

# Envisioning Belltown *as a 15-minute neighborhood*

Winter 2023 | Landscape Architecture Advanced Studio  
College of Built Environments | University of Washington



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## INSTRUCTOR

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Bing Wan | *Bachelor of Landscape Architecture*  
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Ruthie Hoglen | *Master of Architecture*  
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Tianyi Liu | *Master of Urban Planning*  
Yixuan (Eve) Wang | *Bachelor of Landscape Architecture*  
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## ACKNOWLEDGEMENTS

Alliance for Pioneer Square | Erica Bush  
Belltown Art Walk | Amy Tipton  
Belltown United | Tom Graff, David Levinson, Ryan Hendrix, Nick Ferderer, Jon Kiehnau  
City of Seattle | Lyle Bicknell, Gabriel Seo, Patrice Caroll  
Environmental Works | Nic Morin  
Friends of Historic Belltown | Steve Hall  
GGN | Bernie Alonso, Rikkerious Geter  
Growing Vine Street | Jon Kiehnau

## STUDIO E-BOOK

Formatting & editing | Katherine Magee  
Financial support | Integrated Ecology Lab  
Cover photo | Hunter Ottman



**INTEGRATED ECOLOGY LAB**  
RESEARCH | DESIGN | EDUCATION



Photos by Laure Heland (top right), Katherine Magee (bottom right), and Hunter Ottman (left column)

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*Shantol Morgan*

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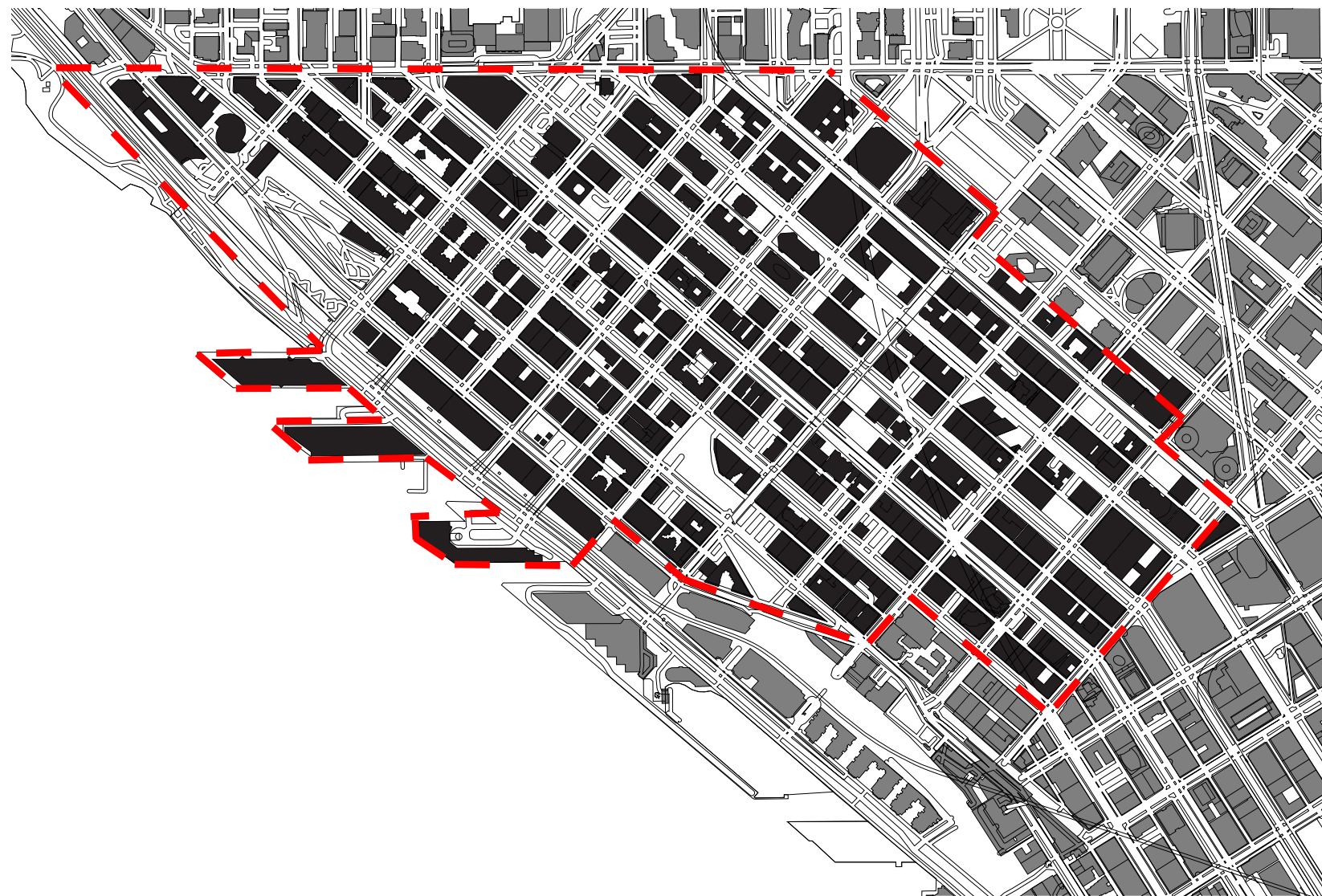
*Alex Holbrook*

*Hunter Ottman*

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Photo by Katherine Magee



Belltown Boundaries | Image created by Ruthie Hoglen



Re-envisioning the future of the Belltown neighborhood in Seattle, Students experimented with design research methods to activate public spaces and right of way along interconnected urban transects and generated landscapes designs that inspire and encourage a pedestrian and healthy life for all, in connection with urban nature. The C. Moreno's "Quarter Hour City", a global movement (Obel Award 2021) that promotes more inclusive neighborhoods where all of one's needs are met within a walking, biking or transit distance, was mobilized as a framework to investigate the following questions:

- In a post pandemic world, **how do we encourage walkable neighborhoods (people-first streets) in dense urban environments**, as a base to building more meaningful and healthier human-environmental relationships that address **climate change and advance equity**?
- What are the **defining spatial features of the 15-minute city**, and how might it be structured to serve the full extent of an existing neighborhood? How can we create better access to the necessary amenities and services?
- How to make sure that developmental change towards a more walkable city with dense cores does not take away the **character of the neighborhoods** with gentrification and displacement?

Building on its interdisciplinary character, this studio draws together contemporary urban sustainability theory and scientifically grounded research methods for Landscape design to develop an evidence-based design process, at the site and neighborhood scale. Applying theory and examples from landscape ecology, urban sociology and place making, students were encouraged to develop a design language and strategies for urban landscapes that are resilient to climatic, social and cultural disturbances in the specific context of the Belltown neighborhood.

We would like to thank all our partners for making this studio a great teaching and learning experience. We are thankful to the City of Seattle office of Planning and Community Development and Belltown United, both involved in the process of the Seattle Waterfront Renovation Project which includes several sites in Belltown. In collaboration with them, we identified these sites and investigated their past / current uses, and potential futures. The active participation of Lyle Bicknell, as well as the contributions of Gabriel Seo and Patrice Carroll (City of Seattle), were fruitful moments for the students. We owe thanks to the enthusiastic people from Belltown United: in particular, Tom Graff, Jon Kiehnau and Ryan Hendrix took an active part in our process and provided invaluable contributions and insights throughout the quarter via field trips, mid review and final review – thank you also for enlisting participants in our narrative strolls around Belltown and studio reviews: Amy Tipton (Belltown Art Walk), David Levinson, Nick Ferderer and J. R. Harris. We sincerely thank Erica Bush (Alliance for Pioneer Square) and Rikkerious Geter (GGN) for their insightful comments on the student's work.

A special thanks to Steve Hall (Friends of Historic Belltown) and Jim Brennan (J. A. Brennan Associates) for contributing their time and knowledge during our narrative strolls, and Nic Morin (Environmental Works) for sharing his experience and feedback during our final review, together with faculties from the Landscape Architecture Department. We thank you all, and hope the ideas generated through this studio will help inspire and shape the future vision for a vibrant and resilient Belltown Neighborhood.

**Laure Heland**, *Affiliate Associate Professor of Landscape Architecture, University of Washington*



Top: Studio Final Review | Photos by Laure Heland  
 Bottom: Growing Vine Street | Photos by Hunter Ottman

# WHAT IS THE 15-MINUTE CITY?

The 15-minute city is an urban planning framework where at least 90% of the needs of life are within a 15-minute walking or biking distance. That means that within a 15-minute walk or ride of the home, there are six basic urban social functions: living, working, commerce, healthcare, education, and entertainment.

The framework was conceived in 2016 by Franco-Colombian scientist Carlos Moreno and encompasses urban design values dating back to the 1800s, including walkability, plentiful green space, and mixed-use development.

The 15-minute city affects the urban fabric of place in multiple spheres:

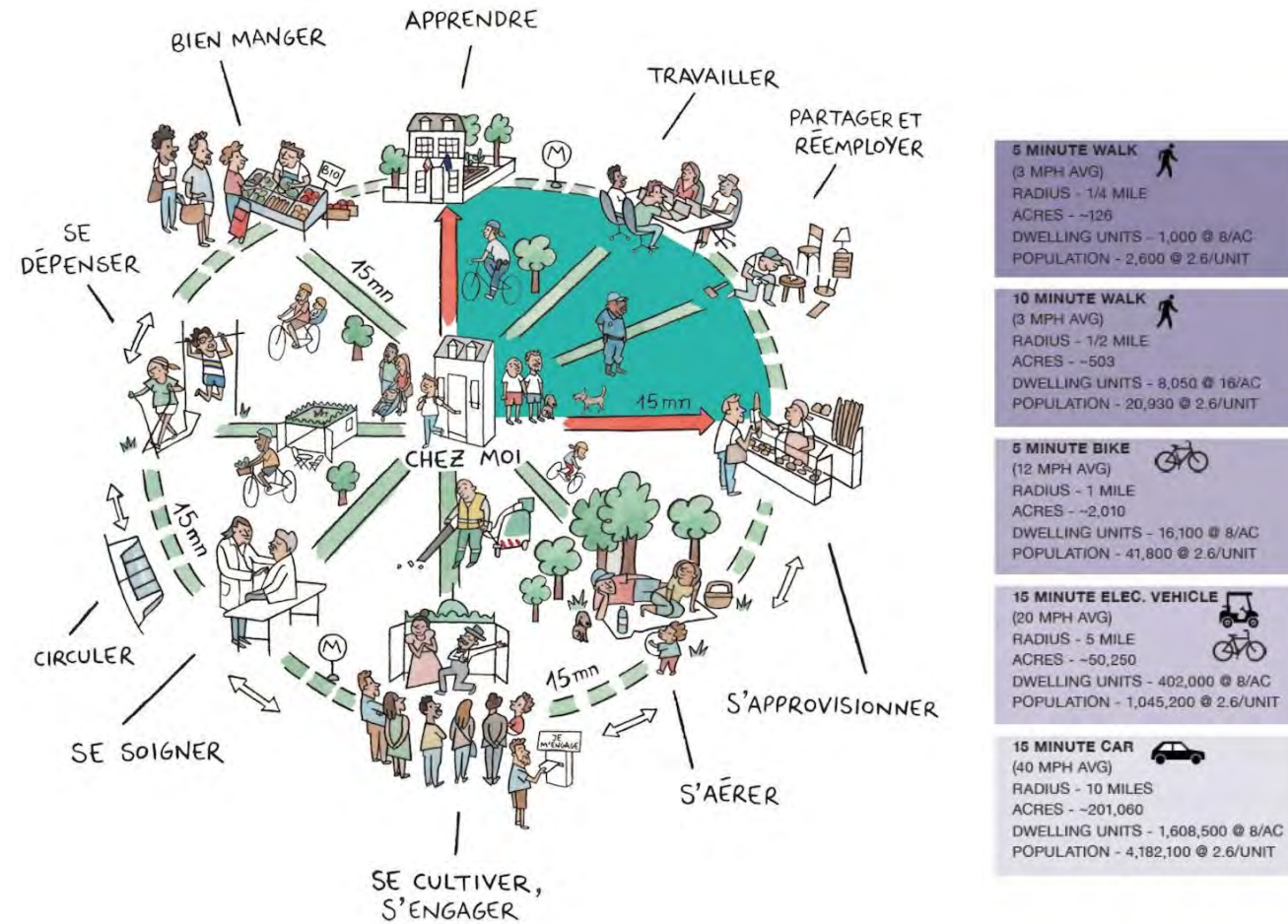
- physical (how space is organized)
- informal (how a space feels due to people and systems)
- digital (such as app ordering, shopping, advertising)
- social spheres (self-governance of place, social norms)

