Surface

The Colonial Parkway is a three-lane-wide roadway, constructed of three, 10-foot-wide, exposed aggregate reinforced concrete slabs 7 inches and 8 inches thick. Tangent sections have a high point at the center of the middle slab and a cross slope of 0.8 percent. Sections not on tangent are connected by horizontal and spiral curves which are superelevated to meet the proper design speed. As noted above, the existing superelevations are a maximum rate of 8.3 percent.

Field observation reveals that the exposed aggregate surface is in good condition, with minimal wear. This may in part be due to the lack of truck traffic on the parkway, since heavy vehicles generally cause the most damage to roadways. Although skid resistance data for the road surface is not available, a review of accident data does not indicate a skidding problem on the parkway. However, some repair to the concrete surface has been necessary, due to failure and deterioration at the corners and edges of concrete slabs. Therefore, the concrete joints between Route 17 and Route 199 and from Jamestown east and north approximately 6½ miles have been recently reconstructed. This work included saw-cutting out the failed portions of concrete around the joints and replacing these areas with new concrete and new joints. In some areas, the new concrete sections are a lighter color than the original concrete, due to the use of a light-colored sand. This has resulted in a pattern of colored patches on the roadway, a visual effect that is most noticeable on the Jamestown end of the parkway.

Open joints between pavement slabs have been sealed in recent years. However, due to warm weather expansion of the concrete, the sealant is being pushed out of the joints. The sealant was placed level with the concrete in an attempt to make the ride smoother for bicyclists. This left no room for movement and resulted in the failures. Figure IV.26 shows a typical sealant installation and failure.

The entire length of the parkway is not surfaced in concrete. At the Yorktown and Jamestown ends the parkway transitions to bituminous concrete. Bituminous concrete is also used at interchanges to provide narrow bands of pavement adjoining the concrete at islands, under bridges, and for all access ramps.

Some degradation on the pavement margins is evident. One such area is shown in Figure IV.27; it is apparently the result of visitors making unauthorized U-turns when they realize they are headed in the wrong direction down the parkway. The repeated travel on these areas has destroyed turf, compacted soil, and caused ponding and erosion. Gravel has been placed along the road margins in a number of locations to stabilize the shoulder and pavement edge. In other places, concrete and bituminous curbing have been constructed at the road edges. In particular, it appears that the major uses of curbing are to control water flow and erosion on down grades, and to define interchanges. In addition, some curbing at the road margins occurs at the parking overlooks to help control vehicle movements.

There are no centerline or edge stripes on the parkway itself, and no accident cluster is evident to indicate a need for striping.[8] However, access ramps with two-way traffic are striped with a centerline, and some edge and centerline stripes occur at the entry to the Williamsburg traffic circle.



Figure IV.26. Typical joint sealant condition, 1996. LANDSCAPES LA·Planning·HP.

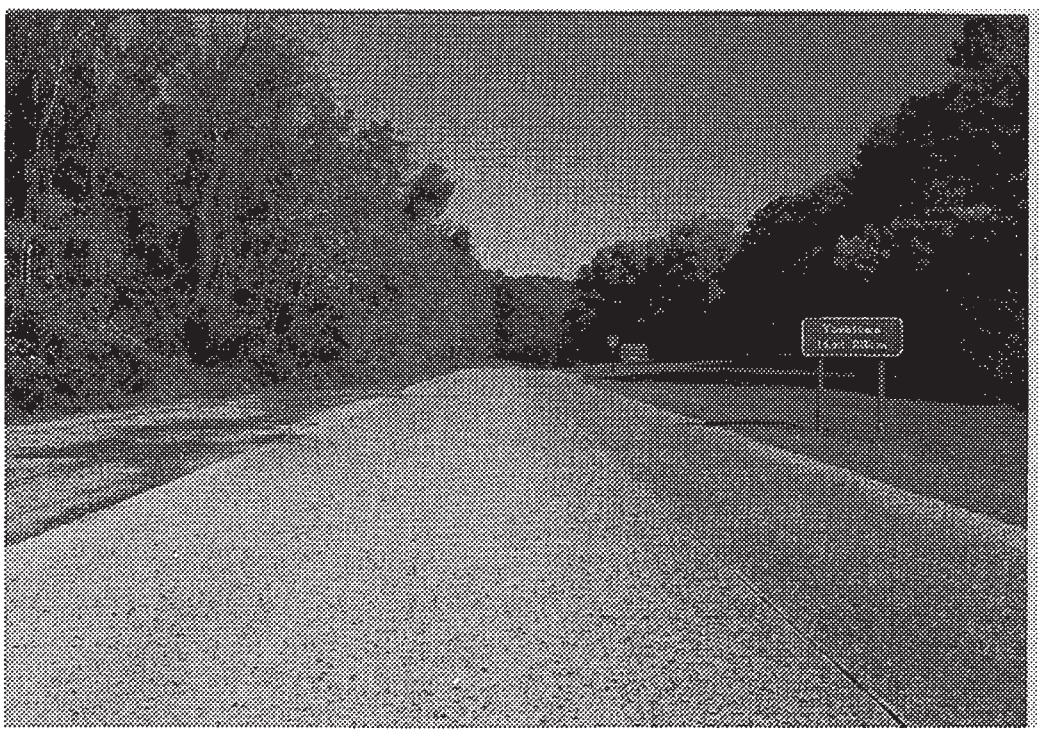


Figure IV.27. Degradation in pavement margin and shoulder, where unauthorized U-turns occur, 1996. LANDSCAPES LA·Planning·HP.

a. Design Speed.

Design speed is the maximum safe speed that can be maintained over a road when conditions are so favorable that the design features—alignment, grades, surfacing, etc.—of the highway govern. As noted in Chapter III, the intended design speed for the parkway was 50 miles per hour (mph). This design speed is confirmed by the current speed limit postings on the parkway today. According to AASHTO the desirable design speed for the existing roadway is, in general, 5 mph greater than the posted speed limit of the roadway. The Colonial Parkway has a posted speed limit of 45 mph for the portion of the roadway outside of Williamsburg city limits (rural area) and a posted speed limit of 35 mph for the portion of the roadway inside the Williamsburg city limits (urban area). Also, near Yorktown and Jamestown the speed limit is reduced to 35 mph and to 25 mph at the very end. Based on the AASHTO standards, this equals a design speed of 50 mph for the portion of the roadway in the rural area and a design speed of 40 mph for the portion of the roadway in the urban area and 30 mph near Yorktown and Jamestown.

3. Interchanges & Intersections

Twelve access points are provided along the length of the parkway. These include a number of grade-separated exchanges and access ramps at Route 17, Route 641 at Cheatham Annex, Hubbard Lane, Parkway Drive, Capitol Landing, the C& O Railroad, Tazewell Hall, and Route 199. At grade access is also provided at Yorktown, Jamestown, and Williamsburg. There is also an at-grade linkage to Route 238 at the Fusiliers Redoubt overlook. A typical interchange configuration is seen in the existing conditions plan for the Route 199 Interchange on Sheet 12 (see Appendix A).

None of the ramped interchanges are consistent with current AASHTO design standards. Their turning radii are tighter than recommended, and they lack separate acceleration and deceleration lanes. These features cause drivers to slow in the travel lane to exit or to enter the highway at low speeds. Figure IV.28 shows a vehicle slowing to exit the Parkway while still in the travel lane. However, the tight turning radii and lack of separate acceleration/deceleration lanes is a characteristic of most limited access highways designed and built in the period of 1930 to 1955. The Merritt Parkway in Connecticut and the Hutchinson River Parkway in New York are but two examples of early, limited access highways built to the same standards.

Of the three major at-grade intersections to the parkway, the one at the Yorktown end stands out as somewhat problematic from a safety standpoint. This five-legged intersection of the parkway with Virginia Route 238, known as "Five Points," creates confusion for drivers.

4. Parking Overlooks

As shown in the 1996 Built Elements Plan, Sheet 21, there are seventeen parking overlooks associated with the parkway. Ten of these parking overlooks occur between Jamestown and Williamsburg while the balance are located on the Yorktown end of the parkway. Figure IV.29 shows a typical parking overlook. These are generally small, bow-shaped pull-offs located immediately off the parkway. Like the parkway, the overlooks are all surfaced with exposed aggregate concrete. Grass islands of various sizes, sometimes defined by concrete curbing, separate the overlook from the parkway. Depending on their sizes, the islands may be planted with turf, specimen trees in turf, or groves of trees in turf. Nose-in parking is accessed from the travel lanes of the pull-offs, and the parking areas are generally edged with concrete curbing. In larger overlooks, a small turf island may divide the parking area into two bays. Drainage slots or small pipes located in the curbing allow water to drain off the parking areas into the surrounding lawn.



Figure IV.28. Vehicle slowing to exit parkway while still in travel lane (near Colonial Williamsburg), 1996. LANDSCAPES LA·Planning·HP.



Figure IV.29. View of typical parking overlook access, at the Isthmus Overlook, 1996. LANDSCAPES LA·Planning·HP.

The parking overlooks allow motorists to stop, admire views, and read interpretive signs without blocking traffic. Apparently they are used by both tourists and local drivers, since both local and rental vehicles are observed in the parking overlooks. Although no picnic facilities are provided at the overlooks, visitors are often seen eating lunch in their vehicles. One or two large, grey, cast aluminum signs in wood frames are generally present at each overlook. These signs describe the history of the region and the cultural resources along the parkway. These cultural resources along the parkway corridor are discussed in detail in the Site History portion of the CLR.

The parking overlooks also function, informally, as recreational areas where visitors may leave their cars. The parking areas located on the James and York River shorelines are particularly well-utilized, with visitors strolling along the short beaches. Frisbee playing has also been observed, and fishing and shell fishing are popular activities at the shoreline overlooks. Few amenities exist for these recreational uses; for example, trash receptacles are generally not provided, with the exception of the parking areas at Felgates Creek and Indian Field Creek. According to park staff, the lack of receptacles has encouraged visitors to carry out what trash they carry in.

In some areas, however, informal recreational activity is affecting the areas around the overlooks. For example, shoreline and bank degradation is occurring where pedestrians consistently walk along informal paths and trails. Such impacts are noted on the existing conditions plan of the Felgates Creek area on Sheet 8. Other visitor impacts include littering, although this does not seem to be a major problem.

The following is a short list and description of the current parking areas along the parkway, along with a description of their significant features.

Fusiliers Redoubt Overlook. The former terminus of the parkway before it was completed, this overlook is located on a short spur off the parkway. Accessed up a hill from the parkway, the parking area provides a view of the York River and Coleman Bridge from atop the York River Bluffs. Reconstructed Revolutionary War-era earthworks are located at the far end of the spur, within walking distance from the parking area. The area contains three interpretive signs: one is situated along the road accessing the larger area, one stands at the parking area, and one is located at the earthworks. The area around the road spur is an open expanse of mown turf. In addition to accessing the parking overlook, the road spur provides access to the Jamestown-Yorktown Foundation's Victory Center and to VA. Route 238.

Naval Mine Depot Overlook. This overlook, is located just north of the Naval Mine Depot, and is shown in the 1996 existing conditions plan of Brackens Pond on Sheet 6. A standard, bow-shaped overlook with a view of the Naval Weapons Station Piers, it contains one interpretive sign.

York River Parking Overlook. This overlook is located east of the Officer's Quarters of the Naval Weapons Station, and also has a good view of the Naval Weapons Station piers. One interpretive sign is located here.

Powhatan Village Overlook and Indian Field Creek Overlook. These overlooks are located adjacent to each other, on opposite sides of the parkway, just east of Indian Field Creek. Both overlooks are quite large, and contain two interpretive signs each. These overlooks, with water access at the creek mouth, are popular for fishing and a trash receptacle is provided at these overlooks.

Bellfield/Cheatham Annex Parking Overlook. This small overlook is tucked into a shady grove east of Felgates Creek. Two interpretive signs at this location describe the Bellfield Plantation and the Navy operations at Cheatham Annex.



Figure IV.30. Steep, eroding slope at Jones Mill Pond Overlook, 1996. LANDSCAPES LA·Planning·HP.

Ringfield Parking Overlook. This overlook, situated at the mouth of Felgates Creek, appears to be a popular location for walking and fishing. As shown in the existing conditions plan of Felgates Creek (see Sheet 8), a deteriorated asphalt path leads to the pedestrian walkway on the Felgates Creek Bridge. The area also shows some signs of impact from visitor use. Informal plank and dirt paths access the beach and marsh areas along the York River, and are beginning to degrade the turf and shoreline here. A trash receptacle is located at this overlook.

Jones Mill Pond Parking Overlook. This parking overlook, shown on the existing conditions plan of Jones Mill Pond (see Sheet 9), was designed to fit in a small open area adjacent to the pond. It is therefore somewhat smaller, and has a more angular layout, than the rest of the overlooks on the Yorktown end of the parkway. With two interpretive signs, the overlook is a popular stopping point and shows signs of pedestrian traffic. The steep slope between the parking area and the edge of the pond is eroding due to drainage and foot traffic. An informal trail leading from the parking area around the east edge of the pond is also present and is causing some erosion into the pond (see Figure IV.30).

Great Oaks Parking Overlook. This parking overlook, the first parking area on the Jamestown end of the parkway, provides a view of large, old oak trees adjacent to the parkway. A standard, bow-shaped parking overlook, it contains two interpretive signs describing the trees and palisades.

Paper Mill Creek Overlook. This parking overlook is located just south of the Great Oaks overlook. Another standard, bow-shaped overlook, it also contains two interpretive signs which describe a historic dam on this creek and the history of the area once known as Great Neck.

Halfway Creek Overlook. This overlook is a tadpole-shaped loop located in a shady, forested area just south of the Halfway Creek Bridge. Parking is provided in three bays at the wide end of the loop, at the

top of a wooded embankment leading to Halfway Creek below. As shown on the existing conditions plan of Halfway Creek (see Sheet 13), the overlook is well-screened from the parkway, and is further separated by being elevated above the parkway level, on the top of the hill through which the parkway cuts. This gives this overlook a somewhat more secluded feel than the other parking areas along the parkway.

This overlook has recently been closed to visitation, and the gate at the entrance area is locked. A 1996 inspection of the area revealed that the paths down the slope leading to the creek were still quite unstable and eroding due to impacts by previous foot traffic. The area contains two interpretive signs, one at the entrance to the area, and one at the parking bays. In addition, a brick arch culvert headwall is located just down the slope from the parking bay and appears to carry storm water from the surfaced parking area.

College Creek Overlook. This overlook is located just south of the mouth of College Creek, on the marsh or inland side of the parkway. Containing two interpretive signs, the overlook is bow-shaped with two large parking bays.

James River Overlook. Located south of the College Creek overlook, this parking area provides a good view of the James River and its eroding banks. Bow-shaped, the overlook contains two interpretive signs and is located adjacent to the remains of a Civil War fort.

Archers Hope Parking Overlook. This elongated overlook is located on a small rise along the James River shoreline. Specimen trees dot the long island separating the parking area from the parkway. The rest of the area surrounding the overlook is predominantly open turf. Although the shoreline is eroding, pedestrian impacts in this area seem to be minimal, perhaps due to a dispersion of traffic and the sandy nature of the soil. Two interpretive signs, one describing Archers Hope and one the life of Solomon Michaux, are located here. A portion of this overlook may be seen in the existing conditions plan of Archers Hope, on Sheet 16 (see Appendix A).

Jamestown Island Overlook. This irregularly-shaped overlook has two long arms leading to a two-bayed parking area near the river's edge. The overlook views the back of Jamestown Island. Located just east of Mill Creek, the parking area is situated in a grove of trees and contains two interpretive signs.

Real Estate Parking Overlook. This is a standard, bow-shaped parking area with a wooded character and one interpretive sign.

Powhatan Creek Overlook. This large parking area is located opposite the entry to the parkway from Virginia Route 31, just before the entrance gate to Jamestown Island. A large, two-bayed parking area is located off two curving access arms. The parking bays are located quite close to the edge of the Back River. The shoreline in this area is showing some erosion, possibly caused by a combination of pedestrian use and wave action.

Isthmus Overlook. This standard bow-shaped overlook is located within the fee area of Jamestown Island, adjacent to the isthmus bridge, with a good view of the James River and its associated boat and ferry traffic. One interpretive sign is provided at this overlook.

5. Picnic and Interpretive Areas

Two picnic areas are associated with and accessed from the parkway. The **Ringfield Picnic Area** is a larger area with two loops of picnic sites with vehicular access, and is located west of Felgates Creek. The

Great Neck Picnic Area, a large loop of picnic sites located south of Williamsburg, is accessed off the northwest ramp of the Virginia Route 199 exchange. Both areas are currently not in use and are closed to visitors.

The **Bellfield Interpretive Area** is a short loop with an interpretive sign and wayside, and is located east of Felgates Creek adjacent to the Bellfield Plantation Site. This area was constructed around 1975, as part of park-wide development projects for the country's bicentennial. It is no longer open to the public.

6. Termini

The two parkway termini may be considered to be the parking lots at the Yorktown and Jamestown Visitor Centers. The Yorktown terminus is a large, almost circular parking lot with 4 double bays of 90 degree nose-in automobile parking. The parking lot islands are turf and quite wide; they contain numerous large shade trees which provide a shady canopy for parked vehicles. Parking for busses and oversize vehicles such as campers is provided at the north end of the lot in a separate bay. Sidewalks from the lot directly access the Yorktown Visitor Center and Park Headquarters. Longer surfaced trails lead to the Yorktown Monument and Yorktown. The parking lot is paved in asphalt with a chip seal finish of fine beige aggregate which matches the color value of the exposed aggregate in the parkway concrete.

The Jamestown terminus is larger than the Yorktown terminus, with a large, rectangularly shaped parking lot. The lot contains four double bays of 90-degree, nose-in parking. Like the Yorktown lot, the parking lot islands are amply broad to support a large number of fine shade trees. Picnic tables and trash receptacles for visitor use are also situated in the islands. Turf in the islands is in fair to poor condition and tree roots are exposed, apparently due to erosion caused by frequent foot traffic. Bus and oversize vehicle parking is provided in a separate parking area west of the automobile parking area. Vehicles access the Jamestown Island tour roads off the northwest corner of the parking lot, and pedestrians access the Visitor Center off the southeast corner.

E. VEGETATION

A wide variety of vegetation exists along Colonial Parkway, some of it naturally occurring and minimally managed and some of it planted and more intensively managed. For the purposes of this report, vegetation has been divided into two broad categories: Vegetation cover types and designed plantings. These two categories provide information at two different scales. Information on cover types describes the types of vegetation and vegetative patterns found at the overall scale of the parkway, while the information on designed plantings identifies a range of existing planting types implemented at the scale of the motorist. It is hoped that the consideration of these two categories separately will help to illuminate the existing conditions of the parkway's vegetation as contributing to both natural and cultural resource values.

1. Cover Types

When considering the evolution of vegetation along the parkway, it is useful to consider the geologic history of the Peninsula and the Chesapeake Bay region. The Chesapeake Bay was formed by the ancestral Susquehanna River, which carved a deep course across the continental shelf in the last glacial epoch when sea level was as much as 300 feet lower than it is today. Seven to ten thousand years ago, as the glaciers

melted, the sea rose again to submerge the valleys of the Susquehanna and its tributaries, including both the James and York Rivers, as well as the Potomac and Rappahannock. Two to three thousand years ago sea level reached to within 10 feet of its present elevation. The sea retreated and then advanced to reclaim land at least four times during the Quaternary era (the last two million years) and each time the estuary gradually filled with sediment. The long, thin and wooded strands of old dune that sweep across Jamestown Island give evidence of these ancient shorelines.

This history has created a landscape of layers of unconsolidated material accumulated over the millennia. Where the shoreline in the area is eroding it may be exposing soil faces that could include early Colonial as well as archaic era artifacts. Where clays predominate the soil is more mesic and where sands are more abundant there is a more droughty soil. Oaks and pine typify this coastal plain landscape although wherever fire cycles have been suppressed, there is a gradual shift to hardwood, as is the case with many other coastal landscapes.

Most of the forest within Colonial Parkway is referred to in the literature as the "oak-pine forest." Many of the trees characteristic of the great Eastern deciduous forest are prevalent here; the main distinction is the abundance of loblolly pine (*Pinus taeda*), as well as Virginia pine (*Pinus virginiana*). The loblolly pines were especially prominent in the original canopy of the area but have decreased relative to the hardwoods with the suppression of fire. The Virginia pine has increased in area with repeated clearing of the forest which favors early successional species. There is also a great diversity of oak species as well as other hardwoods. The specific communities tend to shift along a gradient of moisture and elevation.[9]

This forest is the predominant cover type of the parkway right-of-way. In general, pine forests are most prevalent at the Jamestown and Yorktown ends of the parkway and mixed pine-hardwood forests dominate the inland section between the two rivers, as illustrated on the Vegetation Cover Types Map (see Sheet 23 in Appendix A). Emergent, or non-forested wetlands are prevalent along the river shorelines (very narrow in many areas), at Sandy Bay and along the creeks (College Creek, Halfway Creek, Kings Creek, Felgates Creek, and Indian Field Creek). Forested wetlands comprise a relatively small part of the vegetation cover, existing in scattered pockets from Halfway Creek to the Cheatham Pond area.[10] The remaining vegetation along the parkway consists mostly of mown turf with tree groves, scattered individual trees and shrub masses. The following paragraphs consider these cover types in greater detail, clarifying species present and identifying specific areas along the parkway where they may be observed.

a. Upland Hardwood Forest

This is a predominantly hardwood forest, generally older than the pine-hardwood forests, occurring mainly within the interior upland section of parkway, between Route 199 and Felgates Creek (Figure IV.31). Characteristic species include white oak (*Quercus alba*), chestnut oak (*Q. prinus*), red oak (*Q. rubra*), hickory (*Carya glabra, C. tomentosa*) black walnut (*Juglans nigra*), tulip poplar (*Liriodendron tulipfera*), American beech (*Fagus grandiflora*), ironwood (*Carpinus caroliniana*), redbud (*Cercis canadensis*) and dogwood (*Cornus florida*). Also present, possibly planted and naturalized, are scarlet oak (*Q. coccinea*), mountain laurel (*Kalmia latifolia*), and American holly (*Ilex opaca*). For examples, refer to the 1996 Existing Conditions Plans of Route 199 (see Sheet 12), Capitol Landing (see Sheet 11), and Station Point 544 (see Sheet 10). The above-listed canopy species are characteristic of these areas.
Disturbance species are also present, particularly along the mowed edges where conditions have fostered greenbrier (*Smilax rotundifolia*), bamboo (*Arundinaria* spp.) and honeysuckle (*Lonicera japonica, L. mackii, L. amurense*) invasion and establishment. The interiors of these forests and woodlands appear to be in relatively good condition with an herbaceous layer containing, for instance, mayapple (*Podophyllum peltatum*) and ferns (*Polystichum acrostichoides*).



Figure IV.31. Upland forest near Route 199 underpass, 1996. LANDSCAPES LA·Planning·HP.

b. Lowland Oak Pine Forest

The mixed pine and hardwood forest is the most common cover type throughout the parkway landscape (Figure IV.25). Its characteristic species are sweetgum (*Liquidambar styraciflua*), red maple (*Acer rubrum*), white ash (*Fraxinus americana*), willow oak (*Quercus phellos*), sycamore (*Platanus occidentalis*) and loblolly pine, with tulip poplar and American beech at higher elevations. American holly and dogwood are typical in the understory. Serviceberry (*Amelanchier* spp.), sweetshrub (*Clethra alnifolia*), grey dogwood (*Cornus racemosa*) and black cherry (*Prunus serotina*) also occur in the understory/shrub layer. For examples, refer to the 50-scale existing conditions plans of the Civil War Fort (see Sheet 14), Halfway Creek (where noted) (see Sheet 13) and Bellfield Straight (see Sheet 7). The above-listed canopy species are characteristic of these areas.

Invasive exotic species are present, and in some cases prevalent, in both upland and lowland forests in the understory and shrub layer. In general, invasive exotic vegetation was observed to be less prevalent within the park than was observed along other area roadways, such as Interstate 64. The lower incidence of exotics may be because these species are fostered by airborne nitrogen released as automobile exhaust. The nitrogen concentrated in the parkway corridor is relatively small compared to the amounts of nitrogen from area highways. Invasive species include tree-of-heaven (*Ailanthus altissima*), privet (*Ligustrum vulgare, L. ovalifolium*), empress tree (*Pawlonia tomentosa*), shrub honeysuckle (*Lonicera amuriense, L. tartarica*), bamboo (*Arundinaria gigantea*), paper mulberry (*Broussonetia papyrifera*) and kudzu (*Pueraria lobata*). Exotic species are referenced on the existing conditions plans on Sheets 5 to 16 (see Appendix A) separately from the native vegetation.

Occasional aggressive native species that are present as a result of disturbance include black locust (*Robinia pseudoacacia*), box elder (*Acer negundo*), hackberry (*Celtis occidentalis*), and cherry (*Prunus*

serotina). Greenbrier (*Smilax rotundifolia*) is present throughout the parkway and is noted on nearly all 50 scale maps. Though a native species, greenbrier is typically present in the absence of fire and is an indicator of human impacts.

c. Pine Forest

There are two pine-dominated forests that occur along the parkway. The most common is a successional upland pine forest that occurs on abandoned land, found on Jamestown Island, near Kings Creek and at the Yorktown end of the parkway. Loblolly pine and Virginia pine are the dominant canopy species. Also occurring are sweetgum, red oak, northern red oak (*Q. borealis*), white oak, tulip poplar, and sycamore. Typical understory species include dogwood, black cherry and spicebush (*Lindera benzoin*). This forest is fairly even-aged and the Virginia pine, a relatively short-lived species, will likely drop out of the canopy as the forest matures.

Less common now but once abundant is a lowland pine forest, prevalent before widespread development and fire suppression. This pre-development forest, consisting mainly of loblolly pine, would have been prominent in lowlands adjacent to the James and York River wetlands and in the higher areas between the creek marshes. Fire was a regular historical occurrence in the southern coastal plain, coinciding with droughts as well as activities of hunters and settlers. With the suppression of fire the pines have been supplanted by a lowland forest of mixed pines and hardwoods.[11]

These pine forests, comprising a relatively small proportion of forest, have been combined with the lowland oak pine forest on the Vegetation Cover Types Map (see Sheet 23).

d. Forested Wetlands

Sweetgum, white ash, red maple, black walnut, black gum (*Nyssa sylvatica*) and sycamore are the pre-dominant hardwoods on the forested swamps. They are associated mostly with non-tidal reaches of streams, especially in the Yorktown area. Bald cypress (*Taxodium distichum*) and black gum once predominated and can still be found in association at Swanns Point in the park. These hardwood swamp forests have been mapped as forested wetlands on the Vegetation Cover Types Map (see Sheet 23).

e. Non-forested Wetlands

Tidal and emergent wetlands[12] consisting of both freshwater and brackish tidal communities are found throughout the park in association with the river shorelines and creek systems (see Figure IV.1). These are mapped as non-forested wetlands on the Vegetation Cover Types Map (see Sheet 23). Cordgrasses are the predominant marsh grass, including saltmeadow cordgrass (*Spartina patens*), smooth cordgrass (*S. alternifolia*), and freshwater cordgrass (*S. pectinata*). A shrub-scrub area is characteristic of the upland edge of much of the emergent wetlands (see Figure IV.32). Bayberry or southern wax-myrtle (*Myrica cerifera*) and groundsel bush (*Baccharis halmifolia*) are the pre-dominant shrubs, occurring in masses just above the emergent grasses and reeds. Red cedar (*Juniperus virginiana*) and loblolly pine are common canopy trees. Black locust, Virginia rose (*Rosa lucida*), and sumac (*Rhus glabra, R. typhina*) also occur.

Tidal wetlands have eroded significantly since parkway construction. The shoreline has been held in place by riprap along the York River and parts of the James River. The Virginia Institute of Marine Science report on shoreline erosion in tidewater Virginia showed a net loss rate of over 7,000 acres in 100 years.[13] The remaining tidal wetlands along the James River are decreasing at a rate of over one foot per year due to sea-level rise and shoreline wave action, which is aggravated by boat wakes. Wherever disturbance occurs, common reed (*Phragmites australis*), an aggressive native species, typically becomes established.

f. Parkland (mown turf with planted trees)
Parkland with mown turf is the typical condition of the parkway edge (see Figure IV.33). In general, the roadside edge is mown turf in varying widths, as are the areas surrounding the parking overlooks, managed vista areas such as Bellfield Straight, and open spaces such as Five Points. Planted trees and shrubs include various oaks, sweetgum, sycamore, red cedar, dogwood, sweetbay magnolia (*Magnolia virginiana*), and American holly. Black locust is present, along with loblolly and Virginia pine. (These plantings are described in greater detail under Designed Plantings).

The parkland cover type, since it is confined to the parkway corridor, is best seen at the overall scale as Forest Openings on the Parkway Edge Conditions map or, for representative examples, on the 50 scale plans.

g. Cleared Land and Old Fields
The pastoral landscape of the Chesapeake is rapidly being converted to suburban development. Large tracts of other federal land have also been cleared of forest and appear to be in old field succession. Johnson grass (*Sorghum halepense*) and Canada thistle (*Circium arsense*), both invasive exotics, are present in fields near Yorktown and some spreading of these species to other areas has been noted.

These cleared lands in the areas surrounding the parkway are mapped on the Vegetation Cover Types Map (see Sheet 23).

h. Summary
The native cover types of the parkway—forest and wetland— are experiencing a decrease in quality and extent. Major causes include adjacent development, which is reducing and fragmenting the forest, and erosion, which is reducing and degrading the tidal wetlands. Invasive exotic and aggressive native species are another impact on these native cover types. Managed cover types—parkland and turf—also exist along the parkway. These predominate along the shoreline side of the parkway and have also begun to overlap with wetland areas.

2. Designed Plantings

As noted in the site history, several eras of planting plans guided the designed aspects of parkway vegetation. Distinguishing between "designed" and "natural" plantings along Colonial Parkway can therefore be a difficult undertaking. To some degree, this is due to fragmentary documentation of planting decisions, since much of this work was done in the field. In large part, however, the difficulty in distinguishing between the "two types" of planting is due to the nature and intent of the planting design, which had two clear components. On one hand, the planting was clearly intended to serve specific roadway design goals, the primary one being to enhance the experience of driving and viewing the road trough the planting of individual trees, clumps of trees, and masses of shrubs to frame views and draw the eye along the road. On the other hand, there was also, as evidenced in plant lists and planting plans, a clear desire to effect the "natural" appearance of the local Tidewater landscape through the use of a predominantly native plant palette. This use of a native plant palette, combined with the installation technique of "facing down" cut and fill slopes with vegetation transplanted from the forests immediately surrounding the construction area, makes it very difficult in many cases to precisely identify which plantings are "designed" and which are "natural." In other cases, detailed plans and evidence of implementation provide good documentation. Therefore, the goal of this existing conditions section of the CLR is not so much to distinguish designed from native plantings as it is to identify and describe the range of planting effects that exist along the parkway today. In particular, these are plantings along the parkway which have a distinct character or



Figure IV.32. Typical shrub area seen between wetlands and mown area, 1996. LANDSCAPES LA·Planning·HP.

