Infrastructure as Urban Landscape: Creating a Resilient NYC

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Learning Objectives
1. Identify and quantify the environmental potential of “infrastructure as landscape” for this large, densely populated city
2. Learn the complex issues in recreating transportation and stormwater management as environmentally sensitive systems
3. Learn innovative strategies for changing highly trafficked, populated and contested areas
4. Understanding the roles of public agencies, landscape architects, and community partners in implementing and maintaining a new urban infrastructure

INFRASTRUCTURE
ˈɪn-frə-ˌstræk-чər
The system of public works of a country, state or region…
Merriam-Webster online

NYC Precedents
Route A, West Street
NYC Precedents

Increase in bike ridership

50%

Decrease in vehicular volumes

20%

Decrease in number of passengers and cyclists injured

35%
Increase in retail sales: 49%

Land Use in NYC 2008:
- Buildings & Parking Lots: 45.5%
- Streets: 20.4%
- Parks, Concessions & Other Open Spaces: 15.5%
- Vacant Land: 17%

NYC Precedents:
- Staten Island Bluebelt, NYCDEP

Prioritizing CSO Tributary Areas:
- 75% of Harbor meets pathogen standards for swimming
- 19% meets standards for boating and fishing
- 7% of our Harbor is made up of tributaries that do not meet secondary contact standards
2012 Amended CSO Consent Order

- 1.5 billion dollars for green infrastructure committed by 2030

Goal:
Manage 1 inch of runoff on 10% of impervious surfaces in combined sewer areas

ROW Bioswale

Completed Stormwater Greenstreets

Area-wide Contracts
ROWB Site Selection Example

1. Potential –
   • Desktop Analysis
   • Walkthrough
2. Preliminary –
   • Survey
   • Geotechnical Investigation
3. Final –
   • Approved sites included in contract plans

Red = Eliminated Potential Sites
Yellow = Pending DOT Approval
Green = Preliminary Site
Blue = Proposed SW Greenstreet

Bioswale Siting Criteria

ROW Siting Criteria examples:
• Mature Trees
• Sidewalk widths (8’ or 5’)
• Fire Hydrants
• Pedestrian Ramps
• Building Entrances/Exits
• Driveways
• Muni Meters
• Bus Stops

Infiltration Considerations

Depth to Groundwater

Depth to Bedrock
For more information: nyc.gov/dep/greeninfrastructure

NYC Land Area By Use

27% STREETS

15% BUILDINGS & PARKING LOTS

10% SCHOOLS

15% APARTMENTS

15% PARKS

Sustainable Streets
2008 Strategic Plan

Some of the Major Goals are:

- Cut city traffic fatalities by 50% from 2007 levels.
- Implement bus rapid transit lines and measures to improve bus speeds city-wide.
- Double bicycle commuting by 2015.
- Initiate city-wide parking policies to manage curb space to reduce cruising and congestion.
- Adopting complete-street design templates for reconstruction projects.
Temporary & Permanent Art

Sub-Concessions

Resilience

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