ADAPTIVE STREETS

STRATEGIES FOR TRANSFORMING THE URBAN RIGHT-OF-WAY

CREDITS

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CONTENTS

Right-of-Way *noun* |rīt-ə(v)-ˈwā|

According to the City of Seattle Right-of-Way Improvements Manual:

The strip of land platted, dedicated, condemned, established by prescription or otherwise legally established for the use of pedestrians, vehicles or utilities.

FOREWORD

Streets are public spaces that can support a multitude of activity and function—not only movement of vehicles, pedestrians and cyclists, but also places to gather, socialize, stay and play.

Often comprising over a quarter of a city's landmass, street right-of-ways offer the space to mitigate their own pollution-generating, heat-retaining surfaces and to create connective ecological corridors via canopy and street-level vegetation.

This handbook has been developed to serve as an encouragement and guide for planners, designers, engineers and citizens who see the many opportunities for utility, pleasure and human and environmental health that streets can provide.

Developed by UW graduate students Jordan Lewis and Mike Schwindeller for their internship in the UW Green Futures Lab in Seattle and in the firms of Gehl Architects and Schulze + Grassov in Copenhagen, the document has been inspired and informed by worldwide movements to adapt urban streets to serve multiple purposes, from San Francisco to Seattle, Christchurch to Copenhagen.

Profound thanks go to the project advisors who have helped guide Jordan and Mike over the last year, and especially to the ScanlDesign Foundation for supporting the internship and this work. It is my sincere hope that this handbook will help propel the transformation of our urban streets, so that they may contribute to vital, healthy neighborhoods and cities.

Nancy Rottle, RLA, ASLA
Director, UW Green Futures Research and Design Lab
Associate Professor, UW Department of Landscape Architecture

From parklets to play streets to shoreline street ends to pop-up greenways, the City of Seattle is embracing creative uses of the right-of-way—spaces to meet friends, to be active, to relax and enjoy the beauty of nature, to bike and walk and gather.

Seattle's Public Space Management Program promotes and regulates a vibrant, safe, accessible, and attractive shared right-of-way, and includes more than 30 initiatives to activate streets, promote economic vitality, and support vibrant neighborhoods.

Partnerships between City staff, designers, community members, and students (like Jordan and Mike!) have sparked the city to action over the past couple of years and helped to launch the Public Space Management Program. As we move forward to build great places together, this handbook is sure to be a tremendous resource, both for those of us 'on the inside' and for those who have just the spark of an idea and need a little help to get it moving.

Jennifer Wieland, MCRP, MPH
Program Development Lead,
Public Space Management Program
Seattle Department of Transportation

HOW TO USE THIS HANDBOOK

This handbook has been created to help inspire urban residents, planners, designers and officials to re-imagine the use and function of our streets in order to provide better places for people. In chapter one, **Remix Your Street**, we review a selection of urban design strategies for adapting a street for people and identify where they are typically implemented. In the next chapter, **Activate Your Space**, we highlight the fundamental tools for how to enliven your street. In the final chapter, **Remix Seattle**, we share prototypical visions that combine strategies demonstrating the *what*, *where* and *how* introduced in earlier chapters.


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1. Picnurbia, Vancouver, BC.
Image Credit: Krista Jahnke/The Loose Affiliates
2. Guerrero Park, San Francisco, CA. Credit: SF Planning Dept.
3. Parklet Hosted by Tony's Pizza Napoletana, San Francisco, CA.
Credit: Rebar / Søren Schaumburg Jensen
4. Four Barrel Parklet, San Francisco, CA. Image Credit: Jordan Lewis

HOW CAN STREETS BE ADAPTED SO THAT . . .

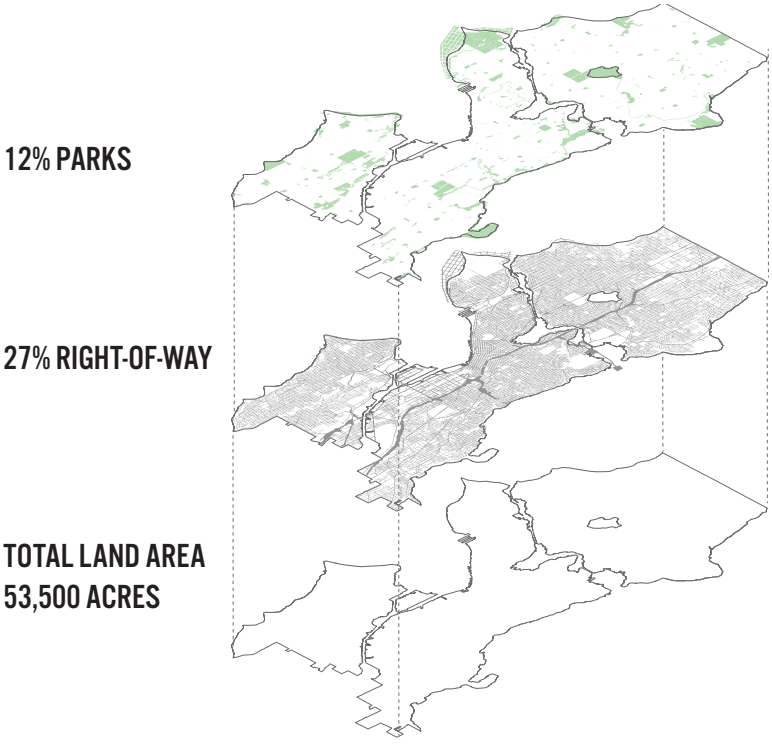
Image Credits:
1. Paul Krueger
2. Chris Gahl/Visit Indy
3. Donald Gunn
4. Portland State University

SEATTLE'S RIGHT-OF-WAY TODAY

Seattle provides an excellent laboratory for adapting the right-of-way. The city has an opportunity to further encourage and expand adaptations to the right-of-way that create multi-functional space for a diversity of users.

As cities grow they will need to accommodate more people without sacrificing quality of life. The adaptations portrayed in this document are space-efficient and can support the social and economic growth of our urban centers by making them more livable, walkable and bikeable.

Image Credit: Oran Viriyincy



Approximately 27% of Seattle's land is public right-of-way (including sidewalks and streets). The quality of this space for people varies greatly within the city. Simple modifications can have a significant positive impact on the environment and the quality of life for Seattle residents.

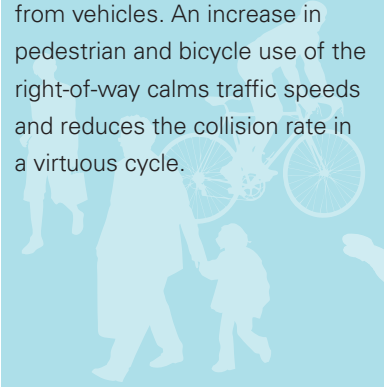
A VISION FOR OUR RIGHT-OF-WAY

STRENGTHEN NEIGHBORHOOD INTERACTION

Adaptations to the right-of-way that provide invitations for people to stay and interact are vital to livable and dynamic neighborhoods. These changes provide a measurable economic and social return on investment to both local businesses and residents.

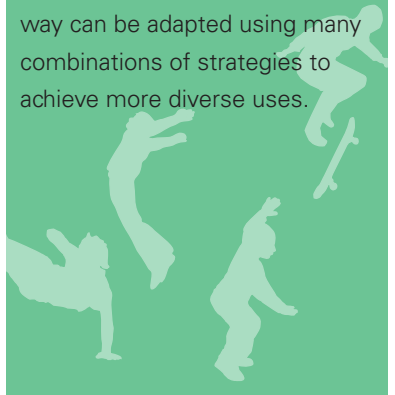
ENCOURAGE ACTIVE TRANSPORTATION AND SAFE STREETS

Right-of-way interventions that support walkability and bikeability provide human health benefits while reducing congestion and CO_2 emissions from vehicles. An increase in pedestrian and bicycle use of the right-of-way calms traffic speeds and reduces the collision rate in a virtuous cycle.



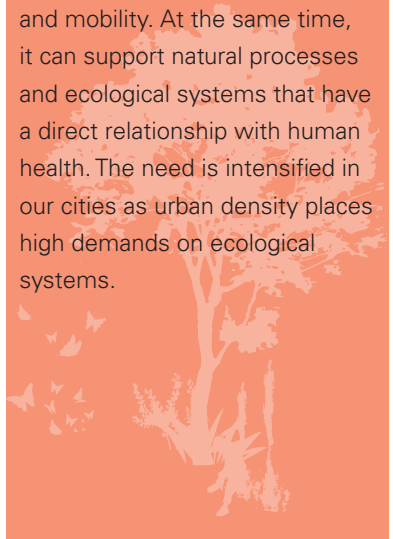
ACTIVATE STREETS FOR NEW USES AND PLAY

Street space, ranging from parking spaces to entire blocks, can serve a variety of functions. In addition to mobility, streets can be programmed as places to play and socialize. The right-of-way can be adapted using many combinations of strategies to achieve more diverse uses.



FOSTER HUMAN AND ECOLOGICAL HEALTH

The right-of-way has the potential to bolster human health and mobility. At the same time, it can support natural processes and ecological systems that have a direct relationship with human health. The need is intensified in our cities as urban density places high demands on ecological systems.



