



A USER'S GUIDE TO THE FALL KILL CREEK

Prepared by the Columbia University Urban Landscape Lab, PAUSE, Landmine Studio and eDesign Dynamics for Hudson River Sloop Clearwater and the Fall Kill Watershed Committee, with support from the New York State Department of Environmental Conservation Hudson River Estuary Program.

A USER'S GUIDE TO THE FALL KILL CREEK

Copyright © 2012 Hudson River Sloop Clearwater, Inc., Janette Kim, Alice Feng, and Matthew Slaats. All rights reserved. No part of this book may be reproduced in any manner without written permission from the authors.

This guide was created as a part of the Fall Kill Plan, a master plan for transforming the Fall Kill Creek into a vibrant community resource. For more information see <http://fallkill.org>.

Organizer:

The Fall Kill Plan was initiated and organized by the Hudson River Sloop Clearwater, Inc. and the Fall Kill Watershed Committee.

Coordinator: Ryan Palmer, Green Cities Department at Clearwater.

Committee Members: Andrew Sawtelle (Hudson River Housing), Bob Mallory (City of Poughkeepsie Common Council, 3rd Ward), Ed Glisson (Mid Hudson Children's Museum), Elizabeth Celaya (Hudson River Housing), Harvey Flad (Vassar College), Jeff Anzevino (Scenic Hudson), Joe Chenier (City of Poughkeepsie Engineering Department), Nancy Cozean (Upper Landing Committee), Roy Budnik (Mid Hudson Heritage Center), John Mylod (City Resident, Fisherman).

Sponsor:

The Fall Kill Plan is supported by a New York State Hudson River Estuary Program grant: Assessing Watershed Restoration Opportunities in the Fall Kill Watershed.

Design Team:

This guide was conceived of and created by the design team for the Fall Kill Plan:

- Janette Kim, team coordinator
Urban Landscape Lab, Columbia University
www.urbanlandscapelab.org

- Matthew Slaats, Poughkeepsie-based community outreach leader
PAUSE
www.matthewslaats.com

- Alice Feng, landscape designer
Landmine Studio
www.alicefeng.net

- Eric Rothstein, habitat and hydrology specialist
eDesign Dynamics
www.edesigndynamics.com

- Research and design fellows: Eliza Montgomery, Marianne Koch, Caroline Ellis, John Buonocore, Sydney Talcott, and Meg Kelly.

Table of Contents

02 Introduction to the Fall Kill Creek

08 How to Use this Guide

20 The Fall Kill Plan

22 Design Catalog

Parks

Public Infrastructure

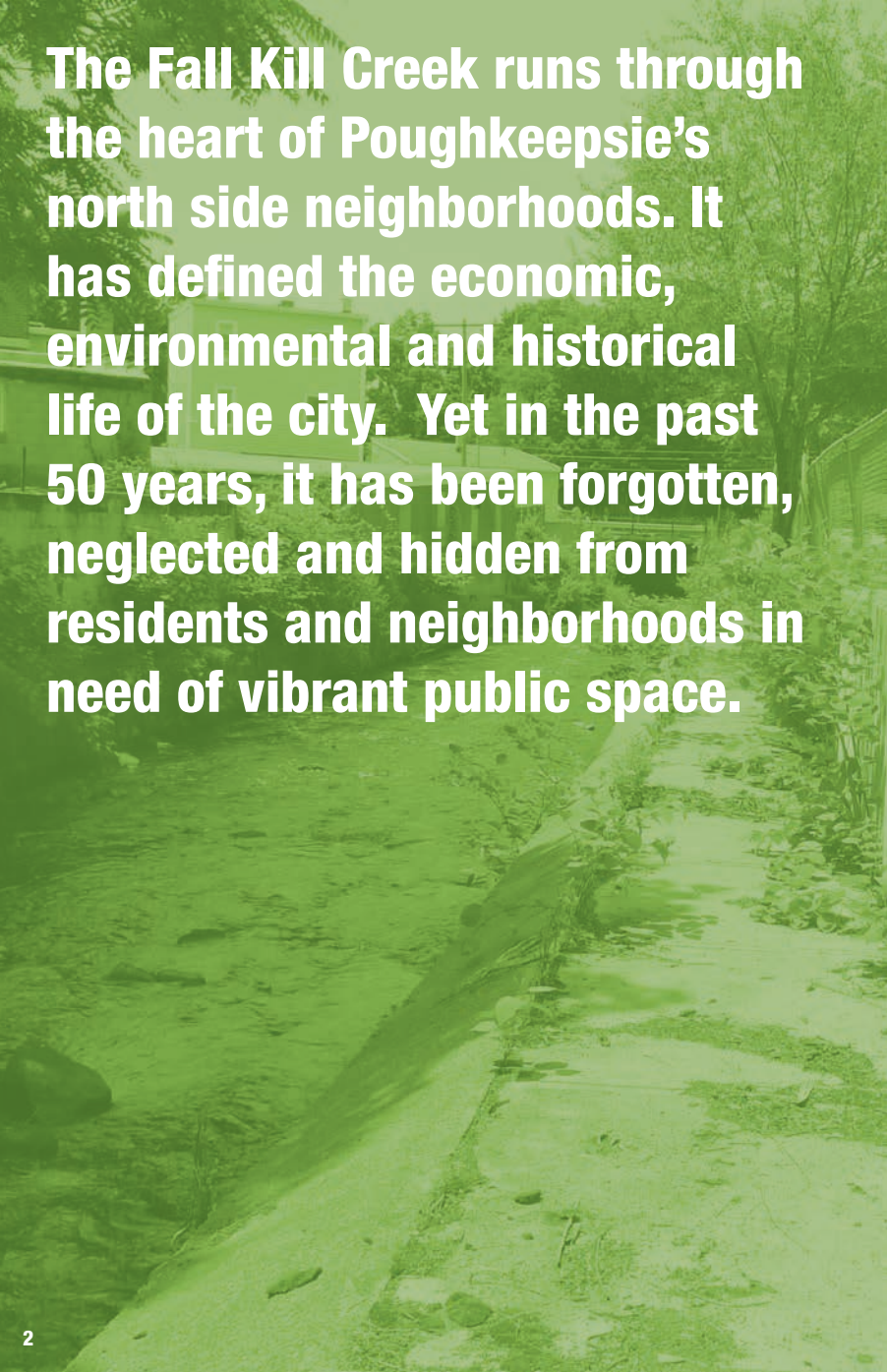
Institutions

Industrial Businesses

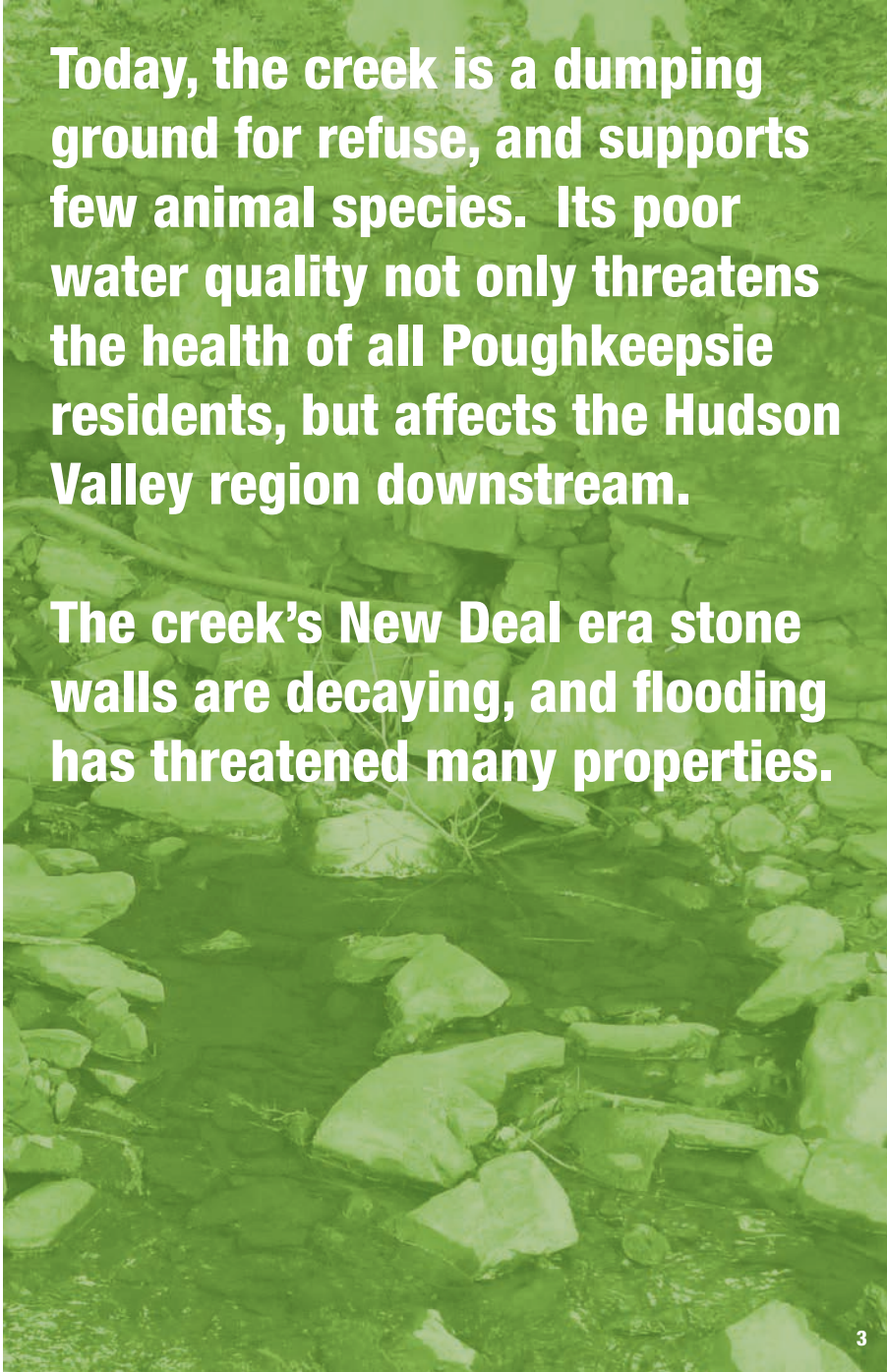
Commercial Businesses

Residents

49 Bibliography



The Fall Kill Creek runs through the heart of Poughkeepsie's north side neighborhoods. It has defined the economic, environmental and historical life of the city. Yet in the past 50 years, it has been forgotten, neglected and hidden from residents and neighborhoods in need of vibrant public space.



Today, the creek is a dumping ground for refuse, and supports few animal species. Its poor water quality not only threatens the health of all Poughkeepsie residents, but affects the Hudson Valley region downstream.

The creek's New Deal era stone walls are decaying, and flooding has threatened many properties.

How can the creek can be an asset to the city, not a liability?




City residents, businesses and institutions can make use of this extraordinary natural resource. Public access to the creek could initiate opportunities for the creation of new neighborhood centers. A greenway along the creek could link historic landmarks, urban trails such as the Walkway Over the Hudson, the train station, and the city center.

Green infrastructure practices and the construction of wetland and riparian habitat can improve water quality and aid in the control of flooding and erosion.



This guidebook offers ideas for Poughkeepsie citizens to get involved in revitalizing the creek.

Ideas range from small to large, from individual to collective, from temporary to permanent, from cheap to expensive, and from private to public. Even the smallest action can make a difference if it is tied to a larger, shared idea.



We invite you to adopt and customize these ideas. Discuss them with your neighbors, and see how together we can make the Fall Kill into a vibrant public resource.

How to Use This Guide

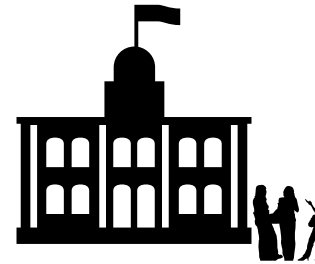
Shown in this guide are design ideas that Poughkeepsie citizens can adopt to create unique spaces along the creek that support user's activities and green infrastructure practices at the same time. In each case, readers should consider the following questions, and ask how these are suited to their needs, budget, space available, and the conditions of their property along the creek's edge.

How do you want to use the creek? How can you improve water quality and habitat? How can you manage erosion? What kind of site do you have?

While some ideas involve simple, do-it-yourself strategies, others suggest significant changes to the creek's edge. These more complex approaches will require consultation with the City of Poughkeepsie Planning Division, an architect or landscape architect, a hydrology engineer, a habitat restoration specialist, and/or a licensed contractor.

In addition, readers are also encouraged to use this guide to ask how the creek can be used in a broader sense. You might, for example, host activities such as a block party or a workshop researching the creek with a school, church, or youth group. You might join a local non-profit and participate in creek clean-up events. You might record an audio tour of the creek including stories of residents along the creek for others to enjoy. Or you might join a local institution and work together to organize, fundraise and build a pocket park in your neighborhood.

WHO IS THIS BOOK FOR?



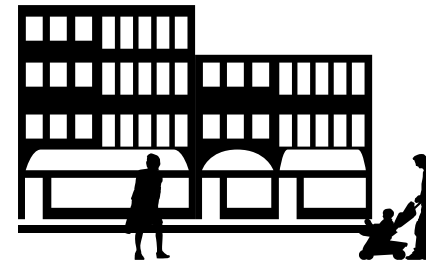
CITY AGENCIES

At a large scale, the city and its community partners can direct initiatives throughout the creek. This can include signage and infrastructural changes, or planning and regulatory changes that can help set up public rights-of-way agreements with private landowners.



COMMUNITY INSTITUTIONS

Community centers, schools, public service agencies, after-school programs, and other community institutions can play a central role in creating pocket parks and public access to the creek. These areas can provide event space for these institutions, and attract new people to their neighborhoods.



