

**ISSUE:** Permit to Demolish/Capsulate (partial) and Certificate of Appropriateness for alterations and Waiver of Rooftop HVAC Screening Requirement

**APPLICANT:** Anne Toth

**LOCATION:** Old and Historic Alexandria District  
413 North Washington Street

**ZONE:** CL/Commercial Low Zone

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**STAFF RECOMMENDATION**

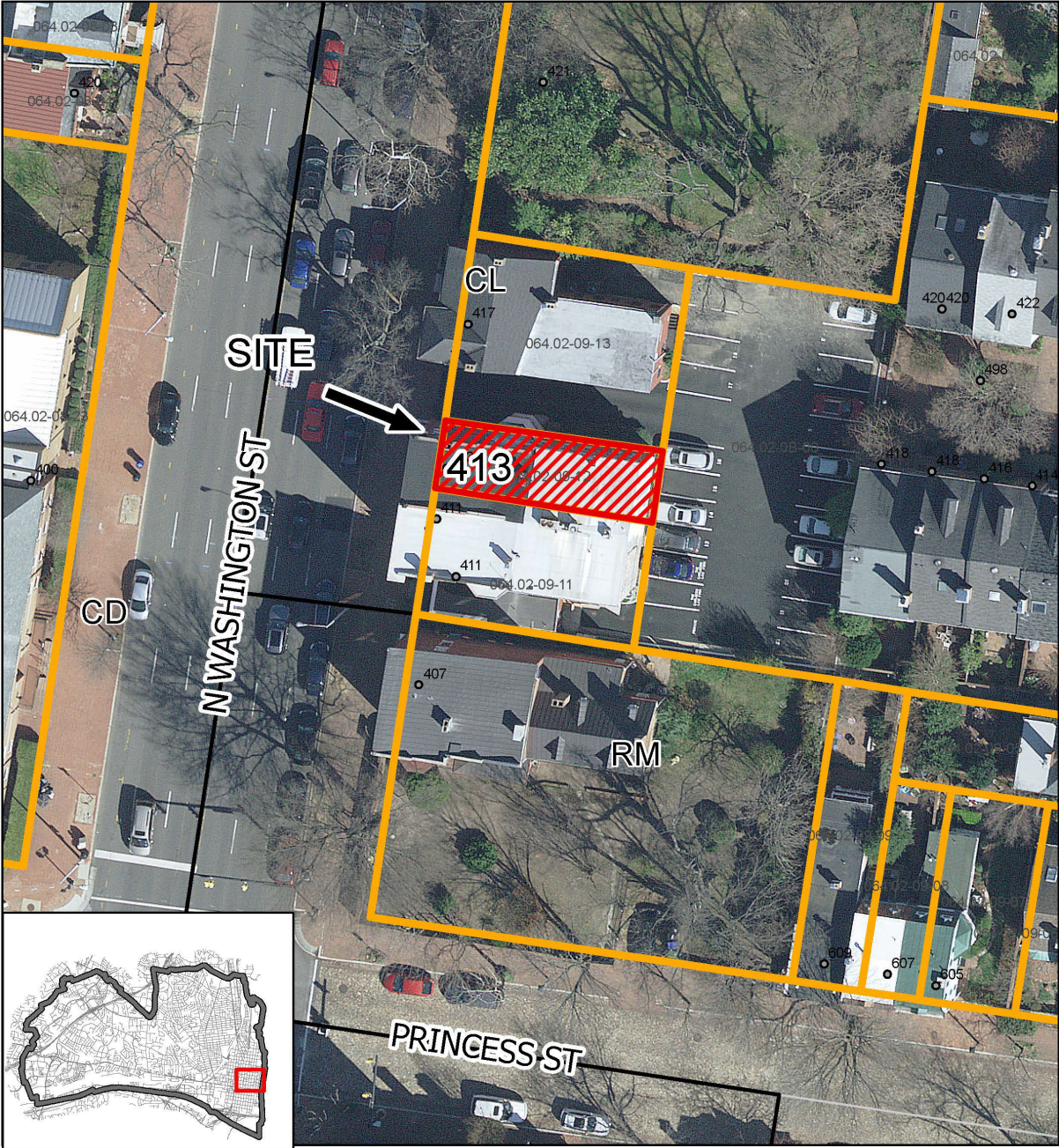
Staff recommends that the BAR approve the Permit to Demolish/Capsulate (partial) and Certificate of Appropriateness for alterations and Waiver of Rooftop HVAC Screening Requirement for all portions of the submitted scope of work with the exception of all work associated with the proposed recessed roof deck, with the following conditions:

1. The windows on the second floor (two-over-two) may be replaced with new six-over-six wood windows
2. All historic windows on the third floor must be retained and repaired
3. Glass from the two-over-two windows should be retained and used to replace broken glass in the windows which will be retained
4. The proposed fenestration at the east elevation meet the Board's *New and Replacement Window Performance Specifications*.
5. That the applicant provide documentation with the building permit materials that the adjacent property owner (415/417 N. Washington Street) will allow for the encroachment of the new stoop and railings on the north elevation of the property.

Staff recommends that the BAR defer approval of the Permit to Demolish/Capsulate (partial) and Certificate of Appropriateness for alterations associated with the proposed recessed roof deck in order for the applicant to address questions and comments from staff and the Board.

**GENERAL NOTES TO THE APPLICANT**

1. **APPEAL OF DECISION:** In accordance with the Zoning Ordinance, if the Board of Architectural Review denies or approves an application in whole or in part, the applicant or opponent may appeal the Board's decision to City Council on or before 14 days after the decision of the Board.
2. **COMPLIANCE WITH BAR POLICIES:** All materials must comply with the BAR's adopted policies unless otherwise specifically approved.
3. **BUILDING PERMITS:** Most projects approved by the Board of Architectural Review require the issuance of one or more construction permits by Department of Code Administration (including signs). The applicant is responsible for obtaining all necessary construction permits after receiving Board of Architectural Review approval. Contact Code Administration, Room 4200, City Hall, 703-746-4200 for further information.
4. **ISSUANCE OF CERTIFICATES OF APPROPRIATENESS AND PERMITS TO DEMOLISH:** Applicants must obtain a copy of the Certificate of Appropriateness or Permit to Demolish PRIOR to applying for a building permit. Contact BAR Staff, Room 2100, City Hall, 703-746-3833, or [preservation@alexandriava.gov](mailto:preservation@alexandriava.gov) for further information.
5. **EXPIRATION OF APPROVALS NOTE:** In accordance with Sections 10-106(B), 10-206(B) and 10-307 of the Zoning Ordinance, any Board of Architectural Review approval will expire 12 months from the date of issuance if the work is not commenced and diligently and substantially pursued by the end of that 12-month period.
6. **HISTORIC PROPERTY TAX CREDITS:** Applicants performing extensive, certified rehabilitations of historic properties may separately be eligible for state and/or federal tax credits. Consult with the Virginia Department of Historic Resources (VDHR) prior to initiating any work to determine whether the proposed project may qualify for such credits.



**BAR #2021-00236 & BAR #2021-00261**  
**413 North Washington Street**

0 15 30 60 Feet



**Note:** Staff coupled the applications for a Permit to Demolish (BAR #2021-00236) and Certificate of Appropriateness (BAR #2021-00261) for clarity and brevity. The Permit to Demolish requires a roll call vote.

## **I. APPLICANT'S PROPOSAL**

The applicant requests a Permit to Demolish/Capsulate (partial), Certificate of Appropriateness and a Waiver of Rooftop HVAC Screening Requirement for alterations at 413 North Washington Street.

### Permit to Demolish/Capsulate

Demolition is proposed in the following locations:

North elevation:

- Demolition of masonry on the third floor for a new window
- Remove second and third floor windows on the portion of the elevation east of the bay
- Removal of ground mounted mechanical units

East elevation:

- Demolition of entire rear elevation; bricks to be salvaged and reused where possible.

Roof:

- Demolition of the west (front) portion of the flat roof to create a sunken roof deck in the currently enclosed third floor interior space.

### Certificate of Appropriateness

The applicant proposes a number of alterations to the building in an attempt to return the building to a residence. The following is proposed:

West (front) Elevation:

Alterations are limited to repairing missing wood trim details and joining the double door panels to create a single door.

North (side) Elevation:

- On the first floor, a new stoop will be constructed at the easternmost door and simple metal railings will be installed here, as well as at the stoop further to the west.
- On the second floor, the existing two-over-two wood windows will be replaced with new 6-over-6 wood, double glazed, sash replacement window units with SDL.
- On the third floor, the existing six-over-six wood windows will be replaced with new 6-over-6 wood, double glazed, sash replacement window units with SDL.
- On the third floor, a new window will be installed adjacent to the existing bay, the window will be a 6-over-6 wood, double glazed, window unit with SDL.
- New copper scuppers and downspouts will be installed



- Roof:

- ### Site context

[illegible]

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## II. HISTORY

413 North Washington Street is one of a pair of three-story, three-bay high style brick Italianate rowhouses that were originally constructed as residences and date from **ca. 1872**. The pair of homes were built for EE Downham and his business partner. Mr. Downham became the mayor of Alexandria in 1887. Sometime in the mid-20<sup>th</sup> century an early two-story rear porch was removed, and the building was converted to office uses.

### *Previous BAR Approvals*

September 9, 1964: BAR Approval for signage  
February 20, 1987: Permit 8600092 for replacement of existing roof  
February 9, 2011: Administrative Approval for a hanging sign (BAR Case #2011-00034)  
May 22, 2012: Administrative Approval for ground mounted HVAC condenser (BAR Case #2012-00171).

## III. ANALYSIS

### Permit to Demolish/Capsulate

In considering a Permit to Demolish/Capsulate, the Board must consider the following criteria set forth in the Zoning Ordinance, §10-105(B), which relate only to the subject property and not to neighboring properties. The Board has purview of the proposed demolition/capsulation regardless of visibility.

Standard	Description of Standard	Standard Met?
(1)	Is the building or structure of such architectural or historical interest that its moving, removing, capsulating or razing would be to the detriment of the public interest?	No
(2)	Is the building or structure of such interest that it could be made into a historic shrine?	No
(3)	Is the building or structure of such old and unusual or uncommon design, texture and material that it could not be reproduced or be reproduced only with great difficulty?	No
(4)	Would retention of the building or structure help preserve the memorial character of the George Washington Memorial Parkway?	No
(5)	Would retention of the building or structure help preserve and protect an historic place or area of historic interest in the city?	No

(6)	Would retention of the building or structure promote the general welfare by maintaining and increasing real estate values, generating business, creating new positions, attracting tourists, students, writers, historians, artists and artisans, attracting new residents, encouraging study and interest in American history, stimulating interest and study in architecture and design, educating citizens in American culture and heritage, and making the city a more attractive and desirable place in which to live?	No
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The analysis of the standards indicated above relate only to the specific portions of the building proposed for demolition/capsulation, not the overall building.

While staff does not typically support the wholesale demolition and reconstruction of historic walls, the accompanying structural report identifies significant problems and past repairs that have made this wall structurally unsound. The structural report specifically notes that “The combined effects of these structural conditions and the history of modification (window infills, lintel replacements) makes a more substantial rebuilding much more appropriate and offers an opportunity to restore physical integrity to this essential component to the building structure.” Therefore, staff supports the demolition of the rear wall, particularly because historic brick will be salvaged and used in the reconstruction of the wall.

Staff also supports the minor demolition on the top floor of the north elevation to add a single window. The masonry material that will be demolished for the project is limited to secondary elevations with limited visibility from the right-of-way and is not of unusual or uncommon design and the affected portions could be reproduced easily today.

The applicant is proposing to demolish an area of the roof on the west end that makes up approximately one quarter of the overall roof area. As demonstrated by the 1987 building permit, the roof was replaced at least once in the history of the structure. The roof line of this portion of the building is concealed behind a tall parapet wall, meaning that the form of the roof is not visible to the public and is therefore not a character defining feature. While the demolition of the roofing itself does not meet any of the criteria for demolition, the potential impact of this demolition on the historic fabric should be further studied. Staff recommends a deferral of this portion of the proposed work, see below for additional discussion on these proposed modifications.

See below for a discussion of the proposed replacement of exterior windows.

In the opinion of staff, with the exception of the potential impact on historic fabric of the proposed removal of a portion of the roof, none of the criteria for demolition and capsulation are met and the Permit to Demolish/Capsulation should be granted.

#### Certificate of Appropriateness

Staff is pleased that the applicant proposes to rehabilitate this well-preserved but somewhat neglected historic house and return it to its original residential use. Staff has met with the applicant on more than one occasion and the program has evolved to cause only a minimal impact on this historic building, with the exception of the rear elevation and the proposed recessed roof deck.

## Windows

Per the submitted documents, the applicant is proposing to replace the existing windows on the second and third floor, east of the existing two-story bay window. New windows are proposed on the second and third floors, the windows being proposed are to be 6-over-6 wood double glazed windows with simulated divided lites in the original openings. Staff and the applicant walked through the interior of the house to inspect each window on the north elevation and the majority are either original or very old, and most have cylinder glass. One aspect that staff was particularly interested in understanding as part of the site visit was why the first and third floor had six-over-six windows and the second floor had two-over-two windows (Figure 2). Staff has determined that it is likely that the two-over-two windows are very early replacement windows and that these windows were all probably six-over-six, which is the case with the twin townhouse at 411 North Washington Street. This is not unusual as builders typically used the most modern and most expensive materials on the fronts of buildings, or in this case, the side of the building up to and including the projecting bay.



**Figure 2: Photograph showing existing window configuration on east side of north elevation**

Per the Board's policy and general preservation philosophy, staff does not support the replacement of historic wood windows that can be retained and repaired. However, since the two-over-two windows were early replacement windows, staff does not object to the replacement of the second-floor windows with wood six-over-six windows, provided that the applicant preserve the glass in the windows to be removed to replace the various pieces of broken glass in the historic six-over-six windows. In summary, staff finds the following with respect to the proposed new windows on the north elevation:

- The windows on the second floor (two-over-two) may be replaced with new six-over-six wood windows
- All historic windows on the third floor must be retained and repaired
- Glass from the two-over-two windows should be retained and used to replace broken glass in the windows which will be retained



#### Stoop/Railing Encroachment

The applicant is proposing to rebuild the two existing exterior brick steps at the north side of the building and install simple handrails at each location. While staff has no objection to the replacement stoop or the historically appropriate metal railing, this portion of the site is not located on the applicant's property, but rather is part of the 415-417 North Washington Street property. The building permit documentation must include proof that the neighboring property owner will permit these features to encroach.

