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**THE RICHMOND BRIDGE CORPORATION AND
FIFTH STREET VIADUCT EXHIBIT
CITY OF RICHMOND, VIRGINIA**

**VDOT PROJECT: U000-127-121, C501
VDHR FILE: 90.268.F; NPS # 964**

Prepared for:

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NOVEMBER 1993



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THE RICHMOND BRIDGE CORPORATION PROJECT

I. OVERVIEW

The Fifth Street Viaduct was built during the depths of the Great Depression by the Richmond Bridge Corporation. Created as a nonprofit company, the corporation's objectives were to provide Richmond with modern bridges and to relieve the increasing unemployment of Richmond's citizens. In addition to the Fifth Street Viaduct, the Richmond Bridge Corporation concurrently built the Lee Bridge over the James River, the Second Street and Cowardin Avenue approach spans to the Lee Bridge, and the First Street Viaduct, and rehabilitated the Marshall Street Viaduct. In building these bridges, the corporation provided employment to over 2,700 Richmonders, thereby significantly reducing unemployment in the city.

The Fifth Street Viaduct across Bacon's Quarter Branch Valley was built in the depths of the Great Depression as part of an ambitious and innovative bridge-building project by the Richmond Bridge Corporation. A nonprofit company, the Richmond Bridge Corporation was established in late 1932 and dissolved in 1946; it was conceived and implemented for two civic purposes - to provide Richmond with an effective, modern bridge system, and to relieve the widespread unemployment that had afflicted the city since the outset of the Depression, and which was becoming even more severe as the winter of 1932/33 approached.

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The Richmond Bridge Corporation was conceived by a Virginia State Senator, John J. Wicker, Jr., and a former head of Richmond's Department of Public Works, Allen Saville. The corporation sought and received a loan of \$1,700,000 from the Reconstruction Finance Corporation to build the Fifth Street Viaduct, its sister structure, the First Street Viaduct, the Robert E. Lee Memorial Bridge over the James River, and the Second Street and Cowardin Avenue approach spans to the Lee Bridge, and to rehabilitate the aging Marshall Street Viaduct. The loan was granted with the stipulation that the bridges would pay back the principal, plus interest, within a specified time period; in order to accomplish this, it was necessary that tolls be charged until such time as the loan was repaid. At that point, the bridges were to be turned over to the city of Richmond, at no charge, and the Richmond Bridge Corporation, having fulfilled its mission, would be dissolved.

The Corporation hired a nationally prominent bridge engineer, Alfredo C. Janni, as its consulting design engineer and began work on the reinforced-concrete spans in the last days of 1932. The contractors were obliged to use Richmonders for their work force, and the project used picks, shovels, and wheelbarrows rather than power shovels and dump trucks in order to provide employment for more men. Many of the men who benefited from this emphasis on manual labor were those whose serious financial difficulties had placed them on relief. The project, which employed over 2,700 men at its height in June 1933, had a dramatic impact on unemployment; at one point, the Richmond City Council was able to slash its relief expenditures by 50%.

In 1934, although all of the bridges had been completed, only one, the Lee Bridge over the James River, was collecting enough revenues to justify the expense of toll collection. Accordingly, all but the Lee Bridge were made toll-free. The toll revenues earned by the Lee Bridge alone were sufficient to pay back the entire Reconstruction Finance Corporation loan by 1946. At this time, the Richmond Bridge Corporation handed over all of the bridges to the city and was officially dissolved.

II. THE GREAT DEPRESSION AND THE RECONSTRUCTION FINANCE CORPORATION

The Great Depression's effects on national productivity and unemployment were devastating, and the federal government was slow to implement serious steps to combat the problem[s]. President Hoover and his supporters optimistically believed that employment and productivity could be restored by a return of "confidence" in the basic soundness of business. Nevertheless, the Hoover administration tried to make credit and public works money more readily available to hard-hit communities. The first federal initiative was the Reconstruction Finance Corporation, which was authorized to make loans to banks, credit agencies, and railroads. It soon became apparent that municipalities and states required loans also, and the Self-Liquidating Division of the RFC was created to fund public works. However, the vast majority of such municipal loan applications were still being denied as 1932 came to a close.

Although the nation had experienced periodic recessions in its past, the Great Depression found both the American people and their government unprepared for the severity and longevity of the economic downturn. Following a period of unparalleled national prosperity and speculative fever among stock market investors, the market crash of "Black Tuesday," October 29, 1929, initiated a prolonged paroxysm in which the nation's industrial production dropped by 50%, the gross national product declined by one-third, and unemployment leapt from 1.6 million in 1928 to a devastating 12.8 million in 1933. At the outset, there were many, including President Herbert Hoover, who believed that the market and the economy were experiencing merely an "adjustment" and that all that was needed for recovery was more "confidence." Although genuinely concerned for the plight of the Depression's victims, Hoover held a deep faith in the self-healing capacity of the economy. After the crash, the nation was to wait two years before the first serious government initiative, the act establishing the Reconstruction Finance Corporation, was signed by the President.

In response to ever worsening economic conditions, on December 7, 1931, President Hoover recommended to Congress the formation of the Reconstruction Finance Corporation (RFC) "in order that the public may be absolutely assured and that the Government may be in the position to meet any public necessity." Believing that the corporation could be dissolved after two years, Hoover optimistically stated, "It may not be necessary to use such an instrumentality very extensively. The very existence of such a bulwark will strengthen confidence." Stating that the corporation would be authorized to make loans to "liberate the full strength of the nation's resources," the President briefly outlined its objectives:

It should be in the position to facilitate exports by American agencies; make advances to agricultural credit agencies where necessary to protect and aid the agricultural industry; to make temporary advances upon proper securities to established industries, railways and financial institutions which cannot otherwise secure credit, and where such advances will protect the credit structure and stimulate employment.

Encountering little significant opposition in Congress, the RFC Act was signed by President Hoover on January 22, 1932. The Act authorized the RFC to loan U.S. Treasury money to banks, credit agencies, and railroads, in order, in Hoover's words, "to stop deflation in agriculture and industry and thus to increase employment by the restoration of men to their normal jobs."

The officials of the RFC interpreted their responsibilities literally: they were to make loans only to banks, credit agencies, and railroads, and they were conservative in their administration of the funds provided to the corporation by the Treasury. However, as the country's economy continued to decline, it became increasingly apparent that other needs had to be addressed. Cities, counties, and states applied for loans, but were turned down by the RFC because such loans had not been authorized by Congress. A well-publicized example of this occurred in June 1932, when the city of Chicago was denied a loan sought in order to fund its payroll for teachers and other municipal workers, who had not received a paycheck in months because of the city's financial straits. The disappointment of the city's officials and citizens bitterly intensified only a few weeks later when the RFC made a loan of \$90,000,000 to the Central Republic Bank of Chicago.

Chicago's sense of outrage was shared by many municipal officials and urban residents throughout the nation. Other cities had been similarly turned down, and discontent with the RFC began to increase as the Depression worsened. This discontent was greatly magnified in July 1932, when the first accounting of the RFC revealed that most of the RFC loans to date had been given to a few large corporations. The failure of the RFC to restore prosperity became the subject of bitter political debate. Hoover's congressional opponents argued strenuously for direct federal grants to states, municipalities, or individuals, but Hoover opposed such changes, arguing that the only proper role for the federal government was to bolster America's businesses.

On July 21, 1932, Congress succeeded in passing the Emergency Relief Act, which authorized the RFC to lend \$300,000,000 to states and municipalities. The Act revamped RFC organization; one of the chief new developments was the creation of the Self-Liquidating Division to fund public works programs. An advisory committee composed of distinguished engineers was appointed to evaluate applications for their feasibility. The committee consisted of C.D. Marx of Stanford University; General Lytle Brown, Chief of Engineers, United States Army; John Lyle Harrington of Kansas City; John Francis Coleman of New Orleans; and John Herbert Gregory, of The Johns Hopkins University. If an application survived the exacting scrutiny of the engineers, it faced another hurdle: the RFC would fund only those projects that could be expected to repay the loan in full within a specified time period. As expressed by the Liquidating Division's head, Harvey Couch,

It is anticipated that every penny loaned by the Corporation shall be repaid. It is further contemplated that the borrower shall receive a lasting economic benefit and not an economic burden from the construction thus financed. All projects must pay for themselves. There is to be no aftermath of public or private debt or default.

Even more daunting was the fact that RFC interest rates were intentionally set higher than those generally available from lending institutions because the RFC did not want to undercut the banking industry. Despite these obstacles, many loan applications were made by cities and states eager to initiate public works projects. The vast majority of these applications were denied; of the forty-three municipal or state applications for loans submitted to the RFC by early October 1932, only three were approved.

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III. RICHMOND IN THE DEPRESSION

The Great Depression's impact in Richmond was serious, but [was] mitigated by the diversification of industry and increased demand for Richmond-produced tobacco products and rayon. Nonetheless, unemployment was increasing as the winter of 1932-33 approached. The city was unwilling to go into debt to cover the costs of unemployment relief, preferring to economize on expenditures. One of the municipally-funded projects that was set aside was the General Bridge Program, an ambitious plan for the construction of nineteen bridges at a total cost of over \$3,000,000.

The Great Depression had a serious impact on Richmond, but the city's diversified range of industries protected it from the ravages that afflicted many one-industry cities. The increased demand for tobacco products and rayon throughout the Depression also created jobs in Richmond that helped keep the city's economy in better shape than that of many cities. Nonetheless, many Richmonders encountered severe financial difficulties and even ruin in the early thirties. Personal income in the area dropped from \$141,000,000 in 1929 to \$121,000,000 in 1932. With a total population of approximately 182,000, of which 117,000 citizens were twenty-one years old or older, 11,877 persons sought work at Richmond's Public Employment Bureau in 1932; of these, 4,873 did not find work and had to go on relief. In 1933, of the 23,547 persons who filed applications at the bureau, 10,367 were unable to find work. The situation worsened in 1934 when 11,387 were unable to find work through the bureau.

There was considerable official reluctance in Richmond to go into debt to provide relief for the unemployed. Although Virginia's Governor Pollard had offered to support municipal applications for RFC loans, a 1932 *News Leader* editorial warned against such a course for Richmond:

It is a very foolish community that borrows in this way unless it must. Money does not grow on trees, not even on those that harried congressmen fertilize with the national credit. Sooner or later the money has to be paid back, either in cash, in aid withheld, or indirectly through taxes. More than one county in Virginia has borrowed in haste and repented at leisure. If the localities have hungry people, they must feed them, but first by practicing economy in governmental expenses. Only when the limit of economies have been reached should counties or cities consider borrowing.

Mayor J. Fulmer Bright agreed with the *News Leader* position, and in December 1932 took his stand against a bonded relief debt for the city "except as a very last resort."

Municipally-funded projects were indefinitely delayed as Richmond struggled to avoid debt. Expenditures of the Department of Public Works dropped from \$2,752,000 in 1928 to \$2,002,000 in 1932, a reduction of 27%. The department was forced to lay off numerous employees and put many of those remaining on part-

time status. Unfortunately, these reductions coincided with a general decrease in construction spending in the city; in 1931, the total amount spent on construction was slightly more than \$3,000,000 - one third of what it had been in 1929; by 1934, spending on construction plummeted still lower, to \$1,500,000.

Perhaps the most important municipally-funded project put on hold by the Great Depression was the General Bridge Program, first submitted by Col. R. Keith Compton, Director of Public Works, to the Street Committee of the Richmond City Council in May 1929. The General Bridge Program outlined an ambitious plan for constructing nineteen bridges at a projected cost of \$6,500,000 to be accomplished in eight to twelve years. The Department of Public Works engaged a bridge engineer of national reputation, John E. Greiner, as a consulting engineer for the project. Included among the bridges was the replacement of the old iron Fifth Street Viaduct over Bacon's Quarter Branch Valley, built in 1891 and maintained by Virginia Electric Power Company (VEPCO); the construction of a Second Street Viaduct over Bacon's Quarter Branch Valley, near VEPCO's old iron First Street Viaduct; the rehabilitation of the Marshall Street Viaduct, built in 1910 and since maintained by VEPCO; and the construction of a major bridge over the James River at Belle Isle, connecting Belvidere and Cowardin avenues. Compton projected the cost of the James River bridge at \$2,000,000, the most expensive in the program. Altogether, the James River, Fifth Street, Second Street, and Marshall Street bridges were expected to cost \$3,275,000, more than 50% of the entire General Bridge Program.

