

**Project Information:**

Project Title: Pine Street Green Infrastructure Improvements

Project Location: Pine Street, Pawtucket, RI, USA

Project Size: 600 linear feet

Budget for Design and Construction: Design: \$200K; Construction: \$900K

**Submitter's Role in this Project:**

Our team provided landscape architectural design services in support of the Transit-oriented District (TOD) Green Infrastructure Stormwater Improvements for the City of Pawtucket, Rhode Island. Our team supported the visual communications of Best Management Practices (BMP) maintenance videos for the Green Stormwater Infrastructure (GSI) materials. The impetus for the project was to leverage the installation of Green Stormwater Infrastructure while providing the co-benefits to the transit oriented district including: placemaking, walkability, bikability and neighborhood revitalization.

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**Summary Statement:**

Pine Street in Pawtucket is a critical gateway to the newly established Pawtucket-Central Falls public transit hub, connecting commuters to Boston and Providence. This transformation reinvigorates a once-underutilized industrial area, kickstarting the Transit-Oriented Development (TOD) vision. Phase one focused on placemaking to support this vision.

One facet of placemaking involves showcasing Green Stormwater Infrastructure (GSI) potential at Pine Street. GSI not only redefines perceptions of green infrastructure but also delineates parklets and manages runoff from a highly developed area. These GSI structures feature native and pollinator plants, requiring periodic maintenance to serve as stormwater purifiers and parklet enhancements.

Challenges in maintaining public spaces, especially GSI practices, include prioritizing maintenance for overburdened public works staff. To tackle this, we created maintenance videos and quick reference guides. These videos demonstrate maintenance procedures while emphasizing the TOD's economic and environmental goals. We also crafted visually-rich guides for each practice type, complete with seasonal checklists. These materials effectively sustain both the environmental and placemaking aspects of Pine Street's landscaping and GSI elements.

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**Narrative:**

Pine Street in Pawtucket, Rhode Island, has undergone a remarkable transformation, evolving into a pivotal gateway to the newly established Pawtucket-Central Falls public transit hub. This evolution has brought with it convenient access to buses and commuter rail connecting the city to bustling metropolises like Boston and Providence. More than just a transportation hub, Pine Street's redevelopment represents a significant stride in the realization of the Transit-Oriented Development (TOD) vision, aimed at breathing new life into a once-underutilized industrial neighborhood.

The journey towards revitalizing this district began with a focus on placemaking – the art of creating vibrant, inviting public spaces that foster a sense of community and purpose. Placemaking serves as the cornerstone for the TOD vision, as it transforms not only physical spaces but also perceptions and expectations of what urban living can be. In Pine Street's case, placemaking was a multi-faceted endeavor, with one crucial aspect being the incorporation of Green Stormwater Infrastructure (GSI).

Green Stormwater Infrastructure is not just a practical solution to manage runoff from densely developed areas; it's a visual and environmental transformation. By weaving native and pollinator plants into the landscape, Pine Street showcases GSI's potential to enhance the aesthetic appeal of urban areas while serving a vital ecological function.

Yet, the success of any GSI project, particularly in a public setting, hinges on maintenance. It's no secret that public works employees often find themselves stretched thin, juggling numerous responsibilities. Convincing them to prioritize the maintenance of GSI structures can be a challenging task. Recognizing this, our team's solution was a comprehensive maintenance strategy, from GSI design to outreach that prioritized ease of maintenance.

This outreach component features two key components: maintenance videos and quick reference guides. The maintenance videos are designed to be short, accessible, and informative, serving as live demonstrations of city staff conducting maintenance procedures. Beyond the nuts and bolts of upkeep, these videos also emphasize the broader economic and environmental goals of the TOD. They connect the dots, showing how maintaining GSI structures contributes to a more sustainable, economically viable urban environment.

Complementing these videos are graphically intensive quick reference guides, tailored to each GSI practice type. Each guide comes

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complete with seasonal checklists, offering a clear roadmap for maintenance throughout the year. These visually engaging resources make it easier for public works employees to understand and execute the necessary maintenance tasks efficiently.

The impact of these maintenance resources cannot be overstated. They have played a pivotal role in ensuring that Pine Street's GSI elements and parklets continue to thrive, fulfilling their dual roles as both environmental champions and contributors to a vibrant urban landscape, offering the added benefit of ease of maintenance.

