GOVERNMENT OF THE DISTRICT OF COLUMBIA
Department of Energy and Environment

MEMORANDUM

TO: Anthony J. Hood,
Chairman, DC Zoning Commission

FROM: Jay Wilson, DDOE
Green Building Program Analyst

DATE: July 07, 2017

SUBJECT: Waiver of Rules for Late Submittal of a Report pertaining to 17-05 2100 2nd Street SW, LLC Post-Hearing Submission

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The attached report concerning Zoning Commission Case 17-05 required a revision and is being submitted less than 10 days prior to the Zoning Commission's Public Meeting. The Department of Energy & Environment respectfully requests that the Commission waive its rule and accept this report into the record.

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TO: Anthony J. Hood
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FROM: Jay Wilson, DOEE
Green Building Program Analyst

DATE: July 07, 2017

SUBJECT: **Z.C. CASE NO.** 17-05 2100 2nd Street SW, LLC (River Point) - CG Overlay Design Review on Lot 10 in Square 613

This memo provides DOEE's response to the River Point project team's supplemental filing on June 23, 2107 and summarizes the results of the several meetings between DOEE staff and the applicant's design and development team since the Zoning Commission Hearing on June 5. This memorandum also clarifies flood hazard rules compliance, the current code modification process, and how DOEE addresses "mixed use" building in floodplains.

Over the last few weeks, the project team has altered the design to meet some of the recommendations presented in DOEE's initial report. Given this progress and changes to the initial design, DOEE recommends approval of the application 17-05 for 2100 2nd Street SW, LLC, with the following considerations.

DOEE Recommendation	Initial Design	Revised Design
Per the building code, raise the first floor 1.5' above the 100-year floodplain elevation, or to 12.1'.	The building's first floor commercial space and residential lobby will be designed to the existing elevation of 9.95'.	No change. The initial design first floor elevation is below the 100-year flood elevation of 10.7'. DOEE will work with the applicant to evaluate opportunities to: raise the adjacent street elevations: incorporate green infrastructure to retain, detail, and convey stormwater; and provide greater resilience from intense rain events, riverine flooding, and the impacts of sea level rise.
Provide dry flood proofing to the 500-year FEMA floodplain elevation.	Dry flood proofing was provided to the 100-year floodplain plus 2'.	Dry flood proofing will be provided by means of removable aluminum floodwalls up to the 500-year flood elevation of 14.1'. Installation details, operation and maintenance plans, and other execution details will be worked out with the applicant during the permit review and approval process.
Raise electrical and mechanical equipment above the 500-year floodplain elevation.	Electrical and mechanical equipment was located on the first floor of the building at an elevation of 9.95'.	Main electrical and mechanical equipment will be elevated to the 500-year floodplain elevation of 14.1'.
Provide adequate means of egress that allow for egress in emergency situations and that provide an area of refuge accessible to the highest	Area of refuge was provided on the deck at the water side of the building.	A means of egress and area of refuge were added along V Street SW. A secondary area of refuge is located along 2nd Street.

vehicular roadway, which in this case is V Street SW		
Exceed the code required 0.8" stormwater retention volume and meet the retention requirement for new construction, 1.2" retention volume.	On site stormwater retention of 0.8".	No change on site, however, the applicant proposes increasing stormwater retention including permeable paving in street parking lanes and the roundabouts at the termini of 1st and 2nd streets. DOEE will work with the applicant during the permit review and approval process to work out additional details.
Demonstrate compliance with the GAR requirement of 0.3 ratio.	The applicant did not include GAR plans.	GAR plans were included demonstrating compliance with a 0.3 GAR ratio for the site.
Certify the project to LEED Gold v4	The project would be designed to LEED Silver v2009 certification	The project will be certified to LEED Gold v2009. DOEE recommends that the project upgrade to LEED v4. The 2009 LEED rating system is outdated and no longer accepting new projects. Although this project was previously registered under that platform, DOEE encourages the applicant to upgrade to the LEED v4 platform, which uses the current building codes as the minimum benchmark for energy efficiency. It would also put the project on par with other new developments in the pipeline.
Incorporate renewable energy strategies to provide 1%-3% of the building's total energy use.	No renewable energy strategies were pursued.	A total of 8,000 sf of solar photovoltaic panels will be installed above portions of the green roof. This contributes to

		GAR compliance and saved money by reducing the need for an intensive green roof. Given the strong financials for solar in the District and resiliency benefits of on-site generation, the applicant is encouraged to maximize opportunities and increase solar photovoltaic installation.

Documents and exhibits provided as part of the supplemental filing show that the project team has made progress in their design. During permitting, this project will require a modification from the building code to allow a mixed-use building with occupiable space below an elevation of 12.1 feet. Per the applicant's Exhibit B-2, confusion remains regarding the floodplain variance or the code modification process, DOEE's criteria used in denying and approving floodplain code modification applications, and how DOEE addresses "mixed use" building in floodplains. DOEE emphasizes that the requirements resulting from the code modification review during the permitting process have potential to change the design of the building significantly. For this reason, it is important that the Project Team consider DOEE's recommendations at this stage of the project, because if design changes occur during the code modification process, re-review by the Zoning Commission may be required.