## REFERENCES:

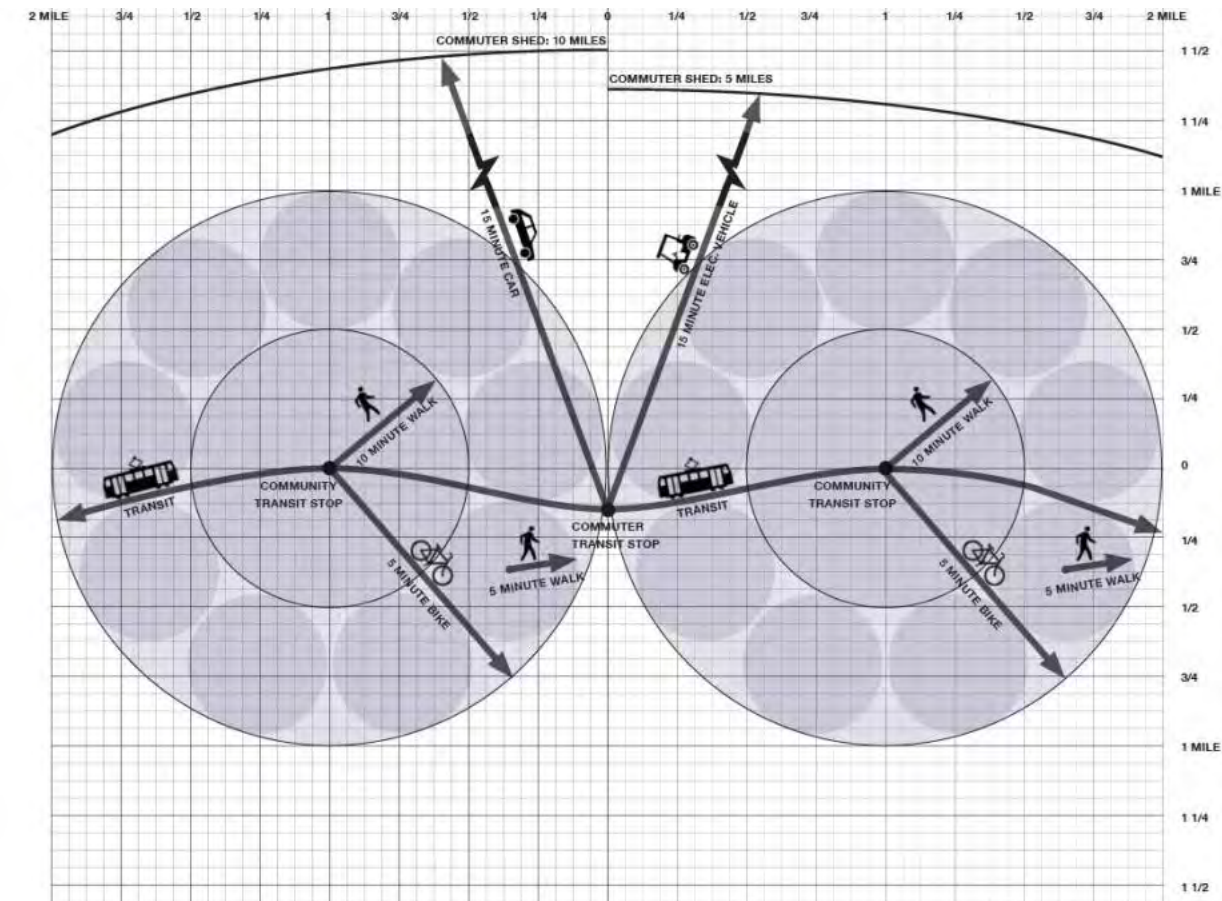
Wen et al., "Street Recovery in the Age of COVID-19: Simultaneous Design for Mobility, Customer Traffic, and Physical Distancing" in *MDPI* (21 March 2022)

Jan Gehl, "To Assemble or Disperse: City and Site Planning" in *Life Between Buildings: Using Public Space* (Island Press: 2011)

Kevin Lynch, "B: The use of the Method" in *The Image of the City* (MIT Press: 1960)



Source: Micaël Dessin and Paris en Commun



Source: Congress for the New Urbanism

PHYSICAL	INFORMAL	DIGITAL	SOCIAL
<ul style="list-style-type: none"> <li>- well-connected street network</li> <li>- traffic calming and pedestrianization</li> <li>- street as public open space</li> </ul>	<ul style="list-style-type: none"> <li>- widen pavement</li> <li>- prolonged business hours for street vending</li> <li>- nighttime markets</li> </ul>	<ul style="list-style-type: none"> <li>- internet and broadband service</li> <li>- e-commerce stores</li> <li>- streamlined online transaction and delivery/pickup</li> </ul>	<ul style="list-style-type: none"> <li>- traffic calming and self-governance</li> <li>- self-building and adaptation</li> <li>- small business and self-organization</li> </ul>

# SITE ANALYSIS & NEIGHBORHOOD FRAMEWORKS

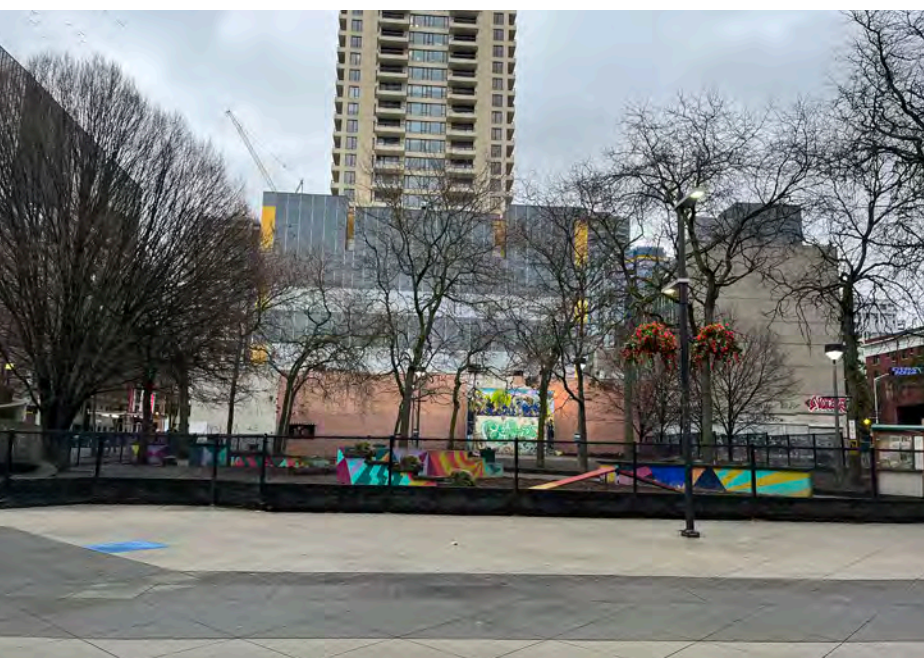
In order to understand existing, planned, and possible conditions in Belltown, students analyzed the neighborhood of Belltown from multiple perspectives: history, social and cultural, mobility, ecology and water, and experiential elements.

Drawing from these analyses, we developed neighborhood frameworks: preliminary neighborhood-scale design ideas that address challenges in each system (social and cultural, mobility, ecology and water) while integrating opportunities to improve the neighborhood as a 15-minute city.

The site analyses and neighborhood frameworks in this section explore the existing context of the site and propose strategies for the neighborhood to achieve goals of mobility; accessibility of retail, nature, and services; and health of people and ecosystems.



Source: Waterfront Seattle, "Explore Seattle's New Waterfront: Bell Street"

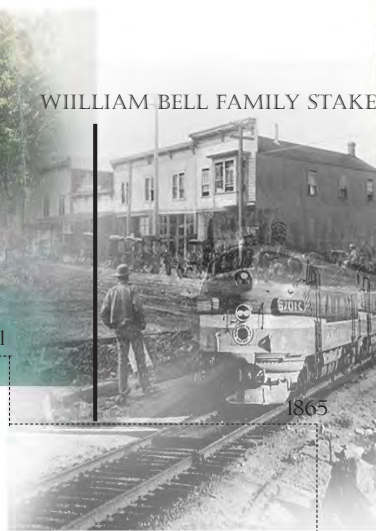


Regrade Park | Market to MOHAI | Growing Vine Street | Seattle Glassblowing Studio  
Photos by Katherine Magee