BUSINESSES AND RETAIL DISTRICTS

Improved access areas along the creek can provide space for outdoor dining, marketplaces, picnic areas, and other functions for retail districts. Pocket parks and walkways along the creek can help to foster a vibrant and safe street life during both day and night, and help to invite visitors from the region.



HOMEOWNERS AND TENANTS

Homeowners and tenants can implement changes on their private property. Changes to the backyard can transform homes into creekfront properties, and attract tenants to multifamily residences.

HOW DO YOU WANT TO USE THE CREEK?

Today, the creek is often neglected and used as a dumping ground. It is a liability for land-owners, and is often fenced off. Despite these challenges, many people still explore its persistent beauty. Some fish or walk along the waterfront. Organizations host trash cleanup events and engage students in citizen science programs exploring the creek's ecosystems.

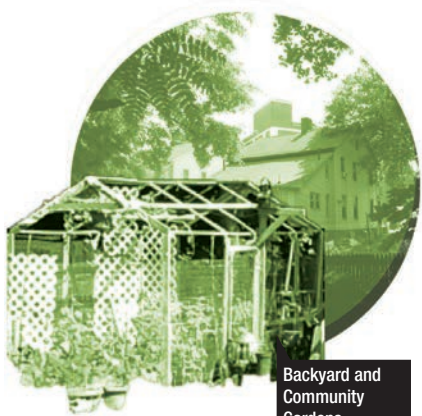
Improved public access to the creek can support a multitude of uses, and build on existing urban activities to enliven neighborhoods. The creek can provide event space and attract new audiences for local institutions. Similar waterfront projects have also proven to boost real estate values and attract tenants to adjacent neighborhoods.



Fishing, bird-watching,
+ nature-trail activities



Outdoor
classroom +
citizen science
programs



Backyard and
Community
Gardens



Business District
picnic areas and
gathering spaces

Pocket parks
+ Playgrounds
+ After-school
programs



Ampitheater +
Performances + Film
Screenings



Playing Fields

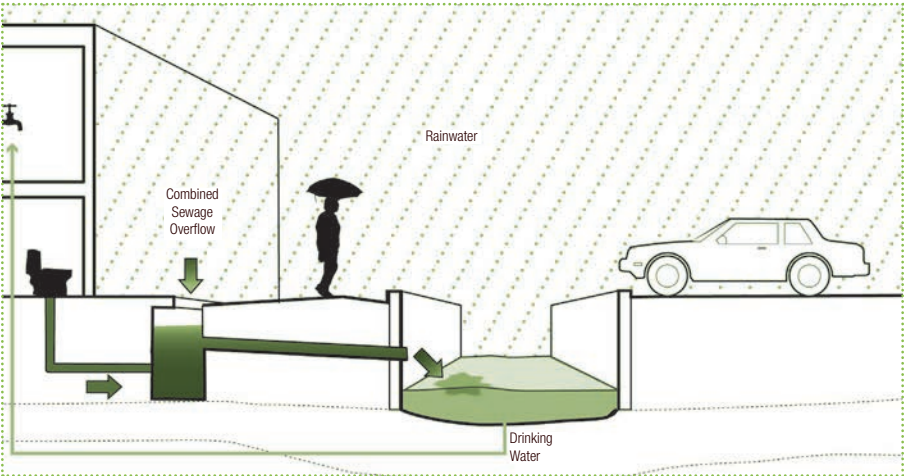


Bike and walking
paths for recreation
and commuting

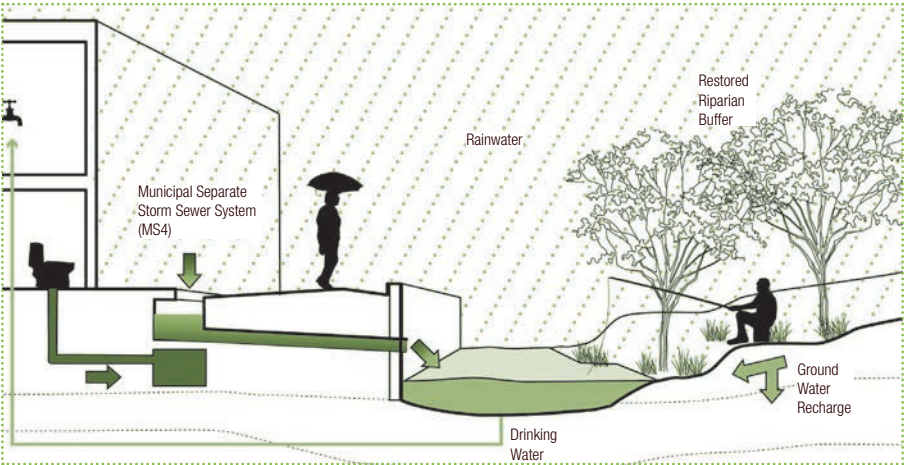
HOW CAN YOU IMPROVE WATER QUALITY AND HABITAT?

A primary objective of this guide is to foster a deeper relationship with the creek among the people of Poughkeepsie. We want residents to see and admire the creek’s potential, and believe that resident participation is vital to the successful revitalization of the creek and its neighboring communities. Water quality and habitat can improve if citizens take ownership of the Fall Kill, enjoy the creek through walking and playing, and integrate it as part of our everyday experience.

The Fall Kill Creek is featured on the New York State Priority Waterbodies List as a “Class C” stream, meaning it is safe for fishing but not for swimming. Significant problems in the creek include high



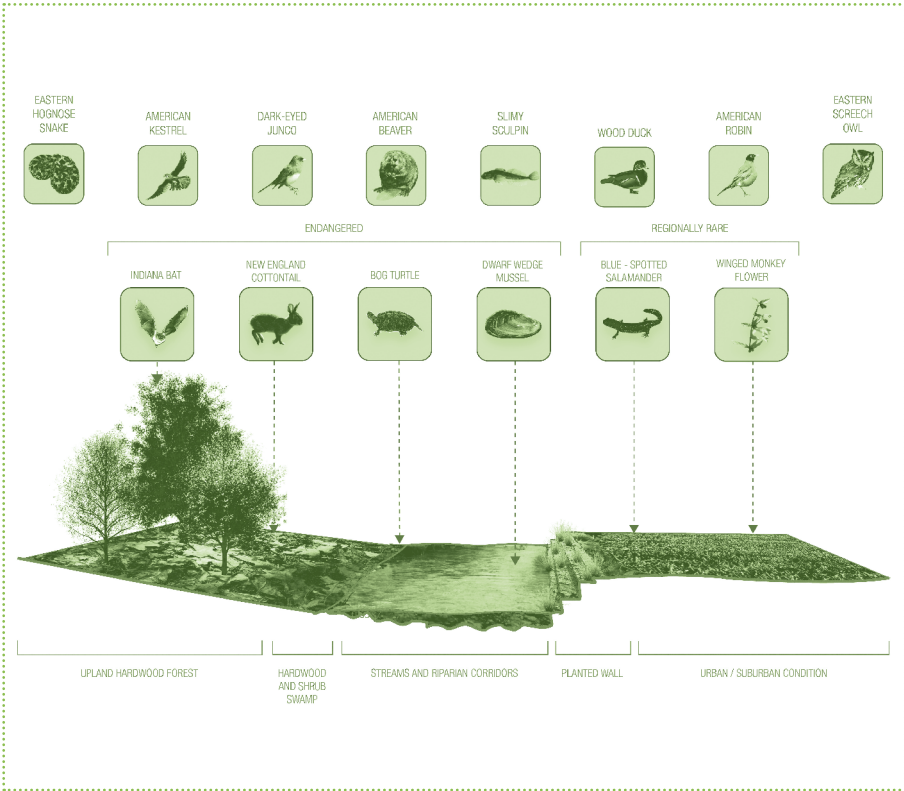
Existing Combined-Sewer Overflow (CSO) infrastructure



Recommended Municipal Separate Storm Sewer System (MS4) + Green Infrastructure

fecal coliform counts, high contaminant and nutrient levels (nitrate, phosphate, sulfate, heavy metals, hydrocarbons), high temperatures due to a sparse tree canopy, and deficient oxygen levels. The creek is also littered with sizable debris, from shopping carts to discarded bicycles. Poor water quality adversely impacts wildlife habitat and decreases recreational use of the waterway.

At a large scale, improvements to water quality and habitat demand the development of a Municipal Separate Storm Sewer System (MS4) that can separate stormwater from the city’s sewage system; the identification and mitigation of point sources of sewage spills and leaks upstream; and the creation and preservation of habitats around the creek. At medium and small scales, community groups and residents can adopt green infrastructure practices to treat stormwater and create habitat. The DEC defines green infrastructure as “the network of naturally occurring and engineered systems in the environment, generally vegetated, that provide ecosystem services. Green infrastructure practices manage stormwater runoff while maintaining or restoring natural hydrology.” Green Infrastructure practices can recharge groundwater, filter pollutants through soil and vegetation, and control flooding and stream bank erosion. At the same time, the restoration and cultivation of new habitats such as wooded or wetland riparian buffers at the edge of the creek can support endangered, rare, and well-populated species.



Potential Fall Kill habitat

Green Infrastructure practices can be adopted throughout the Fall Kill Creek watershed:



Green roofs: Layers of soil and vegetation installed on rooftops that capture runoff, and encourage the evaporation and evapotranspiration of stormwater.

<http://www.dec.ny.gov/lands/58930.html>



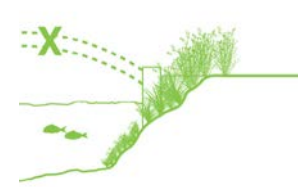
Rain barrels: A container that captures and stores stormwater runoff to be reused on site.

New York State Stormwater Management Design Manual



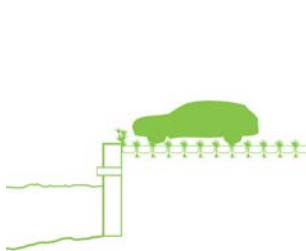
Vertical garden: Vegetation grown directly on retaining walls or building facades adjacent to the creek.

New York State Stormwater Management Design Manual



Creek daylighting: The removal of culverts to restore natural habitats, better attenuate runoff by increasing the storage size, promoting infiltration, and help reduce pollutant loads.

New York State Stormwater Management Design Manual



Porous pavers: Permeable pavement surface with a stone reservoir underneath designed to allow stormwater to infiltrate through the surface.



Street tree network: A system of connected street trees designed to reduce stormwater runoff, increase nutrient uptake, and provide bank stabilization.

New York State Stormwater Management Design Manual



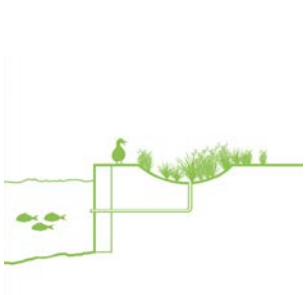
Rip rap: A layer of stone designed to protect and stabilize areas subject to erosion.

http://www.dec.ny.gov/docs/water_pdf/sec5bperm11.pdf



Riparian buffer restoration: A healthy vegetated buffer that can filter and slow polluted runoff.

<http://www.dec.ny.gov/lands/58930.htm>

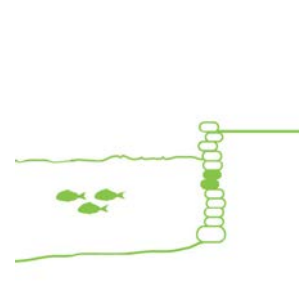


Rain gardens: Planted areas of wetland vegetation allow stormwater runoff to be absorbed into the ground.



Bioswale: Natural drainage paths or vegetated channels used to transport water instead of underground storm sewers or concrete open channels.

<http://www.dec.ny.gov/lands/58930.html>



Wall patch: The reinforcement of an existing creek wall with stone.

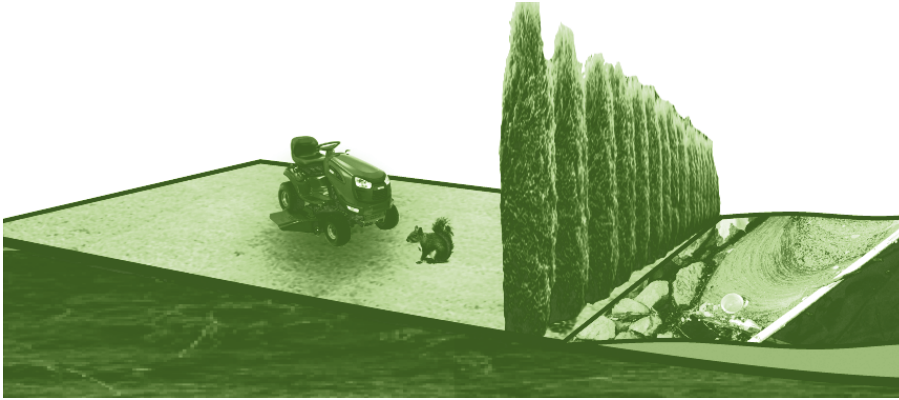


Bio-technical erosion control: The use of live, woody, and herbaceous plants to stabilize or protect creek banks.

