Cumberland, RI
Elm Street
Conceptual Master Plan

Prepared for the town of Cumberland by the
URI Regenerative Community Design Lab

July 16, 2025

PROJECT TEAM

The following team members were part of the URI Regenerative Community Design Lab (RCDL) that developed conceptual green space plans for several Rhode Island communities, aimed at conserving, enhancing, connecting, and protecting their community natural resources.

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- Nathan Barrette | Designer and prospective 2026 graduate
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ACKNOWLEDGEMENTS

Project funding provided in part by the Rhode Island Department of Environmental Management, Urban and Community Forestry Program, and a Coastal Fellowship through the University of Rhode Island College of Environment Life Sciences, in cooperation with the URI Regenerative Community Design Lab in the Department of Landscape Architecture Program.

The URI RCDL team would like to acknowledge the following individuals for their contributions and support throughout the project:

Glenn Modica | Planning Director
Cumberland, Rhode Island

Abby McVerry | Principal Planner
Cumberland, Rhode Island

Romeo Mendes | Director, Public Works
Cumberland, Rhode Island

Most importantly, we'd like to thank the residents of Elm Street for generously sharing their time and thoughts on how they would like to see their street and neighborhood improved.

INTRODUCTION

The Regenerative Community Design Lab at the University of Rhode Island is now in its second summer of operation. Housed within the Department of Landscape Architecture, the Lab works in coordination with the Rhode Island Department of Environmental Management's Urban and Community Forestry Program as well as with communities across the state.

The URI RCDL charter is to work with Rhode Island communities, neighborhood groups, and/or non-profit organizations to improve the natural and built environments through conceptual design and planning. The goal is to create designs that incorporate nature-based solutions that support healthy ecological systems as well as the physical, psychological, and intellectual well-being of users.

The URI RCDL received a strong pool of applications this year, and the Town of Cumberland was selected from among a competitive group of candidates. Through a six-step design process, URI RCDL provided the Town with a set of full-size presentation boards, smaller hard copy versions, and a comprehensive written report which are intended to support future planning efforts and may be used to pursue funding opportunities should the Town decide to advance any of the proposed concepts.

1 - UNDERSTAND
Engage with stakeholders

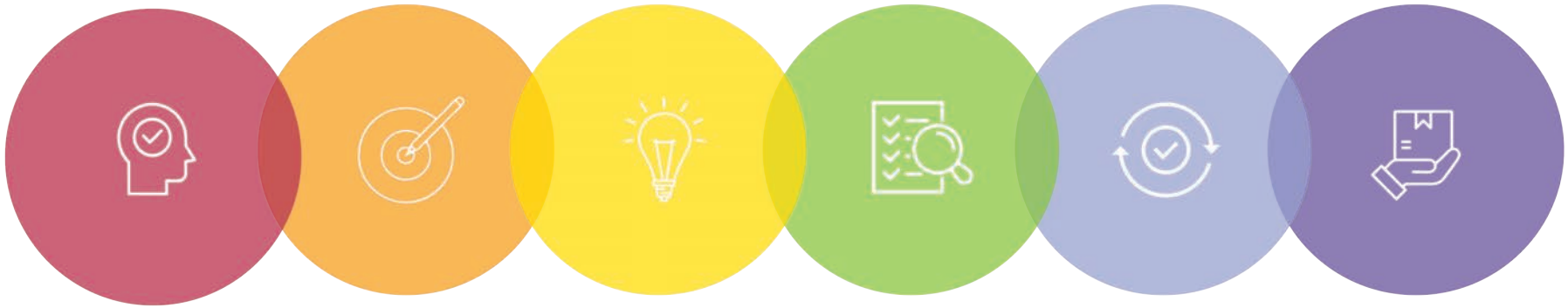
2 - DEFINE
Understand the sense of place

3 - IDEATE
Create conceptual designs

4 - EVALUATE
Gather stakeholder feedback

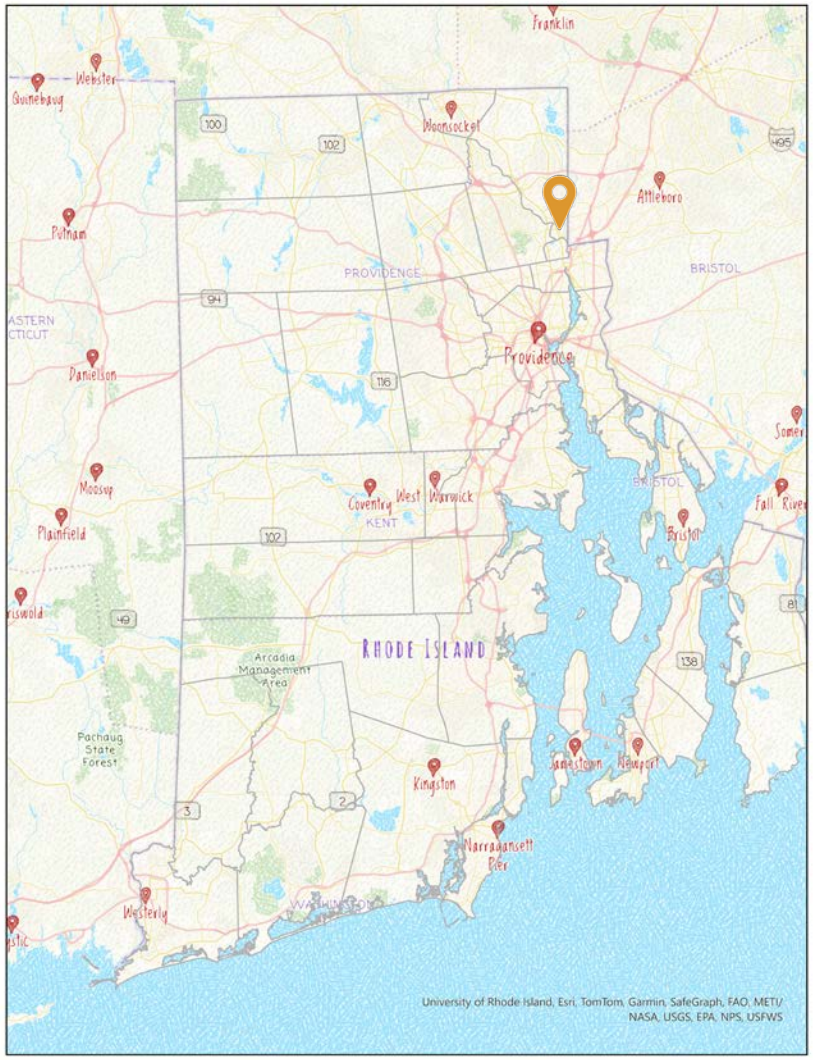
5 - REFINE
Develop conceptual master plan

6 - DELIVER
Provide master plan and report

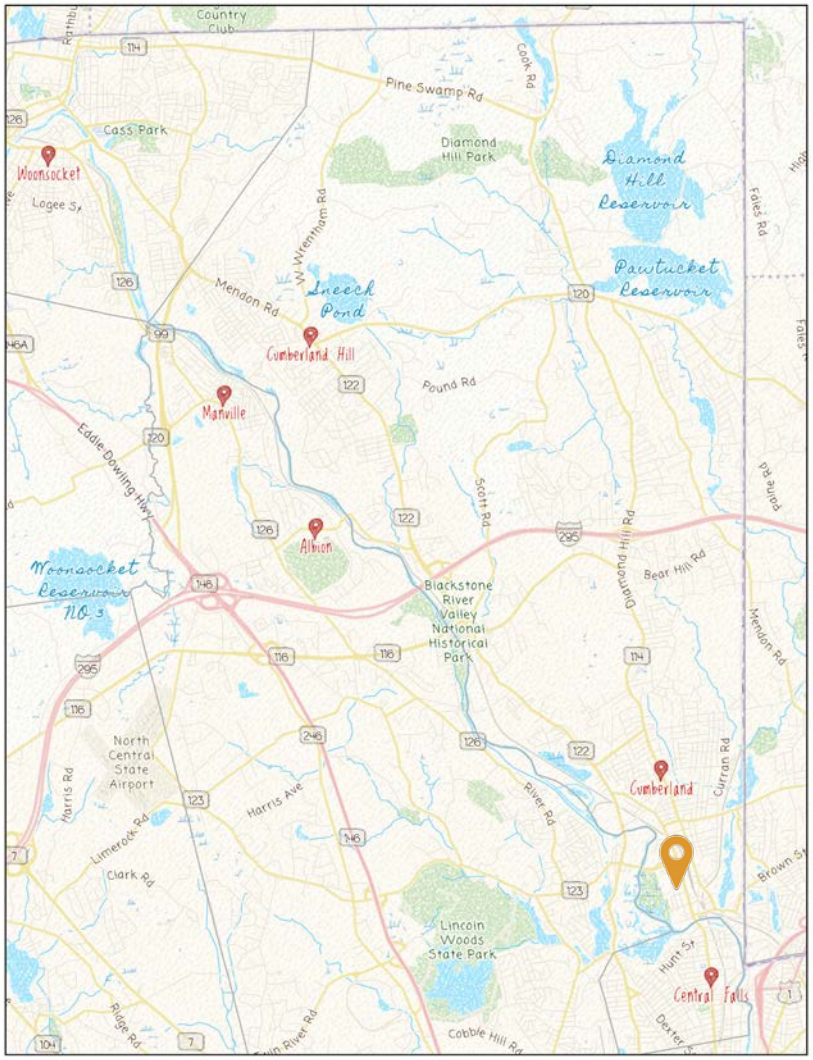


PROJECT LOCATION

Elm Street is a residential, six-hundred-foot-long street located in the Valley Falls neighborhood of Cumberland, RI 02864. It runs west off of Broad Street, which is the urban heart of Valley Falls. The street serves as a main access road from Broad Street to industrial operations on Macondray Street.



Cumberland, RI



Valley Falls & Elm Street

PROJECT DESCRIPTION

The Cumberland Principal Planner, Abby McVerry, nominated Elm Street for design support from the URI RCDL. She specifically asked the URI RCDL to focus on the following goals, challenges, and points of improvement:

1. Create a vibrant, sustainable, and welcoming public space that encourages pedestrian activity
2. Add landscaping to increase pervious surfaces, reduce stormwater runoff, and reduce urban heat island effects
3. Improve aesthetics and strengthen neighborhood identity
4. Enhance overall quality of life for residents and visitors

Cars parked on the sidewalk

Excessive pavement and no trees

Lacking neighborhood identity

Street and sidewalks neglected

DESIGN SUMMARY

On June 12, 2025, the URI RCDL team conducted an initial site visit to Elm Street. During this visit, the team walked the full extent of the site and began documenting existing conditions and identifying key challenges.

Following the site visit, the team undertook a comprehensive analysis to better understand the site's constraints and opportunities. This included a detailed review of local history, cultural context, demographic trends, and environmental conditions.

Informed by stakeholder input, site photographs, municipal GIS data, Google Earth imagery, historical records, and further on-site observations, the URI RCDL team developed two preliminary conceptual designs for Elm Street.

These preliminary concepts were presented on July 2, 2025, to the Town Planner and community stakeholders—including renters, homeowners, and landlords of Elm Street. Stakeholders provided valuable feedback, highlighting the design elements they found most appealing and relevant to their needs.

The URI RCDL team then spent several weeks refining the design, incorporating community-preferred features into the final plan. Additional research was conducted to identify appropriate plant species and materials in accordance with RIDEM guidelines.

Drawing on this research and examples from similar projects, the final design concept was presented to the Town Planner and a broader group of stakeholders on July 16, 2025. The presentation included a detailed walkthrough of each section of the plan to clearly communicate the vision and rationale behind the design.

The team also provided stakeholders with printed copies of the final report and visual materials associated with the plan.

UNDERSTAND

HISTORY

Pre-Colonization
Long before European settlement, the land now known as Cumberland was home to the Wampanoag and Narragansett peoples. For thousands of years, these Indigenous communities lived in harmony with the land, fishing its rivers, hunting in its forests, and cultivating its fertile soil.

17th Century
The 1600s were marked by escalating tensions and violent conflict between Indigenous tribes and European settlers. A pivotal moment occurred during King Philip's War (1675–1676), when Wampanoag leader Metacom, also known as King Philip, was reportedly killed near what is now Cumberland, signaling a decisive shift in the war's outcome.

18th Century
Cumberland was officially incorporated into the colony of Rhode Island in 1746, having previously been part of Massachusetts under the name "Attleborough Gore." The town was renamed in honor of Prince William, Duke of Cumberland.

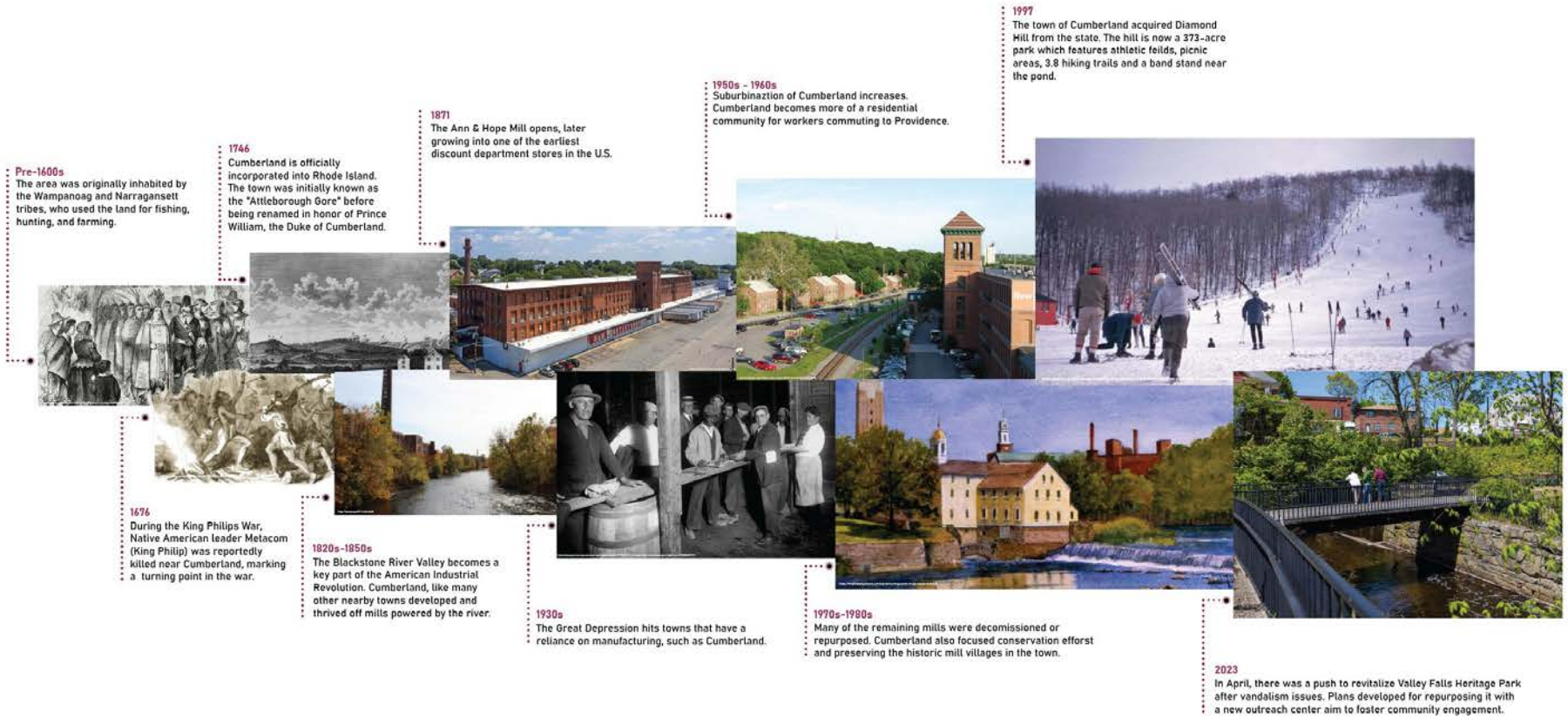
19th Century
Cumberland played a significant role in the early stages of the American Industrial Revolution. From the 1820s through the 1850s, the Blackstone River Valley—home to Cumberland—emerged as a hub of mill-based manufacturing powered by local waterways. In 1871, the Ann & Hope Mill opened in Cumberland, later becoming one of the nation's first discount department stores and a regional icon of innovation and commerce.