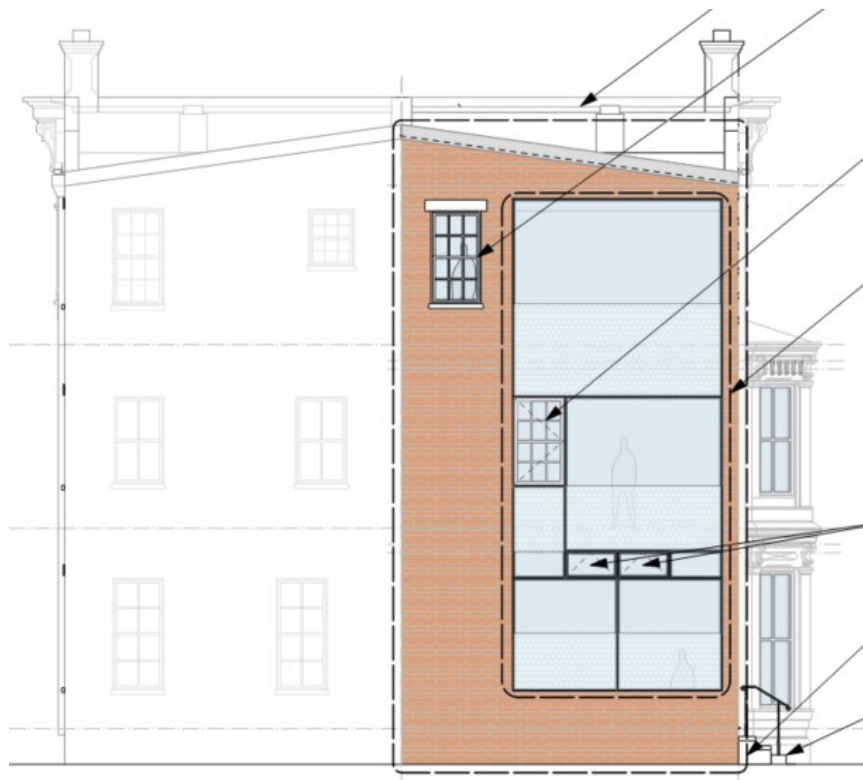
#### Waiver of Rooftop Mechanical Screening Requirement

The applicant proposes to relocate the ground mounted HVAC units to the flat roof. The units will likely not be visible from the right of way because they will be located on the flat roof which has an existing parapet.

#### East (rear) Elevation

Per the attached structural engineering report, the east wall of the building has been modified many times throughout the history of the building, including the erection and demolition of a porch at some time during the 20<sup>th</sup> century. In addition to these changes, the windows are not original on this elevation and there is evidence of a variety of window locations, indicating that the existing window locations are likely not original. The structural engineering report details extensive damage to the existing wall and recommends that it be completely rebuilt.

The applicant is proposing that rather than rebuild the wall to simulate what could have been an original configuration, they install a modern storefront fenestration system that extends from the first floor to the third floor with minimal muntins and including three operable portions (Figure 3).



**Figure 3: Proposed elevation of east wall**

Upon deconstruction of the existing wall, any brick that can be salvaged will be used to reconstruct the portion of the wall to the south of the new window opening. While the rear wall will contain some historic brick, it is essentially a blank canvas, and the use of modern fenestration helps to differentiate this part of the house from the largely untouched side and front elevations. While this elevation is not an addition, it is consistent with the *Design Guidelines* recommendation that “An addition to a historic building should be clearly distinguishable from the original structure. An addition should not obscure or dilute the architectural and historic importance of an existing building by creating a false sense of the past.”

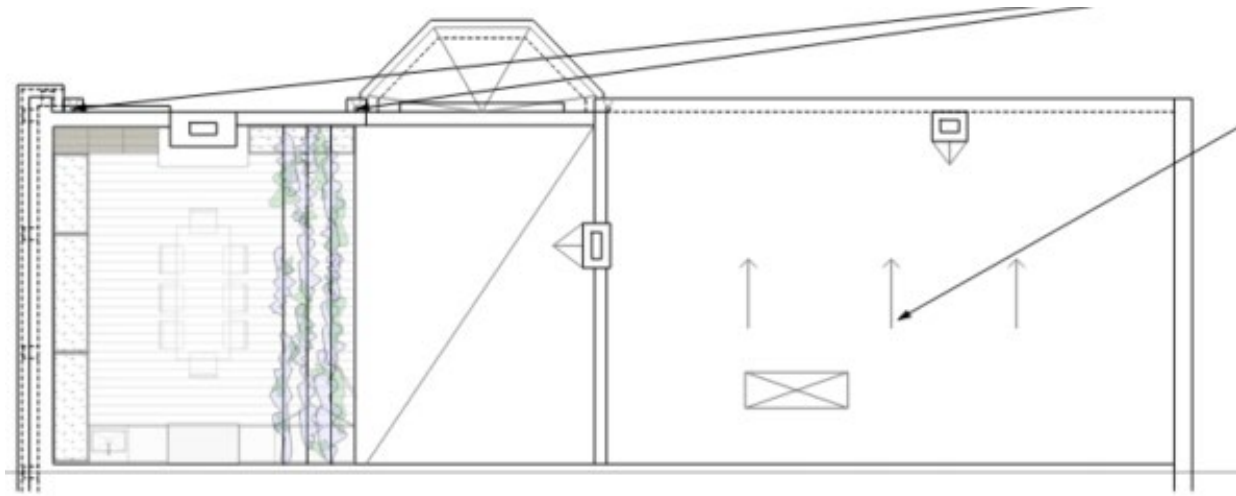
The east side of the building will be minimally visible from a public right of way. The parking lot to the east of the building is private property, meaning that the only visibility will be oblique views from Oronoco St, St Asaph, and Princess Streets (Figure 4). Due to the minimal visibility and structural need to rebuild the existing wall, staff supports the proposed modification and recommends that the applicant work with staff to ensure that the storefront system meets the *New and Replacement Window Performance Specifications*.



Figure 4: Proposed view of east (rear) wall of building from Princess Street

#### Roof Deck

The applicant is proposing to create an occupiable roof deck on the western portion of the third floor through the removal of a portion of the existing roof. The existing exterior walls and windows in this area will remain but the area will be open to above. This area will include access from the enclosed third floor and will require internal drainage (Figure 5). The removal of the roof framing in this area will include the removal of lateral bracing for the exterior walls. The applicant will need to provide a framing system that will brace these walls to ensure their structural integrity. The submitted documents include views from North Washington Street, including site sections, to demonstrate the visibility of these modifications to the existing building but details on the execution of the modification are not currently included.



**Figure 5: Proposed roof plan showing sunken roof deck at the west end of the roof**

The proposed modifications to the building to create the new roof deck do not have a direct influence on the appearance of the building with the exception of how the third floor will be perceived from North Washington Street. This is an important view and staff has expressed to the applicant that the presence of a roof deck in this area should not be evident from the public right of way. This proposal is a unique approach to the introduction of a roof deck into a historic structure and resolves some of the concerns typically associated with the construction of a roof deck. Because the deck is at the level of the third floor, there is no need to extend stairs or an elevator above the existing roof line. The proposed roof deck does not alter the roof line in any way, preserving the historic building form.

While staff finds this approach to be potentially successful, there are a number of concerns that are raised associated with the protection of the existing structure. While these may not be directly visible from the public right of way, the protection of historic buildings is a foremost mission of staff and the BAR. The submitted documents include only schematic plans of the area and some views from Washington Street but they do not include details on how the structure is to be protected from exposure to the elements. Some issues to be addressed by the applicant relative to this proposed work include the following:

- The historic windows will remain in place and will now be exposed to the elements on both sides. How will these windows and the masonry opening at the jambs and sills be protected from water infiltration?
- How can these windows be treated so as not to alter the view of the building from North Washington Street?
- As noted above, the removal of the roof framing will require the introduction of lateral supports for the existing masonry walls. How will this be accomplished without damaging the walls?

- The interior finish of the existing walls will need to be removed to create a surface that can be exposed to the exterior, how will these walls which are now exterior on both sides be protected?
- Will the removal of the roof cause a negative impact on the decorative cornice at the top of the west elevation?
- Will there be an impact on the existing third floor framing due to the introduction of rainwater and roof loads not previously envisioned?

While many of these are technical issues, they directly impact the historic fabric of the building and how it is viewed from North Washington Street. Staff recommends that the portion of work associated with the creation of the roof deck on the third floor be deferred to allow for further study and clarification as to how the historic fabric will be maintained and protected.

Staff recommends that the BAR approve the Permit to Demolish/Capsulate (partial) and Certificate of Appropriateness for alterations and Waiver of Rooftop HVAC Screening Requirement for all portions of the submitted scope of work with the exception of all work associated with the proposed recessed roof deck, with the following conditions:

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Staff recommends that the BAR defer approval of the Permit to Demolish/Capsulate (partial) and Certificate of Appropriateness for alterations associated with the proposed recessed roof deck in order for the applicant to address questions and comments from staff and the Board.

**STAFF**

Bill Conkey, AIA, Historic Preservation Architect, Planning & Zoning  
Tony LaColla, AICP, Land Use Services Division Chief, Planning & Zoning



#### **IV. CITY DEPARTMENT COMMENTS**

Legend: C- code requirement R- recommendation S- suggestion F- finding

##### **Zoning**

F-1 Both of the existing stoops and stairs on the north side yard of the property encroach onto the neighboring property at 417 North Washington. The stairs are increasing in size, which will require approval from the property owner of 417 North Washington. Proof of this approval must be submitted at time of building permit.

F-2 The proposed alterations and solar panels comply with zoning.

##### **Code Administration**

C-1 A building permit and plan review are required prior to the start of construction

##### **Transportation and Environmental Services**

R-1 The building permit must be approved and issued prior to the issuance of any permit for demolition, if a separate demolition permit is required. (T&ES)

R-2 Applicant shall be responsible for repairs to the adjacent city right-of-way if damaged during construction activity. (T&ES)

R-3 No permanent structure may be constructed over any existing private and/or public utility easements. It is the responsibility of the applicant to identify any and all existing easements on the plan. (T&ES)

F-1 After review of the information provided, an approved grading plan is not required at this time. Please note that if any changes are made to the plan, it is suggested that T&ES be included in the review. (T&ES)

C-1 The applicant shall comply with the City of Alexandria's Solid Waste Control, Title 5, Chapter 1, which sets forth the requirements for the recycling of materials (Sec. 5-1-99). (T&ES)

C-2 The applicant shall comply with the City of Alexandria's Noise Control Code, Title 11, Chapter 5, which sets the maximum permissible noise level as measured at the property line. (T&ES)

C-3 Roof, surface and sub-surface drains be connected to the public storm sewer system, if available, by continuous underground pipe. Where storm sewer is not available applicant must provide a design to mitigate impact of stormwater drainage onto adjacent properties and to the satisfaction of the Director of Transportation & Environmental Services. (Sec.5-6-224) (T&ES)

C-4 All secondary utilities serving this site shall be placed underground. (Sec. 5-3-3) (T&ES)

C-5 Any work within the right-of-way requires a separate permit from T&ES. (Sec. 5-2)

(T&ES)

- C-6 All improvements to the city right-of-way such as curbing, sidewalk, driveway aprons, etc. must be city standard design. (Sec. 5-2-1) (T&ES)

**Alexandria Archaeology**

- F-1 No archaeological oversight necessary for this undertaking

**V. ATTACHMENTS**

*1 – Application Materials*

*2 – Supplemental Materials*

*3 – I200 AE Field Report – June 4, 2021*

ADDRESS OF PROJECT: 413 N Washington StreetDISTRICT: ☒ Old & Historic Alexandria ☐ Parker – Gray ☐ 100 Year Old BuildingTAX MAP AND PARCEL: 064-02-09-12 ZONING: CLAPPLICATION FOR: *(Please check all that apply)*☒ CERTIFICATE OF APPROPRIATENESS☒ PERMIT TO MOVE, REMOVE, ENCAPSULATE OR DEMOLISH  
(Required if more than 25 square feet of a structure is to be demolished/impacted)☐ WAIVER OF VISION CLEARANCE REQUIREMENT and/or YARD REQUIREMENTS IN A VISION  
CLEARANCE AREA (Section 7-802, Alexandria 1992 Zoning Ordinance)☐ WAIVER OF ROOFTOP HVAC SCREENING REQUIREMENT  
(Section 6-403(B)(3), Alexandria 1992 Zoning Ordinance)Applicant: ☒ Property Owner ☐ Business *(Please provide business name & contact person)*Name: Anne TothAddress: 413 N Washington StCity: Alexandria State: VA Zip: 22314Phone: \_\_\_\_\_ E-mail: annetoth@gmail.comAuthorized Agent *(if applicable)*: ☐ Attorney ☐ Architect ☐ \_\_\_\_\_Name: Robert Cole Phone: 202.234.1090E-mail: rc@coleprevost.com

Legal Property Owner:

Name: Anne TothAddress: 413 N Washington StCity: Alexandria State: VA Zip: 22314Phone: \_\_\_\_\_ E-mail: annetoth@gmail.com

- ☐ Yes ☐ No Is there an historic preservation easement on this property?
- ☐ Yes ☐ No If yes, has the easement holder agreed to the proposed alterations?
- ☐ Yes ☒ No Is there a homeowner's association for this property?
- ☒ Yes ☐ No If yes, has the homeowner's association approved the proposed alterations?

If you answered yes to any of the above, please attach a copy of the letter approving the project.

**NATURE OF PROPOSED WORK:** *Please check all that apply*

- |  |   |   |                                   |
|--|---|---|-----------------------------------|
| <input type="checkbox"/> NEW CONSTRUCTION  |   |   |                                   |
| <input checked="" type="checkbox"/> EXTERIOR ALTERATION: <i>Please check all that apply.</i> |   |   |                                   |
| <input type="checkbox"/> awning  | <input type="checkbox"/> fence, gate or garden wall | <input checked="" type="checkbox"/> HVAC equipment  | <input type="checkbox"/> shutters |
| <input checked="" type="checkbox"/> doors  | <input checked="" type="checkbox"/> windows         | <input type="checkbox"/> siding                     | <input type="checkbox"/> shed     |
| <input type="checkbox"/> lighting  | <input type="checkbox"/> pergola/trellis            | <input type="checkbox"/> painting unpainted masonry |                                   |
| <input type="checkbox"/> other _____   |   |   |                                   |
| <input type="checkbox"/> ADDITION  |   |   |                                   |
| <input checked="" type="checkbox"/> DEMOLITION/ENCAPSULATION                                 |   |   |                                   |
| <input type="checkbox"/> SIGNAGE   |   |   |                                   |

**DESCRIPTION OF PROPOSED WORK:** *Please describe the proposed work in detail (Additional pages may be attached).*

FRONT (West) Elevation- Add missing wood bracket and detail to existing cornice  
 SIDE (North) Elevation- 3rd F- Replace existing windows w/ 6-over-6 Marvin wood  
 historic replacement double glazed sash windows to match existing. Make new opening  
 and add new 6-over-6 historic window to match others to complete pattern. 2nd- Replace  
 2-over-2 windows w/ 6-over-6 wood historic sash replacement windows to match others  
 Ground F- Repair brick entrance stairs: Add bronze handrail to each stair  
 BACK (East)- Remove painted brick wall. Rebuild wall re-using historic brick and new  
 custom window.