Play Street Detour New York City ca. 1916-1920.
Image Credit: New York City Municipal Archives

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REMIX YOUR STREET:

STRATEGIES FOR DIFFERENT TYPES OF SPACES

01.00
OPPORTUNITIES / RETROFITTED SPACE

01.01
PARKING SPACE STRATEGIES

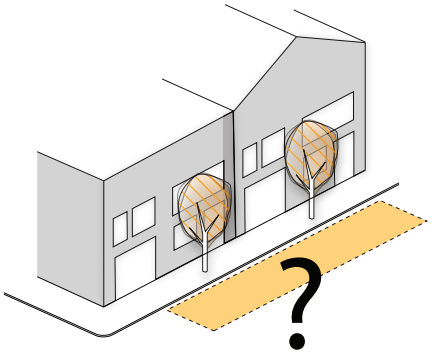
01.02
STREET SPACE STRATEGIES

01.03
RESIDUAL SPACE STRATEGIES

OPPORTUNITIES

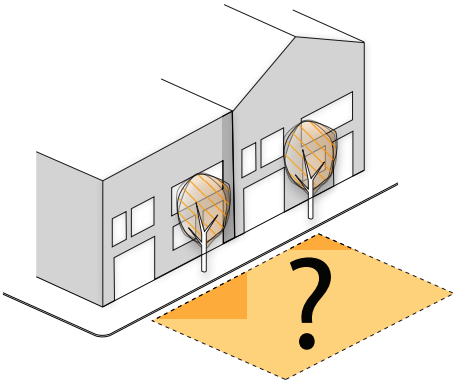
Adapting the Right-of-Way for Multiple Uses

Remixing a street can take place at many different scales ranging from a single parking space to an entire block. Looking at a parking space, street space and residual space, what are the opportunities to adapt this space for new uses?



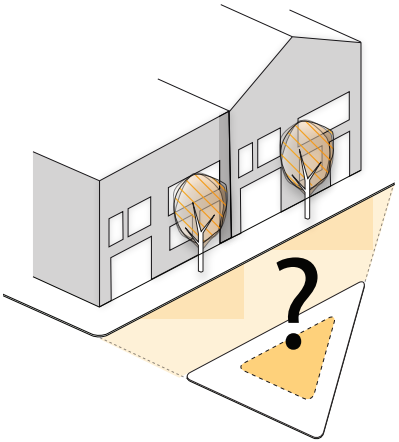
PARKING SPACE

How can a parking space be adapted?



STREET SPACE

How can street space be adapted?



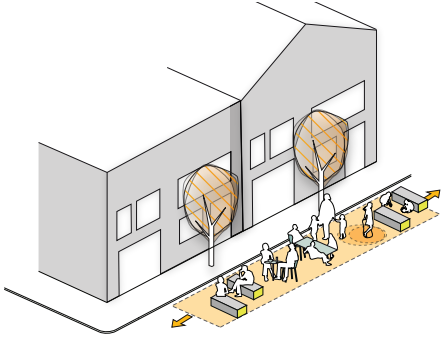
RESIDUAL SPACE

How can residual space be adapted?

RETROFITTED SPACE

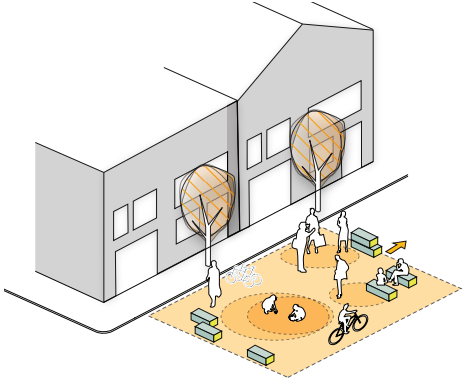
A Collection of Strategies

The following section will focus on strategies that can be used to transform parking spaces, street space and residual space. Each of the strategies listed below will be described, drawing upon examples from different cities. Many of the strategies can be combined to remix a street.



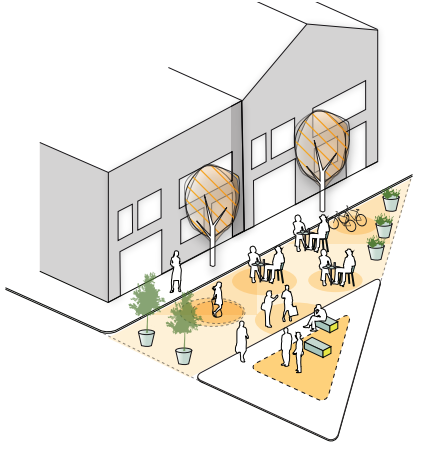
PARKING SPACE

Parklet
Curb Bulb
Sidewalk Extension



STREET SPACE

Temporary Street Transformation
Street Park
Shared Street/Woonerf
Demonstration Cycle Track
Traffic Calming



RESIDUAL SPACE

Shoreline Street End Park
Eco/Social Median
Triangle Plaza

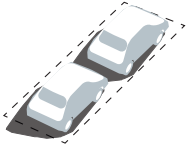
Parking Space Strategies

PARKLET

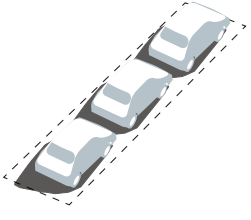
Parklets transform on-street parking spaces into small spaces for people to use and enjoy. They provide pedestrian amenities such as seating, landscaping, and bike parking. The first parklet program began in San Francisco in 2009, and the model has been adopted by many cities in the U.S.

Parklets typically involve a public-private partnership between the city and a community sponsor. The sponsor is responsible to design, build and maintain this public space with permits from the city. Parklets typically are designed to be semi-permanent structures in the right-of-way and were inspired by an annual international event called 'PARK(ing) Day'.

1 Parking Space



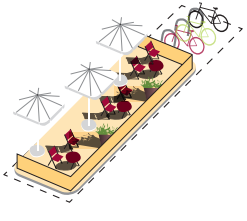
2 Parking Spaces



3 Parking Spaces

Small Parklet

Parklet with Bike Corral or Large Parklet



Large Parklet with Bike Corral

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KEY CONSIDERATIONS

- Parklets are for everyone to enjoy and must be ADA accessible
- Avoid streets with high speeds or traffic volumes
- Avoid slopes greater than 5%
- Application and permitting required
- Maintenance plan
- Weather and seasonal use
- Adjacent land uses

PARTNERS INVOLVED

- Department of Transportation
- Local businesses
- Business associations
- Community associations
- Residents

> Parklets promote a low-cost, easily implementable approach to public space improvement through projects that energize and reinvent the public realm. They help address the desire and need for increased public open space and wider sidewalks.
>
> *San Francisco Pavement to Parks Website*

1. Mobile Parklet, San Francisco, CA. Credit: CMG Landscape Architects
2. Devil's Tooth Parklet, San Francisco, CA. Image Credit: Jordan Lewis
3. Hot Tub Parklet, Vancouver, BC. Image Credit: Paul Krueger
4. Mission Hill Parklet, Boston, MA. Image Credit: Courtney Sacco

Parking Space Strategies

CURB BULB

Curb bulbs, or 'curb extensions', are a strategy to extend the sidewalk into the parking lane at key locations. A curb bulb located at an intersection can shorten pedestrian crossings and improve safety by slowing down turning vehicles. A curb bulb can be also located midblock to provide a pedestrian crossing and is used to calm traffic by visually narrowing the roadway.

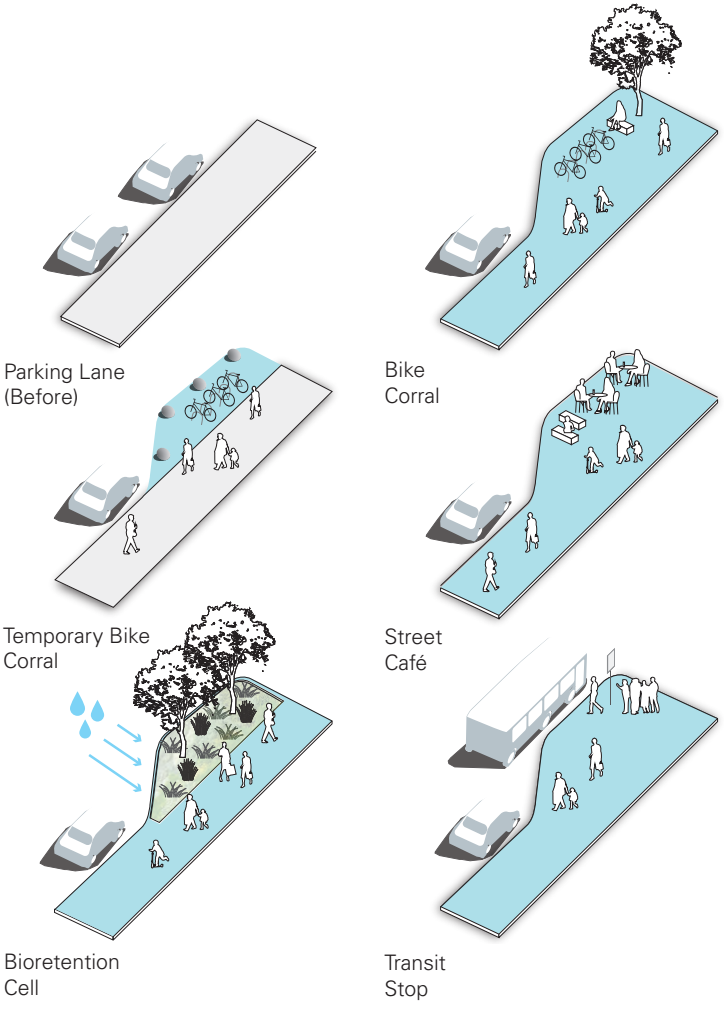
In addition to improving safety, curb bulbs can provide a space for public amenities such as bike parking, transit stops, seating and green infrastructure. For example, a curb bulb bioretention cell can capture and clean stormwater run-off from impervious surfaces.

