



Sustainable Urban Site Design and Low-Impact Development Guidelines for Wyandanch, NY

Town of Babylon · February 8, 2011

Wyandanch Rising

Existing Conditions

- Most economically distressed community on Long Island according to the Suffolk County Planning Commission
- Environmental Conditions – Dozens of brownfield sites, high water table with no sewer infrastructure
- High crime, High Poverty area
- Train Station on Main Line of Long Island Railroad – 50 minutes to Manhattan



Wyandanch Rising

Project Intent

- Develop downtown center around train station with infill development in existing asphalt parking lots and replacing vacant and blighted properties
- Create walkable, pedestrian friendly, mixed use community around train station that provides a sense of place for Wyandanch community
- Convert Wyandanch from a community suffering from environmental degradation to one of the greenest places on Long Island
- Provide affordable rental housing and diverse housing choices near mass transit
- End economic isolation of Wyandanch community by connecting residents to employment centers on Long Island and in New York City

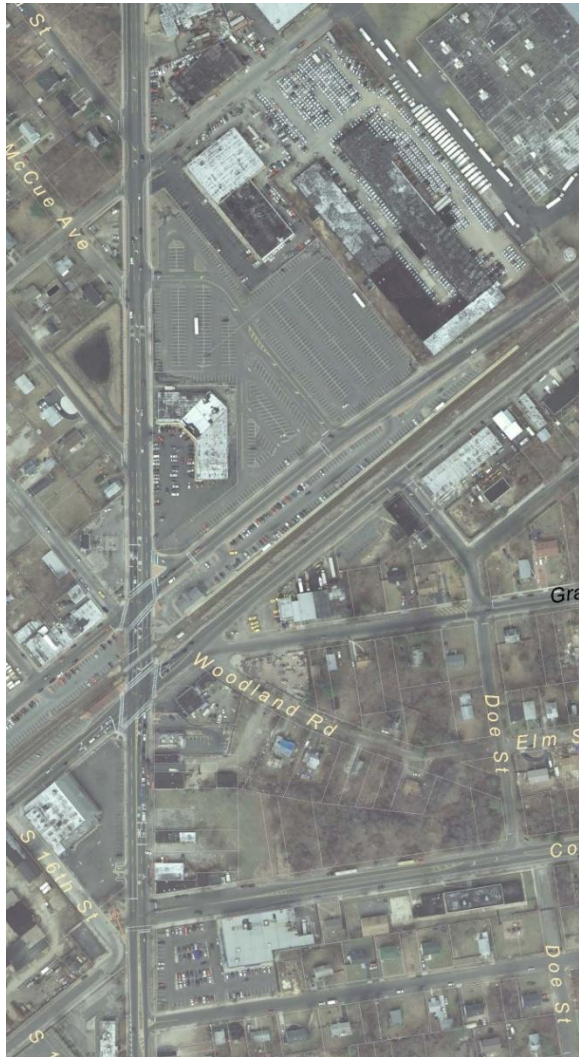


Torti Gallas and Partners



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Wyandanch Rising



Low-Impact Development

Town of Babylon Proposal

- Compile a toolkit of sustainable design best practices
 - Identify environmental opportunities along Straight Path, with focus on the plaza surrounding the train station
 - Recommend practices to mitigate stormwater runoff, eliminate adverse effects of redevelopment, and preserve the natural hydrologic character of Wyandanch
 - Assemble information in a user-friendly toolkit which can be provided to future developers
- Contracted with RBA Group, Inc. in July, 2009
- Toolkit completed in December, 2009

Low-Impact Development

Results

- Stormwater Management
- Plant Material
- Water Management
- Hardscape Material
- Renewable Energy
- Planning Tools
 - ▣ Waste Collection
 - ▣ Alternative Transportation
 - ▣ Public Awareness
- LEED-ND

Sustainable Urban Site Design Guidelines for Wyandanch, NY

2.2.3 Structural Techniques

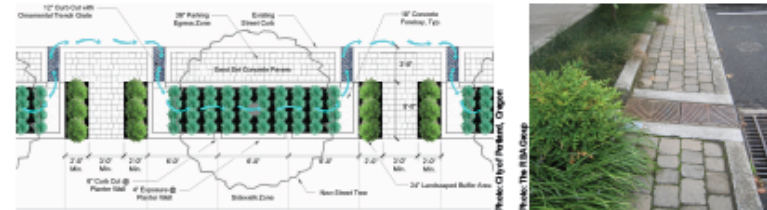
2.2.3.1 Stormwater Planters

These are above ground or below-ground structures that can be used in instances where existing soil conditions or site area do not allow for use of bioengineering techniques. Stormwater planters work by receiving stormwater runoff channeled from adjacent impervious surfaces into the planter box for infiltration and temporary storage.

Planters with Pervious Bottoms: Pervious bottom planters can be used to absorb stormwater runoff from downspouts or other impervious surfaces like asphalt or concrete. The planter should be designed to allow runoff to filter through the planter soil and vegetation and then infiltrate into existing soils below. The planter should be sized to accept runoff and temporarily store water in a reservoir on top of the soil.

Planters with Impervious Bottoms: Impervious bottom planters can be used where native soils are either contaminated or are not conducive to infiltration. Pollutant reduction is achieved as the water filters through the soil; flow control is obtained by storing the water in a reservoir above the soil. The combined planter, soil and overflow drain system should be designed to hold water for a maximum of 4 to 6 hours after a storm event.

It is extremely difficult to determine the cost because there are many variables with this type of planter. An approximate cost of \$250 per linear foot of planter may be used as a guideline. Maintenance of these facilities includes hand weeding (no chemicals are allowed), plant trimming, plant replacement, and debris and sediment removal on a quarterly basis. Though the sediment removal greatly depends on the individual site conditions.



2.2.3.2 Storage/Infiltration Beds

Subsurface infiltration beds consist of a storage bed underlying either a vegetated or hardscaped surface for the purpose of temporary storage and infiltration of stormwater runoff. Subsurface infiltration beds are ideally suited for large, generally flat spaces, such as patios, walkways, driveways or parking lots. The storage media for subsurface infiltration beds typically consists of clean-washed, uniformly graded stone aggregate. The most cost effective stormwater storage solutions, though, are pre-fabricated, modular storage options. These units can be installed either vertically or horizontally and may be capable of handling vehicular loading.

\$100 per cubic yard of storage space can be used as an average cost for installation of these storage beds.

Low-Impact Development

Integration into Redevelopment

- Recommendations incorporated into Torti Gallas Conceptual Design, to be adopted by Town of Babylon
- RFP for Master Developer to be issued Spring, 2011