20th Century
The Great Depression of the 1930s had a severe impact on Cumberland's manufacturing-based economy. In the post–World War II era, the town experienced rapid suburbanization, transforming into a residential community for those commuting to nearby Providence. Beginning in the 1970s, many of the town's historic mills were closed, repurposed, or preserved, and Cumberland began prioritizing historic preservation and environmental conservation, particularly of its mill villages and green spaces.

Cumberland and Valley Falls Today

Cumberland's rich history reflects both the legacy of American industrial progress and a strong commitment to preserving its natural and recreational spaces. Today, the town is home to a vibrant and growing community with an increasing focus on civic engagement and local pride.

In April 2023, efforts to revitalize Valley Falls Heritage Park were renewed following incidents of vandalism. In response, the town began developing plans to repurpose the space, including the creation of a new outreach center designed to promote community involvement and strengthen connections among residents.

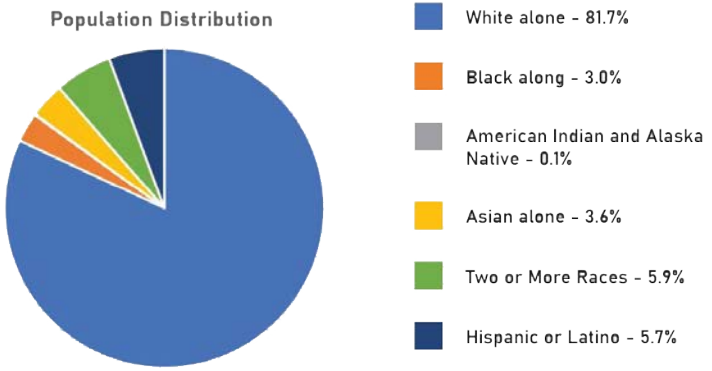


CULTURE

Located in the northeastern corner of Rhode Island, the Town of Cumberland is a quintessential New England bedroom community, home to approximately 33,700 residents across its 28.4 square miles. Known for its strong local governance and a long-standing tradition of academic excellence in its public schools, Cumberland also benefits from a residential tax rate that remains well below the state median.

- TOTAL LAND AREA - 18,112 ACRES
- TOTAL POPULATION - 36,405
- PERSONS AGED 65+ 17.6%
- LANGUAGE OTHER THAN ENLGLISH SPOKEN AT HOME - 22.7%
- MEDIAN RENT - $1,251
- MEDIAN HOME VALUE - $394,600
- MEDIAN HOUSEHOLD INCOME - $118,642
- AVERAGE PERSONS PER HOUSEHOLD - 2.56

Despite its many strengths, Cumberland faces several key challenges. According to the Cumberland Comprehensive Plan, these include managing suburban residential growth, preserving community character and natural resources, fostering a stronger civic identity beyond its bedroom-community status, and expanding access to affordable housing.



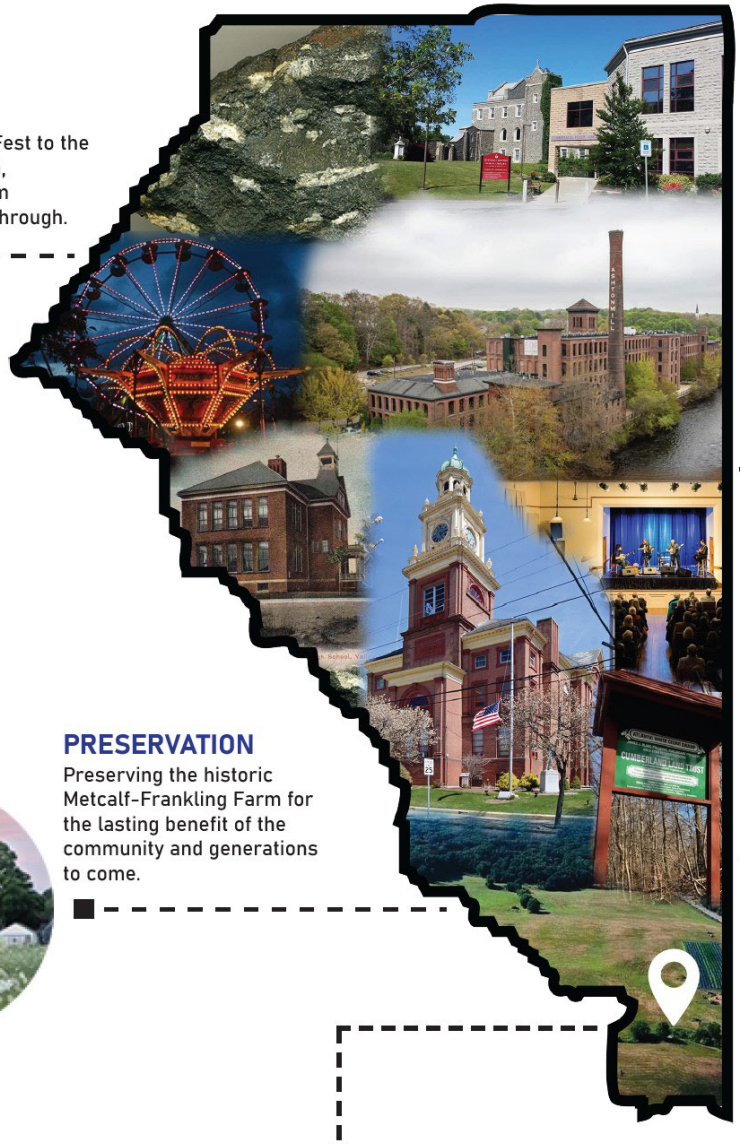
The town's commercial and industrial tax base remains limited and is insufficient to fully offset the long-term fiscal impact of continued suburban development. With constrained opportunities for future commercial and industrial expansion—and a community preference to avoid becoming a regional hub for shopping or manufacturing—Cumberland is focused on growth strategies that maintain quality of life while protecting traffic flow, environmental health, and its small-town character.

Elm Street is located within the Valley Falls neighborhood, the most densely populated and urbanized area in the Town of Cumberland, with a population density of approximately 7.3 people per acre. This neighborhood stands out for its distinct urban character and historical significance. Valley Falls has a higher concentration of low- and moderate-income households compared to other parts of Cumberland. Due to the age of much of the housing stock, the area also has a greater need for housing rehabilitation and investment in infrastructure.

The neighborhood is home to a well-established Portuguese American community with roots in the area dating back to the 1910s. This longstanding cultural presence contributes to the unique identity and social fabric of Valley Falls.

FESTIVALS

From CumberlandFest to the Feast of Saint John, Cumberland's warm hospitality shines through.



COMMUNITY

A strong sense of community is reflected through frequent events at the local library and senior center.

HISTORY

Mill villages, such as Valley Falls, showcase remnants of the American Industrial Revolution, and define Cumberland's historic character.

PRESERVATION

Preserving the historic Metcalf-Frankling Farm for the lasting benefit of the community and generations to come.

RECREATION

Home to many miles of scenic hiking and biking trails, such as those at Cumberland Land Trust, Mercy Woods, and Diamond Hill.

TOTAL LAND AREA - 18,112 ACRES

Valley Falls: Cumberland's Historic Heart

Cumberland Cultural Collage

NOTABLE ACTIVITIES AND LOCATIONS

Arnold Mills Community House

Deeded by Margaret Stearns in December 22, 1942 for the charitable purpose of promoting 'the moral, spiritual, and educational life of the community.'

Blackstone River Bikeway

The Bikeway is the state's second-longest bike path, with 18.2 miles of bikeway, including 11.6 miles of path between Cumberland and Woonsocket.

Blackstone River Theater

Blackstone River Theatre's 165-seat listening room offers world-class performers in an intimate, friendly space.

Cumberland Land Trust

The Cumberland Land Trust protects 1020 acres of land including 21 miles of trails for present and future generations.

Diamond Hill

Diamond Hill, a former ski area, is now home to 3.8 miles of marked trails up the 350 foot rise of “The Big Hill.”

Ephita Park

Epheta Park is a Town-owned one-acre park connected to a 21 ½ acre trail system that is largely wooded.

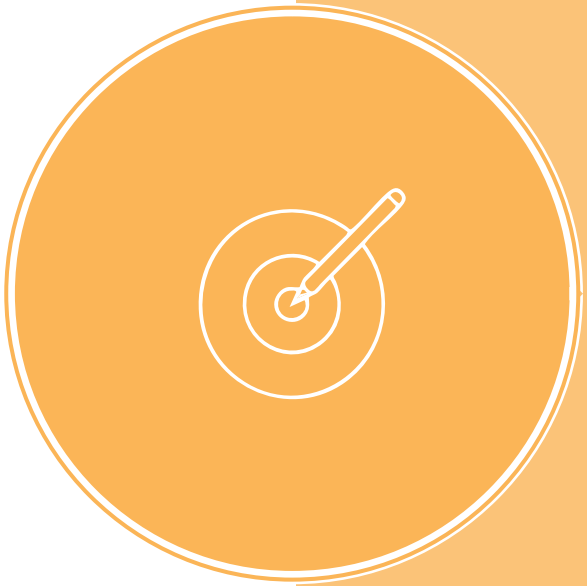
Franklin Farm

The Historic Metcalf-Franklin Farm was the last working and complete dairy farm in Cumberland, RI.

Library and Monestery Park

Our Lady of the Valley Monastery was founded by twelve Nova Scotian monks in 1900. The Monastery is now home to the town library.


FOR SALE
781-862-9168

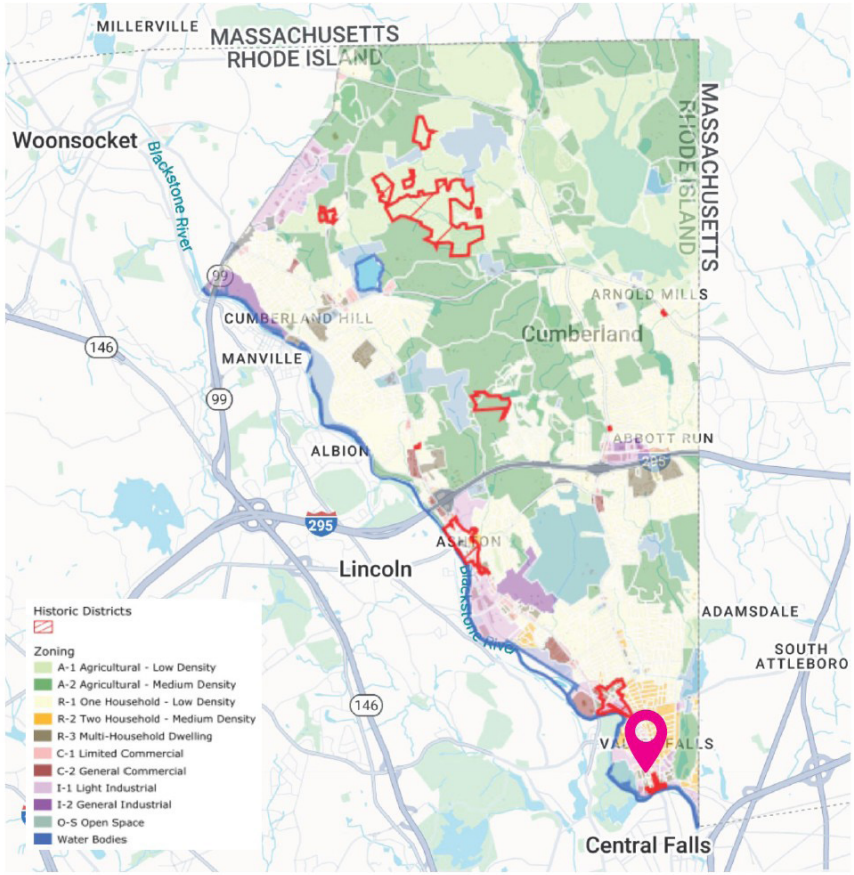


DEFINE

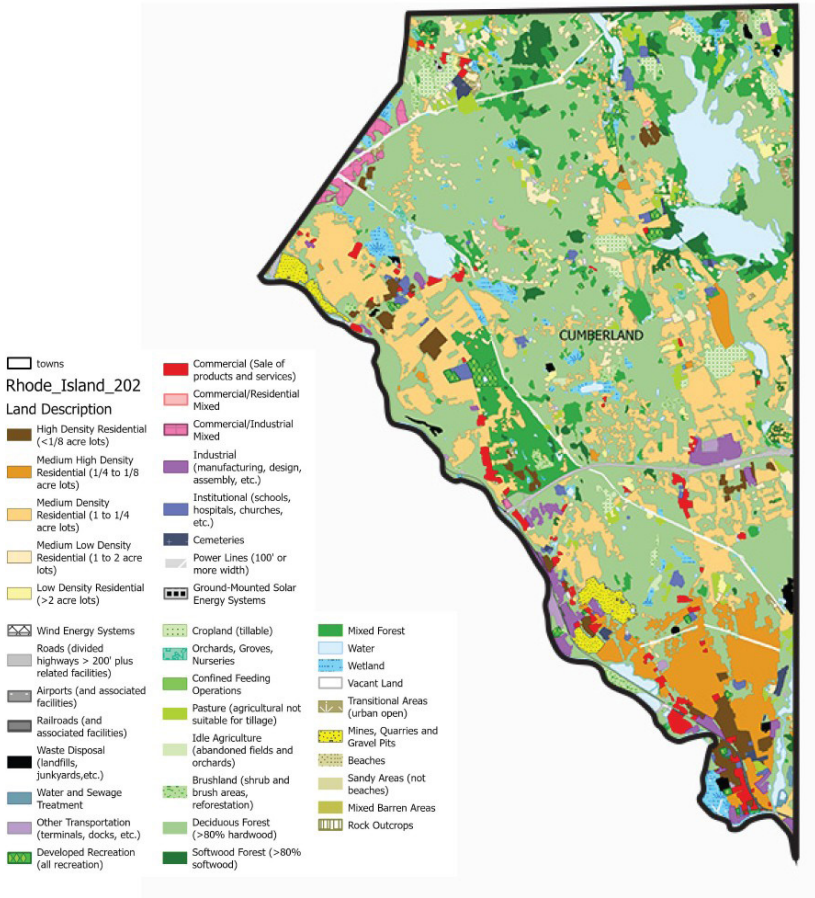
ZONING AND LAND USE

As illustrated on the zoning map below, the town of Cumberland retains a substantial amount of farmland, represented in green. However, Elm Street is located in the Valley Falls neighborhood, a more urbanized area characterized by denser development. Valley Falls features a mix of single-family and multi-family housing, interspersed with pockets of commercial and industrial uses.

The accompanying land use map further highlights the distribution of land use across Cumberland. Farmland and open space are predominantly located in the central and northern portions of town, whereas the southern section, including Valley Falls, contains more compact residential development and a higher concentration of commercial activity.



Zoning



Land Use

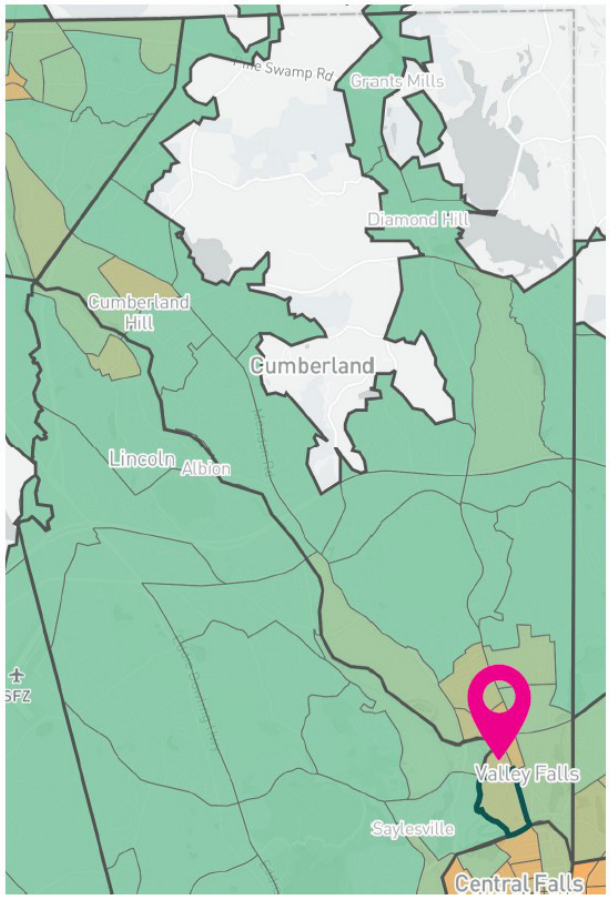
TREE EQUITY

This map illustrates a concept known as tree equity, which measures how equitably tree canopy is distributed across different neighborhoods, particularly with regard to who benefits from the environmental and health advantages that trees provide. Trees do far more than enhance the visual character of a place. They play a critical role in improving air quality, mitigating urban heat, lowering energy costs, and supporting both physical and mental well-being. However, research consistently shows that lower-income communities and communities of color often have significantly less tree cover than more affluent neighborhoods.

