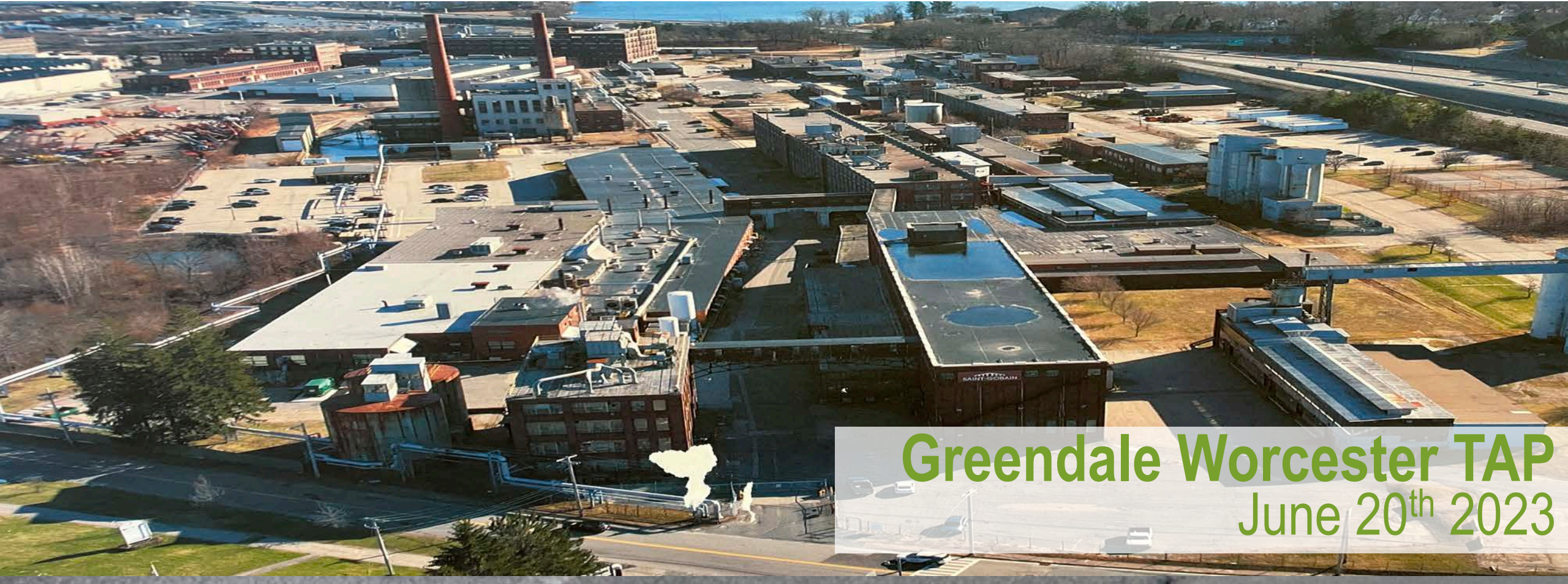




Urban Land Institute **Boston/New England**



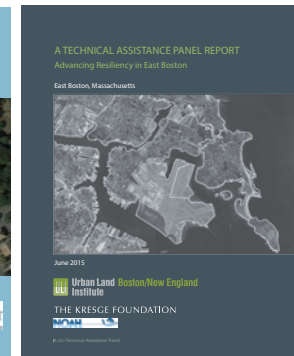
Greendale Worcester TAP
June 20th 2023

About ULI – the Urban Land Institute

The Urban Land Institute is a global, member-driven organization comprising nearly 45,000 real estate and urban development professionals dedicated to advancing the Institute’s mission of shaping the future of the built environment for transformative impact in communities worldwide.

ULI at the local level

Boston/New England District Council covers nearly all of New England with over 1,300 Members—developers, architects, planners, public officials, financiers, students, etc.



Technical Assistance Panels (TAPs)

ULI Boston/New England is committed to supporting communities in making sound land use decisions and creating better places. A TAP brings together ULI members with a range of professional expertise to provide focused, collaborative consultation to a local government or qualifying non-profit organization.

TAP Impact on Communities:

- **82%** said their behavior and approach to **Municipal Planning and Economic Development Strategies** was affected
- **67%** said there were **increased municipal investments** related to the stated goals and recommendations of their TAP report.
- **62%** said at least **one key developable asset addressed in their TAP report had been redeveloped consistent with ULI Boston/New England recommendations**

Final Deliverable – Written report (10 - 12 weeks) will be available at <http://boston.uli.org>

PANEL SPONSOR:



The Panel

Chair

Jim Heffernan, RichMay PC

Panelists

- **Ed Starzec**, Charter Development
- **David Dixon**, Stantec
- **John Giovannone**, Whiting Turner Contr. Co.
- **Caroline Shannon**, Gensler
- **Neal Carey**, GeoEngineers
- **Mike D'Angelo**, MDLA
- **Amelia Casey**, ARUP
- **Tim Lescalleet**, INDUS Realty Trust
- **Derek Masionis**, VHB

ULI Staff

- **Tim Moore**, Manager
ULI Boston New England

TAP Writer

- **Mike Hoban**



Study Area – Greendale Revitalization Area



Study Area – Greendale Revitalization Area





Panel Assignment: Address These Questions

Key Questions – Land Use and Zoning

- **Land Use and Zoning** – Based on information about the area, including but not limited to the existing physical conditions and land uses, what is the highest and best use for the area?
 - Review existing building and zoning regulations for the area
 - Identify deficiencies in available activities and uses
 - Identify potential changes in existing zoning to accommodate the highest and best uses for the area

Key Questions – Transportation and Infrastructure

- What are the necessary infrastructure modifications including but not limited to parking, traffic flow, pedestrian access, and connections to the St. Gobain campus that must be implemented to assist with the overall vitality of the area. What are other infrastructure needs that must be addressed to ensure future development is successfully incorporated into the overall community and provide the greatest level of sustainability.
 - Review access connections to and within the study area
 - Identify barriers and deterrents to connectivity
 - Identify potential infrastructure concerns
 - Identify creative solutions to floodplain issues including sustainable practices for infill development
 - Identify public realm improvements, including but not limited to sidewalks, lighting, street modifications, open space and sustainable development applications for redevelopment that can be implemented into the St. Gobain project.

Key Questions – Market Feasibility

- Considering the land use and current market conditions, what is the vision for the existing Higgins Industrial Park and the newly acquired 51 acres, with focus on the potential for advanced manufacturing, green technology and clean technology?
 - Conduct an economic impact analysis that can evaluate the potential economic value of the proposed land uses, including job creation, tax revenues, and other indirect benefits for the community
 - Review existing uses throughout the corridor and identify gaps in service and/or use and how it relates to the larger Worcester community
 - Identify opportunities and constraints for the area, based on economics of the land use

The Process

Briefing Meeting

Panelists received briefing information from the city regarding the study area including zoning, past studies, current conditions, etc.

Site Visit

Panelists toured the St Gobain campus including New Bond Street, West Boylston, and C Street.

Stakeholder Interviews

The panelists interviewed community members, business owners, and public officials to better understand the needs of the district and the community.



What did we see?