By 1932, Richmond's General Bridge Program had been put on hold by the Crash and the Great Depression. Two reminiscences, recounted later by city residents, aptly summed up the dire predicament of the city and its working people: "The people were standing in the line with forlorn expressions on their faces -nothing to eat except what they were going to get to eat in that soup line"; and, "Job hunting was awful. Jobs were very scarce - especially for men. I saw people doing all types of things to try to make money. People tried to shine shoes, sweep sidewalks."

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IV. FORMATION OF THE RICHMOND BRIDGE CORPORATION

The Richmond Bridge Corporation was created as a nonprofit corporation to provide both bridges and employment to Richmond. The company was founded by State Senator John Wicker and former city Department of Public Works head, Allen Saville. Able promoters and civic leaders, Wicker and Saville sought and eventually received a \$1,700,000 loan from the RFC to build the Lee Bridge (and its approach spans), as well as the Fifth and First Street viaducts, and to rehabilitate the Marshall Street Viaduct.

The construction of the bridges at James River, Second Street, Cowardin Avenue, and Fifth, First, and Marshall streets was the climax of a remarkable fund-raising and promotional effort of two prominent Richmonders, John J. Wicker, Jr., and Allen J. Saville. That Wicker and Saville were able to conceive and carry out this project in the depths of the Great Depression attested to their imagination and tenacity.

John Jordan Wicker, Jr. (1893-1985), was born in Princess Anne County but spent his childhood and youth following his father, John Jordan Wicker, Sr., a noted author, editor, Baptist preacher, and educator (president of Fork Union Military Academy), to Kentucky, Maryland, New Jersey, Massachusetts, and South Carolina. It was during his sophomore year at Furman University that John Wicker, Jr., returned to his native state and transferred to his father's alma mater, Richmond College, from which he received both his bachelor's and law degrees. Enlisting as a private in the U.S. Army at the outset of World War I, Wicker left the Army as a major and became a co-founder of the American Legion. In 1927 he led 18,000 American Legionnaires to France for the largest peacetime overseas convention in history; for his achievement he was inducted into the French Legion of Honor. In 1932 Wicker was elected to the Virginia State Senate, where he served one term before becoming Virginia state manager of the Home Owners Loan Corporation, a federal agency established to protect homeowners from foreclosure. In 1950 Wicker was elected President of the Virginia War Memorial Commission, and he was responsible for the erection of the Memorial in the 1950s. Wicker also found time to indulge his passion for singing with a barbershop quartet and was president of the Society for the Preservation and Encouragement of Barbershop Quartets Singing in America.

Allen J. Saville (1888-1947) was born and raised in Richmond, receiving his degree in mechanical engineering from the University of Virginia in 1908. After graduation, Saville joined the contracting business, but the next year was appointed assistant city engineer in Richmond. He remained in this post until 1913, when he joined the firm of Smith and Claiborne, consulting engineers. During World War I, Saville served as supervising engineer at Camp Lee. After the War, he joined the du Pont Engineering Company at Penniman, and worked for the company at several out-of-state locations. In 1921 he returned to Richmond and was appointed Richmond's Director of Public Works. During his directorship he designed and implemented the Shockoe Flood Control Project in 1923. He resigned in 1924 and formed Allen J. Saville, Inc., Engineering and Construction, and in 1924 became a partner in

Slaughter, Saville, and Blackburn, consulting engineers. In October 1932 Saville received an invitation from the RFC to be one of the thirty-seven engineers who would perform the initial screening for loans to self-liquidating construction projects.

In a 1956 news interview, John J. Wicker provided an account of the events that prompted him and Allen Saville to form the Richmond Bridge Corporation. Wicker recalled that in early August 1932 an out-of-work business man came to his State Senate office in the Mutual Building to ask for a job. Told there were no jobs to be had, the man bolted to the open window, intending to leap to his death. Wicker grabbed the man's trouser leg and saved his life. This experience convinced Wicker that something needed to be done, and done fast, to relieve the ever-worsening unemployment in Richmond. Soon thereafter, Wicker happened upon a Reconstruction Finance Corporation circular, and from it learned that the Self-Liquidating Division of the RFC would make loans for bridges. Richmond's bridges were in poor shape and the city's unemployment was mounting; Wicker reasoned that an RFC loan could be used to relieve both situations.

The initial reception to Wicker's idea ranged from ridicule to official frowns. It was a "ridiculous idea," declared Mayor J. Fulmer Bright, who was unwilling to incur more debt for the city. Governor John Garland Pollard was also unwilling to take the risk, believing that the bridges would not even pay for the interest on the loan. Not easily discouraged, Wicker called Allen Saville, former Director of Public Works, and they met at Murphy's Hotel. The two men resolved to form a nonprofit corporation that would build a bridge over the James River, construct approach spans at Second Street and Cowardin Avenue, replace the viaducts at Fifth and First streets, and rehabilitate the Marshall Street Viaduct. Having built the bridges, the company would charge tolls until the RFC loan was paid off; thereafter, the bridges would be turned over to the city, free of charge.

Resolved to see the project through, Wicker and Saville had to convince not only the RFC, but also the city, that their plan would work. Even as they were persuading city officials, Wicker and Saville undertook the first of their fifty-four trips to Washington in their quest for the RFC loan. The first reaction in Washington was not encouraging; RFC money was for improving bridges, not building new ones, RFC Attorney Stanley F. Reed (later U.S. Supreme court Justice Reed) bluntly informed Wicker.

Nonetheless, Wicker and Saville persisted, and on September 30, 1932, the Richmond Bridge Corporation was chartered as a nonprofit corporation, with stock given to the city. Wicker became president and general counsel for the company and Saville was vice president. Also serving as vice presidents were Horace L. Smith, a partner in the engineering firm of Lee, Smith, and Vandervoort, and Director of Public Works R. Keith Compton, author of the General Bridge Plan of 1929.

The company still faced difficult problems before construction could be planned. Virginia Electric and Power Company (VEPCO) was the owner of existing bridges at three of the projected locations: Fifth, First, and Marshall streets. These structures had been built as private toll bridges between 1891 and 1910 and had been acquired in 1926 by VEPCO, by then the major streetcar company in Richmond. The Richmond Bridge Corporation needed to gain possession of the bridges before further plans could be made. John Wicker's resourcefulness once again provided a way to accomplish this. Prompted by a recent accident on the old First Street Viaduct (Wicker's wife had been a passenger on a streetcar that had jumped the tracks), Wicker delivered a handwritten note to the VEPCO president, Jack Holtzclaw, as he was meeting with VEPCO's board of directors. The note related a dream in which an imaginary Richmond newspaper headline reported "89 die, 132 injured as streetcar plunges from viaduct." Persuaded by Wicker and eager to offer assistance to Depression-weary Richmonders (who were VEPCO customers), VEPCO sold the bridges, valued at \$750,000, to the Richmond Bridge Corporation for one dollar.

On November 30, 1932, the Richmond Bridge Corporation finally received tentative approval for an RFC loan of \$1,700,000 (\$2,500,000 had been requested) at 6% interest.

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- 1956 Lee Bridge, Virginia War Memorial Stand as Monument to Work of John Wicker Jr., *Richmond News Leader*, April 5, 1956.

V. THE RICHMOND BRIDGE CORPORATION BRIDGES - JAMES RIVER AND MARSHALL STREET VIADUCTS

The Richmond Bridge Corporation enlisted the services of the noted bridge engineer Alfredo C. Jani as its consulting design engineer. The RFC Board of Engineers approved all plans enthusiastically, and contractor bidding on all bridges but the Marshall Street Viaduct was accomplished by April 1933. The bridge over the James River was to be a monumental reinforced-concrete, open-spandrel arch span with a rigid-frame approach on the north. It was to be served by two reinforced-concrete, rainbow arch approach spans at Second Street and Cowardin Avenue. The Marshall Street Viaduct was to be rehabilitated.

A complete set of plans for the bridges had to be submitted to the RFC for evaluation by its engineers before the loan could be finalized. Realizing that they needed a knowledgeable design engineer in order to plan a bridge-building program on such a large scale, officials of the Richmond Bridge Corporation hired Alfredo C. Jani, a distinguished bridge engineer from New York City, as the project's consulting design engineer. When the plans for the James River bridge (and approaches) and the Fifth and First Street viaducts were submitted for approval by Allen Saville, their careful preparation received the enthusiastic approval of the RFC board of engineers. The RFC engineers deemed the plans and estimates so thorough that they believed contractors would be able to bid on the bridges with much more certainty than usual, and that a considerable savings would result.

Of the more than 200 contractors and building supply men assembled in Richmond on April 12, 1933, to make their bids on the individual bridge projects, fourteen contractors, from Georgia, Maryland, New York, Pennsylvania, Wisconsin, and Virginia (W.W. Boxley Co. of Roanoke was the only Virginia bidder), submitted bids on the James River bridge and its approaches; the winning bid of \$875,000 came from the S.M. Seisel Company of Milwaukee. More than twenty contractors bid on the Fifth and First Street viaducts, including the John T. Wilson Company and Hughes & Kegan, both of Richmond. The winning bids were submitted by two North Carolina companies, the T.A. Loving Company of Goldsboro for the Fifth Street structure and J.S. Bowers Construction Company of Whiteville for the smaller First Street Viaduct. An editorial in the following day's *News Leader* expressed regret that there was no Virginia firm among the low bidders, but pointed out that "employment will be given to hundreds of Richmonders, and the strain on our social agencies will be reduced." When bidding on the Marshall Street Viaduct was held later, another Milwaukee firm, the Wisconsin Bridge and Iron Company, was the low bidder.

The James River and Marshall Street Spans

The James River Bridge - Connecting Belvidere Street on the north bank of the James River with Cowardin Avenue on the south, The Robert E. Lee Memorial Bridge was designed as a reinforced concrete high-level bridge, its sixteen open-spandrel arches and four rigid-frame approach spans making it, at 3,848 feet end to end, the longest of the Richmond Bridge Corporation structures. As the bridge would cross the main

tracks of the Southern Railway, the Chesapeake and Ohio Railway main line and yard tracks, Tredegar Street, and the Kanawha Canal, as well as the James River, the design of the bridge was primarily governed by clearance requirements. The bridge's arches supported a deck with a forty-foot-wide roadway and two sidewalks above the valley's floor. The James River bridge was to be the most highly ornamented of the bridges built by the Richmond Bridge Corporation; creating a graceful appearance, its open-spandrel arches were surmounted by classically styled balustrades.

Second Street (north end) Approach - Crossing Chesapeake and Ohio railroad tracks north of the James River, the Second Street bridge served as an approach span for the Lee Bridge. Consisting of two 150-foot-long reinforced concrete rainbow arch spans flanked by two 60-foot girders, the bridge was designed on a skewed angle, which gave it an undulating appearance. As noted in a 1935 *Engineering News-Record* article on the Richmond Bridge Corporation project, the deck carried a forty-foot-wide roadway and a four-foot-wide walkway was "carried by cantilever extensions of the floor beam outside the arch on one side."

Cowardin Avenue (south end) Approach - Crossing the railroad tracks of the Atlantic Coast Line to the south of James River, the Cowardin Avenue bridge served as an approach span for the Lee Bridge. The 190-foot-long bridge was designed as a skewed, single-span rainbow arch, and was similar to the Second Street Bridge.

Marshall Street Viaduct - Unlike the other bridges in the Richmond Bridge Corporation project, the Marshall Street Viaduct involved a rehabilitation rather than construction. In addition, this bridge was a steel structure, while all the other bridges were constructed of reinforced concrete. The 2,546-foot-long old Marshall Street bridge, built in 1910, was in poor condition. As noted in the 1935 *Engineering News-Record* article on the project, "it was designed as simple deck trusses, but in erection the top chords were made continuous across alternate towers, throwing excessive stresses into them." These compressive forces caused buckling of the chord members and overstressing of the tower legs. Reconstruction of the bridge involved cutting and reconnecting the top chord and widening the roadway and sidewalks.

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VI. THE FIFTH AND FIRST STREET VIADUCTS

Alfredo C. Janni emigrated to the United States and soon became a prominent bridge engineer in this country. Janni was particularly interested in the elastic capabilities of concrete; his designs for the Fifth and First Street viaducts reflect these interests. Both of these structures were rigid-frame bridges featuring stiff central towers and slender expansion piers. The two bridges were identical in design and differed only in their length; the Fifth Street design had fourteen spans and the First Street had eight.