PRE-SETTLEMENT



BABAQWAB- NATIVE VILLAGE



WILLIAM BELL FAMILY STAKE

WESTWARD MIGRATION: ROBUST ECONOMY, INDUSTRIES & TRANSPORTATION



DENNY REGRADES: 1876-1930'S

TWO MAJOR FIRES: GREAT FIRE OF SEATTLE

THE GREAT DEPRESSION: 1929-1939

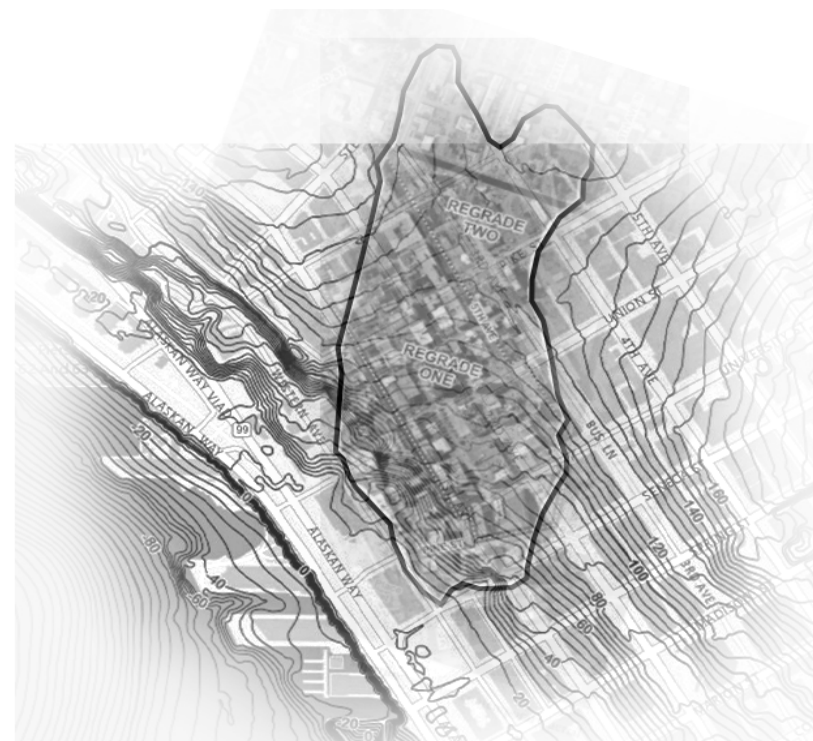


LOW DENSITY RESIDENTIAL AREA

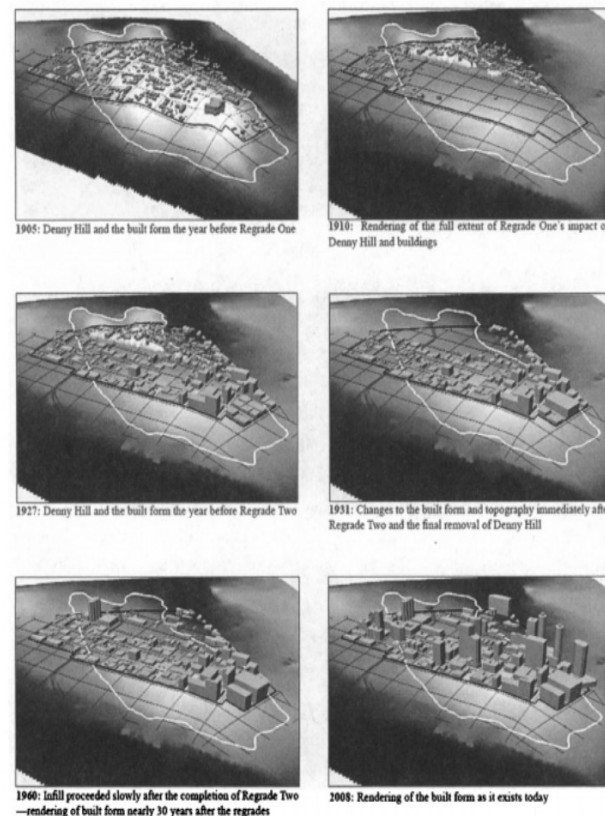


AMAZON INTRODUCED

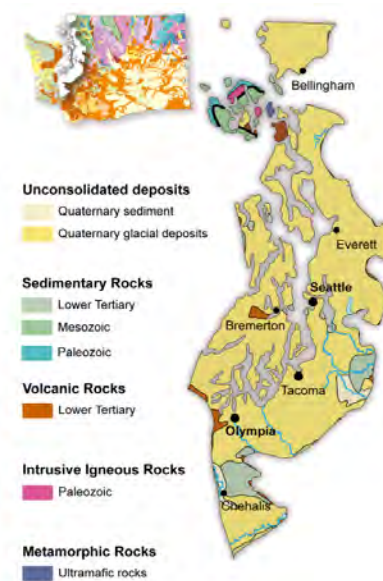
PRESENT



Denny Hill Footprint over a contour map of Seattle's Belltown Neighborhood

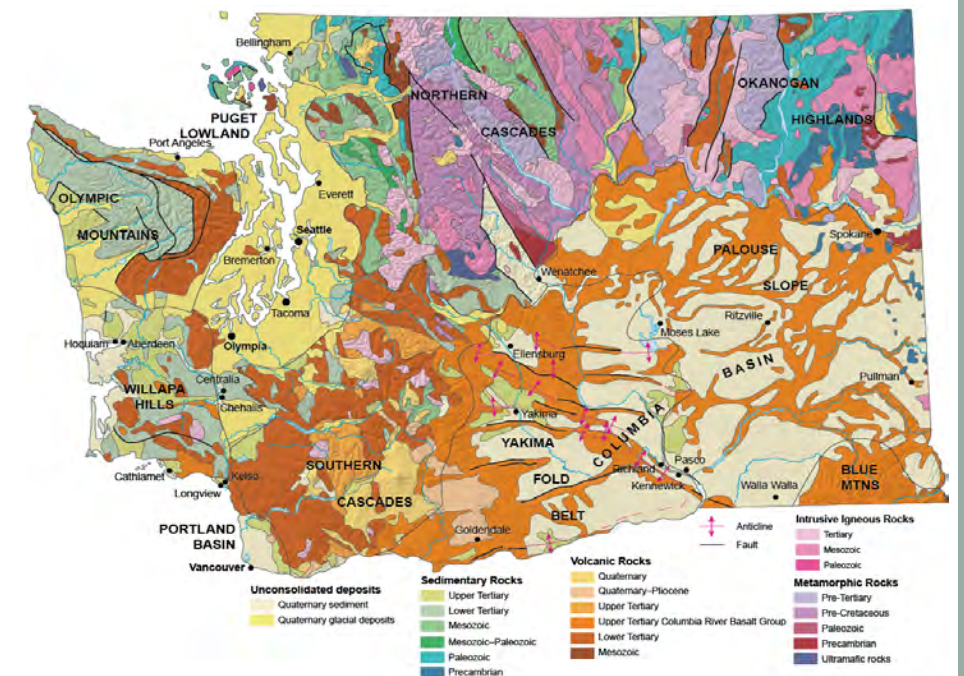


Source: Aaron Raymond, "Denny Regrade, 1893-2008: A Case Study in Historical GIS," *Social Science History* 35:4 (2011)



Quaternary glacial deposits making the soil harder to infiltrate

Source: Washington State Department of Natural Resources, "Puget Lowland"



Geomorphic layers of Washington

Many existing and in-progress plans stem from the Alaskan Way Viaduct and Battery Tunnel removal that was completed in 2019.

Before demolition, view of Western Ave from west:

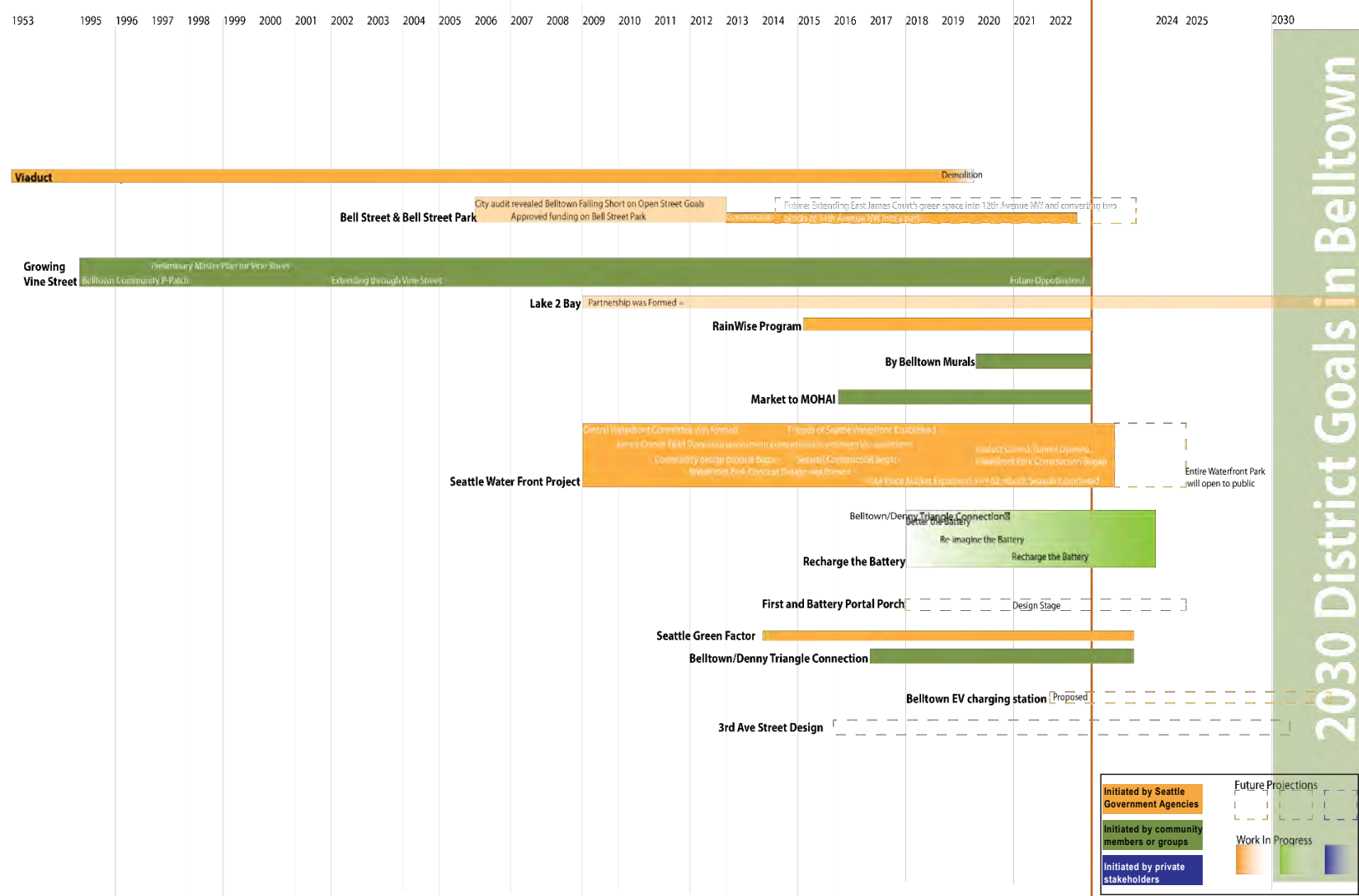


After demolition, view of Western Ave from south:



The removal of the Alaskan Way viaduct was driven by safety concerns. The 2001 Nisqually earthquake caused minor damage to the Viaduct, and later inspections found it to be vulnerable to total collapse in the event of another major earthquake.

Existing and Proposed Projects Timeline:



KEY THEMES of existing & upcoming projects in Belltown:

COMMUNITY VOICES:



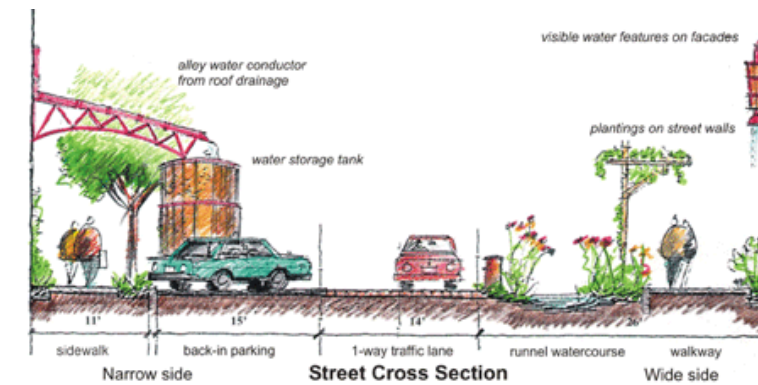
By Belltown Murals (2021)

From the artist: "This is a project all about bringing people together – from the many different groups and individuals who brought it to life, to those who will enjoy and interact with the murals." Imagery is accentuated by statements from Belltown community members.



