

## *WATER POWER: MILLS AND OTHER INDUSTRIES*

The most extensive and sustained activities along the Rappahannock River were the milling enterprises. Water-powered flour and grist mills provided the means for local farmers to convert their crops to usable commodities, for themselves as well as for easier transport to market. Other mills were industrial concerns in their own right, powering saw mills, gold mining equipment, and other machinery. These processing plants were typically built where roads and streams converged. The roads, however crude, provided overland access while the streams provided the energy to turn the mechanical works. Mills established in Fredericksburg also processed local agricultural product, but as that urban center grew newer mills produced textiles, fertilizer, and eventually electricity.

Mills in the Rappahannock valley also illustrate how the land was used during its various phases of occupation. Timber interests, for instance, acquired much of the property that had supported the eighteenth century iron industry. After the iron furnaces shut down, the deforestation so aggressively begun by Alexander Spotswood continued, as investors extracted timber. Water-powered saw mills supported this activity although there were tenant farmers on the land as well.

Not until the early nineteenth century were the large landholdings the timber merchants had acquired from the ironmasters broken up and independent farms and plantations established in the region east of Fredericksburg. The Chancellor family, for instance, did not settle in the area until 1809. The loss of so much timber, however, had resulted in severe erosion and destruction of the soil's natural fertility. Further, fast growing trees such as scrub-oak and cedars sprang up before hardwoods could reestablish themselves and vines and bushes choked out larger growths. The farmsteads worked and developed during the ante-bellum period and the tangled woodlands surrounding them became the landscape across which Civil War armies fought in 1863-64.

Mills that were established in support of these farms were typically small grist mills that operated on shares. By law, the miller received a specific portion of whatever he processed. The standard toll for wheat was 1/8 of the amount of flour processed. The standard for grinding corn was 1/6 of the amount of corn meal. Most of these mills had several grinding stones to handle the different grains that farmers produced.

Mill owners typically needed land on both sides of a waterway. Only then could they construct a dam that would back up the water and create the necessary head pressure. Mills were so important to local economies that if a property owner across a river or stream did not desire to sell the small amount of acreage needed, the jurisdiction would often exercise its right of eminent domain. Then, as now, property boundaries usually ran along the streams, which made such property issues

inevitable. The resulting court records that have survived, however, are an invaluable historic resource.

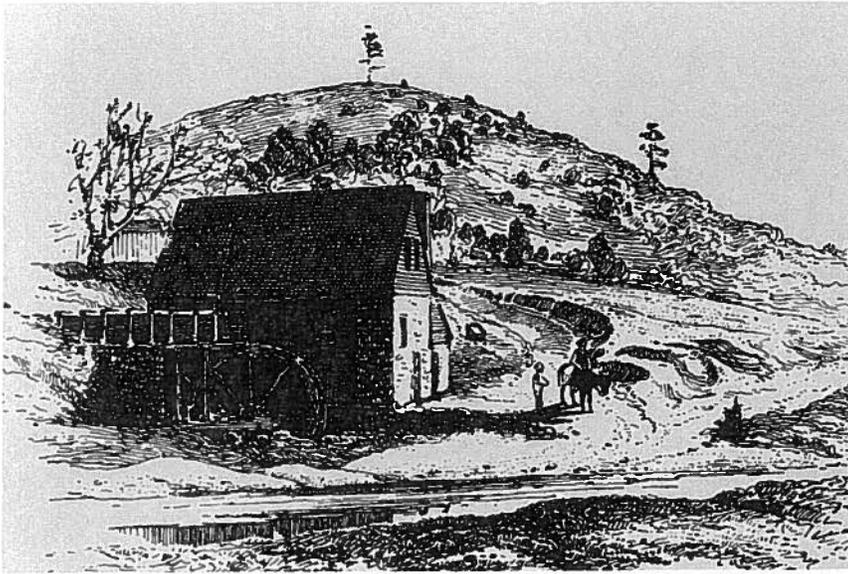
While millers provided many benefits to a local economy, their enterprises had negative impacts as well. Dams interfered with the passage of anadromous fish, such as herring and shad, seeking to reach their spawning areas. Upriver farmers and residents noted the drop in the available fish and complained to their elected representatives. In 1759, the General Assembly ordered mill owners to provide fishways through their respective barriers. Passage over dams was to consist of an opening or slope in the dam that was a least ten feet wide. This solution appears to have been satisfactory, at least for a while, but over time such standards were applied with decreased care. The last dam to remain intact on the Rappahannock River is the concrete Embrey Dam, built in 1910. There is absolutely no provision for fish passage through this structure.

The introduction of electricity in the late nineteenth century allowed industries to begin to locate in places other than along waterways. Early hydroelectric enterprises had only limited capabilities, though, and required a period of growth to attain significance. The first electric generating plant in the Fredericksburg area was the Rappahannock Electric Light & Power Company which was set up in a former sumac mill across from Falmouth. Electricity first lit the city streets in November of 1887. Most of these power plants were relatively minor concerns, but construction of the Embrey Dam in the early twentieth century soon brought electric power to the area in quantities sufficient to power growing manufacturing enterprises. It channeled water into the city's main canal which directed it through the turbines of a power plant on Caroline Street. This dam is extant as is the concrete power station, which ceased operations in the early 1960s. By that time, the demand for electricity had grown beyond the capacity of local water power to provide.

Today, the Rappahannock valley is no longer a commercial corridor dotted with industrial enterprises. Instead, north-south rails and roadways transect the river, part of a transportation network that supports land development and commercial activity beyond this waterway. Enormous quantities of electricity are provided by a nuclear power plant on the North Anna River. The once active mills have quietly deteriorated back into the landscape, only the stone foundations retaining their original form.

#### Selected Bibliography

- ▶ Harrison, Noel G. *Chancellorsville Battlefield Sites*. Lynchburg, VA, 1990.
- ▶ Harrison, Noel G. *Fredericksburg Civil War Sites* (volumes 1 & 2). Lynchburg, VA, 1995.



*Images of intact Rappahannock valley mills are elusive. The mill shown above is Welford's Mill on Hazel Run (from Battles and Leaders of the Civil War) and is representative. Note the overshot wheel and the proximity of the road. The surviving visible portions of these old mills typically include their stone foundations. Shown below are the remnants of Richard's Mill, on the Rappahannock River in Culpeper County.*

54  
65

- ▶ Scheel, Eugene M. *Culpeper. A Virginia County's History Through 1920.* Culpeper, Virginia, 1982.
- ▶ Siegel, Peter E., Wade P. Catts, and Margarita Jerabek Wuellner. "Phase II Archaeological Evaluation of Nine Sites in the Proposed Hunting Run Reservoir Area, Spotsylvania County, Virginia." Alexandria, 1995.
- ▶ 1860 Census, Spotsylvania County, St. George's Parish, Products of Industry.

#### Maps

- ▶ Baldwin, L. "Plan and Profile of a Survey and Level of the Rappahannock River, 1817."
- ▶ Herndon, John M. Map of Fredericksburg and Falmouth Canals and Mills. Fredericksburg District Court Law Order Book, 1806-1807.
- ▶ Jackson, W.A. "Map of the Mining District of Virginia," 1836.
- ▶ "Map and Profile of the Rappahannock River and Its Improvements," 1848.
- ▶ "Map of Property of the Fredericksburg Development Co., 1891."
- ▶ O.W. Gray & Sons. "Gray's New Map of Fredericksburg," 1878.

*The Fredericksburg Mills* - Situated at the falls of the Rappahannock River, Fredericksburg and Falmouth saw numerous entrepreneurs seek to harness the tremendous energy in water falling more than 25 feet over a distance of approximately one mile. Thornton's Mill is believed to have been one of the area's first milling enterprises (established around 1720 by Francis Thornton, Sr.). This site is located on the Fredericksburg shore, just below Hunter's Island, and was powered by water diverted by a dam running across the current between Hunter's Island and a smaller island near the opposite shore. A mill race was readily diverted from the subsequently flooded channel. This dam was improved several times, including the addition of concrete, and remains very evident today as a result. The dam at the head of the raceway was rebuilt in 1907 by the Bridgewater Milling Corporation and this concrete structure remains intact.