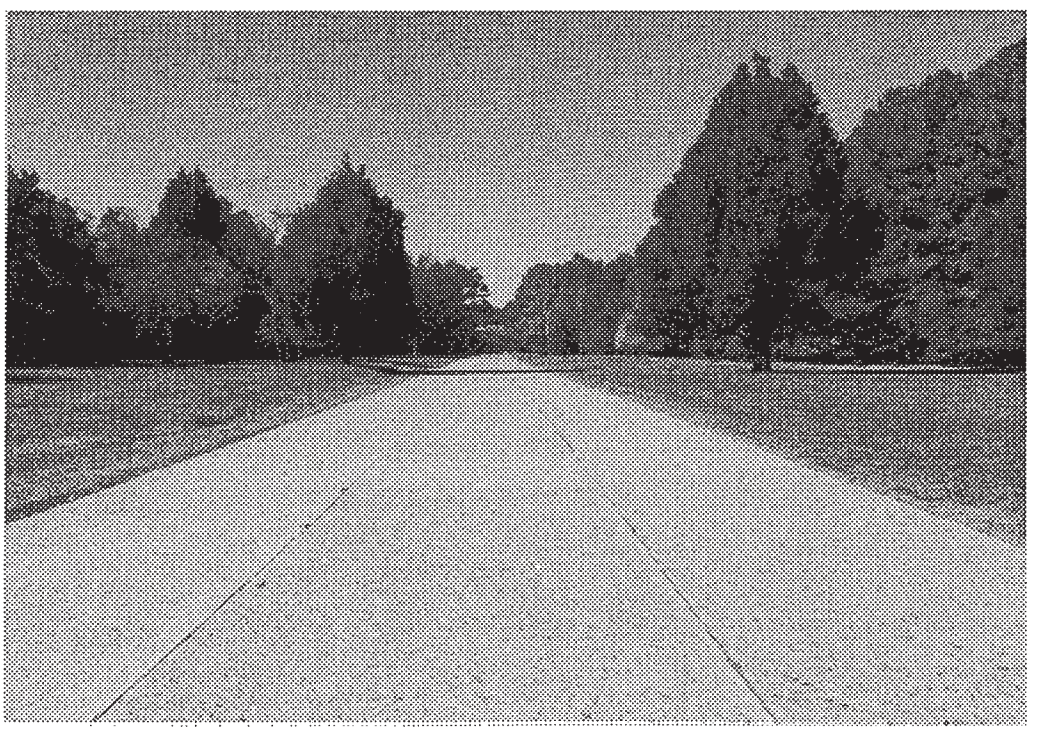


Figure IV.33. Parkland (mown turf with trees) along James River, 1996. LANDSCAPES LA·Planning·HP.

provide a specific visual or aesthetic effect, beyond that of generalized regional forest types and specific local ecological conditions. These planting types are broken down into a number of categories below.

a. Roadside/Forest Edge Plantings

Along many woodland sections of the parkway, forest edges are characterized by a layer of flowering understory trees. Planted in clumps and in informal drifts along the forest edge, this layer of trees adds seasonal color to the roadside and functions as a transition zone between the parkway's turf margin and the tall canopy of evergreen or deciduous growth beyond. Within the cathedral-like spaces provided by the tall deciduous and evergreen trees of the parkway's forest edge, this layer of trees also help to define a linear volume of space immediately around the parkway pavement, creating an intimate space around the motorists' vehicle. When placed on one side of the road, the flowering understory the trees serve to enhance the parkway's curving alignment by drawing the eye down the road; when planted on both sides of the parkway, they function to frame enclosed views.

Although the general pattern of understory trees located between parkway edge and forest edge is frequently seen along the parkway, there is some variation in the location and density of the three elements. In some cases, the understory trees and forest edge are located tightly against the edge of the road, within 10 feet of the pavement. Such a configuration of pavement and forest edge is seen on the existing conditions plan of Station Point 544 (see Sheet 10). In other areas, as shown on the existing conditions plan of Halfway Creek (see Sheet 13), understory trees are clumped irregularly in mowed turf on the roadside slope, with the taller forest edge behind. Understory trees located in the forest edge provide a scale and visual linkage to the trees scattered across the slope. This latter configuration of understory trees extends the transition zone between parkway and forest, creating less of a "tunnel" effect around the motorist. In general, these more open plantings of dogwood and redbud are found between Williamsburg and Jamestown, while the more "tunnel-like" effects are located in the area between Kings Creek and Jones Mill Parkway. In a number of areas the understory tree layer appears to be a remnant of earlier plantings with less density of flowering trees than was originally planned. The area around Kings Creek currently has the highest density of flowering trees, due in part to replanting efforts in this area which occurred in the past five years (see Figure IV.9).

The designed understory tree layer is primarily composed of flowering dogwood (*Cornus florida*) and American redbud (*Cercis canadensis*), although shadbush (*Amelanchier canadensis*) and American holly (*Ilex opaca*) are also found providing a similar function in some locations. Although recent (1974) planting plans show sourwood (*Oxydendron arborescens*) planted in the edge, no evidence of this species was noted during in-field inspection. In general, the health and condition of these understory trees appears to be good to fair, especially given dense shade in some areas and recent anthracnose outbreaks affecting the dogwoods. However, some dogwoods and redbuds appear to be aging poorly; in some cases dead or dying limbs indicate that a more detailed inspection of these trees would be advisable.

b. Groves of Trees in Turf

Another planted feature which appears along the parkway are groves of trees in turf. Like the plantings of understory trees, many of these groves appear to be remnants of historic plantings. Generally these plantings are found on the flatter areas of hydraulic fill, such as the grove of locust trees (*Robinia pseudoacacia*) located on the flats below the Officers Quarters in the area of Indian Field Creek. Groves also appear along the Bellfield Straight. These groves are much less dense than the forest edge, and provide less of a sense of enclosure; rather, the plane in which the parkway pavement exists seems to extend under the trees rather than be bounded by them. In addition, such groves of trees provide an intermediate character between the dense forest and wide open areas that dominate other stretches of the parkway. These groves help maintain a sense of "park" or manipulated landscape which exists along the

parkway in contrast to more densely vegetated areas which lend a sense of "forest" or, in some cases, a sense of "overgrown" vegetation. A more manicured grove character is particularly identifiable in the groves of trees underplanted with mown turf, existing in the areas around the Real Estate and Jamestown Island Parking areas and other areas along the western end of the Parkway.

Tree groves in turf are a particularly characteristic planted feature in the area between Indian Field Creek and Felgates Creek, along the Bellfield Straight, as seen on the area's existing conditions plan on Sheet 7 in Appendix A. Here groves of tall pine underplanted with dogwood, redbud, and junipers frame and filter views of the York River, creating one of the more dramatic settings along the parkway. Figure IV.34 shows this area with taller evergreen trees at the parkway elevation augmented by dogwoods slightly downslope along the river. A continuous planting is spread out along the length of the bluff and alternates with short areas of open turf.

c. Mass plantings of grasses and shrubs

A third distinctive type of planting evident along the parkway today are mass plantings of low-growing grasses and shrubs, such as marsh grasses (*Spartina* spp.), bayberry (*Myrica cerifera*), and groundselbush (*Bacharris halmifolia*). Although these plantings are quite broadly naturalized today, photographs and planting plans indicate that such mass plantings were in fact designed. Although their condition today may differ from that originally intended, these plantings provide distinctive character along many stretches of the parkway. These areas include the inland and shoreline marshy edges at Felgates Creek, Indian Field Creek, and along the bulkhead on the island side of the Jamestown Island Isthmus, where marsh grass plantings create a vegetated plane drawing the eye toward the water and the opposite shore. These marsh grass plantings are well established. They duplicate native plantings and are fully naturalized tidal marsh environments supporting a variety of wildlife.

Large masses of shrubs currently function to screen and frame views along certain areas of the parkway. Such plantings are evident along Brackens Pond (see Figure IV.4), where shrubs screen views of the pond on one side of the road and frame views of the Naval Mine Pier on the other. Or, as seen in Figure IV.35, which shows an inland marsh area near Archers Hope, masses of bayberry help define wetland edges and serve to frame the road corridor. Tall shrubs and grasses also provide a screening effect (whether intentional or not) at the College Creek Overlook, where views toward the inland marsh are partially blocked. It should be noted that in many cases, especially in forest understory areas, it is difficult to tell where shrub masses are clearly designed plantings and where they have simply colonized or naturalized a particular area. For example, naturalized masses of honeysuckle and blackberry are found in the forest edges near the Naval Mine Depot overlook, masses of mountain laurel (*Kalmia latifolia*) are found in the area near Jones Mill Pond, and large clumps of bayberry are seen in the area near the Civil War Fort and the James River parking overlook.

d. Vines

Masses of vines appear along many stretches of the parkway. Appearing on the planting plans of the 1930s, vines were apparently planted in masses in cleared areas, in overlook islands, and on river slopes. Today these vines create an existing condition of invasive growth, as seen in Figure IV.36, a view opposite the parking overlook near Brackens Pond, where Japanese honeysuckle (*Lonicera japonica*) engulfs trees. Other vine species climbing trees and creating dense mats in the understory include wild rose (*Rosa* spp.) near Capitol Landing (see Sheet 11), greenbrier (*Smilax rotundifolia*) near the Civil War fort at College Creek (see Sheet 14), and English ivy (*Hedera helix*) near Colonial Williamsburg and Brackens Pond (see Sheet 6).



Figure IV.34. Groves of trees along the Bellfield Straight, 1996. LANDSCAPES LA·Planning·HP.



Figure IV.35. Wetland marsh near Archers Hope, 1996. LANDSCAPES LA·Planning·HP.



Figure IV.36. Invasive vines and specimen trees near the overlook near Brackens Pond, 1996. LANDSCAPES LA·Planning·HP.



Figure IV.37. Trees in turf providing canopy at Archers Hope Overlook, 1996. LANDSCAPES LA·Planning·HP.

e. Specimen Tree Plantings

Another type of distinctive planting is the use of specimen trees in turf. Although this type of planting is sometimes used along the roadside to vertically mark a curve, drawing the eye of the motorist down the road, in general, the planting of individual trees which have, over time, become distinct specimens, is concentrated in areas around overlooks. These trees, often large oaks, sweet gums, or sycamores, give a volumetric spatial quality to a number of overlooks by providing a canopy and sense of overhead enclosure. The Naval Mine Depot overlook at Brackens Pond, the Archers Hope overlook, and the York River overlook all demonstrate exemplary usage of specimen trees. As seen in Figures IV.36 and IV.37, the Naval Mine (Brackens Pond) and Archers Hope overlook areas, specimen trees mark the parking overlook islands, separating the overlook from the parkway, and provide an edge around the parking area. At other parking areas, specimen trees function less in providing spatial definition than they function as important objects within a wide, open space. This is seen in figures IV.19, which shows an independent pine at the Isthmus parking overlook. Figure IV.38, showing a single sycamore tree at Felgates Creek, illustrates the character of specimen trees along the parkway and the distinctive volumetric quality specimen trees provide to the roadway.

Although not a designed planting *per se*, the large oak trees at the Great Oaks Parking overlook deserve some mention here, since they are significant specimen trees along the parkway. During construction of the parkway, these oaks were recognized as important historic features and the parkway was routed around them in order to allow visitors to view them. Although one of the large trees has been lost, one still remains, and a few smaller, but still significantly large oaks grow in the same area. The large tree has recently been pruned and appears to be in relatively good health, despite some erosion occurring in its root zone.

f. Parking Area/Terminus Planting

Both the Jamestown and Yorktown Visitor Center parking areas, which function as the parkway termini, are defined by their plantings, in which large trees provide shade and overhead canopy enclosing the parking lots. Both parking lots also have some distinct, heavily forested edges, making these spaces seem much like rooms (see Figure IV.20). The plant palette in both parking lots is quite simple, being confined to large trees such as oaks, sycamores, and maples.

g. Bridge Abutments

Based on sketches and planting designs for the parkway structures, it is clear that distinctive plantings once existed around the underpasses and tidal marsh bridges. Today, however, these plantings are missing or exist in remnant form. At the underpasses, these remnants consist of older flowering, deciduous, and evergreen trees located on the slopes immediately adjacent to the bridges. Such a remnant planting is clearly shown on the existing conditions plan of the Capitol Landing Underpass (see Sheet 11), where maple, holly, and dogwood trees are seen located on the slope near the bridge abutment. Daylilies are also planted at this underpass, at the retaining walls directly under the bridge. These appear to have been planted based on a 1974 planting plan. Little or no remnant plantings appear to exist around the more recent bridges such as the underpasses for I-64, Parkway Drive, or Virginia Route 238, where forest vegetation appears to simply meet the bridge abutments. Remnant, bridge-framing plantings can, however, be found near the Tazewell Hall Underpass, the Williamsburg Tunnel, the C&O Railroad Underpass, and at the Route 199 Underpass. The C & O Underpass, which has separate arched openings to accommodate bridle and pedestrian paths, as well as remnant structural features (such as a designed retention pond, a Colonial-style pump house, and some fencing) most likely had additional detailed plantings perceivable by slower-moving pedestrian traffic. However, the area around this overpass is overgrown with volunteer vegetation, which encroaches on the bridge and pond.



Figure IV.38. Single specimen sycamore at Felgates Creek, 1996. LANDSCAPES LA·Planning·HP.

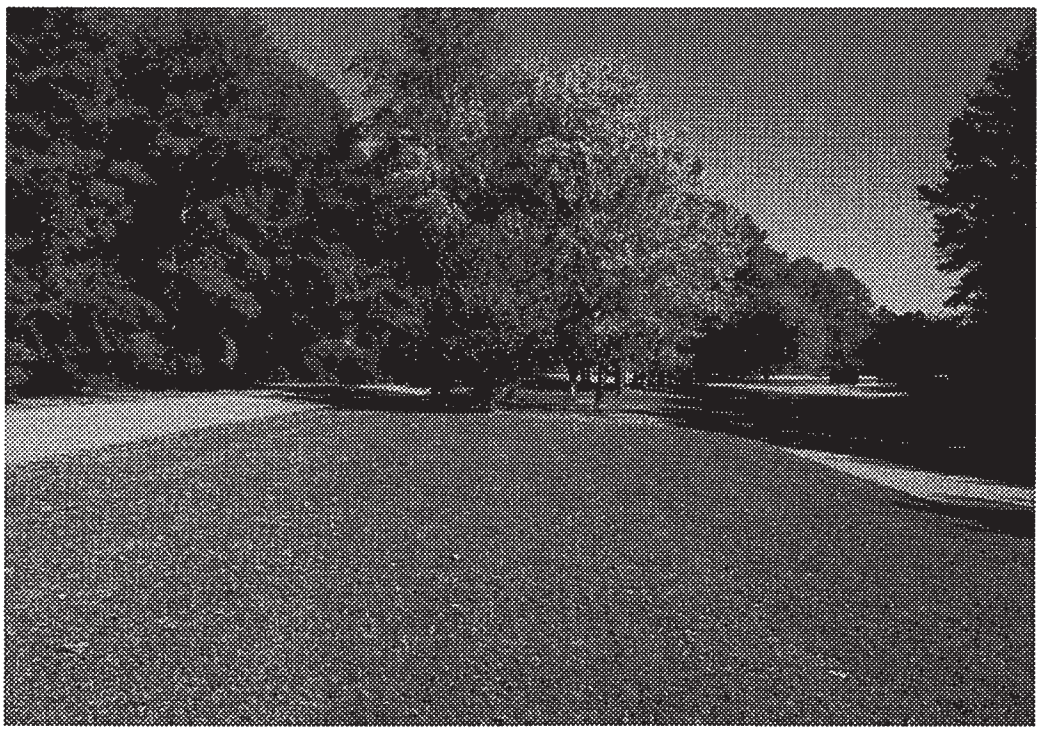


Figure IV.39. Planted median enroute to Jamestown Island, 1996. LANDSCAPES LA·Planning·HP.

In addition to the bridge abutment plantings, flowering understory trees are located in the forest edges leading up to the underpasses. Interestingly, at the Route 199 bridge, some shadbush (*Amelanchier canadensis*) is located in the understory, reflecting plantings shown on the 1974 planting plan. In addition, this area shows some larger trees along the bridge abutment, as well as specimen trees located in the triangular islands of the cloverleaf interchange, the latter being an apparently unique condition along the parkway.

h. Williamsburg Traffic Circle/Jamestown Island Entry

The Williamsburg traffic circle and the Jamestown island entry are two zones of the parkway where the roadway separates into individual traffic lanes, providing opportunities for plantings in the medians separating the interchanges. The access roads and plantings at the margins combine to shape space in these areas. These clearly designed plantings can be characterized as informal plantings of trees and shrubs with an apparent design intent of providing seasonal color and visual interest with flowering plant materials. Historic planting plans indicate a level of detail that is no longer present. As seen in Figure IV.39, the mixed tree planting in the Jamestown median provides visual interest. Perhaps because these areas are interchanges and function primarily as orientation and wayfinding points along the parkway, the plantings are not obtrusive and play a primarily decorative function. Spaces here are defined more by the strong forest edges bounding both spaces and by the lanes of separated pavement, than they are by the clumps, lines, and groupings of low-growing flowering trees and shrubs.

i. Summary

Both general and specific examples of designed plantings have been described in this section. While a number of design effects were intended in parkway plantings dating to many eras, only some examples of these effects remain.

3. Existing Management of Vegetation

a. Forest Management

The only significant forest management at the park-wide scale is the cutting of patches of pine infested with bark beetle, undertaken primarily around the Yorktown tour roads. These sites have been left to succeed naturally. At the present time, there is no specific management intended to sustain the character and conditions of the historic forest communities.

There is some indirect forest management relative to maintenance of the parkway edges as well as sight lines and vistas from the roadway. The mown edge has, in many places, gradually encroached upon and impacted areas of adjacent native forest. Selected areas of forest understory have also been periodically cleared to open views. In places, the vegetation has matured to create a greater degree of enclosure, which may, in turn, have provoked the clearing of understory.

b. Existing Wetland Management

There is no direct management of wetlands. However, intermittent mowing in some of these areas has extended the mow line into wetlands. This is apparent from color aerial photographs, where lawn areas that are wet show as bright pink rather than pale green. Examples of this are cited on Sheets 15 and 8, showing Archers Hope and Felgates Creek (Figure IV.41). Native species are often replaced by common reed in these areas. Wetlands losses also result from erosion due to bulkheading or riprapping of adjacent shorelines.



Figure IV.40. "Class B" mowing on a road sideslope, south of Williamsburg, 1996. LANDSCAPES LA·Planning·HP. new



Figure IV.41. Large mown area, along James River, 1996. LANDSCAPES LA·Planning·HP. new

c. Existing Parkland and Turf Management

Mowing is the most extensive and intensive management undertaken in parkland landscapes. The goals of current mowing practices are to maintain the parkway with a neat, aesthetic appearance while following the legislative intent to maintain the parkway's "country road" feeling. Parkway turf is presently maintained at a variety of heights. The parking areas/overlooks and their islands are mowed every two weeks, maintaining a height of 2 to 4 inches. The parkway shoulders and adjacent fields (Fusiliers Redoubt, Naval Weapons Station, Indian Field, Bellfield, Felgates Creek Area, Jones Mill Pond, Isthmus, College Creek, Archers Hope, and Glebe Gut) are mowed 3 to 5 times per year, maintaining a height of 3 to 8 inches. Figure IV.40 shows a road shoulder mowed at this "Class B" level. Mowing schedules are modified at Bellfield, Brackens Pond and other areas to allow the Yorktown Onion to flower and seed. Additional mowing is occasioned by public events such as Yorktown Day. Variations in staffing and weather conditions may also influence the mowing schedule.

Mowing is generally accomplished with large equipment with wide mowing blades, which helps reduce staffing and time required for mowing. Still, some areas require more labor-intensive approaches, such as the hand cutting required in areas where guard rails were recently installed. However, in most areas, mechanical and hydraulic John Deere tractors with brush hog and mowing bar attachments are used to maintain the road shoulders and earthwork berms. The blade height is adjustable to about six inches and the long bar can be tilted to allow mowing on the steeply sloped earthworks. This large equipment is heavy and causes some compaction and erosion, although the sandier soils along the parkway are less easily compacted than more clayey soils. The use of larger equipment, also causes problems in uneven terrain and on convex slopes, where blades may scrape the surface of the soil. This has resulted in areas of bare or sparsely vegetated soil in some of the vista areas and overlooks and on steeper side slopes (see Figure IV.42). Close mowing has abraded the ground plane at Archers Hope, and this, combined with the area's sandy fill soils, has contributed to a desert-like conditioning this area, seen in Figure IV.43. Management has begun to spread woodchips in an attempt to salvage the ground layer here (see also the existing conditions plan for Archers Hope on Sheet 15).

d. Designed Planting Management

Where designed plantings are clearly distinguishable, management of this vegetation is predominantly focused on maintaining these plantings in good health and good appearance. Where designed plantings are less apparent, blending with native vegetative effects, management is more limited. For example, the parkway's mass plantings of grasses have generally been left alone to establish and naturalize themselves. Similarly, mass plantings of shrubs have also naturalized in areas around tidal creeks and are periodically cut back based on blocking of viewsheds and other maintenance concerns.

The designed planting features which have received the most management attention are probably specimen trees and plantings around peak traffic areas, such as the overlooks, the Visitor Center parking lots, and the Williamsburg traffic circle. In these areas, regular mowing around trees and shrubs maintains a neat appearance and individual plants are pruned when diseased or damaged. Similar management has been practiced on the flowering trees along the road margins. It should also be noted that some replanting of these trees along the parkway has occurred over the years. However, this replanting appears to result from a broader desire to maintain a certain level of seasonal interest along the parkway, rather than a more precise treatment of in-kind tree replacement to recreate specific planting effects as existed historically.

In other areas, where designed plantings have been encompassed by native vegetation, little management occurs. Such minimal treatment occurs primarily around the bridge abutments, and for example, at the C & O Railroad underpass, where only remnants of a larger landscape design remain.



Figure IV.42. Bare soil on slope of overlook, 1996. LANDSCAPES LA·Planning·HP.



Figure IV.43. Bare area and wood chips applied at Archers Hope, 1996. LANDSCAPES LA·Planning·HP.

F. SHORELINE ISSUES

1. Overall hydrologic patterns of the area

The hydrologic patterns of the Chesapeake, like the vegetation, reflect its past history as a drowned valley. The rise and fall of sea level and the accumulation of sediment in the estuary over time has shaped this landscape. The character of this estuarine landscape is driven by the recent acceleration of sea-level rise as well as rapid suburbanization of the region. These factors have led to increasing impermeability of the landscape and a gradual armoring of the coast. The extensive wetland systems and long shorelines that once absorbed and held both flood waters and storm surges are gradually being changed and sometimes compromised by development patterns that increase surface erosion and aggravate shoreline erosion.

The landscape of a drowned river is dynamic and ephemeral. The recent shoreline features of the Bay and its extensive shoreline are shaped by on-going sea-level rise which impacts sand transport, wave action and flooding. The shorelines of the Chesapeake include bluffs, marshes, beaches and riprap. These shoreline features are described in the following section and are also illustrated: Bluff and marsh edges adjacent to the parkway are noted on the Parkway Edge Conditions map (see Sheet 24 in Appendix A); areas of riprap and bulkhead are noted on the Shoreline Conditions map (see Sheet 25).

a. Bluffs

Bluffs are an eroded edge of land. In the Peninsula area, bluffs are composed of unconsolidated materials, including sands and clay. They range from over 100 feet in height at Calvert Cliffs to a few feet in height near College Creek. The bluffs in the area of the parkway are generally low, under 20 feet. Wave action along the parkway may be relatively strong. Bluffs are subject to failure that may be caused by this wave action, as well as by freshwater moving in a sand layer beneath a heavier clay surface soil. Any feature that concentrates seepage through the clay layer may accelerate the rate of slumping by destabilizing the face of the bluff where the water flows out, taking soil with it. An impoundment at the suburban area of First Colony just to the west of the parkway at Jamestown, for example, is probably not coincidentally at the top of the fastest eroding section of bluff in the area.

In addition, any construction—such as a pipe or footing—or a drainage feature—such as an inlet— that might convey water down to the sand layer may accelerate shoreline loss. Bluff erosion is also aggravated by increases in surface runoff due to storm drainage from turf and impermeable surfaces. For example, trampling and compaction at the picnic area near the Yorktown Monument is a likely factor in excessive shoreline loss of the adjacent bluff.

b. Marshes

Throughout the Chesapeake, marshes (estuarine emergent wetlands) are comprised of a mat of grasses that collect sediment and baffle water currents. They are common and were once the predominant shoreline condition (Figure IV.44). Marshes provide a natural defense throughout the more protected intertidal areas with low wave energy. They also provide natural flood protection. Marshes are very vulnerable to severe wave action and may erode several feet in a single storm event, taking away centuries of accumulated peat. Wherever a scarp is visible, active erosion is occurring.

In more stable areas the marsh may be fronted by a sand beach. In general, marshes in the lower Chesapeake are being challenged by an accelerated rise in sea level as well as by the loss of sediment that once came from the rivers and tributary streams being trapped further upstream. Local tidal fluctuations may also be greater due to local bulkheading or riprapping. Although less marsh is now being lost directly to development due to regulatory protection, these wetlands are under assault from surrounding develop-



Figure IV.44. Typical marsh shoreline along the parkway, showing water, marsh, shrubs, turf, 1996. LANDSCAPES LA·Planning·HP



Figure IV.45. Mowing occurring within marsh/wetland limit, 1996. LANDSCAPES LA·Planning·HP.



Figure IV.46. Typical area of scarp along James River, 1996. LANDSCAPES LA·Planning·HP.

ment. Along the parkway, College Creek is one of the most dramatically impacted marshes. Fill for the parkway reduced its tidal exchange, contributing to eutrophication, and minimally-buffered development throughout the watershed has changed drainage patterns into the marshes. In addition, marshes along the parkway are also impacted by mowing as well as erosion and sedimentation from the parkway (see Figure IV.45).

c. Beaches

Beaches in the estuarine zone are created by sediments from adjacent eroding shorelines. Where sandy bluffs are eroding, a wider, longer beach may be made. Many of the shorelines of the lower Chesapeake are downwater from eroding marshes or clay bluffs which make smaller beaches, or none at all, thus providing less protection from wave action. Beaches along the parkway tend to be either armored with riprap or actively eroding. Beach locations were not mapped since they are small and frequently not visible below the marsh or bluff edge.

Armoring of the coastline further starves these minimal buffers which depend on sand transport from adjacent areas. This is compounded by the problem of excessive amounts of sediment being trapped in the rivers by dams. In addition, activity on these narrow beaches may accelerate erosion. Walking and trampling, even where there is no vegetation, may loosen the surface crust and make material more vulnerable to wave action. The presence of a scarp, rather than a gently sloping beach, indicates active erosion (Figure IV.46). In contrast, where a marsh fringes the beach, wave action is lower and a greater degree of protection is provided.

d. Riprap

Stone armoring of the coast is the most rapidly increasing shoreline condition. Although riprap may protect the shore it armors, at least temporarily, it is intimately associated with the deterioration of adjacent, more

natural shoreline areas. Riprap restricts natural longshore transport of sediment which starves beaches and marshes alike. Riprap may also restrict tidal flow in marshes. In general, where riprap is used along the parkway, there has been a loss of natural habitats).

2. Coastal change over time

The Shoreline Conditions map (see Sheet 25) indicates both the rate of shoreline loss as well as the type of shoreline armoring present along the coasts. The length of the "fetch," or the distance over water that wind may travel to generate wave action, is also noted on this map. The information this map was based on is somewhat outdated and at a very large scale, but it nonetheless provides an overview of coastal impacts.

Comprehensive studies of local shoreline erosion were undertaken in the early 1970s. These were based on topographic maps dating from the 1850s to 1940s, and compared the high water shoreline positions.[14] These studies showed the following:

· In areas adjacent to the parkway in York County along the York River's southern shore, shoreline erosion was considered moderate with measured rates below 2.0 feet per year. Considering that this shoreline consists of low to moderately high bluffs, this meant a sizable volume of material eroded each year especially from the York River cliffs to the west, including Yorktown itself and beyond.

· In the parts of the parkway located near the James City County shoreline, erosion was found to be lower. Just to the east of Jamestown, however, a very high erosion rate, greater than 10 feet per year, was noted adjacent to the development known as First Colony.

The most influential shoreline management activities associated with the parkway are vista clearance and shoreline armoring, both of which may have substantial visual and ecological impacts. Where the parkway parallels the James and York Rivers, selective cutting of volunteer and native vegetation has occurred between the parkway and the shore, predominantly where panoramic vistas along both rivers are common. As noted earlier, this sometimes results in the mowing of emergent marsh in a few places.

Shoreline management has until recently been driven primarily by the perceived need to "protect" the shoreline from erosion, particularly in areas where features or structures such as bridges are located. As noted in the text and on the Shoreline Conditions map, this has generally increased the total length of bulkheaded and riprapped shoreline, which in turn may accelerate erosion on adjacent unarmored areas, especially marshlands. However, Colonial NHP staff has recognized the dilemma in seeking to provide static protection in what is essentially a dynamic situation. Current management policy reflects this awareness and it has been stated that a major future goal is to avoid the incremental armoring of the entire coastline over time. Future workshops are scheduled to assess current approaches and to develop long term policies and strategies.

In summary, long fetch distances of up to twenty-one miles create highly erodible shoreline conditions along the York River and parts of the James River. At present most of the shoreline is stabilized with riprap, an expedient and perhaps impermanent solution.

G. DRAINAGE FEATURES

1. Overall Drainage Characteristics

The parkway's drainage reflects the larger patterns of the estuary. All of the park is located within the Tidewater area of Virginia which is in direct hydrologic connection with the Chesapeake Bay. All of the peninsula drains either to the York River watershed on the north and the James and Chickahominy watershed to the south. The drainage divide roughly parallels old U.S. Route 60. The Colonial NHP GIS database reports there are approximately 33 miles of shoreline, over 24 miles of perennial streams and almost 30 miles of intermittent streams within the park's boundaries. The James River watershed is a vital resource to the State of Virginia and supports over one third of the population, although it comprises only one quarter of the land area of the State. The York River watershed is much more sparsely developed, with less than 2% of the area urbanized. Nearly 70% is forested.[15]

The history of sea level change and episodes of filling have produced a terraced landscape that reflects these past histories. As noted in the section on the parkway's existing topographic conditions, the parkway on the peninsula between Powhatan and College Creeks crosses very low terraces and is built entirely on fill. Between College Creek and Halfway Creek the parkway rises onto higher terraces, where it tends to follow the course of stream valleys cut by College Creek. In the eastern section from Williamsburg to Yorktown the parkway crosses a dissected upland and the many stream channels draining north/northeast to the York.

Because of its location, crossing the Peninsula's general drainage pattern, the parkway itself acts as a partial dam to surface drainage. A system of pipes convey the drainage under the roadway. Although these pipes were probably adequately sized upon construction, subsequent development has greatly accelerated surface runoff. This has resulted in sedimentation and erosion along natural drainage channels and undermining of pipes and culverts which allow the drainage to move under the road. These effects are particularly noticeable in the areas abutting developments, such as those near Parkway Drive and Capitol Landing. These problems are likely to become more severe as suburbanization continues around the parkway. At a more local scale, significant hydrologic changes have occurred in habitats where patterns of drainage historically were more diffuse.

Finally, additional changes to the park's natural drainage systems have occurred through the activity of beavers. The construction of beaver dams has, for instance, caused some localized flooding and tree loss along the parkway in the area of Paper Mill Creek.

2. Existing Management of Drainage Features

Dr. James Gregory and Jennifer Wiley, Masters student in hydrology, both of the Department of Forest Resources at North Carolina State University, are presently developing, in cooperation with the park, an Erosion and Sedimentation Management System (ESMS) for Colonial Park. The system is intended to be a set of standard management guidelines that can be utilized by the Natural Resources Manager in any national park to develop and implement a plan for dealing with erosion and sedimentation problems. The plan focuses on accelerated erosion rates caused by anthropogenic activities rather than natural factors. These anthropogenic activities include management practices, rogue trails, concentrated storm water runoff from impermeable surfaces and inadequate storm water control. These impacts are felt both within Colonial NHP as well as off site.

Gregory and Wiley have recently completed the field work for the parkway sections of the park. The documented areas of sedimentation and erosion will be entered into the Colonial NHP GIS system by locating these areas with the use of a Global Positioning System (GPS). Their mapping will not be available before the Spring of 1997, but their survey of natural drainage features will be more comprehensive than is possible within the scope of this cultural landscape report. Although their work encompasses an area larger than the parkway corridor, this is the appropriate level—the watershed level—at which to address parkway drainage issues.

3. Built Drainage Features

As noted above, the parkway, because of its location across the drainage patterns of the Peninsula, functions as a partial dam to surface drainage. To accommodate the flow of water within this watershed, roadway drainage features were constructed to carry water across the right-of-way. Other roadway drainage features were designed to remove storm water from the road itself, and were designed to function in conjunction with the surrounding natural and constructed surface drainage systems. These drainage features include culverts, swales, concrete-lined channels, curbs, and pipes and underdrains of various types. Although common in current road and highway construction, retention or detention basins are not evident along the parkway.

In general, the engineering of Colonial Parkway's drainage is based on surface and sheet flow, rather than on a more elaborate engineering solution of pipes and catch basins. This contributes to the parkway's characteristic appearance, because, for example, when viewed in section, the use of swales next to the road becomes a common and visually dominant effect. However, because much of the drainage system exists at the surface, and is not protected underground, these systems are more susceptible to erosion and sedimentation. Though by and large in good condition, the drainage features of the parkway are beginning to show the effects of these processes. To clarify the condition and appearance of the built drainage system, each type of drainage feature is described in greater detail below.

a. Culverts.

Minor stream crossings of the Parkway are accomplished by a system of arch and box culverts with brick headwalls, which allow surface drainage to flow underneath the parkway. The culverts are numerous, and vary in arch and pipe diameter; it should be noted that both single and double arch and pipe culverts are common. Although the exact locations of the culverts are not comprehensively mapped, many are generally recorded on a colored-pencil set of drawings available in the Engineering Office. However, the locations, sizes, and hydraulic capacities of the culverts should be the subject of further study, so that their condition and status might be more conveniently recorded and managed. It may be useful to record this information via GPS, so that it could then be entered into the Colonial NHP GIS database.

