Public Summary

Documentary Study of 101 Duke Street, Alexandria, Virginia. (DSUP 2021-0012)

Introduction

R. Christopher Goodwin & Associates, Inc. (RCG&A) undertook a documentary study of 101 Duke Street in Alexandria, Virginia on behalf of Eleventh Street Development. The study was conducted in March 2021 in support of the permitting process for redevelopment of the property. The study focused on providing an overview of the historical development of the property, as well as a summary of the property's current conditions and archaeological resource potential.

Project Description

The proposed redevelopment project is located in the Old Town Alexandria, at the northwestern corner of Duke and South Union streets. The property encompasses four contiguous parcels located in the southeastern corner of modern Block 71. The parcels total 0.2347 ac and are bound by Duke Street on the south, S. Union Street on the east, an unnamed public alley on the west and an adjoining brick building on the north (Figure 1). An existing parking garage operated as "Solo Parking" spans all four parcels (Figure 2). The parking garage was built in 1988 and was an adaptive reuse of a single-story warehouse structure constructed during the 1950s as part of the Robinson Terminal South complex.

Planned improvements for 101 Duke Street include new construction of six residential townhomes, upgrades to existing infrastructure, and new landscaping. The townhomes are anticipated to be two three-unit buildings each three-stories in height with a rooftop loft. An attached parking area on the western side of the building will be entered through the public alley and will be accessible from the first floor of the townhome. The townhomes will front South Union Street and will include a small open space adjacent to the stairs/stoop used to access the first level of each townhome.

Figure 1. Aerial map showing the location of the Project Area in Old Town Alexandria

Figure 2. Photograph showing Solo Parking facility, 101 Duke Street, Alexandria, Virginia. (Image: RCG&A)

Due to the situation of the Project Area within the 100-year floodplain of the Potomac River, current construction plans call for elevation of the first floor of the planned townhome units above the flood elevation. The achieve this, a minimum of 5.6 ft (1.7 m) of fill material will be added to bring the top of the first floor slab up to an elevation above the floodplain level The existing lower level parking deck slab will be left in place and covered with suitable fill material.

The project is subject to compliance with the City of Alexandria's Archeological Ordinance No. 3413 (1989), the City's Archeological Protection Code (Section 11-411, adopted June 24, 1992) and the City's Zoning Code (Section 2-151).

Background

The property is located within the Old Town Archaeological Resource Area, which encompasses the historic urban center of the City of Alexandria. It also is located within the Alexandria Historic District (Old and Historic District; VDHR 100-0121), a National Register-listed historic district that is significant for its range of late-eighteenth to nineteenth century residential and commercial buildings that embody "an early town environment" (Old and Historic District, NR Nomination Form 1966).

The project area is located within a developed portion of the City of Alexandria where the natural topography has been extensively altered by historic development. Prior to the founding of Alexandria, the natural terrain sloped gently down to end at a steep bluff overlooking the Potomac River. The northern edge of the property would have included part of the tidal flat and shoreline at the edge of the bluff, which was part of a shallow crescent-shaped bay that extended northward to Tobacco Point, also known as West's Point (Figure 3). Just south of the Project Area at the southern end of the bay, Point Lumley projected east into the river (Figure 4).

Duke Street was extended to the Potomac River in 1751, and in 1755, the Alexandria's Town Trustees began efforts to create useable land along the river edge. The trustees contracted with John Carlyle to build a large warehouse on the shoreline north of Duke Street and once built, filled the 100-ft long warehouse foundation with earth. The shoreline north of the warehouse and near the Project Area was apparently sufficiently elevated that another building could be erected (Miller 1995).

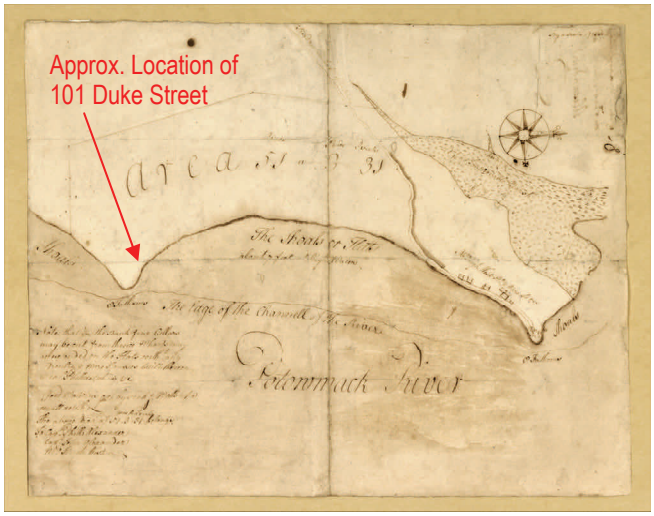

Figure 3. James West's (1748) Plan of Alexandria showing the proposed location of the City of Alexandria (Library of Congress).

