

Storm Water Mitigation – Case Study: Greenwich Hospital, CT

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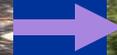
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Overview

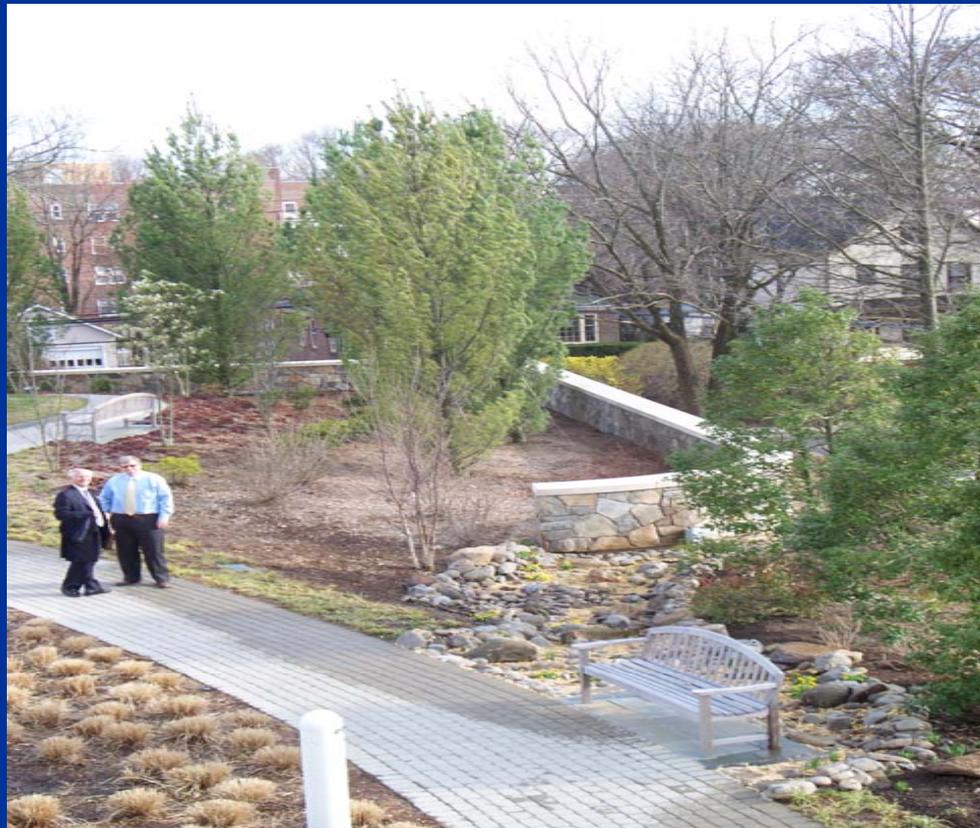
- Reasons for Stormwater Mitigation
- Stormwater Runoff Mitigation Areas of the Greenwich Hospital
- Positives Outcomes
- Lessons Learned
- Future Outlook