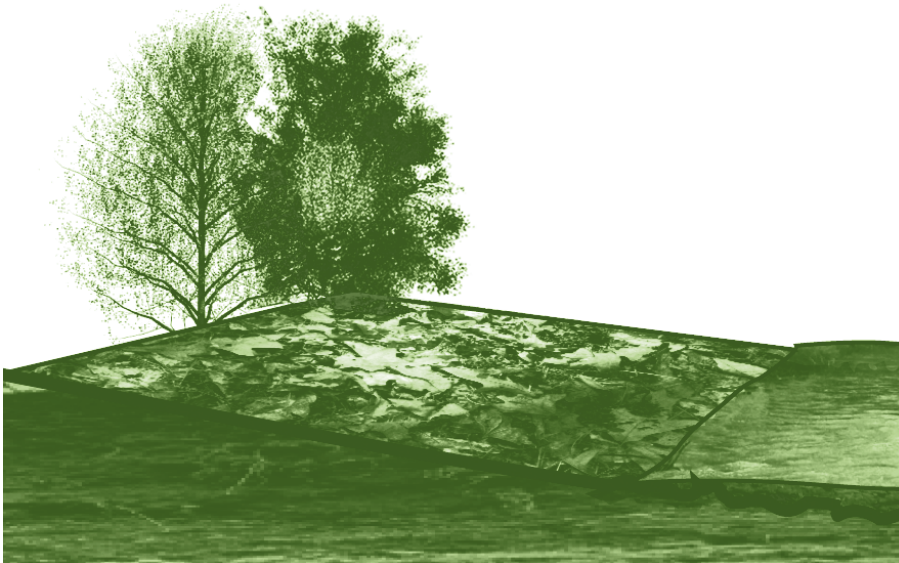
Site Engineering for Landscape Architects

HOW CAN YOU MANAGE EROSION?

The Fall Kill was channelized through a series of stone walls in the New Deal Era. The embankments were designed to direct water away from the watershed as quickly as possible, but have destroyed the creek's riparian habitat. Walls currently line approximately 2.5 miles of the creek's length. Many areas are buckling and bending into the creek, and the foundations of many walls have been eroded away. Where they are necessary to protect existing structures along the creek, walls can be repaired by reinforcing the foundation, patching the masonry wall, or by building vertical planted surfaces.



Existing Channelized Wall



Riparian Edge

It is also vital to understand that while erosion is most apparent at the creek side, areas adjacent to the creek greatly impact the Fall Kill. Collection of rainwater and use of permeable surfaces in neighborhoods away from the creek would minimize effects downstream.



WHAT KIND OF SITE DO YOU HAVE?

Listed here are erosion control strategies for conditions commonly seen along the creek.

Sites not adjacent to the creek: Erosion is not a direct concern here, but sites within the watershed can adopt Green Infrastructure practices to impact water quality.



Anywhere inside the creek watershed

Buried creek: The creek should be 'daylighted,' or uncovered, wherever possible. (see Green Infrastructure practices above).



Culvert



Bridge Crossing

Narrow sites: Where they are necessary to protect existing structures along the creek, walls can be repaired by reinforcing the foundation, patching the masonry wall, or by building vertical planted surfaces.



High embankment with stone wall



Bi-level embankment with stone wall

Wide sites: The Fall Kill Management Plan of 2006 recommends that failing stretches of the wall be allowed to crumble wherever possible.



With wall embankment



Soft riparian edge



Other soft edge

The Fall Kill Plan

This guide is part of a larger initiative called the Fall Kill Plan, a master plan for the creek aimed at transforming the waterway into a vibrant community resource. The plan encourages city officials, organizations, businesses and homeowners in the City of Poughkeepsie to work together to activate and revitalize the creek. The purpose of the Plan is to create active public spaces along the creek, support city residents and institutions, improve creek water quality, and restore habitat for plants and animals. The Plan consists of a research report, a phased master plan, pilot site designs for pocket parks, and a guide for Poughkeepsie citizens.

To see the Fall Kill Plan and comment on it: <http://fallkill.org>.

The Plan focuses on two main strategies:

Pocket Parks, or parks integrated into the street life of each neighborhood. The locations highlighted here can be designated as future pocket parks sites. Sites have been chosen for their potential to act as new neighborhood centers. Here, the creek connects to spaces of public significance, corridors for bikes and pedestrians, and institutions that provide public or retail services to Poughkeepsie's communities. High priority sites noted here include areas already accessible the public or under public ownership that can feasibly be developed as pocket parks.

Corridors, or continuous walkways accessible to the public. Zones marked here could be created along city-owned land, and by forming public rights-of-way easements with individual land owners. While this Plan seeks the eventual creation of a continuous walkway from the Hudson River to Val-Kill, these zones have been selected as high priority areas. They have been identified based on their ability to activate new neighborhood centers, and connect areas of public significance. They include sites designated in the city's land use plan as public, service, commercial and industrial uses.



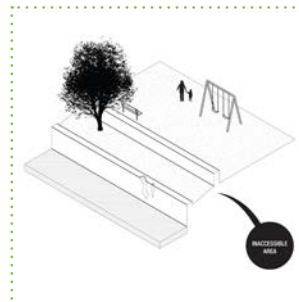
Design Catalog

Design suggestions are shown here according to common land use types, but they can be adapted for a broad range of activities. including:

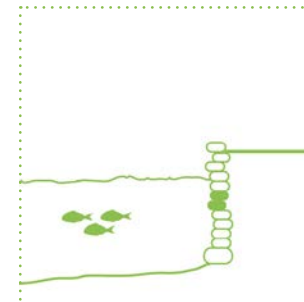
- Parks
- Public infrastructure
- Institutions
- Businesses
- Residents

PARKS

GARDEN PATH



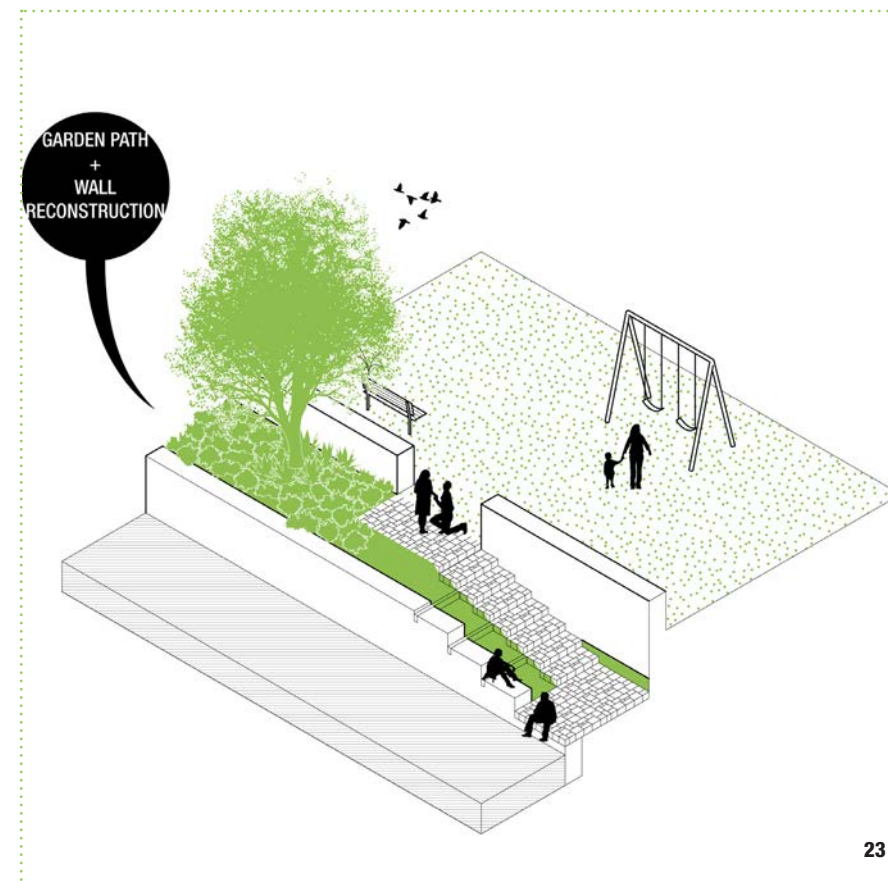
EXISTING CONDITION:
blevel edge with wall



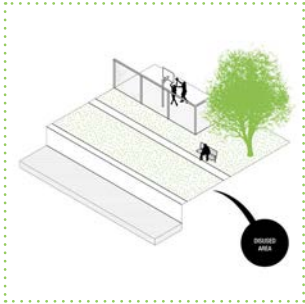
GREEN INFRASTRUCTURE:
wall patch



URBAN IMPACT:
neighborhood park



BASKING BEACH



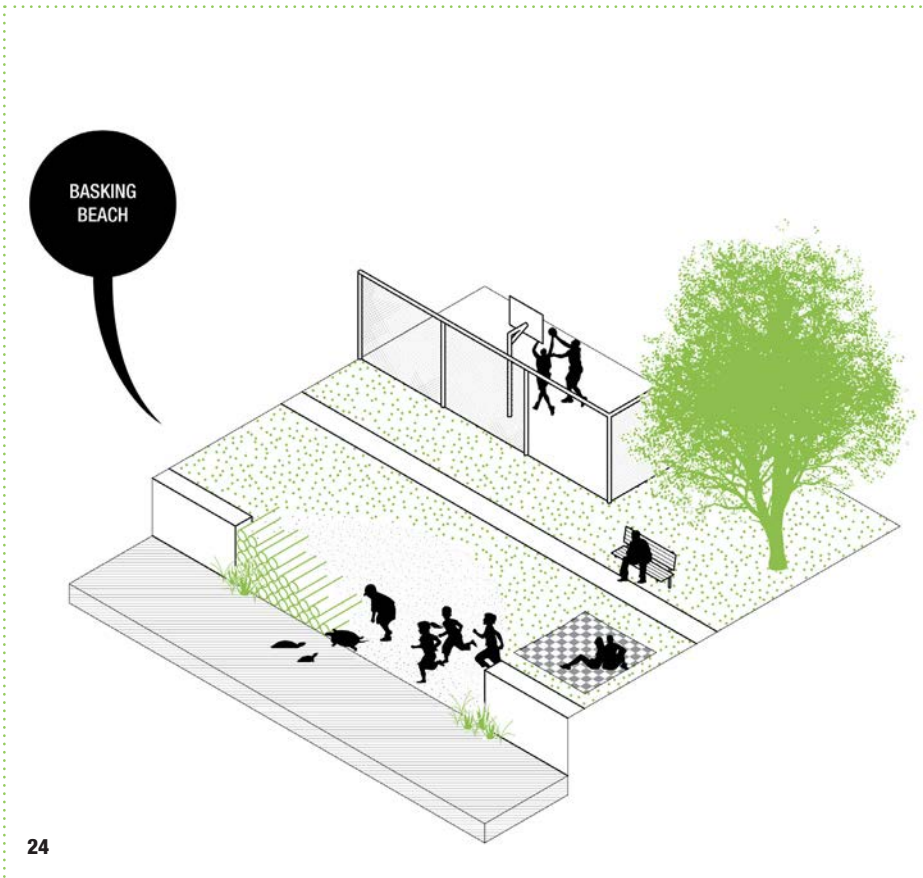
EXISTING CONDITION:
wide site with wall



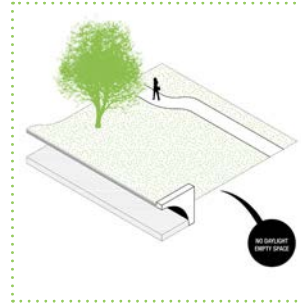
GREEN INFRASTRUCTURE:
bio-technical erosion control



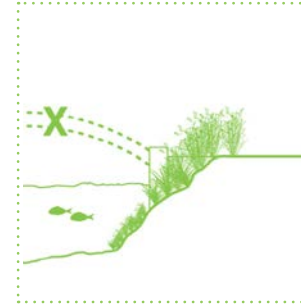
URBAN IMPACT:
neighborhood park



PLAYING FIELD



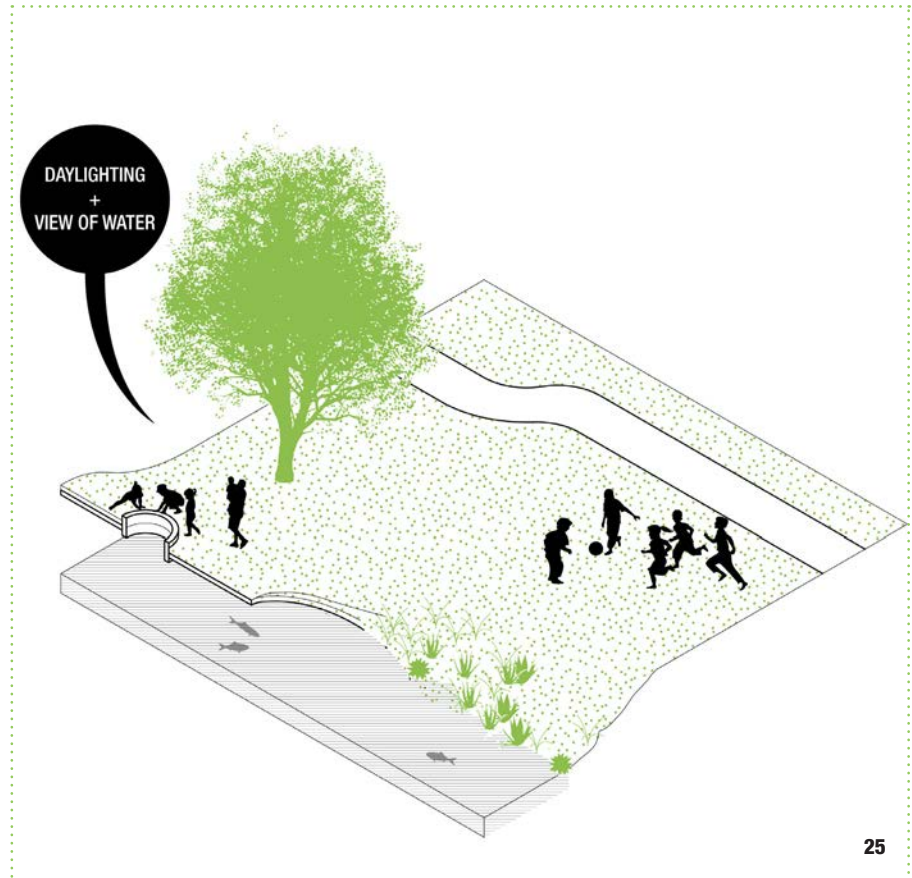
EXISTING CONDITION:
wide site with a culvert