Existing Pedestrian Circulation



Key Mobility Challenges

- High conflict with passenger vehicles, commercial vehicles, and school buses
- Disconnected and unprotected sidewalk network (disruption from curb cuts)
- Lack of directional/informational wayfinding signage and streetscape amenities (lighting, seating, greenery)
- Sidewalks in poor conditions

Existing Conditions – School Bus Circulation

Key Mobility Challenges

- Informal routes lead to congestion on New Bond Street and BOH internal network
- School buses conflicting with personal vehicles and pedestrians
- No formalized drop-off/pick-up zones and associated signage



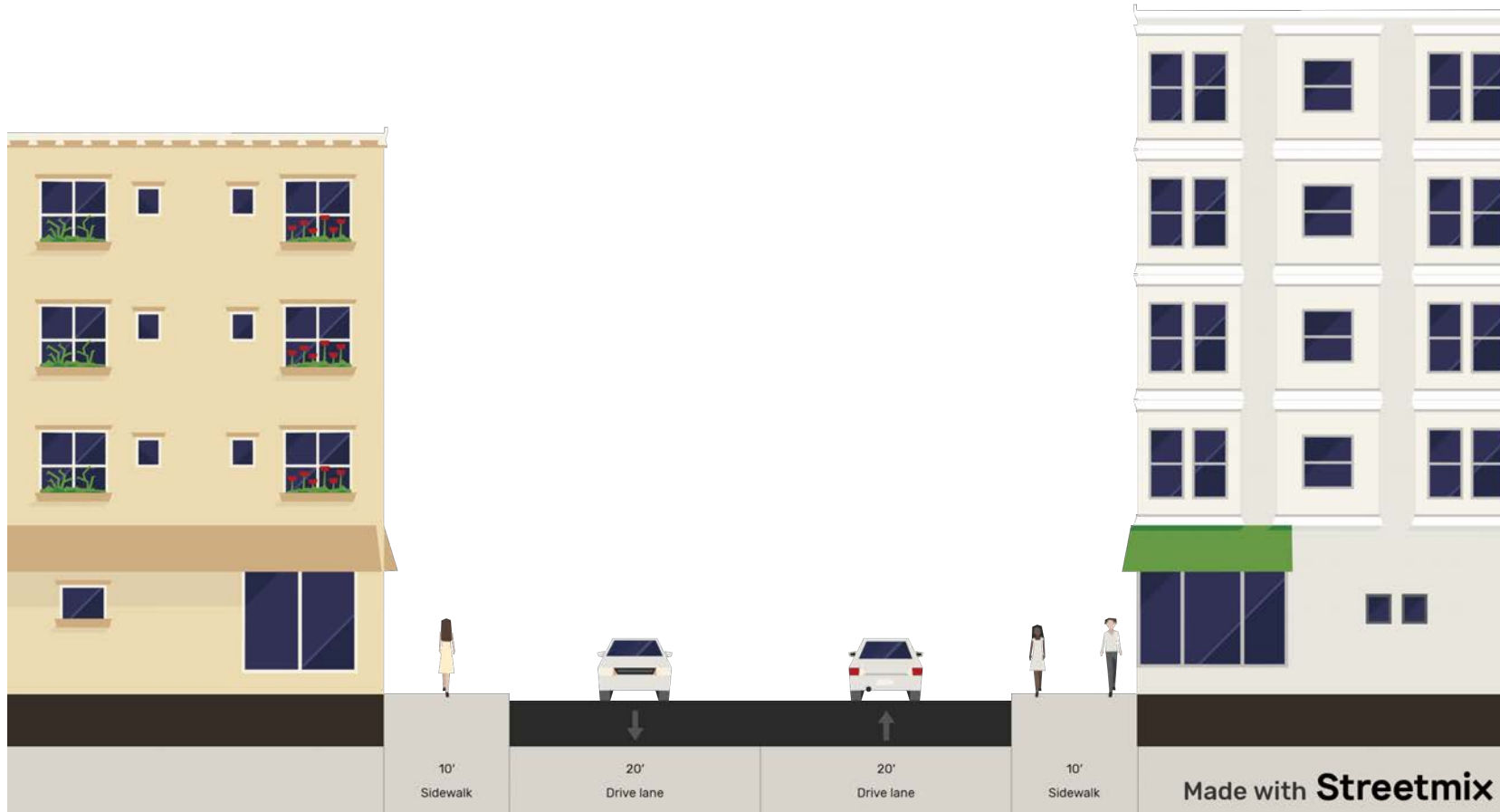
Existing Conditions – Vehicular Circulation (POVs)



Key Mobility Challenges

- Circuitous movements for those entering schools / Saint Gobain
- Delay/congestion along New Bond St (particularly during AM/PM peak)
- High conflict with pedestrians, commercial vehicles, and school buses

Existing Conditions – New Bond Street



Key Mobility Challenges

- No dedicated bicycle facilities
- Uncomfortable walking experience
- Limited lighting/green space/signage
- Lack of flex areas for school pickup/drop-off

Existing Conditions – Zoning Uses Allowed (Code/Deed)

- By Right:

- Research Lab w/o manufacturing
- Research and Development with manufacturing
- Wholesale Business or Storage (not incl. Self-storage)
- Manufacturing, assembly, processing, packaging, research and other industrial operations, including alternative and/or renewable energy systems
- Motor Freight Terminal
- Rail Freight Terminal
- Dry cleaning facility
- Radio/TV Transmission Tower
- Transformer
- Wind Energy Conversion Facility, Small
- Animal Hospital/Clinic
- Bank (drive-thru requires Special Permit)
- Food Service (drive-thru requires Special Permit)
- Motel/Hotel
- Motor Vehicle and Truck, Sales or Service
- Office, General or Professional
- Package Store
- Radio/TV Station

- By Special Permit:

- Accessory Storage of Flammable Liq./Gas
- Manufacturing, assembly, processing, packaging or other industrial operations not otherwise permitted above, including alternative and/or renewable energy systems
- Recycling operations, refuse transfer station
- Stable
- Clinic
- Club/Lodge
- Library/Museum
- Open Lot Storage of auto
- Wind Energy Conversion Facility, Large
- Kennel
- Gas Station
- Retail Sales

Existing Conditions – Zoning Dimensional Requirements

PERMITTED DIMENSIONS BY DISTRICT

TABLE 4.2 – Continued

DISTRICT	USE	LOT		YARD SETBACKS			HEIGHT		FLOOR TO AREA RATIO (Maximum)	
		AREA (Minimum SF)	FRONTAGE (Minimum linear ft.)	FRONT	SIDE ¹	REAR	Maximum in stories ²	Maximum in ft.		
				Minimum depth (linear ft.)						
IP-0.33	All	75,000	200	25	25	25	NA	50	0.33 to 1	
ML-0.5	All	NA	NA	25	NA	25	NA	50	0.5 to 1	
ML-1.0				10		15				2 to 1
ML-2.0				25						
MG-0.5				25		25		50	0.5 to 1	
MG-1.0	All	NA	NA	15	NA	15	NA	NA	1 to 1	
MG-2.0									2 to 1	
IN-S	All	NA	NA	15	10	10	NA	NA	NA	
IN-H										
A-1										



What do we know?

CBRE:

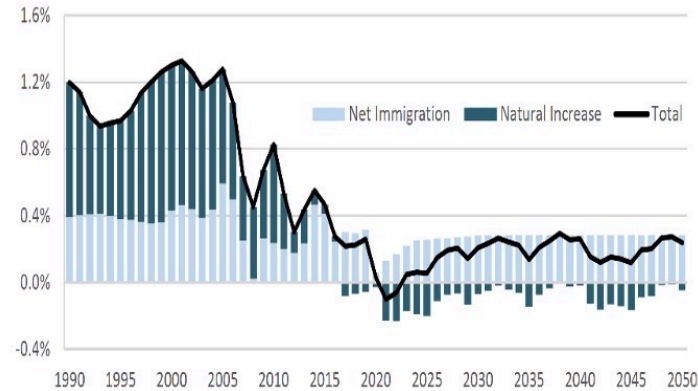
“The availability rate for manufacturing space hit a record low last year...the most since 2001. Average annual net asking rent for manufacturing space increased by 23%”

Source: Colliers International

An Economic Imperative

A surging knowledge economy is accelerating global competition for increasingly scarce skilled workforce.