Below Thornton's Mill, the raceway powered several other enterprises. Just above the current Falmouth Bridge, Thomas F. Knox established a grist mill. After the Civil War, his sons, operating under the name R.T. Knox & Brother, converted the grist mill into a sumac and bone mill. The Knox brothers actually had three mills in operation, and in 1887, this particular mill was converted to an electric generating plant for the Rappahannock Electric Light and Power Company. In 1923, the Spotsylvania Power Company took over this company and its customers. All that remains of this activity are concrete and brick remnants adjacent to an old abutment that supported an earlier bridge to Falmouth.

The raceway is obliterated beyond the Knox/Power Co. mill site (as a result of construction of the existing Falmouth Bridge in the 1940s) until it reaches the site of the Bridgewater Mill. Originally built in 1822 by Joseph B. Ficklen, the Bridgewater structure consisted of a two-story masonry grist mill. The mill was expanded in 1850, rebuilt after a fire in 1858, and was the source of an award-winning display at the Paris Exposition of 1878. By the late nineteenth century, this enterprise included a flour mill, a corn mill, a warehouse, a grain elevator, cooper shops, housing, and an office. The Bridgewater Milling Corporation improved the mill race and its dam in 1907, but by 1912 the mill had been closed down, its once thriving buildings used to house electrical equipment for the Rappahannock Electric Light and Power Company. Only a few stone remnants remain.

Below the Bridgewater Mill, along the still visible raceway, were located the Fredericksburg Wood Working Plant as well as the additional mills of the R.T. Knox & Brother enterprise. The wood working plant was established in 1896 but closed by 1904. During its brief tenure it milled lumber and house trim, the necessary machinery powered by a belt connected to the wheel house of the Bridgewater Mill. The Knox Mills processed sumac as well as ground bones for fertilizer. An 1806 map related to a court case of that year shows Hollingsworth's Mill at the end of the raceway, where it turned to reenter the River. The Fredericksburg Water Power

67

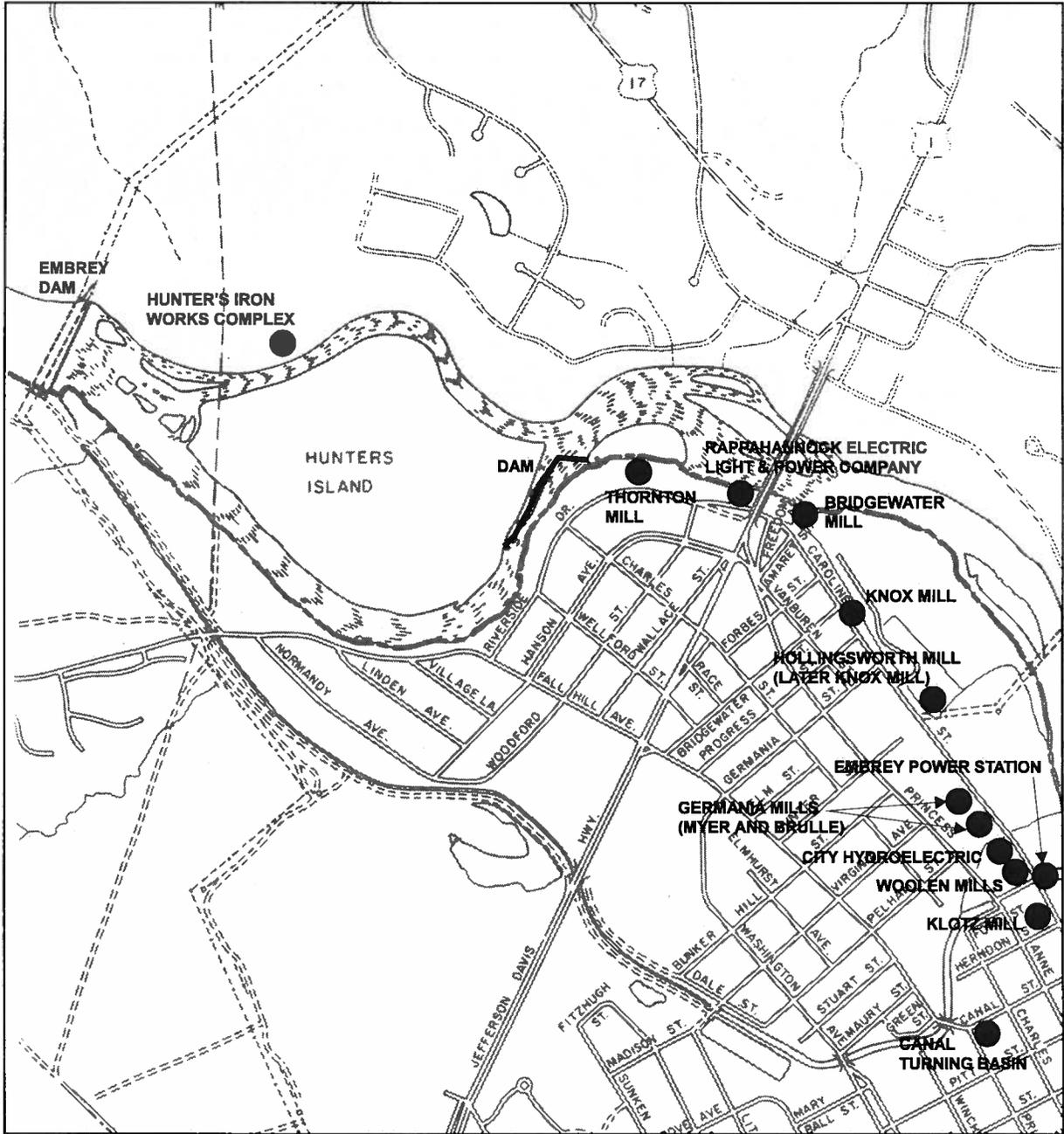
Company's map also shows Hollingsworth's in this location. The second Knox mill was apparently situated between Bridgewater and Hollingsworth, while the third Knox mill may have occupied the Hollingsworth site.

The Rappahannock Navigation Company began construction of a navigation canal from Fredericksburg to the upper Rappahannock basin in 1829. The first canal section extended 3 ½ miles upstream, but in 1854 the Fredericksburg Water Power Company constructed a crib dam across the river that preempted its navigation function to the provision of water power. Canal boats were apparently still able to use the lower two miles of the canal to bring cargo to a turning basin (where the present day Canal and Prince Edward Streets intersect), but the canal's primary purpose had shifted to generating energy.

The Fredericksburg Water Power Company canal flowed into the turning basin and then ran under Princess Anne Street to provide water to several raceways. The Germania Flour Mill was the farthest north of the upper-level mills that used this water power, and was situated approximately 1/4 mile from the Bridgewater Mills. Its owners, J.H. Myer and F. Brulle, eventually built a four-story brick mill that had eight runs of mill stones able to produce 150 barrels of flour and 200 bushels of meal per day. By the late nineteenth century, the mill stones had been replaced by newer rollers and flour continued to be produced into the twentieth century. In 1917, the owners erected a concrete grain elevator to provide storage capacity for 45,000 bushels of grain. Portions of the brick mill remain, notably the outer walls of the lower levels, but the upper stories are gone and the rest is rapidly deteriorating. The concrete grain elevator remains intact, but is overgrown.

South of the Germania Mill stood a municipal electric generating plant. The City of Fredericksburg completed this plant in 1901 and used the power for its street lights. Evidently, a public utility company was not tremendously competitive because it closed by 1919. The remains of this operation include a stone foundation and a concrete pit where an overshot wheel turned.

