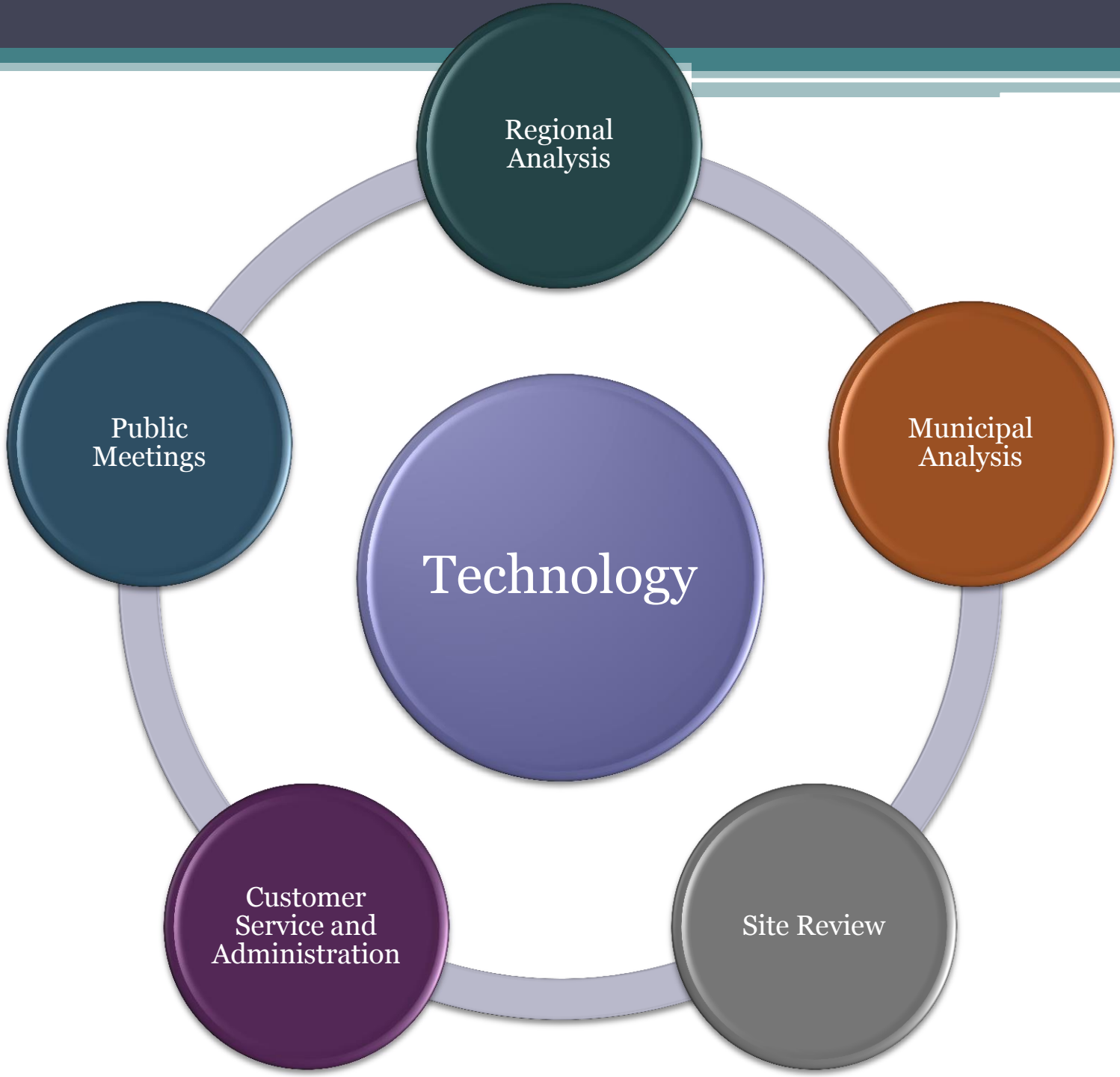
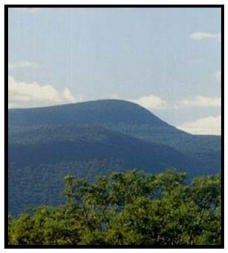
Technology in Planning and Environmental Analysis

Monday June 9th, 2014
Ulster Community College
7:00 PM


Regional Analysis
Municipal Analysis
Site Review
Customer Service and Administration
Public Meetings
Technology

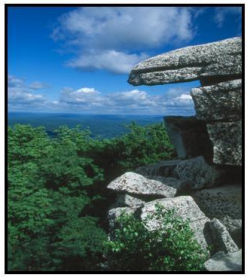
Ulster County Open Space Resources



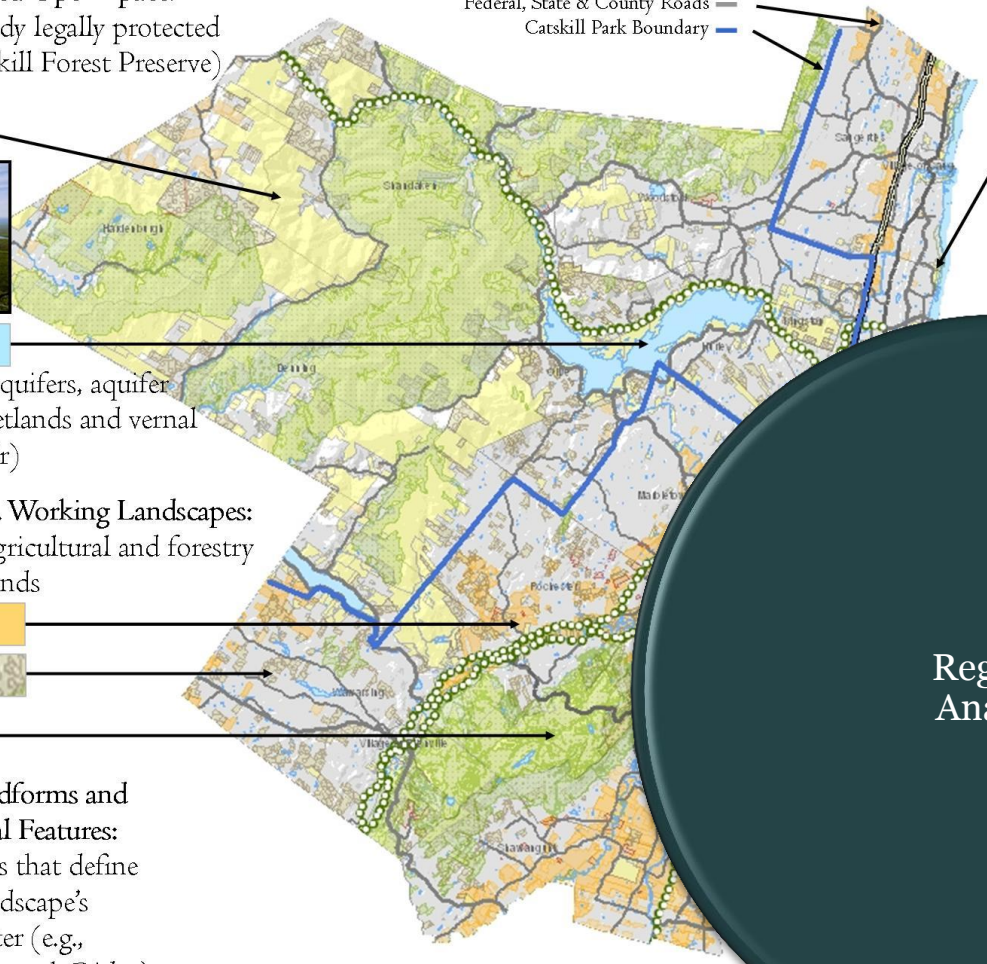
1. Protected Open Space: areas already legally protected (e.g., Catskill Forest Preserve)

2. Water Resources: surface, ground, watersheds, aquifers, aquifer recharge areas, floodplains, wetlands and vernal pools (e.g., Ashokan Reservoir)

3. Working Landscapes: agricultural and forestry lands



4. Landforms and Natural Features: features that define the landscape's character (e.g., Shawangunk Ridge)



7. Recreation Resources: rural and urban parks, shorelines, fishing and hunting, trails, and tourism sites (e.g., Ulster Landing Park)

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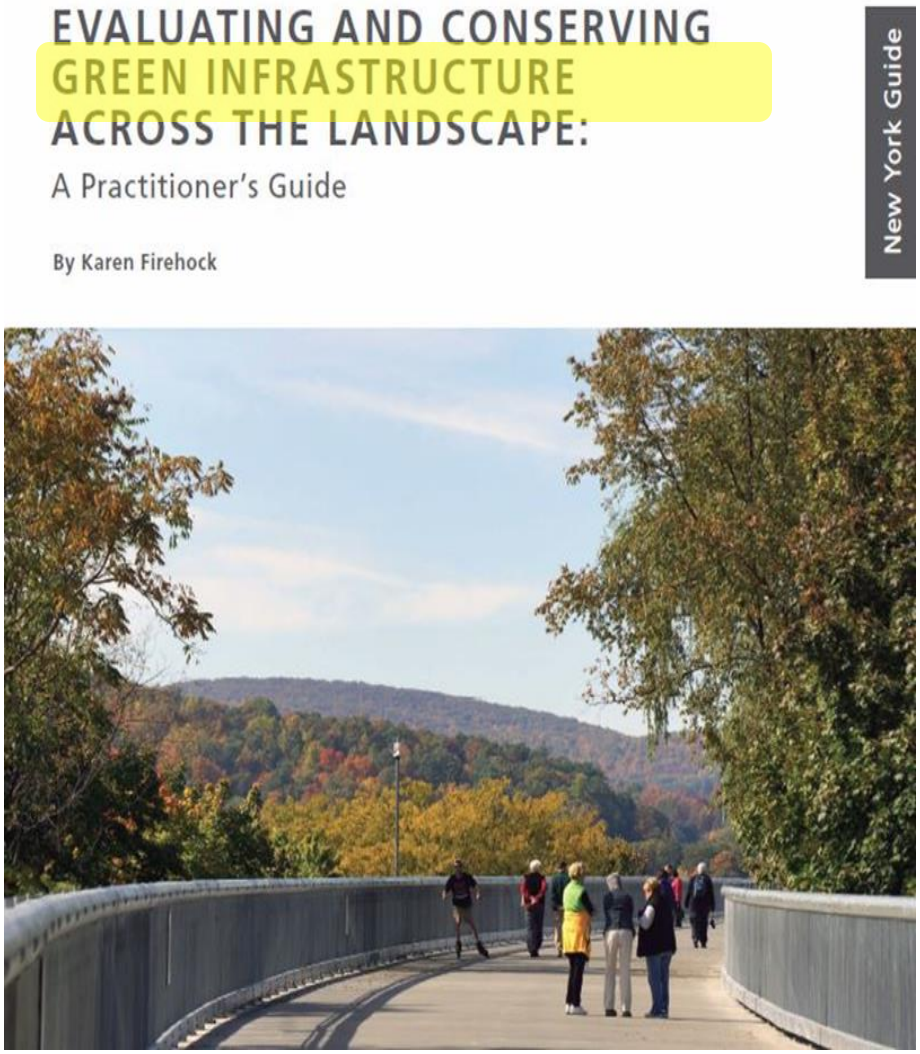
Regional Analysis

Technology for the Region



- Ulster County Green Infrastructure Habitat Cores
  - Creating the Maps
    - Unfragmented Habitat Layer
    - Ranked Cores
    - Themed Maps
  - Using the Maps
    - Linking to Regional/County Level
    - Linking to Town/Site Scale

