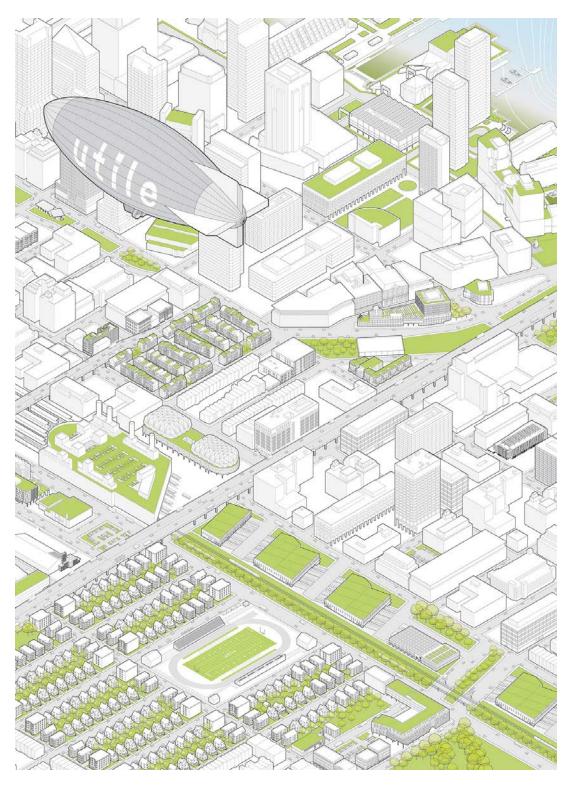
Ayer Road Corridor Vision Plan & Form-Based Code Expression of Interest



September 28, 2020

Ms. Marie Sobalvarro, Assistant Town Administrator 13 Ayer Road Harvard, MA 01451

utile



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September 28, 2020

Ms. Marie Sobalvarro Assistant Town Administrator 13 Ayer Road Harvard, MA 01451

utile

Architecture & Planning

115 Kingston Street Boston, MA 02111 utiledesign.com

Dear Ms. Sobalvarro.

Thank you for the opportunity to contribute to the framing of the plan for the Ayer Road Corridor. It is rare that we encounter a potential process so well considered, and a delight to engage in questions around a defined set of goals. The well-documented history of the planning around this corridor suggests that next steps need to be specific, measured and actionable, and we believe the draft framework achieves those things. Accordingly, our approach offers not a wholesale restructuring of the plan, but rather areas for refinement and additional scope measures to build community support more incrementally, as well as suggestions for better integrating the various disciplines at each phase.

Utile is a 65-person full service Architecture, Urban Design and Planning firm. Our practice is distinguished by the interdisciplinary nature of our approach, which allows us to consider design at multiple scales and to discern when and where big picture or small picture responses are required. Our clients consist of for profit and not for profit developers and corporations, municipalities and government agencies, and institutions. This variety allows us to "see" problems from multiple vantage points, which is particularly useful in planning efforts where community goals must be balanced with market-driven considerations. Our planning practice extends to several cities around the country, but is primarily focused in New England Cities and Towns, including recent related work in the communities of Littleton, Weston and Hyannis.

We have assembled a team with the right balance of national and local experience, to combine the best of forward thinking planning practices with specific, on the ground knowledge of the context. RKG completed the Harvard Town Master Plan adopted in 2017 and would execute the economic analysis and feasibility assessment. Code Studio are nationally recognized form-based code experts, with projects in both large cities and small communities, and will draft the code and provide preliminary advice on framing the vision accordingly. Nelson\Nygaard, who will advise on all matters related to traffic and transportation, also bring national expertise as well as extensive experience in New England. Weston and Sampson, an integrated Landscape Architecture and Civil Engineering practice, will assist in understanding the possibilities for corridor-wide infrastructural improvements, as well as provide guidance for site design controls.

We hope our response contributes positively to your efforts at further framing the proposed planning process. Please feel free to reach out with any questions, as we'd welcome the opportunity to understand more directly your areas of concern.

Sincerely,

Matthew Littell, Principal, Utile, Inc.

Mobile: (617) 686-4282 Office: (617) 423-7200 littell@utiledesign.com

Cover Letter Town of Harvard

Firm Overview

Utile is a planning and architecture firm that is built like a think tank. By developing well-researched, locally specific design methodologies for each project, we offer original and effective solutions that integrate existing conditions while setting the standards for the cultivation of a meaningful urban realm.



Our enthusiasm as designers, cultural anthropologists, and keen observers of the business sector allows us to tackle a broad range of work. Yet rather than seeking one-off projects, we like to invest in multiple projects in one city to gain a deeper understanding of a particular locale. This is as true for our global projects as it is for our work for New England cities. In doing so, Utile delivers strategies that are efficient, economically feasible, and elegantly designed.

Utile specializes in unique regulatory, political, and design challenges. We are committed to the revitalization of the American city through proactive planning and design that bridges public and private jurisdictional boundaries. As a result of this professional framework and our well established reputation, Utile has

tackled a diverse range of challenging projects including urban design proposals for new districts, colleges and universities embedded within cities, and aging industrial districts. In all of the firm's planning work, development economics, community engagement strategies, and the appropriate neighborhood character are carefully considered and balanced.

Utile has charted a new practice model that combines the innovative thinking of a design practice with the proactive strategic insights of business consultants. As the design process unfolds, the firm uncovers hidden correspondences and tests potential conceptual approaches through sophisticated information graphics, maps, and drawings. Because of Utile's unique strategic approach to design and visual communication, the firm has served as the on-call urban design consultant for MassDevelopment and the I-195 Commission in Providence.

Name and Address Utile, Inc. 115 Kingston Street Boston, MA 02111 Date Established 2002 Company Type Corporation Management Team Tim Love, Principal and President Michael LeBlanc, Secretary and Principal Matthew Littell, Treasurer and Principal Mimi Love, Principal **Employees** 65 total (21 licensed architects, 58 professional design staff, 5 admin, 2 interns) Major Areas of Focus Urban design, urban planning, architecture

Planning Approach

Considerations for the Approach

We have reviewed the proposed Planning Framework and scope and are impressed with the thoroughness and rigor with which the project has been framed. The three-phase approach that starts with market feasibility and fiscal implications, progresses to visioning and culminates in action through adoption of new zoning represents a sensible plan with logical steps from analysis to implementation. The recommendations below work within that structure, and include additional considerations for scope as well as the sequencing within each task. More broadly, our recommendation is to foreground some of the visioning and coding into earlier phases, to:

- 1. Generate community, stakeholder and potentially market interest earlier in the process.
- 2. Create a more efficient feedback loop in which the consideration of possibilities for the corridor are more consistently informed by the zoning and funding tools that may ultimately implement them (work backwards as we work forward).
- 3. Allow each task to have more "stand-alone" value in the event that funding is delayed for subsequent phases.

Some possible ways this could be done:

First Phase Market Analysis and Fiscal Impact Assessment: Consider test-fitting, spatial analysis and preliminary concepts for coding early to refine the economic analyses.

Use preliminary visioning as an opportunity to generate market interest early along with community support, leveraging the rural character of the corridor to identify typologies that would distinguish this market from Devens and other adjacent communities. Create imagery and identify precedents to allow a broader constituency to spatially visualize the possibilities in the context of the market analysis. Are there

- models/uses for development that don't fit within typical market sector parameters but should be considered?
- Explore the extent to which preliminary coding changes, or guidelines enforced under discretionary review processes (such as the ARV-SP), could incentivize investment and incubate community support. Identify gaps between the limits of current zoning and market demand/possibility—analyze these spatially. This may provide a stepping stone to attracting development and testing the effectiveness of any new design guidance. If Town funding is not available for a full re-coding in the desired timeframe, this may be a path to advancing corridor goals sooner.
- Analyze development thresholds made possible by various increments of infrastructure improvements (local light pressure water supply, the funding mechanisms and their impact on the scale of potential development, for example). What are the thresholds for achieving economies of scale on these investments and is there a feasible time frame for implementation?
- Consider advancing the parcel inventory (there are only 58, with mostly separate ownership, and apparently few opportunities for assemblage). Can they be sorted by frontage, size, environmental conditions or other physical attributes that can better inform potential market uses? Can some be eliminated from consideration because of dimensional issues (too narrow and deep) or because they are occupied by older structures or uses that would want to be preserved or are not likely to change (such as the cluster of residential plots near the north end)? In brief, can the market analysis be more focused if the particulars of the land supply is more closely analyzed and potential inventory adjusted accordingly? This is where conceptual test fits and coding considerations may play a greater role in Phase 1.

Planning Approach Town of Harvard

Second Phase Corridor Vision Plan: Start with "what if?" scenarios

- Consider an "inside-out" (as opposed to "outside-in") approach to visioning. Informed by the market analysis, what would the ideal commercial/mixed use development look like and what kinds of market-feasible uses would it contain? Identify a cross section of "typical" developable plots to be used as test cases. How are the spatial demands for the imagined uses translated into a "villagelike" architectural expression consistent with the Town's self-image? How is the parking and landscape arranged? How do these functionally tie into Ayer Road aesthetically and from a traffic engineering perspective? What are the environmental issues that might impact individual parcels or corridor-wide planning? Zooming in to a few test cases may fast-track the consideration of essential questions and promote a more meaningful exchange with the community.
- Develop the prototypes through the lens of a future form-based code, and identify dimensional thresholds that govern massing approaches, parking locations and layouts. Build community consensus for the coding approach in this phase as part of the visioning (Utile used this approach in Littleton), allowing stakeholders to build a sense of ownership of the form-based kit of parts. Tie prototypes back to the market analysis and the types of development that may be more likely to locate in the corridor.
- Use the prototypes to develop a broader vision and "hierarchy" along the corridor with consideration to segments with different existing characteristics, uses, plot sizes, etc. Balance the long term build-out vision with interim phases and time frames. Use the prototype approach to reinforce the idea of a flexible framework which can accrue benefits as market conditions evolve. This approach may garner more specific and actionable feedback, and acclimate the community to the idea of incremental development.

Phase Three Coding: Consider a flexible approach that include design guidelines.

It is important to state that planning should not occur through coding. However, having coding at the table during planning discussions eases the transition to this third phase. Once the plan concepts have garnered community support, it becomes straight-forward to code for those concepts. The code should be seen as the way the community gets the outcomes they prefer for Aver Road.

If the approach above is taken during the early stages of work, this phase will consist primarily of the drafting of new text, and the preparation of illustrations that assist in understanding and administering the new code requirements. Having spent significant time discussing and planning the potential corridor outcomes, adoption of the new code implementing the Ayer Road plans should be a simple effort.

Even a form-based code can benefit from design guidelines that allow a more flexible approach (applying discretion) to more detailed design of specific buildings and sites. Consideration should be given to a joint effort during the coding phase that creates not only certainty about future development through the form-based code, but also a mechanism for managing and enhancing the future design of projects through design guidelines.

Additional General Considerations

We are aware that there is an on-going design project for Ayer Road through the MPO's Transportation Improvement Program (TIP) and this corridor study needs to take those designs into account to understand how they do or do not mesh with the Town's vision for land use changes and development. We also recognize the need to not suggest changes to the transportation network that would result in recommendations for a redesign or reconstruction of Ayer Road, but how to work within the design parameters the Town and MassDOT create. Land uses and the subsequent form-based code should respond to the roadway design and use the built form to create a comfortable environment for all who use the Corridor regardless of purpose.

Estimated Budget & Example Schedule

Phase 1: Market Study & Fiscal Impact Analysis





1 Market Study & Fiscal Impact Analysis

Administrative/funding

Primary & Secondary Data Collection

Data Synthesis & Analysis

Stakeholder Engagement

Infrastructure Analysis

Building and Parcel Type Taxonomy

Preliminary Visioning and Test-fitting

Fiscal Impact Analysis



Existing Conditions Analysis

Stakeholder & Public Outreach

Internal Team Charette Establishing
Design Parameters and Goals

Conceptual Analysis/Visioning

Building Prototypes and Development Scenarios

Present Vision/Prototypes to Public

Concept Renderings

Draft Vision Plan

3 Ayer Road Zoning Plan

Drafting/Writing Code Text

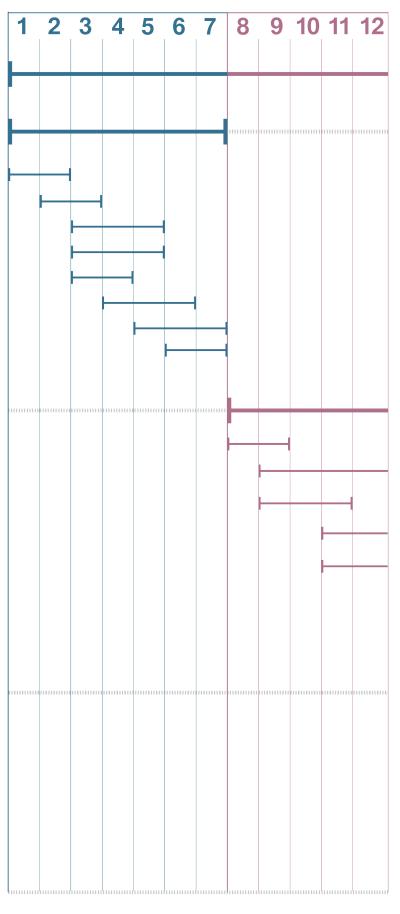
Regulating Plan and Graphics: character, massing, and relationship to existing site conditions