Recharge the Battery (proposed 2017)

A community driven initiative advocating for vital improvements along the Battery Street Corridor which have been overlooked in the plan to fill the Battery Street Tunnel. Advocating for a designed portal park, green stormwater infrastructure, bicycle and pedestrian priority treatments, water reclamation gardens, surface street trees, and other features along the Corridor that offer environmental benefits and quality of life improvements for the residents of Seattle.



Growing Vine Street (1995)

Since building the Belltown P-Patch in 1995 through 1998, neighborhood residents have dreamed of expanding the garden north into Vine Street. Expanded project became a living laboratory for urban neighborhoods, demonstrating the double benefit of reclaiming problem storm runoff while creating a desirable, living green space for people and habitat for wildlife.

Community is also recognized as a key goal in projects including Lake2Bay, Seattle Waterfront Park, Belltown/Denny Triangle, Seattle Climate Action Plan, Market to MOHAI, Portal Porch, 2030 District Goals, and Seattle's RainWise program.

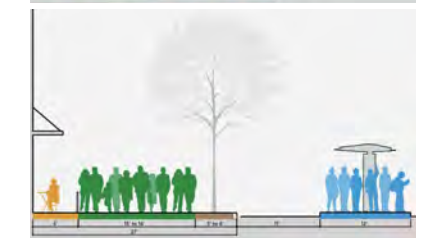
SUSTAINABLE TRANSPORTATION



Lake2Bay Concept Design (2015)

Proposed dedicated bike lanes that offer links to major new and planned bike lanes. Broad Street as an east-west connection for cyclists moving across town, and to and from the waterfront.

Sustainable Transportation is also recognized as a key goal in projects including Belltown/Denny Triangle, Bell St. Park, Seattle Climate Action Plan, and Belltown's proposed EV Charging Station.



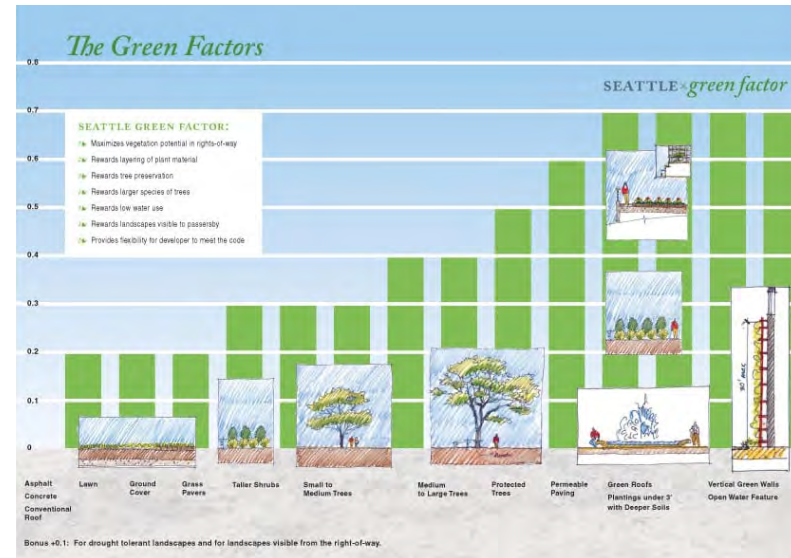
3rd Ave Street Design (2019)

Two proposals for redesigning 3rd Ave. to create more space for pedestrians and public transit.

EXISTING & IN-PROGRESS PLANS



## GREEN SPACE



### Seattle Green Factor scoring (established 2006)

The city of Seattle has a score for different types of green infrastructure. Properties must meet a minimum score (depending on lot zoning).

Green space is also recognized as a key goal in projects including Lake2Bay, Belltown/Denny Triangle, Bell St Park, and Growing Vine Street.



### Recharge the Battery (proposed 2017)

"Battery park" (portal park) as a continuation of the waterfront, then a green boulevard continues along Aurora Ave central median



### Seattle Waterfront (proposed 2012)

A "lush constellation" of public space along the waterfront, reactivating the shoreline and reconnecting the city to its natural environment.

## PEDESTRIAN-ORIENTED DESIGN



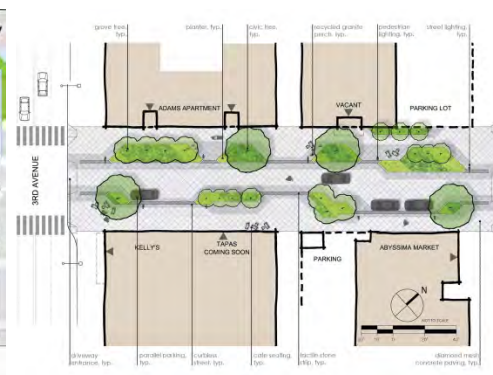
### Lake2Bay Concept Design (2015)

Proposal for generous, occupiable pedestrian space, including active plazas, wide planting zones between roads and sidewalks, street trees, seating, uniquely marked crosswalks and pedestrian scrambles.



### Seattle Waterfront (proposed 2012)

A pedestrian-oriented promenade connects public spaces along the shoreline.

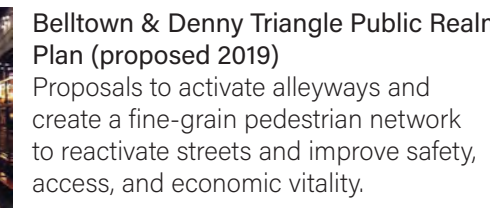


### Bell St. Park (built 2014)

In the most recent Bell Street update, new two-way protected bike lanes are built to replace parking (marked red in left image), and the park centers the pedestrian, with curbside sidewalks and limited traffic. Bell Street Park will also connect to the new pedestrian-oriented walk on the Seattle Waterfront.

Pedestrian-oriented design is also recognized as a key goal in projects including Recharge the Battery, Belltown/Denny Triangle, 3rd Ave, and Market to MOHAI.

## PUBLIC SAFETY



Proposals to activate alleyways and create a fine-grain pedestrian network to reactivate streets and improve safety, access, and economic vitality.

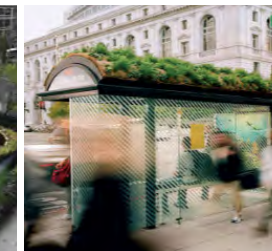


### Bell St. Park before & after (2009 & 2014)

Addressing the primary concerns of community safety and crime reduction. Tactics include creating improvements to traffic speed, protecting pedestrians and cyclists, improving lighting and furnishings, and providing green space.

Public Safety is also recognized as a key goal in projects including Lake2Bay, Recharge the Battery, 3rd Ave, Seattle Climate Action Plan, and the Battery Street Portal Porch.

## WATER MANAGEMENT



### Growing Vine Street (1995)

Roof runoff flows into a cistern for later use (watering the garden) and into the cascading water garden and series of pools. Water features designed to "delight pedestrians" and process and use roof runoff in an ecological way.

### 2030 District Water Goals (2021, ongoing)

Goal of 50% stormwater impact reduction to prevent excessive flow of water into the combined sewer system. Strategies include addition of greenspace, green roofs, p-patches, and more.



### Be RainWise program (2016, ongoing)

RainWise rebates cover most or all of the cost of installing cisterns and rain gardens on private properties in eligible combined sewer overflow basins.

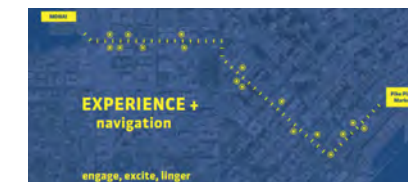


### Lake2Bay Concept Design (2015)

Reclaimed water from captured rainwater runoff, treated grey water and black water from adjacent developments to be harvested and shared along the corridor. Segments of gravity lines should be placed and capped at key intersections for neighboring developments to share water resources.

Water Management is also recognized as a key goal in projects including Recharge the Battery, Seattle Climate Action Plan, and Green Factor.

## ECONOMIC DEVELOPMENT



### Market to MOHAI (2016, 2020)

Goals to invite interaction and lingering. Activated streets to encourage social and economic activity.



### 3rd Ave Street Design (2019)

Improving streets to reduce traffic and crowding will improve the pedestrian experience and revitalize businesses across several districts.



### Seattle Climate Action Plan (2020)

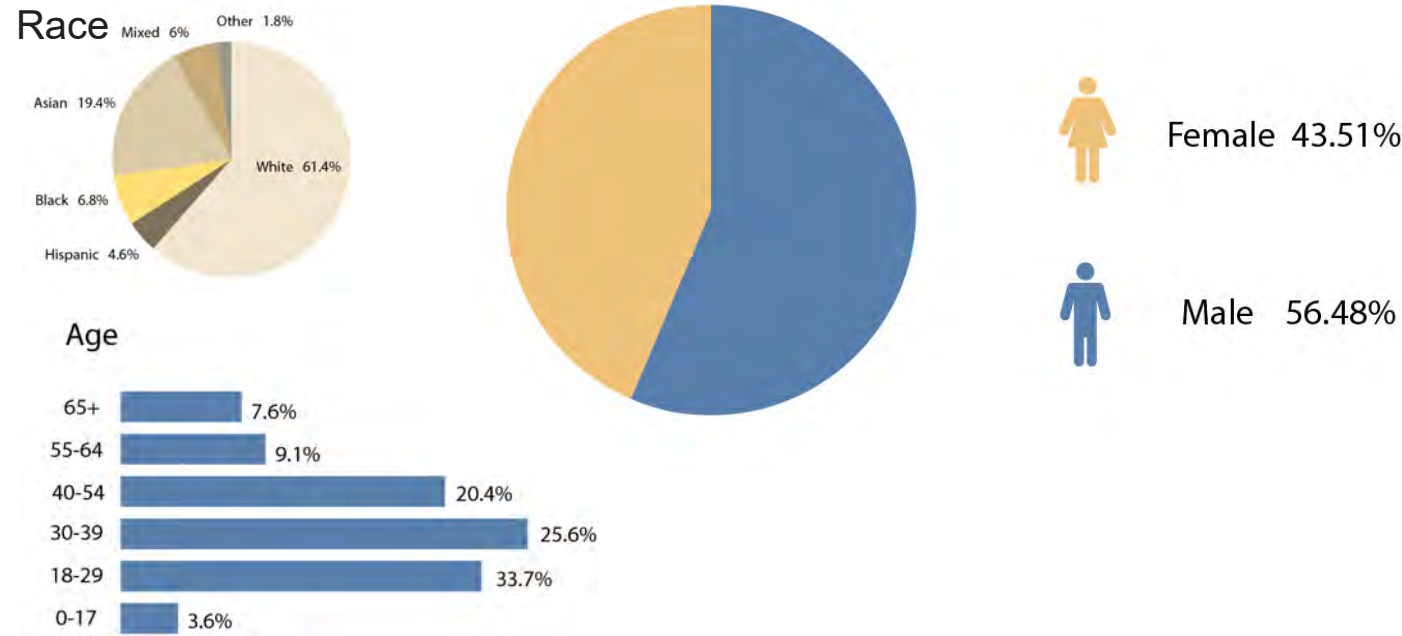
Focus on goods and services to promote zero waste and economic growth, equitable green jobs, and a just food economy.

