



"Richmond, from the hill above the waterworks"; engraved by W.J. Bennett from a painting by G. Cooke; Published by Lewis P. Clover (New York) c. 1843

Historical Documentation of the Site of Venture Richmond's Proposed Amphitheater

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(Figure 1.) View of Richmond from Hollywood Cemetery, (detail) 1854 (Source: Library of Virginia) The James River and Kanawha Canal provided vital transportation and water power for the development of Richmond.

Introduction:

It has been said that Richmond possesses such an embarrassment of historical riches that they are not fully appreciated. This is the case with the James River and Kanawha Canal, which is of profound importance nationally as one of the first canals in the nation with locks. Founded as the James River Company in 1785, the canal boasted George Washington as its first president and prime mover. The canal is an historic treasure and one of the most recognizable landmarks of Richmond in the late 18th and 19th century. The initial hurdle in constructing the canal was to provide water access around the falls of the James River.¹ The canal below Oregon Hill, which

¹ Nomination Report for the James River and Kanawha Canal Historic District, DHR File Id #: 127-0171, Archives, Va. Dept. Historic Resources

has survived over 225 years in its authentic condition, was one of the first segments of this remarkable enterprise to be completed. By 1801, the canal at the falls of the James served a dual purpose of providing a source of vital water power that allowed Richmond's most important industries, including flour, corn, paper, cotton mills and iron works to thrive on the banks of the James River.²



(Figure 2.) "George Washington, 1787," (Source: Pennsylvania Academy of Fine Arts) This portrait of Washington was painted two years after the founding of the James River Company in 1785, and two years before Washington was elected as the first President of the United States. Washington was the prime mover behind building the canal and served as the first president of the James River Company. The portrait was painted about the time that the canal was built below Oregon Hill

Careful documentation indicates that the section of the James River and Kanawha Canal at the falls of the James River below Oregon Hill has been remarkably unchanged in its dimensions from the mid- 19th century, during the period of the canal's primary historical significance. The

² Water lease grants, Tredegar Papers, Box 32, Accession Number 23881, 24808, Archives, Library of Virginia

highpoint of the canal's service was achieved in 1853, two years after the canal was successfully extended to Buchanan, when 231,032 tons of merchandise was shipped, reaching revenues of \$293,512. The following year 195 canal barges, bateaux, and passenger boats were in operation.³ At the site of Venture Richmond's proposed amphitheater the canal was 60 feet wide in the 1838,⁴ the tow path was 30 feet wide in 1848⁵ (and evidence points to it being originally 30 feet wide at this location). It is remarkable that the canal at this location has survived largely unaltered from the 1840s.

Detailed surveys indicate that the water elevation in the canal at Tredegar was at or near 83 feet above mean sea level from 1840 through 1933,⁶ and if the towpath remains unaltered, the canal may again hold water at the 83 feet elevation when the canal is re-watered to Maymont. The canal is a carefully engineered structure, made impermeable by the process of "puddling" the clay when the canal was built two centuries ago, and care should be taken that the original engineered banks of the canal are not damaged.

Any assessment of the James River and Kanawha Canal and the proposed amphitheater must consider the comparative rarity of the resources. While in the entire United States only a handful of canals have survived from this era, such as the Erie, the Schuylkill, and the later Chesapeake and Ohio Canal, there is no shortage of outdoor music venues in Richmond. Outdoor music performances in Richmond are held at Dogwood Dell, Maymont, and Mayo's Island. Venture Richmond already operates the music venue on Brown's Island, which at 5.8 acres is twice as large as the proposed amphitheater below the Virginia War Memorial. Other cities would be envious of having an authentic canal dating from 1785, for which George Washington served as the founding president; it is unfortunate that in Richmond the historic James River and Kanawha Canal must be defended from damage for such trivial reasons as amphitheater sight lines and the ease with which the grass is mowed.

In 2012, the Richmond City Council recognized the importance of the canal by authorizing \$385,000 to protect the canal with a new bridge in the construction of the new 2nd Street Connector road. The site of Venture Richmond's proposed amphitheater is adjacent to the 2nd Street Connector. *(It is regrettable that Venture Richmond's consultant did not avail himself of the extensive information regarding the canal in the Tredegar Papers, and the annual reports of the James River and Kanawha Canal Company on file at the Library of Virginia, or include in his research the exhaustive archaeological survey of the Tredegar property found in the 1992 Raber Associates report.)*

³ "History of the Canal in Richmond," pamphlet, Jack Pearsall Collection

⁴ 3rd Annual Report, James River and Kanawha Canal Company, December 11, 1837, Film 372, Library of Virginia

⁵ Survey of Harvie Property, Henrico Plat Book 3, Page 417, Library of Virginia

⁶ Cross Section of Prism, James River Canal, R. D. Trimble, Tredegar Papers, Box 32, Folder 6, Accession Number 23881, 24808, Archives, Library of Virginia

The historic site:

Venture Richmond, a public private partnership for which Richmond Mayor Dwight Jones serves as President, is applying for city, state and federal approval to build an amphitheater on property owned by the City of Richmond, and Venture Richmond. This property is bisected by the James River and Kanawha Canal, which has been listed on the National Register of Historic Places since 1981. According to the inventory of the nomination for the canal historic district: **“The James River and Kanawha Canal Historic District comprises the present and original site of the James River and Kanawha Canal and canal towpath including a boundary of twenty-five feet to either side of these two features ... ”**⁷



Harry Fenn

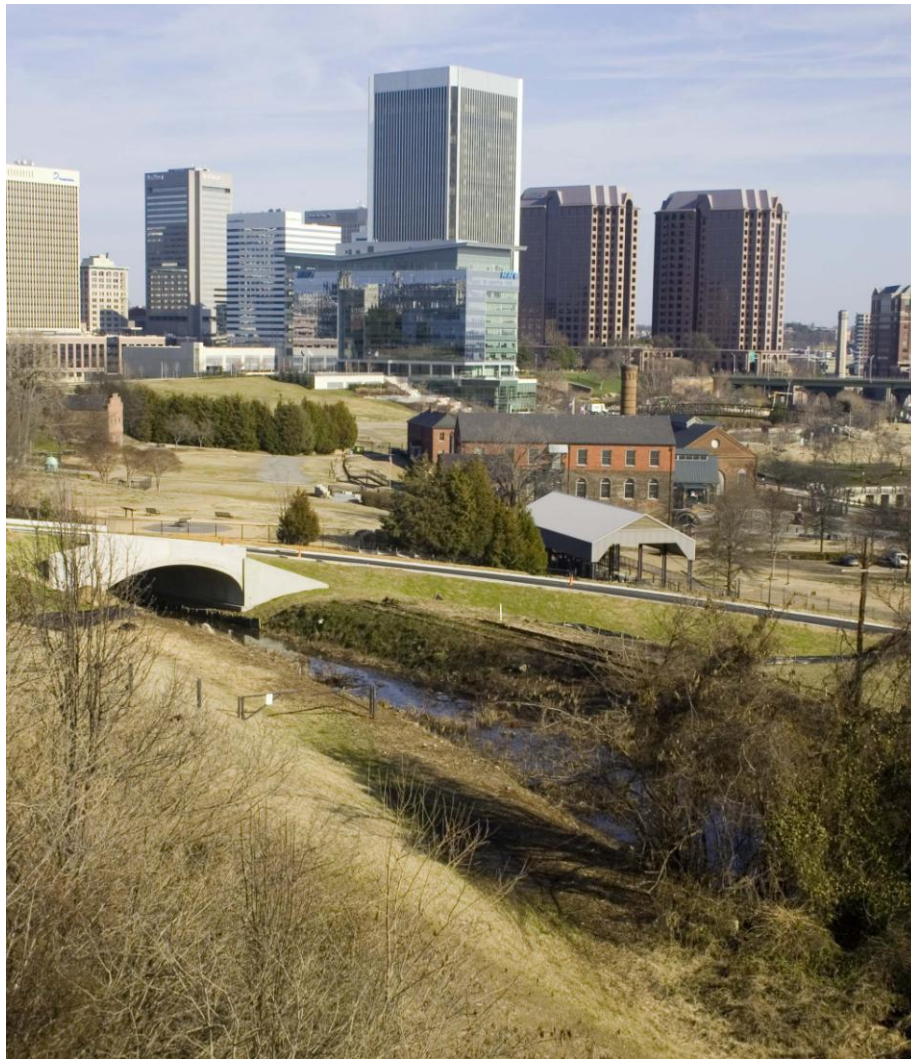
Wood Engraving, 1872

Richmond from the James River and Canal

(Figure 3.) “Richmond from the James River and Canal,” 1872 (Source: Library of Virginia) The James River and Kanawha Canal was a remarkable engineering achievement and one of the most picturesque and iconic features associated with Richmond in the late 18th and 19th century. The James River and Kanawha Canal has been listed on the National Register of Historic Places and the Virginia Landmarks Register since 1981.

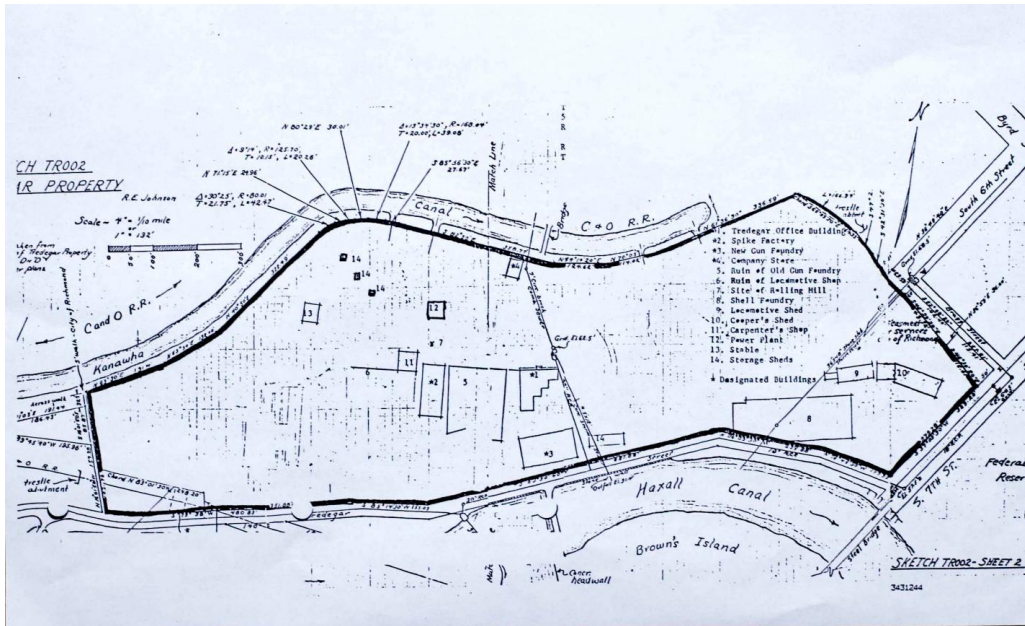
⁷ Nomination Report for the James River and Kanawha Canal Historic District, DHR File Id #: 127-0171, Archives, Virginia Department of Historic Resources.

Additionally, the entire Venture Richmond property below the canal has been listed since 1971 on the National Register of Historic Places as part of the Tredegar Iron Works Historic Site. The Boundary Justification for Tredegar states: “The boundary of the designated area corresponds closely with boundary of the Tredegar facility at the time of its greatest national significance and includes approximately 22 acres and all extant historic Tredegar structures. This entire area is essential to preserving the character of the facility and to protecting it from encroaching commercial development to the east.” The Boundary Description notes that the north boundary of the site follows the north bank of the canal “to a 5-foot-wide city-owned cross walk.”⁸

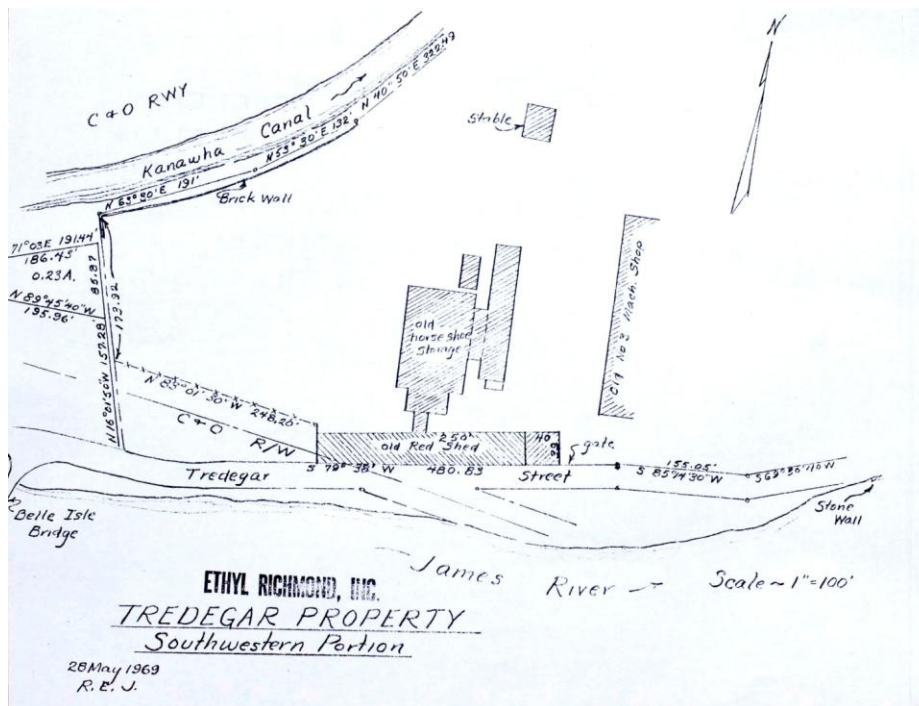


(Figure 4.) The proposed amphitheater is in a very historically sensitive area: the James River and Kanawha Canal bisects the proposed amphitheater site and the property south of the canal is included in the Tredegar Iron Works Historic Site. The Virginia War Memorial and the Oregon Hill Historic District is directly to the north.

⁸ Nomination Report for the Tredegar Iron Works Historic Site, DHR File Id #: 127-186, Archives, Virginia Department of Historic Resources.



(Figure 5.) Boundary Map, Tredegar Historic Site, File 127-186 (Source: Archives, Virginia Department of Historic Resources) The boundary of the Tredegar Historic Site, listed on the National Register of Historic Places, includes the all of the property below the canal that is now owned by Venture Richmond.



(Figure 6.) Southwestern Portion, Tredegar Historic Site, File 127-186 (Source: Archives, Virginia Department of Historic Resources) This map is an excellent resource for identifying where Tredegar buildings were located on the Venture Richmond property, and identifying the boundaries of the Tredegar Historic Site.



(Figure 7.) All of Venture Richmond’s property below the canal is included within the boundary of the Tredegar Historic Site. Many known archaeological resources on the site are carefully documented by the 1992 Raber and Associates report. Bulldozing this site to improve site lines would damage the authentic canal and damage archaeological resources.