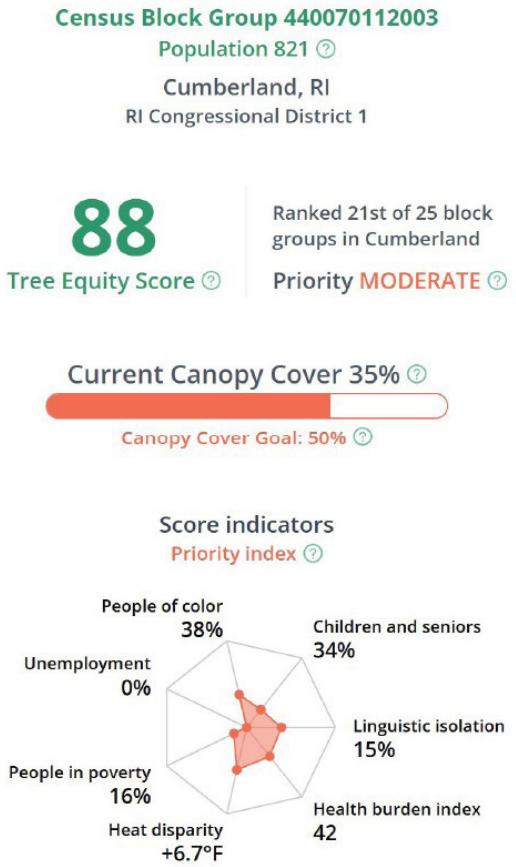
A tree equity score identifies where tree coverage is insufficient and helps prioritize areas where strategic planting could yield the greatest benefits, especially for vulnerable populations such as children, seniors, and individuals with health challenges. In essence, tree equity is about ensuring that everyone, regardless of income or background, has access to the cooling, health-enhancing, and environmental benefits that trees provide.

Elm Street is located in a neighborhood that receives some environmental benefit from nearby tree canopy, particularly near the river end of the street. As shown on the map, the broader Elm Street area has a relatively strong tree equity score of 88.

However, when examining Elm Street itself, the tree equity score drops significantly. This is primarily due to the lack of street trees, which reduces residents' access to the environmental and health benefits typically associated with urban tree cover.



Tree Equity Map



POPULATION GROWTH

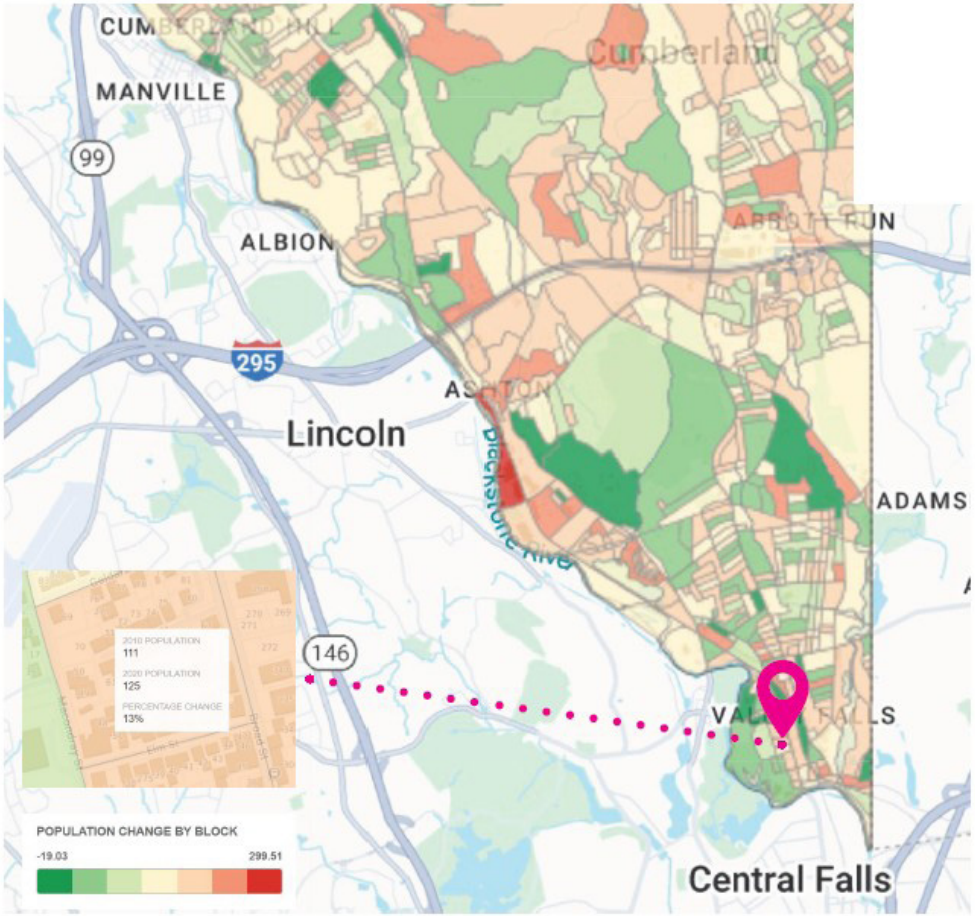
As shown in the zoning map below, the Town of Cumberland continues to retain a significant amount of farmland. However, between 2010 and 2020, Cumberland experienced steady and notable population growth. According to U.S. Census data, the town's population increased from 33,506 to 36,405 residents—an 8.7% rise over the decade. This growth rate exceeded both the national average and the overall population growth in Rhode Island during the same period.

As a result, the town's population density increased from approximately 1,267 residents per square mile in 2010 to 1,374 residents per square mile in 2020. The growth was relatively consistent throughout the decade, with a particularly marked uptick between 2019 and 2020.

The growth was consistent throughout the decade, with a notable uptick in population between 2019 and 2020.

This upward trend reflects Cumberland's continued attractiveness as a residential community within the Providence metropolitan area, with suburban development and regional migration patterns contributing to the increase.

Within this context of town-wide growth, the Elm Street neighborhood saw a population increase of approximately 13% between 2010 and 2020. This rise places greater demand on local infrastructure and energy resources. As the neighborhood continues to evolve, integrating sustainable design strategies, such as increased tree planting, green infrastructure, and climate-sensitive landscaping, can help mitigate urban heat, improve air quality, and support long-term environmental resilience.

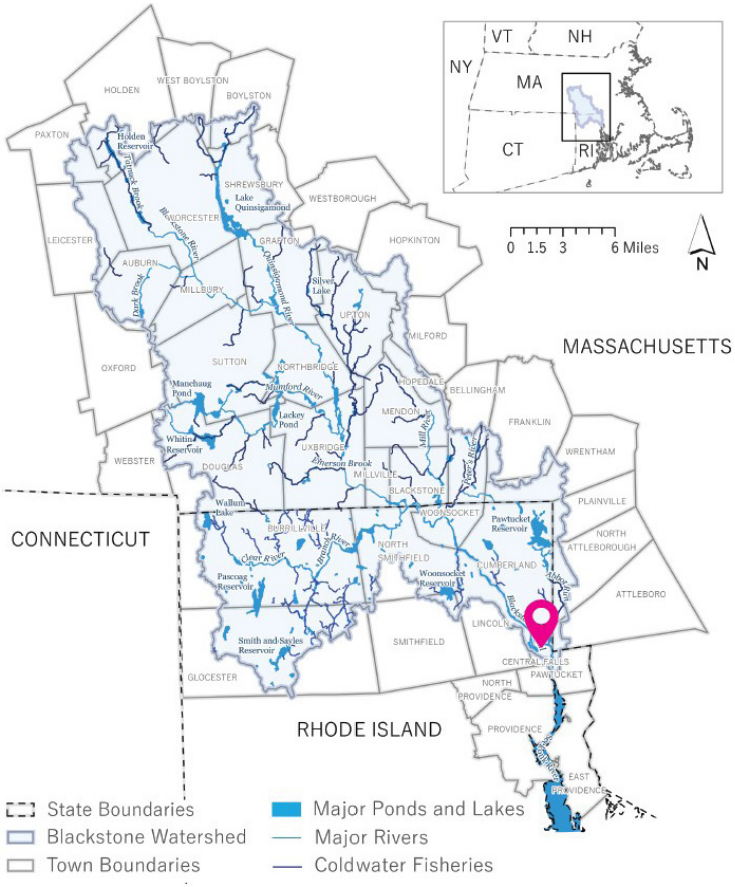


Population Growth

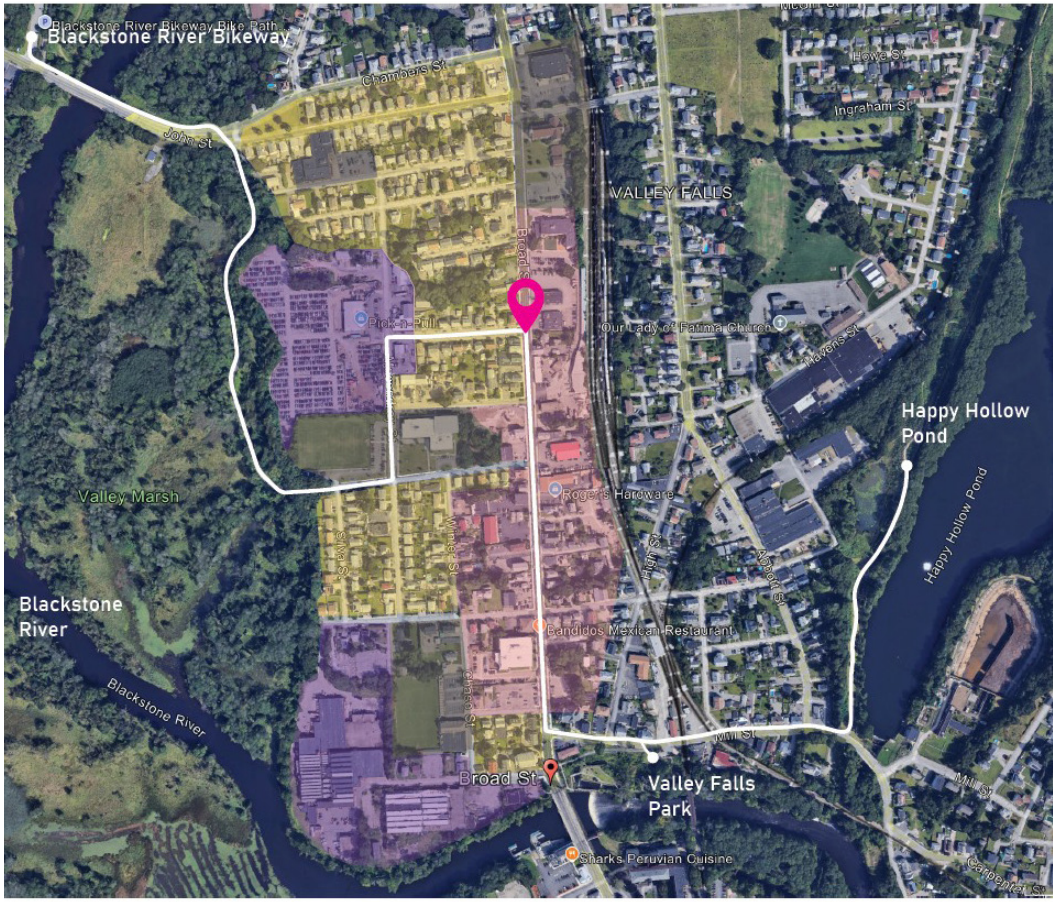
ACCESS TO GREEN INFRASTRUCTURE

While Elm Street itself lacks substantial tree cover and vegetation, it is located within close walking distance of the Blackstone River, one of the region's most significant natural features. The map below illustrates the extent of the Blackstone River watershed, providing a broader environmental context for the neighborhood.

A closer examination of the watershed map and satellite imagery (e.g., Google Earth) reveals that Elm Street lies in proximity to several key natural and recreational assets, including the Blackstone River Bikeway, Valley Falls Park, and the trail network surrounding Happy Hollow Pond. Recognizing the value of the surrounding green spaces, our design approach focused on enhancing the connection between Elm Street and the nearby natural infrastructure by improving both visual and physical access to these amenities.



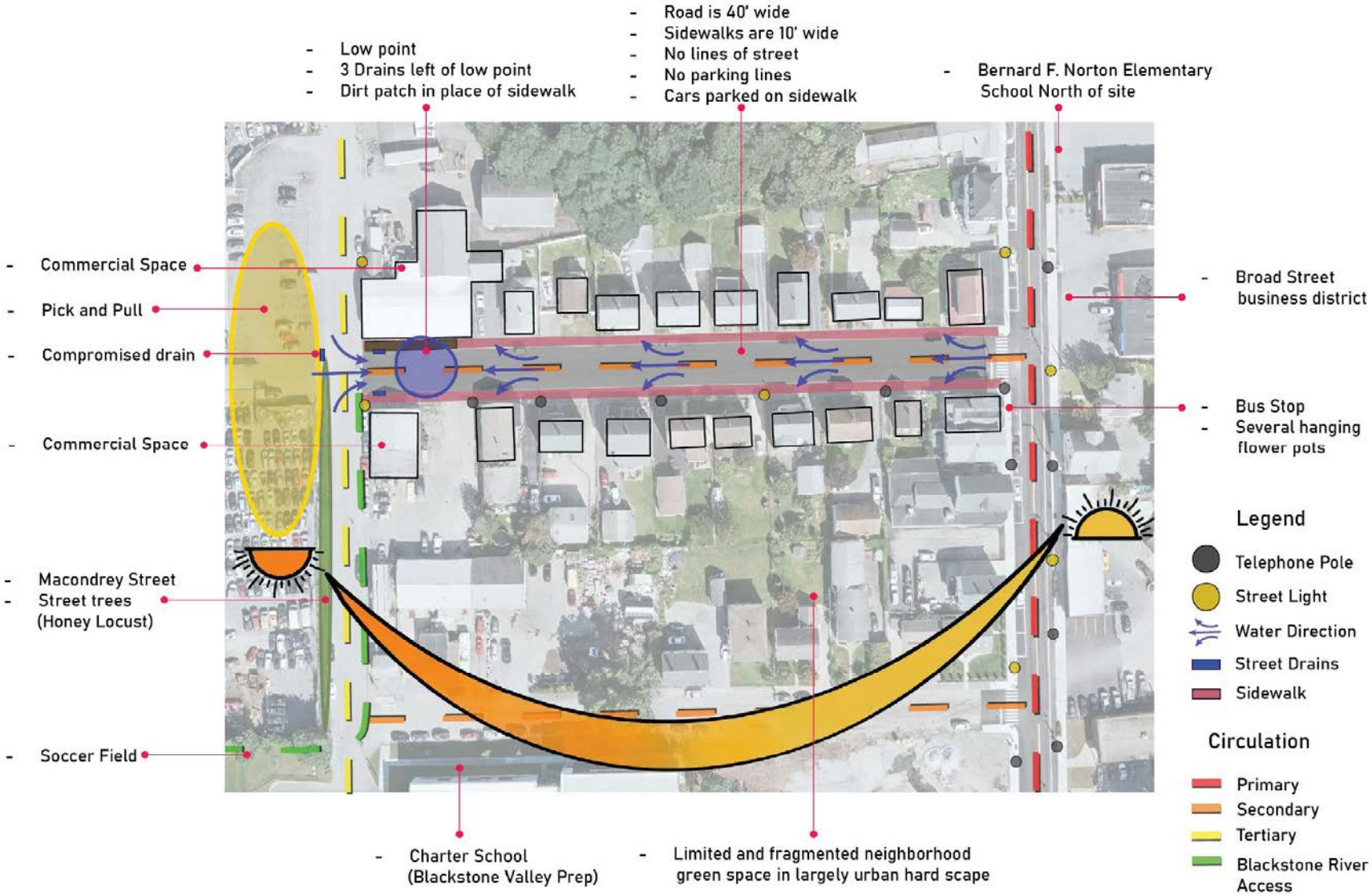
Blackstone River Watershed



Circulation to Existing Green Infrastructure

SITE INVENTORY

A comprehensive site inventory and analysis serves as the foundation for all of our conceptual design work. The site inventory provides an objective record of existing conditions, while the site analysis evaluates those conditions to inform design opportunities and constraints. The inventory and analysis conducted by the URI RCDL team validated several concerns identified during the project initiation phase, while also revealing new opportunities for enhancement and improvement.



