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To: Urban Design Committee
From: Planning and Preservation Division
Date: March 7, 2019
RE: **Conceptual location, character, and extent review of the Byrd Park Tanks roof replacement, 600 S. Arthur Ashe Boulevard; UDC 2019-09**

I. APPLICANTS
Steve Morgan, Department of Public Utilities

II. LOCATION
600 S. Arthur Ashe Boulevard (formerly 700 S. Boulevard)

Property Owner:
The City of Richmond Department of Public Utilities

III. PURPOSE
The application is for conceptual location, character and extent review of the roof replacement for the Byrd Park Tanks.

IV. SUMMARY & RECOMMENDATION
The Byrd Park Reservoir, constructed in 1876, currently utilizes a pre-stressed concrete roof installed in the early 1970s. This proposal seeks to replace the aging concrete roof with two new aluminum roofs. The proposed new roofs will have a taller pitch and will be slightly more visible than the existing roofs in order to provide adequate roof drainage. Additionally, new overflow vents will be constructed to allow free discharge at grade level and will be constructed with an architectural cast stone exterior wall similar to the Columbus Pumping Station Electrical Building located on the north side of the reservoir.

As the reservoir contains the city's potable water supply, the structure is required to meet requirements as they pertain to the Virginia Department of Health. Because of this, the possible shielding of the roof with landscaping is not a viable option as the root systems may negatively impact the structural integrity of the berm. Another concern is that landscaping may diminish visibility from a security perspective.

Therefore, it is Staff's position that the Urban Design Committee should recommend that the Planning Commission grant conceptual approval with the following conditions:

- That the applicant consider and provide an explanation of possible alternatives to minimize the visibility of the roof from surrounding areas
- That the applicant provide necessary materials, when appropriate, for final review

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V. FINDINGS OF FACT

a. Site Description and Surrounding Context

The tanks are part of the Byrd Park Reservoir located in Byrd Park at the terminus of Arthur Ashe Boulevard. The tanks are located within a 20-foot high earthen berm that forms the reservoir walls and consists of approximately eight acres. The reservoir contains two sloped access roads on the northern side that allow vehicles entry to the perimeter road. Currently, there are three concrete stairs located on the eastern, western, and southern side of the reservoir. The reservoir is bordered to the east and south by Byrd Park and the park's VITA trail. Arthur Ashe Boulevard extends from the north of the reservoir, flanked by tennis courts to the west and Fountain Lake on the eastern side. To the west of the reservoir is the Carillon Neighborhood National Registered Historic District.

The site is within the R-2 (single-family residential) zone and borders an area zoned R-4 (single-family residential) to the west.

b. Scope of Review

The improvements associated with this project are subject to location, character, and extent review as a "public building or structure" in accordance with Section 17.07 of the Richmond City Charter.

c. UDC Review History

Staff was unable to identify any prior projects involving this exact property; however, there was extensive review of the Columbus Pumping Station Proposed Electrical Equipment Facility (UDC #04-39, UDC #04-39 (02), and UDC #04-39 (03)). The recommendations for UDC #04-39 reflect concerns of security and that the design blend in and minimally detract from its surroundings as indicated by the landscaping, the creation of a berm to minimize the height of the new building, and the condition for the new design to be subordinate to the existing facility (located behind Columbus Statue).

At its meeting on April 17, 2006, the Planning Commission voted (6-0) to approve the location, character, and extent for the Columbus Pumping Station Proposed Electrical Equipment Facility.

At its meeting on March 14, 2005, the UDC recommended final approval of the project with the following conditions:

- That the maximum height of the building be between elevation 244 to 245 feet above sea level;
- That the retaining wall and fence be extended and squared off;
- That a minimum slope be used on the front berm and the line straightened;
- That the retaining wall be detailed to match the building

At its meeting on November 8, 2004, the UDC recommended conceptual approval of the project with the following conditions:

- The option of one building (as opposed to two buildings), located to the west of the existing pumping facility be investigated
- The new design be subordinate and recede from the existing facility

d. Project Description

The existing Byrd Park Reservoir is located at the southern end of Arthur Ashe Boulevard in Byrd Park. This water storage reservoir is familiar to many residents because of the 20-foot high earthen berm that forms the reservoir walls, and is a little over 8 acres in size.