Reasons of Stormwater Mitigation

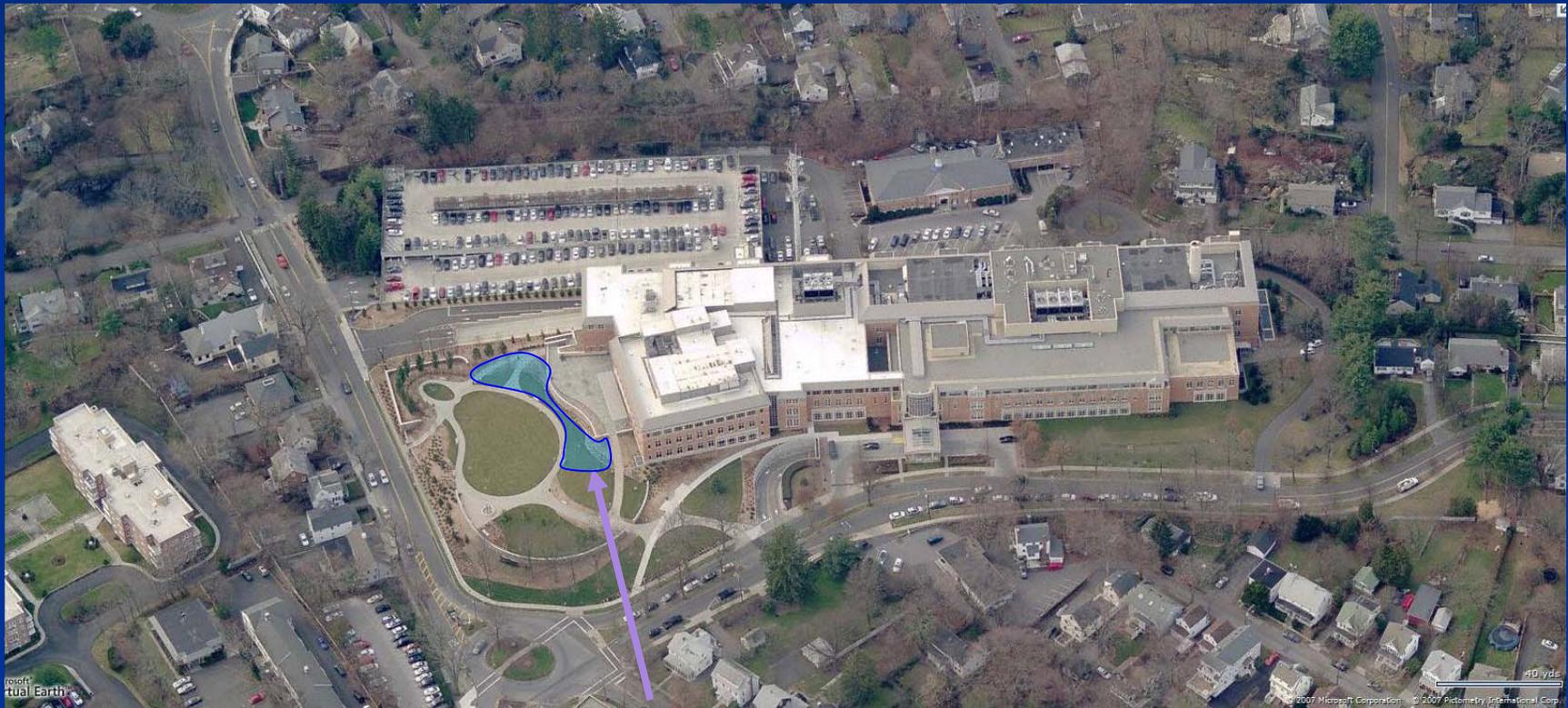


Reasons of Stormwater Mitigation

Interaction of Patient and employee with
nature

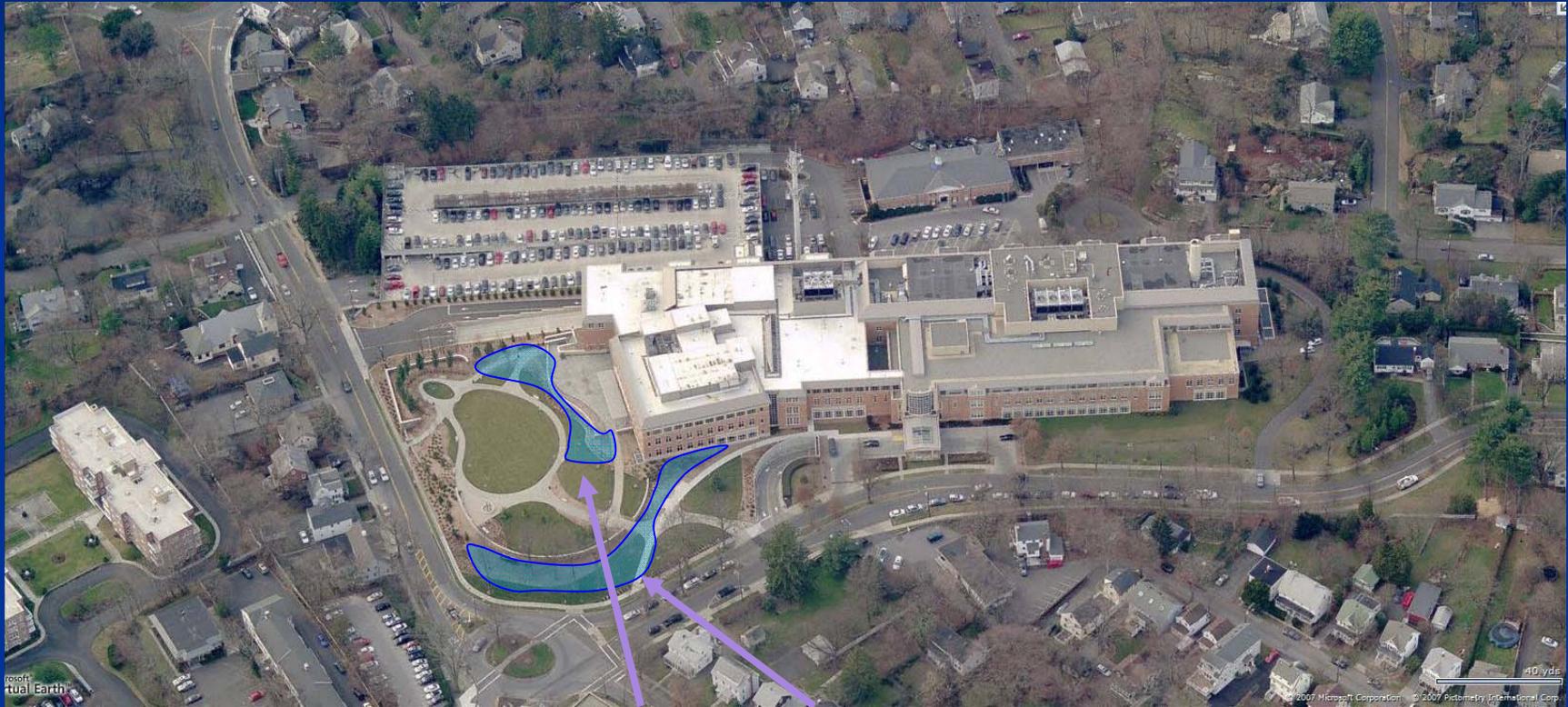


