



Wellington Park & Mill Brook Corridor Revitalization Project - Phase 3

Town of Arlington, MA

Public Meeting #1

April 22, 2020



Wellington Park & Mill Brook Corridor Revitalization Project

Partnership

Town of Arlington and the Mystic River Watershed Association

Primary Purpose

Explore and identify opportunities for improving public access amenities and the ecological quality of the park and corridor

Funding

Provided by the Arlington Community Preservation Act (CPA), Community Development Block Grant (CDBG), and Judy Record Fund, managed by the Town of Arlington

Wellington Park & Mill Brook Corridor Revitalization Goals

1. Complete a community-driven design for Wellington Park that will open up the Brook and provide new amenities
2. Build awareness and support for the concept of a Mill Brook Linear Park and provide a template for enhancement and restoration of other sections of this corridor
3. Use environmentally sustainable planning and engineering approaches for natural resources management



TOWN OF ARLINGTON MASSACHUSETTS

Emily Sullivan

Environmental Planner & Conservation Agent

MyRWA
Mystic River Watershed Association

Amber Christofferson
Mystic Greenway's Director

CLIENT TEAM STAKEHOLDERS

Open Space Committee
Mill Brook Working Group
Park & Recreation Commission

PRINCIPAL-IN-CHARGE

Duke Bitsko, PLA – HATCH

PROJECT MANAGER

Landscape Architecture / Permitting

Andrew Keel, PLA, LEED – HATCH

SUPPORT STAFF

CIVIL ENGINEER / GREEN INFRASTRUCTURE

Hilary Holmes, P.E., LEED AP – HATCH

BIOENGINEERING / HYDROLOGIST

Bob Neville, Ph. D. – HATCH

STRUCTURAL REVIEWS

Colin Lampark, P.E., S.E. – HATCH

SUPPLEMENTARY SERVICES

NATURALISTIC PLAYGROUND DESIGN

Mitch Ryerson – RYERSON DESIGN

Project Team

How to provide feedback

- Visit: www.mysticriver.org/millbrook

HOME NEWS THE WATERSHED THE WORK **Mystic River** WATERSHED ASSOCIATION GET INVOLVED ABOUT US CONTACT US

MILL BROOK AND WELLINGTON PARK

For decades, the Town of Arlington and other community stakeholders have been exploring the feasibility and possibilities for developing a linear park along Mill Brook, an important ecological and historical feature in the town. (See the [April 2019 report](#) and [September 1977 concept study](#)). At one time, there were nine mills and seven millponds along the brook, which flows westward from the Arlington Reservoir to Lower Mystic Lake. Four town-owned recreational and conservation areas are accessible along Mill Brook — Reservoir/Hurd Fields, Wellington Park, Cooke's Hollow, and Meadowbrook Park.

MyRWA is leading a participatory design and planning process that identifies opportunities for increasing the Brook's visibility and new uses for the Mill Brook Corridor between Brattle Street and Grove Street, with a focus on Wellington Park. This project will serve as a model revitalization for the remaining Mill Brook Corridor — turning a hidden, underutilized waterfront into a linear park that connects people to the water and improves ecological quality of the riparian edge.

Progress

Our next public meeting will be held virtually on Wednesday, April 22 at 7:00 pm. We will be sharing initial design ideas for the next phase of construction. Learn more in the link below.

[PUBLIC MEETING DETAILS](#)

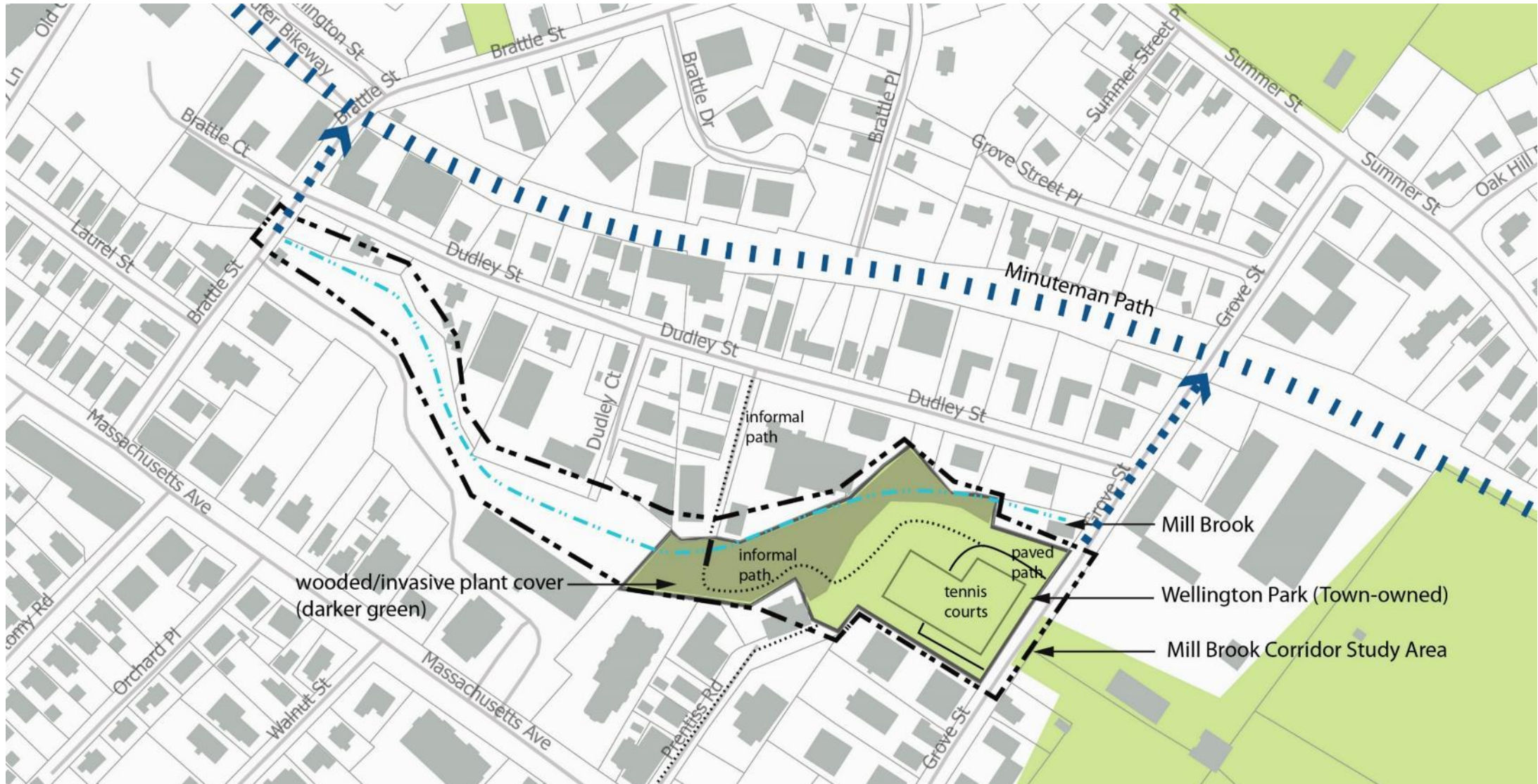


Photographs of the new boardwalk and natural flood storage area built in the first phase of construction. Credit: David Nussina.

Agenda – Wellington Park Phase 3

- Phases 1 and 2 Overview
- Phase 3: Goals and Design Concepts
 1. Pathways and Access
 2. Naturalistic Exploration Area
 3. Planting Strategy
 4. Pedestrian Bridge
 5. Concept Plan
- Project Schedule
- Comments and Questions

Phase 1 Existing Conditions (2017-18)