KEY CONSIDERATIONS

- Pedestrian crossings
- Impacts on bicycle traffic
- Catch basin locations
- Corner radius for large vehicles

PARTNERS INVOLVED

- Department of Transportation
- Local businesses; business districts
- Community organizations
- Adjacent property owners



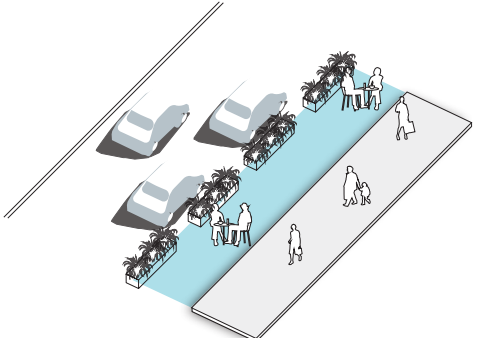
1. Bioretention Cell, Portland, OR.
Image Credit: Linda Dobson
2. Curb Bulb, San Francisco, CA.
Image Credit: Jordan Lewis
3. Bike Lane and Swale, Fairfax, CA.
Image Credit: DBA Architects
4. Stormwater Planter, New York, NY.
Image Credit: NYCDOT

Parking Space Strategies

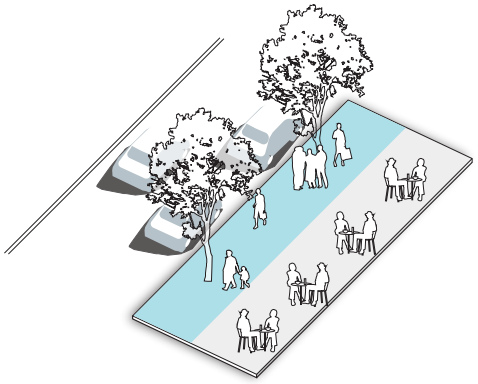
SIDEWALK EXTENSION

Wider sidewalks can improve the pedestrian's experience of the city. In commercial areas, wider sidewalks can provide room for café seating, street furniture, trees and landscaping. Sidewalk extensions can also work well on transit streets to accommodate higher volumes of pedestrians waiting for buses and trolleys.

A pilot project can quickly test sidewalk extension zones as illustrated on this page. After the pilot has proven its viability and value, the sidewalk extensions can be made permanent, with additional long-term amenities.



Pilot Sidewalk Extension



Permanent Sidewalk Extension

1

KEY CONSIDERATIONS

- Pedestrian crossings
- Impacts on bicycle traffic
- Catch basin locations
- Pedestrian volumes
- Corner radius for large vehicles

PARTNERS INVOLVED

- Department of Transportation
- Business districts
- Local businesses
- Adjacent property owners
- Community organizations

> A wide sidewalk offers pedestrians enough space to walk at their chosen pace, stand, sit, socialize, or merely enjoy their surroundings. Wider sidewalks also offer more space for landscaping and amenities, making the streetscape more useful and attractive and also acting as a buffer between traffic and pedestrians.
>
> *SF Better Streets Website*

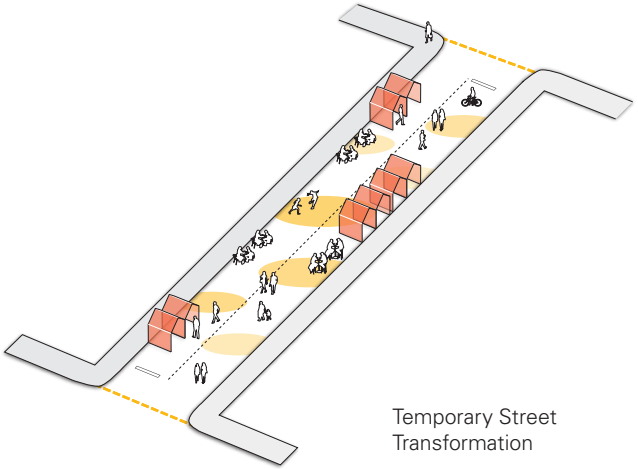
1. Temporary Pedestrian Zone, Younge St, Toronto, ON. Image Credit: Jimmy Lu
2. Breakside Brewery, Portland, OR. Image Credit: Buster Simpson
3. Pineville, NC. Image Credit: Keihly Moore

Street Space Strategies

TEMPORARY STREET TRANSFORMATION

By opening a street to pedestrians and limiting through traffic, streets can support physical activity, social interaction and play and can strengthen community. Play streets, farmers markets and festival streets are examples of street uses that transform streets on a recurring basis. Block parties and summer streets are examples of annual events that transform street space for new uses on a less-frequent basis.

Designated play streets can supplement other public spaces such as parks and provide kids and adults opportunities to engage in physical activities in their neighborhoods. Several cities in the U.S. (New York City, Chicago, Minneapolis, San Francisco) have play street programs underway which offer activities such as bicycle parades, relay races and musical performances.



Temporary Street Transformation

KEY CONSIDERATIONS

- Non-arterial streets
- Avoid transit routes
- Mixed-use streets or higher density neighborhoods
- Impacts to residences or businesses
- Proximity to schools

PARTNERS INVOLVED

- Residents, community groups
- Private developers
- City agencies
- Non-profit organizations
- Neighborhood associations
- Local business associations

> Open streets initiatives temporarily close streets to automobile traffic, so that people may use them for walking, bicycling, dancing, playing, and socializing.
>
> *Openstreetproject.org*

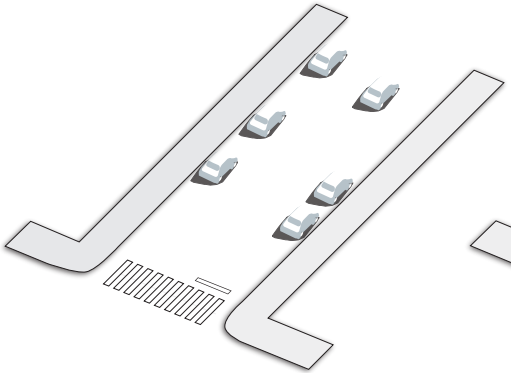
1. Alki Ave Summer Street Event, Seattle, WA. Image Credit: Patrick Robinson, West Seattle Herald
2. Beach Street Party, North Adams, MA. Image Credit: Gillian Jones/North Adams Transcript
3. Phinney Ridge, Summer Street, Seattle, WA. Image Credit: SDOT

Street Space Strategies

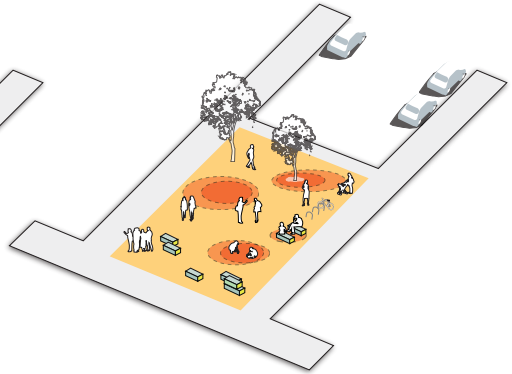
STREET PARK

A Street Park is a permanent transformation of a portion of a non-arterial street into a pocket park space. A Street Park closes a portion of a street permanently to cars and reclaims this space for new uses such as play, urban farming or community gathering.

This street transformation strategy works well on quiet residential streets and may be suitable for streets that have been indentified as neighborhood greenways in Seattle. A Street Park can be designed to provide safe bicycle connections while diverting automobiles from these streets.



Before Street Park Transformation



Street Park Created by Closing One End of the Street to Cars

KEY CONSIDERATIONS

- Suitable for residential streets or neighborhood greenways
- Emergency vehicle access
- Neighborhood support
- Impact on driveway access
- Existing dead-end streets

PARTNERS INVOLVED

- Residents, community groups
- Neighborhood associations
- City agencies
- Non-profit organizations
- 'Pavement to Parks' initiatives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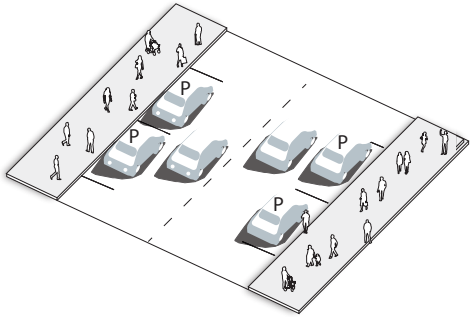
1. Street Playground, Copenhagen, Denmark.
Image Credit: Aaron Naparstek
2-3. Street Playground, Potgieterstraat, Amsterdam.
Credit: Carve Landscape Architects
4. Street End Park, Christchurch, New Zealand.
Image Credit: Nancy Rottle

Street Space Strategies

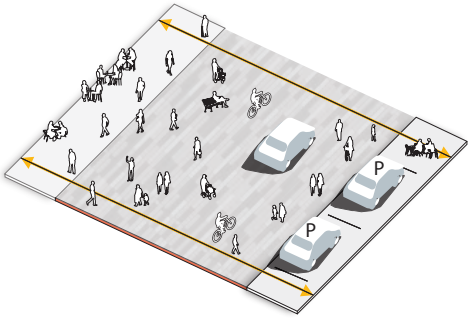
SHARED STREET/WOONERF

A shared street is a street that invites pedestrians, cars and cyclists to use the street space without separating the users. By removing the curb and adding new surface treatments such as pavers to a street, the street is transformed into a space primarily for pedestrians, with bikes and cars allowed as 'guests'. This strategy is often implemented by creating a continuous level surface or 'carpet' between the two framing building facades.