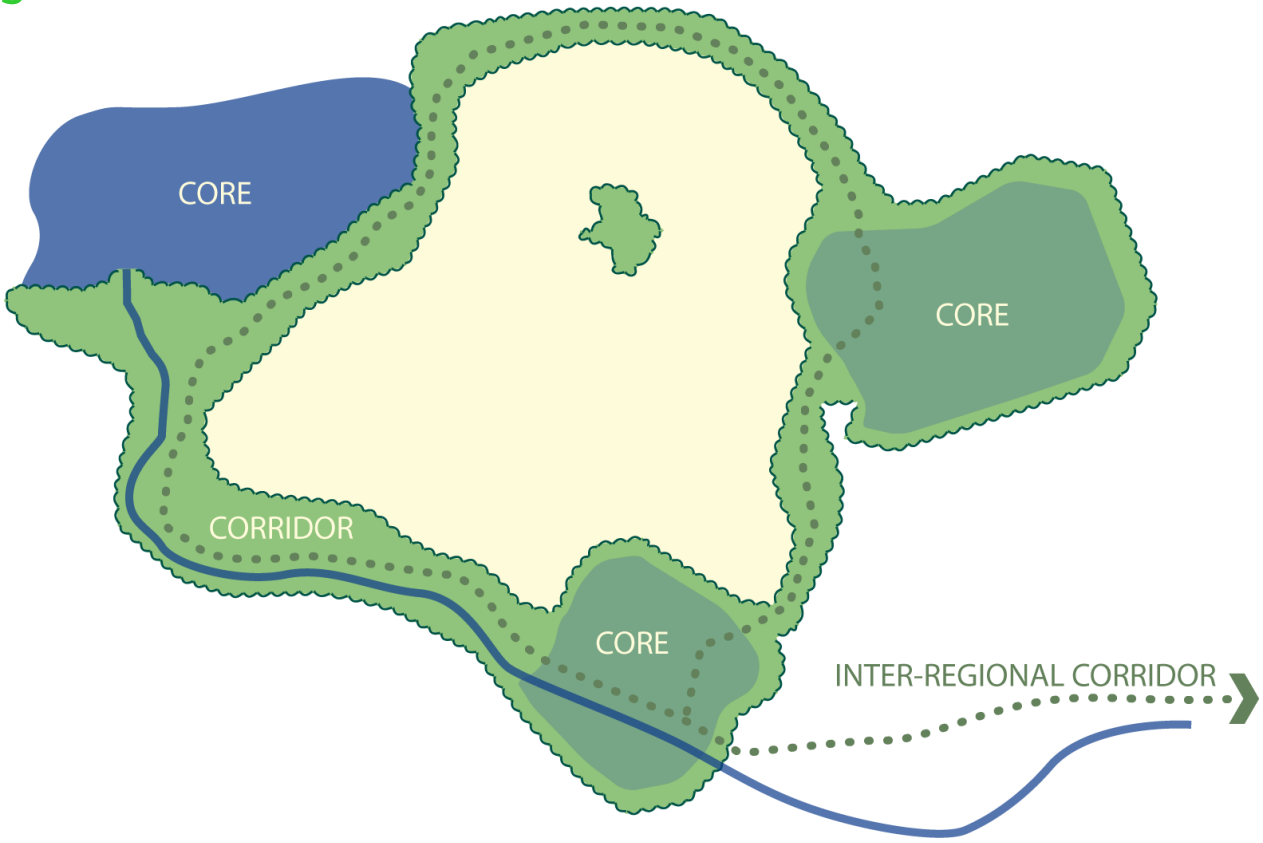
What is Green Infrastructure?

A planimetric map shows a neighborhood's gray infrastructure including buildings and roads (left). Classified high-resolution satellite imagery adds a green infrastructure data layer (trees and other vegetation) (right). Source: American Forests

What Is Green Infrastructure Planning?

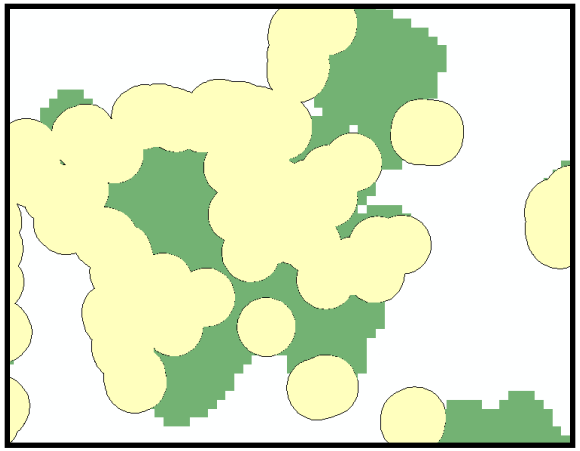
"Strategically planned and managed networks of natural lands, working landscapes and other open spaces that conserve ecosystem values and functions and provide associated benefits to human populations"

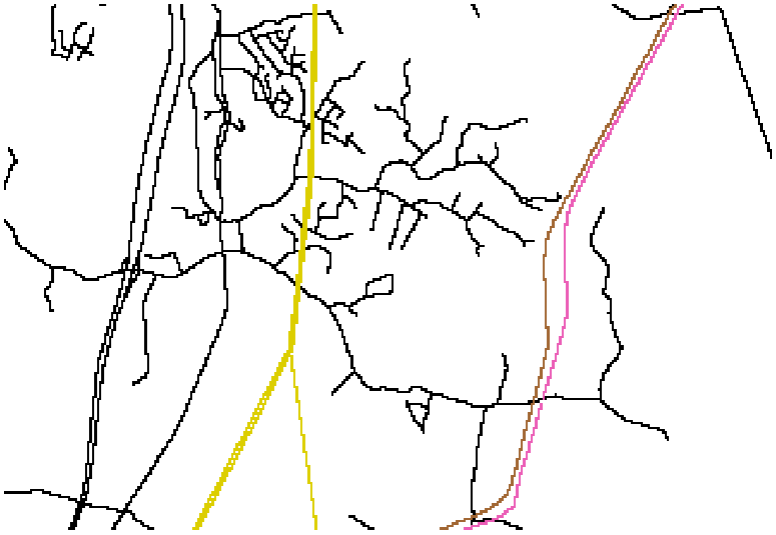
It's about connecting the landscape!

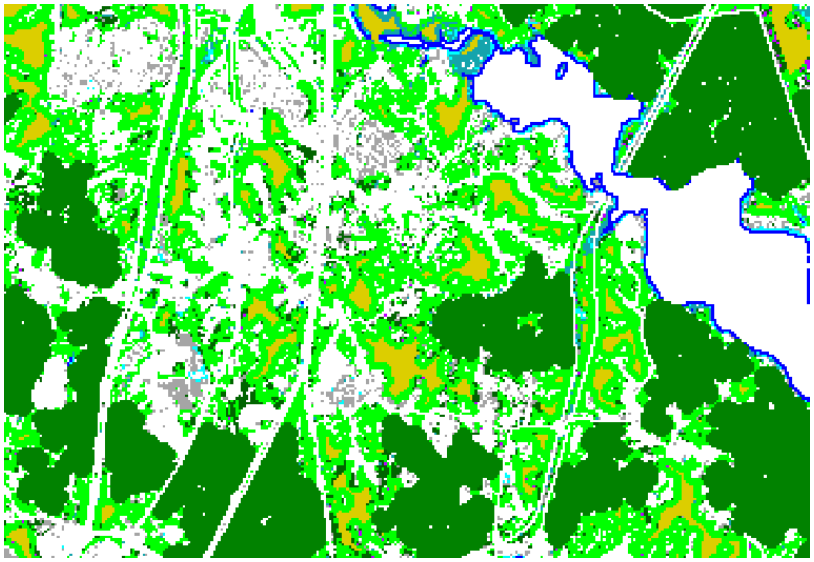


Creating the Maps

- Unfragmented Habitat Layer
- Ranked Cores
- Themed Maps







Ranked Cores

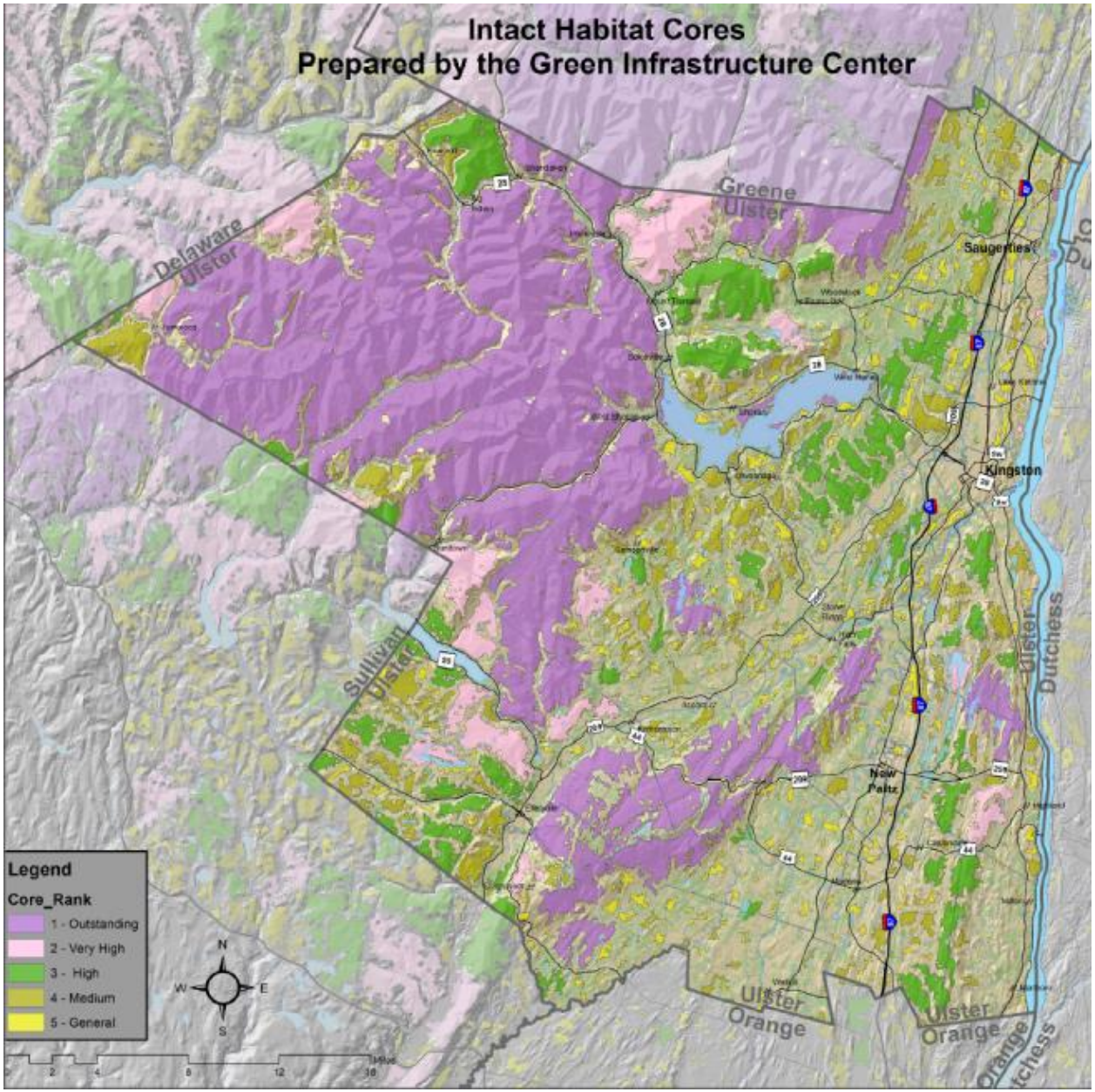
+ Size and shape

+ Rare, threatened and endangered species

+ Water quality, aquatic biodiversity

+ Water abundance

= Habitat Core Ranking for Intact Landscape



Ranked Cores

What makes these cores so special?