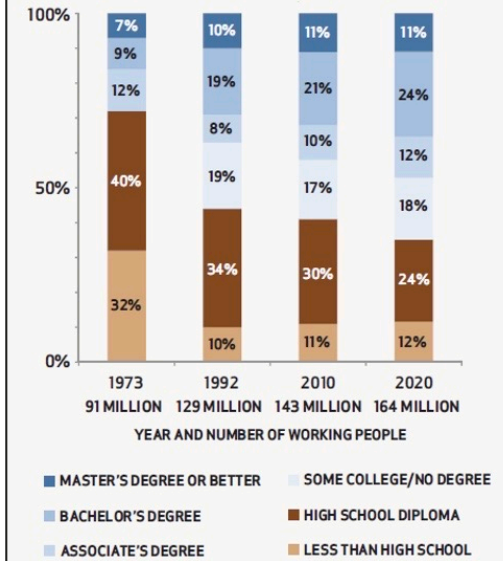
Workforce growth has slowed dramatically—and is fueled by immigration



Note: Components for 1990-2020 are GAI estimates. Natural increase is here defined as the number of 19-year-olds who turn 20 during the year minus the number of 64-year-olds who turn 65 and the number of adults aged 20-64 who die.

Source: CBO (March 2021) and GAI calculations

Most net new jobs require higher education



Creating growing competition for knowledge workers (across the developed world)





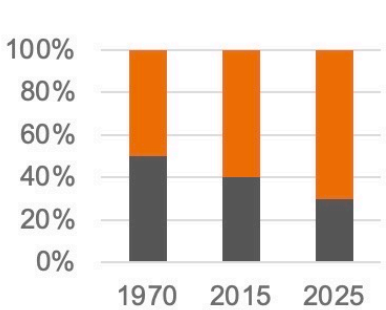
A Demographic Opportunity

Housing will build the future of our downtowns and urban neighborhoods.

Demographics are Destiny: walkable, mixed-use places will face unprecedented demand for two decades

- Households with kids dominated North American growth—and therefore housing markets—for decades
- For the next 2 decades ~80% of net new households will be singles and couples
- 62% of US housing stock is single-family detached

The great housing mismatch--traditional single-family market—households with kids—is shrinking while large majority of available housing is single-family detached



■ Adult singles and couples
■ Families with children

62%
 of US housing
 is single-family
 detached

THE WALL STREET JOURNAL

The Joys of Urban Tech

**Goodbye, office and industrial parks.
Drawn by amenities, skilled workers and
the companies that follow them are
opting for urban places.**

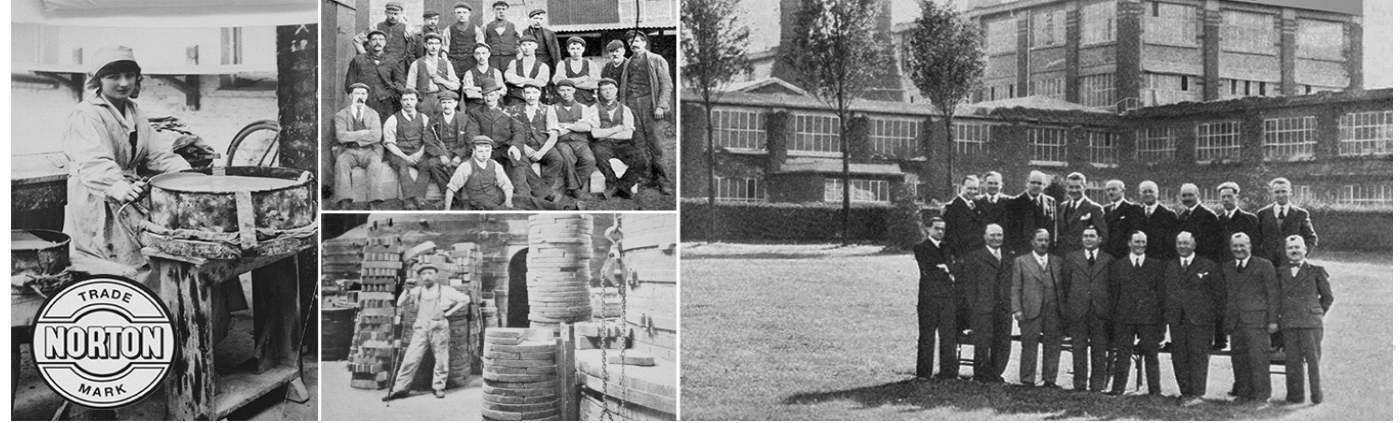




What did we hear?

Stakeholder Themes

- Flooding
- Railroad Bridge – safety and access
- Traffic – high conflict between modes
- Neighborhood connectivity
- History of place should be recorded
- Pedestrian safety for school
- Greenspace and lighting needs to be improved
- Need for skilled employees
- Route 12 business development



Assets and Opportunities

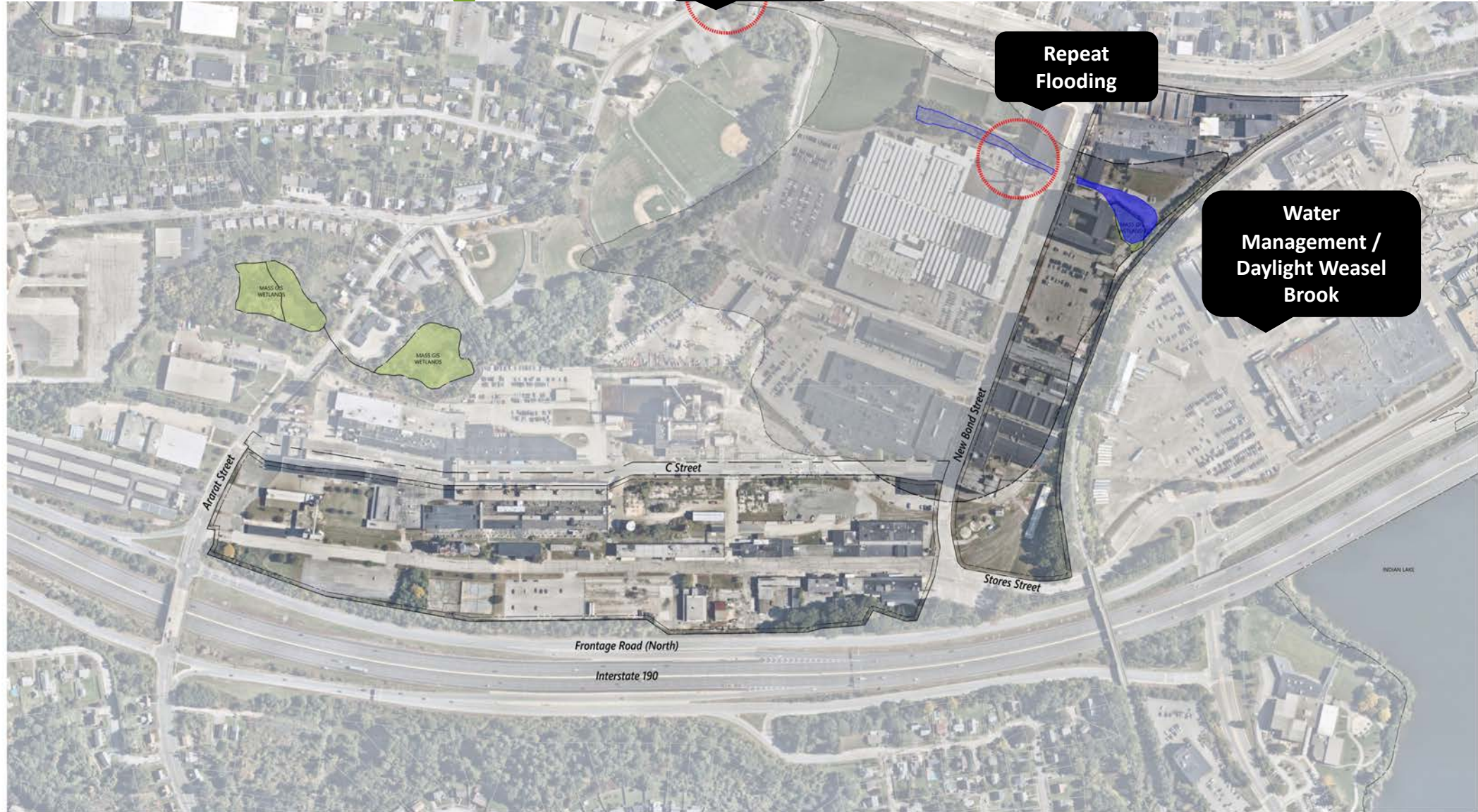
- **Large, level site**
- **Direct access to and visibility from I-190**
- **Robust utility system**
- **Access to City of Worcester technology cluster**
- **Proximity to residential / walkable neighborhoods**
- **Proximity to area restaurants and cultural amenities**
- **Community support for redevelopment**
- **Manufacturing History – Norton Saint-Gobain**
- **Favorable zoning (use and dimensional)**
- **Opportunity to improve existing bus route**
- **Manageable environmental conditions (based on current data)**