Presentation of Code Development

Vision Plan Review

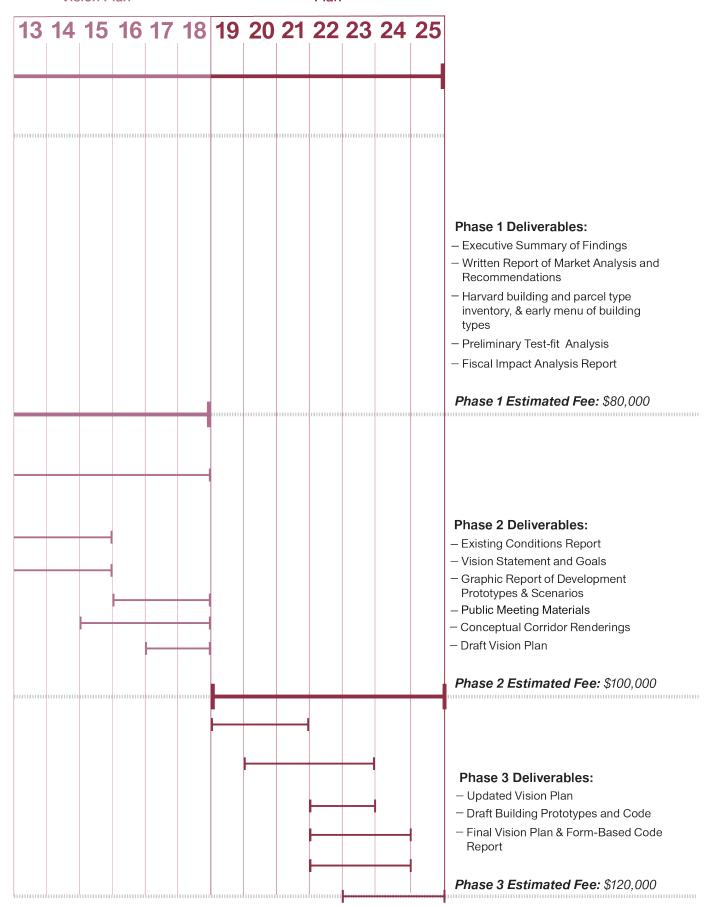
Draft form-based code for client review

Code Refinement and Final Submission



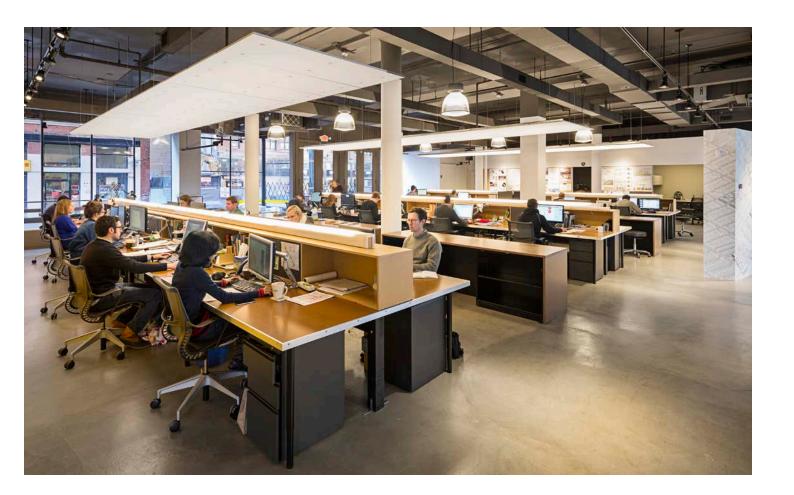
Phase 2:
Ayer Road Corridor
Vision Plan

Phase 3:
Ayer Road Zoning
Plan



Experience

In the following matrix, we've highlighted our team's selected experience in relation to the areas of interest referenced in the RFI. Full project information immediately follows, including descriptions of Utile's innovative approaches and techniques while working with public entities.



Relevance Matrix	Environmental Analysis	Transportation Planning	Real Estate Market Analysis	Fiscal Impact Analysis	Infrastructure Planning	Zoning	Public Participation
Utile Experience							
Littleton Common Form-Based Code, Littleton, MA						Х	Х
Weston Town Center, Weston, MA		Х			х		х
Hyannis Housing Zoning Update						Х	
Raymond Flynn Marine Park, Boston, MA						Х	
Envision Cambridge Alewife Plan, Cambridge, MA		Х	Х	х			Х
Boston Flood Zoning, Boston, MA	Х					Х	Х
Imagine Boston 2030, Boston, MA		Х	Х	х			Х
Code Studio Experience							
River Arts District Form-Based Code, Asheville, NC						Х	Х
Chattanooga Downtown Form-Based Code, Chattanooga, TN						Х	х
Stockyards Form-Based Code, Fort Worth, TX						х	х
Malta Downtown Form-Based Code, Malta, NY						Х	х
RKG Experience							
Route 138 Corridor Study, Canton, MA			Х	Х			
Industrial District Study, Arlington, MA			Х	Х		ĺ	
Economic Development Plan, Framingham, MA				х			
Nelson\Nygaard Experience							
PLAN: South Boston Dorchester Avenue Transportation Plan, Boston, MA	Х	Х	Х		Х		X
Charles River Esplanade Pathway Safety & Improvement Plan, Boston, MA		Х			х		Х
Downtown Mansfield Parking Study, Mansfield, MA		Х		Х	Х		Х
Weston & Sampson Experience							
Millbury Town Center, Millbury, MA	Х	Х			х		Х
Boston Common Master Plan, Boston, MA					х		х
Danvers Water System Study, Danvers, MA	Х			CIP	х		
DCAMM Former Medfield State Hospital Environmental Resource Permitting, Medfield, MA	х				x		

Littleton Common Form-Based Code Littleton, Massachusetts

Client
Town of Littleton
Type
Form-Based Code
Year/Status
2019-2020

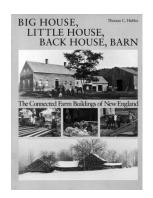
Key Collaborators

Dan Bartman Fort Point Associates UMass Donahue

Reference

Town of Littleton Maren A. Toohill, Town Planner (978) 540-2425 MToohill@littletonma.org A direct outcome of the Littleton Common Revitalization project, Utile worked with planner and formbased code consultant Dan Bartman to conceptualize and write a FormBased Code zoning document for the Littleton Common Village District. The Code would both meet the goals for the Common—to be walkable, mixed-use, and compact—and anchor its design and planning principles in the history and character of Littleton.

In short, the Code fosters predictable future developments by establishing a framework that allows for a wide range of design freedom within a clear set of constraints. These design controls range from the urban scale of the lot to the material scale of building components and landscapes. Most notably, at the massing scale, buildings shall reference New England farmhouses in terms of height and assemblages, ensuring that they remain moderate in scale and yet capable of accommodating large floorplates necessary for contemporary uses.

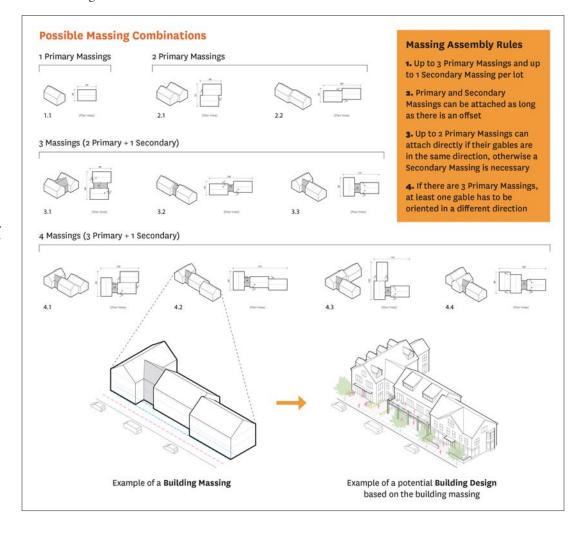


Above: Building massing rules are inspired by farmhouses in the region, such as those depicted in *Big House, Small House, Back House, Barn, by Thomas C. Hubka* (1984).

Right: Matrix showing all possible "farmhouse" massing combinations based on 4 simple assembly rules.

Facing page, top: Lot Standards diagrams showing building and parking placement rules. Facing page, middle: Building Standards diagram and table showing range of permitted building dimensions. Facing page, bottom: Building Frontage Type diagrams showing permitted variations on the porch / gallery type.

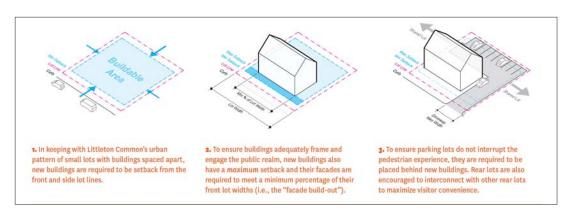
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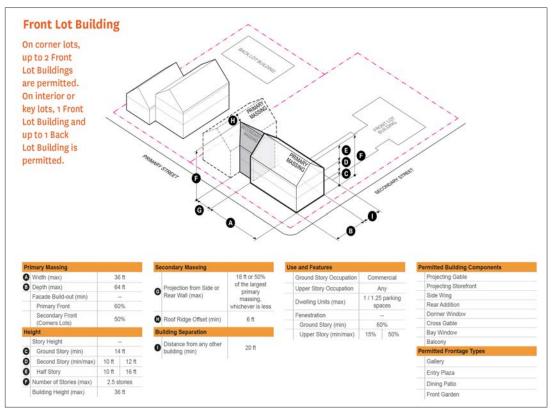


Innovation

The Littleton Formbased Code promotes a new building typology inspired by the farmhouses native to the town. The code operates most effectively at the scale of building massing, where up to 4 so-called "primary massings" can combine as long as an 8' offset is maintained between said massings. This offset ensures that building assemblies always appear modest and compositionally attractive while also allowing for a relatively large floorplate that can accommodate a range of contemporary programs.

Experience







Town of Harvard

Weston Town Center Improvements Weston, Massachusetts



Utile worked with the Town of Weston, MA on improvements to its historic Town Center, which includes streetscape design, pedestrian safety, traffic circulation, utility infrastructure, and parking. Utile's design was approved in an open town meeting vote, and the engineering design phase is currently underway.

While the design begins with the public right-of-way, the overall approach addresses important recommendations surrounding larger issues related to character and placemaking in an effort to re-establish the Town Center as the heart of civic life in Weston. Through relatively few strategic moves, the design is not only able to improve functionality, but also creates a public open space network that complements the original landscape design by the famous Arthur Schurcliff more than a century ago.

The design reclaims excess pavement to create three new open spaces, each with an individual character, which will allow for a wider variety of activity and events to take place that would otherwise not be possible, all without compromising the supply of parking for local businesses. Altogether, the design aims to achieve a more village-like scale that will make Weston Town Center a more cohesive and beautifully-designed environment for people to enjoy, allowing businesses to thrive.

Utile's design was approved in an open town meeting vote, and the project is currently under construction.

Client

Town of Weston

Type

Downtown study

Year/Status

2016

Scope of Services

Planning, urban design

Key Collaborators

Richard Burck Associates, Nitsch

Engineering Reference

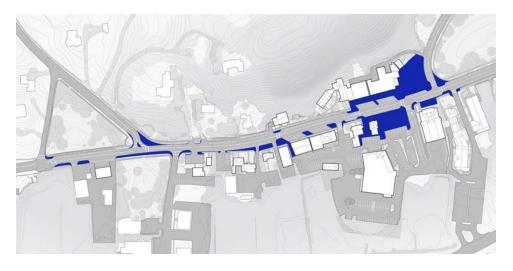
Stephen J. Larocque, Chair of the Weston Town Center Planning

Committee (781) 894-0901

sjl@larocque-architecture.com

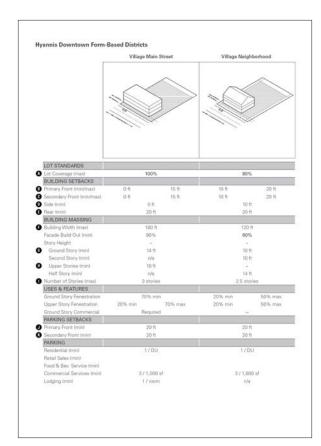


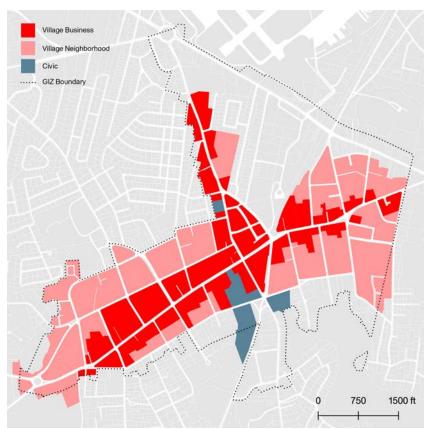




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Hyannis Housing Zoning Update Barnstable, Massachusetts





Zoning Summary Table and Form-based District Map

Utile worked with the Town of Barnstable Planning & Development Department to develop a plan and form-based code for the Hyannis Growth Incentive Zone (GIZ), the downtown area that includes Main Street and the Harbor front.

Hyannis is one of the most populated and dense areas within the Town of Barnstable and the Mid-Cape region. It is home to the Cape Cod Regional Hospital, many historic sea captains' homes, as well as the Cape Cod Regional Transit Authority. The village is also a key departure point for many of the ferry services to Martha's Vineyard and Nantucket. As such, housing production in Hyannis is a priority for the Town. The zoning

ordinance, however, was not consistent with the development goals of the Town and therefore many of the development projects underway required exhaustive contract negotiation and special permits.

The goal of the zoning update was to increase predictability of development outcomes by updating district boundaries, revising dimensional standards, and addressing parking ratios. In addition, the zoning revision seeks to reduce the impact of the auto-dominated urban fabric of the periphery of the downtown area from large scale surface parking lots to large building setbacks.

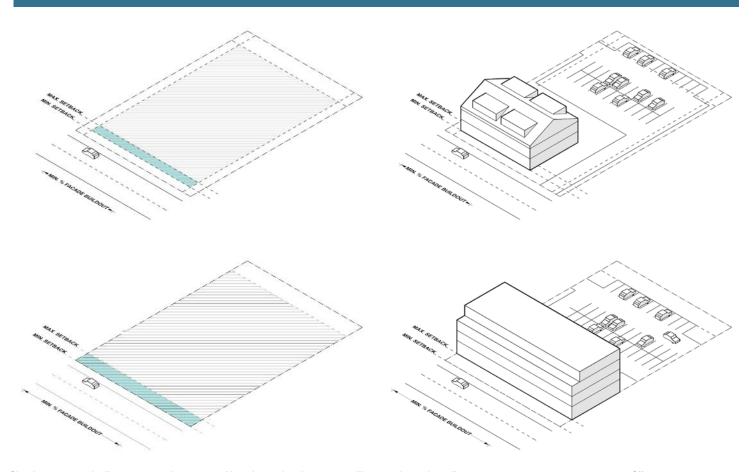
The resulting zoning code establishes two new downtown Form-

Based Districts: Village Main Street and Village Neighborhood. Through development test fits and build-out scenarios or market-tested housing types, Utile worked with Dan Bartman to develop lot and massing standards for the two districts.