Although Alfredo C. Janni (1870-1938) was involved in the design of the James River bridge and its approaches, the rigid-frame bridges at Fifth and First streets were perhaps the purest expression of Janni's interest in the elastic capabilities of reinforced concrete. Janni was born in 1870 to a noble Neapolitan family and bore the title of Count, but chose not to use it. After his graduation from the University of Naples, Janni remained there for two years as Assistant Professor of Steel Construction before coming to the United States. As Assistant Bridge Engineer with the Southern Railway, he designed and supervised construction of many steel and reinforced concrete bridges. Between 1907 and 1914, Janni was Assistant Bridge Engineer for the city of St. Louis, where in 1910 he designed the Kings Highway Viaduct. In 1914, he served as the New York State representative to the Engineering Congress in Phoenix, Arizona. Soon thereafter, Janni came to further prominence when the Businessmen's and Taxpayer's Association of Buffalo, New York, commissioned him to design a reinforced-concrete bridge to be built between Buffalo and Fort Erie, Canada. During World War I Janni designed concrete ships which were accepted by the United States Shipping Board. Janni was particularly interested in the elastic capabilities of reinforced concrete under temperature and load stresses and wrote several articles on the subject for professional engineering journals.

The rigid-frame bridge, pioneered by German engineers and the Brazilian Emilia Baumgart, was introduced to the United States by Arthur G. Hayden in 1922 with a structure on the Bronx River Parkway in New York. Unlike other reinforced concrete spans, in which the superstructure and the substructure were not designed as a continuous unit, the rigid frame bridge as built by Hayden and his associates was a continuous structure "from footing to handrail." An instructive 1933 booklet prepared by the Portland Cement Association noted that in a rigid-frame structure, "the bearing is replaced with concrete that continues monolithically from the abutments into the deck, [so that] the altered structure becomes a frame with rigid corners." Observing that "it is generally simpler and more economical to build a concrete bridge continuous than otherwise," the Association also found that "the moments are small in the sections near the center of the deck of the rigid frame bridge compared with the corresponding moments in a simply supported deck of the same span length." The result was that "frame sections can be reduced and the bridge floor made exceptionally shallow at the center of the span."

The Portland Cement Association declared in their 1933 *Analysis of Rigid Frame Concrete Bridges* that because the rigid frame structure could be built with a shallow

section, "substantial reductions are obtained in volume of embankment fill or excavation, and in area of land required for the approaches." Maintenance expense was also advantageous because the rigid-frame bridge was a monolith, in which "the various details where the deck bears on the abutments are eliminated." The Association declared that rigid-frame reinforced-concrete highway bridges with solid decks were economical up to a span length of about 70 feet, while for longer spans "the ribbed deck construction is preferred on account of its lightness." As of September 1933, the longest rigid frame concrete span in the world was the 224-foot main span of the Herval bridge in Brazil.

During the early 1930s, rigid-frame bridge design and analysis were the subject of specialized treatises such as Arthur Hayden's *The Rigid-Frame Bridge* (1931) and Hardy Cross's and Newlin Dolbey Morgan's *Continuous Frames of Reinforced Concrete* (1932). These texts emphasized the fact that the supporting members in a rigid-frame bridge provided flexure and worked as a unit with the superstructure, while such members in the non-rigid-frame structure simply carried a deck at a certain desirable clearance above a roadway or watercourse. Victor Brown and Carleton Conner in their 1931 work *Low Cost Roads and Bridges* observed that "rigid frame bridges constructed of concrete possess great inherent strength and rigidity which insure their safety"; from the nature of their construction, "any overloading of one part of the bridge simply causes the stresses to be transferred to other parts until a balance is obtained."

By 1939, the authoritative Taylor, Thompson, and Smulski text *Reinforced-Concrete Bridges* included "multi-span rigid frames in which the girders forming the superstructure are rigidly connected with elastic vertical supports" as one of four main choices available to the engineer designing a multiple-span reinforced-concrete girder bridge. The other options were "a number of simply supported girder spans," "a combination of girders provided with cantilevers and short spans supported by these cantilevers," and "continuous girders supported by independent piers." Recommending the rigid-frame design for use "where vertical supports of the bridge are elastic, as in viaducts," the authors enumerated several advantages of rigid-frame bridges over simply supported girder spans: (1) rigid-frame structures required less steel and concrete; (2) the center of the span could be much shallower; (3) fewer expansion joints were required; (4) deflection and vibration were considerably reduced; (5) no bearings were required at the supports; and (6) "owing to rigid connections between the vertical supports and the horizontal members, the stability of the vertical supports in rigid frames is much greater than that of independent piers."

The Fifth and First Street Viaducts - Janni designed the 1,185-foot-long Fifth Street Viaduct as a fourteen-span reinforced-concrete structure consisting of a series of seven double-span, rigid-frame units. Each rigid-frame unit featured a stiff tower as a central support and, on either end, slender expansion piers which flexed to accommodate the expansion of the concrete under varying temperature and load

conditions. The ribbed deck of the viaduct carried two lanes of automotive traffic, a single set of streetcar tracks, and a sidewalk 139 feet above the crowded Bacon's Quarter Branch Valley, in which were located the Seaboard Airline Railroad, the sewer carrying the enclosed stream, Valley Road, and a large array of buildings and railroad tracks owned by the American Locomotive Works. The spare ornamentation of the viaduct reflected its origins as a cost-effective, Depression-era structure. The towers and the expansion piers were plain. Ornamentation was restricted to the parapets, which featured solid panels flanking a group of open panels with a chevron-like design, and the metal light standards. The 877-foot-long First Street Viaduct was identical in design but featured only eight spans.

In accordance with the agreement among the Richmond Bridge Corporation, the City of Richmond, and the RFC, a single, small, painted tollhouse was erected at the southwest end of the Fifth Street Viaduct. Motorists were instructed by signs to "stop" and "pay toll," and reflectors and a special high-intensity lamp aided recognition of the tollhouse during the night hours.

The Viaducts and Adjoining Neighborhoods

The Fifth Street Viaduct was built to facilitate vehicular, streetcar, and pedestrian travel between the neighborhoods of Jackson Ward and Highland Park. Prior to the Civil War, free blacks settled a neighborhood known as "Little Africa" (bounded by present-day Leigh Street, Gilmer Street, Brook Road, and Duval Street) to form the nucleus of Richmond's historic Jackson Ward community. Home to such pioneering black entrepreneurs as financier Maggie Walker and attorney Giles Jackson, Jackson Ward included the nation's first black banks and mortgage institutions. By the 1930s, although the official "ward" designation had been abolished, the Jackson Ward neighborhood, extending east to Fifth Street, continued to be home to the majority of Richmond's black residents.

A result of the "streetcar suburbanization" of Richmond's Northside, Highland Park, formerly the Mansfield estate in Henrico County, was developed in 1890 by the Highland Park Company, which offered 100 lots of "the most beautiful building land in our suburbs" to prospective homeowners. After the area was annexed by the city of Richmond in 1914, further residential expansion occurred. Beyond North First Street, the adjoining community of Barton Heights originated in a similar manner during the same period.

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- 1933 33 Contractors To Bid On Bridges Here, *Richmond News Leader*, February 24, 1933.
- 1935 Richmond Completes Interesting Program of Bridge Construction, *Engineering News-Record*, June 6, 1935.
- 1938 Alfredo C. Janni, 68, *The New York Times*, March 3, 1938.

VII. BRIDGE CONSTRUCTION AND ITS IMPACT ON UNEMPLOYMENT

The Richmond Bridge Corporation provided employment for over 2,700 men at one high activity point in the construction period, which began in December 1932 and ended in November 1934. Relief labor was used extensively, but not exclusively; the majority of the workers were employed at prevailing pay rates. The first bridges to be opened to traffic were the Fifth and First Street viaducts (December 1933), followed by the Marshall Street Viaduct (early November 1934) and the Lee Bridge (November 1934).

Created to provide employment as well as bridges for Richmond, the Richmond Bridge Corporation attempted to provide jobs to the greatest possible number of workers. Although power shovels and dump trucks would have accomplished the job more quickly than hand shovels and wheelbarrows, Richmond Bridge Corporation officials decided to take the slower but more labor intensive course so that more unemployed Richmond men could be offered financial relief.

When Richmond newspapers revealed the previously secret project to the public on November 30, 1932, it was estimated that the bridges would provide employment for 2,000 Richmonders. The public's response to the announcement was dramatic; when the Richmond Public Employment Bureau opened its doors the following day, a crowd of 500 men (many of whom wore jackets and ties) waited to apply for jobs on the project. Three hours later, 1,103 Richmonders had made their applications.

The Richmond Bridge Corporation was also eager to begin work; on the same day that job seekers swamped the Public Employment Bureau, five survey parties began preparation of the bridge sites. The bridge project was good news for Department of Public Works employees, who had been put on part-time status since the previous March. By the middle of December 1933, bureau chiefs at the Department of Public Works let it be known that they saw the project as a way for providing employment for twenty to thirty employees slated to be laid off on January 15.

Relief labor was used extensively on the Richmond Bridge Corporation project. The men earned 25 cents per hour, for a maximum compensation of \$24 per month, as specified by RFC rules. The pay for these men came from \$40,000 in federal work relief money supplied to the city by the state government. However, after January 15, 1933, the majority of the workers on the bridges were hired by the contractors and earned between \$80 and \$200 per month, the prevailing local rates. But the goal of providing jobs for needy Richmonders was maintained as a priority; the contractors were required to hire Richmonders and to use the services of the city's Public Employment Bureau.

The first work began on December 15, 1932, when fifty men started clean-up operations at the Second Street and Belvidere Avenue ends of the James River bridge. Selected from the city's relief list, the men worked for eight hours per day, three days

per week. A second group of fifty men began on the following Monday on the clean-up operations and alternated with the first group, resulting in a six-day work week.

When work on the Fifth and First Street viaducts began in May 1933, relief labor was used exclusively, equipment rental and materials being paid for by the RFC loan. Later, the system of operations changed to a straight force-account basis under the direction of the bridge corporation, with all expenses met from the loan fund. This method of operation still lacked the speed required to finish these two bridges in the desired time. To speed up the work, the last 30 percent was performed by contract.

Relief labor was also used in building the north (Belvidere Street) approach of the James River bridge. The remainder of the James River bridge, including all of the arch spans, was built under a single contract, though the contractor was required to use labor from relief lists whenever possible. On the Cowardin Avenue and Second Street rainbow arch bridges, relief labor was used exclusively throughout, with materials and equipment rental paid by the loan. In the course of building these two bridges, every relief agency devised by the city, state, and federal government had a hand in construction. Municipal and state agencies gave way to the Civil Works Administration for a few months, and the Federal Emergency Relief Administration finally finished the job.

The Richmond Bridge Corporation project provided employment to an impressive number of workers. By the middle of May 1933, when all bridges but the Marshall Street Viaduct rehabilitation were under way, 1,562 men were employed on the entire bridge project, cutting the city's weekly unemployment relief bill almost in half. On June 2, Tazewell S. Wharton, manager of the Public Employment Bureau, estimated that unemployment in Richmond had been reduced 17% since the beginning of the year. Project employment increased to the point that by the middle of June 1933 over 2,700 men were at work, but by the end of the month, the bridge work entered a phase that required a more skilled work force, with a smaller total number of workers.

The Fifth Street Viaduct, along with its sister structure at First Street, was opened on December 23, 1933, a little more than seven months after it was begun. The Second Street approach span to the James River bridge had been completed two weeks earlier, but it could not be opened to traffic until the James River bridge itself was opened to traffic, which occurred with great fanfare on November 3, 1934, when it was formally christened as the Robert E. Lee Memorial Bridge. The Cowardin Avenue approach to the Lee Bridge was completed three weeks later. Rehabilitation of the Marshall Street Viaduct was completed on November 1, 1934.

Many eyewitness stories testify to the dramatic impact of the Richmond Bridge Corporation bridge project on the lives and fortunes of Richmonders hit hard by the

Great Depression. The following accounts illustrate the bridge project's role in combating Richmond unemployment:

1. As the *Times-Dispatch* reported, Public Employment Bureau head Wharton and two others spent Sunday (June 4) informing men that there would be work for them in the coming week; the men showed gratitude:

"Captain Wharton said that the gratitude shown by the men when a job is opened is one of the things that makes the work of the bureau seem worth while.

"Yesterday one of the bureau workers stopped at a man's house to tell him he would go to work today. 'You don't know how happy that makes me' the man said. 'Come on upstairs and I'll show you why.' Upstairs was a two-weeks'-old baby. The father had been unemployed for months.