**SUBMITTAL REQUIREMENTS:**

Items listed below comprise the **minimum supporting materials** for BAR applications. Staff may request additional information during application review. Please refer to the relevant section of the *Design Guidelines* for further information on appropriate treatments.

Applicants must use the checklist below to ensure the application is complete. Include all information and material that are necessary to thoroughly describe the project. Incomplete applications will delay the docketing of the application for review. Pre-application meetings are required for all proposed additions. All applicants are encouraged to meet with staff prior to submission of a completed application.

**Demolition/Encapsulation :** *All applicants requesting 25 square feet or more of demolition/encapsulation must complete this section. Check N/A if an item in this section does not apply to your project.*

- N/A
- |                                     |                                     |   |
|-------------------------------------|-------------------------------------|---|
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Survey plat showing the extent of the proposed demolition/encapsulation.  |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Existing elevation drawings clearly showing all elements proposed for demolition/encapsulation.                       |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Clear and labeled photographs of all elevations of the building if the entire structure is proposed to be demolished. |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Description of the reason for demolition/encapsulation.   |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Description of the alternatives to demolition/encapsulation and why such alternatives are not considered feasible.    |



**Additions & New Construction:** Drawings must be to scale and should not exceed 11" x 17" unless approved by staff. Check N/A if an item in this section does not apply to your project.

- ☒ ☐ N/A
- ☒ ☐ Scaled survey plat showing dimensions of lot and location of existing building and other structures on the lot, location of proposed structure or addition, dimensions of existing structure(s), proposed addition or new construction, and all exterior, ground and roof mounted equipment.
- ☒ ☐ FAR & Open Space calculation form.
- ☒ ☐ Clear and labeled photographs of the site, surrounding properties and existing structures, if applicable.
- ☒ ☐ Existing elevations must be scaled and include dimensions.
- ☒ ☐ Proposed elevations must be scaled and include dimensions. Include the relationship to adjacent structures in plan and elevations.
- ☒ ☐ Materials and colors to be used must be specified and delineated on the drawings. Actual samples may be provided or required.
- ☒ ☐ Manufacturer's specifications for materials to include, but not limited to: roofing, siding, windows, doors, lighting, fencing, HVAC equipment and walls.
- ☐ ☒ For development site plan projects, a model showing mass relationships to adjacent properties and structures.

**Signs & Awnings:** One sign per building under one square foot does not require BAR approval unless illuminated. All other signs including window signs require BAR approval. Check N/A if an item in this section does not apply to your project.

- ☐ ☒ N/A
- ☐ ☒ Linear feet of building: Front: \_\_\_\_\_ Secondary front (if corner lot): \_\_\_\_\_.
- ☐ ☒ Square feet of existing signs to remain: \_\_\_\_\_.
- ☐ ☒ Photograph of building showing existing conditions.
- ☐ ☒ Dimensioned drawings of proposed sign identifying materials, color, lettering style and text.
- ☐ ☒ Location of sign (show exact location on building including the height above sidewalk).
- ☐ ☒ Means of attachment (drawing or manufacturer's cut sheet or bracket if applicable).
- ☐ ☒ Description of lighting (if applicable). Include manufacturer's cut sheet for any new lighting fixtures and information detailing how it will be attached to the building's facade.

**Alterations:** Check N/A if an item in this section does not apply to your project.

- ☒ ☐ N/A
- ☒ ☐ Clear and labeled photographs of the site, especially the area being impacted by the alterations, all sides of the building and any pertinent details.
- ☒ ☐ Manufacturer's specifications for materials to include, but not limited to: roofing, siding, windows, doors, lighting, fencing, HVAC equipment and walls.
- ☒ ☐ Drawings accurately representing the changes to the proposed structure, including materials and overall dimensions. Drawings must be to scale.
- ☒ ☐ An official survey plat showing the proposed locations of HVAC units, fences, and sheds.
- ☐ ☒ Historic elevations or photographs should accompany any request to return a structure to an earlier appearance.

**ALL APPLICATIONS:** *Please read and check that you have read and understand the following items:*

- ☒ I have submitted a filing fee with this application. (Checks should be made payable to the City of Alexandria. Please contact staff for assistance in determining the appropriate fee.)
- ☒ I understand the notice requirements and will return a copy of the three respective notice forms to BAR staff at least five days prior to the hearing. If I am unsure to whom I should send notice I will contact Planning and Zoning staff for assistance in identifying adjacent parcels.
- ☒ I, the applicant, or an authorized representative will be present at the public hearing.
- ☒ I understand that any revisions to this initial application submission (including applications deferred for restudy) must be accompanied by the BAR Supplemental form and revised materials.

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The undersigned hereby attests that all of the information herein provided including the site plan, building elevations, prospective drawings of the project, and written descriptive information are true, correct and accurate. The undersigned further understands that, should such information be found incorrect, any action taken by the Board based on such information may be invalidated. The undersigned also hereby grants the City of Alexandria permission to post placard notice as required by Article XI, Division A, Section 11-301(B) of the 1992 Alexandria City Zoning Ordinance, on the property which is the subject of this application. The undersigned also hereby authorizes the City staff and members of the BAR to inspect this site as necessary in the course of research and evaluating the application. The applicant, if other than the property owner, also attests that he/she has obtained permission from the property owner to make this application.

**APPLICANT OR AUTHORIZED AGENT:**

Signature: Robert Cole

Printed Name: Robert Cole

Date: 13 Jan 2022



# Department of Planning and Zoning

## Floor Area Ratio and Open Space Calculations

as of 12/20/18

**B**

### A. Property Information

A1. 413 N Washington Street CL  
Street Address Zone

A2. 1,292.00 x 0.75 = 969.00  
Total Lot Area Floor Area Ratio Allowed by Zone Maximum Allowable Floor Area

### B. Existing Gross Floor Area

Existing Gross Area		Allowable Exclusions**		
Basement	1,299.37	Basement**		B1. 5,269.94 Sq. Ft.
First Floor	1,335.60	Stairways**	168.65	Existing Gross Floor Area*
Second Floor	1,335.60	Mechanical**		B2. 293.37 Sq. Ft.
Third Floor	1,299.37	Attic less than 7'***		Allowable Floor Exclusions**
Attic		Porches**		B3. 4,976.57 Sq. Ft.
Porches		Balcony/Deck**		Existing Floor Area Minus Exclusions
Balcony/Deck		Lavatory***	124.72	(subtract B2 from B1)
Lavatory***		Other**		
Other**		Other**		
B1. <b>Total Gross</b>	5,269.94	B2. <b>Total Exclusions</b>	293.37	

**Comments for Existing Gross Floor Area**

### C. Proposed Gross Floor Area

Proposed Gross Area		Allowable Exclusions**		
Basement	1,299.37	Basement**	1,299.37	C1. 5,266.34 Sq. Ft.
First Floor	1,335.00	Stairways**	169.96	Proposed Gross Floor Area*
Second Floor	1,335.60	Mechanical**		C2. 2,303.78 Sq. Ft.
Third Floor	773.87	Attic less than 7'***		Allowable Floor Exclusions**
Attic		Porches**		C3. 2,962.56 Sq. Ft.
Porches		Balcony/Deck**	522.50	Proposed Floor Area Minus Exclusions
Balcony/Deck	522.50	Lavatory***	311.95	(subtract C2 from C1)
Lavatory***		Other**		
Other		Other**		
C1. <b>Total Gross</b>	5,266.34	C2. <b>Total Exclusions</b>	2,303.78	

### D. Total Floor Area

D1. 7,939.13 Sq. Ft.  
Total Floor Area (add B3 and C3)

D2. 969.00 Sq. Ft.  
Total Floor Area Allowed by Zone (A2)

### E. Open Space

E1. 0.00 Sq. Ft.  
Existing Open Space

E2. 516.80 Sq. Ft.  
Required Open Space

E3. 522.50 Sq. Ft.  
Proposed Open Space

### Notes

\*Gross floor area is the sum of all areas under roof of a lot, measured from the face of exterior walls, including basements, garages, sheds, gazebos, guest buildings and other accessory buildings.

\*\* Refer to the Zoning Ordinance (Section 2-145(B)) and consult with Zoning Staff for information regarding allowable exclusions. Sections may also be required for some exclusions.

\*\*\*Lavatories may be excluded up to a maximum of 50 square feet, per lavatory. The maximum total of excludable area for lavatories shall be no greater than 10% of gross floor area.

The undersigned hereby certifies and attests that, to the best of his/her knowledge, the above computations are true and correct.

Signature: \_\_\_\_\_

Date: **13 Jan 2022**

# OWNERSHIP AND DISCLOSURE STATEMENT

Use additional sheets if necessary

**1. Applicant.** State the name, address and percent of ownership of any person or entity owning an interest in the applicant, unless the entity is a corporation or partnership, in which case identify each owner of more than three percent. The term ownership interest shall include any legal or equitable interest held at the time of the application in the real property which is the subject of the application.

Name	Address	Percent of Ownership
1. Anne Toth	413 N Washington St., Alexandria, VA 22314	100
2.		
3.		

**2. Property.** State the name, address and percent of ownership of any person or entity owning an interest in the property located at 413 N Washington St., Alexandria, VA 22314 (address), unless the entity is a corporation or partnership, in which case identify each owner of more than three percent. The term ownership interest shall include any legal or equitable interest held at the time of the application in the real property which is the subject of the application.

Name	Address	Percent of Ownership
1. Anne Toth	413 N Washington St., Alexandria, VA 22314	100
2.		
3.		

**3. Business or Financial Relationships.** Each person or entity listed above (1 and 2), with an ownership interest in the applicant or in the subject property is required to disclose **any** business or financial relationship, as defined by Section 11-350 of the Zoning Ordinance, existing at the time of this application, or within the 12-month period prior to the submission of this application with any member of the Alexandria City Council, Planning Commission, Board of Zoning Appeals or either Boards of Architectural Review.

Name of person or entity	Relationship as defined by Section 11-350 of the Zoning Ordinance	Member of the Approving Body (i.e. City Council, Planning Commission, etc.)
1. n/a		
2.		
3.		

**NOTE: Business or financial relationships of the type described in Sec. 11-350 that arise after the filing of this application and before each public hearing must be disclosed prior to the public hearings.**

As the applicant or the applicant's authorized agent, I hereby attest to the best of my ability that the information provided above is true and correct.

