

1.0 INTRODUCTION

Workshop for High Performance Architecture PLLC [WHiP Architecture] has completed an updated independent peer review of the Zoning compliance analysis for the multi-family residential development called **Westend Development** and located at **1521 Varnum Street, NW**, specific to John Stokes' current BZA Appeal. The proposed 1521 Varnum Street, NW multi-family residential development is located on the north side of the 1500 block of Varnum Street, NW and shares a property wall separation with 1519 Varnum Street NW, in Washington, DC 20011.

The purpose of this Peer Review is to evaluate the Zoning compliance of the **revised DC Surveyor's Plat** for the proposed 1521 Varnum Street, NW multi-family residential development on behalf of John Stokes, the owner of the adjoining residence at 1519 Varnum Street, NW, who has made an appeal to the Board of Zoning Adjustment (BZA).

2.0 PROJECT DESCRIPTION

The existing residential building on the property located at 1519 Varnum Street NW, Washington, DC 20011 is a two-story, single family row house with basement. The proposed multi-family residential development would be created by demolishing all of this existing residential building, except the front elevation abutting Varnum Street, NW, the western exterior wall and the existing party wall shared with the adjoining residence at 1519 Varnum Street, NW.

As currently proposed, the Project would contain 7 residential units, each two-bedroom and 1,298 s.f. Gross Floor Area. Each residential unit occupies a complete floor level. On-site parking totaling 4 spaces would be provided at grade level at the rear of the property, abutting a 15-foot wide public alley.

3.0 PEER REVIEW SCOPE STATEMENT

John Stokes has retained Workshop for High Performance Architecture (WHiP Architecture) to to evaluate the Zoning compliance of the revised DC Surveyor's Plat for the Project. The current Zoning regulations that have purview over the 1521 Varnum Street, NW multi-family residential development project are as follows:

- **Zoning Ordinance:** DC Zoning Regulation (DCMR 11)

The following Peer Review Report provides our conclusions in **Section 4.0 Summary of Peer Review Findings**, as well as our analysis of the zoning requirements in **Section 5.0 Appendix**.

4.0 SUMMARY OF PEER REVIEW FINDINGS

Workshop for High Performance Architecture (WHiP Architecture) provides the following as its summary of the findings of the Zoning Peer Review of the revised DC Surveyor's Plat for the Project, identifying the items that are of non-compliance and/or deficiency from the zoning ordinance analysis information previously provided by Rich Markus Architects on the Project drawings for Westend Development at 1521 Varum Street, NW.

4.1 Zoning Ordinance Non-Compliance/Deficiency Items:

DC ZONING REGULATION (DCMR 11):

PEER REVIEW NOTE #1: The updated Plat submitted was created by the DC Surveyor on which diagrammatic layout and annotated information has been drawn by the architect/civil engineer. However, the diagrammatic layout is that of a Roof Plan and not the "new development footprint" as required by DCRA. As such, The Plat includes extraneous information not pertinent to, or directly impairing the evaluation of, the Plat, e.g., penthouse roof structure, roof deck, rooftop AC units.

PEER REVIEW NOTE #2: The proposed development footprint is non-complaint because it goes over the eastern lot boundary line, as observed when coordinating the updated DC Surveyor Plat with the floor plan drawings on Sheets A201 and A202. The new Partition Wall P3 that extends the existing eastern party wall further north, infringes on the adjoining property at 1519 Varum Street, NW for 5.625 inches along the 10 feet 4 inch length of the new Partition Wall P3 wall type.

PEER REVIEW NOTE #3: The updated Plat submitted identifies the specific areas of Pervious Surface that are grass, mulched groundcover, permeable pavers, decks or porches. However, it does not include dimensions of and/or square-foot areas for each. This omission prevents verification of the Pervious Surface calculations provided on the Plat. The Plat needs to be revised to identify and delineate all pervious and impervious surface materials, with dimensions and/or square-foot areas, for compliance with DCMR 11, Section 412.

- **Reference: DC Surveyor's Plat** – DCRA requires that the Plat is to be drawn by the Office of the Surveyor upon which the new development footprint is to be drawn by the architect/civil engineer. The review notes that follow are based on the updated Plat as submitted by the developer (from DCRA website).

