

Staff Report City of Richmond, Virginia

Urban Design Committee

UDC 2022-06	Conceptual Review Meeting Date: 7/7/2022		
Applicant/Petitioner	Thomas Westbrook, City of Richmond Department of Public Works		
Project Description	Conceptual 17.05 review of the replacement of a bridge on E. Broad Street.		
Project Location			
Address: 1554 E. Broad Street	1554 1554 400		
Property Owner: City of Richmond	1604 Telshall Se		
City of Richmond department of Public Works is proposing to replace and existing bridge on E. Broad Street due to structural deficiencies.	1401 55 55 1500 1615 300 190 1705		
The scope of work is "bridge only" as there will be no increase to roadway capacity.	607 607 500 500 500 500 500 500 500 5		
Staff Recommendation	Approval, with Conditions		
Staff Contact	Alyson Oliver, <u>alyson.oliver@rva.gov</u> , (804) 646-3709		
Previous Reviews	This application was reviewed at the May 5, 2022 UDC meeting, where the committee voted to defer the request. At the meeting, concerns were raised about the narrow design of the pedestrian tunnel and the need for public engagement. The UDC appointed a two person sub-committee to work with the applicant on updating the design to address the concerns raised by the UDC.		
Staff Recommendations	Staff recommends that:		
	 The bridge be designed to include a rectangular pedestrian tunnel, as generally shown in the exhibits provided with the application. Existing granite curbing and cobblestone underneath of the bridge be retained and protected during construction. Applicant coordinate final design of the bridge with the Department of Environmental Quality to analyses the project's impact on the existing floodplain and floodway. Any existing historic resources be protected during construction, including existing masonry abutting the existing wingwalls on the southern side of the bridge. Lighting be provided within the pedestrian culvert. Additional details on lighting to be submitted to UDC with final review package. An anti-graffiti sealant be applied within the tunnel to protect against damage from vandalism. 		

Findings of Fact

Site Description	The bridge is located within the City of Richmond limits on Broad Street over abandoned CSXT Right-of-Way, approximately 1,000 feet west of the intersection of Broad Street and 18th Street. The bridge is adjacent to the Lumpkin's Slave Jail and Richmond African Burial Ground. The project location map is provided in Attachment 1 of this report. The proposed tunnel will be constructed in the same location as the existing bridge.	
Scope of Review	The proposed bridge replacement is subject to design review under Section 17.05 of the Richmond City Charter as a "public structure".	
Project Description	The purpose for this project is to replace the existing structurally deficient bridge carrying Broad Street over CSXT Right-of-Way with a new structure to eliminate a structurally deficient bridge from the City's inventory.	
	The existing bridge and approach roadway consists of a four-lane facility located in an urban area. The roadway is classified as a Primary Arterial with a posted speed limit of 25 mph. The existing 34-foot, single span structure was constructed in 1909 and consists of a concrete encased multisteel beam superstructure set on reinforced concrete substructure with slight skew. The framing system consists of 53 steel I-beams (16" deep) spaced at approximately 2'-0" on center. The bridge carries four travel lanes of Broad Street. The travel width of the existing bridge is approximately 42'-0" measured face-to-face of curb with an out-to-out width of approximately 66'-0". The land in the immediate vicinity of the project is generally urban with some historical areas nearby.	
	Below the bridge, there is a proposed 20 foot wide culvert which will be used for pedestrian access below the bridge. The preliminary structural plans have terminal walls that are perpendicular to the culvert. These walls afford the opportunity for signage, artwork, or information regarding the surrounding area.	
	Update since May 5, 2022	
	Since the May 2022 UDC meeting, the applicant has met with the subcommittee, comprised of Todd Woodson and Jessie Gemmer, to work on updating the plans to address concerns raised by the committee. From that meeting, three design options were proposed for the pedestrian tunnel under the bridge: arched, semi- arched, and rectangular.	
	These options were then sent to email distribution list for the Shockoe Alliance. The Shockoe Alliance is composed of 23 citizen members representing business and interest groups appointed by the Mayor to guide the creation of the Shockoe Small Area Plan. As part of the process, the Alliance also reviews major infrastructure projects within the study area. The email distribution list is comprised of 64 contacts, representing the Shockoe Alliance membership and other interested parties.	
	Staff notes that a version of the bridge replacement plans was shared with the Alliance back in March 2021. There were 54 persons in attendance at the meeting, and the minute do not reflect any major comments or concerns with the proposal.	
	Comments regarding the updated design were received from twelve citizens and two Department of Public Utilities (DPU) employees). A summary of the comments is listed below:	
	 Consider adding stairs to connect bridge to the ground on either side; Design to accommodate events, which are often held within the tunnel; Maximize the size of the tunnel; Include interior tunnel lighting in the design; Consider how the timing of construction may impact events in the area; Consider the impact on Floodway (DPU and citizen comment) Design for conditional vehicle access, with bollards; Accommodate existing utility easements within bridge structure (DPU); Consider incorporating art on the retaining walls; 	