Challenges

- **Flooding / Drainage / Flood Plain**
- **Proximity to School / School Bus / Pick-up and Drop-Offs**
- **Railroad Crossing on New Bond Street**
- **Railroad bridge on Brook Street**
- **Deed Restrictions on Use**
- **Isolating Physical Barriers (highway / railroad)**
- **Infrequent Bus Routes/Times**
- **Preserving History**



Weasel Brook Challenges



Repeat Flooding

Repeat Flooding

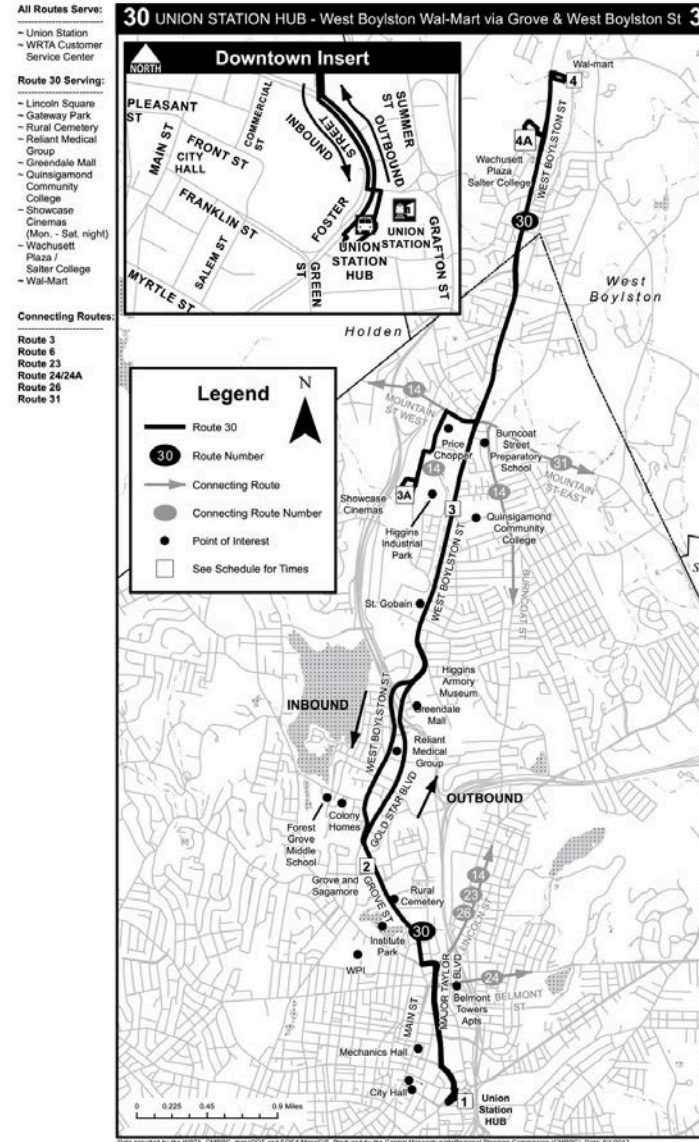
Water Management / Daylight Weasel Brook

Challenges – WRTA Bus Route

Bus Routes – Only towards downtown

Limited Schedule

Route 30	
Outbound	Inbound
8:45 AM	9:17 AM
9:45 AM	10:17 AM
10:45 AM	11:17 AM
11:45 AM	12:17 PM
12:45 PM	1:17 PM
1:45 PM	2:17 PM
2:45 PM	3:17 PM
3:45 PM	4:17 PM