"Another similar case occurred last Tuesday, when the Employment Bureau kept on looking up unemployed for whom jobs were open, despite the half-holiday of Memorial Day and the heavy storm which ended it. A man who got the news that he could go to work for the first time in months expressed utter amazement that the Employment Bureau should hunt him up on a holiday and in the middle of a rainstorm."

2. Leatrice Fetter, whose father ran a grocery store in Jackson Ward, remembered: "Men were put to work building public projects, such as parks, bridges, public buildings, and roads. The men had no way to get to their jobs. My daddy bought an old truck with wire sides and long wooden boards on each side providing seating. The men would meet at our store each morning, and Daddy would take them to their jobs. Sometimes Daddy would let me go with him to get the men after the day's work. The men would jump into the truck and sit on the boards. They would rest their weary heads on their shovels or pick axes. They were so tired, sometimes, the workers didn't speak. Their faces were so covered in dirt, dust, and grime, you could only see the whites of their eyes, but they were so glad to have work again. There were looks in their eyes I'll never forget. When we got back to the store, they shuffled out of the truck and headed home to their waiting families."

Summary of Construction

BRIDGE	BEGUN	FINISHED/REOPENED
First Street Viaduct Construction	May 17, 1933	Dec. 23, 1933
Fifth Street Viaduct Construction	May 10, 1933	Dec. 23, 1933
Marshall Street Viaduct Rehabilitation	Jan. 2, 1934	Oct. 22, 1934 (f) Nov. 1, 1934 (r)
James River (main)	May 11, 1933	Oct. 22, 1934 (f) Nov. 3, 1934 (r)
Second Street Approach	Dec. 12, 1932	Dec. 8, 1933
Cowardin Avenue Approach	Jan. 15, 1934	Nov. 30, 1934

Concise Chronology, Showing Socioeconomic Impact of Project

Nov. 30, 1932	Estimated that 2,000 workers would be hired.
Dec. 1, 1932	Five survey parties at work (James River, Second Street, Cowardin Avenue, Fifth Street, and First Street - Marshall Street being a rehabilitation and plans not finalized). 1,103 applications made for employment in first 3 hours at Public Employment Bureau.
May 19, 1933	RFC-funded bridge projects open jobs for 450.
May 23, 1933	100 men from relief rolls begin work on James River north approach. - 65 men to begin work on north approach. - total of 741 men working on various bridge projects. - 400 men working in parks and cemeteries.

June 2, 1933 Local unemployment was reduced by 17% in May. Officials had to call 1,800 men to place 1,460; one out of six had returned to work.

In May, 1,213 men were employed on various RFC-financed projects.

On James River bridge: 193 men employed 30 hours per week at 25-60 cents per hour; none to exceed \$24 per month.

June 5, 1933 1,800 men getting three days' work per week, with expectation of adding 300-400 men in coming week to bring total work force to 2,200.

Breakdown for bridge projects (apparently only skilled labor):

316	carpenters
72	cement finishers
30	cement mixers
16	crane operators
32	pile drivers
8	pile driver riggers
52	bridge riggers
6	oilers
<hr/>	
532	total

46 carpenters to be put to work on June 5, with expectation that part-time employment would be available for all carpenters who needed it.

June 15, 1933 "Approximately 2,700 men are being employed on the bridges now. The carpenters and cement mixers to be taken may swell this number to nearly 3,000." At this time, the mayor threatened to cut off work unless federal relief was secured.

June 16, 1933 "Approximately 25 more laborers, in addition to the 2,700 already on the job, went to work yesterday [June 15]. Several others, chiefly carpenters and cement mixers, are to be taken on in the next day or so."

The missing RFC check (for \$30,183) was found; Saville stated that the payroll money is part of work-relief allocated to Virginia by the U.S. government.

- June 17, 1933 800 men called off work on June 16 could return to work immediately because the state committee agreed to advance the city about \$30,000 to meet the payroll of men working on the two city-supervised bridges. Relief money used to reduce drain on RFC loan.
- June 20, 1933 About 2,500 men were employed on bridges in preceding weeks; that number was to be "materially reduced" by the end of the week. U.S. relief and RFC loan paying for workers.
- June 21, 1933 Expectation of federal relief appropriation caused city to cut unemployment relief appropriation from \$50,000 to \$25,000. City was then spending \$4,000 weekly for relief, a reduction of almost 50% of what it was in early 1933. The actual expenditure on the bridge work was to be reduced to \$1,000 per day, so that inroads on city funds could be avoided. There was to be a reduction in the labor force, but these men were utilized in street, park, and cemetery work.
- July 19, 1933 More than 400 laborers ("both white and Negro") were to be removed from bridge projects; remaining workers to be paid directly by the Richmond Bridge Corporation rather than by the city. Workers had been able to make as much as \$24 per month. Workers to be skilled or semi-skilled and would work 30 hour weeks. Reorganization immediately affected two northside viaducts (Fifth and First streets) and north approach to James River bridge; later it would affect all projects.
- August 4, 1933 New NRA code of wages and hours caused additional request of \$355,000 from RFC. Bridge payrolls to be increased to \$246,000 and materials costs to \$105,000. Before increase, wages were 25 cents per hour for a 30-hour week, or \$7.50 per week. Individual bridge cost increases specified in article of this date (see Annotated Chronology and Bibliography).
- Nov. 3, 1934 Opening of James River bridge; beginning and completion dates given for all bridges.

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- 1932 Spans Across River, Shockoe Valley to Aid 2,000 Workers, *Richmond News Leader*, November 30, 1932.

- 1932 A Great Service to the City, *Richmond News Leader*, December 1, 1932.
- 1932 Will Register Bridge Labor Here Tuesday, *Richmond News Leader*, December 2, 1932.
- 1932 Richmond Employment Bureau Swa[r]ms With Applicants for Bridge Project, *Richmond News Leader*, December 6, 1932.
- 1932 To Pay Bridge Laborers Here 25 Cents Hour, *Richmond News Leader*, December 14, 1932.
- 1932 To Seek Places for City Force, *Richmond News Leader*, December 14, 1932.
- 1932 Less Than 10 Per Cent of Workers on Bridges Will Get Low Rate of Pay, *Richmond News Leader*, December 30, 1932.
- 1933 \$2,112,000 of R.F.C. Funds Already Spent by State Emergency Relief Group, *Richmond News Leader*, January 7, 1933.
- 1933 \$60,000 Is Paid in Patronage by R.F.C. Here, *Richmond News Leader*, January 27, 1933.
- 1933 Compton Denies Paving Specified, *Richmond News Leader*, February 7, 1933.
- 1933 100 On City List of Jobless Will Get Bridge Work, *Richmond News Leader*, March 29, 1933.
- 1933 Fifth St. Bridge Project Opens Need for Labor, *Richmond Times-Dispatch*, May 5, 1933.
- 1933 Three Bridge Projects Open Jobs for 450, *Richmond Times-Dispatch*, May 19, 1933.
- 1933 Bridge Work To Cut City Relief Cost, *Richmond News Leader*, May 19, 1933.
- 1933 First St. Bridge Is Also Closed to Street Cars, *Richmond Times-Dispatch*, May 23, 1933.
- 1933 Bridge Laborers Said To Complain, *Richmond News Leader*, May 25, 1933.

- 1933 Adopt 2 Five-Hour Shifts on Local Bridges, *Richmond News Leader*, June 1, 1933.
- 1933 Unemployment Reduced 17 P.C. in Five Months, *Richmond Times-Dispatch*, June 2, 1933.
- 1933 Additional 400 Men Called to Bridge Work, *Richmond Times-Dispatch*, June 5, 1933.
- 1933 Lack of Funds May Stop Work on Spans Here, *Richmond News Leader*, June 14, 1933.
- 1933 \$31,000 Mystery Fund Cancels Threat To End Work on Bridges, *Richmond Times-Dispatch*, June 15, 1933.
- 1933 R.F.C. Check Found; Bridge Fears Allayed, *Richmond Times-Dispatch*, June 16, 1933.
- 1933 State Agencies Will Advance Bridge Money, *Richmond Times-Dispatch*, June 17, 1933.
- 1933 Bridge Forces To Be Reduced in New Plans, *Richmond Times-Dispatch*, June 20, 1933.
- 1933 Finance Group Reduces Relief Fund \$25,000, *Richmond Times-Dispatch*, June 21, 1933.
- 1933 Progress Seen in Six Bridge Projects Here, *Richmond Times-Dispatch*, July 17, 1933.
- 1933 Half Million Given Jobless Here in 1933, *Richmond News Leader*, July 17, 1933.
- 1933 Labor Forces on Spans Here Being Changed, *Richmond News Leader*, July 18, 1933.
- 1933 400 Laborers To Lose Work on Bridge Here, *Richmond Times-Dispatch*, July 19, 1933.
- 1933 Sum Allotted Not Sufficient for NRA Terms, *Richmond News Leader*, August 3, 1933.
- 1933 Bridge Needs \$355,000 Loan for New Wage, *Richmond Times-Dispatch*, August 4, 1933.

- 1933 Change in Bridge Financing Asked, *Richmond News Leader*, August 16, 1933.
- 1933 Fund Transfer Is Denied for Bridges Here, *Richmond News Leader*, August 21, 1933.
- 1933 Federal Ruling Halts Bridge Work in City, *Richmond Times-Dispatch*, August 22, 1933.
- 1933 R.F.C. Official To Investigate Bridge Tangle, *Richmond Times-Dispatch*, August 23, 1933.
- 1933 Local Bridge Projects Are Showing Progress, *Richmond Times-Dispatch*, September 24, 1933.
- 1933 Bridge corporation Adopts 30-Hour Week Basis for All Classes of Workers, *Richmond News Leader*, October 27, 1933.
- 1935 Richmond Completes Interesting Program of Bridge Construction, *Engineering News-Record*, June 6, 1935.

VIII. SUBSEQUENT HISTORY OF THE BRIDGES AND THE RICHMOND BRIDGE CORPORATION

As stipulated by the terms of the RFC loan, tolls were to be collected on all of the Richmond Bridge Corporation structures until the loan had been paid off. However, it soon became evident that the only money-maker among them was the Lee Bridge; the other bridges' revenues were not adequate to the expense of collecting the tolls. Accordingly, tolls were removed in August 1935 from all but the Lee Bridge. The revenues from the Lee Bridge were sufficient to retire the loan in 1946; at that time the Lee Bridge became toll-free. In 1948 the Richmond Bridge Company turned over its assets to the city of Richmond and went out of business.

When the Fifth and First Street viaducts were opened to traffic on December 23, 1933, they were toll-free bridges - until January 1, 1934. The charging of tolls was delayed in order to familiarize the public with the convenience that these new spans could provide to the motorist in the daily commute to and from the city. The tolls introduced on January 1 (and announced on December 19) were 10 cents for an automobile, but ranged from a low of 5 cents for an animal, "ridden or led," to a maximum of 25 cents for buses and trucks with a gross weight of five to fifteen tons. By the end of March 1934 it was becoming obvious that the two viaducts had earned less money (\$996.35) than it cost in toll keepers' salaries, lighting, etc. to run them. This was not an auspicious beginning for the Richmond Bridge Corporation spans; not only did the new bridges have to be self-supporting, but they also had to pay back the \$1,700,000 RFC loan - at 6% annual interest. The officials of both the Richmond Bridge Corporation and the city of Richmond were hopeful that the toll revenues on the remaining bridges would turn the situation around. Unfortunately, work on the James River bridge had been seriously delayed by the bad weather of the winter, and the bridge (the Robert E. Lee Memorial Bridge) did not open until November 3, 1934.

One month after the opening of the Lee Bridge, this bridge alone was bringing in as much as \$415.35 per day in tolls. In the one-week period from December 1 through December 7, the Lee bridge earned \$1,512, far more than the other bridges, including the Fifth Street Viaduct's \$70.55 and the First Street Viaduct's \$13.50 during the same period. The toll revenues on all four bridges were meeting the interest charges on the RFC loan, but were a little short of the amount that had to be received in order to liquidate the bridge project in fourteen years, as stipulated by the loan agreement. Toll revenues on the bridges as a group continued to be adequate throughout the month, but the Lee Bridge remained the only true money-maker. By early January, city officials were predicting that the RFC loan could be liquidated within the specified time.

Although the Richmond Bridge Corporation was on its way to liquidating the RFC loan, the continued poor earnings of the Fifth, First, and Marshall Street bridges did not justify paying the toll takers and maintaining the tollhouses. Accordingly, the corporation requested RFC permission to remove tolls from all but the Lee Bridge in

February 1935. On May 28, the RFC approved the request, and by the end of August 1935 tolls were removed, with great celebration, from all but the Lee Bridge.

