

An aerial photograph of the Belmont Public Library and its surroundings. The library building is a large, multi-story structure with a prominent central tower. It is surrounded by a large parking lot filled with cars. To the left of the library is a large, open field. To the right is a dense forest. A road runs along the bottom of the image, with several cars parked along the side. The text "Belmont Public Library" is overlaid in white, bold, sans-serif font, centered horizontally and partially overlapping the library building and the parking lot.

Belmont Public Library

LBC Meeting #5 February 5, 2019

Oudens Ello Architecture

An aerial photograph of a campus or industrial area, featuring a large building with a curved roof, several parking lots filled with cars, and a multi-lane road with traffic. The image is overlaid with a semi-transparent dark grey filter.

Sustainability Goals

Project Goal Setting: Exercise 2

What is unique about this location and program that could contribute to the sustainable design features of project?
What is unique about the project that could contribute to the sustainable development of the neighborhood / Town / greater Boston?

SITE DESIGN
QUALITY OF SPACE/LIGHT
ENERGY
WAST / OPERATING EFFICIENCY
NET ZERO (BOTH AT WORK)
ELEGANT LIGHT
NATURE / BROOK
LIBRARY / PUBLIC PROGRAM
STORY FOR FUNDRAISING

Net Zero / Sustainability Goals

- **Net Zero Classification**
 - Explore “Class C” or “Class D” Net Zero

NZEB:A	Renewable energy harvested within the building footprint
NZEB:B	Renewable energy harvested within the building footprint and on the site
NZEB:C	Renewable energy harvested within the building footprint, on site or by renewable sources imported to the site
NZEB:D	Renewable energy harvested within building footprint and/or on site and supplemented by purchased renewable energy certificates

Net-Zero Energy Buildings: A Classification System Based on Renewable Energy Supply Options, NREL, June 2010

Net Zero / Sustainability Goals

- **Net Zero Classification**
 - Explore "Class C" or "Class D" Net Zero
- **Demand**
 - Strive for an "all electric" building (no use of fossil fuels)
 - Implement high performance building enclosure to reduce energy loads
 - Ample daylighting to reduce reliance on electric lighting
 - Minimize water use
- **Supply**
 - On site renewable energy as a teaching tool
 - Assess viability of Photovoltaics on site. Chris Schaffner: "we can get to net-zero more quickly with solar than with geothermal"
 - Geothermal: Chris Schaffner: "expensive up front to install; not renewable; only reduces electrical load"
 - Micro-hydro? Wellington Brook as energy source.

An aerial photograph of a school campus, overlaid with a semi-transparent dark grey filter. The image shows a large, multi-story school building with a complex roofline, surrounded by numerous trees. To the left of the building is a large, paved parking lot filled with cars. A multi-lane road runs diagonally across the middle of the image, with several cars visible. In the top left corner, there is a smaller building and a curved path. The overall scene is a typical school environment.

Benchmarking Visits



Boston Public Library - Central Library's Johnson Wing



Boston Public Library - Central Library's Johnson Wing



Boston Public Library - Central Library's Johnson Wing



Boston Public Library - Central Library's Johnson Wing



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Boston Public Library - Central Library's Johnson Wing



Food at the Central Library in Copley Square

Patrons may have food in:

- Newsfeed Café (purchased onsite)
- Map Center Café (purchased onsite)
- McKim Courtyard

Kids & teens may have snacks in:

- Children's Library
- Teen Central





Boston Public Library - Central Library's Johnson Wing

Takeaways from BPL Central Library Visit

- **Flexibility**

- Movable display units on ground level to allow for special events

- **Visibility**

- Activate street with clear glass and seating areas at/near windows
- Low shelving
- Ample circulation space
- Strategically placed service desks
- Clear wayfinding & identity signage

- **Seating**

- Seating everywhere, including circulation spaces between program elements
- Generous dimensions at communal worktables to create separation between seats
- Range of seating options (highly public versus more intimate work areas)

- **Technology**

- Power / USB ports everywhere
- Electronic displays

- **Visitor Amenities**

- Cafe
- Food and drink policy
- Stroller parking in Children's space

- **Lessons Learned**

- Vinyl seating for long-term durability
- Revolving doors at entry for better heating/cooling control
- Avoid highly customized elements



Cambridge Public Library

Size

27,200 SF renovation

76,700 SF new construction

5 Floors ($\approx 15,000$ -20,000 SF per floor plate)

Completed

2009



$\approx 15,000$ -20,000 SF per floor plate



Cambridge Public Library



Cambridge Public Library



Cambridge Public Library



Cambridge Public Library



Cambridge Public Library





Cambridge Public Library

WOMEN

Olive Pierce
Photographing Cambridge
1970-1986

Renowned documentary photographer and lifelong political activist, Olive Pierce, has made the subject of her mid-century political photography during the 1970s and 1980s. She documented the political unrest, housing crisis, and social changes in Cambridge, particularly in the area of the old market, and the role of women in the community. Her work is a testament to the power of photography in social and political change.

SILENT STUDY ROOM

SILENT ROOM

For our patrons looking for quiet, this room is set aside as a silent space.

Laptops are allowed; audio of any kind is not. Please turn the ringer and alerts on your phone off.



Cambridge Public Library



AUTOMATIC
CAUTION
DOOR
Warning
ACTIVATE SWITCH
TO OPERATE

Coming Soon!!
Exciting personal
or collaborative
work pod.
Ask a librarian for
more information.





HOLDS



HOLDS



R-S

S

BABY

Red Truck Bakery

US AGAINST YOU

the stars

Casablanca

WESTWORLD

Book Club

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Movie/ Audio Editing
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and much more...
Ask the Q&A desk for more details.

Takeaways from Cambridge Public Library Visit

- **Young Adult Room**
 - Ample size
 - Separated from Children's spaces; proximity to Cambridge Rindge and Latin
 - Unique Teen identity (e.g., seating booths)
 - Food and drinks allowed
 - Movable shelving to allow for events.
- **Children's Room**
 - Children's Room on upper floor (Treehouse theme, great light and views)
 - Shelving height - too high or just right?
 - Perimeter seating nooks
 - Built-in display at Children's Circulation Desk
- **Controlled Outdoor Space**
 - Secure outdoor seating / reading space
- **Centralized staff work areas**
 - Main staff spaces in basement, "de-coupled" from program areas

An aerial photograph of a campus or industrial site, overlaid with a semi-transparent dark grey filter. The image shows a large, multi-story building with a complex roofline in the center. To the left of the building is a wide, multi-lane road with several cars parked along its side. To the right of the building is a large, paved parking lot filled with numerous cars. In the background, there are dense trees and a smaller building with a curved roof. The overall scene is a mix of built infrastructure and natural elements.

Site Design



BELMONT PUBLIC LIBRARY
BOARD MEETING, 2/5/2019

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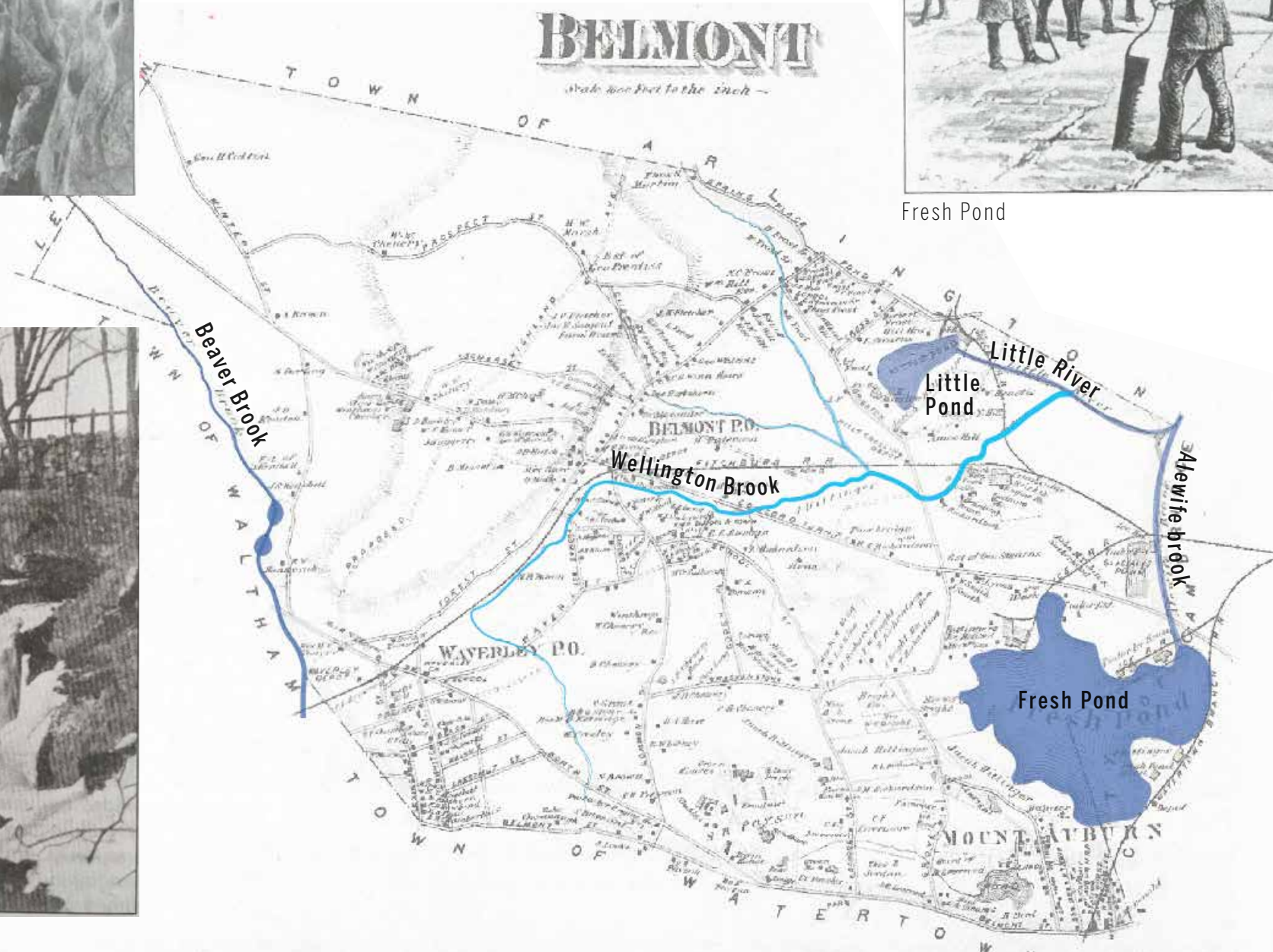
Belmont Springs



Fresh Pond



Beaver Brook



WATER STORY: Historic Waterways (Pre-1880)