13 Jan 2022

Date

Robert Cole

Printed Name

Robert Cole

Signature





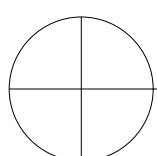
# Toth Residence

413 N Washington St, Alexandria, VA 22314

Proposed Renovations for Historic Exterior

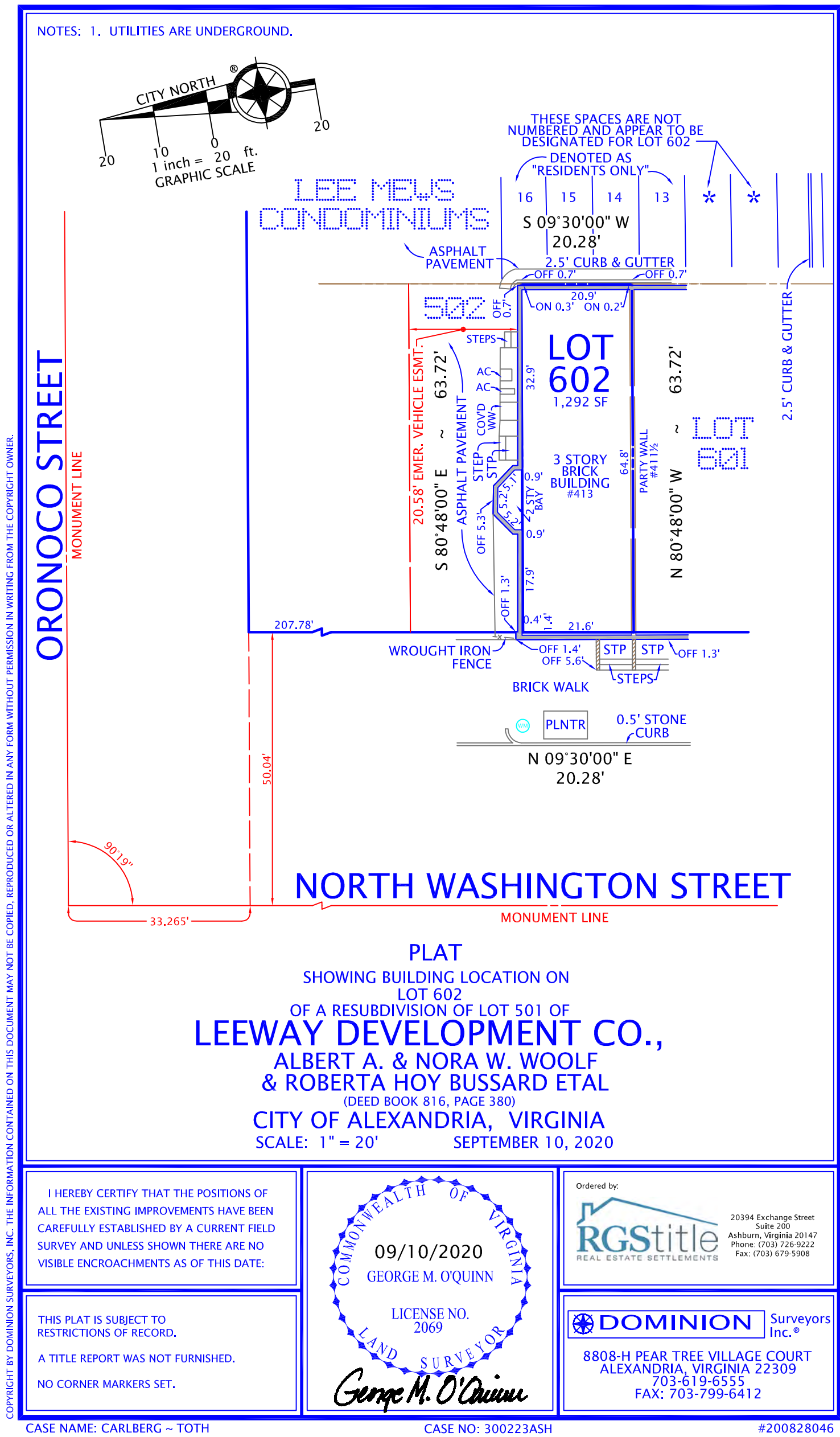
22|01 B.A.R. Submission

date Toth Residence 20.11



**COLEPRÉVOST**

T 202 234 1 090 E cp@coleprevost.com



PROJECT DESCRIPTION

Address: 413 N Washington Street,  
Arlington, VA 22314

Scope of Work: Renovation of Interior and East Elevation

Study Group: 088

Zoning: MU-2

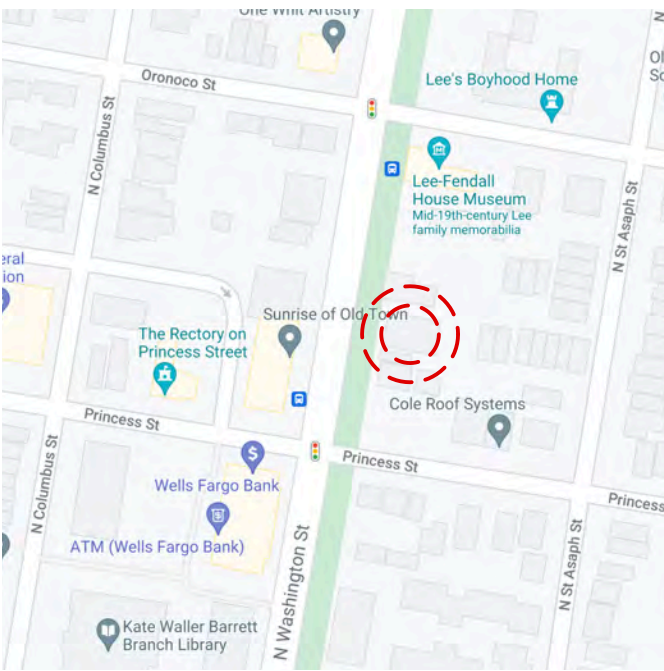
Site Parcel: 06402-090-12

PROJECT DIRECTORY

CLIENT  
Anne Toth  
413 N Washington Street,  
Arlington, VA 22314

DESIGNER  
ColePrévost Incorporated  
1635 Connecticut Avenue NW  
Washington, DC 20009  
202.234.1090

LOCATION MAP

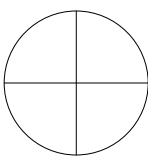


DRAWING LIST

	Title Sheet	
	Survey	
X2.00	Existing Photos	
D1.01	Existing Floor Plan - Level I + II	3/16" = 1'-0"
D1.02	Existing Floor Plan - Level III + Roof	3/16" = 1'-0"
D2.01	Existing Exterior Elevations	3/16" = 1'-0"
D2.02	Existing Rear Conditions	
A1.01	Proposed Floor Plan - Level I + II	3/16" = 1'-0"
A1.02	Proposed Floor Plan - Level III + Roof	3/16" = 1'-0"
A2.01	Proposed Exterior Elevations	3/16" = 1'-0"
A2.02	Proposed Rear (East) Elevation	1/4" = 1'0"
A4.01	Cutsheet - Wausau Windows	
A4.02	Cutsheet - Marvin Windows	
A4.03	Cutsheet - Exterior Stair (NE)	
A4.04	Cutsheet - Exterior Stair (NW)	
A4.05	Cutsheet - Custom Window Unit	
A4.06	Cutsheet - Exterior Deck	
V.01	Perspective - N Washington Street	
V.02	Perspective - N St. Asaph Street	
V.03	Perspective - Oronoco Street	
V.04	Perspective - Princess Street	

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Survey

Toth Residence

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Alexandria, VA 2231 4

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Front (North Elevation)



Front (NW Corner)



Rear (East Elevation)

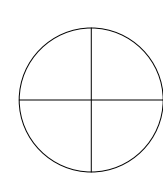


Side (NE Corner)



Rear (East Elevation)

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date Toth Residence 20.11



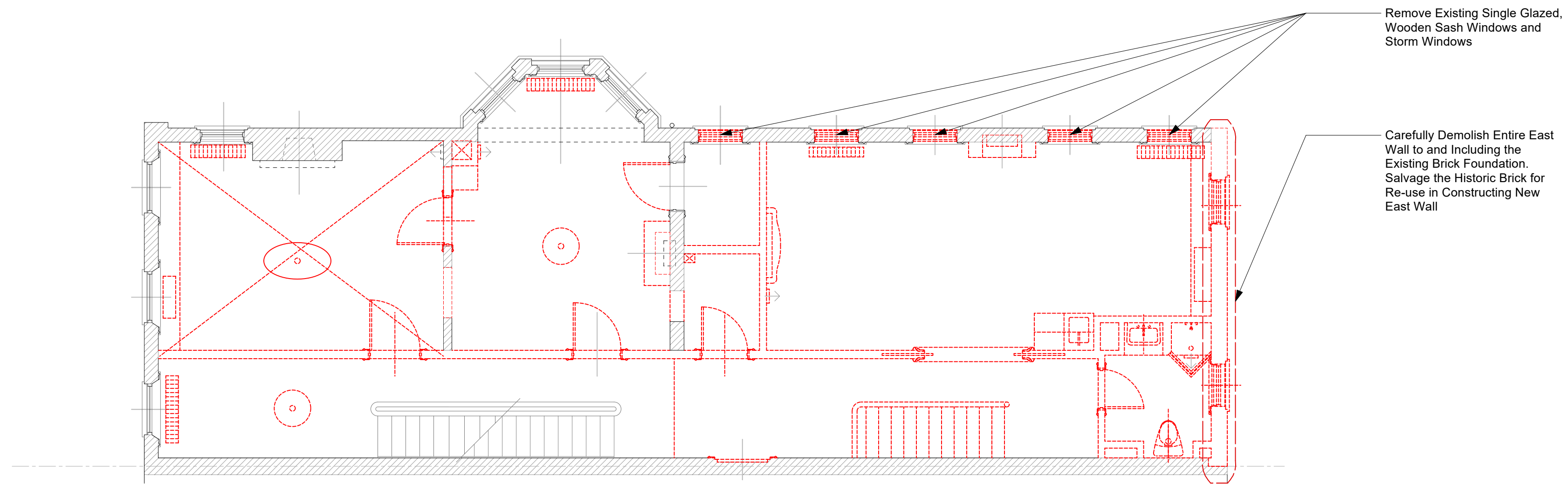
Existing Photos

Toth Residence  
413 N Washington St  
Alexandria, VA 22314

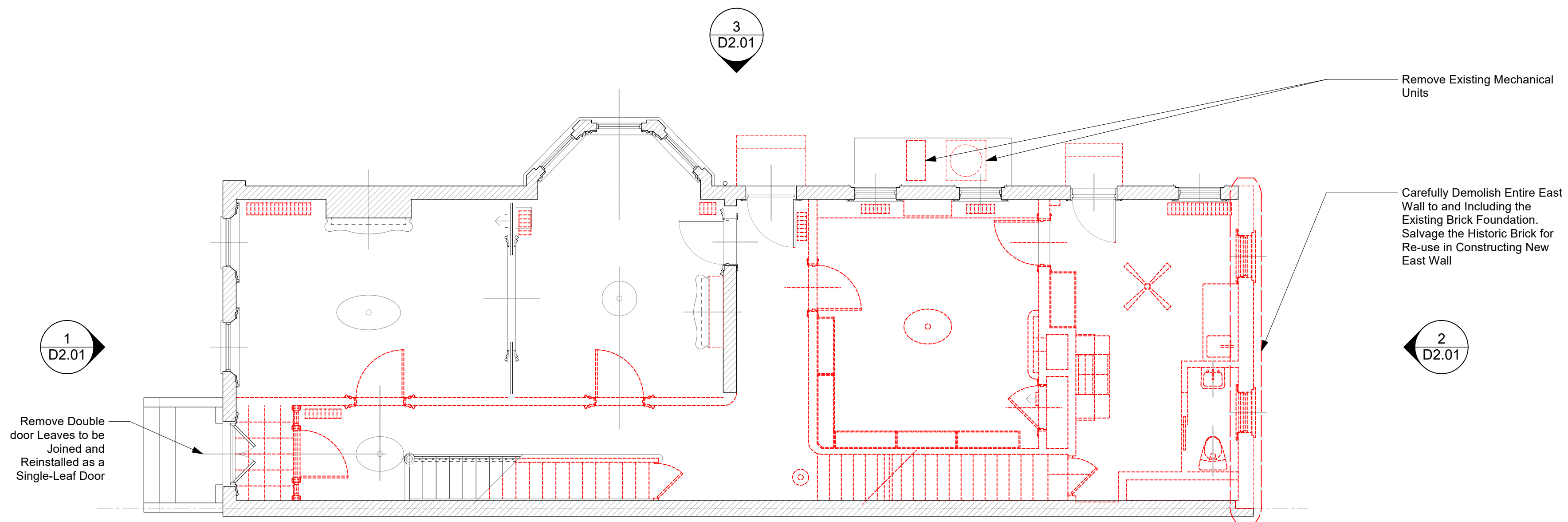
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X  
2 .00





1 Level II Plan  
Scale: 3/16" = 1'-0"



2 Level I Plan  
Scale: 3/16" = 1'-0"

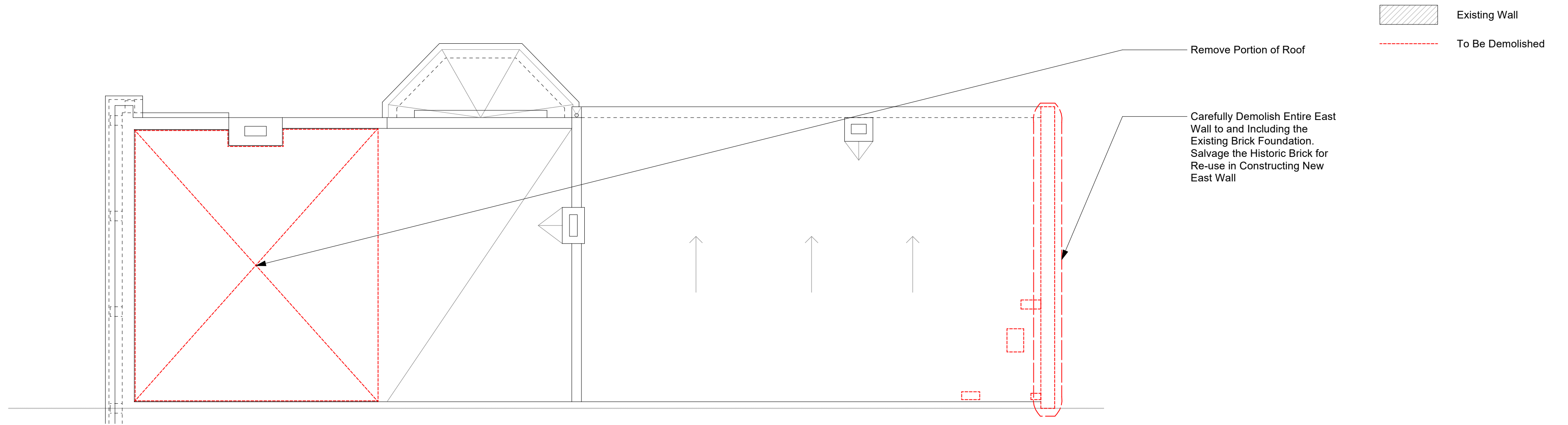
Existing/Demo Plans: Level I and II  
Scale: 3/16" = 1'-0"

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413 N Washington St  
Alexandria, VA 22314

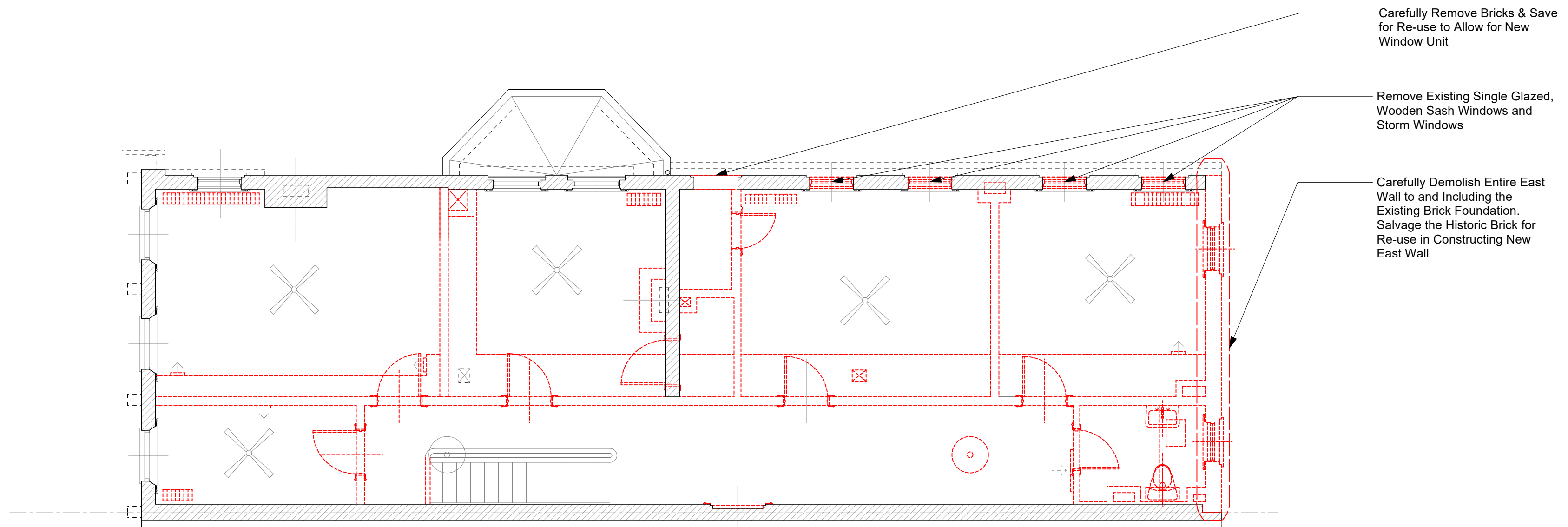
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date Toth Residence 20.11