The Lee Bridge revenues alone proved to be more than sufficient to repay the RFC loan. The increasingly heavy Florida-bound tourist traffic through Richmond caused corporation officials to predict that bridge revenues for the year would exceed those of 1935. In April 1936, the corporation was prepared to offer the RFC interest payments of \$25,000 - money that was not due for seven years. By December 1936 the Richmond Bridge Corporation was able not only to make all interest payments for the year but also to pay \$105,000 on the principal of the RFC loan. In 1938 a syndicate purchased the Richmond Bridge Corporation's bonds from the RFC and reduced the interest rate on the loan to 4%, providing a savings of \$22,500 per year in interest payments.

In January 1942 the leadership of the Richmond Bridge Corporation was replaced by city officials. Wicker chose not to comment on the decision, and in retiring received praise in a *News Leader* editorial:

For this decision he will be applauded. Still more will he be honored for the manner in which he and the men who worked with him to procure the Lee Bridge discharged their self-imposed task. They saw the need of "made work" for Richmond's unemployed, and before any other enterprise of this sort was launched on a large scale, they procured R.F.C. funds for the bridge [the Lee Bridge]. With wisdom they chose an admirable location for the span, which is one of the noblest in this part of Virginia. Splendidly they had it designed and most intelligently they have administered it with the full and fine cooperation of the Department of Public Works. In revenue as in service and in location, the bridge has been magnificently successful. The thanks of the city are due Mr. Wicker and his colleagues. Richmonders gratefully will remember the bridge builders.

The final payment on the RFC loan was made in 1946, and on September 16, 1946, the Robert E. Lee Bridge became toll-free, fourteen years after the formation of the Richmond Bridge Corporation and four months before the death of Allen Saville. In August 1948, the Richmond Bridge Corporation turned over its assets, consisting of the bridges and \$1,300, to the city of Richmond and officially went out of business.

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- 1935 Air View Shows Three Free City Bridges, *Richmond News Leader*, August 30, 1935.
- 1935 Jubilee Marks Free Viaduct for East End, *Richmond Times-Dispatch*, August 31, 1935.
- 1936 Asset of Concrete and Men, *Richmond News Leader*, April 29, 1936.
- 1936 Wicker Declares Williams Opposed Loan for Bridge, *Richmond News Leader*, October 23, 1936.
- 1936 \$105,000 Paid by Bridge Tolls, *Richmond News Leader*, December 28, 1936.
- 1936 \$15,000 to RFC From Bridges, *Richmond News Leader*, April 17, 1937.
- 1938 Group Buys Bridge Bonds, *Richmond News Leader*, February 3, 1938.
- 1942 Woody Named President of Bridge Corp., *Richmond News Leader*, January 9, 1942.
- 1942 Thanks to the Bridge Builders, *Richmond News Leader*, January 28, 1942.
- 1948 Richmond Bridge Corporation Turns Over Assets to City, *Richmond News Leader*, August 25, 1948.
- 1952 Surprises Due As Bridges Get Name Signs, *Richmond News Leader*, July 8, 1952.

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Note: RFC = Reconstruction Finance Corporation; RBC = Richmond Bridge Corporation. Citations without annotations relate to self-explanatory headlines. The bibliographical entries correspond to the hard copies of items included in the Package of Research Materials, which is also arranged chronologically.

- 1932 Common Sense in Relief, *Richmond News Leader*, October 7, 1932.
Editorial stating that it is foolish to borrow to cover relief.
- 1932 Saville Invited to Assist RFC, *Richmond News Leader*, October 17, 1932.
Saville received invitation to be one of 37 engineers to serve in advisory capacity in consideration of applications for loans to self-liquidating construction projects.
- 1932 Spans Across River, Shockoe Valley to Aid 2,000 Workers, *Richmond News Leader*, November 30, 1932.
On November 30, 1932, the RFC approved a loan of \$1,700,000 for the construction of three bridges and the enlargement of the Marshall Street Viaduct. RBC called a nonprofit corporation, with Sen. John J. Wicker as president and general counsel, Allen J. Saville and Horace L. Smith, Jr., as consulting engineers. "Senator Wicker conceived the project with a view to providing substantial unemployment relief during what may prove to be Richmond's most severe winter from a relief standpoint, and also with the purpose of immediately providing Richmond with a system of modern bridges serving all parts of the city." Wicker received "whole-hearted assistance" from Gov. John Garland Pollard and Mayor J. Fulmer Bright. Started working with "engineers, attorneys, financial experts and other officials of the RFC" in August.
- 1932 A Great Service to the City, *Richmond News Leader*, December 1, 1932.
Editorial praising the bridge project, stating that Richmond's achievements of November were "crowned with the assurance of work for some hundreds of Richmond's needy in the construction of bridges that will change the face of our old city." Dismisses objection that the new bridges will require tolls. "It was Richmond's greatest November!

A city that can accomplish these things in the darkness of the depression can await with confidence the dawn!"

1932 Will Register Bridge Labor Here Tuesday, *Richmond News Leader*, December 2, 1932.

1,103 applications for employment made in first three hours on Thursday; projected man-hour needs for various specialties given; guidelines for employment given by Wharton.

1932 Richmond Employment Bureau Swa[r]ms With Applicants for Bridge Project, *Richmond News Leader*, December 6, 1932.

More than 500 jam office at time it opens; article describes hiring procedures and includes photo of crowd of men (many in coats and ties) waiting for employment office to open, and photo of surveyors on the job.

1932 To Pay Bridge Laborers Here 25 Cents Hour, *Richmond News Leader*, December 14, 1932.

"First Group Starting Jobs Thursday to work 8-Hours, 3 Days Week"; day begins at 7:00 am.

1932 To Seek Places For City Force, *Richmond News Leader*, December 14, 1932.

Bureau chiefs of the Department of Public Works trying to work out plan by which 20-30 employees of the Bureau of Survey and Design (who were to be laid off on January 15) could be used on bridge construction work.

1932 Bright Against Bonded Relief Debt For City, *Richmond News Leader*, December 24, 1932.

Mayor Bright against bonded debt for relief purposes "except as the very last resort." Article describes debt limits.

1932 Less Than 10 Per Cent of Workers on Bridges Will Get Low Rate of Pay, *Richmond News Leader*, December 30, 1932.

Relief workers to be in minority; remainder of workers to earn up to \$200 per month.

1933 First Contracts To Be Advertised On Or About 15th, *Richmond News Leader*, January 7, 1933.

Cooperation of city and corporations praised; it is predicted that about 2,500 men will be employed.

1933 \$2,112,000 of R.F.C. Funds Already Spent by State Emergency Relief Group, *Richmond News Leader*, January 7, 1933.

Concerns expressed by state welfare commissioner about how much longer such spending could be kept up.

1933 \$60,000 Is Paid in Patronage by R.F.C. Here, *Richmond News Leader*, January 27, 1933.

Article describes other RFC-funded non-civil service positions in Richmond.

1933 Compton Denies Paving Specified, *Richmond News Leader*, February 7, 1933.

Compton denied that bitulithic paving (patented process done only by one contractor in city) was specified for the Belle Isle bridge, putting to rest much concern among contractors.

1933 33 Contractors To Bid On Bridges Here, *Richmond News Leader*, February 24, 1933.

1933 New Bridge Plans Ready Wednesday For Contractors, *Richmond News Leader*, March 11, 1933.

RFC engineers praise design and thoroughness of specifications; plans "received enthusiastic approval of the RFC Board of Engineers at Washington when they were submitted by Alan J. Saville." Marshall Street bridge plans to be finalized and advertised later.

1933 100 On City List of Jobless Will Get Bridge Work, *Richmond News Leader*, March 29, 1933.

100 men on city list of unemployed will begin Monday on approaches to southern end of Belle Isle across James River; "and all of the work, where practicable, will be performed by hand labor with wheelbarrows being used in place of trucks for moving the dirt."

1933 Open Bids on Two Northside Spans, *Richmond News Leader*, April 12, 1933.

S.M. Seisel Company of Milwaukee submitted a low (lowest of 14) bid of \$875,000 on the contract for the new James River bridge - predicted that cost of all three bridges would be well within \$1,700,000; "more than a score of contracting firms, including John T. Wilson and Hughes & Kegan, of this city, are bidding on the Northside viaducts, to be built at First and Fifth streets, and estimated to cost \$200,000 and \$225,000 respectively." More than 200 contractors and building supply men attending opening of bids; no local contractors bid on James River; the only Virginia bid was from W.W. Boxley Co. of Roanoke (\$1,060,000); bids received from New York, Philadelphia, Pittsburgh, Milwaukee, Buffalo, Baltimore, Roanoke, and Columbus, Georgia, on James River span.

1933 Knit More Closely, *Richmond News Leader*, April 13, 1933.

Editorial expressing regret that no Virginia firm was the low bidder, but "the great gain from the construction will be that Richmond will be more closely knit together." "Employment will be given to hundreds of Richmonders, and the strain on our social agencies will be reduced."

1933 Fifth St. Bridge Project Opens Need for Labor, *Richmond Times-Dispatch*, May 5, 1933.

City Employment Bureau to provide names of idle men for work on Fifth Street Viaduct based on fitness and family requirements; workers to get up to 30 hours of work per week; work on Fifth Street to begin on Monday, May 8, 1933, with T.A. Loving [of Goldsboro, N.C.] as the contractor. Work on First Street to start by May 15, under J.S. Bowers (in 1934 Bowers was the contractor for Bridge 6002 in Kinsale, Westmoreland County). Unemployed men who want work must be approved by City Employment Bureau and Central Application Bureau; Sen. Wicker "explained that the City Bureau would determine a man's physical and industrial fitness, while the Central Application Bureau will examine him to determine the extent of his need and the amount of work he is due to receive, depending on how large a family he has to support." In addition to the "unemployed" labor "which will be used in increasing numbers as the work progresses, a certain amount of 'relief' labor is now at work on a one or two-day-a-week basis on the bridge approaches." These were men who were listed on the city relief rolls. Building materials ordered by time of article.

1933 Three Bridge Projects Open Jobs for 450, *Richmond Times-Dispatch*, May 19, 1933.

Work on three bridges (Fifth Street, First Street, James River) is now underway, financed by \$2,000,000 RFC loan. "Scores of men are employed in preparing the abutments for the bridges proper, and within a few days many more workmen will be supplied with part-time employment." VEPCO announced that Fifth Street Viaduct would be closed "today," and that streetcars would be rerouted. "More than fifty men started work today shaping the way for construction of the First Street bridge. Workmen now are preparing the right-of-way for the big James River bridge."

1933 Bridge Work To Cut City Relief Cost, *Richmond News Leader*, May 19, 1933.

"The enrollment of 1,562 men, now in progress, for work on the two bridges to the Northside and over the James River, will cut the city's weekly unemployment relief bill almost in half by the end of next week." "Beginning last Monday, the employment bureau placed 343 men on the northside viaduct jobs. Seventy-eight of these were Negroes and 265 were white men. In addition to this 31 Negro war veterans were given work on the James River bridge on a 30-hour a week basis and 20 white veterans. On Monday an additional 280 men will be sent from the employment bureau to the bridge jobs, and this will be increased by 60 on Tuesday. By the end of the week, there will be working on all bridge projects two three-day shifts, consisting of 200 on the Southside, 150 at Second and Arch streets, 100 on the First Street viaduct, 100 on the Fifth Street viaduct, 170 on Belle Isle and 60 at Belvidere street, making a total of 781 in each shift, or 1,562 individuals sharing in the bridge work each week."

1933 First St. Bridge Is Also Closed to Street Cars, *Richmond Times-Dispatch*, May 23, 1933.

Street car service over First Street bridge discontinued on May 23 "pending completion of rebuilding work, it was announced yesterday, as officials of the Virginia Electric and Power Company denied that the construction work has made the bridge dangerous for street cars." Vepeco and RBC stated that inspectors "at the first indication of danger, all traffic as well as street cars would be barred." One hundred men from municipal relief rolls began work on May 22 on James River bridge, digging the new foundations at the north approach. Sixty-five men to begin work on May 23 on the James River north approach. "At present

there are 741 men working on the various bridge projects and their approaches, while 400 more from the City lists are working in the parks and cemeteries. All of the bridge projects except the Marshall Street Viaduct are under construction, and a considerable reduction in the municipal relief bill is expected at the end of the week."