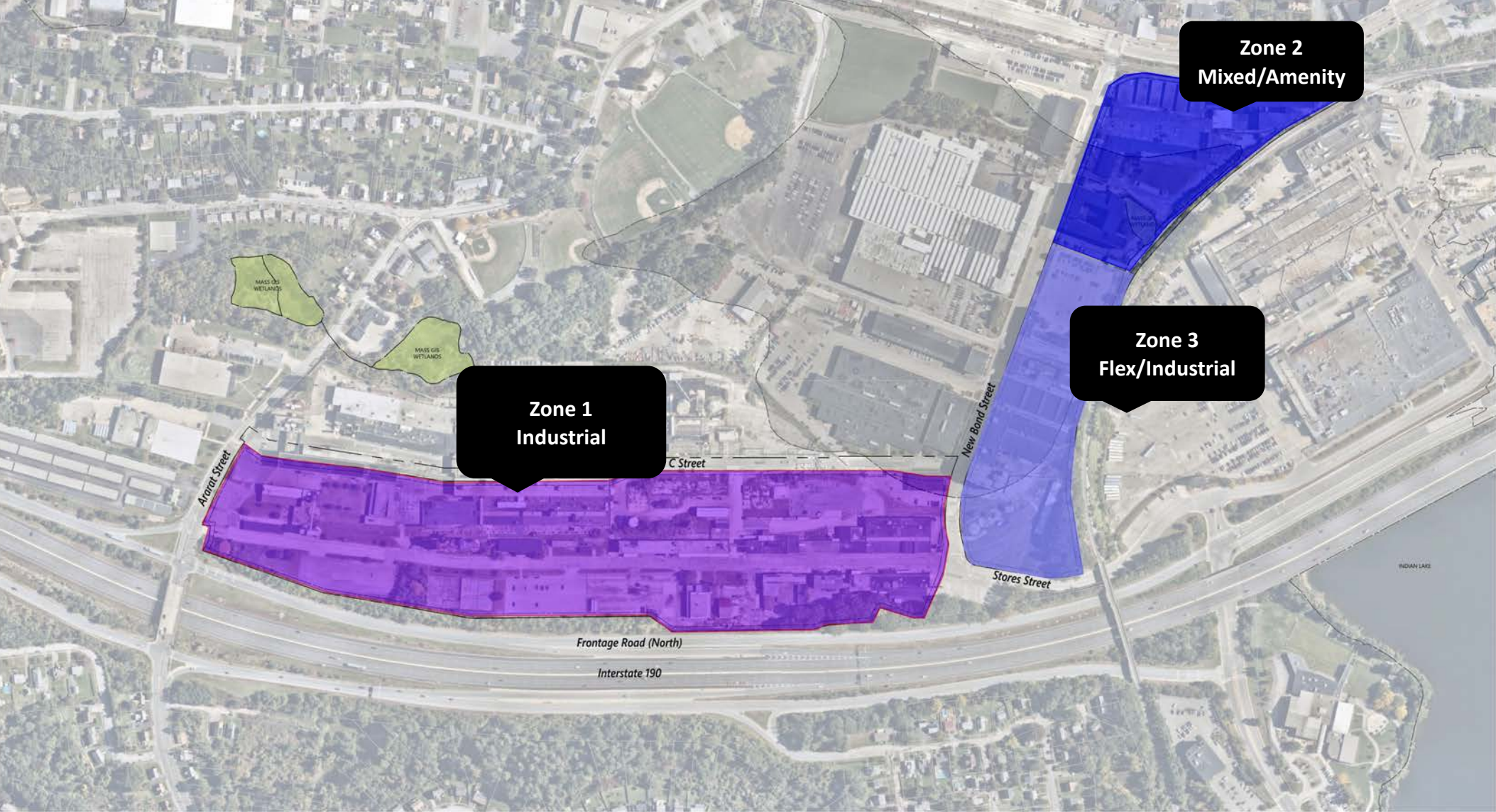


Recommendations

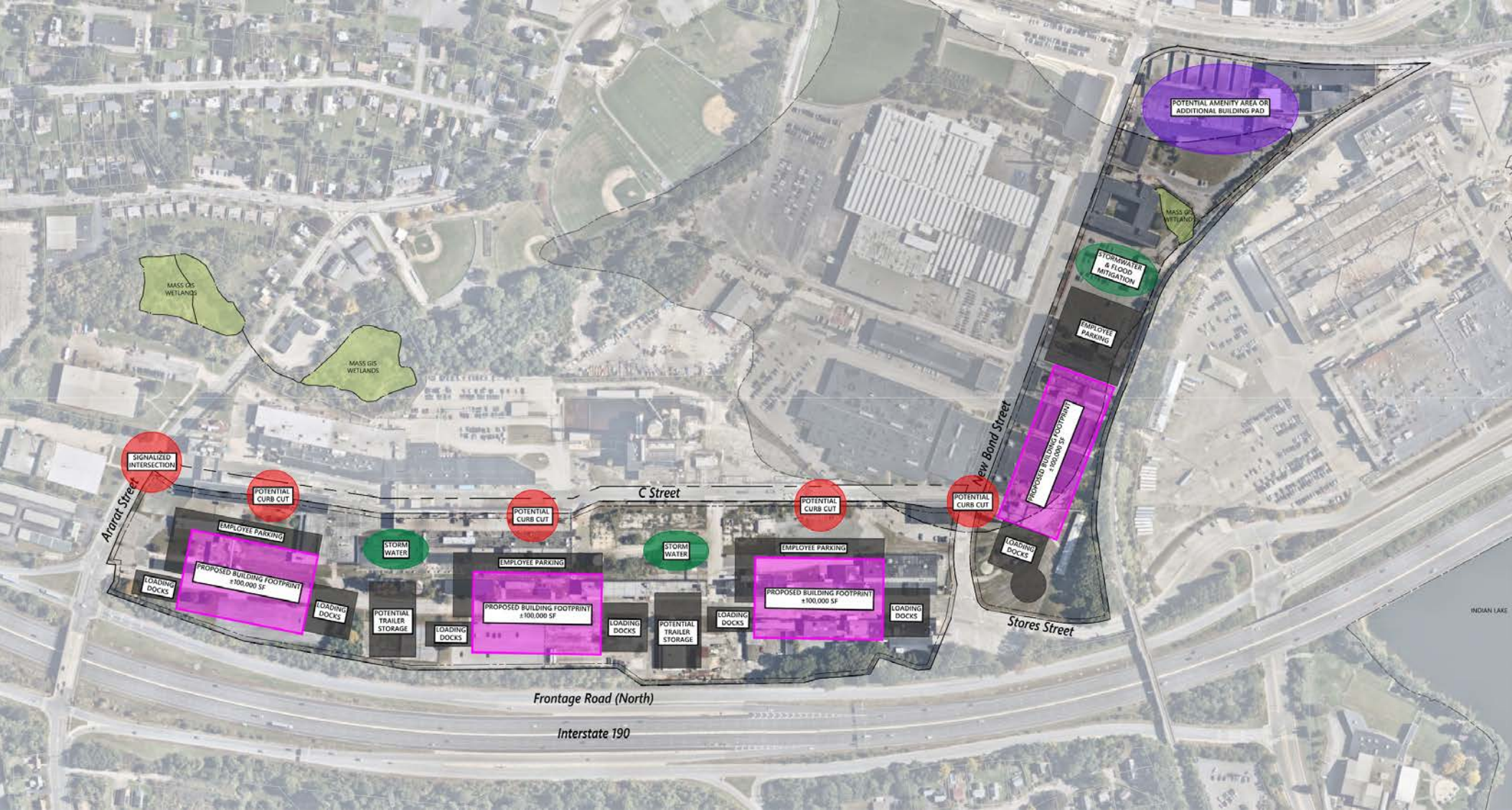
Recommendations:

- **Signalized intersection at C Street and Ararat Street**
 - Re-route truck traffic
 - Avoid School Buses and Railroad Tracks
 - Connect to Higgins Industrial Park
- **Remove Stores St**
 - Enables larger industrial parcels along 1-190
- **Construction Management Plan / Phase staging areas and parking**
- **Environmental Pre-characterization**
 - Soil
 - Groundwater
 - Soil Vapor
- **Pre-Demolition Level Hazardous Building Materials Survey**
- **Specifications (Soil Mgt, Groundwater Mgt, H&S, Abatement, SSDS)**
 - Buried Structures / Obstructions
- **Construction Release Abatement Measure (RAM)**