During field review, the condition of the culverts was generally assessed. Although many culverts are in excellent condition, particularly those where little surface drainage is carried, serious erosion at the downstream side of many culverts is evident. Figure IV.47 shows the erosion at the outlet headwall of one such culvert, located near the Williamsburg Visitor Center. If left to continue, such erosion will eventually undermine the structure, and cause its collapse. This culvert condition is not unique along the parkway, and is occurring in conjunction with the erosion of the natural stream channels.

Beaver dams were noted along Paper Mill Creek. Although the exact hydraulic implications of this activity on culverts and pipes in this area cannot be determined, it should be noted that this activity is changing the hydrologic patterns of this area. This has already resulted in tree loss in this area, changing

the appearance of the forest here, and may also result in culvert blockage or the diversion of water to areas where no culvert exists to provide under road drainage. These conditions may create the potential for roadway flooding, particularly during storm events.

b. Grass Swales, Concrete Swales, and Concrete Chutes

Most of the Parkway is uncurbed with storm water shedding to the side of the roadway. This is referred to as an "umbrella section," because water is shed off the parkway as rain is off an umbrella. Water off the road is then collected in roadside grass swales or concrete-lined swales. In general, grass swales predominate along most of the parkway, and an example of one is shown in Figure IV.48, along the right-hand side of the road.

Concrete swales are used on steep down grades where fast-moving water would cause deep erosion were the channel unpaved. Concrete swales also appear where there is insufficient roadside area to accommodate the projected storm water runoff in a grass swale. An example of a concrete swale is shown in Figure IV.48, along the left-hand side of the road.

Figure IV.48 also shows a third type of roadway drainage feature, the use of a curb and concrete channel. The curb serves to more efficiently collect and direct the water draining off the road into the concrete swale, via a concrete drainage chute. The use of the curb prevents erosion and the deterioration of the grass between the road edge and the concrete swale, by directing the water to a singular, concrete chute. Such chutes are also used to direct water into natural drainage channels, some of which have been fortified with riprap to prevent scouring and surface erosion, as shown in Figure IV.49. (new figure showing typical chute with riprap). Based on construction drawings, it appears the use of the curb and concrete chute is a relatively new addition to the parkway, dating to the work performed by the FHwA in the past two decades.

As is true of the culverts, it may be useful to conduct some further study of the drainage swales. In particular, in may be useful to record the number, length, and locations of grass and concrete swales via GPS and enter this information into the GIS system to facilitate the future management of the park's drainage.

c. Underground Pipes

As noted earlier, underground piping is not a major component of the parkway's drainage system. The major underground pipe systems are located near Page Street, the Williamsburg Traffic Circle and near Tazewell Hall Avenue. Briefly, the three systems, as constructed are:

·Page Street—a series of 15", 18", and 24" reinforced concrete pipes and 6" tile underdrain with an outfall approximately 150 feet east of Page Street.
·Traffic Circle—a system of reinforced concrete pipe, corrugated metal pipe underdrain and arch culvert outletting near the Colonial Williamsburg Visitor Center driveway.
·Tazewell Hall Avenue—a series of reinforced concrete pipe and a small box culvert outfalling near the ramp from Tazewell Hall Avenue to southbound Colonial Parkway.

Systems like these are essentially invisible, contributing little to the characteristic appearance of the parkway. They also require very little maintenance. Generally, leaves and debris have to be cleared from the inlets and only rarely do the pipes have to be cleaned. These systems appear to have been designed for a cleaning velocity of two to three feet per second minimum. The three systems appear to be functional, with no evident ponding. However, reports of roadway flooding by Colonial NHP staff indicate the pipes do not efficiently accommodate today's storm water runoff, particularly during major storm events.



Figure IV.47. Erosion undermining culvert headwall, in the area near Parkway Drive, 1996. LANDSCAPES LA·Planning·HP.



Figure IV.48. Typical concrete-paved swale, south of Williamsburg, 1996. LANDSCAPES LA·Planning·HP.

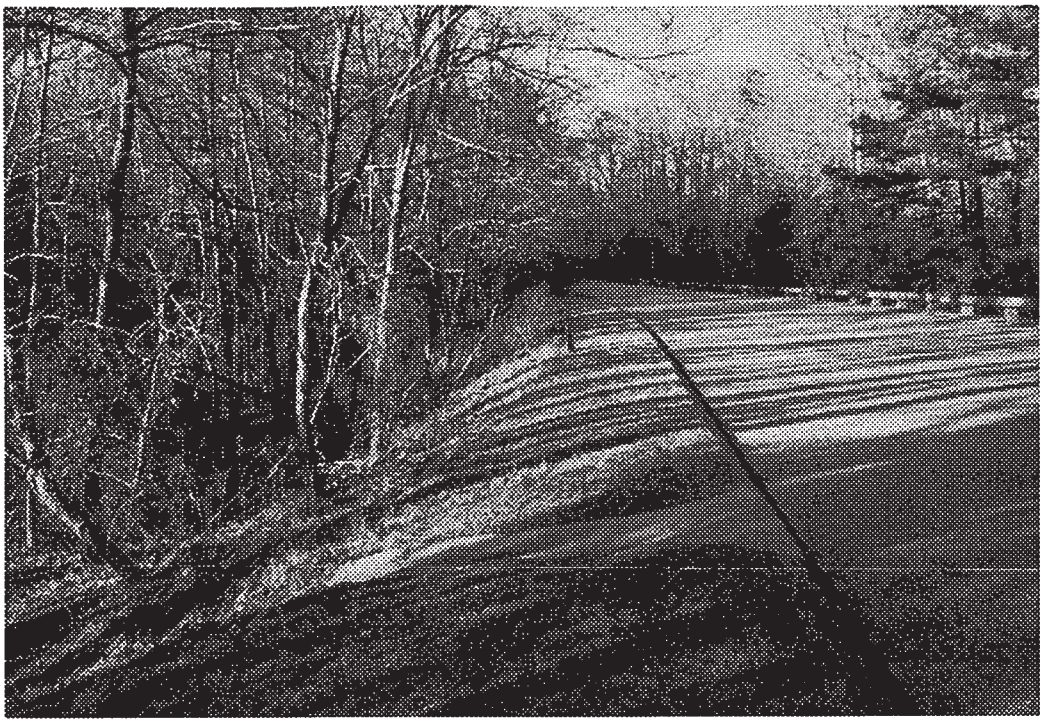


Figure IV.49. Typical concrete drainage chute with riprap to prevent erosion/scouring, 1996. LANDSCAPES LA·Planning·HP.

H. STRUCTURES

As shown on the 1996 Built Elements Plan, a significant number of structures are associated with Colonial Parkway. These structures were conceived as an integral part of the parkway, a fact evidenced by their careful design and construction. Although the great majority were built during the parkway's two major construction periods, a number of structures were built in the years following 1958. The structures fall into a few broad categories, which are explicated in greater detail below.

In 1994, the Federal Highway Administration inspected all bridge structures on the Colonial Parkway. National Bridge Inspection is mandated by the FHwA on a bi-annual basis. As a result of these inspections the FHwA determined that twenty-one of the bridges were in need of maintenance and/or rehabilitation, with an estimated cost of $1,105,400. Most of the work involves maintenance items such as cleaning and painting steel, repairing and repointing bricks and riprapping. Over 70% of the costs are for cleaning and painting the steel. It should be noted that according to the inspection reports no bridge on the Parkway is critically deficient or in danger of collapse. Full reports are on file in the National Park Service Maintenance Facility in Yorktown and a summary of the Bridge Safety Inspection Reports is included in Appendix C.

1. **Culvert Headwalls** (LCS 81984 (group))

Although they are not immediately evident to the casual parkway visitor, culvert headwalls are a significant group of structures found along the entire length of the parkway. Headwalls are generally located on one or both ends of concrete pipe (culvert) carrying water underneath the roadbed. In a sense, the headwalls

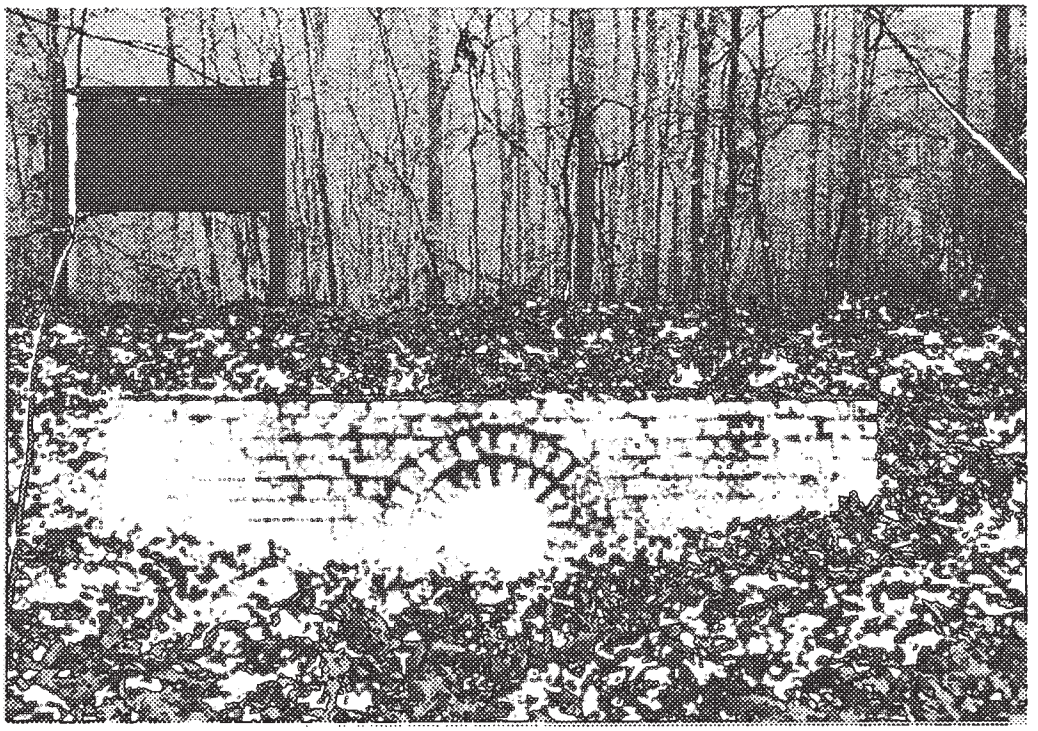


Figure IV.50. Typical brick culvert headwall at Halfway Creek Overlook, 1996. LANDSCAPES LA·Planning·HP.

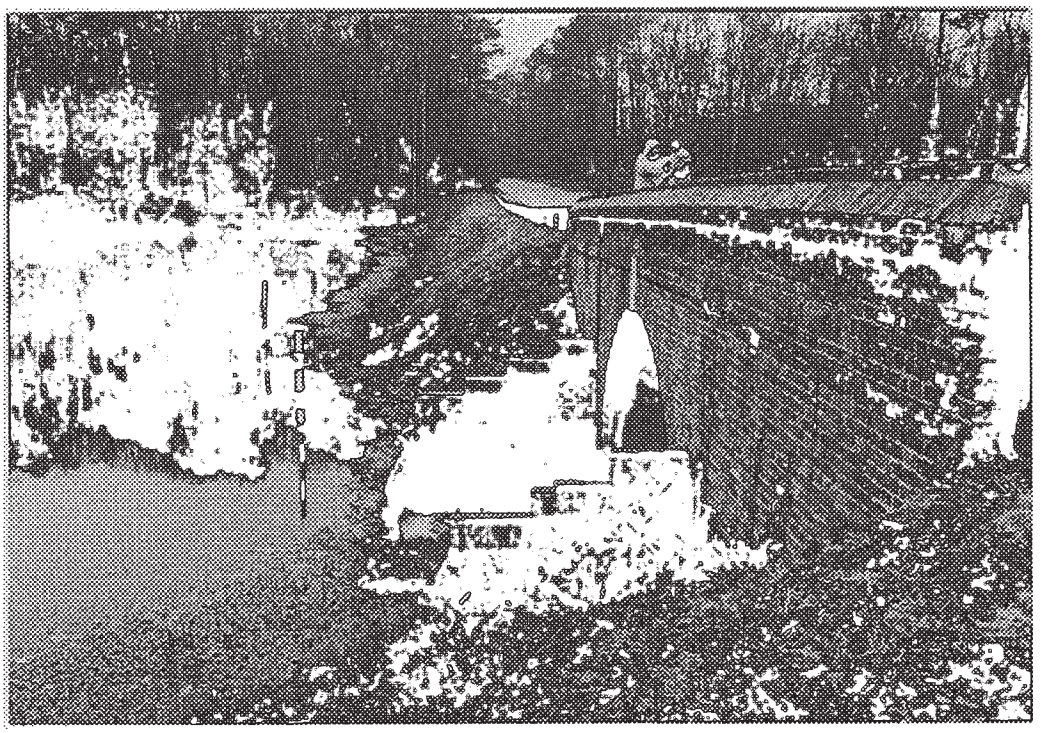


Figure IV.51. Large bridge culvert at Jones Mill Pond, 1996. LANDSCAPES LA·Planning·HP.

are the most visible element of the parkway's extensive drainage system, and certainly the most numerous: Since 95 culverts are found crossing under the parkway, a conservative estimate would calculate upwards of 150 headwalls located along the located along the parkway.[16]

All of the culvert headwalls constructed in the 1930s along the Yorktown end of the parkway are brick-faced concrete arch structures. The design of the arch and brickwork is a simple, but elegant, circular design based on traditional Colonial brickwork, as shown in Figure IV.50. Based on construction drawings and field reconnaissance, it appears that many, if not all, of the brick headwalls constructed in the 1950s also followed the 1930s design, though the brick used in their construction appears to be somewhat more orange in color than the 1930s brick. Some plain concrete headwalls and brick box culverts are also found along the parkway, but are generally associated with post-1958 work, such as the construction of the I-64 double bridges, or the interchange at Virginia Route 199. Another example is a combination of brick and concrete culverts associated with Lakeshead Drive, a collector road built in the upland area north of Williamsburg.

Three headwalls were constructed as part of much larger culverts which aided drainage at more significant drainage ways, and deserve to be called out as individual features. All three are documented on the 1996 Existing Conditions Built Elements Plan (see Sheet 22). The first of these is the **Ballard Creek Culvert** (no individual LCS number), located at the point where Ballard's Creek drains into the York River. This structure is an 8-foot concrete arch structure, clad in Colonial style brick with granite spillway crest stones.

Brackens Pond Culvert (LCS 81955, SP 132) was designed to allow water from Bracken's Pond and Roosevelt Creek to drain into the York River. Designed under the direction of Charles Peterson, the culvert was built in 1931, and is a 13-foot concrete arch culvert clad in Flemish bond brickwork. Unlike the typical culvert headwalls, this structure appears more like a small bridge, with parapet walls rising about 3 feet above the road grades.

The **Jones Mill Pond Dam** (LCS 81966, also known as the Cub Creek Culvert, SP 480) is the third large culvert located along the Parkway and is shown in Figure IV.51. Built in 1931-32, it was designed as part of the dam stabilizing the Jones Mill Pond reservoir and to manage the overflow of water from the pond into Cub Creek below. Located at the center and base of the dam, at water level, the structure is an 18-foot concrete arch culvert with a 59-foot spillway to the creek side discharge. Like the other culverts, it is clad with Colonial-style brick, and its two brick arches are ornamented with Indiana limestone keystones.

2. Brick Overpasses

A second category of structure designed as part of Colonial Parkway are overpasses, which allow the parkway to cross over local roads, railroads and other features. Also constructed of brick-faced concrete, these structures are less ubiquitous than the culverts, and, since only the tops of their parapet walls were viewed by the passing parkway motorist, their construction is somewhat more simply detailed than that of the parkway's underpasses, which are discussed below. All overpasses are highlighted on the 1996 Built Elements Plan (see Sheet 22).

Yorktown Creek Overpass (LCS 81959). Constructed in 1956, as part of the parkway between the Fusiliers Redoubt and the Yorktown Visitor Center, this bridge is a single arch reinforced concrete structure. Its brick parapets have a center camber rising to 3 feet.

U.S. Route 17 Overpass (LCS 81958). This bridge is a reinforced concrete bridge with 3-foot brick parapet walls and apex capped piers at all four ends. Completed in 1956, the overpass was part of the final construction push on the parkway. Two ramps provide access to Route 17, which crosses the York River via the George P. Coleman Memorial Bridge.

Navy Mine Depot Overpass (LCS 81946). One of the first completed structures on the parkway, this bridge was constructed in 1931. A parallelogram when viewed in plan, this 98-foot-long concrete arch, brick clad bridge was constructed on a slight curve. The railroad from the Weapons Station to the Navy Mine Pier passes under the bridge at its center, with an 18-foot vertical clearance and an 11-foot horizontal clearance. The brick work includes Flemish bond on the spandrel walls and the arch. Repairs and additions in the 1980s included the construction of a bicycle crossing and railing on the river side of the bridge.

North Pier Overpass (LCS 81960). Patterned after the Navy Mine Depot Overpass, this bridge was constructed in 1962 to allow an access road to the Navy Pier to pass under the parkway. The bridge is notable for its 3-foot brick parapet walls with apex piers.

Route 641 Overpass (LCS 81967). Built in 1964, this bridge is reinforced concrete bridge with brick cladding, 3-foot high parapets with a center camber and apex-capped piers at each end. The bridge allows the parkway to pass over Route 641 without interruption; interchange ramps provide access to Cheatham Annex.

Hubbard Lane Bridge (LCS 81695). This overpass was built in 1964 to eliminate the at-grade crossing at Hubbard Lane, which is now accessed via two interchange ramps. The bridge is a reinforced concrete columned structure, and its brick parapets have a center camber 3 feet high.

3. Brick Arch Underpasses

A series of brick-faced, reinforced concrete single arch bridges were designed to allow local roads to cross over the parkway without interrupting either traffic flow. As important visual elements along the parkway, the design of these bridges has been kept within strict parameters based on the original design of the first two underpass structures built along the parkway. Today the motorist on the parkway crosses under a total of 8 underpasses between Yorktown and Jamestown, all of which are shown on Sheet 22, the 1996 Built Elements Plan.

Virginia Route 238 (LCS 81957). Built in 1956, this reinforced concrete, single-arch bridge was built to carry Route 238 over the parkway. Modeled after the bridges built in the 1930s, the bridge is clad in brick and its parapet walls have a center camber approximately 3 feet in height. No ramps are associated with this bridge.

Interstate I-64 Bridges. One of two sets of double bridges, these were built to carry Interstate I-64 over the parkway in 1965. There is no interchange associated with these bridges.

Virginia Route 143 Underpass (LCS 81961).This single arch, brick-clad reinforced concrete bridge is similar to other underpass structures with three-foot cambered parapets with an apex-capped pier at each end. Constructed in 1948, the bridge allowed Route 143 to connect northern and eastern portions of Williamsburg without crossing the parkway at grade. Again, there are no ramps associated with this bridge.

Parkway Drive Underpass (LCS 81964) was constructed by the Federal Highway Administration in 1972 to provide a separated grade change at Route 163. This intersection had previously been considered a dangerous at-grade intersection, due to limited site distances. Patterned on the original "Miller's Crossing" Bridge (at Route 199 south of Williamsburg), the bridge is a typical reinforced concrete filled spandrel arch, clad in brick, with a granite keystone. The parapets have capped ends. Two ramps are provided to allow access to and from the parkway.

Capitol Landing Underpass (LCS 81947, also known as the Page Street Bridge). This single-arch, reinforced concrete bridge is 156 feet long. It has brick parapet walls 3 feet high with a center camber, a ribbed vault, a 6-foot granite keystone, limestone skewbacks, and retaining walls. It was completed in 1936. There is no interchange associated with the structure.

C & O Underpass (LCS 81948) is a complex structure, actually two separate bridges connected by overhead brickwork. The larger portion of the bridge carries three railroad tracks over the parkway, while the other portion carries Lafayette Street. The bridge has three arches, to separate vehicular, bridle, and pedestrian traffic. The large center arch, which spans the parkway, spans 50 feet, while the two smaller arches both span 14 feet. The reinforced concrete structure is clad in Flemish bond brick, with roundels as ornamentation between the arches. The structure's design is credited to both Charles Peterson and Arthur Shurcliff, and the bridge was completed in 1937. Access between the parkway and Lafayette Street is provided by one ramp off the southbound lane of the parkway.

Tazewell Hall Underpass (LCS 81745, also known as the Newport Avenue Bridge). This bridge was built in 1957 to eliminate an at-grade road crossing, and today two interchange ramps allow access to and from the parkway. A brick-clad reinforced concrete arch, the bridge is distinguished by its brick-faced spandrels, 3-foot high parapet walls, granite keystones, and cornerstones at the water table course.

Route 199 Bridges. Originally constructed as a single-bridge grade crossing in 1966, in 1973-75 it was redesigned as a two-bridge interchange by the Virginia Department of Highways to accommodate increased traffic on the new Williamsburg bypass. The two bridges are reinforced concrete arch bridges with brick veneer, and were constructed from plans drawn up by the state but approved by the NPS. Although it stands approximately on its original location and looks quite similar to its original appearance, the pre-existing "Miller's Crossing" bridge was significantly altered to accommodate the alignment of Route 199 and the increased traffic load. A full cloverleaf of ramps has been constructed to allow access to and from the parkway. These four legs replaced the two smaller ramps which were part of the earlier single-bridge interchange.

4. Williamsburg Tunnel (LCS 81738)

As shown on the 1996 Built Elements Plan, the Williamsburg Tunnel passes directly below Colonial Williamsburg. The tunnel itself is a cast-in-place reinforced concrete arch tunnel, which was substantially completed in 1942. The tunnel's paving, lighting and ventilation systems were built later. The tunnel is 1138 feet long with a span of 30 by 18 feet. The tunnel portals are designed to reflect colonial brickwork with Flemish and English bond brick, serpentine retaining walls, water courses, arched openings, molded copings, and herring-bone sidewalks.

5. Concrete Bridges

These bridges were designed to span the various tidal marshes and creek mouths the parkway crosses, and are often located adjacent to areas of hydraulic fill.

Indian Field Creek (LCS 82169). This bridge was originally constructed in 1932-33, as a reinforced concrete deck slab on steel I-beams and concrete bents and granite piers. The bridge had a high concrete hand railing. In 1980, significant portions of the bridge were reconstructed, including the bridge deck, abutment wing walls, and the bridge railing, which was reduced in height and designed to more closely match the railings on the bridges south of Williamsburg.

Felgates Creek Bridge (LCS 81962) was originally constructed in 1932-33. Reconstruction in the 1980s an extension of the bridge deck, rebuilt abutments, new railings, and the addition of a bike crossing on the river side. Rip rap protects the bridge abutment on the creek side.

Kings Creek Bridge (LCS 81954) was built in 1932-33 as a single arch reinforced concrete bridge with no parapet and a high railing. Major reconstruction work in 1980 included bridge deck replacement and construction of new bridge railings.

Halfway Creek Bridge (LCS 81743) is a reinforced concrete girder structure with a reinforced concrete slab, is 850 feet long and was constructed in 1941-42 based on plans drawn up by the Bureau of Public Roads. Its post and lintel railings are 28 inches high, and a 3-foot sidewalk lines its western side. 1988 repairs to the structure included reinforcing the abutment walls, modifying the railing to accept a new timber guard rail, and cleaning and sealing.

College Creek Bridge (LCS 81742) is an 87-foot-long, cast-in-place linear span bridge with low post and lintel guard rails. Built in 1955-56, the bridge was repaired in 1988, with work including cleaning, sealing, and inspecting. Modifications for a timber guard rail were also made.

Mill Creek Bridge (LCS 81741) was built in 1955-56. About 137 feet long, it is a steel I-beam bridge with reinforced concrete structure on timber piles, with deep foundation pilings and riprap protection around its abutments. In 1988 repair work was undertaken on the bridge, including modifications to its parapet wall to accommodate a new timber guard rail.

Powhatan Creek (LCS 81740) 725 feet long, this bridge is a cast-in-place post and beam linear span bridge with low, post and lintel guard rails. 1988 repairs included cleaning, inspection, and modifications to accommodate a timber guard rail.

Isthmus Bridge (LCS 81743) was built in 1955-1956 and like the other concrete bridges on the Jamestown end of the parkway, is a simple reinforced concrete deck structure built on steel I-beam with a reinforced concrete substrate on timber piles. The bridge's location at a site vulnerable to erosion by wind, waves, and wake action has required continuing maintenance of its abutments. A 1996 project is will rebuild the riprap surrounding its abutments.

6. Other Architectural Features

These features are the brick gateway and wall of the former Navy Mine Depot and were built in the early 1930s. Although these structures still exist along the parkway and appear to be in good condition, they are

part of the Naval Weapons Station and are not under NPS jurisdiction. One change to these features is that they no longer function together as a gateway. A new entry road and entry station have been built to access the Naval Weapons Station; these are located directly west of the original gate. The brick wall, however, still provides screening of functions occurring on Navy lands.

I. SMALL SCALE FEATURES

1. Guard rail[17]

Guard rail along the parkway is currently steel-backed timber guard rail. It is constructed based on a design devised by the Federal Highways Administration specifically for the parkway, with the result that the guard rail along the parkway is somewhat lower than on other Federal Highways-managed roads. There are currently about 9,000 linear feet of guard rail along the parkway, located where steep grades or bodies of water are found immediately adjacent to the pavement surface. Guard rail is also located at the ends of all overpass bridges and tidal marsh bridges, with some modifications having been made to these structures to allow a close fit and tight anchoring between guide rail and bridge. Guard rail is seen in Figures IV.10 and IV.13.

2. Signage

Signage along the parkway consists of a few distinct types, outlined as follows:

Standard Regulatory Signs. These are predominantly stop signs, yellow warning signs, do not pass and pass with care signs, no parking signs, speed limit signs, and others. Regulatory signs are generally located in the immediate road margin along the parkway and interchange ramps.

Directional Signs. These signs are generally the traditional brown-and-white NPS signs (see Figure IV.27), and are found in a variety of sizes. They point the way to the various NPS sites and units accessed by the parkway, name natural features such as creeks along the parkway, and also indicate names of cross streets and destinations at parkway interchanges. Green Colonial Williamsburg signs are also located on the parkway, near the Williamsburg traffic circle. Like the regulatory signs, directional signs are generally located in the immediate road margin.

Kilometer Markers. These grey and white posts (see Figure IV.25) are located at kilometer intervals along the roadside, on the north or west side of the parkway. Although most are found within a few feet of the roadside edge, a few are located somewhat further back in the woods and are not immediately apparent to motorists. The numbering begins at the Yorktown end of the parkway, with the K1 marker located just west of the U.S. Route 17 bridge.

Interpretive Signs. Located at the parking overlooks, these grey signs consist of a cast aluminum panel mounted in a large rectangular wood frame, which stands between two wood posts. The posts are topped by pointed finials and an ornamental cast iron bracket supports the lower edge of the sign frame. Designed in the 1950s by Robert Steenhagen and Stanley Abbott, the signs usually contain a title and several lines of raised text as well as a circular logo, also in relief, of either a town crier, a ship, or a cannon. The title is black, the text is white, and the circular logo is a combination of white, black, and grey on the overall grey sign.

Brick Entry Signs. 3 large brick bases, faced with brown and white NPS sign boards, are located near the various starting points of the Colonial Parkway and announce the motorist's arrival on the roadway. One is located at the entry of Virginia Route 31 at the Jamestown end, another is located at the traffic circle near the Williamsburg Visitor Center, and the third, at the Yorktown end, is located on the roadside slope near the Fusiliers Redoubt area.

3. Tree Wells (LCS 81971)

According to LCS data, a number of tree wells still exist along the Yorktown end of the parkway, in the margins near the pavement. Constructed during the 1930s with the purpose of protecting the existing trees along the parkway where grades would be changed, this detail was not used during subsequent construction phases.

4. Jamestown Entrance Station

This small wood structure was built in 1957 to provide shelter for the fee collector at the entry to Jamestown island. In 1974-75 it was expanded to its current size.

J. CULTURAL RESOURCES

Located along and within the parkway right-of-way, are a variety of cultural resources, which range from archeological sites to settlement and building sites to revolutionary-era and civil war-era fortifications. These resources may generally be considered historically significant for their associations with events and people in American history, beyond their association with the parkway. Many of these sites, particularly the larger and more significant ones, such as the Yorktown Battlefield, various sites on Jamestown Island, and the settlements at Ringfield and Bellfield, have been identified and documented to varying degrees. Others, such as the Civil War Fort shown on sheet 15, a fort located within the parkway right-of-way south of Jones Mill Pond, and the dam at Paper Mill Creek, have been identified, but have not been extensively documented.

Although Chapter I of this cultural landscape report provides some new information on previously documented and undocumented cultural resources, it also indicates that some future in-field study of these sites may be beneficial to clearly explicate the range of resources present within the parkway right-of-way. Some of these resources and potential resources have been located to the best of the historian's ability on Sheet 26, which may aid in future study.

K. PARKWAY USES

1. Type of Users

Colonial Parkway is predominantly used by passenger cars, pick-up trucks, and tour busses. Most drivers use the parkway to visit the three main historic areas, although fishing, picnicking and strolling were also noted along the parkway. Compared to automobile use, other uses such as biking and hiking are minor.

The relatively small number of bicyclists observed on the parkway could be due, in part, to the roughness of the exposed aggregate concrete and the wide joints in the concrete.

2. Traffic Volumes

Permanent traffic recorders have been established by the NPS at the traffic circle in Williamsburg. Data from the recorders reveals that the average daily traffic (ADT) on the parkway throughout the year is 4000 vehicles, with a high of 5000 ADT in July and a low of 1330 ADT in February. This large variation in seasonal volume indicates that the parkway is used primarily by tourists/visitors and not by a substantial commuting populace. This idea is further substantiated by a comparison of weekday and weekend volumes for July and December (1995). This comparison demonstrates little difference between weekend and weekday morning and evening traffic volumes, indicating little commuter usage. A more detailed comparison of this data is provided in Appendix C.

3. Accident Levels

An accident summary for the period January 1, 1993 through December 31, 1995 was provided by the National Park Service covering 117 reported accidents. A review of this data reveals that most of the accidents on the road occur in daylight (69%); on dry pavement (76%); and involved either animals (32%); or fixed objects (29%). Accidents are generally not very severe, with only 13% involving injury, though 87% caused some sort of property damage. A more detailed summary and review of the accident data appears in Appendix C.

CHAPTER IV: ENDNOTES

[1] General Management Plan for Colonial National Historical Park, page 20.

[2] Much of this technical discussion on topography was drawn from the "Resource Management Plan for Colonial National Historical Park," Draft, April 30, 1996, 23-24.

[3] Horizontal and vertical curvature design elements are governed by "A Policy on Geometric Design of Highways and Streets, 1990" published by the American Association of State Highway and Transportation Officials (AASHTO). This publication was recently updated for metric conversion but our analysis is based on record drawings which are in the English system.

[4] Horizontal curve data was obtained from an examination of original construction drawings, from the various construction periods, located in the Engineer's Office at CNHP.

[5] Information on vertical crest and vertical sag curves is taken from A Policy on Geometric Design of Highways and Streets, American Association of State Highway and Transportation Officials, Washington DC, 1990, 280-290.

[6]Vertical curve and profile data was obtained from an examination of original construction drawings, from the various construction periods, located in the Engineer's Office at CNHP.

[7]The NPS may wish to sign this curve with a "Limited Sight Distance" sign, with an advisory speed rate of 40 mph.

[8]The "No Passing" and "Pass with Care" signs appear to be working adequately.

[9] E. Lucy Braun, The Eastern Deciduous Forest, p. 259; Briefing Package on the Natural Resources of Colonial National Historical Park, VA, July 29, 1994.

[10] Source for information in the paragraph: GIS map, CLR Parkway, Vegetation, scale = 1:25000, April 25, 1996; 9"x9" color infrared photographs, c. 1970s, series UAg 1026; numbers 9720-9791.

[11] General reference, Stephen J. Pyne, Fire in America: A Cultural History of Wildland and Regional Fire, 143-147.

[12] Another term used for tidal wetlands throughout this report is the more generic term "marsh," which is used because of its common usage. Technically, the term "estuarine emergent wetlands" would also apply, as based on terminology used by the US Fish and Wildlife Service.

[13] Byrne and Anderson, p. 5.

[14] Shoreline Situation Reports for James City County and York County, Byrne and Anderson, undated.