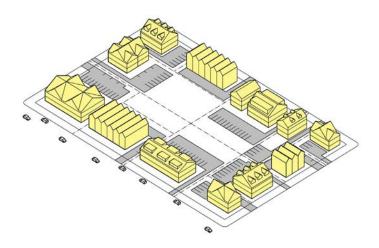
The code determines the process for future development approvals and sets standards for the future form of the neighborhood by establishing rules for building heights, setbacks, massing, and parking, among other regulatory controls. Ultimately, the code enables a more predictable urban form and a streamlined zoning approvals process that makes housing development more accessible and feasible in Downtown Hyannis.

Innovation

The Hyannis Zoning project is situated within a Growth Incentive Zone in the Town of Barnstable and aimed to revise the zoning code to increase housing production within the downtown area. The zoning revision establishes three main "Village" form-based districts that improve dimensional standards to accommodate market-tested housing typologies while retaining Hyannis' unique Cape Cod character. The new form-based districts are intended to increase housing density within the village downtown and strengthening the Main Street corridor.



Simple axonometric diagrams were incorporated into the zoning document to illustrate the various dimensional standards, including buildable area, parking placement, setbacks, and building height.

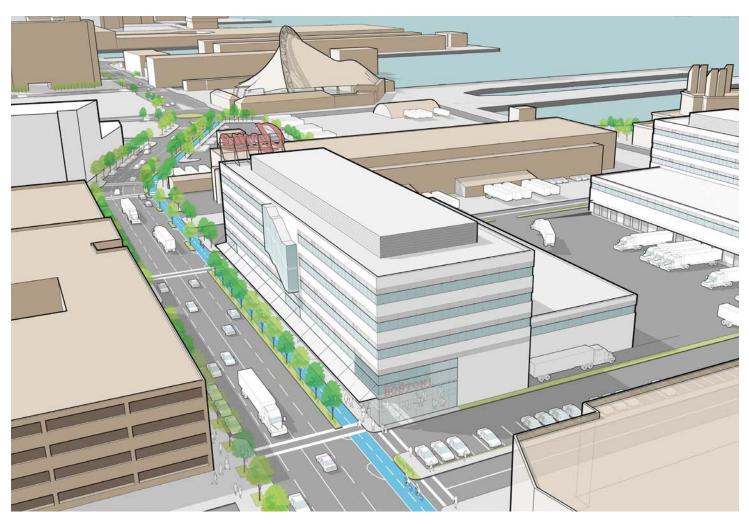


Development test fits and build-out scenarios used market-tested, "missing-middle" housing types to study the development capacity, number of added dwelling units, and overall urban form of the new zoning districts.

Client Town of Barnstable Type Form-based code and planning framework Year/Status 2019-2020 Scope of Services Master planning, urban design, zoning **Key collaborators** Dan Bartman, Zoning Consultant Reference Town of Barnstable, Planning and Development, Elizabeth Jenkins, Director (508) 862-4678 elizabeth.jenkins@

town.barnstable.ma.us

Raymond Flynn Marine Park Master Plan Update Boston, Massachusetts



Utile was selected by the Boston Planning and Development Agency (BPDA) and the Economic Development and Industrial Corporation to produce an update to the master plan for the Raymond Flynn Marine Park. Working with BPDA/EDIC, Utile looked at how the marine park has changed since the last master plan update in 1999. The team conducted an economic analysis of the park's port facilities and identified the port's relative position in the regional maritime economy, as well as examined how future land uses

relate to the South Boston Waterfront Innovation District. An updated master plan offers an opportunity to analyze the changes and challenges to this part of the Boston Harbor and to plot out a course for the next ten years, calling for a mixture of maritime industrial and related manufacturing, research and development, and supporting commercial uses.

Boston Planning and Development Agency; Economic Development and Industrial Corporation

Type

Master plan update; waterfront planning

Year/Status

July 2016

Size

191 Acres Scope of Services

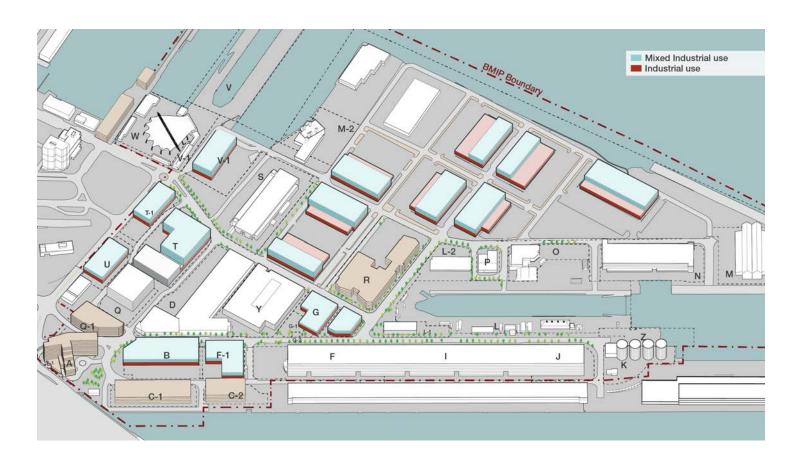
Planning; urban design

Kev Collaborators

Noble, Wickersham & Heart, Durand & Anastas Environmental Strategies. HDR Inc., Nelson\Nygaard

Reference

City of Boston Richard McGuinness, Deputy Director for Waterfront Planning (617) 918-4323 Richard.McGuinness@boston.gov



Innovation

The RFLMP master plan used the idea of an innovative mixed-use industrial/commercial typology to encourage the redevelopment of properties into modern, high-bay, flex industrial uses that would both finance the cost of redevelopment and prepare the marine park for coming decades of the new needs of water-dependent and other industrial tenants.









Envision Cambridge Alewife Plan Cambridge, Massachusetts



The City of Cambridge hired Utile to develop a district plan for Alewife as part of its work with Utile on a 2030 citywide plan. This ambitious district plan repositions Alewife as a mixed-use district, composed of six unique subdistricts, that more fully reflect the urban fabric of the remainder of Cambridge. The district plan responds to increasing land values and mounting pressure for residential development in a legacy industrial area, analyzing Alewife and proposing recommendations through a series of lenses, including urban design, economic development, and climate resiliency.

The plan proposes a land use scheme that makes room for housing growth while preserving industrial uses through an innovative mixeduse light industrial prototype that would allow industrial uses to densify and become financially viable. Sustainability and resiliency are at the core of the proposal, calling for a variety of mitigation and preparedness measures.

The plan was developed through a variety of planning tools, including a robust community engagement process, analysis of existing conditions, future-oriented scenario planning, economic feasibility, and traffic impact analysis. Our team of expert consultants included Interboro Partners for community engagement, HR&A for market, real estate, and economic analysis, Nelson\Nygaard for multimodal transportation planning, and BuroHappold for environment.





Client

City of Cambridge

Citywide planning, community engagement, data analysis, visualization

Year/Status

2015-2018

Key Collaborators

HR&A, Interboro Partners, Nelson\ Nygaard, BuroHappold

\$2.5 million (Entire Envision Cambridge Plan)

Reference City of Cambridge

Melissa Peters, Director of Community Planning

(617) 349-4605

mpeters@cambridgema.gov

Proposed Land Use

Commercial Residential

Mixed-Use

Industrial

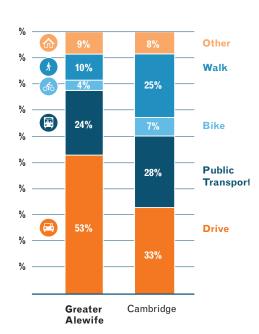
Artist Live-Work

Transportation & Utilities

Innovation

Envision Cambridge was a threeyear citywide planning process that combined innovative engagement techniques with innovative planning methodologies. The use of a physical model of the city, alongside coordinated in-person and online outreach tools, allowed the planning team to do extensive community engagement that provided nuanced feedback about the goals for the citywide plan. Moreover, the use of custom analytic models for the Alewife district (a major focus area of the citywide plan) alongside more detailed buildout citywide analyses for the commercial corridors allowed the plan to provide data-informed targets for growth and change that Cambridge can use to guide its zoning and redevelopment efforts over the coming decades.

Residents' Commuting Mode Choice



Boston Coastal Flood Resilience Design Guidelines & Zoning Overlay District

Boston, Massachusetts

Client

Boston Planning & Development Agency (BPDA)

Type

Resilience planning; design guidelines **Year/Status**

October 2018 - July 2019

Budget \$250K

Scope of Services

Urban planning, scenario planning, architectural feasibility tests, public outreach and engagement, graphic design **Key Collaborators** Kleinfelder. Noble.

Key Collaborators Kleinfelder, Noble, Wickersham & Heart LLP, HDR Engineering, Offshoots, Inc.

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Awards

2020 APA Excellence in Sustainability
Award in the Policy,
Law, or Tool category from the American
Planning Association
(APA) Sustainable
Communities Division
USGBC Massachusetts
Chapter 2019 Market
Leader in Resilience
Award

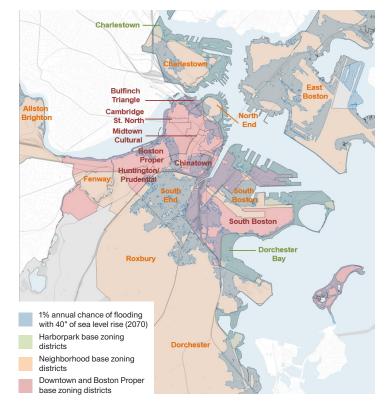
Reference

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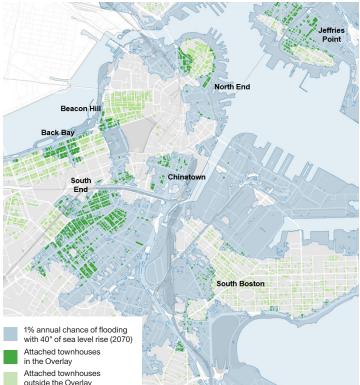
BPDA Chris Busch, Senior Waterfront Planner (617) 918-4451 chris.busch@boston. Utile was selected by the Boston Planning and Development Agency to lead a team of consultants to develop recommendations for a citywide Flood Resilience Zoning Overlay District for areas with a 1% chance of flooding in 2070, and to craft design guidelines to retrofit existing buildings and into compliance—a critical step in the City's Climate Ready Boston initiative.

The multi-faceted project approach integrates a study in national best practices, existing regulations, analysis of Boston's built form, community input, and expertise in cutting-edge building technology to identify effective, consensus-driven revisions to the zoning code.

Working closely with stakeholders in the design and development community, the consultant team examined existing frameworks for resilience in the region's coastal and low-lying communities, research national precedents and test their feasibility in the context of Boston. The team evaluated recommendations that balance public and private needs, prioritize equity, and facilitate the implementation of both short- and long-term goals.



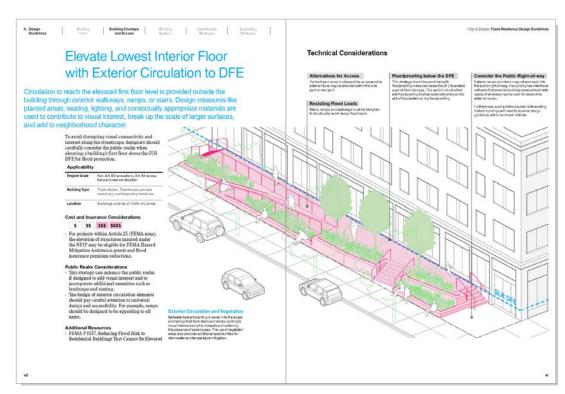
The study area includes the highly vulnerable neighborhoods of East Boston, Charlestown, and the South Boston Waterfront.

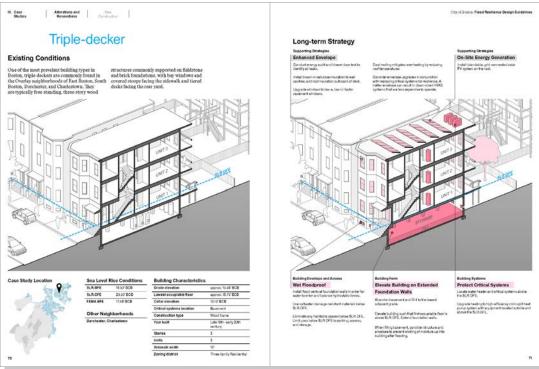


A typology analysis of Boston's built form was used to determine the of applicability of various adaptation measures.

Innovation

The Boston Coastal Resiliency Flood Zoning Design Guidelines recommends short- and long-term strategies to protect existing and future buildings from projected coastal flooding. The design guidelines are tailored to the building typologies most common to the Boston Area, from the classic triple decker of East Boston to the pre-war heavy timber buildings of Fort Point, and illustrate creative solutions to both enhance flood resiliency and ensure such measures also enhance the public realm





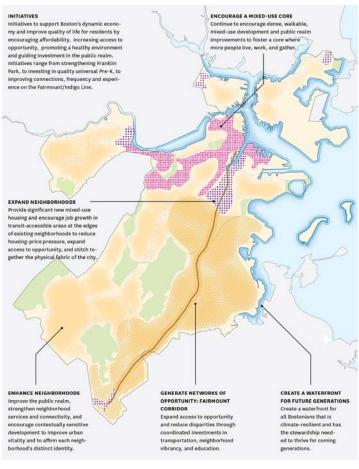
The toolkit of strategies includes a description along with supporting information including technical considerations, relative cost and insurance factors, public realm considerations, sustainability co-benefits, and further resources. Case studies illustrate how strategies can combine to enhance the coastal flood resilience of retrofits and new construction at a range of scales and in different neighborhoods.

Imagine Boston 2030 Boston, Massachusetts

As the City of Boston's first city-wide planning effort in nearly 50 years, Imagine Boston 2030 charts a course for Boston to guide growth, address persistent inequalities, and face climate change. HR&A and Utile served as lead consultants to develop a cohesive vision that stitches together past and ongoing planning efforts, and links a long-term strategy with the physical city. The team situated these elements within a holistic, system-wide approach that encompasses all aspects of urban life.