12,758 acres in size

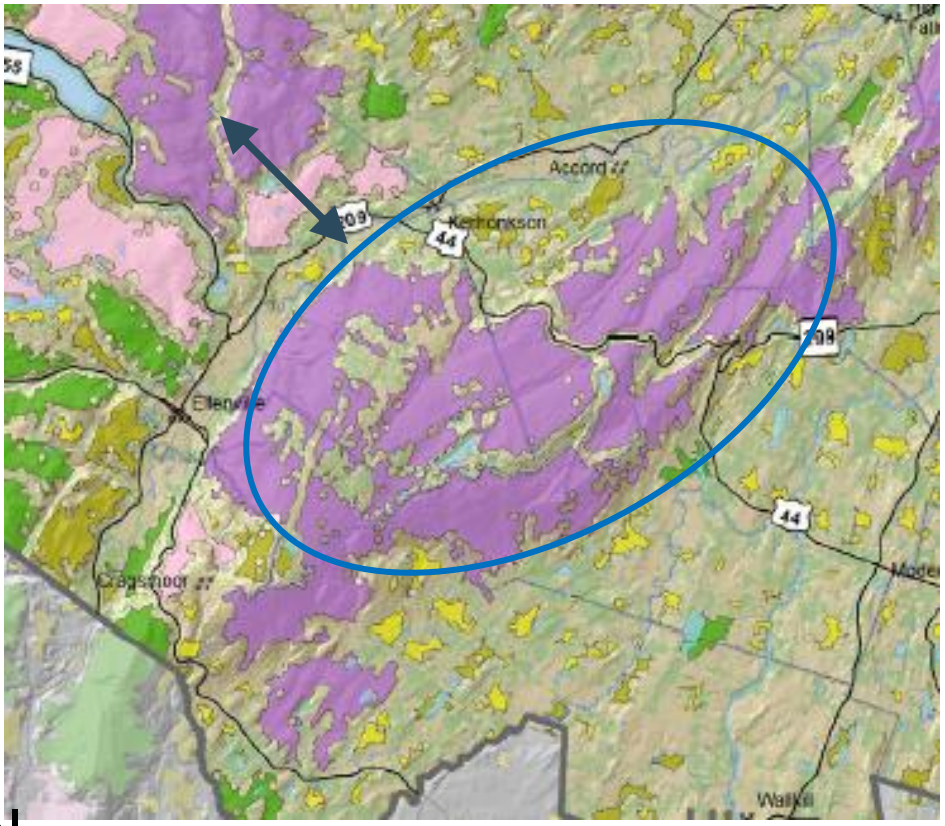
258 acres of interior wetlands

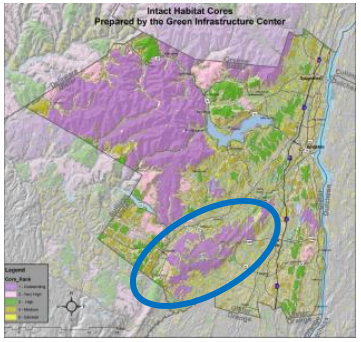
27 Element Occurrences

12 KM of DEC Class A streams

9,880 acres in protection (77%)

11543 acres of significant natural communities (EO)



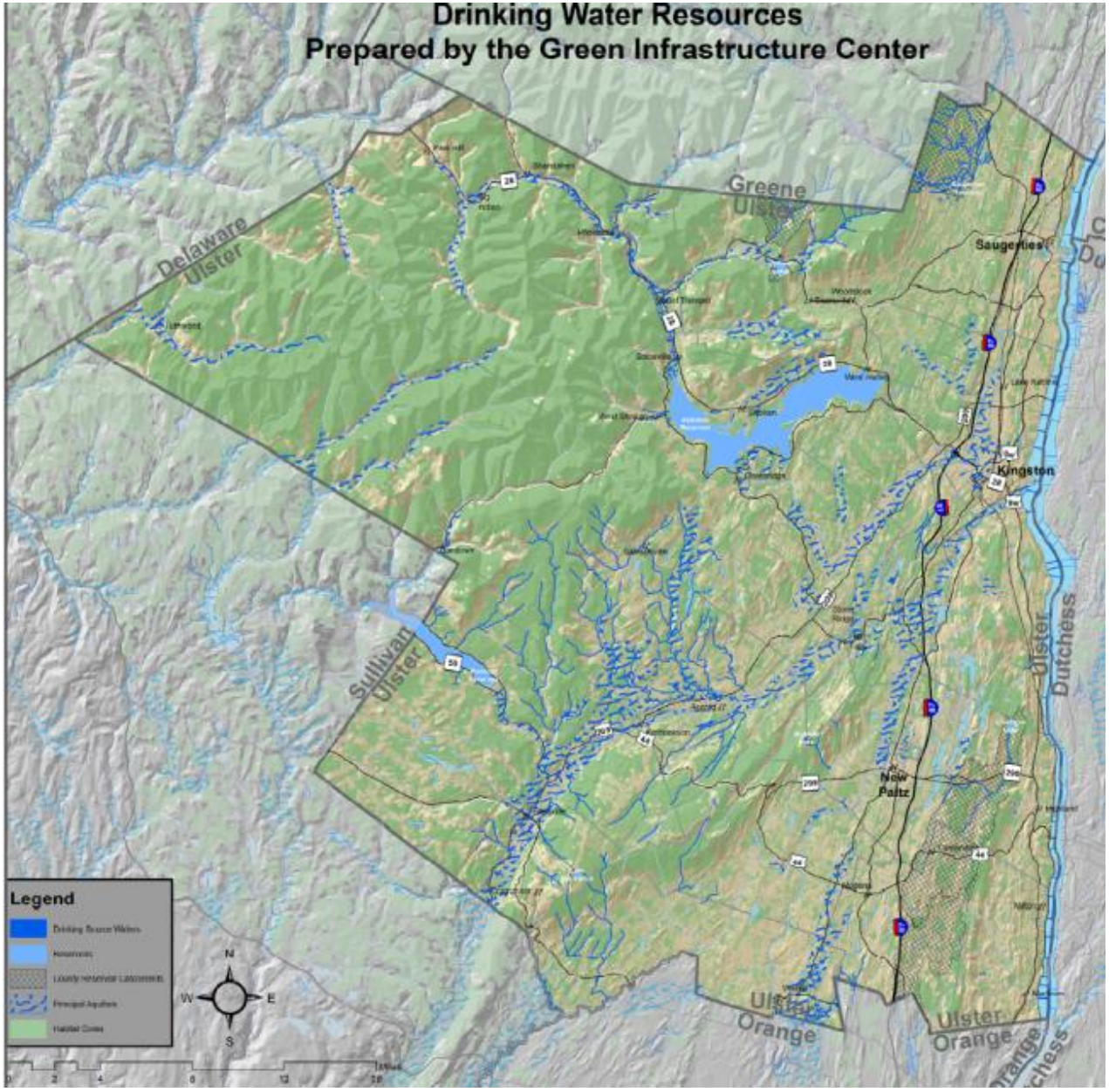


Themed Maps

+ Local Reservoirs

+ Aquifers known or likely to be highly productive, but not yet used extensively.

= Drinking Water



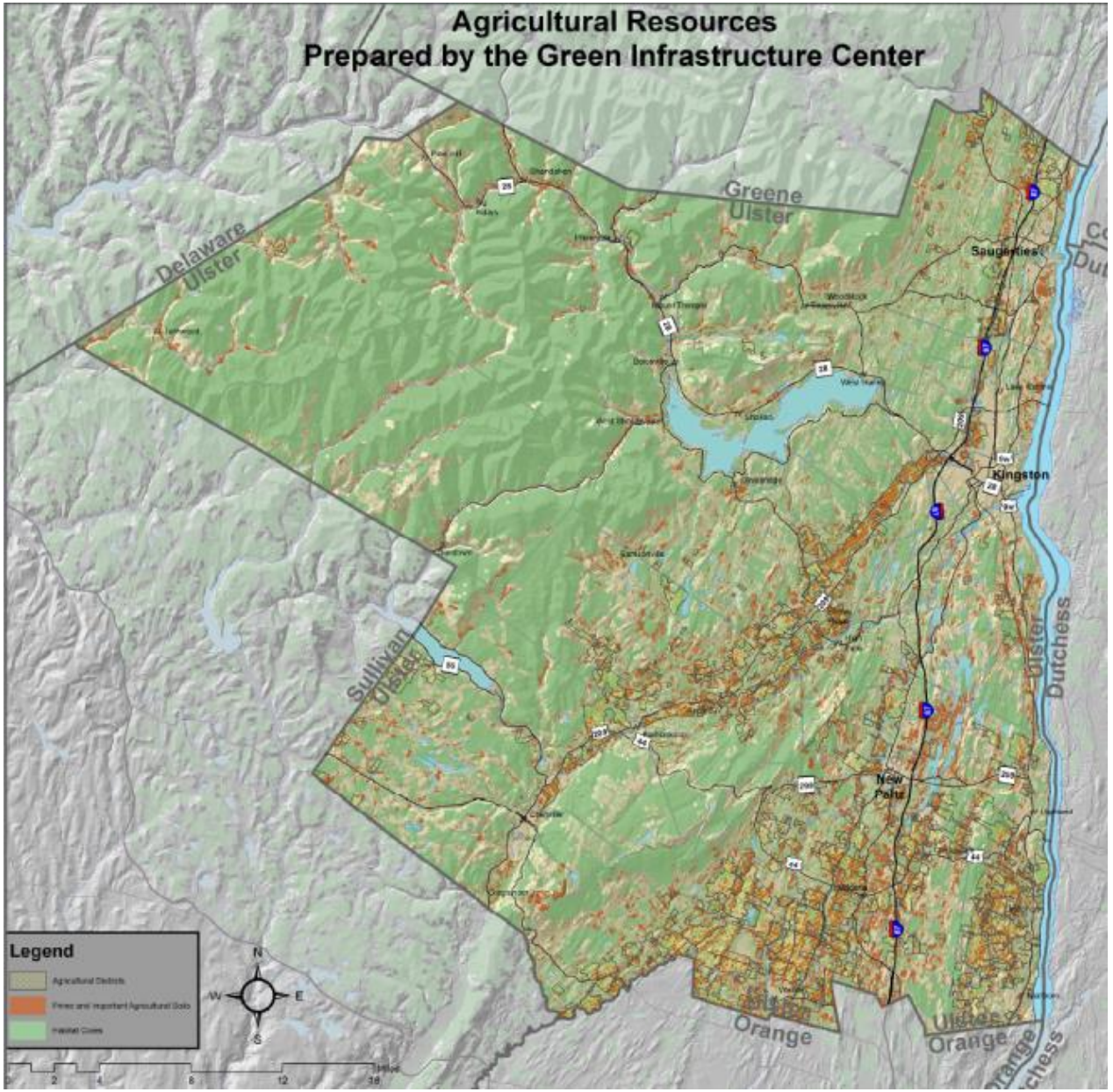
Themed Maps

+ Prime (best) agricultural soils

+ Agricultural Districts

- Forested lands

= Agricultural Lands



Themed Maps

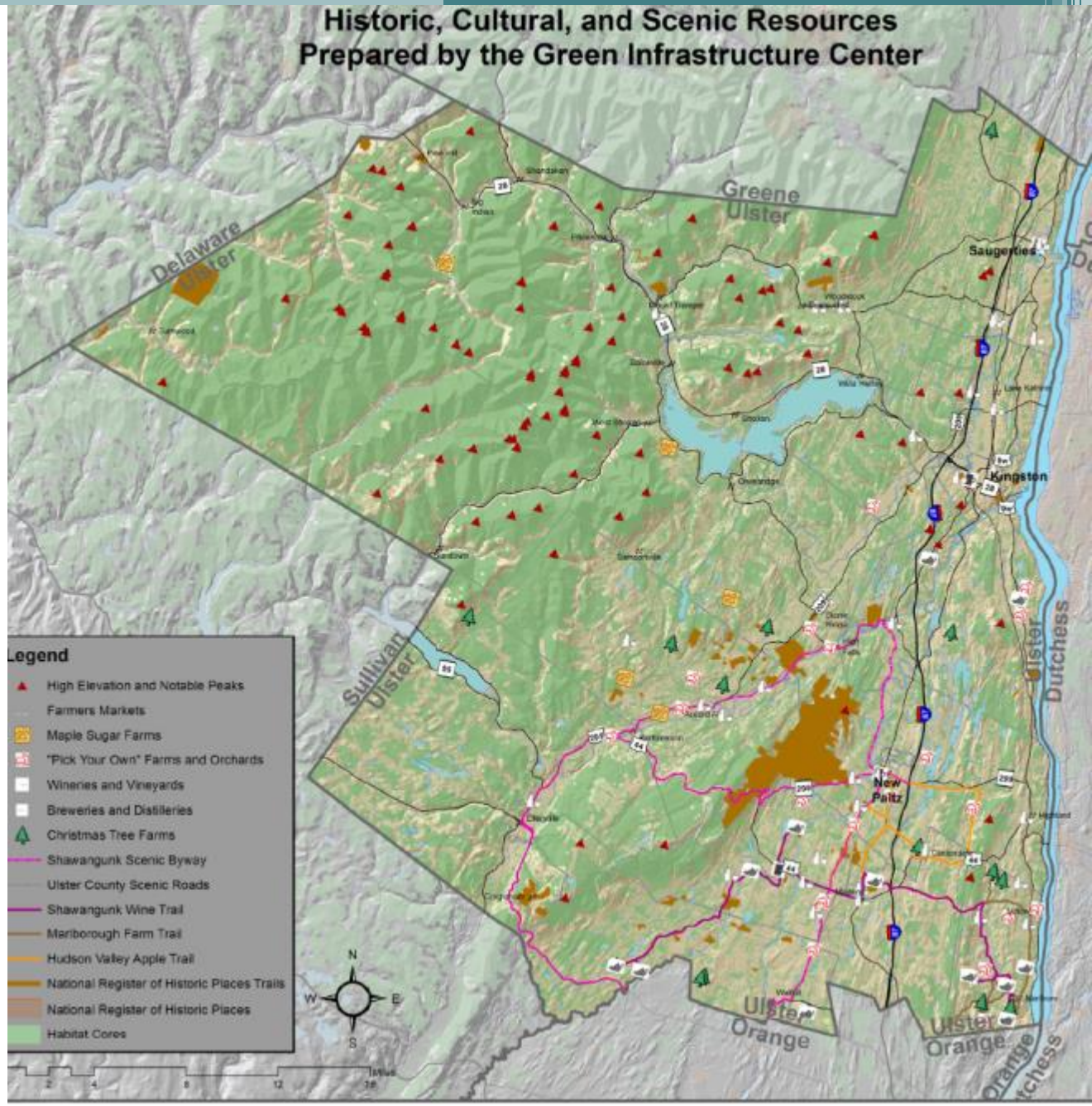
+ Scenic/land based tourism (wineries, apples, maple sugar)