South of the City's electric plant, the Washington Woolen Mills had been in operation since at least 1859-60. It too was fed by the Fredericksburg Water Power Company canal. The textile-producing machinery was housed in a four-story brick building and powered by a great iron overshot wheel. It remained in operation until destroyed by fire in 1910. An associated pants factory escaped the fire and because it was powered by electricity, was able to operate for several more years. The portions of the Washington Woolen Mills remaining include its stone wheel pit, the headrace tunnel, and a large portion of the old structure (currently used by the Dowling Sign Company).



Map 24. The Fredericksburg Mills.

The southernmost water-powered enterprise in this area was the C.W. Wilder and Company Silk Mill. It was a single-story brick structure whose water wheel turned overhead shafts to operate the mill machinery. This mill opened in 1890 and was sold to the Klotz Throwing Company (another silk processing operation) in 1900. A fire in 1934 brought an end to its use as a mill. Large portions of this brick structure also remain intact and in use for other purposes, at the corner of Caroline and Herndon Streets.

As electricity replaced water power, larger generating plants were needed to meet the growing demand. In 1909, the Fredericksburg Water Power Company completed the Embrey Dam, a reinforced concrete structure that could provide an enormous amount of energy (approximately 8,000 horse power). In 1910, Frank Gay Gould, son of the financier Jay Gould, purchased the Fredericksburg Water Power Company and established the Spotsylvania Power Company. He produced electricity at a reinforced concrete power house where the canal now reenters the river. The branch in the power canal where water diverted to the new power plant is evident just west of Princess Anne Street. The branch to the upper mills is now dry but clearly evident on both sides of Princess Anne Street. The Virginia Electric Power Company (VEPCO) acquired this plant in 1926 and kept it operational until the early 1960s. The City of Fredericksburg acquired the power plant, which remains relatively intact, in 1968 when it purchased its riparian property from the electric company. This structure has since been sold, however, to a private individual.

The lower mills and their power canal remain under the City of Fredericksburg's ownership. Much of this area is included in a public recreational facility called Old Mill Park. The Rappahannock Canal also belongs to the City of Fredericksburg and currently routes raw water to its municipal treatment plant. The canal turning basin has been covered and is now the site of homes and a community center. Another raceway once branched off the main canal, where the water treatment plant is now located, and flowed south to power other mills at the lower end of town. This raceway is also covered over and now provides drainage to a portion of the city. A paper mill (constructed in 1860) was operated by this branch raceway, but burned in 1877. Its remains are located on city property adjacent to the treatment plant. The upper mills, once powered by the Rappahannock Canal, are privately owned, but were included in the City of Fredericksburg's Old Mills Historic District in 1993, along with the lower mills and their associated canal.

The Falmouth mill sites are every bit as diverse as the Fredericksburg mills. In addition, the power canal dramatically commences where a stone cliff was blasted open to provide a channel. These sites are not within the City of Fredericksburg's riparian holdings, though, and are not explored in this study.

*The 1854 Crib Dam; the 1910 Embrey Dam* - The Fredericksburg Water Power Company dam extended approximately 572 feet across the Rappahannock River. Its construction consisted of large timber cribs filled with stone and the upriver side angled back so its base was wider (36 feet) than the top (18 feet). The upriver side was planked to be watertight although the gathering silt also aided in this regard. A stone lock on the southern end controlled the water flow into the canal as well as allowed passage for the occasional canal boat. A 1910 technical journal, in an article about the Embrey Dam construction, described this earlier dam's characteristics:

the old wooden dam had a spillway of 560 ft. and a large rubble masonry abutment extended back to the hill at the northern end. This abutment was built because proper foundation could not be found for a wooden dam and was protected only by a wing wall, which extended down the river about 20 ft., and a small wooden fish ladder which broke the force of any undertow which existed. During a freshet in 1889 the abutment gave way and the water scoured the river bottom at that point to a considerable depth.

"Engineering Record."  
February 12, 1910, p. 197.

The Stafford shore still shows the tremendous erosion that resulted from the 1889 flood described above. The damaged section was subsequently repaired, but the 1850s structure still had limitations. By 1910, as the article in "Engineering Record" noted, the old dam "had deteriorated greatly" and "during the dry seasons the amount of water diverted by the crib dam was insufficient for the needs of the mills."

To provide for additional water-powered development, the Fredericksburg Power Company constructed a masonry dam downstream of the old dam:

After making soundings across the river at the site of the dam it was decided to locate the new structure about 35 ft. downstream from the old one. The soundings showed that the entire foundation would be of very hard granite and that the northern end would have to be carried to a considerable depth on account of the scouring which removed all of the soft rock in 1889 and left in this washout very large boulders and pieces of the old abutment.

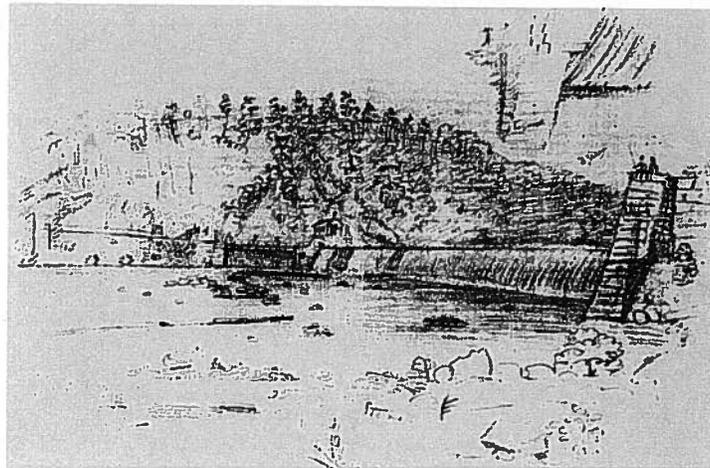
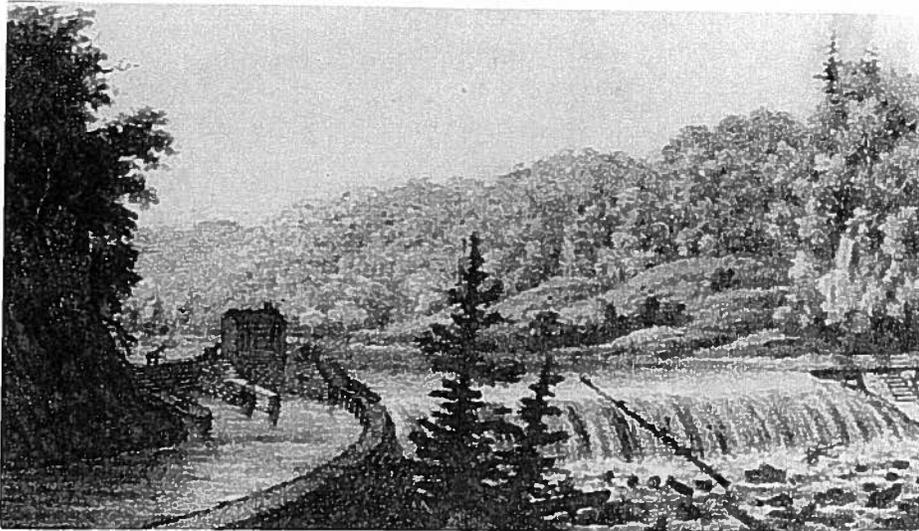
"Engineering Record."  
February 12, 1910, p. 197.

This new dam was constructed of reinforced concrete with buttressed piers every 14 feet, on center. At the north end, boulders and debris had to be excavated to a suitable foundation and resulted in portions of the dam being as high as 43 feet. When completed, the Embrey Dam (as it was called) was over 800 feet long, with a 768-foot long spillway. Its upriver side sloped at a 38 degree angle. The engineers also retrofitted the old 1850s canal lock to divert water to the power canal.

The 1910 Embrey Dam shows signs of decay although its gravity type construction keeps it intact. The 1854 crib dam remains in place behind the masonry dam,

71

although it should be remembered that this wooden stucture was already deteriorated when the newer dam was being planned.



