Assignment #1: Regional Analysis Project
Site Location: Greater Boston Area

What comprises a region?

The many elements within a region comprise the region as a whole. Natural as well as man-made environmental elements, combined with human and wildlife activity, together create an urban region.

Why examine regional aspects through analysis?

The region where the site is located contains many factors which greatly impact the site itself, however small the site may be. For example, major highway traffic from surrounding suburbs may pass near or through the site, bringing residents from neighboring towns into the scope of the design. Large disparities in race or household income across the region may make evident certain design necessities previously unimagined. Additionally, the overlap of natural and man-made elements across the region may not function in sync; wildlife habitat, spread of invasive or native species, and watershed activity could occur outside of the constraints of the urban design. Examining all of these elements simultaneously at a regional scale can greatly impact the information we use to design the site.

The goals of site design using the regional analysis approach are to: understand the site in its larger context; inform design possibilities beyond the site scale, create or improve ecological networks; improve human access to the site; and inspire design possibilities.

Methodology:

Gather information from online resources covering the following topics:

NATURAL SYSTEMS

1. Vegetation (forested, grassland, wetland, man-made aeras)
2. Hydrology (rivers, streams, lakes, ponds, wetlands, tidal flux, etc.)
3. Wildlife Habitat (birds, mammals, reptiles, fish, insects, migration patterns, etc.)

INFRASTRUCTURE

1. Impervious Surfaces (buildings, roads, parking lots)
2. Transportation (Vehicular, Subway, Commuter Rail, Ferry, Bicycle, Pedestrian)
3. Power Utilities (Gas, Electric, Hydro, Wind, Nuclear)

HUMAN ACTIVITY

1. Demographics (Household Income, Age, Race, Gender)
2. Land Use (residential, commercial, industrial)

REGIONAL LANDSCAPE

1. Major Open Space (fields, greenways, parking lots, airports, etc.)
2. Density (measure and show physical or population density)

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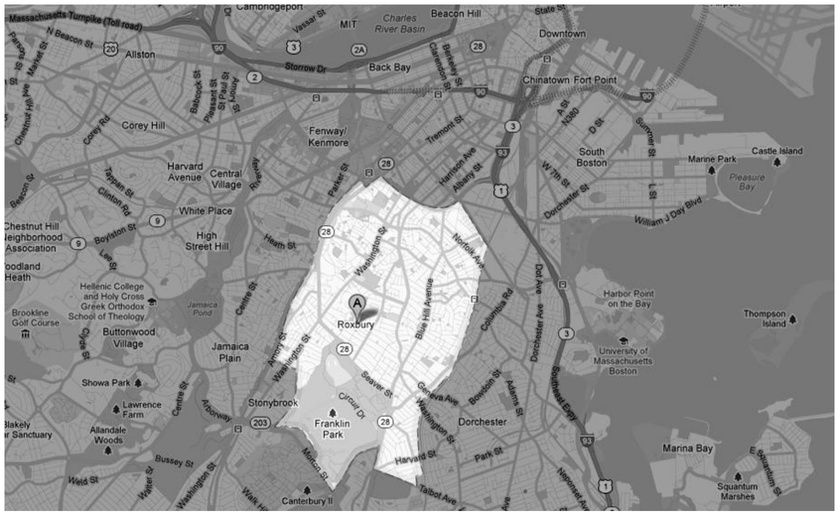
Assignment #2: Multi-Scale Urban Analysis
Site Location: Boston/Roxbury



Neighborhood of Roxbury

The relationship between a city and its parks, rivers, streets, neighborhoods, and other systems is one of great complexity. To best understand how such elements operate as part of the city's urban fabric, analysis should occur at several scales simultaneously.

For this assignment, a single analysis topic will be given to each student, and the student will perform an analysis both at the scale of the city of Boston, as well as at the scale of the neighborhood of Roxbury. Examining the same topic at two scales, it is essential to remember that the level of inquiry must match the scale. For example, when looking at transportation, analysis of the city of Boston might reveal major roadways, walking bicycle paths, and bus routes. At the neighborhood scale, this inquiry might also include specific bus stops, T stations, crosswalks, etc. Before beginning these analyses, be sure to think carefully about what you will be looking for at each scale.

Methodology:

Gather information from online resources covering the following topics:

1. Land Use + Historic Context
2. Green Space
3. Hydrology
4. Water Quality
5. Climate/Microclimate
6. Institutions, Neighborhood Demographics
7. Vegetation
8. Topography, Soils and Geology
9. Transportation

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Assignment #4: Contextual Site Analysis
Site Location: Dudley Square, .5 mile radius of Dudley Square Station

The relationship of the site to its immediate context is one that is continually changing and evolving. In order to intimately understand the context within which the designer operates, it is necessary to examine and analyze the surrounding urban fabric, deriving both information and inspiration from these elements. The analysis must be both objective and subjective; the designer should rely on objective mapping tools such as GIS, as well as experiential information gained by spending time on the site and exploring its surrounding neighborhood.