EXISTING CONDITIONS

The images below were captured during the URI RCDL team's site visit and serve to document the current conditions of Elm Street and its surrounding neighborhood. These photographs provide valuable context for understanding the physical environment, challenges, and opportunities that informed the design recommendations presented in this report.

SITE ANALYSIS

SITE ANALYSIS SUMMARY

Key Site Challenges:

1. **Excessive Impervious Surfaces:** The street is dominated by asphalt and pavement, causing stormwater runoff and limiting natural infiltration.
2. **Lack of Street Trees:** The absence of trees increases the urban heat island effect and reduces shade and comfort for pedestrians.
3. **Inadequate Sidewalks and Curbs:** Minimal separation between the roadway and sidewalk, possibly due to repeated repaving, compromises pedestrian safety.
4. **Accessibility and Safety Concerns:** Unmarked parking and absent curbs lead to vehicles blocking sidewalks, creating hazardous conditions for pedestrians.
5. **Over-wide Street and No Centerline:** The street's excessive width and lack of a centerline encourage unsafe driving behavior.
6. **Lack of Visual Identity:** Elm Street lacks visual appeal and design elements that contribute to neighborhood character or sense of place.
7. **Industrial Impacts:** Noise, visual blight, and heavy truck traffic from nearby industrial uses disrupt residential quality of life.

Key Site Opportunities:

1. **Separate Pedestrian and Vehicular Traffic:** Remove excess asphalt or elevate sidewalks and curbs to restore a clear distinction between roadway and sidewalk, improving pedestrian safety and stormwater management.
2. **Add Centerline Striping:** Mark the centerline to guide drivers, calm traffic, and promote safer driving behavior.
3. **Define On-Street Parking:** Clearly mark parking spaces to prevent sidewalk encroachment and improve pedestrian access.
4. **Expand Tree Canopy:** Plant street trees to manage stormwater, provide shade, lower temperatures, and enhance comfort.
5. **Enhance Street Identity:** Incorporate crosswalk art, murals, and signage to strengthen neighborhood character and sense of place.
6. **Install Community Seating:** Place benches under new trees to create shaded areas that encourage outdoor activity and social connection.


CHEVROLET
4
EA7

IDEATE

INTRODUCTION

In accordance with our charter with the Rhode Island Department of Environmental Management (RIDEM), the URI RCDL team developed two preliminary concept plans featuring illustrative master plans, sections, and perspective renderings. The design process was guided by three key issues identified by the Town of Cumberland and confirmed through our site analysis:

- A general absence of neighborhood character and sense of place
- The need for street calming and improved pedestrian access to sidewalks
- The lack of trees, contributing to the urban heat island effect

To gather community input, the team installed presentation materials directly on Elm Street and shared both concept plans with residents, the Cumberland Town Planner, and the Urban and Community Forestry Program Coordinator from RIDEM. The feedback received from these stakeholders was instrumental in shaping the final master plan and planting plan, both of which are detailed later in this report.

Lack of neighborhood character

Lack of street markings or parking delineation

Lack of trees

PRELIMINARY CONCEPT 1

Preliminary Concept 1 was designed with a focus on simplicity and impact, prioritizing key improvements such as organized parking, traffic calming measures, increased shade, and the addition of green space. Each proposed intervention is intended to make Elm Street a more welcoming and livable environment for the residents who call it home.

The Problems:

- **Overabundance of pavement and asphalt**, contributing to significant stormwater management issues
- **Absence of centerline** markings, leading to unsafe driving behavior
- **Lack of curbs** separating the roadway from sidewalks
- **No clearly delineated on-street parking**
- **Sidewalks obstructed by parked cars**, leaving no safe space for residents, particularly children and the elderly, to walk or play
- **Urban heat island effect** caused by a lack of street trees and vegetation
- **Limited aesthetic appeal** and absence of distinctive neighborhood features

The Solutions:

- Install a clearly **defined, elevated curb** to establish a distinct separation between the street and the sidewalk
- **Paint a centerline** along Elm Street to guide traffic flow
- **Delineate street parking**
- Install **six tree pits** on the north side of Elm Street
- Install **low-maintenance perennial plantings** along the south side of the street, under existing power lines
- Add a **decorative, welcoming street sign** at the entrance to Elm Street to enhance neighborhood identity
- Convert the underutilized area, adjacent to the commercial building, into a **community garden space**
- Add **high-visibility crosswalks** at both the east and west ends of Elm Street

The Benefits:

- **Enhanced pedestrian safety** by reinforcing the boundary between vehicular and pedestrian zones
- **Improved traffic behavior and calming** through the addition of centerline striping
- **Better street organization** by clearly delineated parking
- **Environmental and aesthetic enhancements** through an increased tree canopy and perennial planters
- **Reduced heat island effect** and improved streetscape
- **Stronger neighborhood identity** through signage and place-making elements
- **Safer pedestrian connectivity**

PLACEMAKING

Placemaking is a collaborative process that enhances public spaces to foster community identity, pride, and a sense of belonging. By incorporating elements like signage, public art, landscaping, and gathering areas, placemaking can transform utilitarian spaces into vibrant, people-focused environments.

On Elm Street, we propose several placemaking strategies:

- Install a decorative street sign reflecting the neighborhood's character.
- Plant street trees along the north side, where no overhead power lines are present.
- Add large planters with low-maintenance perennials on the south side to introduce greenery without impacting utilities.
- Extend decorative pole-mounted planters from Broad Street to create visual continuity and strengthen neighborhood identity.

Existing entry to Elm Street from Broad Street

Perspective of enhanced entry to Elm Street

COMMUNITY BUILDING

Community gardens provide a wide range of social, environmental, and health benefits. They give residents access to fresh produce, support healthier eating habits, and enhance food security. These shared green spaces also foster social interaction, collaboration, and neighborhood pride. Environmentally, community gardens aid in stormwater management, support pollinators, and help reduce urban heat through increased vegetation.

The overgrown, informal parking area at Elm Street's west end could be transformed into a community garden with accessible raised planter beds. This would enhance the streetscape and create a space for residents to grow food and connect.

Existing West end of Elm Street

Perspective of enhanced West end of Elm street and community garden

STREET CALMING

Street calming encompasses design strategies aimed at reducing vehicle speeds and enhancing safety for pedestrians, cyclists, and drivers. Common strategies include narrowing lanes, adding centerline striping, curb extensions, speed humps, and visual cues such as trees, pavement markings, or signage. These measures not only slow traffic but also create a safer, more inviting environment for all users.

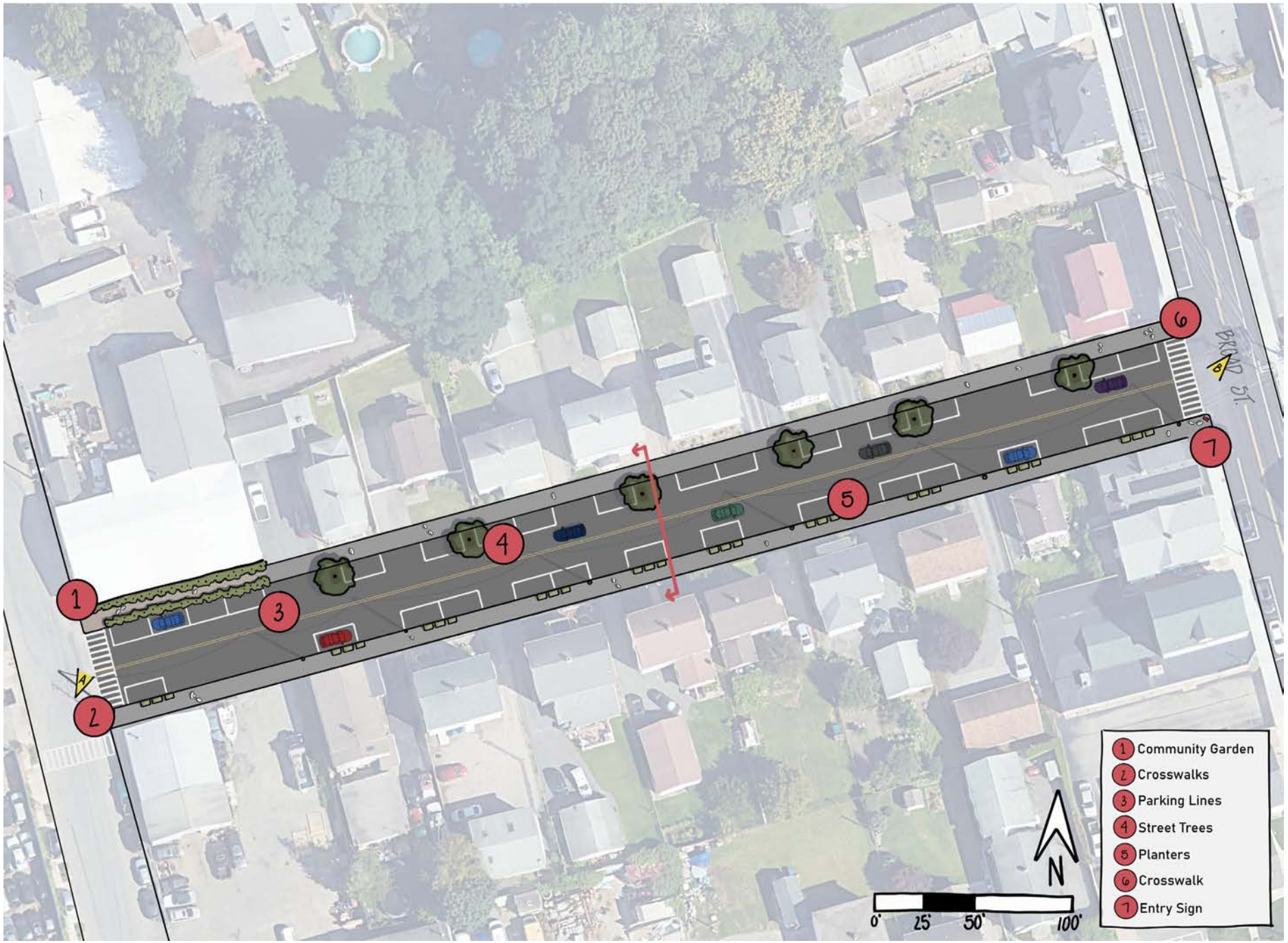
By promoting safer driving and reducing cut-through traffic, street calming increases pedestrian activity, improves public safety, and enhances neighborhood livability. On Elm Street, targeted interventions can address persistent safety concerns while supporting broader community and placemaking goals.

During our site visit, we observed that many drivers travel at high speeds down the center of the roadway, likely due to the lack of visual lane guidance. To address this, we recommend installing a centerline to encourage lane discipline and reduce speeds, a simple but effective traffic calming measure.

Parking also presents challenges, as vehicles frequently park on sidewalks, obstructing pedestrians, particularly those with strollers, mobility aids, or bicycles. This problem arises from faded or missing curbs, which fail to clearly separate the street from the sidewalk. To address this, we recommend either removing excess asphalt to lower the road surface or raising the sidewalks and installing curbs to reestablish a defined boundary.

The absence of marked parking spaces contributes to sidewalk encroachment. Elm Street's wide roadway can accommodate on-street parking without restricting traffic flow. Clearly striped parking areas would provide designated spaces, preventing sidewalk obstruction and ensuring safe pedestrian access.

All of these recommendations are illustrated in the conceptual master plan provided on the following page.


1 Community Garden
2 Crosswalks
3 Parking Lines
4 Street Trees
5 Planters
6 Crosswalk
7 Entry Sign
N
0'
25'
50'
100'
BROAD ST.

IMPROVED GREEN INFRASTRUCTURE

The urban heat island (UHI) effect causes urban areas to heat up more than rural ones due to heat-absorbing surfaces and limited vegetation. This leads to higher energy use, poorer air quality, and health risks, especially for vulnerable populations. Planting street trees, green infrastructure, and vegetated spaces can help create a cooler, more comfortable environment for residents.

Elm Street experiences elevated summer temperatures that increase discomfort for residents and raise cooling demands. To address this, we recommend planting six street trees along the north side, where no overhead power lines restrict growth. Over time, these trees will provide shade, lower surface temperatures, and enhance the streetscape's visual appeal.

We suggest using the Permavoid system for tree planting. Permavoid is a modular subsurface solution designed to support healthy urban tree growth in areas with limited soil volume and high impervious coverage. It provides structural support, manages stormwater, and creates space for root development by allowing trees access to air, water, and nutrients without damaging surrounding infrastructure. Integrated into sustainable drainage systems (SuDS), Permavoid helps capture and slowly release stormwater, reducing flood risks and promoting tree health. The Rhode Island Department of Environmental Management (RIDEM) has access to Permavoid materials, and we recommend the Town of Cumberland collaborate with RIDEM to secure them for Elm Street's proposed trees.

Due to the presence of overhead power lines on the south side of Elm Street, tree planting is not recommended in that area. Instead, we propose installing large planters with hardy, low-maintenance perennials to introduce greenery, support pollinators, and enhance urban biodiversity while improving the street's aesthetics.

Section view of Elm Street looking toward the Pick and Pull

PRELIMINARY CONCEPT 1 - PRECEDENCE IMAGES

Precedent images showcase successful projects that inspire and guide design decisions. They help identify effective strategies and communicate ideas to stakeholders. For Elm Street, these precedents informed streetscape, tree placement, sidewalk design, and neighborhood identity to ensure practical, proven solutions.

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PRELIMINARY CONCEPT 2

Preliminary Concept 2 adopts a broader, more strategic approach. While it continues to address immediate priorities such as parking, traffic calming, shade, and green space, it also establishes a stronger connection between Elm Street and the larger Broad Street Revitalization Initiative, positioning the corridor as a vital link within the wider neighborhood transformation effort.

The Problems:

- **Overabundance of pavement and asphalt**, contributing to significant stormwater management issues
- **Absence of centerline** markings, leading to unsafe driving behavior
- **Lack of curbs** separating the roadway from sidewalks
- **No clearly delineated on-street parking**
- **Sidewalks obstructed by parked cars**, leaving no safe space for residents, particularly children and the elderly, to walk or play
- **Urban heat island effect** caused by a lack of street trees and vegetation
- **Limited aesthetic appeal** and absence of distinctive neighborhood features

The Solutions:

- Install a **clearly defined, elevated curb** to establish a distinct separation between the street and the sidewalk
- **Paint a centerline** along Elm Street to guide traffic flow
- **Create bump-outs** along Elm Street and delineate street parking in between
- **Install trees** in the bump-outs on the North side of the street
- Install **permanent shade structures** and benches in the bump-outs on the South side of the street
- Add a **decorative, welcoming street sign** at the entrance to Elm Street
- **Add a mural on the commercial building** at the west end of the street, creating a community space with benches and trees
- **Add murals to the crosswalks** at both the east and west ends of Elm Street to enhance neighborhood identity

The Benefits:

- Strengthened separation between vehicular and pedestrian zones, enhancing overall **pedestrian safety**
- **Improved driver behavior and reduced vehicular speed**
- **Enhanced clarity and functionality of the streetscape**
- Expanded urban tree canopy contributes to **visual appeal, shade, and environmental health**
- **Reduced surface temperatures** and **improved pedestrian comfort** through increased vegetation and the addition of permanent shade structures
- **Reinforced community character** with new signage and place-making features
- **Improved pedestrian access and connectivity** throughout the neighborhood
- **Stronger sense of community**

PLACEMAKING

To reinforce neighborhood identity and celebrate local heritage, we recommend installing a decorative sign that reflects the character and history of the community. Further enhancing this identity, we propose the addition of decorative murals within the crosswalks at both ends of Elm Street.