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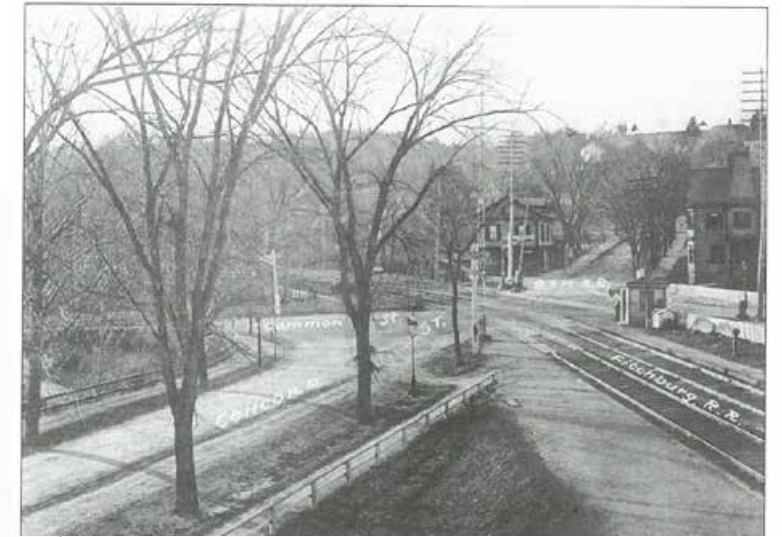
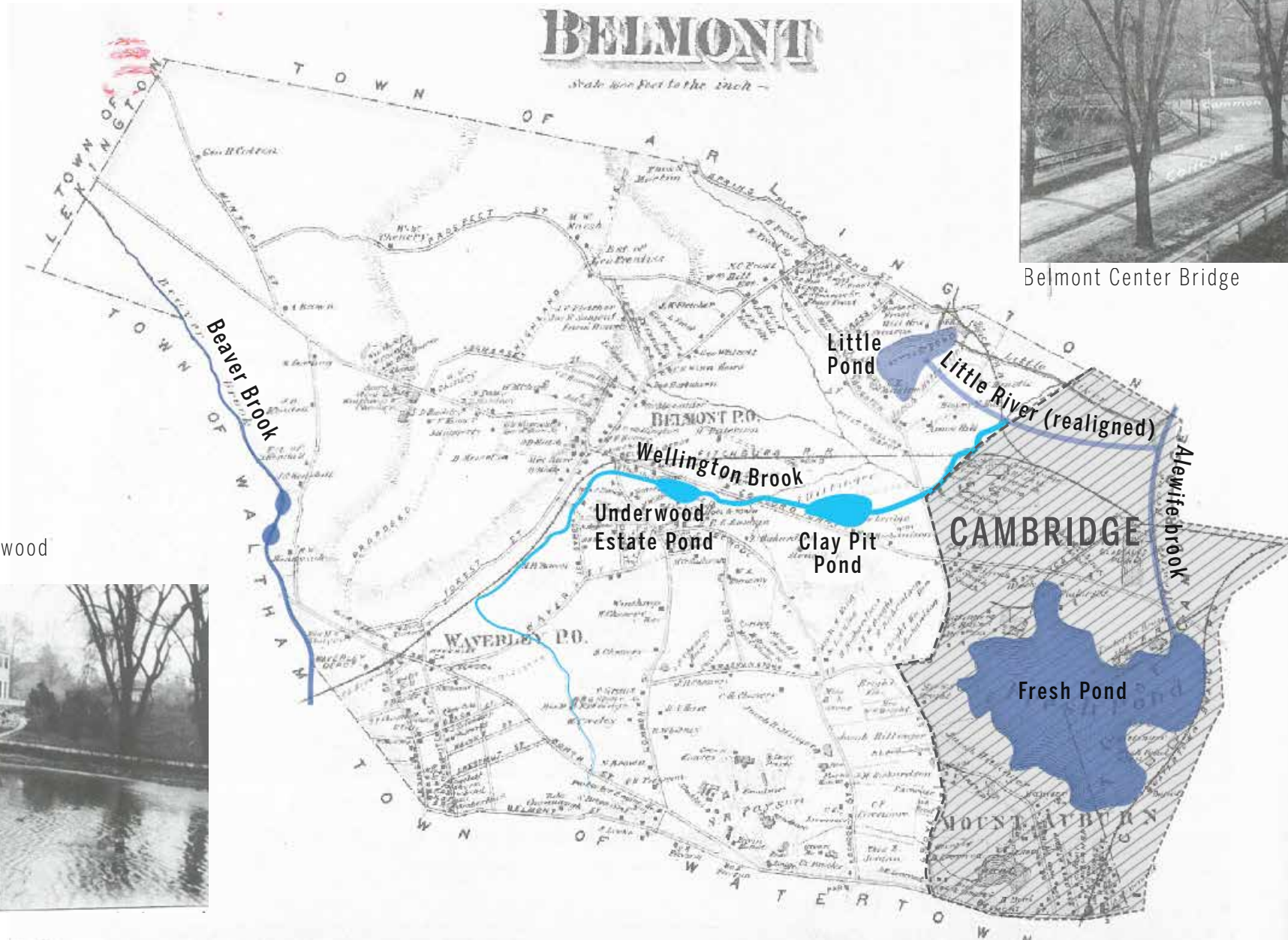
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Thomas Brown and William Underwood



Sam Meade, Underwood Estate

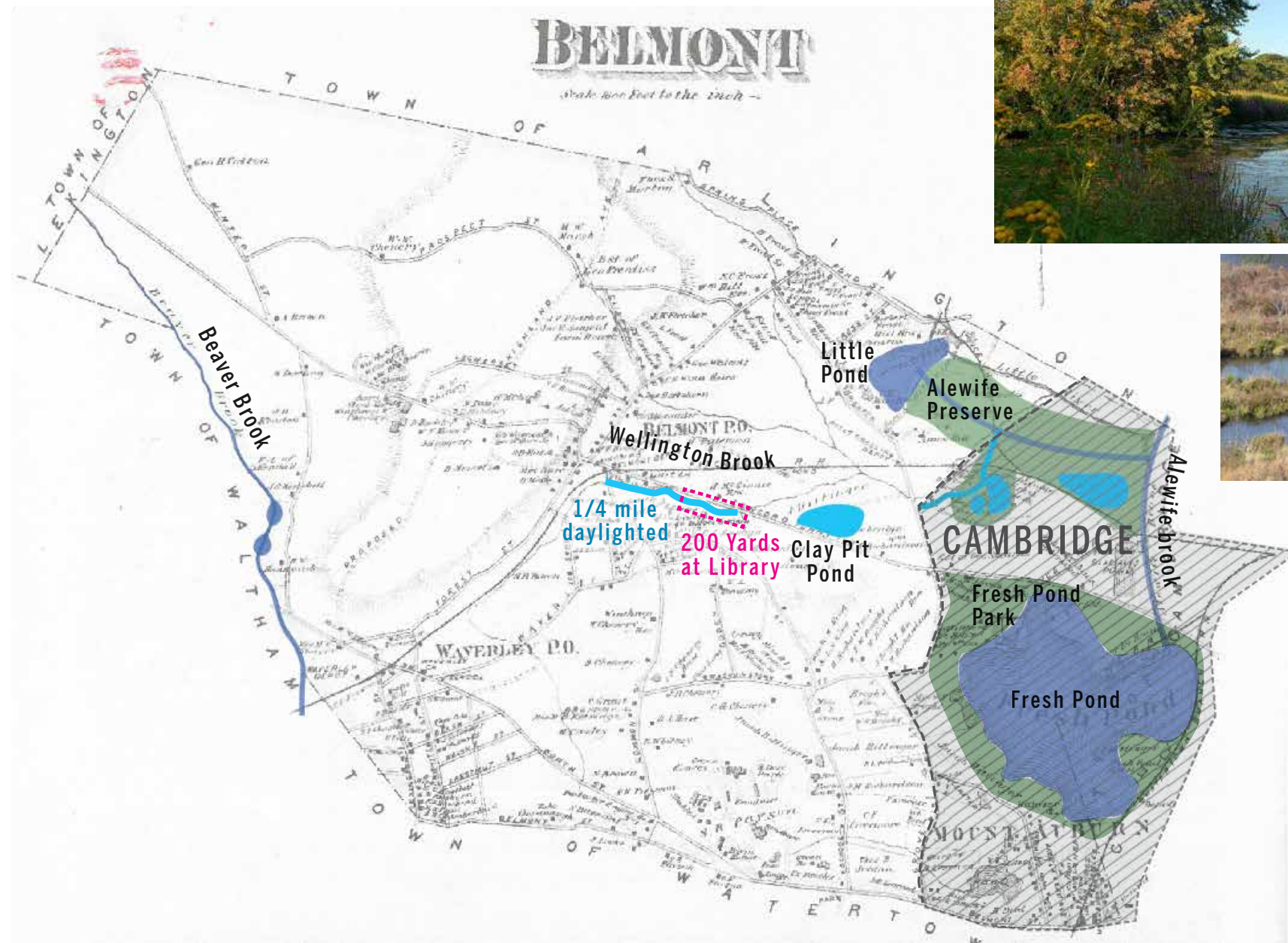


Belmont Center Bridge

WATER STORY: Developing Belmont (c. 1880)

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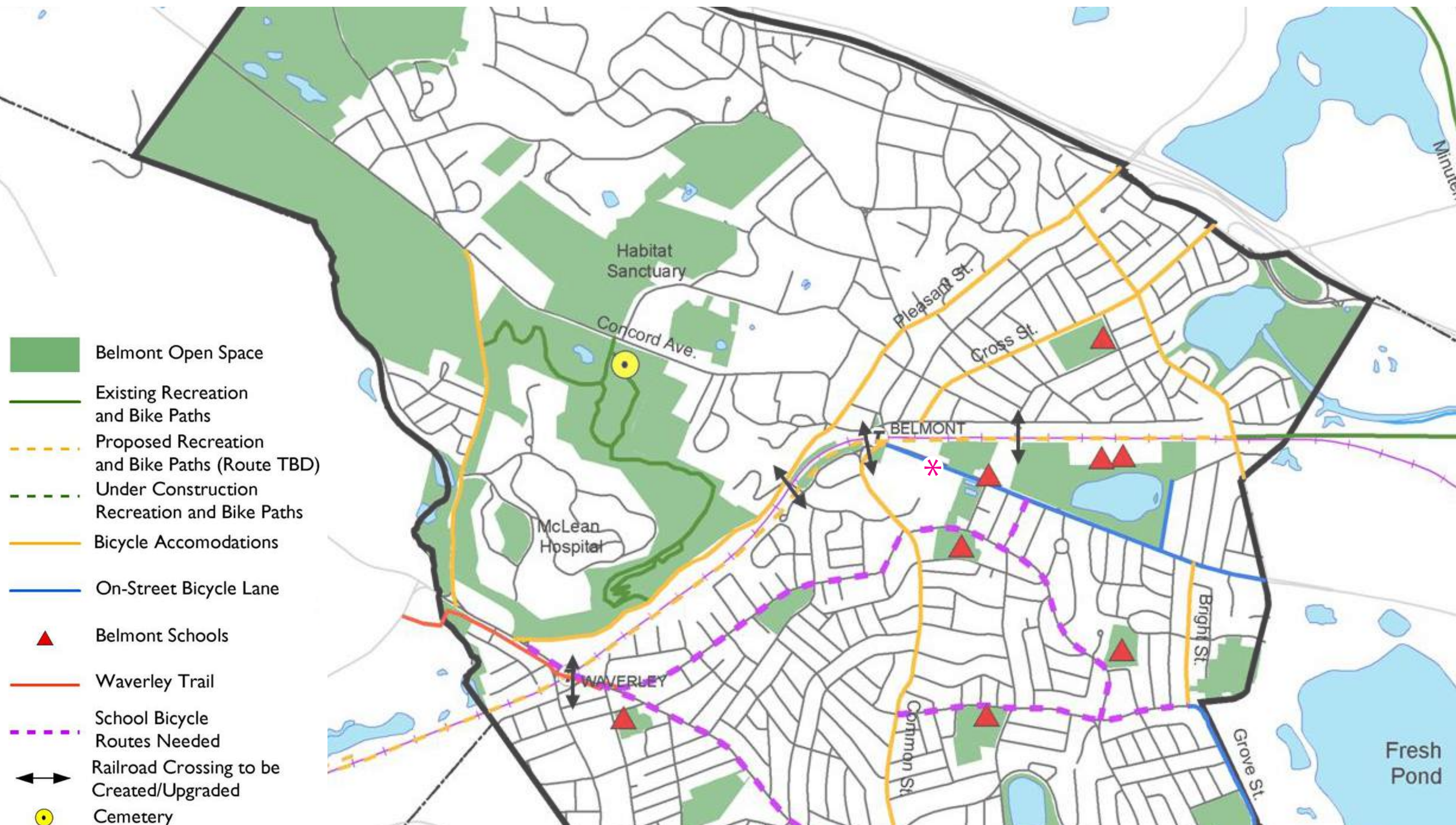
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WATER STORY: Urbanization ((after 1900))