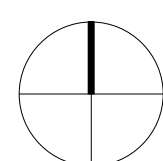
**D**  
**1**.01



1 **Roof Plan**  
Scale: 3/16" = 1'-0"



2 **Level III Plan**  
Scale: 3/16" = 1'-0"



**Existing/Demo Plans: Level III and Roof**  
Scale: 3/16" = 1'-0"

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Alexandria, VA 22314

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**D**

**1 .02**



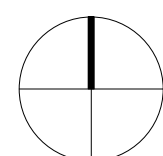
1 Side (North) Elevation



2 Front (West) Elevation



3 Rear (East) Elevation



## Existing Elevations

Scale: 3/16" = 1'-0"

## Toth Residence

413 N Washington St  
Alexandria, VA 22314

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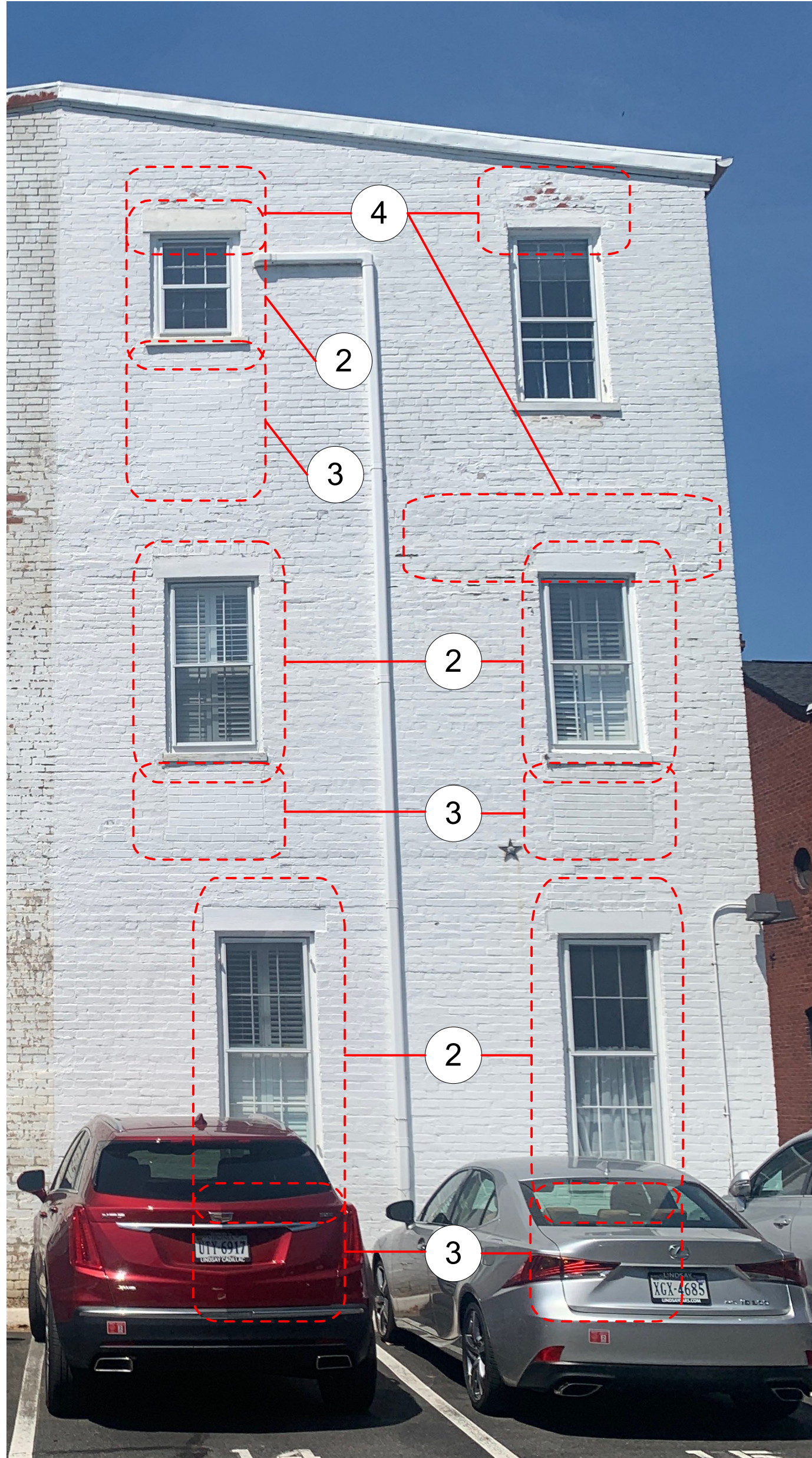
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**2**

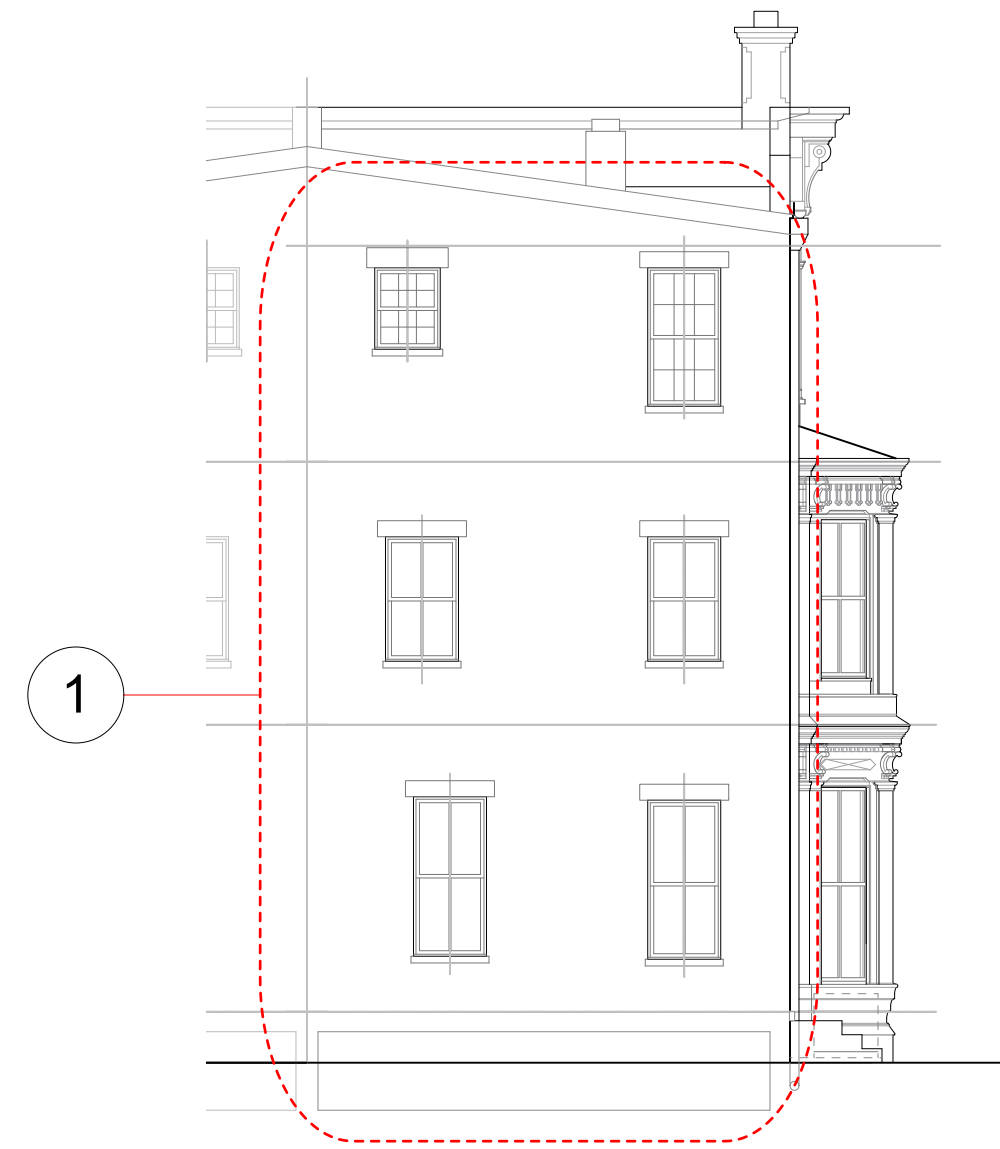
.01

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- 1 Historic Brick Has Been Painted Over
- 2 Historic Openings Closed in with New Window Replacements
- 3 Historic Brick Replaced in Several Places
- 4
  - Spalled Brick
  - \* Structural Repairs Needed. See: Structural Engineer 1200AE's Field Report



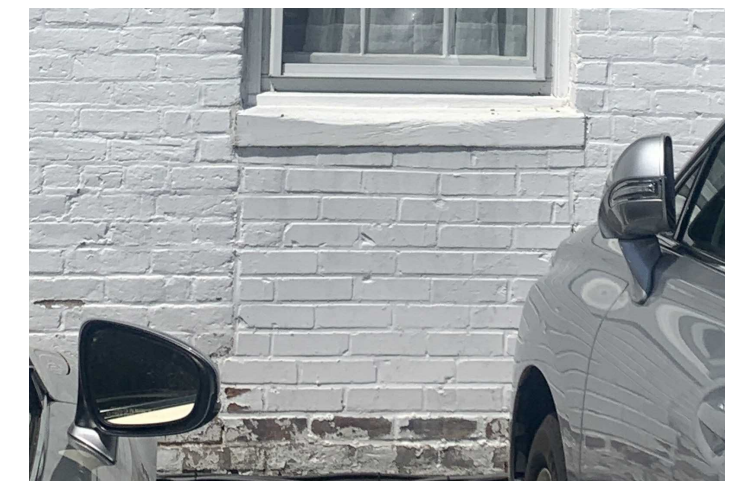
1 **Rear (East) Elevation**  
Scale: 1/8" = 1'-0"



1



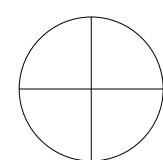
3



3



4



Existing East (Rear) Elevation

## Toth Residence

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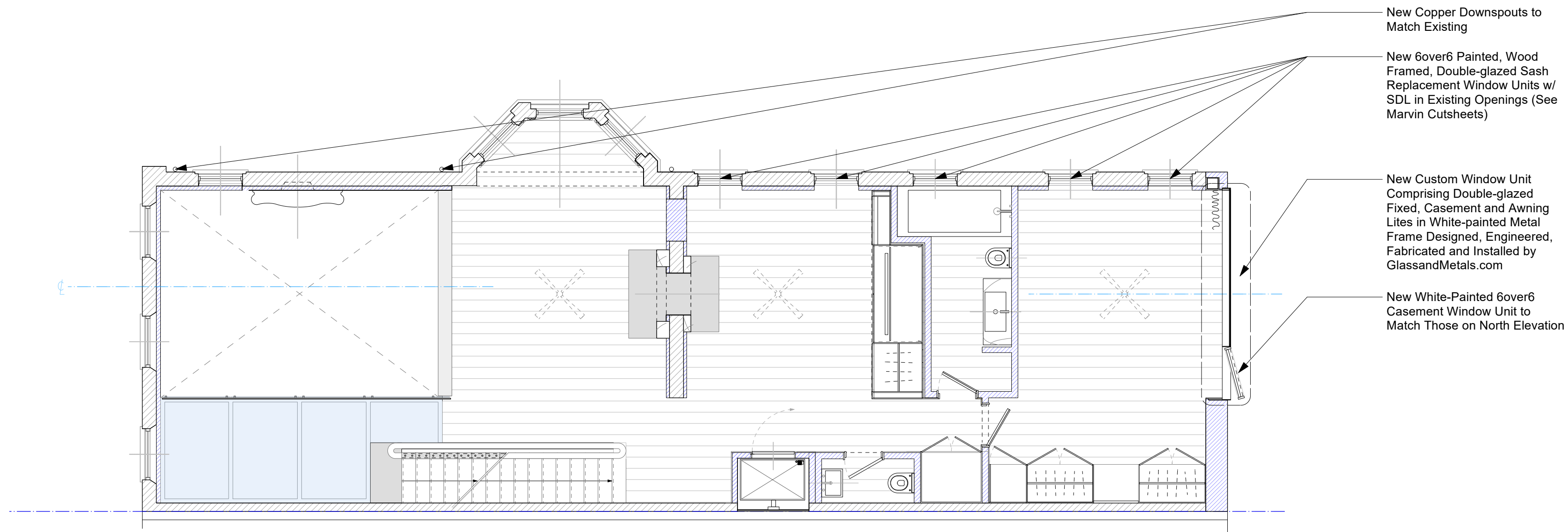
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D

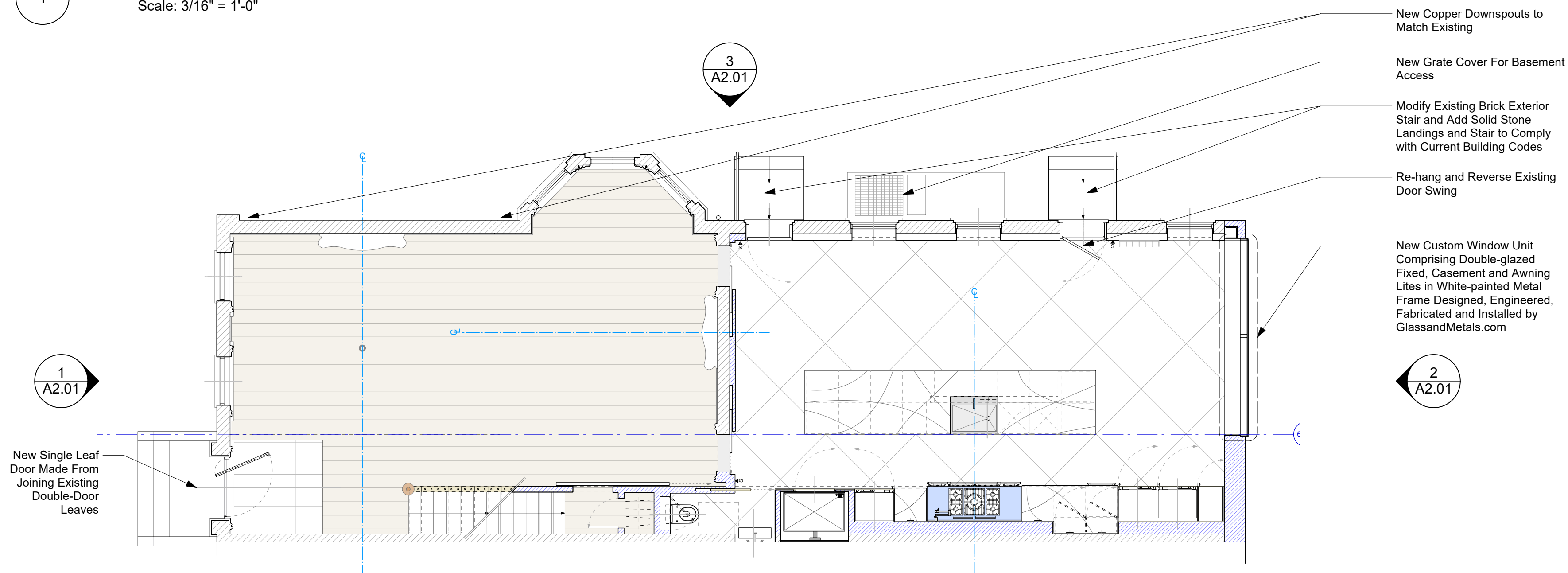
2

.02





1 Level II Plan  
Scale: 3/16" = 1'-0"



2 Level I Plan  
Scale: 3/16" = 1'-0"

Proposed Floor Plans: Level I and II  
Scale: 1/4" = 1'-0"

