Orange Village Drainage Improvement Project:

◊ Linear bioretention swale system within the right-of-way of a residential street.

◊ Designed to distribute, reduce, and treat storm water runoff before connecting to a storm sewer system.

**Sterncrest Road Original Conveyance Channel**

**Original System**

- Built in late 1950’s
- Road runoff drains to open swales then to channels that run through rear yards on private property.
- No storm sewer connection.
- No access easements.
- System not properly maintained resulting in:
  - Little to no gradient in channels
  - Standing water
  - Chronic street and yard flooding

**Design Considerations**

Fixing original system would have required:
- Easements from multiple property owners.
- Clearing heavy brush/trees along property lines
- Re-grading hundreds of feet of channel/ditch.
- Removing and replacing undersized piping.

New retrofit swale system required:
- No brush/tree removal.
- Connection to Lander Rd. storm sewer.
- Reducing flow to storm sewer connection
- Detaining storm sewer flow from Sterncrest Road to new connection.
- Construction within existing right-of-way.

**Construction - November 2007**

Funding provided by: Lake Erie Protection Fund
• Open grass swale with perforated storm sewer pipe below soil mix.
• 70% sand, 30% peat/leaf compost soil mix.
• Soil mix acts as a filter system to remove pollutants.
• Nine landscaped rain garden areas around catch basins receive surface flow.
• Rain garden areas fill to a maximum of 6” around catch basin.
• Catch basins overflow during storm events to prevent flooding.
• Pooled water filters through soil mix within 48hrs.