Stormwater Runoff Mitigation Areas – Main Campus



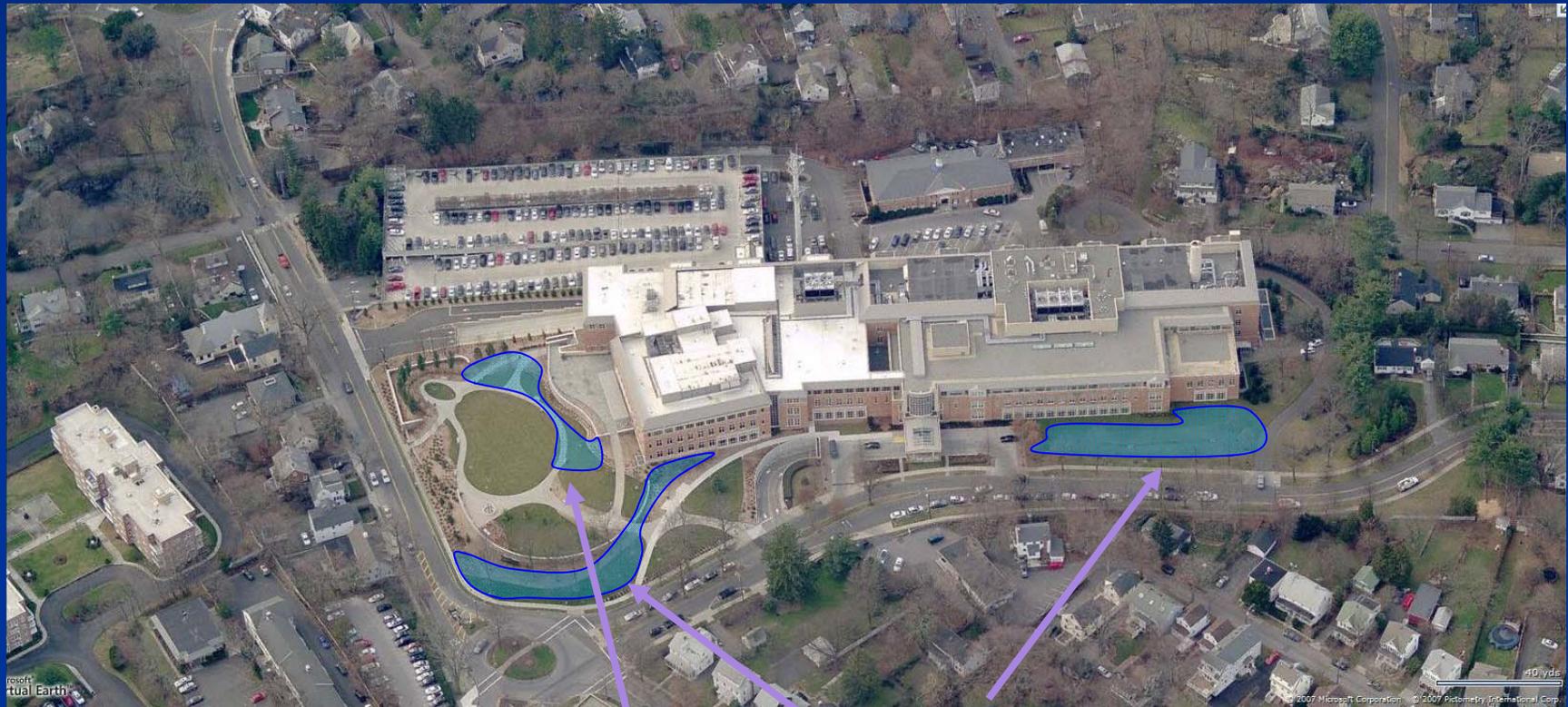
Area 1

Stormwater Runoff Mitigation Areas – Main Campus



Area1 Area2

Stormwater Runoff Mitigation Areas – Main Campus

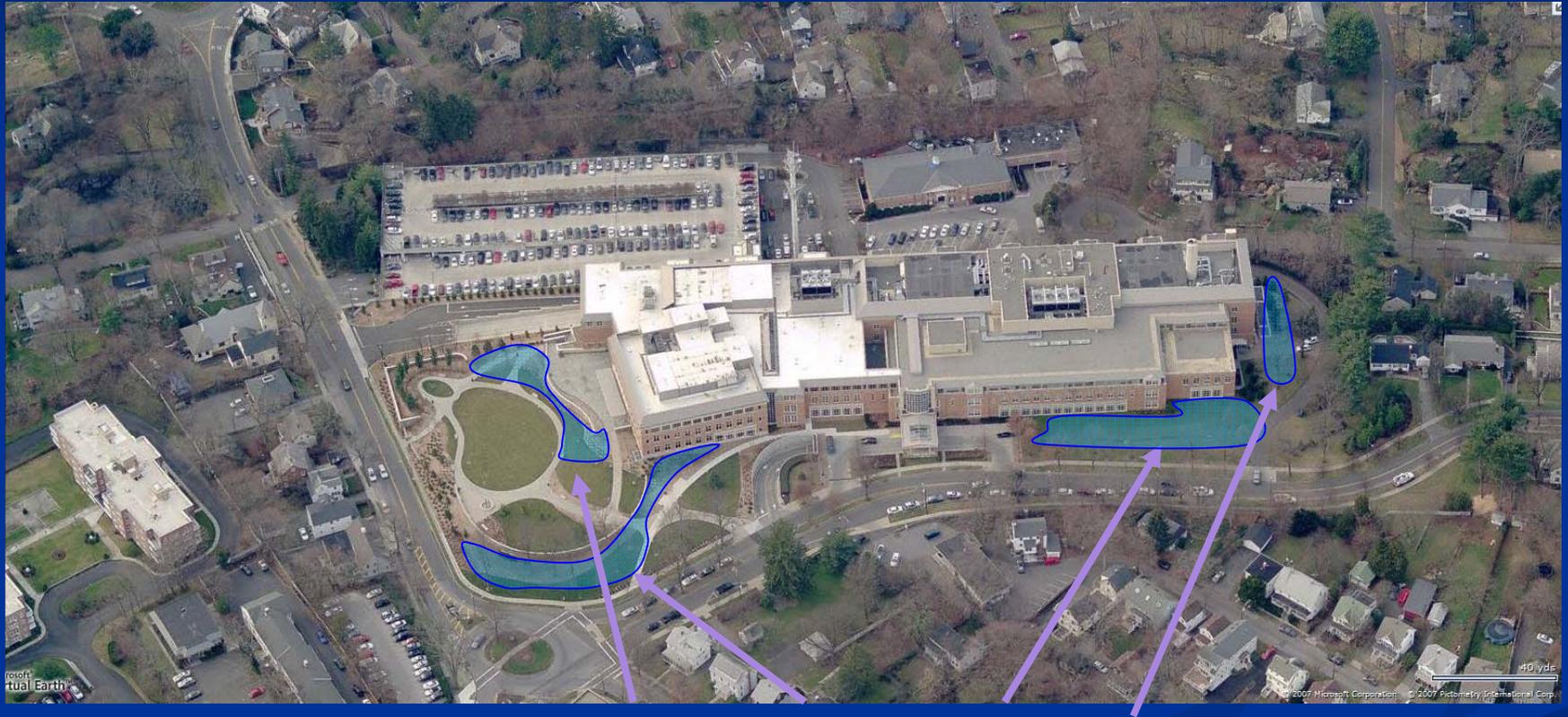