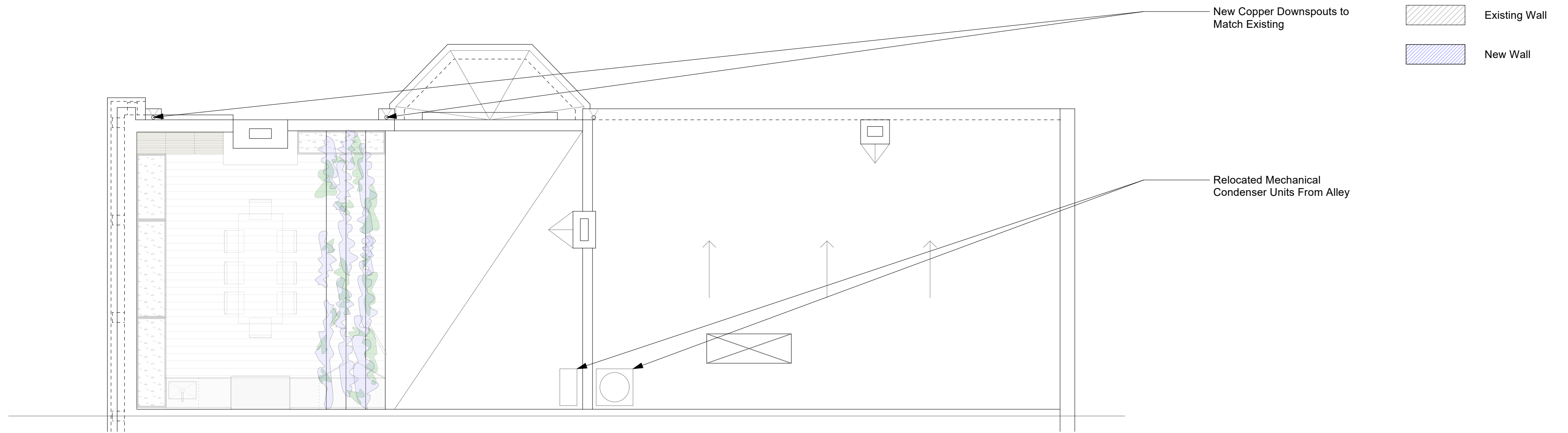
Toth Residence  
413 N Washington St  
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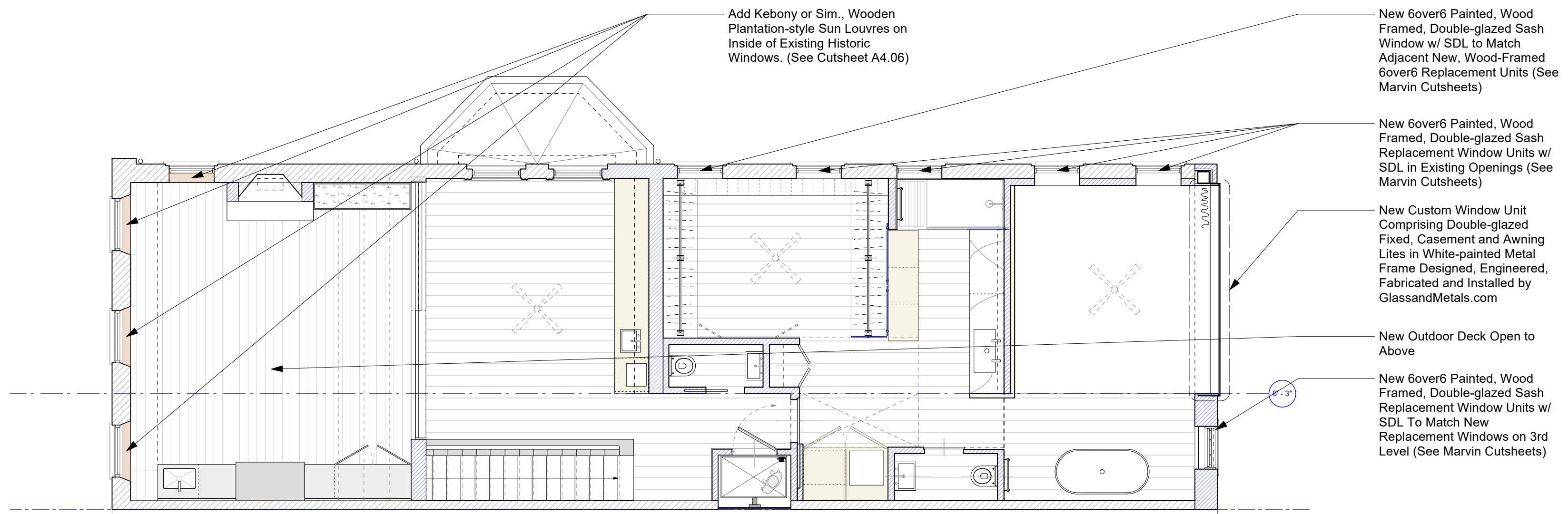
22/01 B.A.R. Submission  
date Toth Residence 20.11

A

1.01



1  
Roof Plan  
Scale: 3/16" = 1'-0"



2  
Level III Plan  
Scale: 3/16" = 1'-0"

Proposed Third Floor Plan  
Scale: 3/16" = 1'-0"

Toth Residence  
413 N Washington St  
Alexandria, VA 22314

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date Toth Residence 20.11

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1.02



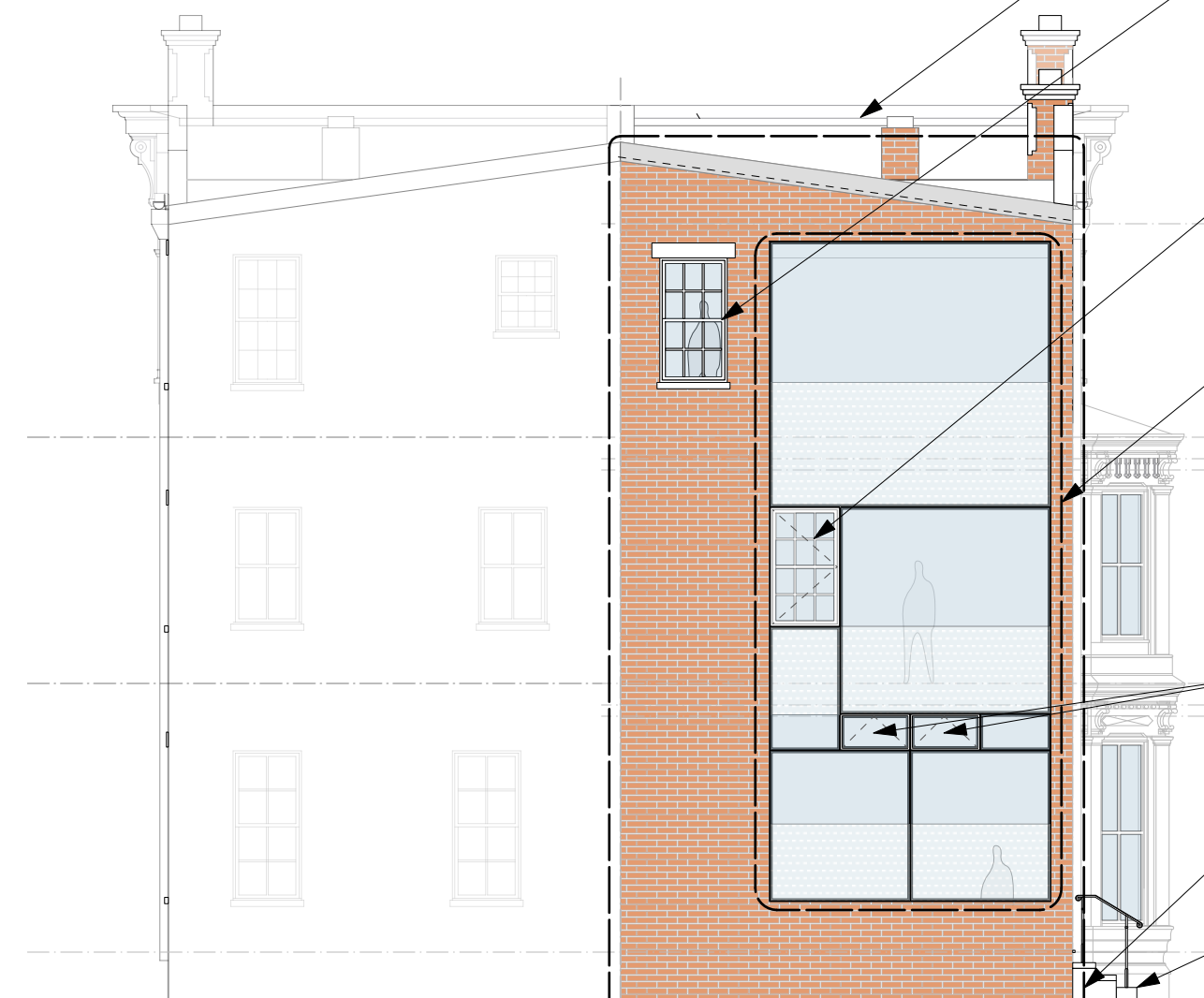
- New 6over6 Painted, Wood Framed, Double-glazed Sash Replacement Window Units w/ SDL in Existing Openings (See Marvin Cutsheets)
- New 6over6 Painted, Wood Framed, Double-glazed Sash Window w/ SDL to Match Adjacent New, Wood-Framed 6over6 Replacement Units (See Marvin Cutsheets)
- Add Kebony or Sim., Wooden Plantation-style Sun Louvres on Inside of Existing Historic Windows. (See Cutsheet A4.06)
- New 6over6 Painted, Wood Framed, Double-glazed Sash Replacement Window Units w/ SDL in Existing Openings (See Marvin Cutsheets)
- New Drainage Scuppers and Copper Downspouts
- Re-hang and Reverse Existing Door Swing
- Repair Existing Stair and Add New Bronze and Forged Steel Handrail

**North Elevation**  
Scale: 1/8" = 1'-0"



- Replicate and Add Missing Historic "Nipple" Detail
- Replicate and Add Missing Bottom of Historic Bracket
- Add Kebony or Sim., Wooden Plantation-style Sun Louvres on Inside of Existing Historic Windows. (See Cutsheet A4.06)
- Join Existing Pair of Door Leaves into Single Door Leaf

**West Elevation**  
Scale: 1/8" = 1'-0"



- Solar Panels To Be Designed by Subcontractors (Sunpower or sim.)
- New 6over6 Painted, Wood Framed, Double-glazed Sash Replacement Window Units w/ SDL To Match New Replacement Windows on 3rd Level (See Marvin Cutsheets)
- New White-Painted 6over6 Casement Window Unit to Match Those on North Elevation (See Wausau Cutsheets)
- New Custom Window Unit Comprising Double-glazed Fixed, Casement and Awning Lites in White-painted Metal Frame Designed, Engineered, Fabricated and Installed by GlassandMetals.com
- New Operable Awning Window Units (See Wausau Cutsheets)
- New Brick Wall Elevation Using Salvaged Brick to Replace Damaged Existing Painted Brick Wall
- Repair Existing Stair and Add New Bronze and Forged Steel Handrail

**East Elevation**  
Scale: 1/8" = 1'-0"

**Proposed Elevations**  
Scale: 1/8" = 1'-0"

**Toth Residence**  
413 N Washington St  
Alexandria, VA 22314

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**A**

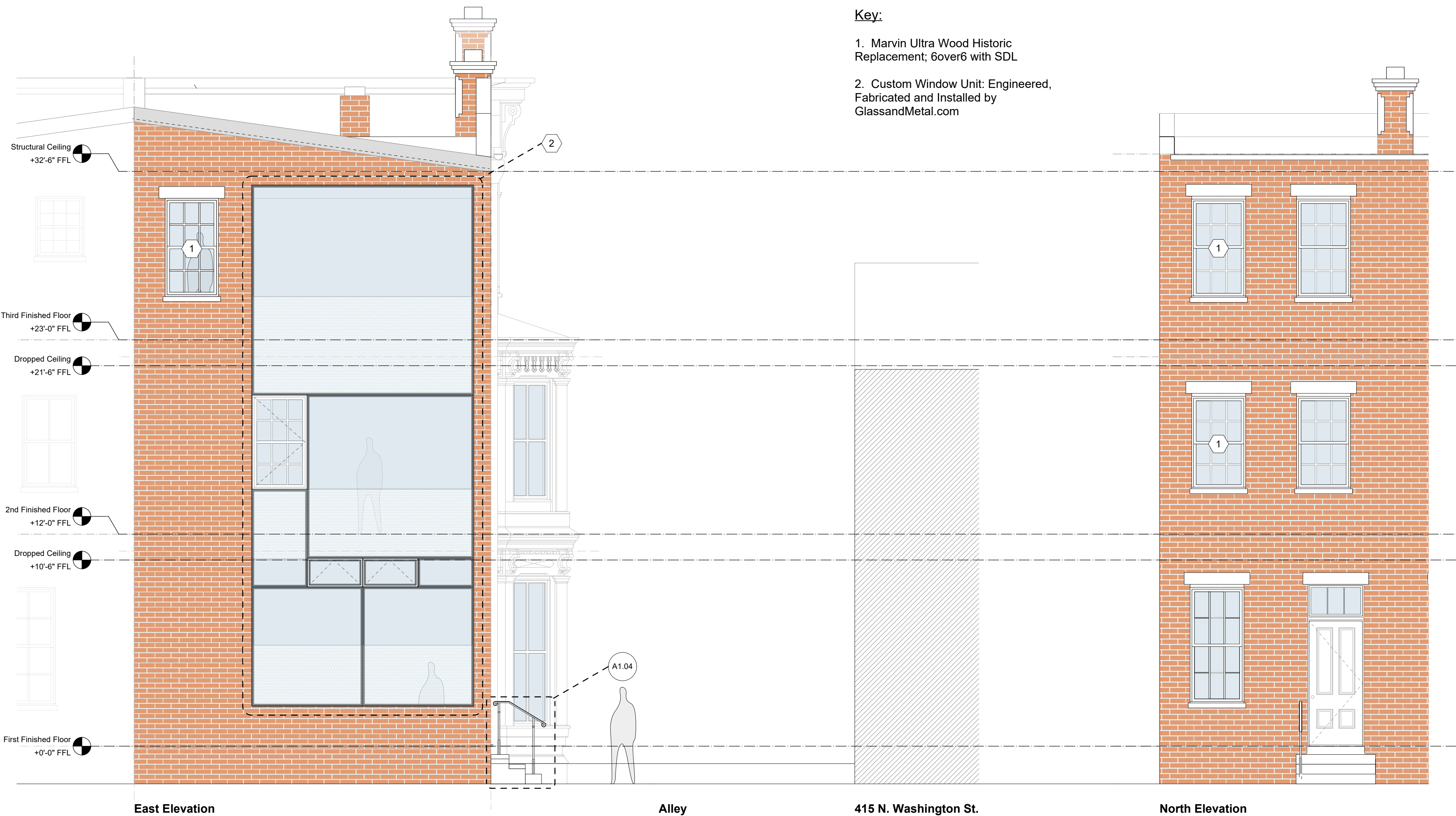
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22|01 B.A.R. Submission  
date Toth Residence 20.11