[15] Briefing Package on the Natural Resources of Colonial National Historical Park, VA.

[16] Count based on a review of Roy Bigelow's colored Land Use Management Plans, which indicate approximate locations of culverts and headwalls along the parkway. Engineering Office, CNHP.

[17] The term "guard rail" has recently been replaced with the term "guide rail" by the FHwA and other engineering organizations. However, in the 1930s and 1950s,"guiderail" was not used. To maintain consistency with the history section of the report, the old-fashioned term guard rail is used here.

V. ANALYSIS OF CHARACTER-DEFINING FEATURES AND INTEGRITY

INTRODUCTION

Colonial Parkway is one of the few remaining designed parkways in the United States. These roads, designed for both commuter and recreational traffic, were characterized by their curving alignments, park-like plantings, and limited access points. These limited access roads were constructed predominantly in the 1930s and 1940s, after which time changing highway design standards altered subsequent roadway designs. Today, many parkways designed during this era have been irrevocably changed to accommodate faster driving speeds, new safety standards, and greater capacities of automobiles. Colonial Parkway, however, remains true to its original design, a unique example of and testament to this period of road design. Because of its uniqueness and integrity, Colonial Parkway is potentially eligible to be listed on the National Register of Historic Places as significant under Criterion C, Design and Construction.

Part of the process of determining Colonial Parkway's significance and eligibility for the National Register is assessing the parkway's character-defining landscape features and evaluating its integrity. These assessments are undertaken here as part of the Cultural Landscape Report for Colonial Parkway.

The analysis of character-defining features follows procedures set forth in *Bulletins 15, 16, and 18 of the National Register* and in the Secretary of the Interior's *Standards for the Preservation of Historic Properties* and *Guidelines for the Treatment of Cultural Landscapes*. This analysis involves assessing the *level of change and continuity* of the parkway's character-defining features. This is accomplished by comparing each feature's existing conditions (as outlined in Chapter IV) with its conditions in 1958 (as discussed in Chapter III), when the parkway's as-built condition was established. This comparison reveals the integrity of each feature, that is, whether it still exists in a condition similar to its historic condition. Following the analysis of features, the overall integrity of the parkway as a resource is evaluated.

A. SPATIAL ORGANIZATION/CONTEXT

Although the basic physiographic patterns of the area surrounding Colonial Parkway—the overall topography, watersheds, and distinctive shorelines—have changed little since 1958, other major changes have occurred to the area's spatial organization. These include changes in the park boundary, increased suburban and urban development of the region, and loss of forest and agricultural land. Many of these changes can be seen in a comparison of the 1958 Spatial Organization Plan, Sheet 17, with the 1996 Spatial Organization Plan, Sheet 18 (see Appendix A).

Probably the most significant change in the area's spatial organization since 1958 is the increase in urban and suburban development. Although the 1958 Spatial Organization Plan shows that development was increasing as early as the late 1950s, development in the years since has accelerated, affecting the formerly rural setting of the parkway. In particular, both agricultural land and forest have diminished, a fact evident in even a cursory comparison of aerial photographs from 1937, 1953, and 1996. By 1996, the patchwork of field and forest shown in 1937 is almost completely gone, replaced by a combination of residential and urban development. Although regrowth forest has occurred on some agricultural fields, this has been offset by forest losses in other areas.

The 1996 Spatial Organization Plan shows that much residential growth has occurred north and south of Williamsburg, with agricultural land lost along the James River. Increased suburban and urban development is also manifested by the greater number of roads evident on the 1996 Spatial Organization Plan and not shown on the 1958 Plan. These new roads, which transport residents in the region, include the major arterial highways of Interstate I-64 and Va. Route 199. Other changes demonstrating increased population and traffic in the area include the change of Route 60 from a two-lane highway in 1958 to a four-lane highway in 1996. Similarly, cloverleaf intersections, a sign of larger highways and greater traffic volumes, are rare on the 1958 map, but are common on the 1996 map.

Although development has been increasing in most spheres, development in the naval bases surrounding the parkway has decreased since 1958. Military activity around the parkway, which had been confined to the Navy Mine Depot in the 1930s when the parkway was originally conceived, reached its zenith around World War II, when the parkway was closed to promote efficient military functions. In recent years, however, military activity has declined, and resulted in the NPS acquisition of lands in Cheatham Annex. This land acquisition has provided a greater buffer against development for the areas of the parkway immediately adjacent to Cheatham Annex, offsetting some problems with the parkway's narrow right-of-way. Additional land was also acquired north of College Creek and provides similar protection for the parkway against abutting development and visual intrusion.

Integrity of Spatial Organization/Context

Because the scenic qualities of the parkway draw heavily on the borrowed landscape of the surrounding farms, forests and other natural features, changes in the context and spatial organization have a strong effect on the parkway. Based on the changes that have occurred in the Peninsula, it would appear that the integrity of context and spatial organization for the parkway is moderate. Although there has been little change to the area's overall physiography, significant change has occurred in the surrounding land uses. In particular, the increase of urban and suburban development, combined with the loss of forest and farmland, has significantly altered the parkway's relationship with its surroundings. Stretches once imbedded in a matrix of forest may now be comprised of only a thin strip of forest confined to the right-of-way surrounded by development. Instead of winding through a green, rural environment as it did in the 1930s and 1950s, the parkway is now a winding green ribbon which passes through developed areas.

B. COLONIAL PARKWAY SPATIAL CHARACTER

A comparison of the 1958 and 1996 Spatial Character/View Plans, Sheets 19 and 20 in Appendix A, reveals that, for the most part, the spatial character of the parkway as present in 1958 still remains along the parkway in 1996. This spatial character is the parkway's openness along the York and James Rivers and its enclosure in the uplands surrounding Williamsburg, between the approximate boundaries of Kings Creek and Halfway Creek.

However, there are some changes in the details of the patterning of spatial effects. This is particularly evident in the stretches along the two shorelines, where the composition of views and vistas has changed over time. The 1958 Spatial Character Plan (see Sheet 19) for example, shows a very regulated pattern of views and vistas along the Bellfield Straight, between Indian Field and Felgates Creeks. As shown on the 1996 Spatial Character Plan (see Sheet 20), this sequence of vistas has become more randomized and less regular in its repetition. This is due to losses of vegetation which orchestrated the sequence of views.

In addition to changes in the overall pattern and sequence of river views, changes have also occurred at specific viewpoints. In some areas, new views have been created. This is true near the Naval Mine Depot. Here, visitors stop to observe activities on the Naval Pier, and bollards have been placed along the road's edge in an attempt to discourage visitors from obstructing traffic while observing this view from their vehicles. Although presently of interest to visitors, this view was not part of the original viewshed plan. Elsewhere, vistas open in 1958 are now blocked or filtered by vegetation growing along the shoreline. Sheet 8, the existing conditions and period plans of the Felgates Creek area, provides a fine demonstration of this situation. The 1949 period plan shows this area was originally designed with low-growing, knee-height vegetation in the immediate surrounds of the parking area. Figure V.1, a historic view of the area, also shows these open conditions. Today, however, as shown on the existing conditions plan and in Figure V.2, a screen of vegetation along the water's edge partially blocks views of the York River and Felgates Creek. Other views and vistas have been lost in other locations. For example, as shown in Figure V.3, a view of Brackens Pond, inland vistas over marshes and creeks were once carefully kept open. Today, as demonstrated by Figure V.4, a photograph duplicating the historic view, many of these vistas have closed due to changes in vegetation management.

Although many changes have occurred in the structuring or organization of the vistas, little degradation—that is, visual intrusion—has occurred in the scenes being viewed. Both the James and York Rivers are broad enough that development on their opposite shores does not significantly change the quality of the view seen from the points along the parkway. Increases have occurred in the size and numbers of the vessels traveling the river, but river and naval traffic has always been a feature of these river viewsheds since the 1930s. A further consideration is that large navy ships, which come and go, are not a constant intrusive element in a viewshed that a permanent power plant or antenna cluster might be. The only feature of this magnitude is the George P. Coleman Memorial Bridge, visible from the Yorktown end of the parkway. However, the scale and breadth of views containing the bridge are generally broad enough to prevent the bridge from becoming an overpowering aspect of the view.

The 1958 and 1996 Spatial Character/View Plans (see Sheets 19 and 20) also show that changes have occurred to the spatial character of the upland stretches of parkway between King Creek and Halfway Creek. These changes in spatial character include increases and decreases in the level of enclosure along the parkway. In some areas, as shown in Figure V.5, vegetation has grown to now enclose the road, creating a tunnel effect. In 1958, trees were shorter and obscured less of the sky, as shown in Figure V.6. Enclosure has particularly increased in areas around the underpass abutments. This is clearly shown on Sheet 11, which compares the 1949 period conditions with the 1996 existing conditions of the Capitol Landing area. In contrast to the conditions in 1949, trees now completely cover the side slopes abutting the bridge. This change is also clearly documented by Figures V.7 and V.8, historic and contemporary views.

Since its construction, much of the parkway's spatial character has been defined by the use of understory vegetation to bring the forest edge close to the edge of the pavement. This spatial quality is still apparent along much of the road, where a wall of forest appears to abut the parkway. However, one major change in spatial enclosure has been caused by the reduction of forest width in areas where suburban and urban development abut the parkway's narrow right-of-way. The increasing narrowness of such forest strips reduces the feeling of enclosure around the parkway, as development becomes clearly visible behind the narrow band of forest. This is especially true during the fall and winter, when the leaves of deciduous vegetation are not present to hide adjacent buildings. The areas most affected are those near Queens Creek, Hubbard Lane, and near Page's Landing and the intersection of the Parkway and Route 682.



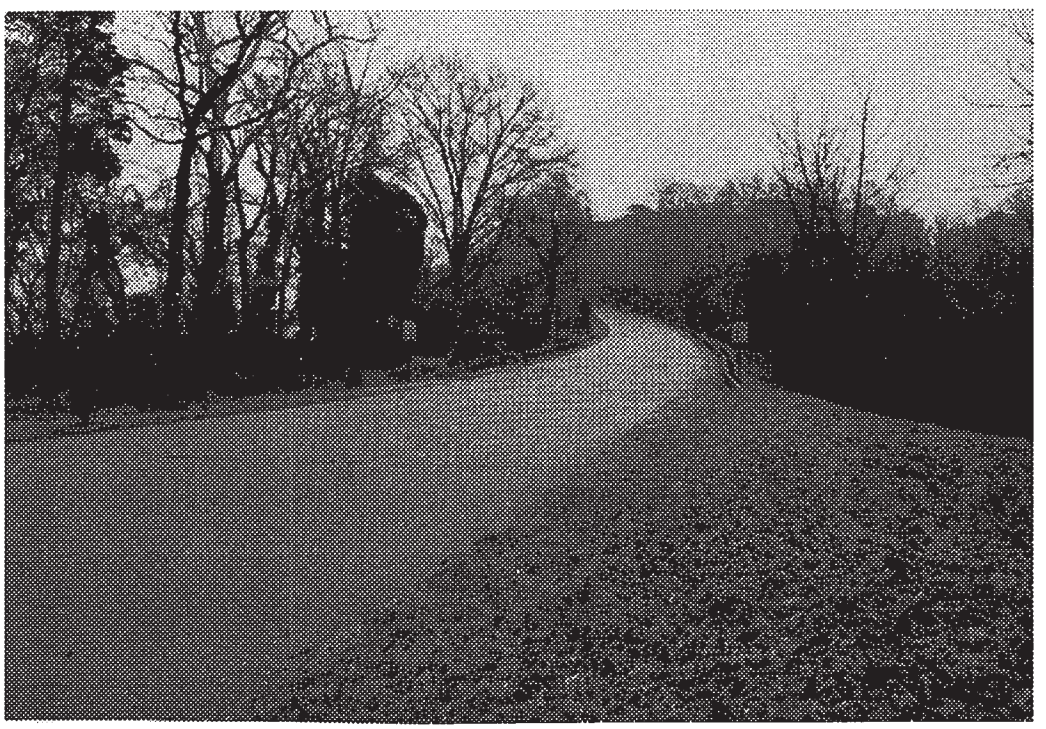
FigureV.1. Historic (c. 1935) view of Felgates Creek (duplicate of Figure III.43). National Park Service, Colonial National Historical Park.



FigureV.2. Current (1996) view of Felgates Creek. LANDSCAPES LA·Planning·HP.



FigureV.3. Historic (c. 1938) view of Brackens Pond ("Parkway Station 138, General View looking East," #3743. No date.). National Park Service, Colonial National Historical Park.



FigureV.4. Current (1996) view of Brackens Pond. LANDSCAPES LA·Planning·HP.



FigureV.5. Current (1996) view of vegetation enclosing parkway. LANDSCAPES LA·Planning·HP.



FigureV.6. Historic (c. 1970) view of vegetation with sky overhead (duplicate of Figure III.54). National Park Service, Colonial National Historical Park.



FigureV.7. Historic (c. 1938) view of Capitol Landing Overpass (Capitol Landing Underpass--View along Parkway. . .," #8306. No date.). National Park Service, Colonial National Historical Park.



FigureV.8. Current (1996) view of Capitol Landing Overpass. LANDSCAPES LA·Planning·HP.

Integrity of Spatial Character

Based on this analysis, the integrity of Colonial Parkway's spatial character is high. In general, the broad patterns of spatial character, including vistas, openness, and enclosure, are intact, with visitors experiencing much the same sense of roadway enclosure today as they did when driving the parkway in 1958. However, some alterations to the parkway's spatial character have occurred over time, primarily in the loss or blocking of views. Most of these changes, however, are due to vegetation growth or losses, and would be reversible through vegetation management.

C. TOPOGRAPHY

A comparison of USGS topographic maps from the early 1900s, mid 1900s, and 1980s reveals that very little change has occurred to the overall topography of the terrain through which the parkway passes. In general, the dendritic pattern of ravines, terraces, bluffs, and flats of the peninsula is much as it existed in 1930, prior to parkway construction.

Similarly, little change has occurred in the topography along the parkway corridor since its construction. Although the cut and fill side slopes of the road were generally regraded in the first year or two following the parkway's construction in both the 1930s and 1950s, no documentation has been found indicating that these slopes were altered after 1958. Topographic changes have therefore been purely localized to areas where new overpasses or underpasses and their accompanying access ramps were created in the years between 1958 and the present. This type of change is seen on Sheet 12, which compares the 1958 period conditions with the 1996 existing conditions at the Route 199 Interchange area. Sheet 12 shows that this area was regraded to accommodate new bridges and ramps where none had previously existed. This work significantly altered the topography of the area.

Integrity of Topography

Because changes to parkway topography have been minor and localized, the distinctive visual qualities of the roadway provided by its curving horizontal and vertical alignment and its concave, curving cut and fill side slopes remain in the same state as they did in 1958. Therefore, overall integrity of parkway topography can be considered high.

D. CIRCULATION: THE ROADWAY

1. Alignment

As noted in Chapter IV, Existing Conditions, the parkway's alignment has not changed since its construction in 1958. The overall route of the road and its horizontal and vertical curvatures remain in their original state, with the latter generally in conformance with current AASHTO standards. The only maintenance work affecting the alignment has been some mudjacking, which occurred in the 1960s, which



Figure V.9. Change in pavement color on the parkway, south of Williamsburg, 1996. LANDSCAPES LA·Planning·HP.

was done to counteract road bed settling and to maintain the designed roadway elevation and alignment.

2. Surfacing

One of the unique aspects of Colonial Parkway, the surfacing, has changed little since 1958. The surface of the road retains its three-lane construction with its rough, exposed aggregate surface and no striping. Repairs to the roadway have generally respected this original construction, configuration, and use of materials. However, as noted in Chapter IV, recent repairs to the concrete at slab joints used a lighter-colored sand in the concrete mix, which resulted in some obvious patches of pavement. These color patches in the road surface, visible in Figure V.9, detract somewhat from the perception of the roadway as a single ribbon of unified pavement and are an alteration from its historic condition. Another change to the road surface is the addition of curbs and drainage chutes along some sections of the parkway, as shown in Figure IV.48. Little, if any, curbing was originally constructed along the parkway's edge.[1] The new curbing was implemented during the FHwA repair projects to facilitate drainage off the road surface and to reduce erosion and degradation of the grass road margins caused by such surface drainage.

3. Interchanges & Intersections

Of all the circulation elements along the parkway, the aspect which has changed the most is the number and types of intersections and interchanges. In fact, since its completion in 1958, the parkway has seen a general trend in the elimination of at-grade intersections or their replacement by overpasses or underpasses with or without interchanges.

Between 1930 and 1966, a reasonably large number of at-grade intersections existed along the parkway. One of these is shown in the left-hand side of Figure III.71; more are shown in Figure III.31. In some

cases these intersections were access points to private properties; in others, they were major thoroughfares. In the years following the completion of the parkway, the NPS increasingly perceived the existing at-grade intersections as dangerous and as a major source of accidents, and worked to replace the intersections with bridges and interchanges. Examples of this effort are the structures at Hubbard Lane and Parkway Drive. In addition, Colonial NHP staff worked to make sure that any new roads constructed by the local communities or the State of Virginia did not cross the parkway at grade. This resulted, for example, in bridges and ramps being constructed at the parkway's intersection with Route 199 when this road was built.

Despite Colonial NHP efforts to prevent new parkway access points or crossings of any sort. The desire for new access points is a continuing pressure as the land abutting the parkway is developed. One solution has been to encourage developments to build collector roads which parallel the parkway until reaching an existing interchange. One such collector road is shown on Sheet 10, in the existing conditions plan of Station Point 544. This road, named Lakeshead Drive, accesses the parkway at the Hubbard Lane interchange.

4. Parkway Termini

The parking lots at both the Jamestown and Yorktown end of the parkway appear to have changed little since 1958. They retain the forms shown in their construction drawings. It is likely that their pavement surfaces have been resurfaced since their construction.

5. Parking Overlooks

A comparison of the 1996 and 1958 Built Elements Plans (Sheets 21 and 22) reveals that no change has occurred to the numbers and locations of parking overlooks on in the past 40 years. In 1958 the 1930s overlooks were upgraded with curbs and concrete surfacing to match the new overlooks then being constructed on the Jamestown end of the parkway. Interpretive signs were also added to the overlooks at this time. Since 1958, the most significant change to the overlooks has been the repair of the concrete curb defining the overlooks and the addition of concrete drainage chutes to this curbing to aid in surface drainage off the overlook. This work was done as a part of the FHwA projects contracted in the late 1980s and early 1990s.

6. Picnic Areas and Interpretive Areas

In 1958, only one picnic area, the large Ringfield loop, was affiliated with the parkway. This picnic area is no longer in use. Its abandonment detracts somewhat from the integrity of the parkway's historic function. The parkway's other picnic area, the Great Neck Picnic Area, is also no longer used. However, because it was not a part of the original parkway design, its current disuse does not affect the historic integrity of the parkway.

Like the Great Neck Picnic area, the Bellfield Interpretive area was implemented long after the parkway's completion, and is no longer in use. Because it was not part of the original design, its abandonment does not affect the parkway's integrity.

Integrity of Circulation

When compared to other parkways of its era, Colonial Parkway is quite remarkable in that little alteration

has occurred to its circulation features. Unlike most parkways, its width and alignment have not been altered to accommodate higher speeds and more traffic. It has not been degraded by the addition of at-grade intersections, traffic lights, jersey barriers or other items that commonly alter parkways in urban areas. The fact that the parkway also retains its characteristic rough pavement, lack of striping, and its interpretive parking overlooks further contributes to its integrity. Although some changes have occurred in the process of repair and maintenance, such as the addition of new curbing and drainage chutes and changes in concrete color, these are relatively minor changes when viewed in the entire context of circulation features. Because so much of the circulation system remains unaltered and intact, the integrity of the circulation features of Colonial Parkway may therefore be judged high.

E. VEGETATION

1. Vegetative Cover

The major changes to the vegetative cover throughout the parkway landscape may generally be classified as cumulative impacts to the overall health of natural vegetative systems. It should be noted that these changes are not only a site-specific or local concern, but are also symptomatic of regional concerns that relate to the management of the larger park landscape and the surrounding area and watersheds. In addition, it should be noted that large scale changes in land use may be more fully evaluated when new aerial photography and ground reconnaissance occur. For example, much of the suburbanization around Williamsburg has taken place in recent years, while the overall maps in this report are based partly on information dating from the 1980s and partly on a set of aerial photographs between twenty and thirty years old. In some cases, the most recent impacts were difficult to discern and record. However, new mapping is occurring. For example, the erosion and sedimentation study that is being undertaken by Gregory and Wiley includes mapping of the subwatersheds that form the drainage context for the parkway. This information will be useful in understanding the change over time that has occurred in the region. In fact, future parkway interventions can be developed using the subwatershed data as a basis for management.

For the time being, however, the text below records, to the extent possible, the significant changes that have occurred over time to the broad patterns of vegetation along the parkway.

a. Forest Cover Types

Chapter IV outlined the types of forest cover present along the parkway. Although these cover types for the most part existed along the parkway historically, their current state illustrates that some change has occurred since that time. For example, fire, natural and induced by humans, was historically a factor in maintaining pine dominance in lowland forest throughout the region. In the absence of fire, oaks are out-reproducing pines in the understory, and mesic hardwood species, such as tulip poplar, beech, maple, and sweetgum have become much more prevalent in the canopy. Vines, such as greenbrier and Japanese honeysuckle, that would normally be reduced by fire, are gradually extending their range throughout the park.

In other areas, change due to species loss from insect infestations has occurred. For example, areas of severe infestations of pine-bark beetle in the park were logged in the past while the wood was still marketable. These sites today are dominated by young pine forest although the pine bark beetle is still present. Pine-bark beetle is not uncommon where fire has been suppressed and where understory vegetation has been removed, a fact which indicates that pine losses along the parkway may continue to occur in the future. Restoration of the shrub and understory layers and the establishment of a natural fire regime may be more effective in controlling the beetle than vigorous eradication and clearance efforts.

The major changes that have occurred to the health of the forest cover types are associated with the consequences of fragmentation. This is the most far-reaching landscape change that has occurred to the historic context of the parkway and is immediately apparent on the Vegetation Cover Types map. In many instances, the parkway corridor is the only remaining piece of a once-larger forest system. These areas are shown as Forest Strip on the Parkway Edge Conditions Plan, Sheet 24. Figures V.10. and V.11 compare aerial views of Station Point 544 in 1953, before Interstate 64 was built, and afterwards, in circa 1980. Here, new suburban developments adjacent to the parkway conspicuously reduce the forest around the parkway into a narrow strip. One result of this reduction in forest width is a gradual loss of native species biodiversity and a gradual erosion of the vegetative character of the parkway and adjacent lands.

Another change to the forest cover since the 1930s and 1950s appears to be an increase in exotic species along the parkway. The major exotic species have been listed in Chapter IV and are referenced on the existing conditions plans of Sheets 5 through 16. Exotic vegetation occurs along the length of the parkway, but was primarily noted at the edges of the forest. Adjacent development, including agricultural fields and residential areas, typically creates a mown edge against the forest, creating openings for invasives. Understory mowing opens the ground layer to light, allowing the woodland edge to become overrun with invasive vegetation, such as bamboo, kudzu, and Japanese honeysuckle. Figure IV.28, for example, shows a mat of kudzu growing at the edge of a forest area. About one-third of the parkway right-of-way is bordered by field or development (noted as Forest Openings on the Parkway Edge Condition Map, Sheet 24), and these areas are already degraded or have a significant potential for future management problems. As noted in the previous section, there is no current forest management intended to sustain the character and conditions of the forest communities, and invasive woodland species are not specifically managed in an exotics control program. This may have implications for continuing changes in the composition and appearance of the forest cover along the parkway.

A third notable change along the parkway appears to be an increase in white-tailed deer activity, as noted by a visible browse line throughout the park, although there is little agreement about what level of impact this has had on the natural diversity or on the historic appearance of the parkway. In general, deer are causing heavy damage to forest reproduction in the Northeastern US where suburban development is widespread. A comprehensive survey of Colonial NHP deer population, as well as an assessment of impacts including monitors and enclosures, is needed in order to evaluate the deer effect along the parkway and within the park.

b. Wetland Cover Types

Most of the parkway's wetland cover types by and large still exist in their historic locations, but changes have also occurred within these areas, primarily due to sedimentation and erosion. These processes are inevitable in area wetlands wherever suburbanization of the watershed occurs. During development, forest vegetation is typically cleared to the limit allowed by law, which provides a minimal buffer but is not adequate to prevent changes in the hydrologic regimen for that area after development. Run-off from developed properties therefore increases, and silt is often carried into wetlands. Wetland loss is another typical change, and occurs almost continually due to sea level rise. The exceptions to this have been areas that are not armored, where the topographic relief allows the wetlands to migrate inland over time. At the regional scale of the larger watersheds, dams that have been built upstream starve estuaries of sediment accumulation, which further restricts the ability of the marshes to keep pace with rising sea level.

As noted earlier, mowing has also caused some change within the wetlands. In some locations, mowing has given non-native species a window of opportunity. At Brackens Pond, for example, Japanese honey-



Figure V.10. Aerial View of parkway near Station Point 544 in 1953. Virginia Department of Transportation.

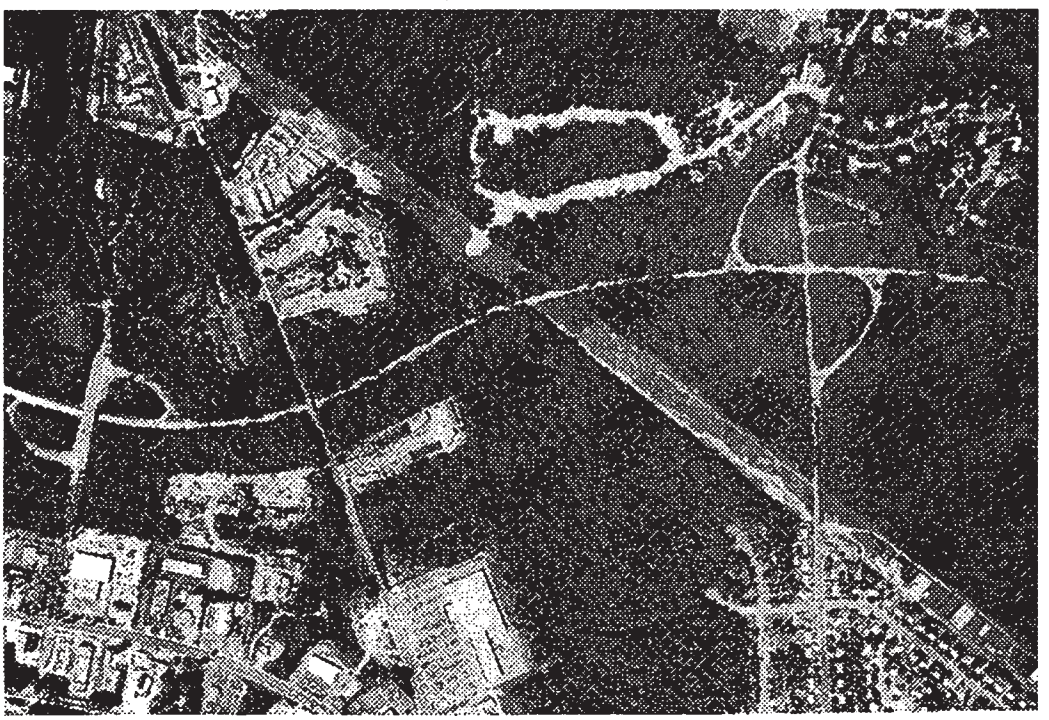


Figure V.11. Aerial View of parkway near Station Point 544 circa 1980. National Park Service, Colonial National Historical Park.

suckle, ailanthus *(Ailanthus altissima)*, and blackberry *(Rubus, spp.)* have become established in previously mown areas of emergent wetlands along the York River. Shoreline mowing may also have contributed to destabilization of the river banks in some cases by removing buffer vegetation.

Perhaps the most visually perceptible change within the parkway's wetlands is the invasion of common reed *(Phragmites australis)* in a number of locations along the parkway. This plant is now beginning to establish a monoculture in some non-tidal wetlands within the parkway. The species' tall height and habit of crowding out native vegetation has subtly altered the appearance of wetland areas in a number of locations, primarily in the wetlands along the James River. As noted in a 1995 technical assistance report prepared for the park fisheries and aquatic programs, phragmites is a poor forage grass that will eventually displace native reeds and grasses. Although the overall extent of non-tidal wetlands may be relatively unchanged, the presence of phragmites raises a serious question about the continuing quality of the wetlands.

c. Parkland (mown turf with trees)

As was true historically, today much of the area along the parkway is maintained as "parkland" with turf and trees. Although, due to somewhat limited photographic documentation, a comprehensive understanding of the entire parkway's historic turf conditions cannot be absolutely determined, it appears that historically, an area of shorter turf (2-3") existed in the vicinity of the parkway, with taller grass (6-12") found behind guardrails (either directly behind or a little down slope); behind the grassy swales next to the road; underneath plantings of shrubs and young trees; and in areas abutting forest. Another important characteristic of the historic condition of the parkland turf was seasonal variation, with longer (12" -24") turf heights shown during the Yorktown Onion blooming season. Some erosion and bare spots are also noted in historic photos. For example, Figure III.47 of the Kings Creek Area shows eroding bare patches near the top of a hogback slope and Figure III.59 of an area on the Jamestown end also shows bare patches, this time on the sandy hydraulic fill.

To varying degrees, these characteristics of parkland all exist along the parkway today. There are areas of shorter and longer turf and areas of seasonal variation in turf heights, and areas of erosion. However, it is difficult to say whether or not these conditions exist in their historic locations. It is likely that in several instances the extent of mowing has increased over time, changing the proportion of area managed as turf. For example, the steep slope along the Bellfield Straight is now mowed, as seen in Figure V.12, whereas historically it was a vegetated slope, as shown in Figure III.61. However, the park's Resource Management Plan notes that the bluff mowing has led to recreational climbing on the bluffs and recommends planting native vegetation to control erosion caused by this use.[2]

It should be noted that the presence and overall pattern and appearance of turf is the most important characteristic of the parkland along the parkway. This characteristic is still maintained at the current time and contributes to the historic integrity of the parkway.

Integrity of Cover

In summary, the overall patterns of vegetative cover within and abutting the parkway corridor have altered, both subtly and significantly, over time. Although many areas of original cover remain, in other areas, severe loss to development or degradation by erosion have compromised the historic integrity of forest and wetland cover types. Many of these changes, such as loss of forest width, are irreversible.

These changes mean that the historic integrity of vegetative cover patterns may only be considered mod-

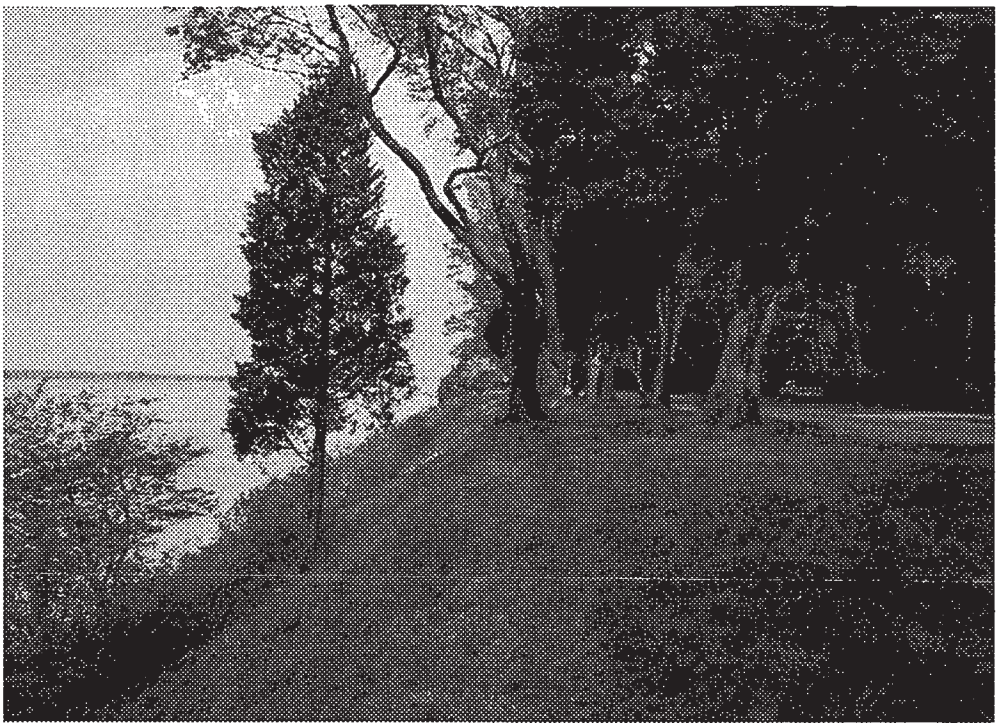


Figure V.12. Mowing on steep slope at Bellfield Straight, 1996. LANDSCAPES LA·Planning·HP.

erate. However, it should be remembered that the overall pattern of light, shade, enclosure and openness that the vegetative cover historically created are also important, and that future management techniques may be able to restore these characteristics while not being able to restore ecological integrity to the larger region. In other words, in future management, issues of design intent, as-built character, and historic integrity may need to be considered simultaneously with ecological health and sustainability issues.