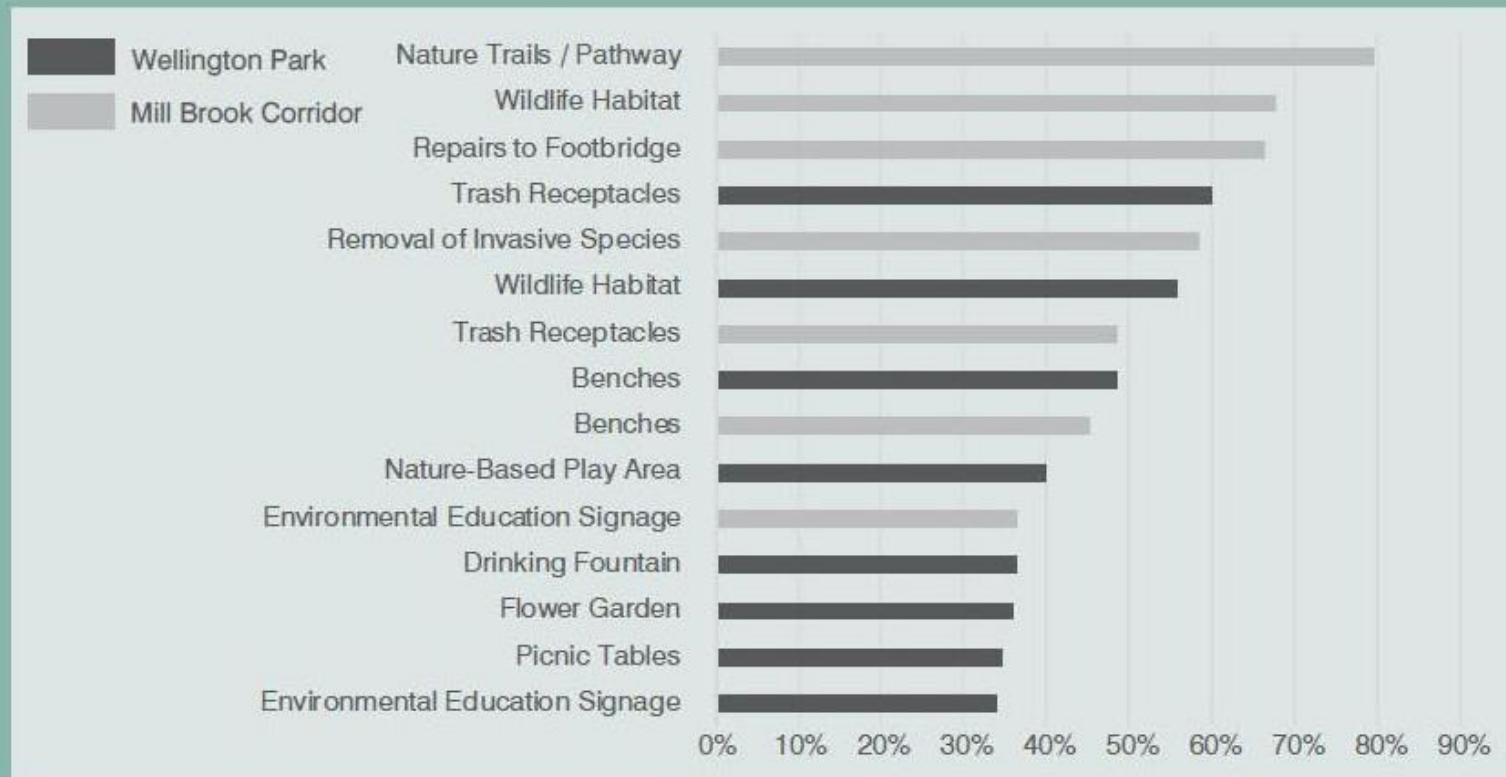


Phase 1 Existing Conditions

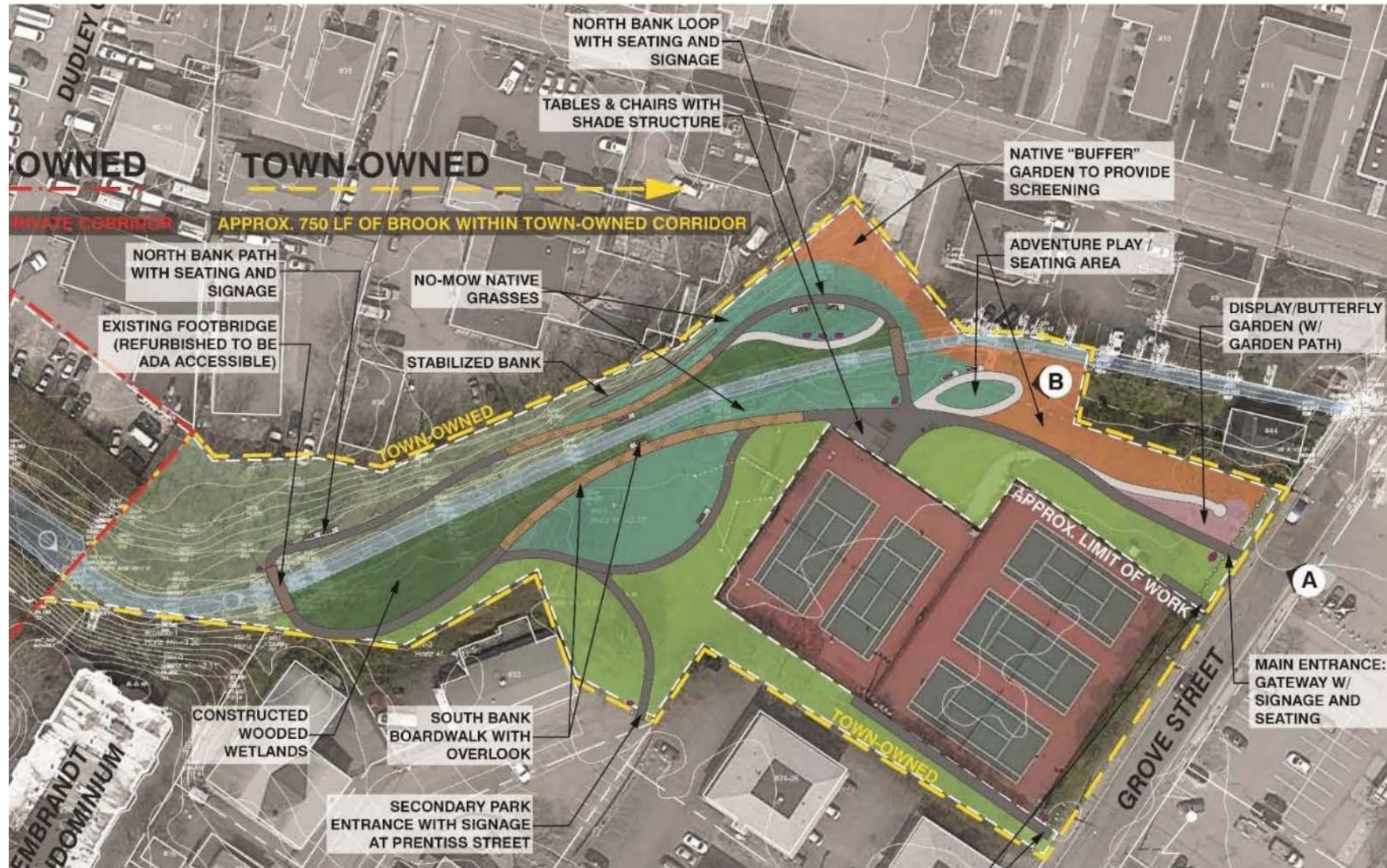


Phase 1 Community Input

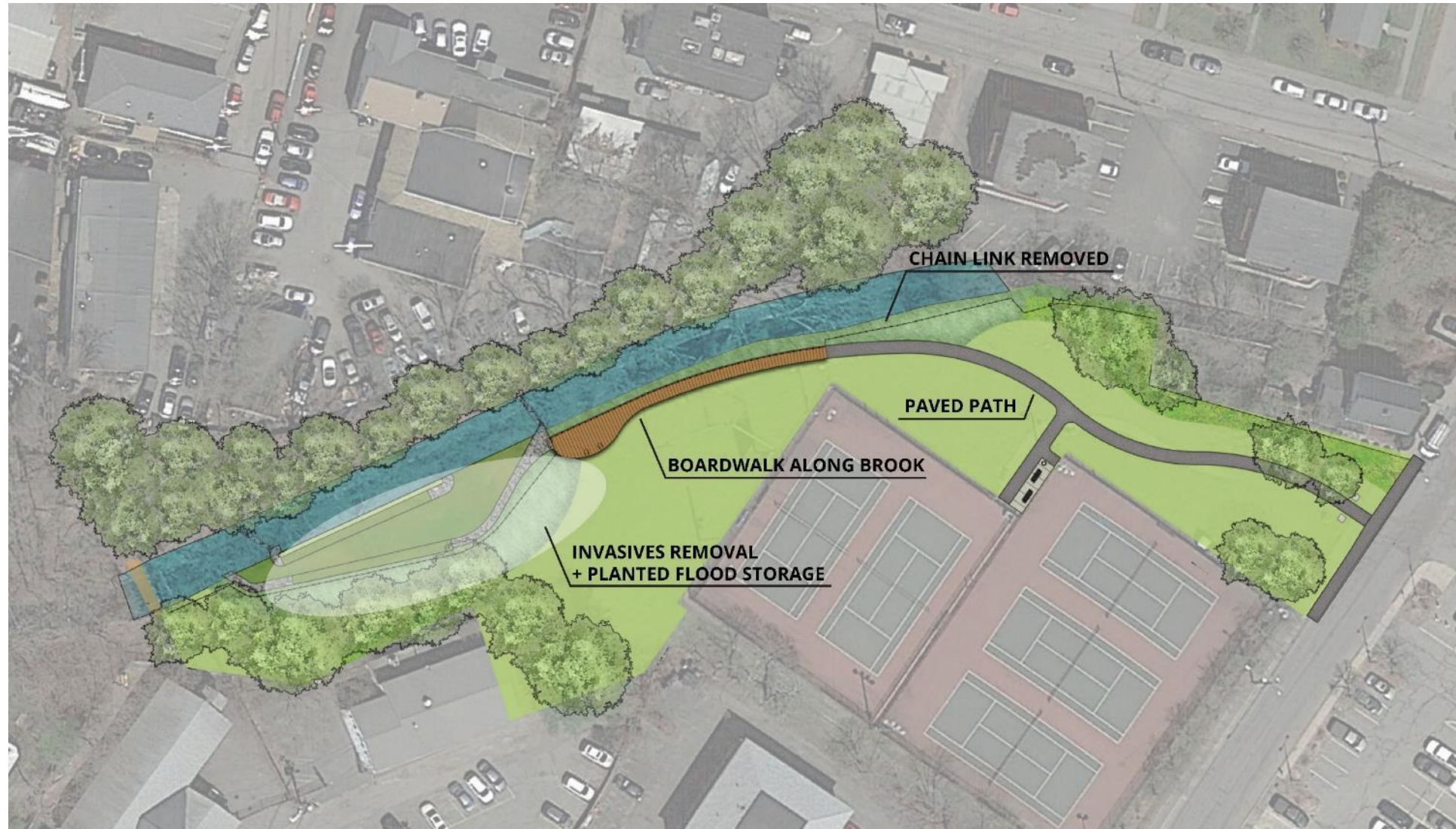
Desired New Amenities



Phase 1 Concept Design



Phase 2 Site Improvements (2018-19)



Phase 2 Site Improvements



Phase 3 Goals

1. Implement park improvements and values from the original concept design and community input, this includes:

- Improve park circulation and connect to existing bridge over Mill Brook
- Maintain natural sense of place and provide wildlife habitat
- Site Amenities: Add benches, picnic tables
- Add native and seasonal plantings and rain garden to mitigate stormwater flooding
- Naturalistic Seating and Exploration Area; in general, provide more opportunities to view Mill Brook

2. Use environmentally sustainable planning and engineering approaches for natural resources management

Phase 3 Timeline

- **Community Outreach**
 - Public Meeting #1: April 22, 2020
 - Public Meeting #2: May 2020 (TBD)
- **Complete Design/Construction Documents:** June 30, 2020
- **Construction Begins:** Fall 2020

Phase 3 Design Issues

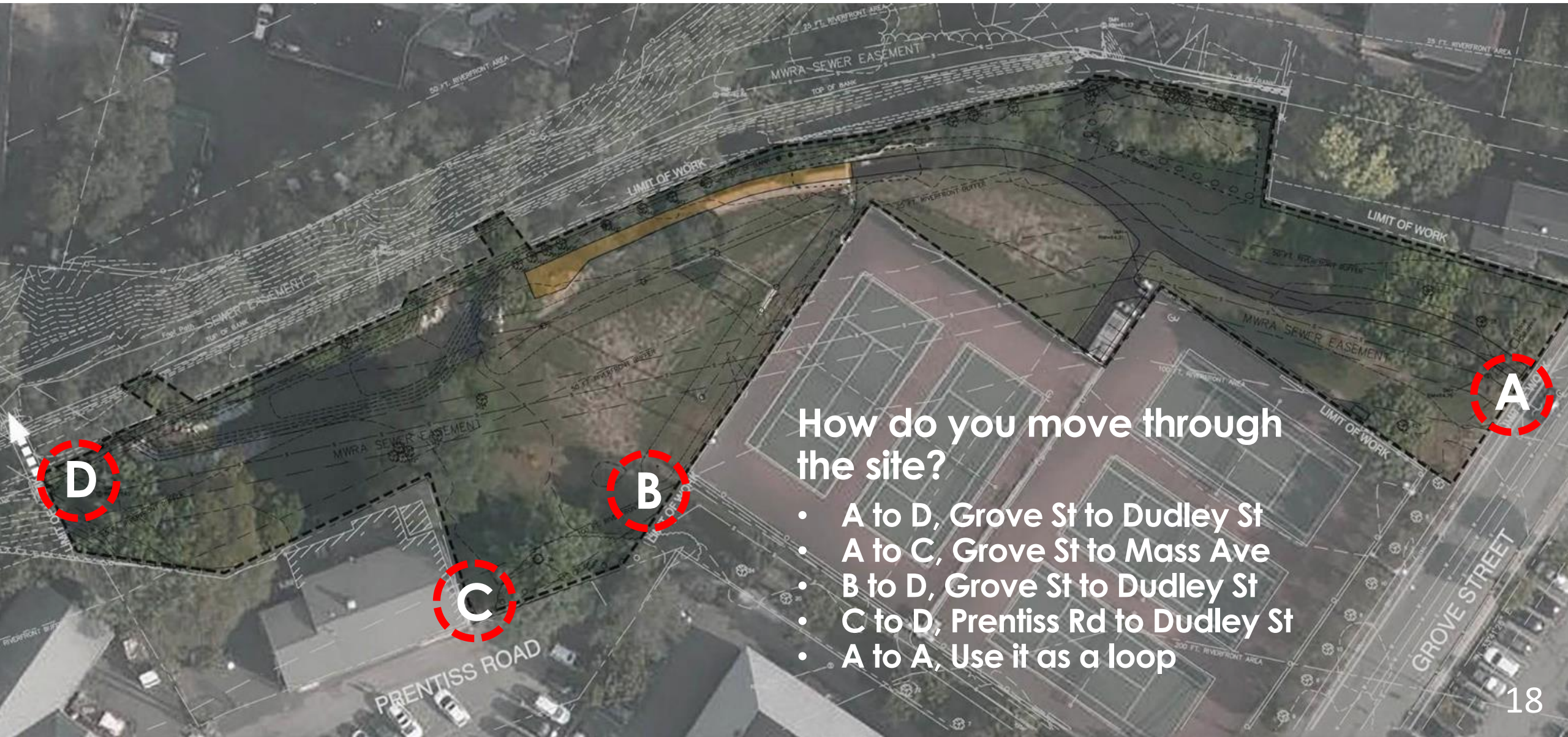
1. How to improve pedestrian circulation and seating without overdoing it?
2. What opportunities for informal/ exploratory play would you like to see?
3. How important is retrofitting the existing pedestrian bridge?
4. Are existing turf lawn areas desirable?