To enhance the pedestrian experience along Elm Street, we propose adding landscaped bump-outs on the north side, where there are no overhead utility lines. These bump-outs would feature street trees and low-maintenance vegetation, providing shade and visual appeal. On the south side—where overhead utility lines restrict tree planting—we recommend the installation of permanent shade structures paired with benches to create inviting spaces for neighbors to gather and spend time outdoors.

Existing entry to Elm Street from Broad Street

To strengthen visual continuity with the broader Broad Street Revitalization Initiative, we also recommend extending the decorative pole-mounted planters used on Broad Street onto Elm Street. This will foster a stronger sense of cohesion, enhance the pedestrian experience, and further reinforce the neighborhood's distinct identity.

Perspective of enhanced entry to Elm Street

COMMUNITY BUILDING

The area in front of the commercial building at the west end of Elm Street is currently overgrown and used primarily for informal parking. We recommend transforming this underutilized space into a vibrant community gathering area for neighborhood residents. As part of this transformation, we propose installing a decorative mural on the side of the building to enhance the visual appeal of the streetscape and contribute to a stronger sense of place. The design also includes the addition of several benches and a strategically placed street tree to provide shade and create a welcoming, comfortable space that encourages outdoor gathering and social interaction.

Existing West end of Elm Street

Perspective of enhanced West end of Elm street and community gathering area

IMPROVED GREEN INFRASTRUCTURE

As previously noted, Elm Street experiences elevated temperatures during the summer months. To help mitigate these conditions, we recommend planting six street trees along the north side of the street within newly installed bump-outs. Over time, these trees will provide critical shade, lower surface temperatures, and enhance both the comfort and aesthetic quality of the streetscape. Due to the presence of overhead power lines on the south side of Elm Street, tree planting is not advised in that area. Instead, we propose the installation of several permanent shade structures accompanied by benches and low-maintenance plantings. These structures will not only offer relief from the heat and encourage outdoor activity but will also contribute to reducing the urban heat island effect.

STREET CALMING

As previously discussed, one of the most pressing concerns on Elm Street is the speed and behavior of vehicular traffic. Many drivers were observed traveling down the center of the roadway at relatively high speeds, likely due to the absence of visual cues or lane demarcation. To address this, we recommend the installation of a painted centerline to encourage drivers to remain in their designated lanes, promoting safer travel and contributing to overall traffic calming.

To support traffic calming and enhance the pedestrian experience, we propose a series of bump-outs along both sides of Elm Street. On the north side, where there are no overhead utility lines, the bump-outs can include street trees and low-maintenance plantings, adding shade and greenery. On the south side, they can accommodate permanent shade structures and benches, creating comfortable, inviting spaces for residents. Beyond these amenities, the bump-outs help visually and physically narrow the roadway, which naturally encourages slower driving speeds.

Parking is another significant challenge along Elm Street. Numerous vehicles were observed parked on the sidewalks, creating barriers for pedestrians, particularly those using strollers, mobility aids, or traveling with children. This issue stems primarily from the lack of a defined curb, blurring the boundary between the street and pedestrian areas. To reestablish this critical separation, we recommend either removing excess layers of asphalt to lower the roadway or raising the sidewalks and installing new curbing.

The absence of marked parking spaces contributes to disorganized parking and further sidewalk encroachment. Elm Street's relatively wide cross-section can accommodate on-street parking without compromising vehicular flow. By clearly delineating parking stalls, particularly within the segments between bump-outs, residents will have designated areas to park, helping to keep vehicles off the sidewalks and restore safe, accessible pedestrian pathways.

These recommendations are illustrated in the conceptual master plan on the following page.


1
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3
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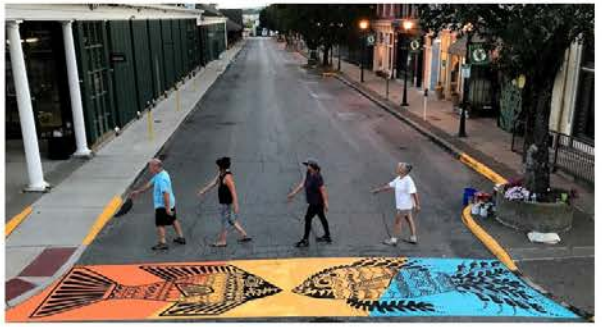
N
1" = 25'
0
25'
50'
100'
Legend
1. Mural and Seating
2. Parking Lines
3. Bump Outs
4. Shade Canopy
5. Street Trees
6. Native Grass Planting
7. Art Crosswall
8. Entry Sign
Perspective Views
Section Line

PRELIMINARY CONCEPT 2 - PRECEDENCE IMAGES



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SLOW

EVALUATE

STAKEHOLDER FEEDBACK

On July 2, 2025, the URI RCDL team presented two preliminary design concepts to a group of stakeholders, including the Town Planner, as well as residents of Elm Street. The presentation took place directly on Elm Street and included a Q&A session designed to gather input on which elements of each concept were best suited to the site. The feedback collected during this session informed the development of the final conceptual master plan, detailed in the Refine section of this report.

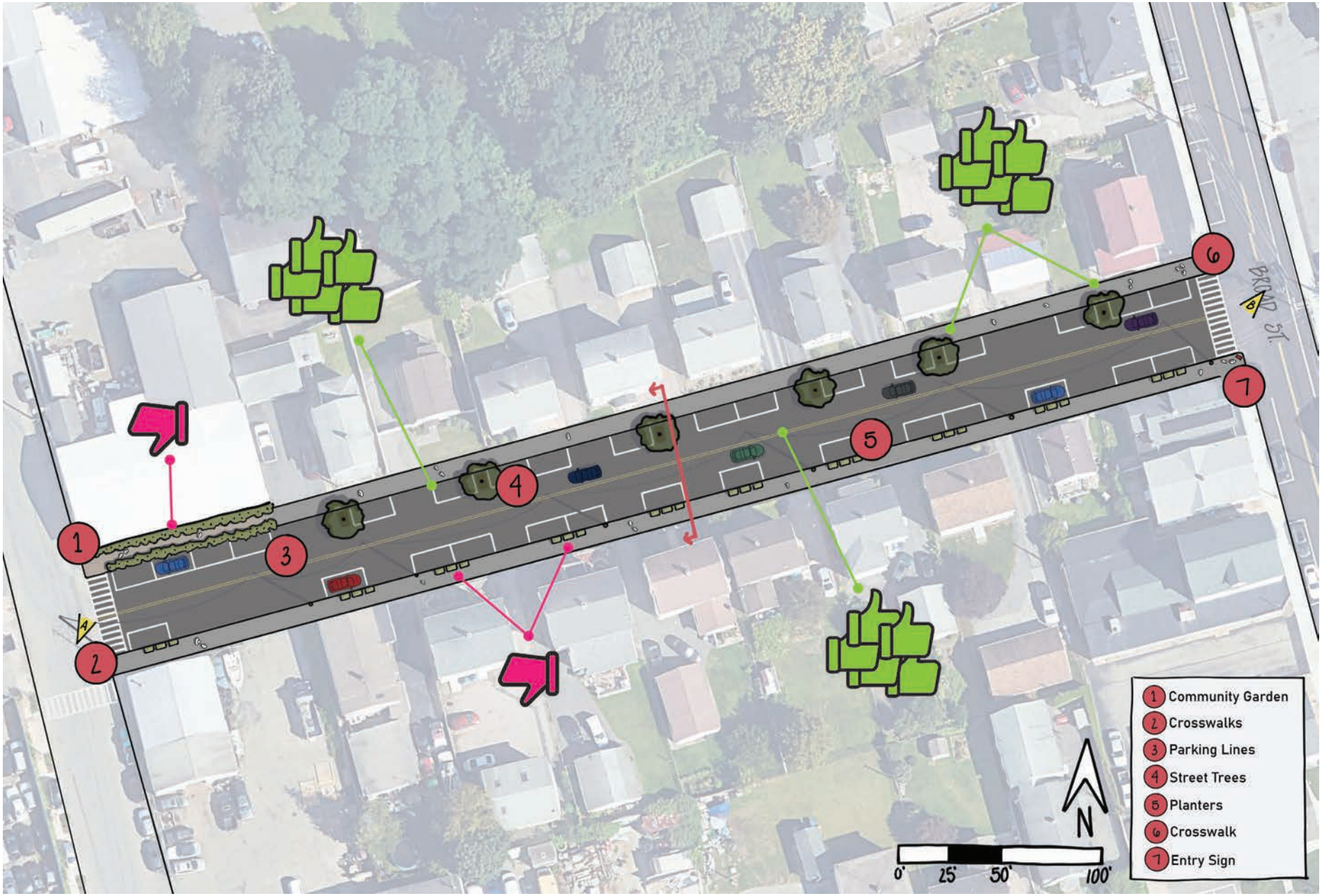
What They Liked

- Painted centerline down Elm Street
- Clearly designated street parking
- Defined curb and reclaimed sidewalk
- Addition of street trees
- Addition of benches along the street
- Inclusion of a shade structure
- Added character and neighborhood identity to Elm Street through signage, painted sidewalks and murals

Additional Considerations

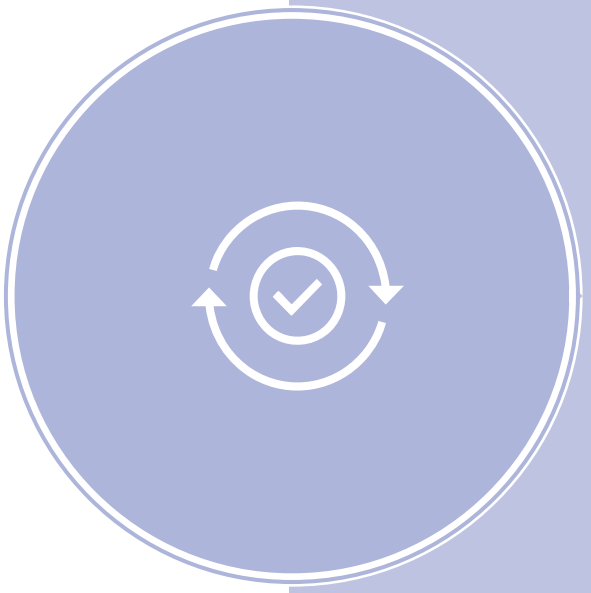
- Adding street trees to both sides of Elm Street, planting smaller trees that can fit under the power lines on the south-side
- Not planting trees too close to Broad Street
- Encouraging neighbors to place trash receptacles behind their houses instead of on the sidewalk
- Repairing or replacing the sidewalk
- Encouraging residents to keep their yards clean and tidy

PRELIMINARY CONCEPT 1 - STAKEHOLDER FEEDBACK



PRELIMINARY CONCEPT 2 - STAKEHOLDER FEEDBACK


SEÑIORIS
UNIVERSITY OF RHODE ISLAND
LANDSCAPE ARCHITECTURE
RHODE ISLAND TREES & WILDFLOWERS



REFINE

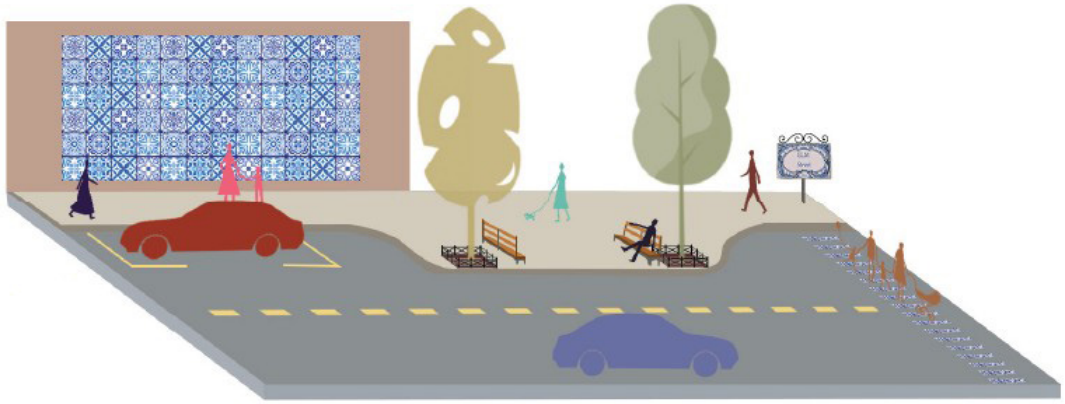
FINAL CONCEPTUAL MASTER PLAN

Based on feedback gathered from the Town Planner and several residents from Elm Street, the URI RCDL team developed a final design concept for Elm Street. The plan focuses on three primary areas of the site:

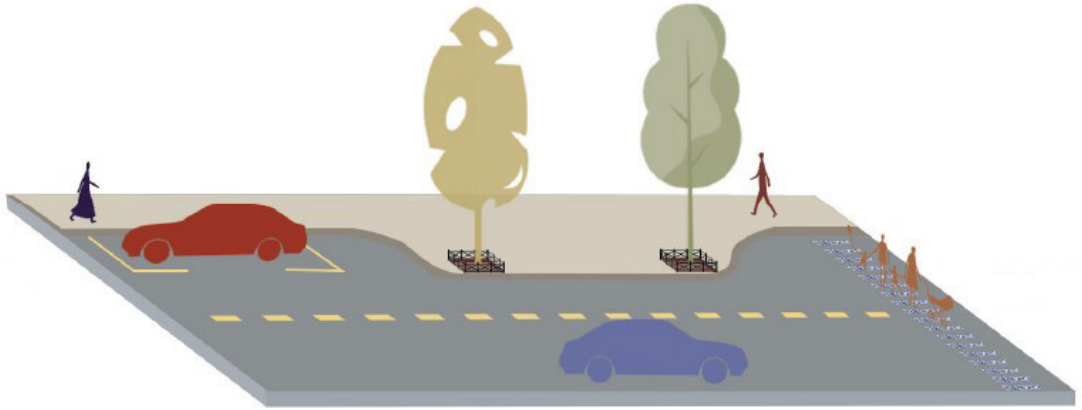
- Placemaking and community building
- Safer, more pedestrian-friendly streets
- Enhanced green infrastructure

Our design approach aimed to transform Elm Street into a street that residents can take pride in—enhancing not only its visual appeal, but also its safety, environmental performance, and contribution to public health and well-being. Throughout the design process, we remained committed to honoring the community by reflecting the distinctive character and cultural identity of Valley Falls.

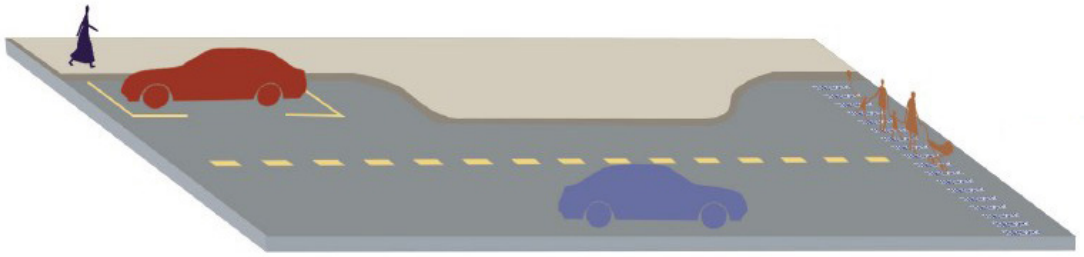
Placemaking and community building



Enhanced green infrastructure



Safer, more pedestrian-friendly streets



FINAL CONCEPTUAL MASTER PLAN

Our design approach aimed to transform Elm Street into a street that residents can take pride in, enhancing not only its visual appeal, but also its safety, environmental performance, and contribution to public health and wellbeing. Throughout the design process, we remained committed to honoring the community by reflecting the distinctive character and cultural identity of Valley Falls.

PLACEMAKING AND COMMUNITY BUILDING

Identity - See perspective on pages 58–59.

To reinforce neighborhood identity and celebrate local heritage, we recommend installing a decorative gateway sign that reflects the character and history of the Valley Falls community. To further enhance this sense of place, we propose incorporating artistic crosswalk murals at both ends of Elm Street. These creative elements will contribute to a distinctive and memorable streetscape.