The Byrd Park Reservoir was built in 1876 and was provided with a pre-stressed concrete roof in the early 1970s that fully enclosed the open-air reservoir to form two 25 million gallon tanks. The existing concrete tank roof is reaching the end of its useful life and is being scheduled to be replaced by two new aluminum roofs. The Department of Public Utilities plans to upgrade this water storage facility with the following improvements in addition to the tank roof replacement:

- Replacing existing tank outlet gates
- Upgrading tank overflow piping systems
- Replacing existing tank inlet and outlet valves
- Constructing new City Zone 2 North Transmission Main around the tanks for improved system reliability and redundancy
- Providing tank security system enhancements
- Providing tank ventilation system improvements
- Providing new tank mixing systems for water quality enhancement
- Constructing a new electrical and control building
- Providing other water storage facility upgrades and improvements

In order to provide adequate roof drainage, the proposed new aluminum tank roofs will have a slightly higher level at their center than the existing concrete roofs. The new roofs will only be slightly more visible than the existing roofs because of the height of the existing earthen berms that surround the tanks.

It is planned that the old concrete stairs on the east and west side of the tanks be removed to improve park user safety levels. The existing concrete stair on the south side of the tanks will be replaced by a new upgraded concrete stair to allow the operator safer access to the tanks.

The tanks will be provided with new overflow systems that need free discharge vents at grade level at the tank earth berms. It is proposed that each overflow vent be provided with a small structural security enclosure that is recessed into the earthen berms to minimize park user impacts. These overflow vent structures will have architectural cast stone exterior walls that are similar to those of the Columbus Pumping Station Electrical Building which is located on the northwest corner of the existing tank earth berm.

The two northern access drives from Arthur Ashe Boulevard and the fencing system around the top of the tank earthen berms will not be significantly altered by this project. It is planned that two existing northern access drives from Arthur Ashe Boulevard will be used for removal of the existing concrete roofs and construction of the two new aluminum roofs and for making other water storage tank upgrades and improvements. The use of these existing tank access drives for construction traffic will limit project impacts on park users. The existing cobblestone pavers at the Arthur Ashe Boulevard entrances will be removed during construction and then replaced when the project access work to the tanks has been completed.

The proposed tank valve replacements and piping system improvements on the east side of the Trafford Pumping Station will be routed through the park to minimize overall impacts, but it is expected that some existing tree removals will be needed. It is planned that some new trees will be provided at better locations within the park.

The estimated construction costs for the tank roof replacement project is $40,500,000. The City of Richmond, Department of Public Utilities will finance this project from their Capital Budget. The City is planning to initiate construction on this project in the fall of 2019.

e. Master Plan

The project area is located in the Near West Planning District, as defined by the citywide Master Plan. The Plan places the subject area in the Public and Open Space use category, with primary uses including publicly owned and operated parks, recreation areas, open spaces, schools, libraries and other government facilities (page 231).

f. Urban Design Guidelines

The Public Park section of the Urban Design Guidelines notes that “public parks are integral to the quality of life found in any urban landscape. Parks should respond to the environment in which they are located and should be designed in accordance with their intended use” (page 9).

Additionally, “A preference should be given towards materials and construction techniques which improve energy efficiency and water/soil quality” (page 9). The Guidelines are also very supportive of low-impact development and green building practices (page 10, 11).

The Guidelines note that landscape plans should “include diverse plant species, including evergreen, flowering and shade tree species combined with shrubs, ground covers and annual and perennial plantings” and that “shade trees for pedestrian comfort should be the predominant plant material in an urban setting” (page 10).

The Public Facilities section of the Urban Design Guidelines notes that “Green building practices, which minimize the environmental impact of buildings both in the construction phase and throughout the life of the building, should be considered in the construction of new public facilities as well as in the adaptation of existing public facilities. In general, public facilities should be designed to promote street activity and interaction with surrounding uses” (page 13). It also states that “building materials should be aesthetically and structurally durable, of high quality, and require little maintenance. Where appropriate, substances which resist graffiti should be applied to building materials to reduce maintenance requirements” (page 17).

Lastly, the Guidelines state that “lighting and landscaping should allow for surveillance and policing activities, but should be designed primarily to accommodate the intended use of the park” (page 9).