2. Designed Plantings

The changes that have occurred over time in the designed planting of the parkway are best analyzed through a comparison of the 1996 existing conditions plans and the period plans of the 12 typical areas along the parkway (see Sheets 5 through 16).. A series of historic period photographs and comparable current photographs are also useful. Together, these plans and photos are typical examples of how growth and loss of vegetation have changed the vegetation in the roadway corridor to a greater or lesser degree. The dynamic quality of vegetation requires that design intent be a focus of this analysis, since changes in scale, due to maturation of vegetation, has occurred over the decades.

a. Forest edge plantings

As evidenced on the plans for Jones Mill Pond, Station Point 544, and Capitol Landing, (see Sheets 9, 10, and 11) in the upland areas surrounding Williamsburg, changes to the forest edge plantings have primarily been due to plant growth. The area plan and section views show that vegetation has, over time, progressively moved toward the edge of the parkway pavement, serving to provide a greater sense of enclosure along the road. However, based on a comparison of plant lists dating to the 1950s and 60s with the existing species in the forest edge, the composition of species in the roadside edges demonstrates continu-

ity. In some cases the large caliper of flowering understory trees, such as dogwood (*Cornus florida*) and redbud (*Cercis canadensis*) would indicate that these trees date to both the 1930s and 1950s periods of construction. Yet it is also clear that many understory trees were added to the parkway in the years since its completion as replacements for sick or dying trees. For example, the area between King Creek and Felgates Creek was heavily planted in small dogwoods and redbuds about five years ago by a volunteer.[3] And, it should be noted that although many places have retained their understory plantings, other areas have lost theirs. This is true, for instance, of Halfway Creek, shown on Sheet 13. The 1958 period plan of this area shows that more small trees were found on the roadside slopes than are present today. Another example of loss is the vegetation "facing down" the slopes at Station Point 544 (see Sheet 10). A comparison of the 1949 period plan with the existing conditions Plan shows that much of this planting has been lost, leaving a mown slope in its place.

b. Groves of Trees in Turf

As noted in the Existing Conditions chapter, groves of trees in turf are a significant vegetation feature between Indian Field and Felgates Creeks and at the Archers Hope and Real Estate Parking Areas. In addition, other groves are found along the flats below the Officers Quarters. Their character today is generally in keeping with the character they exhibited in 1958, with some changes. For example, along the Bellfield Straight, the tall pines in turf still retain the distinctive column-like appearance which dates to the 1950s. This continuity is demonstrated by Figures V.13, a historic view, and Figure V.14, a contemporary view. However, as noted on Sheet 7, the 1996 existing conditions plan of this area, more and taller vegetation, including vines and volunteer trees, now exists on the steep banks leading down to the river than existed earlier.

Changes at the Archers Hope and the Real Estate parking overlooks indicate that these areas also look much as they did circa 1958, though now the trees surrounding the overlooks have reached a more mature height and provide greater amounts of shade. Figures V.15 and V.16 document this change at Archers Hope.

While tree groves in many areas retain their organization today, these trees are maturing and a tree replacement strategy will be required in the near future.

c. Mass Plantings of Shrubs, Grasses, and Vines

Although many areas of naturalized shrub and grass plantings exist along the parkway today, their current effect and presence does not reflect their condition in 1958. Unfortunately, due to limited photographic documentation of the whole parkway, differences and similarities between the existing and historic conditions can be definitively quantified only in a few areas.

For example, it appears that marsh grass plantings at Indian Field Creek, Felgates Creek, College Creek and at the bay side of the Isthmus are the direct descendants of conscious plantings in the 1930s and 1950s. However, taller vegetative growth such as cedar and pine in these areas do not appear to have been part of the original plan since they tend to screen views over the river and creeks. In other areas, there appear to have been losses of shrub plantings. In a number of areas, masses of native shrubs were used to face woodland edges, create shapes and direct lines of vision within the parkway corridor. Their loss alters the original intent of the design dating to the 1930s. For example, at the Brackens Pond and Felgates Creek parking overlooks, low-growing shrub vegetation existed in the islands and in the areas surrounding the parking overlooks. These shrubs are seen in Figure V.1 but not in Figure V.2. Similarly, 1958 planting plans show many more clumps of lower-growing shrubs such as bayberry and groundselbush along the road margins between Tazewell Hall and College Creek than currently exist. Although notations on the planting plan show that these shrubs were planted and then replanted, they do not exist today.



Figure V.13. Historic (c. 1958) view of Bellfield Straight (duplicate of Figure III.51). National Park Service, Colonial National Historical Park.



Figure V.14. Current (1996) view of Bellfield Straight (duplicate of Figure IV.34). LANDSCAPES LA·Planning·HP.

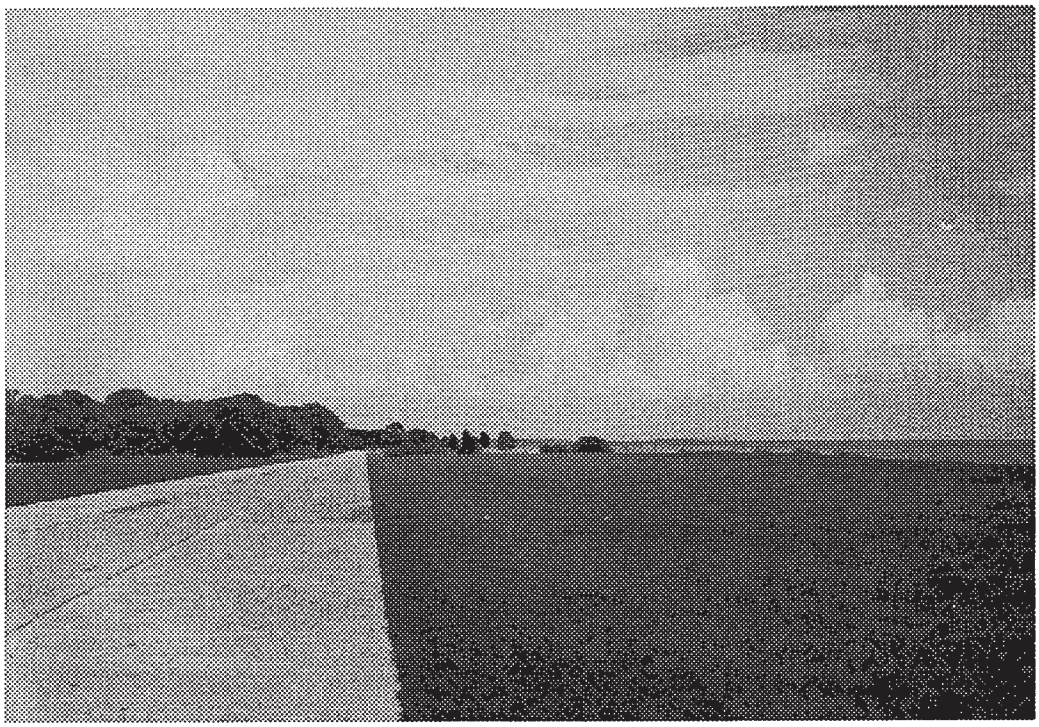


Figure V.15. Historic (c. 1957) view of Archers Hope (duplicate of Figure III.52). National Park Service, Colonial National Historical Park.

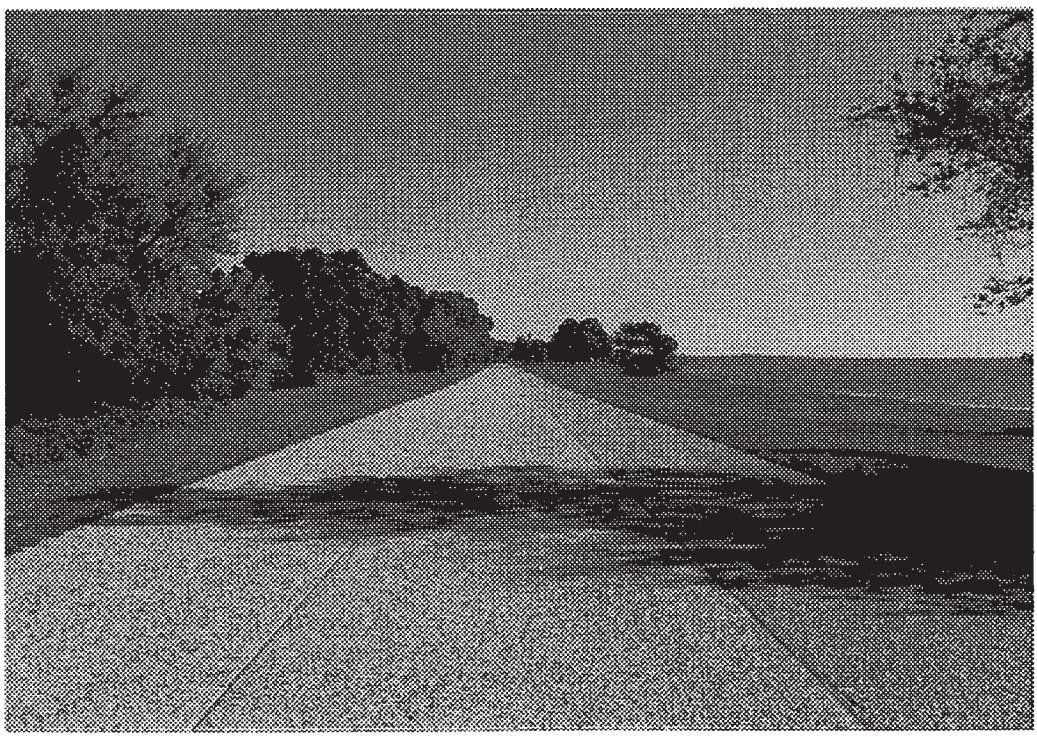


Figure V.16. Current (1996) view of Archers Hope. LANDSCAPES LA·Planning·HP.

Planted exotic vines, such as Japanese honeysuckle, were specified for stabilizing slopes and filling open areas. While in some areas these original intents are still served, notably along the Bellfield Straight, over time this aggressive vine has invaded many areas along the parkway. A comparison of the 1957 view of the Civil War Fort, Figure V.17, and a current view of the same area, Figure V.18, shows a significant level of closure of the understory, due in part to invasive Japanese honeysuckle.

d. Specimen Tree Plantings

Many of the large trees standing independently along the parkway date to the original construction periods. A number also predate these years. Because of a lack of definitive planting plans, however, the determination of age can only be made based on photographic evidence and tree size. Although coring is the most precise method of dating trees, this invasive procedure is not recommended along the parkway. Rather, it should be assumed that the largest trees likely date from the period of significance, taking into account the differences in growth rates among trees species. Examples of trees that can be definitively identified as dating to 1958 or earlier include: the sycamores and oaks at the Brackens Pond overlook; trees along the road margins at Archers Hope; and the Great Oaks south of Williamsburg. Figure V.19 shows extant specimen sycamores seen in Figure V.20.

However, some large trees, such as the hackberries at Felgates Creek, do not date to the parkway's construction period, since they are not distinguishable on aerial photographs dating to 1963. In general, the individual trees along the parkway continue to serve as sentinels, focusing the eye, providing vertical form and canopy and shaping space.

e. Parking Area Plantings

Good photodocumentation and planting plans exist for the parking areas at Jamestown and Yorktown. From this evidence, it appears that most of the canopy tree plantings and some of the shrub plantings in these areas do date from the original construction period. Some losses can be discerned on close study but the intent of the design of the overlook area plantings, which was to define these spaces with individual trees, groves and retained and augmented woodland segments, remains essentially intact.

f. Bridge Plantings

Based on detailed sketches and bridge plans, it is clear that distinct planting plans once existed for the areas at the corners of the tidal marsh bridges and the abutments of brick underpasses built during the 1930s. Photographs also confirm this intent, with Figure V.7 showing layered plantings around Capitol Landing Underpass and Figure V.21 showing plantings of shrubs and trees at the base of the Felgates Creek Bridge. In contrast, it appears that planting plans for the bridges and underpasses built in the 1950s and later had much less formalized planting around them, since neither planting plans nor photographs of these bridges show distinctive plantings. According to park staff, FHwA work at the bridges in the 1980s modified or eliminated any plantings that may once have existed in these locations.[4]

Today, little remains of the bridge abutment plantings designed in the 1930s. As shown in Figure V.21, no plantings exist around the Felgates Creek Bridge. Although a few remnant trees, such as a few dogwoods and maples, from the 1930s seem to have survived around the Capitol Landing Underpass, they have grown out of scale with the bridge and dominate the structure. Shrubs at this bridge have also been lost or replaced with modern plantings such as the day lilies (*Hemerocallis* spp) at the top of the bridge's retaining walls, which were planted in 1974.[5] At Capitol Landing, so much overgrowth of forest has occurred, that it is difficult to discern if the original 1930s plantings remain (see Figures V.8 and V.9).

g. Williamsburg Traffic Circle and Jamestown Island Entry

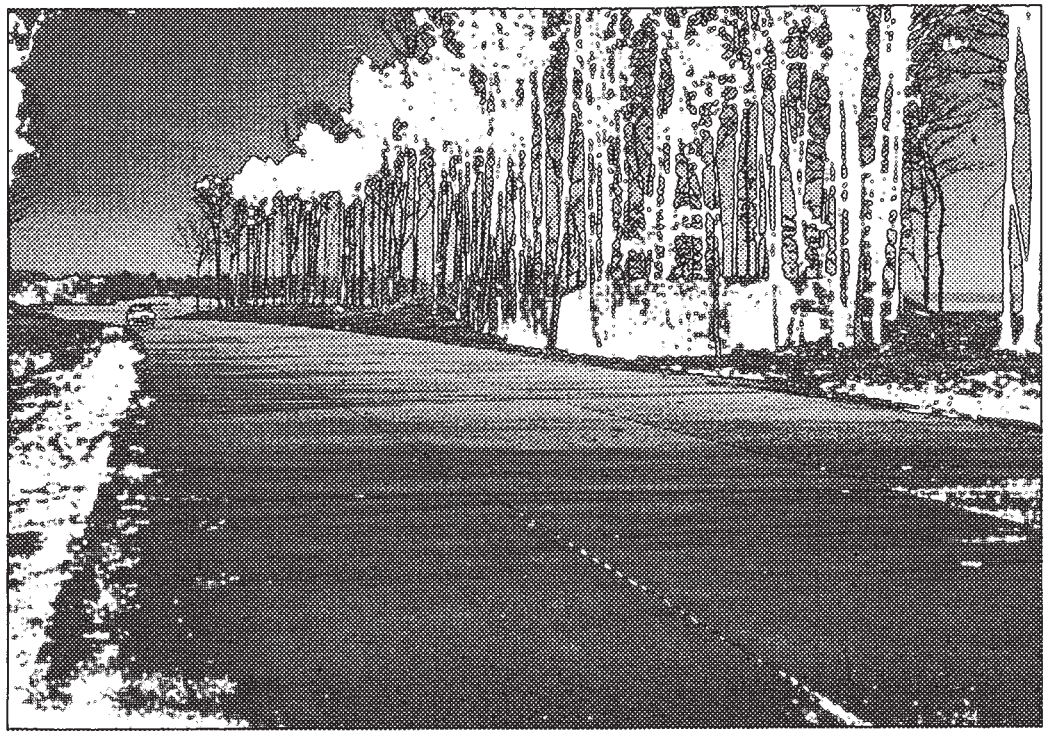


Figure V.17. Historic (c. 1957) view of the Civil War fort, with no undergrowth (duplicate of Figure III.57). National Park Service, Colonial National Historical Park.



Figure V.18. Current (1996) view of the Civil War fort area, with significant vine undergrowth. LANDSCAPES LA·Planning·HP.

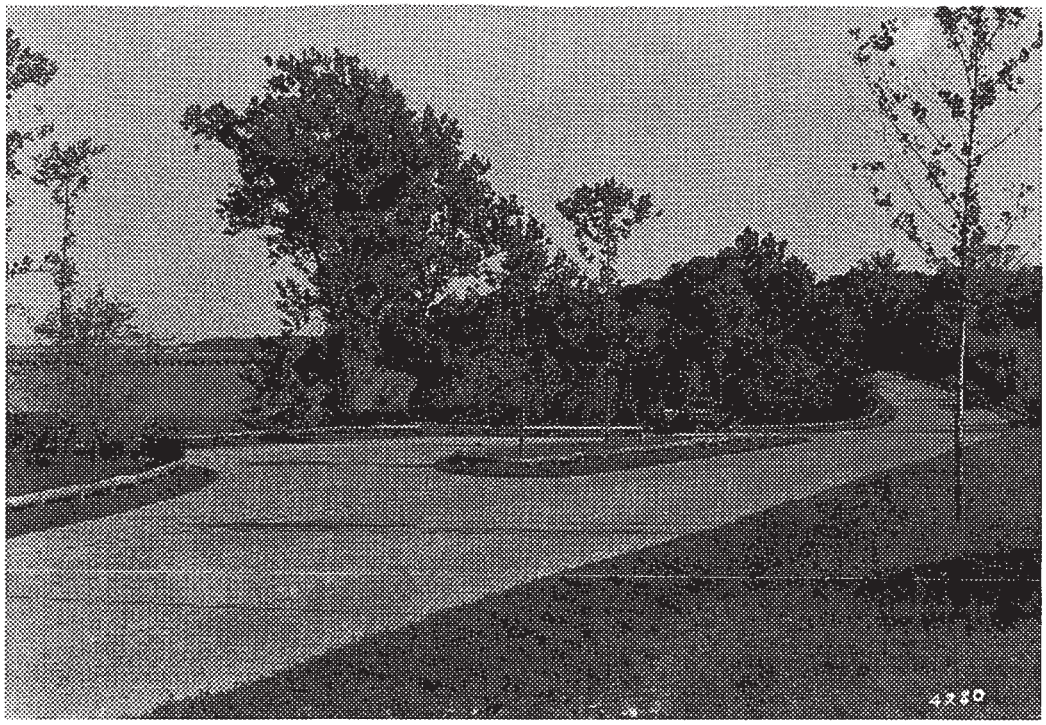


Figure V.19. Historic (c. 1935) view of overlook near Brackens Pond (duplicate of Figure III.32). National Park Service, Colonial National Historical Park.



Figure V.20. Current (1996) view of overlook near Brackens Pond. LANDSCAPES LA·Planning·HP.

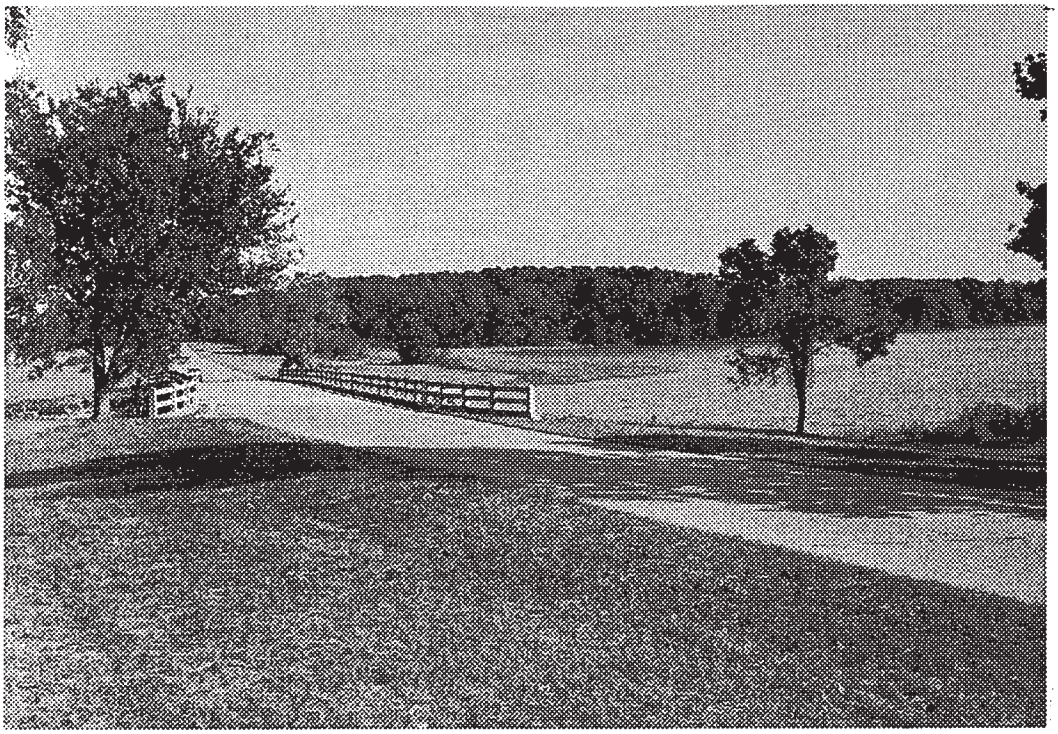


Figure V.21. Historic (c. 1958) view of Felgates Creek (duplicate of Figure III. 53). Note trees at bridge abutments. National Park Service, Colonial National Historical Park.

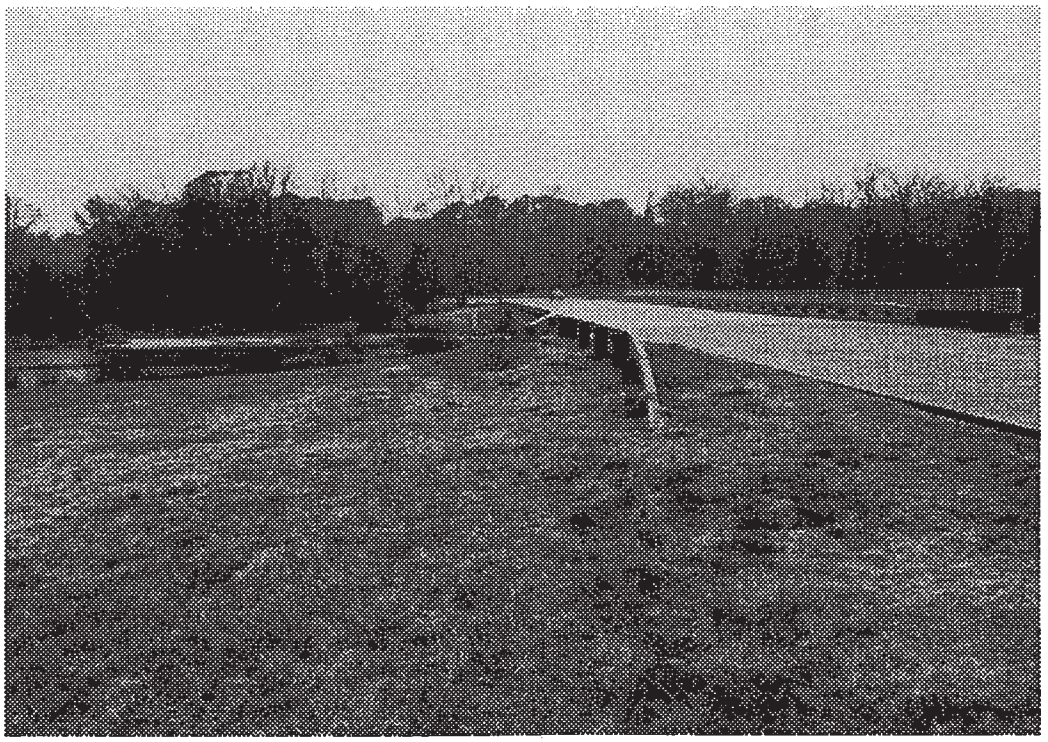


Figure V.22. Current (1996) view of Felgates Creek. Note no trees or plantings at abutments. LANDSCAPES LA·Planning·HP.

Based on the size of the current plantings, it is clear that some of the designed plantings in these areas date from 1958. However, planting did occur in these areas in 1974, requiring a careful assessment of which plant materials date to which planting effort. The intent of the plantings at Williamsburg was to shape spaces using shrub clusters at corners and by using shrub masses, mixed plantings, individual trees and groves. Though some of this design intent remains apparent, shrubs and trees have been lost. A detailed in-field survey, comparing the 1957 planting plan, the 1974 planting plan, and the existing conditions of these two areas would reveal a complete record of changes and form the basis for replanting lost plant materials from the period of significance.

Integrity of Designed Plantings

Based on the analysis above, it appears that the integrity of the parkway's vegetation can be considered to be relatively high. In general, the broad types of designed planting established along the parkway by 1958 are still in place along the parkway, though their locations may not, in all cases, be precisely the same as in 1958. Other differences between historic and existing conditions include regeneration of plant materials where none existed after construction and the loss of some detailed plantings. Documentation allows for these changes to be carefully assessed in many areas. Many changes could be reversed with removals, new plantings, and new management regimes, which would return the designed plantings to a condition more closely matching the original design intent and as-built condition.

F. HYDROLOGY & SHORELINE

The construction of the parkway, particularly the placement of large areas of hydraulic fill, significantly changed the shoreline configurations of the York and James River. Since that time, however, natural processes have acted to alter the configuration of the parkway's shorelines from their 1958 as-built condition. The shorelines along the York and James Rivers all have a relatively long fetch for estuarine shorelines in the Chesapeake and, because of their orientation, are subject to extreme wind-driven tidal surges. These surges can cause significant erosion along the shoreline. As such shoreline erosion by wind, wave, and drainage action continues, it may prove to be a long term issue for the integrity of the parkway, particularly in some low-lying stretches, such as where construction occurred on hydraulic fill.

In 1933, a dramatic storm surge in the Chesapeake raised tides to seven to nine feet above sea level. There have been six more storms since then with high tides in excess of a meter above mean sea level.[6] A recent example of such shoreline impacts are photographs taken in September 1996 in the aftermath of Hurricane Fran, which show the tidal line well above sea level, with water and debris covering parkway turf, as shown in Figures V.23 and V.24. Over time, storms may cause extensive shoreline erosion. This is evidenced, for example, by shrinking beach widths: Figures V.15 and V.16 show that the width of land between the parkway and the James River has indeed narrowed over time.

Perceived needs to "protect" the shoreline from such erosion has effected another change along the parkway over time: a significant increase in the total length of bulkheaded and riprapped shoreline. Riprapping and bulkheading began in the late 1930s, with riprapping around Indian Field Creek; it has continued to the present, with a recent project installing gabion cages around the Isthmus Bridge. As noted in Chapter IV, such shoreline armoring has accelerated erosion on adjacent unarmored areas, especially marshlands (see the Shoreline Conditions map). Although armoring has prevented shoreline movement, over the long

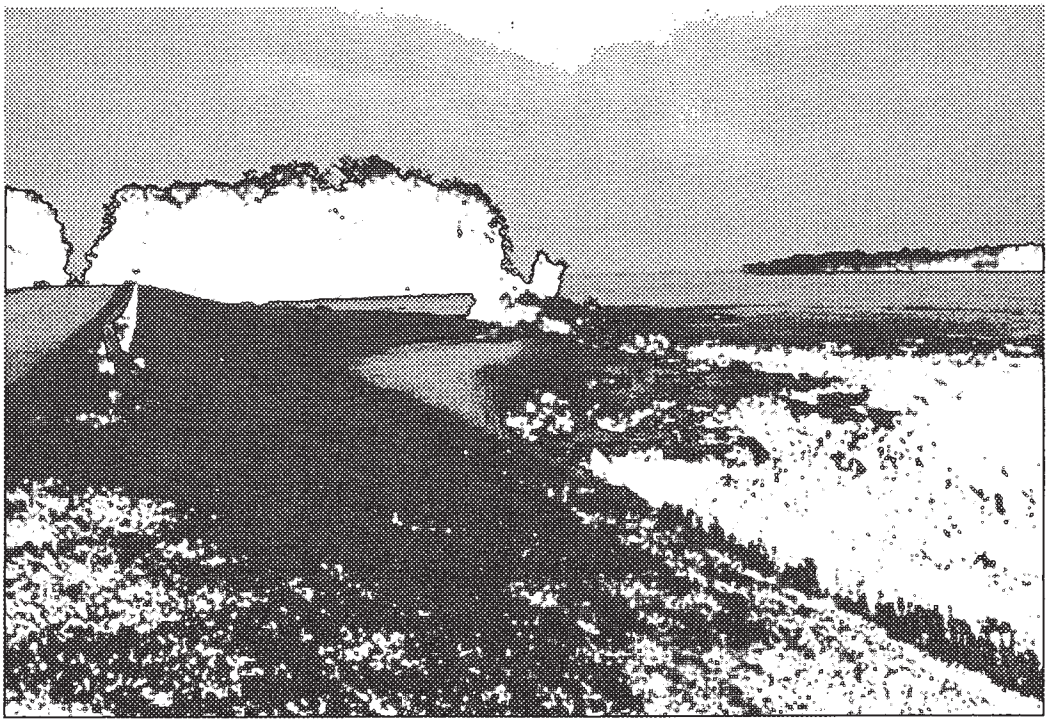


Figure V.23. Wind-driven tidal line from Hurricane Fran, 1996. National Park Service, Colonial National Historical Park.

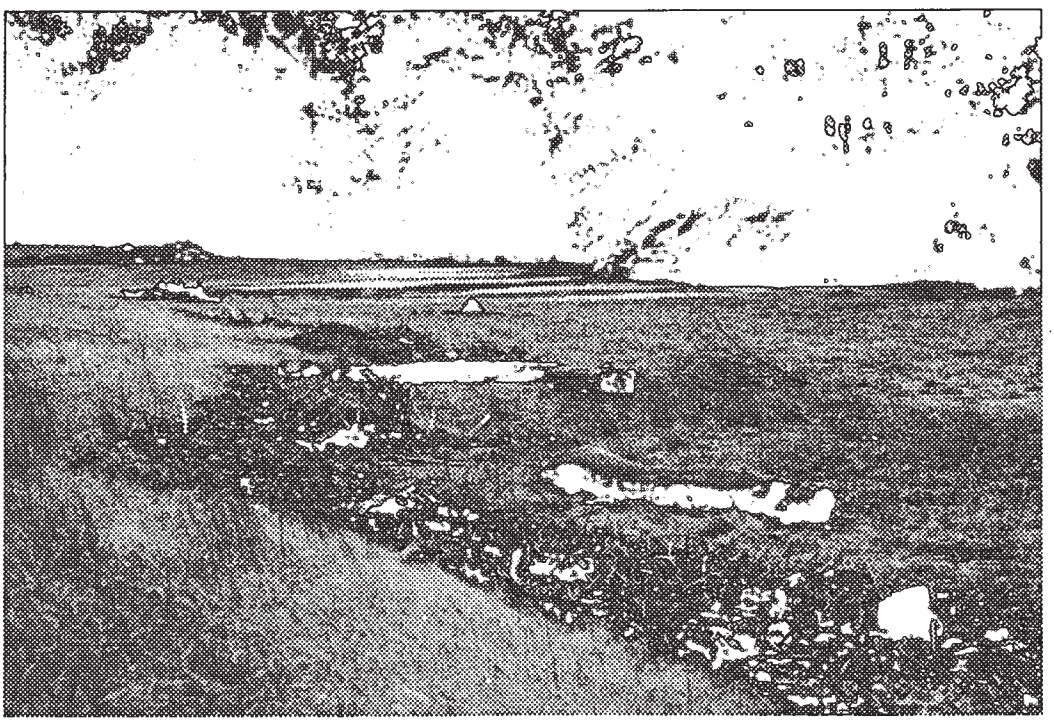


Figure V.24. Debris line showing extent of storm surge during Hurricane Fran, 1996. National Park Service, Colonial National Historical Park.

term it doesn't guarantee resource protection, since in some instances the shore continues to erode behind the riprap. Furthermore, this approach to shoreline instability may lead to an entirely armored coast, a condition which would significantly compromise the character of the parkway and its surrounding natural areas.[7]

Integrity of Shoreline Character

The shoreline along the parkway is still a key component of the parkway's views, vistas, and spatial character and the parkway still retains its intimate relationship to both the York and James shorelines. This is an important parkway characteristic which is still very much intact, and thus the integrity of shoreline character must be judged to be at least moderate. However, the combined effects of shoreline erosion and armoring have changed the character and condition of the shoreline itself in a number of locations. Beaches have shrunk and what was once marsh or shore is now an edge protected by riprap. These changes have affected appearance and character and serve to lower the integrity of the parkway's overall shoreline character. Because continued erosion and armoring will only continue to decrease integrity of this parkway characteristic, it is advisable that future management of the shoreline should focus on conservation. This is a complex task, requiring the integration of risk assessment, natural resource, cultural resource, and engineering approaches.