Shared streets are best implemented on streets with lower volumes of traffic and higher volumes of pedestrians. The Dutch concept of the **woonerf** (translates as 'living street') applies a similar concept in a typically residential context, mixing users with amenities and other traffic calming measures. In all contexts, it is important to provide visual and tactile cues, to slow the speed and delineate the spaces where vehicles are not permitted.



Before Transformation



Shared Street

KEY CONSIDERATIONS

- Traffic volume and speed, not suitable for arterial streets
- Alleyway and driveway access
- Linkages to other pedestrian oriented streets
- Level ground plane without curb
- Quality surface materials, tactile strips for the visually impaired
- Active building frontages

PARTNERS INVOLVED

- City agencies
- Local businesses
- Neighborhood associations
- Adjacent property owners

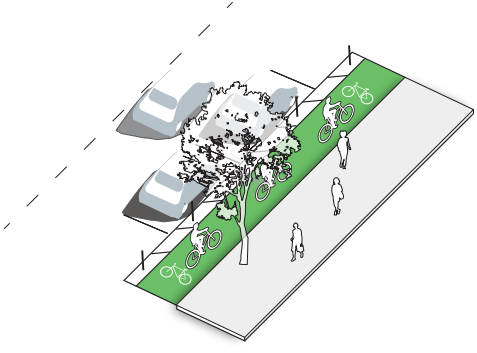
1. Bell Street Park, Seattle, WA. Credit: Nate Cormier / SVR
2. New Road, Brighton, UK. Credit: Gehl Architects

Street Space Strategies

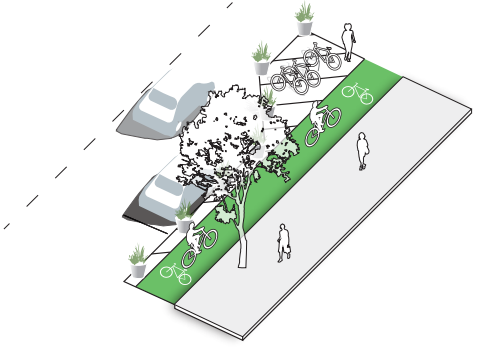
DEMONSTRATION CYCLE TRACK

Cycle tracks, also called **protected bike lanes**, adapt streets for bicycling by making riders of all ages and abilities feel safe and protected with a physical buffer from vehicle traffic. This strategy can be tested through the implementation of temporary cycle tracks by using paint, flexible bollards/delineators or planters.

A cycle track can be designed in a variety of ways to create separation from vehicles. One of the more common approaches is to position the cycle track between parked vehicles and the sidewalk. This remix should consider relationships with other strategies as well as connections to the existing and proposed bicycle infrastructure network.



Demonstration Cycle Track with Parking Buffer



Demonstration Cycle Track with Curb Extension

KEY CONSIDERATIONS

- Street width
- Existing bicycle infrastructure
- Coordination with Bicycle Master Plan
- Driveways and parking
- Buffer from moving traffic
- Commercial vehicle/delivery zones
- Freight mobility and corridors
- Rail/street car tracks

PARTNERS INVOLVED

- Department of Transportation
- Adjacent property owners/neighbors
- Local businesses
- Bicycle clubs and commuters

> [Demonstration cycle tracks] . . . allow people to sample a design idea, to understand how it works, and for the City to evaluate what's working or not — without making expensive or permanent changes.
>
> *SF Bicycle Coalition*

1. Flexible Delineators, Kinzie St, Chicago. Credit: Chicago DOT
2. New York, NY. Credit: NYCDOT
3. Vancouver, BC. Image Credit: Paul Krueger

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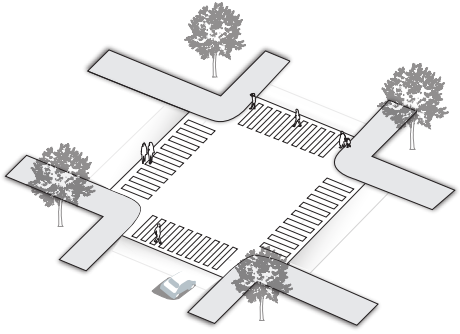
Street Space Strategies

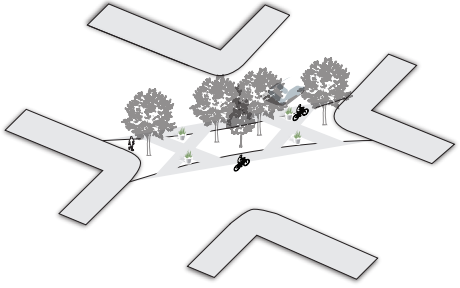
TRAFFIC CALMING

In order to make streets more inviting and accessible to a diversity of user groups, traffic calming is frequently required to reduce speeds and increase safety. Many traffic calming methods can be combined with other strategies in a holistic approach for adapting a street. For example, vertical elements like speed humps and speed tables can be combined with chicanes and curb extensions to slow traffic on neighborhood greenway routes.

A few representative methods for traffic calming are provided to help you envision how they can be combined with other strategies. Some even begin to create new public spaces.



Vertical Elements (Including Raised Intersections (above), Speed Tables, Speed Humps, etc.)



Traffic Rerouting (Including Diverters (above), Chicanes, Lane Shifts, Road Diets, etc.)

1

KEY CONSIDERATIONS

- Traffic volume and speed
- Safe pedestrian crossings
- Street selection and hierarchy
- Neighborhood context and support
- Bicycle networks

PARTNERS INVOLVED

- Department of Transportation
- Local residents
- Neighborhood groups
- Local businesses
- Adjacent property owners

> “Traffic calming is the combination of mainly physical measures that reduce the negative effects of motor vehicle use, alter driver behavior and improve conditions for non-motorized street users.
>
> *Institute of Transportation Engineers (ITE)*

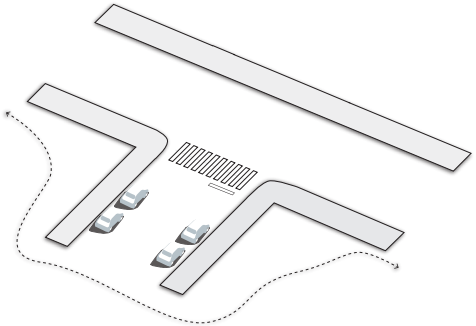
1. Bicycle Bypass, Vancouver, BC. Image Credit: Dylan Passmore
2. Temporary Chicane, Philadelphia, PA. Credit: Better Block
3. Diverter, Vancouver, BC. Image Credit: Paul Krueger

Residual Space Strategies

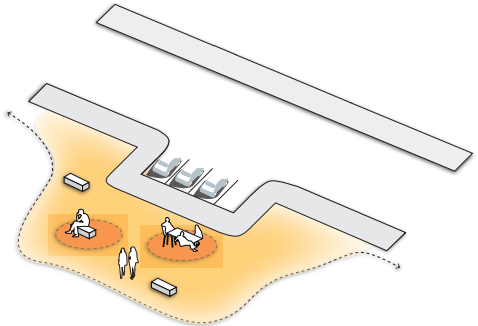
SHORELINE STREET END PARK

In Seattle there are nearly 150 streets that end on waterfronts. While some of these streets already have been improved for public use, "nearly two thirds of these street ends are unmarked, overgrown or have private encroachments" (Source: Seattle Department of Transportation). Partnering with the city, community residents and groups can transform these spaces into great neighborhood assets.

Shoreline street ends can play an important role in restoring marine habitat and should provide for public enjoyment of the waterfront open space. A network of shoreline pocket parks can provide stepping stones for local residents as well as aquatic species.



Shoreline Street End (Before)



Improved Shoreline Street End

1

KEY CONSIDERATIONS

- Public access and signage
- Potential slopes
- Maintenance plan
- Access to water's edge
- Permitting required

PARTNERS INVOLVED

- Department of Transportation
- Parks and Recreation
- Neighborhood associations
- Neighborhood residents

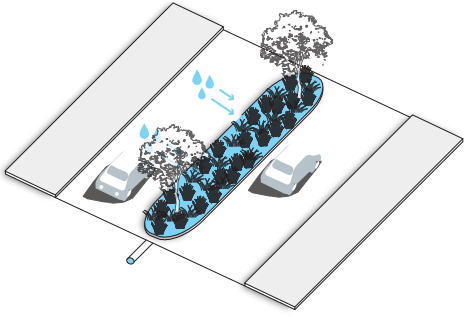
1. Hamlin Street End, Seattle, WA. Image Credit: Diane Walsh
2. Lynn Street Park, Seattle, WA. Image Credit: Bill Thorness
3. Shoreline Restoration on Earthday, Seattle, WA. Image Credit: SDOT
4. Shoreline Street End #82, Seattle, WA. Image Credit: Jordan Lewis

Residual Space Strategies

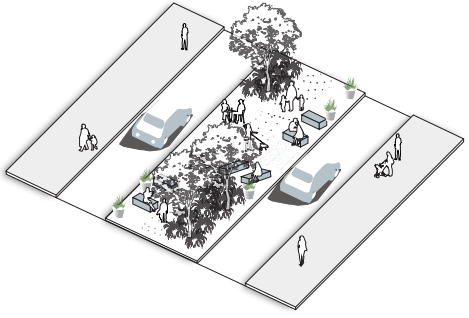
ECO/SOCIAL MEDIANS

Medians or center islands are generally used for traffic calming on wider segments of the right-of-way. In addition to slowing traffic speeds, medians can provide opportunities to increase Green Stormwater Infrastructure (GSI) and urban tree coverage.