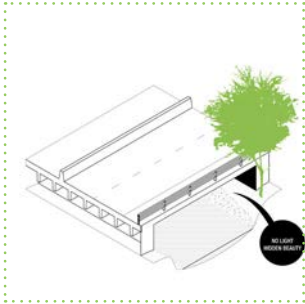
GREEN INFRASTRUCTURE:
creek daylighting



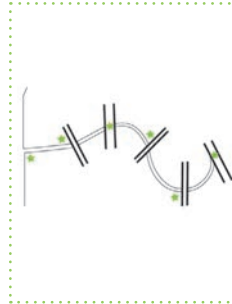
URBAN IMPACT:
linear greenway



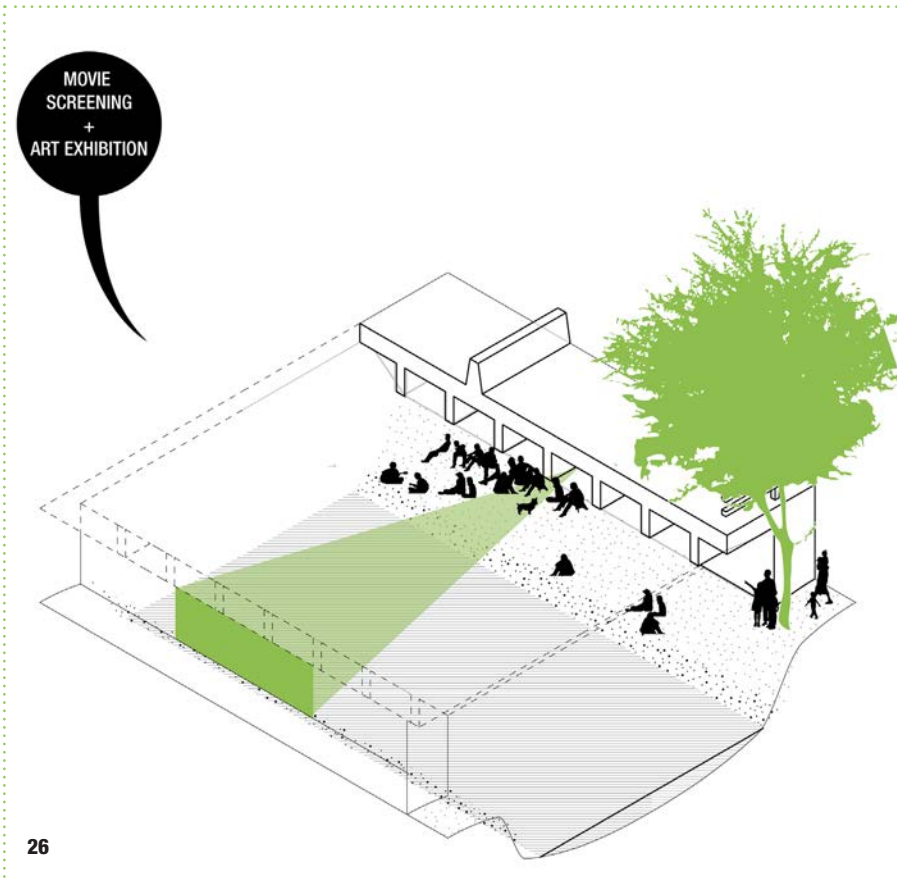
THEATER + EVENT SPACE



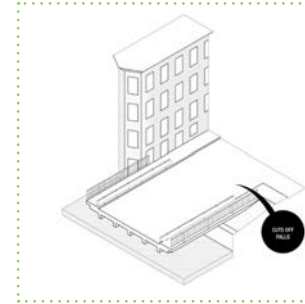
EXISTING CONDITION:
Bridge crossing



URBAN IMPACT:
bridge crossings



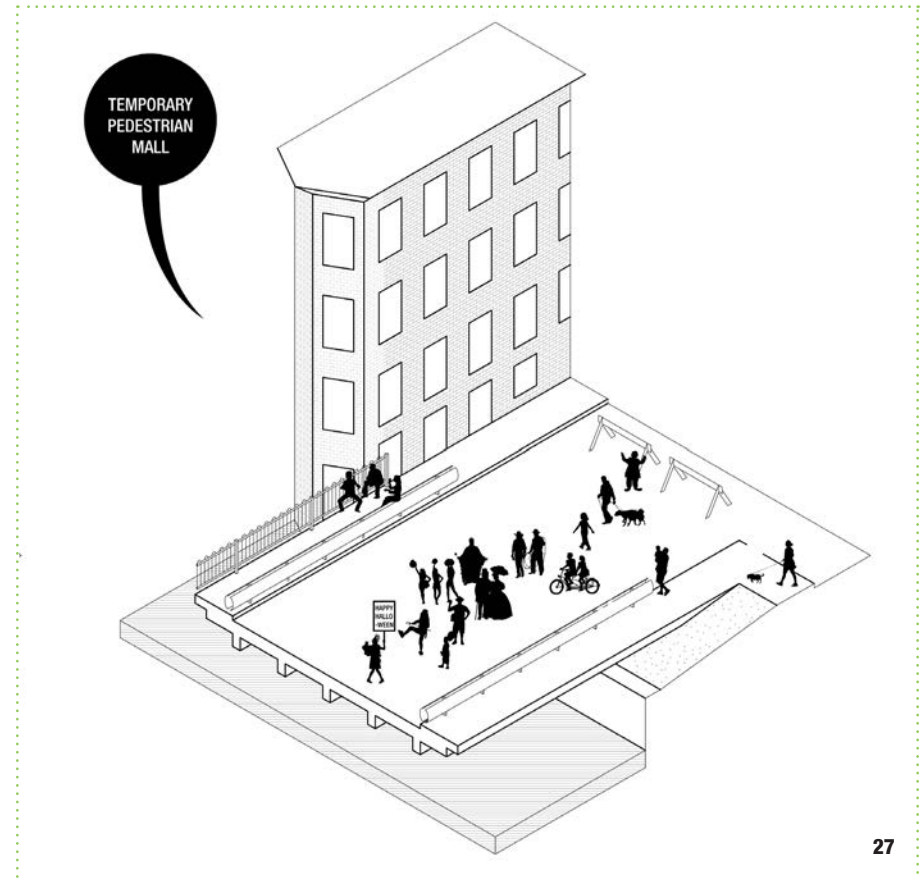
BLOCK PARTY



EXISTING CONDITION:
Bridge crossing

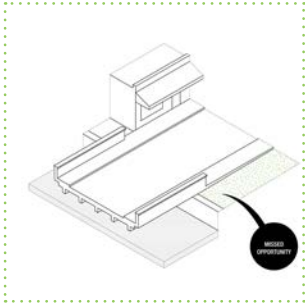


URBAN IMPACT:
bridge crossings



PUBLIC INFRASTRUCTURE

BUSINESS DISTRICT STREETScape



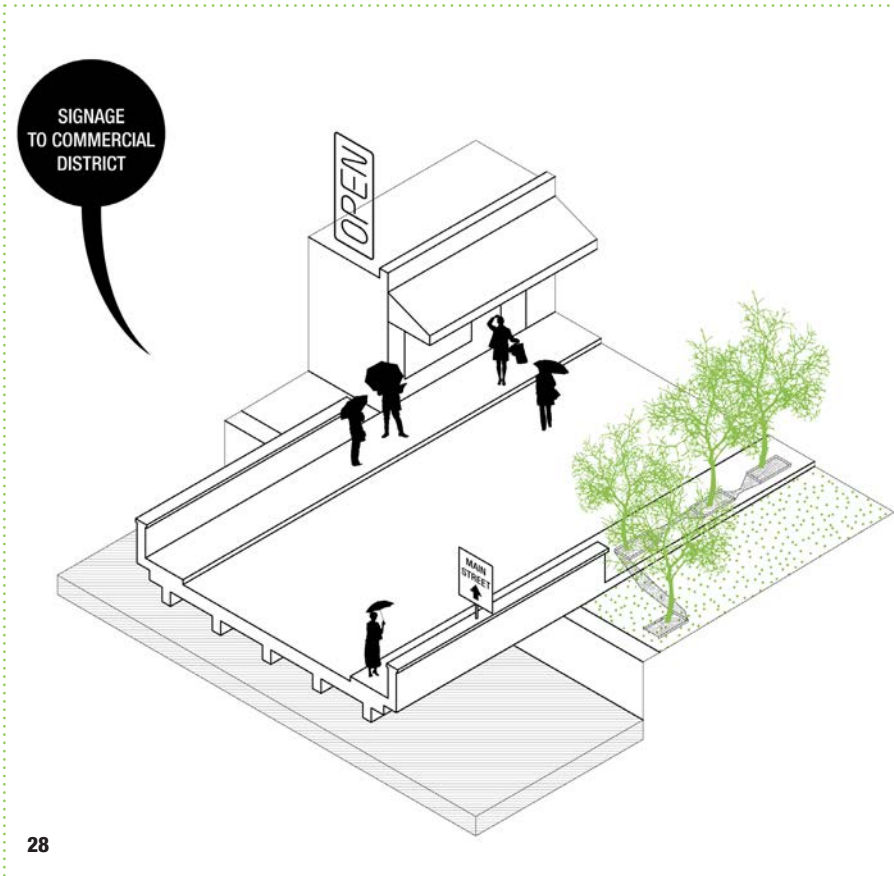
EXISTING CONDITION:
street and bridge



GREEN INFRASTRUCTURE:
street tree network

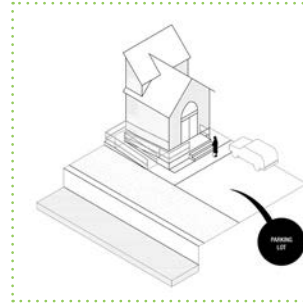


URBAN IMPACT:
street tree corridor

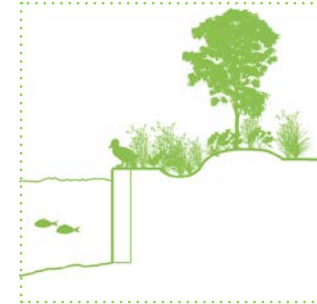


INSTITUTIONS

COMMUNITY GARDEN



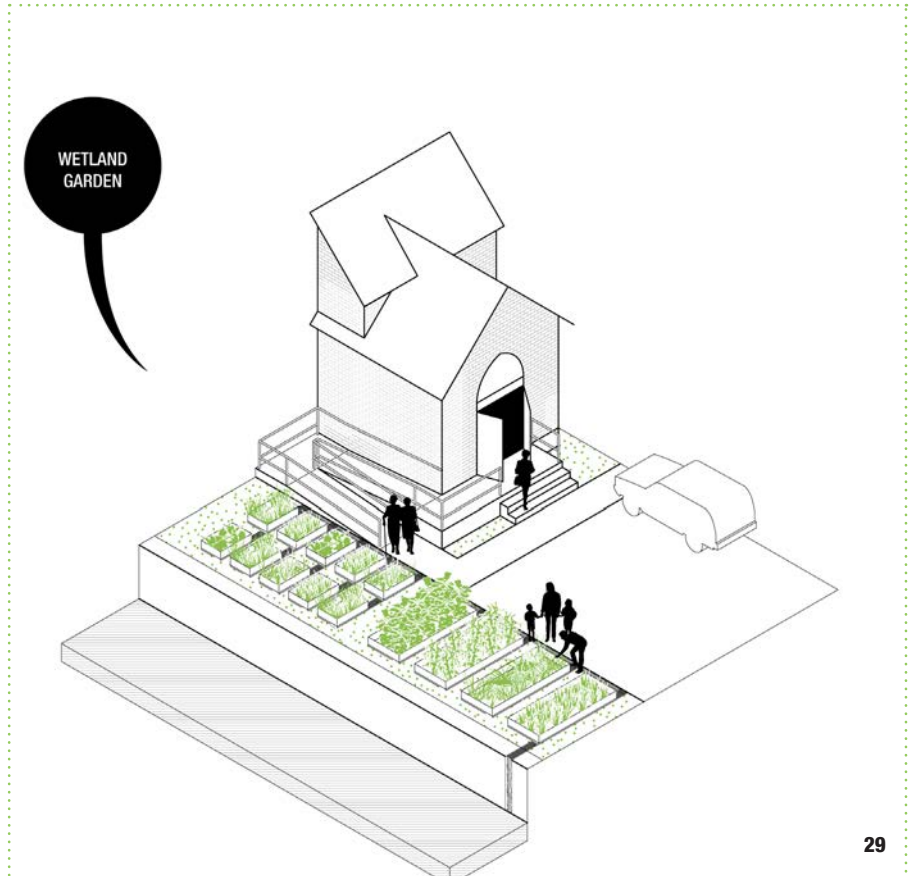
EXISTING CONDITION:
narrow site with a wall