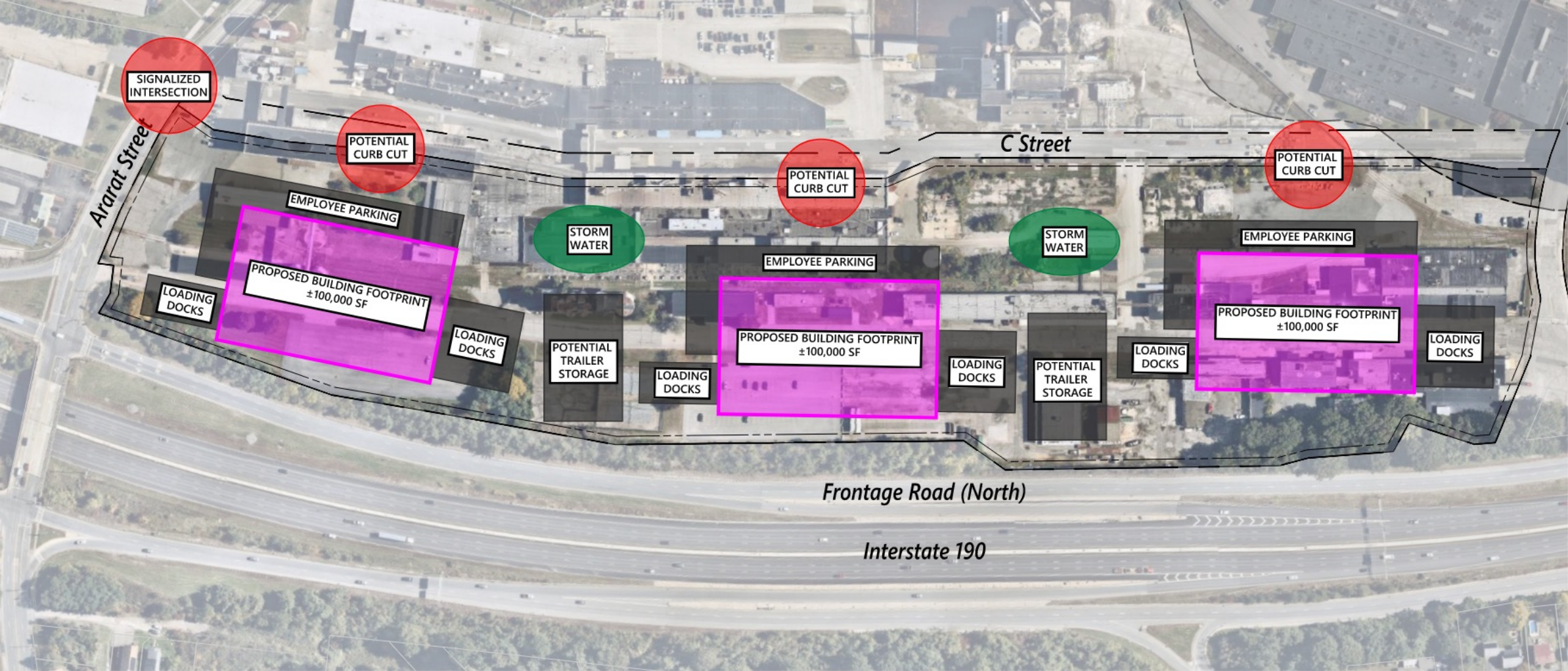
Site Zone Map



Illustrative Site Plan – Overall



Illustrative Site Plan – Zone 1 Industrial



Illustrative Site Plan – Zone 2 Mixed/Amenity



Zone 2 – Mixed Use & Amenity Parcel

Route 12 & New Bond Street

- Thesis: To create an area of project that fosters development of amenities for use by existing/new businesses and reconnects site to adjacent neighborhoods.

- Prospective uses
 - Eateries– Food hall, food trucks, shared kitchen, chef incubator, micro-breweries/distilleries
 - Gym
 - Hotel
 - Function Room
 - Outdoor/Public Realm
 - Seating
 - Leisure
 - Performance/exhibit
 - Interpretative walking trail (Norton and community it helped to build)
 - Innovation/Incubator space
 - Maker space (industrial arts, cabinetry, textiles, commissary)
 - Showrooms (designer studio, art gallery, retail, manufacturers)
 - School internships & workforce training

Zone 2 – Mixed Use & Amenity Parcel

Route 12 & New Bond Street

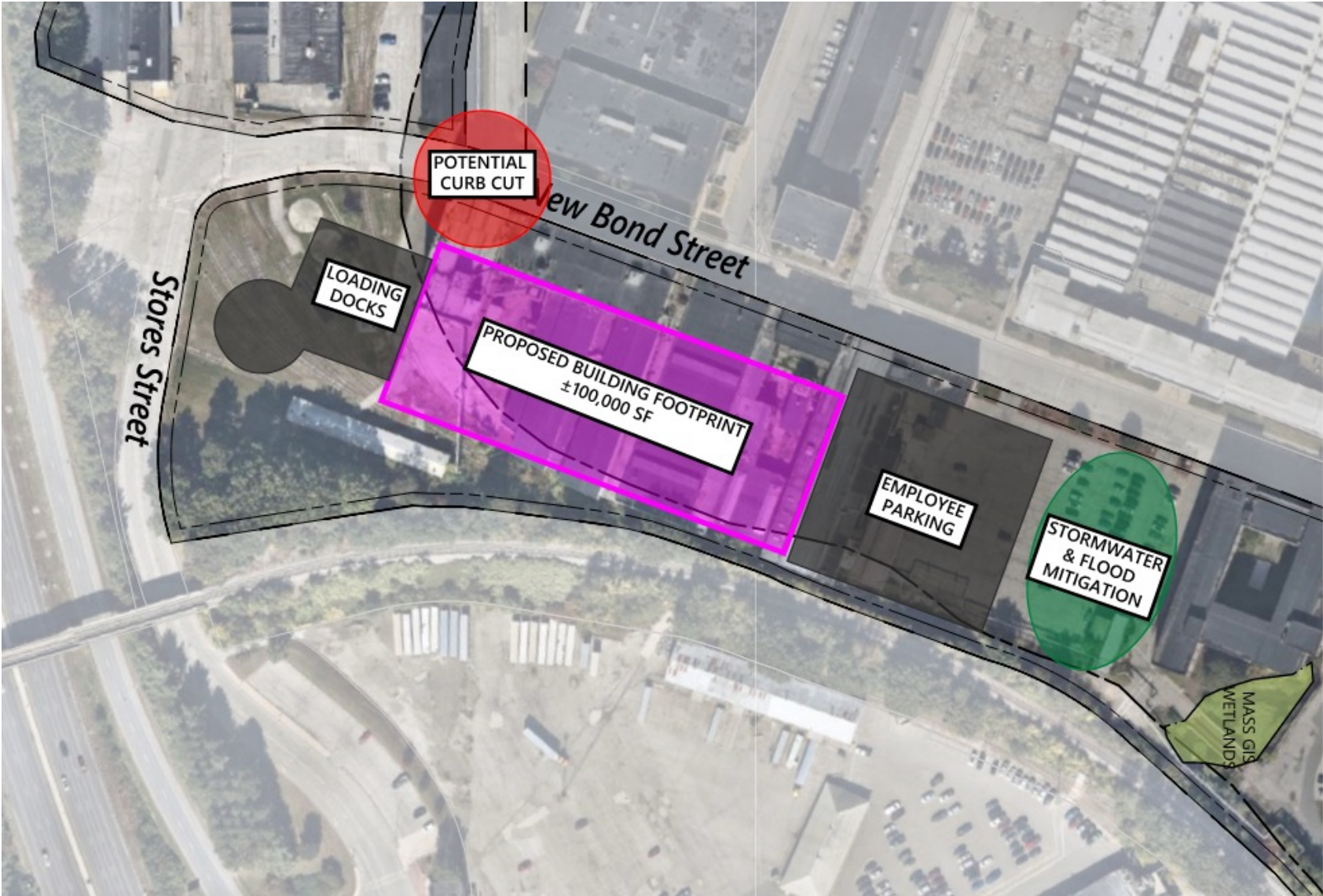
- Development Constraint
 - Topographic Challenges
 - Site grade significantly below existing street grades
 - Wetlands
 - Setbacks due to recognized area behind 10 New Bond St.
 - Drainage Way
 - Requires improving to address upstream flooding issues.
 - New Identity?
 - Restore historic identity and/or amend to address new direction and enhance business & employee attraction

Zone 2 – Mixed Use & Amenity Parcel

Route 12 & New Bond Street

- Re-development Activities
 - Reuse certain buildings fronting Rt. 12
 - Buildings 201, 202 & 205
 - Select demolition
 - Back appendage of Building 202
 - Back portion of Building 205
 - All or portion of Building 201 (10 New Bond St.)
 - Create open space for commercial & passive use
 - Increase accessibility to streets
 - Pedestrian & bicycle
 - Parking & storage
 - Construct commercial facilities