+ Scenic routes

+ National Register properties that are landscape dependent

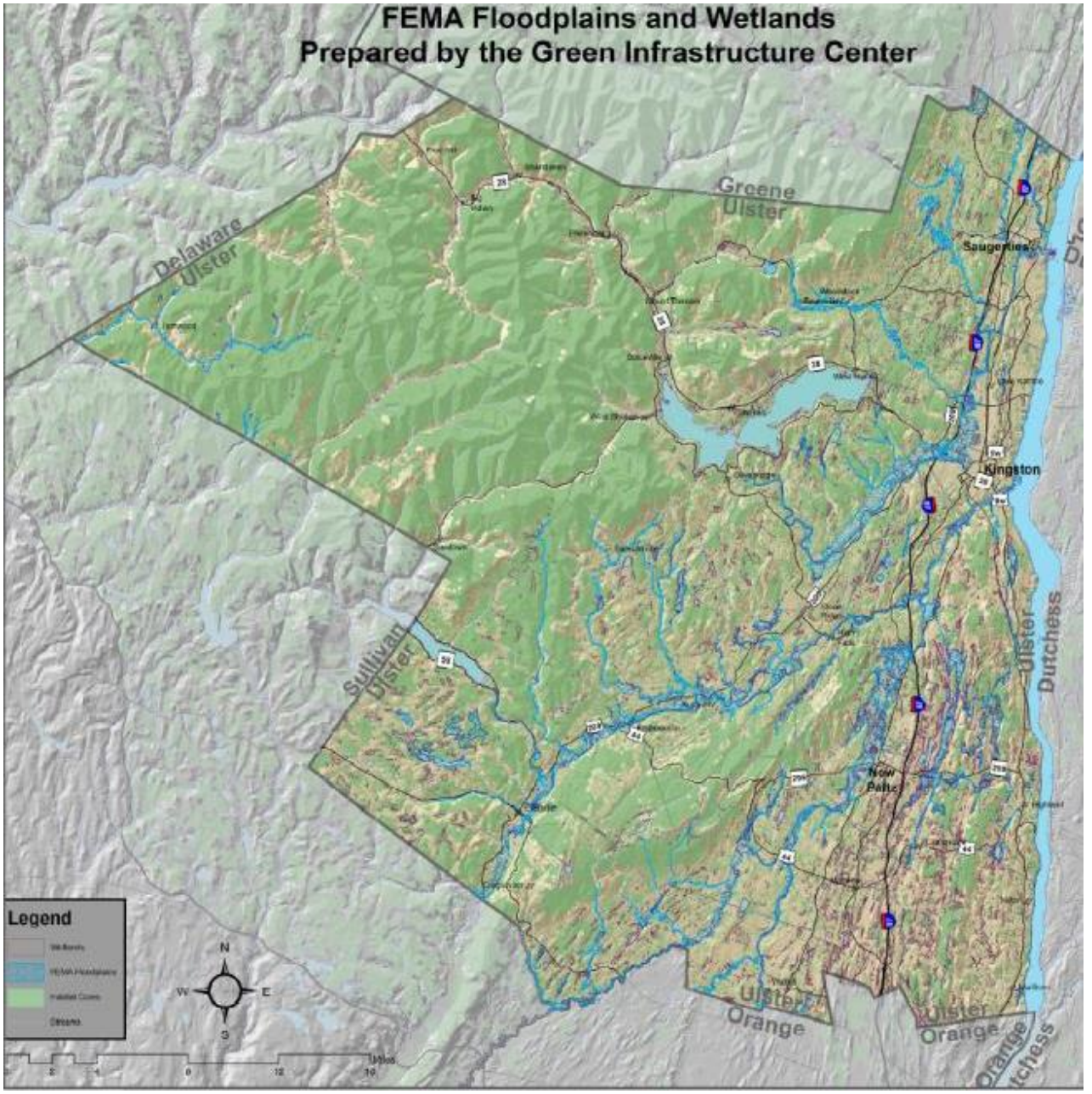
+ Hudson River Viewshed

= Cultural Resources Supported by the Landscape



Risk Assessment – What assets are most at risk?

Waters deemed impaired by state and EPA, mapped floodplains

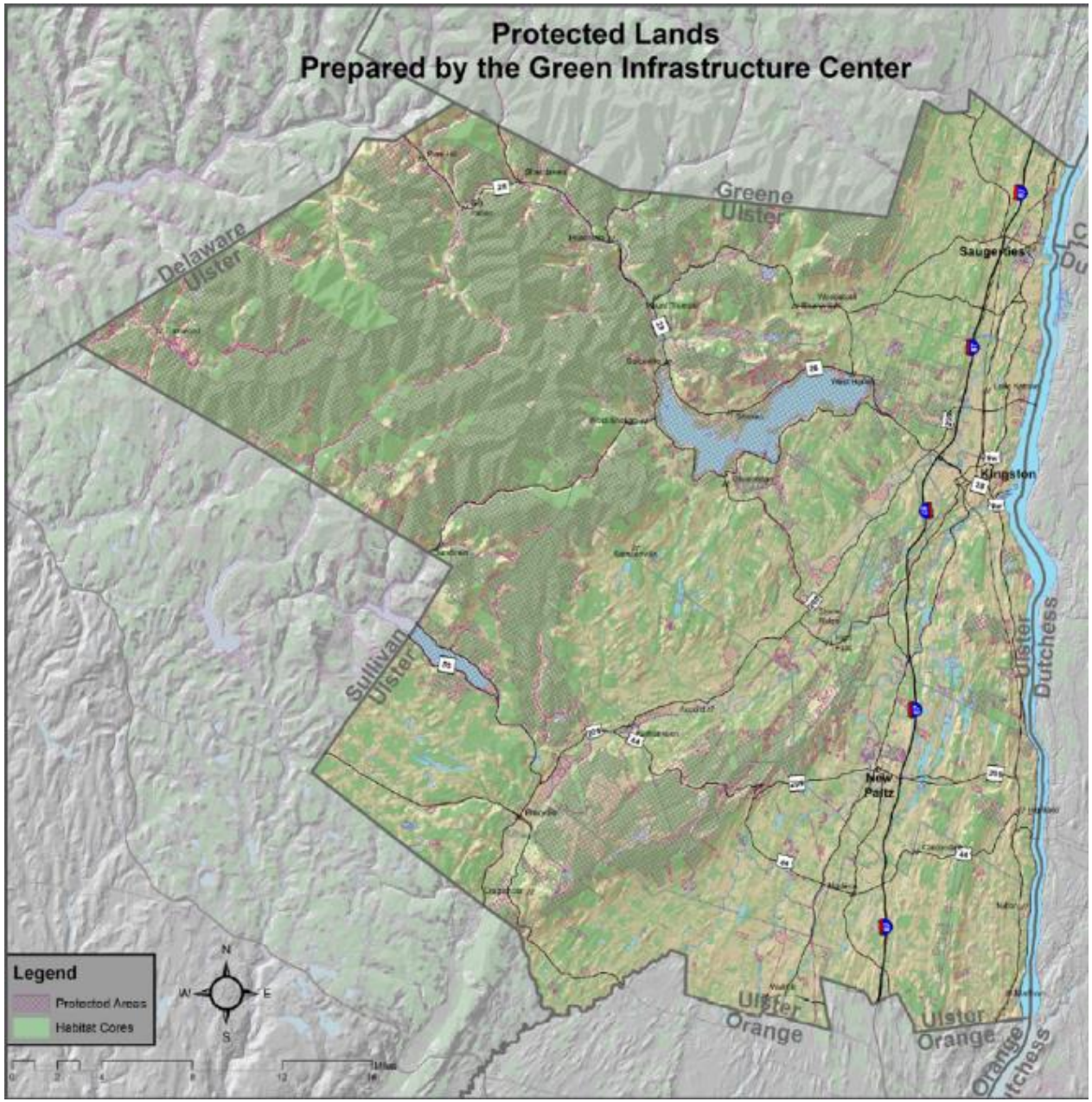


Of the high quality habitat cores, which are protected, which are not?

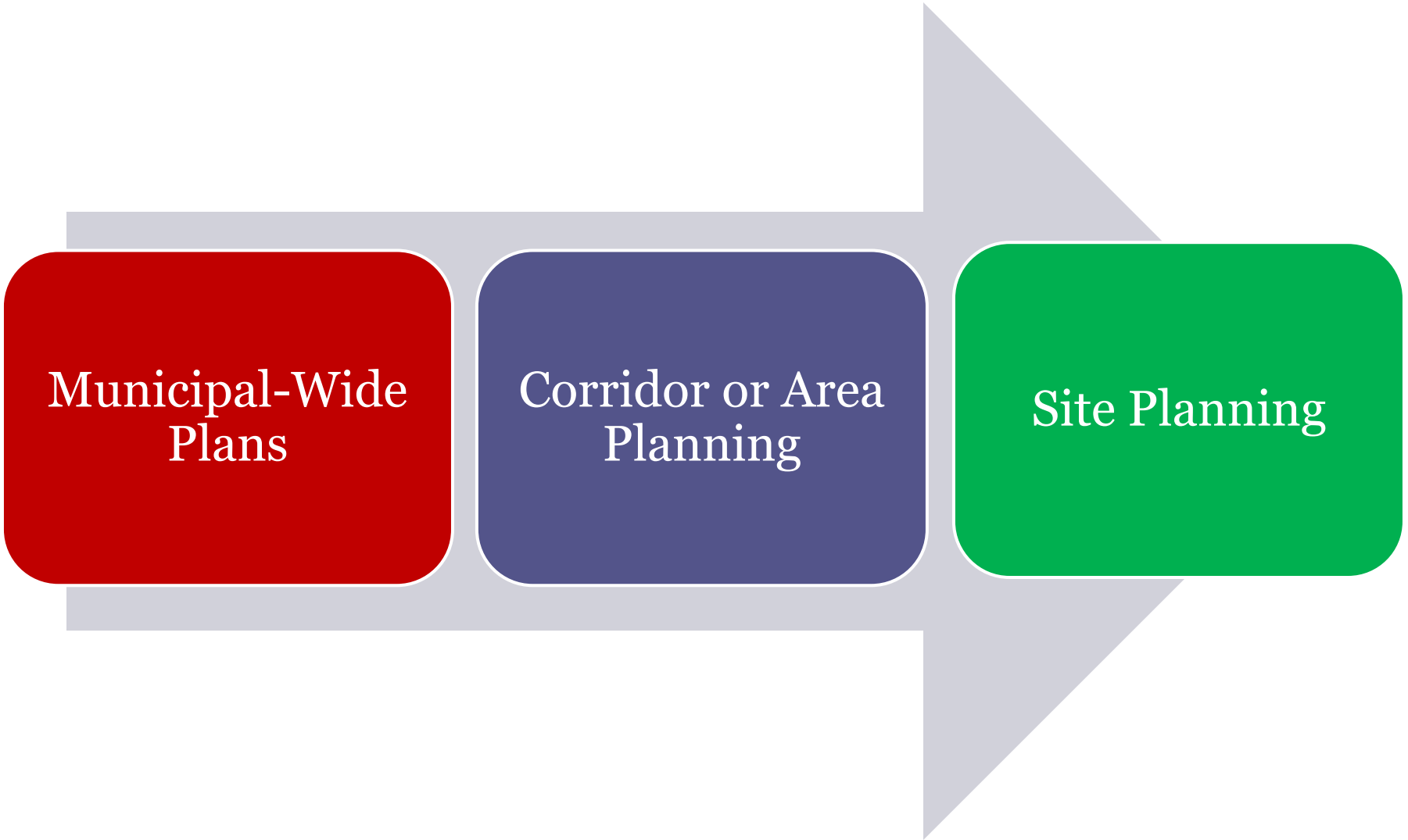
+ Forest Cores

+ Land under easement, parkland or nature reserve

= **Protected High Quality Cores**



Technology for Towns and Villages



Town of Saugerties
Open Space Plan
Vision Map

Catskill Mountains
- Large, unbroken forests embedded with lakes, rivers, wetlands and vernal pools
- Headwater streams provide habitat for trout and cold water species
- Preservation of biodiversity and rare species, including the timber rattlesnake
- Maintaining drinking water quality