*The top image is a detail of an 1856 lithograph showing the 1854 crib dam (courtesy of the James Monroe Museum and Memorial Library). Scenes like this were meant to entice investors by showing, among other things, the area's industrial potential. The lower image is an 1863 Civil War sketch of the same dam by J.G. Keyser (courtesy of Cumberland County Historical Society, Greenwich, New Jersey).*



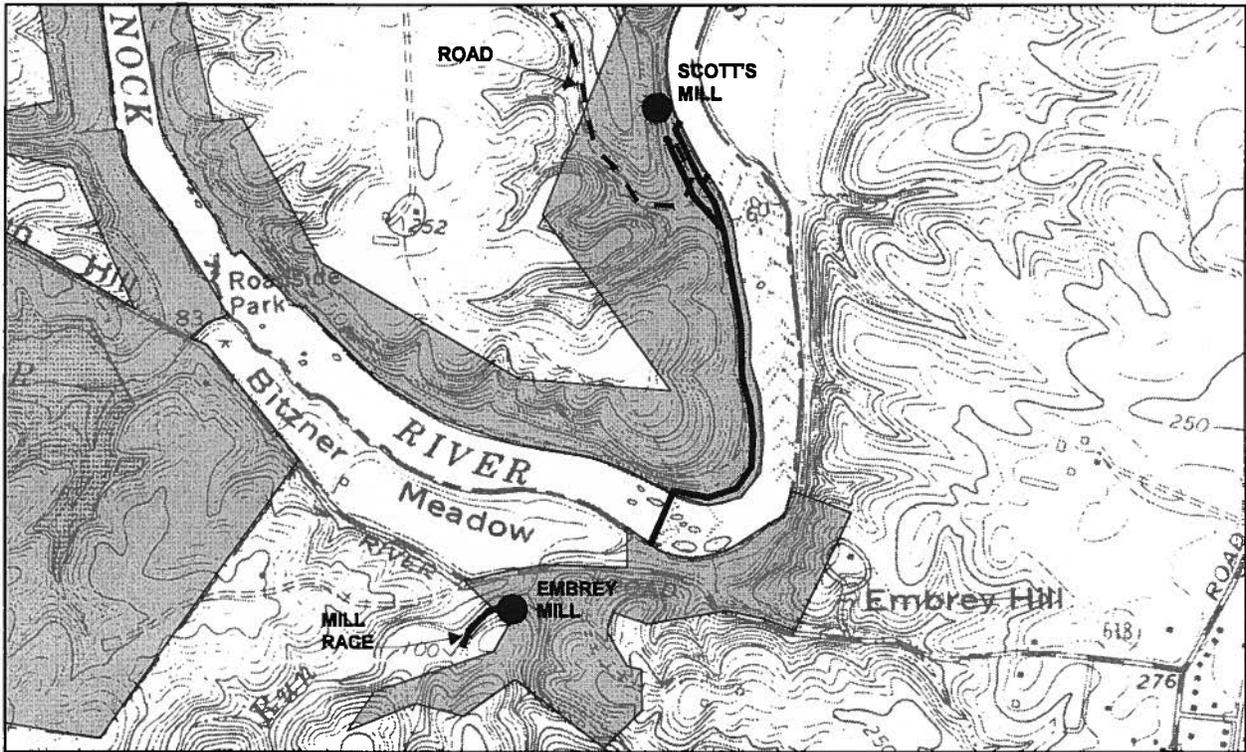
*In 1910, the larger Embrey Dam was constructed just downstream of the earlier crib dam. The photo at top is a view looking north, toward Stafford County. At times of low water, the 1850s crib dam becomes visible, as seen in the 1966 photo at bottom. This view is toward Fredericksburg, from the Stafford side of the river.*

*Scott's Mill (Stafford County)* - References to Scott's Mill are found in documents dating from the Civil War. Stonewall Jackson's topographical engineer Jedediah Hotchkiss prepared a map of the Chancellorsville battlefield to accompany General Robert E. Lee's report of that campaign. This map shows a building in this location labeled "Scott's." The requisition book of Lieutenant Lemuel B. Norton, a signal officer in the Army of the Potomac also provides a reference to this site. He described Scott's Ford and placed it "near Scott's Mill." According to Noel Harrison, in his Chancellorsville Battlefield Sites, this enterprise was a sawmill in 1860. It processed timber that was rafted down the river into the navigation canal and then diverted to the power canal that led to the mill.

The remnants of this mill and its mill race are entirely within the City of Fredericksburg's riparian holdings. These consist of a stone foundation and portions of the old canal.

*Embrey Mill (Spotsylvania County)* - There are several map references to this mill on Golin Run. Jedediah Hotchkiss plotted a mill of this name on his initial Chancellorsville battle map although this site was not included on the finished map that accompanied Lee's Chancellorsville report. The 1836 Map of the Mining District of Virginia plots a grain mill on or very near this site although there is no corresponding name on that document. Finally, the 1863 map of Spotsylvania County prepared by military engineers in the Department of Northern Virginia shows a site called "Embrey's," although Nathaniel Michler, in his 1867 map of the Chancellorsville battlefield, only identified this site as "Mill."

The remnants of the Embrey Mill are evident on a small hill above Golin Run where it meets a small tributary from the east. There is a large flattened area cut into the hillside and a mill race that enters the site from the west. There is also a narrow stone-lined pit that looks very much like it may have once held an overshot wheel. The Embrey Mill site and a portion of its millrace are located within the City of Fredericksburg's riparian holdings.



Map 25. Scotts Mill (site) in Stafford County; Embrey Mill (site).

75

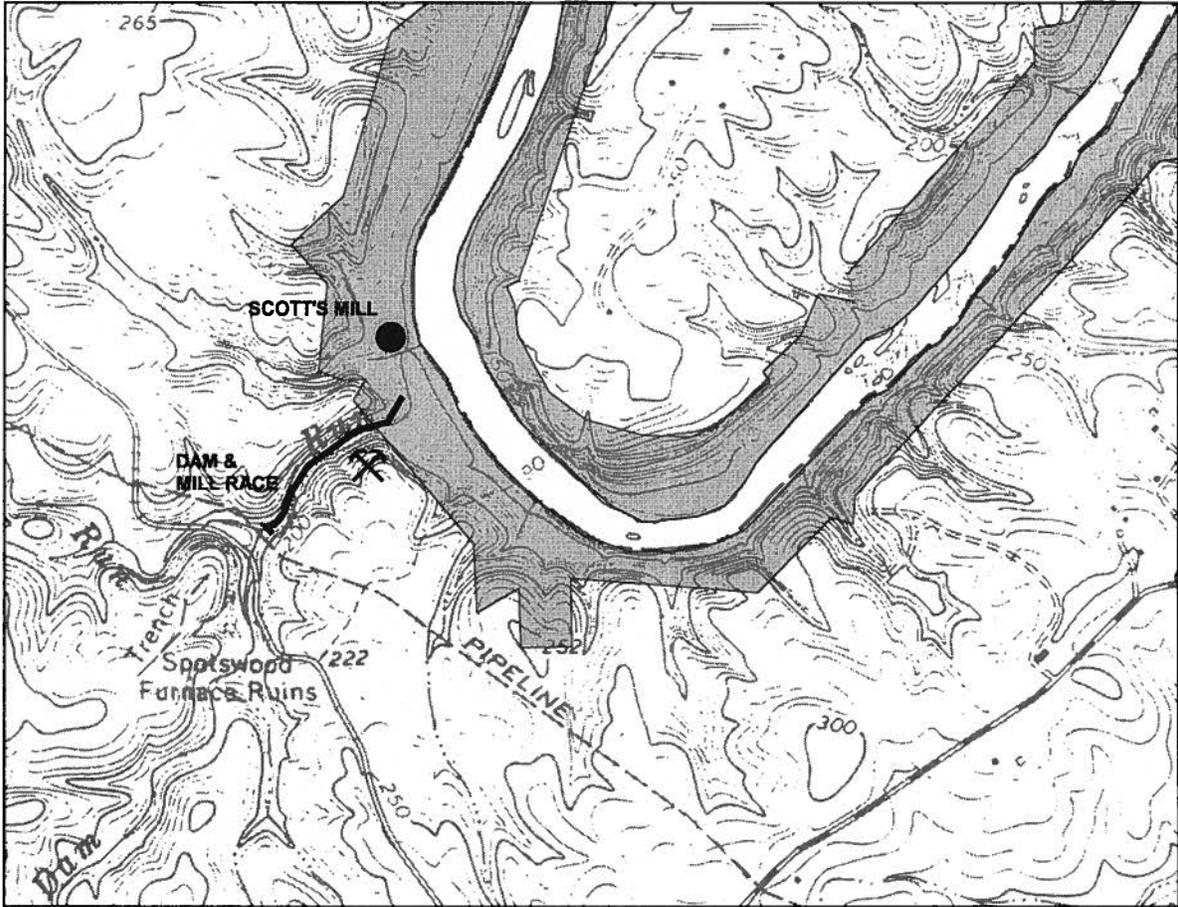
*Scott's Mill (Spotsylvania County)* - The 1836 Map of the Mining District of Virginia shows a mill on the north side of the immediate junction of Pipe Dam Run and the Rappahannock River. The site is one of three identified as "Company Mills," which refers to the Rappahannock Navigation Company. Various Civil War accounts refer to this structure as Scott's Mill (not to be confused with the mill of the same name near Bank's Ford in Stafford County). The 1860 census for St. George's Parish (Spotsylvania County) enumerates a "Bark and Sumack mill" owned by a Francis E. Leroque which may refer to this site (a stream called La Roque Run is nearby). This entry, however, could also refer to the mill located near United States Ford, which was also known as Bark Mill Ford.