In addition, to strengthen visual continuity with the broader Broad Street Revitalization Initiative, we recommend extending the decorative pole-mounted planters currently used along Broad Street onto Elm Street. This extension will foster a stronger sense of cohesion between the two corridors, enrich the pedestrian experience, and further reinforce the neighborhood's unique identity.

Streetscape - See perspective on page 60.

To enhance the pedestrian experience and streetscape, we propose planting five medium-sized street trees along the north side of Elm Street, where no overhead utility lines are present. Each tree will be set in a permeable pit with curb cuts to capture stormwater for passive irrigation, complemented by low-maintenance vegetation for year-round visual interest. On the south side of Elm Street, where utility lines are present, we recommend planting five small-stature trees that will remain below the wires. These will complement the tree pits on the north side, creating a unified and attractive streetscape. Together, the plantings will help reduce the urban heat island effect and enhance the street's greenery.

To support comfort and social interaction, benches will be added on both sides of the street, providing shaded places to rest and gather beneath the tree canopy.

Community - See perspective on pages 61.

At the west end of Elm Street, the underused space in front of the commercial building, currently overgrown and used for informal parking, can be transformed into a vibrant community gathering spot. A mural on the building's façade will add visual interest and identity, while seating, low-maintenance landscaping, and a shade tree will create a welcoming space for social interaction and neighborhood pride.

ENTERING ELM STREET FROM BROAD STREET - BEFORE

Existing east end of Elm Street off Broad Street

ENTERING ELM STREET FROM BROAD STREET - IMPROVED

Perspective of the enhanced east end of Elm Street

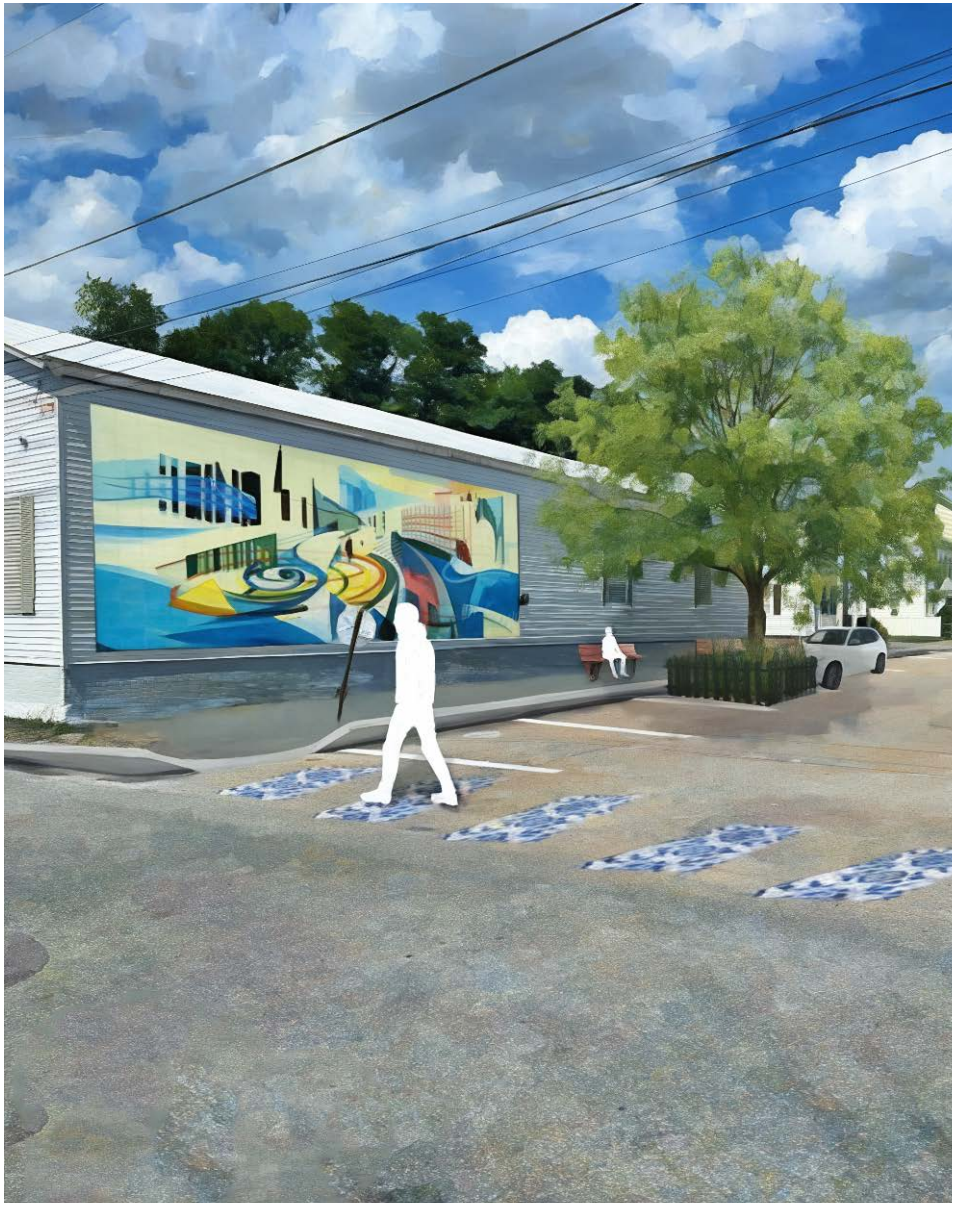
SIDEWALK AND STREET - BEFORE & IMPROVED

Existing condition of the sidewalk and street

Perspective of the enhanced streetscape

WEST END OF ELM STREET - BEFORE & IMPROVED

Existing west end of Elm Street



Perspective of the improved west end of Elm Street

EXAMPLES OF PLACEMAKING STRATEGIES

SAFER, MORE PEDESTRIAN-FRIENDLY STREETS

Traffic Calming and Circulation

As previously noted, one of the most pressing concerns along Elm Street is the speed and behavior of vehicular traffic. Observations revealed that many drivers travel down the center of the roadway at relatively high speeds—likely a result of the lack of visual cues or defined lane boundaries. To address this, we recommend the installation of a painted centerline. This simple but effective intervention will encourage drivers to remain in their lanes, promoting safer travel and contributing to overall traffic calming.

To further support traffic calming efforts, we propose the addition of tree pits along both the north and south sides of Elm Street. These planting areas will accommodate street trees and low-maintenance vegetation, contributing to a greener, more shaded streetscape. Importantly, the presence of these features will also help to visually narrow the roadway, a proven strategy for naturally reducing vehicle speeds and reinforcing a pedestrian-friendly environment.

Parking and Pedestrian Access

Parking along Elm Street presents a significant challenge. Numerous vehicles were observed parked on the sidewalk, obstructing pedestrian movement and creating particular difficulties for individuals using strollers, mobility aids, or walking with children. This issue is largely due to the lack of visible curbs or clear separation between the street and sidewalk, caused by degraded or missing infrastructure.

To reestablish a defined edge and support safe pedestrian access, we recommend either removing excess asphalt to lower the roadway or raising the sidewalks and installing new curbing. This would create a clearer boundary between pedestrian and vehicular zones.

Additionally, the absence of marked parking spaces contributes to irregular parking behavior and sidewalk encroachment. Elm Street's generous roadway width can accommodate on-street parking without impeding traffic flow. By introducing clearly striped parking lanes, the design will guide drivers to park appropriately, prevent sidewalk obstruction, and ensure continuous, accessible pedestrian pathways.

ELM STREET - BEFORE

Existing streetscape

ELM STREET - IMPROVED

Axonometric view of the improved streetscape

ELM STREET SIDEWALK - BEFORE

Existing condition of the sidewalk

ELM STREET SIDEWALK - IMPROVED

Perspective of the improved sidewalk

ADDITIONAL TRAFFIC CALMING STRATEGIES

To further calm traffic along Elm Street, a variety of physical design interventions may be considered. These measures are proven to influence driver behavior by reducing speed, discouraging cut-through traffic, and enhancing overall pedestrian safety. The primary categories of traffic calming techniques include horizontal deflections, vertical deflections, lane width reductions, and routing restrictions, each described below.

Horizontal Deflection

Horizontal deflections disrupt a driver's ability to travel in a straight line by introducing lateral shifts in the roadway. This forces motorists to reduce speed in order to safely navigate the altered path.

- **Chicane which is a series of alternating curves or lane shifts that require drivers to steer back and forth, reducing speed and discouraging high-speed cut-through traffic. (Also referred to as deviations, serpentines, reversing curves, or twists.)**

Vertical Deflection

Vertical deflections introduce a change in roadway elevation, compelling drivers to slow down to maintain comfort and control.

- Speed hump – A gradual, raised area of pavement designed to reduce vehicle speed.
- Speed cushion – Similar to speed humps but segmented to allow emergency vehicles to pass with minimal delay.
- Rumble strip – A series of raised or grooved patterns that alert drivers through vibration and sound.
- Raised crosswalk – A pedestrian crossing that is elevated to sidewalk level, improving visibility and prioritizing pedestrian movement.

Street Width Reduction

Reducing the width of travel lanes encourages slower driving speeds by creating a more constrained travel environment. Narrower lanes also shorten crossing distances for pedestrians, improving safety and comfort.

- On-street parking – Strategically located parking can visually and physically narrow the travel lane, calming traffic while providing needed parking access.

Routing Restriction

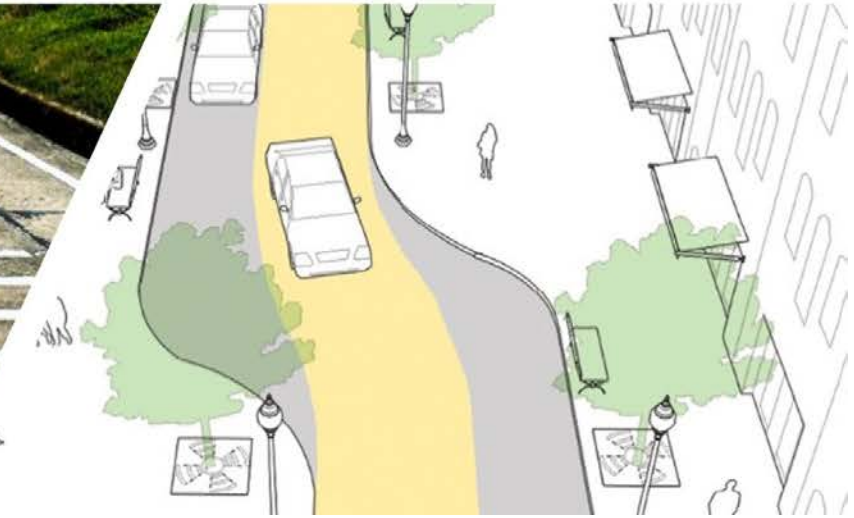
Routing restrictions limit specific vehicle movements at intersections, effectively reducing volumes of cut-through traffic.

EXAMPLES OF TRAFFIC CALMING STRATEGIES

Speed cushions

Clearly delineated street parking

Rumble strip



Chicane

ENHANCED GREEN INFRASTRUCTURE

As discussed earlier in this report, Elm Street experiences elevated summer temperatures due to the urban heat island effect. This phenomenon is driven by excessive impervious surfaces—primarily asphalt and pavement—and a lack of tree canopy. The resulting temperature increase contributes to higher energy consumption, degraded air quality, and increased health risks, particularly for vulnerable populations such as children, older adults, and individuals with pre-existing health conditions.

To mitigate these impacts, we recommend strategic tree planting and the incorporation of green infrastructure elements. Specifically, we propose planting six medium-sized street trees along the north side of Elm Street, where no overhead utility lines are present and tree growth is unrestricted. On the south side, where utility lines are located, we recommend six small-stature trees that can grow safely beneath the wires.

Over time, this new canopy will help lower surface temperatures, provide much-needed shade, and enhance the visual character of the street. To further support biodiversity and urban greening, we also recommend planting hardy, low-maintenance perennials around the tree pits. These plantings will help suppress weeds, attract pollinators, improve soil health, and contribute to the overall ecological and aesthetic quality of the corridor.

To ensure the long-term health of street trees in an urban environment with constrained space and high impervious coverage, we recommend using the Permavoid system. Permavoid is a modular, load-bearing subsurface solution designed to promote healthy tree growth in built environments. It supports root development, structural integrity, and stormwater management by:

- Creating accessible subsurface space for root expansion;
- Providing consistent access to air, water, and nutrients;
- Protecting nearby pavement and infrastructure from root-related damage;
- Functioning as part of a sustainable drainage system (SuDS) by capturing and slowly releasing stormwater.

This integrated approach improves both tree vitality and resilience to extreme weather events while contributing to local flood mitigation efforts. The Rhode Island Department of Environmental Management (RIDEM) currently has access to Permavoid materials. We recommend that the Town of Cumberland coordinate with RIDEM to procure and install these systems for the proposed tree locations at the top and bottom of Elm Street.

STORMWATER MANAGEMENT

Elm Street currently faces significant challenges related to stormwater runoff due to the abundance of impermeable surfaces. To address this, we propose the installation of tree pits on both sides of the street designed with curb cutouts that allow stormwater to enter and infiltrate as it flows downhill from Broad Street to Macondray Street. The accompanying diagram illustrates how these strategically placed tree-pits will intercept and retain runoff, thereby reducing the volume of stormwater reaching the lower end of the street, alleviating pressure on the main drainage infrastructure.

Elm Street stormwater management axonometric diagram

TREE SPECIES RECOMMENDATIONS - NORTH SIDE OF ELM STREET

In collaboration with the Rhode Island Department of Environmental Management (RIDEM), the URI RCDL recommends the following selection of tree species for planting along the north and south side of Elm Street, where no overhead utility lines are present. To promote ecological resilience and reduce the risk of disease or pest outbreaks, we recommend incorporating a diverse mix of species rather than establishing a monoculture.

Gleditsia triacanthos - Honey locust is a rapidly growing, large deciduous tree in the Fabaceae (bean) family. It is native to central and eastern North America. Honey locust is an excellent choice to plant in a native garden or as a street tree.

Height: 60 ft. 0 in. - 80 ft. 0 in.
Width: 60 ft. 0 in. - 80 ft. 0 in.

Zelkova serrata - Japanese zelkova a tough and durable large deciduous tree in the Ulmaceae (elm) family. It is noted for its graceful vase shape when young, green textured foliage, and attractive honeycomb bark. It is tolerant of drought and wind once established.

Height: 50 ft. 0 in. - 80 ft. 0 in.
Width: 50 ft. 0 in. - 80 ft. 0 in.

Nyssa sylvatica - Black gum or black tupelo is a medium-sized, native deciduous tree in the Nyssaceeae (tupelo) family. This tree is an excellent choice to support wildlife in the landscape. Black gum is a good street tree, specimen, and shade tree. The spectacular fall foliage color will add interest to the landscape.

Height: 40 ft. 0 in. - 70 ft. 0 in.
Width: 20 ft. 8 in. - 35 ft. 6 in.

TREE SPECIES RECOMMENDATIONS - SOUTH SIDE OF ELM STREET

Syringa reticulata - Japanese tree lilac is a small deciduous tree or large shrub in the Oleaceae (olive) family. The tree also provides shelter and habitat for wildlife. It may also be considered as a street tree, large hedge, or an accent or specimen for a shrub border.

Height: 25 ft. 0 in. - 30 ft. 0 in.
Width: 15 ft. 0 in. - 20 ft. 0 in.

Acer ginnala - Amur maple is a deciduous small tree or large shrub in the Sapindaceae (maple) family. The shape is variable from multi-stemmed to single trunked and rounded to open crown and can be successfully tailored to specific landscape requirements by pruning. Tolerant of wind, dry soil, and drought.

Height: 15 ft. 0 in. - 20 ft. 0 in.
Width: 15 ft. 0 in. - 20 ft. 0 in.

Cornus kousa - The Kousa dogwood is a handsome, small- to medium-sized tree in the Cornaceae (dogwood) family. A tree for all seasons, the Kousa dogwood has berries that resemble raspberry fruit in autumn, and the peeling bark on the mature tree trunks has an attractive mottled appearance.

Height: 20 ft. 0 in. - 30 ft. 0 in.
Width: 15 ft. 0 in. - 30 ft. 0 in.