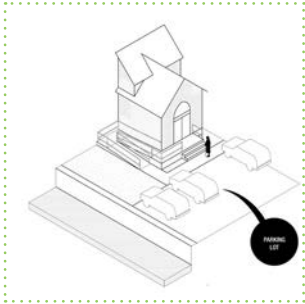
GREEN INFRASTRUCTURE:
bioswale



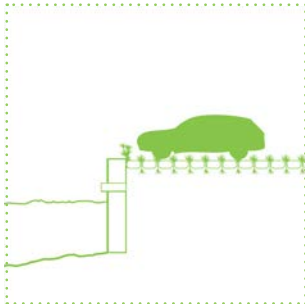
URBAN IMPACT:
networked stormwater



PARKING LOT + EVENT SPACE



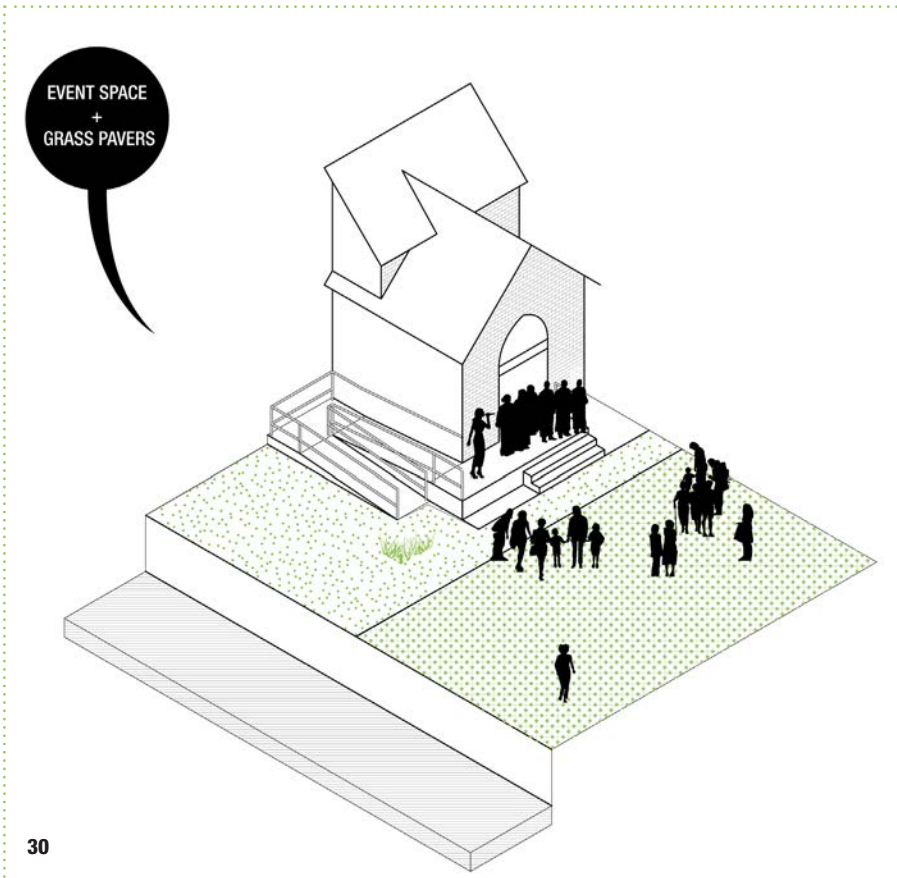
EXISTING CONDITION:
narrow site with a wall



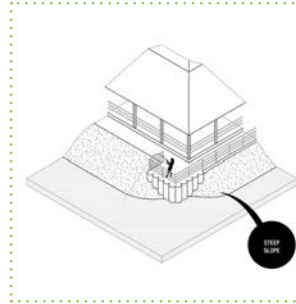
GREEN INFRASTRUCTURE:
permeable pavers



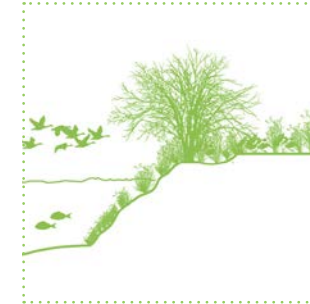
URBAN IMPACT:
distributed improvement



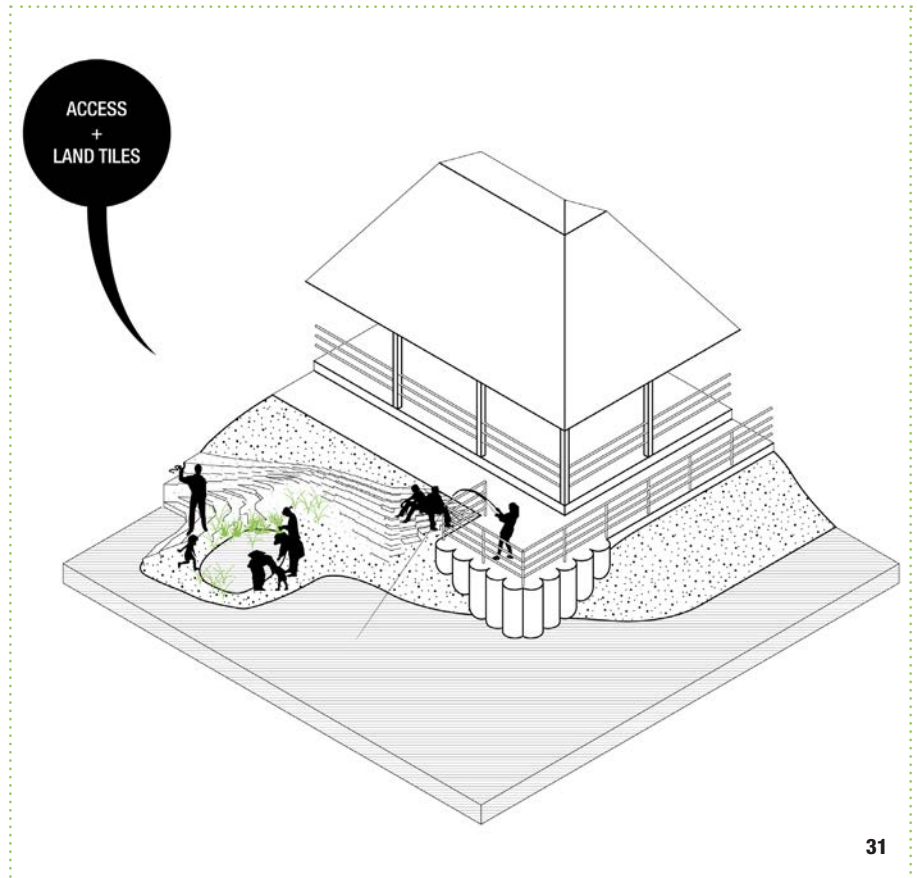
TIDAL POOL + OUTDOOR CLASSROOM



EXISTING CONDITION:
narrow site with a soft slope

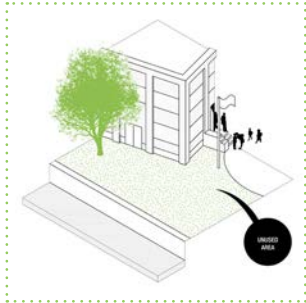


GREEN INFRASTRUCTURE:
riparian buffer restoration

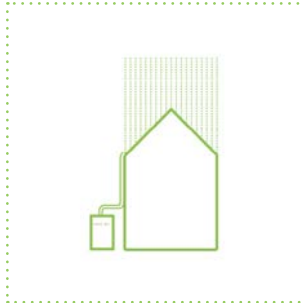


INSTITUTIONS

GREENHOUSE + WINTER GARDEN



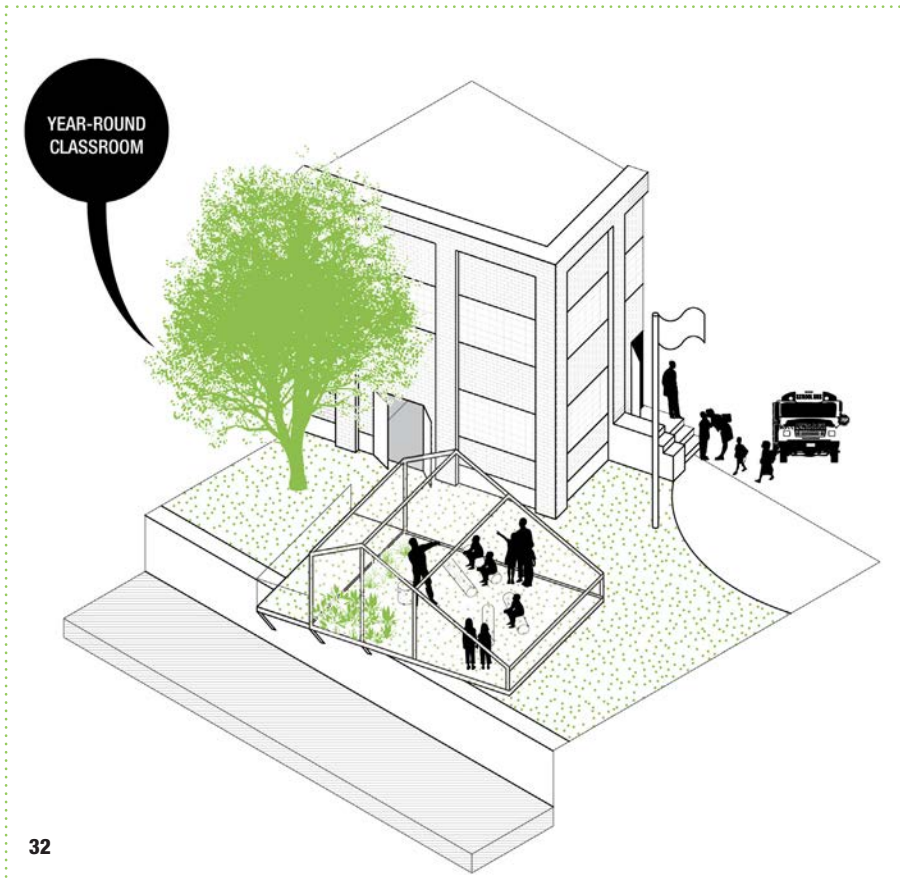
EXISTING CONDITION:
wide site with a wall



GREEN INFRASTRUCTURE:
rain barrels

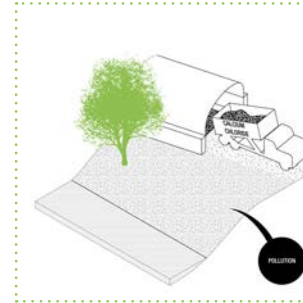


URBAN IMPACT:
distributed improvement



BUSINESSES

WETLAND NATURE TRAIL



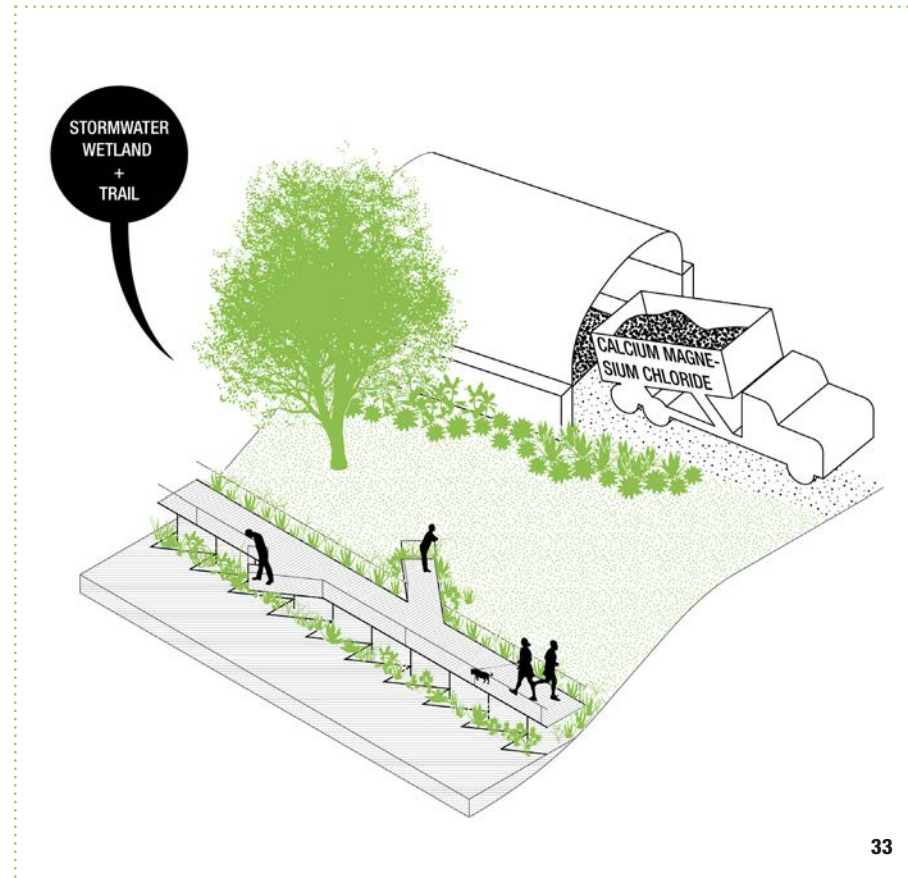
EXISTING CONDITION:
wide site with a soft slope



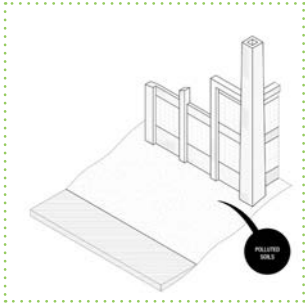
GREEN INFRASTRUCTURE:
riparian buffer restoration