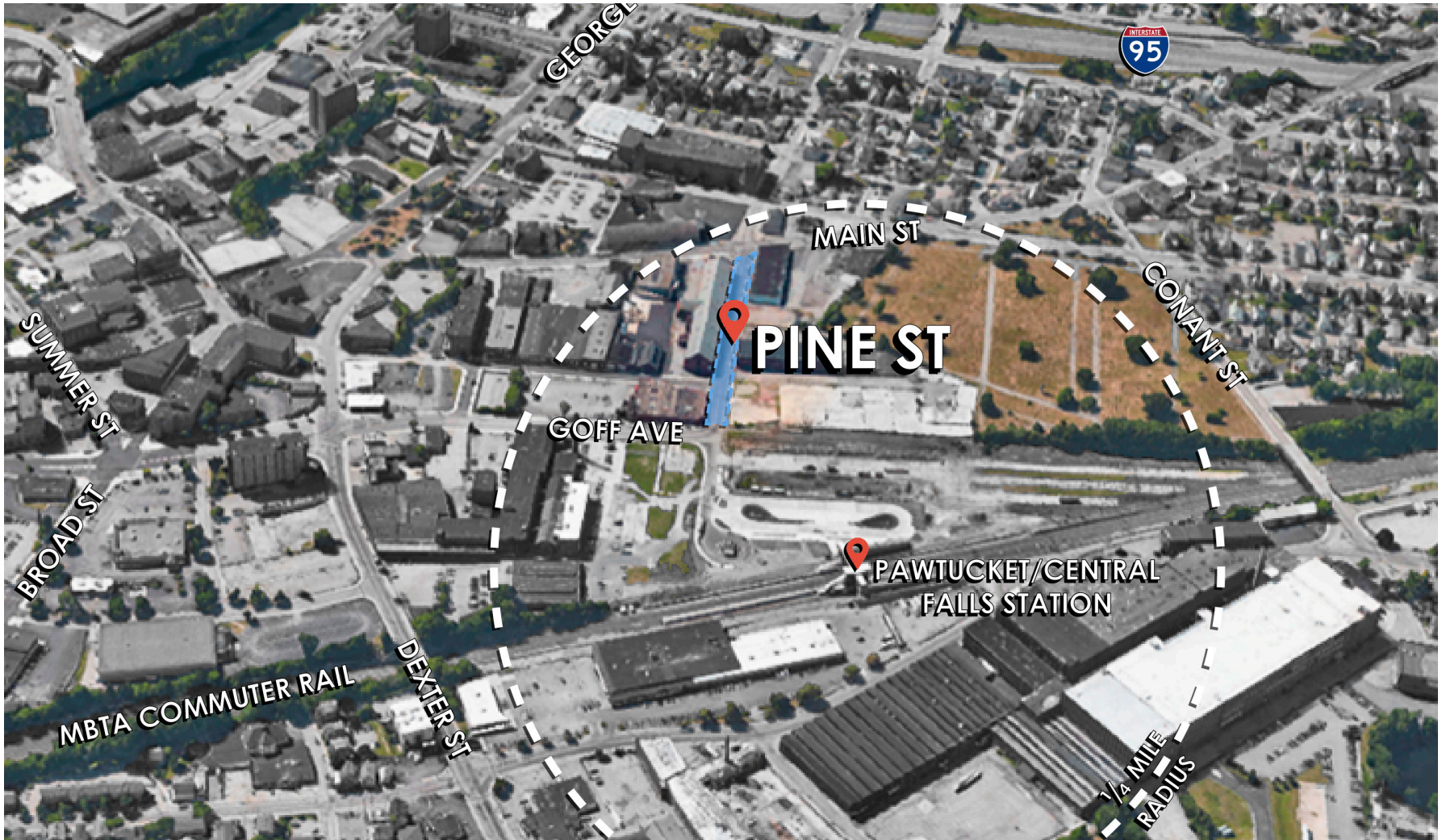
This redevelopment effort is about more than just infrastructure and maintenance protocols. It's a testament to the importance of community engagement and public awareness. Pine Street's transformation is not confined to the realm of landscape architects and public works professionals; it resonates with the broader public. It's a tangible example of how urban environments can be improved, made more sustainable, and reimagined as thriving and connected hubs of activity.

The benefits extend far beyond Pine Street's immediate vicinity. The initiative serves as a model for similar urban revitalization projects across the region. It demonstrates that the integration of GSI into urban planning isn't just an environmentally responsible choice; it's an economically sound one too. By managing stormwater effectively and creating attractive green spaces, Pine Street has become a beacon of sustainable urban development.

Furthermore, this transformation underscores the interconnectedness of urban planning and transit-oriented development. Pawtucket-Central Falls now has a public transit hub that not only facilitates commuting but also serves as a gateway to a vibrant urban experience. This approach aligns with the broader shift in urban planning towards creating livable, walkable, and transit-friendly communities.