For this assignment, students will each perform a thorough analysis of the site and its context. No individual topics will be given; instead, students will undertake their own individual analyses of the site by examining topics from the list below. Multiple topics must be analyzed by each student, and each student must present a compelling reason for having examined their topics of choice. During this process, each student should develop a position or attitude about the site and the potential for design opportunities. Be sure to draw upon existing analysis performed in previous assignments; these analyses can be found in the course dropbox.

Methodology:
Gather information from site visits + online and printed resources covering the following topics:

1. Land Use + Historic Context
2. Vegetation + Green Space
3. Urban Water Management
4. Climate/Microclimate
5. Institutions, Neighborhood Demographics
6. Topography
7. Transportation

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Assignment #4: Conceptual Site Design
Site Location: Dudley Square, Roxbury

In the final weeks of the semester, students will select and develop a design scheme within Dudley Square and its immediate surroundings. Students will first select a site (or sites) where they will implement a landscape architecture design. The site may be previously unused, or it may contain building elements or other infrastructure. A proposal will be developed for transforming the site(s) into a viable landscape architecture project; students should be able to articulate how their previous analyses informed their site selection. Students should consider adjacent factors such as neighborhood demographics, circulation and transit schemes, and urban environmental factors, as well as larger regional patterns of settlement, development, circulation, decay and renewal.

Following the site election, students will focus on the development of a design strategy which achieves specific performance benefits. Students must be able to describe how they selected these performance benefits, and how their design will achieve their selected performance benefits. Development of various infrastructural, ecological, and building components should come together to form a coherent design strategy which takes draws upon the previous analysis work from the entire semester. Students should focus on developing landscape performance goals which position their chosen site(s) as a catalyst for positive change and urban renewal, impacting both the immediate site extents as well as the greater context of Dudley Square and beyond.

Students will develop a timeline for phased implementation of their design, and will use predictive calculations and modeling tools to anticipate the expected impact of their intervention. Students will also visually explore the impacts of their design within a broader urban context through diagrammatic representation.

Performance Benefits
Students are expected to integrate multiple performance benefits through their site design. Possible areas to develop performance benefits include:

Land
Shoreline protection
Transportation
Land efficiency/preservation
Soil preservation
Soil creation/restoration

Water
Stormwater management
Water conservation
Water quality
Flood protection

Habitat
Habitat preservation
Habitat creation/restoration

Carbon, Energy & Air Quality
Energy use & emissions
Air quality
Temperature & urban heat island
Carbon storage & sequestration

Materials & Waste
Reused/recycled materials
Local materials
Waste reduction
Green waste

Economic
Property values
Operation and maintenance savings
Economic development
Job creation

Social
Recreational & social value
Cultural heritage
Public health & safety
Educational value
Noise mitigation
Food production
Scenic quality/views

To locate existing landscape projects which achieve some of these performance benefits, visit http://www.lafoundation.org/research/landscape-performance-series/case-studies/

From there, you can search for case studies by landscape performance benefit, project type, or location.

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Key Questions

- Problem definition: what problems does the project solve?
- Program: what is the project's program? How does this translate into site selection and development of form?
- Perception and meaning how is this place perceived and valued?
- Community: how is the community served by this project? What is the social impact and meaning of the project?
- Environmental impact: how does this project serve the environment? How does this project contribute to sustainability?
- Infrastructure: what are the underlying challenges presented by the site? What are the constraints dictated by the site?

Key questions are informed by A Case Study Method For Landscape Architecture (1999), Mark Francis, ASLA

Assignment Deliverables

Site Plan (1)
To scale; scale varies by project. Plan should be diagrammatic and conceptual.

Site Sections (minimum 3)
Sections should be to scale and include:

- entire site transect
- site detail 1
- site detail 2

Design Concept Diagrams (minimum 3)
Diagrams should show aspects of in-site operations, contextual operations, relationship to and impact on surrounding context.

Performance Benefit Diagrams (minimum 2)
Diagrams should explain elements of performance within the design, and should quantify these performance benefits using predictive tools such as LAF's Performance Benefit Toolkit. Diagrams can make use of plan graphics, sections and elevations, 3D modeling, as well as data visualization tools to represent quantitative performance values.

Students are expected to expand their representation beyond the minimum requirements as necessary, in order to effectively communicate the intentionality and impact of their design interventions.