		Additionally, citizen comments also expressed a concern that the new tunnel may be tagged with graffiti, and there was no clear preference for the shape of the tunnel (arched, semi-arched, or rectangular).
	To address these comments, staff recommends adding conditions that require an anti-graffiti sealant be applied within the tunnel to protect against damage from vandalism. Staff also recommends that the applicant pursue the rectangular design option, which is the option preferred by DPW. These conditions have been incorporated into the staff recommendations listed in this report.	

Urban Design Guidelines and Master Plan

	Text	Staff Analysis	
Richmond 300 Master Plan	Objective 4.1.e e. Encourage development that respects and preserves the natural features of the site through sensitive site design, avoids substantial changes to the topography, and minimizes property damage and environmental degradation resulting from disturbance of natural systems. Goal 9: Streets, Bridges & Connections Building and improving Richmond's street network and bridges is critical to connect our neighborhoods to one another and provide multiple routes for pedestrians, cyclists, and transit moving around the city. (pg. 122) Objective 9.2: Improve and Create Bridges a. Develop and implement a plan to rehabilitate and repair city bridges so that less than 10% of bridges are rated as structurally deficient and all bridges have been substantially renovated and maintained.	This proposal helps meet the Goal 9 outlined in the Richmond 300 Master Plan by replacing an existing structurally deficient bridge that has been rated "poor" by VDOT. Staff notes that the proposed bridge and culvert are located within a 100-year Floodplain and Floodway. In order to minimize any future environmental degradation as a result of this project, <u>staff</u> <u>recommends that the applicant coordinate</u> <u>the final design of the bridge with the</u> <u>Department of Environmental Quality to</u> <u>analyses the project's impact on the existing</u> <u>floodplain and floodway.</u>	
Urban Design Guidelines			
Environment, Public Parks, Design Considerations, pg. 9	Certain design considerations should be addressed in any project, regardless of the type of park. Historic elements should be surveyed and preservation should be considered for both facilities and landscapes. Impacts to the natural landscape should be assessed and should generally be minimized when constructing man-made elements. Lighting and landscaping should allow for surveillance and policing activities, but should be designed primarily to accommodate the intended use of the park.	There are several historical elements on site that should be preserved as part of this reconstruction project. These items include: (i) any existing granite curbing and cobblestone below the bridge, (ii) the existing masonry abutments flanking either side of the wing walls on the south side of the tunnel, and (iii) the larger pieces of masonry located in the fill on the north side of the bridge. <u>Staff recommends that these</u> <u>elements retained and protected during</u> <u>construction.</u>	
Transportation, Provision of New Sidewalk, pg. 4	Existing granite curbing and stormwater inlets should be retained. Any new	Staff recommends that any existing cobblestone and granite curbing below the	

	granite curbing should match existing curbs.	bridge be retained and protected during construction.
		Staff also notes that there are existing brick- paved sidewalks with granite curbs on the bridge. The plans provided with this application note that these features will be reconstructed as part of this project.
Community Character, Illumination, pg. 22	Consistent levels of illumination should be maintained in public areas. Safe and comfortable circulation depends more on the consistency of illumination than on the level or brightness of the lighting. All light sources should be shielded to reduce glare, spill light, and wasted light.	Staff notes that the preliminary structures report submitted with the application recommends the inclusion of pedestrian lighting within the resulting culvert. However, no information on any proposed lighting has been provided with this application. <u>Staff</u> <u>recommends that lighting be installed within</u> <u>the culver and that additional details be</u> provided to UDC for review.