Economic Development is also recognized as a key goal in projects including Lake2Bay, Seattle Waterfront, Belltown/Denny Triangle, Green Factor.

Seattle  
733,919

# Belltown

Population: 11,979

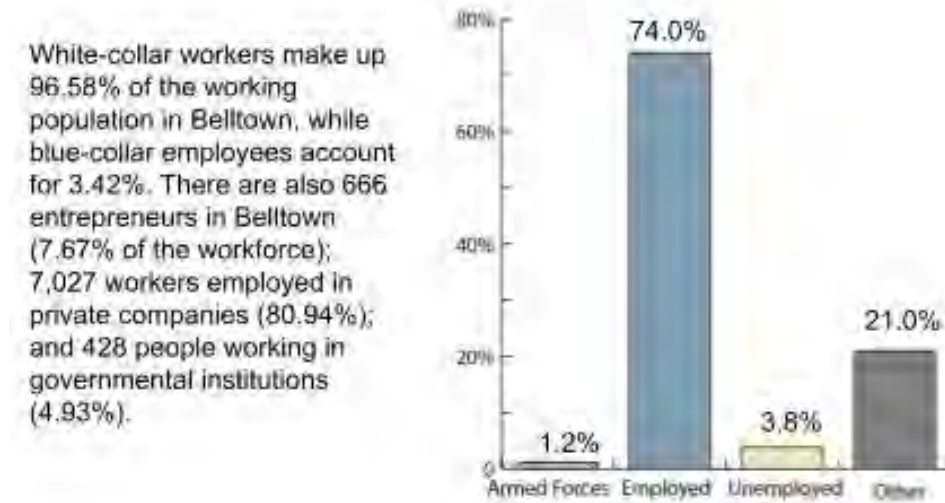


Belltown has a total population of 11,979, ranking at the 15th in Seattle, with 56.48% of male and 43.51% of female residing in the neighborhood. Based on the population density diagram (updated 2018) there are dense clusters on 3rd Ave & 4th Ave. The waterfront area is also dense in the neighborhood.

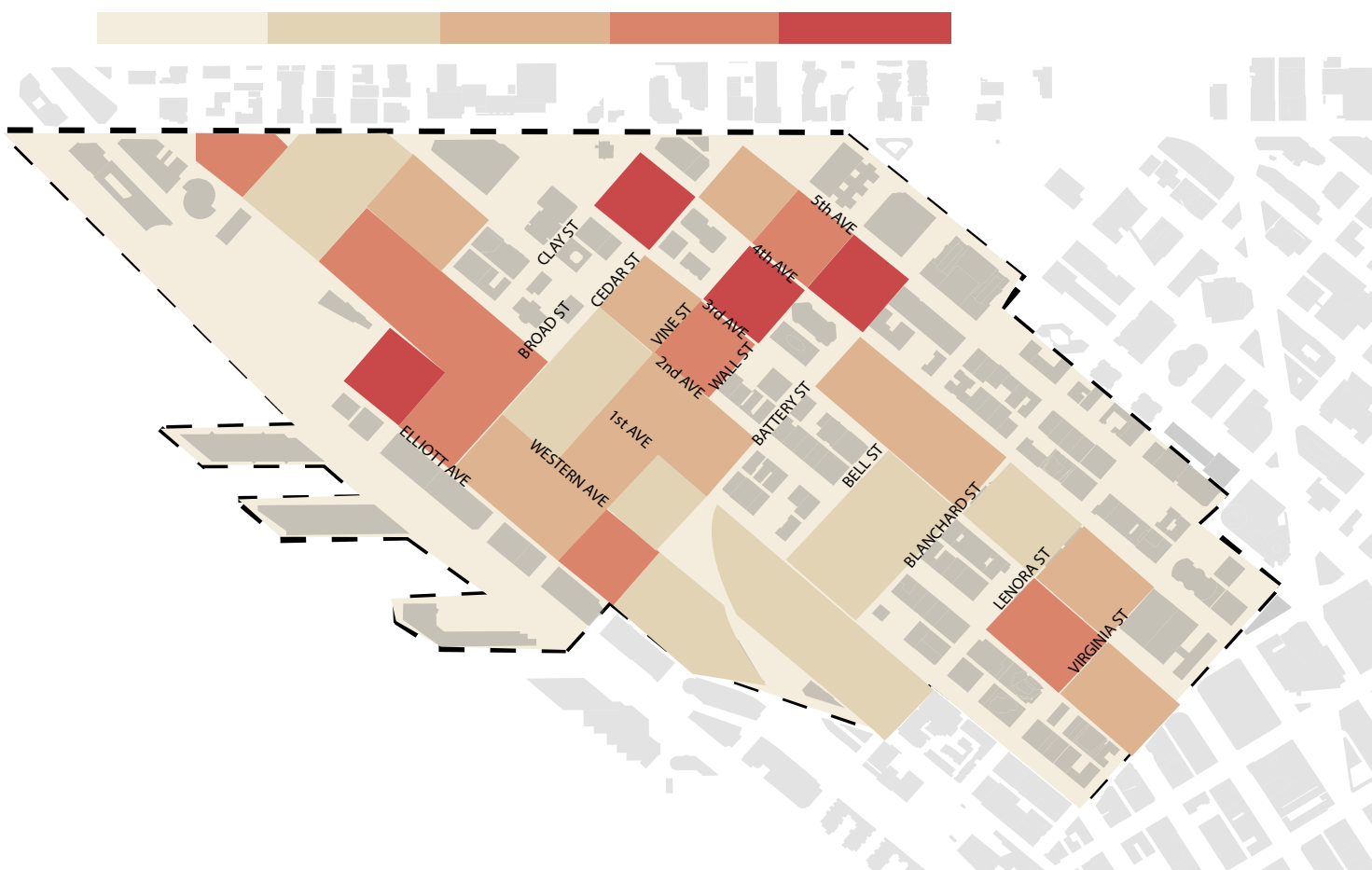
Belltown has the highest population density of all neighborhoods in Seattle. Despite the population of the Capitol Hill neighborhood being the highest in Seattle, Belltown's population is still more dense.

## EMPLOYMENT STATUS

Percentage of population aged 15 to 61 years old.  
Scope: population of Belltown

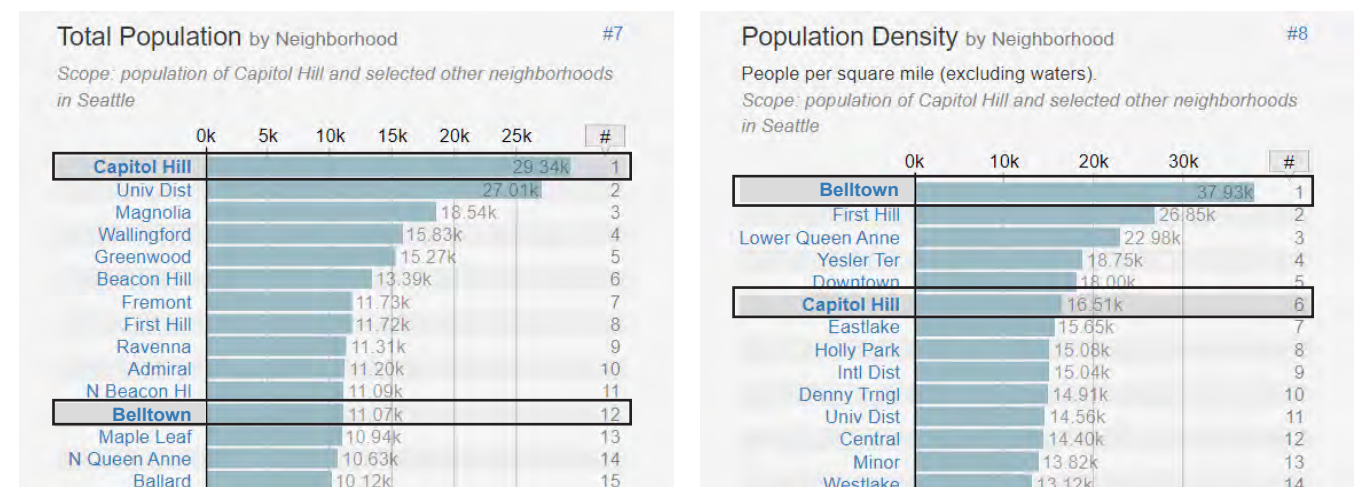


## BELLTOWN POPULATION DENSITY (by blocks)



Source: StatisticalAtlas.com, Seattle Belltown neighborhood population (2018)

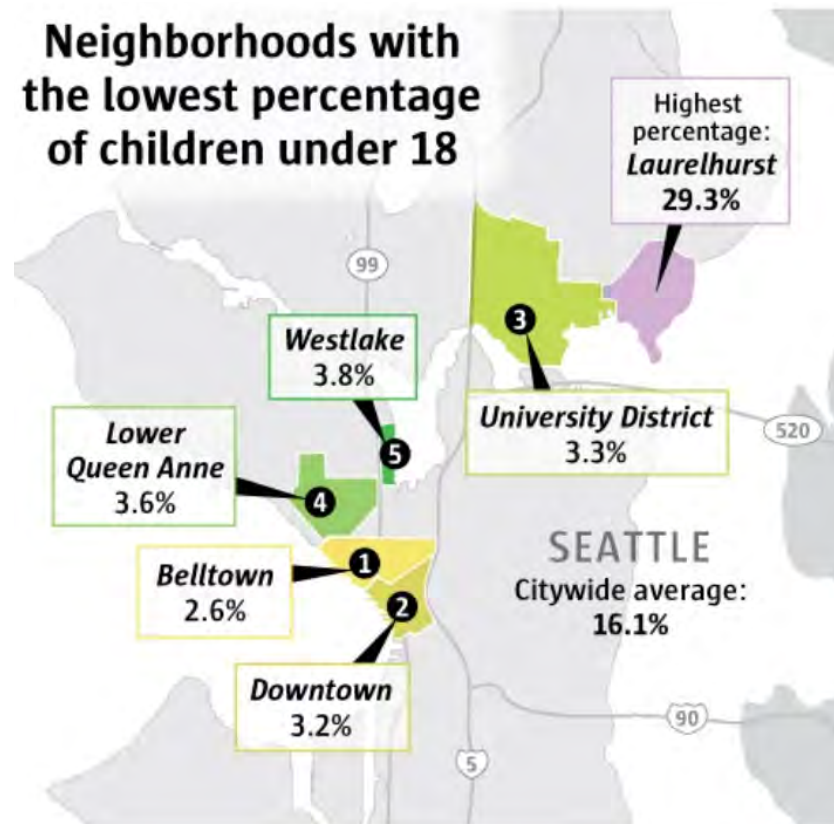
## COMPARING POPULATION DENSITY with Capitol Hill



