Envisioning Needham Street

October 28, 2010
OVERVIEW

Who are we?

Why are we here?

What are we doing?
PROCESS

**Initial Exploratory Phase**
- Site visits
- GIS analyses
- Comprehensive Plan review
- Stakeholder interviews
- External research

**Preliminary Recommendations**
- 4 objectives with proposed interventions

**Final Recommendations**

- Internal Presentation on Findings
- Public Meeting *October 28th*
- Public Meeting *December*
- Final Report

**Introduction**
CONTEXT
CIRCULATION & MOBILITY

What Works

• Good local and regional accessibility
• Ample parking

What Doesn’t

• Traffic congestion
• Few crosswalks
• Narrow, crumbling sidewalks
• Too many curb cuts
• Lack of grade separation
• No bike lanes
• Limited bus service
ECONOMY & MARKET

What Works

• Employment center
• Provides significant tax income to city
• Solid consumer base

What Doesn’t

• High vacancy rates
• Loss of some industrial uses
LAND USE

What Works

• Horizontal mix of uses
• Industrial parcels sited away from street
• Large parcels allow for uses not found elsewhere in Newton

What Doesn’t

• No vertical mix of uses
• Disconnected from surrounding neighborhoods
What Works

- Some landscaped areas
- Historic building & bridge

What Doesn’t

- No cohesive visual identity
- Edges not well defined
- Lack of transparency
- Overhead wires
- Buildings not oriented to street
- Parking lots abut sidewalks
HISTORIC PRESERVATION

What Works

• Rich manufacturing history
• Mill building and bridge are on National Register of Historic Places

What Doesn’t

• No interpretation of historic assets
• No connection to Upper Falls Historic District
OPEN SPACE

**What Works**

- Proximity to existing recreation areas & natural resources

**What Doesn’t**

- Limited connections to existing recreation areas
- Nearby natural resources are hidden
FOUR OBJECTIVES FRAME VISION

1. Create a **safe** and **comfortable** environment for cars, bikes, and pedestrians

2. Maintain existing **industrial uses** and promote **fine-grain mixed use**

3. Create a more **cohesive** and **attractive** physical environment

4. Create a recreational **open space network**
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STREETScape IMPROVEMENTS

- Landscaping & street trees
- Consistent sidewalk treatment
- Street furniture & lighting
- Buried utility lines
- Additional crosswalks
- Crosswalk treatment
- Planted median & lane restriping
- Bulb-outs
- Reduced number of curb cuts
- Roundabouts
NEEDHAM – WINCHESTER INTERSECTION

Objective 1: Safe and comfortable environment
MID-NEEDHAM STREET
MID-NEEDHAM STREET

Objective 1: Safe and comfortable environment

- Planted median
- Landscape improvements
- Consolidated curb cuts
NEEDHAM – CHRISTINA – OAK INTERSECTION
Objective 1: Safe and comfortable environment

NEEDHAM – CHRISTINA – OAK INTERSECTION

- Bulb-outs at key points
- Crosswalk differentiation
Objective 1: Safe and comfortable environment
EXAMPLE PERSPECTIVE

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Objective 2: Industrial uses and fine-grain mixed use

EXISTING LAND USE

Land Use Key
- Residential
- Commercial
- Industrial
- Open Space
EXISTING BUILDING TYPOLOGIES

- Multifamily
- Multi-story office
- Large-scale retail
- Small-scale retail
- Industrial
- Historic
EXISTING LAND USE AND BUILDING TYPOLOGIES

- Small-scale retail
- Multifamily
- Multi-story office

Objective 2: Industrial uses and fine-grain mixed use
EXISTING LAND USE AND BUILDING TYPOLOGIES

Large-scale retail

Multi-story office

Industrial

Historic

Multifamily
COMPREHENSIVE PLAN EXCERPTS

• Economic development vision
  • “Flexible Moderate Growth”
  • Selected development along Newton’s commercial corridors can augment its income and tax base
  • Growth of commercial developments and research office parks
  • New low environmental impact industries, such as informatics, biotechnology and health-care
  • More dense development, that may reflect urban trends and that may reduce tax burdens, in the commercial corridors

• Residential vision
  • Maintaining diversity of housing types
  • Maintaining economic diversity of housing
  • Development of housing in mixed use areas can lead to maintaining strong, vibrant…mixed use corridors
PROPOSED LAND USE & NEW TYPOLOGY

Objective 2: Industrial uses and fine-grain mixed use

- Fine-grain mixed use
- Predominantly commercial
- Light manufacturing, R&D

Vertical mixed-use building typology introduced
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Objective 3: Cohesive and attractive environment

ONE STREET, TWO ZONES

Lot size | Setbacks | Building footprint | Building height | Density
NORTH ZONE: EXISTING URBAN FIGURE
Infill | Rear parking | Abut street | Pedestrian infrastructure | Consolidate curb cuts
Neighborhood tree buffer | Minimize neighborhood traffic
Objective 3: Cohesive and attractive environment

Uniform street parking | Abutted facades | Structured parking
Established central space | Residential use toward neighborhood
SOUTH ZONE: EXISTING URBAN FIGURE

Objective 3: Cohesive and attractive environment
SOUTH ZONE: SHORT RUN FIGURE GUIDE

Objective 3: Cohesive and attractive environment

- Infill
- Abut street
- Planned demolition only
- Consolidate curb cuts
- Rear overflow parking
- Single-row parking
- Respect owner lot lines
Objective 3: Cohesive and attractive environment

SOUTH ZONE: LONG RUN FIGURE GUIDE

Transport and amenities | Unify circulation | Scale gradient to Upper Falls
Structured parking | Historic buildings
Objective 3: Cohesive and attractive environment

CORRIDOR GATEWAYS

Southern Gateway

- Raised Crosswalk
- Corner Build
- Sculpture / Sign
Objective 3: Cohesive and attractive environment

Northern Gateway

Roundabout
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NEWTON COMPREHENSIVE PLAN / THE 2003 NEWTON RECREATION AND OPEN SPACE PLAN

- A community which prides itself in being “The Garden City”

- Newton’s over-riding vision is of a metropolitan community able to maintain and preserve its natural assets and resources and able to meet both the passive and active recreational needs of its citizens.