1933 Bridge Laborers Said To Complain, *Richmond News Leader*, May 25, 1933.

"Report of Near-Strike Not Heard by Welfare or Employment Bureau." Some workers put down their tools at end of 8-hour day and walked off, without informing supervisors, and were told they were not needed the next morning. The men were worked 10 hours each day and were paid 25 cents per hour; "The contractor, by working ten hours a day instead of eight is able to take advantage of the longer daylight and has told city officials that by so doing he is able to use 20 per cent more labor than would otherwise be the case. The men working on the bridge are unemployed men who have been provided with made-work by the city in the parks or on the city streets prior to the time work on the R.F.C. bridges began. They are worked three days a week and are then replaced by another shift. They receive 25 cents per hour for their work, the labor payroll coming from R.F.C. loans to the city for relief."

1933 Adopt 2 Five-Hour Shifts on Local Bridges, *Richmond News Leader*, June 1, 1933.

"New Work System, In Effect Monday, Will Give Jobs to More Men, Will Add 140 To Force"; Wharton explained protest of dismissed workers; new shifts: "two five-hour shifts per day, six days per week, on the entire Richmond bridge project was ordered today by the Richmond Bridge Corporation, following several weeks of experimentation in three different shift plans." There were about 1,500 men on projects. Saville stated, "on the First and Fifth-street jobs we tried a shift of ten hours straight. At Second street we tried the eight-hour daily shift. On the James River job, we tried the double-five hour plan. We believe the double five-hour plan is best, so we are making it applicable to all jobs as soon as possible." "[Wharton] is doing a miraculous job." Wharton recounted the story of the two dismissed workers who had walked off the job at the end of 8 hours and were therefore fired. Job officials stated that the 10-hour day made it possible to employ 20 percent more men.

1933 Unemployment Reduced 17 P.C. in Five Months, *Richmond Times-Dispatch*, June 2, 1933.

"Local unemployment has been reduced by at least 17 per cent since January 1, it is estimated by [Captain] Tazewell S. Wharton, manager of the Public Employment Bureau." He based estimate on the fact that it was necessary to call 1,800 men to select the 1,460 men placed on jobs during May. At least one out of six men called (all had registered since December 15, 1932) had returned to his old job or gotten a new one. In May, 1,213 men were employed on various RFC bridge projects; on the James River bridge "193 men are employed thirty hours each week at a rate scale of from 25 cents an hour to 60 cents, depending upon the class of work." Wharton predicted that "this number will be greatly increased within a few weeks." None of the men would make more than \$24 per month. Report for May from Public Employment Bureau gave breakdown of jobs: 12 clerical and technical; 11 domestic; 277 skilled mechanics; 134 semi-skilled and industrial; 1,026 common and casual (total = 1,460).

1933

Additional 400 Men Called to Bridge Work, *Richmond Times-Dispatch*, June 5, 1933.

"Projects Provide Jobs for 2,200 Idle Persons." "With contractors calling for 300 to 400 additional men for work this week on the various R.F.C. bridge projects in Richmond, the bridges are proving of even greater value than was predicted six months ago in lessening the acute unemployment conditions that faced the City during the winter months." Wharton and two members of his staff put in a full day's work Sunday [June 4] notifying men on his rolls that there was work for them; because many men had moved and had not updated their files, some men who had been on the rolls only a week were given work. "With a total of 1,800 men now getting three days' work a week on the bridges, the bureau head declared that the continued calls for more workers will make the bridge work under the Richmond Bridge Corporation a really more valuable source of unemployment relief than was forecast at the beginning." Breakdown for bridge workers: 316 carpenters; 72 cement finishers; 30 cement mixers; 16 crane operators; 32 pile driver helpers; 8 pile driver riggers; 52 bridge riggers; 6 oilers (total = 532). Forty-six carpenters to be put to work on June 5, with expectation that part-time employment would be available for all carpenters who needed it. The need for updating addresses stressed by Wharton. The ordinary method was to send a postcard, but on Sunday Wharton and two others drove to addresses to personally notify potential workers. It was predicted that the need for pile-driver operators would exceed supply. Article has some good accounts of gratitude shown by men who were notified that there was work for them.

1933 Lack of Funds May Stop Work on Spans Here, *Richmond News Leader*, June 14, 1933.

"Between 2,600 and 2,700 men would be affected by the shutdown."

1933 \$31,000 Mystery Fund Cancels Threat to End Work on Bridges, *Richmond Times-Dispatch*, June 15, 1933.

Mayor Bright's threat to call off bridge work unless federal relief was secured was countermanded when \$31,000 was "found somewhere or other," meaning that bridge work could be carried on at least 2 more weeks. Bridge work to be expanded; Wharton looking for more carpenters and cement workers. "Approximately 2,700 men are being employed on the bridges now. The carpenters and cement mixers to be taken on may swell this number to nearly 3,000." Article details problem of missing funds and the puzzle of the money's discovery (see following article).

1933 R.F.C. Check Found; Bridge Fears Allayed, *Richmond Times-Dispatch*, June 16, 1933.

An RFC check for \$30,183 (not \$31,000) sent on Friday by the state committee that administers federal work relief funds was misplaced by the city, but was discovered on June 15. RBC chief engineer Saville stated that there was no danger to the bridge project: "The bulk of the money for the structures was borrowed by the company from the RFC, under the self-liquidating provisions of the Federal measure. The payroll money, with which the company has nothing to do, is part of the work-relief fund allocated to Virginia by the Federal Government." State committee, composed of Gov. Pollard, Arthur James (State Commissioner of Public Welfare), Henry G. Shirley (State Highway Commissioner), "administers the work relief money, distributing it here and elsewhere for work relief projects as it is needed. Approximately twenty-five more laborers, in addition to the 2,700 already on the job, went to work on the bridge yesterday. Several others, chiefly carpenters and cement mixers, are to be taken on in the next day or so."

1933 State Agencies Will Advance Bridge Money, *Richmond Times-Dispatch*, June 17, 1933.

Sub-headlines: "Officials Agree in Conference to Pay \$30,000 to Meet Payroll in City - 800 Men Laid Off - Work for Contingent to Be Resumed Today, Monday." State committee administering federal relief funds met with Mayor Bright and RBC officials; decided to advance city

approximately \$30,000 to meet the payroll of men working on the two city-supervised new bridges. "According to Arthur W. James, a member of the State committee, this amount would be allotted to the City sooner or later in any event, but it was advanced at this time because the number of workmen employed on the bridges, under the work relief plan, had been increased to such an extent that the payroll fund in hand was insufficient to pay them off." 800 men called off work on June 16 could resume work immediately. "The local bridge program, however, is in no danger. It will be carried through whether the laborers are employed on a work relief basis or not, according to Alan Saville, chief engineer of the bridge corporation. Since the bridges are to be self-liquidating - that is, they are to be toll bridges until they have paid for themselves - the money for their erection has been borrowed from the RFC and will be used in toto if necessary. Under new Federal relief plans, Virginia is allocated so much money to be used for work relief. . . .If this money is used to pay bridge workers, the local cost of the program will be that much less and the bridges will be paid for through tolls, and turned over to the City as free bridges in a shorter time than would be the case if the bridge corporation had to pay the workers out of the funds it has borrowed." Workers to be called back June 17, or June 19 at the latest.

1933 Bridge Forces To Be Reduced in New Plans, *Richmond Times-Dispatch*, June 20, 1933.

Conference between city and RBC officials resulted in reduced employment on bridges. Approximately 2,500 men were employed on the bridges for the preceding few weeks; that number to be "materially reduced" by the end of the week. Funds to continue to come from federal relief funds and the RFC loan (\$1,700,000 - construction of three and rehabilitation of a fourth), with the majority from the latter. Details of reduction were to be announced within several days.

1933 Finance Group Reduces Relief Fund \$25,000, *Richmond Times-Dispatch*, June 21, 1933.

Sub-headlines: "Propose Allocation Cut in Half With Aid Probable From Federal Cash - Cheered by Report - Government May Carry Burden, Committee Hears." Expecting federal government relief appropriation of \$500,000,000, the City Finance Committee decided to cut from \$50,000 to \$25,000 the proposed allocation of unemployment relief; "Director of Welfare W. Brownley Foster stated that the smaller sum would probably carry the relief work for six weeks, after which something tangible concerning the expected Federal relief might develop." The city was then spending \$4,000 weekly for relief, a

reduction of almost 50% from what it was spending early in 1933. "The actual expenditure on bridge work, under appropriations from the RFC, will be reduced to a maximum of \$1,000 a day, or approximately \$30,000 a month, for the present, it was pointed out, so that inroads on the City funds may be avoided. There is to be a reduction in forces of laborers, which will throw some men back upon the city. Yet these men can be utilized in street, park, and cemetery work."

1933 Wicker Named To Direct Home Loan Unit in Va., *Richmond Times-Dispatch*, June 29, 1933.

Wicker appointed Virginia state manager of the Federal Home Owners Loan Corporation, with regional office in Richmond.

1933 Progress Seen in Six Bridge Projects Here, *Richmond Times-Dispatch*, July 17, 1933.

Cowardin Avenue within 10% of completion; Second Street 75% completed; First and Fifth streets "progressing beyond the 22 per cent mark"; and the connecting approach to the Second Street and the James River bridges is reported one-quarter complete. Mention of sewer projects.

1933 Half Million Given Jobless Here in 1933, *Richmond News Leader*, July 17, 1933.

"Approximately \$500,000 in federal, city and private funds have been spent this year in providing direct relief and work for Richmond's unemployed." "Examination of the records today show city expenditures approximating \$141,000 since February 1, federal funds for direct relief and for the bridge payrolls amounting to \$127,000 and disbursements by the Salvation Army, Bureau of Catholic Charities and the Family Service amounting to \$150,000." "Mayor Bright has estimated the city will come to the end of the year with a floating debt for unemployment relief that may run as high as \$300,000. But for the federal aid received through the R.F.C. projects and for direct relief, Richmond would face a tremendous floating debt for relief at the close of the year. The records of the department of public welfare show that city council has appropriated \$100,000 for relief since the first of February, the money coming from temporary loans. . . .The records of the R.F.C. bridge paymaster show total expenditures since the bridge work began of \$126,996.56, of which \$68,000 was advanced by the Reconstruction Finance Corporation and the balance from federal aid funds for direct relief. While the aid the city has received from the government through

the R.F.C. bridges and from funds for direct relief have greatly eased the burden on the city, cutting weekly relief bills from over \$9,000 to less than \$4,000 the city's expenses will increase with the advent of cold weather."

1933 Labor Forces On Spans Here Being Changed, *Richmond News Leader*, July 18, 1933.

"No Longer Possible to Use Large Crews of Rough Labor on Work." Two hundred relief workers were paid off and told to report to the city employment bureau for further orders; these men were to be listed and given work as soon as it can be found for them.

1933 400 Laborers to Lose Work on Bridge Here, *Richmond Times-Dispatch*, July 19, 1933.

Sub-headline: "Deserving Employees Find Temporary Aid From City Relief Fund Maintenance." "With a reorganization of the labor forces engaged on the local bridge projects, more than 400 laborers, both white and Negro, will be thrown back upon the City's list of worthy persons to be aided through the City's relief fund." Changes effective this week when contractors were to be paid by RBC rather than city - from the RFC loan of \$1,500,000. Few common laborers were needed from this point on. The RFC loan was to pay for all labor; direct relief was practically exhausted. Those who lost work were to be provided work by the city in parks, cemeteries, alleys, and streets. "White and Negro labor suffered alike. Many who today are without work had been able during their work to make as much as \$24 a month. Under the reorganization plan, it is understood the workmen will be engaged under the thirty-hour plan, thus insuring longer steady work for those employed." Bridge work from now on was to require "workers. . . more carefully chosen for their fitness, and it is now impossible to use large forces of green labor." Reorganization affected two northside viaducts and north approach to the James River bridge. "Later. . . the labor forces on all the projects will of necessity be reduced to a minimum and only skilled and semi-skilled workmen employed." Two cases of laborers affected are cited in the article.

1933 City May Ask New Bids For Two Viaducts, *Richmond News Leader*, July 21, 1933.

"The Richmond Bridge Corporation may discuss with the contractors on the First and Fifth-street bridges the advisability of submitting new bids on these two projects, if the city is to receive no further funds from the

government for direct relief, it was learned today. The new bids would be based on the contractor providing everything, including the labor and giving a fixed price for the job. Such an agreement is in effect on the James River bridge. The contracts under which the First and Fifth-street viaducts are being built is based on the city providing the labor and the contractor furnishing the supervision and equipment. If the city is to receive no more direct relief funds for payment of labor, and labor costs are to be charged to the R.F.C. loan, the bridge company officials feel a new agreement is advisable."