BROAD STREET (ROUTE. 250) OVER CSXT ROW: PRELIMINARY STRUCTURES REPORT

JUNE 25, 2020

PREPARED FOR:

City of Richmond Department of Public Works 900 E. Broad Street Richmond, Virginia 23219

PREPARED BY:

Timmons Group 1001 Boulders Parkway, Suite 300 Richmond, Virginia 23225

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Introduction

Authority

This study was authorized by the Department of Public Works of the City of Richmond (the City) as part of the design services for the subject project. Timmons Group (Timmons) is providing the Stage I bridge design services under an on-call contract with the City and based on the executed scope and fee letter dated March 20, 2020.

Project Purpose

The purpose for this project is to replace the existing structurally deficient bridge carrying Broad Street over CSXT Right-of-Way with a new structure to eliminate a structurally deficient bridge from the City's inventory. The project is a "bridge only" replacement, meaning no increase to the existing roadway capacity is included in the scope of the project.

The scope of work for this project consists of preliminary design. Preliminary design includes the development of 30% bridge plans, this Stage I Report, and an initial cost estimate.

Roadway Functional Classifications Information

The functional classification of Broad Street (Route 250) over abandoned CSXT Right-of-Way is a Principal Arterial. The current average annual daily traffic (AADT) is estimated to be 28,000 vehicles per day (from VDOT Traffic Engineering Division 2019 data) with approximately 1% truck traffic and 1% bus traffic. According to the VDOT Road Design Manual, the required design speed is 25 mph. The current posted speed limit along Broad Street is 25 mph.

Roadway Geometry

The roadway alignment along Broad Street runs west to east. The existing roadway is approximately 42 feet wide, which includes four travel lanes with two in each direction, approximately 10 feet wide.

The total roadway width for an urban principal arterial with curb and gutter roadway, based on VDOT geometric design criteria, is controlled by lane width set at 11' when design speed is 40 mph or less. However, for instances which carry restrictions on truck traffic, the lane width may be reduced by 1'. Truck restrictions are imposed due to railroad trestle east of the bridge location which limits the height of the travel way.

As is customary on low speed corridors, and in agreement with VDOT guidelines, we propose to use a design speed of 25 mph, which matches the currently posted speed limit. In an effort to reduce right-of-way, environmental, and utility impacts of the new bridge the approach roadway alignment will not be shifted. The proposed roadway typical sections will remain consistent with those currently in place.

Data Sources

The following data sources were used in the development of this report:

- Structure Inspection Report (Timmons Group April 2020)
- Design Drawings (December 1906, revised March 31, 1909)
- Field notes and project meeting minutes
- City of Richmond provided utility mapping

Design Criteria

The following design criteria were used to develop the Stage I Report and preliminary bridge plans

- AASHTO LRFD Bridge Design Specifications, 8th Edition, 2017
- VDOT Modifications to the AASHTO LRFD Bridge Design Specifications (IIM-S&B-80.6) dated October 31, 2018
- VDOT Road and Bridge Standards, 2016
- VDOT Road and Bridge Specifications, 2020
- VDOT Manual of the Structure and Bridge Division, Part 2 Design Aides & Typical Details
- VDOT Manual of the Structure and Bridge Division, Part 5 Prestressed Concrete Adjacent Member Standards
- VDOT Road Design Manual (January 2005), revised January 2019
- VDOT Drainage Manual (April 2002), revised March 2019
- VDOT Work Area Protection Manual (WAPM), 2011, revised April 2015
- VDOT Traffic Engineering Traffic Count Data (2017)

Site Description

The existing bridge and approach roadway consists of a four-lane facility located in an urban area. The roadway is classified as a Primary Arterial with a posted speed limit of 25 mph.