G. DRAINAGE FEATURES

1. Overland Drainage Characteristics

As noted in Chapter IV, Colonial Parkway crosses the Peninsula watershed and functions as a partial dam to surface drainage, which flows overland in a dendritic pattern of stream and intermittent streambeds. Over time, the greatest change which has occurred to this drainage system is a long-term, cumulative deterioration of these natural drainage ways, primarily due to accelerated suburbanization and development of the surrounding region. Where little development existed around the parkway in 1958, today there are large subdivisions, commercial, and private developments. These developments' parking lots, driveways, and road systems have changed the drainage patterns surrounding the parkway and have increased runoff into the drainage systems crossing beneath the parkway, causing erosion and sedimentation in the natural drainage ways. In some areas, streambeds have widened greatly as a result of increased water flow, and in other areas, Colonial NHP staff has placed riprap to reduce the impacts of rushing water. Despite these actions, parkway infrastructure has been undermined in a number of locations. Intensive mowing practices in some areas along the parkway have also contributed to drainage way deterioration, by diminishing cover in places and creating areas of bare soil which contribute to sheet and rill erosion. Informal trails created along the parkway create similar effects, and become eroded drainage ways themselves.

A final change to natural drainage ways along the parkway is occurring as a result of beaver activity. These changes are most notable in the area near Paper Mill Creek, where the enlargement of streams into shallow ponds by beaver dams has drowned trees and reduced forest cover. Although the beaver activity is a natural process, the argument can be made that the loss of forest caused by beaver activity has negatively impacted Colonial Parkway as a cultural resource, through the loss of trees and forest buffer which historically existed around this part of the parkway. Although there is no evidence to any damage to the parkway infrastructure (i.e., drainage pipes and road bed), *per se*, changes to surface drainage systems

adjacent to the parkway have occurred. Channels have been rerouted and soils in some areas are now saturated. These changes may increase the potential for parkway flooding during heavy rain events, though this is difficult to assess.

Integrity of Overland Drainage

Natural drainage ways still are an important feature around the parkway, as they were historically. Because they are substantially extant, their integrity may be considered to be moderately high. However, although they continue to serve drainage functions, in many areas, these drainage ways are in poor condition or are failing. This degradation, due to development impacts and changes in drainage patterns caused by erosion and beaver activity, compromises the integrity of the overland drainage system. Because Colonial NHP staff recognizes that drainage issues are a serious problem best addressed with a watershed-wide set of better management practices, as noted in Chapter IV, problems are being catalogued and an Erosion and Sedimentation Management System (ESMS) for Colonial NHP is being developed.

2. Built Drainage Features

A variety of built drainage features were constructed to carry drainage under the parkway and to carry surface water off the parkway. Some of these features, particularly the culvert headwalls, were designed as an integral part of the design vocabulary of the parkway. Many or most of these structures are still intact along the parkway, and their presence in their historic locations contributes to integrity. However, some changes have occurred to the built drainage features over time, and these changes are outlined below.

a. Surface Drainage Systems

The parkway retains its dependence on sheet flow, or surface drainage to remove water from the surface. Intact historic surface drainage features include roadside swales and concrete channels which are in good condition except for some erosion. However, recent roadway repairs have made some minor adjustments to the roadway to improve surface drainage in problem areas. These changes include the addition of curbing along the road margin, as well as the addition of drainage chutes (and riprap splash pads at their bases). Although unobtrusive in appearance, as a matter of course it should be noted that these are drainage features which did not exist historically along the parkway.

b. Culverts

Although almost all culverts appear to be extant in their historic locations, some culverts along the parkway are beginning to be undermined and destabilized as surface water flow exceeds the design of these structures. Some culverts, such as the one shown in Figure IV.47, are in very poor condition. Along with their surrounding stream channels, these features are generally in need of maintenance and rehabilitation to prevent their loss. However, any effort to enlarge the culverts to provide for better drainage of increased runoff could increase erosion and sedimentation downstream. Such proposals should be evaluated in the greater light of their impacts to area natural systems and park resources.

c. Subsurface Drainage Systems

The three subsurface drainage systems at Page Street, the Williamsburg Traffic Circle and Tazewell Hall Avenue appear to be intact in their historic locations. Although these systems were probably adequate when designed, it appears that uncontrolled storm water runoff from development near the parkway, such as housing, I-64, and the William and Mary College expansion, is taxing these existing systems, whose

function may need to be further examined and altered. However, changes to these systems should be carefully implemented to avoid impacting parkway character.

Integrity of Built Drainage Features

The integrity of built drainage features is relatively high, but is compromised to some degree by the poor condition of individual elements of the system. Although most original features are extant, many are deteriorating. In addition, some new features have been added, though these are quite unobtrusive. In general, the integrity of the drainage system will be a future management issue, one which will require integrated solutions to address increased storm water flows into the parkway corridor while preserving the original structures and design intent of the original parkway system.

H. STRUCTURES

Nearly all structures extant along the parkway in 1958 are still extant today. The only structures that may have been lost are a few culverts or culvert headwalls eliminated during the construction of new bridges along the parkway after 1958. Major change to the parkway's structures has been limited to the addition of new bridges and the repair of old structures.

Since 1958, a total of 8 new structures have been constructed along the parkway, as seen in a comparison of the 1958 and the 1996 Built Elements Plans, Sheets 21 and 22. In contrast to the 1958 plan, the 1996 plan shows a greater number of both overpasses and underpasses. These additional structures include the North Pier, Route 641, and Hubbard Lane Overpasses, Parkway Drive Underpass, and the double bridges at both the I-64 and Route 199 Underpasses. Remarkably, all of these new structures were designed to be compatible with the existing bridges along the parkway. Their forms are therefore similar to the simple arch forms of the original bridges, and all the new structures are clad in red brick, with Colonial-style detailing of the brickwork. However, these new bridges are somewhat less intricately detailed than the original bridges, lacking, for example, the fine brickwork of the roundels on the C & O Underpass built in the late 1930s. It is likely, though, that these differences are not immediately apparent to the untrained eye.

Despite the architectural compatibility of the new bridges with the old, the addition of the new structures has changed the character and experience of driving the parkway. A motorist now goes a much shorter distance before crossing under a bridge, which changes the rhythm of driving the parkway. This effect is most noticeable in the area between King Creek and Williamsburg. With four new underpass bridges, an increase of almost 50%, this stretch of road now has a much more repetitive feeling as one crosses under bridge after bridge, than it did in 1958. Although repeatedly experiencing the change in light and road noise caused by passing under a bridge may seem to be a minor change, it is none-the-less a distinct alteration from the 1958 condition of the parkway. In addition, it should be noted that the increase in structures has primarily occurred in the areas surrounding Williamsburg, and are a result of increased population, urban development, and enlarged transportation routes.

The other major change which has occurred to parkway structures is the rebuilding of the three concrete tidal marsh bridges at King Creek, Felgates Creek, and Indian Field Creek in the 1980s by the Federal Highway Administration. Due to structural problems, these bridges were significantly rebuilt, with the

Felgates Creek bridge receiving particular attention, partly due to safety concerns and traffic accidents which had occurred in the area. The bridge was also lengthened and widened to accommodate a bike lane on one side. Overall, the greatest impact of the FHwA work was the change to the bridges' appearance with the replacement of their post and beam style railings with much lower railings. The difference between the two railings is shown in Figures V.25 and V.26, a historic view and a contemporary view of the bridge railing details. This new railing, which is substantially different from the original railing, was, however, patterned after the railing on the bridges on the Jamestown end of the parkway. In another recent change, the abutments of all of the concrete bridges along the parkway were altered by the FHwA to accommodate the attachment of a new, steel-backed timber guard rail, as shown in Figure V.27.

Integrity of Structures

All the structures along the parkway are important elements of its design. They are important functionally, moving water and allowing traffic to flow unimpeded; they are also a strong stylistic and visual element of the parkway. Although a significant level of change has occurred to the array of parkway structures through repair and additions, the integrity of the structures should, overall, still be considered high. This judgement is based on the fact that no losses of structures have occurred and because additions and repairs have been implemented with a high degree of sensitivity and compatibility to the preexisting structures.

I. SMALL SCALE FEATURES

Changes have occurred in the form, number, and appearance of the parkway's small scale features.

a. Guard rail

Historically, two types of guard rail existed along the parkway. During the 1930s, a peeled-log guard rail existed in a number of areas along the Yorktown end of the parkway, as seen in Figure V.28. During the 1950s, a square-timber guard rail was constructed along the new stretch of road between Williamsburg and Jamestown. A photo of this guardrail is seen in Figure III.28. It is unclear whether the square timber guard rail was ever installed along the Yorktown end of the road; however, some badly deteriorating log guard rail is seen in Figure V.29, a photograph dating to the late 1950s.

As shown in Figure V.27, the new guard rail, designed by the FHwA, bears a greater similarity to the 1950s guard rails than the 1930s guard rails. There appears to be some level of correspondence between the location of the current guard rail and where guard rail existed historically. However, it should be noted that safety issues, not historic location, was a consideration when the current steel-backed guard rail was installed.

b. Standard Regulatory Signs

The locations of these signs over the past 40-odd years of the parkway's post-completion history has not been precisely documented. Interestingly, no historic photographs have been located which contain regulatory signs other than stop signs at-grade crossings, indicating that today's level of signage is probably higher than in the past. Adding credence to this idea is the fact that specific signs, such as the duck crossing sign near Jones Mill Pond, can be documented as *not* existing during the parkway's period of significance. However, it should be noted that current regulatory signage, located on the road margins, is in keeping with where such signs are traditionally located on roadways. "Passing" and "No Passing"

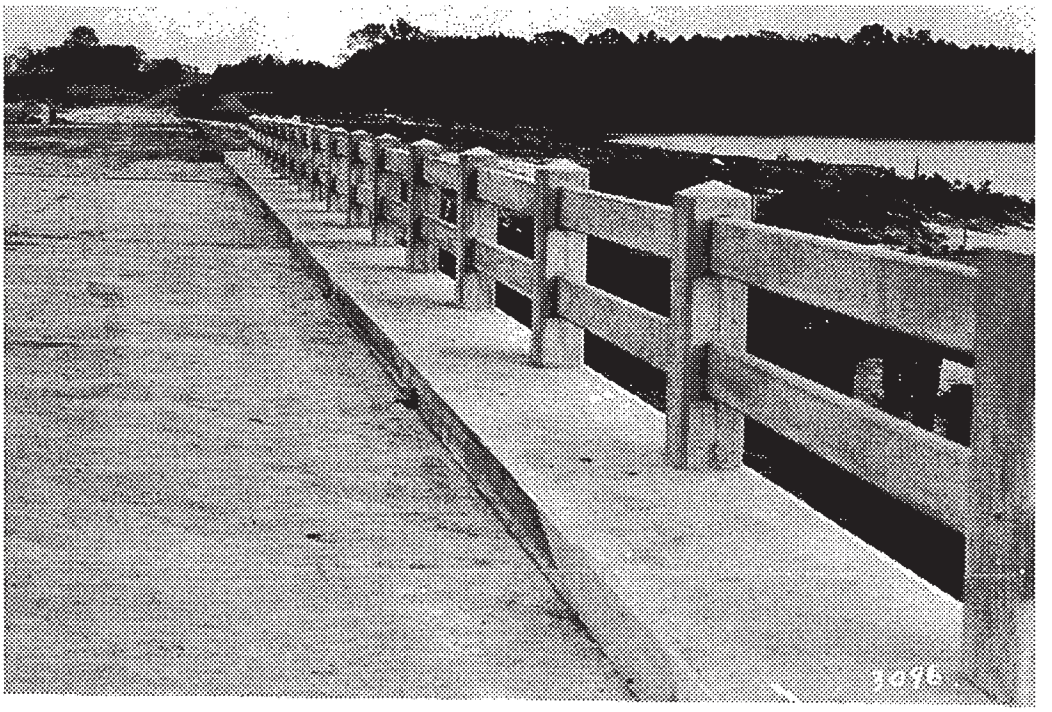


Figure V.25. Historic (circa 1934) view of bridge railing detail (duplicate of Figure III.69). National Park Service, Colonial National Historical Park.



Figure V.26. Current (1996) view of bridge railing detail of 1980s, which replaced detail of Figure V.25. LANDSCAPES LA·Planning·HP.

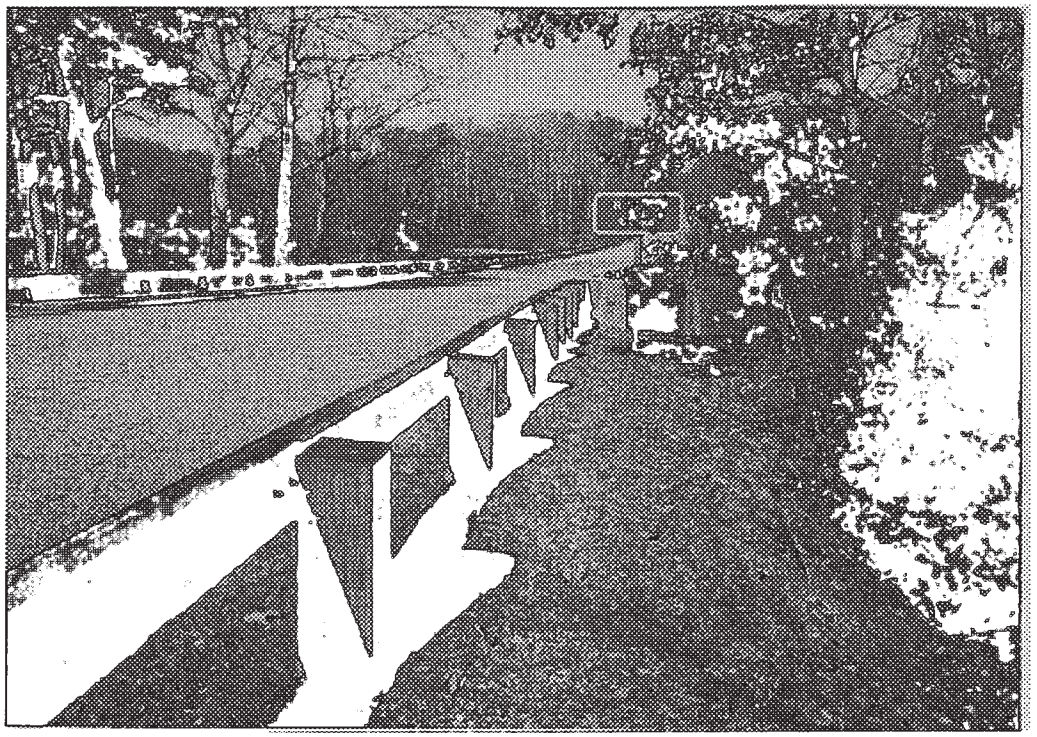


Figure V.27. Current (1996) view of typical bridge abutment changes and new guard rail. LANDSCAPES LA·Planning·HP.



Figure V.28. Historic view of 1930s peeled log guard rail ("After Picture of 6086, Station 534," no date, circa 1938. National Park Service, Colonial National Historical Park.

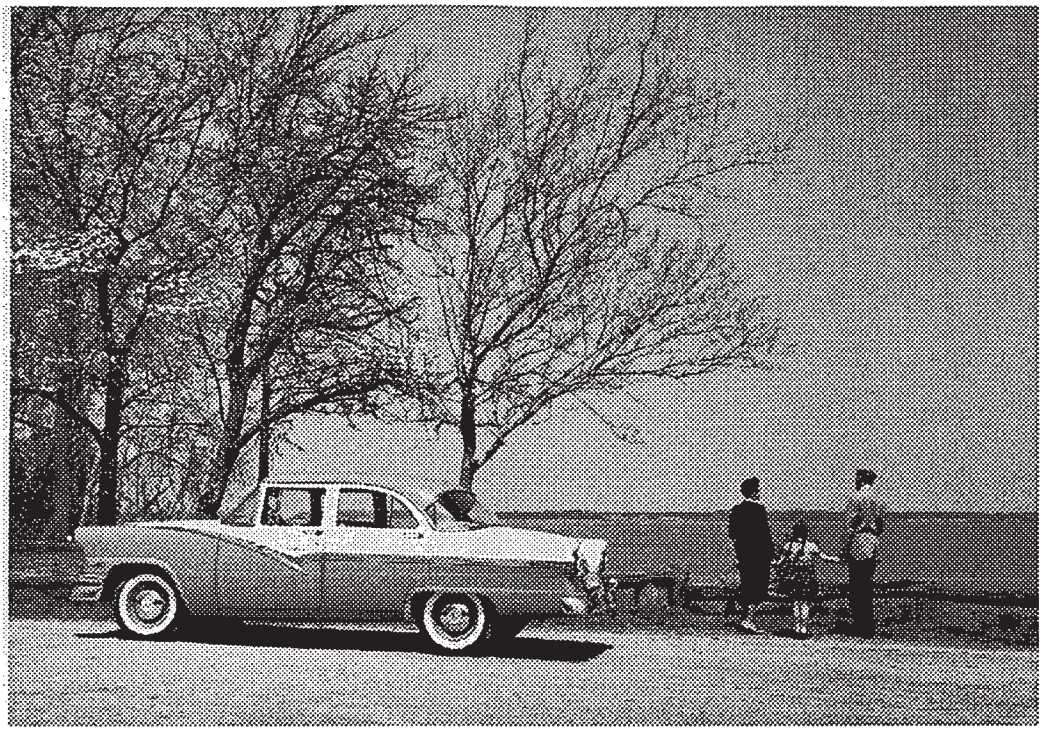


Figure V.29. Historic view showing deteriorating log guard rails ("Dogwood Blooms at a turnout or overlook on the scenic Colonial Parkway. . . ," #COLO-38951.506, 1956). National Park Service, Colonial National Historical Park.

signs are some of the most numerous signs and are necessary if pavement striping is to be avoided. One interesting regulatory sign that consistently appears in historic photographs but is no longer seen, is a "Keep off the Shoulder" sign. As seen in Figure III.71, these were low signs, standing 2-3 feet off the ground directly adjacent to the pavement edge. Since incursion onto the parkway shoulder and resulting rutting, compaction, and turf loss is evident in a number of areas, perhaps this historic sign might serve a purpose today.

c. Directional Signs

The standard brown and white NPS directional signs were introduced along the parkway in the 1970s by NPS engineers. In some cases it appears these signs may have replaced small, grey and white place name signs (stylistically similar to the interpretive signs) in a number of locations. One of these small location signs appears in Figure III.58. According to Skip Brooks, the current Chief of Maintenance, the number of directional signs on the parkway has been reduced over the past 5-10 years, reducing visual clutter along the road. According to other park staff, the number of signs along the road has fluctuated over the years, depending on park management.[8]

d. Kilometer Markers

Not part of the original design of the parkway, these signs were installed in the 1970s, at the same time as the brown and white NPS signs.

e. Interpretive Signs

Part of the design work done during the 1950s, the interpretive signs are essentially found in their historic 1958 condition and locations. The only recent addition to these signs is the sign at Archers Hope docu-

menting the life of the Elder Lightfoot Solomon Michaux. A painting schedule maintains the interpretive signs' finish and neat appearance. These signs are the only ones along the parkway that date to the historic period. Designed by Steenhagen and Abbott, they are important contributors to the character of the parkway overlooks.

f. Brick Entry Signs
These signs were constructed as part of the Bicentennial construction program. However, they are currently faced with a standard brown and white NPS sign rather than the individual steel letters that were originally bolted into the face of the brick structure.

g. Tree Wells
Based on a review of the construction documents for the parkway, it appears that tree wells were only constructed during the 1930s. Though the precise number of tree wells constructed is currently unknown, the extant wells are important as a record of the first construction phase.

h. Jamestown Entry
The current structure was not present in 1958.

Integrity of Small Scale Features

The above analysis indicates the high level of change that has occurred in the number and form of the small scale features of the parkway. This is not surprising, given the given the age and length of the parkway. In addition, many of the parkway's small scale features, such as signs and markers, are also affected by changing safety standards and may therefore exhibit a higher level of change than other, more permanent features such as bridges. With the exception of the interpretive signs and tree wells, none of these small scale items were present in 1958. Due to the high level of change of these features, their integrity could be considered to be moderate to low.

J. CULTURAL RESOURCES

As noted in Chapter IV, a variety of cultural resources are located within the parkway right of way. Most of these features have not been disturbed since the construction of the parkway. Although their significance as individual resources may not have been fully documented, because they remain as extant features along the parkway, their integrity may be judged high.

K. PARKWAY USE

Although little documentation of parkway use exists, it appears that use has changed little over time. The predominant use of the parkway remains tourist automobiles travelling between the three historic sites. An interesting note is that although the parkway was designed to be a "chronological experience" with visitors moving along a historic time line from Jamestown to Williamsburg to Yorktown, it appears that many visitors today access the parkway in the middle and travel to either end.

Anecdotal communication from park staff indicates that bus traffic along the parkway has increased over

the years, especially during certain times of the year. There also appears to be an increase in bike use, partly manifested in local interest in developing a bike trail on or near the parkway. Although this interest seems recent, it should be remembered that a bicycle trail along the parkway is discussed in park documents dating to 1941, 1946, and 1974. It is likely, though, that now there are indeed more bicyclists, joggers, and people fishing along the parkway than in 1958, primarily because of increases in the area's population. This increased use is impacting some parkway areas, but overall does not have a large impact on the parkway as a whole.

L. OVERALL EVALUATION OF INTEGRITY

The above analysis of character-defining features demonstrates that the condition and integrity of most features is quite high. Little change has occurred to most features, and circulation, topography, vegetation, and built elements of the parkway are predominantly intact. For features where change has occurred, such as in the parkway's spatial character and context, many of these alterations are due to regional growth and development, beyond the control of the parkway's stewards. But what is perhaps most remarkable about Colonial Parkway is that, with the exception of some of the minor small-scale features and some plant materials, virtually no major element of the parkway's original design has actually been lost. Rather, most of the changes to the parkway have been changes of addition, such as the growth of new vegetation, the increase in suburban and urban development, and the augmentation of existing structures with new structures. Thus, all of the parkway's original designed elements are all present, and are only compromised to the extent that the additions alter their context or appearance. Furthermore, it should be noted that not all changes to the parkway's features are irreversible, and the possibility exists that changes in management could actually improve the conditions of some features.

As part of a National Register evaluation, in addition to an evaluation of a historic resource's character-defining features, an evaluation of the resource's overall integrity is also recommended. This is undertaken by considering seven aspects of a resource's integrity. These seven aspects are: Location, Design, Setting, Materials, Workmanship, Feeling, and Association. Depending on the resource, some of these aspects may be more or less important. For designed landscapes, such as Colonial Parkway, Design, Materials, and Feeling might be considered to be the most important aspects of integrity. In the following paragraphs, each aspect of integrity is considered separately for the parkway, and then an overall assessment of integrity is determined.

Location
Colonial Parkway's integrity of location is high, since it exists in the location where it has always existed.

Design
Colonial Parkway's integrity of design can also be considered to be high. Its designed features, including its characteristic curving alignment and grading, its unique bridges, overpasses, and underpasses, and its orchestrated views and vistas, remain intact, in a condition similar to that of when the parkway was completed. Little significant change or loss has occurred to the parkway's original design, and many of these changes are reversible.

Setting
The integrity of setting for the Parkway is moderate. On the one hand, the broad physiographic patterns of topography, watershed, and views and vistas remain intact around the parkway. However, other changes to the parkway's physical context have occurred, including the loss of forest and agricultural land that

once abutted much of the parkway. In many cases these rural land uses have been replaced by urban and suburban development, making the parkway a green ribbon in a developed landscape. This alters the parkway's relationship to its surroundings, and lowers, to some degree, its integrity of setting.

Materials

The parkway's integrity of materials is high. Most of the parkway's simple palette of original materials—brick, wood, exposed aggregate concrete, poured concrete— used in the parkway's construction are still present in the field today. This is also true for plant materials, where the original plant palette has, for the most part, been used when replanting. Throughout the 23-mile parkway, where repair, replacement, and additions have been made, materials duplicating the originals have generally been used, maintaining the parkway's integrity of materials.

Workmanship

Integrity of workmanship for the parkway is also high. The parkway's original construction used high quality materials and a large work force to produce a roadway defined by its precisely calculated and constructed alignments, meticulously designed and built structures, and carefully planted roadside plantings. Work which was done after the original construction periods followed these standards, so that in many cases additions to the parkway are, to the untrained eye, indistinguishable from the original structures.

Feeling

Colonial Parkway's integrity of feeling is high. Because of a lack of change in alignment, driving speed, surfacing, and moderate changes to the spatial character of the corridor, the experience of driving the road today remains very similar to that of 1958.

Association

Although association is an aspect of integrity more important for properties associated with a historic figure or event, it appears that Colonial Parkway's integrity of association is also high. Because it still retains its characteristic designed features, it fully retains its associations with an early period of roadway engineering and aesthetics. The characteristic grading and alignment of Colonial Parkway are clearly not associated with current highway engineering standards, and as a motorist experiences the parkway's curves and scenery at a leisurely speed, one hearkens back to an earlier era of automobile transportation.

Overall Integrity

Because it retains integrity for six of seven aspects, and because so many of its character-defining features are still extant, the overall integrity of Colonial Parkway can be judged to be high. In other words, not only is Colonial Parkway a special place and a carefully designed landscape, but it is substantially intact and

fully able to convey its historic significance as an outstanding example of American parkway design.

CHAPTER V: ENDNOTES

[1] As far as can be told from 1930s documentation of drawings, text, and photographs, no road edge curbing was constructed along the parkway in the 1930s. Similarly, no historic photographs have been located from the 1950s and later which show roadside curbing in place along the parkway. However, construction drawing from the 1950s do show a curb detail. It is therefore unclear whether or not any curbing was implemented along the Williamsburg-Jamestown stretch of the parkway. However, if curbing were constructed, it must have existed in relatively small linear foot quantities.

[2] Resource Management Plan, Colonial National Historical Parkway, DRAFT, April 30, 1996.

[3] Information conveyed to project team by Jim Haskett, comment memorandum October 3, 1996. Also, a 1974 planting plan indicates additions of small flowering trees.

[4] Information conveyed to project team by Jim Haskett, comment memorandum October 3, 1996.

[5] 1974 Planting Plans.

[6] Source: Ward, L.G. , P.S. Rosen. W.J. Neal, O.R. Pilkey, Jr., O.R. Pilkey Sr., G. Anderson, and S.J. Howie. 1989. *Living with the Chesapeake and Virginia's Ocean Shores*. Duke University Press.

[7] A recent workshop by park staff in the fall of 1996 was part of the continuing process to evaluate the shoreline conservation program. A key objective is to identify alternatives to riprap and to fully explore the use of soft and "greener" solutions to shorelines, including bio-technical solutions as well as offshore and nearshore structures. Attendees included representatives of the US Army Corps of Engineers, the National Biological Survey, the Virginia Institute of Marine Science, and the Virginia Shoreline Advisory Service.

[8] Information conveyed to project team by Jim Haskett, comment memorandum October 3, 1996. Mr. Haskett says: "Each period of [sign] expansion was followed by the appointment of a committee to reduce the numbers of signs, eternal vigilance being the price of escaping a forest of signs."

CHAPTER VI: SIGNIFICANCE

INTRODUCTION

Colonial Parkway is potentially significant under Criterion C of the National Register for its association with landscape architecture, because it embodies the distinctive characteristics of a type of designed landscape, the parkway. The following section outlines the context for significance, and then provides a statement and period of significance for the parkway.

A. CONTEXT

The roots of the modern parkway lie in the late nineteenth century parkways and boulevards built as part of urban park systems. At this time, the concept of a "parkway" was a grass- and tree-lined roadway, which linked parks to their surrounding urban and suburban communities. Perhaps the first such example were the Eastern and Ocean Parkways in Brooklyn, New York. These scenic roadways were designed by Frederick Law Olmsted and Calvert Vaux as a part of their work on Prospect Park. Dating to 1865, this work set a precedent of linking urban parks in a system of broad, green corridors which would soon be applied elsewhere. The right-of-way width of the Eastern and Ocean Parkways was about 200 feet, wide enough to allow a central road flanked by side service roads, walking or bridle paths, all with tree-lined medians and margins. Olmsted and Vaux's work in Brooklyn was followed by their design of a park and parkway system for Buffalo, NY in 1870. The Buffalo plan won a city planning award at the Paris exposition of 1873. These parkway projects spawned other late nineteenth and early twentieth parkways linking parks and urban areas, designed by Olmsted, Vaux and other designers. Over time, Rochester, New York; Minneapolis, Minnesota; Boston, Massachusetts; Kansas City, Kansas; Louisville, Kentucky; and Seattle, Washington would all have intraurban park and parkway systems.

However, it was not until after World War I that the modern parkway was truly born. The idea crystallized with the construction of the Bronx River Parkway, which was begun in 1907 and completed in 1923. Winding through the shallow valley the Bronx River, the parkway provided a pleasant drive between Bronx Park and urban New York City via a four-lane road situated in a wide area of park land. Cross streets were eliminated from the route, with traffic crossing instead on bridges overhead.

The Bronx River Parkway's success was widely imitated, and scenic travel routes emerged in several regions. Simply speaking, the new type of road, the modern parkway could be defined as a strip of park land of varying width containing a roadway dedicated to recreation and the movement of pleasure (passenger) vehicles.[1] The parkway differed from ordinary roads and highways in that:

- It was meant for comfortable driving through pleasant surroundings.
- It used an alignment of gentle curves. These curves were designed for speeds in keeping with the capabilities of contemporary automobiles.
- It had limited access, with few intersections. Abutting owners had no right of light, air, or access over the parkway land.
- It used designed plantings, views, and other park-like features to enhance the appearance and experience of driving the road.

Over the forty years following the completion of the Bronx River Parkway, many more parkways were designed and built, predominantly in the eastern portion of the United States. New York State in particular built a veritable system of parkways. Chief among these was the Westchester County Parkway built by the Westchester County Parkway Commission in 1923, with landscape architect Gilmore Clarke and engineer Jay Downer given much of the credit for the design of this parkway. The Westchester County Park Commission later enlarged their system to include the Sawmill River Parkway, the Hutchinson River Parkway, the Briarcliff-Peekskill Parkway and the Cross County Parkway. As the parkway idea spread, in 1936-38 the Merritt Parkway was constructed in Fairfield County, Connecticut. Developed by Connecticut transportation engineers in conjunction with landscape architect Thayer Chase and architect Louis Dunkelberger (who designed the bridges), the Merritt Parkway provided a transportation corridor linking coastal Connecticut communities. This generation of longer parkways, which connected communities rather than parks eventually included a system of parkways on Long Island and the Taconic Parkway in New York and the Palisades and Garden State Parkways in New Jersey.

Development of scenic park roads within National Parks and interurban parkways near Washington, DC occurred contemporaneously with the development of the New York, New Jersey, and Connecticut parkways. The Mount Vernon Parkway, which linked Washington's home with the capitol city, and later, the larger George Washington Parkway system, were developed by the National Park Service (NPS) and the Bureau of Public Roads (BPR) in the early 1930s. The design and construction of the Going-to-the-Sun Road in Glacier National Park and other scenic roads in the western parks also served to develop parkway ideas and to train NPS landscape architects for parkway development. The NPS interest in constructing parkways was further strengthened in 1926, when a cooperative agreement between the Bureau of Public Roads and the NPS was created for the purpose of jointly developing scenic roads. While the BPR engineers would handle the engineering aspects of road construction, the NPS landscape architects would focus on the roadways' scenic appearance and fit with the surrounding landscape. The Blue Ridge, Colonial, and Natchez Trace Parkways were all built as part of the BPR-NPS collaboration.

As more parkways were built, their design evolved. There are some differences between the design of the parkways noted above. Some, for example, have concrete surfaces; others have bituminous surfaces. Some have divided pavements, with a center median of landscape between traffic lanes while others are single roadways. However, an examination of this class of roads reveals a number of unifying characteristics of design, which define them as a landscape type. These characteristics are described below.

Parkway alignments were characterized by their use of long curves, spiral transitions between tangents and circular arcs, and superelevations. These elements helped to provide the road's sinuous, curving appearance to the road and initially accommodated increasing automobile speeds.

- Sideslopes were carefully designed in areas of cut and fill, with ogee-curved slopes used to blend the parkway into the surrounding terrain.