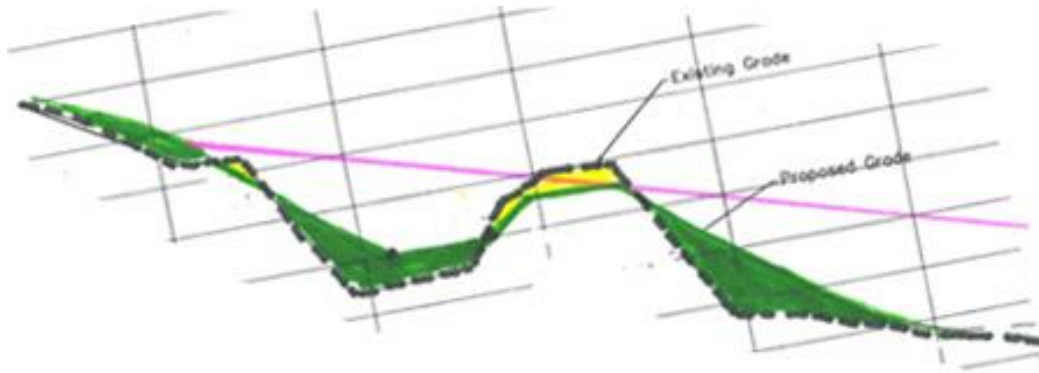
Directly to the north, across 2nd Street from the proposed amphitheater (which is slated to be Venture Richmond's largest and loudest stage accommodating 10,000 spectators) is the Virginia War Memorial, a place of quiet meditation and profound contemplation. To the north of the Va. War Memorial is the Oregon Hill Historic District, a neighborhood with important connections to the Tredegar Iron Works and the site of the surviving home of Samuel P. Parsons, the Superintendent of the Canal in 1840 when the canal was expanded to Lynchburg.



(Figure 8.) The amplified sound from the proposed amphitheater will be the loudest of any outdoor venue in Richmond. It would be remarkably poor planning to position Richmond's largest and loudest outdoor stage venue directly below the Virginia War Memorial, a place of quiet meditation. The proposed amphitheater would be not be limited for use for the Richmond Folk Festival but would be Venture Richmond's largest venue, available year round for lease.

Venture Richmond's amphitheater proposal:

At this historically sensitive site Venture Richmond has proposed an amphitheater, which would be available for lease without restriction on the number of events annually. The sound from the stage, which would be arguably the largest and loudest outdoor venue in Richmond, would be aimed directly at the Virginia War Memorial, which is across 2nd Street from the proposed amphitheater, and at the Oregon Hill Historic District, which is home to families of mixed income. Venture Richmond's plan is largely unchanged from 2012.



(Figure 9.) Venture Richmond’s 2012 plan showed the canal tow path damaged to improve sight lines for the proposed amphitheater. (Source: Venture Richmond)



(Figure 10.) Venture Richmond’s 2013 plan shows little change from the 2012 plan. Under the 2013 plan, the canal tow path would be similarly damaged to improve the sight lines for the proposed amphitheater. (Source: Venture Richmond)

This vital section of the James River and Kanawha Canal, which has survived intact for over 225 years since first constructed under the presidency of George Washington, is now threatened for the trivial reasons of improving sight-lines and making it easier to cut the grass at the amphitheater. Venture Richmond is proposing to remove half of the tow path of the James River and Kanawha Canal, from over 25 feet to 12 feet. They also propose removing the railroad tracks that connected Tredegar with the Iron works on Belle Isle and propose lowering the tow path to an elevation of 83 feet above sea level. This would have a serious adverse impact on the canal since the water elevation in the canal was historically at 83 feet above sea level. Additionally Venture Richmond proposes reducing the width of the canal from 60 to 50 feet. *(Venture Richmond misrepresents that its proposed damage to the historic canal is based on the original specifications used in the construction of the canal in the 18th century. But a careful check of the reference cited for these specifications [History of the James River and Kanawha Canal, Wayland Dunway, 1922] indicates that these specifications cited were actually recommendations presented half-a-century later for the expansion of the canal to Lynchburg*

and beyond, as presented at the stockholders meeting of the James River and Kanawha Canal Company in 1835.⁹ The section of the canal below Oregon Hill was completed half-a-century before these specifications for expanding the canal to Lynchburg were presented in 1835. It would be a tragedy if the James River and Kanawha Canal below Oregon Hill is damaged based on a misrepresentation of the proposed specifications for expanding the canal to Lynchburg in 1835, as cited in the Dunway book.)



(Figure 11.) The James River and Kanawha Canal bisects the site of Venture Richmond’s proposed amphitheater. Rather than one venue spanning the canal, the site could accommodate two stages (above and below the canal) without requiring damage to the canal.

⁹ Dunway, Wayland, *The History of the James River and Kanawha Canal*, Columbia University, New York, 1922, pages 118-120 and pages 163-167

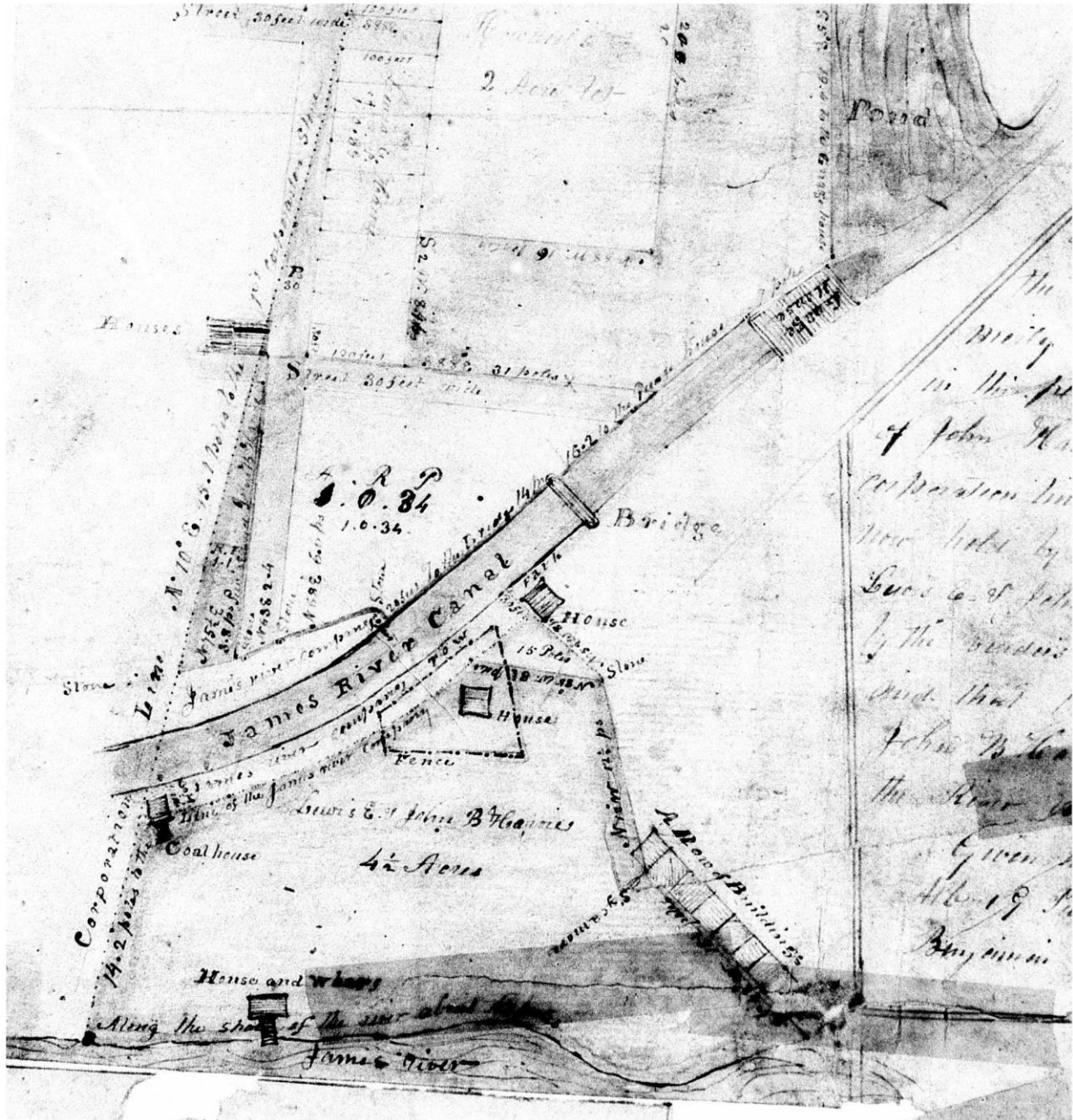


(Figure 12.) In 2012, the Richmond City Council approved the expenditure of \$385,000 to protect the canal by constructing this bridge over the canal as part of the construction of the 2nd Street Connector.

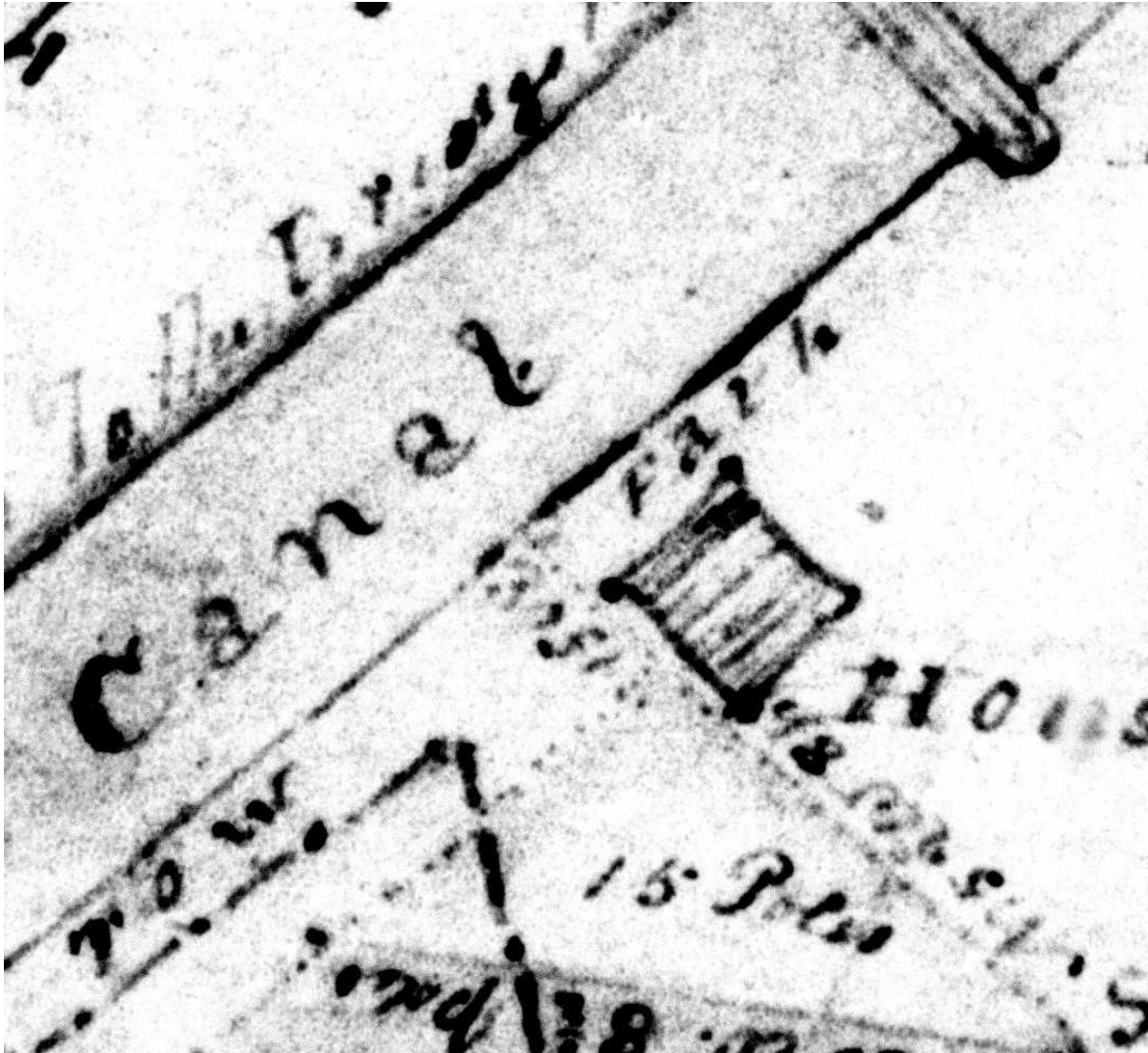
Canal tow path historically 30 feet wide at this site:

In 1848 the Harvie family commissioned a survey of their property below Oregon Hill that spanned the canal. This property survey is very detailed and clearly identifies the **width of the canal tow path as 30 feet.**¹⁰ (*Venture Richmond has inaccurately stated that the tow path at this location was only 12 feet wide until it was enlarged to accommodate the railroad tracks in the 1880s.*)

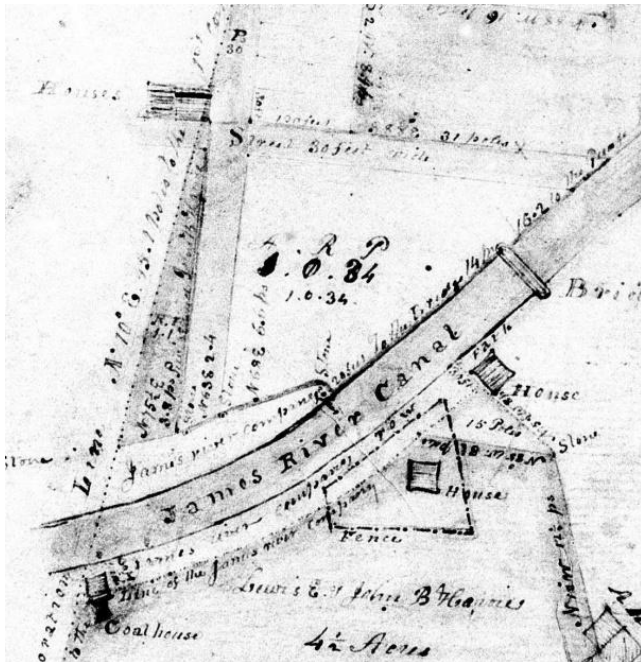
¹⁰ Henrico Plat Book 3, Page 417, 1848 (Library of Virginia)



(Figure 13.) Land survey of Harvie property, Henrico Plat Book 3, Page 417, 1848 (Source: Library of Virginia). This detailed land survey of the Harvie property in 1848 clearly shows the canal tow path as 30 feet wide. John Harvie served as a founding director of the James River Company while George Washington served as the company's president. Harvie's property included the current site of Venture Richmond's proposed amphitheater.



(Figure 14.) The tow path of canal at site of Venture Richmond's proposed amphitheater was 30 feet wide in 1848, as shown in this detail of Henrico Plat Book 3, Page 417. (Source: Library of Virginia) (Venture Richmond inaccurately asserted that there were no buildings near the tow path that could have accounted for stone in the clay layer of the canal west of the 2nd Street Connector. This 1848 plat shows a building near the location of where the 2nd Street Connector was constructed.)



1848 Henrico Plat (Source: Library of VA)



1876 Beers Atlas (Source: Library of Congress)

(Figure 15.) The dimension of the tow path shown on the 1848 Plat, identified as 30 feet wide, closely correspond with the dimensions of the tow path shown on the detailed 1876 Beers Atlas. This survey and map verify that the tow path was 30 feet wide during the canal’s primary period of significance.

The south bank of the canal was probably 30 feet wide in this location when the canal was first built in the 1780s. According to the Raber-Tredegar report, the tow path at this location was a “substantial embankment” to hold back the extensive volume of water in Harvie’s Pond:

The relatively broad expanse between the canal and river here, generally 450-500 feet, provided ample room for mill construction, generally above flood levels, with nearly 50 feet of head. Damming of the large creek proved especially important for early local industrialists. The canal had to cross the ravine and creek, using one of two basic engineering options: an aqueduct or large culvert passing the creek under the canal, or a substantial embankment on the downhill or southern side, incorporating the creek’s waters into the canal. The latter choice was made...¹¹

¹¹ Raber Associates, *Historical and Archaeological Assessment Tredegar Iron Works Site*, prepared for Valentine Museum and Ethyl Corporation, page 9, Lyle Browning Collection

In fact, in an early water agreement dated June 26, 1801, whereby John Harvie acquired the right to take water from the James River Canal to be used for the Virginia Company's Manufacturing Mills, the south bank of the canal at this location was referred to as "the water dam":

Witnesseth, That the said President and Directors, ... have granted ... unto the said John Harvie, his heirs ... forever, full right, liberty, power and privilege, to fix a trunk in the dam or wall of the James River canal ...