Through this two-year process, the team prepared a plan that was created, supported, and driven forward by Boston residents of all ages and backgrounds. Initial steps established a clear citywide strategic direction, and translated that direction into spatial and policy priorities accompanied by a clear implementation framework.

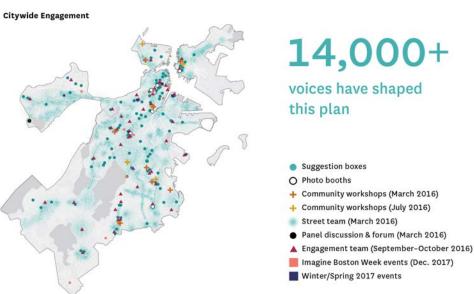
The preliminary Imagine Boston 2030 Strategic Vision Plan, released in November 2016, established strategies and a physical vision for the City's future. The spring 2017 Boston Citywide Plan encompassed the priority strategies to achieve the City's goals. Throughout this process, the team used creative and engaging approaches that exhibited national leadership and local connection to gather both input and feedback from Bostonians. This unprecedented effort engaged more than 15,000 residents via street teams, online mapping tools, workshops, and social media.



City of Boston Type Citywide planning, data analysis, visualization Year/Status 2015-July 2017 **Key Collaborators** HR&A (Utile was the planning sub-consul-Fee \$3.5 million Awards 2017 APA-MA Comprehensive Planning Award Reference Sara Myerson, Vice President at Suffolk Ventures (Former Director of Planning at (617) 652-9280 smyerson@suffolk-ven-

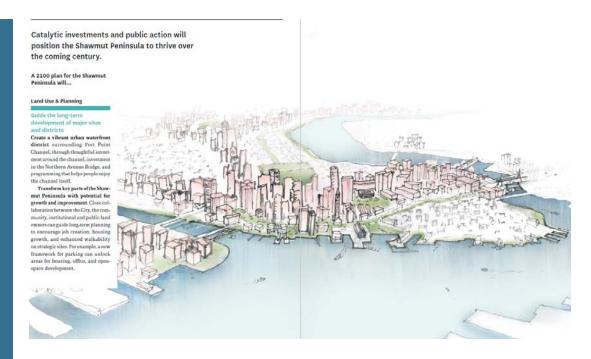
fures.com

Client



Innovation in Engagement

Imagine Boston 2030 successfully reached a wide cross-section of Bostonians through a combination of the extensive use of street teams to conduct inperson surveys and conversations, textbased phone surveys to repeatedly reach out to respondents, and multiple neighborhood open houses presenting both nuanced areaspecific information alongside the ability to meet with multiple levels of the city's planning department."









FEATURED PROJECT: FORM-BASED CODE

ASHEVILLE, NORTH CAROLINA

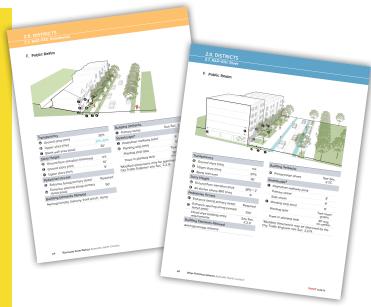
Contact: Sasha Vrtunski, Urban Planner svrtunski@ashevillenc.gov (828) 259-5560

Code Studio (Lead)

Third Coast Design Studio Nelson/Nygaard **Noell Consulting Group**

The River Arts District (RAD) has long been a cultural center for Asheville, with artists living and working in the affordable and architecturally interesting industrial buildings located near the French Broad River, yet close to downtown and other intriguing Asheville neighborhoods. This, in combination with new restaurants and shops, has made the River Arts District a vibrant, hip and exciting place to work, live and visit. However, the area is also experiencing economic, social, and physical changes.

Code Studio prepared a form-based code for the district with the goal of maintaining the industrial and creative arts feel of the District; retaining an



New district standards focus on enhancing and protecting the cultural and natural context of the area



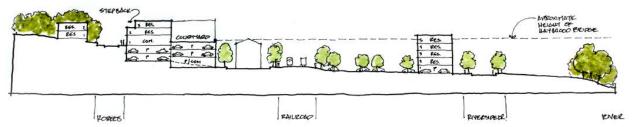


ENHANCED STANDARDS FOR STEEP SLOPES

- realm, new standards require ground story floor plates to step down with the slope of the abutting sidewalk.
- » To properly activate the public » Maximum buildings heights are required relate to topography and view sheds from adjacent neighborhoods.



Ground story floor plates must relate to the topography of the area



Topography and height study



SPACE FOR WORKING **ARTISTS STUDIOS PRESERVED**

- » Introduced live-work uses.
- » Adjusted height and intensity requirements across the RAD to focus redevelopment pressure in areas not currently occupied by artists.
- » Introduced an affordable housing height bonus system.



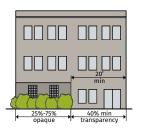


Working artists in their River Arts District studios



NEW RULES ACCOMMODATE THE FLOODPLAIN







New entrance options for development in the floodplain

- » Focus on activating the street in a floodplain environment where ground floors must be elevated above base flood elevation.
- » Building break flexibility for ground floor parking podiums on large redevelopment sites.
- » Landscaping, parking screening and parking setbacks adapted to floodplain condition.

FEATURED PROJECT: FORM-BASED CODE

CHATTANOOGA, TENNESSEE

Contact: Karen Hundt, Director, Community Design hundt karen@chattanooga.gov

Code Studio (Lead)

(423) 643-5913

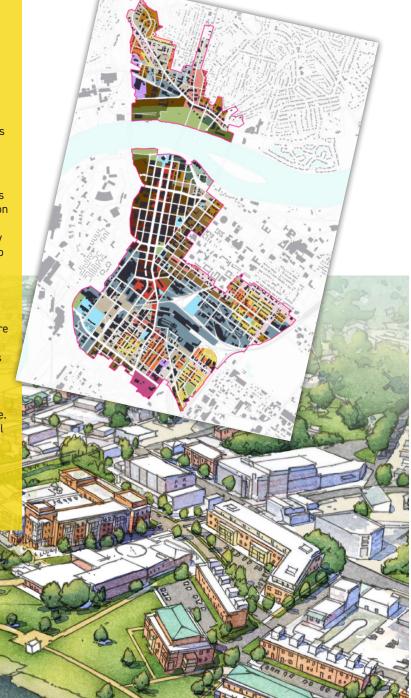
Third Coast Design Studio Nelson\Nygaard Noell Consulting Group Winter & Company

DOWNTOWN FORM-BASED CODE

Urban Advantage Zanetta Illustration Elemi Architects Urban Design Associates

The City of Chattanooga has embraced planning innovation for many years, with its successful Downtown and riverfront revitalization and high levels of public involvement. Chattanooga had a shared vision for Downtown, but the existing zoning code did not support that vision, nor did it provide sufficient quality control to ensure that new development is designed to be compatible with surrounding neighborhoods.

The Chattanooga-Hamilton County Regional Planning Agency (RPA), on behalf of the City of Chattanooga, hired Code Studio to develop a form-based code for five Downtown neighborhoods. The idea was to prepare a code that fit downtown, but could also serve as the template for other existing or emerging urban centers throughout the community as plans and visions for those areas are solidified in the future. The project offered the opportunity to enhance the form of the Downtown by directly coding for the intended outcome. The Form-Based Code was adopted by the City Council in June 2016.





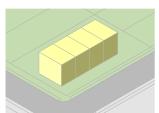
MISSING MIDDLE HOUSING

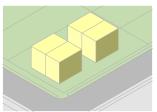
- » New single-family and multi-family zones allow a variety of multi-unit lot configurations.
- » Lot types establish a common vocabulary and advise users to available options.



Cottage Court Development







Lot Configurations



INCREMENTAL AND SMALL LOT REDEVELOPMENT

- » Right sizing parking requirements to market demand.
- » No density limitations in mixed use areas.
- » Reduced minimum lot sizes.



Private Parking Supply Analysis



CONTEXT BASED ZONING TOOLKIT

- » Modular district standards are calibrated to a variety of existing or proposed conditions, allowing for incremental expansion throughout the city.
- » Enhanced public realm standards improve development predictability and cohesive character.



FEATURED PROJECT: FORM-BASED CODE

FORT WORTH, TEXAS

STOCKYARDS FORM-BASED CODE

Contact: Randy Hutcheson, Manager Randy.Hutcheson@fortworthtexas.gov (817) 392-8008

Code Studio (Lead)

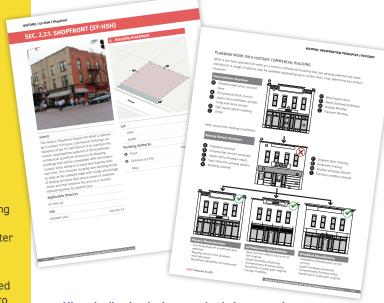
Winter & Company Common Ground Noell Consulting Group Toole Design Group Berkenbile Landscape Architects

The Fort Worth Stockyards was one of the largest livestock markets in the United States and a defining factor for the community. As the industry changed, the Stockyards transitioned from an important center for the meat packing and livestock industry to a visitor destination.

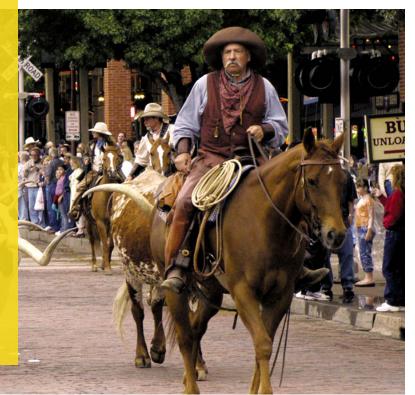
During the summer of 2014, the City Council rezoned the Stockyards in July 2014 from heavy industrial to mixed-use in order to require pedestrian-oriented development, allow residential uses and prohibit heavy industrial uses.

As a result, the City of Fort Worth hired Code Studio to develop the form-based code and design standards and guidelines.

The project area covers almost 300 acres and includes the historic Stockyards, the Marine Creek area, the Swift and Armour meatpacking sites, the commercial corridors of Main Street and 28th Street, and portions of the North Side and Diamond Hill - Jarvis neighborhoods.

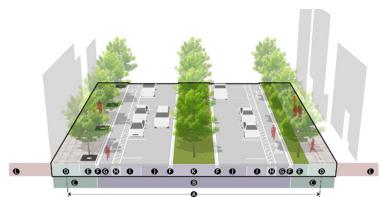


Historic district design standards integrated into form-based code

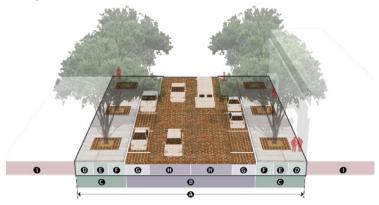


1 STREET TYPES

- » Retooled rights-of-way for multi-modal mixed-use future.
- » Increased network connectivity through new street connections.
- » Codified historic street character and introduced livestock specific infrastructure.



Stockyard Blvd street standards



East Exchange Blvd street standards

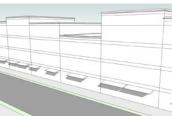
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HISTORIC DESIGN GUIDELINES

- » Historic design guidelines integrated into form-based code.
- » Variations in guidelines based on historic context.
- » Set compatible height and bulk, decoupled entitlement from appropriate design.



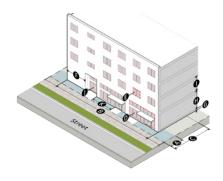


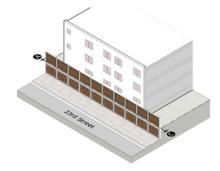


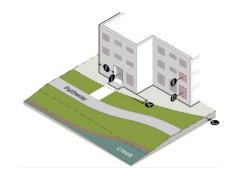
Articulation standards vary by historic context



- **FRONTAGES** » Frontages codify consistent development character along street edges regardless of adjacent zoning height and land use entitlements.
 - » Increases focus on the public realm while increasing flexibility and simplicity of zoning districts.







FEATURED PROJECT: FORM-BASED CODE

MALTA, NEW YORK

DOWNTOWN FORM-BASED CODE

Contact: Tony Tozzi, former Planning Director director@troycommunitylandbank.org (518) 328-0244

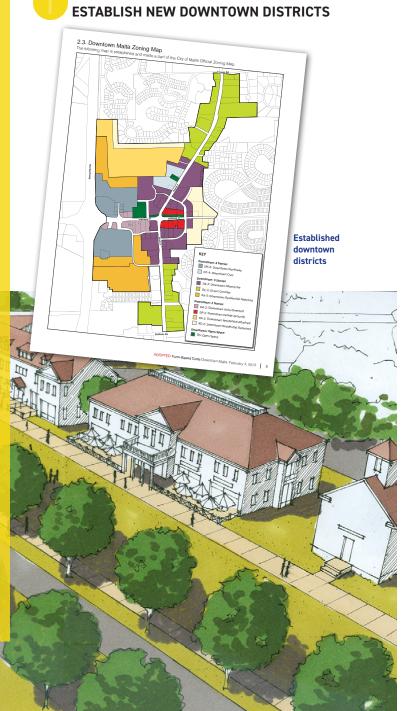
Code Studio (Lead)

Third Coast Design Studio Howard/Stein-Hudson Associates Fuss & O'Neill

On behalf of the Town of Malta, Code Studio, prepared a form-based code and complete streets plan for downtown area. The community has recently seen substantial development activity associated with the construction of several new microchip fabrication facilities. Prior to this project, the community worked to prepare a consensus plan for embracing this new growth in their downtown. However, the first developed projects based on that plan generated significant discussion due to their height, scale and mass.

Code Studio led a 6-day public participation urban design charrette to refine the downtown master plan and prepare for the new code and complete streets plan. Issues of concern included the character of State Route 9 through the study area, the significant length of the designated downtown, and the need for enhanced connectivity in the area. Large developable parcels that lie immediately behind the Route 9 frontage hold the key to the area's long-term success.

Code Studio prepared the new form-based code for the downtown responding to the vision of the charrette. The existing zoning was replaced using the outcome of the charrette to remap the downtown area in sync with the adopted downtown plan.