5. Are native plants and the ecosystem services they provide important?

Challenging Site Features

- Narrow Pedestrian Corridor
- MWRA Right-of-Way and Future Access to Utility Structures
- Localized Flooding
- Climbing Structure Poles & Guy Wires
- Invasive Vegetation
- Aging Bridge Structure

1. Pathways and Accessibility

Site Access Points



How do you move through the site?

- A to D, Grove St to Dudley St
- A to C, Grove St to Mass Ave
- B to D, Grove St to Dudley St
- C to D, Prentiss Rd to Dudley St
- A to A, Use it as a loop



Path Surfacing – Not Recommended

Bituminous Concrete

- Impervious (not porous)

Stabilized Aggregate

- Performs poorly in areas prone to flooding
- Does poorly in shaded areas
- Maintenance needs: High

Compacted Earth

- Not ADA-compliant
- Performs poorly when wet

Path Surfacing – Recommended

Porous Bituminous Concrete

1. ADA-compliant
2. Cost: Low
3. Maintenance: Medium
4. Local Examples:
 - Wellington Park
 - Perimeter Road, Fresh Pond Reservation, Cambridge



Flexible Porous Paving

1. ADA-compliant
2. Cost: High
3. Maintenance: Medium
4. Local Examples:
 - Spy Pond Park, Arlington
 - Kingsley Park & Black's Nook Pond, Fresh Pond Reservation



Timber Boardwalk

1. ADA-compliant
2. Cost: High
3. Maintenance: Replacement
4. Local Examples:
 - Wellington Park
 - Spy Pond Park, Arlington



Path Constraints

- Pinch point at tennis court, path and guy wire
- Boardwalk slope transitions up