Bristol Beach

Planning Concepts

Bristol Beach Plan
Develop a Master Plan to increase Access to Bristol Beach and Preserve Historic and Ecological Resources

Hudson River Trail
Develop a continuous trail to provide access to and between public parks, neighborhoods and hamlets, and historic attractions

Esopus Creek Water Trail
Create a series of water access points to provide access to the Esopus Creek for kayaking between Glenerie Falls and the Cantine Dam

Mountain Cloves Scenic Byway Connection
Work with the towns of Hunter and Catskill to develop a Saugerties connection to the Mountain Cloves Scenic Byway

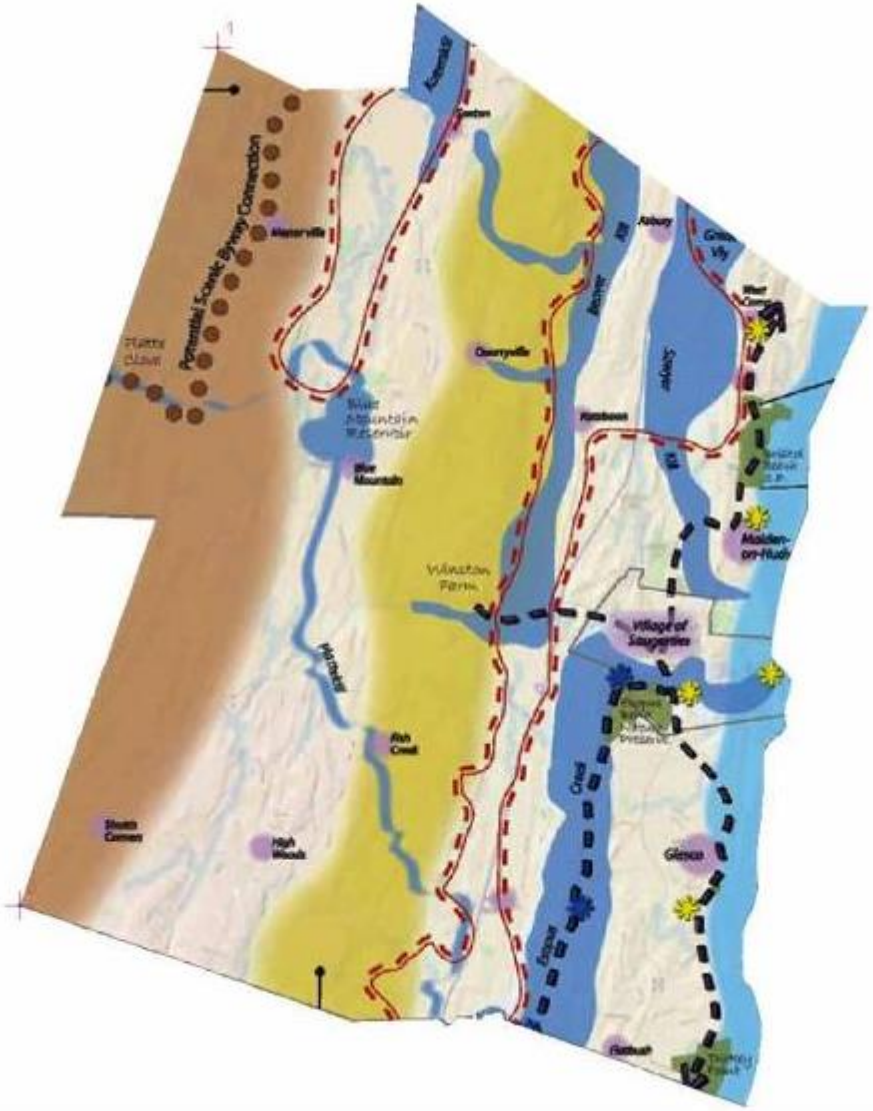
Important Waterways, Watersheds and Aquifers
Sawyerkill, Plattekill, Esopus Creek, Beaver Kill, Kaaterskill
- Biodiversity benefits of riparian and upland habitat
- Water quality
- Flood protection and stormwater recharge
- Recreation and scenic qualities

Core Farming Areas
Bakoven Valley-Saugerties Valley and the Saxton Flats
- Prime soils and areas of agricultural production
- Economic, scenic and environmental benefits to the community
- Local food and agricultural products

Limestone and Shale Ridges
- Scenic views and character of Saugerties
- Unique geology
- Rare animals and plants

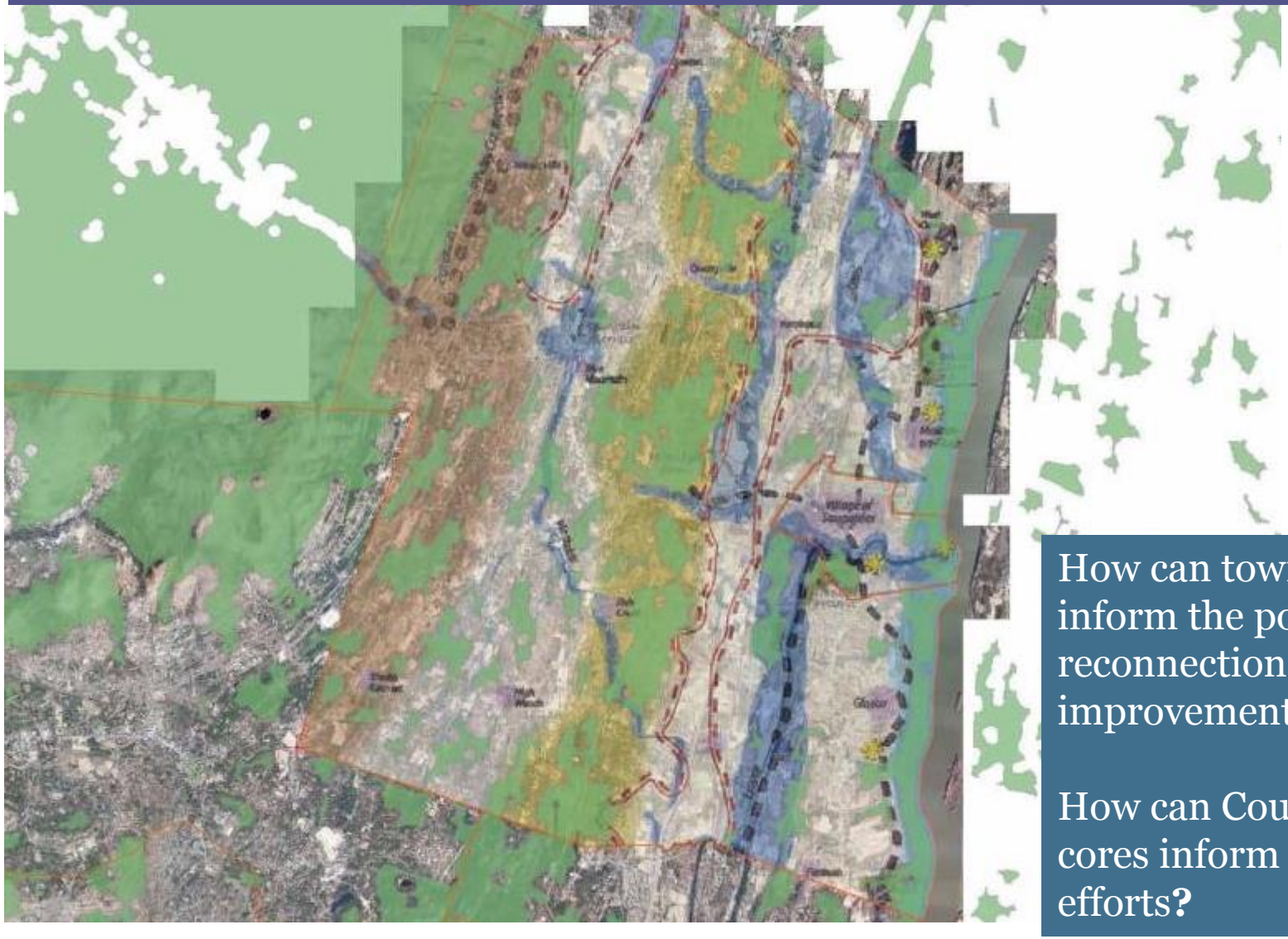
Hudson River Corridor
- The historic "landscape that defined America"
- Riverine and estuary habitats
- Freshwater wetlands and freshwater tidal mudflats
- Tidal area of the mouth of the Esopus
- Hudson River access and recreation opportunities

Town of Saugerties- Open Space Vision Plan



Town of Saugerties- Open Space Vision Plan

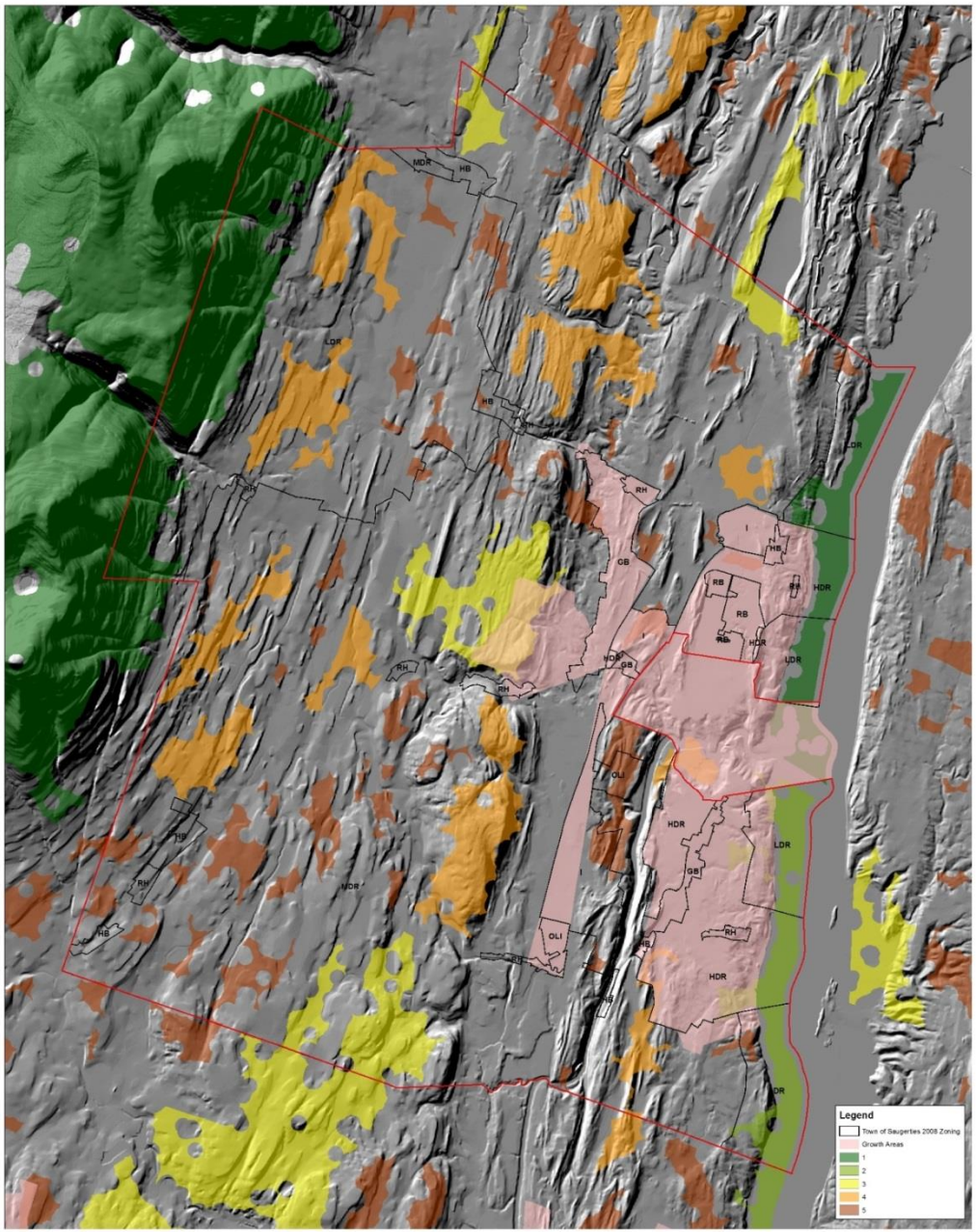
Town of Saugerties- Open Space Vision Plan



How can town level data inform the potential reconnection/ improvement of cores?