...forever, ninety square inches of water from the James River Canal, to be taken at the water dam where the water is now used for the Virginia Company's Manufacturing Mills, lately belonging to the said John Harvie ...¹²



(Figure 16.) This detail from the 1835 Bates Atlas illustrates the large Harvie Pond, also known as the Penitentiary Basin, before the sides of the pond were shored up with stone later that decade. The south bank of the canal at this location served as a dam to hold back the water from the creeks and springs that fed Harvie's Pond. (Source: Library of Virginia)

¹² Chronology of the Cunningham Grants, page 51, Tredegar Papers, Box 32, Folder 4, Accession Number 23881, 24808 (Library of Virginia)

The 1848 Morgan map was dated the same year as the more detailed survey of Harvie's property in Henrico Plat Book 3, Page 417, in which the tow path was identified as 30 feet wide. The Morgan map shows the many springs and creeks that fed the several acres of water that made up Harvie's Pond. A "substantial embankment" for the south bank of the canal was required to hold back this volume of water in the natural ravine between Oregon Hill and Gambles' Hill.



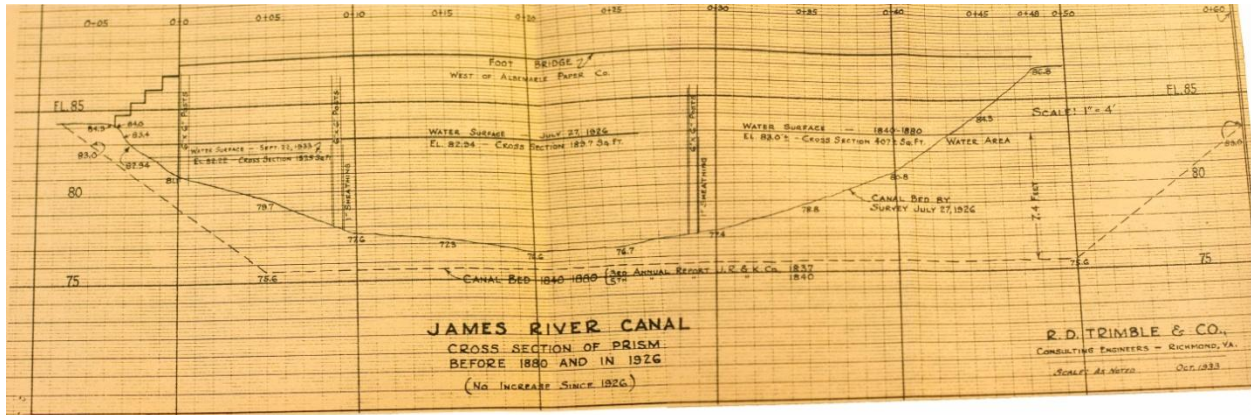
(Figure 17.) Morgan Map, 1848 (Source: Library of Virginia) This map is dated the same year as the very detailed Harvie Plat that identifies the tow path as 30 feet wide. Note the several springs and creeks that fed Harvie's Pond, including the spring for which Spring Street was named. Around 1838 when the canal was widened to 60 feet, Harvie's Pond was reshaped and reinforced with stone. The south bank of the canal was a "substantial embankment" that was referred to as a "dam" in an 1801 water lease agreement. Note that Belvedere is shown on the map, enclosed with a serpentine wall brick. Belvedere was home in 1798 to John Harvie who was a founding Director of the James River Company.



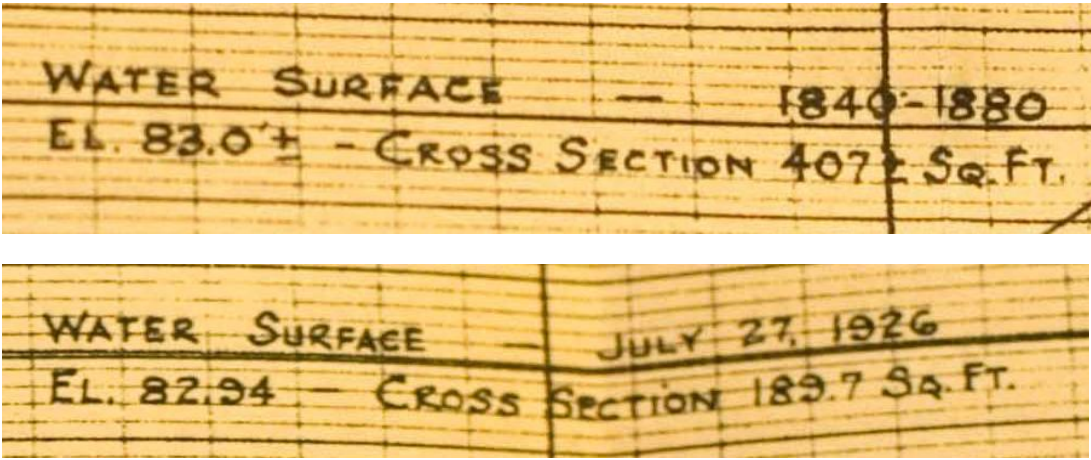
(Figure 18.) This 1865 photograph shows the extent of Harvie's Pond, which was fed by springs and creeks filling the natural ravine that separates Oregon Hill from Gamble's Hill. Evidence indicates that the tow path on the site of Venture Richmond's proposed amphitheater was originally a "substantial embankment" 30 feet wide to hold back this volume of water. (Source: Library Company of Philadelphia)

Canal water elevation at 83 feet from 1840:

Detailed surveys in the Tredegar Papers at the Library of Virginia indicate that the water elevation in the canal at Tredegar was at or near 83 feet above sea level from 1840-1933. (*Venture Richmond's consultant inaccurately asserted that the water elevation in the canal was at 81 feet based on a notation in the margins of the Morgan map. Not only was the Morgan Map margin notation undocumented, it also did not indicate **where** on the canal the elevation was at 81 feet.*)

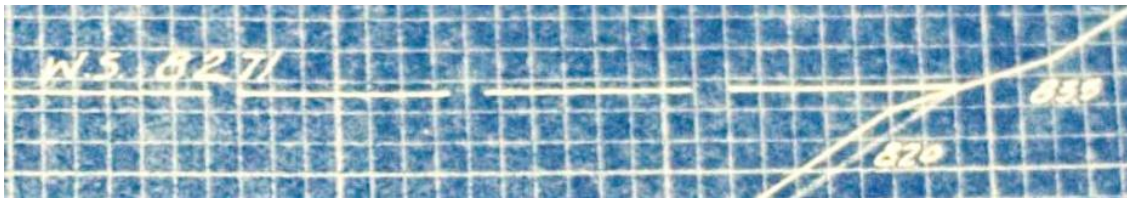
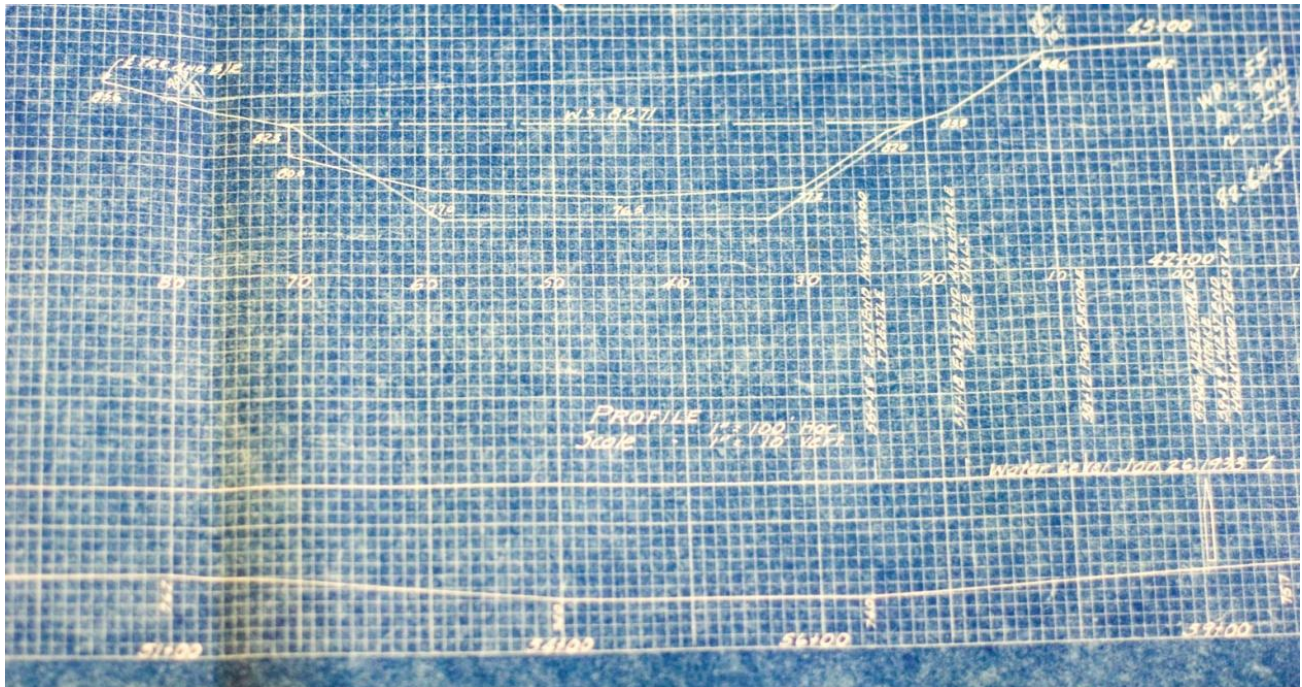


(Figure 19.) Trimble cross section of the prism of the canal at Tredegar before 1880 and in 1926, documenting the water surface in the canal at Tredegar was at or near 83 feet elevation from 1840-1880 and in 1926. Tredegar Papers, Box 32, Folder 6, Acc. No. 23881, 24808 (Source: Library of Virginia)



(Figure 20.) Details of the Trimble cross section of the canal at Tredegar documenting the water surface in the canal at or near 83 feet elevation from 1840-1880 and in 1926 even while sediment decreased the square footage of the cross section of the canal. Tredegar Papers, Box 32, Folder 6, Acc. No. 23881, 24808 (Source: Library of Virginia)

The water elevation in the canal is of critical importance because there are plans to re-water the canal to Maymont. Venture Richmond is proposing to reduce the elevation of the tow path to 83 feet, which would be the same elevation as the historical water level in the canal. Obviously, it would be ill-advised to maintain the water level at the same elevation as the tow path; heavy rain and boat traffic would cause the canal to overflow its banks. Flooding was historically the major cause for damage to the canal.



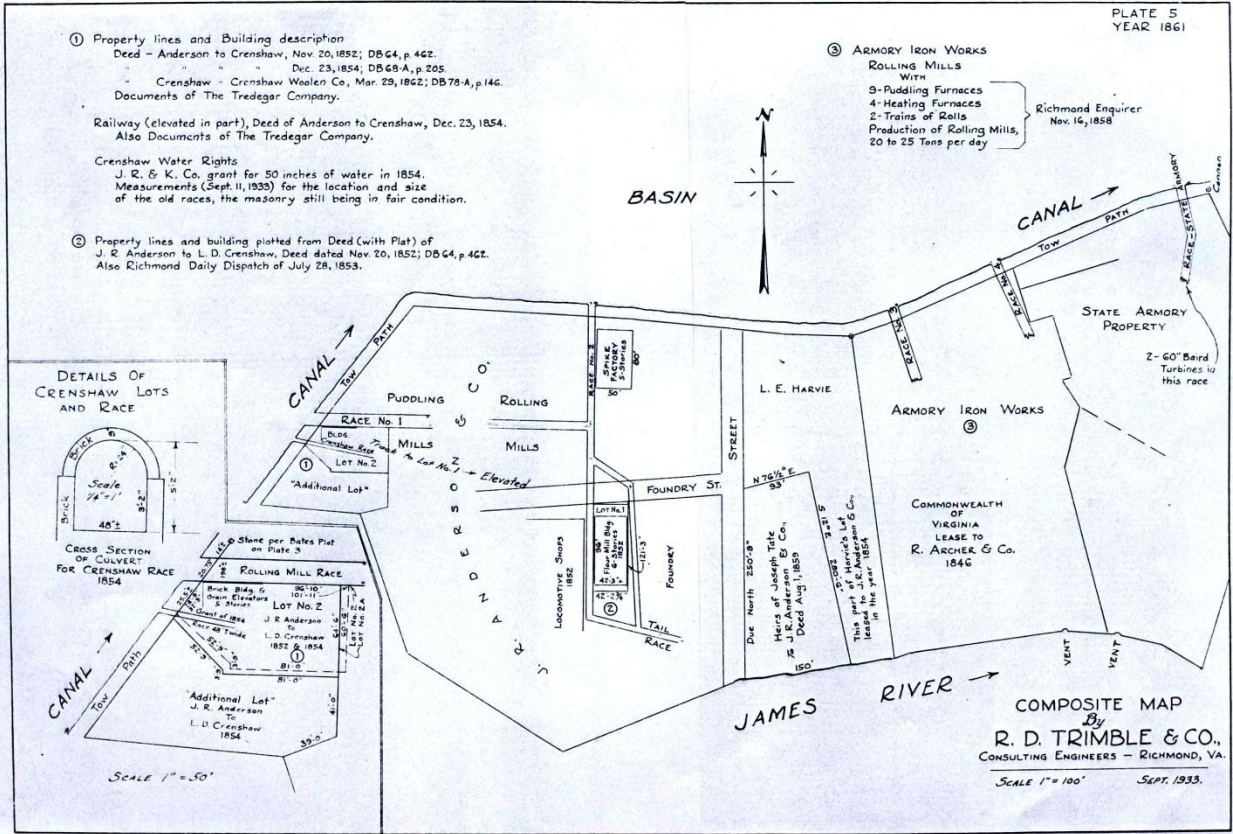
(Figure 21.) Trimble survey (and detail) of the canal at Tredegar in 1933, indicating that the water surface in the canal was at 82.71 feet. Tredegar Papers, Box 31, Tube #1, Accession Number 23881, 24808 (Source: Library of Virginia)

TREDEGAR COMPANY GRANTS							
Grantor Grantee	Kind of Instrument	Date	Inches of Water	Head in Feet	Cu.Ft. per Second	Ann. Rent	
JOHN HARVIE GRANTS.							
James River Co. to John Harvie	Perpetual Lease	June 26, 1801	90 sq. in.	4½		133 L. 12 s.	
James River Co. to John Harvie	Perpetual Lease	June 26, 1801	Trunk 4 inches square	1			
James River Co. to Thos. Rutherford	Perpetual Lease	July 2, 1812	120 sq. in.	3	8.01	\$500.00	
This instrument supersedes two Harvie Grants.							
THOMAS GREEN GRANTS.							
James River Co. to Thomas Green	Perpetual Lease	June 16, 1828	100 cu. in	4	7.80	\$400.00	
James River Co. to Thomas Green	Perpetual Lease	Letter dated June 15, 1829	100 inches	4	7.80	400.00	
Thomas Green to J. B. Harvie	Assignmt. by letter	Jan. 1, 1830	200 inches				
J. B. Harvie to Edward Cunningham & Rohmd. Mfg. Co.	Assignmt. by letter	Feb. 20, 1832	200 inches				
Jas. River Co. to Edward Cunningham & Rohmd. Mfg. Co.	Agreement	June 7, 1832	200 inches				
Jas. River Co. consents to assignment of two Green Grants.							
OTHER GRANTS.							
Jas. River Co. to Edward Cunningham	Perpetual Lease	July 2, 1828	100 cu. in	4	7.80	500.00	
Jas. River and Kanawha Co. to Tredegar Co.	Perpetual Lease	Jan. 1, 1869			69.76	4,494.08	
Hecla Iron Works		--- --- 1852			4.59	266.22	
L. D. Crenshaw or Haxall Crenshaw Co.		May 3, 1854	50 sq. in.	4½	3.40	171.64	
ARMORY GRANT							
Commonwealth of Va. or David Ross		Nov. 27, 1798	160 sq. in.	4½	13.20	1,280.00	
					Total	122.56	\$8,011.94

(Figure 22.) Extensive list of the water leases and agreements for various manufacturing enterprises near Tredegar dating from 1801. Tredegar Papers, Box 31, Folder 5, Accession Number 23881, 24808 (Source: Library of Virginia)

Maintaining the water elevation in the canal at 83 feet above sea level was important for maintaining the transportation and water power functions of the canal. The elevation of the water in the canal was carefully monitored. Since 1801, numerous water leases, grants and agreements contractually ensured adequate water power for the cotton, flour, corn, and paper mills, and the iron manufacturing enterprises at this section of the canal, including Tredegar Iron Works, the state Armory. As a result of the reliable water power provided by the canal, this was one of the nation's most important manufacturing hubs.¹³

¹³ Chronology of the Cunningham Grants and Chronology of the James River Canal, Tredegar Papers, Box 32, Accession Number 23881, 24808, Library of Virginia



(Figure 23.) Composite map showing the many water races from this section of the canal, with a detail of the Crenshaw race. Tredegar Papers, Box 32, Accession Number 23881, 24808 (Source: Library of Virginia) The canal was carefully engineered to provide transportation and water power for one of the most important industrial areas in the nation. Bulldozing the south bank of the canal would irreparably damage the carefully engineered structure and possibly damage remains of old mill races.