TREE PIT COMPANION PLANT RECOMMENDATIONS

Incorporating hardy, low-maintenance perennials into urban tree pits enhances both the ecological function and visual appeal of the streetscape. These plantings help suppress weeds, retain soil moisture, and support pollinators while introducing seasonal color and texture. In high-traffic urban environments like Elm Street, selected species should be drought-tolerant, salt-resistant, and capable of thriving in compacted soils with limited root space.

Schizachyrium scoparium
Little bluestem is a perennial, ornamental, warm season grass. Once established, it has excellent drought resistance.

Achillea
Yarrow is a genus of flowering plants in the aster family and are native to North America. They are generally drought tolerant and also tolerate poor soil.

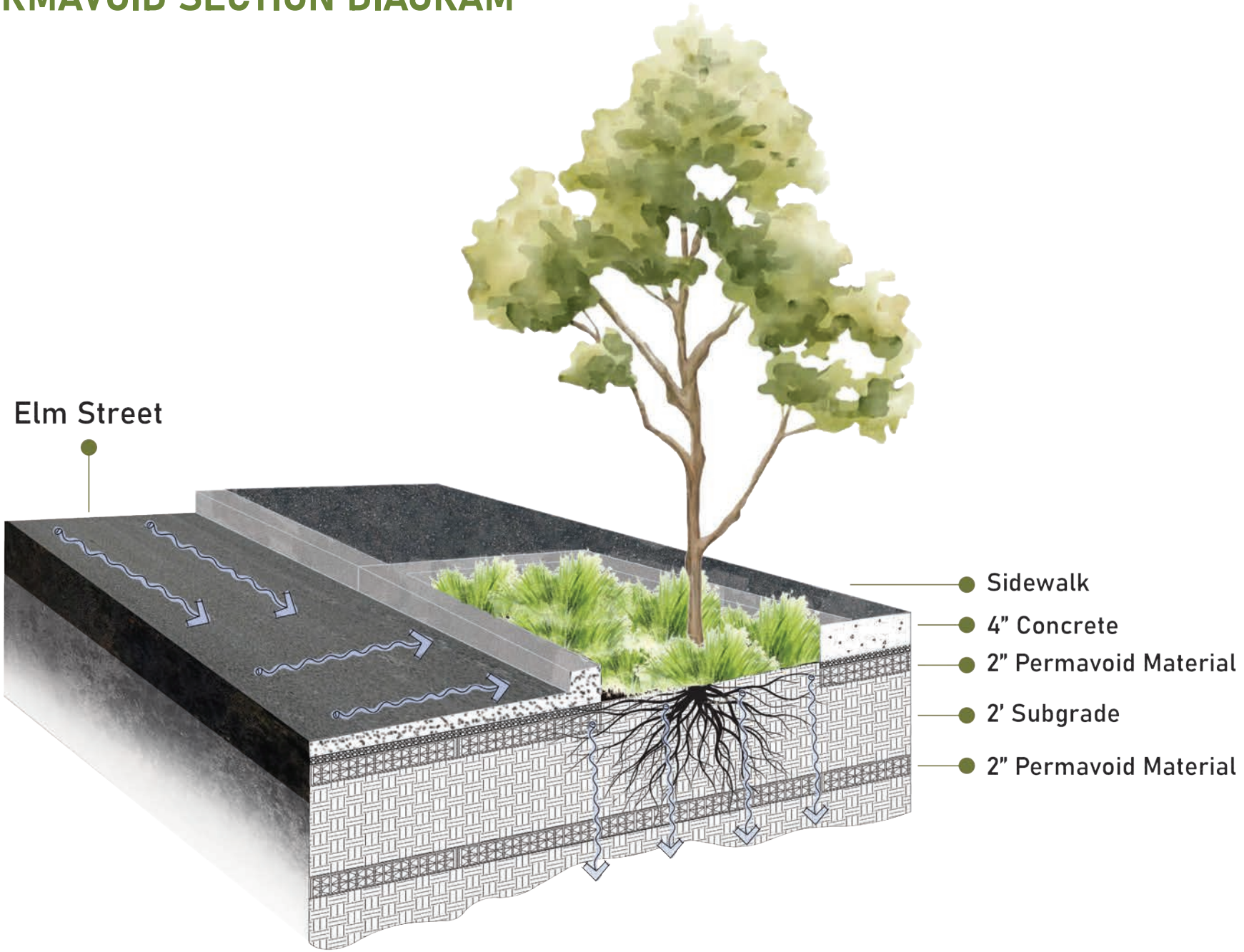
Panicum virgatum
Switchgrass is a perennial, warm-season ornamental grass. It is effective as an accent plant in a native or water garden.

Echinacea purpurea
Purple coneflower This is a popular and long-blooming plant for use as a border or in groupings in a native or pollinator garden, meadow, and naturalized areas.

Salvia yangii
Russian sage is an erect, perennial shrub that has a woody base. Use it in perennial beds, drought tolerant gardens, and as a filler plant.

Asclepias tuberosa
Butterfly weed is a tuberous-rooted, native, herbaceous perennial. It is drought tolerant, moderately salt tolerant, and does well in poor, dry soils.

PERMAVOID SECTION DIAGRAM



DELIVER

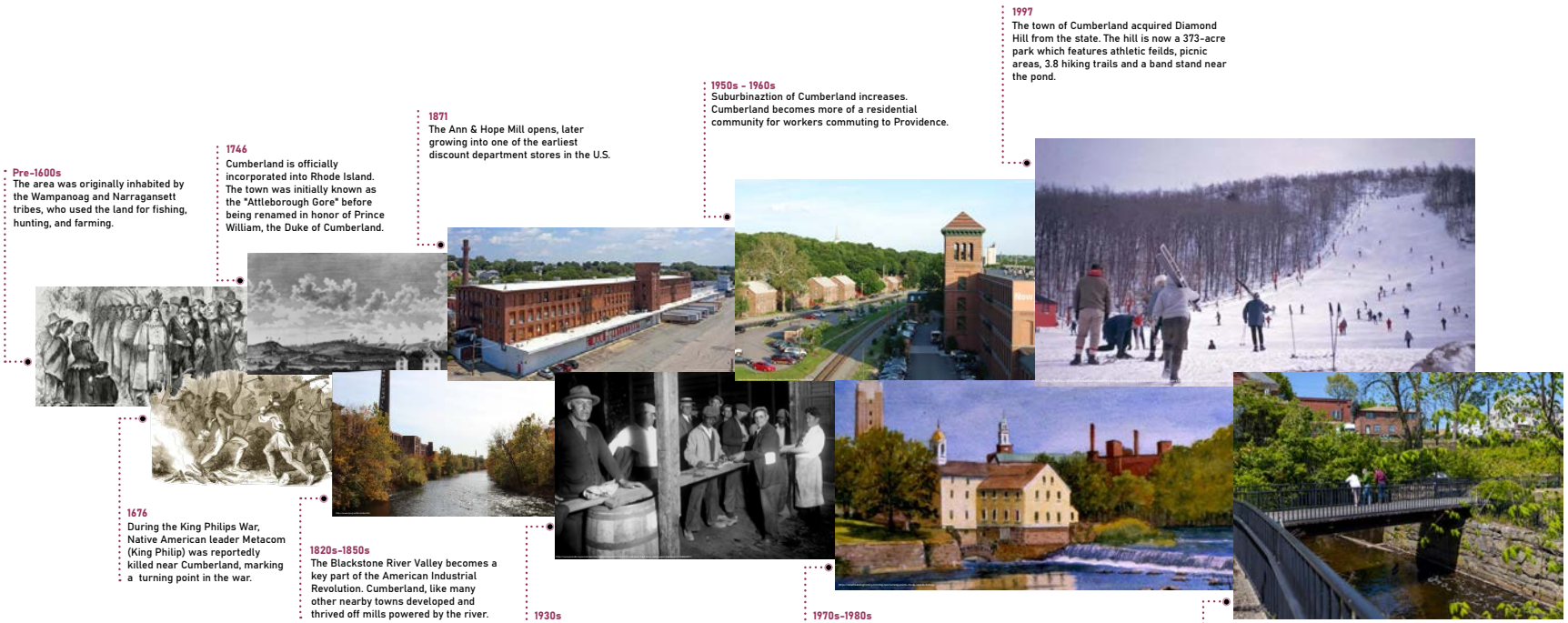
PRELIMINARY CONCEPTUAL & RESEARCH DESIGN BOARDS

CUMBERLAND ELM STREET

UNIVERSITY OF RHODE ISLAND REGENERATIVE COMMUNITY DESIGN LAB

Cumberland – Then & Now

Cumberland, located along Rhode Island's northern border, has a long and layered history that stretches back to pre-European times, when the area was inhabited by Indigenous peoples of the Narragansett and Wampanoag tribes. With the rise of American industry, Cumberland became an important hub of mill villages and manufacturing, shaping the town's economic and cultural landscape. Today, Cumberland honors its industrial roots while preserving its natural beauty and recreational spaces, and is home to a growing, connected community.



Pre-1600s
The area was originally inhabited by the Wampanoag and Narragansett tribes, who used the land for fishing, hunting, and farming.

1746
Cumberland is officially incorporated into Rhode Island. The town was initially known as the "Attleborough Gore" before being renamed in honor of Prince William, the Duke of Cumberland.

1871
The Ann & Hope Mill opens, later growing into one of the earliest discount department stores in the U.S.

1950s – 1960s
Suburbinaztion of Cumberland increases. Cumberland becomes more of a residential community for workers commuting to Providence.

1997
The town of Cumberland acquired Diamond Hill from the state. The hill is now a 373-acre park which features athletic feilds, picnic areas, 3.8 hiking trails and a band stand near the pond.

1676
During the King Philips War, Native American leader Metacom (King Philip) was reportedly killed near Cumberland, marking a turning point in the war.

1820s-1850s
The Blackstone River Valley becomes a key part of the American Industrial Revolution. Cumberland, like many other nearby towns developed and thrived off mills powered by the river.

1930s
The Great Depression hits towns that have a reliance on manufacturing, such as Cumberland.

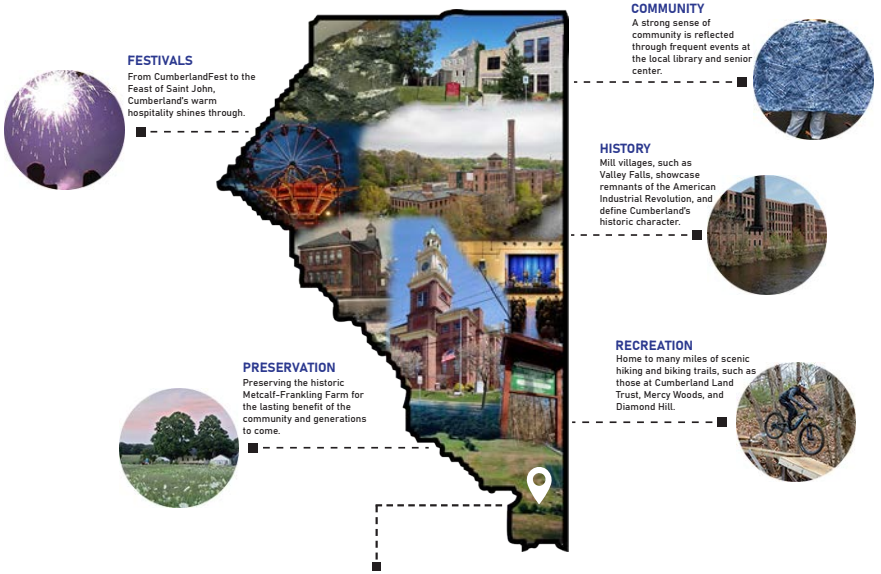
1970s-1980s
Many of the remaining mills were decomissioned or repurposed. Cumberland also focused conservation efforst and preserving the historic mill villages in the town.

2023
In April, there was a push to revitalize Valley Falls Heritage Park after vandalism issues. Plans developed for repurposing it with a new outreach center aim to foster community engagement.

CUMBERLAND CULTURE AT A GLANCE

Cumberland, Rhode Island: A Town of History and Natural Beauty

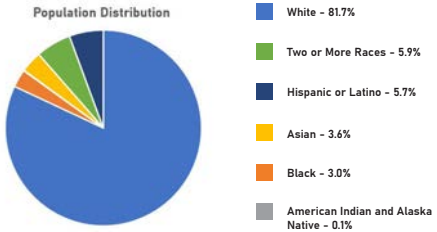
Nestled along the Massachusetts border in northeastern Rhode Island, Cumberland blends a rich industrial past with a strong commitment to preserving natural spaces. Historic mill villages, scenic riverways, and expanding neighborhoods reflect a town that continues to grow while honoring its roots.



- TOTAL LAND AREA - 18,112 ACRES
- TOTAL POPULATION - 36,405
- PERSONS AGED 65+ 17.6%
- LANGUAGE OTHER THAN ENLGLISH SPOKEN AT HOME - 22.7%
- MEDIAN RENT - $1,251
- MEDIAN HOME VALUE - $394,600
- MEDIAN HOUSEHOLD INCOME - $118,642
- AVERAGE PERSONS PER HOUSEHOLD - 2.56

Valley Falls: Cumberland's Historic Heart

Located along the Blackstone River, Valley Falls is Cumberland's most urban neighborhood and a former hub of textile production. Shaped by waves of immigrant labor, especially Portuguese and now a vibrant Latino community, it remains a lively residential area with deep historic character. Preserved mills, riverfront views, and the Blackstone River Bikeway link the past with the present.



Community Priorities

- Maintain a high level of municipal services and educational quality
- Preserve historically farmed areas and encourage a vibrant agricultural sector
- Provide equitable, safe, and affordable housing opportunities for existing and future resident
- Incorporate Best Management Practices for retrofitting outdated drainage facilities within local streets, to limit stormwater runoff and enhance water quality
- Create walkable neighborhoods
- Implement neighborhood economic development strategies that promote harmony between economic and

CUMBERLAND - A CLOSER LOOK

CUMBERLAND ELM STREET
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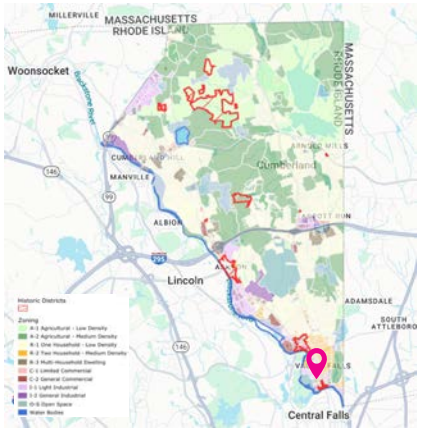
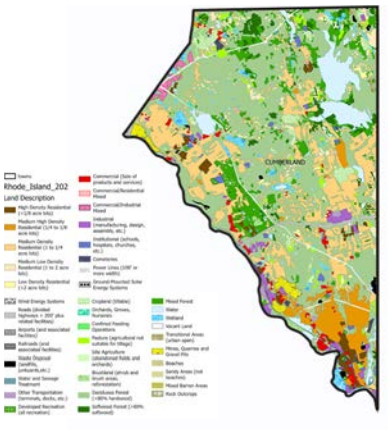
Cumberland Zoning Map

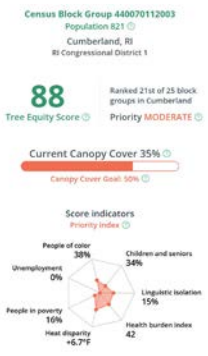


Cumberland Land Use Map



Tree Equity Score

Measures how well the critical benefits of urban tree canopy are reaching those who need them most. The score establishes an equity-first standard to guide investment in communities living on low incomes, communities of color and all those disproportionately affected by extreme heat, pollution and other environmental hazards.



