

**CLIMATE CHANGE, ENERGY AND ENVIRONMENT COMMISSION**

**c/o Department of Environmental Services  
2100 Clarendon Blvd., Suite 705  
Arlington, VA 22201**

March 28, 2022

Honorable Katie Cristol, Chair  
Arlington County Board  
2100 Clarendon Blvd., Suite 300  
Arlington, VA 22201

Re: PenPlace

Dear Chair Cristol,

The Climate Change, Energy and Environment Commission (C2E2) has reviewed the application for the PenPlace Project. Based on our review, the Commission assesses that the project, designed to achieve LEED Platinum Certification, is an exemplar in advancing Arlington's Community Energy Plan (CEP) and other sustainability goals and will serve as a model for other developers. **Overall, we score this project's contribution to meeting Arlington County's CEP targets at 90%, indicating the project largely meets what is required to achieve the County's carbon neutrality and other sustainability goals.** Please reference the Appendix for further detail on how C2E2 has assessed this project.

The success of Arlington's CEP depends, in large measure, on the County's resolve in ensuring that all buildings are at least zero carbon ready. In practical terms that means four things for every new and renovated building: Make it highly efficient; make it electric; make the electricity renewable; and make it carbon free. In this case, Amazon's application excels in almost all of these areas:

**Energy Efficiency:** The project expects to exceed 30 percent energy efficiency gains over the ASHRAE baseline, demonstrating what can be achieved with careful design that incorporates building orientation, material selection, and highly-efficient mechanical systems.

**Electrification of Systems:** With the exception of first-floor retail space and backup generators, the PenPlace project plans for all-electric HVAC systems, hot water heaters, and corporate cooking equipment.

**EV Charging Infrastructure:** The project meets the Green Building Incentive threshold for electric vehicle (EV) infrastructure, with EV chargers installed in 7% of parking spots and 15% of parking spots ready for future EV chargers. **The C2E2 strongly recommends that all projects that come to the SPRC for consideration strive for 10% and 50% of parking spots that have EV chargers and are EV ready, respectively.** This will help meet future demand for a full transition to electric vehicles and avoid the need for much more expensive retrofitting later. The Applicant should consider 'smart charging' technology to maximize the number of vehicles that can be charged while reducing demands on the electrical capacity available at site.

**Renewable Electricity (Energy):** Amazon plans to power the buildings with 100 percent renewables including onsite solar panels for 1.2 megawatt hours per year and an offsite power purchase agreement in partnership with Arlington County and Dominion Energy.

**Zero Carbon Certification:** The Zero Carbon Assessment for this project indicates that zero carbon certification is not only feasible but well within reach given its exemplary design. We recommend that Amazon commit to achieving this certification by:

- Identifying and working with retail tenants willing to adopt all-electric cooking equipment from the outset and demonstrate that tasty, well-prepared food can be prepared without the use of fossil gas.
- Seeking additional opportunities to reduce the embodied carbon in materials and construction and further reduce the need for carbon offsets.
- Considering zero carbon alternatives to backup generation.

### **Other Sustainability Issues**

The Project includes numerous additional sustainability elements that are outstanding:

- Biophilic elements are incorporated throughout the project, including a forest walk, a water feature, extensive use of native plants, 42 percent tree canopy coverage in the public spaces, and natural materials in the open spaces and retail pavilions. The Helix has been designed to incorporate outside natural elements into the interior of the building.
- Reduction of outdoor potable water use by 100 percent through extensive stormwater capture cisterns and 50 percent reducing indoors water use through WaterSense appliances and other strategies.
- Compliance with Dark Skies lighting standards, including turning off outdoor lighting when nocturnal bird activity is high.
- Use of bird-friendly glass that achieves a low threat score for bird collisions.

The world is facing a catastrophic climate crisis which requires immediate action by individuals, governments, and businesses to avoid the worst consequences, and all future development needs to align to these goals. We commend Amazon for designing a project that adheres to standards that will advance Arlington's energy and sustainability goals.

We encourage the County and Amazon to showcase this project as an example for other developers of what can be done when sustainability is prioritized and integrated into the design from the beginning.