Maintaining the water elevation at the historical level of 83 feet in the canal when the canal is re-watered to Maymont will be even more important since the combined overflow pipe was laid in the canal bed in the 1980s. This pipe sits about three feet above the canal bed near Hollywood Cemetery.



(Figure 24.) Combined sewer overflow pipe in the bed of the James River and Kanawha Canal below Hollywood Cemetery. In order for canal boats to clear this overflow pipe in the bed of the canal when the canal is re-watered to Maymont, the elevation of water in the canal must be maintained at its historical level of 83 feet above sea level. If Venture Richmond lowers the tow path to improve its sight lines, the canal will not hold water at its historic level.

Tow path least two feet above water level in the canal:

According to topography maps supplied by Venture Richmond, the highpoint of the existing canal tow path is around 85 feet above sea level. This tow path height should be maintained in order too accommodate the historical water elevation in the canal of 83 feet.

Civil war era photographs of this section of the canal indicate that the tow path was at least two feet in elevation above the level of the water in the canal. (Venture Richmond inaccurately asserted that there was “limited clearance” between the water level in the canal and the top of the tow path.)



(Figure 25.) "Richmond Va. View from Hollywood Cemetery," (detail) John Keekie, c. 1865 LC-B811-929 (Source: Library of Congress). Note the tow path in this Civil War era photograph is at least two feet above the water level in the canal based on the adjacent fence for comparison.



(Figure 26.) Canal with Belle Isle in background (detail). The tow path is at least two feet above the water level of the canal in this Civil War era photograph. The fence on the tow path provides a convenient bench-mark to gauge the tow path's elevation above the water level. (Source: New York Public Library)



(Figure 27.) “Looking up the River at Hollywood Cemetery,” (detail) David H. Anderson, Civil War era (Source: New York Public Library) The water level is at least two feet below the top of the tow path in this photograph of the canal looking west from Hollywood Cemetery. Venture Richmond’s consultant has inaccurately stated that there was limited clearance between the tow path and the water level in the canal.

It is important for the tow path to be about two feet above the water level on the canal to prevent flooding during times of heavy rain and ice melt. In 1842 a freshet caused overflowing of the canal and resulted in breaks in the canal in 103 places requiring expensive repairs.¹⁴

¹⁴ Dunway, Wayland, *History of the James River and Kanawha Company*, Columbia University, New York, 1922, page 146.

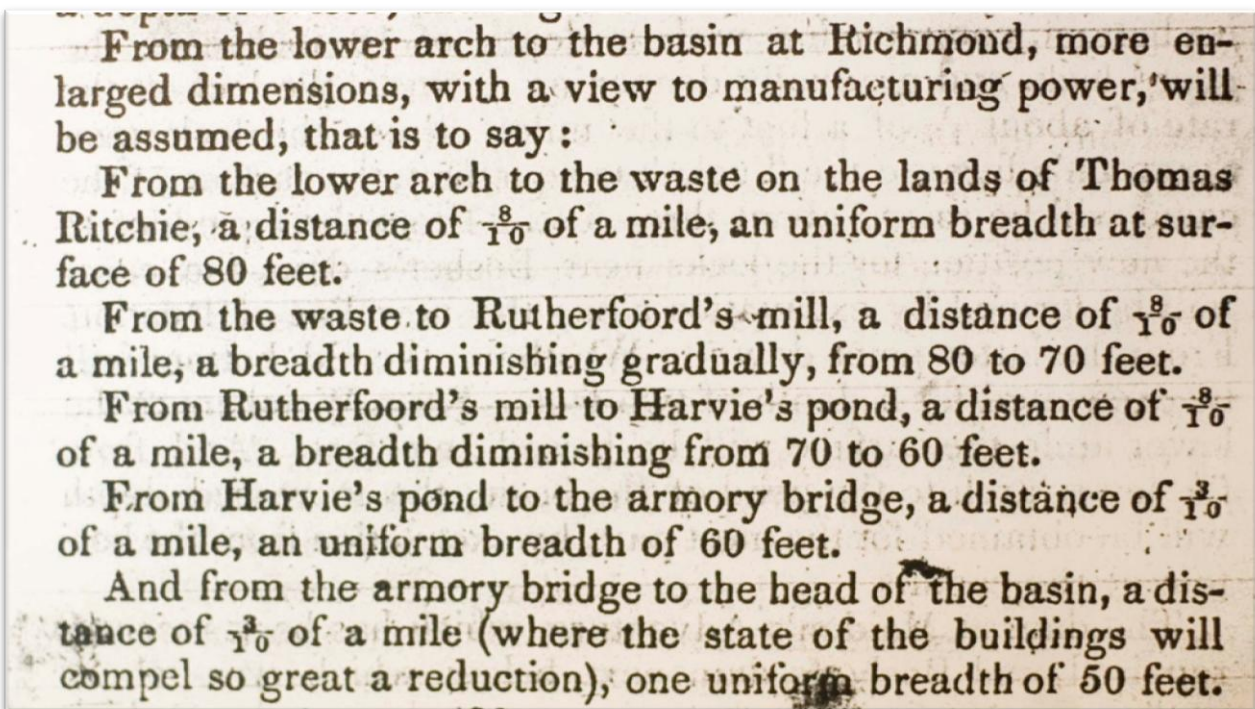


(Figure 28.) Canal from Hollywood Cemetery (detail), Civil War era. The canal at Hollywood Cemetery provided a picturesque setting that was often photographed. These photographs now provide useful information in determining the elevation of the tow path above the water level of the canal. The tow path in this photograph was at least two feet above the water level of the canal. This provided a margin of safety during freshets that could cause flooding and expensive damage the canal banks. Flooding was historically the cause of the most serious damage to the canal. (Source: New York Public Library)

Canal 60 feet wide from 1838:

Because the manufacturing enterprises below Oregon Hill, including cotton, paper, and flour mills, a distillery and tannery, the Tredegar Iron Works, and the Armory relied on a large amount of water power, the canal at this location was widened from 40 to 60 feet in 1838. The 3rd annual report of the James River and Kanawha Company on December 11, 1837 declared

the intention of widening this stretch of canal to 60 feet.¹⁵ The 1838 enlargement of the canal was accomplished by excavation of the north bank of the canal (leaving the tow path intact).¹⁶ The canal widening was completed by the following year and water was returned to the canal, as announced in the December 18, 1838 Richmond Enquirer, and confirmed in the canal company report of 1839.¹⁷



From the lower arch to the basin at Richmond, more enlarged dimensions, with a view to manufacturing power, will be assumed, that is to say:

From the lower arch to the waste on the lands of Thomas Ritchie, a distance of $\frac{8}{10}$ of a mile, an uniform breadth at surface of 80 feet.

From the waste to Rutherford's mill, a distance of $\frac{8}{10}$ of a mile, a breadth diminishing gradually, from 80 to 70 feet.

From Rutherford's mill to Harvie's pond, a distance of $\frac{8}{10}$ of a mile, a breadth diminishing from 70 to 60 feet.

From Harvie's pond to the armory bridge, a distance of $\frac{3}{10}$ of a mile, an uniform breadth of 60 feet.

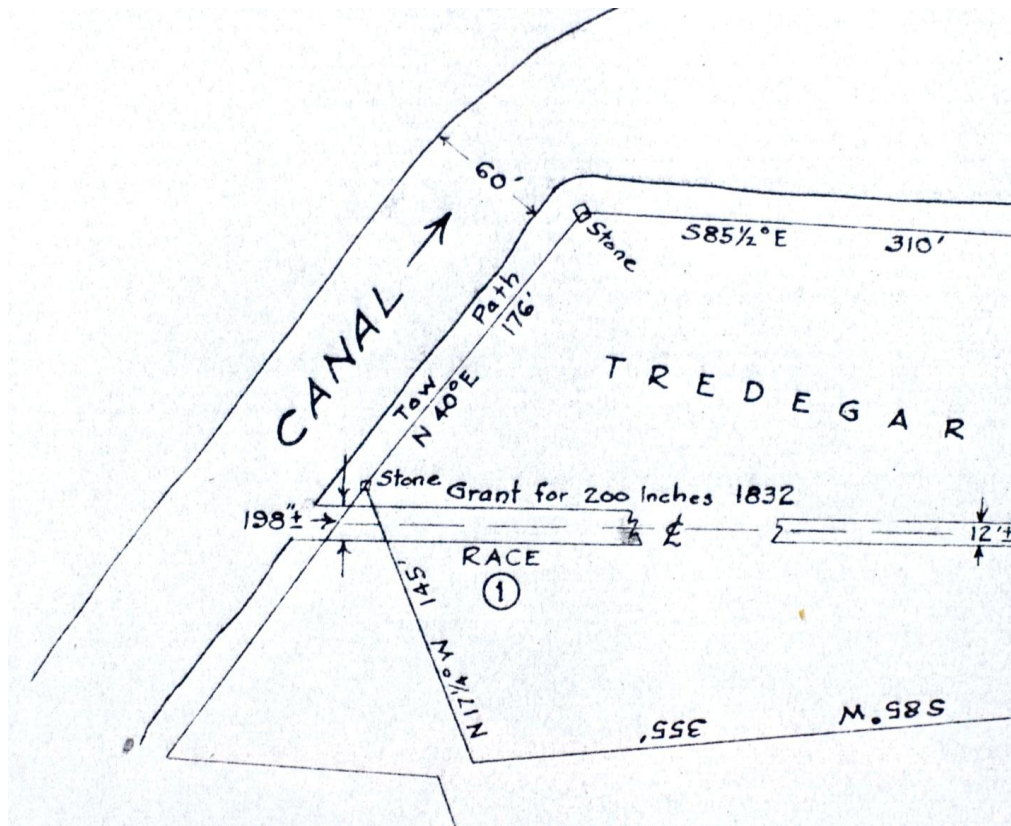
And from the armory bridge to the head of the basin, a distance of $\frac{3}{10}$ of a mile (where the state of the buildings will compel so great a reduction), one uniform breadth of 50 feet.

(Figure 29.) The 3rd annual report of the James River and Kanawha Canal Company, Dec. 11, 1837, Film 372, Reel 4 (Source: Library of Virginia). The canal was successfully widened to 60 feet from Rutherford's mill to Harvie's Pond in 1838 to accommodate the growing demands for transportation and water power. The many manufacturing enterprises below Oregon Hill, including flour, cotton, corn mills and the Tredegar Iron Works relied on the water power provided by the canal.

¹⁵ 3rd Annual Report, James River and Kanawha Canal Company, December 11, 1837; Film 372, Reel 4, Library of Virginia

¹⁶ Raber Associates, *Historical and Archaeological Assessment Tredegar Iron Works Site*, prepared for Valentine Museum and Ethyl Corporation, page 11, Lyle Browning Collection

¹⁷ Testimony transcripts, Tredegar V. C.&O. Railroad, 1933, Tredegar Papers, Box 41, Accession Number 23881, 24808, Library of Virginia

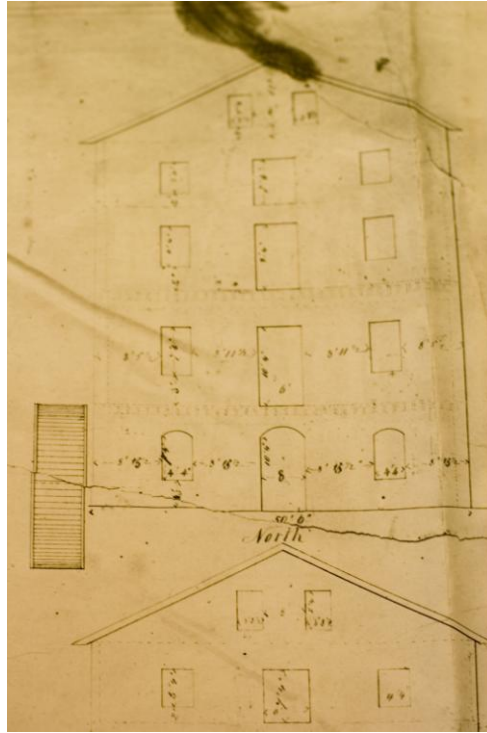


(Figure 30.) Composite map Plate 3 for Year 1839 (Detail), Trimble, September 1933, Tredegar Papers Box 32, Accession Number 23881, 24808 (Source: Library of Virginia) This composite map illustrates that the canal was 60 feet wide at Tredegar in 1839.