1933 Sum Allotted Not Sufficient for NRA Terms, *Richmond News Leader*, August 3, 1933.

Request of \$355,000 increase in loan to cover increased costs resulting from NRA code. "The increase [in expenses] is estimated at \$352,000." A breakdown of increased costs by bridge is provided.

1933 Bridge Needs \$355,000 Loan for New Wage, *Richmond Times-Dispatch*, August 4, 1933.

NRA code of wages and hours requirements of \$14 per week (maximum of 40 hours) minimum caused an additional request of \$355,000 from RFC. Bridge payrolls were to be increased \$246,000 and materials \$105,000. Before increase, wages were 25 cents per hour for a 30-hour week, or \$7.50 per week. Individual bridge work increases were as follows: James River, \$79,000; First Street, \$22,000; Fifth Street, \$32,000; Marshall Street, \$34,140; fabricating steel, \$7,500; miscellaneous items, \$8,000; workmen's compensation insurance, \$8,000; contractors' bonds and carrying charges, \$22,088; engineering and contingency of 10%, \$22,800; increased material costs, \$105,000.

1933 Change in Bridge Financing Asked, *Richmond News Leader*, August 16, 1933.

Saville wanted financing to be transferred from RFC to federal Public Works Administration (PWA).

1933 Fund Transfer Is Denied for Bridges Here, *Richmond News Leader*, August 21, 1933.

Financing transfer to PWA was not allowed.

1933 Federal Ruling Halts Bridge Work in City, *Richmond Times-Dispatch*, August 22, 1933.

Sub-headlines: "Loan Cannot Be Raised to Meet New NRA Wage and Hour Requirements; 800 Men Laid Off; Officials of Company Plan to Return Them Soon" "Federal authorities announced that the loan for the purpose [bridge projects] cannot be increased to meet NRA wage and hour requirements, and that the financing cannot be transferred from the R.F.C. to the new public works administration. The immediate effect of this was for the Richmond Bridge Corporation to lay off from 800 to 900 men temporarily until it can adjust its arrangements to the conditions which have arisen." RBC officials said they would proceed in a day or so when they received \$20,000 from the Governor's relief committee (promised August 19). RFC advised on August 21 that the loan could not be increased since the self-liquidating section had ceased to function two months previously. "The increase is necessary, officials of the bridge corporation said, to bring the projects under the NRA hour and wage requirements, but now that the money is apparently not available, they are at a loss to understand how the bridges can be built to NRA standards. The wage paid at present to workers on the bridges is 25 cents an hour, or \$7.50 a week, about half the minimum wage specified by the NRA. It is also pointed out that if all other construction jobs in the City are paying NRA wages, labor will desert the bridges for the other projects and there will be a labor shortage."

1933

R.F.C. Official To Investigate Bridge Tangle, *Richmond Times-Dispatch*, August 23, 1933.

Sub-headline: "'Plenty of Hot Water' Here, Says Aide, Sending Agent to Put 900 Back on Job" Mayor Bright went to Washington, D.C., to meet with RFC. An RFC official stated, "The contractor is operating under the code proposed by contractors generally, and submitted to the NRA. There seems to be the impression that the bridges are being constructed under the public works code, but that is wrong. The code accepted by construction contractors is self-imposed, and the R.F.C. has no legal power to do anything about it, especially to change the existing contract." PWA would not take over any self-liquidating projects, especially where contracts had already been made. The mayor was expected to call back men to work on Monday, August 28. Bids on the rehabilitation and widening of the Marshall Street bridge were to be opened on September 6; the contract was for \$150,000-\$175,000. Bridge officials were seeking to get \$300,000 for increased materials and labor costs from the federal government.

1933

Local Bridge Projects Are Showing Progress, *Richmond Times-Dispatch*, September 24, 1933.

Cowardin Avenue is within 1% of completion; Second Street, 78%; James River, 21%; First Street, 70%; Fifth Street, 69%. Work on the connecting bridge at the foot of Second Street is within 13% of completion. The article mentions sewer projects.

Jemian, S.C.

1933 Richmond Launches Program of Bridge Construction, *Civil Engineering*, Vol. 3, No. 10 (October 1933): 545-549.

This is a primary source on the engineering aspects of the RBC bridge program.

1933 Bridge corporation Adopts 30-Hour Week Basis for All Classes of Workers, *Richmond News Leader*, October 27, 1933.

Thirty-hour week adopted for all workers, skilled and unskilled; to raise maximum earnings from \$24 to \$30 per week as per RFC, "the relief men now working on the bridges will be retained on the job if they are good workers but the incompetent ones will gradually be dropped from the payrolls."

1933 Building Bridge Patronage, *Richmond News Leader*, November 13, 1933.

Editorial backs Wicker's proposal to open bridges free-of-charge until new year; reduced-price bridge annual passes are also recommended.

1933 Announce Toll Charges Over Viaducts Here, *Richmond News Leader*, December 19, 1933.

Vehicles with a gross load of over 20 tons to be allowed to cross either the First or Fifth Street viaducts. Tolls for single trips set as follows: motorcycles, 10 cents; animals, ridden or led, 5 cents; horse-drawn vehicles, 10 cents; passenger cars or delivery trucks up to 1 ton, 10 cents; trucks from 1 to 5 tons, 15 cents; trucks over 5 to 10 tons, 25 cents; buses, 25 cents; and trailers up to 15 tons, 25 cents. Monthly tickets for unlimited passage for motorcycles through light trucks to be \$1; 1- to 5-ton trucks, \$1.25; and 5-ton trucks, \$2. Annual rates for passenger cars and horse-drawn vehicles to be \$9; for 1- to 5-ton trucks, \$10; for 5- to 10-ton trucks, \$15.

1933 New 5th Street Bridge Opens; RFC Project, *Richmond Times-Dispatch*, December 24, 1933.

Fifth Street bridge formally opened on December 23, the second of the bridges to be completed. The bridge was to be toll-free until January 1. The ceremony was attended by Mayor, Wicker, and president of Highland Park Association.

1934 Unemployment in Va. Shows Decrease of 4,186 Placements in Week Ending Feb. 3, *Richmond News Leader*, February 9, 1934.

Listing by county of total unplaced applicants for work in Virginia; list does not include Richmond, Norfolk, South Norfolk, and Roanoke.

1934 Seek To Prevent Bridge Firm Suits, *Richmond News Leader*, February 10, 1934.

"The Richmond Bridge Corporation has petitioned chancery court asking that all local insurance companies sharing in the distribution of premiums and commissions resulting from insurance and bonds place on the RFC bridges here be enjoined and restrained from instituting any suits against the corporation because of dissatisfaction with the manner in which the premiums have been divided."

1934 New Northside Span Receipts Below Expenses, *Richmond News Leader*, March 29, 1934.

First and Fifth street bridge tolls did not meet expenses; Fifth Street was the most popular, with tolls of \$711.40, while the First Street bridge drew only \$284.95 from January 1 through March 26.

1934 Marshall Viaduct and Span Pushed, *Richmond News Leader*, April 11, 1934.

"Working 24 hours per day on Marshall and employing more than 400 men on the James River bridge, contractors are rushing both RFC projects in the hope of making up some of the time lost by bad weather last winter." The RFC lost two and a half months on the James River bridge because of bad weather and "we hope to make up at least a month and a half of the loss this summer," said R.S. Hummel, vice president of RBC. About 500 men are working on both bridges; 300 men were employed on the James River during the winter, and over 400 are working on it now, with about 75 working on Marshall. James River bridge: arches on half the bridge completed and the deck has been laid on a quarter of it; Marshall Street bridge: welding crews are working 24 hours per day 6 days per week. Compton urged city welfare head to

give Cowardin Avenue first preference in the work relief program of the Federal Emergency Relief Act (FERA) funds.

1934 Need \$21,000 on Approaches to River Span, *Richmond News Leader*, May 30, 1934.

"The impossibility of securing sufficient work-relief labor from the VERA (Virginia state office of FERA) will compel the city to provide \$21,000 for completion of the approaches to the James river bridge or the \$1,000,000 structure will be inaccessible to traffic when it is finished on September 1."

1934 May Eliminate Toll on First, Fifth Bridges, *Richmond News Leader*, June 4, 1934.

1934 Bank Receivers Get RFC Loan For Dividends, *Richmond News Leader*, June 16, 1934.

Receivers of Broadway Bank and Trust get \$75,000 loan from RFC (collateral RFC information).

1934 Relief Will Pay for Approaches, *Richmond News Leader*, August 9, 1934.

City's expenditures on the James River approaches will come back to city in the form of relief appropriations on a ratio of 2 to 1, so the approaches will eventually cost nothing, Compton announced.

1934 Bridge Costs Surpass 8-Months Fees \$1,405, *Richmond News Leader*, September 12, 1934.

First and Fifth Street bridges combined continued to be a losing proposition: Fifth Street yielded greater revenue for 8 months (January 1 to August 31), \$1,771.97; First Street, \$633.30; \$200 in monthly salaries for toll keepers on each bridge, or \$3,200 in salaries and \$571.97 in incidental expenses.

1934 Bridge Pioneers, *Richmond News Leader*, November 2, 1934.

Editorial congratulating Wicker and Saville; mention of controversy about approaches.

1934 Formal Event on Lee Span, *Richmond News Leader*, November 3, 1934.

James River bridge was christened Robert E. Lee Bridge with elaborate ceremony on November 3, 1934. "It was on Nov. 29, 1932, that the

Reconstruction Finance Corporation gave final approval for the project, allowing \$1,700,000 instead of the requested \$2,500,000. But the city itself agreed to use its relief funds for labor on the approaches with the result that more than \$2,000,000 was available for the six spans. Five survey parties were at work the day after the RFC approval was given. On May 10, 1933 actual work on the Fifth Street viaduct was started and the bridge was used for the first time on Dec. 23, 1933. The First Street viaduct was started on May 17, 1933, and reopened for use on Dec. 23, 1933. Work started on the Second Street approach to the R.E. Lee bridge on Dec. 12, 1932, and it was completed on Dec. 8, 1933. Meanwhile the main Lee structure was started on May 11, 1933. The Marshall Street viaduct opened on Nov. 1, was closed on Jan. 2, 1934, and was practically rebuilt. The Cowardin Avenue approach to the Lee Bridge was started on Jan. 16, 1934, and is almost finished. The Cowardin Avenue and Semmes Avenue approaches to this span will not be completed until about Feb. 1, however."

1934 Dedication of Six New Bridges Today Settles Problem Facing City for 192 Years as Backward Glance Shows, *Richmond News Leader*, November 3, 1934.

Historical account of bridges' predecessors.

1934 A Magnificent Bridge, *Richmond News Leader*, November 5, 1934.

Another laudatory editorial regarding RBC accomplishments.

1934 Payment Set On Bridge, *Richmond News Leader*, December 7, 1934.

"The Richmond Bridge Corporation will pay off \$100,000 on the principal of its RFC bridge loan on Feb. 1 and \$30,000 on the interest, reducing the loan which was originally \$2,000,000 to \$1,400,000, John J. Wicker, Jr., president of the bridge corporation informed the trustees today. With Lee Bridge tolls still averaging over \$400 a day the corporation will not only be able to pay the semi-annual interest of \$30,000 on Feb. 1 and take up \$50,000 in bridge bonds that fall due on that date, but also take up \$50,000 in bonds that do not mature until next year, Mr. Wicker said."

1934 New Bridges Meet Interest, *Richmond News Leader*, December 11, 1934.

Bridges meeting interest but a little short of amount needed to liquidate loan in next 14 years. Toll collections on all four bridges during the first

7-day week in which they all were operating totaled \$1,751.25, a little over \$250 per day; about \$300 per day needed to liquidate the loan in 14 years. The article contains more details, the gist of which is that the Lee Bridge toll revenues were carrying the others financially.

1935 Tolls on RFC Spans Exceed Expectations, *Richmond News Leader*, January 4, 1935

Lee Bridge ("the one money-maker") bringing in more than \$200 per day. "At the present rate of revenue the bridges will not only pay annual interest charges but there will be between \$20,000 and \$25,000 to apply on the liquidation of the RFC loan, records of the Department of Public Works show today. The revenues from the four bridges, plus the \$20,000 payable by the Virginia Electric and Power company, will bring the annual income from the bridges to around \$90,000 per year which is more than sufficient to pay the \$65,000 in interest charges."