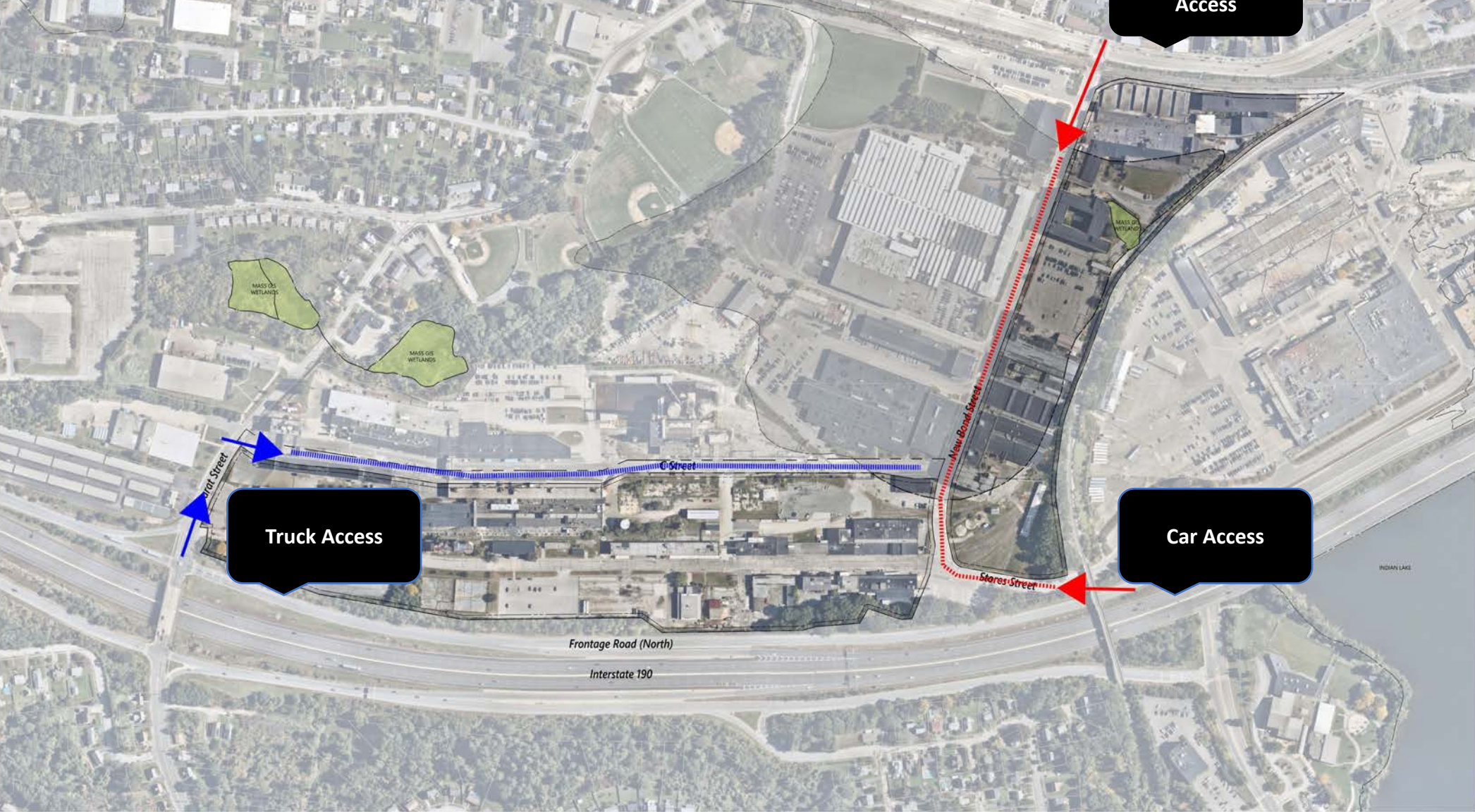
Illustrative Site Plan - Zone 3 Flex/Industrial