Pine Street's journey from an underutilized, car-centric industrial area to a thriving transit hub and community showcase is a testament to the power of visionary planning and sustainable development. Placemaking, with a strong focus on Green Stormwater Infrastructure, has redefined the urban landscape, offering a glimpse into the future of cities that prioritize both functionality and aesthetics. The innovative approach to maintenance through videos and quick reference guides ensures the continued success of GSI elements, ultimately benefiting the entire community. Pine Street's story is not just about one street: it's a blueprint for reimagining and revitalizing urban spaces across the region.

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Site Location Transit Oriented District



Existing Conditions




Existing Conditions



GSI including wider sidewalk, biofiltration planters, and trees for reduction of heat island effect. The QR code link: Overview GI Operations and Maintenance video.



Pawtucket  Rhode Island

Green Infrastructure  
Maintenance  
QUICK REFERENCE GUIDE

Green Infrastructure Maintenance - Pawtucket, Rhode Island

Equipment needed:

- Personal Protective Equipment
  - ~ Hi-Vis Vest
  - ~ Safety Glasses
  - ~ Traffic Cones
  - ~ Steel-Toed Shoes/Boots
  - ~ Work Gloves
- Pry Bar or Magnetic Grate Lifter
- Small Hammer
- Vac Truck
- Shovel
- Rake
- Trash Bags/Barrel

See the Quick Reference Guide for a chart of where the good plants are located.



Before



After



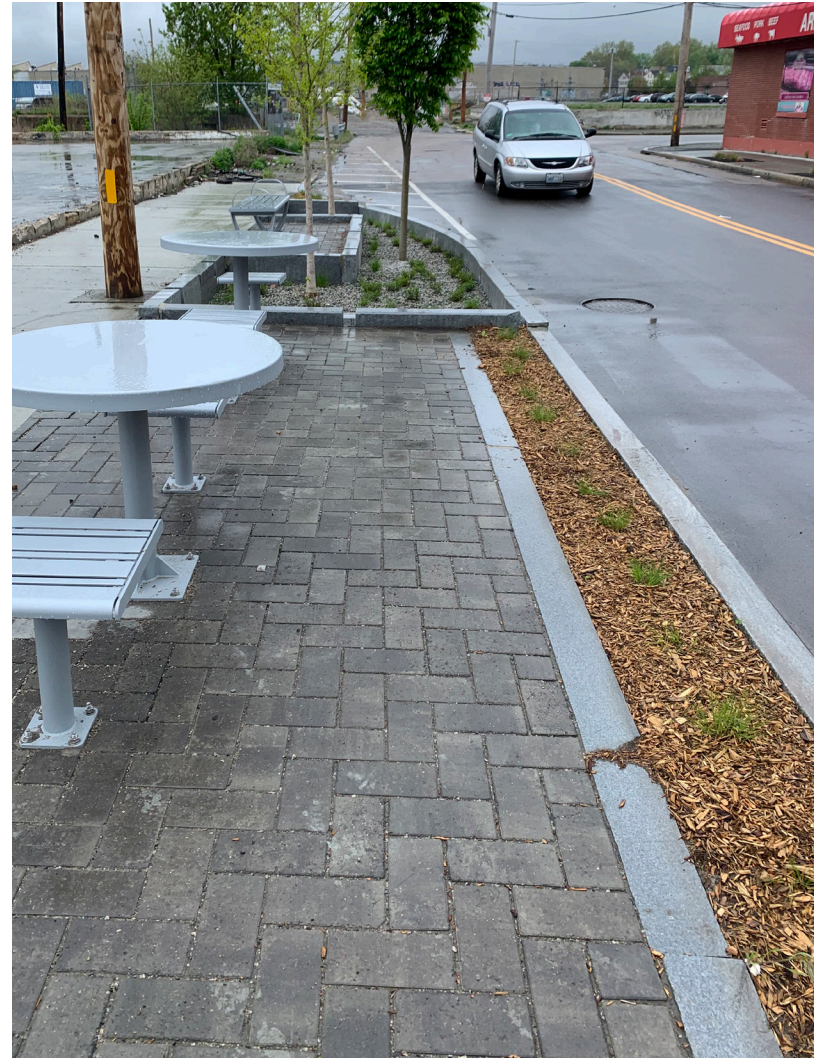
Excerpt of Quick Reference Guide for City staff who will maintain the BMPs and green infrastructure.



Green Infrastructure Biofiltration Planters Installed. The QR code links to the Pretreatment Operations and Maintenance video.



Green Infrastructure Biofiltration Planters Installed. The QR code links to the Planter Bed Operations and Maintenance



Green Infrastructure Biofiltration Planters Installed. The QR code provides a link to the Permeable Paver Care and Maintenance video.



Wider sidewalks provide multimodal transportation and social gathering spaces.



Street trees provide heat reduction. Native forbs and grasses for uptake of stormwater pollutants. Arranged in uniform masses for ease of maintenance. Plantings promote pollination amongst a heavily paved neighborhood.



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