WAYNE GLEN
(also known as the Richter Property)
A model Low Impact Development (LID) community.

Conditional Use Hearing
January 5, 2015

ARCADIA®
Photo credit: Bob Byrne
Glenhardie

Photo credit: Bob Byrne
Contention Lane
Walker Road

Photo credit: Laurie Elliot
A decade-long Township response to flooding.

- 2004 Watershed Restoration and Protection Plan
- 2009 stormwater ordinance update
- 2010 Watershed Study
- 2012 Trout Creek Overlay Ordinance adopted.
- 2015 - First implementation of ordinance: Wayne Glen.
Stormwater improvements throughout the site.

REGIONAL BASIN STORMWATER IMPROVEMENTS:

a) Regional Basin
b) Berm along Walker Road
c) New Culvert under Walker Road
d) Stream restoration
Regional Stormwater Basin design concept examples.

Images are for illustrative purposes to demonstrate design intent. Actual design will be refined during land development.
Bio-retention design concept example.

Lebanon Valley College – Lebanon County, PA

Images are for illustrative purposes to demonstrate design intent. Actual design will be refined during land development.
Project Layout: Residential.
108 units: 30 Carriage Homes + 78 townhomes

Landscape plan is for illustrative purposes and will be modified during land development to accommodate the approved plan, as applicable.
Project Layout: Circulation and Parking

- Two-way private entrance road
- Two-way private drive
- One-way loop
- Emergency access roads
- Parking space locations
- Sidewalks / Pedestrian paths
Project Layout: Office.
240,000 sq. ft. in 2 buildings + parking garage.

Landscape plan is for illustrative purposes and will be modified during land development to accommodate the approved plan, as applicable.
Many benefits of Wayne Glen

- Age targeted development with fiscal benefit
- New Class A commercial development with fiscal benefit
- Implementation of decade-long effort by Township
- Eliminate flooding on Walker Road
- Improved safety for downstream residents
- Reduced property damage for downstream residents
- Reduced stream bank erosion and stream impairment
- Millions of dollars in stormwater infrastructure with public benefits
Site – Existing conditions and Surroundings
Plan was designed around stormwater infrastructure and the underlying geology.
Stormwater improvements throughout the site.

- 18 bio-retention basins
- 6 surface infiltration basins
- 3 sub-surface infiltration basins
- 11,847-sf permeable pavement on residential
- 33,964-sf permeable pavement on professional
- 42,000-sf green roof on professional
**Key Stormwater Provisions of the Overlay.**

Development Stormwater Infrastructure

<table>
<thead>
<tr>
<th>STANDARDS OF THE OVERLAY</th>
<th>Criteria Achieved</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEVELOPMENT VOLUME CONTROL</td>
<td>157,891 cubic feet</td>
</tr>
<tr>
<td>100% OF THE 2-YR/24 HR STORM</td>
<td></td>
</tr>
<tr>
<td>DEVELOPMENT RATE CONTROL:</td>
<td>Exceedance: 73.06% +</td>
</tr>
<tr>
<td>EXCEED CH. 174 BY 50%</td>
<td></td>
</tr>
</tbody>
</table>
Development Volume Control

Graph 2. A bar graph representing the runoff volume for the site for various scenarios. The runoff volume for the Wayne Glen site for the 2-year storm will be 0-cf.

Source: Post Construction Stormwater Management Report Summary
Development Rate Control

Graph 1. A bar graph representing the peak runoff rate reductions associated with Point of Interest #2 for each design storm event in accordance with the Tredyffrin Township TCO. All storm events are reduced more than the allowable TCO rates.

Source: Post Construction Stormwater Management Report Summary
Key Stormwater Provisions of the Overlay.
Regional Stormwater Improvements

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| REGIONAL BASIN RATE CONTROL: MEET THE TROUT CREEK STUDY’S PERFORMANCE | Rate reduction:  
- 2 yr storm: 5%  
- 100 yr storm: 20% |
Regional Basin Rate Control

Graph 3. A graphical representation of the rate reductions provided by the Regional Detention Basin at Walker Road.

Source: Post Construction Stormwater Management Report Summary
Flooding on Walker Rd. eliminated up to 100 yr storm.

The system has been designed to eliminate overtopping of Walker Rd. for all storms up to and including the 100-yr storm.

Source: Post Construction Stormwater Management Report Summary
How it works: Treatment train approach to storm water.
Regional basin.

Source: Post Construction Stormwater Management Report Summary
Re-designed Walker Road culvert.
Basin fills to varying depth with each design storm
2-yr storm: no more overtopping of Walker.
50-yr storm: No more overtopping of Walker.
100-yr storm: No more overtopping of Walker.
208-15-A(11) - The conditional use criteria for Wayne Glen have been satisfied.

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<tr>
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<th>Description</th>
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<tbody>
<tr>
<td>A</td>
<td>Present proposed layout, including the project-specific and public stormwater improvements…</td>
<td>✓</td>
</tr>
<tr>
<td>B</td>
<td>Demonstrate consistency with the 2010 Trout Creek Watershed Study and Stormwater Best Management Practice Analysis;</td>
<td>✓</td>
</tr>
<tr>
<td>C</td>
<td>Demonstrate how the public stormwater improvements are consistent with the purpose and meet the standards of Chapter 174, Stormwater Management;</td>
<td>✓</td>
</tr>
<tr>
<td>D</td>
<td>Demonstrate the applicant's ability to achieve the proposed public stormwater improvements;</td>
<td>✓</td>
</tr>
<tr>
<td>E</td>
<td>Present a long-term operations and maintenance plan consistent with the requirements of Chapter 174, Stormwater Management;</td>
<td>✓</td>
</tr>
<tr>
<td>F</td>
<td>Confirm that all necessary repairs and maintenance to the public stormwater improvements are conducted within a ninety-day time frame;</td>
<td>✓</td>
</tr>
<tr>
<td>G</td>
<td>Commit to conduct annual inspection and maintenance of the public stormwater improvements;</td>
<td>✓</td>
</tr>
<tr>
<td>H</td>
<td>Measurement data to be collected, where applicable;</td>
<td>✓</td>
</tr>
<tr>
<td>I</td>
<td>Provide other information and supporting documentation showing how the improvements serve the best interests of the Township.</td>
<td>✓</td>
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