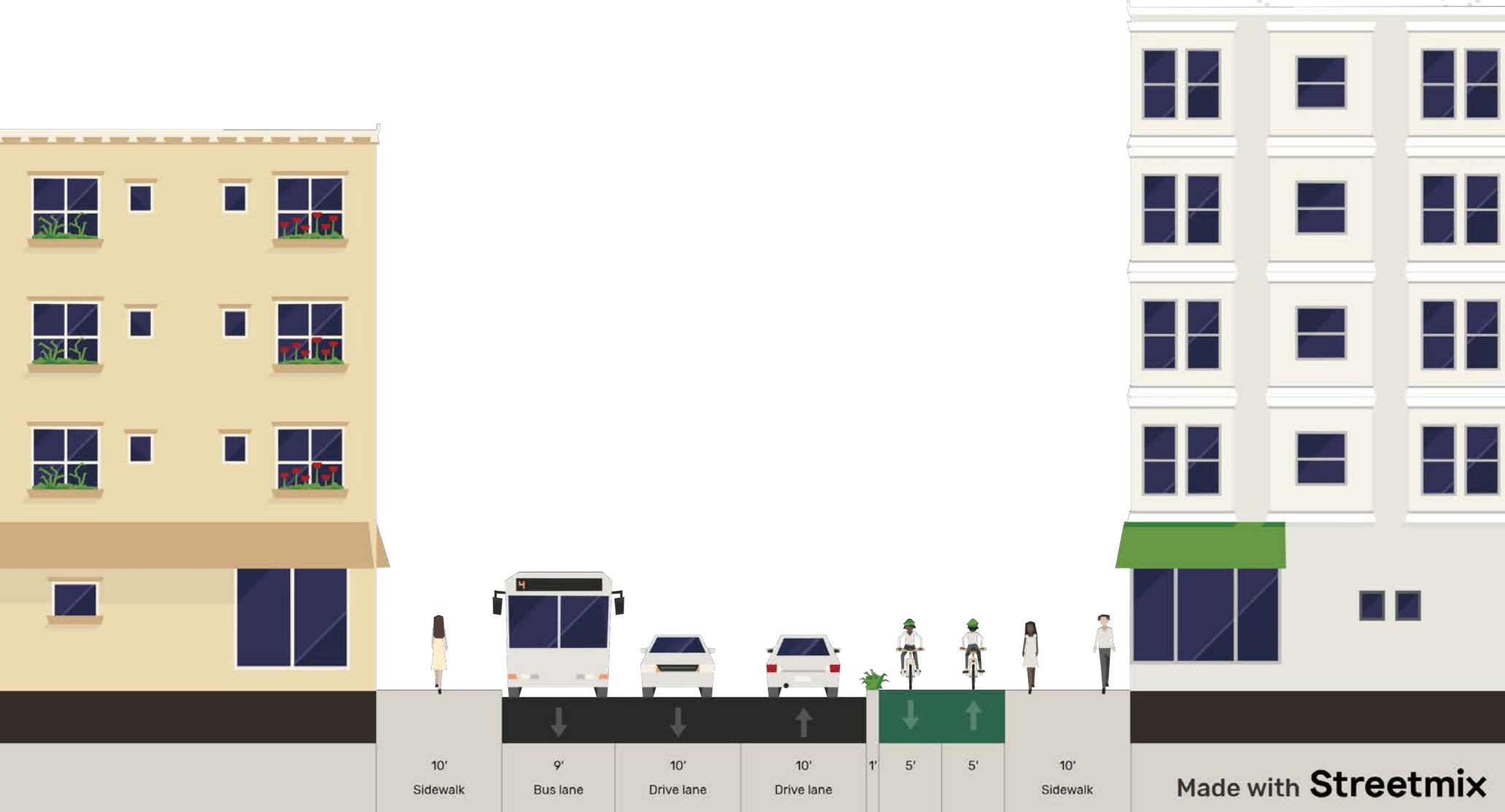
Site Pedestrian Access



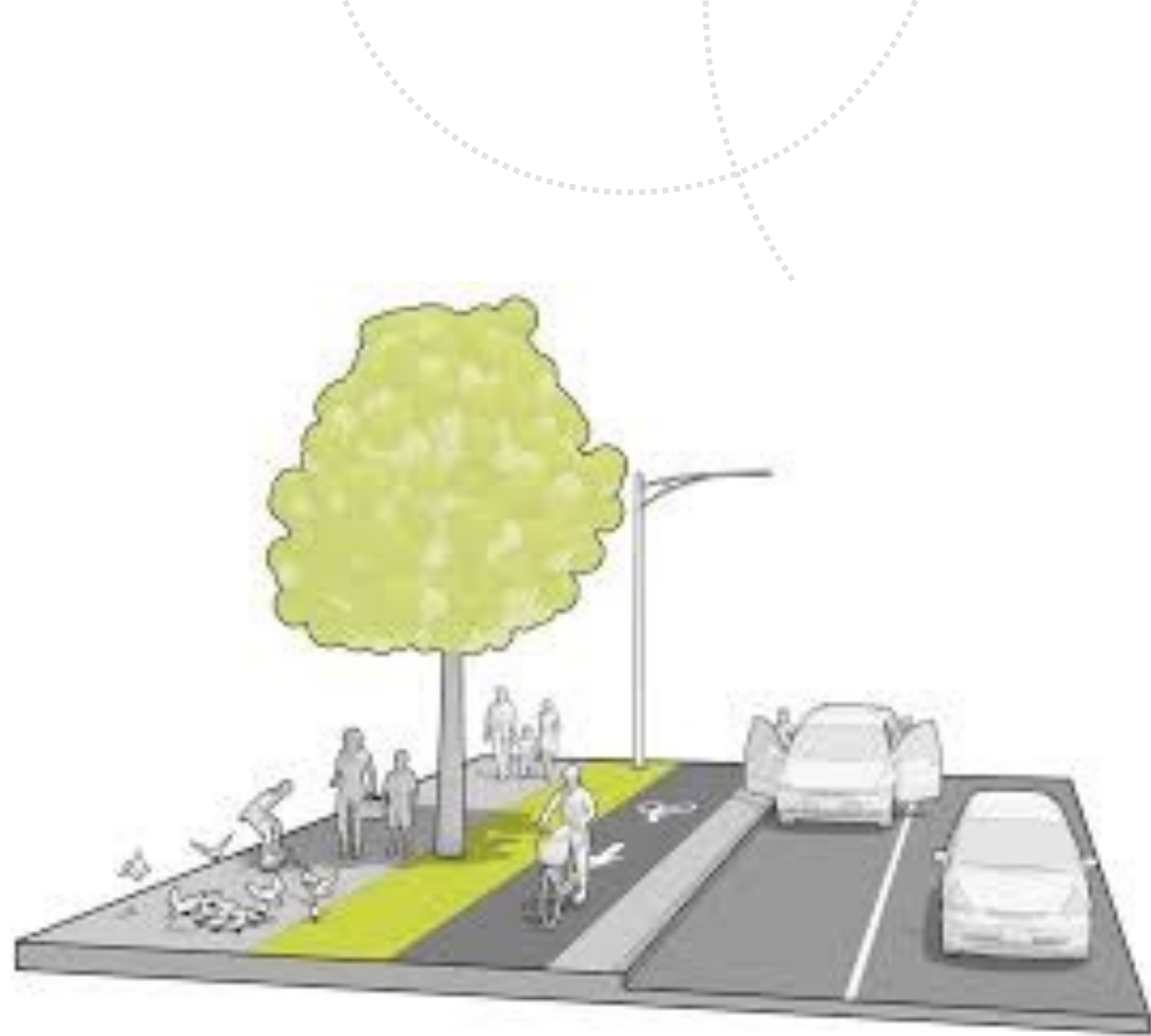
Site Vehicular Access



Complete Streets Cross-section: New Bond Street



Complete Streets - Precedents



Raised 2-Way Cycle Track

Internal Walking Paths



Traffic Calming Measures



Precedents – Advanced Manufacturing



Placemaking & Public Art With Historic Industrial Elements



Placemaking & Public Art With Historic Industrial Elements



Green Spaces – Daylighting Streams



Green Spaces – Activation Through Pop-ups



Green Spaces – Low Impact Development



Pollinator Gardens



Sustainable Meadows

Green Spaces – Corporate Amenities



Green Spaces – Corporate Amenities



Recommendations: Transportation and Infrastructure

2. Implement "green" parking solutions

- Shared parking – leverage existing zoning
- Pervious parking lots
- Spaces for EVs

Recommendations: Transportation and Infrastructure

1. Create an accessible & connected campus

- Dedicated bike/ped facilities (preferably protected/buffered and off-street)
 - NACTO/MassDOT Separated Bike Lane Planning & Design Guide
 - Wide, inviting sidewalks
- Pedestrian safety/traffic calming mechanisms
 - Through lighting, high visibility signage, pavement markings
- Potential for first last mile solutions (for future employees)
- Expansion of future transit services – coordinate with WRTA for shuttle/on-demand style services & improved frequency for existing routes
- Enhanced wayfinding signage for all modes
 - "Gateway" signage

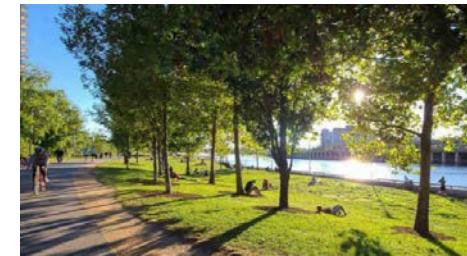
Recommendations: Transportation and Infrastructure

3. Streamline vehicular flow within the internal network

- Intercept signage to reduce congestion on C St/New Bond St
- Curbside management – flex zones during school/LU peak hours to alleviate congestion in travel lanes (and spillover onto W Boylston St)
- Formalization of truck/school bus/POV routes

Recommendations: Sustainability Strategies

- **Energy:**
 - On-site renewables
 - PV (rooftop)
 - Geothermal – requires feasibility study
 - EV Charging – Day 1 & Day 2
 - District Micro-grid – Efficiency & Resilience
 - Demand Response coordination with grid (on-site storage)
- **Material:**
 - Material Circularity & Reuse from Existing Buildings
 - Biophilic Design / Natural & Reclaim Materials – especially in landscape
 - Low carbon materials – mass timber, low carbon steel & concrete
- **Landscape:**
 - Daylighting of Weasel Brook
 - Drought tolerant plantings
 - Meadows (instead of maintained lawn)
 - Pollinator gardens
 - Diverse & native plantings
 - Raingardens / Stormwater management
 - Permeable paving (where possible)
 - Complete streets / Street trees
- **Community & Connectivity**
 - Multi-modal site access restored – vehicular, pedestrian, bike
 - Interpretive path
 - Complete Streets – Improved pedestrian & bike connectivity
 - Ongoing community engagement in the development process





Funding & Resources

Supplemental funding and financing resources

- **MassWorks** - Capital funds for public infrastructure projects that support and accelerate housing production, spur private development, and create jobs throughout the Commonwealth.
- **Site Readiness Program** – Funding for site preparation and predevelopment and permitting activities for large scale industrial, commercial, and mixed-use sites.
- **Brownfields Grants** - Finances the environmental assessment and remediation of brownfield sites.
- **Underutilized Properties Program** – Predevelopment and capital funding for projects that will improve, rehabilitate or redevelop blighted, abandoned, vacant or underutilized properties.
- **Real Estate Technical Assistance** – Small grants for re-use of municipally owned properties.
- **Community Planning Grant** – Technical assistance for Community Planning i.e. corridor studies.
- **Community Preservation Act (CPA) Funding** - Helps communities preserve open space and historic sites, create affordable housing, and develop outdoor recreational facilities.

Supplemental funding and financing resources

- **District Improvement Financing (DIF)** - A locally-enacted tool that enables a municipality to identify and capture incremental tax revenues from new private investment in a specific area and direct them toward public improvement and economic development projects.
- **Brownfields Loans** – Up to \$250,000 for environmental assessment and \$750,000 for environmental clean-up.
- **MA Brownfields Tax Credit (BTC)** - MA tax credit for cleaning up contaminated property.
- **Tax Exempt Bonds** – Tax-exempt financing for 501(c)3 nonprofit real estate and equipment, affordable rental housing, public infrastructure projects etc.
- **The Infrastructure Investment Incentive Program “I-Cubed” Program** – Public-private partnership that allows new state tax revenues generated from private economic development projects to cover the costs of the public infrastructure improvements needed to support the project.

Q&A

Worcester Technical Assistance Program
June 20, 2023