PEER REVIEW NOTE #4: The eastern and western exterior walls of the Rooftop Penthouse Structure shown in the Rooftop Deck Plan on Sheet A203 do not comply with 11-400.7 (b). The setbacks

shown are 3 feet 4 inches and 2 feet 0 inches respectively, but should be at least 18 feet 6 inches, the distance equal to the height of the Penthouse above the roof.

- **Reference: 11-400 Heights of Buildings or Structures** – The height of buildings or structures shall not exceed 40 Feet or 3 Stories.
 - **11-400.7** *If housing for mechanical equipment or a stairway or elevator penthouse is provided on the roof of a building or structure, it shall be erected or enlarged as follows:*
 - It shall meet the requirements of § 411;
 - It shall be set back from all exterior walls a distance at least equal to its height above the roof upon which it is located; and
 - It shall not exceed eighteen feet, six inches (18 ft., 6 in.), in height above the roof upon which it is located. Mechanical equipment shall not extend above the permitted eighteen foot, six inch (18 ft., 6 in.), height of the housing.

PEER REVIEW NOTE #5: The proposed development includes 7 dwelling units. Existing Lot Area = 6,278 square feet. Therefore, the minimum lot size required is $900\text{SF} \times 7 = 6,300\text{ SF}$. Therefore, the 7 dwelling units proposed are non-compliant. However, the Project drawings indicate that the 7 units are allowed as per Zoning Administrator Determination Letter, exercising minor flexibility. Historical research indicates that this lot was originally 5,956 SF, but was increased by an additional 323 SF through purchase of part of the adjoining property to the west. Based on this fact, the Zoning Administrator's exercising minor flexibility on this lot is not congruent with the Interpretation and Application of DCMR 11 to "prevent undue concentration of population and the overcrowding of land".

- **Reference: 11-101 Interpretation and Application**
 - **11-101.1** *In their interpretation and application, the provisions of this title shall be held to be the minimum requirements adopted for the promotion of the public health, safety, morals, convenience, order, prosperity, and general welfare to:*
 - (a) *Provide adequate light and air;*
 - (b) *Prevent undue concentration of population and the overcrowding of land; and*
 - (c) *Provide distribution of population, business and industry, and use of land that will tend to create conditions favorable to transportation, protection of property, civic activity, and recreational, educational, and cultural opportunities;*

and that will tend to further economy and efficiency in the supply of public services.

- **Reference: 11-401 Minimum Lot Dimensions**

- **401.3** Except as prescribed in the other provisions of this chapter, the minimum dimensions of a lot in an R-4 Residence District Conversion of a building or structure to an apartment house = 900 SF/apartment or bachelor apartment.

PEER REVIEW NOTE #6: The proposed development shows rooftop mechanical equipment located at two separate locations and outside of the Rooftop Penthouse Structure, which is non-compliant.

- **Reference: 11-411 Roof Structures**

- **11-411.3** All penthouses and mechanical equipment shall be placed in one (1) enclosure, and shall harmonize with the main structure in architectural character, material, and color.

PEER REVIEW NOTE #7: The New Work Site Plan drawing on Sheet A001 does not identify the specific areas that are grass, mulched groundcover, permeable pavers, decks or porches with dimensions and/or square-foot areas included for each. This omission prevents verification of the Pervious Surface calculations. The New Work Site Plan drawing on Sheet A001 needs to be revised to identify and delineate all pervious and impervious surface materials, with dimensions and/or square-foot areas, for compliance with Section 412.

- **Reference: 11-412 Pervious Surface** – The minimum percentage of pervious surface of a lot in an R-4 Residence District which is larger than 2,000 square feet, shall be 20 percent (Section 412.4).
 - **11-412.5** The percent of pervious surface area shall be calculated by dividing the total area of pervious surfaces on the lot by the total area of the lot.
 - **11-412.6** Only the following shall be considered pervious surfaces for the purposes of calculating the pervious surface area:
 - Grass, mulched groundcover, all areas of a vegetated roof planted with a growing medium, and other planted areas;
 - Permeable pavers or paving that facilitate the infiltration of water into the soil; and
 - Decks or porches constructed above the surface of the lot that are erected on pier foundations, and that maintain a permeable surface underneath that can facilitate the infiltration of water into the soil.