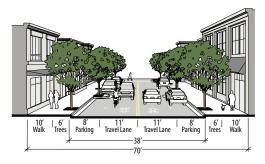




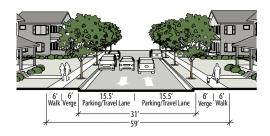
Form Districts provide a place-based framework for a walkable urban town center



D. Downtown Connector

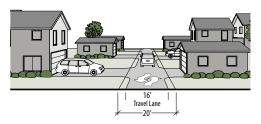


F. Downtown Residential



Street sections strengthen place identity as standards vary through town

H. Residential Alley



J. Pedestrian / Bike Path

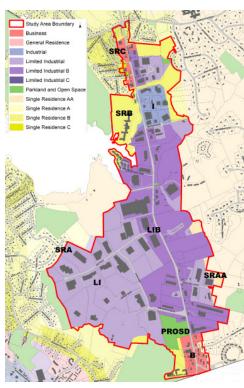


PROJECT EXPERIENCE



Route 138 Corridor Study Canton, Massachusetts





RKG SERVICES

Economic Base Analysis, Real Estate Market Analysis, Market Analysis, Fiscal Impact Analysis, Zoning, Public Engagement.

SITUATION

The Route 138 Corridor in Canton is home to nearly 350 businesses and contributes 12 percent of the Town's total property tax base. As changes in industrial parks continue in the Boston region, the Town wants to ensure this Corridor remains a viable and competitive option for companies. With several key vacancies and zoning that may not relate well today's industrial and office users, the Town embarked on a study to understand the economic opportunities and challenges and recommend regulatory changes to help secure the Corridor's future.

RKG APPROACH/SOLUTION

To answer the questions surrounding this Corridor, RKG conducted an in-depth market analysis to determine current and future demand for industrial, office, retail, and residential development. RKG also reviewed the existing Zoning Bylaw to understand how current regulations may be limiting development potential and look for ways to unify the broader Corridor. Through this process, the zoning regulations will take cues from the market analysis and ensure there is synergy between likely uses in the Corridor and what is allowed and encouraged through the Town's Zoning Bylaw. RKG also completed a fiscal impact analysis to determine the net fiscal benefits of different development alternatives along the Corridor.

RESULTS

This project was completed in December 2019 and the Town is working on rezoning efforts.

RKG Associates

PROJECT EXPERIENCE



Economic Analysis of Industrial Zoning Districts

Arlington, Massachusetts





RKG SERVICES

Market Analysis, Industrial Real Estate Analysis, Land Use and Zoning Assessment, Build-Out Analysis, and Fiscal Impact Analysis

SITUATION

The Town of Arlington, MA, a largely residential suburb of Boston, was evaluating the long-term future of its few industrially-zoned parcels, most of which were located in a densely-developed commercial spine down the town's center. In the face of significant real estate pressures driven by a hot housing market, RKG was retained to analyze Arlington's industrial zones and advise on the role that existing and future industrial uses could play in the town's economic future.

RKG APPROACH/SOLUTION

RKG, working with teammate firm Harriman, reviewed Arlington's industrial parcels in five distinct districts, identifying indicators of each parcel's susceptibility to change. RKG completed a deep dive market study for all of the town's major land uses, including office, retail, and residential, all of which were exerting redevelopment pressure on industrial landowners. Employment trends and projections were used to identify potential future commercial land uses and opportunities for Arlington to diversify its tax base. Harriman prepared a series of test-fit scenarios of different zoning schemes, which RKG supplemented with analyses of the municipal fiscal impact of each.

RESULTS

This project is ongoing and is due to be completed in the fall of 2020.

RKG Associates

PROJECT EXPERIENCE



Economic Development Plan

North Central Massachusetts Region

RKG SERVICES

Lead consultant managing entire project including sociodemographic analysis, market analysis, real estate analysis, industry sector and skills assessment, strategy identification, and public process.

SITUATION

The North Central Massachusetts Development Corporation hired RKG Associates to undertake an economic development strategy for the North Central Massachusetts Region, which includes 27 communities from I-495 west to Athol and south to Barre, Sterling, and Clinton. The NCM Region is uniquely situated between the Greater Boston and Greater Worcester markets, yet there are economic engines within the region that compete for workers and talent. In recent years, the region has been able to attract and retain jobs in manufacturing, healthcare, and education as well as grow a robust tourism and service-based industry. A lower cost of living compared to neighboring regions provides housing options that might otherwise be out of reach for workers. While the region is performing well, there is a feeling that more can be accomplished with a new strategic direction, targeted efforts, and advancing partnerships.

RKG APPROACH/SOLUTION

In the first phase of the plan, RKG evaluated socioeconomic, industry sector, and real estate market conditions to better understand how the region is performing and what industries have historically been attracted to the region. RKG identified target industry sectors the region should be pursuing and is working to develop marketing and business support strategies to attract and retain businesses long-term to the region. In the plan will provide local and regional priorities for improving overall competitiveness for both workers and jobs.

RESULTS

This project is on-going and expected to be completed in Fall 2020.





RKG Associates

Boston, MA

PLAN: South Boston Dorchester Avenue Transportation Plan



Dorchester Avenue in South Boston is undergoing rapid change. Anchored by two MBTA Red Line stations—and surrounded by major employment centers in Back Bay, the Seaport District, and downtown—the City and community developed a vision plan for redeveloping what is now a largely underutilized area. The Dorchester Avenue Transportation Plan will support access and mobility in a new neighborhood, transforming from auto-oriented commercial uses to a higher-density, multimodal mixed use. As future development progresses, everyone benefits from a better understanding of what transportation infrastructure is required to maintain and improve access and quality of life.

Phase 1 of the study has focused on compiling data to distill information about land use and transportation in the study area, as well as the prominent challenges and opportunities. The Nelson\Nygaard team has evaluated data and identified key issues to be addressed.

Future phases will turn needs, opportunities, and priorities identified at the end of the first phase into a set of network investments. This plan will be focused on multimodal issues and will include short-term and long-term recommendations, with a combination of infrastructure and policy recommendations. With public input, the study will recommend improvements and strategies that the City can pursue. Central to this work is the creation of a plan that is aesthetically interesting and creative, yet pragmatic and easily understood.

Project Duration: 2019–Ongoing

Total Budget: \$400,000

Nelson\Nygaard Budget: \$218,000

For More Information:

Boston Planning and Development Agency 1 City Hall Square #9 Boston, MA 02201

Contact:

James Fitzgerald Sr. Manager Transportation & Infrastructure 617-918-4327 James.Fitzgerald@boston.gov

Key Staff:

Theresa Carr (PM) Michael Carraher Matt Smith Suzie Birdsell



Boston, MA

Charles River Esplanade Pathway Safety & Improvement Plan



The Charles River Esplanade is the most iconic and actively used public open space in Boston. It's the daily thoroughfare for local joggers, cyclists, and roller bladers as well as a waterfront reading and picnic oasis for families, students, and tourists from all over the world. Robust programming by the Esplanade Association includes concerts, fitness classes, and movies at the Hatch Shell and dozens of other cultural and community events. Once a year, the space also plays host to Boston's famed Fourth of July fireworks and symphony musical celebration. The Esplanade pathways meander around all this programming and provide access to the Charles River and a scenic commuting route between downtown Boston and Cambridge destinations.

Since the active transportation facilities on the Esplanade were developed, national best practices for trail facility designs have evolved significantly. In addition, the area has experienced the typical challenges that come with the development of an adjacent highway cut through the space and the popular use by competing user groups convening within a limited right-of-way. On behalf of the Esplanade Association and the Department of Conservation and Recreation (DCR), the Nelson\Nygaard team formulated a pathway improvement vision and safety plan to contemporize this historic landscape with current best practices, to ensure the landscape can meet the needs of future local conditions, and to align the path system with the vision and goals of the Esplanade 2020 Vision Plan.

Project Duration: 2018–2019

Total Budget: \$50,000

Nelson\Nygaard Budget: \$35,000

For More Information:

Esplanade Association 367 Boylston Street Suite 503 Boston, MA 02116

Contact:

Emily O'Connor Director of Park Operations 617-227-0365 Ext. 501 eoconnor@esplanadeassociation.org



88 Experience Town of Harvard

Mansfield, MA

NELSON NYGAARD

Downtown Mansfield Parking Study

Downtown Mansfield has seen many changes over the past decade, as ridership at the Town's commuter rail station has risen significantly. In addition to new multifamily residential developments with ground-floor retail uses, the existing retail environment has seen changes and turnover. More mixed-use development in, around, and near the station is planned or proposed. These factors have resulted in increased parking pressure at the station and across downtown, contributing to growing vehicular congestion during peak commuting hours.

Nelson\Nygaard helped Mansfield proactively manage its parking inventory to ensure that the downtown provides enough parking at the right times to support existing businesses and attract new ones. A key challenge of this study is to cooperatively integrate two separate parking systems—a commuter parking system and a downtown parking system—that are physically divided by the train tracks, and create a cohesive, connected system that improves the downtown and commuter parking experience for all users. Many commuter parking concerns and issues are a direct result of a complicated system of public and private parking lots adjacent to the station with different owners, restrictions, (Town-only spots, MBTA public spots, monthly spots), rates, hours, and more. The current system is not predictable; access in and out of the facilities is circuitous, confusing, and encroaches on a residential neighborhood; and regulatory signage is poor. At the same time, the surface commuter lots adjacent to the station hold promise for transit-oriented development (TOD)—walkable, transit-accessible development with residential and retail located within walking distance of public transit service. Nelson\Nygaard is advising the Town on land use practices and the scale and design of replacement commuter parking spaces in advance of TOD to aid in parking management during construction and after buildout.

Nelson\Nygaard developed strategies to improve connectivity to and from the commuter rail station and downtown as well as add consistency, convenience, and predictability to the parking experience through shared parking agreements between public and private lots. The Town installed a pop-up bidirectional separated bike lane on Old Colony Way to remove the last gap between the WWII Veterans Memorial Trail and the train station.

Project Duration: 2018–Ongoing

Total Budget: \$79,000

Nelson\Nygaard Budget: \$79,000

For More Information:

Town of Mansfield 6 Park Row Mansfield, MA 02048

Contact: Kevin Dumas Town Manager 508-261-7370 kdumas@mansfieldma.com



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MILLBURY TOWN CENTER REVITALIZATION

town of millbury, massachusetts







Weston & Sampson recently worked with Town of Millbury representatives to prepare a revitalization strategy for the Town Center funded by the EPA through the New England Interstate Water Pollution Control Commission. The strategy includes planning and community outreach to implement a series of infrastructure-related improvements (parking, traffic, streetscape, intersection) and green infrastructure/Low Impact Development (LID) strategies in combination with other initiatives while leveraging new, private investment and restoring relevance to Millbury Center with a more cohesive and aesthetically pleasing retail/downtown setting.

The plan for creation of a dynamic, attractive town center at the heart of the Millbury community includes roadway/intersection repaving, reconstruction of lower/upper commons areas, parking improvements, pedestrian signals, energy-efficient street lighting, drainage improvements, ADA-compliant sidewalks/crosswalks/ramps, and a series of attractive streetscape enhancements (decorative pavers, benches, street trees, landscaped areas, etc.). Our multi-disciplinary team of transportation, landscape architecture, and utilities professionals conducted a site survey and prepared a baseplan, produced preliminary designs, met with town representatives and residents to gather feedback, developed designs from the preferred alternative, and prepared contract documents for construction. Throughout the project, Weston & Sampson facilitated the community process through workshops/meetings with residents, business owners, town representatives, and other stakeholders.

In addition, Weston & Sampson helped the town prepare a Municipal Vulnerability Preparedness (MVP) program grant application and secure additional funding for project implementation. Governor Charlie Baker recently visited the town to announce the award of \$1 million in MVP grant funding for climate change adaptation (stormwater infrastructure improvements through the use of green infrastructure).

- town center revitalization
- LID/green infrastructure development
- roadway & drainage design
- stormwater management / runoff reduction
- community outreach/ stakeholder support/ participation
- federal & state grants

client contact

Laurie Connors Town Planner 508-865-4754 Iconnors@townofmillbury.net



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BOSTON COMMON MASTER PLAN

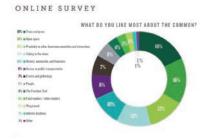
city of boston, massachusetts













The Boston Parks and Recreation Department commissioned Weston & Sampson to develop a creative, innovative, and flexible master plan for the revitalization of Boston Common. A major tourist destination, cultural beacon, and neighborhood park, Boston Common is one of the most treasured green spaces in the world. As America's first public park and an oasis in downtown Boston, we envision a resilient Common with increased capacity for existing and future historical tourism, recreation, and programming.

Together with the Boston Parks and Recreation Department and the Friends of the Public Garden, Weston & Sampson Design Studio has partnered with Kyle Zick Landscape Architecture and HR&A Advisors to develop a master plan of improvements that can withstand heavy use, New England weather, and the test of time.

As we work to prepare a strategic plan for this 50-acre property, we are guided by the goal of crafting an atmosphere of civic access and engagement. We have carefully calibrated and begun a robust public outreach process to capture a diverse range of voices across the city and beyond. We deployed a "Mini Common" pop-up exhibit at farmers markets, in public plazas, and in the park itself, giving residents and visitors the opportunity to comment on areas of the Common they like most/least, evaluate current programming, and create a wish list of potential interventions and improvements.

Nearly 6,000 individuals have taken our online survey or engaged with us at an inperson event, which provides the data about how people use the Common now and how it can better serve them in the future. A series of evening open houses has provided attendees with a summary of existing findings and an opportunity to speak one-on-one with our project team members about specific topics like safety, circulation, and trees, as well as geographic areas such as Park Street Plaza and the Frog Pond. Coupled with our design expertise, this diverse collection of engagement strategies will culminate in the delivery and implementation of a new vision for Boston Common over the next several years.