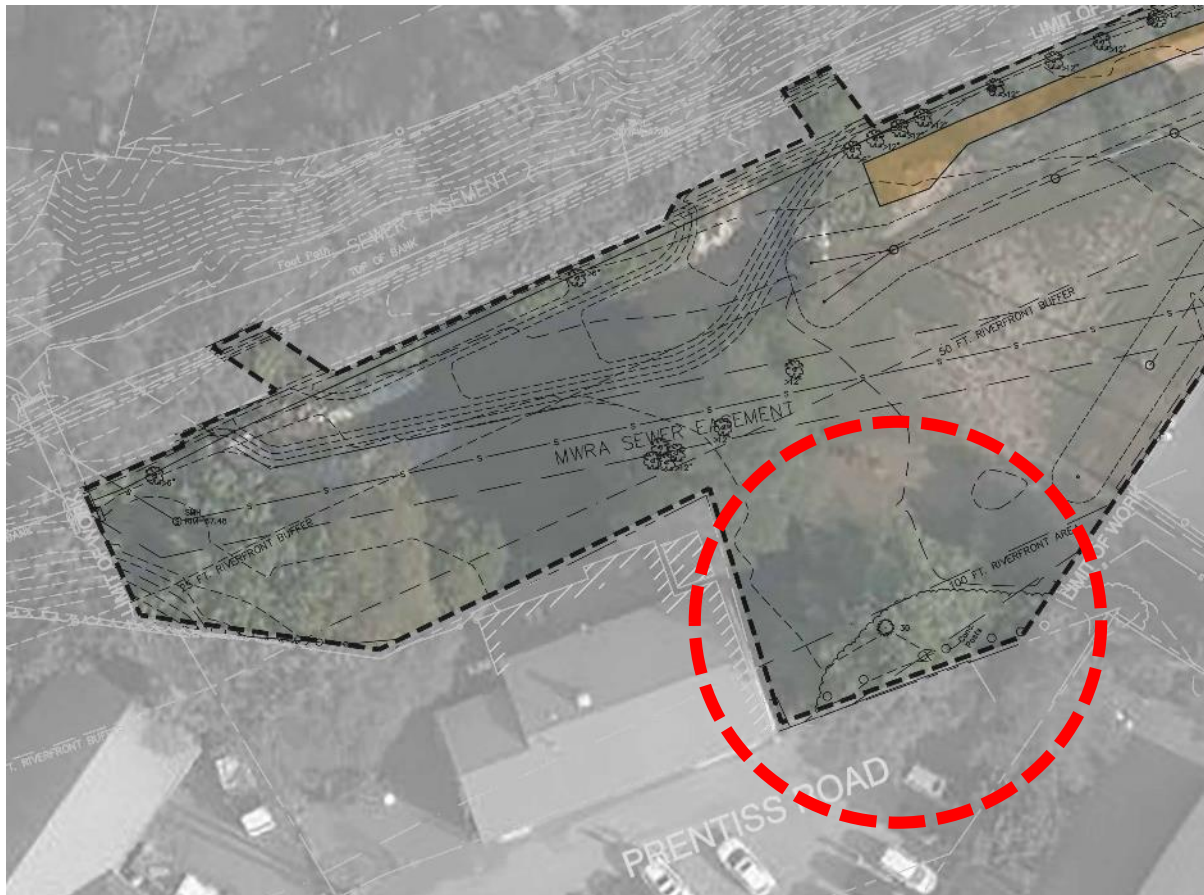
Path Constraints

- Significant side slope
- Pinch point at trees existing trees



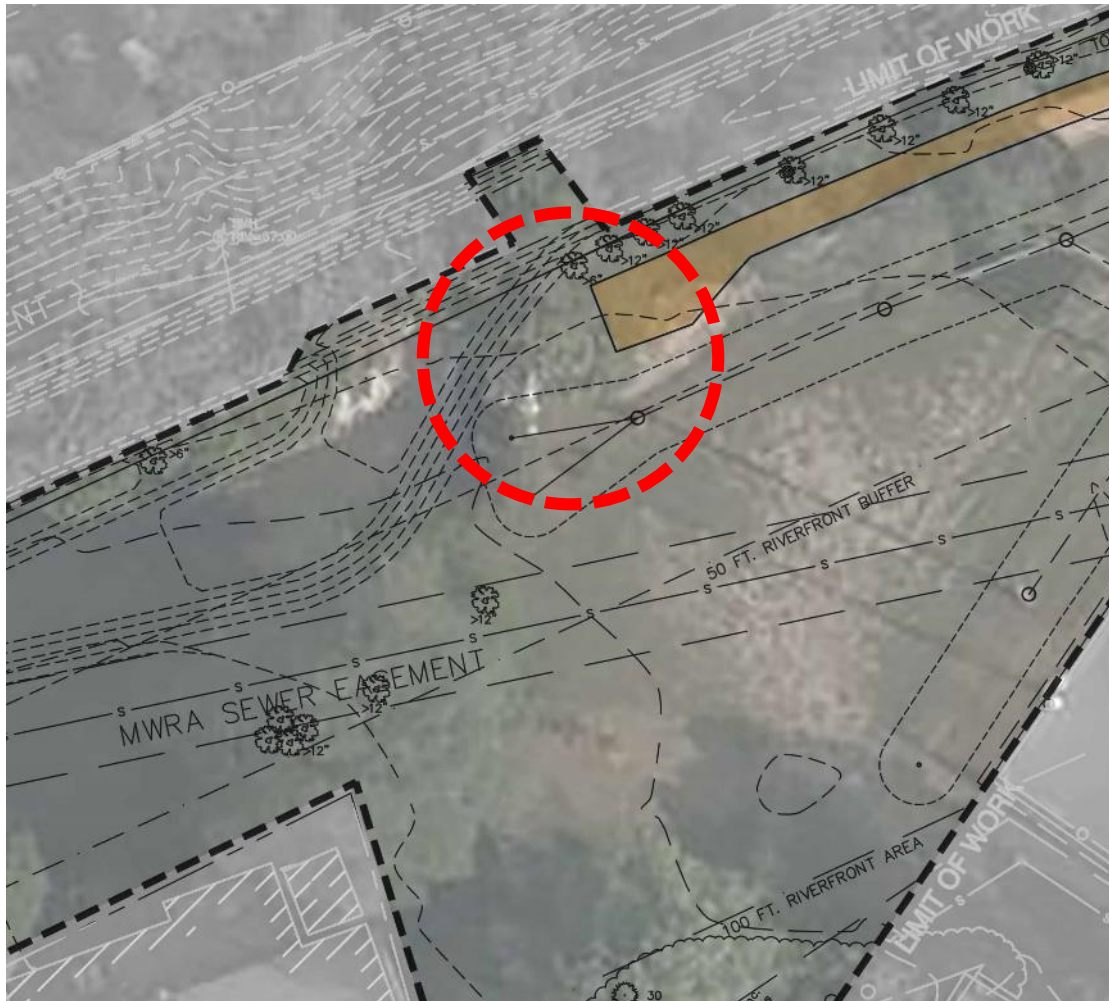
Path Constraints

- Access from Prentiss Road
- Drainage issue along property line
- Existing trees



Boardwalk Connection

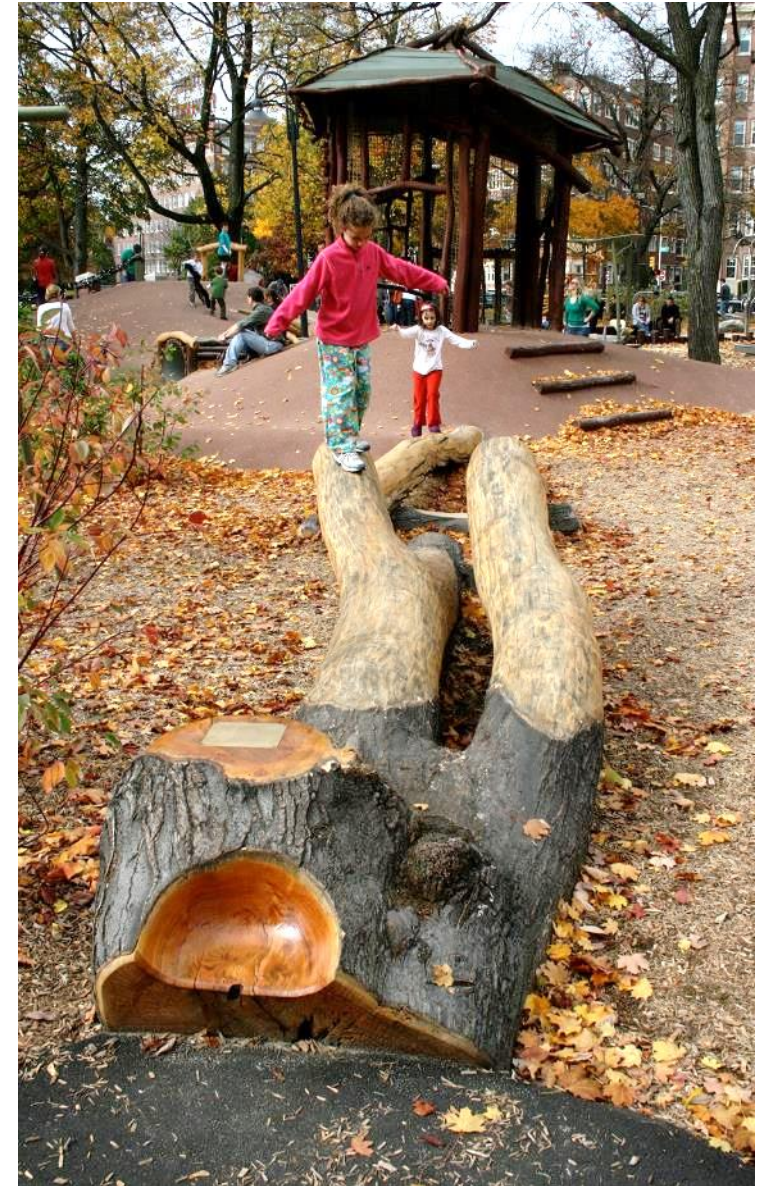
- Create accessible transition point to surface of existing boardwalk
- Ropes course guy wire and pole conflicts