In some cases, where there is sufficient width, medians can also be transformed into linear park spaces. On some low-traffic volume streets, these residual spaces can provide opportunities for neighborhood amenities, including urban agriculture, playgrounds and seating.



Eco-Median



Social Median

KEY CONSIDERATIONS

- Traffic volume
- Width of the street and median
- Drainage of the street
- Pedestrian and bicycle access

PARTNERS INVOLVED

- Department of Transportation
- Public Utilities
- Parks and Recreation
- Adjacent property owners
- Neighborhood organizations

> Medians provide space for trees and planting, visually break down the scale of the right-of-way, and create space for pedestrian refuges.
>
> *SF Better Streets Website*

1. Stormwater Median, Milwaukee, WI. Image Credit: Aaron Volk
2-3. Sonder Blvd, Copenhagen, DK. Image Credit: Gehl Architects

2

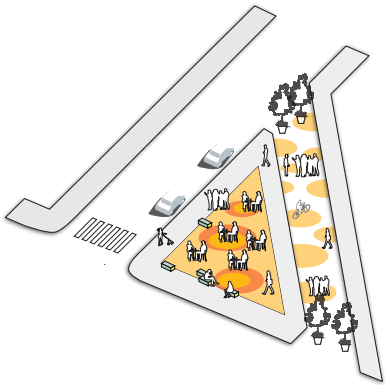
3

Residual Space Strategies

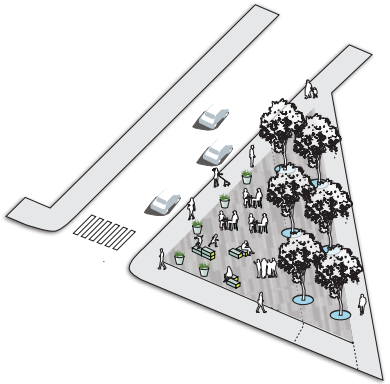
TRIANGLE PLAZA

A triangle plaza repurposes an oversized portion of the right-of-way that is frequently found when there is a break in the grid and streets cross at oblique angles. A portion of the street can often be closed and connected to leftover space 'islands' to create a new public space.

Cities such as New York and San Francisco have recently created 'Pavement to Plazas' or 'Pavement to Parks' initiatives aimed at transforming residual spaces for people. These cities have reclaimed leftover space using paint, planters and inexpensive materials. Such projects have had much success, leading to permanent design solutions for these spaces.



Triangle Plaza, Pilot Project



Triangle Plaza, Phase 2

1

KEY CONSIDERATIONS

- Business access and driveways
- Volume and speed of traffic
- Nearby pedestrian activities
- Pedestrian crossings
- Community support
- Maintenance

PARTNERS INVOLVED

- City agencies
- Neighborhood groups
- Adjacent property owners
- Business associations

> A 2012 New York City Department of Transportation study found that retail sales increased by 172% after a parking triangle on Pearl Street in Brooklyn was converted into a pedestrian plaza.
>
> *Gehl Architects Website*

1. Madison Square Plaza, New York, NY. Credit: NYCDOT
2-3. Before and After, Pearl Street Triangle, Brooklyn, NY. Credit: NYCDOT

2

3

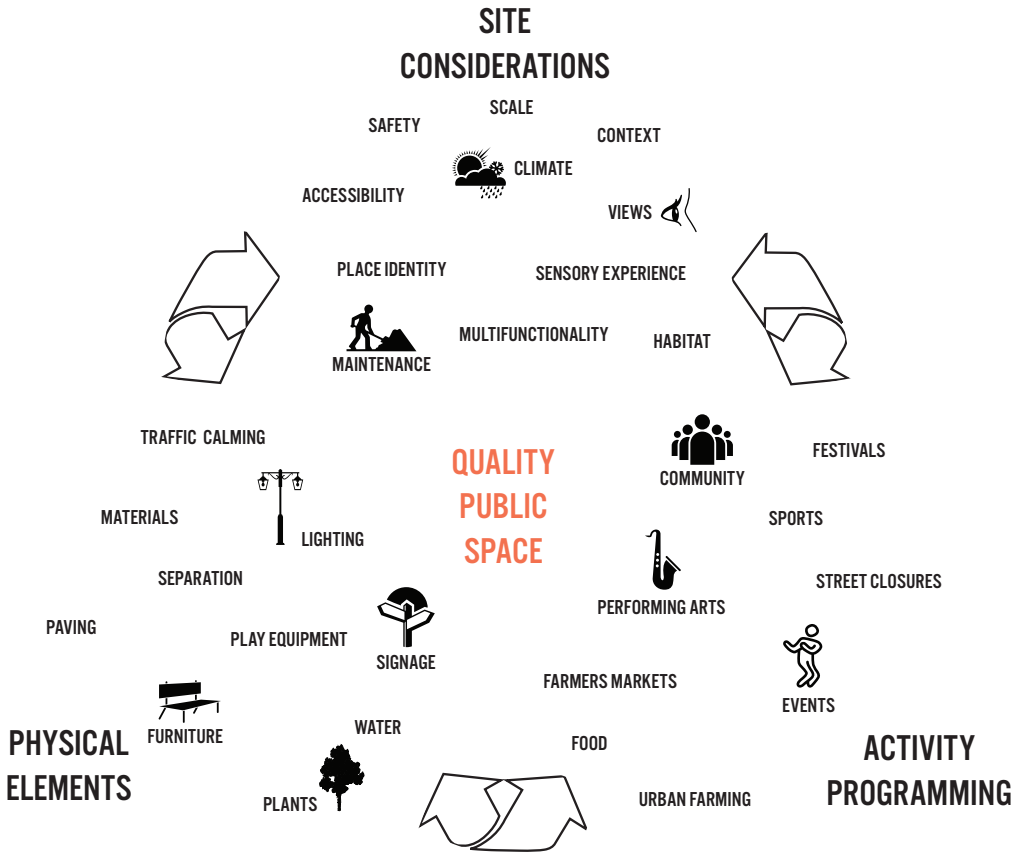
Temporary Pedestrian Zone 2012, Younge Street, Toronto, ON
Photo Credit: Doug Taylor, Historic Toronto

02.00//
ACTIVATE YOUR SPACE:

TOOLS TO ADAPT YOUR STREET

FROM STREET TO QUALITY PUBLIC SPACE

What are the components of creating quality public space in the right-of-way? You can start by thinking on a larger scale and develop an understanding of the **site considerations**. Once you have taken these into account, you can begin to review how the site can be used. Propose **activity programming** that is adaptive, flexible and can respond to user needs and seasonality. Finally, look at the detail scale and the **physical elements** that provide a safe environment with invitations for human use and interaction.



Icons from the Noun Project, Creative Commons 2.0: Bench: Irene Trautluft, Bollard: David Graus, City Buildings: Julien Menichini, Neighborhood Buildings: Claire Jones, Dancing: Edward Boatman, Eye: Andy Santos-Johnson, Lamp and Arrows: Juan Pablo Bravo, Maintenance: Laurent Patain, Passenger Loading: Kirk Lohry, Pedestrian: Irene Hoffman, Saxophone: Jakub Ukrop, Signpost: Factor[e] Design Initiative, Climate: Mateo Zlatar, Public Domain if not listed.

SITE CONSIDERATIONS

SAFETY

Protection From Traffic and Visibility

- ❑ Traffic speeds and volumes
- ❑ Visual permeability
- ❑ "Eyes on the street"
- ❑ Lighting

CLIMATE

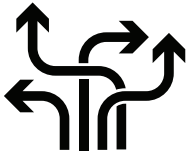
Understanding Weather and Comfort

- ❑ Sun exposure and shade
- ❑ Protection from the elements
- ❑ Seasonality – year round use
- ❑ Sensory perceptions

SCALE

Size of Adjacent Buildings and Streets

- ❑ Width of street and sidewalk
- ❑ Density and height of buildings
- ❑ Ground floor usage and transparency



ACCESSIBILITY

Allowing for Movement of All Users

- ❑ Alternative circulation patterns
- ❑ Delineation of spaces and edges
- ❑ How people arrive, thresholds
- ❑ Vehicle and bicycle parking
- ❑ Slope and topography

CONTEXT

Unique and Responsive Placemaking

- ❑ Surrounding land use
- ❑ Responds to the needs and desires of community
- ❑ Nearby amenities
- ❑ Pedestrian and bicycle traffic
- ❑ Building on existing street life

MAINTENANCE

Long-Term Care

- ❑ Local partners and sponsors
- ❑ Long-term management plan
- ❑ Resilient native plants

PHYSICAL ELEMENTS

The following "kit of parts" provides examples of common elements used to adapt a street. Physical elements should be responsive to site conditions and activity programming to support a high-quality space for people.

PHYSICAL PROTECTION

Protection From Traffic and Weather

Planters, bollards, trees and umbrellas are all examples of classic elements. Creative examples include dumpsters, logs and furniture to protect and define space for human use.





INTERACTIVE OBJECTS

Activities and Play

Exercise equipment, game tables, ping-pong, instruments and artwork inspire spontaneous interactions and playful uses of urban spaces.



PLANTS

Ecosystem Services and Habitat

The many benefits that plants provide humans can be referred to as ecosystem services. From the shade trees provide, to the cleansing of both air and water, to stormwater mitigation, the impacts extend beyond people to the broader environment.



WAYFINDING/SIGNAGE

Navigation and Identity

A small sign can be used as a friendly invitation to a space. In larger spaces, consistent surface markings and materials can provide wayfinding.