How can County level cores inform town level efforts**?**

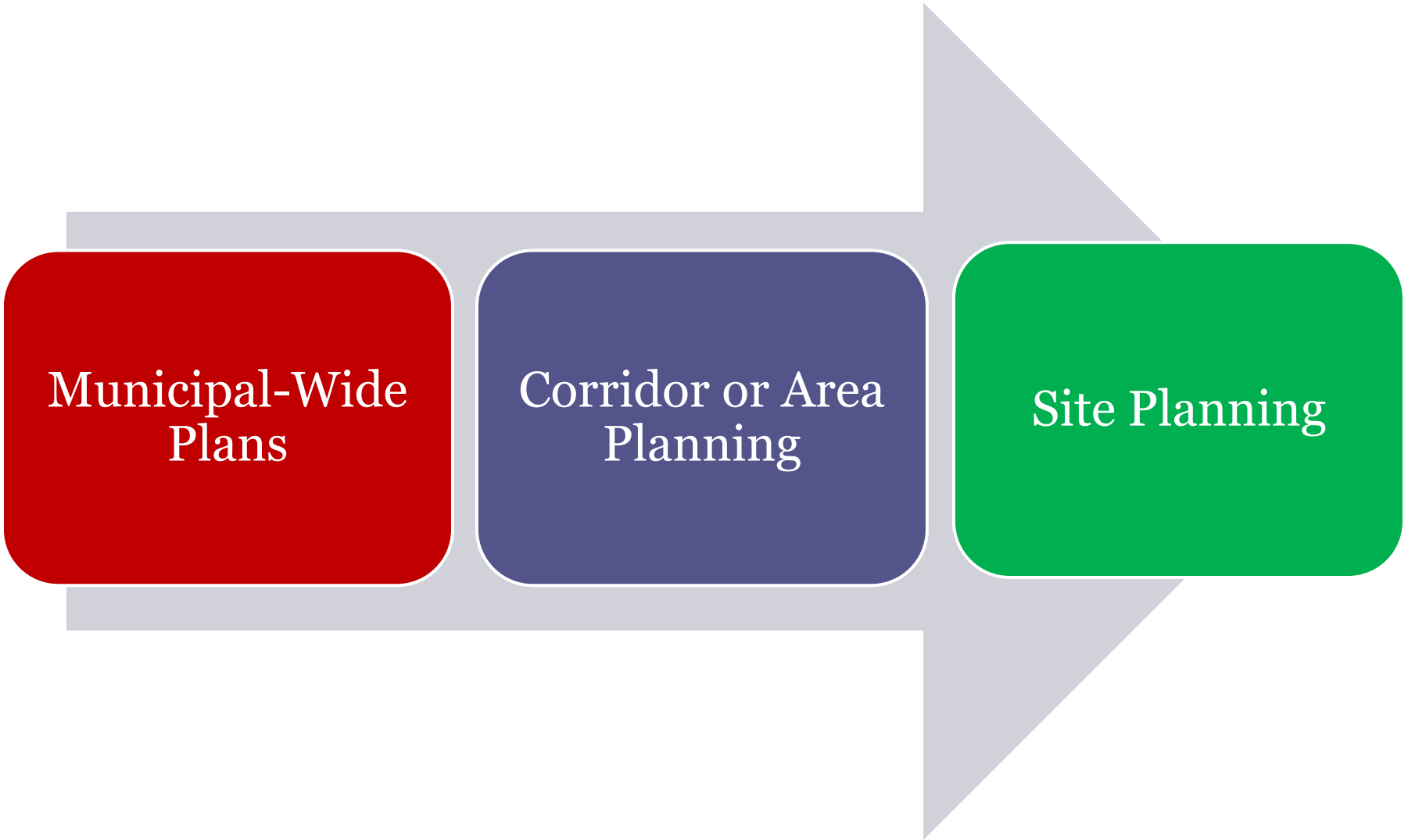
Town of Saugerties – Cores and Greenway



Green Infrastructure Mapping:

- Links the County to the Region… and beyond
- Builds on existing data and efforts at the municipal and area scale
- Informs and further efforts at the municipal and region scale

Technology for Towns and Villages



U.S. Route 9W
Corridor Enhancement Plan

Town of Ulster, New York

Prepared by the Town of Ulster Comprehensive Plan Implementation Committee
With Planit Main Street, Inc.
Adopted by the Town of Ulster Town Board on April 24, 2014

PLANIT MAIN STREET

Proposal:

To install curbing and sidewalks along entire length of the east side of U.S. Route 9W to facilitate a pedestrian connection on this side of the corridor.

Relocate the bulky telecommunications cables behind the buildings in the linear strip of green space, which exists between the buildings on Route 9W and the malls.

Proposal:

Create a design vocabulary for the U.S. Route 9W corridor, which includes street trees, period style lighting and the installation of curbing and sidewalks on east side of corridor.

Relocating telephone and cable lines behind buildings would substantially reduce the clutter of overhead utilities.

Problem:

The U.S. Route 9W corridor is not pedestrian friendly and is visually unappealing. There are few sidewalks along the eastern side of the corridor and the combination of overhead utilities pole signs and billboards along the corridor create visual clutter that is unsightly. There is a need to soften the appearance of this important gateway into the Town of Ulster.

Problem:

Having almost all the streetlights on one side of the street creates a lopsided appearance of the corridor. This is also not an effective means of evenly distributing light to both sides of the street.

Proposal.

Install streetlights on both sides of the street and stagger lighting poles to form an even distribution of lighting along the U.S. Route 9W corridor.

LEGEND

- Existing Street Lamp
- Existing MOU

Existing Conditions – Figure 1

Above (Left to Right): View of existing conditions on U.S. Route 9W corridor looking north from Kings Mall on east side of U.S. Route 9W; same view showing new period streetlights with banners, a new sidewalk, relocation of telephone and cable lines (see Appendix A) replacement of Verizon pole sign with monument sign and removal of billboard and pole signs on left side of photo; and same view with new period lighting with banner with the Verizon pole sign, but billboard on left side of photo removed. These illustrations show how streetlights, sidewalks and sign regulation affect the appearance of the corridor.

Form Based Zoning

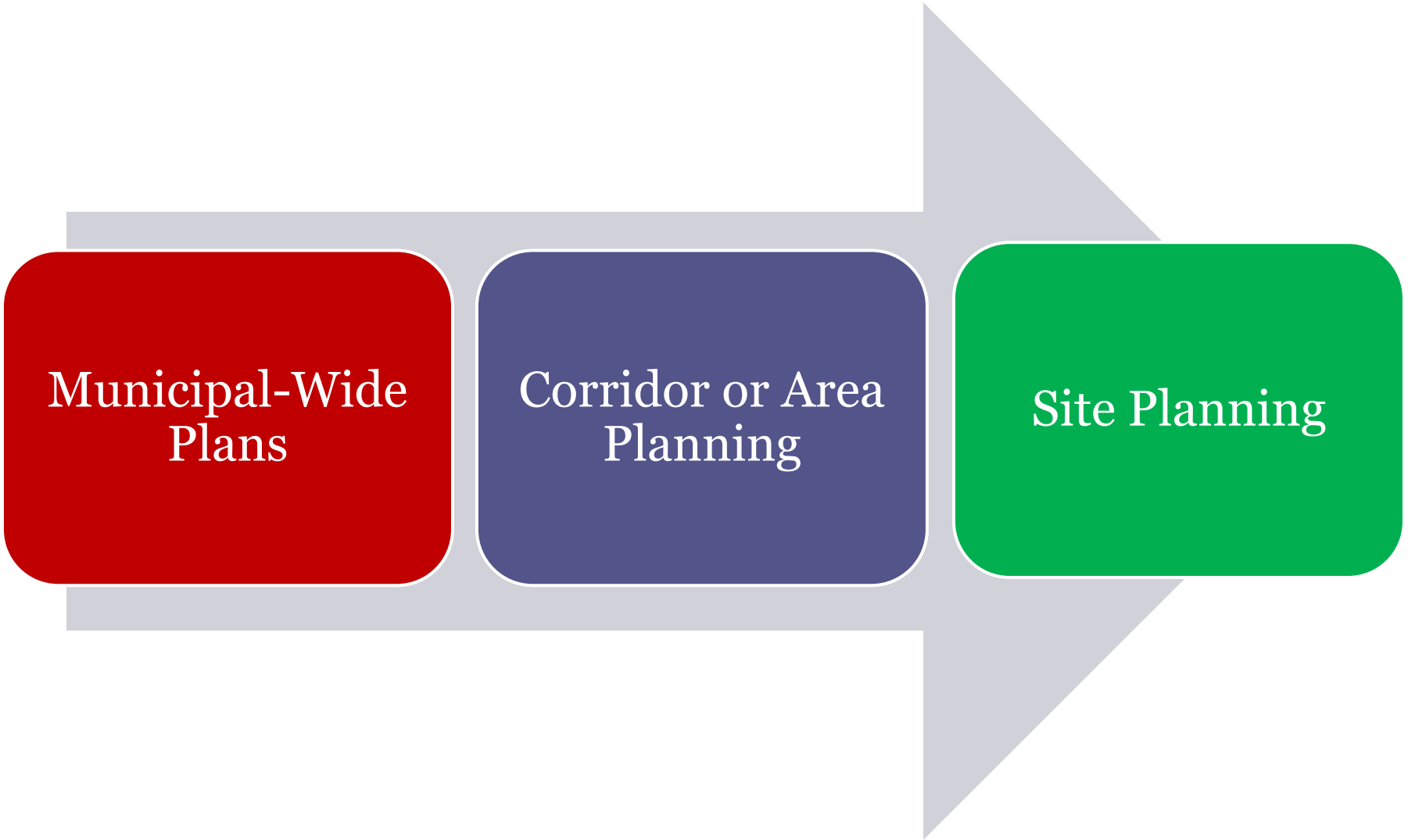
Figure 2: Minimum Lot Depth and Maximum Lot Coverage

Figure 3: Maximum Building Coverage

Figure 4: Minimum Landscaped Area

Town of Lloyd – Rt. 9W Visualization

Technology for Towns and Villages



Ulster County Parcel Viewer

- Feature Overview
  - Basemaps and Layers
  - Measurements
  - PDF Creation
  - Sharing
  - Parcel Search and Identify
  - Buffer and Neighbor Identification