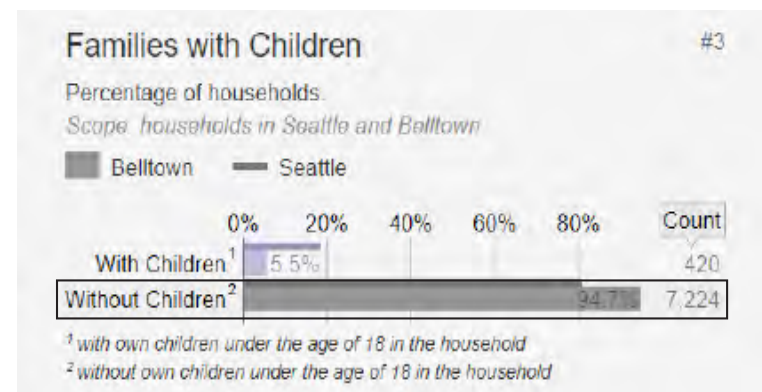
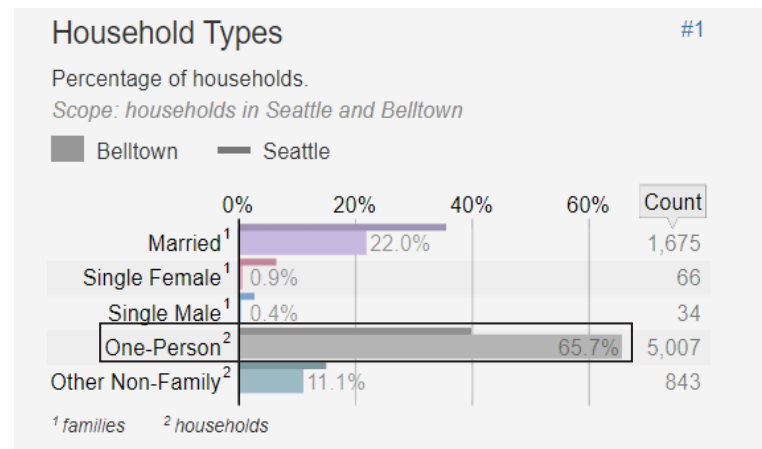
Source: StatisticalAtlas.com, Seattle Belltown neighborhood population (2018)

## Low percentage of children population

The Seattle Times has announced Belltown as one of the top five childless neighborhoods in Seattle as of 2008. Four of the top five childless neighborhoods were recommended to kid-averse couples: Belltown, Downtown, Lower Queen Anne and the University District. Belltown has the lowest percentage of children of all of neighborhoods in Seattle. Combining the 2020 population density data with this data from the Seattle Times, we can tell that Belltown puts more consideration into attracting adults and promoting new developments favoring adult clientele, including nightclubs, bars, and restaurants.

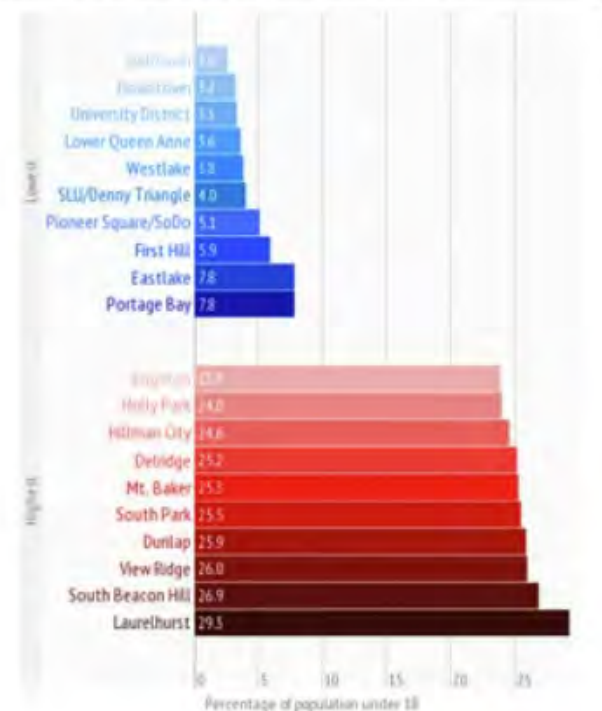


Source: Experian (Estimates for 2013), Kelly Shea/The Seattle Times



Source: StatisticalAtlas.com, Seattle Belltown neighborhood population (2018)

## Neighborhoods with lowest, highest percentage of kids



Source: Experian (Estimates for 2013), Gene Balk/The Seattle Times

## WORK SECTOR



Source: StatisticalAtlas.com, Seattle Belltown neighborhood population

## AVERAGE RENT paid by renters

Scope: households in Belltown



Source: The Seattle Times / Gene Balk, "What is Seattle's Most Kid-Free Neighborhood?" (July 6, 2013)

# HOUSELESS RESIDENTS OF BELLTOWN

Observations and qualitative data from students and Belltown residents alluded to high numbers of houseless individuals occupying many streets across the neighborhood.

A point-in-time count in January 2022 found that 13,368 people in King County were experiencing homelessness that night (sheltered and unsheltered). The total number of people experiencing homelessness in King County throughout 2020 was 40,871. 15+ organizations in Belltown serve houseless people in King County at various times of day - providing meals, employment services, health services, shelter, and more. These statistics are likely contributors to the high numbers of houseless individuals living throughout the neighborhood.

Source: King County Regional Homelessness Authority

# BUILDING VACANCIES IN BELLTOWN



vacancies in Belltown pre-COVID | Source: 2017-2019 Google Earth data



vacancies in Belltown post-COVID | Source: 2022 Google Earth data



## HOMELESS SERVICES IN BELLTOWN

- HOUSING DESIGNATED FOR PEOPLE EXPERIENCING HOMELESSNESS
- SHELTER
- SOCIAL SERVICE ORGANIZATION OR AGENCY
- SERVING SENIORS AND/OR PEOPLE WITH DISABILITIES

Source: Google Maps (2023)

# PUBLIC REALM AMENITIES

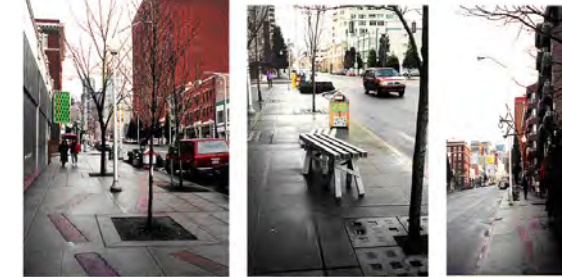
## Arterial Streets:

2nd Avenue and 4th Avenue; Broad Street, Wall Street, Battery Street from 1st Avenue to Denny Way, Lenora Street, Virginia Street and Stewart Street.

## Street Furnishings:

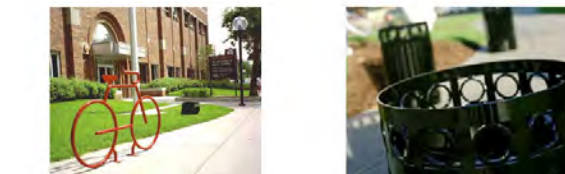
### 2nd Avenue

New installations on 2nd Avenue should continue the style of "limited edition" street art that currently exists between Cedar Street and Virginia Street. Examples include the following:



### 4th Avenue

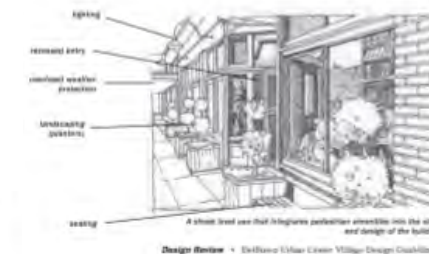
Street furnishings on 4th Avenue should be "off-the-shelf" / catalogue modern to reflect the high-rise land uses existing or permitted along that corridor.



Bike Racks: off-the-shelf models, and custom designs to dress up the sidewalk



Source: Design Guidelines for the Belltown Urban Center Village (2004)



2004 Seattle Belltown Design Review calls for integration of pedestrian amenities into building site.

VS

current streetscape: no seating, overhead weather protection, landscaping, or lighting. Pedestrian amenities called forward in design review have not been successfully implemented. Source: 2210 3rd ave google earth imagery november 2022



Photo sources: ALT-J at The Crocodile, flickr  
Screwdriver Bar, Erica L on yelp  
Elav8 lounge, yelp

Observations on site in Belltown showed that a majority of social interaction happens indoors. Streetscapes are dirty and empty, with low numbers of pedestrians and greenery. Parks and green spaces are lacking in quantity and quality.

## VACANCIES

any retail space for sale, for rent, unoccupied, closed temporarily, closed permanently, boarded up, or gated. source: google earth 2023, google maps, apple maps. data as of november 2022.

## ENTERTAINMENT

any bars, clubs, music venues, nightlife, theaters. light pink shows location of coffee shops. source: google earth 2023, google maps, apple maps. data as of november 2022.

## AMENITIES

any grocery stores, healthcare facilities, convenience stores, pharmacies, gyms. source: google earth 2023, google maps, apple maps. data as of november 2022.



# EXISTING NEIGHBORHOOD (Belltown)

1. Belltown is in close proximity to Pike Place Market, South Lake Union, Downtown, Olympic Sculpture Park and the Space Needle, resulting in high pedestrian volumes from many points surrounding the neighborhood.

2. High density of entertainment and amenities in the central area of Belltown.

3. Vacant buildings are distributed throughout the neighborhood.



Sources: Google Maps, apple maps

# SOCIAL & CULTURAL FRAMEWORK FOR BELLTOWN

## Main Goals:

1. Draw crowds from literal surroundings into Belltown.
  - High pedestrian volumes exist at: the Space Needle, Pike Place Market, Olympic Sculpture Park, Alaskan Way/waterfront.
2. Vertical connections from waterfront to 1st Ave can draw people into Belltown.
  - Opportunity to promote small local businesses (food, bars, entertainment, etc.)
3. Adult play street & dog parks implementation.
  - As one of the top five childless neighborhoods in Seattle, Belltown's population is only 2.6% children. Setting up a play street for adults and more dog parks can increase community engagement.
4. Complete Streets on 1st Ave and 3rd Ave.



- Complete Streets
- Tactical Urbanism incorporating sight-lines
- Vertical connections needed

# Streets, Mobility, Access and Circulation Flows

## Street Types

Seattle's functional classifications include Interstate Freeways; Regional, Principal, Minor and Collector Arterial streets; Commercial and Residential Access Streets; and Alleys. At the end of the hierarchy, a residential access street provides easy access to adjacent residential, commercial, and industrial land uses, while limiting traffic passing through to other destinations. The arterial network is the backbone of the roadway system and accommodates the most trips for all modes of transportation.

Currently, SDOT recognizes Belltown's street types in 3 categories: downtown, downtown neighborhood, and downtown neighborhood access.