Richmond at the fall line was blessed with enormous water power because in a distance of approximately three miles the river falls 84 feet to tidewater at the eastern edge of the city. At Tredegar, there is almost 50 feet of drop from the canal to the elevation of the James River. According to the Raber-Tredegar report:

Richmond is thus the head of tidal navigation as well as the first and most important waterpower site on the James. Construction of the James River and Kanawha Canal solved a critical transportation problem and created a new opportunity for exploitation of waterpower resources. The canal as it entered the city from the west could deliver a controlled flow of water from upstream and make it available to local manufacturers. There was so much drop between the upper level of the canal and the river below the falls that water drawn from the canal could be used to power one, two, or even three mills in sequence. The canal gave Richmond the potential to become a major center of industry and commerce.¹⁸

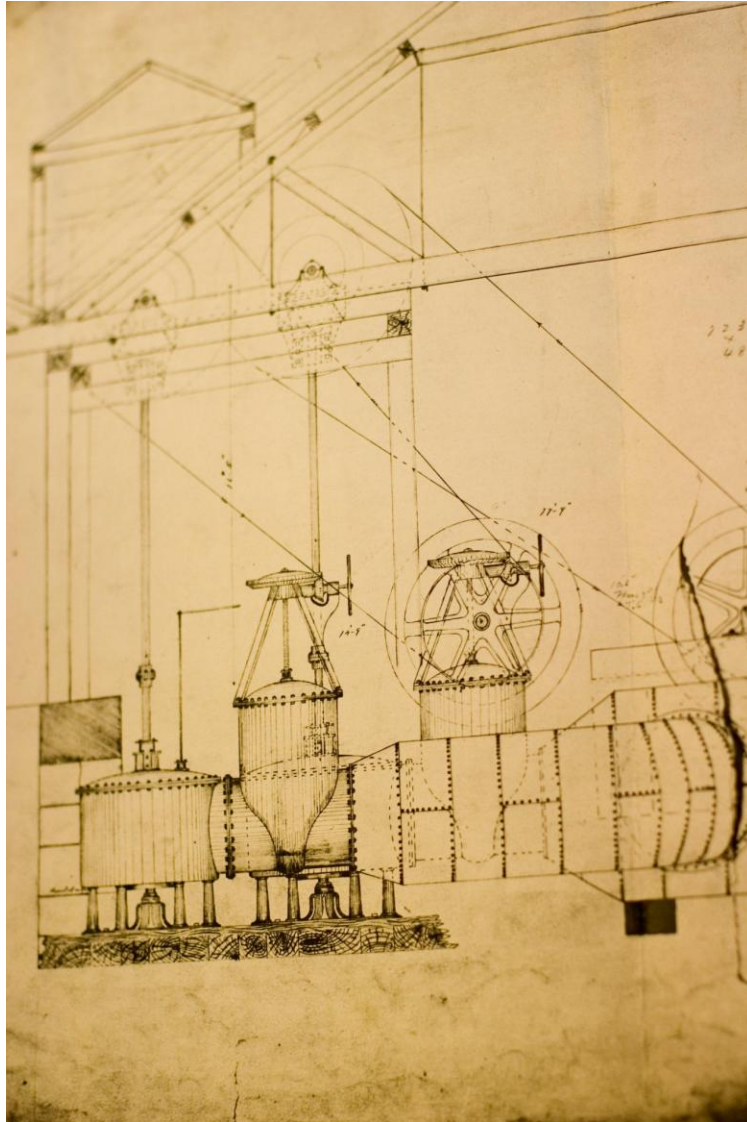
¹⁸ Raber Associates, *Historical and Archaeological Assessment Tredegar Iron Works Site*, prepared for Valentine Museum and Ethyl Corporation, page 42, Lyle Browning Collection



(Figure 31.) Tredegar Iron Works relied on water power from the James River and Kanawha Canal to power its many manufacturing processes. This drawing depicts the original overshoot wheel at Tredegar Iron Works. Tredegar Papers, Box 40, Accession Number 23881, 24808 (Source: Library of Virginia)



(Figure 32.) On display at Tredegar Iron Works is a replica of the overshoot wheel powered by water from the James River and Kanawha Canal. With a 50 foot drop from the canal to the level of the James River, each water race could power up to three mills in sequence.



(Figure 33.) From the 1870s, water powered turbines replaced the overshot wheel as the source of power at Tredegar Iron Works. Tredegar Papers, Box 40, Accession Number 23881, 24808 (Source: Library of Virginia)

After the canal ceased to be used for transportation, it continued to provide a valuable source of cheap water power for the Tredegar Iron Works. In 1933, Tredegar and the C. & O. Railroad were involved in extensive litigation; at issue was the water supply from the canal, which was accumulating sediment that reduced the water volume. Tredegar presented over 800 exhibits (now compiled in the Library of Virginia), carefully documenting the water power leases and grants, and the historical dimensions of the canal. The case was settled out of court, but the court documents provide a treasure trove of information on the canal and its history.¹⁹

¹⁹ Tredegar papers, Boxes 31-44, Accession Number 23881, 24808, Library of Virginia

Canal is a carefully engineered, impermeable structure:

While few would be so insensitive to suggest demolishing a portion of a Civil War earthworks in order to improve sight-lines, the banks of the of the James River and Kanawha Canal were more structurally engineered than Civil War earthworks because the canal walls were required to be leak-proof. The portion of the canal where Venture Richmond proposes to remove over half of the tow path was one of the first segments of the canal to be completed around 1787.

It was a laborious process to build a canal without benefit of modern equipment. Both slaves and free men toiled to construct one of the engineering marvels of its day. Due respect should be paid to this remarkable achievement for which many lives were sacrificed. The canal should not be damaged for trivial reasons, such as improving sight lines to a stage or to make it easier to mow the grass.

The canal walls are not just mounds of earth that could be later replaced but are carefully engineered structures with “puddled” clay as an impermeable layer. Puddling clay is now largely a forgotten process, which would be difficult to reproduce if the canal bank and tow path is damaged by Venture Richmond. In the 18th and 19th century, puddling was a labor intensive technique of mixing and re-mixing fine grain clay with water to a plastic cement-like consistency.

When the 2nd Street connector road was built in 2012, a cross section of the canal revealed the clay layer. Dr. Bill Trout, a noted canal authority, inspected the cross section and observed that the clay layer was intact to the east and west of the connector road. He took a sample of the clay layer and demonstrated how the clay was puddled by mixing it with water.²⁰

Slicing the carefully engineered canal banks and tow path, which have survived intact for over 200 years, should be avoided at all costs. Removing a substantial portion of the south bank of the canal and tow path would weaken the intact, authentically engineered structure as well as change the original dimensions and appearance of the tow path and bank of the canal that is listed on the National Register of Historic Places. Removing half of the tow path of Washington’s canal to improve sight-lines is a short-sighted proposal when one recognizes the work and structural engineering involved in creating the impermeable canal, one of the remarkable engineering feats of its day.

²⁰ Trout, William, “Puddling on the James River Canal, *The Tiller*, publication of the Virginia Canals and Navigations Society, Vol. 34-1, 2012, pages 8-9



(Figure 34.) The James River and Kanawha Canal was a carefully engineered structure, designed to withstand the vicissitudes of weather and traffic, while holding back the considerable volume of water in the canal. This cross section of the canal was revealed when the 2nd Street Connector was constructed in 2012. This cross section exposes the layer of clay that was “puddled” in a process to make an impermeable water-tight canal bank.

[F.]

STATEMENT of the average Prices of the several kinds of work executed in the construction of the Canal between Lynchburg and Maiden's Adventure, up to this date.

34

EXCAVATION.			EMBANKMENT.					PUDDLING.	WALLING.	
1st.	2d.	3d.	1st.	2d.	3d.	4th.	5th.		1st.	2d.
Of earth, gravel or loose stone.	Of granite or other rock.	Of slate.	Excavated from canal, transported over 150 feet.	Not excavated from canal, transported less than 150 feet.	Not from canal, transported over 150 feet, and less than $\frac{1}{2}$ mile.	Not from canal, transported over $\frac{1}{2}$ mile, and less than $\frac{1}{4}$ mile.	Not from canal, transported over $\frac{1}{4}$ mile.		Of stone from canal excavation.	Of stone not excavated from canal.
Per cubic yd.	Per cubic yd.	Per cubic yd.	Per cubic yd.	Per cubic yd.	Per cubic yd.	Per cubic yd.	Per cubic yd.	Per cubic yd.	Per cubic yd.	
D. C. 12 $\frac{1}{2}$	D. C. 64 $\frac{1}{2}$	D. C. 38 $\frac{1}{2}$	D. C. 9	D. C. 14	D. C. 22 $\frac{1}{2}$	D. C. 29 $\frac{1}{2}$	D. C.	D. C. 11 $\frac{1}{2}$	D. C. 54 1-6	D. C. 1 38 2-5

OFFICE OF THE JAMES RIVER AND KANAWHA COMPANY, }
1st December, 1836.

(Figure 35.) Virginia Board of Public Works Reports, Film 372 (Source: Library of Virginia) Along with Excavation, Embankment and Walling, Puddling expenses are enumerated as a major cost of expanding the canal to Lynchburg. Puddling was a labor intensive process that required hand mixing and remixing of fine grained clay with water to the correct consistency to form an impermeable, leak-proof layer that has survived for centuries.



(Figure 36.) Canal authority, Dr. Bill Trout, sampled the clay from the canal tow path when the canal was cut in order to build the 2nd Street Connector in 2012. He demonstrated that puddling this clay made it leak proof. (Source: *The Tiller*, publication of the Virginia Canals and Navigations Society, Vol. 34-1, 2012, pages 8-9)

Sacrifice of slaves and immigrants:

No discussion regarding the preservation of the surviving authentic canal can be made without an acknowledgement of the sacrifices made by the slaves and Irish and German immigrant laborers who built the canal. It was grueling and dangerous work building the canal and contractors relied on German and Irish immigrants and slaves for the hard labor. Slaves were hired from their owners for the work, much like today one might rent a piece of equipment. Contractors paid a bounty of five dollars a head “for each strong able bodied Negro man who should be hired...” for work on the canal. One contractor demanded partial credit of the \$721 contracted to keep each of seven slaves for eight months for work on the James River and Kanawha Canal on the grounds that he had to provide shoes for the slaves and that the slaves were sometimes sick. Another contractor demanded partial credit of the payment for hiring a slave named Tom, whose owner was paid \$115 per year for his work on the canal; Tom was “an old man and totally unable to perform the labor” on the canal, according to the contractor.²¹

Slaves were considered the most efficient workforce for large construction projects like the James River and Kanawha Canal.²² Slaves toiled on the canal through the unpredictable Virginia winters and in rain downpours, and in the summer fever season. Blacks were treated as if they were immune to these forces that ate away at a free laborer’s work year.²³ Health problems, serious injuries, yellow fever, malaria and cholera were annual problems.²⁴

In the 1830s, about the time that the canal below Oregon Hill was enlarged to 60 feet in width, there were 3300 workers on the canal: two-thirds were mostly Irish immigrants, with one-third of the work performed by slave labor. The Third Annual Report of the James River and Kanawha Company records how slave labor was harshly exploited in the deadly heat of the summer when immigrant laborers refused to work under such terrible conditions:

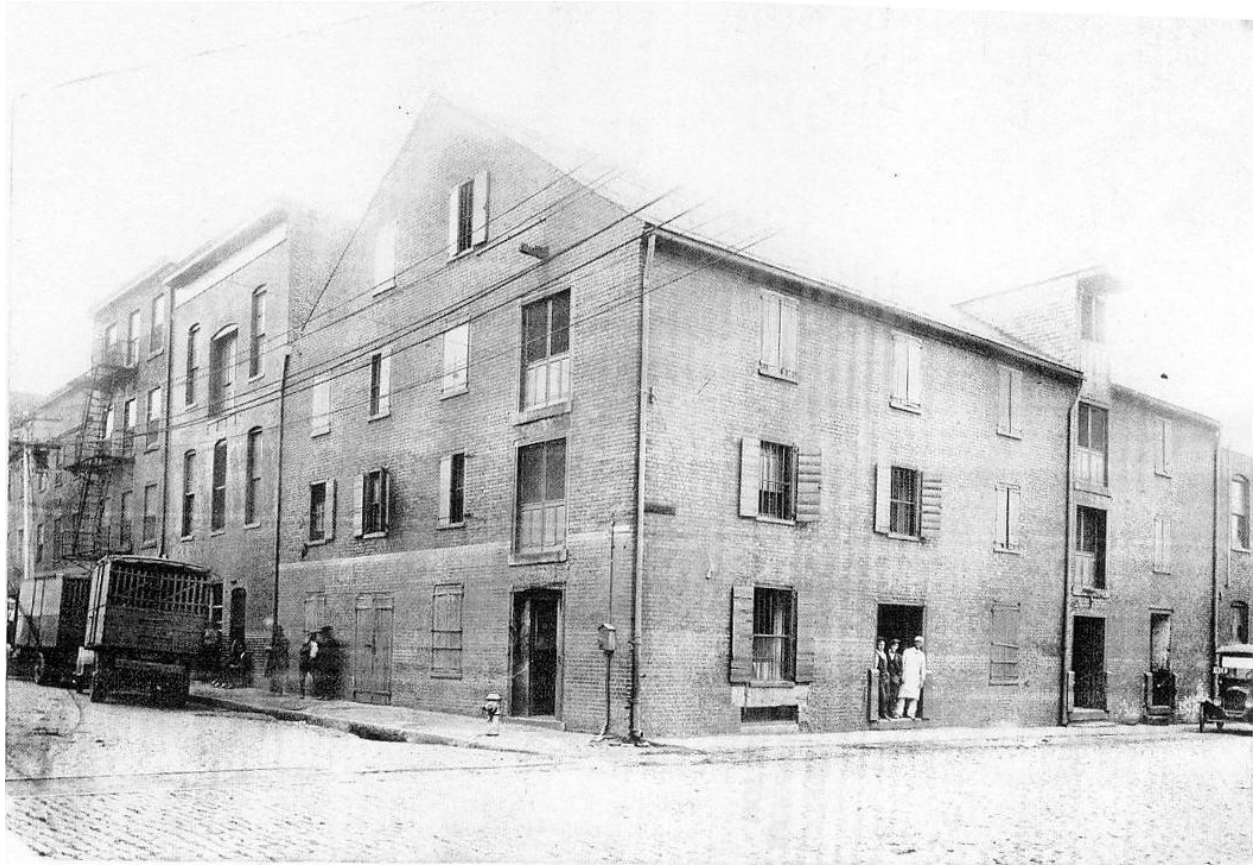
“The summer of 1838 was unusually hot and some of the Irish died of prostration. At this point panic seized the Irish and about 200 of them quit work and migrated north. In the autumn the force became more stable and manageable two-thirds of them now being tractable slaves.”

²¹ *Digital Library of American Slavery*, University of North Carolina at Greensboro, Petition Analysis Records: 21084209, 21683908, and 21684216.

²² Nomination Report, *The Slave Trade as a Commercial Enterprise in Richmond, Virginia, Multiple Property Submission*, File Number 127-6196, Archives, Virginia Department of Historic Resources

²³ Way, Peter, *Workers and the Digging of North America’s Canals, 1780-1860*, Cambridge University Press, 2009, p. 128.

²⁴ Robertson, Gary, *Canal was carved with slave labor*, Richmond Times Dispatch, September 26, 1999.



(Figure 37.) It is chilling to see the bars on even the fourth story windows in this early 20th century photograph of the former slave market at 15th and Cary Street, Richmond. (Source: Cook Collection, Valentine Museum) Perhaps some of the many slaves that worked on the James River and Kanawha Canal were sold at this Richmond slave market. The two-thirds of the workers on the canal were slaves in the autumn of 1838 when improvements were made to the canal below Oregon Hill.

The James River and Kanawha Canal was added to Richmond's Slave Trail to honor the slaves who toiled and lost their lives in this huge construction project. The authentic canal built with so much sacrifice by slaves and immigrants should be respected and not damaged.

The Tredegar Iron Works employed many immigrants, particularly German and Welsh immigrants who were highly skilled iron workers, and many of these immigrants lived in the adjacent Oregon Hill neighborhood.²⁵ The iron works were also grueling, hot and dangerous work. Tredegar came to increasingly rely on slave labor during the Civil War which caused friction with the free workers. In 1862 an advertisement posted a reward for the capture of five runaway slaves who left Tredegar Iron Works. There is a terrible irony in the fact that one of the runaway slaves was named after George Washington, who founded the canal that powered Tredegar.

²⁵ Nomination Report, Oregon Hill Historic District, File Number 127-362, Archives, Virginia Department of Historic Resources.

STOP THE RUNAWAYS—
\$200 REWARD.
The following negro men left the Tredegar Iron Works on Saturday last. We will pay a reward of two hundred dollars for their apprehension and delivery to us in this city, or in any jail where we can get them; or in the same proportion for the arrest of either of them:

FLEMING, has a dark skin, about 5 feet 8 inches high, has a slight impediment in his speech, and has a wife living on the Brook turnpike.

JIM LIGHTFOOT, has a very dark skin, good teeth, about 5 feet 4 inches high, has a wife in Hanover county, at Dr. Gaines's.

GEORGE WASHINGTON, has a brown skin, downcast look when questioned, about 5 feet 6 inches high.

