GOVERNMENT OF THE DISTRICT OF COLUMBIA
Department of Energy and Environment

MEMORANDUM

TO: Anthony J. Hood
Chairman, DC Zoning Commission

FROM: Jay Wilson, DOEE
Green Building Program Analyst

DATE: December 4, 2017

SUBJECT: **Z.C. CASE NO.** 17-09 for FP Eckington Holdings LLC – Consolidated Planned Unit Development and Related Map Amendment for Lot 15 in Square 3581

The District Department of Energy and Environment (DOEE) does not have comments to the applicant's height or setback requests, or for matters that will be fully addressed through any of DOEE's normal regulatory review processes. Rather, the comments contained herein address issues that the applicant should be made aware of in the early stages of design and entitlement, including strategies to exceed regulatory requirements to meet the policies outlined in the District's Comprehensive Plan and the goals of the Sustainable DC Plan. The items mentioned below are by no means comprehensive, but are a summary of specific items related to the site in question. DOEE is always interested in meeting with applicants early in the development process in order to identify opportunities and to help avoid future regulatory conflicts.

DOEE recommends support and **approval** of the PUD application 17-09 for FP Eckington Holdings, LLC, (Eckington Park) after addressing the following concerns and recommendations:

Applicant's post-hearing submission outlines a few environmental benefits addressed by the project, including a small solar array and designing to a LEED v2009 Gold standard, however, many of the noted improvements, including GAR, the green roof for stormwater retention, and proposed energy efficiency improvements do not exceed the baseline regulatory requirements. While this is commendable and the submission demonstrates at a schematic level that the Applicant is on track for meeting the minimum environmental regulatory requirements, there are a number of additional measures that would improve the environmental performance of project.

The following outlines specific environmental policies included in the District's Comprehensive Plan and DOEE's recommendation for how the development project could contribute to meeting those policies.

Comprehensive policies related to stormwater management:

> ***Policy E-3.1.2: Using Landscaping and Green Roofs to Reduce Runoff***
> Promote an increase in tree planting and landscaping to reduce stormwater runoff, including the expanded use of green roofs in new construction and adaptive reuse, and the application of tree and landscaping standards for parking lots and other large paved surfaces. [613.3]

Stormwater Management:

- A conceptual stormwater management plan for lots A and B was included with the submission. It shows that the project will meet the regulatory requirements for retention and treatment. The development team is encouraged to further refine this plan through the permit review process and generate additional retention volume, capturing stormwater volume up to a1.7" storm event. Any stormwater retained above the 1.2" volume would qualify the project for the District's stormwater retention credit trading program and generate operational savings to the property owner.
- The landscaped areas within the public right of way are strongly encouraged to be designed as stormwater BMPs that capture street runoff. DDOT and public space approved examples include First Street, NE in NoMa.
- **Capturing a higher storm level volume will benefit the developer's application by ensuring its' commitment to the environment and providing needed relief from stormwater runoff. Hence, DOEE's Watershed Protection Division (WPD) recommends the project capture a 1.7" rain storm event.**

Comprehensive policies related to air quality and environmental impacts:

> ***Policy E-4.1.3: Evaluating Development Impacts on Air Quality***
> Evaluate potential air emissions from new and expanded development, including transportation improvements and municipal facilities, to ensure that measures are taken to mitigate any possible adverse impacts. These measures should include construction controls to reduce airborne dust, and requirements for landscaping and tree planting to absorb carbon monoxide and other pollutants. [618.8]

Policy E-4.1.4: Stationary Sources

Maintain controls on gaseous and particulate emissions from stationary sources of air pollution in the city, such as power plants and refrigeration plants. Particular attention should be given to monitoring the air quality impacts of local power plants, which are the largest stationary sources of air pollution in the District. 618.9

Air Quality:

The project would primarily impact air quality as a result of construction dust, fuel-burning equipment, and emissions from traffic resulting from the development. A full evaluation of the project's environmental impacts with regard to air and environmental quality will be done during the permitting and approval process. Significant adverse environmental impacts due to installation of fuel burning equipment and traffic are not expected to result from this development. Considerations are discussed below.

Fugitive Dust

- Fugitive dust results from construction. The applicant must comply with 20 DCMR 605, Control of Fugitive Dust, during project construction in order to minimize fugitive dust.

Fuel-Burning Equipment

- Any fuel-burning equipment to be installed must comply with District of Columbia regulations. Any installation of fuel burning equipment (such as boilers) with heat input ratings greater than 5 MMBTU/hour, stationary generators, or other stationary air pollutant emitting equipment will need to go through a separate air quality permitting process prior to installation.

- **In addition to these minimum requirements, the DOEE's Air Quality Division (AQD) recommends that the applicant consider using lower-emitting technologies to the extent possible to provide power, heating, and cooling.** Renewable technologies such as increasing solar power may help to reduce power demand from the electrical grid. It is not expected that boilers or emergency generators would be installed as a part of this development project.

