



MONTGOMERY

TOWNSHIP, NEW JERSEY

ENVIRONMENTAL COMMISSION

To: Montgomery Township Planning Board
From: Montgomery Township Environmental Commission
Re: BPS Development PB-07-22
Date: March 20, 2023

A. Energy Efficiency

1. The Environmental Commission recommends the use of LEED standards of design and construction. All appliances and fixtures should conserve energy and water.
2. We suggest that solar panels be installed on the roof, and that geothermal heat exchange be used for the HVAC system.
3. We noticed the vehicle charging tower on the Site Plan, as required by a new state law. We are not clear how many vehicles can be served by this one tower. It would be useful for visitors and employees, as well as some Assisted Living residents, to have access to charging stations.

B. Lighting

1. All outdoor lighting should be pointed downwards, shielded from the sides, and as low in elevation and intensity as possible, in keeping with Montgomery's Dark Skies policy. Please be aware that overly bright lights can cause glare and temporarily blind drivers and pedestrians, reducing visibility, and will attract or otherwise interfere with nocturnal pollinators, fireflies, bats, and migrating birds. Yellow light bulbs, which are the least disorienting to wildlife, should be used. Every life form is adapted by evolution to dark nights, even humans, and we all benefit from dark nights.
 - a. There is a Model Lighting Ordinance jointly developed by the Illuminating Engineering Society and the International Dark Sky Association that provides guidance on developing a lighting plan that will meet the applicant's needs and protect the wildlife that provides us with so vital many ecosystem services, including pollination and pest control. The Environmental Commission requests that your design follow those guidelines. The International Dark Sky Association provides a lot of information on the least harmful yellow lights and other issues.

C. Site Amenities

1. We recommend the provision of park benches and picnic tables (with umbrellas in the courtyard) for staff, visitors, and for residents to meet with visitors. Even residents of

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Memory Care facilities, who are not ordinarily allowed to leave the building, could miss being outdoors.

D. Landscaping & Tree Planting

1. Thank you for the extensive use of native plants in the landscaping plan. These plants will be very beneficial to the local ecosystem. Though members of this committee have no direct experience with viburnum leaf beetle, we have heard that it is found in the area, and that black haw viburnum, a large native shrub, is the native viburnum that is most resistant to this pest. Would you consider replacing some of the other native viburnums with black haw, just in case? It is an attractive large shrub, around the same height as Arrowwood viburnum, deer-resistant, widespread in Montgomery's woods, and successfully planted in Montgomery parks in sunny spots.

E. Stormwater Management

1. We recommend porous pavement and rain barrels to reduce ponding, which can occasionally occur during extreme storms, and provide water for landscaping and to wash sidewalks.
2. How about a small pond or water feature that might serve as a vernal pool, a breeding habitat for amphibians? The calls of the spring peeper are musical and beautiful. Fish should not be included, as they eat the frog eggs and tadpoles. Stonebridge has spring peepers in a water feature in their courtyard.
3. We are disappointed to see how small a fraction of your stormwater basins are actually bio basins.
 - a. The existing basin that is proposed to be expanded is a mowed detention basin, the vegetated swale is to be mowed.
 - b. Are the side slopes of the new proposed biobasin to the east of the proposed building also to be mowed? If so, this leaves only the bottom of the biobasin, a small area that is dwarfed by the sides of the basin.
 - i. Cannot these mowed areas be planted with native flowers, trees, shrubs, and tall grasses, whose roots would help infiltrate stormwater, and whose leaves and trunks would intercept and hold rainwater before it hits the ground?
 - ii. We would recommend willow oak trees, which have very small leaves, to prevent clogging of the outlet structures. Should they shade the ground, we would recommend planting underneath them Chasmanthium

latifolium, known as river oats, an attractive, deep-rooted, shade-tolerant, moisture-loving, drought-resistant, spreading native grass.

- c. If the side slopes are considered too steep, we request that the bottom of the expanded existing detention basin and the vegetated swale be planted with native grasses and trees.
- d. We are concerned about some issues in the maintenance manual. We doubt that frequent mowing strengthens the roots of grasses and prevents damage to their growing tips.
 - i. In fact, grasses grow from the base of the leaves, not the tips, and frequent mowing weakens their roots by taking stored energy from them to re-grow the leaves. Monthly mowing of grass in the basins seems excessive.
 - ii. We also request that the instructions in the manual on page 4 under Inspection and Maintenance A.1.a) Grass Cutting be clarified. Should the grass not be allowed to grow more than one to two inches high in total height, or should it not be allowed to grow more than an additional one to two inches between cuttings? Different readers interpreted this sentence differently.
 - iii. In addition, we want the instructions clarified to state that the *Panicum virgatum* in the biobasin will not be subject to monthly mowing. Experts recommend cutting or pruning it back heavily in late winter or early spring, not monthly. It would be unfortunate if the *Panicum virgatum* was subject to monthly mowing because maintenance staff thought it was the same as lawn grass.
 - iv. Furthermore, *Panicum virgatum* should not be fertilized because that can cause it to put on excessive growth and droop or flop. Fertilizer will also cause water pollution.