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OPEN SPACE FRAMEWORK: Town of Belmont Comprehensive Plan (2010-2020, Larry Koff and Associates)

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UNDERSTORY

- * Belmont Public Library Site
- Greenbelt
- Greenbelt connection



OPEN SPACE FRAMEWORK: Belmont Greenbelt Plan (2010-2020, Larry Koff and Associates)

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UNDERSTORY

-  Belmont Public Library Site
-  Greenbelt
-  Greenbelt connection
-  Civic Center



OPEN SPACE FRAMEWORK: Civic Center

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UNDERSTORY

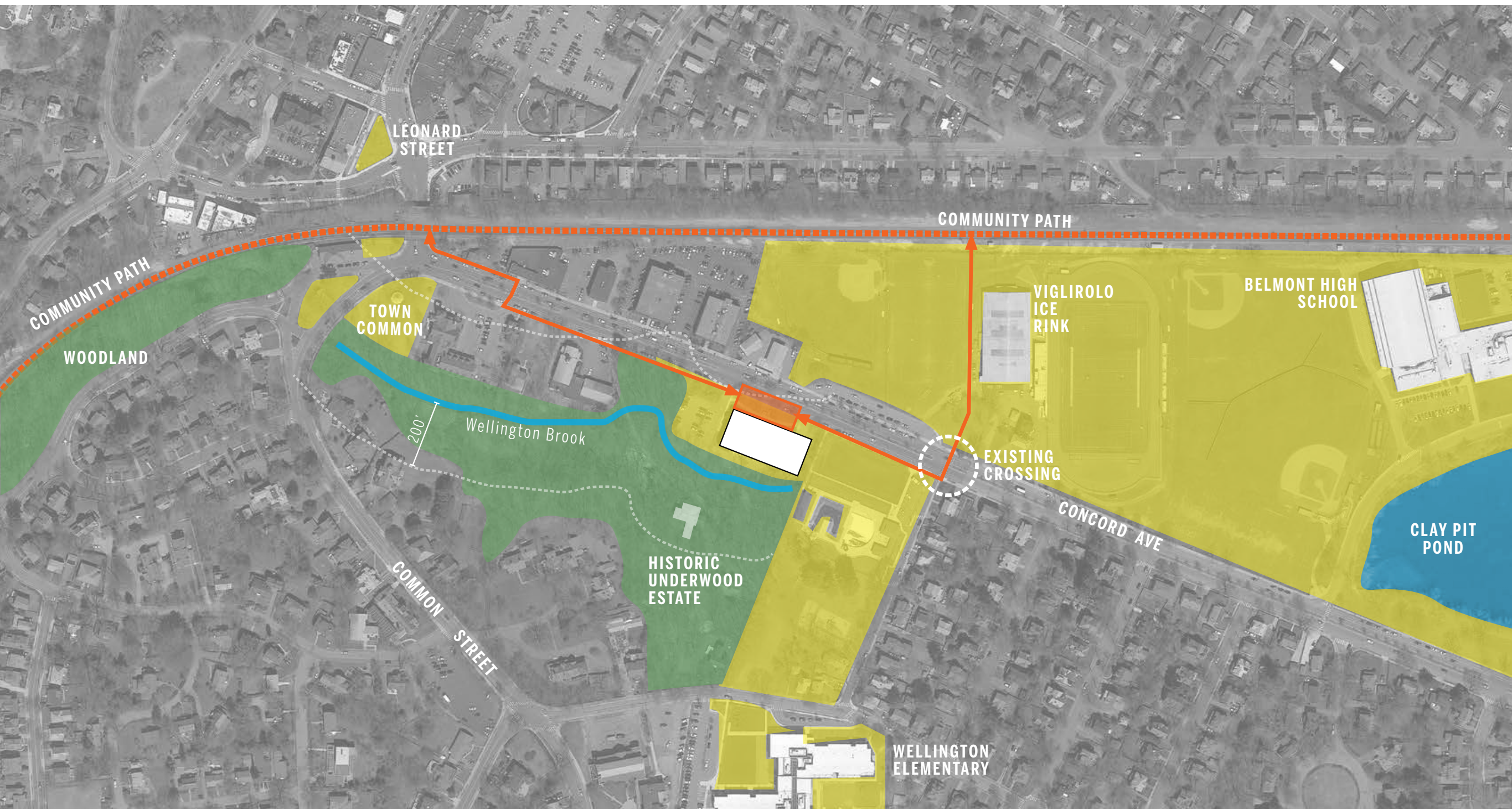
-  Belmont Public Library Site
-  Greenbelt
-  Greenbelt connection
-  Civic Center
-  Potential Connection to Belmont Community Path
-  Belmont Community Path



OPEN SPACE FRAMEWORK: Proposed Connection to Community Path

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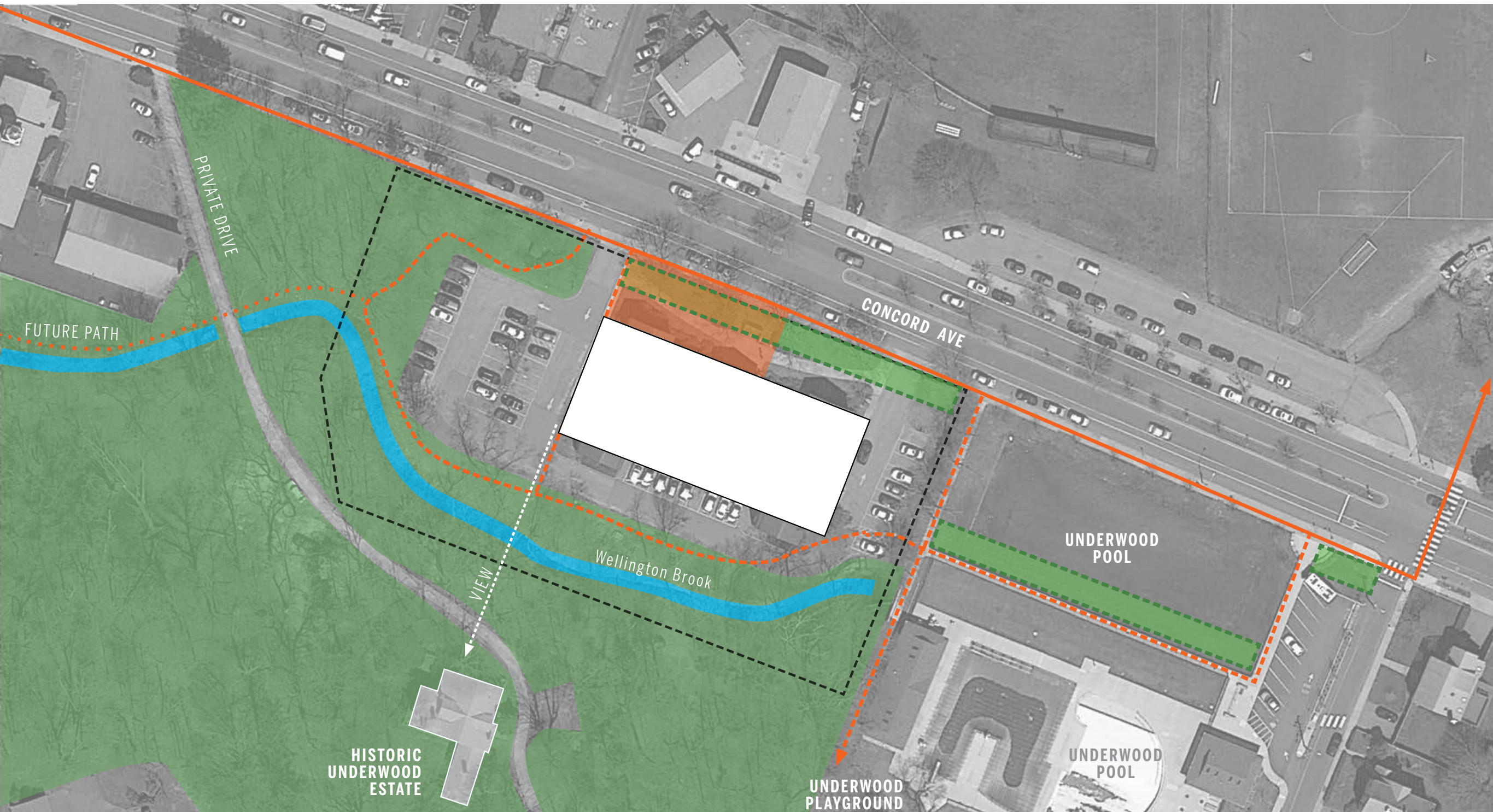
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DESIGN: Proposed Site Connections