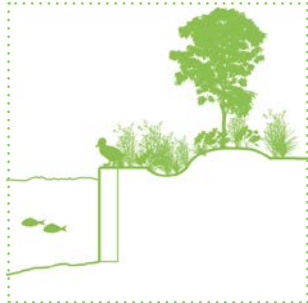
URBAN IMPACT:
linear greenway



INDUSTRIAL HISTORY TOUR



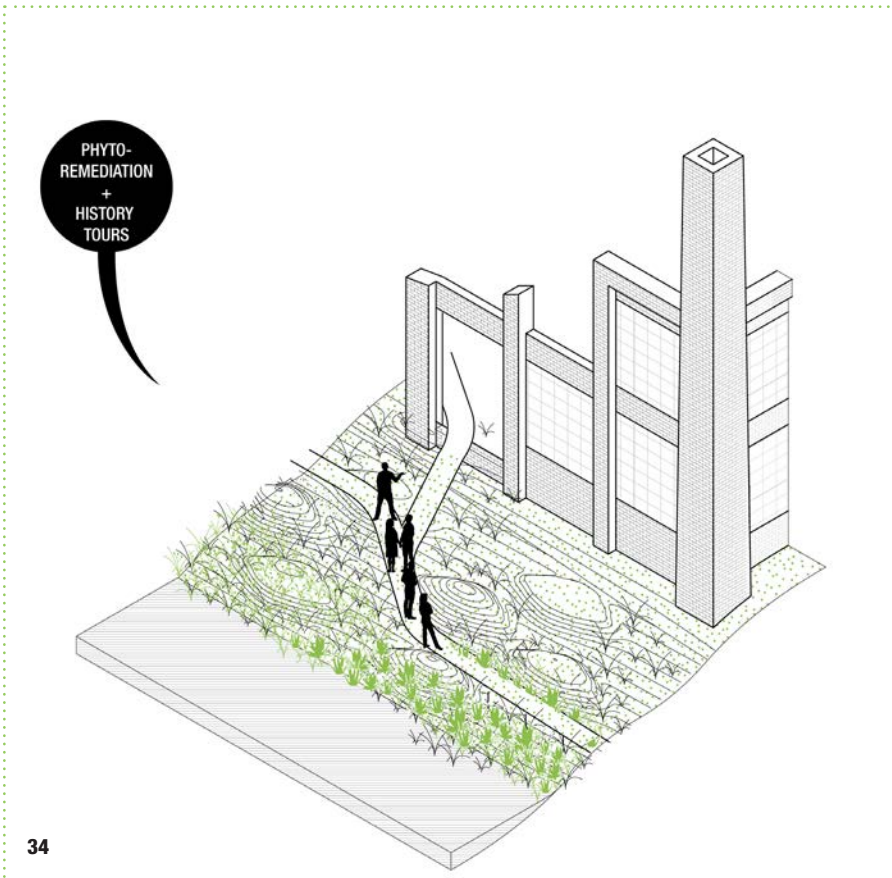
EXISTING CONDITION:
wide site with a soft slope



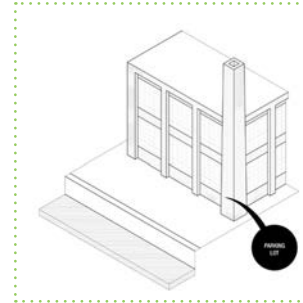
GREEN INFRASTRUCTURE:
bioswale



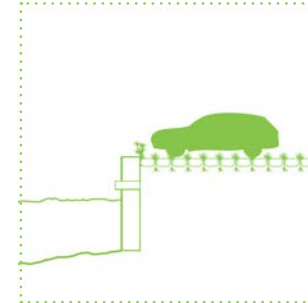
URBAN IMPACT:
linear greenway



TIME SHARE MARKET



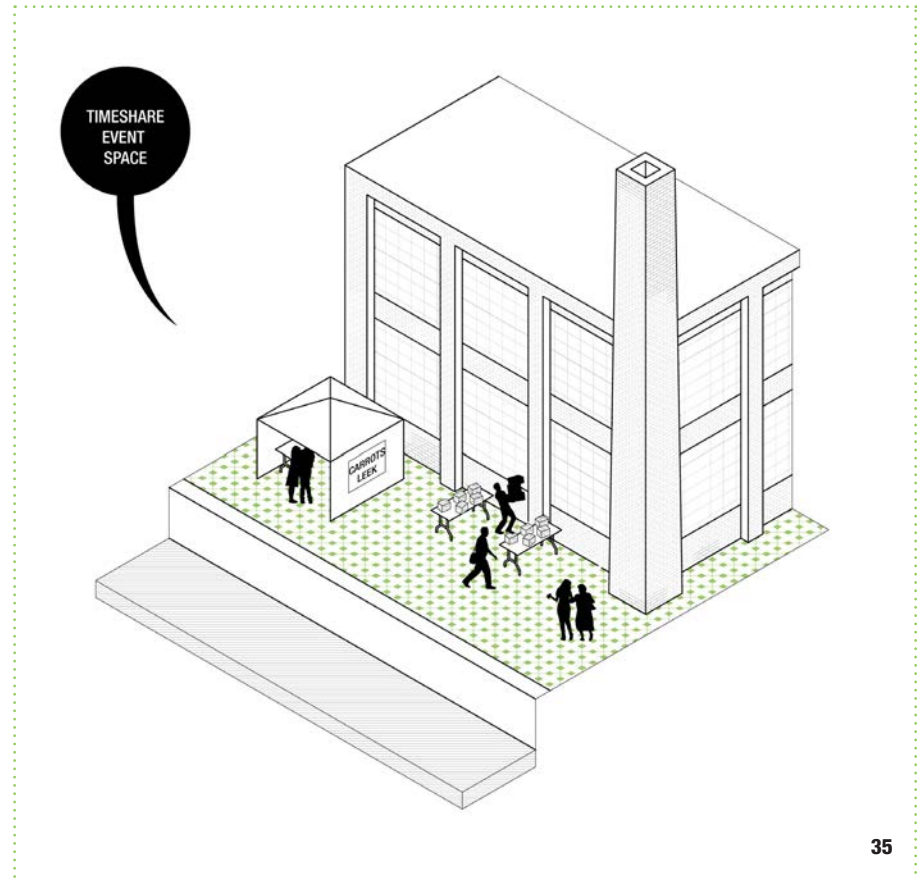
EXISTING CONDITION:
wide site with a wall



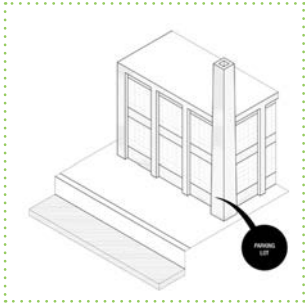
GREEN INFRASTRUCTURE:
permeable pavers



URBAN IMPACT:
timeshare event space



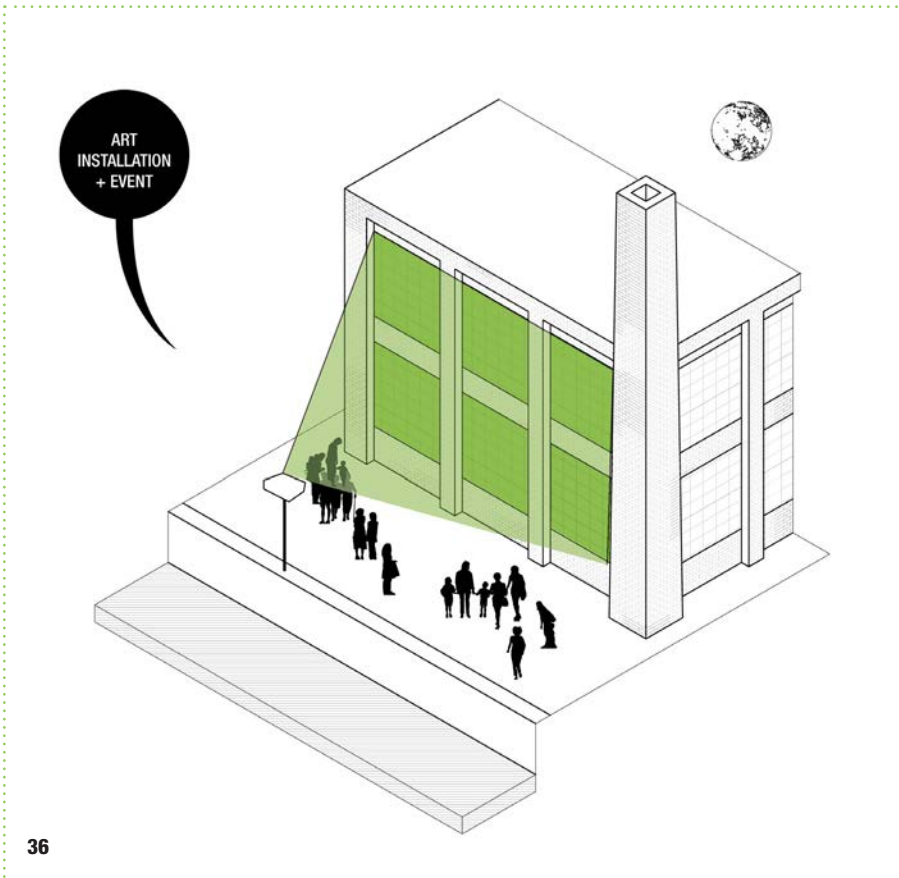
ART INSTALLATION EVENT



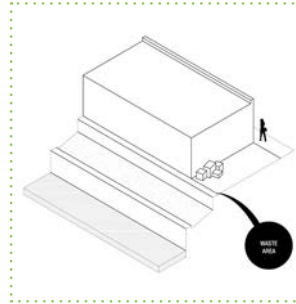
EXISTING CONDITION:
wide site with a wall



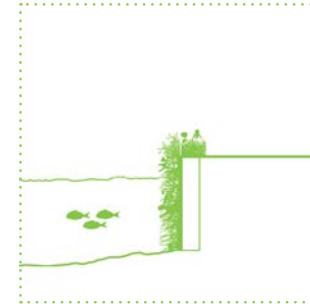
URBAN IMPACT:
timeshare event space



BEER GARDEN



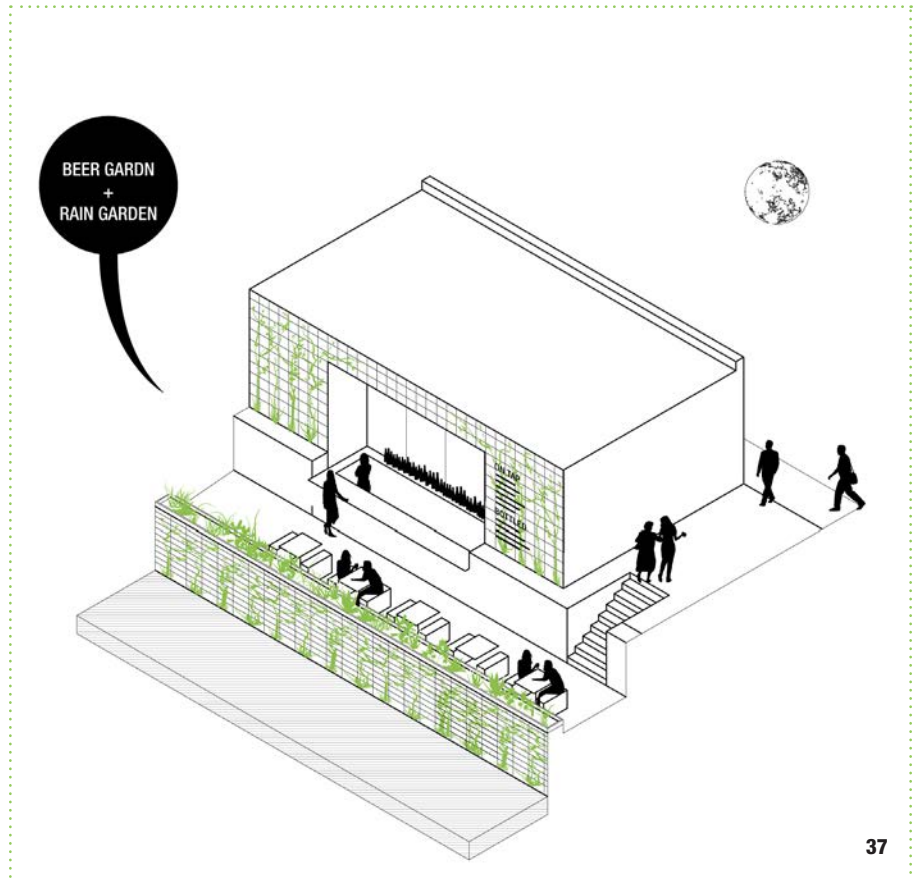
EXISTING CONDITION:
bilevel edge with a wall