- Parking areas were provided for use as motorist stopping points and for viewing scenery, reading interpretive markers, or picnicking.

- Access to the roadway was controlled to specific points, eliminating constant interruptions in driving. At-grade intersections were eliminated and replaced with ramps from grade-separated interchanges.

- Structures such as underpasses and overpasses were architecturally designed to complement the road and the surrounding scenery. Local materials, such as stone, were often used in their construction.

- Planting was an integral part of the roadway design, to prevent erosion on side slopes, to block headlight glare from oncoming vehicles, to compose views, and to fit the parkway into the landscape. Plant materials native to the area were often used.

From a more generalized perspective, parkway design emphasized the interprofessional collaboration of landscape architects, engineers, and architects to create a road in which an aesthetic experience was emphasized. Parkways also generally connected urban areas to rural areas, connected park land to other park land, or were destination drives or recreation activities in themselves; they were not designed to carry commuters into cities. Commercial vehicles such as trucks were denied access entirely.

The era of the designed parkway lasted until the early 1960s, after which time the American perception of roads and automobile travel began to change, changing the design of roadways. As more people owned cars, more trucks transported goods, and more people began to use the car for everyday transportation and not just recreation, they no longer desired leisurely, winding roads. Speed of travel became more important than a roadway's appearance, leading to the loss of the curving alignments and the designed plantings which had characterized parkway design. It is no coincidence that the advent of the Interstate Highway System in the 1950s coincides with the disappearance of the parkway as a landscape type. The wide lanes, low grades, and straighter alignments of the interstate, which allowed drivers to go farther and faster than they ever had before, made the leisurely "tour-road" incompatible with highway efficiency. The completion of the Blue Ridge Parkway in 1965 can be considered the end of the parkway era.

However, the desire for wider, faster, and greater capacity roadways did not merely spell the end of parkway design and construction, but also led to the alteration and degradation of existing parkways, as they were used less for recreation and more for commuting. To accommodate more cars and faster speeds of 55 and 65 mph, many parkways had their curving alignments straightened and their lanes widened. Wide, paved shoulders were also added. These actions eliminated the viewsheds, broad slopes, and space-shaping planting designs characteristic of the parkway. Planted medians were consumed by increased lane pavement and replaced with metal guide rail and jersey barriers. Acceleration and deceleration ramps, not used on parkways with slow design speeds, were added, and the radii of interchange ramps were correspondingly increased. In some cases, architecturally significant underpass structures were removed or altered to accommodate widened lanes.

Changes like these have lessened the integrity of the majority of the parkways built in the eastern U.S., with some losing enough of their characteristic features to be unrecognizable as parkways. The original Bronx River Parkway and other parkways around New York, such as the Westchester County and Long Island Parkway systems, have been significantly altered. Similarly, the Merritt Parkway in Connecticut has experienced numerous highway "improvements," resulting in a loss of many its characteristic features. The nationwide level of incompatible change to the modern parkways of the 1920s to 1960s makes the high integrity of Colonial Parkway all the more important.

B. STATEMENT OF SIGNIFICANCE FOR COLONIAL PARKWAY

1. Significance under Landscape Architecture

Because of the losses occurring to so many parkways across the country, Colonial Parkway can be considered significant simply because it is one of the few remaining, intact examples of its type. However, in addition to its preservation, it is also an outstanding representative of this class of roads. Colonial Parkway displays, in a representative manner, all salient characteristics of a modern parkway, described as follows:

Built between 1930 and 1958, Colonial Parkway is situated squarely in the chronological and stylistic milieu of the designed parkway. Its design and construction followed the standard parkway design principles, using state-of the art technology for its time. The use of hydraulic fill, for example, was patterned on work being done on the nearby Mount Vernon Parkway along the Potomac River. In addition, its construction pioneered the use of some new technologies, including the used of exposed aggregate concrete surface, unique among the parkways designed in the U.S.

Colonial Parkway illustrates, in a complete and exemplary manner, the typical features of the designed parkway. Its alignment is defined by long curves with spiral transitions, and its side slopes are graded with ogee curves to smoothly interface with the surrounding terrain. It is a limited access road, and intersections with local roads are separated by underpasses and overpasses. These grade-separation structures are distinguished architecturally; made of red brick, they evoke the area's Colonial history and provide the parkway with some of its distinction. So do the creek bridges, with their streamlined, horizontal concrete form, which expressed the new age of automobile traffic that the parkways represented. The parkway's plantings are similarly an integral part of the parkway's design. Used to compose views and structure the driving experience, the planting design also evokes the landscape of Tidewater Virginia through the predominant use of local plant materials.

In addition to being an outstanding representative of its type, Colonial Parkway is a distinguished designed landscape in and of itself. Its alignment along the James and York Rivers, its abundant planting, unique brick and concrete structures all combine to create a landscape with superior aesthetic qualities. The parkway's construction also displays a high level of skilled craftsmanship which further contributes to the parkway's excellence in design.

Like most parkways, the design of Colonial Parkway is the result of a collaborative effort between landscape architects, engineers, and architects. In particular, it is representative of the collaboration between the design professionals of the National Park Service and the Bureau of Public Roads, a collaboration which produced several other great roadways, including the Blue Ridge Parkway, the Natchez Trace Parkway, and the Going-to-the-Sun Road in Glacier National Park. In addition, Colonial Parkway is representative of the ideas of some of the country's major parkway designers who were involved, on some level, in the design of the parkway. These men include landscape architect Gilmore Clarke and engineer Jay Downer, designers of the Westchester County Parkway System, who examined plans of the parkway and participated in field sessions with NPS and BPR Designers. Planner Harland Bartholomew and noted landscape architect Arthur Shurcliff also consulted in the design of the parkway, and it is believed that Shurcliff's influence is seen in the design of the parkway around Williamsburg. Of particular note, as well, is Stanley Abbott's work on the parkway in the 1950s and 1960s. Abbott, who began his career working under Clarke and Downer at the Westchester County Parks Commission, went on to become the landscape architect responsible for the design of the Blue Ridge Parkway.

These aspects of the parkway's design, combined with its high integrity, mean that it is fully able to convey its significance as a designed landscape. Therefore, Colonial Parkway should be considered potentially eligible for the National Register and worthy of future preservation. It may also be proposed for listing as a National Historic Landmark as one of the few remaining intact examples of modern parkway design.

2. Significance under Other Areas

In addition to its significance as a designed landscape under Criterion C, other areas of significance may also apply to Colonial Parkway. These include potential significance under Criterion C, as an outstanding example of National Park Service Design. In the early 20th century the National Park Service established an important style of park architecture and landscape architecture, as documented in a recent National Historic Landmark theme study. The Colonial Parkway may be significant in this area since its design follows those National Park Service design tenants yet places them in a Colonial-Revival context. In addition the Parkway is an important NPS-designed parkway, in the company of such NPS-designed roads as the Going-to-the-Sun Road and the Blue Ridge Parkway. Furthermore, the parkway may also be significant under Criterion B for its association with the Historic Preservation Movement. As one of the first National Historic Parks, Colonial NHP is clearly important in the early years of the historic preservation movement, which had its roots in state and local organizations such as the Association for Preservation of Virginia's Antiquities (APVA) and Society for the Preservation of New England Antiquities (SPNEA) in the late 19th and early 20th centuries. As a roadway connecting historic sites, Colonial Parkway is potentially a unique manifestation of historic preservation. The topic of parkways in the context of the historic preservation movement deserves additional research and might include such other examples as the Natchez Trace and the George Washington Memorial Parkways. To better ascertain the significance of Colonial Parkway under these and perhaps other areas of significance, further research will be required. This work will likely include development of the contexts mentioned above and would be appropriate as part of the process of completing a National Register Application.

3. Period of Significance

The parkway's period of significance may be considered to be 1930-1958, the date which bracket its period of construction. The use of the construction period as the period of significance is typical and appropriate for a resource which is eligible for the National Register under Criterion C, Design and Construction.

Although the end of the period of significance, 1958, does occur within the past 50 years, Colonial Parkway is still considered eligible for the National Register since the beginning of its construction period occurs well before 50 years ago. This fact means that Colonial Parkway is not required to meet Criterion Consideration G of the National Register.

4. Summary of Potential Significance

Colonial Parkway is potentially eligible for the National Register under Criterion C, Design and Construction for its association with Landscape Architecture, as an outstanding example of designed parkway. Its period of significance is 1930-1958, the dates of its construction. The completion of a Determination of Eligibility would be an appropriate first step toward completing a National Register Nomination. Much of

the historical information in Chapters II and III and the contextual information in this chapter may be appropriate for inclusion in such a document.

CHAPTER VI: ENDNOTES

[1]This and the following descriptive parkway characteristics are drawn from Norman Newton's book, *Design on the Land*, 600-619.

APPENDIX B: LIST OF CONTRIBUTING & NON-CONTRBUTING FEATURES

A. CONTRIBUTING FEATURES

Colonial Parkway:
Including its characteristic Spatial Organization, Spatial Character (Views and Vistas)Topography, and Circulation (Alignment, Surfacing and Interchanges), and Vegetation (Cover Types and Designed Plantings).

Parking Overlooks:
Fusiliers Redoubt Overlook
Naval Mine Depot Overlook
York River Overlook
Powhatan Village Overlook
Indian Field Creek Overlook
Bellfield/Cheatham Annex Overlook
Ringfield Overlook
Jones Mill Pond Overlook
Great Oaks Parking Overlook
Paper Mill Creek Overlook
Halfway Creek Overlook
College Creek Overlook
James River Overlook
Archers Hope Overlook
Jamestown Island Overlook
Real Estate Overlook
Powhatan Creek Overlook
Isthmus Overlook.

Parking Lots:
Jamestown Visitor Center Parking Lot
Yorktown Visitor Center Parking Lot.

Picnic Area:
Ringfield Picnic Area

Small Culverts and Drainage Features:
Grass and Concrete Swales
The approximately 95 culverts, with brick headwalls at one or both ends, located along the parkway.

Large Culverts:
Ballard Creek Culvert
Brackens Pond Culvert
Jones Mill Pond Dam

Brick Overpasses:
Yorktown Creek Overpass,
U.S. Route 17 Overpass
Navy Mine Depot Overpass

Brick Arch Underpasses:
Virginia Route 238 Underpass
Virginia Route 143 Underpass

Capitol Landing Underpass
C & O Underpass
Tazewell Hall Underpass.

Williamsburg Tunnel

Concrete Bridges:
Indian Field Creek Bridge
Felgates Creek Bridge
Kings Creek Bridge
Halfway Creek Bridge
College Creek Bridge
Mill Creek Bridge
Powhatan Creek Bridge
Isthmus Bridge.

Navy Mine Depot/Naval Weapons Station Structures:
Brick Wall
Gate House

Small Scale Features:
Grey Interpretive Signs
Brick Tree Wells

Archeological Sites:
Sites along the Parkway, including pre-settlement/Native American, Colonial, Revolutionary War and Civil War sites, such as settlements, plantations, forts, homesteads, earthworks, etc.

B. NON-CONTRIBUTING FEATURES

Picnic and Interpretive Areas:
Great Neck Picnic Area
Bellfield Interpretive Area.

Brick Overpasses:
North Pier Overpass
Route 641 Overpass
Hubbard Lane Bridge.

Brick Arch Underpasses:
Interstate I-64 Bridges
Parkway Drive Underpass
Virginia Route 199 Underpass.

Small Scale Features:
Regulatory and Directional Signage
Kilometer Markers
Guard Rail
Brick Entry Signs
Jamestown Entrance Station.

APPENDIX C: ENGINEERING DATA

Table 1: Horizontal Curve Data

LOCATION		CURVE				
PC	PT	Delta	Degree	Radius	Length	Tangent
64+19.4	75+31.5	44°29'00"	04°00'00"	1432.7'	1121.1'	585.8'
80+61.7	90+69.7	05°02'30"	00°30'00"	11459.2'	1008.0'	504.5'
95+66.5	105+69.8	05°01'00"	00°30'00"	11459.2'	1003.3'	500.3'
105+69.8	116+43.0	19°59'00"	01°51'40"	3069.5'	1073.2'	542.4'
121+90.8	136+98.1	37°41'00"	02°30'00"	2292.0'	1507.3'	782.1'
147+17.9	158+33.9	27°54'00"	02°30'00"	2292.0'	1116.0'	569.3'
161+57.7	174+93.5	13°21'00"	01°00'00"	5729.6'	1335.8'	671.0'
188+52.7	195+26.6	20°13'00"	03°00'00"	1910.1'	673.9'	340.5'
199+24.1	206+84.7	39°56'00"	05°15'00"	1091.7'	760.6'	396.6'
206+84.7	217+60.8	21°53'00"	02°08'00"	2685.9'	1022.1'	518.6'
230+00	267+51.5	06°15'00"	00°10'00"	34377.5'	3751.5'	1877.0'
267+51.5	275+51.5	08°00'00"	01°00'00"	5729.7'	800.0'	400.7'
278+48.9	286+38.9	03°57'00"	00°30'00"	11459.2'	790.0'	395.1'
299+42.6	313+05.2	61°19'00"	04°30'00"	1273.6'	1362.6'	754.9'
315+85.9	330+86.9	44°09'00"	02°56'29"	1948.1'	1501.0'	790.3'
330+86.9	356+43.6	25°34'00"	01°00'00"	5729.7'	2556.7'	1300.0'
373+10.1	382+36.2	25°28'00"	02°45'00"	2083.68'	926.1'	470.83'
384+15.9	391+90.8	40°41'00"	05°15'00"	1091.73'	774.9'	404.7'
396+93	426+27.5	14°42'41"	00°30'05"	11439'	2934.5'	1476.4'
426+27.5	438+82.3	20°58'00"	01°40'13"	3457.9'	1254.6'	634.8'
441+16.6	447+04.1	02°44'30"	00°28'00"	12277.7'	587.6'	294.9'
447+04.1	450+04.2	03°01'00"	01°40'16"	3428.7'	300.1'	150.1'
450+04.2	454+80.5	06°02'00"	01°16'00"	4523.4'	476.3'	238.4'
572+02.6	587+53.8	10°36'00"	00°41'00"	8385.8'	1551.22'	777.89'
587+53.8	592+52.6	09°19'00"	01°52'07"	3067.51'	498.77'	249.95'
622+27.5	629+96.4	13°35'00"	01°46'00"	3243.29'	768.87'	386.26'
630+93.7	640+83.9	19°00'00"	01°55'00"	2989.48'	991.3'	500.26'
640+83.9	650+24.6	07°37'00"	00°48'35"	7076.77'	940.7'	471.1'
666+92	682+48	27°14'00"	01°45'00"	3274.2'	1556.2'	793.1'
696+90.7	711+71.8	22°13'00"	01°30'00"	3819.72'	1481.1'	750.0'
792+35.18	802+28.86	09°36'00"	00°58'00"	5927.15'	993.07'	497.71'
845+44.25	855+31.75	53°10'00"	01°20'00"	4297.18'	3987.50'	2150.30'
910+00.75	927+25.75	04°18'45"	00°15'00"	22918.31'	1725.0'	862.85'
953+24.51	1015+40.45	33°54'41"	00°32'44"	10503.35	6214.97'	3202.29'
1020+40.38	1036+78.08	20°44'41"	01°16'00"	4522.06'	1637.70'	827.70'
1039+82.94	1057+29.61	21°50'00"	01°15'00"	4583.66'	1746.67'	884.06'
1057+29.61	1067+29.19	04°03'00"	00°24'18.6"	14141.07'	999.58'	500.0'
1068+60.03	1083+17.38	16°31'00"	01°08'00"	5055.51'	1457.35'	733.77'
1087+48	1101+70.2	21°20'00"	01°30'00"	3819.8'	1422.2'	719.6'
1111+34.3	1121+33.14	15°45'00"	01°26'00"	3997.38'	998.84'	554.45'
1141+90.31	1146+61.98	03°32'15"	00°45'00"	7639.44'	471.67'	235.91'
1147+41.21	1152+12.88	03°32'15"	00°45'00"	7639.44'	471.67'	235.91'

Table 2: Horizontal Spiral Curve Data

LOCATION		CURVE				SPIRAL	
PSC	PCS	Delta	Degree	Radius	Length	Delta	Length
460+17.6	470+41.7	18°26'00"	01°48'00"	3183.2'	1024.1'	01°00'00"	111'
474+84.8	477+93.75	10°21'00"	03°21'00"	1710.6'	308.95'	02°30'00"	165'
484+55	495+24.9	38°09'30"	03°34'00"	1606.7'	1069.86'	03°30'00"	192'
503+01.71	516+82.23	35°06'00"	02°32'00"	2261.9'	1385.52'	01°40'00"	132'
525+08	536+16.5	56°10'00"	05°04'00"	1131.2'	1108.55'	04°40'00"	182'
540+73.5	556+98.5	73°40'00"	04°32'00"	1264.2'	1625.0'	04°40'00"	203'
561+93.78	570+75	48°33'00"	02°01'00"	2841.3'	2407.44'	01°40'00"	164'
592+52.6	596+30	10°34'30"	02°48'10"	2044.25'	377.31'	03°30'00"	240'
601+48.5	611+17.4	30°56'00"	03°11'35"	1794.39'	968.82'	02°30'00"	165'
611+17.4	619+23.9	18°14'00"	02°15'40"	2533.97'	806.53'	01°40'00"	164'
653+53.2	658+15.1	50°48'30"	11°00'00"	520.87'	461.89'	08°15'00"	150'
685+70.31	687+27.49	18°44'00"	05°14'41.4"	1092.43'	157.18'	05°14'41.4"	200'
689+27.49	696+89.71	03°16'00"	00°22'30"	15278.87'	762.22'	05°32'11.4"	200'
716+48.62	731+11.95	40°20'00"	02°30'00"	2291.83'	1463.33'	01°52'30"	150'
734+29.86	745+80.57	61°08'00"	04°42'00"	1219.06'	1150.71'	03°31'30"	150'
753+64.87	764+64.87	19°30'00"	01°30'00"	3819.72'	1100'	01°30'00"	200'
766+64.87	776+92.69	11°20'00"	01°00'18"	5701.39'	1027.76'	01°30'00"	200'
777+86.51	788+59.84	16°06'00"	01°30'00"	3819.83'	873.33'	01°30'00"	200'
819+48.01	826+54.35	20°15'15"	02°22'00"	2420.95'	706.34'	01°46'30"	150'
832+57.89	845+44.25	36°00'00"	02°35'48"	2206.46'	1286.36'	02°35'48"	200'
885+31.75	895+79.98	20°51'00"	01°48'57"	3155.34'	1048.23'	01°48'57"	200'
1158+80.58	1172+17.83	35°55'52.2"	02°30'00"	2291.83'	1337.25'	02°30'00"	200'
1172+17.83	1185+92.54	42°46'00"	02°54'00"	1975.72'	1374.71'	02°54'00"	200'

FOR ORIENTATION
Station (-12+00) = Route 238
Station 108+20 = Mine Depot Bridge
Station 299+00 = Felgate Creek Bridge
Station 546+00 = I-64 Bridges
Station 660+00 = Approximate Center of Williamsburg Circle
Station 847+00 = College Creek Bridge
Station 1189+00 = Jamestown Information Center

Table 3: Vertical Curve Data

LOCATION		CURVE		TYPE OF			ALGEBRAIC
PVC	PVT	LENGTH	K	CURVE	G1	G2	DIFFERENCE
58+00	66+00	800	257.65	Crest	0.35%	-2.75%	-3.11%
72+50	81+50	900	166.88	Sag	-2.75%	2.64%	5.39%
85+50	93+50	800	216.39	Crest	2.64%	-1.06%	-3.70%
94+00	102+00	800	285.61	Sag	-1.06%	1.75%	2.80%
102+25	107+75	550	95.74	Crest	1.75%	-4.00%	-5.75%
110+75	118+75	800	108.11	Sag	-4.00%	3.40%	7.40%
119+00	128+75	1000	174.43	Crest	3.40%	-2.33%	-5.73%
129+25	136+25	700	175.18	Sag	-2.33%	1.66%	4.00%
137+75	143+75	600	195.57	Crest	1.66%	-1.41%	-3.07%
145+00	154+00	900	265.57	Sag	-1.41%	1.98%	3.39%
158+00	168+00	1000	261.1	Crest	1.98%	-1.85%	-3.83%
173+00	179+00	600	325.03	Sag	-1.85%	0.00%	1.85%
212+00	218+00	600	314.3	Sag	0.00%	1.91%	1.91%
221+00	231+00	1000	458.3	Crest	1.91%	-0.27%	-2.18%
233+00	241+00	800	1349.07	Sag	-0.27%	0.32%	0.59%
245+50	253+50	800	1144.49	Crest	0.32%	-0.38%	-0.70%
260+00	268+00	800	678.54	Sag	-0.38%	0.80%	1.18%
268+00	278+00	1000	455.79	Crest	0.80%	-1.39%	-2.19%
288+00	292+00	400	286.94	Sag	-1.39%	0.00%	1.39%
294+00	300+00	600	378.31	Sag	0.00%	1.59%	1.59%
303+50	319+50	1600	635.93	Crest	1.59%	-0.93%	-2.52%
325+00	332+00	700	303.69	Sag	-0.93%	1.38%	2.31%
342+00	349+00	700	203.67	Crest	1.38%	-2.06%	-3.44%
356+50	360+50	400	193.99	Sag	-2.06%	0.00%	2.06%
360+50	369+75	395	100.77	Sag	0.00%	3.92%	3.92%
362+67.1 (Bk.) = 367+98.1 (Ahd.)							
371+75	376+75	500	105.09	Crest	3.92%	-0.84%	-4.76%
378+25	385+25	700	188.83	Sag	-0.84%	2.87%	3.71%
391+00	404+00	1300'	287.80	Crest	2.87%	-1.65%	-4.52%
408+50	415+50	700'	259.84	Sag	-1.65%	1.05%	2.69%
435+25	441+25	600'	139.02	Crest	1.05%	-3.27%	-4.32%
441+75	446+75	500'	73.61	Sag	-3.27%	3.52%	6.79%
446+75	453+00	600'	150.08	Crest	3.52%	-0.48%	-4.00%
463+50	473+50	1000'	219.06	Crest	-0.48%	-5.04%	-4.57%
473+50	484+27.4	950'	98.70	Sag	-5.04%	4.59%	9.63%
488+00	492+00	400'	127.47	Crest	4.59%	1.45%	-3.14%
501+50	509+50	800'	458.19	Crest	1.45%	-0.30%	-1.75%
518+75	528+77.5	1000'	598.44	Crest	-0.30%	-1.97%	-1.67%
531+00	545+01.5	1400'	401.61	Sag	-1.97%	1.52%	3.49%
548+50	558+50	1000'	181.29	Crest	1.52%	-4.00%	-5.52%
562+75	570+75	800'	91.84	Sag	-4.00%	4.71%	8.71%
570+75	572+00	125'	132.14	Sag	4.71%	5.66%	0.95%
573+50	580+50	700'	78.64	Crest	5.66%	-3.24%	-8.90%
569+00	604+00	1500'	226.72	Sag	-3.24%	3.37%	6.62%
613+50	619+50	600'	83.94	Crest	3.37%	-3.78%	-7.15%
621+70	630+90	920'	144.65	Sag	-3.78%	2.58%	6.36%
634+00	639+00	500'	193.50	Crest	2.58%	0.00%	-2.58%
639+00	645+00	600'	179.59	Crest	0.00%	-3.34%	-3.34%
645+50	657+00	1200'	322.84	Sag	-3.34%	0.38%	3.72%
661+75	664+75	300'	70.94	Sag	0.38%	5.00%	4.23%
663+75	671+25	750'	136.36	Crest	5.00%	-0.50%	-5.50%
683+00	685+50	250'	113.64	Sag	-0.50%	1.70%	2.20%

Table 3: Vertical Curve Data, cont'd

685+50	691+50	600'	222.22	Crest	1.70%	-1.00%	-2.70%
692+90.26	696+89.71	400'	125.00	Crest	-1.00%	-4.20%	-3.20%
697+75	700+75	300'	86.26	Sag	-4.20%	-0.72%	3.48%
706+50	712+50	600'	142.11	Sag	-0.72%	3.50%	4.22%
713+56.98	721+46	800'	100.38	Crest	3.50%	-4.47%	-7.97%
723+46	729+46	600	134.23	Sag	-4.47%	0.00%	4.47%
741+25	753+25	1200'	244.90	Sag	0.00%	4.90%	4.90%
757+25	765+25	800'	107.32	Crest	4.90%	-2.55%	-7.45%
769+00	775+00	600'	108.50	Sag	-2.55%	2.98%	5.53%
778+25	784+25	600'	76.96	Crest	2.98%	-4.82%	-7.80%
787+50	792+00	600'	88.44	Sag	-4.82%	1.96%	6.78%
796+50	804+50	800'	133.02	Crest	1.96%	-4.05%	-6.01%
808+50	821+50	1300'	151.69	Sag	-4.05%	4.52%	8.57%
821+50	829+50	800'	105.19	Crest	4.52%	-3.09%	-7.61%
833+47.37	839+47.37	600	194.49	Sag	-3.09%	0.00%	3.09%
845+15	850+15	500	714.29	Crest	0.00%	-0.70%	-0.70%
851+78	856+78	500	714.29	Sag	-0.70%	0.00%	0.70%
870+00	876+00	600	468.75	Sag	0.00%	1.28%	1.28%
879+00	885+00	600	263.16	Crest	1.28%	-1.00%	-2.28%
887+50	895+50	800	444.44	Sag	-1.00%	0.80%	1.80%
897+50	905+50	800	404.04	Crest	0.80%	-1.18%	-1.98%
907+00	913+00	600	508.47	Sag	-1.18%	0.00%	1.18%
917+50	922+50	500	1000	Sag	0.00%	0.50%	0.50%
922+50	927+50	500	501.66	Crest	0.50%	-0.50%	-1.00%
927+50	932+50	500	1006.64	Sag	-0.50%	0.00%	0.50%
937+50	942+50	500	1000	Sag	0.00%	0.50%	0.50%
942+50	947+50	500	666.67	Crest	0.50%	-0.25%	-0.75%
954+00	960+00	600	857.14	Sag	-0.25%	0.45%	0.70%
963+00	971+00	800	941.18	Crest	0.45%	-0.40%	-0.85%
974+00	980+00	600	1500	Sag	-0.40%	0.00%	0.40%
997+50	1002+50	500	1000	Sag	0.00%	0.50%	0.50%
1007+00	1012+00	500	500	Crest	0.50%	-0.50%	-1.00%
1017+41	1020+91	350	700	Sag	-0.50%	0.00%	0.50%
1021+00	1027+00	600	400	Sag	0.00%	1.50%	1.50%
1027+00	1033+00	600	229.01	Crest	1.50%	-1.12%	-2.62%
1035+00	1041+00	600	315.08	Sag	-1.12%	0.78%	1.90%
1042+00	1048+00	600	1122.96	Crest	0.78%	0.25%	-0.53%
1051+00	1059+00	800	1600	Crest	0.25%	-0.25%	-0.50%
1059+00	1065+00	600	533.33	Crest	-0.25%	-1.38%	-1.13%
1065+00	1071+00	600	221.81	Sag	-1.38%	1.33%	2.71%
1071+00	1077+00	600	379.75	Crest	1.33%	-0.25%	-1.58%
1081+00	1085+00	400	800	Sag	-0.25%	0.25%	0.50%
1091+00	1099+00	800	581.82	Crest	0.25%	-1.13%	-1.38%
1099+00	1107+00	800	492.31	Sag	-1.13%	0.50%	1.63%
1113+50	1117+50	400	400	Crest	0.50%	-0.50%	-1.00%
1148+00	1154+00	600	428.88	Sag	-0.90%	0.50%	1.40%
1165+75	1172+75	500	500	Crest	0.50%	-0.50%	-1.00%
1177+00	1181+00	400	1176.47	Sag	-0.50%	-0.16%	0.34%

Traffic Volume Data

Permanent traffic recorders have been established by the National Park Service at the Rotary in Williamsburg. A comparison of weekday and weekend volumes for July and December indicates very little usage of the parkway for commuting. As an example, for loop #3 (refer to exhibit IV.J.2) 24 more vehicles/hour in July on a weekday morning were counted than for the weekend morning; in the afternoon the average was 34 vehicles. This is not considered a significant difference in traffic volumes. Tables IVJ.2.1 and IVJ.2.2 contain the July and December summaries at four different traffic count locations.

The average daily traffic on the Parkway throughout the year is 4000 vehicles with a high of 5000 ADT in July and a low of 1330 ADT in February. Again, with the large variation in volumes, this indicates that the parkway is used primarily by tourists/visitors and not by a substantial commuting populace.