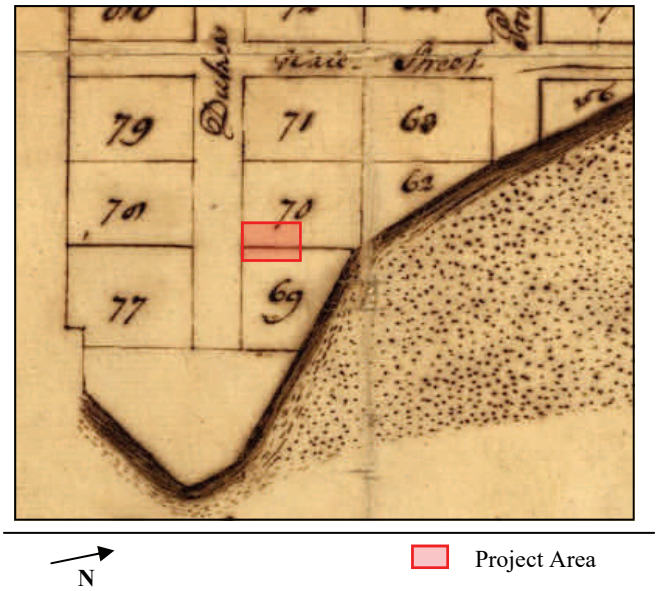

Figure 4. Excerpt from George Washington's (1749) survey of Alexandria, showing the approximate location of 101 Duke Street (Image: Library of Congress)

The process of filling in the shoreline progressed rapidly during the last quarter of the eighteenth century. "In 1780, except the roadways by which Oronoco Street reached Point West and Duke Street sloped to Point Lumley, there was no way to reach the river shore except the rough and precipitous inclines cut through the high buff which overtopped the river side. The earth cut from the hills was used in filling up the cove in front of the town, 'banking out' the process was called. While this grading was in progress, before porches could be completed, temporary steps and ladders furnished access to the doors" (*Alexandria Gazette* 1797, Oct 12). By 1785, the crescent-shaped bay had been filled in sufficiently to allow the construction of Union Street, which forms the eastern boundary of the Project Area.

Existing grades within the Project Area range from approximately 8.8 ft (2.7 m) amsl in the northeastern corner of the Project Area along South Union Street, to approximately 19 ft (5.7 m) amsl near the northwestern corner of the Project Area. This difference in elevation is noticeable along Duke Street, which rises up to the west from South Union Street toward Washington Avenue. These elevations are unlikely to have changed extensively since the early nineteenth century when Alexandria began paving its streets.

The earliest historic development within the Project Area occurred during the mid-eighteenth century, shortly after the lot was laid out and sold as part of the founding of the new town of Alexandria. The Project Area was part of Lots 69 and 70, which were sold to Colonel Nathaniel Harrison in 1752. Richard Arell later purchased both lots, but died intestate (without a will) in 1795 and the ownership and leasing agreements for the lots was heavily disputed for the next two decades.

By the early nineteenth century, Union Street has been completed and most of early historic lots had been subdivided and contained dwellings or commercial businesses. The section of Union Street near Duke Street was occupied by a mixture of skilled independent craftspeople like nail makers, blacksmiths, and coopers, and/or by retail merchants.

At least two structures stood within the project area by the mid-nineteenth century, although a determination of who owned or rented the buildings proved difficult due to a multitude of leases, liens, chancery cases and inheritance issues that followed the property. Charles Magnus' 1863 "Bird's Eye View of Alexandria" (Figure 5) provides the first clear picture of the block that encompasses the 101 Duke Street project area. Magnus' depiction of this portion of Alexandria showed two structures on the southeast corner of Duke and Union. Several light-industries occupy these buildings by 1877 (Figure 6).

