

# Low Impact Development

Next steps:

- Identify the areas of consideration for LID (a map)
- Update the subdivision and zoning ordinances
  - o Require the engineer to provide a study of the site
  - o Provide a list of options (as referenced in our manual)
  - o Provide a formula for future maintenance

# Low Impact Development

Rain Gardens



Vegetated Swales



Rain catchment



# Low Impact Development

Typical Grid System – more impervious



Vegetated Swales



Curvilinear System – less impervious



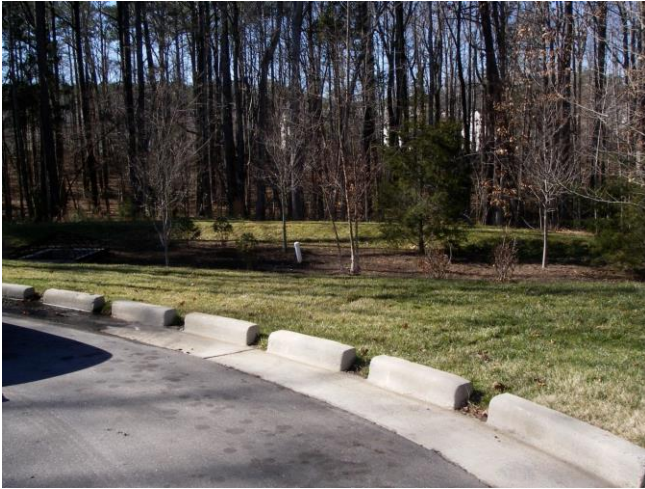
Pervious pavers





# Low Impact Development

Curb cuts and vegetated filter strips



# LED parking lot lighting

Staff recently attended the Hill Country Alliance Dark Sky Conference in Fredericksburg and has since consulted with lighting experts. Staff is prepared to update the zoning ordinance to make the appropriate changes to permit LED lighting. We are already allowing LED lighting (with staff approval) if they meet several of the dark sky friendly requirements as provided below.

## **LED lighting may be used if the following criteria is met:**

- All fixtures are Full cut-off fixtures
- No up-lighting
- Lighting trespass at 5 feet from the property line is as follows:
- Based on surrounding environment type – backlight of pole fixture in urban area .02 at 5 feet out
- Urban area - .05

# LED parking lot lighting

- Poles are 20' in height with perimeter lighting poles 10' in height
- Lumens per net acre shall not exceed 100,000 (does not include governmental owned streetlights) – this lumen per net are value is an upper limit and not a design goal; design goals should be the lowest levels that meeting requirement of the task
- Maximum 3000 kelvins for bulbs
- Any lighting under eaves, awnings or canopies shall be completely recessed
- Outdoor lighting intended to be left on more than 30 minutes after closing, or the completion of activities, must be reduced to 25% or less of the normal lumen output. Motion sensor activation may be allowed to cause the light to resume normal lumen output only when activated and to be reduced back to 25% or less of normal lumen output within 5 minutes after activation.
- Wall packs may be used in combination with pole lights if they are full cut-off fixtures.