2. Naturalistic Exploration Area

Naturalistic Exploration Area - Examples

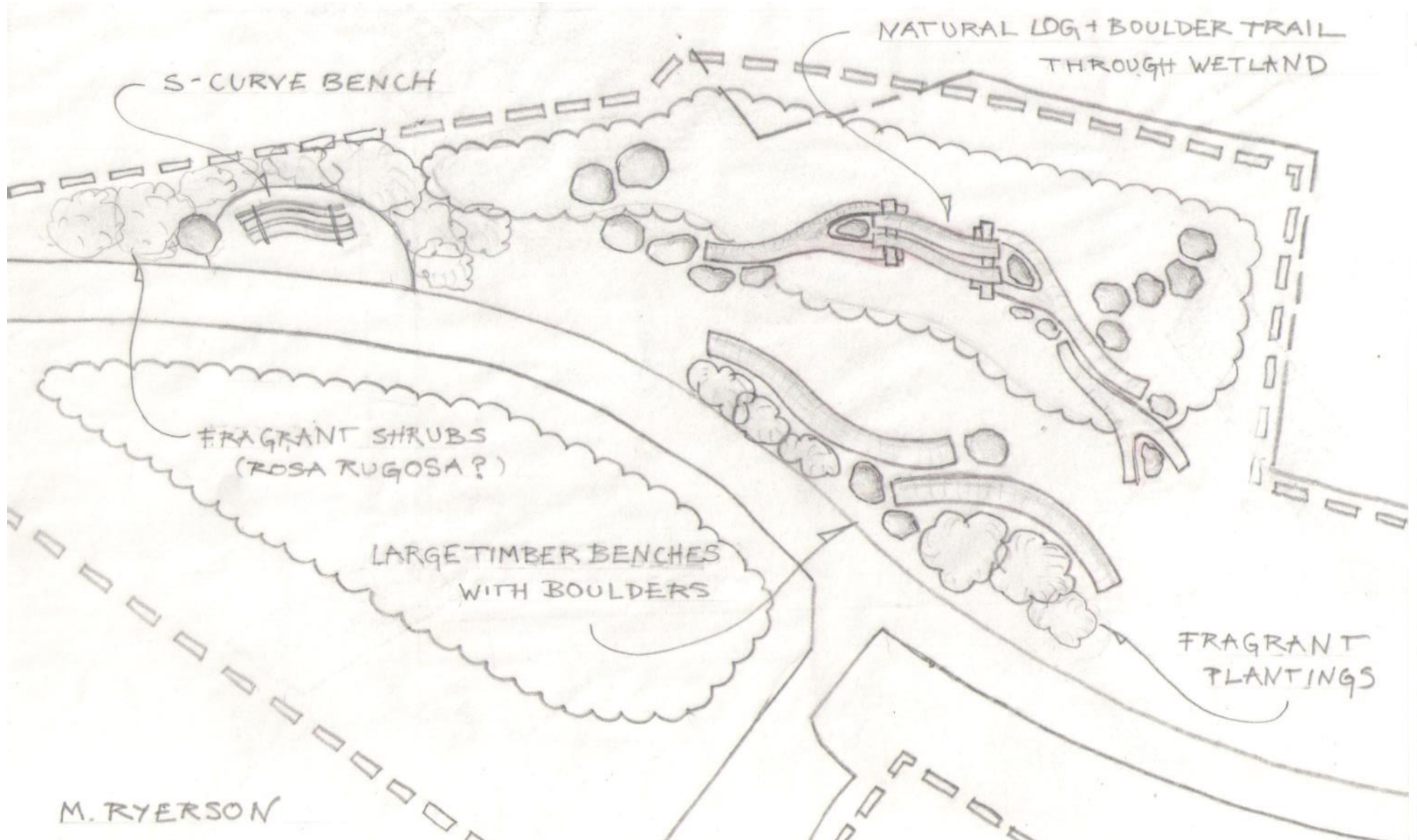
- Area for seating and unstructured play



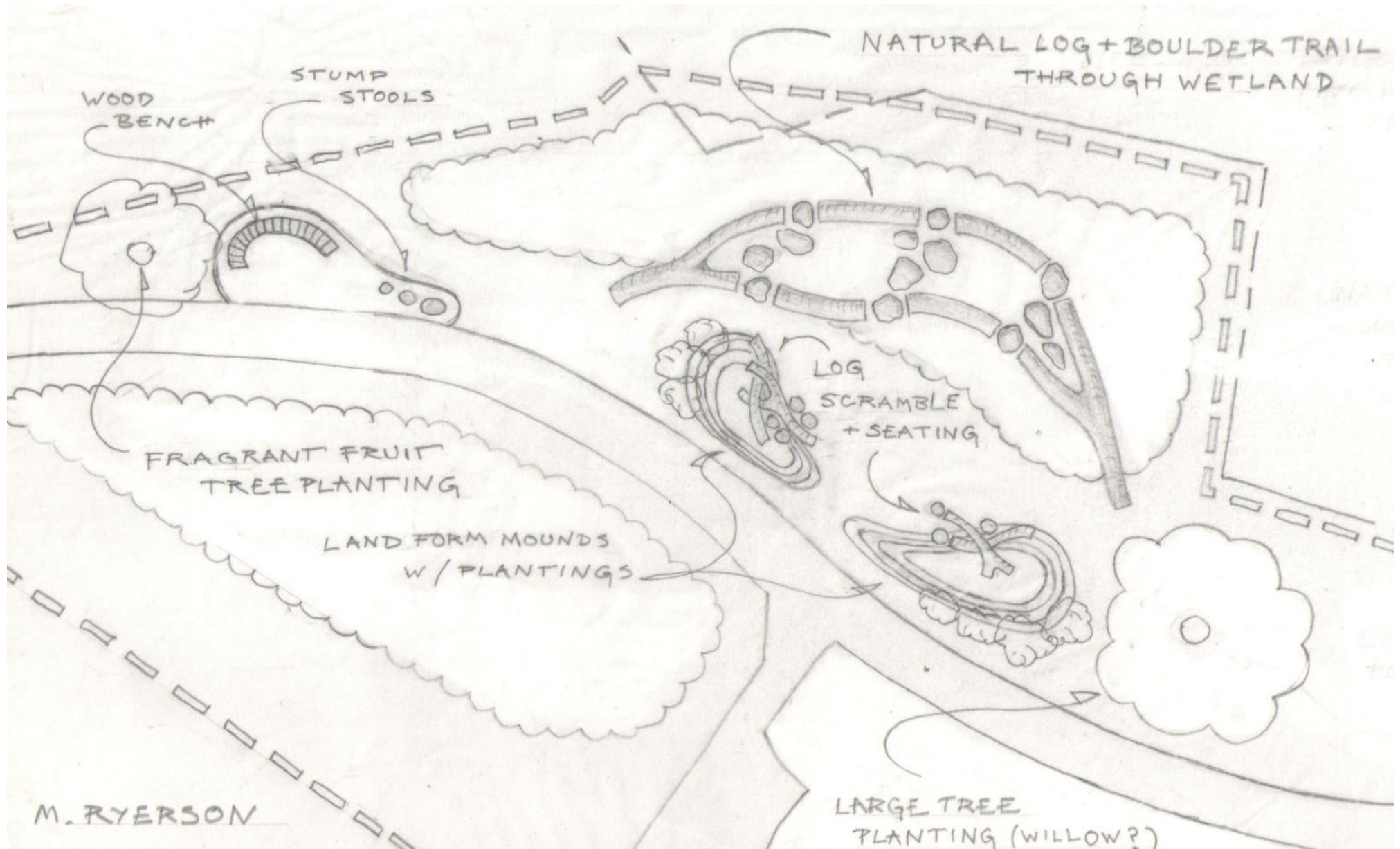
Naturalistic Exploration Area - Prototypes