Figure 5. Excerpt from Charles Magnus' (1863) Bird's Eye View of Alexandria, VA, showing the project area (Image: Library of Congress).

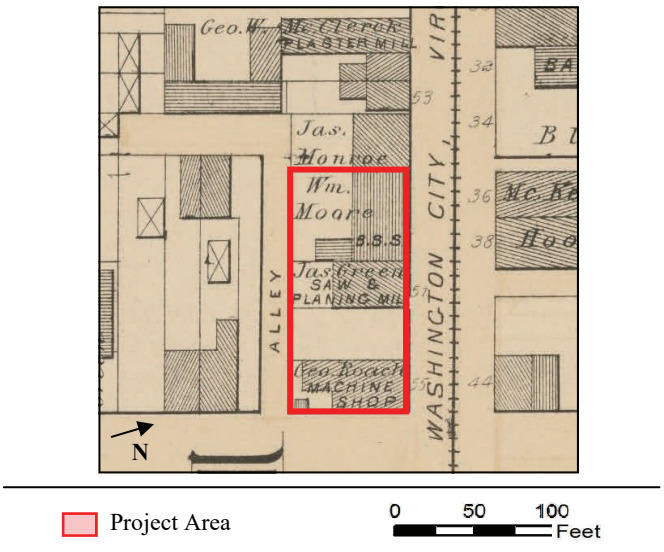

Figure 6. Excerpt from Plate I of G. M. Hopkins' (1877) Atlas of Alexandria, showing the buildings and occupants at Duke and Union Streets (Image: Stephenson 1976: p. 81).

From 1885 through about the first quarter of the twentieth century, the buildings at the corner of Duke and Union streets almost exclusively housed light industries. Among the most prominent were Moore's brass and iron foundry, the Aitcheson Brothers' lumber factories and the Emerson Engine Company's facilities (Figure 7). By 1921, however, industrial pursuits had largely abandoned this location and by 1941, all of the buildings in the Project Area had been razed and the parcels were vacant (Figure 8). Sometime prior to 1959, a single story warehouse was constructed on the Project parcels as part of the Robinson Terminal South complex (Figure 9). The warehouse was adaptively reused in 1989 as a parking garage. Today, the parking garage is operated as "Solo Parking."

As built in 1988, the parking facility occupies a total site area of 10,222 square ft and has a total capacity of 72 parking spaces. Fifteen spaces on the upper deck were designated for compact cars and the remaining spaces were designated for standard vehicles. A notation on the site plans indicates the lower level of the

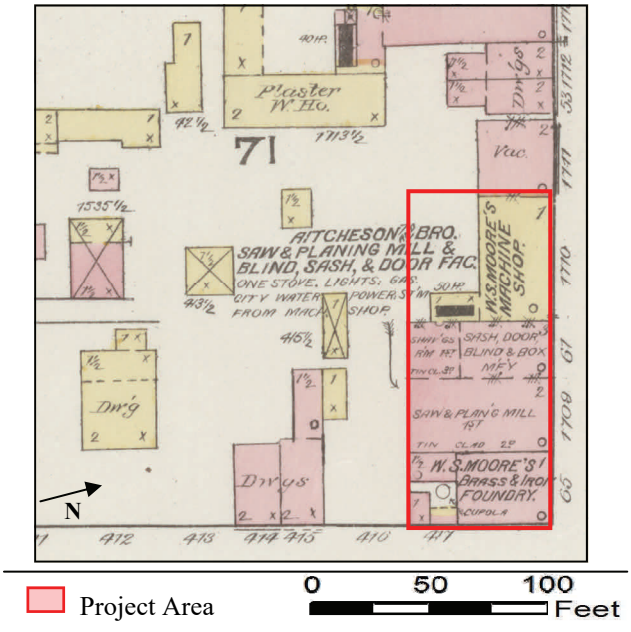

Figure 7. Excerpt from Plate 9 of the Sanborn Map and Publishing Company's 1885 Fire Insurance Map of Alexandria, showing buildings and occupants at Duke and Union Streets (Image: Library of Congress).

Figure 8. Excerpt from Plate 12 of the Sanborn Map Company's 1941 Insurance Map of Alexandria, showing the four unoccupied parcels at Duke and Union Streets (Image: Library of Congress).