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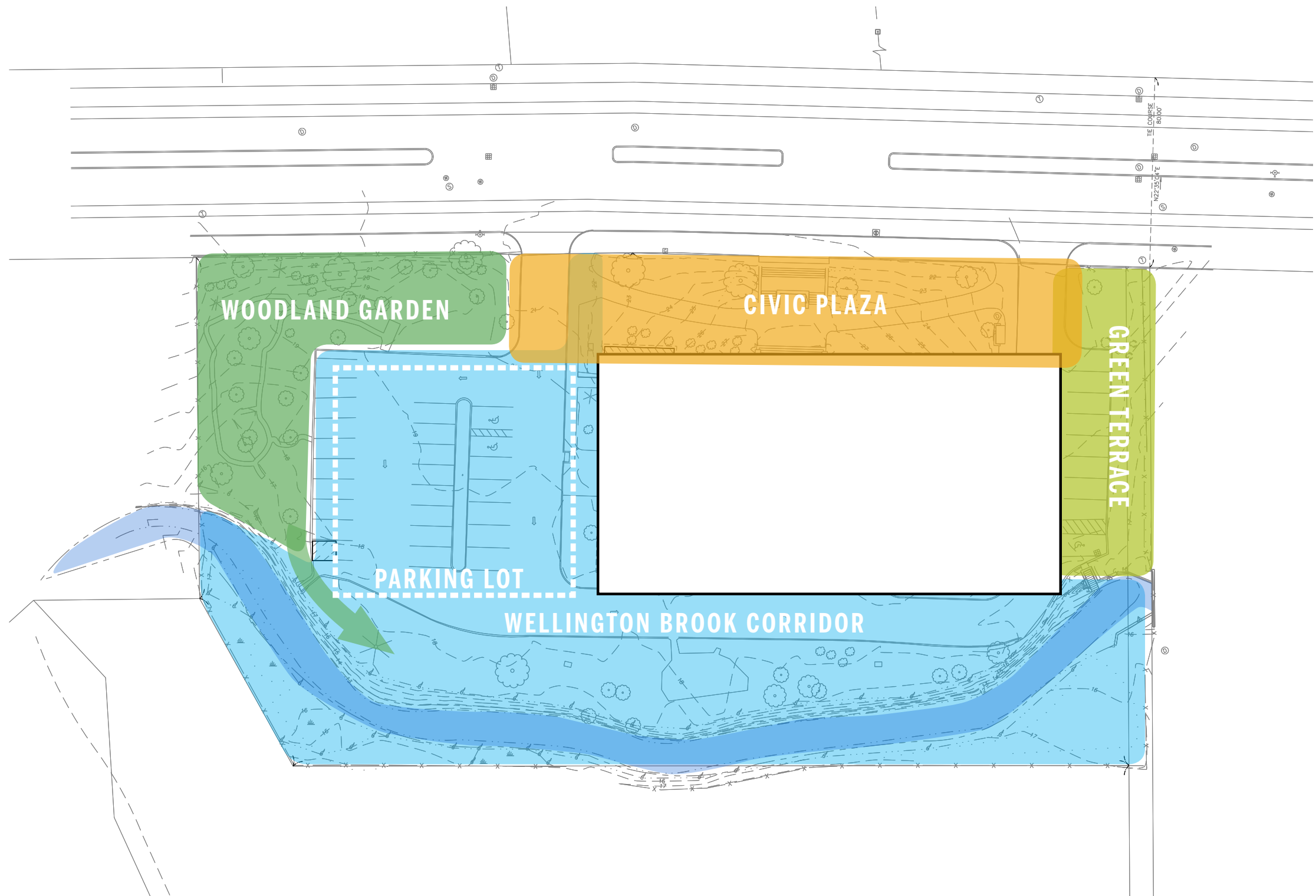
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DESIGN: Proposed Site Connections

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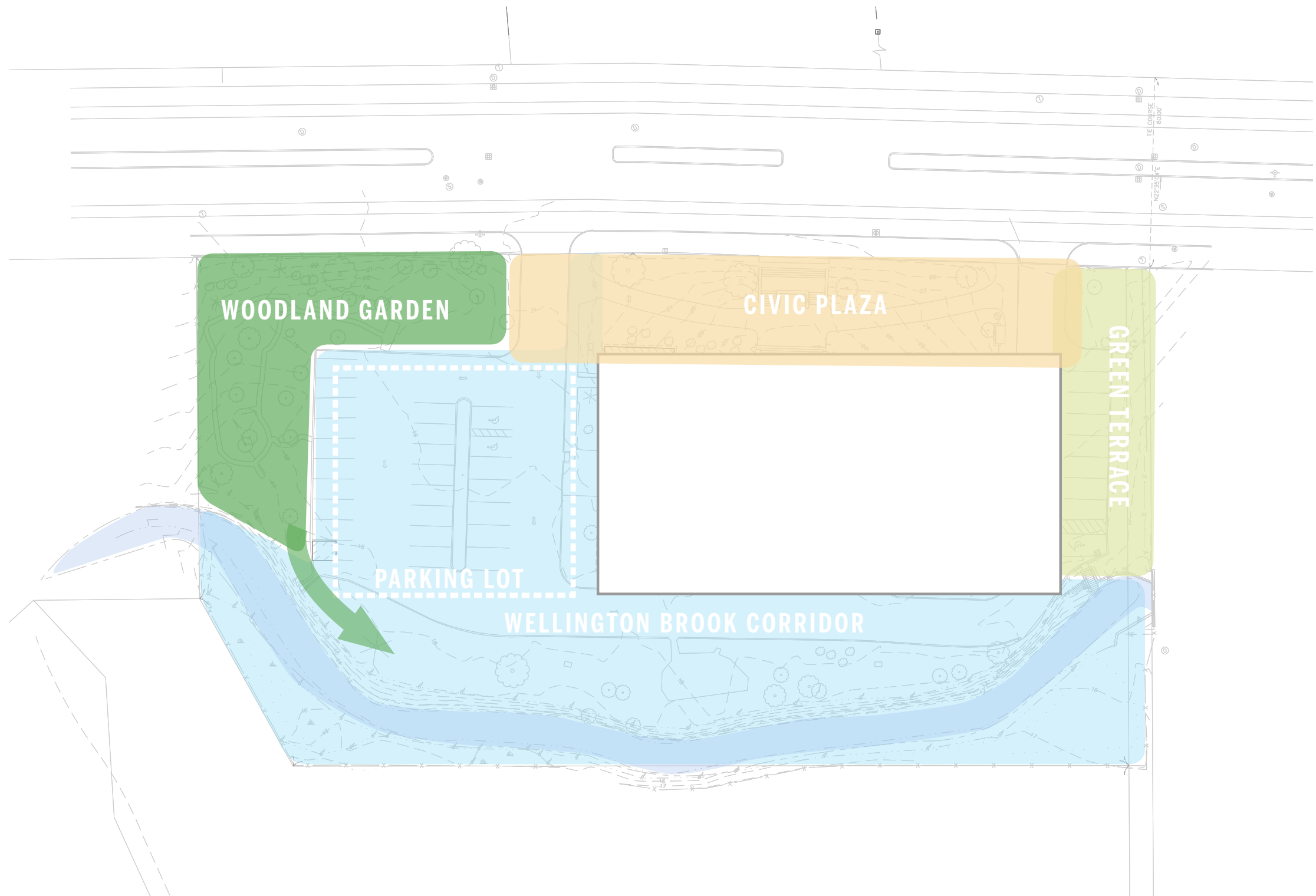
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DESIGN: Character Zones

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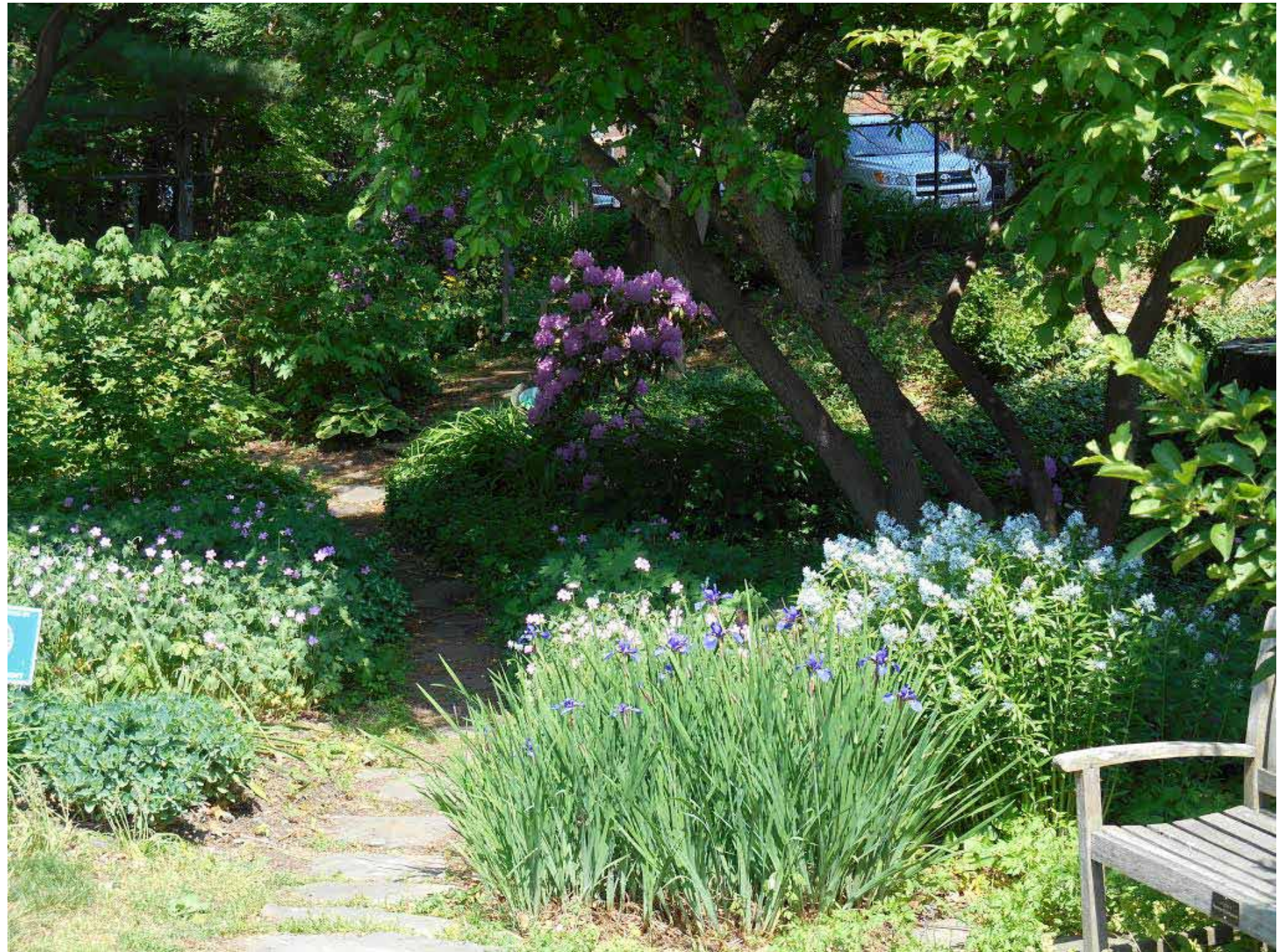
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WOODLAND GARDEN