GREEN INFRASTRUCTURE:
vertical garden

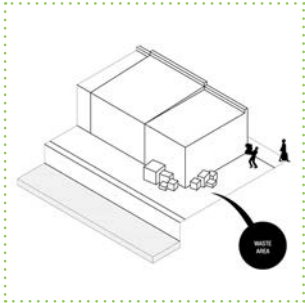


URBAN IMPACT:
distributed improvement

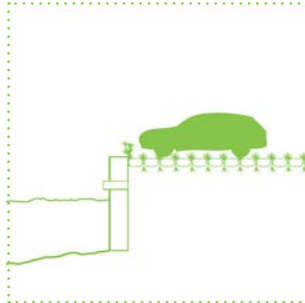


BUSINESSES

SIDEWALK SALE



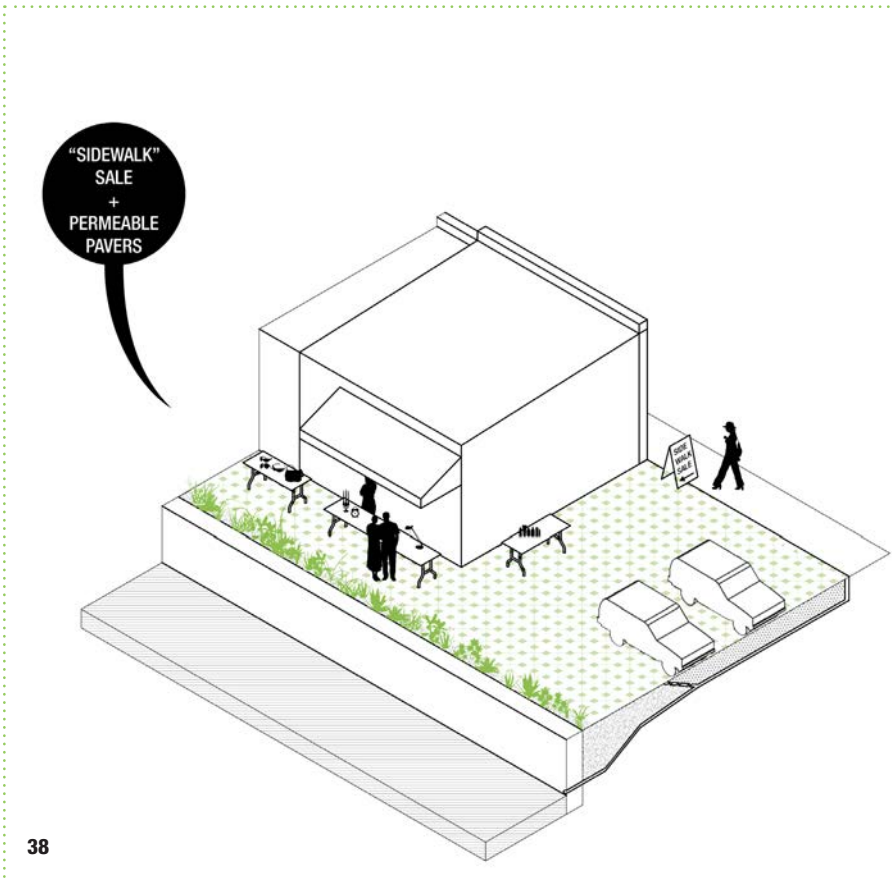
EXISTING CONDITION:
wide site with a wall



GREEN INFRASTRUCTURE:
permeable pavers

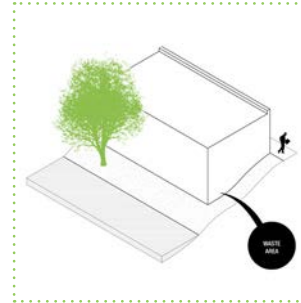


URBAN IMPACT:
timeshare event space



BUSINESSES

GREENWAY + TO GO WINDOW



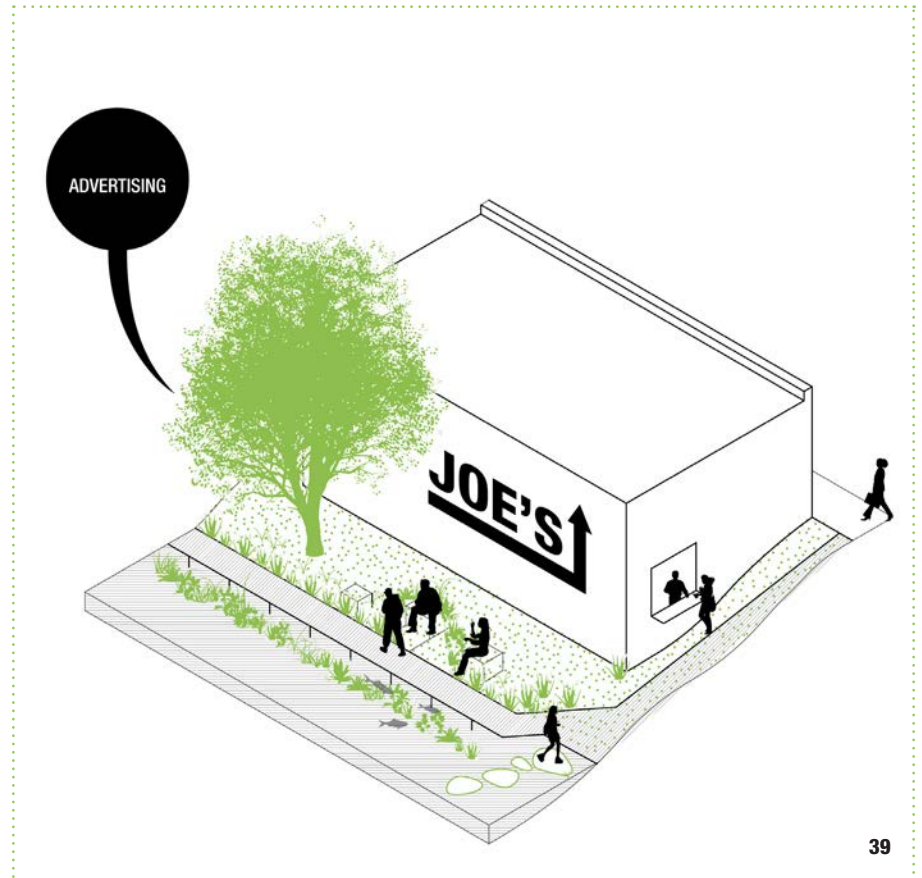
EXISTING CONDITION:
wide site with a wall



GREEN INFRASTRUCTURE:
riparian buffer restoration

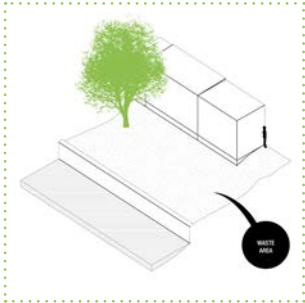


URBAN IMPACT:
commuter pathway

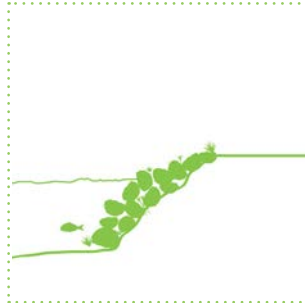


BUSINESSES

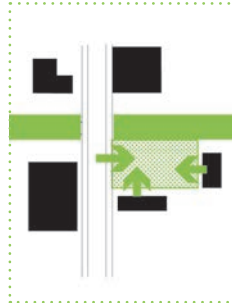
PICNIC AREA



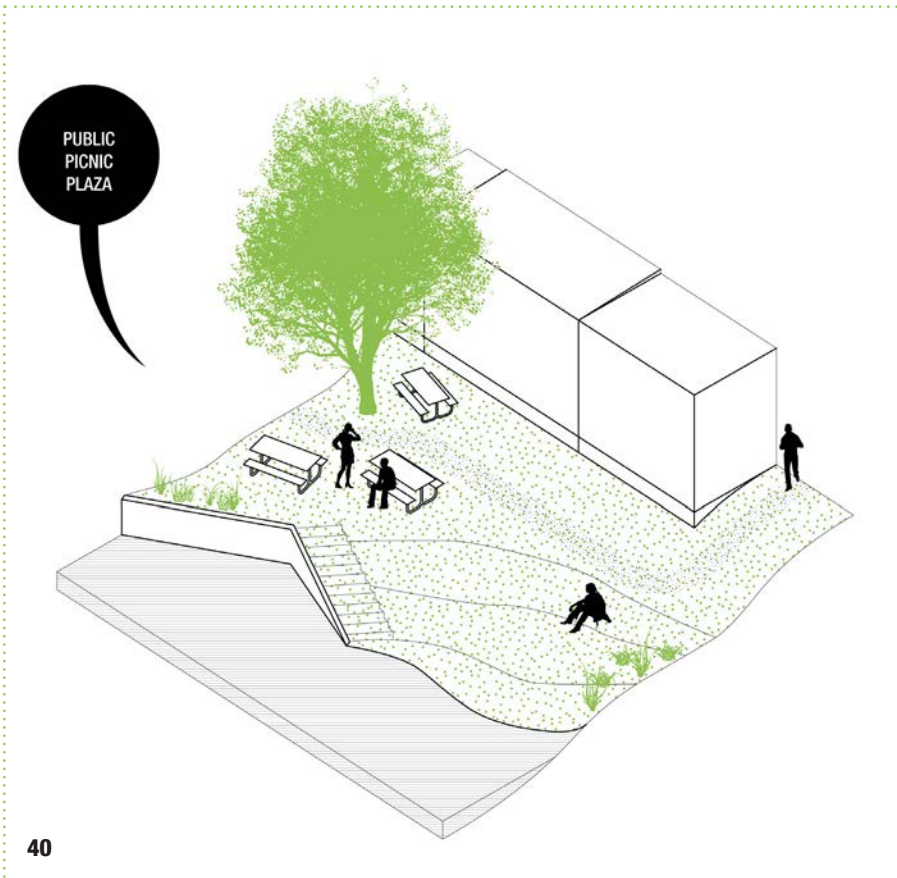
EXISTING CONDITION:
wide site with a wall



GREEN INFRASTRUCTURE:
rip rap

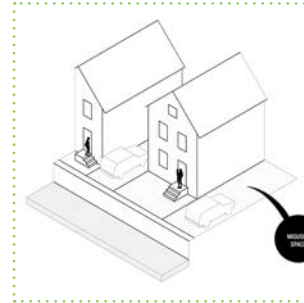


URBAN IMPACT:
business district

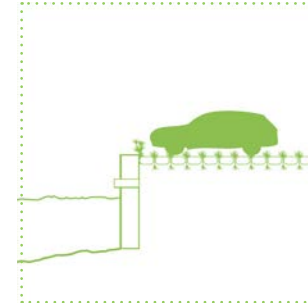


RESIDENTS

PLAYGROUND + PARKING LOT TIMESHARE



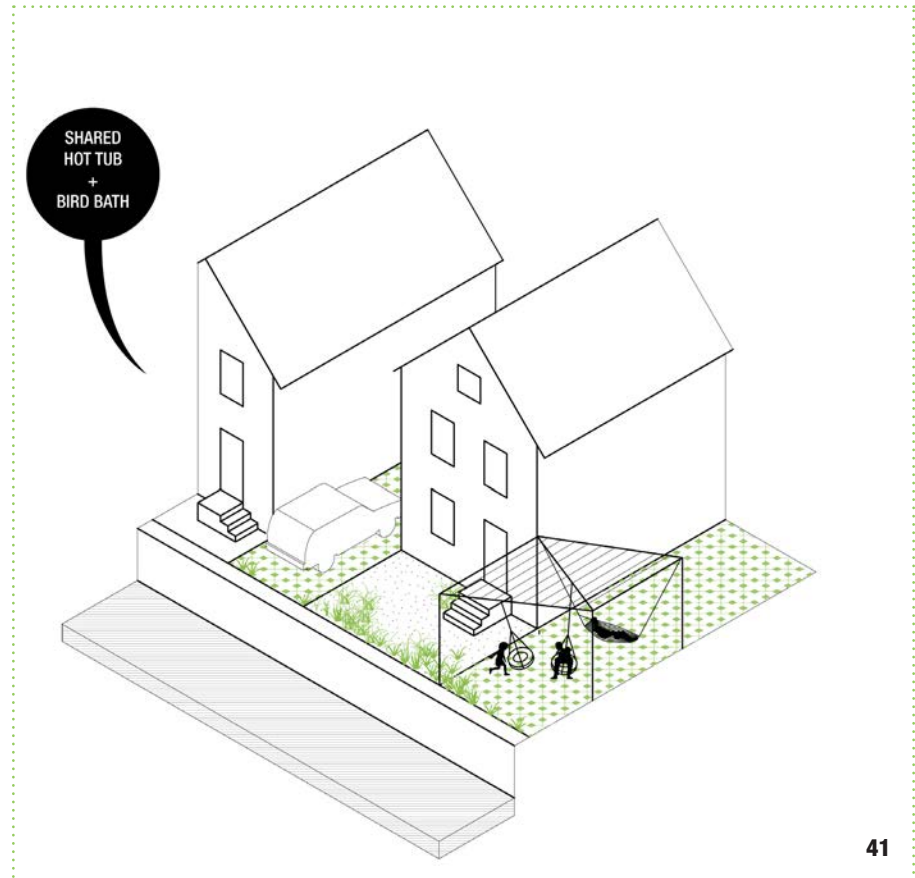
EXISTING CONDITION:
narrow with with a wall



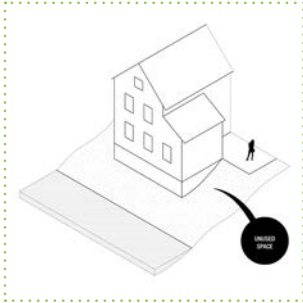
GREEN INFRASTRUCTURE:
permeable pavers



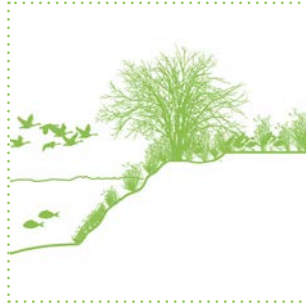
URBAN IMPACT:
distributed improvement



NO MOW LAWN + BIRD HABITAT + CAT RUN



EXISTING CONDITION:
wide site with a soft slope



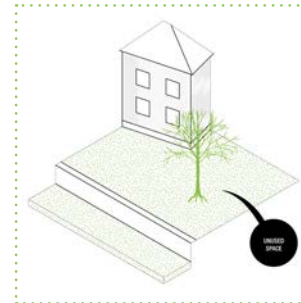
GREEN INFRASTRUCTURE:
riparian buffer restoration