- multi-functional park for the full diversity of users
- deliberate community and visitor programming
- historical tourism
- physical landscape & circulation rejuvenation
- subsurface infrastructure coordination
- stormwater management/drainage design
- robust public engagement & social media campaign

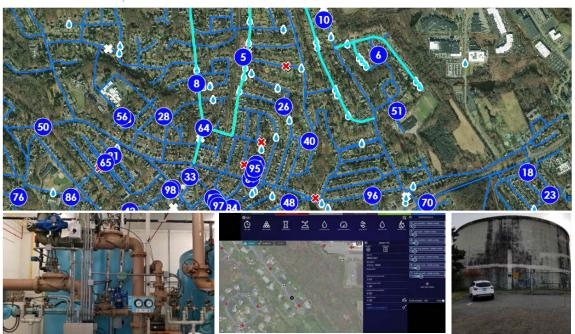
client contact

Nate Frazee Project Manager Boston Parks and Recreation Department 617-961-3167 nathan.frazee@boston.gov



WATER SYSTEM STUDY AND CAPITAL IMPROVEMENT PLAN

town of danvers, massachusetts



Weston & Sampson worked with the Town of Danvers to create a comprehensive assessment management plan, including a 20-year Capital Improvement Plan (CIP). To prioritize and track projects, Weston & Sampson created a horizontal asset (water distribution piping) inventory and a vertical asset (pump and well stations, water storage facilities, and interconnections) inventory for the town.

Weston & Sampson updated the horizontal asset inventory by taking the water distribution data (piping age, size, condition, fireflows, etc.) from the hydraulic model and GIS systems and uploading to into SEDARU a capital improvement software system purchased by the town. Using SEDARU, Weston & Sampson was able to identify system deficiencies, examine current conditions and remaining useful life, and prepare rankings for criteria, project criticality, and analyses.

For the vertical assets, the assessment focused on surveying and inventorying vertical assets that had not been included in previous CIPs, including pump and well stations. Site visits were conducted, and historical data and maintenance logs were reviewed to evaluate the vertical assets conditions and controls. These assets were assigned condition scores and consequence of failure ratings.

In addition, Weston & Sampson reviewed the hydrogeology, permitting limitations, and potential contamination sources for a potential groundwater supply wellfield at the Rebecca Nurse site and provided guidance on next steps to determine the feasibility of developing a new well source.

Using the asset rankings determined through the analysis of horizontal and vertical assets, Weston & Sampson created an asset management plan for the town to prioritize and budget for future system rehabilitation and management. Projects were grouped together by cost, criticality, service history and other key factors determined by Danvers and Weston & Sampson for the 20-CIP.

Town of Harvard

client contact

Stephen M. King Jr., PE Town Engineer Danvers Engineering Division Danvers, MA 978-777-2668 ext. 3635 sking@danversma.gov



FORMER MEDFIELD STATE HOSPITAL - ENVIRONMENTAL RESOURCE PERMITTING

massachusetts division of capital asset management and maintenance











Weston & Sampson was selected by the Massachusetts Department of Capital Asset Management and Maintenance (DCAMM) to comprehensively manage Massachusetts Contingency Plan (MCP) response actions for eight open Release Tracking Numbers (RTN) at the former Medfield State Hospital located in Medfield, Massachusetts.

One of these sites, known as the C&D area, was located adjacent to the Charles River. In order to complete the remediation of the site, the project had to undergo a full environmental permitting review.

In addition to delineating the site for Land under Water, Bank and Bordering Vegetated Wetland, this project was successfully permitted through the following environmental resource permitting process:

- Wetlands Protection Act NOI
- MEPA Permitting EENF
- Section 401 Water Quality Certification
- Chapter 91 Dredge Permit
- ACOE General Permit Category II

- 2017 ACEC Silver Engineering Excellence Award
- 2016 EBC Nicholas
 Humber Environmental
 Energy Award
 for Outstanding
 Collaboration

client contact

John O'Donnell Deputy Director Massachusetts Division of Capital Asset Management and Maintenance Boston, Massachusetts 02108 617-727-4050 john.odonnell@dcp.state.ma.us





References

Littleton Common Form-Based Code, Littleton, MA

Town of Littleton Maren A. Toohill, Town Planner (978) 540-2425 MToohill@littletonma.org

Weston Town Center Improvements, Weston, MA

Stephen J. Larocque, Chair of the Weston Town Center Planning Committee (781) 894-0901 sjl@larocque-architecture.com

Hyannis Housing Zoning Update, Barnstable, MA

Town of Barnstable, Planning and Development, Elizabeth Jenkins, Director (508) 862-4678 elizabeth.jenkins@town.barnstable. ma.us

Resumes

Matthew Littell LEED AP Principal-in-Charge

Matthew Littell is one of the founding principals of Utile. Through his work in the firm's architecture, planning, and early phase development projects, he has gained an expertise in building and zoning codes and the regulatory process specifically as they relate to urban design, housing and land use.

Matthew served as Utile's principal-in-charge for Imagine Boston 2030, the city's first comprehensive plan in 50 years. He has directed many of the firm's early phase planning and urban design projects, including the Downtown Boston Waterfront Municipal Harbor Plan, as well as the design guidelines and zoning for the Rose Kennedy Greenway District. He has led planing efforts in several Massachusetts Gateway cities, including Holyoke, Revere and Chelsea, MA, and has just completed a plan for Boston's first Flood Resilience Guidelines and Zoning Overlay. He is currently the firm's principal in charge for citywide rezoning efforts in Atlanta and Detroit, as well as Municipal Harbor Plans in Salem, Lynn, and Chelsea, MA.

Matthew teaches a course on contemporary urban design issues at Boston College. He earned his M.Arch. from Harvard's Graduate School of Design in 1997, where he received the Boston Society of Architects' James Templeton Kelly award for the best final design project, as well as the Clifford Wong prize for outstanding design in housing.



Education

Harvard University Graduate School, Master of Architecture, 1997

Columbia College, Bachelor of Arts in Religion, 1989

Affiliations

Northeastern University Department of Architecture, Lecturer in Computer Aided Design, Graduate Thesis Studio

Selected Projects

Boston Flood Resiliency Zoning Overlay District & Resiliency Design Guidelines, Boston, MA—for the City of Boston

Imagine Boston 2030, Boston, MA—The City of Boston's first citywide master plan in 50 years

Greenway District Planning Study, Boston, MA—for the City of Boston

Stuart Street Planning Study, Boston, MA—Comprehensive planning study and zoning update

Long Beach Corridor Vision Plan, CA—in collaboration with RSAUD

East Anaheim Street Corridor Study, Long Beach, CA—in collaboration with RSAUD

Downtown Boston Waterfront Planning Initiative, Boston, MA—for the City of Boston

Climate Ready Boston: Coastal Resilience Solutions for Dorchester, Dorchester, MA—with SCAPE for the City of Boston

Salem Municipal Harbor Plan Update, Salem, MA—Ongoing update for the City of Salem

Lynn Waterfront Master Plan, Lynn, MA—for the City of Lyann

Chelsea Creek Municipal Harbor Plan, Chelsea, MA—for the City of Chelsea Dorothea Dix Park Master Planning, Raleigh, NC—with MVVA

Buffalo Bayou East Master Plan, Houston, TX—with MVVA and HR&A for the Buffalo Bayou Partnership

Chelsea Soldiers' Home Campus Redevelopment Master Plan, Chelsea, MA

Frontage Road Municipal Operations, Boston, MA—for the City of Boston

Portland Housing Authority Master Planning, Portland, ME

88 Hudson Street Condominiums, Boston, MA—51 units of affordable housing for Asian CDC

One Beach, Revere, MA—39 units of affordable senior housing for The Neighborhood Developers

The Mastlight, South Weymouth, MA—265-unit mixed-use development on a former naval air station

MetroMark Apartments, Boston, MA—283 units for The Brennan Group & John M. Corcoran Company

Spencer Green, Chelsea, MA—48 units of affordable housing for The Neighborhood Developers

Upper Washington, Dorchester, MA—Mixed-Use development for VietAID

242 Spencer Avenue, Chelsea, MA—34 units of affordable housing for The Neighborhood Developers

Hyde-Blakemore, Roslindale, MA—13 units of affordable housing for Urban Edge

Lyman Terrace Redevelopment Studies, Holyoke, MA—for MassDevelopment

Lower Roxbury Housing Analysis, Roxbury, MA—for The American City Coalition (TACC)

Taskina Tareen Project Manager

Taskina Tareen joined Utile in 2018 as an urban designer and planner. She has worked extensively as content manager on PlanBeverly, the City of Beverly's comprehensive master plan which will be completed in summer 2020. She was the project manager for the Worcester Main South TDI District Planning study, and managed the research and graphic content for the New Bedford Maritime Economy Innovation Pitch Book. Taskina has also worked on feasibility and development test-fit studies in Westfield, Revere, Detroit, and Houston.

Prior to joining Utile, Taskina worked as an architectural designer at Arrowstreet in Downtown Boston, where worked on a variety of project types including residential and retail development. She received her Master of City Planning from the Massachusetts Institute of Technology, where she served as co-chair of UrbanAfrica, a student-led initiative exploring research and practice-based interests and analysis of African cities, and a Bachelor of Architecture from Syracuse University, where she received a citation for excellence in thesis design for her project focused on urban food systems in developing cities.



EducationMIT, Master of City Planning

Syracuse University, Bachelor of Architecture

Selected Projects

Nashua Master Plan Update, Nashua, NH

Houston Land Bank Inventory Mappings and Test-fits, Houston, TX

PlanBeverly Citywide Plan, Beverly, MA—for the City of Beverly

Worcester Main South District Planning Study, Worcester, MA

MassDevelopment Test Fits, Westfield, MA

Maritime Economy Innovation Pitch Book, New Bedford, MA—with Ninigret Partners

Tech Client Data Center Workspace Prototype, Nationwide

Education

Harvard University Graduate School of Design, Master of Architecture in Urban Design

Rice University School of Architecture, Bachelor of Architecture, with honors

Rice University School of Architecture, Bachelor of Arts in Architecture, Magna cum laude, Phi Beta Kappa

Selected Projects

Littleton Common Revitalization & Form-based Zoning, Littleton, MA

Boston Flood Resiliency Zoning Overlay District & Resiliency Design Guidelines, Boston, MA

Pittsfield Tyler Street Housing Plan, Pittsfield. MA

Vision Haverhill 2035 Citywide Master Plan, Haverhill, MA

Frontage Road Municipal Operations Planning, Boston, MA

Shirley Ave. Streetscape Design, Revere, MA—for the City of Revere

Dorothea Dix Park Master Planning, Raleigh, NC—with MVVA

Tech Client Data Center Workspace Prototype, Nationwide



Jessy Yang Urban Designer

Jessy, a Houston native and Rice University undergraduate, joined Utile in 2018 as an urban designer. He earned his Master of Architecture in Urban Design degree with distinction from the Harvard University Graduate School of Design, where he won the Award for Outstanding Leadership in Urban Design.

At Utile, he's managed the Littleton Common Revitalization and subsequent Formbased Zoning project, and has been involved with reimagining the future of Dorothea Dix Park in Raleigh, North Carolina. Jessy previously worked at the Harvard GSD Office for Urbanization where he conducted design research on the urban adaptation of Miami Beach to climate change and sea level rise.

Prior to joining Utile, Jessy worked at Stan Allen Architects, Machado Silvetti, and CAZA Architects. Having taught summer courses on architecture and urban design at the GSD, he is currently co-teaching a graduate studio at the Boston Architectural College on the integration of typology and topography. Jessy received his Bachelor of Architecture from the Rice University School of Architecture.

Jeff Geisinger AIA, LEED AP, CPHC® Director of Sustainable Design

Jeff Geisinger leads Utile's building performance and resilience initiatives. As a Certified Passive House Consultant (CPHC), he has guided the design of several multifamily projects pursuing Passive House certification. He works intimately with project teams to set sustainability goals from the start and to integrate cost-effective solutions for energy efficiency through in-house energy modeling. Jeff also advances resilience best practices within the firm's architecture and urban design practice. In 2019, he co-authored the City of Boston's Coastal Flood Resilience Design Guidelines, which outlines strategies to make buildings more resilient to sea level rise. In addition to project-based work, Jeff leads Utile's AIA 2030 Commitment benchmarking.

Jeff holds a Master of Science from the Building Technology Program at MIT and a B.Arch from Rice University. He is a lecturer at the Rhode Island School of Design's Department of Architecture, where he teaches courses on environmental building performance.

 $\mbox{\sc CPHC} \mbox{\sc B}$ is a certification mark of Passive House Institute US (PHIUS). Used under license.



EducationMIT, Master of Science in Building Technology

Rice University, Bachelor of Architecture

Affiliations

Certified Passive House Consultant

Selected Projects

Boston Flood Resiliency Zoning Overlay District & Resiliency Design Guidelines, Boston, MA

domestiCITY for an Affordable Atlanta Competition, Atlanta, GA

Highland Yard Energy Positive Housing, Roxbury, MA

Scape Mixed-Use Developments, Boston & Somerville, MA

25 Sixth Street Housing, Chelsea, MA—62 units of affordable housing for The Neighborhood Developers

Sycamore on Main, Brockton, MA—48 units for NeighborWorks Housing Solutions

1599 Columbus Ave, Jamaica Plain, MA—65-unit ffordable housing in Jackson Square for Urban Edge

1005 Broadway, Chelsea, MA—38 units of affordable housing for The Neighborhood Developers

LEE EINSWEILER



EDUCATION

Master of Regional Planning University of North Carolina at Chapel Hill

Bachelor of Science Environmental Planning/ Regional Analysis University of Wisconsin at Green Bay

PRINCIPAL-IN-CHARGE

Lee has been involved in planning, zoning and plan implementation in a variety of settings over the past 30 years. His emphasis has been on redevelopment activity in urban areas, beginning in south Florida in the 80's and 90's, and continuing with his recent work in Los Angeles, Amherst NY and the Concord NH.

Lee sharpened his skills in the preparation of zoning and subdivision regulations across the country, and has been personally responsible for over 50 code projects, including the complete revision and adoption of over 30 codes and the preparation of almost 20 form-based codes. His combination of conventional zoning know-how and new code approaches are rare in the profession, and his ability to facilitate the consideration and adoption of new zoning serves his clients well.

Lee has served as an adjunct faculty member in the Department of Community & Regional Planning at the University of Texas, teaching smart growth tools at the graduate level, which serves as a constant source of innovation. He is a former board member of the Central Texas chapter of the Congress for the New Urbanism (CNU). Lee is a frequent speaker at state and national conferences on the issue of zoning and form-based codes.