PEER REVIEW NOTE #8: The Project results in an increase in lot occupancy of over twenty percent (20%) which causes the GAR to be applicable as per § 3401.5. Provide Green Area Ratio (GAR) calculations, pursuant to § 3402.

- **Reference: 11-3400 Green Area Ratio** - *Green Area Ratio (GAR) is the ratio of the weighted value of landscape elements to land area. The GAR score relates to an increase in the quantity and quality of environmental performance of the urban landscape.*

Peer Reviewer:

Patrick Williams, AIA, NCARB, LEED AP BD+C,

Principal | Owner, WHiP Architecture

District of Columbia Architect License #ARC 101164

5.0 APPENDIX

5.1 Zoning Requirements Analysis

The 1521 Varum Street, NW multi-family residential development property is zoned within the District of Columbia's **R-4 Residence zoning district**. The R-4 Residence District Zoning requirements permit matter-of-right development of single-family residential uses (including detached, semi-detached, row dwellings, and flats), churches and public schools with a minimum lot width of 18 feet, a minimum lot area of 1,800 square feet and a maximum lot occupancy of 60% for row dwellings, churches and flats, a minimum lot width of 30 feet and a minimum lot area of 3,000 square feet for semi-detached structures, a minimum lot width of 40 feet and a minimum lot area of 4,000 square feet and 40% lot occupancy for all other structures (20% lot occupancy for public recreation and community centers); and a maximum height of three (3) stories/forty (40) feet (60 feet for churches and schools and 45 feet for public recreation and community centers). Conversions of existing buildings to apartments are permitted for lots with a minimum lot area of 900 square feet per dwelling unit. Rear yard requirement is twenty (20) feet.

Data	Requirement	DCMR 11	Compliant?
Maximum Building Height	40 feet; 3 Stories	400.1	Yes
Roof Penthouse Setback	Exterior walls located at least equal to height above the roof	400.7 (b)	No
Minimum Lot Area	900 square feet per dwelling unit	401.3	Yes
Floor Area Ratio	None Prescribed	402	
Maximum Lot Occupancy	60% of gross lot area	403.2	Yes
Minimum Setbacks:			
Front Yard	None Prescribed		
Rear Yard	20 feet	404.1	Yes
Side Yard	None Prescribed	405	
Court	None Prescribed	406	
Roof Structures:			
Roof Penthouse	Penthouses and mechanical equipment to be in one (1) enclosure	411.3	No
Pervious Surface	Areas are to be delineated	412.6	No
Green Area Ratio	Calculations are to be provided	3402	No

Heights of Buildings or Structures:

The height of buildings or structures shall not exceed 40 Feet or 3 Stories.

- **400.7** If housing for mechanical equipment or a stairway or elevator penthouse is provided on the roof of a building or structure, it shall be erected or enlarged as follows:
 - (a) It shall meet the requirements of § 411;
 - (b) It shall be set back from all exterior walls a distance at least equal to its height above the roof upon which it is located; and
 - (c) It shall not exceed eighteen feet, six inches (18 ft., 6 in.), in height above the roof upon which it is located. Mechanical equipment shall not extend above the permitted eighteen foot, six inch (18 ft., 6 in.), height of the housing.

PEER REVIEW ANALYSIS: The eastern and western exterior walls of the Rooftop Penthouse Structure shown in the Rooftop Deck Plan on Sheet A203 do not comply with 11-400.7 (b). The setbacks shown are 3 feet 4 inches and 2 feet 0 inches respectively, but should be at least 18 feet 6 inches, the distance equal to the height of the Penthouse above the roof.

Roof Structures:

To exercise a reasonable degree of architectural control upon roof structures in all districts, housing for mechanical equipment, stairway and elevator penthouses, and, when not in conflict with An Act To Regulate the Height of Buildings in the District of Columbia, approved June 10, 1920 (36 Stat. 452; D.C. Official Code, §§ 6-601.01 to 6-601.09, on apartment building roofs, penthouses for (a) storage, showers, and lavatories incidental and accessory to roof swimming pools or communal recreation space located on that roof; and (b) other enclosed areas, within the area permitted as a roof structure, used for recreational uses accessory to communal rooftop recreation space, shall be subject to conditions and variable floor area ratio credit specified in this section.