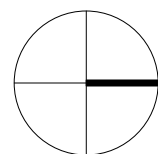
Key:

- 1. Marvin Ultra Wood Historic Replacement; 6over6 with SDL
- 2. Custom Window Unit: Engineered, Fabricated and Installed by GlassandMetal.com



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date Toth Residence 20.11



Proposed East (Rear) Elevation

Scale: 1/4" = 1'-0"

Toth Residence

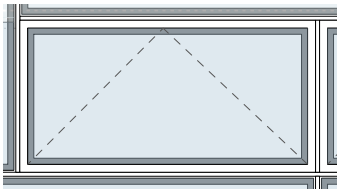
413 N Washington St  
Alexandria, VA 22314

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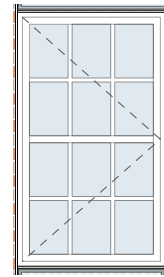
2.02



1

### Awning Elevation

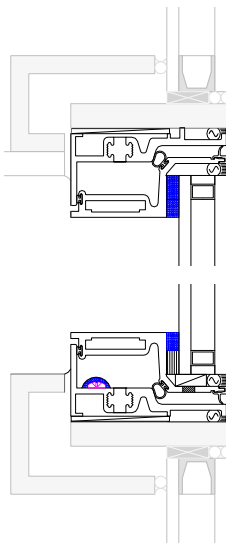
Scale: 1/2" = 1'-0"



2

### Casement Elevation

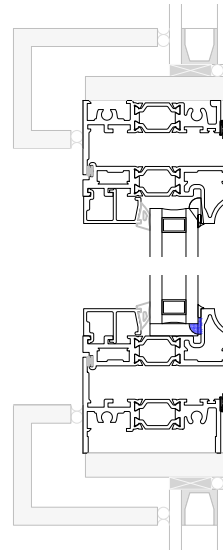
Scale: 1/4" = 1'-0"



3

### Awning Section Detail: Head Jamb and Sill

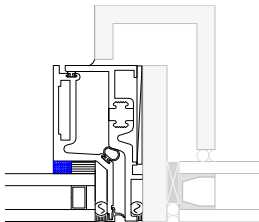
Scale: 3" = 1'-0"



4

### Casement Section Detail: Head Jamb and Sill

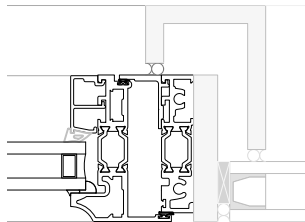
Scale: 3" = 1'-0"



5

### Awning Section Detail: Jambs

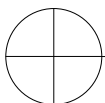
Scale: 3" = 1'-0"



6

### Casement Section Detail: Jambs

Scale: 3" = 1'-0"



Wausau Windows

Toth Residence

413 N Washington St  
Alexandria, VA 22314

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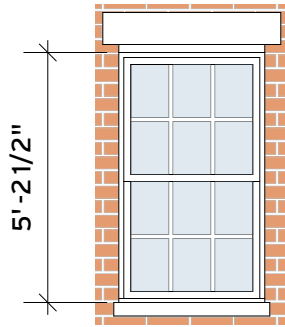
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4 .01

22|01  
date

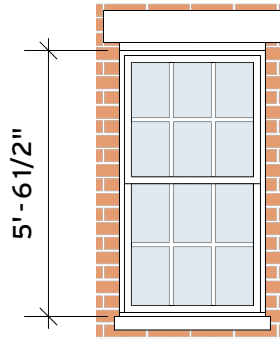
B.A.R. Submission

Job 20.11



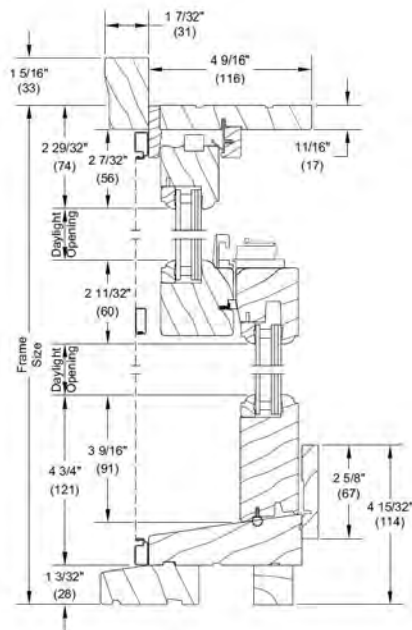
1 Level II Elevation

Scale: 1/4" = 1'-0"



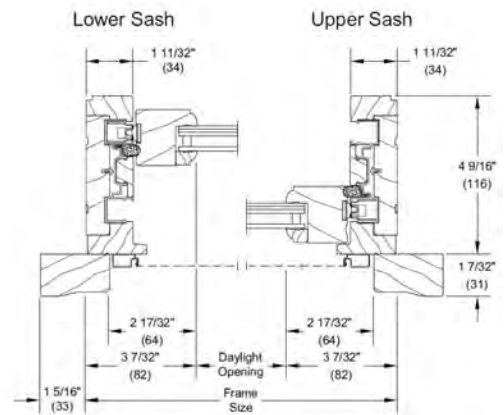
2 Level III Elevation

Scale: 1/4" = 1'-0"



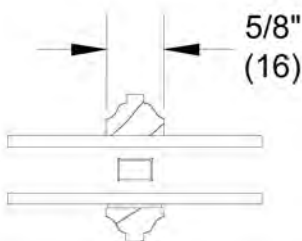
3 Section Detail: Head Jamb and Sill

Not to scale



4 Section Detail: Jambs

Not to scale

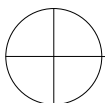


5 SDL Detail w/ Rectangular Spacer

Not to scale

#### Scope of Work:

Keep Existing Framing and Rough Opening. Replace Window Unit with Marvin Ultimate Wood Double Hung 6over6 Historic Unit to Replace Existing



Marvin Windows

Toth Residence

413 N Washington St  
Alexandria, VA 22314

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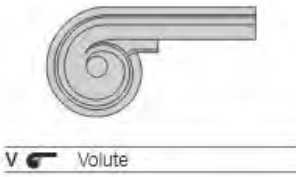
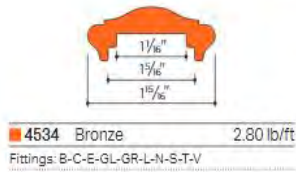
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A

4 .02

22|01 B.A.R. Submission  
date

Job 20.11



## Scope of Work:

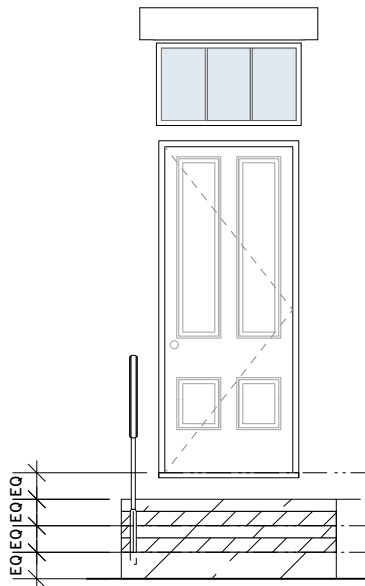
Repair existing brick stairs; cap treads with solid limestone

Handrail - Julius Blum

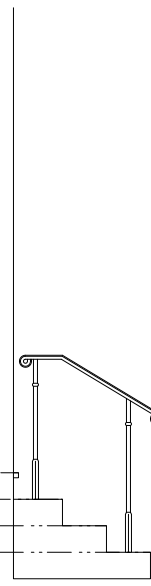
<https://www.juliusblum.com/our-products/?catalog-page=40>

<https://www.juliusblum.com/our-products/?catalog-page=47>

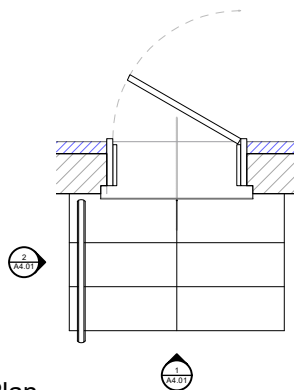
## 1 Catalog Information



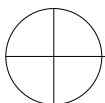
## 2 Elevation



## 3 Elevation



## 4 Plan



Northeast Stair

Scale: 1/4" = 1'-0"

Toth Residence

413 N Washington St  
Alexandria, VA 22314

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A

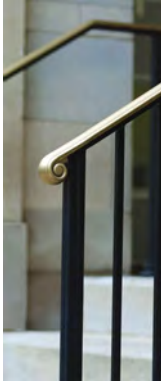
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.03

22|01 B.A.R. Submission

date

Job 20.11



### Scope of Work:

Repair existing brick stairs; cap treads with solid limestone

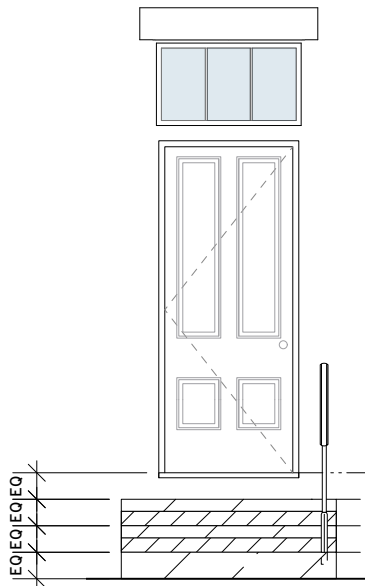
Handrail - Julius Blum

<https://www.juliusblum.com/our-products/?catalog-page=40>

<https://www.juliusblum.com/our-products/?catalog-page=47>

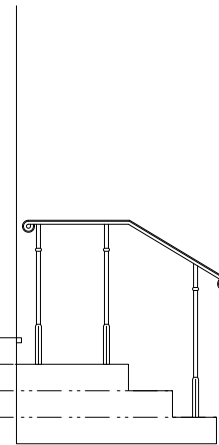
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### Precedent Images



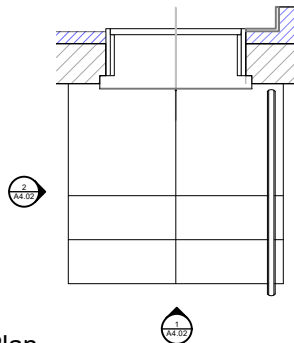
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### Elevation



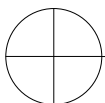
3

### Elevation



4

### Plan



### Northwest Stair

Scale: 1/4" = 1'-0"

### Toth Residence

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Alexandria, VA 22314

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### A

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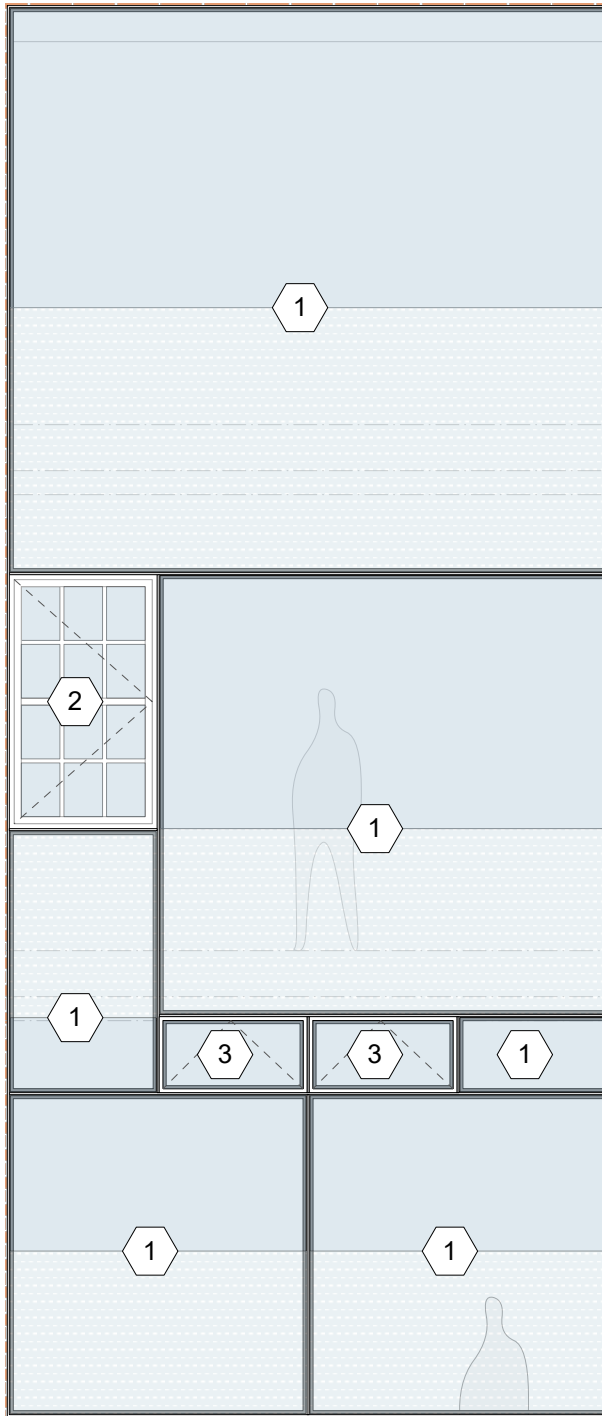
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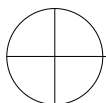
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Job 20.11