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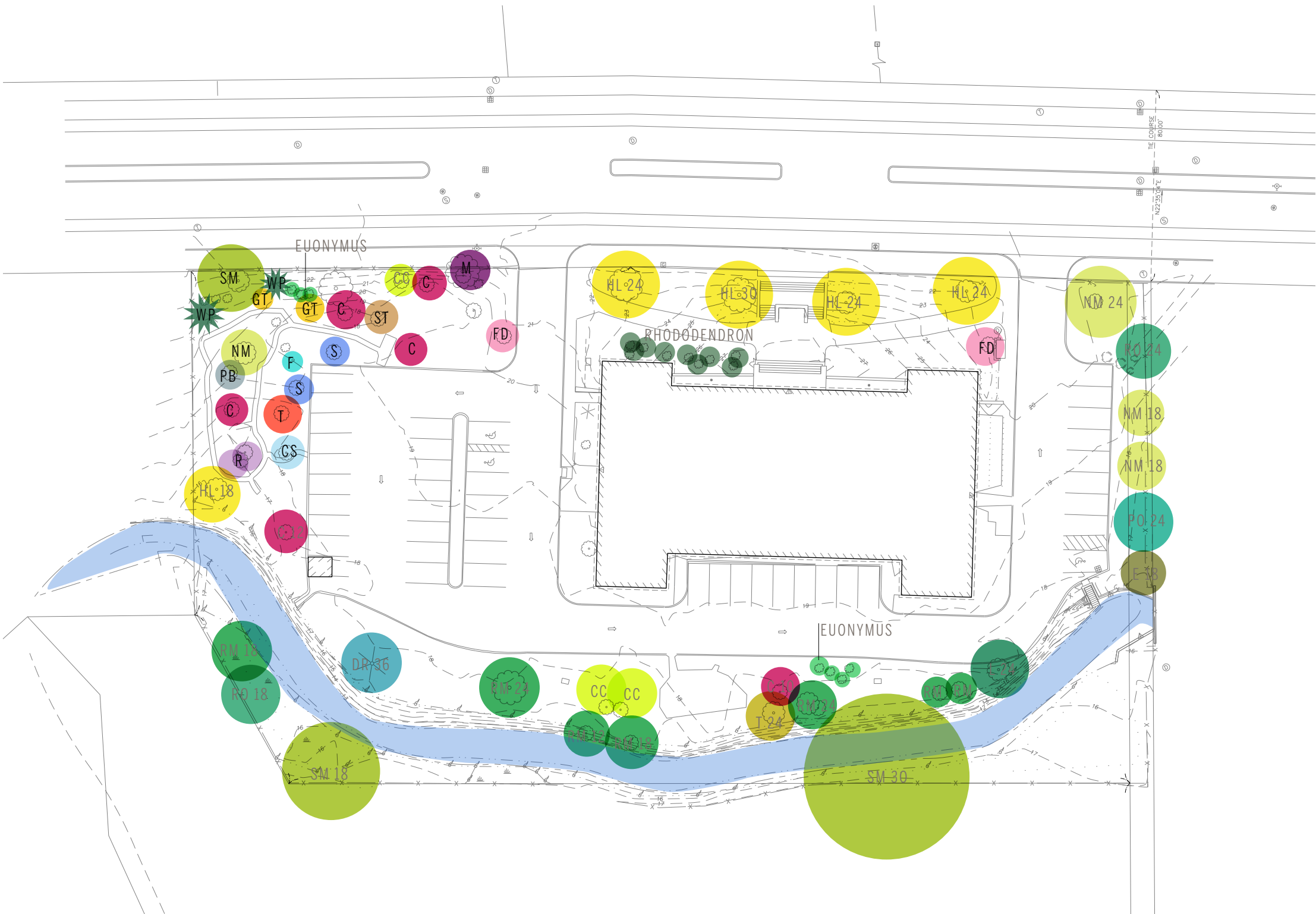
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WOODLAND GARDEN: Existing Garden

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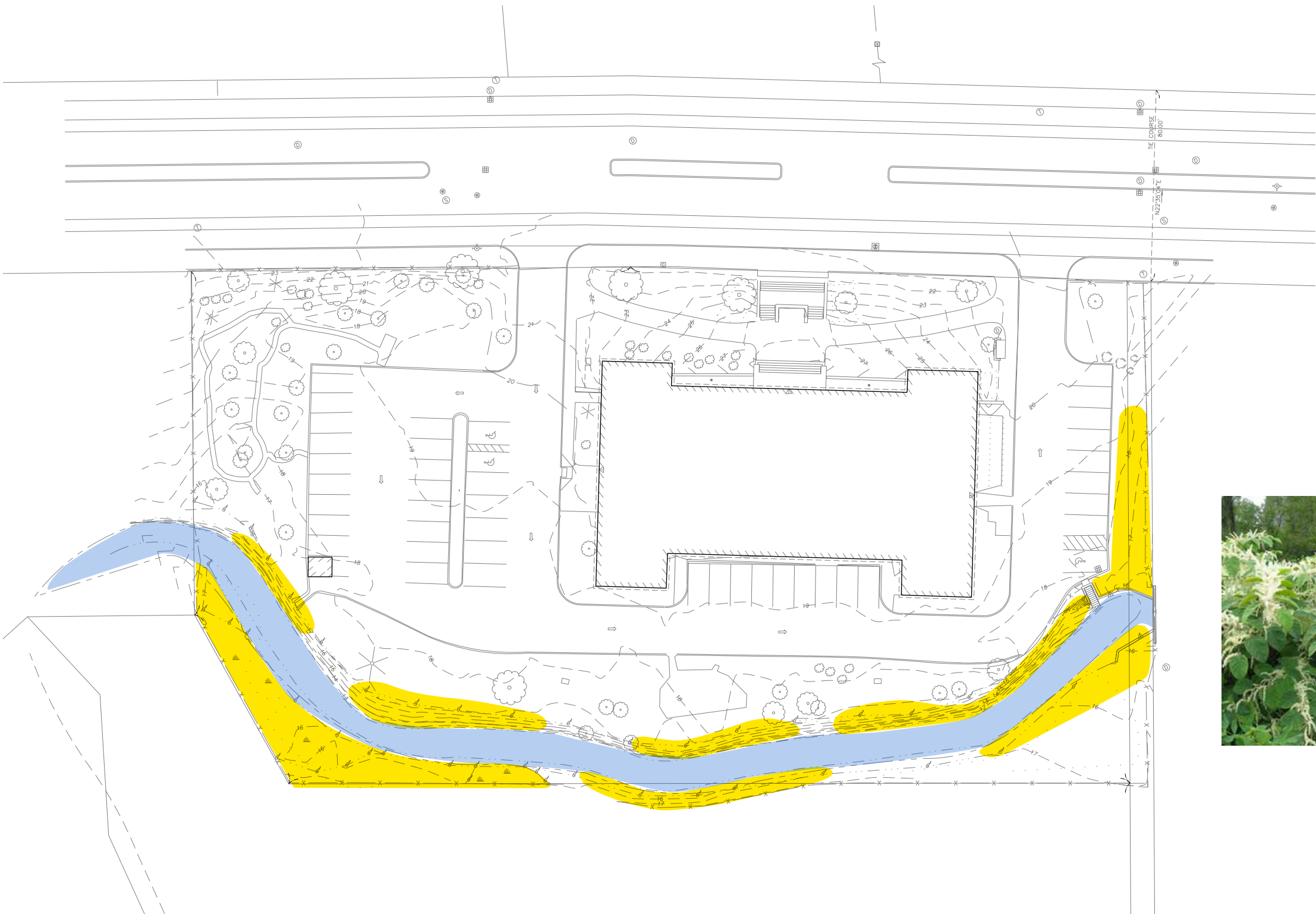
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- TREES
- C CRAB APPLE
 - RM RED MAPLE
 - DR DAWN REDWOOD
 - TT TULIP TREE
 - HL HONEY LOCUST
 - CC CORNELIAN CHERRY DOGWOOD
 - L LINDEN
 - NM NORWAY MAPLE
 - SM SUGAR MAPLE
 - FD FLOWERING DOGWOOD
 - RO RED OAK
 - PO PIN OAK
 - E ELM
 - T TUPELO
 - R REDBUD
 - GT GOLDENRAIN TREE
 - ST STEWARTIA
 - S SHAD
 - CS CAROLINA SILVERBELL
 - F FOTHERGILLA
 - PB PAPER BIRCH
 - M MULBERRY
 - ✱ WP WHITE PINE