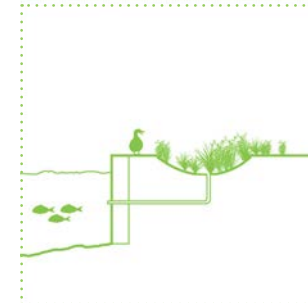
URBAN IMPACT:
distributed improvement



DAY CARE DECK



EXISTING CONDITION:
narrow with with a wall



GREEN INFRASTRUCTURE:
rain garden

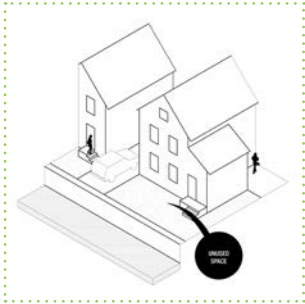


URBAN IMPACT:
distributed improvement



RESIDENTS

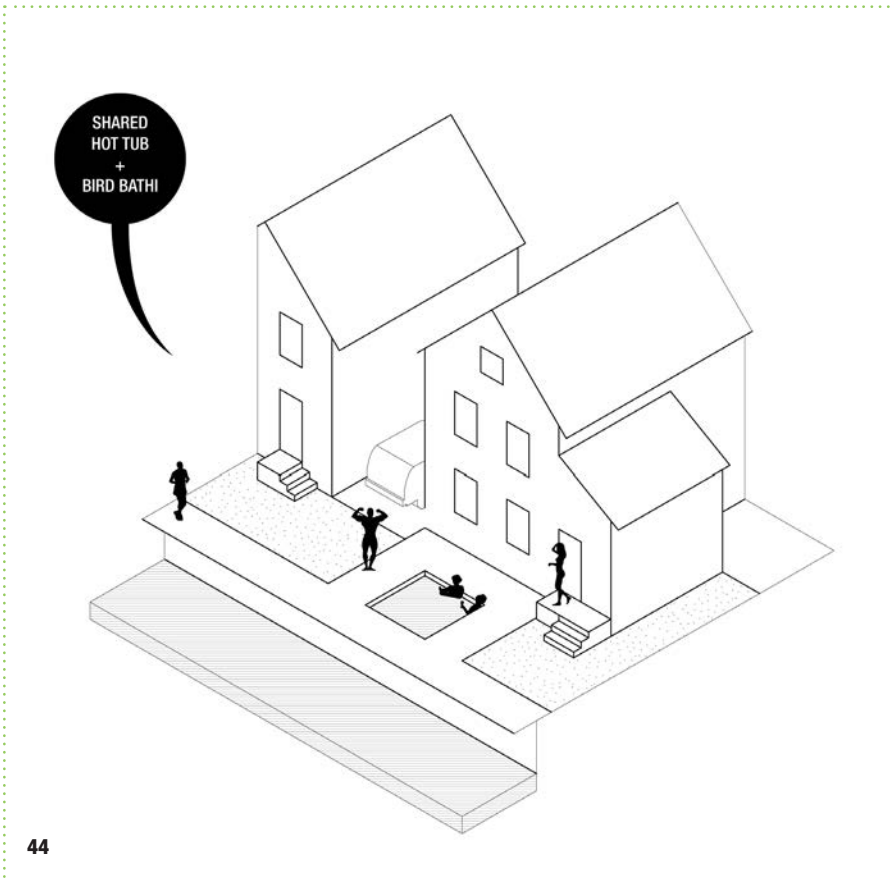
SHARED BACKYARD + HOT TUB



EXISTING CONDITION:
narrow with with a wall

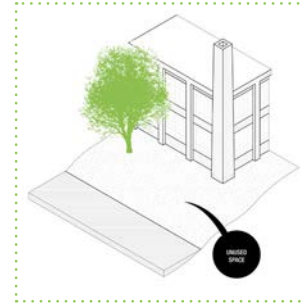


URBAN IMPACT:
communal backyard

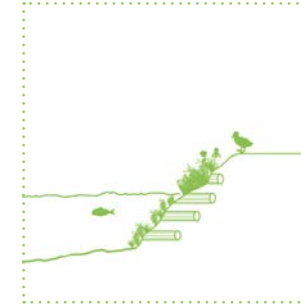


RESIDENTS

DECK



EXISTING CONDITION:
wide site with a soft slope



GREEN INFRASTRUCTURE:
bio-technical erosion control



URBAN IMPACT:
distributed improvement



About the Authors:

Project Coordinator:

Hudson River Sloop Clearwater

Ryan Palmer, Green Cities Project Coordinator and Fall Kill Watershed Coordinator

724 Wolcott Ave, Beacon, NY 12508

(845) 265 - 8080 x 7114

Ryan Palmer is a Hudson Valley native who first joined the Clearwater team in 2004 as an Environmental Associate, where he spent 3 years developing early watershed protection initiatives: serving as the original coordinator of the Hudson River Watershed Alliance and the Fall Kill Watershed Committee. He holds BS in Environmental Science and Wildlife Biology from the University of Rhode Island and has training in Land Use Law, Stream Monitoring, Biodiversity Assessment, Watershed Management, and Energy Efficiency Auditing. Ryan returned to the Clearwater team in 2011 as the first Green Cities Project Coordinator, leading their watershed protection, green infrastructure, and environmental justice projects in Poughkeepsie, and providing strategic planning and capacity building support for their regional Green Cities, Clear Waters Initiative.

For over 40 years, Hudson River Sloop Clearwater has been at the forefront of the environmental movement as champion of the Hudson River, working to pass landmark legislation like the Clean Water Act, providing innovative educational programs, environmental advocacy, and musical celebrations, including the renowned annual Clearwater Festival, to inspire, educate, and activate millions of people. Founded by music legend and environmental activist Pete Seeger, the organization began with the launch of the sloop Clearwater in 1969—a majestic replica of the sloops that sailed the Hudson in the 18th and 19th centuries. Listed on the National Register of Historic Places, the 106-foot-long sloop is among the first vessels in the U.S. to conduct science-based environmental education aboard a sailing ship, creating the template for environmental education programs around the world. More than half a million young people and hundreds of thousands of adults have experienced their first real look at an estuary's ecosystem aboard Clearwater. The organization's strong connection to youth, environmental education, and its agenda to create the next generation of environmental leaders, are all part of building and strengthening a Green Cities Initiative for a green economy and a more inclusive and diverse environmental movement. Utilizing the greatest natural resource in the region, the Hudson River, Clearwater has become the grassroots model for producing positive changes to protect our planet.

Design Team Coordinator:

Urban Landscape Lab, Columbia University Graduate School of Architecture, Planning and Preservation

Janette Kim, Director

www.urbanlandscapelab.org

Janette Kim teaches at the Columbia University Graduate School of Architecture, Planning and Preservation. She is director of the Urban Landscape Lab, an inter-disciplinary applied research group at GSAPP. Janette's work focuses on design and ecology in relationship to public representation, interest, and debate. The lab and Kim's design practice, All of the Above, have worked with the Metropolitan Transit Authority in New York and the City of Newark, as well as non-profit advocacy groups. Janette has been awarded by the Van Alen Institute New York Prize Fellowship. And as partner of Town/Kim studio, she won an international design competition to design the AIDS Memorial in San Francisco. Janette's work has been featured on NPR's Brian Lehrer Show, Artforum, Architect, and other journals including Volume, which recently published her article "Biosphere 2's Contested Ecologies." Janette's work has been exhibited on the New York City subway system and galleries including Artists Space, Eyebeam, and the Storefront for Art and Architecture. Janette holds a Masters of Architecture from Princeton University and a Bachelor of Arts from Columbia University.

Community Outreach Leader:

PAUSE

Matthew Slaats, founder

www.matthewslaats.com

A native of Wisconsin, Matthew completed his MFA and MA from the University of Wisconsin-Madison in 2005 and his BA in Archaeology from the University of Evansville in 1999. His artistic career has a vast array of interests focusing around community engagement, performance, installation, video, and sound. This has led him to pursue various media based projects that explore the relationship between people and place. In 2009 he completed a community image archiving project in Hyde Park, NY and a mobile gaming project in Poughkeepsie, NY. In 2010 he started working with Middle Main Revitalization to support the development of cultural assets in Poughkeepsie. This has lead him to start PAUSE, a non profit that partners artists, local organizations and residents to collaborate on rebuilding decaying communities

Landscape Designer:

LandMINE

Alice Feng, principal

www.alicefeng.net

Alice is a landscape designer with a professional focus on ecologically engaged projects in the public realm that deal with issues relating to environmental stewardship, economic regeneration, and public/private interests. She is currently working with a multidisciplinary team at AECOM on New York City's East Midtown Waterfront Esplanade which seeks to transform the water's edge between 37th street and 61st street along the East River into an attractive recreational thoroughfare, involves numerous infrastructural and cultural complexities, and includes a major focus on urban aquatic

habitat restoration. Also at AECOM, she has been project designer on the World Trade Center Memorial District, which includes streetscape design, campus security planning, an elevated park and transportation hub plaza designs. Alice previously worked at Balmori Associates where she was project lead on numerous international competitions, helping the firm win 1st Prize for “Darat King Abdullah II House of Culture & Art” in Amman, with work commissioned by Zaha Hadid Architects. Also at Balmori Associates, she was project designer for several public and private green infrastructure projects including Duke University’s Central Campus Masterplan which was designed to attain Silver LEED rating, storm water management for the Headquarters for the Botanical Research Institute of Texas, and repurposing of old infrastructure in the Farmington Canal Greenway. Alice has also worked at Scape Studio where she collaborated in a multi-disciplinary team on a design proposal that incorporated bio-ecological processes to manage projected rising sea levels, which was exhibited at the Museum of Modern Art in New York and P.S.1 in Brooklyn (Rising Currents: Projects for New York’s Waterfront, “Oyster-tecture”). Alice Feng holds a Master of Landscape Architecture from Harvard University and a Bachelor of Fine Arts from Parsons School of Design.

Habitat and Hydrology Engineer:
eDesign Dynamics
Eric Rothstein, Managing Partner and Engineer
www.edesigndynamics.com

Eric Rothstein is a hydrologist with fifteen years of experience working on a variety of sustainability projects. Mr. Rothstein’s career has focused on ecosystem restoration and water resources planning within urban centers. He currently leads the team investigating the sustainable water resource planning for the proposed 60-acre development at Willets Point, Queens, New York. His international work includes water resource and ecosystem planning in Sao Paulo, Brazil, rural Rwanda, and the Aegean coast of Turkey. Mr. Rothstein previously worked as a project manager for New York City for over seven years. In that capacity, he managed ecological restorations including salt marshes, fresh water wetlands, grasslands, and forests and developed naturalized stormwater management structures. Examples of Mr. Rothstein’s built work can be found in all five boroughs of New York City and beyond. He has also worked for a national ecological restoration firm where he worked on master planning of ecological, stormwater management and soil components for large scale developments. Mr. Rothstein has lectured on wetland restoration and stormwater management issues at the graduate level at Harvard, Columbia, and The University of Pennsylvania. He teaches continuing education courses to professionals through the State University of New York College of Environmental Science and Forestry. Mr. Rothstein holds an M.S. in Soil and Water Engineering /Hydrology from Cornell University and a B.S. from the University of Wisconsin, Madison.

Research and Design Fellows:
Eliza Montgomery, Marianne Koch, Caroline Ellise, John Buonocore, Sydney Talcott, and Meg Kelly.

Bibliography

Fall Kill Plan

- <http://fallkill.org>

Fall Kill Environment and Ecology

- “A Watershed Management Plan for the Fall Kill, Dutchess County, New York,” prepared by the Fall Kill Watershed Committee, October 2006. [http://www.hudsonwatershed.org/plans09/Fall Kill.pdf](http://www.hudsonwatershed.org/plans09/Fall%20Kill.pdf)
- Dutchess Watersheds Fall Kill Creek general information: [http://www.dutchesswatersheds.org/Fall Kill-creek-information](http://www.dutchesswatersheds.org/Fall%20Kill-creek-information)
- “A Rapid Trash Assessment of the Fall Kill, Conducted,” by Jennifer Rubbo, et. al. ([http://dutchesswatersheds.org/images/dwp/Fall Kill/fall_kill_trash_report-final.pdf](http://dutchesswatersheds.org/images/dwp/Fall%20Kill/fall_kill_trash_report-final.pdf))
- Fall Kill Creek Biological Assessment.
by Bode, R.W., Noval, M.A., and Abele, L.E., NYS Department of Environmental Conservation, Division of Water, Stream Biomonitoring Unit, Albany, NY. 1998.
- Hudsonia.org
- Center for Watershed Protection: <http://www.cwp.org/>

Fall Kill Documentation Resources

- City of Poughkeepsie documentation: <http://www.cityofpoughkeepsie.com/downloads>
- Federal Emergency Management Area: Flood Insurance Rate Map 1984: <http://gis1.msc.fema.gov/Website/newstore/Viewer.htm>

Green Infrastructure Resources

- Hudson Valley Regional Council Green Infrastructure Planning: <http://sites.google.com/site/greeninfrastructureplanning/>
- New York State Association of Regional Councils (NYSARC) Water Resource Program: <http://www.cnyrpd.org/nysarcwater/>
- Site Engineering for Landscape Architects, by Steven Strom, Kurt Nathan, Jake Woland, 2009.
- New York State Stormwater Management Design Manual: <http://www.dec.ny.gov/chemical/29072.html>
- New York State Department of Environmental Conservation: Green Infrastructure Examples for Stormwater Management in the Hudson Valley: <http://www.dec.ny.gov/lands/58930.html>

Fall Kill history

- Main Street to Mainframes: Landscape and Social Change in Poughkeepsie (Sunny Series, an American Region: Studies in the Hudson Valley)
Harvey K. Flad (Author), Clyde Griffen (Author)
- Poughkeepsie: Halfway up the Hudson, by Joyce C. Ghee, Joan Spence
- Poughkeepsie, 1898-1998 (Images of America: New York), by Joyce C. Ghee, Joan Spence

Legal Resources

- Charter and Codes of the City of Poughkeepsie NY, v9 (Updated through L.L. No. 2-2010, Ord. No. 0-10-17)
- Local Waterfront Revitalization Plan (1998)
- General Code: <http://generalcode.com/>
- Land Use Law Center: <http://landuse.law.pace.edu/>

The
URBAN
LANDSCAPE
LAB

II PAUSE



Clearwater

