



MONTGOMERY

TOWNSHIP, NEW JERSEY

ENVIRONMENTAL COMMISSION

To: Montgomery Township Zoning Board
From: Montgomery Township Environmental Commission
Re: The Malvern School BA-07-22
Date: March 21, 2023

A. Site Grading & Design

1. This design will require quite a lot of regrading. The retaining wall on the east side is unfortunate. If the buildings could be built into the slope, a lot of ground disturbance and grading could be avoided.
2. A steep slope analysis is mentioned, but we did not receive one. We also did not receive plans for a medical office.
3. We are concerned about the lack of an off-street loading spot. Route 518 and Brecknell Way will be very busy at rush hour, just the time when children are being dropped off and picked up. Will the parents all park and walk the children in to the building?
4. We see no reason given to grant the building height variance. Shouldn't there be an elevator in the building, for accessibility and for equipment and supplies?

B. Energy Management / Efficiency

1. The Environmental Commission recommends that LEED standards of design and construction be used for this project.
2. Energy-efficient and water-conserving fixtures and appliances should be used.
3. The roofs of the two buildings should have solar panels, or green roofs.
4. We recommend geothermal heat exchange HVAC systems.

C. Tree Planting / Landscaping

1. We expect the tree survey to include the species of each tree located, or at least the genus, and to provide a table of the trees with species and diameter at breast height (DBH), indicating which trees are to be removed.

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(908) 359-8211

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2. We are also concerned about the areas around the edges of the site shown as wooded. Once Brecknell Way is constructed and the lot to the east of the proposed school site is redeveloped, most of the trees in the wooded areas may be gone, with only invasive shrubs and vines remaining.
3. The unlabeled existing trees shown may not be suitable as street trees or as screening. The applicant should be prepared to plant street trees in these areas, especially at the north edge of the site.
4. We doubt that any of the existing trees growing west of the retaining wall can be preserved, due to extensive regrading. On the northern part of the site, the bioretention basin, not to mention the building, driveways, and parking lot, will displace all except possibly four existing trees shown on the landscape plan.
5. The proposed landscaping plan includes too many non-native plants. The Environmental Impact Statement (page 4) claims that existing vegetation and wildlife will relocate to surrounding wooded areas when the existing site is developed. Leaving out the unlikelihood of vegetation relocating itself, wildlife is also unlikely to survive if relocated, due to existing habitat elsewhere already being used to its maximum extent by other wildlife. In addition, most of the nearby wooded area has already been cleared.
 - a. The proposed site could provide habitat for birds and butterflies by planting native plants that will provide food in the form of leaves for native caterpillars, flowers that offer nectar and pollen to butterflies and other pollinators, and seeds and berries for native birds. With the decline of indigenous insects and the birds that eat them, popularly known as the Insect Apocalypse, these functions for native plants are especially important.
 - b. Please replace the Japanese katsura tree with Eastern redbud, and the European linden tree with American basswood.
 - c. Disease-resistant American elm trees could be used as shade structures in the playground, street trees, or parking lot trees. In the past the Board has required applicants to plant trees in play areas.
 - d. Where space is available for a large tree, black gum, hackberry, white oak, swamp white oak, chestnut oak, willow oak, and river birch are also attractive and reliable trees in Montgomery.
 - e. Please replace hedge maple street trees under the overhead wires with native hawthorn, fringe trees, hornbeam, or hop hornbeam.

- f. In the northern part of the site, where there are no overhead wires, some of the shade trees suggested above should be used for street trees.
- g. Canadian hemlock trees are susceptible to the woolly adelgid, and should not be planted in our town unless a resistant variety is used.
- h. *Thuja occidentalis* is native but heavily browsed by deer; *Thuja plicata* Green Giant presumably has the same problem.
- i. The native *Cornus florida* is preferable to a hybrid.
- j. Why only seven inkberry hollies out of 111 evergreen shrubs? For deciduous native shrubs we recommend black haw viburnum, arrowwood viburnum, fragrant sumac, common witchhazel, bayberry, fothergilla, ninebark, and *Itea virginica*. Bayberry is actually semi-evergreen.

D. Stormwater Management

1. The bioretention basin is proposed to discharge water onto the adjacent property, not into a watercourse. This seems to be a recipe for flooding the adjacent property. We do not know whether it is legal or not, but it seems that the Development Review Committee and the Zoning Board would have a responsibility to prevent one property owner from dumping their rainwater runoff onto another property.
2. The basin outflow may exceed the pre-development peak in storms larger than 100 years and smaller than 2 years, and will certainly continue longer than peak runoff under pre-development conditions, resulting in greater likelihood of erosion and flooding.
3. We recommend porous pavement, rain barrels, and rain gardens.
4. The parking lots could be sloped toward the islands, which could be rain gardens, with underground storm drains leading to the bioretention basin.
5. The application we have been given to review does not include a stormwater management plan. Without that plan the application is incomplete. It should not be approved the Environmental Commission, Open Space Committee, Shade Tree Committee, and Landmarks Commission have the opportunity to review and submit memos to the board on the stormwater management plan.

E. Lighting

1. All outdoor lighting should be pointed downwards, shielded from the sides, and be 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 interfere with nocturnal pollinators, fireflies, bats, and migrating birds. Yellow light bulbs, which are the least disorienting to wildlife, should be used.
2. 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 on other issues in their website.

F. Site Amenities

1. We recommend bike racks.
2. Electric charging stations should be required for employees as well as clients.
3. No idling signs should be posted in the parking area and in front of the buildings explaining the state laws against idling engines. Children should have clean air to breathe, and idling engines produce more air pollution than cars that are driving.
4. Park benches in front of the school would be a useful addition.