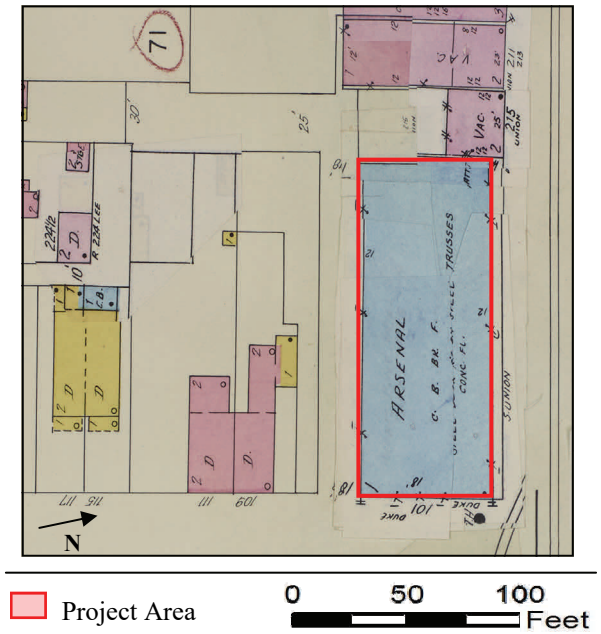

Figure 9. Excerpt from Plate 12 of the Sanborn Map Company's 1959 Insurance Map of Alexandria, showing the Robinson arsenal at Duke and Union Streets (Image: Library of Congress).

parking garage was below the flood elevation of 9.4 ft (2.9 m) and was to be signed "Subject to Flooding" and "No Overnight Parking."

The parking facility has three vehicle entrances that provide access to each of the three parking decks. The South Union Street vehicle entrance is located in the northeastern corner of the garage and accesses the lower parking level, which descends ½-story below ground toward the southern end of the building. A second entrance on Duke Street provides access to the middle parking level of the garage and reuses the enlarged original entrance to the ca. 1950s warehouse (Figure 10). The middle parking deck spans the southern half of the building and is elevated above the current street level; this deck does not extend the full length of the building (Figure 11). The third vehicle entrance fronts the public alley and provides access to the upper parking deck (Figure 12). A pedestrian entrance along S. Union Street provides pedestrian access to all decks.

During its renovation as a parking facility, the foundation walls of the warehouse were underpinned by 69 closely-spaced piers that were placed beneath the western, northern, and eastern walls of the building (GGC 2020:Appendix E). An additional 30 block piers were placed in the interior of the building as column supports for the parking deck structure. Geotechnical soil borings performed for the current project indicate the lower level parking deck is composed of a 6 in (15.24 cm) thick concrete pad underlain by a 6 in (15.24 in) base (GGC 2020). The borings further indicated up to 15 ft (4.6 m) of fill material underlay the slab in the center of the building, while at least 10 ft (3 m) of possible fill material underlay the slab in the northern end of the building. The possible fill material was described as "orange brown, loose to dense, poorly graded sand, trace gravel" (GGC 2020).

Archaeological Potential

The shallow cove with its high bluffs overlooking the Potomac River was one of the principal factors in siting the location of the new town of Alexandria. The peninsulas flanking the cove proved to be ideal loca-

Figure 10. Photograph showing the southern elevation of the Solo Parking facility (Image: RCG&A).

Figure 11. Photograph showing interior view of the lower parking level of the Solo Parking facility. (Image: RCG&A)

Figure 12. Photograph showing the entrance to the upper parking level of the Solo Parking facility, as accessed from the public alley (Image: RCG&A)

tions for the construction of warehouses, shipyards, and wharves. Lots perched on the higher bluffs backing the cove however did not have ready access to the river and consequently developed differently than lots with direct access. Many interior lots that were situated in close proximity to the water developed as commercial or light-industrial properties that supported maritime commerce.