Design 1



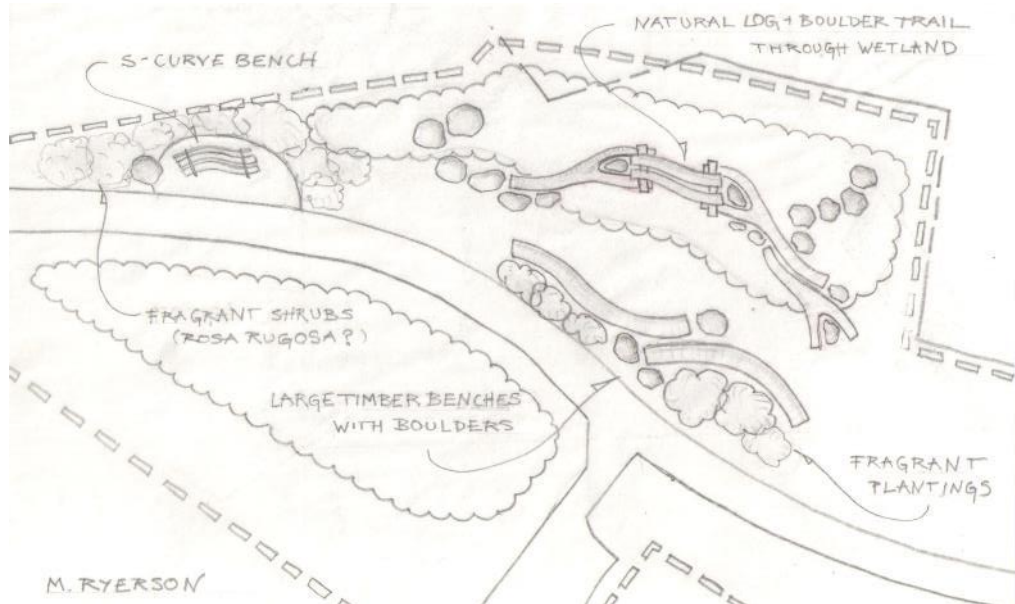
Design 2



Naturalistic Exploration Area

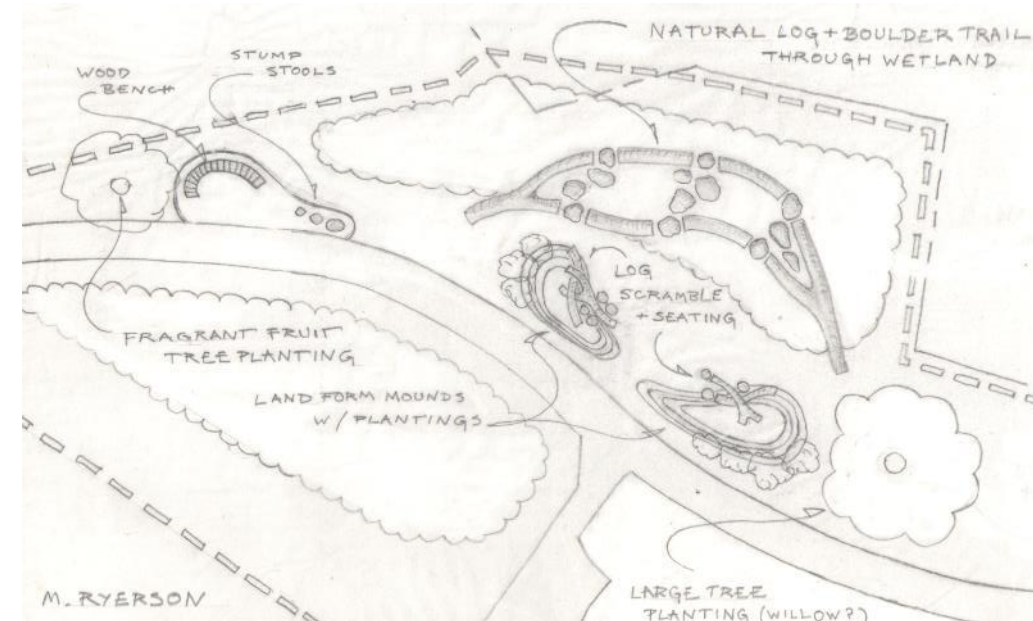
Design 1 Elements

1. S-Curve Bench
2. Large Timber Bench with Boulders
3. Natural Log and Boulder Trail



Design 2 Elements

1. Stump Stools
2. Wood Bench
3. Log Scramble Seating
4. Natural Log and Boulder Trail



3. Planting

Existing Mowed Lawn Areas



Existing Non-Lawn Areas



Flood Storage Area 2



Woodland with Invasive Species

Planting Strategy

1. Replicate Natural Communities Indigenous to Mystic River Watershed
2. Restoration of Riparian Floodplain Forest
3. Woodland Understory (Upland)
4. Natural Grassland Habitat (Upland)
5. Native, Non-cultivar Species
6. Highly Adaptive Plants—Minimize Maintenance

High-terrace Floodplain Forest

State Rank: S2 - Imperiled



High-terrace Floodplain Forest with mixed herbaceous layer and floodline visible on the nearest tree. Photo: Jennifer Kearsley, NHESP.

High-Terrace Floodplain Forests are deciduous hardwood forests that occur along riverbanks, above the zone of annual flooding. Although they do not flood annually, they flood often enough for the soil to be moderately enriched.

cherry, basswood, and elms. An open subcanopy usually includes ironwood and canopy species. The shrub layer varies from sparse to well-developed with arrowwood, nannyberry, and winterberry commonly mixed with invasive non-native shrubs including multiflora rose, Japanese knotweed, Japanese barberry, and buckthorns. The herbaceous layer is a mixture of the characteristic floodplain forest plants - sensitive fern, ostrich fern, and wood-nettle - and rich upland herbs, such as lady fern, zigzag goldenrod, white snakeroot, jack-in-the-pulpit, and bellwort. Native and non-native vines can be very dense in places.

Description: High-terrace Floodplain Forests occur on raised banks adjacent to rivers and streams, on steep banks bordering high-gradient rivers in the western parts of the state, on high alluvial terraces, and on raised areas within major-river and small-river floodplain forests. In general, these communities are within the 100-year flood zone of rivers, so are river influenced, but they typically are not flooded annually as indicated by the presence of a distinct surface soil organic layer. Soils are typically silt loams. As with other types of floodplain forests and Rich, Mesic Forests, the rich soils and moist conditions make disturbed areas in them prone to invasions by exotic plant species.

Characteristic Species: These floodplain forests typically have species from lower floodplain forests mixed with species from mesic, upland forests. The canopy may include red, silver, and sugar maples, birches, hickories, ashes, butternut, sycamore, cottonwood, black



High-terrace Floodplain Forest with dense barberry patches in the otherwise diverse understory. Photo: Patricia Swain, NHESP.

Differentiating from Related Communities: Occurrences of High-terrace Floodplain Forests tend to be relatively small narrow forests on high alluvial terraces that flood only occasionally (not annually) and for a shorter duration than other types of floodplain forests. Less flooding typically results in more structural and species diversity than found in other floodplain forests.

High-terrace Floodplain Forests are most closely related to the Transitional Floodplain Forests, Small-river Floodplain Forests, and Rich, Mesic Forests. They are sometimes seen as a hybrid between floodplain and upland forests as the vegetation composition of all layers of this forest type shares species with other floodplain forests and with Rich, Mesic Forests (for example, silver and red maple grow with sugar maple, ostrich fern with lady fern). They have more litter accumulated than other floodplain forests. Alluvial Red Maple Swamps along low-gradient rivers flood annually and are slow to drain. Silver maple is often a codominant with red maple. Alluvial Hardwood Flats are along small streams that have multiple short flooding events throughout the year after storms. Black cherry and white pine are usually abundant in the canopy with red maple, but not silver maple.

Habitat for Associated Fauna: High-terrace Floodplain Forests can contain low wet depressions that function



as vernal pools and provide important amphibian breeding habitat. Being small communities, they are part of the habitat of the wide ranging riverine and upland animals.

Examples with Public Access: George L. Darey Housatonic WMA, Lenox; Knightville WMA, Huntington and Chesterfield; Arcadia WS (MAS), Northampton; Bolton Flats WMA, Bolton and Lancaster.