76.9-2-43
76.9-2-42
76.9-3-12
76.9-2-34
76.9-2-35
76.9-2-31
Sheldon Drive
76.9-2-28
76.9-2-29
76.9-2-30
76.9-2-36
76.9-2-37
76.9-2-41
Webster Avenue
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76.9-2-38
76.13-3-25
76.9-2-39
US Highway 209
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76.13-3-24
76.13-3-21
76.10-1-49
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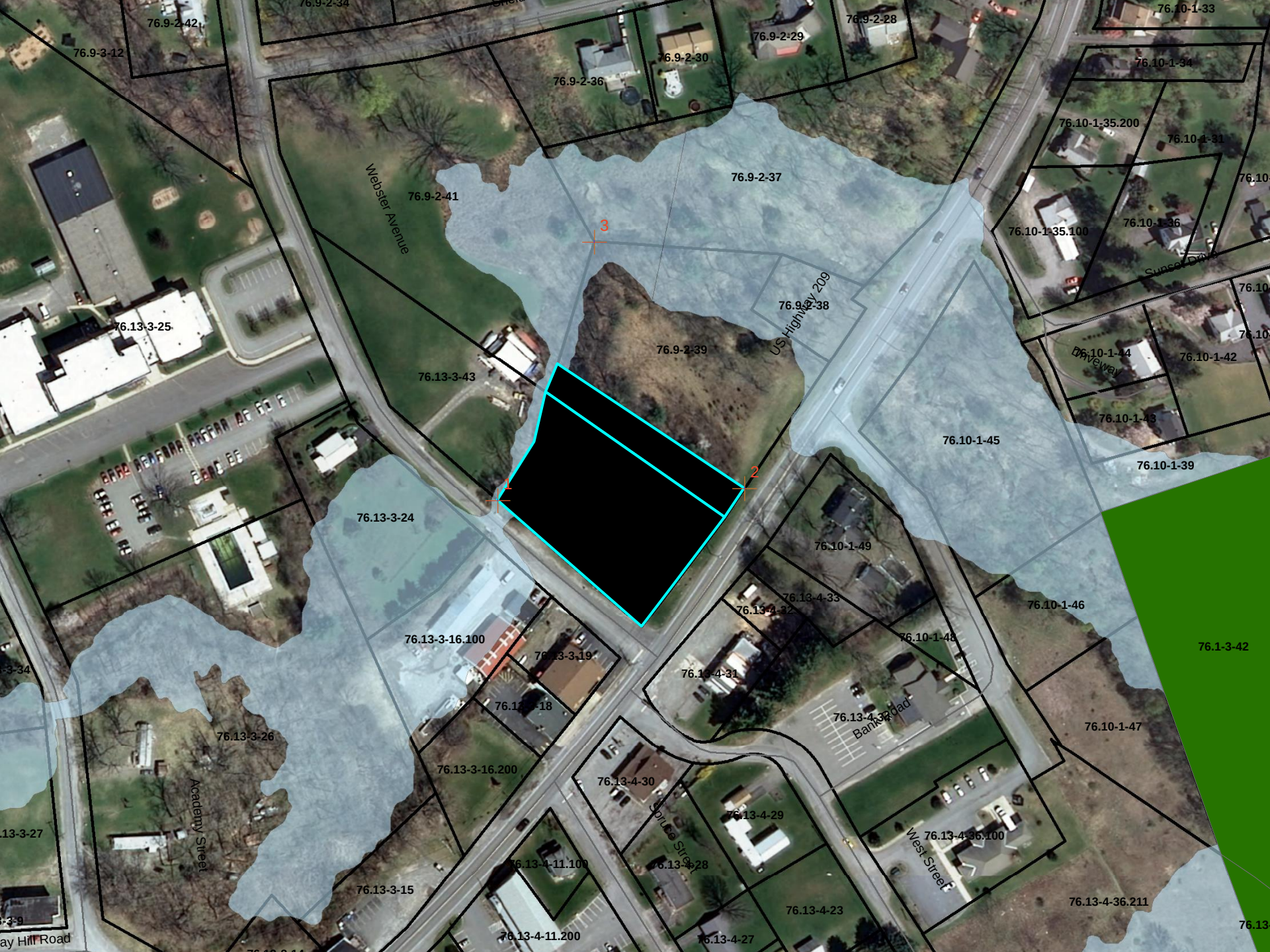
76.13-4-31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76.10-1-35.200
76.10-1-31
76.9-2-37
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76.10-1-35.100
76.10-1-36
Sunset Drive
76.9-2-38
US Highway 209
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76.9-2-39
76.13-3-43
Driveway
76.10-1-44
76.10-1-42
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76.10-1-45
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76.13-3-18
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76.13-3-26
76.13-3-16.200
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Academy Street
Spruce Street
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West Street
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76.13-4-11.100
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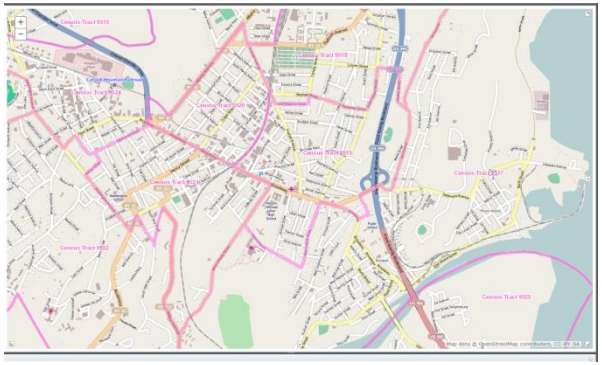
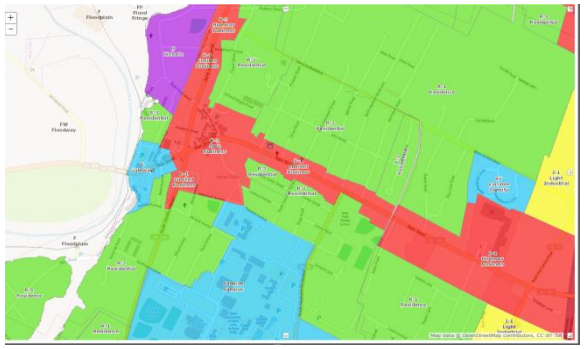
Layers





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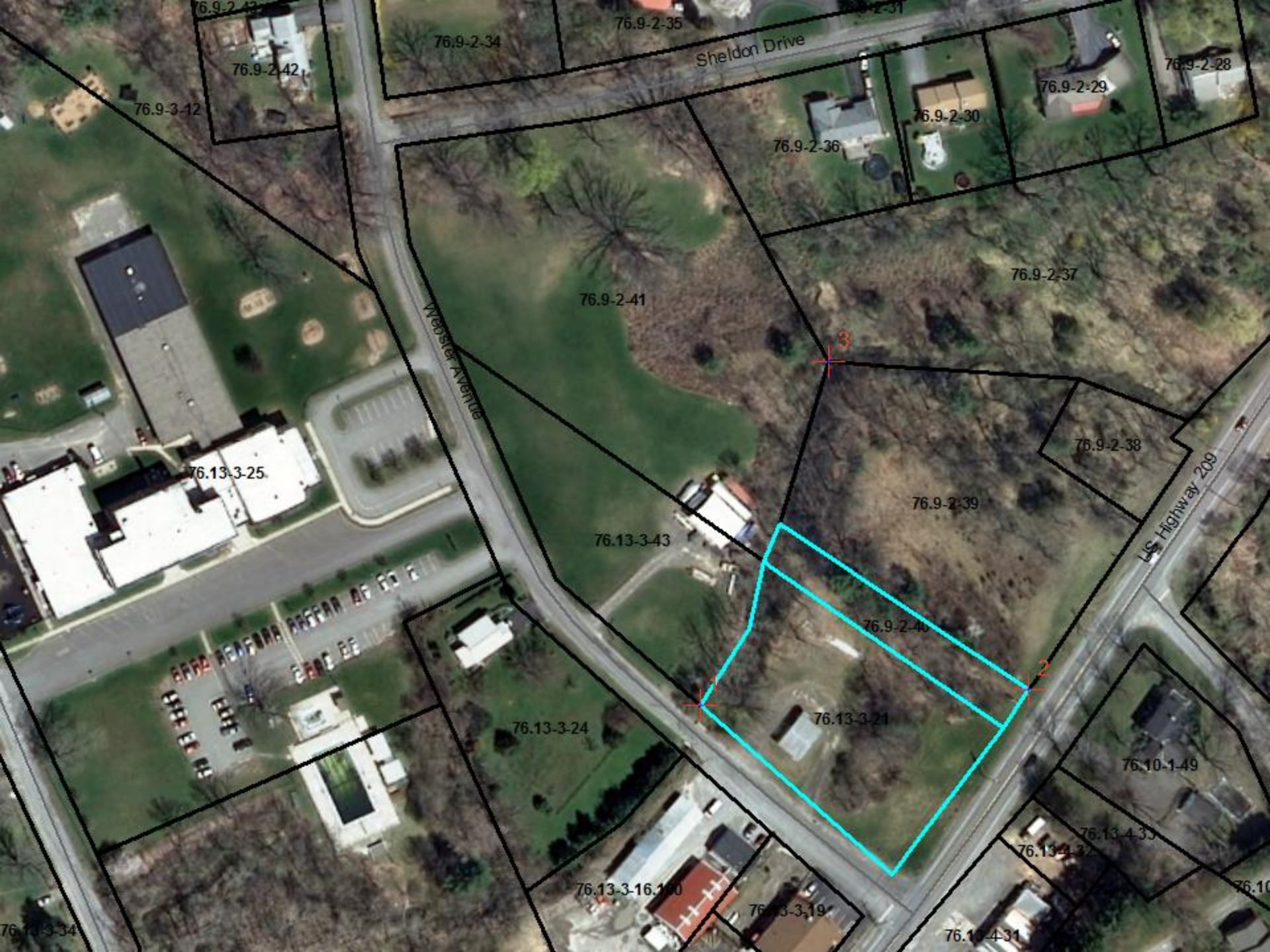

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Lot Line Change Parcel
±7,037 SF
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DOLLAR GENERAL
PROPOSED 9,224 SF RETAIL BUILDING
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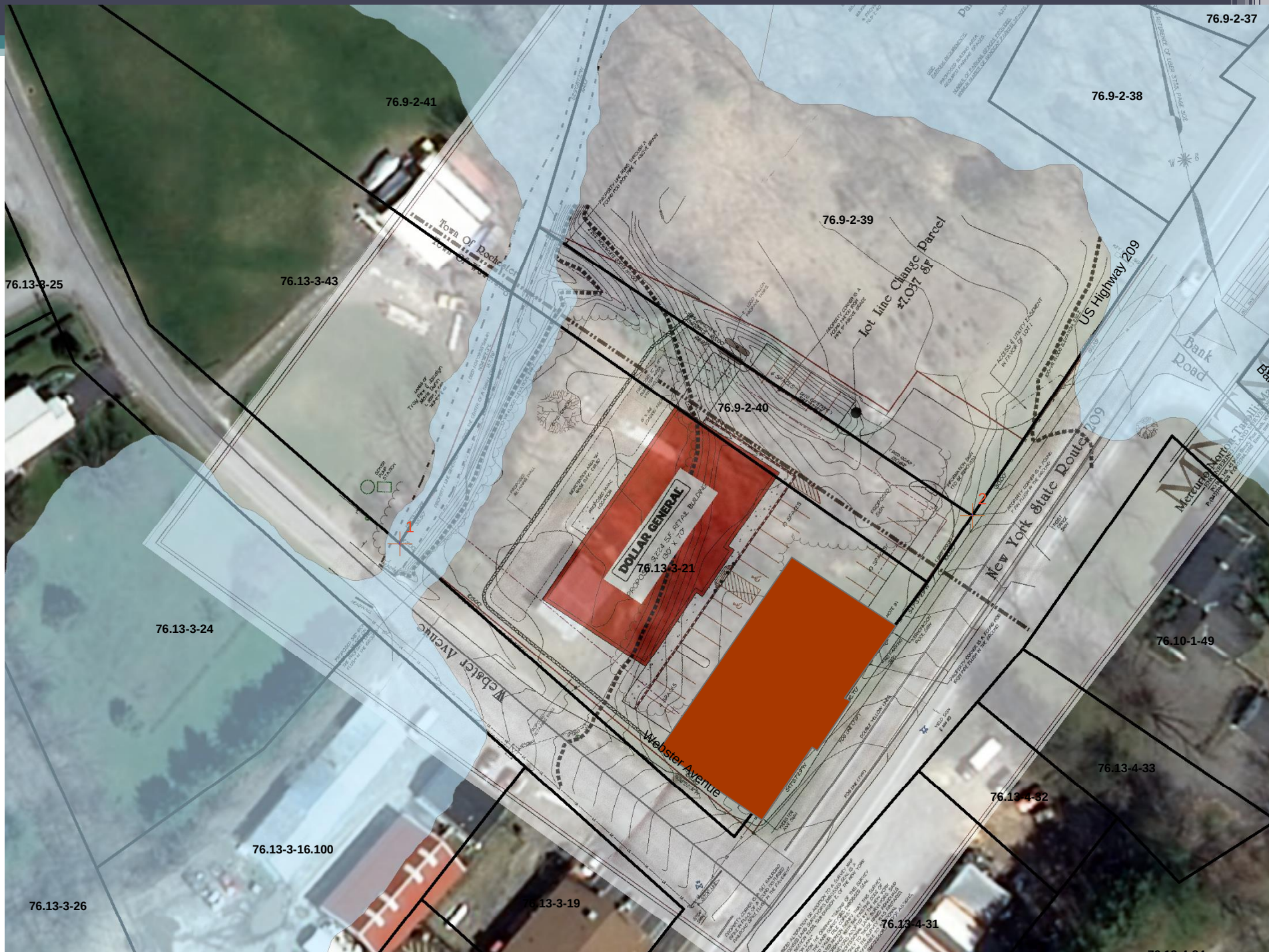
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Lot Line Change Parcel
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Bank Road
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DOLLAR GENERAL
9,124 SF RETAIL BUILDING
150' X 70'
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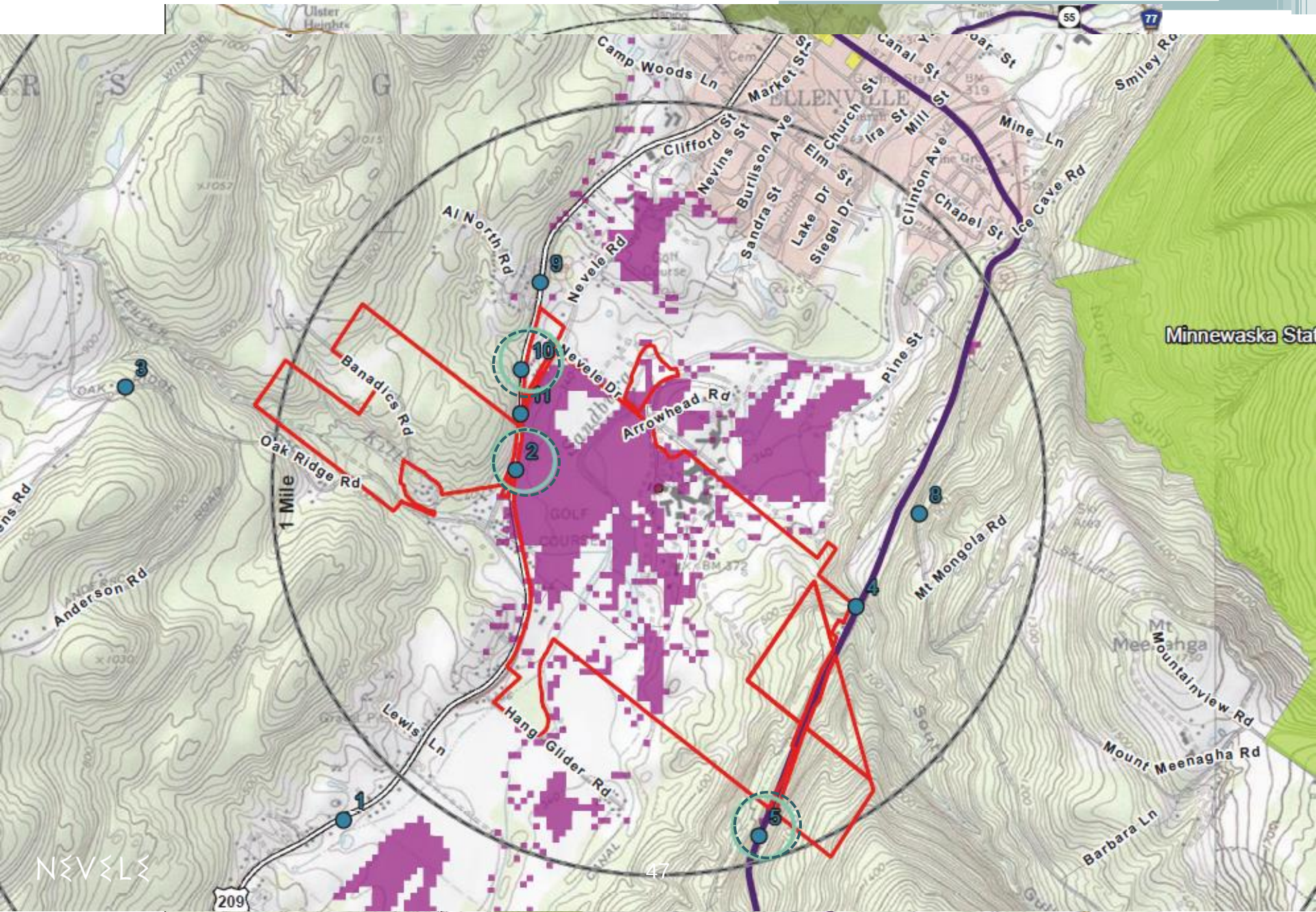
RENDERING
N.T.S.