The existing 34-foot, single span structure was constructed in 1909 and consists of a concrete encased multisteel beam superstructure set on reinforced concrete substructure with slight skew. The framing system consists of 53 steel I-beams (16" deep) spaced at approximately 2'-0" on center. The bridge carries four travel lanes of Broad Street.

The travel width of the existing bridge is approximately 42'-0" measured face-to-face of curb with an out-to-out width of approximately 66'-0".

The land in the immediate vicinity of the project is generally urban with some historical areas nearby.

Project Location

The bridge is located within the City of Richmond limits on Broad Street over abandoned CSXT Right-of-Way, approximately 1,000 feet west of the intersection of Broad Street and 18th Street. The bridge is adjacent to the Lumpkin's Slave Jail and Richmond African Burial Ground. The project location map is provided in Attachment 1 of this report. The proposed tunnel will be constructed in the same location as the existing bridge.

Geotechnical Description

Based on observations noted in the previous bridge inspection report and during Timmons' field visit, the existing bridge is believed to be founded on shallow foundations, utilizing a gravity-type abutment structure.

According to the 1993 Geologic Map of Virginia, the project site is located in the Coastal Plane Physiographic Province. Locally, the site appears to be underlain by the Chesapeake Group formation, which typically consists of Tertiary aged deposits of fluvial sand, gravel and clays.

While there are currently no borings for the subject site available, borings are available for the adjacent bridge over I-95. Reviewing these borings, preliminary geotechnical recommendations are to support the proposed

tunnel on a shallow foundation system consisting of spread footings placed onto dense natural soils. Anticipated bearing capacity is 6 ksf to 8 ksf. Undercut is anticipated to control settlement. We anticipate that the project will require extensive quantities of fill soils to bury the proposed tunnel and bring the grade up to keep the current vertical alignment of Broad Street.

The geotechnical design will be further refined during final design as bridge loads are refined and a full geotechnical report will be developed. While shallow spread footings are currently assumed to be the preferred foundation alternative, other options will be considered during final design to ensure the most efficient foundation design is utilized.

Lighting

It is recommended that lighting inside the culvert be included as part of the final design.

Ventilation

It is recommended that ventilation inside the culvert be natural or passive as opposed to active/mechanically assisted.

Utilities

The existing utilities within the Broad Street corridor at the bridge is compiled based on survey field notes, documents from the original bridge plans, City utility records (as included an appendix) and information from private utility representatives. There is evidence that as many five utility lines or utility conduits have been or are currently housed within the superstructure of the existing bridge. The utilities listed from the original record drawings progressing from the southern end to the northern end are a 20" natural gas line, a 16" water main, a 8" water main, a 12" power line duct bank conduit, and a 10" telecommunications duct bank conduit.

According to the City gas inventory mapping, we believe that a 20" gas line is abandoned or is being used to house another utility at present time. According to the City waterline inventory mapping, we believe that the 8" watermain is abandoned or is being used to house another utility at present time. The other three lines are expected to be active and in use at this time.

There is an existing 3-phase overhead power line crossing Broad Street just east of the bridge that is active and must be kept in mind by the contractor on crane usage expected in the demolition of the bridge and/or the placement of the tunnel.

Timmons has made initial contact with Jonathan Cosby in the City's Department of Public Utilities (DPU) regarding the planned 16" waterline replacement along Broad Street in the area of this bridge. The coordination of this effort should continue through final design.

There is no evidence of there being any sanitary sewer (CSO or otherwise) in the immediate vicinity of the bridge (refer to appendix).

There is a City non-encased street light power service line that runs along the northern side of Broad Street east of the bridge, a City encased street light power service line that runs along the northern side of Broad Street west of the bridge, and a City non-encased street light power service line under the bridge from the north end to the south end of the bridge providing power to a pedestal light pole in the northwest quadrant of the tunnel.