- **411.3** All penthouses and mechanical equipment shall be placed in one (1) enclosure, and shall harmonize with the main structure in architectural character, material, and color.

PEER REVIEW ANALYSIS: The Rooftop Deck Plan drawing on Sheet A203 identifies two (2) separate locations for Outdoor ACC Units which are outside of the Rooftop Penthouse Structure. This is non-compliant with § 411.3.

Pervious Surface:

- **412.4** The minimum percentage of pervious surface of a lot in an R-4 Residence District which is larger than 2,000 square feet, shall be 20 percent.

- **412.5** The percent of pervious surface area shall be calculated by dividing the total area of pervious surfaces on the lot by the total area of the lot.
- **412.6** Only the following shall be considered pervious surfaces for the purposes of calculating the pervious surface area:
 - A. Grass or mulched groundcover
 - B. Permeable pavers or paving that facilitate the infiltration of water into the soil
 - C. Decks or porches constructed above the surface of the lot that are erected on pier foundations, and that maintain a permeable surface underneath that can facilitate the infiltration of water into the soil.

PEER REVIEW ANALYSIS: The New Work Site Plan drawing on Sheet A001 provides Pervious Surface formula calculations. However, the drawing does not identify the specific areas that are grass, mulched groundcover, permeable pavers, decks or porches with dimensions and/or square-foot areas included for each. This omission prevents verification of the Pervious Surface calculations. The New Work Site Plan drawing on Sheet A001 needs to be revised to identify and delineate all pervious and impervious surface materials, with dimensions and/or square-foot areas, for compliance with Section 412.

Green Area Ratio:

- **3401.5** Any approved change or modification to a permit, project or application in § 3401.3 and 3401.4 that results in an increase in impervious surface or lot occupancy of twenty percent (20%) or more shall cause the GAR to be applicable for that portion of a project that is effected by the modification.

PEER REVIEW ANALYSIS: In the General notes/Zoning Code Analysis provided on Sheet A000 of the Project drawings, an increase in lot occupancy from 19% to 50% is indicated. This represents an increase of over twenty percent (20%) which causes the GAR to be applicable as per § 3401.5.

- **3402 Calculation of Green Area Ratio**

PEER REVIEW ANALYSIS: Provide Green Area Ratio (GAR) calculations, pursuant to § 3402.

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5.2 Photographs



Photo No. 1: Front Elevation of 1521 Varnum Street, NW
(Adjoining 1519 Varnum Street, NW property is to the right)



Photo No. 2: Rear Elevation of 1521 Varnum Street, NW
(Adjoining 1519 Varnum Street, NW property is to the left)



Photo No. 3: Party Wall at Rear Elevation
(Between at 1521 Varnum Street, NW and 1519 Varnum Street, NW)



Photo No. 4: Roof Parapet between at 1521 Varnum Street, NW and 1519 Varnum Street, NW



Photo No. 5: Roof Parapet between at 1521 Varnum Street, NW and 1519 Varnum Street, NW