RENDERING
N.T.S.

Viewshed Analysis



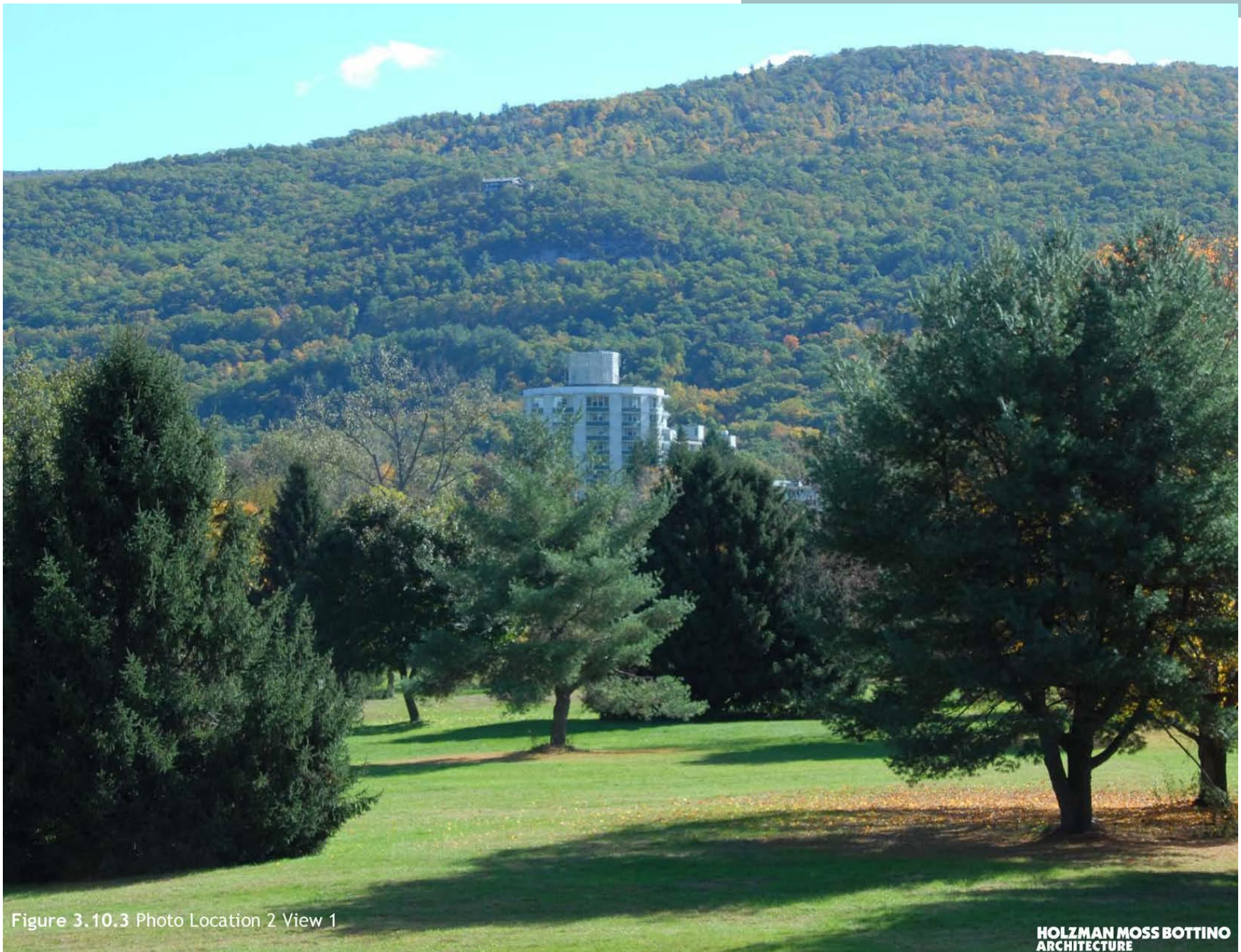


Figure 3.10.3 Photo Location 2 View 1

HOLZMAN MOSS BOTTINO ARCHITECTURE

Figure 3.10.4 Photo Location 2 View 2

HOLZMAN MOSS BOTTINO ARCHITECTURE

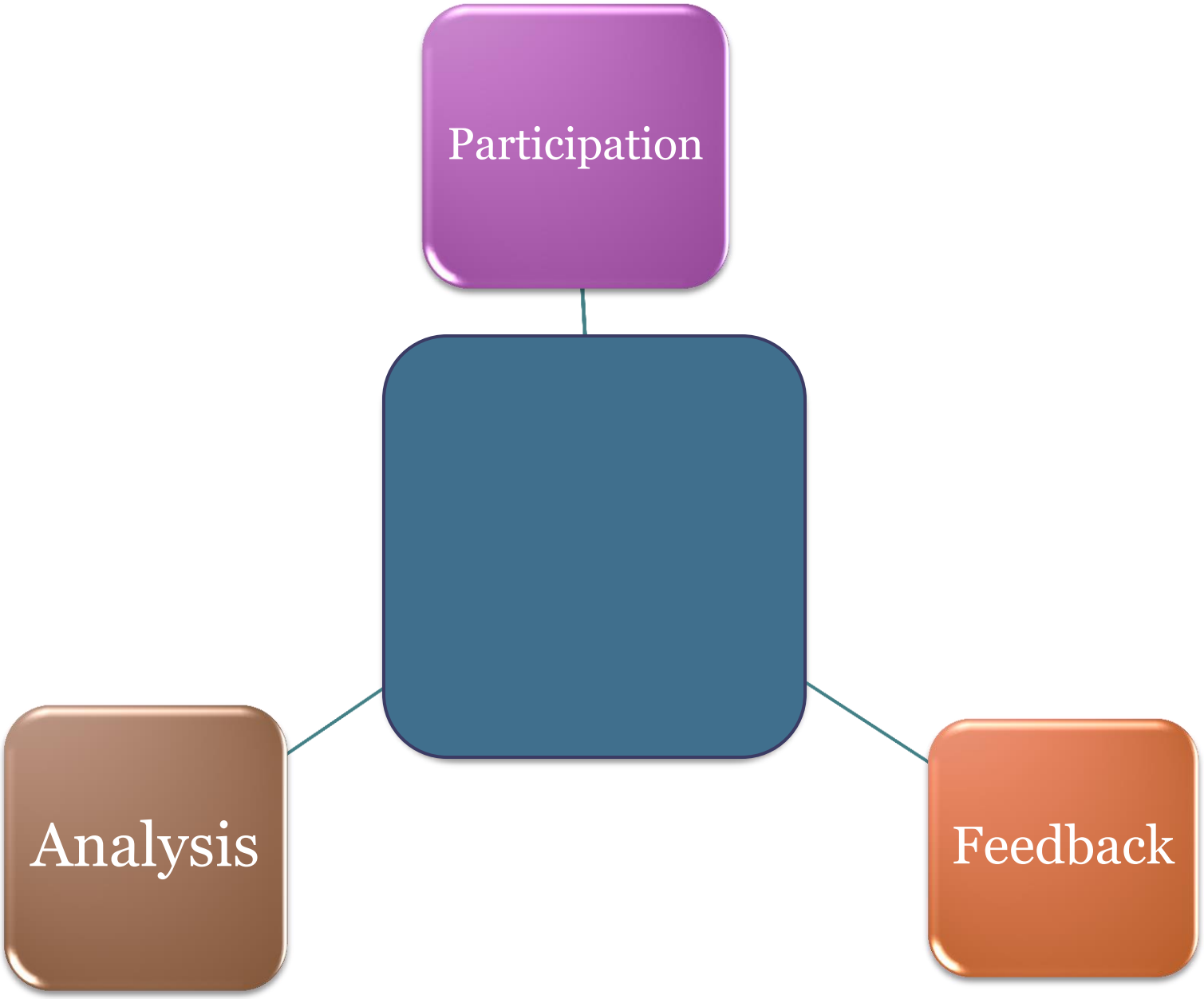
Figure 3.10.7 Photo Location 5 View 1

Figure 3.10.8 Photo Location 5 View 2

Figure **3.10.9** Photo Location 5 View 3

Figure 3.10.10 Photo Location 5 View 4

Administration
Customer Service
Web Presence
Outreach


Participation
Analysis
Feedback

5803
1
2
3
4
5
6
7
CLINTON PLACE
SPRING STREET
SPEEDWELL AVE
5803 Blocks
5 Lots
Redevelopment Area

Tools for Board Members

- Data Sharing
  - Cloud Storage
  - Cloud Collaboration
- Training
  - Planning
  - Environmental Science

Implementing GIS Mapping

- Software
  - ArcGIS for Home Use ($100/Year)
  - ArcExplorer
  - Google Earth – Free
    - Shp2kml – transforms GIS layers to Google Earth
  - Quantum GIS (QGIS) – Free
- Data
  - Ulster County – http://ulstercountyny.gov/ucis/gis-data
  - Google
- Training Opportunities
  - See Handout

Technology Q & A and Information Sharing

- What techniques are you using to improve your processes?
- How can help you solve your technological needs?