Key recommendations include, but are not limited to:

(1) Elevate the first floor of the building to at least 1.5 feet above 100-year flood elevation; and
(2) Floodproof the entire building to 500-year elevation.

DOEE will continue working with the applicant by fully reviewing the flood hazard code modification application package with supporting documents and justifications of why elevating the first floor of the building is not achievable. In granting a flood hazard code modification, elevating the first floor commercial uses is a preferred measure, rather than flood proofing it; however, in discussions with the Applicant, we understand there are reasons why the first floor cannot be raised, such as the relative elevation of the surrounding streets. We will investigate opportunities to increase resilience throughout this next stage of design and permit process. In instances where elevating is not possible, flood proofing to higher flood proofing design elevation can be achieved and considered as an alternative. In this case, the applicant has agreed to provide flood proofing of the entire building to 500-year elevation at a minimum and provide full documentation to support that elevating is not possible.

Flood Hazard Rules Compliance

The District adopted Flood Hazard Rules (20 DCMR Chapter 31) in 1985 and amended these rules in 2010 in order for residents, property owners and renters to be eligible for federally backed flood insurance under the National Flood Insurance Program and federal disaster assistance. DOEE, as the District's floodplain administrator, regulates development in the Special Flood Hazard Area (SFHA) or 100-year floodplain to ensure that the site is "reasonable safe from flooding" (20 DCMR 3102.2). DOEE coordinates with DCRA as the Code Official to review and approve projects within a SFHA.

Two key technical provisions of Flood Hazard Rules are:

3105.2 Within SFHAs, the lowest floor (including basement) of any new construction of, or substantial improvement to, *residential structures* shall be at least one and one-half feet (1-1/2 ft.) above the base flood elevation and shall be verified by an Elevation Certificate (FEMA Form 81-31).

3105.3 Within SFHAs, the lowest floor (including basement) of any new construction of, or substantial improvement to, *non-residential structures* shall be at least one and one-half feet (1-1/2 ft.) above the base flood elevation or be designed and constructed to be floodproofed during any flood up to that height. Elevation and floodproofing shall be verified by an Elevation Certificate (FEMA Form 81-31) and a Floodproofing Certificate (FEMA 81-65).

Code Modification/Floodplain Variance Process

DOEE coordinates with DCRA as the Code Official to review and approve projects within a SFHA, including reviewing and approving all floodplain code modification applications. To request any variance of flood hazard rules, an applicant must complete and submit the Application for Modification of Construction Code Requirements along with justifications, supporting documents and a registered design professional's seal. In order to obtain an approval of the code modification or variance on Flood Hazard Rules, the applicant must provide at a minimum the following justifications and supporting documents:

(1) Good and sufficient cause that the unique characteristics of the size, configuration or topographic of the site;
(2) Evidence that failure the grant the requested modification would result in exceptional hardship by rendering the lot undevelopable;

(3) Evidence that the granting of the requested modification will not result in increased flood heights, additional threats to public safety, extraordinary public expense, cause fraud on or victimization of the public, or conflict with existing laws or ordinance;
(4) Evidence that the requested modification is the minimum necessary to afford relief, considering the flood hazard.

DCRA will not approve the floodplain code modification application without DOEE's input and recommended approval.

Response to Exhibit B-2 Floodplain Report

The District's floodplain regulations (mainly 20 DCMA Chapter 31 and 12 DCMR, DC Constructions Codes) do not address "mixed use" buildings proposed within a SFHA. Although FEMA issued Technical Bulletin 6-93 in 1993 that mentioned "mixed use" buildings, FEMA's guidance on "mixed use" buildings in compliance with the local floodplain regulations has been inconsistent since then. FEMA's Technical Bulletins are guidance for communities like the District to assist in compliance with minimum NFIP requirements. The District, however, has authority to regulate development in a SFHA to ensure that the site is "reasonable safe from flooding."

In May 6, 2016, DCRA, in coordination with DOEE, issued Administrative Bulletin CC2016-02 specifically addressing structures with residential occupancies or "mixed use" buildings within a SFHA. The Bulletin establishes new submittal requirements for permit applications for buildings in SFHA that propose new construction or substantial improvement of a Residential Group R building or a mixed use building with Residential Group R occupancies and an underground parking garage. Essentially, no permit application proposing an underground garage for new construction or the substantial improvement of a Residential Group R building or mixed use building containing Group R occupancies in a SFHA will be granted without written evidence that DCRA and DOEE have approved a code modification application. In order to approve any code modification application, the applicant must submit the application package as outlined above.

CONCLUSION:

DOEE recognizes the progress that the design team has made over the last several weeks and recommends approval of the project at this time. DOEE will continue to work with the applicant and adjacent land owners to ensure that development in this high-risk area can increase resilience, incorporate sustainable strategies, and help meet the District's ambitious climate mitigation and adaptation, and Sustainable DC, goals.