Area1

Area2

Area 3

Stormwater Runoff Mitigation Areas – Main Campus



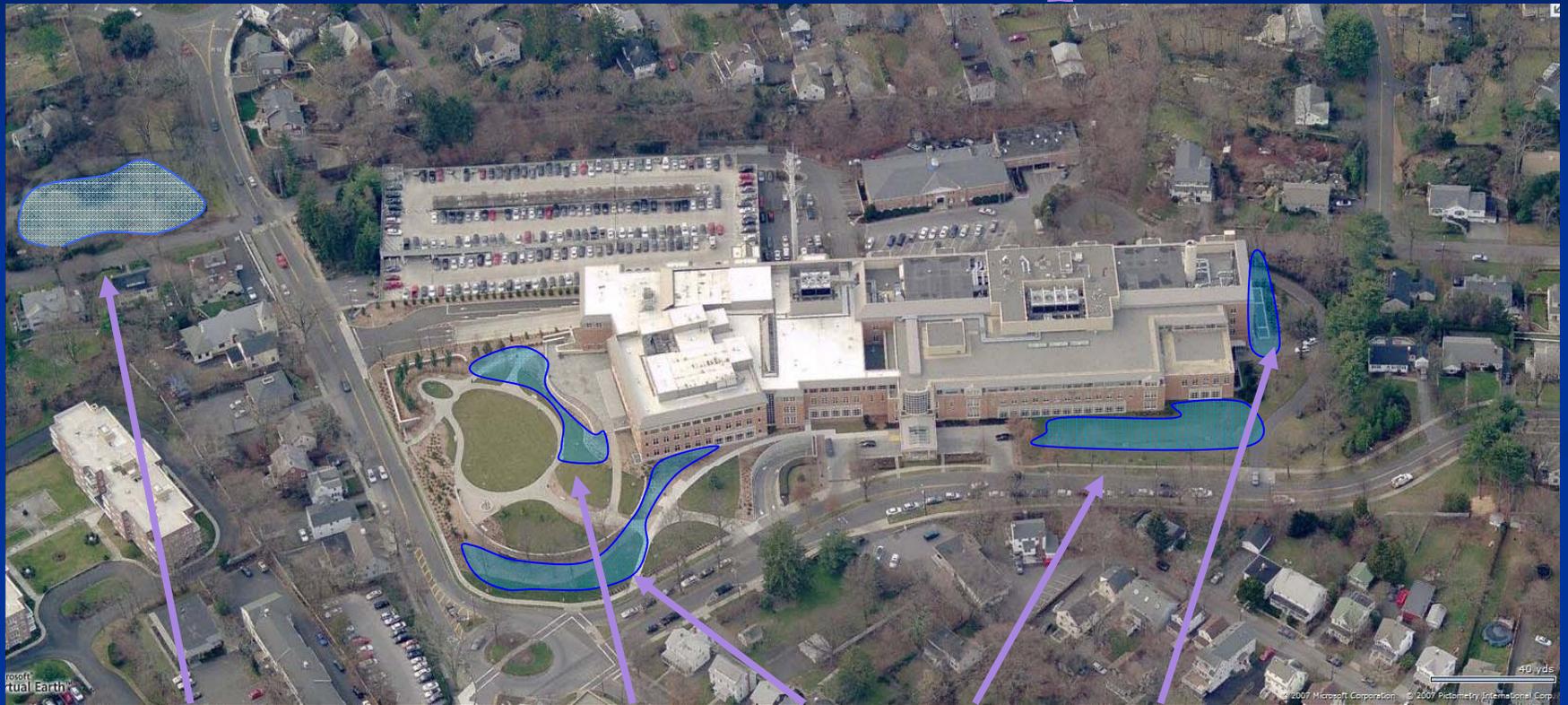
Area 1

Area 2

Area 3

Area 4

Stormwater Runoff Mitigation Areas – Main Campus