There is a 24" storm sewer system running directly under the proposed box culvert. According to City mapping (included in the appendix), this line is referred to as the "Western Interceptor" line and is recorded as a precast reinforced concrete (PRC) pipe. This storm sewer may run the risk of being damaged from the construction. Timmons recommends that measures be taken to ensure it is not damaged as part of the final design. If this is not feasible, it either be replaced in its current location or offset adjacent to the culvert as part of this project.

According to record plans of the trail design (circa 2017), there are also three (3) parallel underdrain lines (two 6" and one 12") running under the bridge.

A utility field review meeting should be held on-site with all the utility owner representatives to initiate discussions of necessary relocation work assuming all lines are still required.

Traffic Engineering

Broad Street over the abandoned CSXT Right-of-Way is a highly traveled roadway with an Average Annual Daily Traffic (AADT) of 28,000 vehicles per day. The area that is serviced by Broad Street is a predominantly central business district and intermediate areas with low truck volumes.

The stretch of Broad Street around the bridge is mostly used as an access point to the I-95 on-ramps and as a major east-west arterial between office land uses from the west and residential & mixed use land uses from the east. There are only two access points off Broad Street in this area, one is for a small business, Hungerford Heating & Cooling facility approximately 300 feet east of the bridge, and the other is the entrance to a public and Virginia Commonwealth University (VCU) parking lot approximately 450 feet east of the bridge. Access to both entrances are planned to be maintained during the duration of construction.

Broad Street Pedestrian Crossing

There is a proposed pedestrian Hawk Signal and high visibility crossing just west of the proposed structure. The City is waiting for VDOT advertisement authorization and anticipates the proposed project to be in construction by fall or winter of 2020. City desires to not bundle this pedestrian signal with the subject work; however, coordination between the projects is anticipated as temporary signals may be necessary during construction and pavement markings may be impacted.

Figure 1: Broad Street Pedestrian Crossing

Sequence of Construction

Based on the condition and framing system of the existing bridge and

available right-of-way limits, it is feasible to maintain traffic in both directions on Broad Street during construction of the new tunnel, although the through lanes will be reduced to one eastbound lane and one westbound lane for most of the construction duration. It is proposed to close one side of Broad Street to through traffic within the limits of the project to demolish the existing superstructure. Phasing the construction of the new road will permit limited traffic flow through this area.

The existing bridge plans do not relay enough information to rule out the possibility that the abutments are not self-supporting (i.e. – this is a possibility that the existing bridge superstructure provides support for the abutments through frame action). We have outlined in the plans a sequence of demolition/construction that takes this into account. There will be a need for partial backfill adjacent to the new culvert prior to removal of the superstructure in order to support the abutments that will be buried and remain in place. It is anticipated to use VDOT-specified select backfill material for the first stages of backfill to facilitate drainage as well as avoid compaction issues.

Environmental

Coordination with the Department of Historic Resources (DHR) will be performed through the submission of project information to DHR's Electronic Project Information Exchange (ePIX). It is anticipated that there will need to be special provisions taken for the adjacent historical properties and accessory items such as signage.

At this time it appears that there are no wetlands or jurisdictional waters of the U.S. features in the vicinity of the project and that the project should be below RSMP requirements, strict adherence to applicable state and local erosion and sediment control/storm water management regulations will be recommended by the regulatory agencies.

Drainage

Existing approach roadway drainage flows off the paved surface to curb and gutters on either side of Broad Street. The drainage gutters direct the water into stormwater infrastructure in the surrounding area, and ultimately outlet to the James River. The existing bridge has no drainage system and debris and vegetation are collecting along the curb-lines and parapets.

For the proposed structure and approach roadway, the existing drainage patterns will be maintained. The drainage gutters will be maintained to keep water away from the structure. There will otherwise not be a need for new drainage structures in the immediate area.

Constructability and Duration

A construction duration of 9-12 months is estimated. With 28,000 VPD on Broad street, traffic reduced to two lanes during construction will have a significant impact. Consideration to incentive clauses may be considered to minimize this traffic disruption.

Access to both sides of the proposed tunnel will be achieved from the existing roadway approaches and rightof-way. Temporary construction easements will likely be required for construction of the structure.