5.3 Diagrams

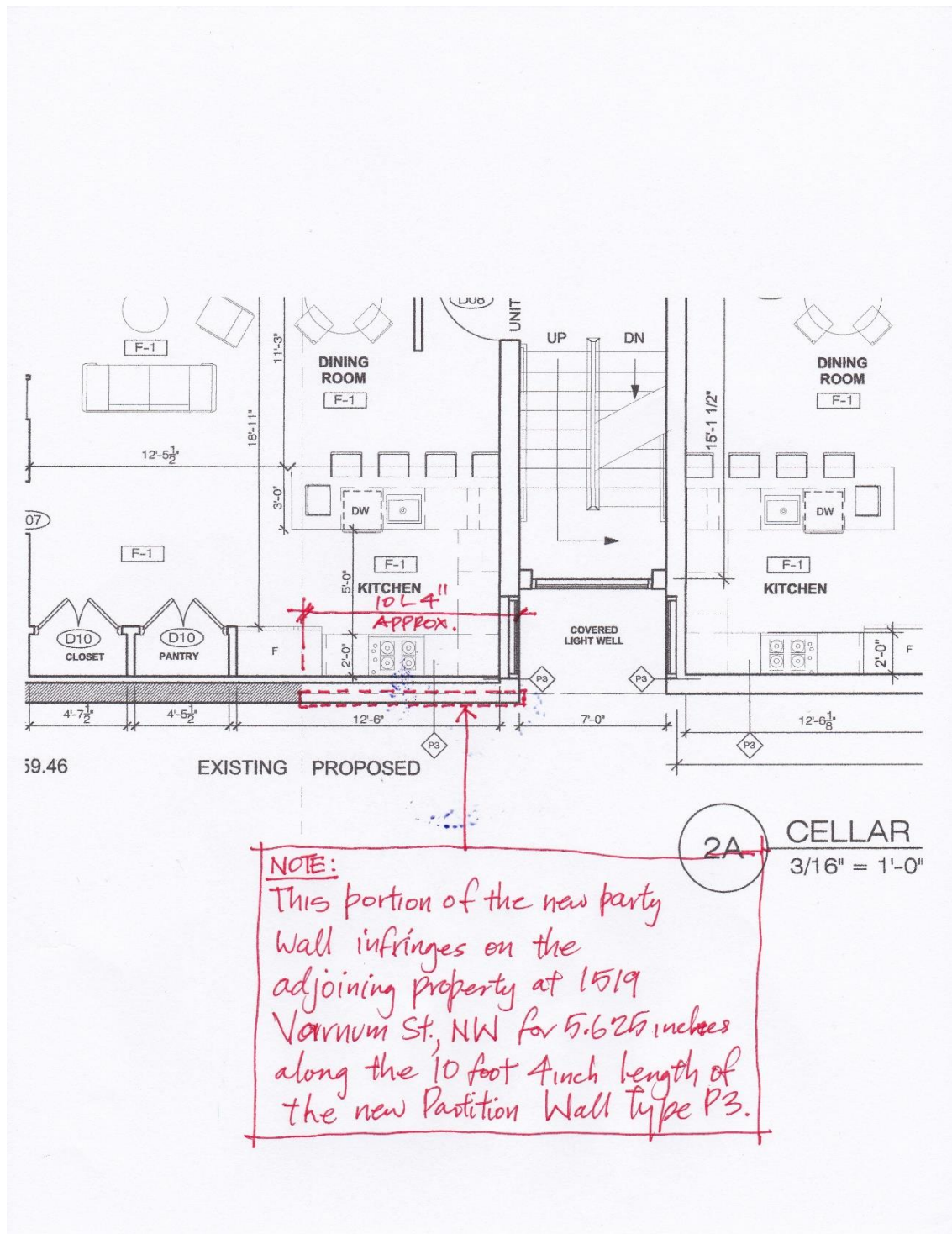


Diagram No. 1: Partial First Floor Plan identifying infringement of adjoining property at 1519 Varum Street, NW

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5.4 DC Property Quest Report

The following report for 1521 Varnum Street, NW includes information researched and extracted from the Property Quest website, created by the District of Columbia Office of Planning as an easy way to view a wide range of site-related information.

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**1521 Varnum Street, NW
Multi-Family Residential
Development**

Zoning Peer Review Report

Submitted to:
John Stokes, Owner
1519 Varnum Street, NW
Washington, DC 20011

Prepared by:
**Workshop for High Performance
Architecture PLLC**
3025 Daniel Lane, NW
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June 9, 2015 (Updated)

Workshop for High Performance Architecture PLLC [or WHiP Architecture] is a single-member, limited liability company providing professional architectural, planning and interior design services. Founded in 2013 by Patrick Williams, AIA, NCARB, LEED AP BD+C, WHiP Architecture fully embraces the Integrated Design Approach and Integrated Team Process methodologies for designing and building which assures the most responsive, accurate and cost effective project outcomes.

This Zoning and Building Code Peer Review was conducted by **Patrick Williams**, AIA, NCARB, LEED AP BD+C, Principal & Owner, who is a Registered Architect in the District of Columbia.

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