

Memo

To: Board of Adjustment Chairperson McGinley and Secretary Miesche
Verona Board of Adjustment (BoA)

From: Plan Review Committee of the Verona Environmental Commission

c: Verona Environmental Commission Chair

Date: January 29, 2024

Re: **Case # 2024-01**
144 Elmwood Road [Block 902, Lot 27]
Verona, New Jersey

Zone: R-60 (Medium Density Single Family)

The Plan Review Committee of the Verona Environmental Commission (VEC) reviewed the application for 144 Elmwood Road in Verona submitted by John and Kathleen Wessling, which we received on January 22, 2024. We understand that the Applicant is seeking to obtain a variance for a home addition which will encroach into the rear-yard setback. The comments below are provided for the Board's consideration:

- 1) The VEC PRC understands that the applicant intends to remove an 8" birch tree that currently exists in the proposed addition's footprint. The VEC recommends that the applicant mitigate on the property with at least 1 large shade tree from the [Recommended Plant Selection List](#) included in Verona's Zoning Code, §150.
- 2) Existing and Proposed Improved Lot Coverage is listed as 25.14% and 33.4% on the application, respectively. Scaling off the drawing, we calculated an Existing Improved Lot Coverage of 25.1% based on an Existing "Improved Area" of 3,707.6 ft² (please see attached annotated pdf). Furthermore, we calculated a Proposed Improved Lot Coverage of 33.5% based on a Proposed "Improved Area" of 4,943.6 ft². We understand that the maximum Improved Lot Coverage for the R-60 Zone is 40%. We agree with the impervious coverage analysis provided on the plans by the Applicant.
- 3) The VEC PRC understands that the Applicant will exceed the 400 ft² of new impervious surface, which requires stormwater management mitigation using green infrastructure as per [§455-17 Minor Developments](#). The PRC recommends that the Applicant provide testimony as to which green infrastructural best management practices are planned for installation and where they will be installed on the property. Should the Applicant install a rain garden or bioretention basin for mitigation, the Applicant should also provide a planting list in accordance with [Recommended Plant Selection List](#) included in Verona's Zoning Code, §150. The Applicant may also consider the installation of a pervious paving system for the proposed driveway, or grass swales and the planting of additional trees to help capture and infiltrate runoff onsite.
- 4) We understand that since 2020 at least five trees have been removed (sizes unknown) in the front yard affronting Elmwood Road. The Applicant's plan set calls for an additional three, clustered, 8-inch-diameter Birch Trees to be removed for the proposed addition. The Applicant should provide testimony as to the proposed removal of trees

and replacement mitigation plans in the rear of the yard to permit the proposed construction, and be required to comply with §493, Article II. It is the commission's recommendation for the Applicant to try to maintain, with plantings, the bucolic nature and character of the Township.

- 5) We recommend that downspout pipes on the home be disconnected from storm drains and redirected to flow away from the home, over the property's permeable areas, gardens, and lawns.
- 6) In addition to the above comments, please see attached the Low Impact Planning and Construction Checklist. This suggested list was compiled by the VEC based on best available practices.

Low Impact Checklist: Construction

This suggested list has been compiled by the Verona Environmental Commission based on best available practices. This is not a requirement of the uniform construction code. It is intended to be beneficial to all residents considering renovations and new construction. The purposes of this list are to 1) assist those planning construction projects to do so in a manner that causes the least disruption to the environment; 2) establish a healthy setting for those occupying the new or renovated space; and 3) reduce waste and save resources. Implementing environmentally friendly practices can be economical when considered at pre-construction stages and are often beneficial in the long term.

General Construction

- ☐ Recycle and/or salvage non-hazardous construction and demolition debris
- ☐ Use renewable building material and products
- ☐ Incorporate renewable energy (i.e. geothermal, solar)
- ☐ Use local products (i.e. local and sustainable woods)
- ☐ Use local construction products and companies
- ☐ Conserve energy and reduce electricity use as much as possible

Grounds & Landscaping

- ☐ Create a sedimentation control plan to prevent sediment from moving off site.
- ☐ Use native plantings (Native plants are adapted to thrive in local conditions)
- ☐ Use captured rainwater or recycled grey water for irrigation
- ☐ Provide bicycle parking to help reduce overcrowded streets and CO2 emissions.

Storm Water Management

- ☐ Avoid runoff to other properties by installing an underground cistern or rain garden. This will keep water on your own property and out of the sewer system.
- ☐ Limit impervious surfaces – use an open grid pavement system (at least 50% pervious)
- ☐ Promote infiltration that captures and treats storm water runoff from rainfall
- ☐ Use a water retention system (i.e. rain barrel) to collect rainwater for non-potable uses

Lighting

- ☐ Choose LED lights (the most environmentally-efficient option)
- ☐ Purchase renewable electricity, either directly from your power supplier, from an independent clean power generator, or through renewable energy certificates.
- ☐ Use skylights or solo tubes for natural daytime lighting. Use sensor controls in commercial or industrial settings and solar lighting outdoors.