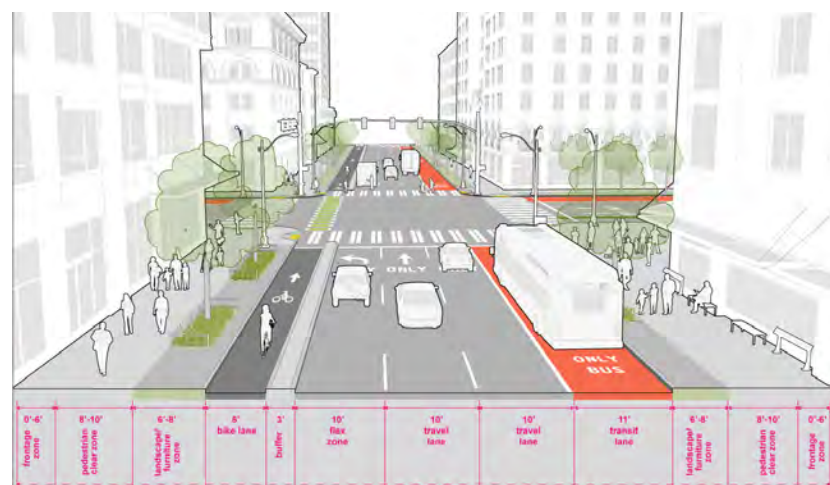
Legend

- Downtown
- Downtown Neighborhood
- Downtown Neighborhood Access

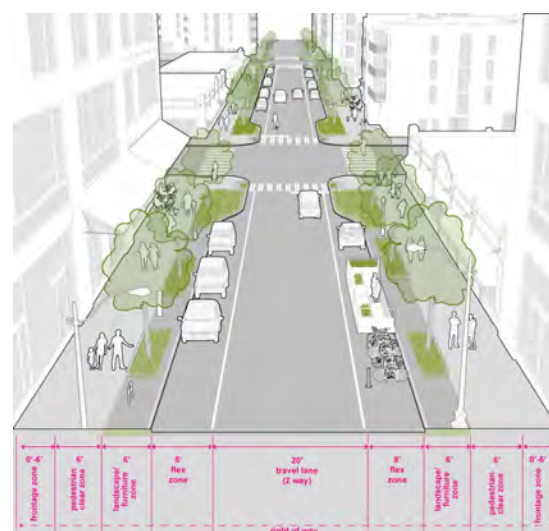
Street Type Map

### Street Type: Downtown

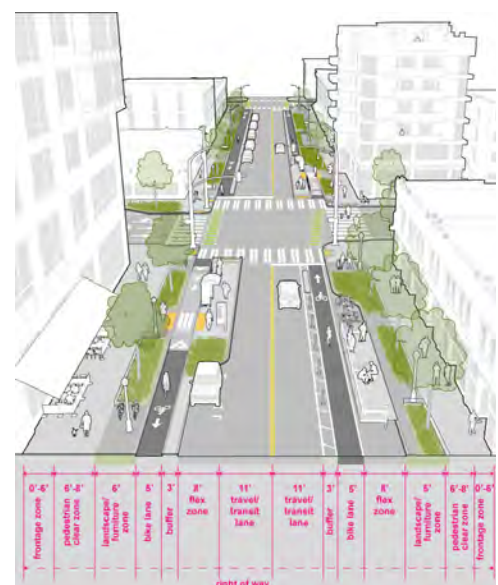
- Land use and Density :
1. Located within the Downtown Urban Center
  2. High intensity office, commercial and ground floor retail with moderate levels of high rise residential.
- Typical Street Classification: Principal Arterial



Downtown



Downtown Neighborhood Access



Downtown Neighborhood

- Street Type: Downtown Neighborhood
- Land use and Density :
1. Located within the Downtown Urban Center
  2. Moderate intensity office, commercial and high rise residential with retail.
- Typical Street Classification: Minor and Collector Arterials

## Street Sections & Traffic

Belltown's streets are currently designed to be vehicle-oriented and can be uncomfortable for pedestrians and cyclists. Most streets are constructed with 3 or 4 driving lanes and narrow sidewalks, and many lack protected bike lanes and street buffer. Some roads like Elliott Ave and Bell Street are too narrow to accommodate such a heavy traffic volume. All of these qualities make walking and biking less comfortable and less safe, discouraging residents from utilizing non-vehicle transit options.

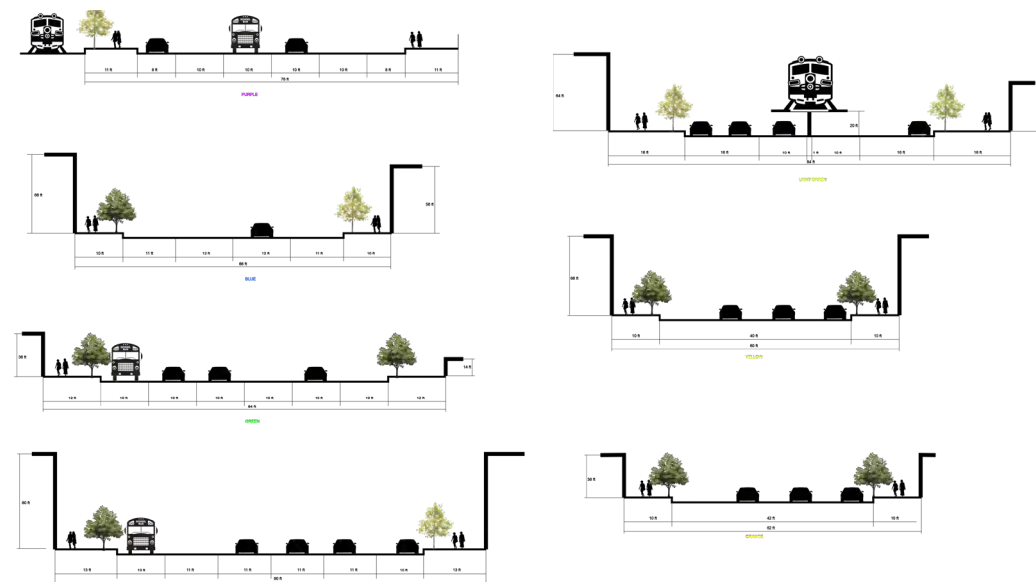
Street Classification by Width



Legend

- 75 feet - 90 feet
- 65 feet - 80 feet
- 55 feet - 70 feet
- 45 feet with transit

Street Sections



Annual Weekday Traffic Volume



Produced by the Seattle Department of Transportation

MOBILITY



## Access to Amenities

In Belltown, there are a lot of essential amenities for the concept of 15-minute city, especially parks, grocery stores, and health care. However, all these amenities are not visible enough for pedestrians and many parks are not well-maintained and accessible for pedestrians or visitors.



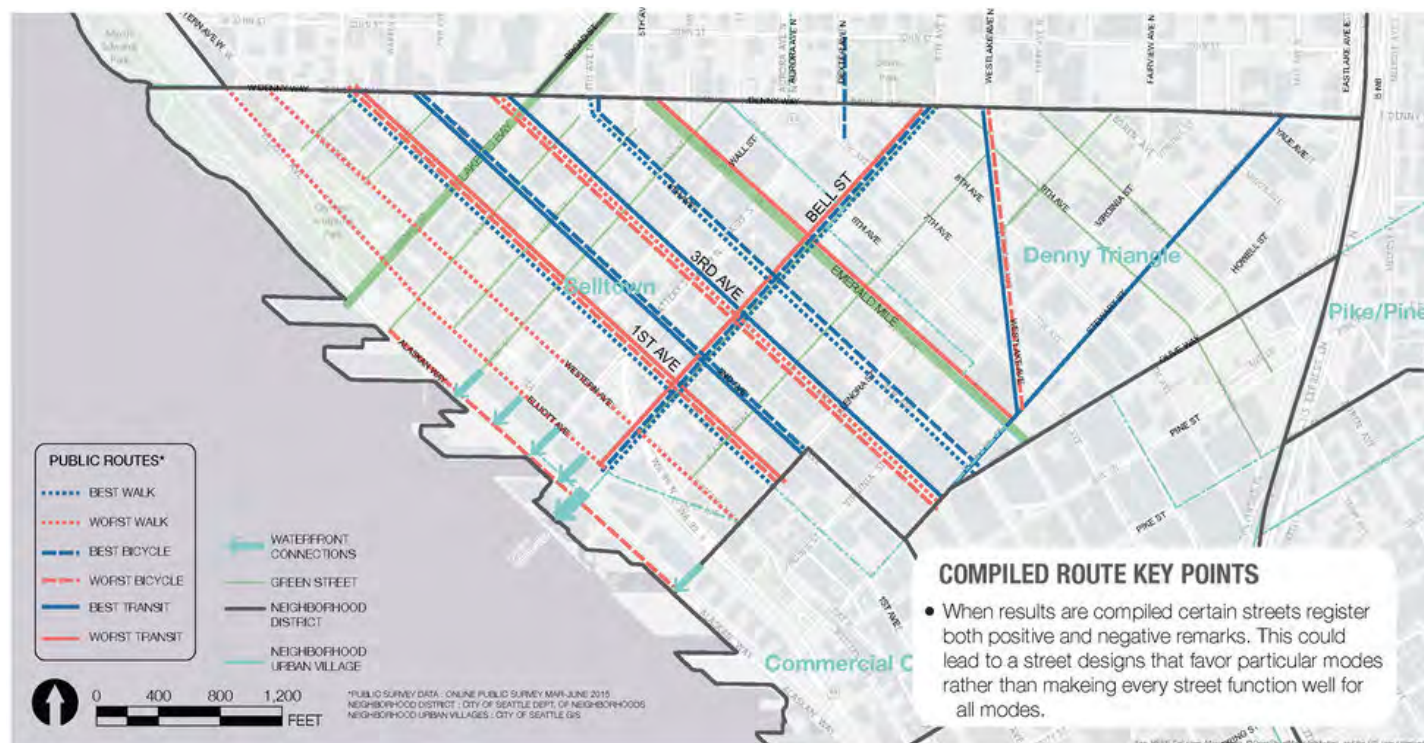
Public Places Map (Source: Framework, "Belltown & Denny Triangle Connected Public Realm Plan")  
Belltown Amenities Map

## Gaps & Opportunities

According to research conducted by Framework about priorities for the future of the Belltown public realm, the top three priorities of the community are safety, multi-modal transportation, and neighborhood access to goods and services. Therefore, primary tasks of mobility designers and planners may be to increase the safety in Belltown by eliminating blind spots, improving the lighting system, and improving the numerous unsafe intersections by adding crosswalks and outlawing right-on-red turns. Building a multi-modal transportation system is also necessary to improve the neighborhood accessibility of amenities, connect more amenities and make current assets more visible to pedestrians.



Public Survey Source: Belltown & Denny Triangle Connected Public Realm Plan



Public Survey, Compiled Route Key Points (Source: Belltown & Denny Triangle Connected Public Realm Plan)

## Transit

There is ample transit resources in Belltown and throughout Seattle, including the Link light rail, RapidRide buses, Frequent and basic buses, the Monorail, and streetcars. However, most transit resources are located at the north part of Belltown, and there are few resources near the waterfront, so transit should be updated to be more comprehensive and inclusive of all areas of the neighborhood.



## Seattle's Transit Network

**Frequent All Day Service**  
Every 15 minutes or better, until 7 pm, Monday to Friday. Every 30 minutes or better until midnight every day. Most routes/lines are frequent late nights and weekends.