Aesthetic Considerations Superstructure replacement option is selected in 2022.

The City has voiced their intention of having 20-foot-wide cross section for a pedestrian walkway which was deemed acceptable with a concrete arch concept as to mimic that of a railway tunnel. The proposed height of the arch was determined with a focus on minimizing required grading at the termini while meeting AASHTO and VDOT minimum requirements for pedestrian use.

The preliminary structural plans have terminal walls that are perpendicular to the culvert. These walls afford the opportunity for signage, artwork, or information regarding the surrounding area. This opportunity is recommended be investigated further as part of final design. A similar system was utilized by the VDOT Route 27 / Route 244 Interchange design build project in Alexandria.

It is assumed that this project will need to go through the Urban Design Committee (UDC) process, and before the Planning Commission and City Council for aesthetic approvals.

Superstructure replacement option is selected in 2022.

The proposed roadway typical section is established based on the existing roadway and traffic conditions, the VDOT Roadway Design Manual, and the VDOT Structure and Bridge Division Manual, Part 2. The preferred typical section was discussed and decided on during the scoping process with the City.

The typical section will accommodate a 20-foot wide pedestrian path with an arched top. Timmons submitted a concept sketch to the City in April 2020 with rectangular and arch concepts. A 20-foot wide cross section was deemed desirable by the City and the arch concept as also preferred. The actual height of the arch was reduced from this initial sketch to minimize required grading at the termini.

This configuration aligns with VDOT requirements and guidelines. The VDOT Roadway Design Manual for a "shared-use path" calls for a desirable 10' vertical clearance. In addition, the MUTCD provides requirements for vertical clearance of signs to be no less than 7'. This guidance can be utilized for the dimensions of the arch.

Structure Types Investigated

Previous discussions of options for this bridge included a superstructure replacement as well as a full bridge replacement.

Superstructure Replacement Superstructure replacement option is selected in 2022.

This option was ruled out because the existing substructure that would remain is over 100 years old. There would need to be extensive work to the existing abutments to accept the new superstructure and there are inherent risks in not knowing the overall condition of the abutments or even the exact configuration of the abutments. The original design drawings allowed for options for the footings. As-built drawings are not available for the footings. In addition, there is some concern that the existing structure utilize frame-action for the support of the abutments. This issue further removes the option for a superstructure replacement.

Full Bridge Replacement

Replacing the structure with a new bridge was ruled out as the required span, given its current and future use as a pedestrian facility, is significantly less than the current span. The added complications and cost of building a bridge in the same location as existing and the impacts on maintenance of traffic further ruled out his option.

Structure Preliminary Recommendation

The preliminary recommendation, as shown on the Preliminary Drawings provided in the Attachments, consists of construction of a structure underneath the existing bridge to provide a sheltered walkway for pedestrians. Once the new fill is in place, the existing superstructure can be partially demolished. The majority of the existing substructure is anticipated to remain buried in place. A new roadway will be constructed on top of the proposed fill to reinstate the Broad Street traffic.

The structure will be comprised of a reinforced concrete arch which follows the skew of the current bridge opening. The substructure is anticipated to consist of shallow foundations.

The preliminary construction cost estimate for this project is provided in an attachment to this report. The preliminary cost estimate was developed based on information gathered from historical bid tab data, experience, and engineering judgement. The cost estimates include demolition of the existing structure, construction of the new structure, and approach roadway work.

Schedule for City Process

Assuming that the project is developed as a conventional city-managed project, the approximate milestone dates, project progress, and submittals are as follows:

- Geotechnical Investigation
- Environmental Studies
- 60% Plans and Estimate
- 90% Plans, Specifications, and Estimate
- Final Construction Documents
- Advertisement
- Start Construction
- Construction Complete

July-August 2020 July-August 2020 September 2020 October 2020 November 2020 January 2021 March 2021 March 2022

Incorporation into a VDOT Project

There have been discussions about combining this project with the projected Virginia Department of Transportation (VDOT) design build project for the rehabilitation of five bridges over I-95. One of these bridges is adjacent to the subject project and there are potential cost savings with bundling these projects together. With a projected Request for Qualifications (RFQ) date of Spring 2020 and Request for Proposals date of Fall 2020, the decision to incorporate this project into the VDOT design build project is timely.