Foundation & Basement

- ☐ Use environmentally friendly foundation sealants (rather than black tar)
- ☐ Prevent sump pump water from flowing into the sewer system

Roofing

- ☐ Use light color roofing materials to limit heat absorption created by darker roofs
- ☐ Use roofing material with a solar reflectance index (SRI) equal to or greater than 78 for low roofs and 29 for steep-sloped roofs
- ☐ Install tile or metal roofs
- ☐ Consider installing a vegetated roof

Heating & Cooling

- ☐ Use 2 x 6 studs instead of 2 x 4 to increase amount of insulation
- ☐ Install programmable thermostats that adjust temperatures throughout the day
- ☐ Use occupant sensing and/or remote control thermostat technologies
- ☐ Install heat pumps to transfer energy heat and cold Use high-efficiency boilers/furnaces
- ☐ Use attic fans to regulate heating and cooling

Windows

- ☐ Choose ultraviolet window protection to protect against sun damage
- ☐ Install triple pane windows or windows with Argon or Kryton gas between panes

Products

- ☐ Choose products with low VOCs (VOCs are found in adhesives, interior paints, cabinets, etc)
- ☐ Avoid products that contain hazardous chemicals such as formaldehyde and cyanide
- ☐ Choose ENERGY STAR® appliances
- ☐ Install dual flush toilets Install low flow shower heads
- ☐ Avoid garbage disposals and make provisions for composting

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Low Impact Checklist: Planning

This suggested list has been compiled by the Verona Environmental Commission based on best available practices. This list is intended to assist individuals involved in planning and building projects in Verona Township towards submitting low impact plans. The goal of a low impact plan is not only to increase cost savings and add value to your project but to make environmentally responsible choices and eliminate project delays in early stages of the planning process.

General Construction & Design

- ☐ Provide occupants with connection to outdoor space through increased natural light and views
- ☐ Orient buildings facing southwest to maximize potential solar installation
- ☐ Use orientation and design to maximize passive solar heat/cooling
- ☐ Use proper planning to prevent damage to surrounding properties and public spaces
- ☐ Minimize disturbance to soils and vegetation
- ☐ Recycle and/or salvage non-hazardous construction and demolition debris
- ☐ Use renewable building materials and products
- ☐ Use local and sustainable woods
- ☐ Incorporate renewable energy and reduce energy use

Grounds & Landscaping

- ☐ Create a sedimentation control plan Limit altering steep slope areas
- ☐ Encourage landscaping that requires limited moving, trimming, and watering
- ☐ Create landscapes that limit the need for lawn chemicals and maintenance
- ☐ Position evergreens to the north to shield wind/ Position deciduous trees to the south to cool buildings
- ☐ Use native plantings (Native plans are adapted to thrive in local conditions)
- ☐ Place parking spaces in shaded areas
- ☐ Place bicycle parking racks in secure areas near entrances
- ☐ Use paving materials with an SRI value >29. This will reflect, not absorb solar heat.

Storm Water Management

- ☐ Limit impervious surfaces – use an open grid pavement system (at least 50% pervious)
- ☐ Reduce impervious cover to promote infiltration that captures and treats storm water
- ☐ Use a water retention system (i.e. rain barrel) to collect rainwater or recycled gray water for non-potable uses

Foundation & Basement

- ☐ Use alternative practices (rather than black tar) for foundation sealants
- ☐ Encourage aeration and ventilation
- ☐ Draw sunlight into basement areas through access windows

Roofing

- ☐ Use light color roofing materials to limit heat absorbed by dark colored roofs
- ☐ Use roofing material with a solar reflectance index (SRI) equal to or greater than 78 for low roofs and 29 for steep sloped roofs
- ☐ Consider Tile or Metal roofs
- ☐ Construct roofs that can support solar installations

Lighting

- ☐ Use solar lighting outdoors
- ☐ Use skylights or solo tubes for natural daytime lighting
- ☐ Use motion sensor lighting where applicable
- ☐ Choose energy-efficient light bulbs

Products

- ☐ Avoid products that contain hazardous chemicals such as formaldehyde and cyanide
- ☐ Use local products (i.e. local and sustainable woods)
- ☐ Use local construction equipment and companies when possible

For more information and resources please see:

The Native Plant Society of New Jersey - <http://www.npsnj.org>

The Association of New Jersey Environmental Commissions - <http://www.anjec.org>

US Green Building Council NJ Chapter - <http://usgbc.org>

New Jersey Green Building Manual - <http://greenmanual.rutgers.edu>

The New Jersey Department of Transportation Master Plan - <http://njbikepedplan.com>

Rutgers Center for Green Building - <http://greenbuilding.rutgers.edu>

The Verona Environmental Commission - <http://www.veronaec.org>