

Low Impact Design/Construction Checklist

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.

Design

- Design for energy efficiency with the [NJ Energy Star Homes](#) or [Zero Energy Ready Homes \(ZERH\)](#) program which include:
 - Higher levels of insulation
 - Better windows
 - Efficient heating and cooling equipment
 - Incentives for doing so
- If possible, Orient buildings facing south to:
 - optimize passive solar gain/easily shade summer sun
 - optimize potential solar installation
- Use proper planning to prevent damage to surrounding properties and public spaces
- Use renewable building materials and products
- Use local and sustainable woods
- Provide occupants with connection to outdoor space through increased natural light and views

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 and position deciduous trees to the south to cool buildings
- Use native plantings (Native plants are adapted to thrive in local conditions)
- Place parking spaces in shaded areas
- Place bicycle parking racks in secure areas near entrances.
- Use captured rainwater or recycled grey water for irrigation
- 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)
- Use a water retention system (i.e. rain barrel) to collect rainwater or recycled gray water for non-potable uses
- 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.
- Promote infiltration that captures and treats storm water runoff from rainfall

Foundation & Basement

- Use environmentally friendly foundation sealants (rather than black tar)
- Draw sunlight into basement areas through access windows
- Prevent sump pump water from flowing into the sewer system

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
- Consider installing a vegetated roof

Lighting

- Choose Energy Star lighting and LED's
- Use solar lighting outdoors
- Use skylights or solar tubes for natural daytime lighting
- Use motion sensor lighting where applicable

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

Heating & Cooling

- Install programmable thermostats that adjust temperatures throughout the day
- Use high-efficiency boilers/furnaces or heat pumps

NOTE, ENERGY STAR AND ZERH INCLUDE THESE MEASURES

Windows

- Choose Energy Star Windows, or
- For higher efficiency, upgrade to triple pane windows or windows

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

For more information and resources please see:

The New Jersey Clean Energy Program. www.njcleanenergy.com

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 - website <http://usgbc.org>

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

New Jersey Department of Transportation Bike/Pedestrian Master <http://njbikepedplan.com>

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

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