Sincerely,



Joan McIntyre  
Chair, Climate Change, Energy and Environment Commission

Appendix

**C2E2 SPRC  
CHECKLIST**

**PROJECT NAME:** PenPlace **Overall Score**  
**COMMISSIONER**  
**REVIEWING:** Joan McIntyre **90%**

Building Component	GBI or C2E2 Baseline (Meets)	Requirements to Meet CEP & Sustainability Goals (Exceeds)	PenPlace (Evaluation)	Recommendation / Comments	Assessment
<b>Green Building Certification and Carbon Reduction</b>					<b>89%</b>
Certification	Commercial: LEED Gold Multi-family: Earthcraft also permissible	Commercial: LEED Platinum Multi-Family: Earthcraft also permissible	LEED Platinum		Exceeds
Zero Carbon*	Evaluate feasibility of Zero Carbon certification (ILFI)	Zero Carbon Certification (ILFI)--(GBI .7 FAR level)	Zero Carbon Assessment indicated that achieving this goal is feasible and Amazon intends to achieve almost all of the criteria	Amazon should be encouraged to commit to Zero Carbon certification	Meets
Building materials	Meet the criteria that would earn the project at least two (2) points for LEED version 4.1 MR credit Building Life Cycle Impact Reduction.	Score at least ten (10) overall for LEED version 4.1 Materials and Resources.	Planned 6 points out of 13, with 1 possible additional point--Amazon plans to 100 percent carbon emission offsets.	Amazon should continue to explore opportunities for reducing embodied carbon in materials, especially for cement	Exceeds
<b>Energy Efficiency</b>					<b>100%</b>
Energy Optimization	Commercial: Min. 10% (20%) improvement LEED v 4.1 (v 4) Multi-Family: HERS Index of 65 also permissible	Commercial: Min. 20% improvement from LEED v4.1 Multi-family: HERS Index of 50 also permissible	Expect almost 31 percent improvement over ASHRAE		Exceeds
AIRE GBI required narrative	Provide narrative on Energy Efficiency	Make available on SPRC website			Exceeds

Energy Star Certification	Must meet Energy Star 75 within 4 years	Meet highest possible GBI standard (differs by FAR level)	Score of 90 or higher		Exceeds
Energy Benchmarking	Install energy meters or monitoring devices	Meet GBI Extra on Advanced Energy Metering			Exceeds
Electrification					92%
Building's Electrical Capacity	Electrical infrastructure allows for GBI baseline	Electrical infrastructure allows for 100% electrification			Exceeds
Utilities Electrification	Electric water heating ready and narrative	Fully electric water heating (commercial and residential)			Exceeds
	Electric HVAC ready and narrative	Fully electric HVAC (commercial and residential)			Exceeds
	Electric cooking ready and narrative	Electric cooking; electric ready for restaurants.	Amazon central kitchen will be all electric but planning on including natural gas for retail	Amazon should work with potential tenants willing to rely solely on electric kitchen equipment	Meets
Electric Vehicle Infrastructure					83%
Electric Vehicle Charging	4% of parking spots have EV charging	10% of parking spots have EV charging	7 percent of spaces to have EV charging		Exceeds
	15% of parking spots are EV-ready	50% of parking spots are EV-ready	EV-ready planned for 15 percent of spaces	Plan meets County requirements but	Meets
Electricity from Renewable Sources					100%
Renewable Energy	2W/ft <sup>2</sup> onsite solar or equivalent	On-site and/or off-site for 50% of annual load	Roof top solar and offsite VPPN will cover 100% of electricity		Exceeds

Battery Energy Storage*	Battery Energy Storage ready	Battery Energy Storage as backup generation		Backup battery systems not specific	
Environmental Sustainability					100%
Biophilia / Open Space	Provide narrative addressing listed issues	Create a sense of natural environment, habitats. Keep mature trees, tree canopy, native plants, etc.	Plan incorporates multiple elements of biophilic design	Some opportunities remain to reduce hardscape for more trees and native plantings	Exceeds
Storm Water Management	Meet Virginia building code	Seek use of pervious materials; offset storm water with green roof, bio-retention or manufactured treatment device	Plans extensive stormwater retention vaults and other green infrastructure to retain 98% of stormwater runoff		Exceeds
Bird-friendly Material	Must minimize bird strikes by meeting GBI criteria	GBI criteria plus ground floor bird-friendly material		Designed to achieve a BCTR of 15 or less as a weighted average	Exceeds
Light Pollution Reduction	Meet light pollution reduction in GBI	Dark Sky-approved "Friendly Fixture" certification		Will be Dark Skies compliant, with features such as automatic shut off of lights when nocturnal bird activity is highest	Exceeds
Water Use	WaterSense label for all toilets, bathroom faucets, and showerheads installed in residential and hotel units	In addition to Meets, must not use potable water for irrigation.	Watersense fixtures, stormwater retention, and native plantings will allow for an expected 100% reduction of outdoor potable water use and 50A% indoor use reduction		Exceeds

Social Equity					67%
Diversity, Equity and Inclusion	1. One company on development team with DEI program 2. LEED Social Equity Checklist completed	1. Development team presents and discusses LEED Social Equity Checklist to SPRC and AIRE 2. Develop project specific DEI plan			Meets

**\*C2E2 Baseline Requirements**