High-terrace Floodplain Forest with diverse canopy and herbaceous layers. Photo: Michael Batchner.



From: *Classification of Natural Communities of Massachusetts* <http://www.mass.gov/nhesp/>
Natural Heritage & Endangered Species Program, Division of Fisheries & Wildlife, 1 Rabbit Hill Rd., Westborough, MA 01581

Updated: 2016
(508) 389-6360

Riparian Floodplain Community

Canopy Trees

1. *Acer rubrum* (red maple)
2. *Quercus bicolor* (swamp white oak)
3. *Betula nigra* (river birch)
4. *Ulmus americana*
(American elm)



Riparian Floodplain Community

Shrubs and Groundcovers

1. ***Lindera benzoin***
(spicebush)
2. ***Cornus amomum***
(silky dogwood)
1. ***Ilex verticillata***
(winterberry)
2. ***Viburnum dentatum***
(arrowwood)
3. ***Filipendula ulmaria***
(meadowsweet)
4. ***Clethra alnifolia***
(summersweet)
5. ***Onoclea sensibilis***
(sensitive fern)



Woodland Understory – Trees/Shrubs

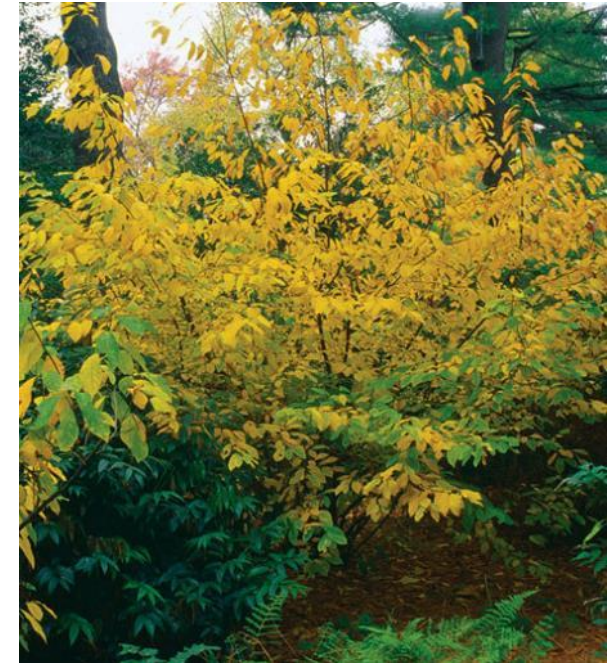
1. *Cornus florida*
(flowering dogwood)

2. *Lindera benzoin*
(spicebush)

3. *Cornus racemosa*
(gray dogwood)

4. *Viburnum dentatum*
(arrowwood)

5. *Hamamelis virginiana*
(witchhazel)



Woodland Understory - Groundcovers

1. **Carex pennsylvanica**
(Pennsylvania sedge)
2. **Tiarella cordifolia**
(foamflower)
3. **Asarum canadensis**
(Canadian wild ginger)
4. **Eurybia divaricata**
(white wood aster)
5. **Dryopteris marginalis**
(marginal woodfern)
6. **Pteridium aquilinum**
(bracken fern)



Grassland Community (Meadow)

1. Grasses and Wildflowers
2. Focus on Pollinator Insects, Songbirds, and Ground-nesting Birds
3. 3' – 4' Mature Height
4. Mowed Annually



Eastern Grassland Community: Meadow Habitat

Some of the pollinator species you may see blooming during different times of the summer include:



Asclepias tuberosa
Butterfly Milkweed



Aster prenanthoides
Zig Zag Aster



Senna hebecarpa
Wild Senna



Solidago nemoralis
Grey Goldenrod



Aster macrophyllus
Big-leaf Aster



Chamaecrista fasciculata
Partridge Pea



Solidago juncea
Early Goldenrod



Tradescantia ohiensis
Ohio Spiderwort



Monarda fistulosa
Wild Bergamot



Rudbeckia hirta
Blackeyed Susan



Verbena urticifolia
White Vervain



Zizia aurea
Golden Alexanders

Also known as a Meadow, the Grassland Community is an open, treeless plant community dominated by native, warm-season grasses. A plant community is a group (or association) of plants classified by dominant biological and physical features. It is a successional community that if left to its own would develop into a tree-dominated landscape. The Town of Arlington manages this grassland community through annual mowing. Mowing grasslands in the spring promotes nesting and overwintering habitat for certain bird species and reduces invasive weed growth.

Pollinator insects such as butterflies and native bees are attracted to the wildflowers and grasses found in our grassland. Songbirds and ground-nesting birds also benefit from the distinct food source (insects and seeds) found in grasslands. Most wildflowers require the support of the tall, bunch-type grasses to survive, such as Canada Wild Rye (*Elymus canadensis*).

Meadow and Naturalistic Play Area



Rain Garden/Bioretention Basin

Bioretention Systems:

1. Green Infrastructure Practice
2. Engineered Rain Garden (outflow device)
3. Improves Water Quality
4. Reduction in Surface Runoff and Sedimentation into Mill Brook
5. Engineered Rain Garden (outflow device)



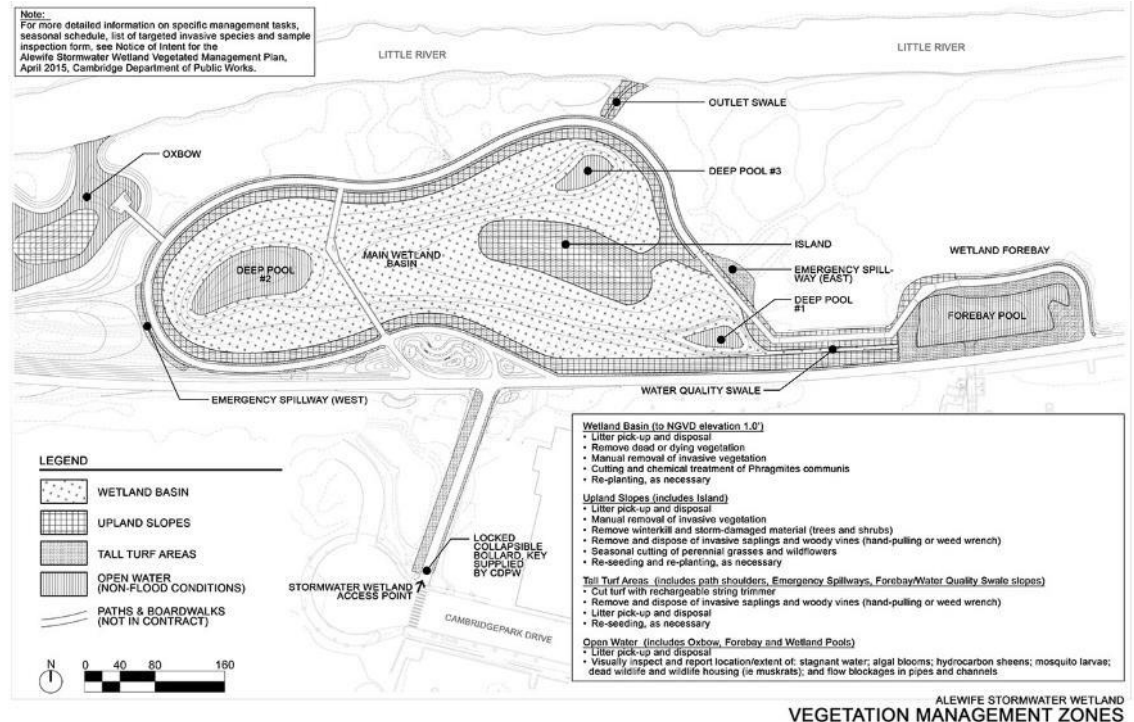
Bioretention Plant Community

1. *Juncus canadensis* (Canada rush)
2. *Panicum virgatum* (switchgrass)
3. *Schizachyrium scoparium* (little bluestem)
4. *Asclepias tuberosa* (butterfly weed)
5. *Echinacea purpurea* (purple coneflower)
6. *Rudbeckia fulgida* (black-eyed susan)