1935 Bridge Heads' Resignations Await Report, *Richmond News Leader*, February 6, 1935

Present officers: Wicker (president), Compton, Saville, and Smiths (VPs), Landon B. Edwards (comptroller), and Wilmer L. O'Flaherty (secretary). Proposed reorganization: officers to be Mayor, Director of Public Works, City Attorney, and presidents of the Board of Aldermen and Common Council. Change pending final report of representatives of RBC, VEPCO, and RFC on the question of free traffic on three RFC spans

1935 Using Lee Span City Obligation, *Richmond News Leader*, February 23, 1935

"The city of Richmond is placed under direct obligation to route traffic over the Robert E. Lee bridge and to erect signs directing traffic over the bridge, under its contract with the Reconstruction Finance Corporation, examination of the contract revealed today." The article details the questioning of the obligation raised by those who protested routing of tourist traffic.

1935 First Interest on Bridge Loan Paid by Tolls, *Richmond News Leader*, May 1, 1935.

RBC paid RFC \$33,800 in interest and had a balance on hand of \$14,350, or about 45% of the amount needed to meet the next six months' interest charges. Total tolls amounted to \$288.38 per day (of which Lee Bridge contributed \$270.79 per day).

1935 RFC Approves Removing Tolls On Local Spans, *Richmond News Leader*, May 28, 1935.

All but Lee span to be toll-free; VEPCO to continue to pay \$20,000 per annum to RFC, and city to pay \$10,000 per year.

1935 Richmond Completes Interesting Program of Bridge Construction, *Engineering News-Record*, June 6, 1935.

This is a primary source on the engineering aspects of the RBC bridge program. Overall description: "The plan was extended to provide for five new bridges and the repair of a sixth. The First, Fifth and Marshall St. viaducts were purchased from the power company. The first two were replaced entirely with unusual rigid-frame concrete viaducts. At Marshall St. extensive repairs and alterations widened and strengthened the old steel-truss structure. A high-level multiple-arch concrete bridge was designed for the river crossing, connecting Belvidere St. in Richmond with Cowardin Ave. in south Richmond. To provide proper and adequate approaches to the James River Bridge, Second St. on the Richmond side was extended across the C.&O. freight yard on a two-span parabolic tied-arch bridge, to connect with the north plaza: on the opposite side of the river a new single-span bowstring arch was built to carry the main Cowardin Ave. approach over the A.C.L. Railway tracks." Labor: "Relief labor was used in the new bridge program. At the start of work on the First and Fifth St. viaducts, relief labor was used exclusively, equipment rental and materials being paid for out of the RFC loan. After 40 per cent of the work on the two structures had been completed, the system of operations was changed to a straight force-account basis under the direction of the bridge corporation, with all expenses met from the loan fund. This method of operation still lacked the speed required to finish these two bridges in desired time. To speed up the work, the last 30 per cent was performed by contract. Relief labor was used in building the north approach of the river bridge, a complicated structure crossing railroad tracks and a canal. The remainder of the river bridge, including all of the arch spans, was built under a single contract, though the contractor was required to use labor from relief lists whenever possible. On the Cowardin Ave. and Second St. bowstring arches, relief labor was used exclusively throughout, with materials and equipment rental paid for out of the loan. In the course of construction of these two bridges, every relief agency devised by the city, state and federal government had a hand in construction at some time or other. Municipal and state agencies gave way to the CWA [Civilian Works Administration] for a few months, and SERA [State Emergency Relief Administration] and FERA finally finished the job."

- 1935 Bridge Tolls Above Expenses, *Richmond News Leader*, August 8, 1935.
- "Gross Income for Seven Months of \$62,649 Is Reported." This amount was more than sufficient to meet 1935 interest charges, with something left over.
- 1935 Air View Shows Three Free City Bridges, *Richmond News Leader*, August 30, 1935.
- Captioned photograph shows three bridges to be opened to free traffic at 10:00 pm; Marshall Street, Fifth Street, and First Street.
- 1935 Jubilee Marks Free Viaduct For East End, *Richmond Times-Dispatch*, August 31, 1935.
- Celebration of the opening of Marshall Street Viaduct as a toll-free span.
- 1936 Asset of Concrete and Men, *Richmond News Leader*, April 29, 1936.
- "The proudest Virginia story of the depression - we hope it is not apocryphal - describes how officials of the RFC would not believe representatives of the Richmond Bridge Corporation were serious when they first proposed to anticipate repayment of funds advanced by the federal government." RBC will offer RFC, with interest, \$25,000 that is not due for 7 years; RBC is eager to pay off debt and hand over bridges to city.
- 1936 Wicker Declares Williams Opposed Loan for Bridge, *Richmond News Leader*, October 23, 1936.
- "The facts are that, although the most earnest and persistent efforts were made, without any interruption, beginning the latter part of August 1932, nevertheless, the first definite encouragement was received in Washington during the latter part of November of the same year. Then, on the last day of November, 1932, the RFC agreed to make the loan, provided we could meet a large number of conditions. These conditions were formulated later, and embodied in a definite loan contract between the RFC and the Bridge Corporation on April 18, 1933. The loan was closed, and the first installment of the loan paid over to the Bridge Corporation on May 13, 1933."
- 1936 \$105,000 Paid By Bridge Tolls, *Richmond News Leader*, December 28, 1936.

RBC able to pay \$105,000 on principal of loan in the first ten months of 1936 as well as meet all interest payments during the year. January 1 - November 30 revenues from Lee Bridge amounted to \$107,357.40 "and with the Florida-bound tourist traffic now getting heavier each day the bridge revenues for the full year are expected to surpass revenues received in 1935." Article provides information on payments.

1936 \$15,000 to RFC From Bridges, *Richmond News Leader*, April 17, 1937.

RBC paid to RFC on April 15, \$15,000 on the principal of \$1,690,000; the first regular payment on the principal fell due on May 1; tolls from Lee bridge were so heavy that the company has been able to keep up the semiannual interest payments on the loan and also pay approximately \$150,000 on the principal. "On May 1 the payment of \$20,000 on the principal falls due, which the company will be able to pay. With the \$15,000 paid on April 15 the May 1 payment will bring reductions on the loan for this month to \$35,000."

1938 Group Buys Bridge Bonds, *Richmond News Leader*, February 3, 1938.

"Syndicate Takes Entire Issue; \$22,500 Saved. A syndicate composed of Mason-Hagan, Inc. of Richmond and A.C. Allyn and Associates of Chicago, today bought the entire issue of the Richmond Bridge Corporation's bonds, at a saving to the city or the bridge corporation of \$22,500 a year." Bridge tolls reduced the original loan to \$1,500,000, in addition to meeting interest payments. The refinancing reduced the interest rate from 5.5% to 4%. "John J. Wicker, Jr., president of the bridge corporation, estimates that the Robert E. Lee Bridge, the only one of the four bridges on which tolls are now collected, will be entirely free from debt within twelve years. This is a much shorter time than was anticipated when the bridge was built."

1938 Alfredo C. Janni, 68, *The New York Times*, March 3, 1938.

Obituary of Janni, consulting design engineer for RBC project.

1942 Woody Named President of Bridge Corp., *Richmond News Leader*, January 9, 1942.

"Alderman Henry B. Woody was elected president of the Richmond Bridge Corporation at a meeting of the stockholders, held in the offices of Mayor Ambler today. The action of the stockholders places the bridge corporation completely under the control of city officials and members of the City Council. . . .At a meeting held last week, the stockholders

elected directors, but neglected to elect a president. Alderman Woody, president of the Board of Aldermen, W.C. Carpenter, president of the Common Council, and Alderman E. Harold Thompson were elected in place of Mr. Wicker, Wilmer J. O'Flaherty and Horace L. Smith, citizen directors on the old board."

1942 Thanks to the Bridge Builders, *Richmond News Leader*, January 28, 1942.

Editorial indicating that Wicker et al. were pushed out in undefined power play; praise for the "magnificently successful" bridge; expresses hope that the Council would formally thank Wicker et al.

1947 "As One That Loves His Fellow Men," *Richmond News Leader*, January 21, 1947.

Editorial on the occasion of Saville's death; Saville was a University of Virginia graduate and was director of Public Works in 1921.

1947 Saville Funeral Wednesday; City's Ex-Public Works Head, *Richmond News Leader*, January 21, 1947.

Saville died January 20; "Mr. Saville conceived and designed the Robert E. Lee Bridge. In 1933 he helped organize the Civil Works Administration, the first of the government's work relief agencies, in Virginia, and later was active in its successor, the WPA."

1947 Former City Official, Allen J. Saville, Dies, *Richmond Times-Dispatch*, January 21, 1947.

Basic obituary and description of Saville's life is the same as in the *News-Leader*: "Mr. Saville conceived and designed the Robert E. Lee Bridge. In 1933 he helped organize the Civil Works Administration, the first of the government's work relief agencies, in Virginia, and later was active in its successor, the WPA."

1948 Richmond Bridge Corporation Turns Over Assets to City, *Richmond News Leader*, August 25, 1948.

RBC turned over assets (four bridges and about \$1,300) to the city on August 24 and went out of business. RBC was chartered September 30, 1932. The debt was paid off in 1946, and a court order made the bridge toll-free after September 16, 1946.

1952 Surprises Due As Bridges Get Name Signs, *Richmond News Leader*, July 8, 1952.

Apparently, the various bridges never got name plaques, so the public did not know that they were named bridges. All had been given names in 1941, except the Lee Bridge (James River), which had been named when it was opened. The official bridge names given were as follows: Fifth Street - Stonewall Jackson Memorial Bridge; Marshall Street - A.P. Hill Memorial Bridge; First Street - J.E.B. Stuart Memorial Bridge. Note the naming of the bridges after prominent Confederate generals.

1956 Lee Bridge, Virginia War Memorial Stand as Monument to Work of John Wicker Jr., *Richmond News Leader*, April 5, 1956.

This is a fine, greatly informative and enjoyable article in which Wicker describes the origin of the RBC. A prime source for exhibit.

Hagstrom, Suzy

1979 Stark Memories Haunt Many, *Richmond News Leader*, October 26, 1979.

A companion piece to Whitely's article (below); contains some good personal recollections of Depression-era Richmond.

Whitely, Tyler

1979 Market Bust Surprised City, *Richmond News Leader*, October 26, 1979.

Some good general information on the impact of the Depression on Richmond; an article published on the fiftieth anniversary of the Crash.

Fetter, Leatrice Caplan

1988 *825 St. Paul Street; A Memoir.*

Contains very good description of relief workers on their way to and from projects. Ms. Fetter's father offered transportation to Jackson Ward area workers on relief projects (see Section VII).

List of Graphics Resources - The Richmond Bridge Corporation Project

American Society of Civil Engineers
Library
Tel: 212 705-7611

The ASCE is a possible source for a photograph of Alfredo Janni.

New York Times Pictures
Tel: 212 556-1234
Contact: Barbara Mancuso

The *New York Times* obituary of Alfredo Janni (March 3, 1938) featured a photograph of the engineer. NYT Pictures charges \$100 to search for and reproduce a photograph.

Richmond Newspapers, Inc.
Library
Tel: 804 649-6285
Contact: Charles Saunders, Director

The library of Richmond Newspapers, Inc., has photographs that appeared in both the *Times-Dispatch* and the *News Leader*. However, staff indicated that their holdings from the 1930s were spotty and that they could not provide copies unless the photographs were taken by newspaper staffers.

The Valentine Museum
Tel: 804 649-0711
Contact: Rosalind Urbach Moss, Historian and Curator of Photographs

The Valentine Museum has twelve photographs of the construction of the Lee Bridge and one of the construction or reconstruction of the Marshall Street Viaduct. The Valentine also has a view of the original Fifth Street Viaduct from the turn of the century.

VDOT Structures and Bridges

Tel: 804 786-2635

Contact: Mal Kerley, Chief Engineer

The Virginia Department of Transportation has complete plans for all of the Richmond Bridge Corporation structures.

Virginia State Archives

Picture Collection

Tel: 804 786-8958

Contact: Carolyn Parsons, Picture Collection Librarian

The Virginia State Archives has four excellent 8x10" prints of the Lee Bridge and one lesser-quality print of the bridge against the Richmond skyline. Aside from these prints and a 1913 postcard of the Marshall Street Viaduct, Ms. Parsons was unable to find any views of the bridges.