1 Custom Window Unit  
Scale: 1/4" = 1'-0"



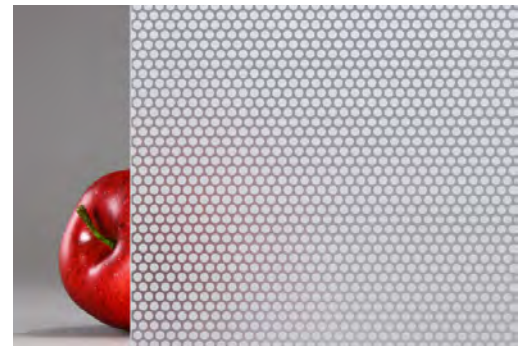
Custom Window Unit

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**Notes:**

Custom Window Unit: Engineered, Fabricated, and Installed by GlassandMetal.com. Window Assembly Set in Structural Steel Frame, Securely Fastened Into New Structural Opening. Window Unit Comprises:

1. Double-glazed, Low-E Lites with Fritting
2. Wausau Historic Metal Casement Window Unit with Double-glazed Lites Similar to New Marvin Wood 6over6 Historic Marvin Replacement Windows on North Elevation
3. Wausau Metal Frame Awning Windows with Double-glazed Window Panel with Historic Details Similar to Existing



**Bendheim Lumi Frit | Projectable Surface 1 Frit Glass, Small Dot + Etch**

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### Scope of Work:

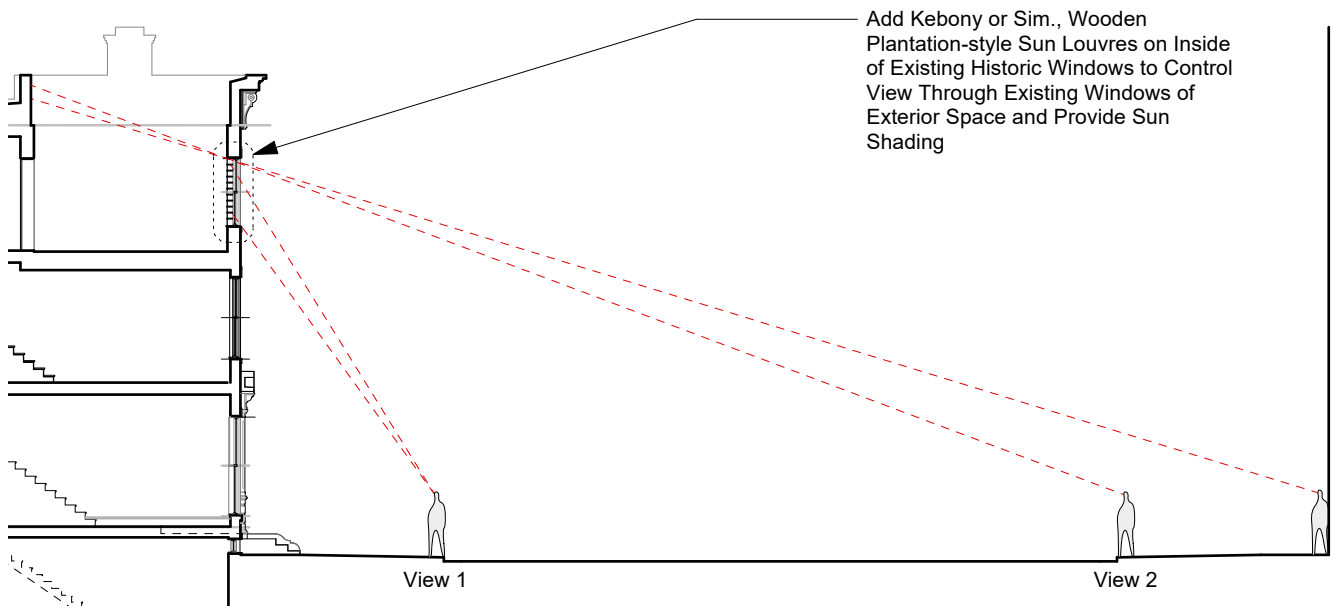
Louvre system on 3rd floor exterior deck windows to eliminate visibility of sky from public way



1 View 1



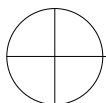
2 View 2



3 Deck Sightlines  
Scale: 1/16" = 1'-0"

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Exterior Deck

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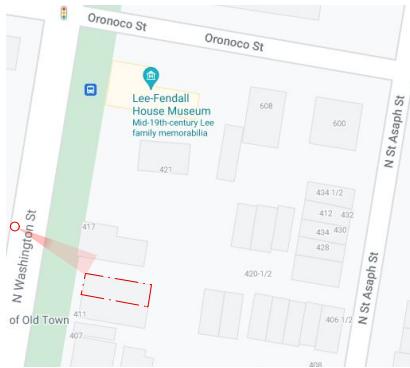




Current View From N. Washington



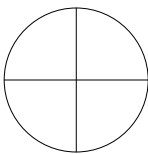
Proposed View From N. Washington



Perspective - N. Washington Street

1. New 6over6 Painted, Wood Framed, Double-glazed Sash Window w/ SDL to Match Adjacent New, Wood-Framed 6over6 Replacement Units (See Marvin Cutsheets)
2. New Drainage Scuppers and Copper Downspouts
3. Replicate and Add Missing Historic "Nipple" Detail
4. Replicate and Add Missing Bottom of Historic Bracket

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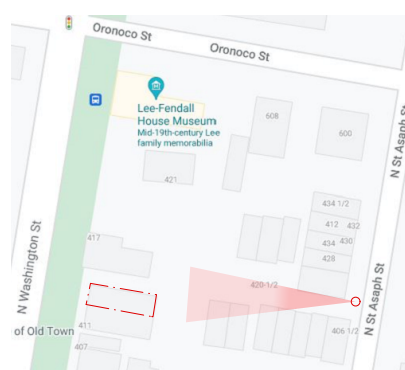




Current View From St. Asaph - Building Circled in Red



Proposed View From St. Asaph - Building Circled in Red



Perspective - St. Asaph Street

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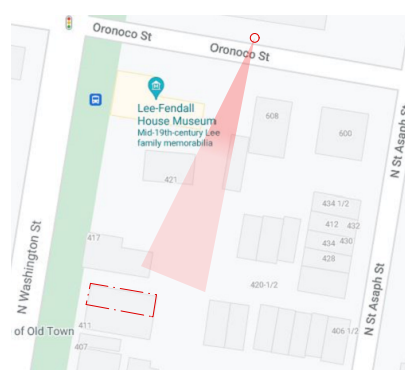




View From Oronoco St. - Building Circled in Red



Proposed View From Oronoco St. - Building Circled in Red



Perspective - Oronoco Street

## Toth Residence

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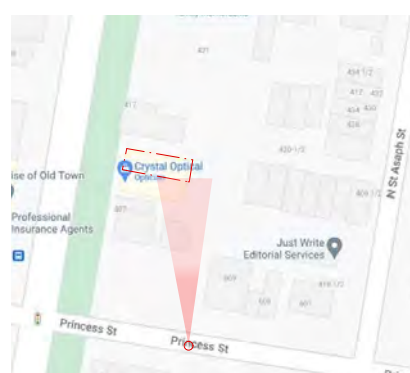




Current View From Princess Street - Building Circled in Red



Proposed View From Princess Street - Building Circled in Red



Perspective - Princess Street

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## FIELD REPORT

<b>Date:</b>	June 4, 2021	<b>Date(s) on site:</b>	May 21, 2021
<b>Attention:</b>	Robert Cole	<b>Project name:</b>	Toth Residence
<b>Company:</b>	Cole Prevost	<b>1200AE Proj. #:</b>	20-162.1
<b>Weather:</b>	Sunny and warm	<b>Location:</b>	413 N. Washington St. Alexandria, VA
<b>Submitted by:</b>	John Matteo, PE	<b>Present on site:</b>	J. Matteo, 1200AE; R. Cole & D. Fernandez- Barbara, Cole Prevost; W. Cromley, WC Restoration; S. Sample and BAR Reps.
<b>Cc:</b>	John Thibau, 1200AE		



OBSERVATIONS	IMAGES
<p>John Matteo of 1200 Architectural Engineers, PLLC visited the site on May 21, 2021 to review and discuss the structural condition of the east wall at the above residence. As depicted in Photo 1, the wall is currently painted white and integral with the adjacent brick masonry wall to the south. The wall is currently in poor structural condition and in need of significant repair. The conditions are broadly shown in Figure 1 and then described with detailed photos. The historic residence is being renovated and modifications to the east wall are proposed that will address the current structural weaknesses while also introducing changes to fit with the interior renovation. As the rear wall of the property, the visibility of the proposed changes for the general public is very limited.</p> <p>Of note in Photo 1, and shown in detail in Photo 2, is the fact that the wall to the south has been substantially rebuilt. The painted white portions of the wall consist of some portions that were left in place along the centerline of the combined façade, with the scattered white brick perhaps representing salvaged brick. The red brick appears newer and no longer is constructed with the common bond pattern of the original construction. The wood lintels have been replaced with steel angles over the windows.</p>	 <p>Photo 1: East Elevation</p>  <p>Photo 2: Transition to Rebuilt Wall to the South</p>





Figure 1: East Elevation with Structural Conditions Noted



Figure 1 shows the conditions of the east wall in broad perspective.

The red lines represent larger scale cracking that is generally focused around the window openings (shown in some detail in Photo 3). The cracking is likely the result of several factors, the first of which is the apparent replacement of the wood lintels at some point in the past. The current lintels, with smooth finish and sharp 90 degree edges, are clearly newer and sawn from modern machinery. The original wood likely rotted from the sustained presence of moisture in the wall. As the rear wall functions as a primary component of lateral resistance for the building, the cracking may also be associated with stresses imposed on the façade from wind and seismic loadings (recalling the 2011 Mineral, VA earthquake as a fairly recent, significant event). The loose connection of the east façade to the floor and roof diaphragms and its resulting bowing, as discussed below, is also likely a factor contributing to the masonry cracking. An important note is that the cracking observed is clearly subsequent to the latest painting effort, and also after the lintel replacement.

The green arrows show examples of paint loss that is the result of brick deterioration. The loss of coating is fairly widespread, with concentrations above the upper two windows (Photo 4). However, the coating loss is less important structurally than the material disintegration of the brick units and mortar that appears to be the root cause within the wall construction. This is likely the result of sustained moisture within the wall, perhaps even being retained by the coating, and then the resulting stressing from freeze-thaw cycling. As retained water freezes it expands volumetrically, inducing internal stresses to the moisture-containing masonry.

The yellow arrows show areas of infill below windows. It appears that there was some sort of accessible porch as the windows were previously serving as doorways. The new brick has not been toothed into the original jambs, providing a



Photo 3



Photo 4: Brick deterioration over lintels

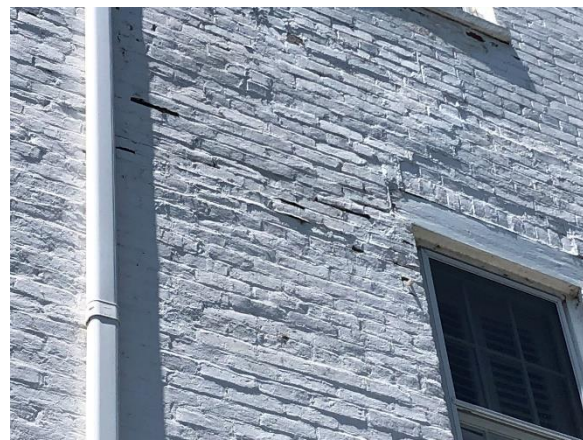


Photo 5:

natural discontinuity and avenue for cracking and water penetration. Note that at least one of the documented larger cracks follows along the lines of one of these infill areas.

The orange arrow shows a single star anchor located at the 2<sup>nd</sup> floor level. Star anchors are a traditional way of bracing the exterior masonry façade to the floor and roof diaphragms, particularly along facades where the interior framing does not bear on the exterior wall, and instead runs parallel to the wall. The wood joists and rafters of the interior floor and roof framing run north-south here and, as such, provide limited bracing to the east wall. The single star anchors appears to have been installed in reponse to outward bowing of the wall, however would not fully address the bowing as currently observed.

Using a 4 foot level and tape measure, Matteo measured the wall at the first floor level to be out of plumb on the order 1 inch over the 4 foot length. As such, the wall is estimated to be bowing on the order of 3 inches at around the mid-height of the second floor. This bowing imposes bending stresses in the wall as the result of an eccentricity between the weight of the wall above and its misaligned position below, rendering the wall more susceptible to failure when subjected to larger loadings.

Photo 5 show both the deterioration of the masonry and its outward displacement at the second floor level.

Photo 6 shows a rapid outward displacement at the ground level, as the bowed wall realigns itself with foundation level masonry that is kept in place by the surrounding soil.

Photo 7 shows that the bowing is restrained at the return walls (both the north wall and the south demising wall between the connected buildings) but increases substantially toward the middle of the façade, both north to south, and from ground to roof.



Photo 6:



Photo 7: Outward Bowing of East Wall

## RECOMMENDATIONS

The structural conditions noted above warrant significant structural repair and stabilization as part of the upcoming renovation and preservation work. Of particular concern is the outward bowing of the façade, which needs to be minimally addressed with more robust connection to the floor and roof diaphragms. Also very significant, but less easily quantified, is the apparent deterioration of the mortar and masonry units that has resulted from a long history of moisture infiltration and entrapment. The combined effects of these structural conditions and the history of modification (window infills, lintel replacements) makes a more substantial rebuilding much more appropriate and offers an opportunity to restore physical integrity to this essential component to the building structure.

If you should have any questions or concerns related to the content of this report, please feel free to contact us at (703) 350-4151.

Site observation visits are conducted for the purpose of observing the general nature of and the technical progress of the work and do not replace regular quality control inspections.