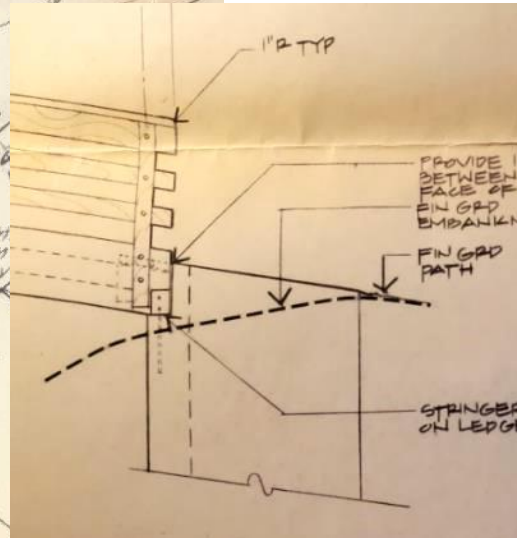
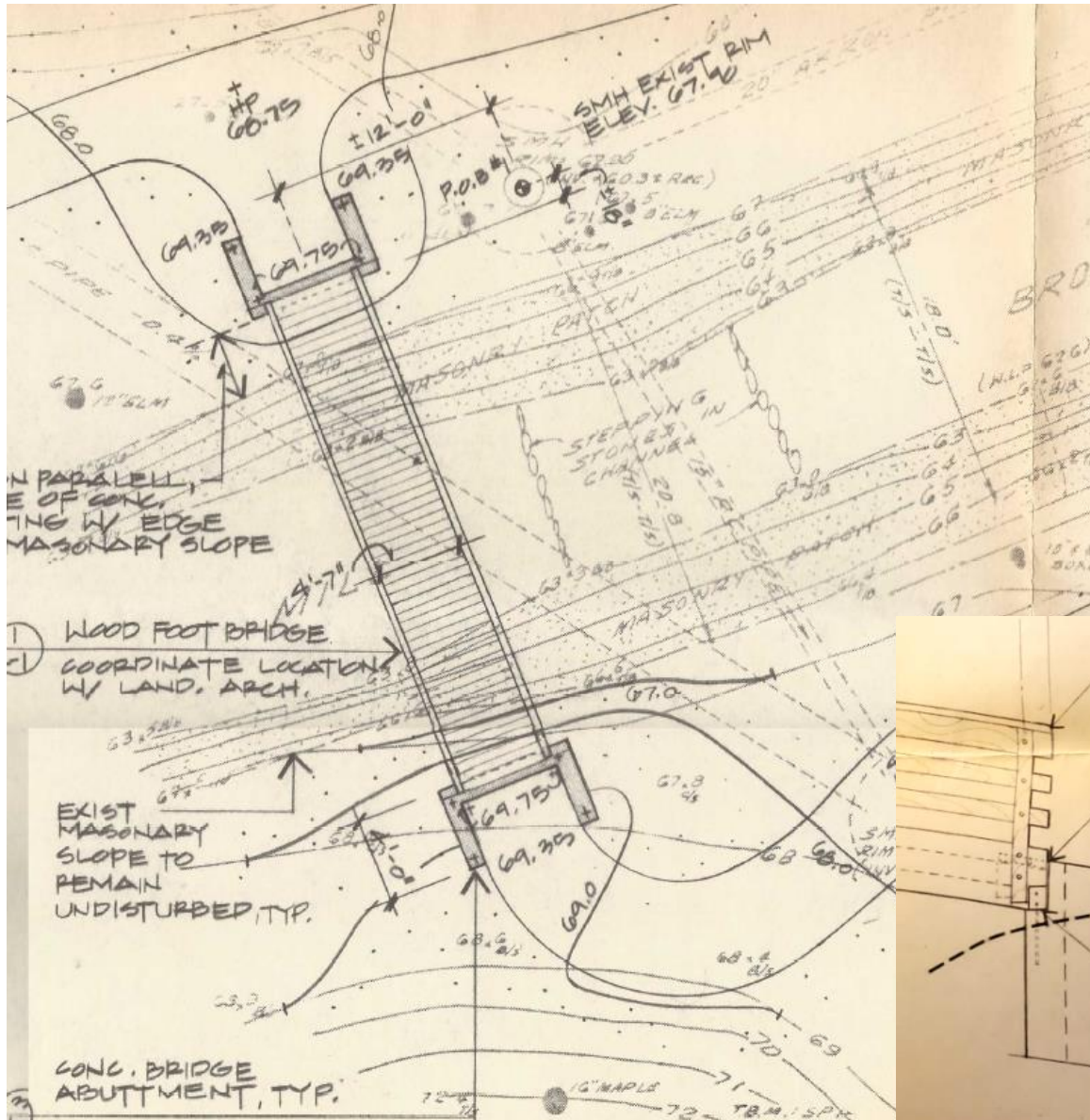
Invasive Species Management

1. Develop Vegetation Management Plan
2. Target existing Invasive Species
3. Focus on Manual and Mechanical Techniques (non-chemical)
4. Work with Volunteers, Town Recreation and Public Works for support



4. Pedestrian Bridge

Pedestrian Bridge Assessment



5. Design Concepts

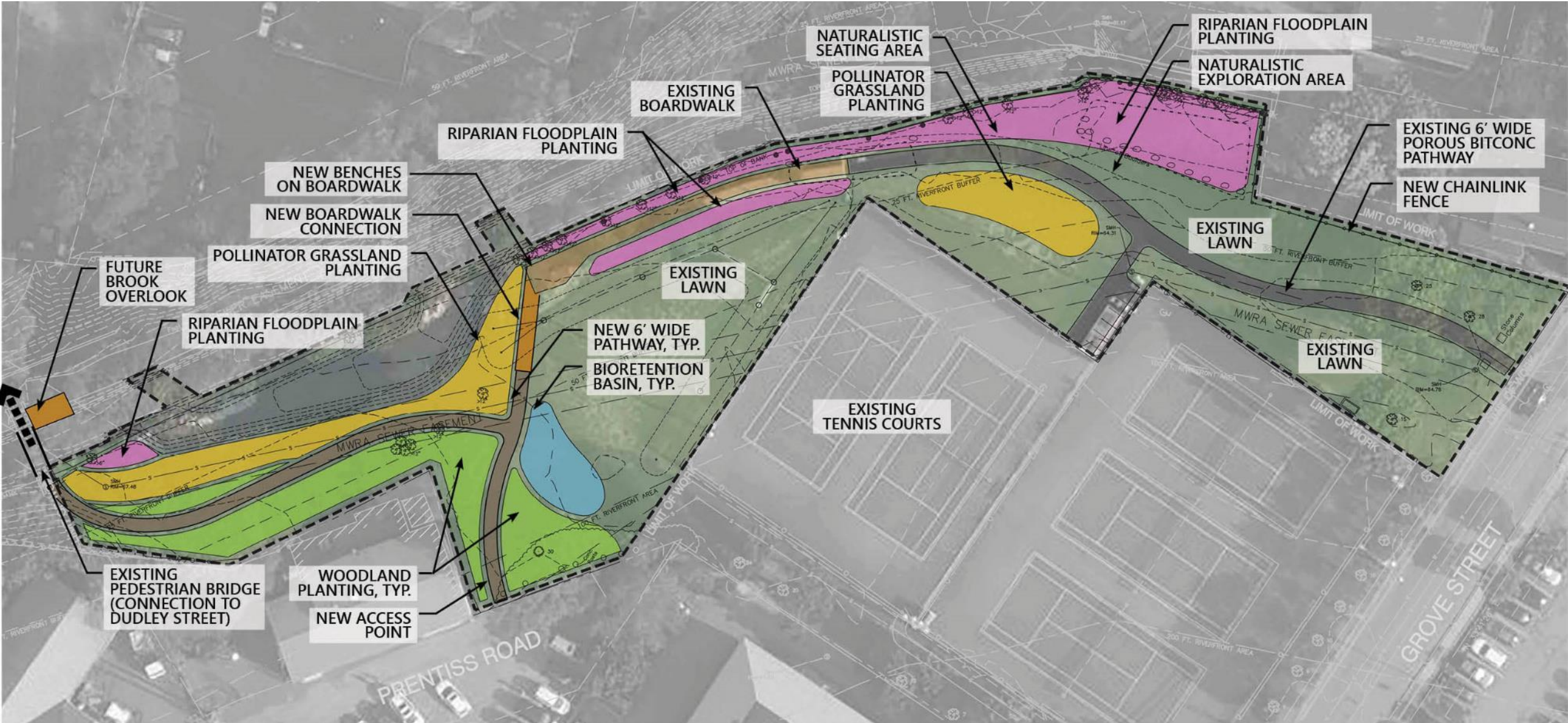
Existing Conditions



Concept A



Concept B



Next Steps

1. **May 1st Public Meeting #1 feedback deadline**
2. **Develop preferred alternative for review (early May)**
3. **Develop 75% Design drawings (May)**
4. **Notice of Intent Submission (May)**
5. **Develop 95% Design drawings (June)**

Thank You! Please Provide Feedback

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MILL BROOK AND WELLINGTON PARK

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