On March 18, 2020, Jason Zhang of VDOT provided to the City their perceived risks as well as requirements to combine the projects. Following are portions of that information sent from VDOT, along with the status of each item.

VDOT Risks

Currently VDOT has identified several risks and concerns by inclusion of the sixth bridge. Those risks and concerns and are outlined below.

- The Lumpkin Bridge is outside the scope of the VDOT project, since it is not over I-95
 - o Timmons assumes this is not a risk as it would end the discussion with VDOT
- Environmental/Cultural Resources (Historical & Archeological) unknowns
 - Timmons conducted work in 2014 in this area as part of the Gateway Project
 - Timmons anticipates a Categorical Exclusion is applicable for this work
- Does not appear that the City has studied this beyond a conceptual level
 - Stage 1 report is now developed
- The Lumpkin Bridge interferes with the sequencing of construction with the main bridges if trying to construct at the same time
 - This project actually aligns as there will need to be similar traffic shifts for both projects but coordination and timing is key
- The Lumpkin Bridge is not a VDOT asset
 - o Timmons assumes this is not a risk as it would end the discussion with VDOT
- Unknown risks associated with City Council, Planning District Commission (PDC) and City staff
 preferences
 - o The City has stated that they can take on these risks
- Urban Design Committee input/changes could result in increased costs and/or project development delays.
 - o The City has stated that they can take on these risks

VDOT Requirements

In order for VDOT to consider including construction of this structure within the VDOT proposed design build (DB) project, they have recommended that the City develop an appropriate level of Preliminary Engineering consistent with their VDOT DB policy. Following is a summary of activities needed to be completed by the City and Timmons. VDOT has noted that the deliverables should be submitted to VDOT no later than early September 2020. The RFP for VDOT design build project is currently scheduled to be issued in November 2020.

- City will scope project (recommend using PM-100) with critical path schedule and major quantities engineer estimate with VDOT review
 - o Timmons Group will provide this task
- City will take the bridge through public involvement and either posting of willingness or conduct public hearing.
 - o City will conduct this work, assisted by Timmons Group

- City will complete all environmental studies and documentation to support the design build RFP, including but not limited to completing the NEPA document, performing an asbestos inspection of the bridge and any attached utilities, and providing environmental support documentation to support the RFP.
 - Timmons Group will provide this task
- City will develop engineering plans for bridge demolition and construction commensurate with public hearing plans.
 - Timmons Group is currently conducting this task
- City will close all public involvement requirements and obtain all required City Council and VDOT approvals.
 - City council requirement will be handled by the City, assisted by Timmons Group
 - VDOT to clarify what VDOT approvals do they will need
 - City will obtain City Council resolution recommending project for design build
 - City will conduct this work, assisted by Timmons Group
- City will facilitate separate risk work session for their bridge
 - Timmons Group will provide this task
- City will develop final part 2 technical requirements for their bridge to be incorporated in the DB documents.
 - Timmons Group will provide this task
- City to obtain a Finding of Public Interest (FOPI) from Federal Highway for DB delivery

 Timmons Group will provide this task
- City will obtain all City Council approvals to allow approval for award of DB construction
 - City will conduct this work, assisted by Timmons Group

Schedule for VDOT Design Build

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Following is a schedule for the incorporation of the bridge into the VDOT design build project. If VDOT deems that they will not incorporate it into the design build project, the subject project can proceed on as a City Project.

- City review of the Stage 1 report
- Submit Stage 1 report to VDOT
- VDOT approval of DB incorporation
- Geotechnical Investigation
- Environmental Studies
- Full package to City for review
- Full package to VDOT for incorporation

June 2020 June 2020 July 2020 July-August 2020 July-August 2020 Late August 2020 September 2020

Attachment 1: Project Location Map