RECENT EXPERIENCE

Los Angeles Zoning Update. Lee is currently leading a team in the process of replacing Los Angeles' 1946 zoning code. The new code will eventually cover the entire City, implementing community plans as they are updated. This multi-year effort includes a downtown code.

Sandy Springs Development Code. Lee recently worked with this 10-year old City to replace their former County zoning with new concepts tailored to match their recently adopted Comprehensive Plan.

Amherst Mixed Use Activity Center Zoning. The Town of Amherst, NY is committed to grow more sustainably. Lee prepared a sustainable centers strategy plan amendment, along with new zoning to implement the sustainable centers concept.

COLIN SCARFF



EDUCATION

Master of Community & Regional Planning University of Texas at Austin

Bachelor of Arts Urban & Regional Analysis University of Texas at Austin

PROJECT MANAGER

Colin brings a design perspective to conventional coding and planning practices, developing plans and codes that place a greater emphasis on urban form. Colin crafts plans and codes that are easy to use, easy to understand and easy to administer. His recent efforts focus on applying form-based, mixed-use approaches to plan and code the character of a wide variety of communities across the nation. Whether it's a neighborhood, downtown, commercial corridor or entire community, Colin believes in developing planning documents that encourage traditional, compact neighborhoods that are sensitive to the environment and context around them.

Colin's work takes a holistic approach, with the philosophy that effective regulations can only be developed with the aid of good planning support. Colin believes in using public participation charrettes to create effective plans and codes, bringing together a wide variety of participants to collaborate on a vision for their community. As a result, the "right" plans and codes are more easily developed and adopted.

Colin's work in Peoria, Illinois won a Driehaus Award for Excellence from the Form-Based Code Institute. His work in downtown Simsbury recently received an honorable mention from CNU New England for excellence in urbanism and public participation.

RECENT EXPERIENCE

Chattanooga Downtown Form-Based Code. Colin recently prepared new zoning for five downtown neighborhoods. This form-based code is intended to encourage economic development consistent with the planned character of the Downtown area.

Fort Worth Stockyards Form-Based Code. Following a recent local historic district designation for the Stockyards, a form-based code and guidelines to support this key piece of Fort Worth's history was recently adopted.

Asheville River Arts District Form-Based Code. Colin worked with the community and City staff to prepare a form-based code for the River Arts District that aims to preserves existing character such as working artist studios, as well as providing for creative infill.

QUALIFICATIONS



EDUCATION

University of Illinois
Masters of City and Regional Planning

Rutgers UniversityB.S. in Environmental Planning and Design

Harvard University Executive Ed. Urban Retail

PROFESSIONAL AFFILIATIONS

Urban Land Institute

Housing and Economic Development Council

American Institute of Certified Planners

American Planning Association

ECONOMIC/MARKET STUDY EXPERIENCE

North Central Mass Economic Dev't Strategy NCM Region, Massachusetts

Transformative TOD Market AnalysisFitchburg, Springfield, Worcester, and Lynn, Mass.

Littleton TOD Market Analysis Littleton, Massachusetts

Route 113 Corridor Study Market Analysis Dunstable, Massachusetts

Route 138 Corridor Study Canton, Massachusetts

Broadway Industrial Market Analysis Haverhill, Massachusetts

Route 66 Corridor Study
Easthampton and Portland, Connecticut

ERIC HALVORSEN, AICPVice President and Principal



Eric Halvorsen, AICP, has over fourteen years of experience in land use, economic development, housing, and transportation planning. Eric's diverse planning background provides a broad perspective making connections between the many facets that drive community decisions, inputs, and results. Eric also brings a wide range of project experience including work on master plans, downtown plans, economic and market studies, housing plans, and site specific plans. Additionally, he has managed multiple public engagement efforts, crafting processes for groups as small as five and as large as 300. These include highly interactive open houses, site walks,

Eric's focus has been and continues to be the formulation of realistic strategies that help catalyze change in the short- and long-term. Making connections between each facet of community development is a critical component to success. Eric enjoys learning, understanding, and leveraging those elements of a place that make it unique.

town hall meetings, small group facilitation, focus

groups, and project working groups.

FISCAL IMPACT ANALYSIS EXPERIENCE

Arlington Industrial Zoning Study Arlington, Massachusetts

Framingham Economic Dev't Study Framingham, Massachusetts

Northland Newton Development FIA Newton, Massachusetts

Mashpee Commons Development FIA Mashpee, Massachusetts

Assembly Row FIA Somerville, Massachusetts

Oak Grove Mill FIA Melrose, Massachusetts

Noroton Heights FIADarien, Connecticut

*Additional Project Experience Provided Upon Request

RKG Associates

QUALIFICATIONS



EDUCATIONUniversity of Maryland
B.A. Economics and Geographical
Sciences

PROFESSIONAL AFFILIATIONS

Urban Land Institute

RKGASSOCIATES INC.

RACHEL WALDMANProject Manager

Rachel has over six years of consulting experience working with both public- and private-sector clients. Rachel specializes in advising clients on a wide variety of housing, real estate, and economic development decisions from site-specific developments to neighborhood and community plans. Her experience with a diversity of clients, projects, and geographies provides her with a broad perspective from which to draw when understanding the unique characteristics of each community and project.

Rachel has extensive experience managing the data analysis and research elements of projects that provide the foundation to support meaningful conclusions and recommendations.

DEVELOPMENT FEASIBILITY & MARKET STUDIES

Comprehensive Development Feasibility Study Detroit, MI

Hotel-Branded Condominium Market Feasibility Study and Fiscal Impact Analysis Phoenix, AZ

Strategic Development, Programming, and Phasing Analysis and Recommendations Nashville, TN

Highest and Best Use Analysis Poughkeepsie, NY

Retail Repositioning and Fiscal Impact Analysis Loudoun County, VA

Rental Apartment Market Study and Strategic Development Recommendations Denver, CO

NEIGHBORHOOD & AREA PLANNING EXPERIENCE

Eastern Market Neighborhood Framework Detroit, MI

Riverfront Legacy Master Plan Wichita, KS

Cherry Hill Transformation Plan Baltimore, MD

Business Improvement Zone Inception Analysis Midtown Area Detroit, MI

HOUSING PLAN & STRATEGY EXPERIENCEHoward County Housing Opportunities Master Plan

Howard County, MD

RKG Associates

^{*}All projects completed under previous employer.







Matt Smith has more than a decade of public and private-sector experience in transportation and urban planning, working closely with municipalities, state and regional agencies, and private-sector clients on transportation initiatives, redevelopment planning, economic analyses, and environmental assessments. Throughout his career, Matt's work has focused on the integration of transportation and land use planning and policy to enhance community livability, economic opportunity, and sustainability. His work in multimodal and parking management planning has helped communities to develop efficient, connected, and safe transportation networks for all users—pedestrians, bicyclists, transit riders, and drivers. Matt knows how to both plan the work and work the plan. Prior to joining Nelson\Nygaard's Boston office, he was the Director of Traffic and Parking for the City of Salem, MA, where he led implementation of Nelson\Nygaard's Downtown Parking Plan, the city's Complete Streets and Neighborhood Traffic Calming programs and successfully launched and grew the city's bike share program.

EDUCATION

Master of Urban Planning, Hunter College of the City University of New York, 2005 B.S., Communications, Syracuse University, 1994

EXPERIENCE

Nelson\Nygaard Consulting Associates, Inc. Principal, 2018–Present

- Dorchester Avenue Transportation Plan, Boston Planning and Development Agency (Boston, MA) 2019 Ongoing. Matt serves as the Deputy Project Manager, overseeing multimodal analysis, parking strategy and transportation demand management strategy, and assessing how future land uses and auto traffic will impact the larger multimodal transportation network. This project builds on 2016's PLAN Dorchester Avenue, which laid the foundation for a mixed use and multimodal future for Dorchester Avenue.
- Manchester TOD Strategy (Manchester, NH), 2019-Ongoing. Matt is managing the multimodal transportation network planning to anchor a future TOD district in Downtown Manchester. Critical to the success of the district is to "break through" substantial physical barriers to create a highly connected, efficient mobility environment; and a successful, user-friendly parking system and regulatory requirements to support future redevelopment within the project area.
- Attleboro Downtown Mobility Study (Attleboro, MA) 2020 Ongoing. As Project Manager, Matt is assisting MassDevelopment and the City of Attleboro to develop a comprehensive mobility plan to enhance safety and economic opportunity in its downtown and TOD area adjacent to the MBTA commuter rail station. Key recommendations will focus on active transportation investments, enhanced lighting and streetscapes, ADA-accessibility, pedestrian safety and road diets, and a new wayfinding strategy. The plan will also provide key strategies for recovery after the COVID-19 slowdown.
- Keene Downtown Parking Zoning Analysis (City of Keene, NH) 2019-2020. Working with the City of Keene, NH, Matt managed this assessment of total parking supply and demand within its downtown and surrounding neighborhoods as part of the City's rezoning process. Using Nelson\Nygaard's proprietary parking model, the project resulted in a complete understanding of parking needs within the study area, and recommended parking requirements for the five zoning districts
- Mansfield Downtown Parking and Connectivity Study, Town of Mansfield (Mansfield, MA) 2018-Ongoing. As Project Manager, Matt is working with the Town of Mansfield to develop a parking strategy that is responsive to changing commuter parking, land use and retail patterns (e.g. mixed use redevelopment) in its downtown. A key component of the strategy are strategies to relocate over 700

CAROLINE WELLS, AICP

BACKGROUND

2019-present Senior Project Manager Weston & Sampson

2014-2019 Principal Bonville Strategies, LLC

2017-2019 Director of Planning & Development Town of Coventry, Rhode Island

> 2016-2017 Principal Planner State of Rhode Island

2008-2015 Director of Planning Town of Warren, Rhode Island

2008 Consultant Church Community Housing Corporation

2006-2007 Deputy Director, Department of Housing & Community Development City of New Bedford, MA

2000-2005
Executive Director,
Redevelopment Commission
Department of Housing &
Community Development
City of Greensboro, North Carolina

EDUCATION

2000 Master of Regional Planning University of North Carolina, Chapel Hill

> 1996 Master of Arts Classical Art and Archaeology University of Texas, Austin

1994 Bachelor of Arts Anthropology and Classics University of Florida, Gainesville

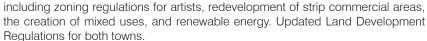
PROFESSIONAL REGISTRATION

Certified Planner with the American Institute of Certified Planners (AICP)

Caroline is a senior project manager with nearly 20 years of experience in comprehensive planning and development review. She has managed numerous public projects involving green infrastructure, brownfields, parks, streetscapes, and bike paths. She has expertise in policy and plan development, grant writing and grant management, community outreach and stakeholder engagement, and budgeting.

SPECIFIC PROJECT EXPERIENCE

Local Zoning and Land Development Regulation Development, Warren and Coventry, Rhode Island. Researched and prepared development regulations,



Comprehensive Plan Development, Warren and Coventry, Rhode Island. Led the development of comprehensive plans for the Town of Warren and the Town of Coventry. Facilitated workshops focus groups, neighborhood meetings, and Town Council updates. Drafted and conducted online surveys to gather public opinion and prepared print and web media for community outreach. Researched and drafted plan sections and created associated maps.

Metacom Corridor Streetscape Plan, Route 136, Warren, Rhode Island. Led a planning effort to introduce Complete Streets concepts to an existing commercial strip that created a barrier for pedestrian transportation for adjacent neighborhoods. Facilitated stakeholder workshop with neighborhood residents, business owners, local politicians, and local police officers.

Rhode Island Long Range Transportation Plan and Bicycle Mobility Plan, State of Rhode Island Metropolitan Planning Organization (MPO). Led the development of the state's 20-year plan for transportation investment in keeping with requirements of federal law, the State Guide Plan, and other goals. Prepared scope of services for consulting teams, coordinated a selection review committee, and presented updates to the RI Statewide Planning Council, Transportation Advisory Committee, and Technical Committee. With the Governor's Office, coordinated a regional transportation event to launch the planning effort and set schedule for statewide public workshops.

Hazard Mitigation Plan, Warren, Rhode Island. Directed the town's HMP effort, including facilitation of the HMP Committee, workshops, and public meetings. Researched existing conditions and previous natural hazard events and mapped vulnerable areas, critical infrastructure, and special populations. With the HMP Committee, prioritized actions to reduce vulnerability to natural hazards. Prepared drafts and updates based on public input. The final plan was approved by FEMA under their guidelines for Hazard Mitigation Planning. (with former employer)



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JEFFREY SANTACRUCE, PE, PTOE

BACKGROUND

2018-Present Senior Project Manager Weston & Sampson

2011-2018 Project Manager McFarland Johnson, Inc.

> 2010 Project Engineer Kleinfelder/SEA

2002-2009 Project Manager Greenman-Pedersen, Inc.

1997-2002 Access and Utility Supervisor New Hampshire DOT Highway Maintenance District 5

EDUCATION

1994

Bachelor of Science, cum laude Civil Engineering University of New Hampshire

PROFESSIONAL REGISTRATION

Professional Engineer: Massachusetts No. 50065 New Hampshire No. 10650 Connecticut No. 0030580 Vermont No. 08.0091133 Maine No. 13637

Professional Traffic Operations Engineer # 4394

PROFESSIONAL AFFILIATIONS

Institute of Transportation Engineers

New Hampshire Institute of Transportation Engineers (Past President 2016-2017) Jeffrey is a senior project manager with more than 20 years of experience leading highway and traffic engineering/ transportation planning projects throughout New England. His projects have included traffic signal design, traffic calming strategies, roundabout design and complete street designs. Jeffrey is also experienced in drainage design, structural design, hydrologic/hydraulic analysis, cost estimating, construction inspection, and the environmental approval process.