Receiving Body of Water

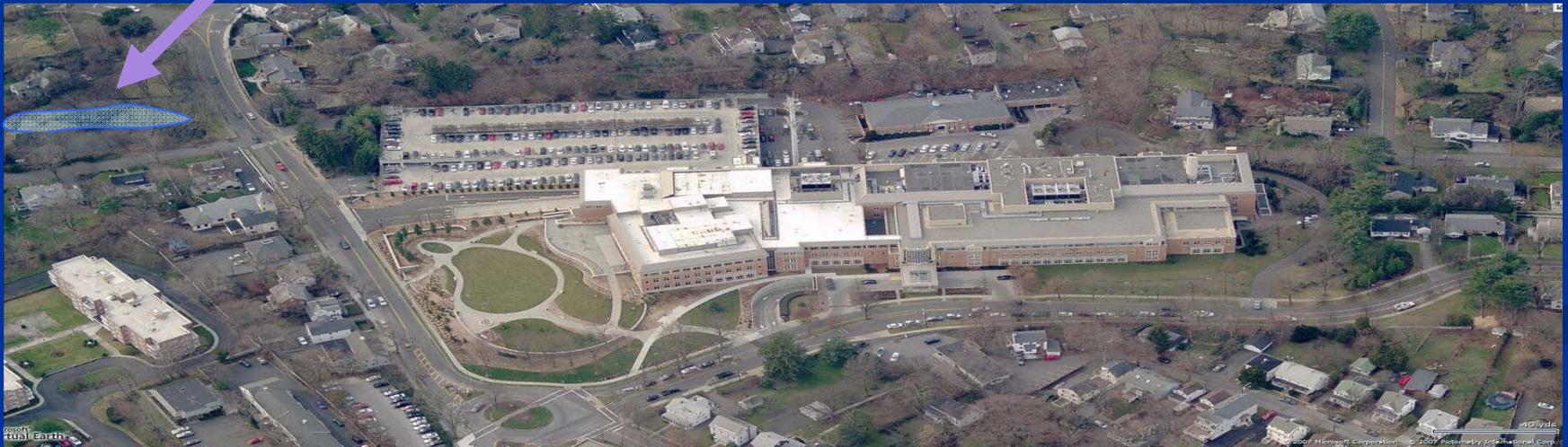
Area 1

Area 2

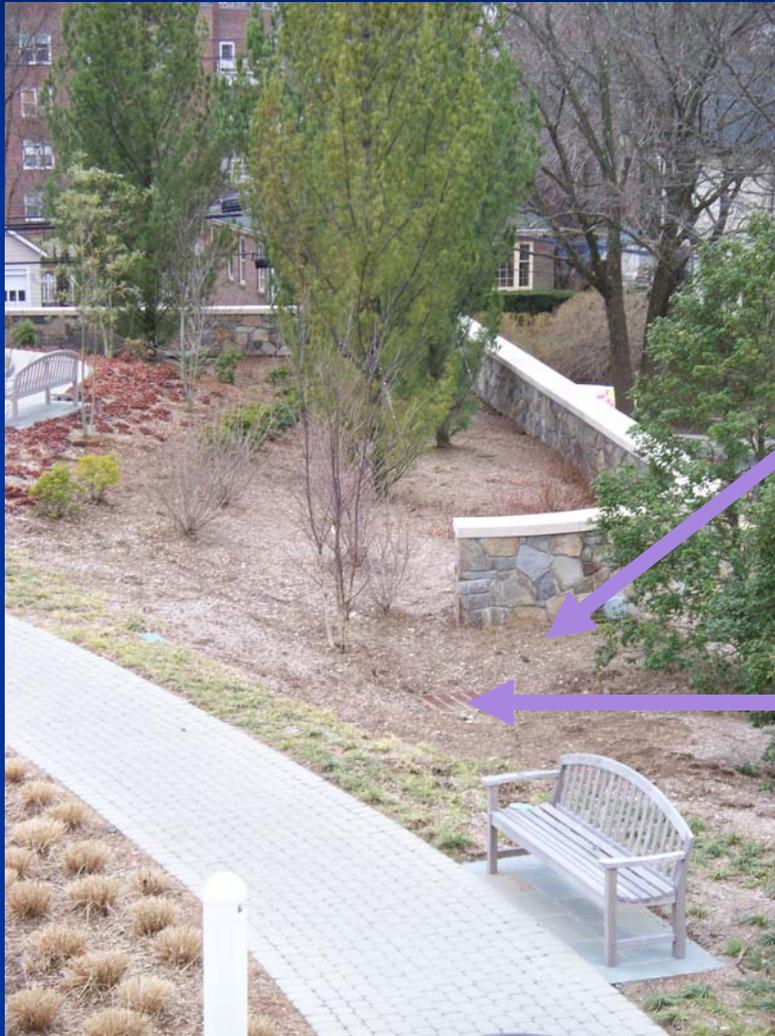
Area 3

Area 4

Receiving Body of Water



Area 1: Pre-Construction



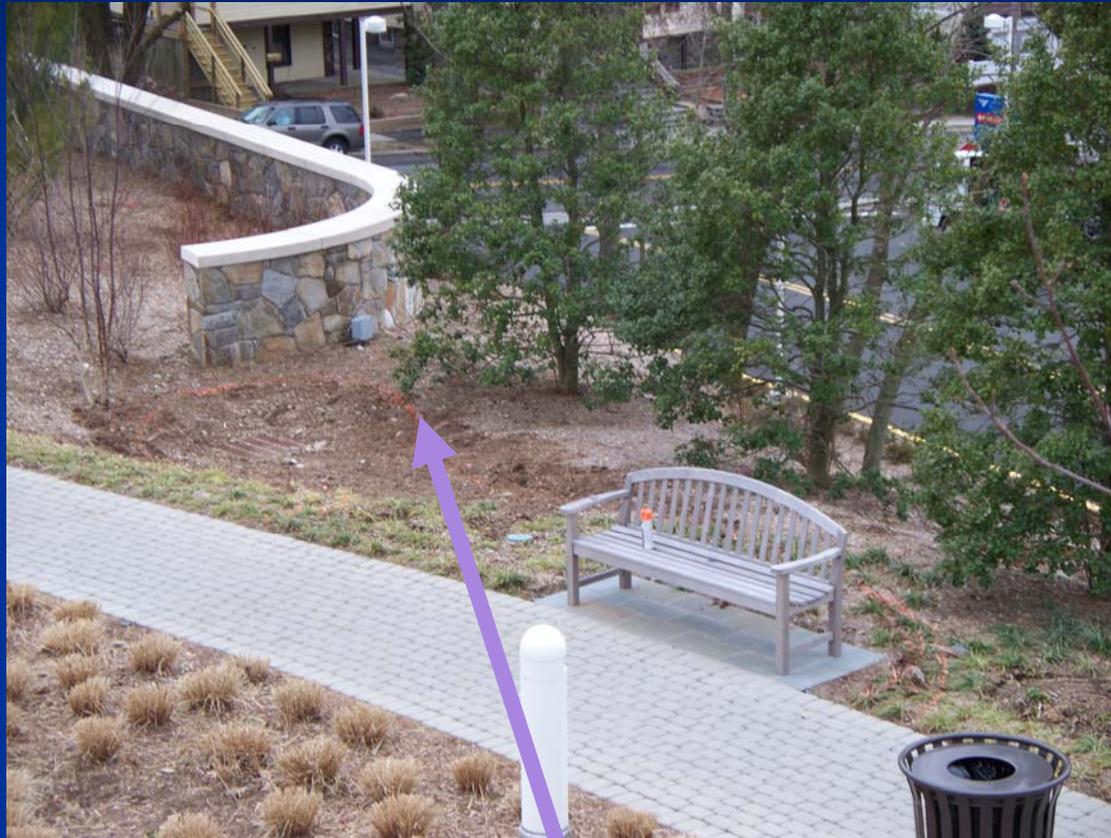