- As Newton faces future pressures toward buildout, only 2,300 of its over 11,000 acres remain in parcels that can be considered as open space. Some 1,000 acres of that open space are privately owned, more than half of that by private golf courses. The remainder is publicly owned, primarily in parks and playgrounds.

- Newton’s natural resources lie within and above fewer than 12,000 acres, of which only a little more than 2,000 acres is land remaining in a largely natural state, about 300 acres is open water, and the rest is land substantially shaped to serve human habitation.

- The City of Newton has been recognized for environmental leadership - most prominently in its recycling and waste management programs, and more recently in its pursuit of high performance design standards for new public facilities.

WATER RESOURCES

WATER BODIES - Protecting natural bodies of water. Preventing stormwater pollution via roadways to the added maintenance requirements of a largely engineered system to the natural process of eutrification.

THE CHARLES RIVER - Newton has twelve miles of riverfront property along the Charles, more than any other neighboring community. Municipal and collective responsibility to protect the river from both point source contamination and sudden inflows of storm water that carry pollutants. A vast majority of Newton’s stormwater drains to the Charles.

STORMWATER AND WASTEWATER MANAGEMENT - Limiting and controlling storm water runoff. Limiting Run Off: Containment versus Bioretention to prevent additional pressure on city storm drain infrastructure, current policy in Newton’s Engineering Division is that applicants for new development must present a plan to contain or manage stormwater on site in the event of a “100- year storm.” Creation of “rain garden,” or bio-retention area. Over the past several years, Newton has been systematically uncovering and addressing crossovers between storm water and sewer systems.
OPEN SPACE AS ECOLOGICAL SYSTEM

NEEDHAM CORRIDOR
ECOLOGY AND GREEN SPACES FINDINGS

Predominant Plants and Plant Communities:
Characteristic of Southern New England lowland wetland vegetation with red maple, American elm, and ash species.

Successional areas with gray birch, white pine and red maple, and non native species.

Buttonwood shrub swamps and spruce-tamarack wetlands.

Fisheries and Wildlife:
Characteristic of Southern New England

Green Spaces and Recreation on Site:
Larger Patch of wetland on the east side
Linear greens running North – South
Charles River System running East – West
Objective 4: Recreational open space network

**Base Framework for biodiversity conservation:**
*Human Use/Water Protection/Natural Vegetation/Wildlife Movement*

**Patches:**
- Promote large patches of vegetation
- Promote interaction between patches (connections and movement)
- Provide stepping of small patches
- Concentrate recreational opportunity on the edges
- Promote on site phytoremediation
- Design for straight and convoluted boundaries
- Promote microhabitat heterogeneity

**Water Flows:**
- Protect hydrologic function of wetlands
- Promote wetlands as pollutant filter
- Protect and enhance vegetation along small channels
- Provide dense floodplain vegetation (to reduce downstream flooding)
- Protect and enhance ‘river-ladder’ pattern
- Protect aquifers

**Natural Corridors:**
- Promote corridor width and connectivity
- Promote small patches attached to corridors (‘rest stops’)
- Mitigate habitat contrast
- Promote alternative routes
Objective 4: Recreational open space network

LANDSCAPE FRAMEWORK: POSSIBLE ACTIONS

**NEEDHAM CORRIDOR**

**LANDSCAPE FRAMEWORK: POSSIBLE ACTIONS**

**Base Framework:**

- Create a landscape hierarchy system to bring identity to the site.
- The landscape framework will carry the water management system for the site (artificial + natural).
- Landscape improvements with autochthon species to promote corridor effect.
LANDSCAPE FRAMEWORK: POSSIBLE ACTIONS

Objective 4: Recreational open space network
OPEN SPACE AS CIRCULATION NETWORK

- Long term: Retain flexibility for MBTA Green Line extension
- Short term: Recreational trail along corridor
- Link Needham Street corridor to surrounding neighborhoods using open space
- Provide neighborhoods direct pedestrian access to retail and jobs
- Connection to Upper Falls is a prime opportunity
OPEN SPACE AS CIRCULATION NETWORK

Objective 4: Recreational open space network

Existing conditions

Trail (short term)

MBTA extension

80’

Source: “Rail Service to Newton Upper Falls and Needham,” Srdjan Nedeljkovic
CONNECTION TO UPPER FALLS

Objective 4: Recreational open space network
SUMMARY
WRAP-UP

- Four objectives frame a vision for Needham St
  1) Create a safe and comfortable environment for cars, bikes, and pedestrians
  2) Maintain existing industrial uses and promote fine-grain mixed use
  3) Create a more cohesive & attractive physical environment
  4) Create a recreational open space network

- Next steps
  - Refine objectives and vision based on stakeholder feedback
  - Identify specific interventions
  - Evaluate financial feasibility
  - Propose potential zoning changes
  - Develop final plan
DISCUSSION