Comprehensive policies related to building design, energy efficiency, and renewable energy:

Policy E-2.2.1: Energy Efficiency

Promote the efficient use of energy, additional use of renewable energy, and a reduction of unnecessary energy expenses. The overarching objective should be to achieve reductions in per capita energy consumption by DC residents and employees. 610.3

Policy E-2.2.5: Energy Efficient Building and Site Planning

Include provisions for energy efficiency and for the use of alternative energy sources in the District's planning, zoning, and building standards. The planning and design of new development should contribute to energy efficiency goals. 610.7

Policy E-2.2.4: Alternative Energy Sources

Support the development and application of renewable energy technologies such as active, passive, and photovoltaic solar energy, fuel cells, and other sustainable sources. Such technology should be used to reduce the dependence on imported energy, provide opportunities for economic and community development, and benefit environmental quality. A key goal is the continued availability and access to unobstructed, direct sunlight for distributed-energy generators and passive-solar homes relying on the sun as a primary energy source. [610.6]

Policy E-3.2.1: Support for Green Building

Encourage the use of green building methods in new construction and rehabilitation projects, and develop green building methods for operation and maintenance activities. [614.2]

Sustainable design and energy efficiency:
The Applicant's pre-hearing submission notes that the development will be designed to achieve a minimum of 60 points under the LEED v2009 green building standard. Although the Zoning Regulations lists this as a possible benefit and amenity, DOEE does not consider this an option to exceed minimum code requirements and several strategies may be incorporated to improve its effectiveness in helping the District meet our Sustainable DC and greenhouse gas reduction goals.

- LEED v2009 is a dated standard that sunset for new project registrations on October 31, 2016. It has been exceeded by LEED v4, which adds important credits for integrated design and updates energy credits consistent with current code requirements, maintaining that a project certified to this standard would exceed code required minimums. This project, as presented, shows energy efficiency points that meet the current code requirements. In addition, by not going through the 3rd party verification process, there is no guarantee that the project will be constructed as designed. The project should evaluate and update the design to meet the LEED v4 standard at the Gold level and is strongly encouraged to go through the certification process to verify that changes during design or construction do not result in the erosion of the green building goals and credits stated during design.
- The District's goal to reduce energy consumption and greenhouse gases, each by 50% by 2032 is ambitious and requires that buildings, especially new construction development, exceed baseline code standards. There are numerous opportunities where the design could be improved to achieve a higher level of energy efficiency.
    - The rendering of the roof design shows condensing units associated with split system mechanical equipment. Variable refrigerant volume (VRF) mechanical systems are more suitable for small residential units and are up to 25% more efficient than conventional air sourced systems. In addition, VRF systems reduce the amount of roof space required for mechanical equipment allowing the building to dedicate more square footage to green roof or solar panels.
    - Increased energy and water efficiency beyond the currently projected code required minimum, high performance building envelope design, integration of energy recovery systems, and enhanced refrigerant management would achieve

LEED credits, and help the District meet its sustainability goals while ensuring that the project remains economically competitive into the future.

- Well-integrated designs prioritize green building goals in order to hit LEED Silver and Gold targets as certified by 3rd party review. This is not an unrealistic target for a project of this size in an urban setting. DOEE is finalizing a grant study identifying the premiums for green strategies and certification. Certification, including registration costs plus the paperwork associated with review, would not exceed 0.05% of construction cost for a project of this size. DOEE asks that this project increase its commitment to sustainability and achieve a minimum of LEED Gold certification under LEED v4.
- **Given market conditions and the District's goal of continually improving building codes to meet higher efficiency targets with the ultimate goal of achieving net zero energy properties by 2032, it is strongly encouraged that the applicant maximize all strategies to increase energy efficiency and therefore decrease tenant utility costs.**

Renewable Energy:

- One critical goal of the Sustainable DC Plan is for renewable energy to make up fifty percent (50%) of the District's energy use. This is a major priority of the current administration. The Mayor signed legislation this summer to increase the District's Renewable Portfolio Standard (RPS) to 50% of energy use, with a local solar carve-out of 5.0% by 2032. As a result of this legislation, the District has the best financials available to the business and development community for solar energy in the country with return on investment often in two to five years for owner-financed systems and zero up front cost for a leased system.
- Several design solutions could allow the applicant to include more solar photovoltaic panels including reduction of the space dedicated to mechanical equipment through the use of a VRF system, concentrating mechanical equipment to the center of the building site, or mounting an array above equipment. It should also be noted that for a project with a total site area exceeding 77,000 square feet and a rooftop footprint of almost 38,000 square feet, a 1,500 square foot solar array does not maximize opportunities for solar on this project.
  To create a more resilient and economically progressive project, it is strongly encouraged that the project revisits the rooftop design and incorporates solar panels that would generate a minimum of 1% - 3% of the buildings' total energy use.

Finance:

- Financial program like the DC Property Assessed Clean Energy (DC PACE) program can pay for increases in construction cost for on-site generation, for increased energy efficiency above baseline code requirements, and for stormwater management strategies that garner return on investment through the District's Stormwater Retention Credit Trading program. This financing does not increase debt on the property and is repaid over time as a special assessment on the property tax. **DOEE recommends that the applicant take advantage of financial programs and opportunities that would finance an increased commitment to sustainability.**

Well detailed and integrated stormwater management strategies, increased energy efficiency, and integrating on-site renewable energy help the District to meet its sustainability goals and ensure

that the project is economically competitive into the future. DOEE advocates for the project to increase its commitment to sustainable design and is glad to serve as a technical resource for the Applicant as the project continues forward.