CAMBRIDGE, has not a very healthy appearance, brown skin, 5 feet 8 inches high, has a wife near the Second African Church.

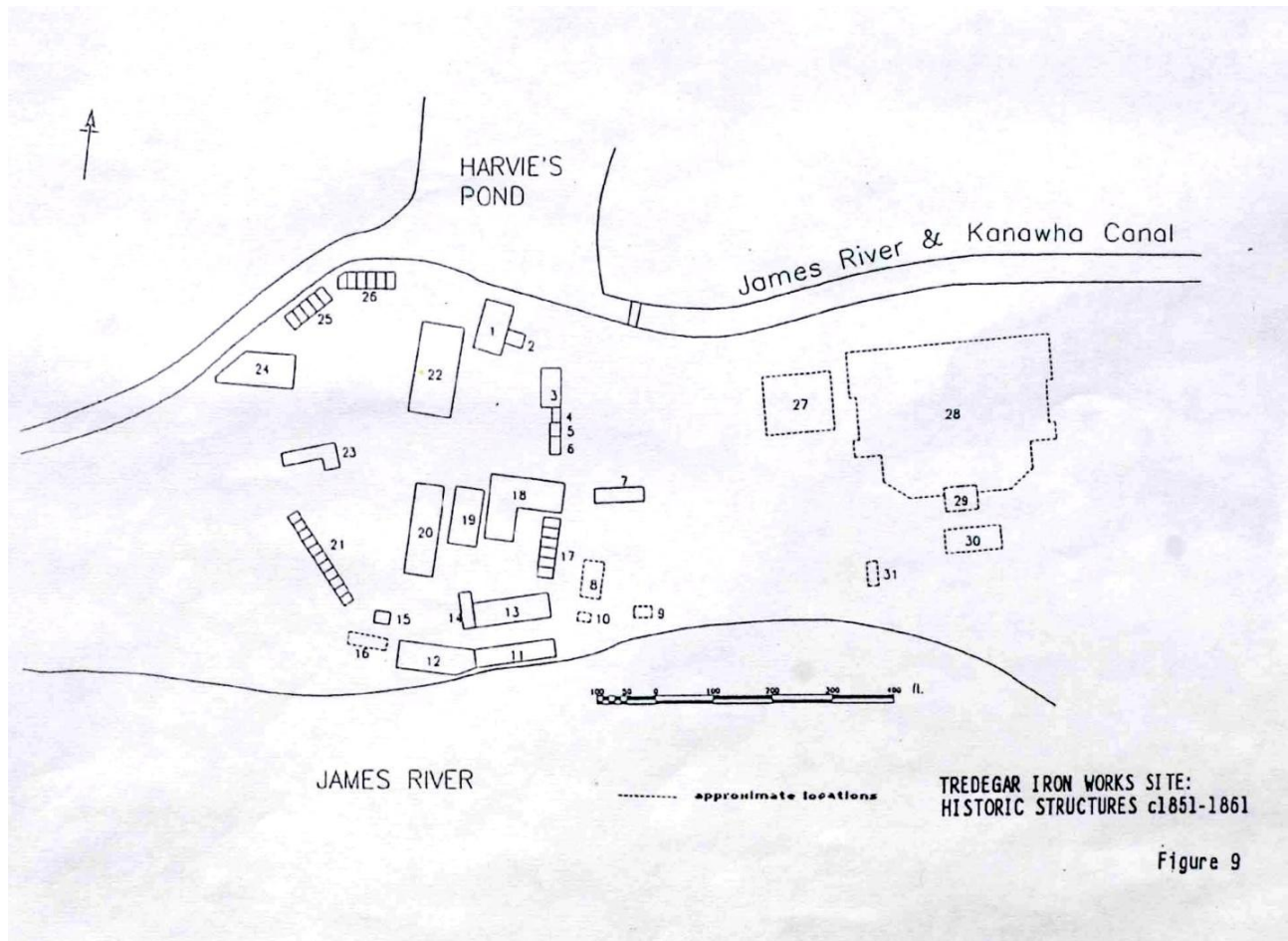
WILLIS DICKENSON, has a dark skin, large mouth and eyes, speaks slowly, about 5 feet high, can read and write, good teeth, and has a wife in the city.

my 15-1w J. R. ANDERSON & CO.

(Figure 38.) Advertisement offering a reward for the return of five slaves who escaped from the Tredegar Iron Works, one of whom was named George Washington. Richmond Daily Dispatch, May 16, 1862 (Source: EncyclopediaVirginia.org)

Archaeological resources on the proposed amphitheater site:

The Venture Richmond property is the site of important archaeological resources, which were extensively catalogued chronologically in the 1992 Raber Associates report on the history and archaeological resources of the Tredegar Iron Works. (*Venture Richmond's consultant did not reference the extensive research of the Raber-Tredegar report and inaccurately stated that there was no significant use of this property until after the Civil War. To quote from the inaccurate assessment of Venture Richmond's consultant, "We also know that prior to the Tredegar Iron Works Company acquiring the land containing the project area shortly after the Civil War, that there is no map evidence of significant or substantial develop [sic] or use of this property."*)



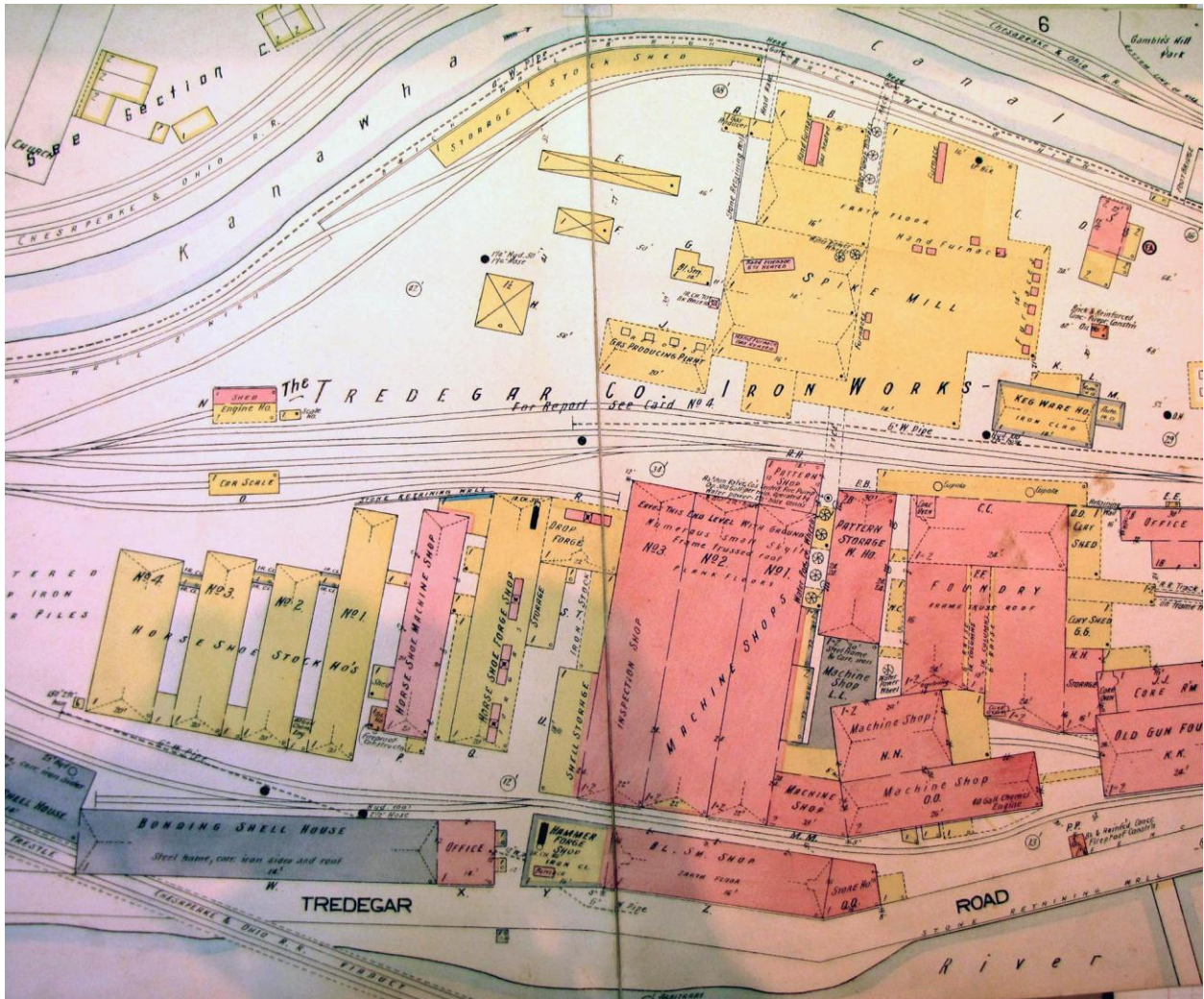
(Figure 39.) Raber Associates in 1992 conducted a detailed evaluation of the archaeological resources on the Tredegar Site for the period 1798 to 1957. The study included the property now owned by Venture Richmond. Archaeological resources dating from c. 1851-1861 are shown on Figure 9. The row of dwellings (21) are also shown on the 1848 survey of Harvie property. (Source: Raber Associates, Tredegar Report)

LEGEND TO FIGURE 9

No.	Map Period	Site Name(s)	Site Date Range	Table 1 Reference
1		J. R. Anderson spike mill	c1799-1872	1
2		J. R. Anderson spike mill furnaces	c1852-1861	2
3		J. R. Anderson iron storehouse	c1799-1872	3
4		J. R. Anderson dwelling	c1837-1865	23
5		J. R. Anderson dwelling	c1837-1865	23
6		J. R. Anderson office and dwelling	c1803-1865	5
7		J. R. Anderson office	c1816-present	12
8		J. R. Anderson bark house	c1804-1861	15
9		J. R. Anderson engine house	c1804-1861	13
10		J. R. Anderson stable	c1804-1861	14
11		J. R. Anderson blacksmith shop	c1850-1895	27
12		J. R. Anderson boiler shop	c1852-1957	30
13		J. R. Anderson pattern shop	c1837-1957	21
14		J. R. Anderson lumber house/gun chipping house	c1832-1861	18
15		J. R. Anderson blacksmith shop	c1832-1863	19
16		Bowers & Snyder stove works: office & pattern depository	c1852-1868	28*
17		J. R. Anderson foundry dwellings	c1837-1864	24
18		J. R. Anderson foundry	c1837-1863	20
19		Crenshaw flour mill/woolen mill	c1854-present	31
20		J. R. Anderson locomotive shop	c1852-1863	6
21		J. R. Anderson dwellings	c1832-1872	17
22		J. R. Anderson rolling mill	c1837-1861	22
23		J. R. Anderson dwelling	c1799-1865	7
24		Crenshaw warehouse & grain elevator	c1854-1873	32
25		J. R. Anderson rolling mill dwellings	c1840-1872	25
26		J. R. Anderson rolling mill dwellings	c1840-1872	25
27		R. Archer & Co. rolling mill	1847-1861	26
28		Virginia Manufactory of Arms (main building)	c1800-1865	8
29		Virginia Manufactory of Arms foundry	c1807-1865	10
30		J. B. Bragg flour mill	c1807-1865	9
31		Virginia Manufactory of Arms dwelling	c1801-?	11

*location conjectural; Bowers & Snyder foundry and stove works' location presently unclear and not mappable

(Figure 40.) Legend to Raber Associates Figure 9 (above) identifies the many buildings on the site from 1851-1861 (Source: Raber Associates, Tredegar Report) This is a very well-documented archaeological site. There were many mills and other industries on this site before the Tredegar Iron Works opened in 1836.



(Figure 41.) 1905 Sanborn Insurance Map, Tredegar Papers (Source: Library of Virginia) This 1905 Sanborn map identifies many Tredegar buildings including the horseshoe works that were on the site of Venture Richmond's proposed amphitheater. (The red buildings indicate that they were built with brick, the yellow buildings indicate frame construction.)

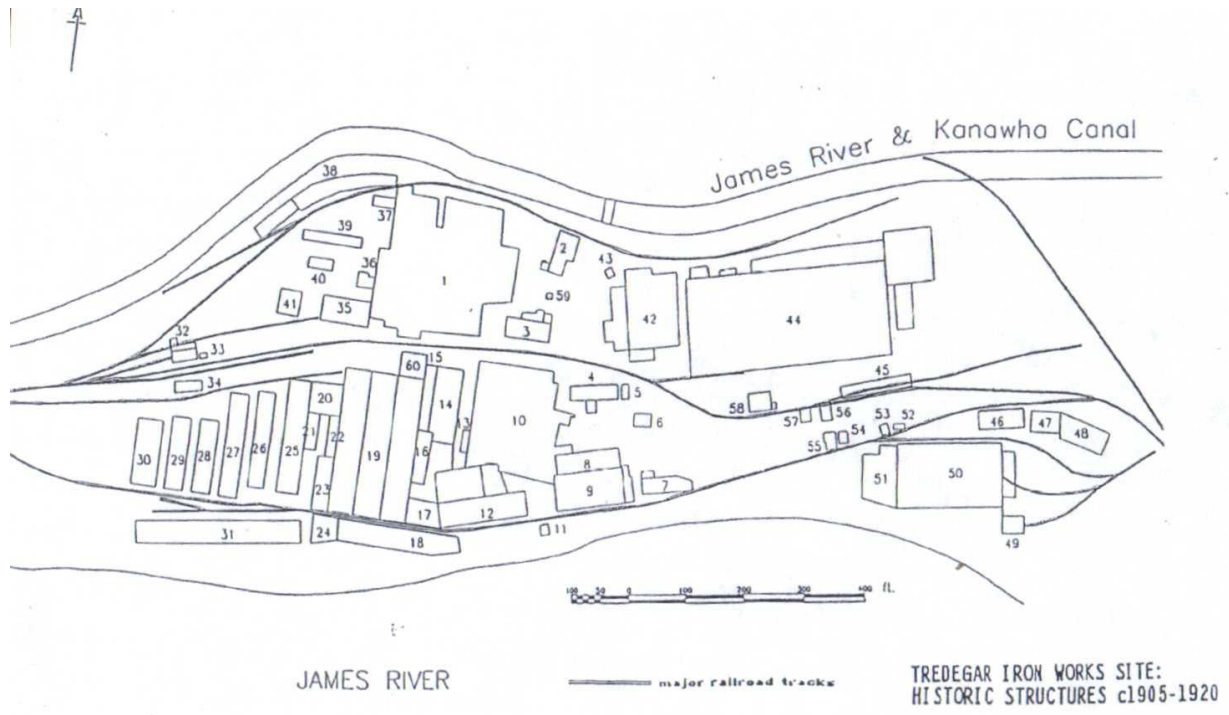


Figure 15

(Figure 42.) Archaeological resources dating from c. 1905-1920 are shown on Figure 15 of the Raber Associates report. These resources correspond to the buildings depicted in the 1905 Sanborn map above. (Source: Raber Associates, Tredegar Report) The Raber Associates report cited the horseshoe manufactory (that was probably on what is now Venture Richmond property) as being of special archaeological interest.