PEDESTRIAN AMENITIES

Basic Needs and Comfort

Amenities such as restrooms, water fountains, bus shelters and kiosks help create pedestrian-friendly spaces.

FURNITURE

Fixed and Flexible

Furniture should provide invitations to stay in a space. Material choice impacts comfort; for example, metal can get very hot or cold. A mixture of fixed seating that is always available and flexible seating that is customizable is ideal.

LIGHTING

Safety, Scale and Extended Use

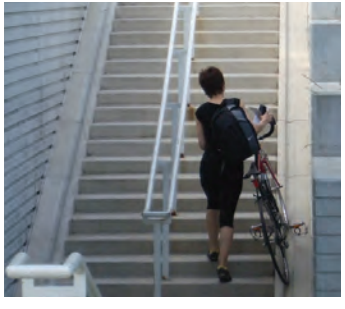
The way a space is used and feels at night is significantly impacted by lighting. It can provide a canopy, wayfinding or make a space feel pedestrian-friendly and scaled appropriately.



BICYCLE FACILITIES

Encouragement, Parking and Repair

Providing facilities that make bicycling easier and more convenient can include options for parking at the end of trips as well as support along the way such as ramps, fixed pumps and tools.


SURFACE MATERIALS

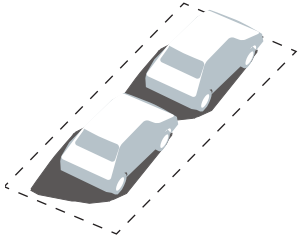
Variation, Color and Accessibility

Paint, permeable paving, precast concrete, cobbles, wood, etc., can add interest and define space for new uses. Choose sturdy materials for longer-term interventions. Variations in material can indicate circulation, but should be easy for users to navigate.

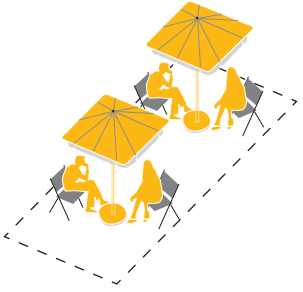


ACTIVITY PROGRAMMING

Street space, ranging from parking spaces to entire streets, can be programmed for different uses throughout the day or during each season. The use of the right-of-way can be flexibly programmed to be more responsive to people. For example, parking spaces, when not in use, can be quickly transformed by introducing a picnic table. By deploying lightweight elements, such as seating or games, the right-of-way can be temporarily transformed for new activities and different users. Over time these temporary uses may lead to more permanent transformations of the right-of-way.



Parking During Peak Hours



Café Seating in the Afternoon

Music in the Evening

FLEXIBLE PROGRAMMING THROUGHOUT THE DAY . . .

8 AM

1

12 PM

2

Seattle's Nord Alley in Pioneer Square hosts many different events including art installations, film screenings, dances and musical performances. A variety of programming helps create a vibrant public space throughout the year.

3 PM

3

8 PM

4

Nord Alley, Seattle, WA.
1-3: Image Credit: Jordan Lewis
4: Image Credit: Mitch Reinitz

FROM PILOT TO PERMANENT

Times Square, New York City

In 2009, New York City began an initiative to improve the mobility, safety and pedestrian experience on Broadway by closing portions of the street to traffic and creating pedestrian plazas at Times and Herald Squares. Broadway cuts diagonally across the Manhattan city grid, resulting in complex intersections with higher rates of traffic collisions and congestion compared to other Manhattan streets.

By closing portions of Broadway to cars, the City added 60,000 square feet of space for the approximately 360,000 pedestrians that use the street every day. In addition to improving public safety, the project has improved the pedestrian experience for countless New York residents and visitors. The project has increased both foot traffic and stationary pedestrian activity (such as sitting, eating or standing) in the area.

Broadway Pilot Project Begins, May 2009

Times Square, June 2009

PILOT PROJECT AND DATA COLLECTION

To test the pedestrian street as a public space, the New York City Department of Transportation initially provided simple lawn chairs. After a few months the city invested in semi-permanent street furniture and put down a semi-permanent epoxy-gravel surface.

> “The project dramatically improved pedestrian safety in Times and Herald Squares. Pedestrian injuries fell by 40% in Times Square.
>
> Green Light for Midtown Evaluation Report, NYCDOT, 2010.

REFINE AND MEASURE RESULTS

Data were collected before and after the pilot project started, to evaluate the impact of the changes to pedestrian activities, public safety, and traffic congestion.

3

Times Square, 2011

4

Proposed Design for Times Square by Snohetta Architects, 2013

FINALIZE DESIGN

The pilot project has informed the final design decisions, leading to a more responsive design. In addition, pilot projects provide an opportunity for the public to become involved in shaping the final design.

1-4: Times Square Pilot Project. New York, NY.
Image Credit: NYCDOT

COMMUNITY PLACEMAKING

Guerrero Park, San Francisco

Like many projects created through San Francisco's Pavement to Parks program, Guerrero Park was intended to be a temporary trial plaza that adapted 9,000 sq ft of residual right-of-way space into a neighborhood amenity. The San Jose/Guerrero Coalition to Save Our Streets secured grant funds and worked with the Project for Public Spaces in 2005, introducing the idea of 'placemaking' early in the grassroots efforts.

The long-term involvement of the community in the process from planning to fundraising to design to implementation to maintenance has made this Pavement to Parks site successful.

1

> "What was truly remarkable about this project was the way in which city and agency staff partnered with community leaders and neighborhood advocates as problem solvers and guides through the regulatory, legal, design and approval processes . . . "
>
> *Project for Public Spaces*

2

COLLABORATE WITH OTHERS

The new plaza at the intersection of Guerrero St and San Jose Ave opened in 2009, was designed by landscape architect Jane Martin, and was a collaboration between San Francisco Public Works Department, the San Francisco Planning Department, local businesses and the San Jose/Guerrero Coalition to Save Our Streets.

> These plantings and plaza aren't just about aesthetics . . . the collision rate . . . has been reduced by 53% since 2004.
>
> *Allison Arieff, The New York Times*

SIMPLE AND AFFORDABLE MATERIALS

This intervention was limited, as no asphalt was removed from the site, most materials had to be recycled or surplus from the city, and city workers had to be able to construct the park. It cost just $20,000 to build and was funded entirely by corporate grants and donations.


3


4

5

TEST AND ADAPT

The vision of the local community was tested and can be improved in future iterations with more permanent features and more durable materials.

Image Credits:
1. Guerrero Park Site Before, San Francisco, CA. San Francisco Pavement to Parks
2. Andres Power
3. San Francisco Pavement to Parks
4. Brian Kusler
5. SPUR

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REMIX SEATTLE:

VISIONS FOR ADAPTING SEATTLE'S STREETS

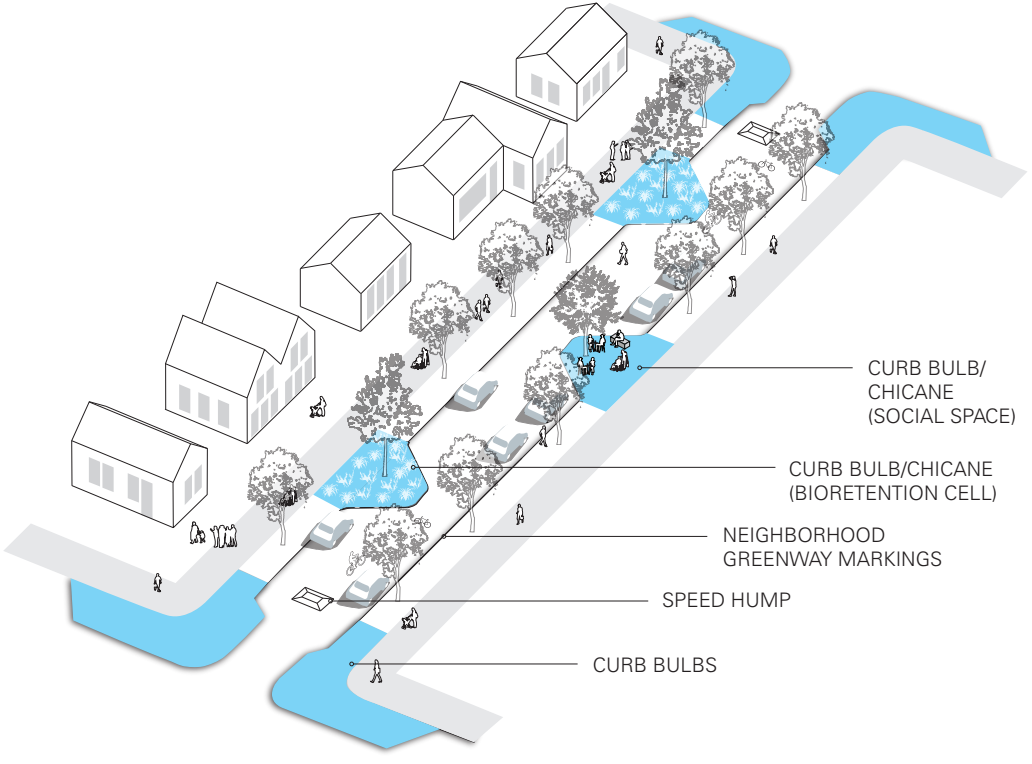
Residential Street Vision

CONNECTOR STREET

In order for a residential street to be adapted for a wider variety of uses, it may require traffic calming elements. Curb bulbs or chicanes (alternating curb bulbs) are a strategy to reduce the width and speed of traffic on a through street.