Population Change by Block

Blackstone River Watershed

Existing Connections to Green Infrastructure

CONCEPT 1

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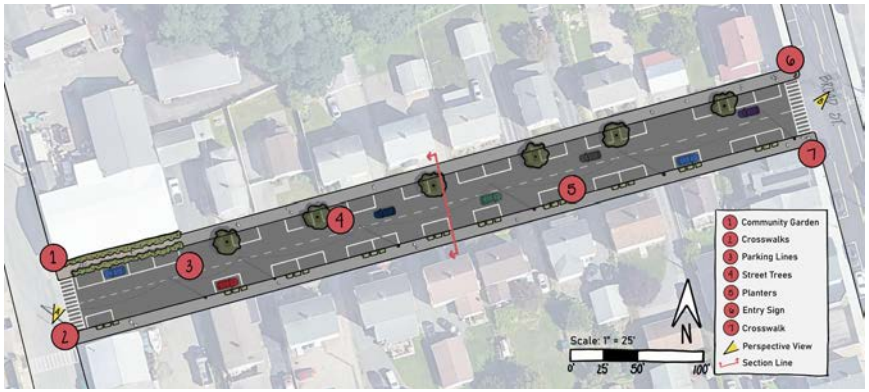
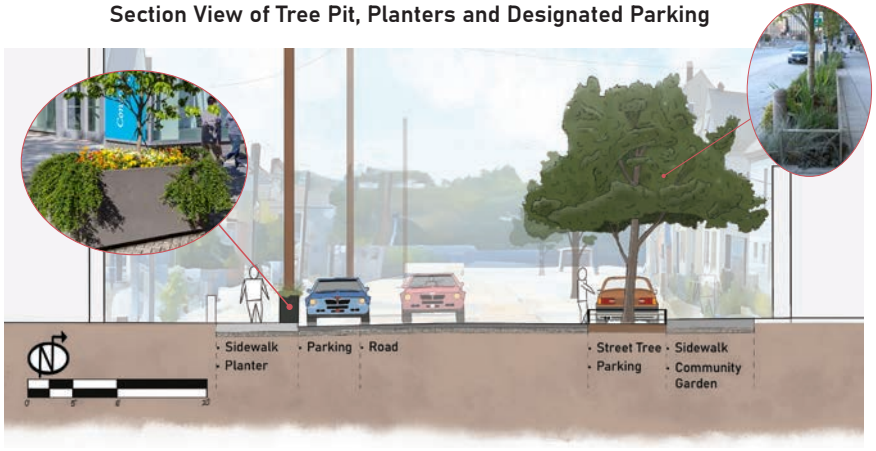
Site Plan



Perspective A - Entrance from Macondaray St.

Perspective B - Entrance from Broad St.

Section View of Tree Pit, Planters and Designated Parking



CONCEPT 2

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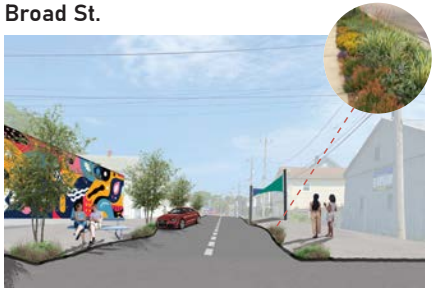
Site Plan

Perspective A - Entrance from Broad St.



Perspective B - Entrance from Macondaray St.

Site Section - Seating to Street Tree

FINAL CONCEPTUAL DESIGN BOARDS

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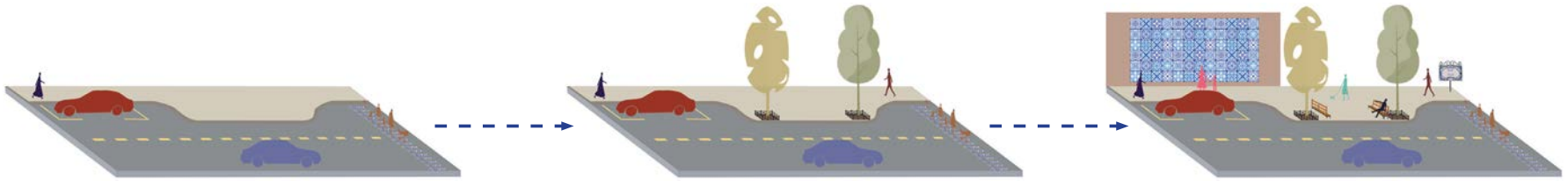
Final Conceptual Master Plan

Our design approach aimed to transform Elm Street into a street that residents can take pride in, enhancing not only its visual appeal, but also its safety, environmental performance, and contribution to public health and wellbeing. Throughout the design process, we remained committed to honoring the community by reflecting the distinctive character and cultural identity of Valley Falls.



Safer, More Pedestrian-Friendly Streets

Enchanced Green Infrastructure

Placemaking and Community Building

PROPOSED ELM STREET PLACEMAKING AND COMMUNITY BUILDING

CUMBERLAND ELM STREET

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Placemaking and Community Building

Placemaking and community-building strategies on Elm Street focus on transforming underutilized areas into active, inclusive public spaces. This can be achieved by introducing elements such as public art and seating areas that encourage gathering and social interaction. Supporting local identity helps strengthen community ties and foster a sense of ownership among residents.

Approaching Elm Street from Broad Street

Problems

- **Limited aesthetic appeal**
- **Absence of distinctive neighborhood features**

Solutions

- **Add welcoming street sign**
- **Add a mural, creating a community space with benches and trees**
- **Add murals to the crosswalks at both ends of Elm Street**

Benefits

- **Reinforced community character**
- **Improved pedestrian access and connectivity**
- **Stronger sense of community**

Placemaking and Community-Building Strategies

Curbside Spaces for Shade, Rest and Community

Macondaray Street Corner Mural

PROPOSED SAFER, MORE PEDESTRIAN-FRIENDLY STREETS

CUMBERLAND ELM STREET

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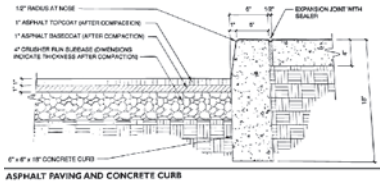
Disclaimer: This drawing is conceptual and was prepared to show approximate location and arrangement of site features. It is subject to change and is not intended to replace the use of construction documents. The client should consult appropriate professionals before any construction or site work is undertaken. The URI RCDL is not responsible for the inappropriate use of this drawing.

Safer, More Pedestrian-friendly Streets

To create a safer and more pedestrian-friendly street along Elm Street, we recommend implementing traffic calming measures to reduce vehicle speeds and improve pedestrian safety. These improvements work together to support a more vibrant, accessible, and comfortable public realm for all users.



Problems:
- Lack of centerline markings, leading to unsafe driving behavior
- Lack of curbs separating the roadway from sidewalks
- No clearly delineated on-street parking
- Sidewalks obstructed by parked cars, leaving no safe space for residents

Solutions:
- Install a clearly defined curb to separate the street and sidewalk
- Paint a centerline along Elm Street to guide traffic flow
- Delineate street parking

Benefits
- Separation between vehicles and pedestrians, enhancing overall pedestrian safety
- Improved driver behavior and reduced vehicular speed
- Enhanced clarity and functionality of the streetscape

Street Calming Strategies


Street and Sidewalk Before


Street and Sidewalk After

PROPOSED ENHANCED GREEN INFRASTRUCTURE

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Enhanced Green Infrastructure

Elm Street is subject to elevated summer temperatures as a result of the urban heat island effect. To help mitigate these conditions, we recommend a combination of strategic street tree planting and the integration of green infrastructure elements to provide shade, reduce surface temperatures, and improve overall thermal comfort.

Stormwater Management

Elm Street currently faces significant challenges related to stormwater runoff due to the abundance of impermeable surfaces.

SOLUTION:

Install tree pits on both sides of the street.

RESULT:

These strategically placed tree pits will intercept and retain runoff, alleviating pressure on the main drainage.

Permavoid Urban Tree Pit Detail

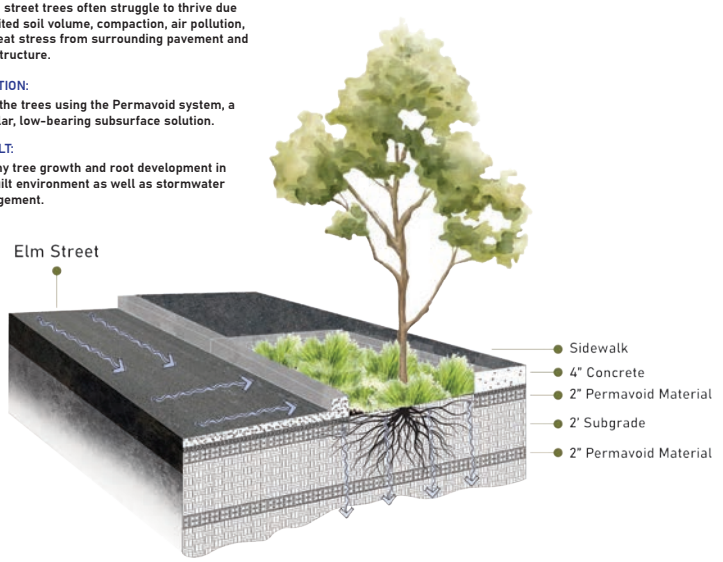
Urban street trees often struggle to thrive due to limited soil volume, compaction, air pollution, and heat stress from surrounding pavement and infrastructure.

SOLUTION:

Plant the trees using the Permavoid system, a modular, low-bearing subsurface solution.

RESULT:

Healthy tree growth and root development in the built environment as well as stormwater management.



The Problems

- **Overabundance of pavement and asphalt, significant stormwater management issues**
- **Urban heat island effect caused by a lack of street trees and vegetation**

The Benefits

- **Expanded urban tree canopy contributing to visual appeal, shade, and environmental health**
- **Reduced surface temperatures and improved pedestrian comfort through increased vegetation**

The Solutions

- **Install medium sized street trees along north-side**
- **Install small street trees under the power lines on south-side**
- **Add hearty perennials to each tree pit**

Tree Species Recommendations - North Side of Elm Street

Gleditsia triacanthos - Honey locust is a rapidly growing, large deciduous tree in the Fabaceae (bean) family. It is native to central and eastern North America. Honey locust is an excellent choice to plant in a native garden or as a street or security tree.

Height: 60 ft. 0 in. - 80 ft. 0 in.
Width: 60 ft. 0 in. - 80 ft. 0 in.

Zelkova serrata - Japanese zelkova a tough and durable large decidous tree in the Ulmaceae (elm) family. It is noted for its graceful vase shape when young, green textured foliage, and attractive honeycomb bark. It is tolerant of drought once established and wind.

Height: 50 ft. 0 in. - 80 ft. 0 in.
Width: 50 ft. 0 in. - 80 ft. 0 in.

Nyssa sylvatica - Black gum or black tupelo is a medium-sized, native deciduous tree in the Nyssaceae family. This tree is an excellent choice to support wildlife in the landscape. Black gum is a good street tree, specimen, and shade tree. The spectacular fall foliage color will add interest to your landscape.

Height: 40 ft. 0 in. - 70 ft. 0 in.
Width: 20 ft. 8 in. - 35 ft. 6 in.

Tree Species Recommendations - South Side of Elm Street

Syringa reticulata - Japanese tree lilac is a small deciduous tree or large shrub in the olive family (Oleaceae). The tree also provides shelter and habitat for wildlife. It may also be considered as a street tree, large hedge, or an accent or specimen for a shrub border.

Height: 25 ft. 0 in. - 30 ft. 0 in.
Width: 15 ft. 0 in. - 20 ft. 0 in.

Acer ginnala - Amur maple is a deciduous small tree or large shrub in the maple family (Sapindaceae). The shape is variable from multi-stemmed to single trunked and rounded to open crown and can be successfully tailored to specific landscape requirements by pruning. Tolerant of wind, dry soil, and drought.

Height: 15 ft. 0 in. - 20 ft. 0 in.
Width: 15 ft. 0 in. - 20 ft. 0 in.

Cornus kousa - The Kousa dogwood is a handsome, small- to medium-sized tree reaching a mature height of 30 feet. A tree for all seasons, the Kousa dogwood has berries that resemble raspberry fruit in autumn, and the peeling bark on the mature tree trunks has an attractive mottled appearance.

Height: 20 ft. 0 in. - 30 ft. 0 in.
Width: 15 ft. 0 in. - 30 ft. 0 in.

Tree Pit Companion Plant Recommendations

Schizachyrium scoparium Little bluestem is a perennial, ornamental, warm season grass. Once established, it has excellent drought resistance.

Panicum virgatum
Switchgrass is a perennial, warm-season ornamental grass. It is effective as an accent plant in a native or water garden.

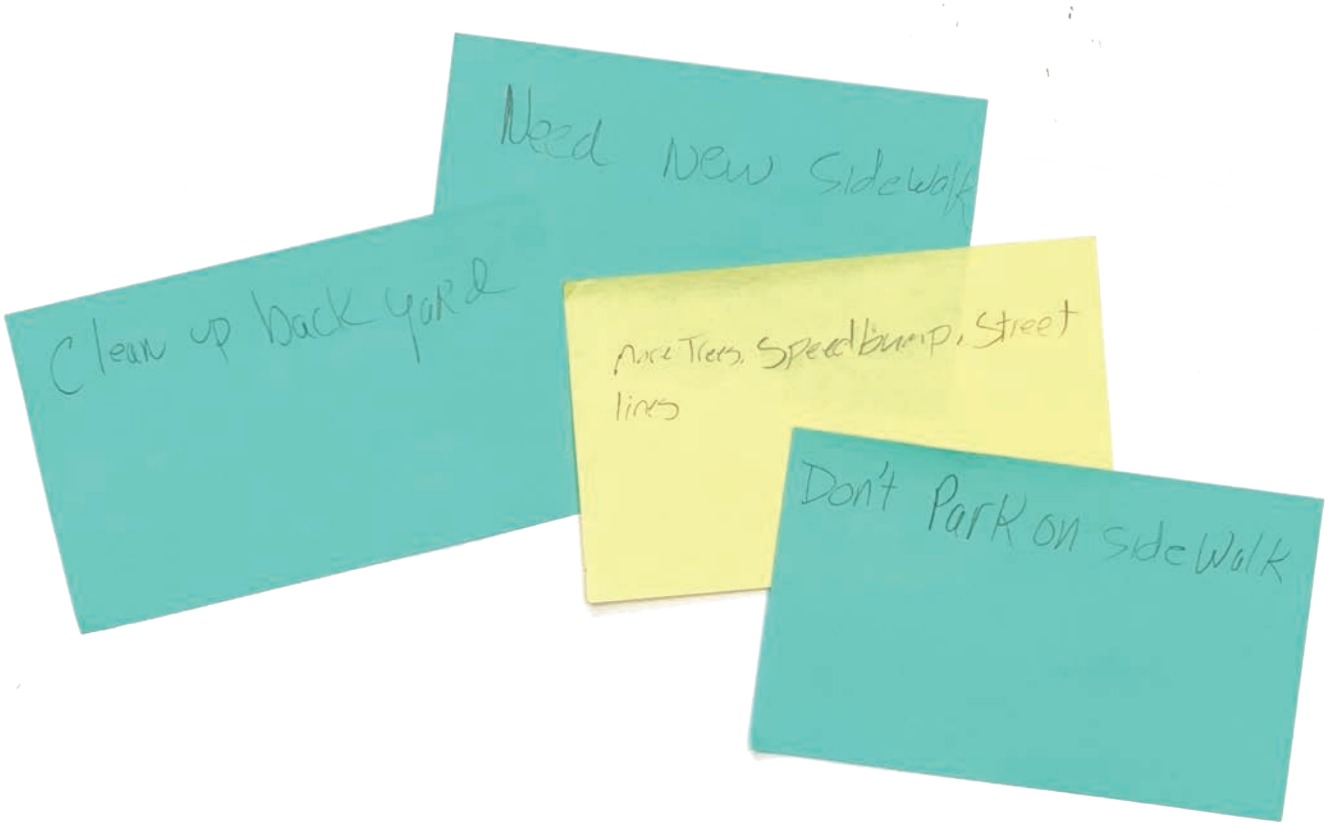
Salvia yangii
Russian sage is an erect, perennial shrub that has a woody base. Use it in perennial beds, drought tolerant gardens, and as a filler plant.

Achillea
Yarrow is a genus of flowering plants in the aster family and are native to North America. They are generally drought tolerant and also tolerate poor soil.

Echinacea purpurea
Purple coneflower This is a popular and long-blooming plant for use as a border or in groupings in a native or pollinator garden, meadow, and naturalized areas.

Asclepias tuberosa
Butterfly weed is a tuberous-rooted, native, herbaceous perennial. It is drought tolerant, moderately salt tolerant, and does well in poor, dry soils.

The URI RCDL would like to extend our sincerest thanks to the residents of Elm Street for their generosity and thoughtful feedback.



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