))
LEGEND TO FIGURE 15
 (all Tredegar Company structures)

No.	Map Period Site Name(s)	Site Date Range	Table 1 Reference
1	spike mill	c1861-1957	22
2	store	1868-present	41
3	keg storage	c1863-1957	36
4	office	c1816-present	12
5	office addition	c1905-1950	12
6	carpenter shop	c1863-1920	37
7	casting and cleaning shed	c1915-1980	81
8	furnace house	1861-present	34
9	foundry	1861-present	34
10	car wheel foundry	1889-1957	20
11	oil house	c1915-1957	82
12	machine shop	c1837-1957	21
13	foundry addition/toilet	c1915-1957	20
14	pattern storage building	c1867-present	31
15 & 16	machine shop sheds	c1915-1957	46
17	machine shop	c1867-1957	44
18	blacksmith shop	c1889-1957	30
19	boiler & machine shop	1872-1956	46
20	drop forge shop	c1915-1957	46
21 & 22	storage sheds	c1915-1925	46
23	shell storage shed	c1915-1957	46
24	hammer forge shop	c1915-1957	30
25	horseshoe forge shop	c1887-1927	57
26	horseshoe machine shop	c1887-1927	58
27	horseshoe warehouse	c1887-1927	59
28	horseshoe stock house no. 2	c1910-1926	74
29	horseshoe stock house no. 3	c1910-1926	75
30	horseshoe stock house no. 4	c1910-1926	76
31	bonding shell house and office	c1915-1957	83
32	engine house	c1915-1957	85
33	shed	c1915-1945	85
34	car scales	c1915-1945	84
35	Siemens gas producer	c1884-1920	52
36	blacksmith shop	c1905-1957	69
37	gas producer house	c1905-1930	64
38	storage sheds	c1890-1940	63
39	wagon shed	c1905-1926	42
40	storage barn	c1905-1957	42
41	stable	c1905-1975	68
42	forge shop	c1884-1957	53
43	shed	c1905-1940	72
44	merchant/bar mill	c1905-1957	26
45	iron stock shed	c1910-1920	73
46	hoop warehouse	c1915-1975	79
47	cooper shop	c1915-1957	78
48	stave shed	c1915-1957	77
49	clay shed	c1915-1957	80
50	new shell foundry	1917-1986	87
51	cleaning shed	c1917-1986	88
52	turbine house	c1904-1986	66
53	dynamo shed	c1904-1940	67
54	iron cutter shed	c1904-1940	65
55	turbine house	c1903-1957	--
56	storage shed	c1905-1940	72
57	carpenter shop	c1905-1940	71
58	pay office	c1861-1957	35
59	oil house	c1915-1957	--
60	carpenter shop	c1915-present	86

(Figure 43.) Legend to Raber Associates Figure 15 (above) identifies the many buildings on the site from 1905-1920 from the survey by Raber and Associates in 1992. Because many Tredegar buildings were on the west side of the complex, this area (now owned by Venture Richmond) was included in the Tredegar Historic Site. (Source: Raber Associates, Tredegar Report)

The Raber Associates survey of the extensive archaeological resources of the site identified the horseshoe manufacture (that may have been on the site of Venture Richmond's proposed amphitheater) as being of particular interest. According to the Raber report, "There appears to be little available information on the American industrial horseshoe manufacture. The undisturbed site of the demolished c1887 horseshoe forging shop could provide some archaeological information on shop layout, if used in conjunction with informant and historic view data, making his site potentially significant under National Register criterion D. The c1872 horseshoe shop, later incorporated into the spike mill, could also retain some potentially significant archaeological data ..."²⁶

A site with such significant archaeological resources should not be indiscriminately bulldozed to create an artificial incline that bears little relationship to function of the historical site. The Venture Richmond property below the canal is within the Tredegar Historic Site and includes the former location of many Tredegar buildings. An early Coal House and what could possibly be an early Gauge House are shown on the 1848 Harvie land survey; the archaeological remains of structures would be destroyed if half of the tow path is removed and the site bulldozed to make a new smooth amphitheater slope. Venture Richmond's proposal to create one smooth amphitheater incline ignores the great historical significance of the site and could possibly cause the property to be de-listed from its inclusion in the Tredegar Historic Site.

Railroad tracks connecting Tredegar with Belle Isle:

The railroad tracks that are now on the tow path on City of Richmond and Venture Richmond property were the connecting link between the Tredegar Iron Works and the Belle Isle Manufacturing Company, later known as the Old Dominion Iron and Nail Company on Belle Isle. The tracks were laid in the 1870s as the **Tredegar Branch** of the Richmond and Danville Railroad. A portion of the trestle that spanned the James River and the stone pylons for the bridge in the James River have also survived.²⁷

These railroad tracks are an important part of the interpretive history of the Tredegar Iron Works and its relationship to the iron works on Belle Isle. Tredegar was closely involved with the manufacturing railroad tracks and spikes, and it is possible that these tracks were made at Tredegar. Every effort should be made to preserve all of the surviving historic fabric relating to the Tredegar Historic Site, which is of national importance. Why remove the authentic Tredegar Branch railroad tracks from the Tredegar Historic Site?

²⁶ Raber Associates, *Historical and Archaeological Assessment Tredegar Iron Works Site*, prepared for Valentine Museum and Ethyl Corporation, page 67, Lyle Browning Collection

²⁷ *Belle Isle Photos and Maps of the Past*, VintageRVA.blogspot.com

Venture Richmond has proposed removing the remnant of this rail connection with Belle Isle to improve sight lines for its amphitheater and to build a bike trail. Since Venture Richmond successfully opposed having a bike lane on the new 2nd Street Connector, this would be a 100 foot bike trail to nowhere. The tracks are a negligible impediment to the sight line.



(Figure 44.) These railroad tracks were part of the Tredegar Branch of the Richmond and Danville Railroad. They connected the Old Dominion Iron and Nail Company on Belle Isle with Tredegar Iron Works. Tredegar made railroad tracks, so it is possible that these tracks were made at Tredegar.



(Figure 45.) These railroad tracks connecting Tredegar with Belle Isle are within the National Parks Service Tredegar Site and are a continuation of the tracks on the tow path on Venture Richmond and City of Richmond property. These tracks are the Tredegar Branch of the Richmond and Danville Railroad. Also visible in this photograph is the Tredegar wall; a 100 foot section of this same wall was illegally demolished in 2012 on Venture Richmond and City of Richmond property.



(Figure 46.) The railroad tracks connecting the iron works on Belle Isle with Tredegar are seen here on the top of the tow path. Venture Richmond has proposed removing these railroad tracks, which only add a few inches to the height of the towpath, in order to improve the sight lines of the amphitheater and to build a bike path. Venture Richmond successfully opposed putting a dedicated bike lane on the new 2nd Street connector, so replacing the authentic Tredegar-Belle Isle rail link with a bike path would be a 100 foot bike trail to nowhere.



(Figure 47.) The stone pylons in the James River and a bridge section on the banks of Belle Isle have survived from this bridge, which was photographed around 1972. A former bridge on these same pylons carried the Tredegar Branch of the Richmond and Danville Railroad, connecting Tredegar Iron Works with Old Dominion Iron and Nail Company on Belle Isle. (Source: VintageRVA.blogspot.com)



(Figure 48.) The surviving railroad tracks of the Tredegar Branch of the Richmond and Danville Railroad are seen from the west on the tow path of the James River and Kanawha Canal. These tracks provide an historical link between Tredegar and the iron works on Belle Isle and help interpret the evolution of transportation history. Also visible in this photograph are a pallet of bricks that were stacked after the illegal demolition of the Tredegar wall on City of Richmond property in 2012.



(Figure 49.) This photograph dated 1870s-1880s includes a canal boat in Harvie's Pond and shows the rail bridge connecting the Old Dominion iron works on Belle Isle with the Tredegar Iron Works. The two transportation modes coexisted for a while as the primary means of transport evolved from canal boat to train. The 8 foot high brick wall enclosing Tredegar's north property line is also seen in this photograph. (Source: Valentine Museum)

Tredegar Wall (anticipatory demolition?):

On October 16, 2012, a contractor illegally demolished with a bulldozer the remains of the 100 foot long Tredegar wall on city property on the site of Venture Richmond's proposed amphitheater. The Tredegar wall had survived for almost a century-and-a-half on the canal tow path and had formerly enclosed the north boundary of the Tredegar Iron Works. The Tredegar wall demolition was carefully coordinated to occur two days after the end of the Venture Richmond's Folk Festival and one day before the beginning of the construction of the 2nd Street Connector. The contractor accessed the Tredegar wall by bulldozing a rut up the side of the canal on Venture Richmond property. The Tredegar wall would have been in the sight lines of Venture Richmond's proposed amphitheater, which now is proposed to include city property. The contractor claims that the 100 foot long wall "accidentally" fell down. An investigation is warranted to determine if this was anticipatory demolition to avoid regulatory review.

No entity has been held accountable for hiring the contractor which undertook this irresponsible demolition of the Tredegar wall. It is important to recognize how quickly the city's treasured history can "accidentally" disappear when bulldozers operate on historic sites. Further damage should be avoided by limiting Venture Richmond's amphitheater to the area below the canal. Removing a significant portion of the canal berm would negatively impact the impermeable clay layer of the canal and archaeological resources.



(Figure 50.) On October 16, 2012 the historic eight foot tall Tredegar wall was illegally demolished by a bulldozer on City of Richmond property on the site of Venture Richmond’s proposed amphitheater. Was this wall removed as anticipatory demolition before the regulatory review of Venture Richmond’s proposed amphitheater, which now includes this City of Richmond property?



(Figure 51.) A bulldozer accessed the 100 foot long Tredegar wall on city property through Venture Richmond property. This contractor was not hired as part of the construction of the 2nd Street Connector. Contractors were photographed at the scene of the illegal demolition stacking the bricks on pallets within an hour of the demolition. No entity has been held accountable for hiring the contractor to demolish the Tredegar wall on City of Richmond property without a permit. Was the removal of this wall anticipatory demolition?

Oregon Hill associations with the canal:

While it is widely known that there is a close association between the Oregon Hill Historic District and the Tredegar Iron Works, because of the large number of Tredegar workers who lived in Oregon Hill, it is less commonly known that there are important associations between Oregon Hill and the James River and Kanawha Canal. The southern boundary of the Oregon Hill Historic District is defined by the steep decline at the edge of Oregon Hill Park that leads to the James River and Kanawha Canal.²⁸

²⁸ Nomination Report, Oregon Hill Historic District, File Number 127-362, Archives, Virginia Department of Historic Resources.



(Figure 52.) Belvidere as painted by Benjamin Latrobe (Source: Marie Tyler-McGraw, *At the Falls of the James*, University of North Carolina Press, 1994, page 47) Belvidere was purchased in 1798 by John Harvie, who served with George Washington as a founding Director of the James River Company. Belvidere was later owned by Benjamin James Harris who served as an engineer for the canal. Harris' father, James Harris, was the first General Manager of the James River Company.

On August 20, 1785 John Harvie was elected as a founding Director of the James River Company, at the same meeting of the subscribers that elected George Washington as the newly formed company's president.²⁹ Fourteen years later Harvie purchased from Washington's nephew, Bushrod Washington, the Belvidere estate that was originally built on Oregon Hill by William Byrd III, of Richmond's founding family. Harvie lived at Belvidere until his death in 1807.³⁰ Harvie, a lawyer and merchant, not only had a vital role in the advancement of the canal, but he also had the vision to realize the important role that the canal and Harvie's Pond could play in providing water to power industries on his property below the canal. At the beginning of the 19th century, Harvie established several industries on his property powered by the water from the canal, including a flour mill and tannery.³¹

In 1814, Benjamin James Harris purchased the Belvidere estate after the death of John Harvie. Benjamin James Harris served as an engineer for the canal company, and his father, James Harris, was the first General Manager of the James River Company. Benjamin Harris built a

²⁹ Dunway, Wayland, *History of the James River and Kanawha Company*, Columbia University, New York, 1922, page 26.

³⁰ Scott, Mary Wingfield, *Old Richmond Neighborhoods*, William Byrd Press, Richmond, 1984, page 213 and 214

³¹ Raber Associates, *Historical and Archaeological Assessment Tredegar Iron Works Site*, prepared for Valentine Museum and Ethyl Corporation, page 16, Lyle Browning Collection

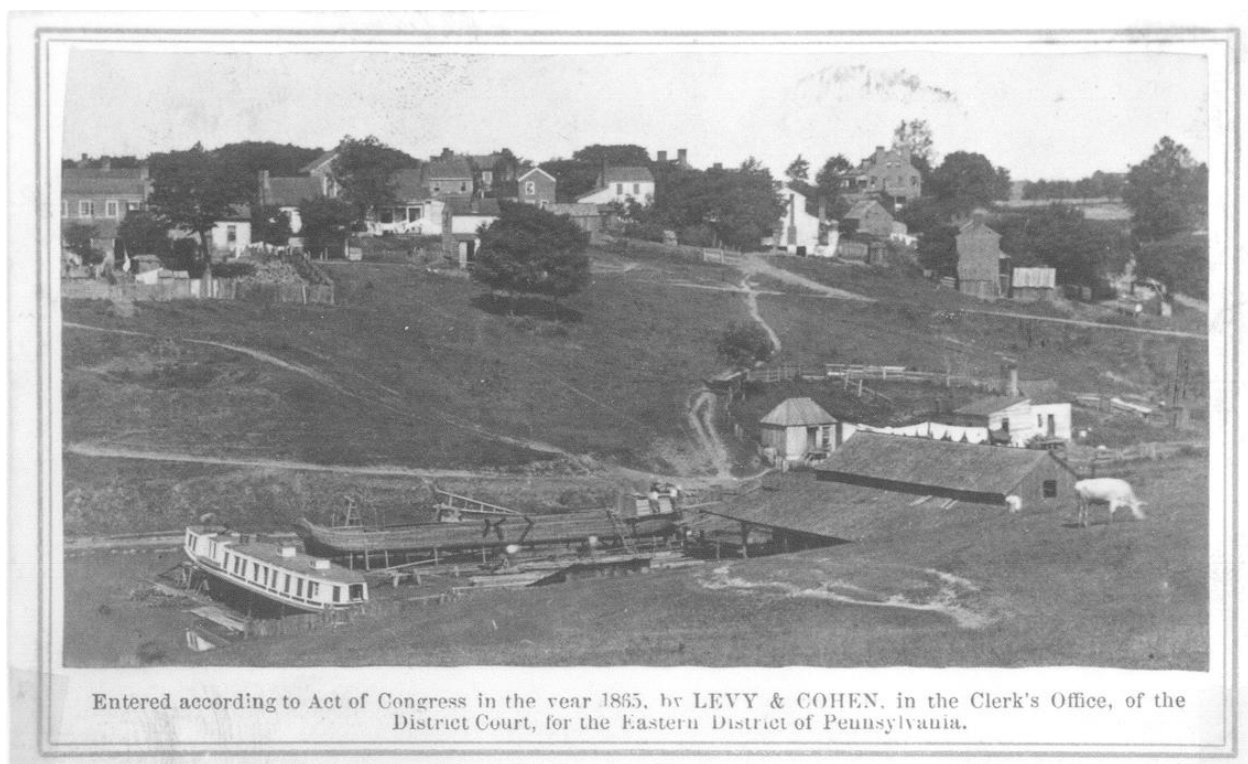
cotton mill powered by the water from the canal, and had an important role in the development of Oregon Hill by laying out the Plan of Belvidere from the original 17 acres of the estate. The canal was the southern border for the Belvidere property. The Plan of Belvidere was later added to the Plan of Sydney which included the portion of Oregon Hill north of Spring Street and much of the Fan.³²



(Figure 53.) The Samuel Parsons House, 601 Spring Street, Historic American Buildings Survey, c. 1933, 44-RICH, 78—1 (Source: Library of Congress) Samuel P. Parsons served as the Superintendent of the Canal in 1840 when the canal was expanded to Lynchburg. The Parsons House is a contributing structure to the Oregon Hill Historic District, and the park across Spring Street from the house is named for Parsons. (Source: Library of Congress)

³² Pool, Charles and Ward, Dulaney, *Plainly Significant, The Jacob House; Richmond Journal of History and Architecture*, Vol. II, No. 1, Spring 1995, William Byrd Branch, Association for the Preservation of Virginia Antiquities

Samuel P. Parsons was the Superintendent of the canal in 1840 when it was successfully expanded to Lynchburg. Parsons' home, built in 1819, survives in the Oregon Hill Historic District at 601 Spring Street. Parsons was a Quaker who served two decades earlier as the Superintendent of the Penitentiary. As Superintendent of the Canal, Parsons placed advertisements seeking laborers for work by the month or for the balance of the year. Parsons advertised for lock-keepers, of sober and steady habits, for over thirty locks in the canal, noting that they would not be allowed to sell groceries or "raise animals or fowls to go at large." Parsons printed regulations for the canal which indicated the canal was narrower above Maiden's Adventure Dam: "No boats of a width more than thirteen and a half feet will be permitted to pass the locks above Maiden's Adventure Dam." In 1840 Parsons wrote his daughter, "I have now disposed of getting the boats higher up the canal than Joshua Falls Dam twelve miles from Lynchburg. To this point they may, I think, go in about ten days. Like most other public work in Virg'a things are managed with tails in instead of a head."³³



(Figure 54.) Penitentiary Basin [also known as Harvie's Pond], Levy and Cohen, 1865, Library Company of Philadelphia. Several creeks and springs fed Harvie's Pond, including the spring for which Spring Street derived its name. Harvie's Pond was the site of John Messler's canal boat building business and was an important basin for maneuvering the canal boats. The topography required that the south bank of the canal serve as a dam for the pond. (Source: Library Company of Philadelphia)

³³ Pool, Charles, *The Samuel Pleasants Parsons House*, for the Oregon Hill Home Improvement Council, 1990

John Messler lived in Oregon Hill's oldest home, the 1817 Jacob House, in the 1870s. The Messlers had a short walk from Cary Street to the Penitentiary Basin where they ran a canal boat building business from the 1850s until the 1880s. His enterprise was photographed by Levy and Cohen in the Basin in April 1865, after the fall of Richmond. The photograph probably captured Messler himself at work building a canal boat. Earlier in 1821, the Jacob House was owned by Benjamin James Harris whose father, James Harris, was the first General Manager of the James River Navigation Company.³⁴



(Figure 55.) The Jacob House built in 1817, 610 West Cary Street, photographed in 1895 (Source: Robert Willis Collection) Home in the 1870s to the Messler family, who had a canal boat building business in the Penitentiary basin. The Jacob House was owned in the 1821 by Benjamin James Harris who was an engineer for the canal.