SPECIFIC PROJECT EXPERIENCE

Route 103 Traffic Calming & Roundabout, Warner,

New Hampshire. Traffic engineer responsible for traffic engineering design and initial layout of the proposed roundabout. Project included traffic calming and motorist safety measures, roundabout design, improved driveway access to local businesses, and a park and ride lot. (with former employer)

Transportation Improvements Planning Study for US 3 and NH 25 Corridor, Meredith, New Hampshire. Traffic engineer responsible for traffic engineering analysis and design of signal intersection improvements, as well as review of all pavement marking and sign installation for NHDOT. The planning phase included studying a range of alternatives to relieve congestion. Work involved community planning and public outreach consistent with Context Sensitive Solutions principles, as well as assessment of capacity, safety, and operational challenges within the study limits; transportation modeling; traffic counting and analysis; economic evaluations; environmental screening; landscape architecture; and project website development. (with former employer)

US Route 3 Corridor (North) Improvement Program Phase 4B, Concord, New Hampshire. Traffic engineer responsible for traffic engineering analysis and design of signal intersection and roadway improvements, as well as review of all pavement marking and sign installation. Improvements included eliminating a lane, reconfiguring left turns to and from Route 3, and reconstructing curbing, sidewalks, crosswalks, and drainage facilities. (with former employer)

Traffic Signal Design, Hudson, New Hampshire. Project manager responsible for overall project coordination, project design, overseeing the traffic analysis of the proposed improvements, and preparation of design plans, specifications, and bid documents. Design aimed to improve the operation at the intersection of Pelham Road and Lowell Road (Route 3A) while mitigating the overall impacts to traffic. (with former employer)

Downtown Main Street Complete Street Project, Concord, New Hampshire. Traffic engineer responsible for traffic engineering analysis and design of the signal intersection improvements, as well as review of all pavement marking and sign installation. Project involved converting Main Street's four-lane vehicular roadway to a two-lane roadway with wide lanes to accommodate bicycles and enlarged sidewalks with prominent bump-outs, new lighting, and LED Blank-Out panels with a "No Right Turn" indication to increase pedestrian safety. (with former employer)

Weston & Sampson

LEAH STANTON, PE

BACKGROUND

2016-Present Vice President Weston & Sampson

2011-2015 Senior Associate Weston & Sampson

2009-2011 Team Leader Weston & Sampson

2002-2008 Project Manager Weston & Sampson

1999-2002 Senior Engineer Weston & Sampson

1996-1999 Engineer Weston & Sampson

EDUCATION

1998 Master of Science Civil/Environmental Engineering University of New Hampshire

1994 Bachelor of Science Civil Engineering University of New Hampshire

PROFESSIONAL CERTIFICATIONS

Professional Engineer: Massachusetts No. 45779 Connecticut No. PEN.0032293 New Hampshire No. 10406 Rhode Island No. 0011578 Florida No. 82069

PROFESSIONAL SOCIETIES

American Water Works Association

PRESENTATIONS & **PUBLICATIONS**

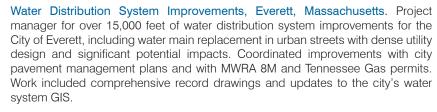
"Rehab or Replacement," presented at AWWA CT Conference, February 2018

Leah has more than 20 years of experience in the study, design, and construction of water supply, storage, distribution, and treatment systems, as well as water supply modeling. She also assists with long-term capital and fiscal planning and developing financial plans for utility capital programs.

SPECIFIC PROJECT EXPERIENCE

PJ Holton Water Treatment Plant On-Call Engineering Services, Providence Water, Rhode Island. Project manager for the 144-mgd P.J. Holton water treatment plant on-call engineering services project for Providence Water. Prepared chemical





Water Treatment Plant Design and Construction, Chatham, Massachusetts. Principal for the engineering design of a greensand iron and manganese removal plant for three wells with differing water quality. Completed construction and oversaw plant start-up as needed with staff retirement of project engineer.

Water System Hydraulic Model Update, Woburn, Massachusetts. Project manager for the water system hydraulic model update for the city. Recommended improvements to the city's water system GIS pipe network to address future imports into the hydraulic model. Performed flow testing, model calibration, steady-state analysis, and preparation of a Capital Improvement Plan.

Winona Water Treatment Plant Upgrade, Peabody, Massachusetts. Principal for cost evaluation of rehabilitating a 50-year old surface water treatment plant compared with water supply from regional authority. Worked with the city to ultimately choose a plant upgrade. The upgrade will be comprehensive and will include installation of a new dissolved air flotation (DAF) system to replace the conventional sedimentation process. The project includes a pilot study and a new building addition for chemical feed systems.

Water Treatment Plant Design and Construction, MCI Norfolk, Massachusetts. Principal for the engineering design of a greensand iron and manganese removal plant for the water supply at the MCI Norfolk prison facility.

Well Pump and Pumping Station, Williamstown, Massachusetts. Project manager for the design of a new vertical turbine well pump and pumping station. Performed well pump and instrumentation and controls design upgrades that resulted in significant energy savings in pump operations over the original well and pump. Upgrades to the pump station included rehabilitation of existing chemical feed systems, processes, and building.

Weston (&) Sampson

HILLARY LACIRIGNOLA, PE

BACKGROUND

2017-Present Vice President Weston & Sampson

2011-2017 Associate Weston & Sampson

2010-2011 Team Leader Weston & Sampson

2004-2010 Project Manager Weston & Sampson

2001-2004 Senior Engineer Weston & Sampson

1997-2001 Engineer Weston & Sampson

EDUCATION

2002 Master of Science Civil Engineering Northeastern University

1997 Bachelor of Science Environmental Engineering Syracuse University

PROFESSIONAL REGISTRATION

Professional Engineer: Massachusetts No. 47992 New Hampshire No. 10788

PROFESSIONAL CERTIFICATION

OSHA 40-Hour HAZWOPER

PROFESSIONAL SOCIETIES

American Society of Civil Engineers

Institute of Risk Management

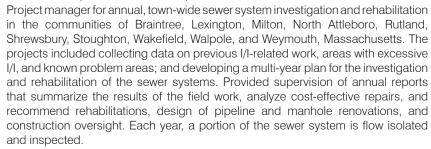
New England Water Environment Association

Water Environment Federation

Hillary is involved in the planning, design, construction, and evaluation of wastewater, stormwater, infrastructure management, and water resource engineering projects. She has a working knowledge of federal, state, and local regulatory agency policies, procedures, and permitting requirements, and has been responsible for managing several projects. Hillary is also involved in corporate risk management.

SPECIFIC PROJECT EXPERIENCE

Town-Wide Sewer System Investigation and Rehabilitation, Various Locations, Massachusetts.



Sewer Separation Study, Chelsea, Massachusetts. Engineer for this study which involved coordination and oversight of the subcontractor's field evaluation, manhole inspections, smoke testing, and dye testing. Also assisted in the cost-effectiveness analysis as well as the design of inflow rehabilitations.

Interceptor Evaluation and Hydraulic Capacity Analysis, Shrewsbury, Massachusetts. Project manager for the project which included performing a hydraulic analysis and developing a computer hydraulic model for the town's major wastewater interceptor. Manhole and pipeline inspections were also conducted, and the data was used to develop a 3-phased Interceptor Upgrade Program. The first phase, currently underway, includes clearing of nearly 3000 linear feet of sewer easement with gravel road construction, and replacement of nearly 1500 linear feet of sewer interceptor pipe.

Wastewater and Water System Planning Projects, Southeastern Massachusetts.

Client/project manager for various wastewater and water system planning projects for the largest landholder in southeastern Massachusetts to provide a variety of services for a 1,175-unit development across 1,500 acres of undeveloped/agricultural land. One of the primary concerns was with respect to wastewater disposal, or more specifically Nitrate (NO3-) disposed of in treated effluent in a watershed that was determined to be impaired by Nitrate and listed on the EPA's 303(d) list. This project included the development of a private water utility and water use rate structure for approval through the Massachusetts Department of Public Utilities. This effort included developing a rate/revenue analysis, submittal of testimony to the DPU, and implementation of the rate structure including customer billing format.

Weston & Sampson

CHERI RUANE, FASLA

BACKGROUND

2015-Present Vice President | Practice Leader Weston & Sampson

2006-2015 Practice Leader | Senior Associate Weston & Sampson

2005-Present
Visiting Lecturer and Studio
Instructor
Harvard Graduate School of Design

2001-2006 Senior Landscape Architect Jacques Whitford Company, Inc.

> 1999-2001 Summer Intern Carol R. Johnson Associates

> 1995-1999 Assistant Project Manager Boston Parks and Recreation Department

EDUCATION

Master of Landscape Architecture
Harvard University
Graduate School of Design

1995 Bachelor of Science, cum laude Landscape Architecture University of Massachusetts

PROFESSIONAL REGISTRATION

Registered Landscape Architect:
Massachusetts No. 1220
New Hampshire No. 012
Connecticut No. LAR.0001510
New York No. 002211-1
Florida No. 6667031
North Carolina No. 2141
South Carolina No. LSA 1336
Texas No. 3270
Pennsylvania No. LA.003136
Colorado No. LA.0001152

PROFESSIONAL AFFILIATIONS

Fellow, American Society of Landscape Architects

CLARB Certified

Boston Society of Landscape Architects, President

Cheri is a Registered Landscape Architect with 20 years of experience in multi-disciplinary project management, community engagement, construction administration, and business development. She has special expertise with socially and politically complex site design projects and facilitating public participation. The combination of managing projects from the perspective of the owner, while working for the City of Boston, as well as supporting clients as a consultant, has given Cheri a unique understanding of how best to manage complex projects and work in close coordination with various stakeholders.



Cheri understands that urban landscapes require a creative approach to design integration. From coordinating the goals of owners and stakeholders to choosing appropriate construction materials, these places have complicated contexts that need to be carefully addressed in order for the end result to be successful. In addition, Community outreach as well as owner-interface presentations throughout the design process are integral to all of Cheri's projects.

SPECIFIC PROJECT EXPERIENCE

Master Plan for Boston Common, Boston, Massachusetts. Project manager for the development of creative, innovative, resilient, and technically sound plans for revitalization of America's first park. Responsible for coordinating with the Boston Parks and Recreation Department, Friends of the Public Garden, multiple subconsultants, and our engineers, environmental site professionals, and stormwater experts to deliver a strategic plan for this signature property. Project goals include increasing capacity for existing and future historical tourism, recreation, and programming.

Prescott Park Master Plan Development & Implementation, Portsmouth, New Hampshire. Project manager for the creation and execution of a strategic master plan for historic waterfront Prescott Park and nearby Four Tree Island. Performed a thorough site analysis, conducted an extensive public input program, developed a comprehensive master plan and facilities plan, and now implementing renovation and restoration strategies and solutions for a revitalized, resilient park.

Revitalization of Draw Seven Park, Massachusetts Department of Conservation & Recreation. Team leader for the revitalization of this signature park along the banks of the Mystic River in Somerville. Work includes providing urban design/landscape architecture, climate resiliency, utility infrastructure, waterfront engineering, environmental permitting, architecture, facilities planning, public participation, and cultural resource planning to redevelop this high-visibility waterfront park.

Downtown Visioning and Connectivity, Portsmouth, New Hampshire. Provided support for the Vaughan Mall visioning initiative that involved a review of the existing zoning requirements and possible build-out scenarios for city-owned parcels to revitalize the downtown and repurpose surface parking lots to create a more pedestrian- and retail-friendly environment. Project efforts included identifying key priorities from the city-wide master plan and an evaluation of ways to implement pedestrian connectivity, urban design/planning, urban forestry, and visioning.

Weston & Sampson

ANTHONY 7FRILLI

BACKGROUND

2012-Present Permitting Manager Weston & Sampson

2002-2012 Environmental Scientist Weston & Sampson

2002

Laboratory Technician Biomarine Laboratories

1998-2002

Environmental Science Student Bates College

1998 and 1999 Department of Public Works Gloucester, Massachusetts

EDUCATION

2002

Bachelor of Science Environmental Science Bates College

PROFESSIONAL CERTIFICATION

OSHA HAZWOPPER 40 Hour Regulations 29 CFR 1910.120 and 1926.65

> Army Corps Certified Wetlands Delineation June 2003

Tony is an environmental scientist with over 15 years of professional experience in the environmental and natural resource management field. He coordinates all aspects of environmental permitting for Weston & Sampson. Working within the fields of hydrogeology, engineering, water resource development, wetlands sciences, renewable energy and construction oversight, Tony has specialized experience with developing permitting strategies that follow stringent permitting requirements for a variety of environmental engineering projects including municipal infrastructure and construction projects, renewable energy siting and development, lake management and dredging, and wetland creation/restoration.



SPECIFIC PROJECT EXPERIENCE

DCAMM Former Medfield State Hospital MCP Activities & Permitting, Medfield, Massachusetts. Provided permitting services for the former Medfield State Hospital, which contains eight separate areas with releases regulated under the MCP. Managed the preparation of federal and state permits for the dredging of petroleum-impacted sediments from the Charles River, including a programmatic general permit from the US ACOE, a MA Chapter 91 Waterways Permit, and a Chapter 401 Water Quality Certificate.

Technical Assistance and Quality Control, Keene, New Hampshire. Provided technical assistance and quality control oversight for the Northeast Utilities Service Company and its subsidiary, PSNH, for the remediation of the former MGP site. The project included remediation design and construction oversight within Mill Creek and Ashuelot River. Oversaw extensive wetlands replication. Oversight included ensuring that the replicated wetlands were graded according to design, that the correct plants were furnished and installed properly, that the banks were stabilized using a predetermined bio-stabilization technique and that all replicated areas were sufficiently replicated.

Environmental Permitting Assistance, Various Locations, New England. Provided environmental permitting assistance associated with wetlands impacts and restoration in several communities. Permits included MEPA certification, ACOE General Permit, MassDEP 401 Water Quality Certification, Chapter 91 Licensing, NHESP Notification, and wetlands permitting. Major permitting projects included remediation within Mill Creek and Ashuelot River in Keene; Medfield State Hospital Remediation for the DCAMM; Miller's River restoration and monitoring for MassDOT; Willow Pond Dredging for Look Park in Northampton; Weymouth Sewer Main Replacement and wetland restoration; Salisbury Industrial Park for Salisbury; Kingman Pond Dam for Mansfield; and the Arlington Reservoir Dam for Arlington.

Hazardous Waste Sampling, Various Locations, Massachusetts. Worked on sampling possible hazardous waste sites, including polluted reservoirs and abandoned factories, and their impacts on adjacent resource areas, at the Charles River in Boston, the Coes Reservoir in Worcester, and sites in Bellingham, Carver, and Milford, Massachusetts.

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