These types of interventions can accommodate public amenities such as seating, plants and stormwater infiltration. A good place to introduce these right-of-way investments is along neighborhood greenways or bicycle boulevards.

Before Adaptation

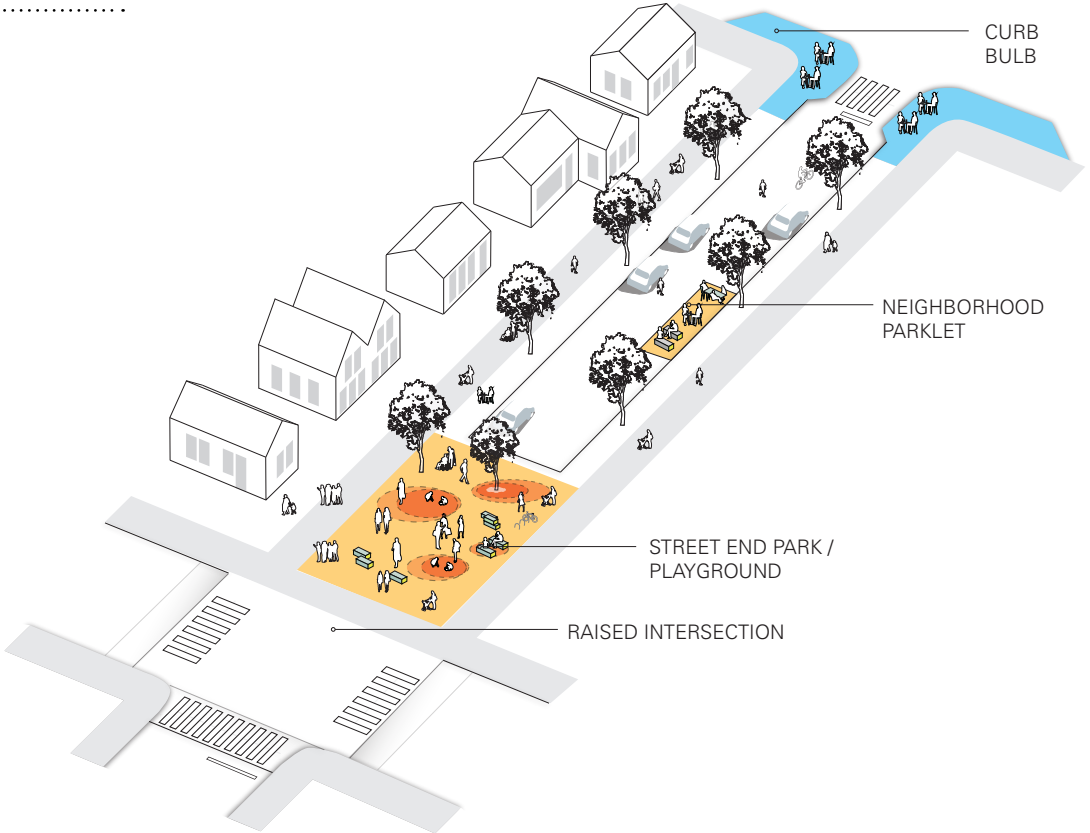


Mixed-Use Street Vision

LIVE, WORK, PLAY STREET

This vision shows how several strategies can be used to transform a mixed-use street into a community oriented space. The 'Live, Work, Play Street' proposes using the parking lane for uses such as urban farming, parklets, food trucks and closing off the street to traffic on a recurring basis to create a play street. Materials and furniture that are movable can be deployed during times the street is closed to traffic. In addition, the vision proposes paving the street with epoxy gravel in order to signify the street's pedestrian-oriented function.

Before Adaptation



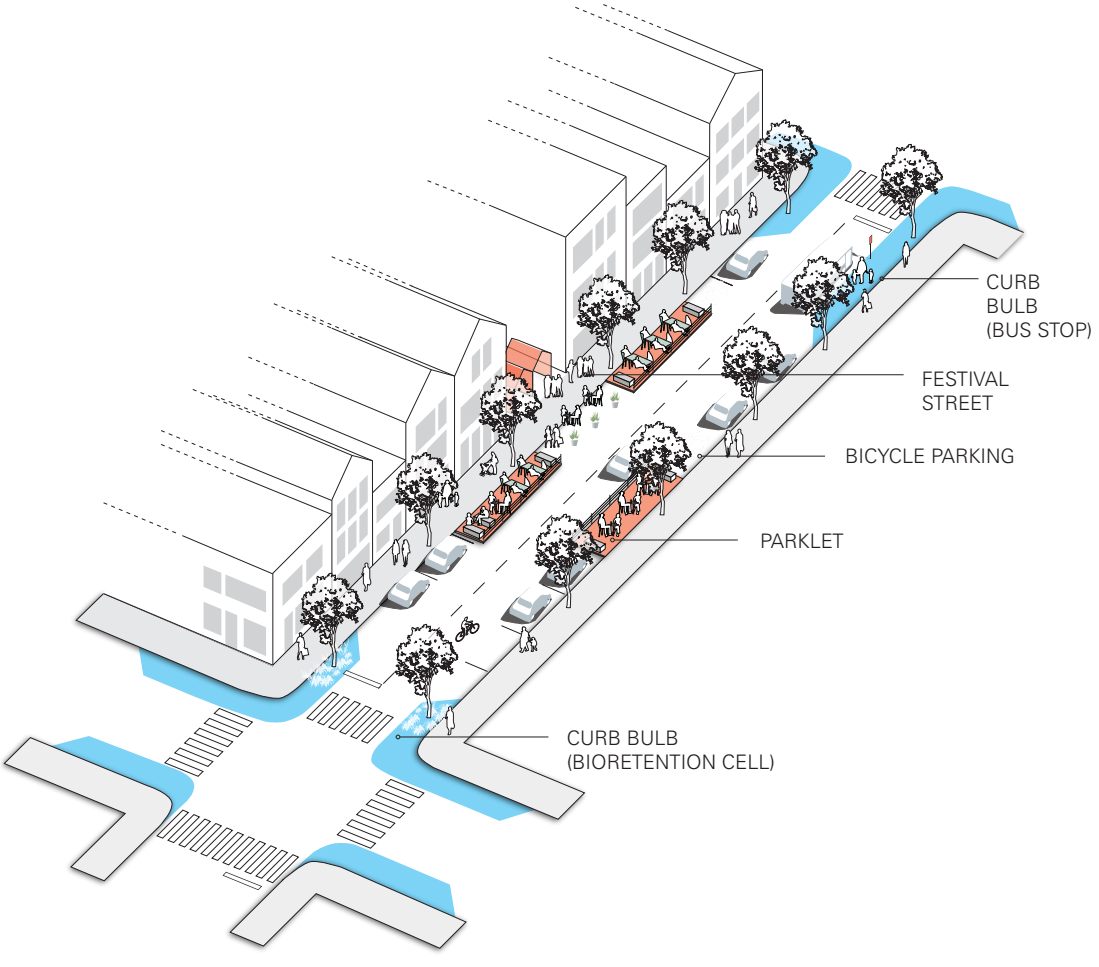

PLUMBING

Commercial Street Vision

MAIN STREET

This vision shows several easy-to-implement strategies for a commercial main street with limited sidewalk space. The proposed vision maintains the current traffic circulation while selectively removing some parking spaces for parklets, curb extensions, bike parking and green infrastructure. Parklets could respond to building uses by providing places for people to sip coffee, play games, read the paper or study. In subsequent iterations, a more permanent strategy could include wider sidewalks with integrated café seating and landscaping.