Catch Basin

Area 1: Pre-Construction



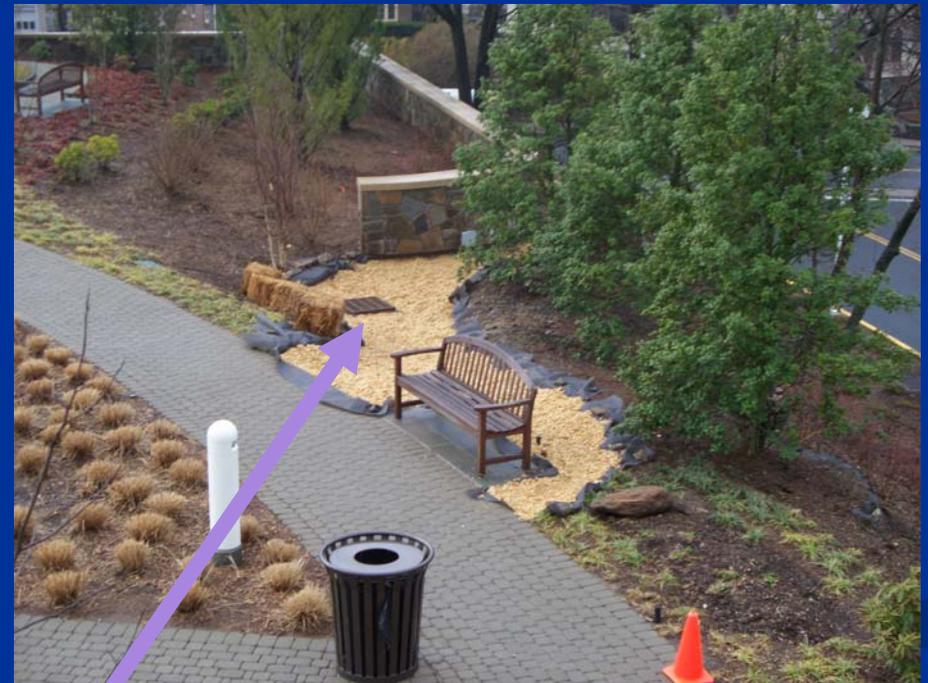
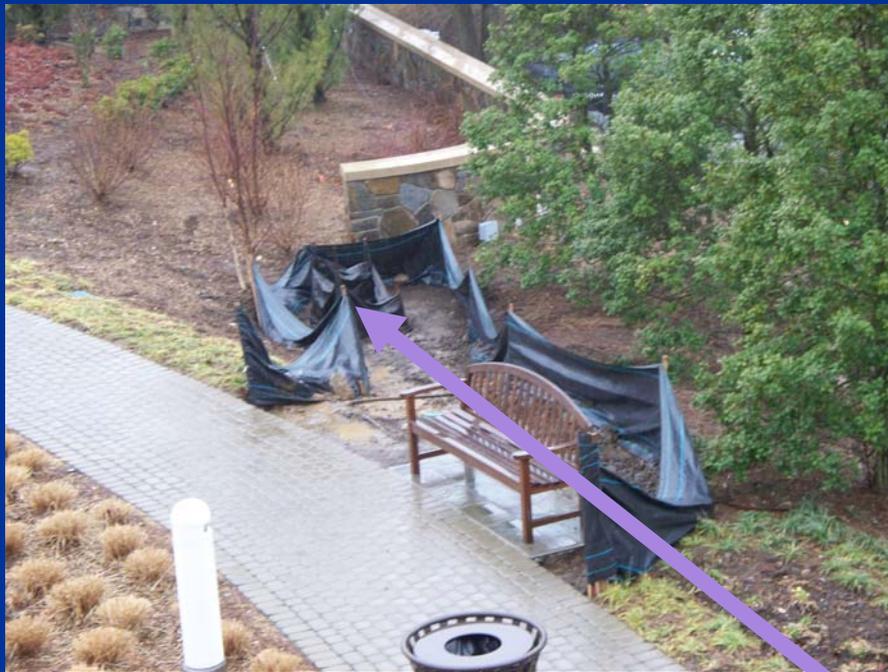
- Mulch/Soil Erosion
- Fertilizer & Pesticides Runoff into receiving Water bodies