Zoning considerations:

The property at Tredegar Green owned by the City of Richmond and Venture Richmond straddles the James River and Kanawha Canal. South of the canal is zoned M-1 (industrial), and north of the canal at Tredegar Green is zoned R0-3 (residential-office). An amphitheater is not a permitted primary use of the property in the R0-3 zoning. This property above the canal is a historically sensitive area on which Oregon Hill homes were demolished to make way for the Virginia War Memorial. The Oregon Hill Historic District and the Overlook condominiums on

³⁴ Pool, Charles and Ward, Dulaney, *Plainly Significant, The Jacob House; Richmond Journal of History and Architecture*, Vol. II, No. 1, Spring 1995, William Byrd Branch, Association for the Preservation of Virginia Antiquities

Belvidere Street face the proposed amphitheater, and these neighbors purchased their property with the expectation that the existing zoning would prohibit any use of this area that creates loud noise and crowd congestion. If Venture Richmond’s stage at Tredegar Green is limited to the property below the canal, no damage to the canal will be required, and the volume of the music will be reduced because it will not need to be amplified above the canal.



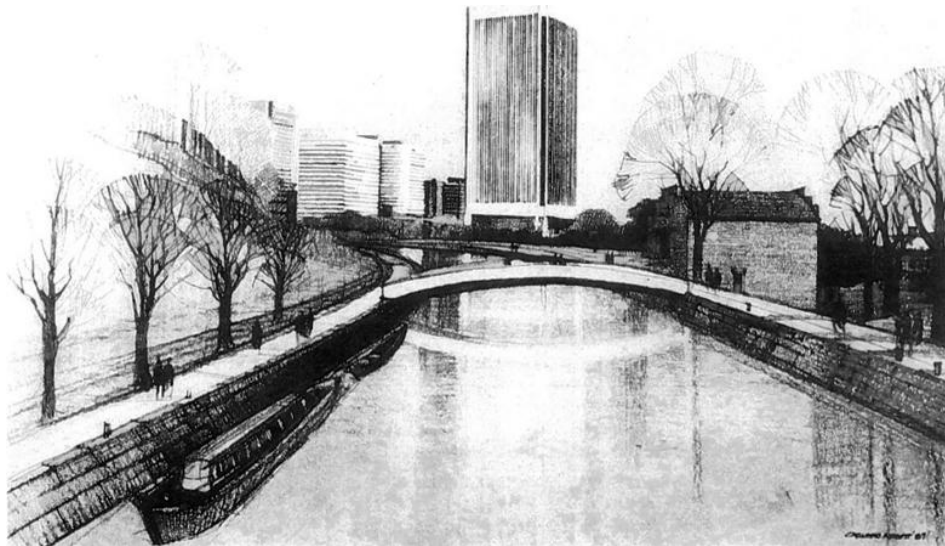
(Figure 56.) The City of Richmond Zoning Map indicates that the property north of the canal is zoned RO-3 (residential-office). An amphitheater is not a permitted primary use in the RO-3 zoning because of the excessive noise and crowding. The Virginia War Memorial is directly north of the proposed amphitheater, and the Oregon Hill Historic District is across Belvidere Street from the Virginia War Memorial. It would be poor planning to place Richmond’s largest and loudest stage aimed directly at the Virginia War Memorial and Oregon Hill.

Plans for re-watering the James River and Kanawha Canal:

“The idea of connecting westward found lodgment in the minds of her far-sighted men and remained a cherished idea for many years.”³⁵ This vision of early Virginians, who saw the potential of the canal, might also apply to the far-sighted men and women who now envision the remarkable and rare blueway that could be achieved by revitalizing the canal westward to Maymont.

Such a vision would be compromised by lowering the tow path to an elevation of 83 feet (which was historically the elevation of water in the canal) and by removing half of the tow path of the canal (which at this location was 30 feet wide from 1848 and earlier.)

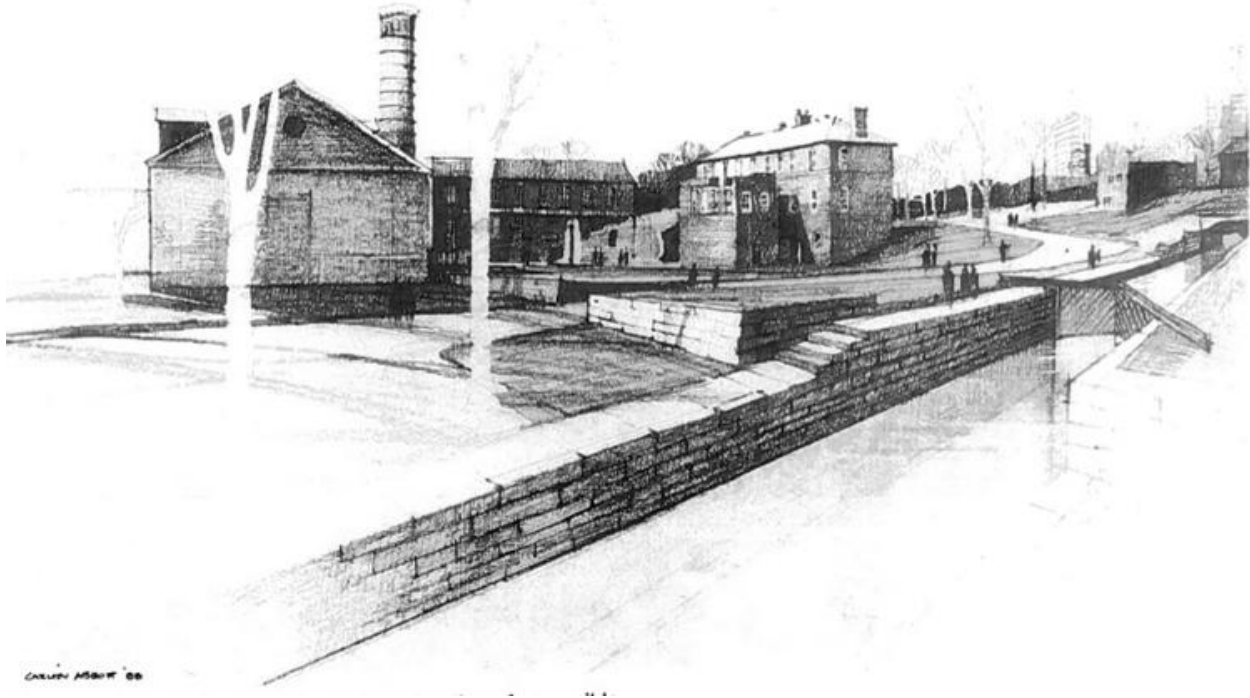
The goal for many years has been to re-water the James River and Kanawha Canal to Maymont and to connect the canal to the renovated Haxall Canal below Tredegar. So long as the banks of the canal are not damaged, and the tow path is not lowered, re-watering the James River and Kanawha Canal between Tredegar and Maymont may not be a prohibitively expensive proposition. In 1988 the Historic Richmond Foundation commissioned a study on the revitalization of the James River and Kanawha Canal, including a conceptual plan for a canal lock to the east of the Tredegar Iron Works, on the property of the old state Armory.³⁶



(Figure 57.) Revitalization of the James River and Kanawha north of the Tredegar Iron Works, near the site of Venture Richmond’s proposed amphitheater, is envisioned in this conceptual drawing from a 1988 study commissioned by the Historic Richmond Foundation. (Source: Carlton Abbott & Partners, P.C., “The Richmond Canals,” 1988, Historic Richmond Foundation, Collection of Jack Pearsall)

³⁵ Dunway, Wayland, *History of the James River and Kanawha Company*, Columbia University, New York, 1922, page 9.

³⁶ Carlton Abbott & Partners, P.C., “The Richmond Canals,” 1988, Historic Richmond Foundation, Collection of Jack Pearsall.



(Figure 58.) Plans for a lock east of the Tredegar Iron Works connecting the renovated Haxall Canal with a re-watered James River and Kanawha Canal were envisioned in this conceptual drawing in the 1988 canal study commissioned by the Historic Richmond Foundation. (Source: Carlton Abbott & Partners, P.C., “The Richmond Canals,” 1988, Historic Richmond Foundation, Collection of Jack Pearsall)

The goal of re-watering and protecting the canal on the site of Venture Richmond’s property at Tredegar Green is reflected in the wording of the 2012 Richmond Riverfront Plan:

All public improvements to and investments in Tredegar Green should support the goal of westward (or appropriate) canal restoration, as the canal could once again become a functioning connective conduit, a historic blueway.³⁷

Lowering the tow path elevation to 83 feet above sea level, as proposed by Venture Richmond, would certainly not support the goal of westward canal restoration. The water elevation of the canal was historically at 83 feet from 1840 to 1933 and the tow path needs to be about two feet above the water level so that the water will not overflow the banks of the canal in times of heavy rain and flooding.

³⁷ Richmond Riverfront Plan, page 28, 2012, City of Richmond, Virginia

Alternative site for Venture Richmond’s largest stage:



(Figure 59.) Brown’s Island shown during the Folk Festival with two tented stages. (Source: Google Maps) At 5.8 acres, the Brown’s Island site, operated by Venture Richmond, would be the logical venue for Venture Richmond’s largest stage. Brown’s Island has the infrastructure in place to accommodate a crowd of 10,000 spectators. The two smaller stages shown on Brown’s Island could be accommodated above and below the canal at Tredegar Green without damaging the canal and without blasting the Virginia War Memorial and the Oregon Hill Historic District with loud noise.

Brown’s Island would be the best location for Venture Richmond’s largest stage. It is owned by the City of Richmond, and Venture Richmond already holds Folk Festival and other outdoor music events at this site. Brown’s Island has the infrastructure in place in terms of lighting, pathways, walk-bridges for crowd control, and access to parking facilities. Brown’s Island is farther from the Va. War Memorial and the Oregon Hill neighborhood, so the loud music at his venue would have less adverse impact upon the War Memorial and the Oregon Hill neighbors.

Venture Richmond’s largest stage will be available for lease with no limit on the number of performances annually. According to Venture Richmond Director Jack Berry, staging big events for thousands of people carry big risks.³⁸ These risks are minimized by planning performances for the largest outdoor stage in Richmond on a site like Brown’s Island, where crowd control can be maximized and where there is infrastructure to support a crowd of 10,000.

³⁸ *Richmond Times Dispatch*, August 27, 2013, page A-10.

Summary:

The James River and Kanawha Canal was the most significant public improvement in the Commonwealth of Virginia prior to the Civil War. The section of the canal below Oregon Hill was one of the first sections of the canal completed after the James River Company was founded in 1785, when George Washington served as president of the company. The canal transformed Virginia's transportation, and it provided water power for many mills and industries, including the Tredegar Iron Works. The canal is of great state and national historical significance with important associations to the adjacent Oregon Hill Historic District.

The canal was a carefully engineered structure, and the section below Oregon Hill has survived in an authentic and structurally sound condition. The canal was created through the enormous sacrifice of slaves and immigrant laborers.

Careful documentation, including detailed land surveys, confirms that the canal is remarkably unaltered below Oregon Hill from its dimensions in the 1840s. The James River and Kanawha Canal at the location of Venture Richmond's proposed amphitheater had the following dimensions during the canal's primary period of significance:

- **30 foot wide towpath**
- **60 foot canal width**
- **83 foot water elevation**
- **2 foot minimum elevation of the tow path above the water level in the canal**

Because of the extreme rarity of the resource, it is important that the authentic James River and Kanawha Canal not be damaged and altered for relatively trivial reasons, such as improving amphitheater sight-lines or making it easier to mow the grass. If the tow path is lowered to an 83 foot elevation, as proposed by Venture Richmond, the canal will never again hold the historical water level in the canal of 83 feet elevation above sea level. If the height of the tow path is lowered it may be impossible for canal boats to clear the combined overflow pipe, now in the bed of the canal, when the canal is restored. If the height of the tow path is lowered it may be impossible to maintain the necessary two-foot elevation of the tow path above the water level in the canal to keep the canal from overflowing its banks in heavy rain. If over half of the tow path is removed, as proposed by Venture Richmond, it will jeopardize the integrity of the structure that is carefully engineered to be leak-proof with impermeable "puddled" clay.

The city is committed to preserving the canal and in 2012 devoted \$385,000 to protect the canal when building the 2nd Street Connector. Planners have proposed re-watering the canal west to Maymont. Any damage to the structural integrity of the canal berm or any lowering of the tow path could jeopardize the plan to restore the canal.

Venture Richmond’s property below the canal is included in the Tredegar Historic Site because of the large number of Tredegar buildings that were formerly on this property. Archaeological resources not only include the foundations of the Tredegar buildings, but houses, mills and water races that were on this property prior to Tredegar’s founding in 1836. Bulldozing the site to improve site lines will destroy significant archaeological resources, and will unnecessarily alter the landmark setting.

A prudent and reasonable alternative exists because Venture Richmond already operates the nearby venue on Brown’s Island that is twice as large as Venture Richmond’s Tredegar Green property. The Brown’s Island site has the infrastructure in place to accommodate an outdoor venue for 10,000 spectators without damage to the canal or archaeological resources. Placing the city’s largest and loudest venue directly below the Virginia War Memorial would be very poor planning, while installing Venture Richmond’s largest stage on Brown’s Island would avoid the negative impact of excessive noise and crowds on the Virginia War Memorial and the Oregon Hill Historic District.



(Figure 60.) The authentic James River and Kanawha Canal has survived intact for 225 years. It can be re-watered to Maymont so long as the carefully engineered tow path is not lowered or damaged.