This area constituted the extreme left of the Union line from 1-4 May 1863, during the Chancellorsville Campaign. As a consequence, there are soldier references to this once prominent feature of the landscape. Elements of the Irish Brigade (2nd Brigade, 1st Division, 2nd Corps), for example, moved into this area, as described in a contemporary memoir.

*On the 30th (the regiment) crossed United States Ford on a pontoon bridge and continued the march. On May 1st they marched to a place called Scotts Mills and arrived there about ten o'clock that night. Immediately on arrival they set about fortifying the position. They threw out pickets, loopholed the walls of the mill, dug trenches, cut down trees and erected abatis (sic) and did everything possible to ensure a first class defense....*

*Memoir of Kenneth H. Powers  
unpublished manuscript (courtesy  
of National Park Service)*

There is no longer any visible evidence of Scott's Mill although there are likely to be archaeological resources under the silt that covers this area. An elaborate stone-lined raceway can be seen on the west side of Pipe Dam Run, extending upstream to where remnants of a dam are evident just below its confluence with LaRoque Run. Wooden sluices likely bridged the gullies and other gaps along the steep hillside. On the east side of Pipe Dam Run are some quarries which surely provided stone for the mill and its power canal. Scott's Mill and a portion of its stone-lined mill race are located within the City of Fredericksburg's riparian holdings.

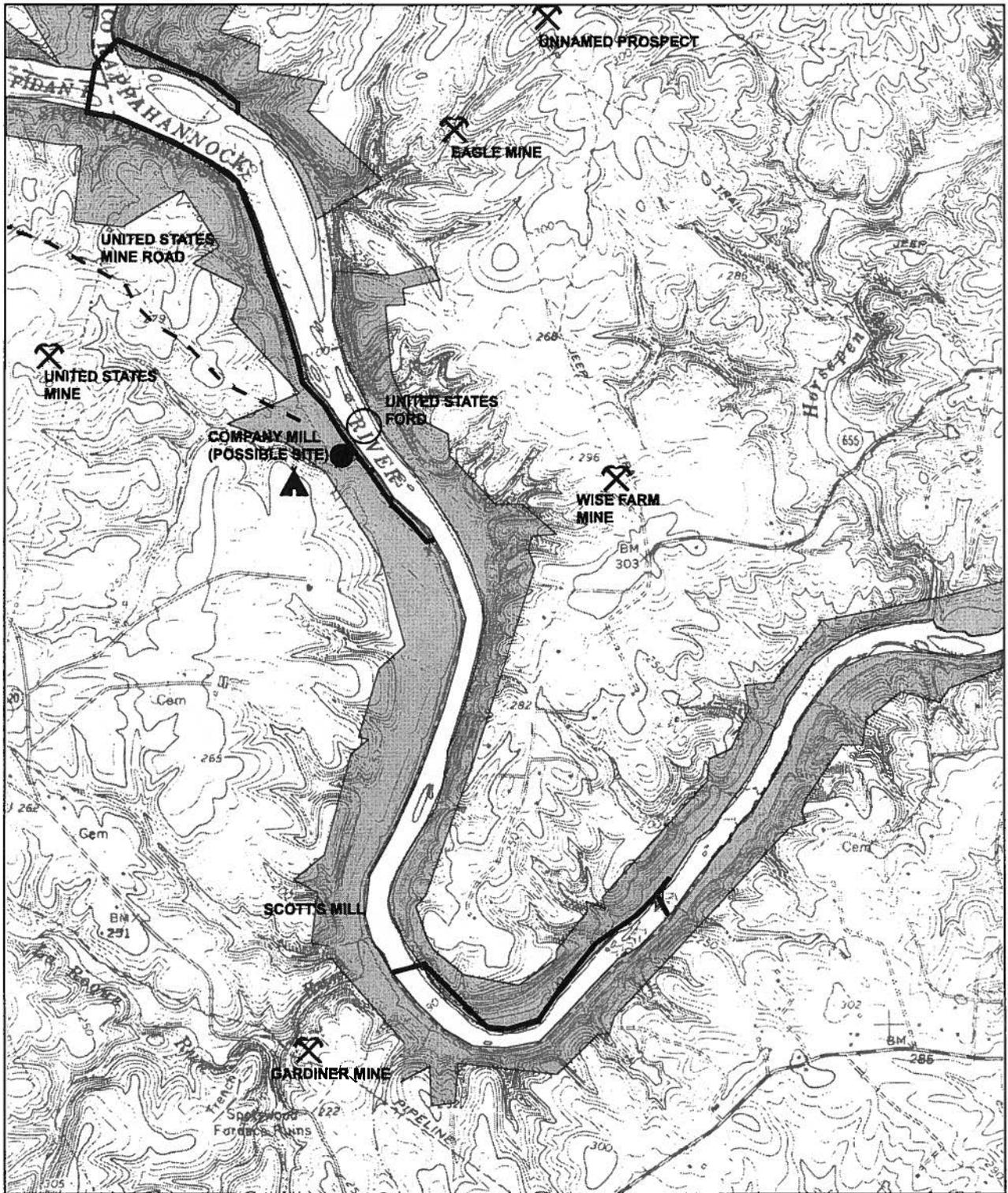


Map 26. Scott's Mill (site) in Spotsylvania County.

*Company's Mills (Spotsylvania County)* - The United States Ford was a prominent river crossing during the Chancellorsville Campaign, and was also known as Bark Mill Ford prior to the war. The U.S. Mine Road, described in the section on mining can be traced to at least 1836, as it appears on the Map of the Mining District of Virginia, of that date. This map also shows one of three sites labeled as "Company's Mills" in this area. Further, a 1907 property deed refers to the "Old Mill Tract."

As noted under Scott's Mill (in Spotsylvania County), there is a reference to a "Bark and Sumack Mill" in the 1860 Census for St. George's Parish (a portion of Spotsylvania County). The earlier appellation of the United States Ford as Bark Mill Ford suggests this was the location of the mill identified in the Census. The mill owner is listed as Francis E. Leroque, though, which would suggest the Census entry may refer to the Scott's Mill site, which is near the creek named La Rogue Run.