WOODLAND GARDEN EXPANSION: Existing Canopy

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UNDERSTORY

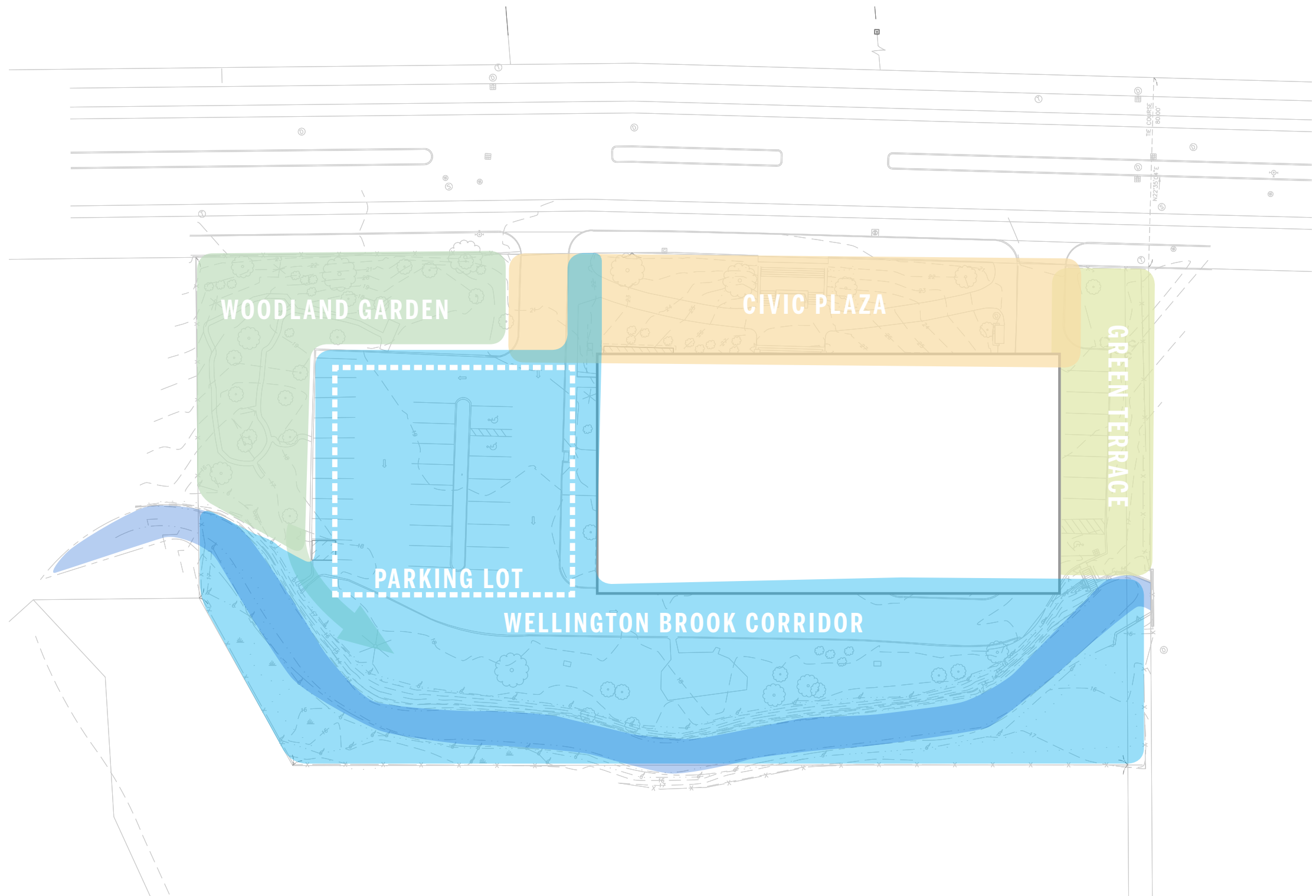
JAPANESE
KNOTWEED



WOODLAND GARDEN EXPANSION: Existing Understo-

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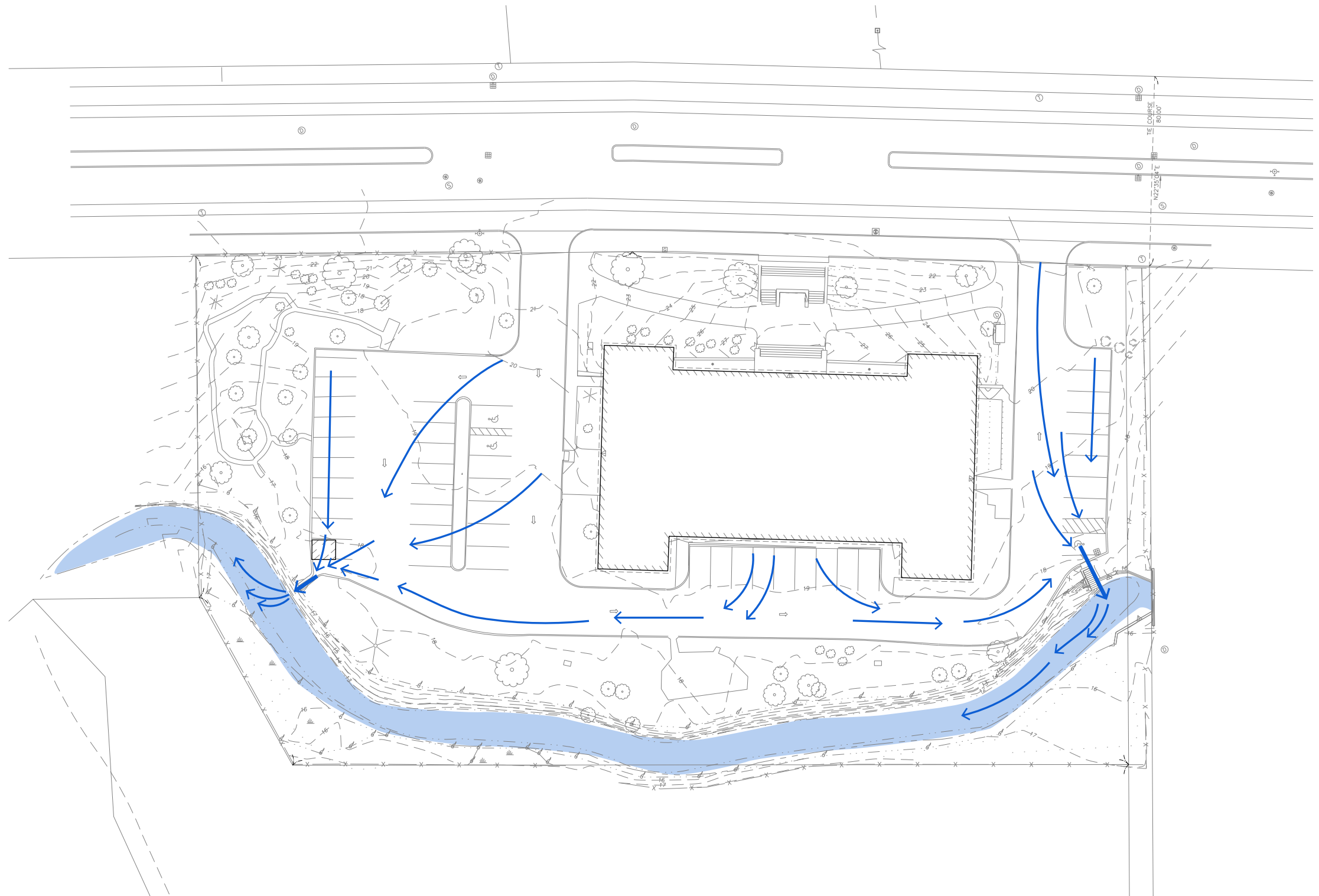
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WELLINGTON BROOK CORRIDOR

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WELLINGTON BROOK CORRIDOR: Existing Site Drainage

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WELLINGTON BROOK CORRIDOR: Existing Conditions

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WELLINGTON BROOK CORRIDOR: Existing Conditions

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WELLINGTON BROOK CORRIDOR: Existing Conditions

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WELLINGTON BROOK CORRIDOR: Proposed Drainage System

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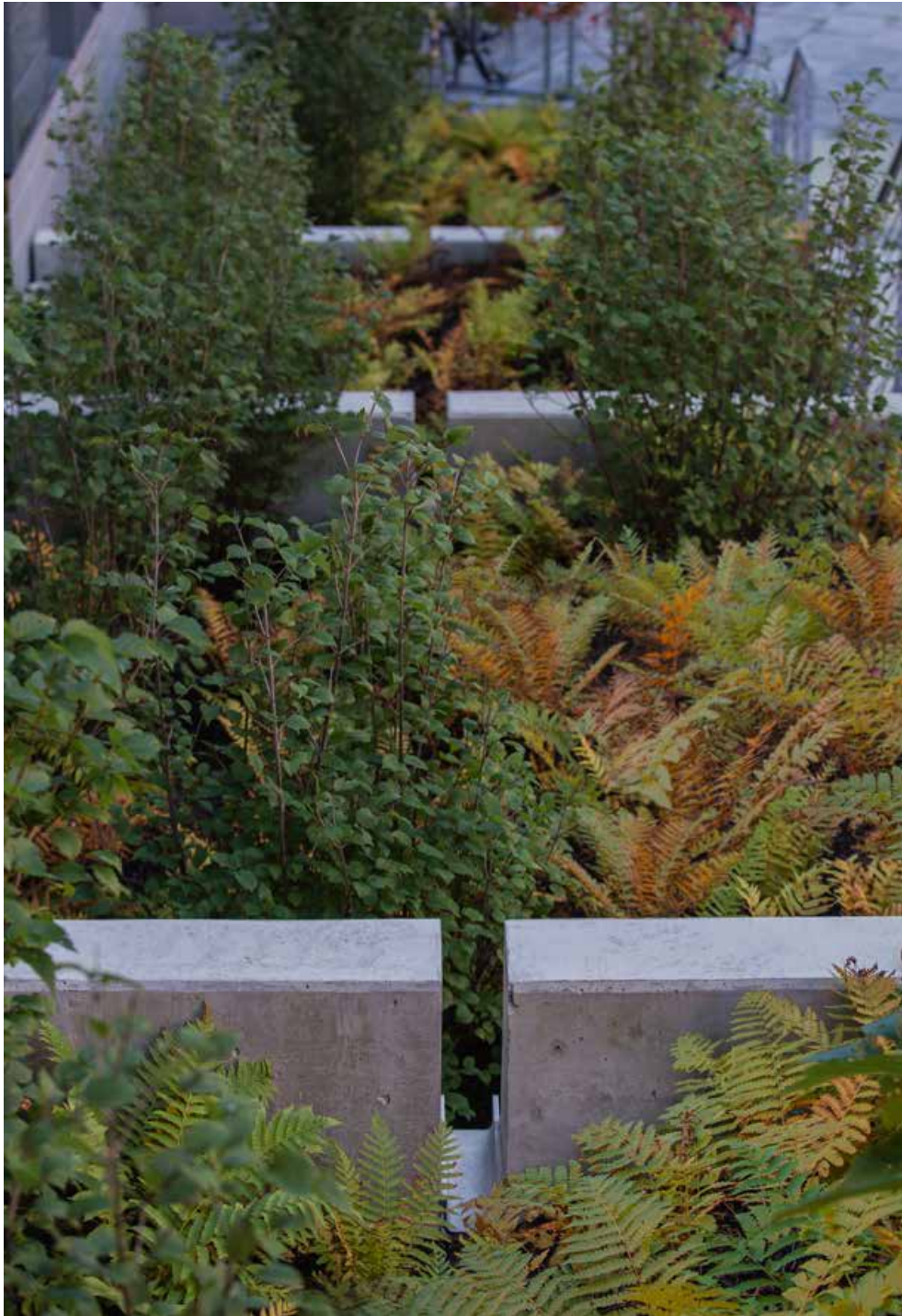
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WELLINGTON BROOK CORRIDOR: Visitor Engagement

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WELLINGTON BROOK CORRIDOR: Precedents