Bulkhead and wharf structures were common along Alexandria's shoreline where it was necessary to create accessible land for docking ships and barges. Bulkhead and wharf structures identified during other archaeological investigations show that soil and brush typically were used as fill material behind man-made timber-cribbed structures. A ca. 1759 wharf structure constructed of pine logs topped with cobble fill was identified north of the Project Area, near the Torpedo Factory (Heinztelman-Muego 1983). The ca. 1785 wharf uncovered at Harborside development, southeast of the Project Area, was partially covered with planks (Knepper and Prothro 1990). The public wharf constructed at the foot of Duke Street in 1755 most likely also was covered with planks. This wharf stood 4 ft (1.2 m) high and was sheltered by a warehouse that backed to the high bluff (Ring and Pippenger 2008). It was located directly north of a ca. 1744 wharf of stone rubble and timber construction that enclosed part of Point Lumley (Shomette 1985). Scuttled vessels also were used on the river-side of bulkheads to create additional area for in-filling.

Although the Project Area included part of the shoreline, deeply buried resources associated with the infilling of Alexandria's shoreline are unlikely within the Project Area. There is no evidence the part of the shoreline that was included in the Project Area was formally bulkheaded or otherwise prepared prior to infilling, nor is there evidence that any structures were ever built on it. Areas of obvious fill material that may have indicated the original bluff edge were not indicated during excavations for the current parking garage. The engineering report submitted during the permitting process indicated that the underpinning pier and footing subgrades had been excavated to natural soils (GGC 2020:Appendix E). Descriptions of the fill material within and adjacent to the building foundation suggest is comprised primarily of redeposited "natural soils" (GGC 2020).

The warehouse that was readapted as a parking garage in 1988 was originally constructed as part of the Robinson Terminal South warehouse complex in the 1950s. The foundation has a depth of greater than 10 ft (3 m) below surface, which suggests extensive excavation was undertaken during the initial construction of the structure. When the foundation was underpinned in 1988 for reuse as a parking garage, there was no indication that the original foundation was extended or modified to accommodate the lower parking level. Since the deep foundation is unusual for a slab-on-grade building, it is likely the original warehouse had a partial or full basement level. Either way, it is apparent that more than 10 ft (3.1 m) of original ground was removed along the foundation walls during both the original construction and the later underpinning process.

Recent soil borings conducted in the interior of the foundation showed 10-15 ft (3-4.6 m) of potential fill material underlying the concrete slab, further suggesting that the entire interior of the foundation was excavated during the underpinning process in order to complete the conversion of the structure to a parking garage.

Archaeological Recommendations

Subsurface disturbances related to construction of the existing ca. 1950s warehouse structure, followed by extensive excavations to prepare the building for reuse as a parking facility have negatively affected the archaeological potential of the property. Although the project area was initially developed as a series of residential parcels during the mid-late eighteenth century, it is extremely unlikely that evidence of these occupations has survived into the modern period. It also is unlikely that any deeply buried waterfront resources, such as early bulkheading or wharf structures would be located within the project footprint.

While archaeological monitoring typically would be recommended to verify the level of disturbance from past construction activities, the current development plans for 101 Duke Street call for retention of the existing concrete parking deck slab with minimal sub-slab disturbance (Figure 13). At least 5.6 ft (1.7 m) of fill material will be placed over the existing slab during construction. The only significant disturbance to the existing slab will occur during relocation of a sanitary sewer line to the interior of the existing building footprint, parallel to South Union Street. This utility will be placed 2 ft (0.6 m) west of the slab edge and will be within the area previously excavated for underpinning of building foundation.

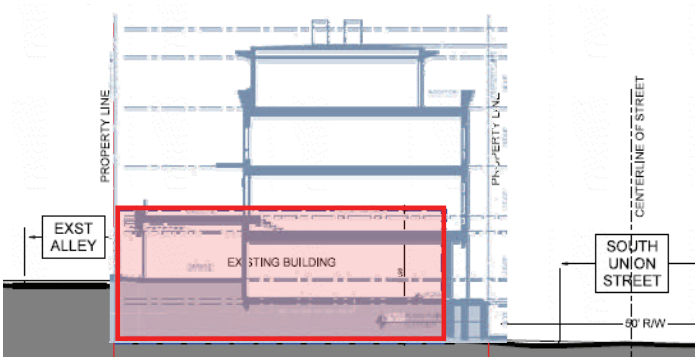

Figure 13. Overlay showing the projected new townhome construction (blue) that will replace the existing parking garage structure (red) (Provided by Eleventh Street Development).

Due to the lack of archaeological potential within the project area resulting from previous construction-related disturbances, no archaeological investigations (Phase I evaluation or archaeological monitoring) are recommended for the 101 Duke Street Project Area.