Consistent with its obscure name, there are very few clues to this mill's precise location on the ground. Along a creek, just below the road bridge abutments, where the Ford Road crossed the Rappahannock Canal, is a stone wall that may be the correct site. On the other hand these stones could have been part of a bridge on the road to the ford. The floodplain where the mill is likely to have been located is within the City of Fredericksburg's riparian holdings. The siltation, however, makes it difficult to pinpoint the millsite.



Map 27. United States Ford area.

*Richard's Mill (Culpeper County)* - Richard's Ford was a significant crossing of the Rappahannock River for centuries. It shows signs of Native American occupation from the European contact period, was probably traversed by John Lederer during his explorations in 1670, had a ferry during the early European settlement period, and became fordable after the Rappahannock Navigation Company dammed the river upstream to provide slackwater for canal bateaux.

In 1817, an engineer named Laomi Baldwin surveyed the Rappahannock River for the Virginia Board of Public Works in anticipation of canal construction. He noted "Richard's House, mill, and Ferry" in this location. At the time of the Civil War, the canal had fallen into disuse, but the crossing remained fordable as Lieutenant Lemuel B. Norton, signal officer in the Army of the Potomac, noted in his requisition book. This conscientious officer wrote that this area was "formerly a ferry now forded at low water, slackwater navigation having changed the character" of the crossing. Confederate cartographer Jedediah Hotchkiss, however, labeled the crossing as Richard's Ferry on his Chancellorsville battle map and noted the house as "Miss Richard's." An 1864 United States Army map also used these latter designations.

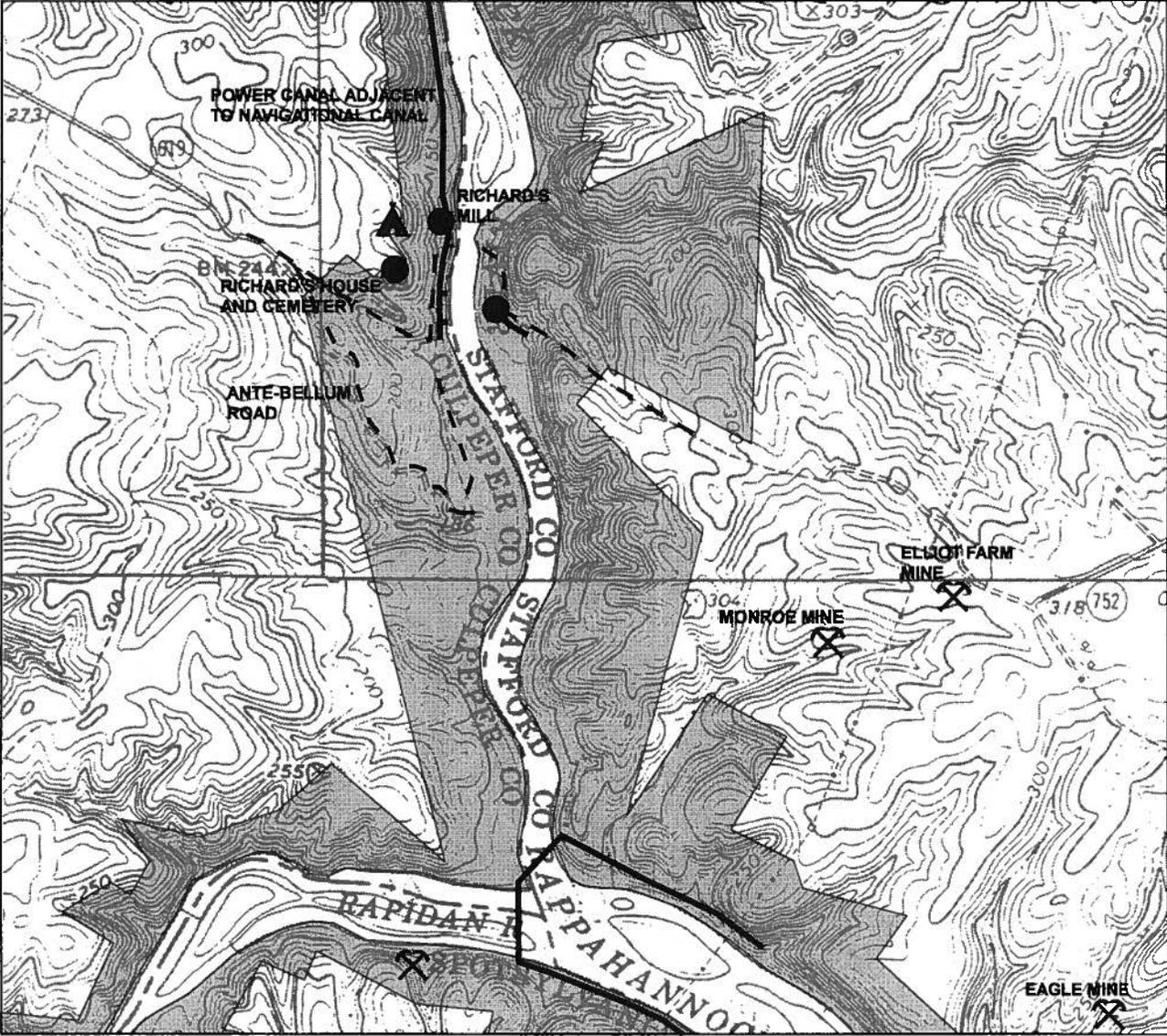
Richard's Mill appears to have been located between the mill race (close to the river) and the navigation canal (inshore of the power canal) where a stone foundation is evident. On the ridge to the north of the mill are the remnants of the Richard's House. These consist of a stone foundation and a 2-story stone chimney. A well is also evident to the southeast of the house and beyond that a rather large cemetery. Most of the graves are marked with crude field stones, but several have carved stones with legends. A Pennsylvania soldier described this house, as he saw it during a reconnaissance in December 1862.

Just on the edge of the ford stood a fine old Virginia mansion, occupied by a farmer and his three daughters. From the windows, the enemy had replied to the (Union) sharpshooters. In passing one of the windows, in search of a place of safety, one of the daughters was severely wounded in the thigh.

Smith, J.L. History of the 118<sup>th</sup> Pennsylvania Volunteers. Philadelphia, 1905. p.154

Field research has also located road traces on both sides of the river that lead to the ferry/ford. These traces correspond with historic maps and the 1907 property deeds for this area. On the Stafford shore are two sections of stone wall along the old road, as high as 8 feet in some places and approximately 75 feet and 115 feet in length. More dramatic, though, is a 15x15 foot stone foundation, on the Stafford side, ranging in height from 2 to 7 feet, with all four corners intact. The purpose of this structure is unknown.