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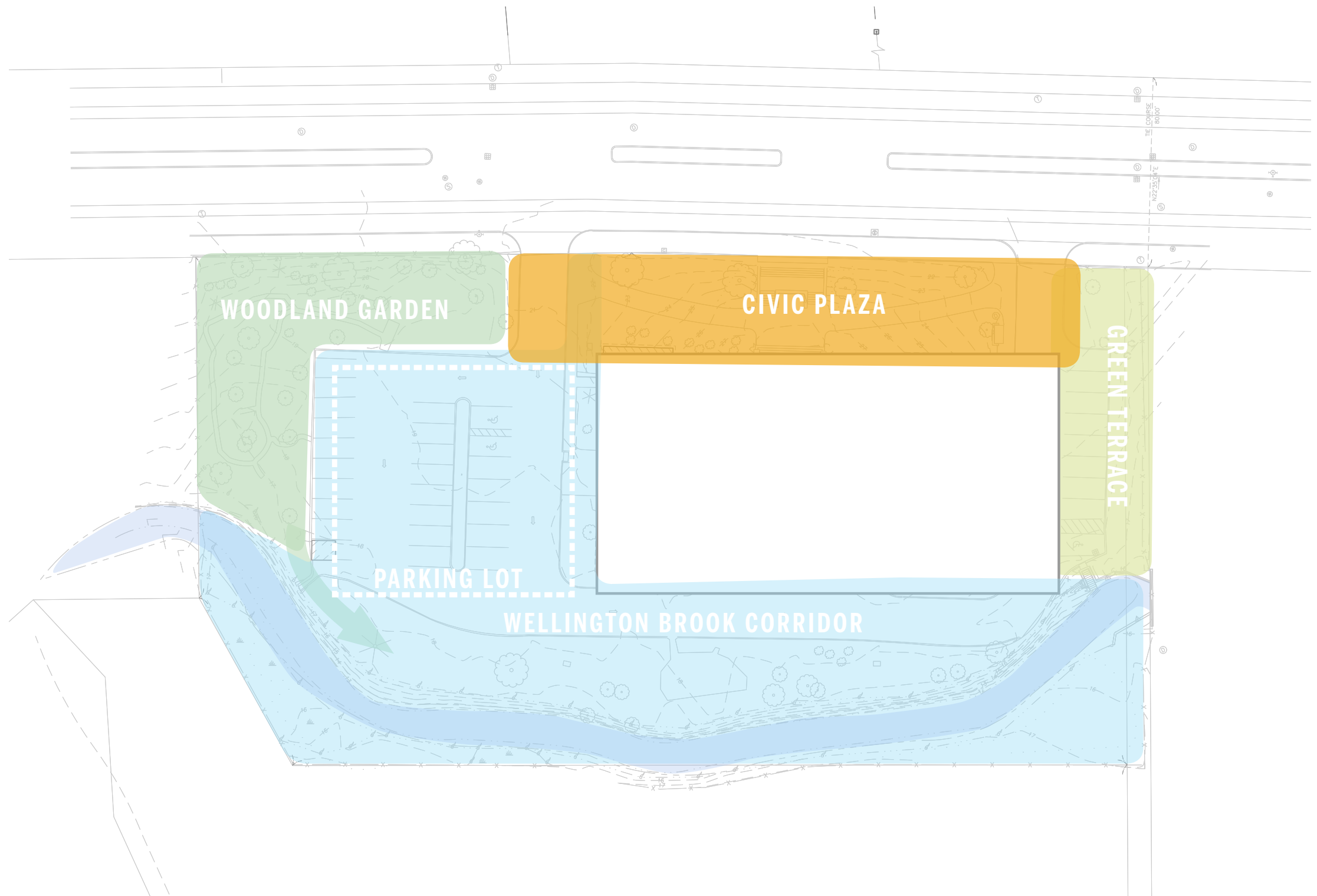
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WELLINGTON BROOK CORRIDOR: Precedents

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CIVIC PLAZA

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CIVIC PLAZA: precedents

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CIVIC PLAZA: precedents

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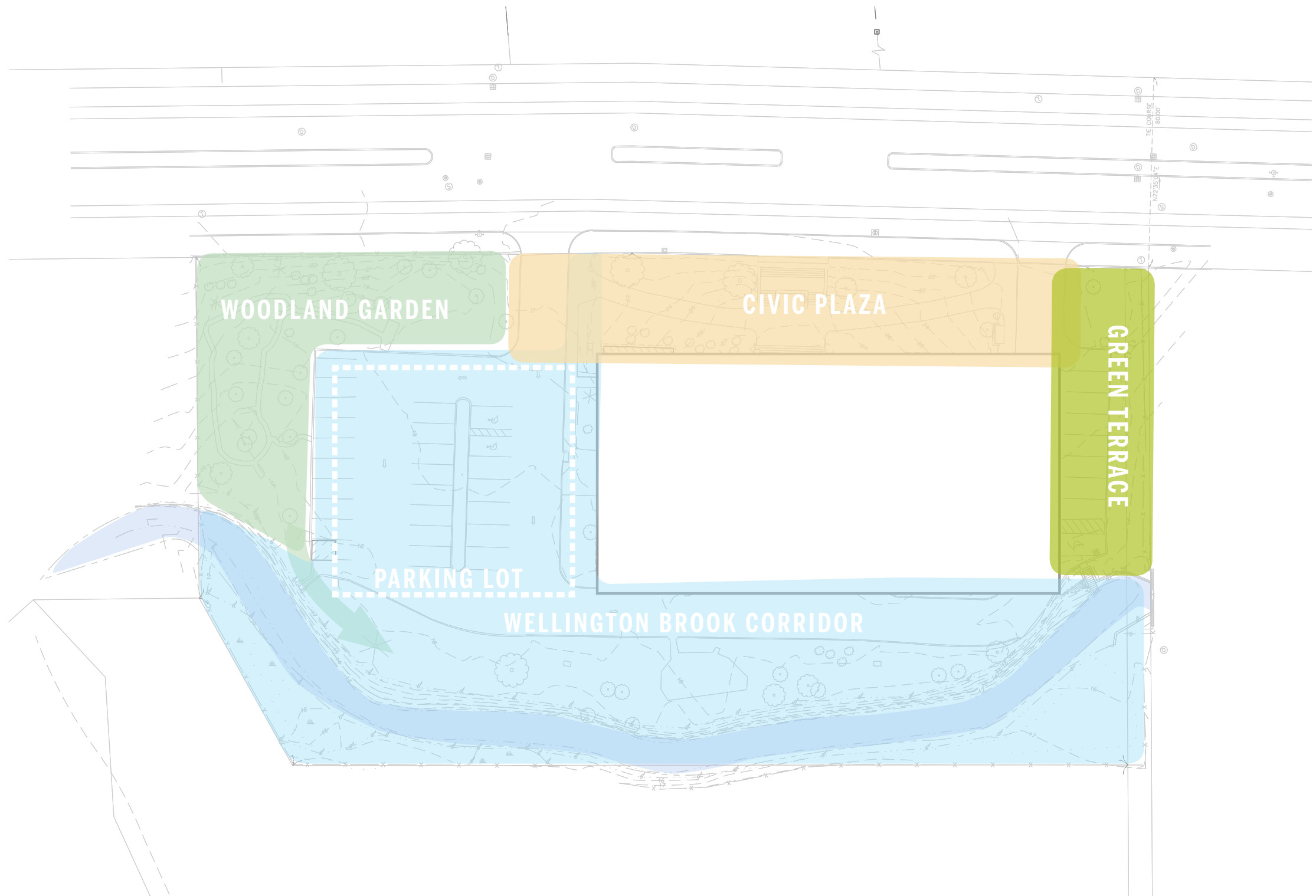
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CIVIC PLAZA: precedents

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GREEN TERRACE

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GREEN TERRACE: Adjacency

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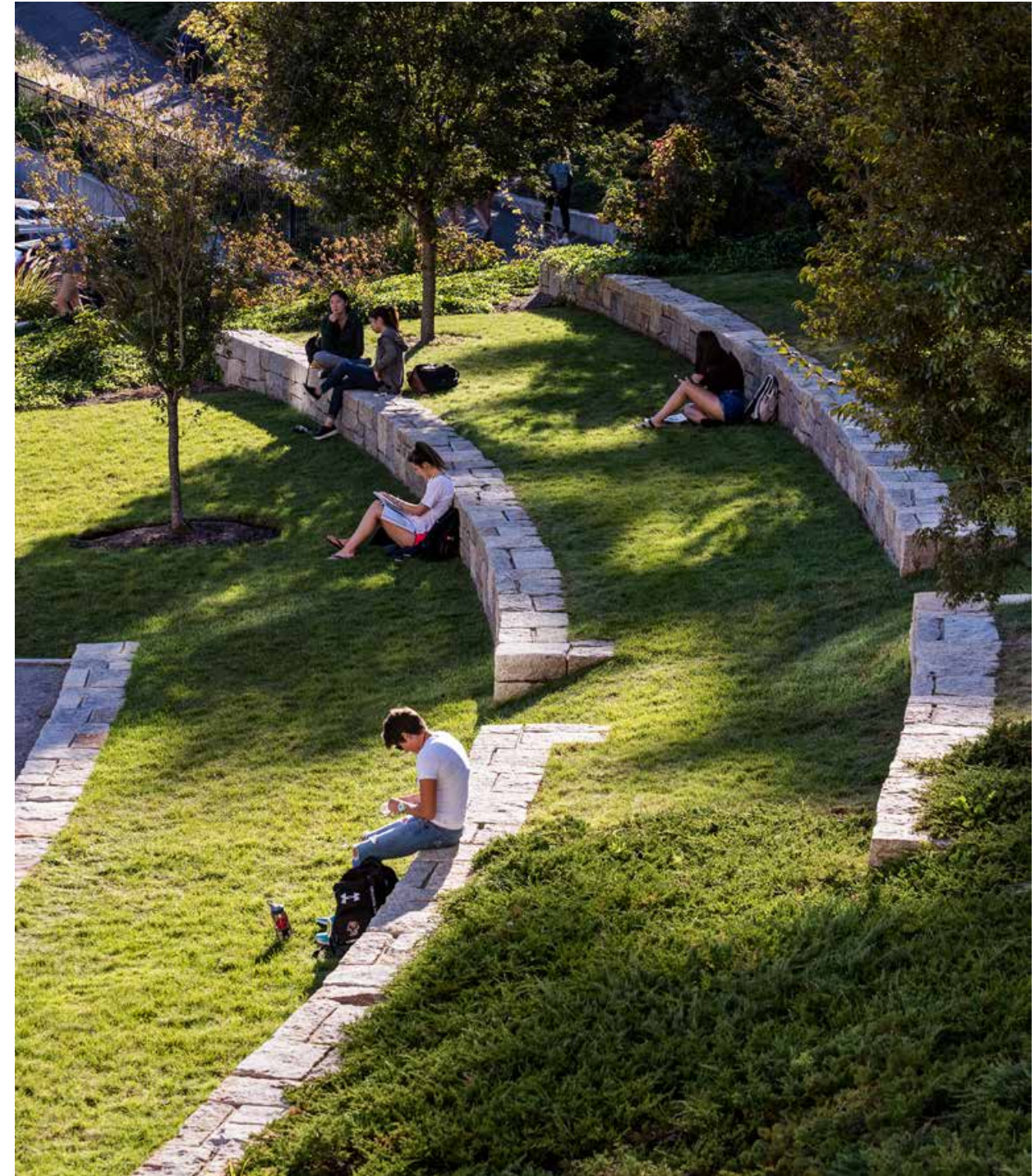
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GREEN TERRACE: Adjacency