Area 1: Pre-Construction



Construction Outline

Area 1: Construction



Catch Basin

Area 1: Construction



- Up-gradient Area

Area 1: Construction



Catch Basin

Retention Basin

Area 1: Post-Construction



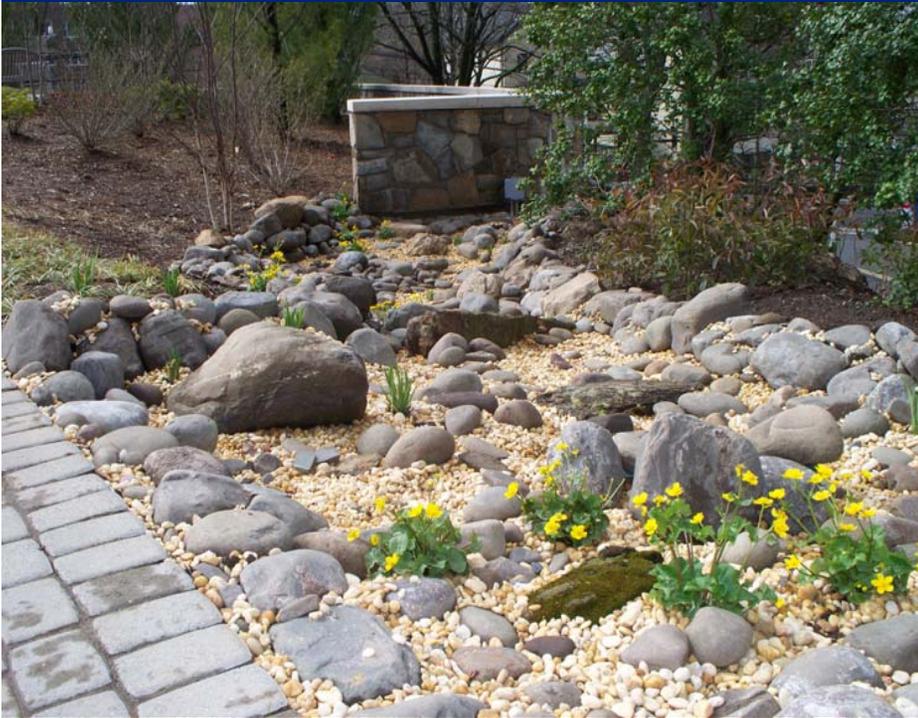
Spring

Area 1: Post-Construction

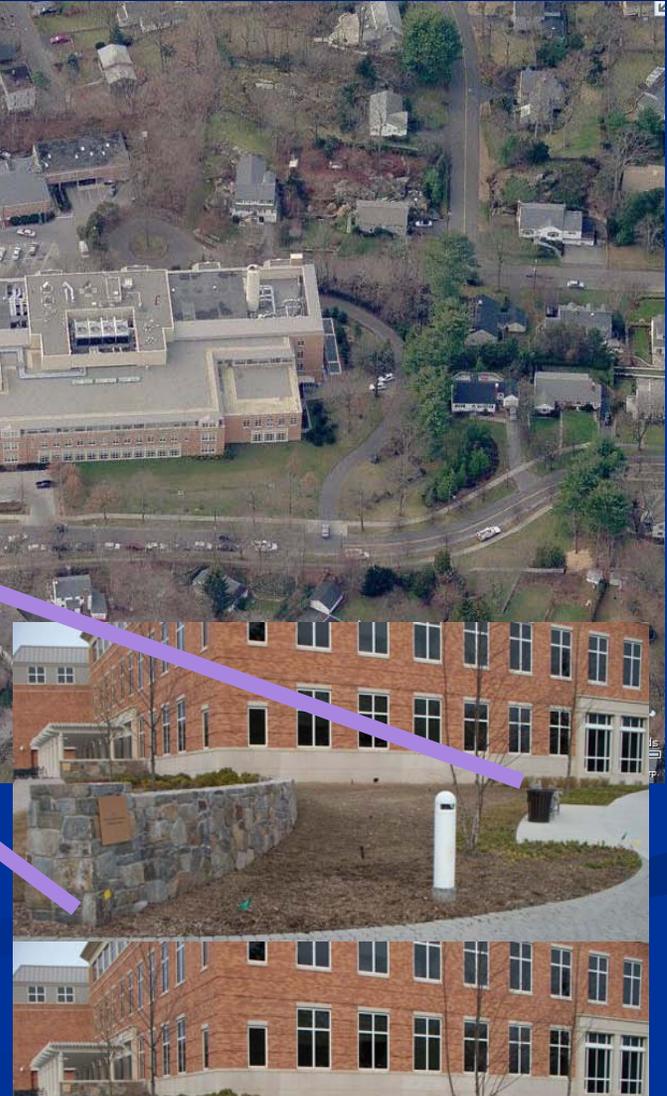


Summer

Area 1: Post-Construction Spring/Summer



Area 2: Pre-Construction



Catch Basin

Area 2: Pre-Construction



Catch Basin

Area 2: Construction



Ponding

Area 2: Construction



French Drain
from waterlogged area



Storm Water Retention Areas

Area 2: Construction



Stormwater Retention
Areas

Post Construction Area 2

Spring/Summer



Area 2: Late Summer



Area 2 - Post Construction Panorama



Area 3: Pre-Construction Phase



Area 3: Post-Construction



Area 3: Post-Construction



Area 4: Post-Construction



Mitigation of Stormwater runoff into grid area

Offsite Location – Healthy Living Center, 55 Holly Hill Lane



Pre Condition

Healthy Living Center - Small Rain Garden Preconstruction



Healthy Living Center - Small Rain Garden Preconstruction



Catch Basin

Healthy Living Center - Construction Phase



Healthy Living Center - Construction Phase



Catch Basin

Stormwater Retention
Areas

Healthy Living Center – Post Construction

Catch Basin



Healthy Living Center – Post Construction



Positive Outcomes