Figure 1. Traffic Circle Loop Locations

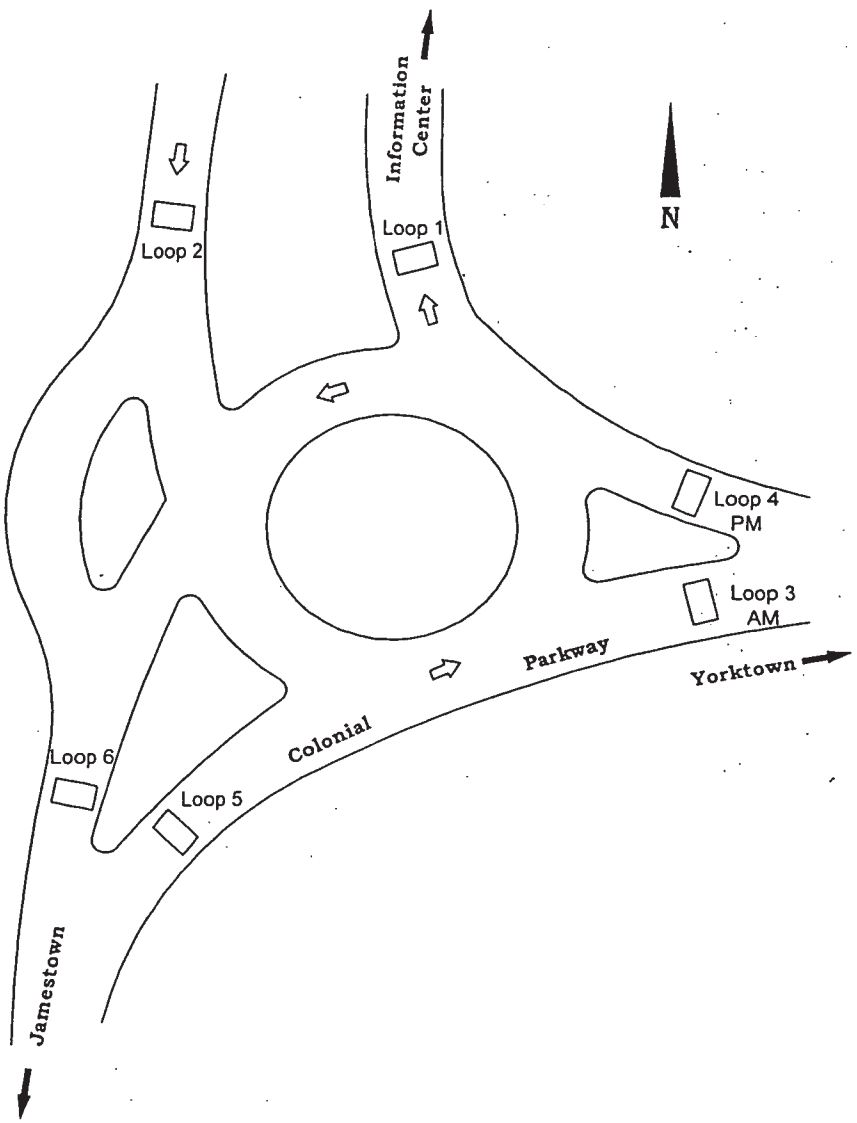


Table 4: July Traffic Volumes

STATION 502 (ROTARY CIRCLE & VA 132 CONNECTOR) TRAFFIC COUNT

TYPICAL WEEK RUSH HOURS ON JULY FOR LOOP #3								
	7 AM	8 AM	9 AM	AM AVG.	4 PM	5 PM	6 PM	PM AVG.
SUNDAY	15	30	48	31	247	211	205	221
MONDAY	26	67	78	57	201	224	281	235
TUESDAY	23	58	78	53	218	266	278	254
WEDNESDAY	32	64	93	63	233	269	326	276
THURSDAY	25	72	84	60	210	247	282	246
FRIDAY	32	61	98	64	175	234	261	223
SATURDAY	15	35	63	38	235	193	184	204
WEEKDAY AVG.	28	64	86	59	207	248	286	247
WEEKEND AVG.	15	33	56	35	241	202	195	213

TYPICAL WEEK RUSH HOURS ON JULY FOR LOOP #4								
	7 AM	8 AM	9 AM	AM AVG.	4 PM	5 PM	6 PM	PM AVG.
SUNDAY	32	62	121	72	221	217	251	230
MONDAY	70	149	225	148	177	172	204	184
TUESDAY	79	145	245	156	203	193	185	194
WEDNESDAY	65	162	222	150	180	204	204	196
THURSDAY	70	165	220	152	164	184	186	178
FRIDAY	67	152	210	143	191	177	183	184
SATURDAY	37	69	134	80	190	188	183	187
WEEKDAY AVG.	70	155	224	150	183	183	192	186
WEEKEND AVG.	35	66	128	76	206	203	217	209

TYPICAL WEEK RUSH HOURS ON JULY FOR LOOP #5								
	7 AM	8 AM	9 AM	AM AVG.	4 PM	5 PM	6 PM	PM AVG.
SUNDAY	23	53	160	79	257	236	277	257
MONDAY	56	111	238	135	253	235	234	241
TUESDAY	54	122	257	144	270	261	261	264
WEDNESDAY	56	140	269	155	247	237	243	242
THURSDAY	62	143	242	149	223	197	241	220
FRIDAY	60	124	229	138	235	227	234	232
SATURDAY	31	63	154	83	232	232	224	229
WEEKDAY AVG.	58	128	247	144	246	231	243	240
WEEKEND AVG.	27	58	157	81	245	234	251	243

TYPICAL WEEK RUSH HOURS ON JULY FOR LOOP #6								
	7 AM	8 AM	9 AM	AM AVG.	4 PM	5 PM	6 PM	PM AVG.
SUNDAY	18	35	96	50	301	253	285	280
MONDAY	27	71	116	71	245	287	346	293
TUESDAY	25	86	157	89	301	308	359	323
WEDNESDAY	31	75	132	79	319	344	375	346
THURSDAY	27	61	119	69	261	263	338	287
FRIDAY	25	71	135	77	232	285	299	272
SATURDAY	18	40	87	48	271	236	211	239
WEEKDAY AVG.	27	73	132	77	272	297	343	304
WEEKEND AVG.	18	38	92	49	286	245	248	260

Table 5: December Traffic Volumes

STATION 502 (ROTARY CIRCLE & VA 132 CONNECTOR) TRAFFIC COUNT

TYPICAL WEEK RUSH HOURS ON DECEMBER FOR LOOP #3								
	7 AM	8 AM	9 AM	AM AVG.	4 PM	5 PM	6 PM	PM AVG.
SUNDAY	2	3	32	12	191	217	184	197
MONDAY	4	22	49	25	125	186	218	176
TUESDAY	4	16	54	25	166	173	250	196
WEDNESDAY	5	21	66	31	158	186	239	194
THURSDAY	7	30	56	31	142	160	175	159
FRIDAY	7	29	56	31	152	208	226	195
SATURDAY	5	12	27	15	137	171	166	158
WEEKDAY AVG.	5	24	56	28	149	183	222	185
WEEKEND AVG.	4	8	30	14	164	194	175	178

TYPICAL WEEK RUSH HOURS ON DECEMBER FOR LOOP #4								
	7 AM	8 AM	9 AM	AM AVG.	4 PM	5 PM	6 PM	PM AVG.
SUNDAY	7	22	57	29	269	319	344	311
MONDAY	17	67	145	76	138	145	140	141
TUESDAY	16	74	162	84	143	142	159	148
WEDNESDAY	18	70	184	91	128	157	142	142
THURSDAY	20	63	145	76	119	135	143	132
FRIDAY	13	78	153	81	139	171	164	158
SATURDAY	11	32	56	33	167	156	169	164
WEEKDAY AVG.	17	70	158	82	133	150	150	144
WEEKEND AVG.	9	27	57	31	218	238	257	238

TYPICAL WEEK RUSH HOURS ON DECEMBER FOR LOOP #5								
	7 AM	8 AM	9 AM	AM AVG.	4 PM	5 PM	6 PM	PM AVG.
SUNDAY	9	20	54	28	346	350	194	297
MONDAY	12	55	129	65	191	169	147	169
TUESDAY	19	47	131	66	180	196	154	177
WEDNESDAY	17	49	148	71	182	164	182	176
THURSDAY	19	42	127	63	199	185	167	184
FRIDAY	20	67	136	74	251	218	195	221
SATURDAY	21	44	177	81	231	227	201	220
WEEKDAY AVG.	17	52	134	68	201	186	169	185
WEEKEND AVG.	15	32	116	54	289	289	198	259

TYPICAL WEEK RUSH HOURS ON DECEMBER FOR LOOP #6								
	7 AM	8 AM	9 AM	AM AVG.	4 PM	5 PM	6 PM	PM AVG.
SUNDAY	4	6	47	19	361	378	199	313
MONDAY	8	25	69	34	217	235	235	229
TUESDAY	10	17	75	34	189	245	199	211
WEDNESDAY	8	23	80	37	175	255	227	219
THURSDAY	9	28	66	34	187	238	224	216
FRIDAY	8	26	74	36	258	276	229	254
SATURDAY	7	12	32	17	201	182	146	176
WEEKDAY AVG.	9	24	73	35	205	250	223	226
WEEKEND AVG.	6	9	40	18	281	280	173	245

Accident Data

An accident summary for the period January 1, 1993 through December 31, 1995 was provided by the National Park Service covering 117 reported accidents and is contained in Table IV.J.3.1. As a result of our review of the data the following observations are noted:

- Accident data is consistent for 1993 and 1995. However 1994 was 37% higher than the other two years. Most of the 1994 increase was fixed object accidents (69% of the increase).

- 63% of the accidents occurred during daylight, 29% at nighttime with the roadway unlit and 9% other.

- 76% of accidents occurred on dry pavement, 21% on wet pavement and 3% other.

- Fully 32% of all accidents involved animals. This is the largest single category.

- Fixed object accidents, the next-ranked category, accounted for 29%.

- Only 5% of the accidents involved sideswipe (4 accidents in three year period) or head on (1 accident in three year period).

- There is a lack of severity in the accidents with only 13% injury and 87% property damage.

- Only two accidents involved the use of alcohol or drugs.

- Of those accidents reported with causative factors, driver inattention accounted for 38% and failure to obey a yield sign or other traffic control device accounted for 18% of the accidents.

Table 6: Three-Year Accident Summary

TIME OF DAY	NUMBER OF ACCIDENT				PERCENT OF ACCIDENT
	1993	1994	1995	1993-1995	
DAYLIGHT	25	24	24	73	62%
DAWN	1	1		2	2%
DUSK	1	2	1	4	3%
DARK LIGHTED	2		1	3	3%
DARK NOT LIGHTED	6	20	8	34	29%
UNKNOWN		1		1	1%
TOTAL	35	48	34	117	100%

WEATHER	NUMBER OF ACCIDENT				PERCENT OF ACCIDENT
	1993	1994	1995	1993-1995	
CLEAR	24	35	21	80	68%
CLOUDY	6	6	9	21	18%
RAIN	4	6	4	14	12%
UNKNOWN	1	1		2	2%
TOTAL	35	48	34	117	100%

LOCATION	NUMBER OF ACCIDENT				PERCENT OF ACCIDENT
	1993	1994	1995	1993-1995	
INTERSECTION	8	4	4	16	14%
PARKING ACCESS	1	1	1	3	3%
INTERCHANGE	1	3	1	5	4%
BRIDGE	2	2		4	3%
WORK ZONE		9		9	8%
ON ROADWAY OTHER	16	14	18	48	41%
PARKING LOT	2	5	2	9	8%
ROADSIDE	4	9	4	17	15%
OFF ROADWAY OTHER	1		4	5	4%
UNKNOWN		1		1	1%
TOTAL	35	48	34	117	100%

SURFACE CONDITION	NUMBER OF ACCIDENT				PERCENT OF ACCIDENT
	1993	1994	1995	1993-1995	
DRY	26	37	26	89	76%
WET	7	9	8	24	21%
DEBRIS	1			1	1%
OTHER		1		1	1%
UNKNOWN	1	1		2	2%
TOTAL	35	48	34	117	100%

ACCIDENT CLASS	NUMBER OF ACCIDENT				PERCENT OF ACCIDENT
	1993	1994	1995	1993-1995	
NON COLLISION	2		4	6	5%
OTHER VEHICLE	9	11	9	29	25%
FIXED OBJECT	10	19	5	34	29%
BICYCLE	1		1	2	2%
PARKED VEHICLE	1	1		2	2%
ANIMAL	11	12	14	37	32%
OTHER OBJECT	1	3		4	3%
UNKNOWN		2	1	3	3%
TOTAL	35	48	34	117	100%

Table 7: Colonial Parkway Bridge Safety Inspection Summary

Location	Structure No.	Milepost	Purpose of Recommended Improvement	Priority of Improvement (see note)	Cost Estimates for the improvement
Colonial Parkway over Yorktown Creek	4290-005P	0.26	Rehabilitation and/or Reconstruction	C	$12,000.00
Colonial Parkway over U.S. Route 17	4290-006P	0.41	Rehabilitation and/or Reconstruction	C	$105,500.00
VA Route 238 over Colonial Parkway	4290-007P	1.39	Maintenance	D	$7,500.00
Colonial Parkway over Naval Weapons Road	4290-009P	2.24	Maintenance	D	$3,000.00
Colonial Parkway over North Access Road	4290-008P	2.86	Maintenance	D	$8,000.00
Colonial Parkway over Indian Field Creek	4290-010P	4.19	Rehabilitation and/or Reconstruction	C	$202,500.00
Colonial Parkway over Felgate's Creek	4290-011P	5.85	Rehabilitation and/or Reconstruction	D	$7,000.00
Colonial Parkway over Kings Creek	4290-012P	6.97	Rehabilitation and/or Reconstruction	C	$508,000.00
Colonial Parkway over VA Route 641	4290-013P	8.29	Maintenance	D	$3,500.00
Colonial Parkway over Hubbard's Lane	4290-014P	10.93	Maintenance	D	$5,500.00
Parkway Drive over Colonial Parkway	4290-016P	11.67	Maintenance	D	$6,200.00
Page Streef over Colonial Parkway	4290-018P	11.96	Maintenance	D	$6,800.00
C & O Railroad - over Colonial Parkway	4290-034P	12.54	Maintenance	D	$1,200.00
Lafayette Street over Colonial Parkway	4290-019P	12.56	Rehabilitation and/or Reconstruction	C	$16,500.00
Colonial Parkway over Williamsburg Tunnel	4290-033P	12.70	Rehabilitation and/or Reconstruction	C	$58,700.00
Newport Avenue over Colonial Parkway	4290-020P	13.17	Maintenance	D	$9,300.00
Colonial Parkway over Halfway Creek	4290-022P	15.36	Maintenance	D	$6,500.00
Colonial Parkway over College Creek	4290-023P	16.04	Maintenance	D	$5,500.00
Colonial Parkway over Mill Creek	4290-024P	19.09	Maintenance	D	$4,000.00
Colonial Parkway over Powhatan Creek	4290-025P	21.02	Rehabilitation and/or Reconstruction	D	$7,700.00
Colonial Parkway over Back River	4290-026P	22.08	Rehabilitation and/or Reconstruction	C	$120,500.00

Priority of Improvement

A - Bridge is closed, in danger of collapse, presents a critical safety hazard, or meets all three of the following criteria:
1. Have a severe structural inadequacy; 2. have a high traffic volume; 3. Be of vital importance to the community or area.

B - Bridge is critically deficient and/or presents a severe safety hazard, but can remain in service at reduced loads with frequent Inspections.

C - Bridge is deficient, functionally obsolete, presents a moderate safety hazard, or needs a high degree of maintenance.

D - Bridge is structurally sound. May or may nor require preventative maintenance.

E - Bridge is under construction, reconstruction, or has not been inspected to date.

APPENDIX D: LIST OF REPOSITORIES VISITED AND RECOMMENDATIONS FOR FUTURE RESEARCH

A. REPOSITORIES CONSULTED: CHAPTER I

1. Library of Congress—Washington, DC

The cartographic works on file in the Library of Congress' Division of Maps and Geography include original works, facsimiles and atlases. They include seventeenth, eighteenth, nineteenth and twentieth century maps that provide coverage of the study area. They range from very early schematic representations to sophisticated, topographically sensitive renderings. Also on hand are maps showing some of the right-of-way alternatives that were being considered prior to the Colonial Parkway's construction.

Dr. Richard Stephenson, former head of the Division of Maps and Cartography, compiled an index of the Library of Congress' holdings of Virginia maps. Therefore, works related to specific regions of the state, or certain counties, may be readily identified. The Library of Congress Virginia collection also includes maps associated with public works projects, the development and interpretation of tourist attractions, and those produced by county planners and Chambers of Commerce. Many of these maps are unavailable elsewhere. The Library of Congress also has a complete set of the Sanborn Insurance Company's urban maps and a microfilm of the Southern Historical Society's collection of Gilmer maps. The Library's Rare Collections include some charts produced by very early explorers; however, almost all of its early Virginia holdings have been published. The Library of Congress has an excellent assortment of atlases, some of which include Virginia maps.

The Still Pictures branch of the Library of Congress has a wide assortment of Civil War photographs and panoramic views. During the Jamestown Archaeological Assessment, research was done utilizing the photographic collections of the Library of Congress.

Also among the Library of Congress's holdings are the original HABS drawings and the Ambler Papers. Both collections are well organized and readily accessible. The Library of Congress maintains its collections of maps and photographs in the Madison Building, in downtown Washington, D. C.

2. National Archives—College Park, MD

The National Archives map collection for Virginia includes original works, facsimiles and atlases that encompass the seventeenth through the twentieth centuries. Although many of the Virginia map facsimiles on file at the National Archives are available at other major repositories, its collection of Civil War era maps is large and unique. Some have been reproduced in the Official Atlas of the Civil War; many have not. The National Archives' Civil War map collection includes an assortment of works prepared by Confederate cartographers. Most, however, were generated by topographic engineers associated with the Union Army. They shed a considerable amount of light upon settlement and development within the James-York peninsula, including the area through which the Colonial Parkway was built. One highly unique set of maps on file in theNational Archives was produced by the Freedmen's Bureau (Bureau of Refugees) in the 1860s, to show tracts that had been assigned to freed blacks for subsistence farming. The Colonial Parkway passes through some of that acreage.

The National Archives Cartographic Center's index to its Virginia map collection is organized chronologically. Therefore, each card in the index must be examined. Although the collection includes many Virginia map facsimiles that are available elsewhere (for example, the chart produced by Captain John Smith), its strength lies in its massive assortment of Civil War maps.

The National Archives Virginia map collection also includes very early topographic quadrangle sheets and maps produced by the Soil Conservation Service. Both are of great value in the prediction of archaeological site locations. A few maps that portray the layout of military facilities.

The National Archives Still Pictures Branch houses a wide variety of Civil War photographs. However, most of these views have been published. The collection is difficult to use due to its topical organizational scheme. During the Jamestown Archaeological Assessment, research was done utilizing the photographic collections of the National Archives.

3. Virginia Historical Society—Richmond, Virginia

The Virginia Historical Society is justifiably proud of its collection of Civil War maps. Original maps produced under the direction of Confederate topographic engineer J. F. Gilmer form the core of this collection. Scholars are allowed to examine high quality facsimiles and the original maps are available for use, if necessary. Unfortunately, relatively little of the area through which the Colonial Parkway passes was mapped by Confederate cartographers. The Virginia Historical Society maintains a thorough, cross-referenced card catalog that is extremely useful in accessing its Virginia maps. Among the society's holdings are facsimiles of many of Virginia's best known maps, such as those produced by Captain John Smith, Joshua Fry and Peter Jefferson, and others. Use was made of an index to the Virginia Historical Society's plats that are accessioned among its collection of private papers. This index was compiled by the author in 1985. No items were found that shed light upon the study area. During the Jamestown Archaeological Assessment, research was done utilizing the archival collections of the Virginia Historical Society.

4. Library of Virginia (Virginia State Library—Richmond, Virginia

The Library of Virginia's map collection, which embraces the entire state, largely consists of facsimiles procured from the Library of Congress and National Archives. However, there are some county maps and sketches produced as part of state public works projects, such as turnpikes and canals. No unique maps (facsimiles or originals) were found at the Library of Virginia that shed light upon cultural features associated with the Colonial Parkway and the countryside through which it passes.

During the Jamestown Archaeological Assessment, research was done utilizing land patents and local court records, microfilms of which are on file at the Library of Virginia. The library also contains numerous local histories and facsimiles of British Public Records Office documents.

5. Virginia Department of Historic Resources—Richmond, Virginia

This state agency's map collection, which was developed by the author between 1976 and 1985, includes facsimiles from the Library of Congress, National Archives, Bermuda, Kentucky, the Huntington Library, the North Carolina State Archives, the United States Military Academy, the National Oceanic and Atmospheric Administration, the Virginia Historical Society and county courthouses throughout the state. The collection, which is indexed, is unique in that it includes Gilmer map facsimiles from the Virginia Historical Society and the United States Military Academy. It also includes a substantial number of county maps and plats. Copies of mid-nineteenth century topographic and hydrographic maps, produced by USGS engineers and maintained by the National Oceanic and Atmospheric Administration, are in the VDHR collection. Four notebooks of small maps (facsimiles from published works) are available for use. Facsimiles in the VDHR map collection (formerly property of the Virginia Research Center for Archaeology) were intended for use in cultural resource management work. They complement the holdings of the Colonial Williamsburg Foundation.

6. U. S. Army Corps of Engineers Archives—Norfolk, Virginia

The COE Archives at Fort Norfolk, which contains a large collection of Virginia maps, often is overlooked by scholars. Although the collection is not indexed, it is organized by river drainages and therefore is not overly difficult to use. Most of these maps, which were prepared by highly skilled topographic engineers, were prepared because of proposed dredging or erosion curtailment projects. Many of the maps are fragile and lack titles or accessioning numbers. They are not in individual folders. The COE map collection is one of the most important in the state of Virginia.

Relatively few maps were found that shed light upon the Yorktown area or the shore line between Queens Creek and Yorktown. However, numerous cartographic works are available for the James River basin and good coverage is given to the area above and below Jamestown Island. Facsimiles procured from the Corps of Engineers Archives are on file with the Colonial Williamsburg Foundation in Williamsburg and the National Park Service in Jamestown and Yorktown.

7. City of Williamsburg/James City County Courthouse, Williamsburg, Virginia

Although almost all of the antebellum records of Williamsburg and James City County were destroyed when Richmond burned in 1865, both jurisdictions, which share circuit court facilities, have extensive plat collections. They show cultural features and the patterns of settlement and development that occurred. City surveyors' maps, on file in the clerk's office, are extremely helpful in understanding Williamsburg's growth and development and they chart the episodes of annexation that have occurred.

Although James City County was established in 1634 and Williamsburg, in 1699, both jurisdictions' earliest extant local court records date to the 1850s. It should be noted, however, that excerpts of local records are to be found in official records maintained by the legislature and other over-arching branches of government.

Original deed and will books for James City County and Williamsburg are on file in the jointly-operated courthouse in Williamsburg. Pre-twentieth century real estate and personalproperty tax rolls are available at the Library of Virginia in Richmond. Microfilms of tax rolls, 1782-1861, are available at the Colonial Williamsburg Foundation Research Archives. Extensive research was conducted utilizing the archival records of Williamsburg and James City County.

8. Colonial Williamsburg Foundation Research Archives—Williamsburg, Virginia

The Colonial Williamsburg Foundation's map collection is large and includes Virginia map facsimiles and originals procured throughout the United States and abroad. As the focal point of the Foundation's interpretive programs is the eighteenth century, that is where the strength of its map collection lies. Special emphasis has been placed upon Revolutionary War era maps. Included are maps from the Library of Congress and other institutions throughout the United States and abroad. The CWF collection includes single, double- and triple-oversized facsimiles and small map notebooks. The collection's index minimizes the strength of the Foundation's map holdings, which are voluminous.

Facsimiles of mid-nineteenth century topographic and hydrographic maps, procured from the National Oceanic and Atmospheric Administration, and copies of the Gilmer maps obtained from the United States Military Academy are among the Foundation's holdings. One Gilmer map facsimile, which includes the local area, was obtained from the College of William and Mary's Swem Library. Microfilms of Virginia maps in the British Public Records Office and other overseas repositories are available

The Sanborn Insurance Company's maps of Williamsburg (1904-1930) are available as are facsimiles of Mutual Assurance Society policies, which include sketch maps. Extensive research was done utilizing archival records and secondary sources that are on file at the Colonial Williamsburg Foundation.

9. York County Courthouse—Yorktown, Virginia

York County's court records, which are available from 1634 on, are unique in that they essentially are intact. In 1634 when county government was established in Virginia, eight shires (or counties) were formed. Six of these original counties were located on the James-York peninsula. Only York's records escaped destruction during the Civil War. Ironically, very few York County plats are available that predate the 1880s, with the exception of a few that are scattered through earlier deed books. This phenomenon is attributable to the procedural policies followed by York's seventeenth, eighteenth and nineteenth century clerks of court, who had a lot of leeway in how they could run their facilities. City surveyors' maps, on file in Yorktown, were helpful in understanding Williamsburg's growth and development.

Microfilms of York County's antebellum land and personal property tax rolls are available at the Library of Virginia and the Colonial Williamsburg Foundation Research Archives. Later dated tax rolls are located in Yorktown. Extensive research was conducted utilizing the archival records of York County.

B. REPOSITORIES CONSULTED: CHAPTERS II AND III

1. Colonial National Historical Park—Yorktown, Virginia

Because of the vast amount of information located here, the park proved to be the most important archive consulted.

a. Jamestown Archives

David Riggs reviewed the Jamestown database for information relating to parkway construction. A minimum of files were deemed relevant and were pulled for review by the LANDSCAPES team. These files primarily concerned the archeological investigation (Project 116) of the Williamsburg to Jamestown portion of the parkway prior to its construction in the 1950s. The files included one map of the parkway route annotated to show settlement and plantation sites along the parkway right of way, a number of more detailed archeological maps and daily logs recorded during the excavations of 10 sites along the parkway. In addition, notes for project 114, research on the Neck-of-Land area were examined for parkway information, but yielded nothing of great importance.

b. Yorktown Archives

Aided by a finding aid generated from the park archive database, LANDSCAPES reviewed the following materials in the Yorktown Archives:

Photograph collection—14 boxes of photographs and negatives relating to parkway construction were pulled by park staff for review by LANDSCAPES. We reviewed all printed photographs, but did not review negatives. The photographs provide an especially good overview of the 1930 to 1940 period of construction on the Ballard's Creek to Williamsburg section of the parkway, including grading, paving, planting operations. Photographic information for the Williamsburg to Jamestown section is much less complete, although excellent oblique aerial views of this portion of the parkway are found here.

Archive Files—Given the recent comprehensive review of these files by the HABS/HAER team, LANDSCAPES briefly examined the bulk of these files and then concentrated on those files deemed most relevant to the landscape character of the parkway. These files included the files on Planning the Parkway from 1931 to 1936, a construction file on Unit 1, the Superintendent's Monthly Narrative Reports, and the Engineering Report Files (which actually contain monthly Landscape Architect Reports) from 1954-57.

Drawing archives—Drawings located in the flat files at the Nelson House were comprehensively reviewed and some of these drawings were selected for reproduction in this report. Most of the drawings are blueprints, though there are some originals (ink on linen, pencil on trace) Based on handwritten notations on the drawings, and the content of the drawings, it appears that some of these drawings were originally located in the Landscape Division Office. There is some duplication of historic drawings between these files and those of the Engineering Office, but the overlap is not complete. In general, the Nelson House files contain more construction drawing cross sections, though based on drawing dates, these may not be the final versions of these features.

c. Engineering Archives

The drawings in the Engineering flat files were comprehensively reviewed. This office alsohouses microfilm which contains the most complete record of parkway drawings. The filing cabinet labeled "Original Parkway Construction Specifications" contains correspondence for many of the BPR construction projects on the parkway. Master plans for the park are also housed here.

2. Frances Loeb Library, Harvard Graduate School of Design—Boston, Massachusetts

The collection was reviewed for contemporary articles written about the parkway during its construction. Good collection of information on other contemporary parkways and other secondary source materials.

3. Westchester County Planning Commission—Westchester County, New York
Clarke and Rapuano—New York City, New York
Cornell University—Ithaca, New York

This office was checked by telephone to determine if any correspondence from Jay Downer and Gilmore Clarke regarding their consulting on the parkway existed here. Because of the volume of records here with no finding aid able to search Colonial Parkway, we did not pursue information here further. We were referred by phone to Clarke and Rapuano for additional information on Gilmore Clarke, and from there to Cornell University, where nothing in Clarke's papers yielded specific information on Colonial Parkway. Further pursuit of these archives in person may yield additional information.

4. National Archives—College Park, Maryland

These archives were contacted via phone, and we spoke to David Pfeifer, the transportation specialist. Mr. Pfeifer searched the NPS record group and the BPR record group (numbers 30 and 79, respectively) for information on the parkway. No references were apparently found in the BPR record group. The NPS record group in general appeared to duplicate park files. In all, they retain 16' of records on Colonial NHP. Mr. Pfeiffer mailed us a finding aid, and we searched it for references for monthly landscape architect's reports, references to which we had seen in other documents at the park. However, no such documents appeared in the finding aids. Since it was felt that little information beyond what was located in the park would be reviewed, an on-site visit to this archive was not pursued.

The Map division of the archives was also contacted, regarding aerial photographs for the parkway dating to the 1930s. The only ones found are those duplicated in this report as Figures III.1 and III.2.

5. National Archives—Philadelphia, Pennsylvania

Sean Albright at this repository was contacted regarding NPS records from Colonial NHP. Again, materials here seemed to duplicate those found at the park. There were also no references found to the monthly landscape architect's report here, either.

6. Olin Library, Washington University—St. Louis, Missouri
Bartholomew and Associates—St. Louis, Missouri

Harland Bartholomew's firm in St. Louis was contacted to determine if any information on his role at Colonial NHP was still retained in the firm library. When a check of their files yielded no information, we were referred to the Olin Library at Washington University, where the majority ofhis papers now reside. A reference librarian keyed various search words into their database of Bartholomew's papers, but no materials pertaining to Colonial Parkway were found. A report on Colonial Williamsburg was located, but contained no information pertinent to the parkway.

7. Virginia Department of Transportation—Norfolk, Virginia

The Virginia DOT was contacted for aerial photographs of the parkway. Although they have a good assortment of recent aerials, their older aerials are more limited. We received the oldest sets of aerial photographs they had, dating to 1963 and 1953. While the 1963 aerials provided good coverage, the 1953 aerials did not contain information around the Naval Weapons Station, due to a "military blackout" of this information. Although the VDOT had records of a 1937 set of aerials, these were no longer available, due to damage to the negatives. It is unclear if these 1937 aerials are the same as the composite received from the National Archives.

8. James City County Planning Office—Williamsburg, Virginia

This office was contacted for aerial photographs and topographic data. We received topographic maps and aerial photographs of those areas on Drawing Sheets 12, 13, 14, 15, 16

9. York County Planning Office—Yorktown, Virginia

This office was contacted for aerial photographs and topographic data. We received aerial orthoquads (blueprints) of the parkway between Williamsburg and Yorktown, and digital topographic data for Sheets 5, 9, and 10.

10. Williamsburg Planning Office—Williamsburg, Virginia

This office provided topographic data for Sheet 11.

C. RECOMMENDATIONS FOR FUTURE REFERENCE

Very Early Land Ownership

The first generation land patents available for the area between Wormeley and Queens Creek should be plotted to scale electronically and then superimposed upon an electronic base map. Patent boundary reconstruction also should be done for the land between Glass House Point and College Landing, with the exception of Jamestown Island. Such work is basic in establishing reliable chains of title.

Tuttey's Neck

This area is in need of basic archival research and a formal property history. A chain of title should be reconstructed utilizing land and personal property tax rolls, deeds, wills, agricultural and demographic

census records and other official documents. Research also should included the examination of private papers. Afterward, a property history should be written. Full use should be made of historical maps identified during earlier phases of work on the Colonial Parkway and reliable secondary sources.

The information gathered on Tuttey's Neck should be integrated with, but not replicate, what's already known about the history of Kingsmill Plantation. However, documents specificallyassociated with Tuttey's Neck should be identified. As Civil War features are known to have been located in the vicinity of Tuttey's Neck, archival research should focus upon their construction and use.

Barren Neck

This area is in need of basic archival research and a property history. A chain of title should be reconstructed utilizing land and personal property tax rolls, deeds, wills, agricultural and demographic census records and other official documents. Research also should included the examination of private papers. Afterward, a property history should be written. Full use should be made of historical maps identified during earlier phases of work on the Colonial Parkway and reliable secondary sources.

Glass House Point

Although some archival and archaeological research has been done on this property earlier in the century, future research should include the development of a chain of title and formal property history. This also should include determining what relationship the tract had (if any) with the Governor's Land, to which it's adjacent. Documents associated with 17th century glass manufacturing and the glass-makers themselves should be collected and analyzed and perhaps additional archaeological excavations should be done. Some of the written records associated with the Glass House have been identified as part of the Jamestown Archaeological Assessment.

Stony Point

This tract is in need of extensive archival research, comparable to that which the late Charles Hatch conducted on Bellfield and Ringfield. It should include a chain of title, a summary of the development that occurred there, and the role the property's owners/occupants played in local and regional history. Land and personal property tax rolls, demographic and agricultural censuses and other records should shed new light upon the 18th and 19th century usage and development of this properties. The issue of freed blacks' occupancy right after the Civil War warrants thorough investigation.

Bellfield/Indian Field Plantations

Although the late Charles Hatch compiled an admirable amount of information on these two properties, efforts should be made to determine the sequence of development that occurred on each. For example, it is unclear when and why the Digges' abandoned their "Old House Tract" on the east side of Indian Field Creek and returned to the westerly area occupied by Edward Digges I. Research also should address Captain John West's usage of the property and the boundaries of his original patent should be delimited. More research also should be done on those who subsequently owned/occupied Bellfield and Indian Field. Land and personal property tax rolls, demographic and agricultural censuses and other records should shed new light upon the 18th and 19th century usage and development of both properties.

Ringfield

Like the Bellfield and Indian Field tracts, Ringfield's property history needs to be expanded and updated, particularly with regard to the 17th century. Extensive use should be made of the Colonial Williamsburg Foundation's York County Records Project's data base and other sourcesthat potentially could shed light upon Ringfield's owners/occupants. Its early patent boundaries should be ascertained. Land and personal

property tax rolls, demographic and agricultural censuses and other records should shed new light upon the 18th and 19th century usage and development of this property.

Chiskiack Glebe

This tract should be subjected to intensive archival research with emphasis upon the years 1637-1803. It should include an exploration of the property's development as a glebe, the uses to which it was put, and by whom it was occupied. More should be learned about the parish with which it was associated. Comparative data have been assembled on the Henrico Glebe as part of archaeological investigations associated with the construction of Interstate 295.

Kings Creek Plantation

Although a rudimentary chain of title has been compiled, this important tract should have a formal property history. Like Hatch's Ringfield and Bellfield studies, it should be comprehensive. Efforts should be made to determine the relationship between the Kings Creek Plantation and other Burwell properties. Also, efforts should be made to learn more about those who owned and occupied it. Land and personal property tax rolls should be examined as well as agricultural and demographic censuses and other official documents.

Force's Quarter, New Quarter and the Bruton Parish Glebe

Very little archival research has been done on Force's Quarter and the Bruton Parish Glebe. Also, the data available on New Quarter were compiled prior to the availability of the York County Records Project card files. The chains of title need to be traced for all three properties, which use also needs to be studied. Very little is known about the Bruton Parish Glebe, as Bruton's colonial vestry records have been destroyed. However, information may be available in official records of the colonial government or in the records of York County.

Colonial Parkway

Because of the amount of archival information on Colonial NHP, in general, any recommended additional research in the parkway is primarily a question of increasing thoroughness. For example, it may be useful to do a perusal of the National Archives at College Park and Philadelphia to determine if there is any new information in these sources which does not duplicate that contained in park files. It may be useful to contact Stanley Abbott's relatives to see if his papers contain any information pertaining to the parkway. And, more complete oral histories from Charles Peterson and Robert Steenhagen may be useful in capturing additional information about the design and construction of the parkway.

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5. Drawings and Maps

The drawings and maps reviewed during the creation of this report are too numerous to list here; the extent to which Colonial NHP archives were researched is described in Appendix D. In addition, sources for the plans and base maps created for this report are provided on each drawing sheet. Listed here are sets of drawings which proved especially useful during the course of the report in determining the parkway's design and as-built character.

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