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GREEN TERRACE: Precedents

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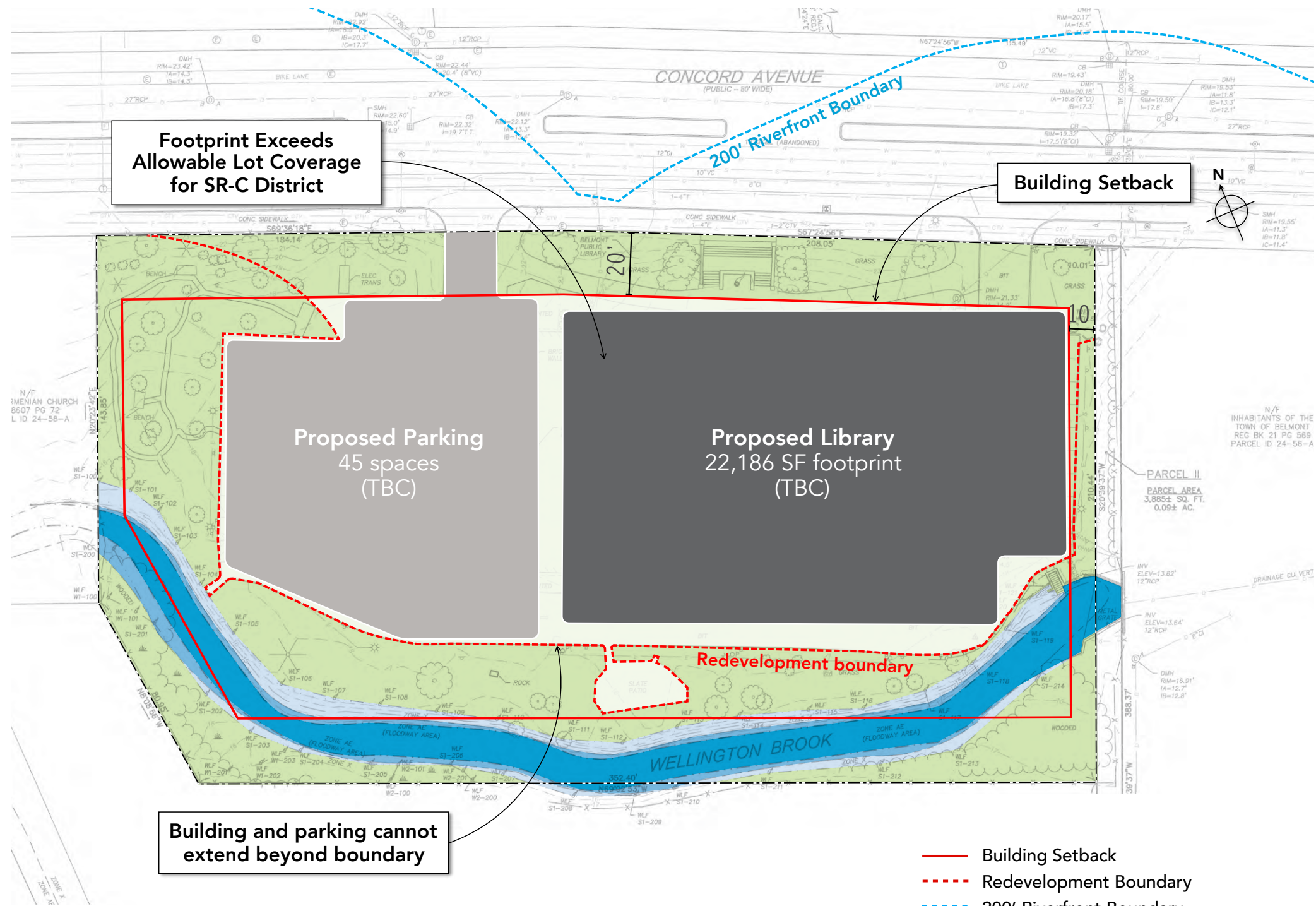
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GREEN TERRACE: Precedents

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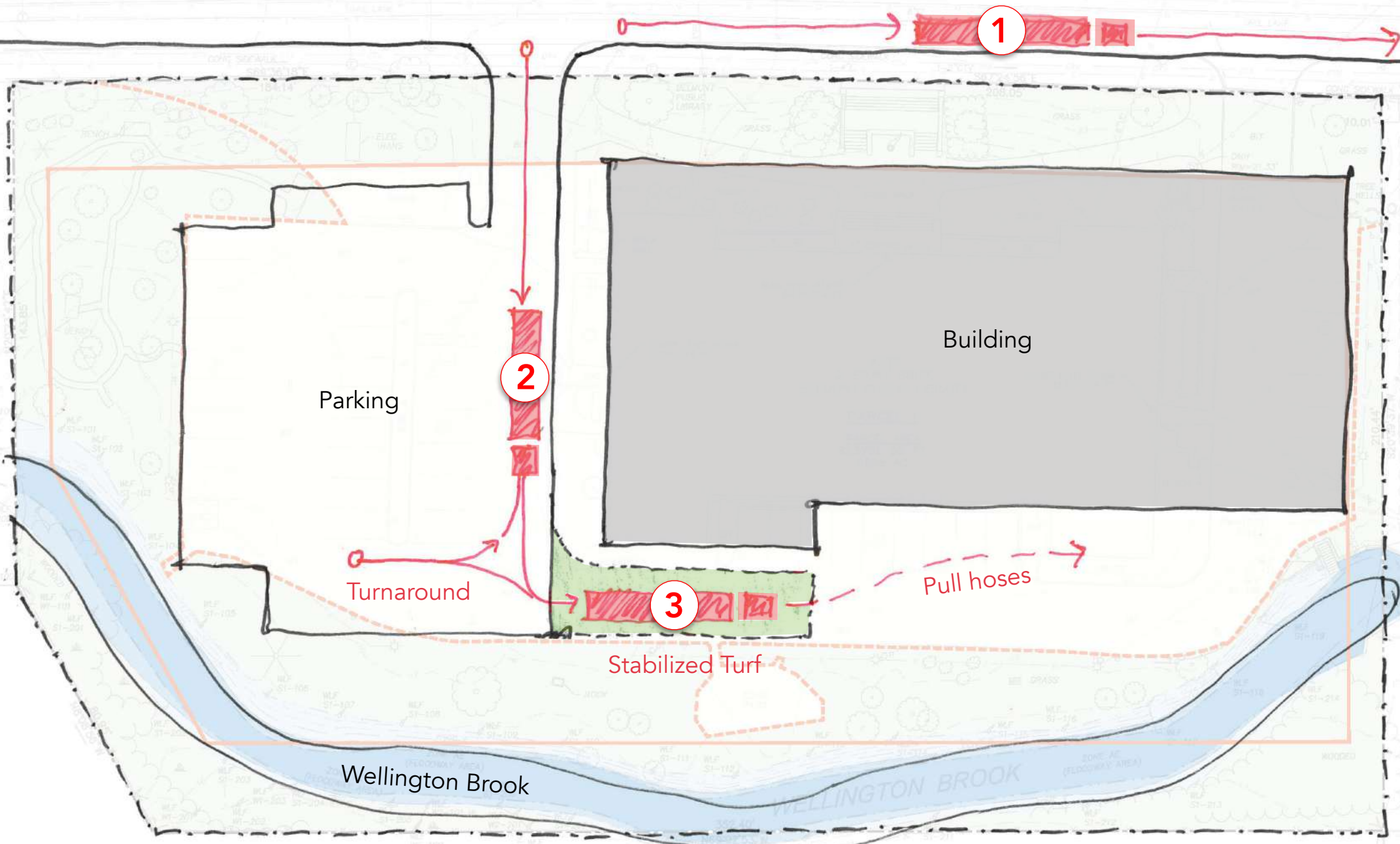


SITE CONSTRAINTS: Buildable Area

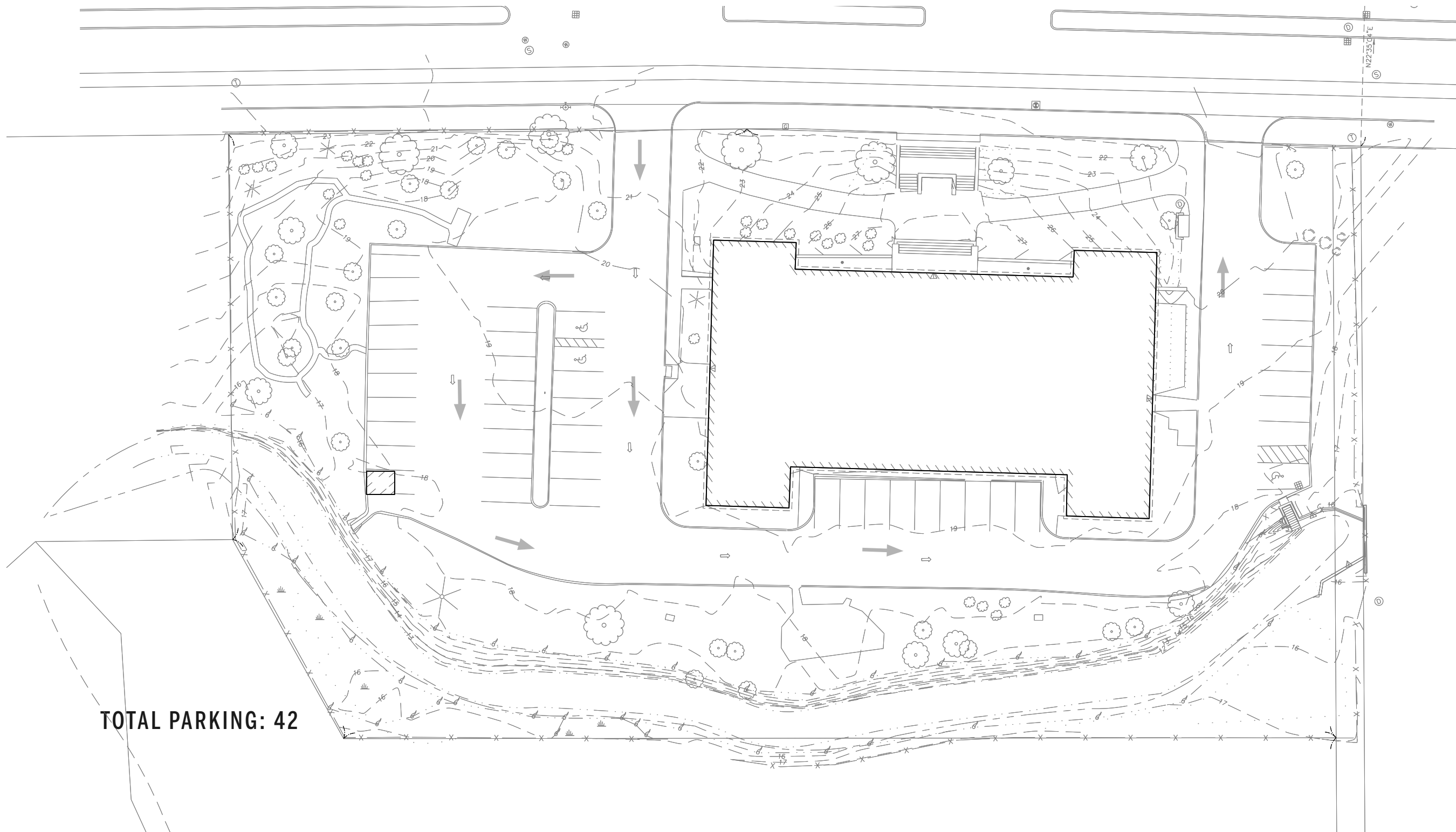
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Concord Avenue



Fire Vehicle Access



TOTAL PARKING: 42

PARKING LOT STUDY: Existing

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PARKING LOT STUDY: Option A

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3-STORY LIBRARY
≈ 17,250 Footprint Area

TOTAL PARKING: 47

PARKING LOT STUDY: Option B

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Oudens Ello Architecture