Retention of Soil Erosion, Pesticides and Fertilizer

Wildlife Enhancement/Habitat Creation

Interaction of Patient and employee
with nature

Positive Outcomes

Retention of Soil, Fertilizer and
Pesticides

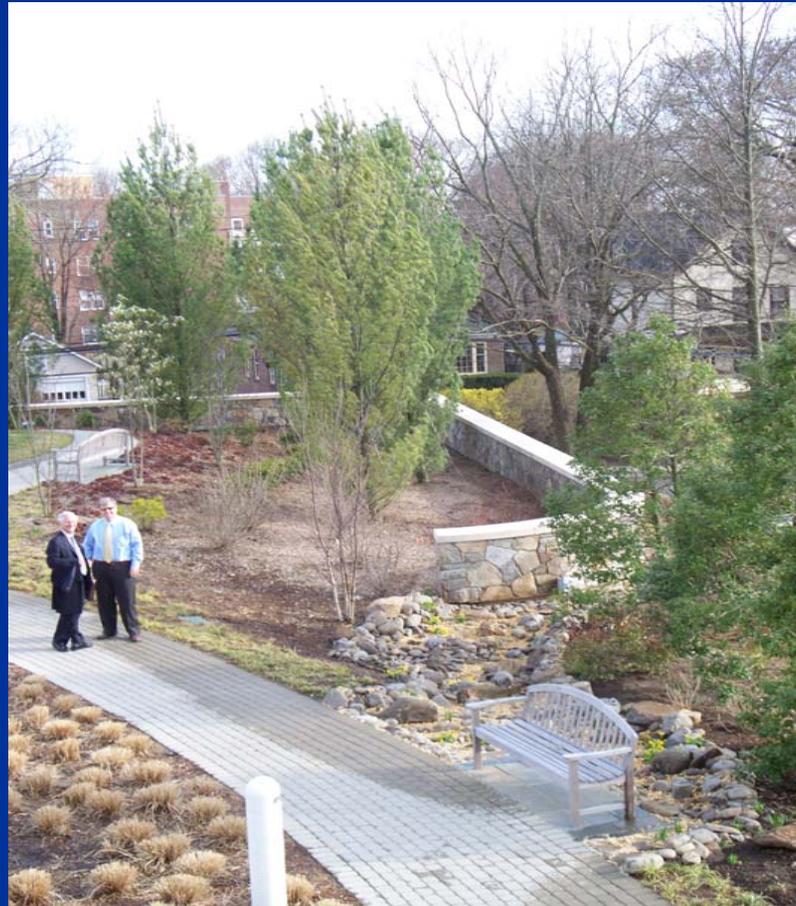


Positive Outcomes

Wildlife Enhancement/Habitat Creation



Interaction of Patient and employee Positive Outcomes with nature



Lessons Learned



Plant influx into Filter
Medium and
Destruction of Geo-Textile
through plant roots



Lessons Learned

Groundcover Influx into
Gravel Matrix

Soil/Mulch Intrusion



Future Outlook

- Continuation of Stormwater Mitigation in the Community Garden
- Stormwater Mitigation of Offsite Properties
- Greenroof Installation
- Expansion to Yale Newhaven System Sites

Future Outlook

Continuation of Stormwater
Mitigation in the Community Garden



Future Outlook



Continuation of Stormwater
Mitigation in the
Community Garden

Future Outlook



Stormwater Mitigation of Greenwich Hospital
Offsite Properties

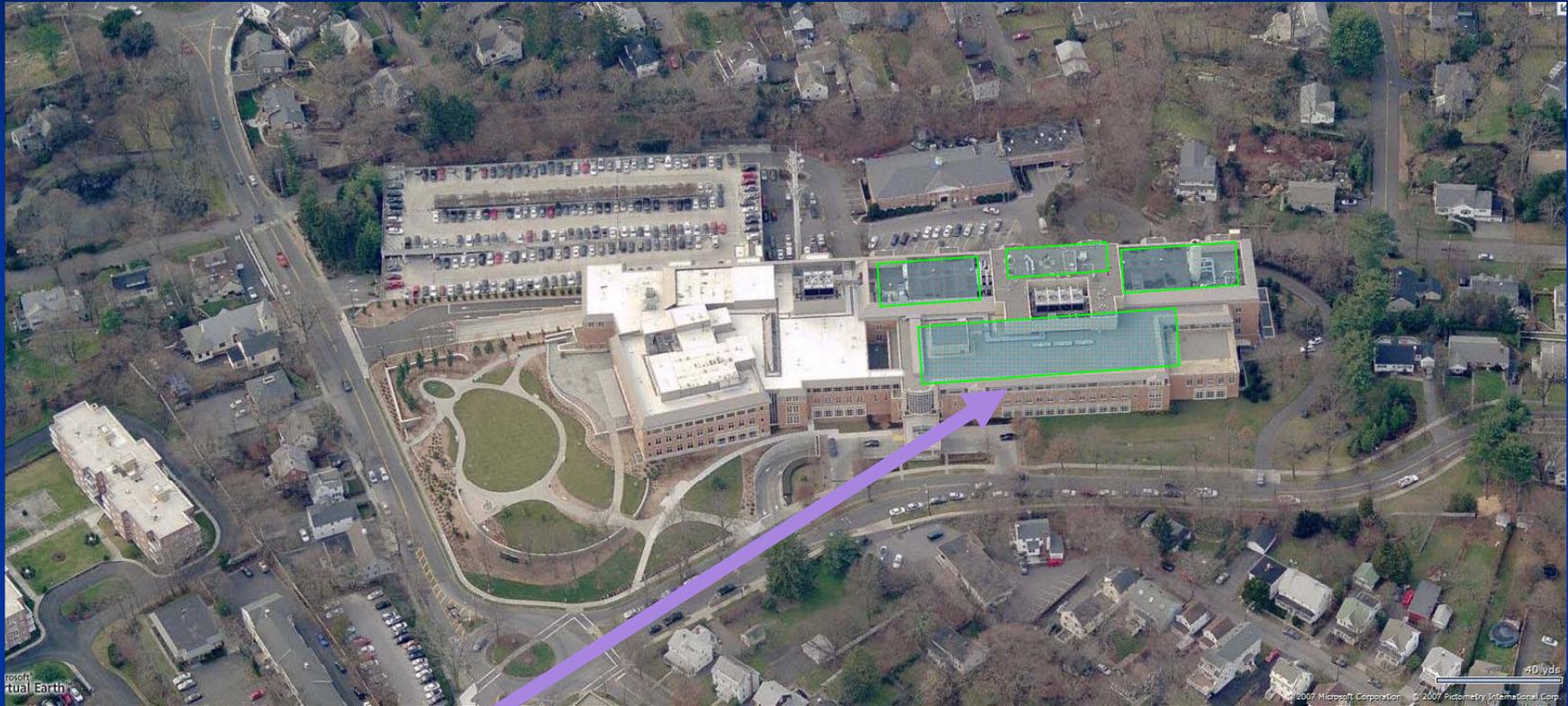
Greenroof Installation-Phase I



Surgery Waiting Area

Maternity Roof

Greenroof Installation-Phase II



Gravel Rooftop Area – Extensive Vegetated Roof

Future Outlook

- Expansion to the Yale Newhaven System Sites
 - Yale Newhaven Hospital
 - Bridgeport Hospital

Contact

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