Before Adaptation



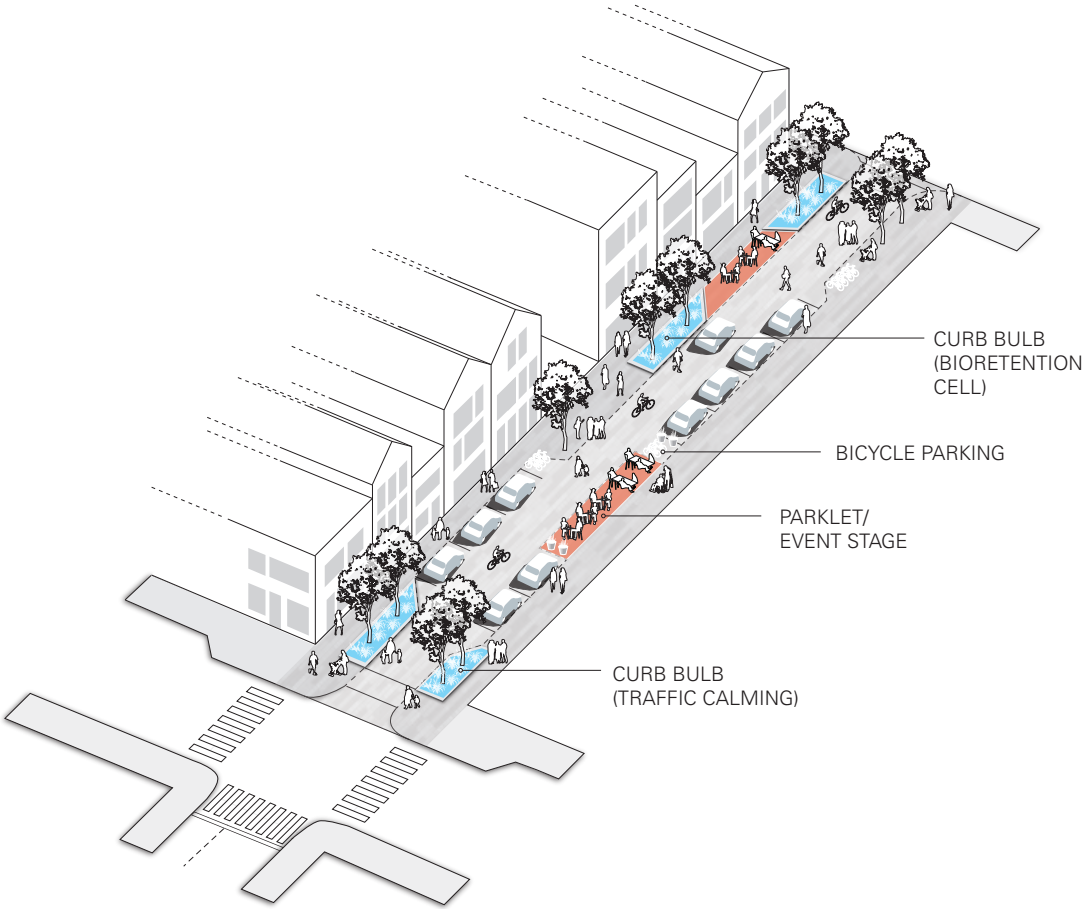

HAN BROTHERS
BULLDOG

Commercial Street Vision

SHARED STREET

This vision shows how a non-arterial street in a commercial or mixed-use neighborhood can be transformed using a shared street strategy. While vehicle access is allowed, the street is primarily a space for pedestrians. When the curbs are removed and a uniform surface is provided, pedestrians are no longer constrained to using the sidewalks. The lighter color paving shown on the diagram is used to indicate surfaces where cars and bikes are permitted at very low speeds. This street can also be easily transformed into a weekend festival street for events.

Before Adaptation

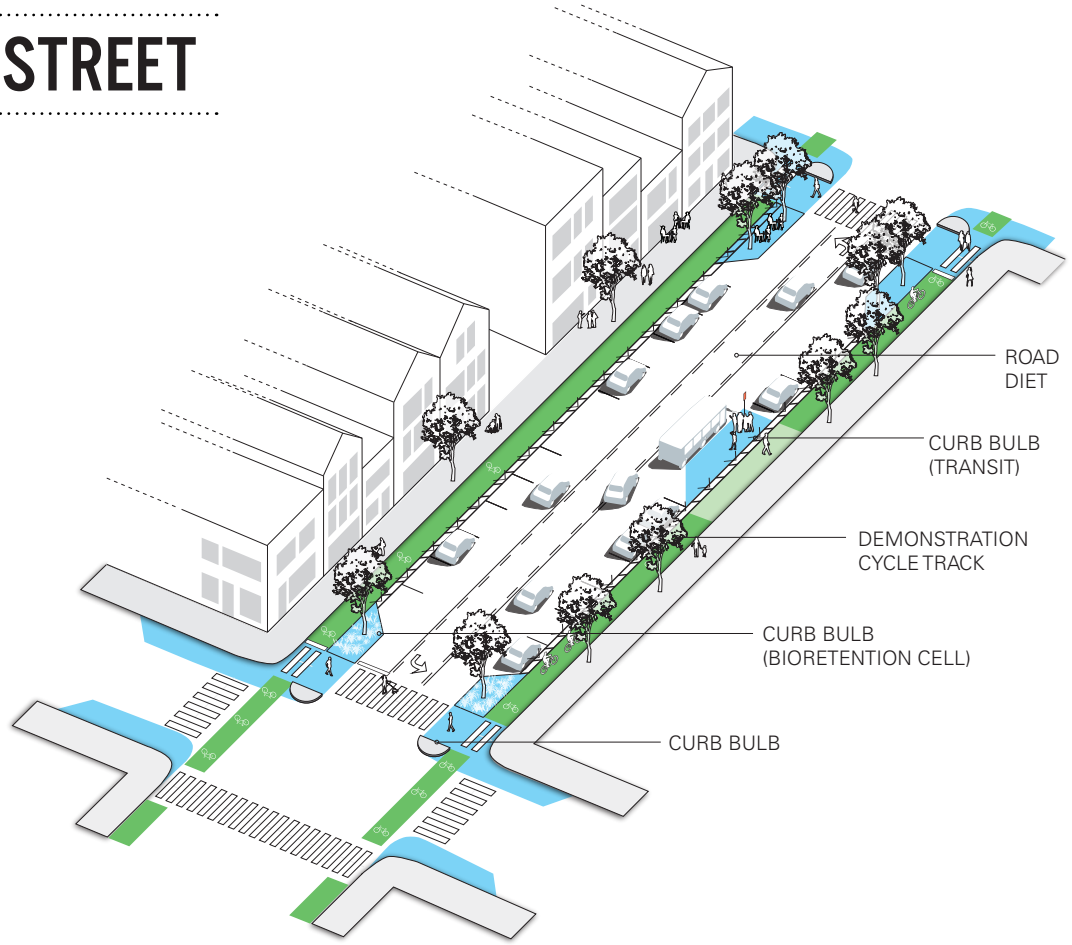


Commercial Street Vision

ACTIVE TRANSPORT STREET

An active transport street is typically found in a commercial district and can support walking and biking in conjunction with bus and/or trolley service. The addition of features such as curb bulbs, demonstration cycle tracks and traffic calming elements contributes to a safer and more highly-used corridor. A road diet is a traffic calming technique which reduces the width of the road and the number of travel lanes to create space for pedestrian and bicycle improvements.

Before Adaptation



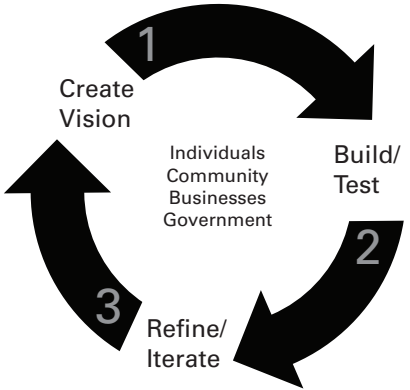
TAKE ACTION

Opportunities to Get Involved

It starts with a vision for a street. We have shown some examples and prototypes, but how does your community envision its block? While many of these visions can be easily implemented, a city's policies may need to be adjusted to support transforming the right-of-way.

In Seattle, these adaptations have begun through the development of a Public Space Management Program, which includes a Parklet Program and the development of a Pavement to Parks Program. These programs can be expanded, with additional staff and resources to support community engagement and better streets for people.

Streets can continually be adapted for new uses. The process is iterative and requires the involvement of the community and city agencies for successful implementation and management.



1. CREATE A VISION

Community

- Generate a vision for your street by participating in public and neighborhood meetings
- Identify local champions (primary)

Government

- Work with community to create a vision
- Expand the "Public Space Management Program"
- Establish a Pavement to Parks program
- Adapt policy frameworks in response to visions and potential strategies

2. BUILD & TEST PROJECTS

Community

- Sponsor or volunteer for a project
- Fundraise: grants or crowd-source funds (ex. neighborhood matching grants)

Government

- Recruit local supporters (secondary)
- Engage community in process
- Sponsor demonstration/pilot projects
- Apply for state and federal funding
- Design projects
- Construct projects

3. REFINE & ITERATE DESIGN

Community

- Provide feedback
- Expand and revise vision
- Recruit new partners

Government

- Identify gaps and connect nodes
- Measure and evaluate programs and projects
- Monitor and maintain built projects

RESOURCES

General/Complete Streets

San Francisco Better Streets Program
sfbetterstreets.org

Bain, Leslie. et. al, *Living Streets: Strategies for Crafting Public Space*. John Wiley and Sons, 2012.

Tactical Urbanism Handbook
tinyurl.com/TacticalUrbanismHandbook

Cities for People Blog by Gehl Architects
gehlcitiesforpeople.dk

StreetsBlog
streetsblog.org

Open Streets Project
openstreetsproject.org

Pavement to Parks

San Francisco Pavement to Parks Program
sfpavementtoparks.sfplanning.org

New York City Pavement to Plaza Program
tinyurl.com/PlazaProgramNYC

Parklets

Seattle Parklet Program
seattle.gov/transportation/parklets.htm

San Francisco Parklet Manual
tinyurl.com/SFParkletManual

Reclaiming the Right of Way: A Toolkit for Creating and Implementing Parklets
its.ucla.edu/research/parklettoolkit.pdf

Bicycle Facilities

NACTO Urban Bikeway Design Guide
nacto.org/cities-for-cycling/design-guide

Seattle Bicycle Master Plan
seattle.gov/transportation/bikemaster.htm

Seattle's Neighborhood Greenways Toolkit
tinyurl.com/NeighborhoodGreenways

Shoreline Street Ends

Seattle Shoreline Street Ends
seattle.gov/transportation/stuse_stends.htm

Street Design and Traffic Calming

Seattle Traffic Calming Program
seattle.gov/transportation/ntcp_calming.htm

National Association of City Transportation Officials (NACTO) Urban Street Design Guide
nacto.org/usdg

Institute of Transportation Engineers (ITE), Traffic Calming Measures
ite.org/traffic/tcdevices.asp

Seattle Right-of-Way Improvements Manual
seattle.gov/transportation/rowmanual

ADAPT YOUR STREET!

> “Streets serve more functions than simply moving people and goods . . . Streets and sidewalks are places to congregate, relax and enjoy being out in public.
>
> *NYCDOT, "Measuring the Street: New Metrics for the 21st Century"*

Jordan Lewis and Mike Schwindeller
In collaboration with:
UW Green Futures Research and Design Lab
Gehl Architects, Urban Quality Consultants
Schulze + Grassov, Urban Design Studio

With support from:
The Scan|Design Foundation