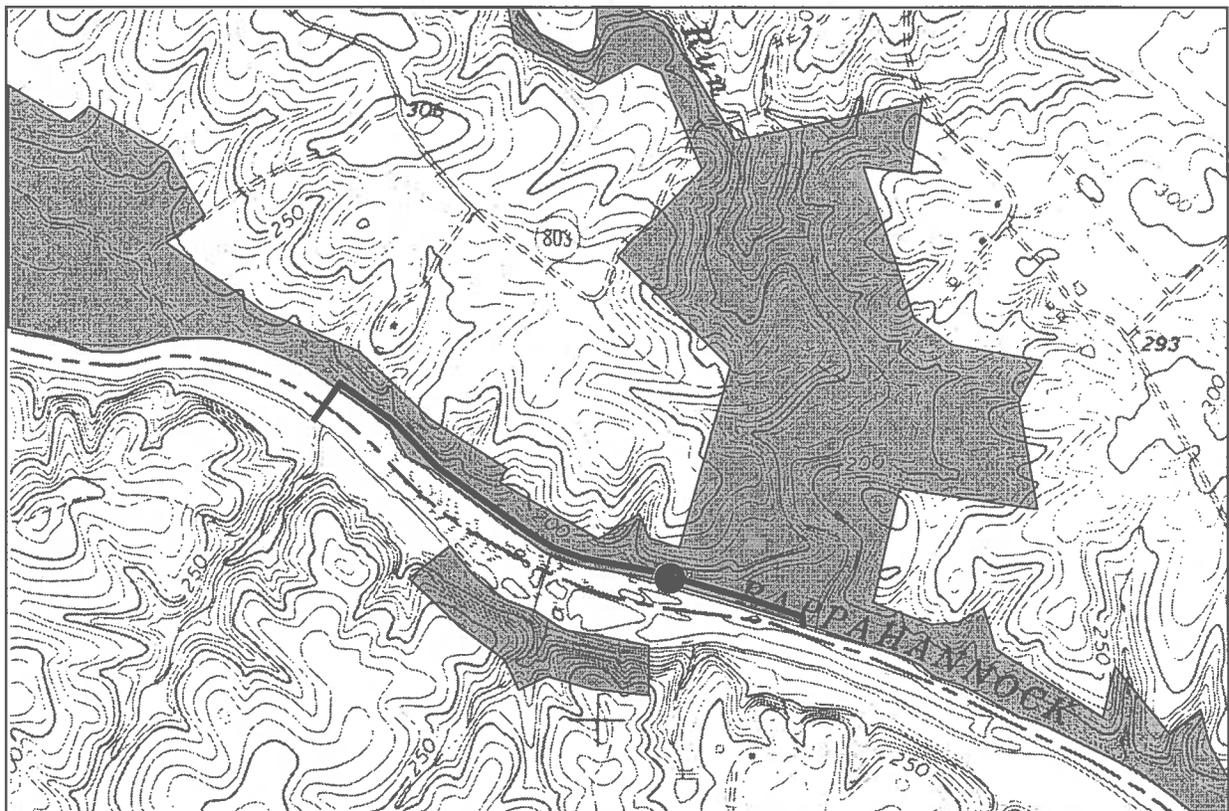
The mill site and the mill race, in Culpeper County, as well as the stone-lined road and foundations on the Stafford side, are within the City of Fredericksburg's riparian holdings. The Richard's House site and its cemetery are on private property.



Map 28. Richard's Mill (site).

**Skinker's Mill (Fauquier County)** - Approximately midway along Skinker's Canal, at Skinker's Ford, are the remnants of Skinker's Mill. This mill appears on the 1848 "Map and Profile of the Rappahannock River and Its Improvement," related to the Rappahannock navigation system. The remains of this site are rather impressive and include a stone structure, approximately 20x24 feet, with each corner intact. The stone walls are as high as 20 feet in places and consist of cut stone and mortared joints. The mill was situated between the canal and the river.

There are some road traces that lead to the ford. There are also a few places along the canal where many large stones have fallen in the waterway, suggesting collapsed abutments where an old road would have crossed the canal to reach the ford. Locating the old roads with any precision is extremely difficult though. Much of the area above the floodplain has been logged, for instance, making any earlier roads difficult to discern. Further, recreational off-road vehicles continue to use trails along the canal, obscuring evidence of previous occupations.



Map 29. Skinker's Mill (site).

*Ellis's Mill (Fauquier County)* - This river crossing shows up on an 1817 map developed by State engineer Laomi Baldwin (in anticipation of canal improvements) as "Barnett's Mill and Ford." On an 1848 map showing the completed Rappahannock navigation system, however, the crossing is shown as "Ellis's." The April 9, 1855 edition of the Fredericksburg Virginia Herald indicated that Lewis Ellis rebuilt this mill following a fire.

In August of 1863, the 149th New York Volunteer Infantry (3rd Brigade, 2nd Division, 12th Army Corps) was posted in this area. One of its members penned a memoir that contains an excellent description of the crossing as well as a drawing of the mill.

*The river at this point is not more than sixty feet wide, the highway leads down to it on either side, and people riding on horse-back or in wagons ford the stream.... Immediately at the ford there is considerable cleared land on both sides of the river, and rows of bushes and trees stand on the margins of the stream and in the gulfs where the brooks run down the hillside. The course of the river is somewhat tortuous, adding beauty to the scenery.*

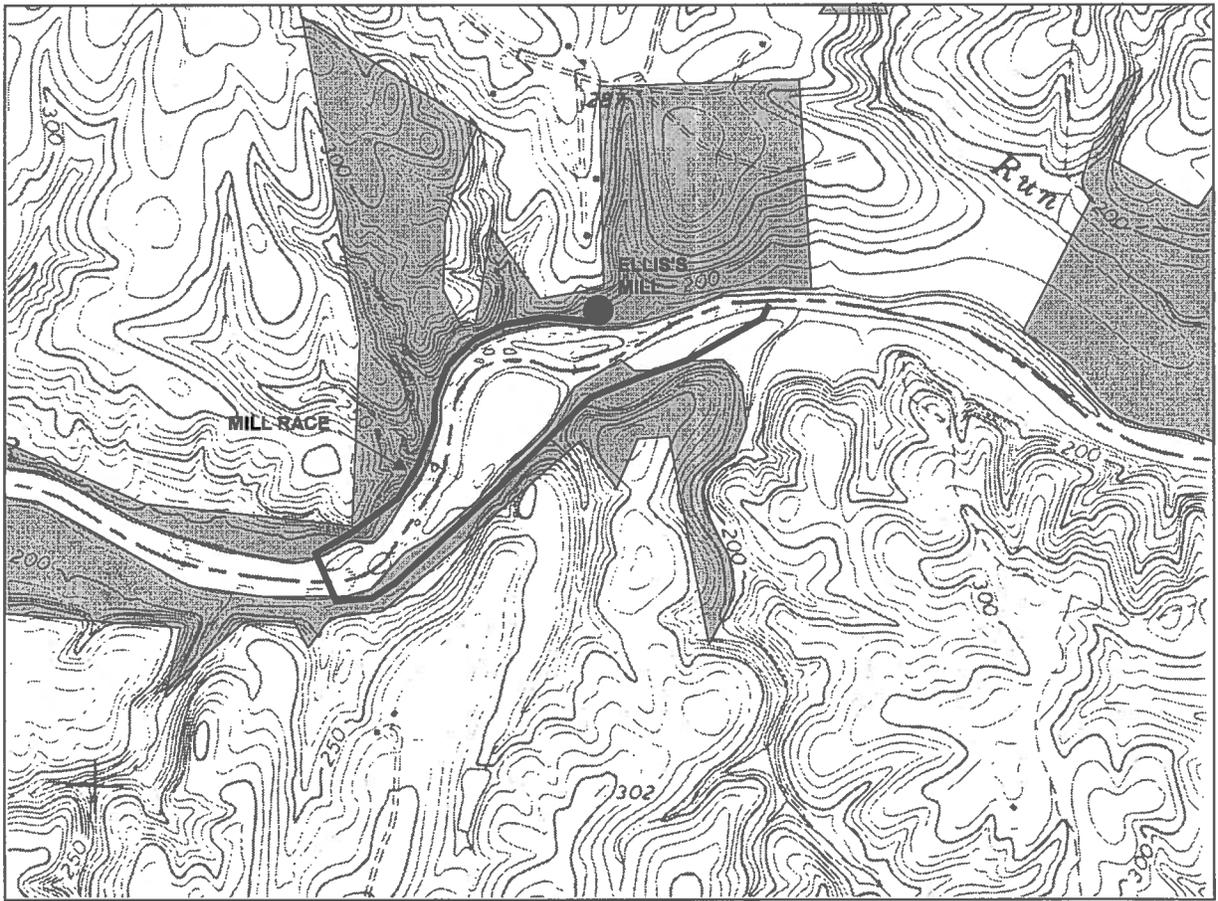
*An old man by the name of Ellis had his residence on the road... where it approaches the river. Just above, on the same side, were several buildings, shops and a grist mill, belonging to old man Ellis.*

*Collins, George K. Memoirs of the 149th Regiment, New York Volunteer Infantry. Syracuse, 1891. p. 172.*

The remains of Ellis's Mill consist of a three sided 42 x 42 foot stone foundation along a mill race that extended upstream to where Snake Castle Dam was located (also called Ellis's Dam). The foundation walls range from 2-5 feet high. The hillside north of the mill has obviously been quarried. The mill race is intact upstream from the mill for approximately half its length, but is then washed away in sections and increasingly obscure until it reaches the dam site, where a deep cut is still evident through Snake Castle Rock.

Also evident are three more stone foundations to the east of the mill and a deep, stone-lined road that extends up a ravine. Another stone foundation is situated to the east and adjacent to the road. Another road appears to have traversed the hillside above the structures as well as the quarry.

Ellis's mill (site) and its raceway, as well as the additional stone foundations and the stone-lined road are entirely within the City of Fredericksburg's riparian holdings.



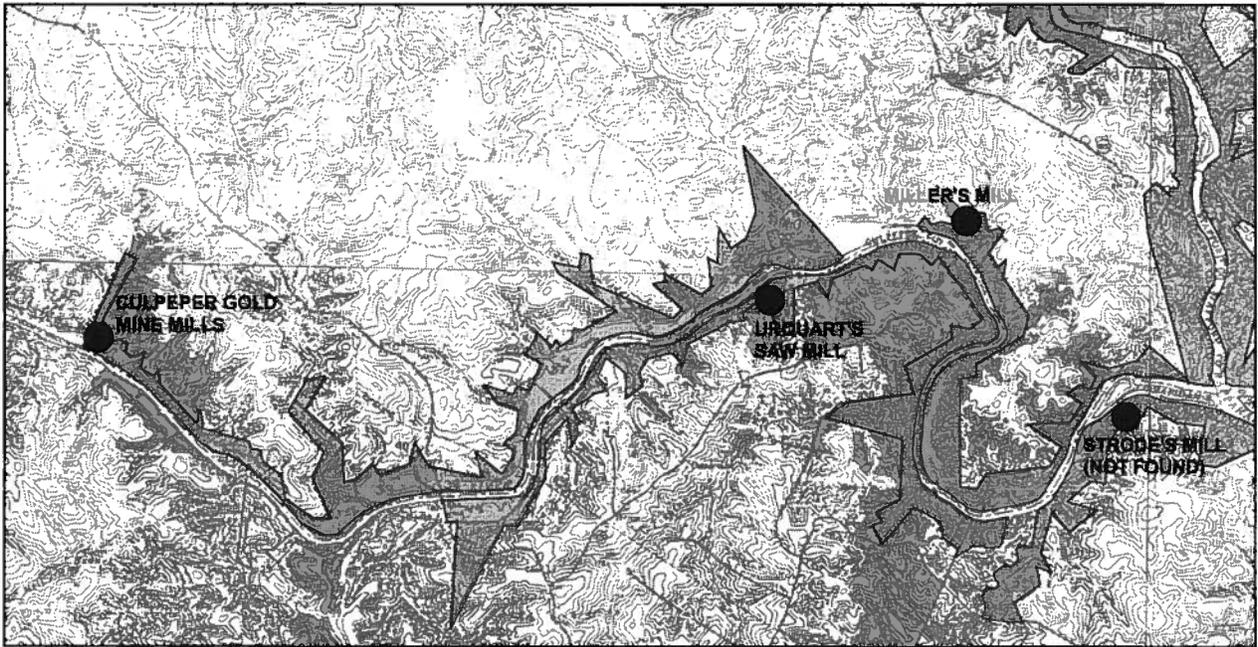
Map 30. Ellis's Mill (site).

*Strode's Mill (Spotsylvania County)* - The Rappahannock Scenic River Atlas identifies a dam on the Rapidan, approximately 3/4 of a mile above the confluence, but specifies that its related mill has not been located. During field research for this project, historians discovered a rather confusing site in this general vicinity that exhibited traces of gold mining, military trenches, and possibly a portion of a millrace. No trace, however, was found of the mill itself. The above site includes three large pits on top of a hill, running roughly north to south. A mining trench runs up the hillside from the river to the hilltop. At the base of the hill is a short ditch that may be a portion of Strode's millrace. The hill also had military significance because there are a series of trenches that wrap around the crest, perhaps to cover the crossing at Blind Ford. This busy area is entirely within the City of Fredericksburg's riparian holdings.

*Miller's Mill (Culpeper County)* - There is no visible evidence of Miller's Mill although a portion of the crib dam that diverted water to its millrace remains intact. Its timbers and rocks can be seen at times of low water. The millrace itself is also evident for some of its distance, but becomes obscure as it nears the mill site. The millrace and mill site are entirely within the City of Fredericksburg's riparian holdings.

*Urquhart's Saw Mill (Spotsylvania County)* - Field research did not locate this mill site in the area shown in Dr. Trout's Rappahannock Scenic River Atlas. This site dates to the timber extraction period (following the iron industry period), but is likely silted over.

*Culpeper Gold Mine Mills (Culpeper County)* - The Culpeper Mining Company developed an entire industrial complex along the Rapidan River at Mine Run. Various types of machinery were needed to cut the lumber that lined the mine shafts and to crush the gold bearing quartz. A 412-foot dam across the Rapidan (9 feet high) diverted water to a 5,400-foot long canal to provide the necessary power. The industrial site at the end of this impressive canal included a stamping and amalgamating mill, a sawmill, a blacksmith shop, an ore house, and a powder magazine. Only a small portion of this area is within the City of Fredericksburg's riparian holdings.



Map 31. Rapidan Millsites.

## *DECISIVE TERRAIN: THE CIVIL WAR*

The Civil War spilled into the Rappahannock valley in the Spring of 1862. In March of that year, Major General George B. McClellan moved his Army of the Potomac to the peninsula between the York and James Rivers. His intent was to capture Richmond and end the war. Confederate General Joseph E. Johnston hurried his army south to meet this threat. Into this void arrived a Union corps, under Major General Irvin McDowell, which occupied Falmouth in April.

The armies inevitably gravitated to the north-south corridor through Fredericksburg as it was the most direct route between the two warring capitals. The Richmond, Fredericksburg, and Potomac Railroad also served as the logical conduit for the logistics necessary to sustain concentrated armies in the field.

McDowell's Federal force occupied Fredericksburg briefly, but was soon drawn to the west to help crush Major General Thomas J. "Stonewall" Jackson's forces in the Shenandoah Valley. During a 30-day period in May-June, Jackson outmarched and outfought his several adversaries there. He then brought his troops to Richmond to assist the renamed Army of Northern Virginia, under its new commander General Robert E. Lee. Together they would push McClellan back from Richmond's doorstep.

McDowell's corps was eventually merged into the newly created Army of Virginia commanded by Major General John Pope. In July, while Lee and McClellan faced each other on the Virginia Peninsula, elements of this new army probed toward Culpeper, Orange, and Madison Court Houses. Pope then advanced further south toward the Rapidan, planning to capture Gordonsville. Lee, in the meantime, had neutralized McClellan's massive force and sent Stonewall Jackson back to the Rappahannock Valley to counter Pope's movements. Of critical concern was the rail junction at Gordonsville which connected to Richmond via the Virginia Central Railroad. In August, after some initial sparring, Jackson attacked one of Pope's brigades, under Major General Nathaniel P. Banks, at Cedar Mountain.

Jackson was soon followed by the rest of Lee's forces and the Army of Northern Virginia soon opened what became the Second Manassas Campaign. The contending armies moved away from the Rappahannock basin, fought at Manassas and met again along Antietam Creek near Sharpsburg, Maryland. The Army of the Potomac, having absorbed Pope's Army of Virginia, moved south from Maryland in pursuit of Lee's Army of Northern Virginia. The corridor of operations was once again along a rail corridor, the Orange and Alexandria Railroad. McClellan was extremely reluctant to bring on a battle, however, and on November 7th, President Abraham Lincoln appointed Major General Ambrose E. Burnside to command the Army of the Potomac.