- Link light rail rapid transit
- RapidRide limited stop bus for a faster ride
- Frequent bus route
- Basic routes combining for Frequent Service

**Basic Service**  
Every 20-60 minutes most of the day, with more frequent service on some routes during peak hours

- main route
- certain trips or peak only
- Infrequent section of Frequent Service route

**Special Service**  
Hours and frequency vary by service. May only operate infrequently at certain times and not every day.

- Peak-only Bus weekday commute hours only
- Flexible service area reservations required for pick-up/drop-off anywhere in zone
- Washington State Ferry, King County Water Taxi, Kitsap Fast Ferry
- Seattle Streetcar
- Seattle Center Monorail

- Exceptions
- Express service making limited or no stops
- designated stop
- Suspended service
- Buses run
- not every day
- a lowlighted badge indicates a part-time service
- Destinations
- Point of Interest
- College/University
- High School
- Hospital/Clinic
- Library
- Park/Green Space

- Connections
- Transit Center/ Major Transfer Point
- exit, no elevator
- exit, accessible
- Amtrak/Sounder train
- Secure Bicycle Parking
- Park & Ride (50+ cars)

- Transit Center/ Major Transfer Point
- exit, no elevator
- exit, accessible
- Amtrak/Sounder train
- Secure Bicycle Parking
- Park & Ride (50+ cars)

SCALE IS APPROXIMATE.

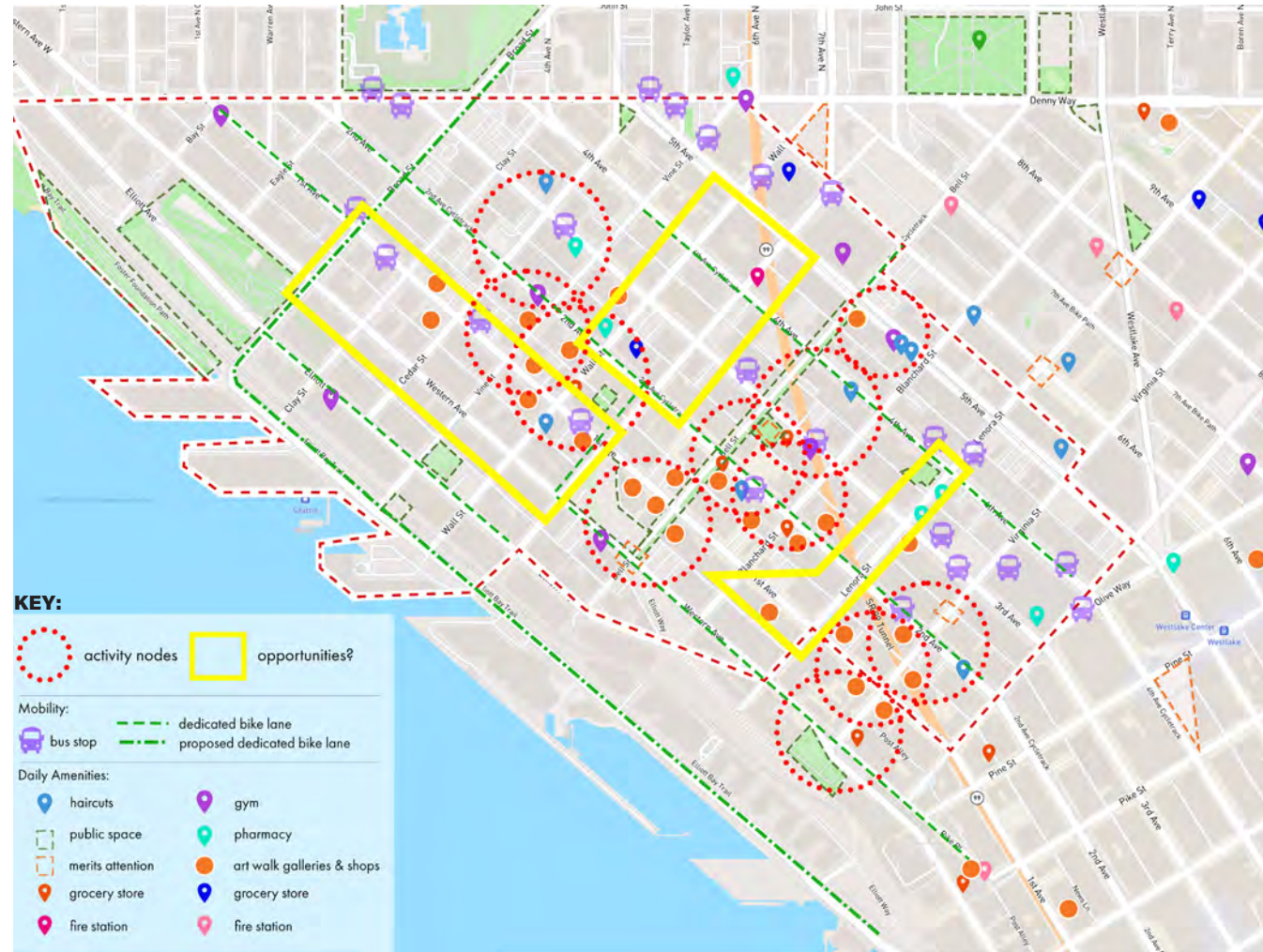
Seattle Transit Map Source: seattletransitmap.com

MOBILITY

# MOBILITY FRAMEWORK FOR BELLTOWN

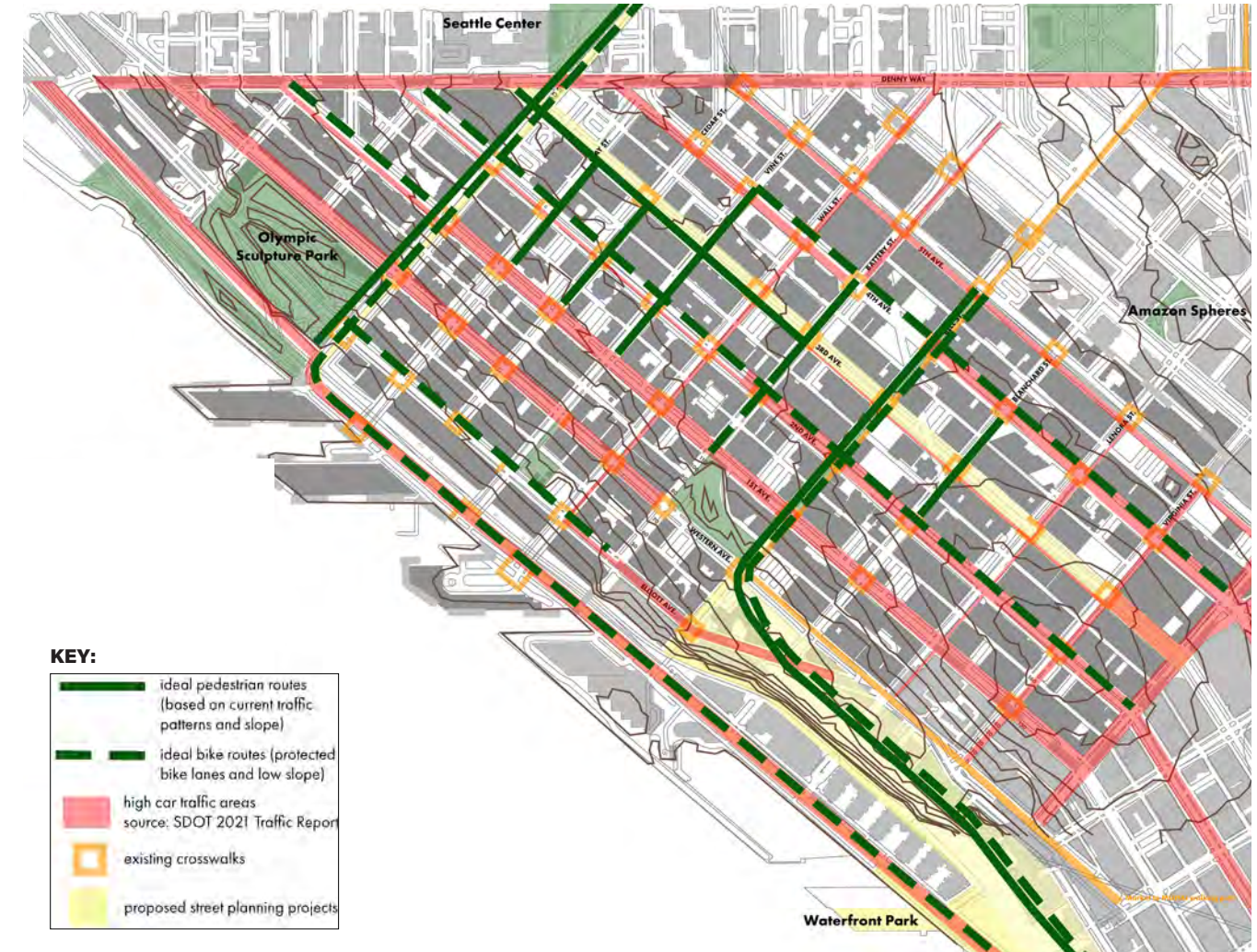
Goals for mobility in the Belltown neighborhood revolve around safe and easy access - via walking, biking, or public transit - to daily amenities including grocery stores, pharmacies, gyms, convenience stores, banks, and more.

## CURRENT NODES & FUTURE OPPORTUNITIES



Based on these ideals which align with the concept of the 15-minute city, we overlaid amenities and mobility (including bus stops and protected bike lanes) to understand which pockets of the neighborhood are nodes of activity and movement. Nodes were identified as groups of 1-2 blocks that contain at least 3 different amenities as well as some sort of non-car transit. Areas of "opportunity" (yellow boxes above) were identified as areas nearby to activity nodes but are predominantly vacant of amenities. There are opportunities for activation and growth in these areas!

## CURRENT PEDESTRIAN & CYCLING ROUTES



Mobility and accessibility in the 15-minute city is not just related to proximity of amenities - it also relies on safe, protected pedestrian and bike routes. Based on current traffic and slope conditions in Belltown, as well as the locations of existing and proposed protected bike lanes, ideal pedestrian and cycling routes were identified above. Ideal pedestrian routes were determined to be on streets that are not major arterials with high daily traffic. Ideal bike routes were determined to be on streets with protected bike lanes (with dedicated cycling lanes in both directions, with a protected barrier between bike lanes and vehicle lanes). These ideal pedestrian and cycling routes are only placed on roads no steeper than 10ft of vertical gain every 240ft (one block). Included is the in-progress Waterfront Park which will include elevated and ADA-friendly pedestrian walkways and dedicated bike lanes.

It should be noted, however, that this information does not include social/environmental factors including sidewalk widths, amenities or trees located within right-of-ways, adjacent facades, noise, and more.

## PROPOSED FRAMEWORK: COMPLETE STREETS



Based on analyses of amenities and locations and safety/comfort of pedestrian and cycling routes, we identified Western Avenue as a key arterial that could benefit from a Complete Streets model. Other potential opportunities for Complete Streets implementation or activation some other way include Vine Street (between 1st and 3rd Ave), Wall Street (between 1st and 5th Ave), Battery Street (between 1st and 5th Ave), and Lenora Street (between 1st and 4th).

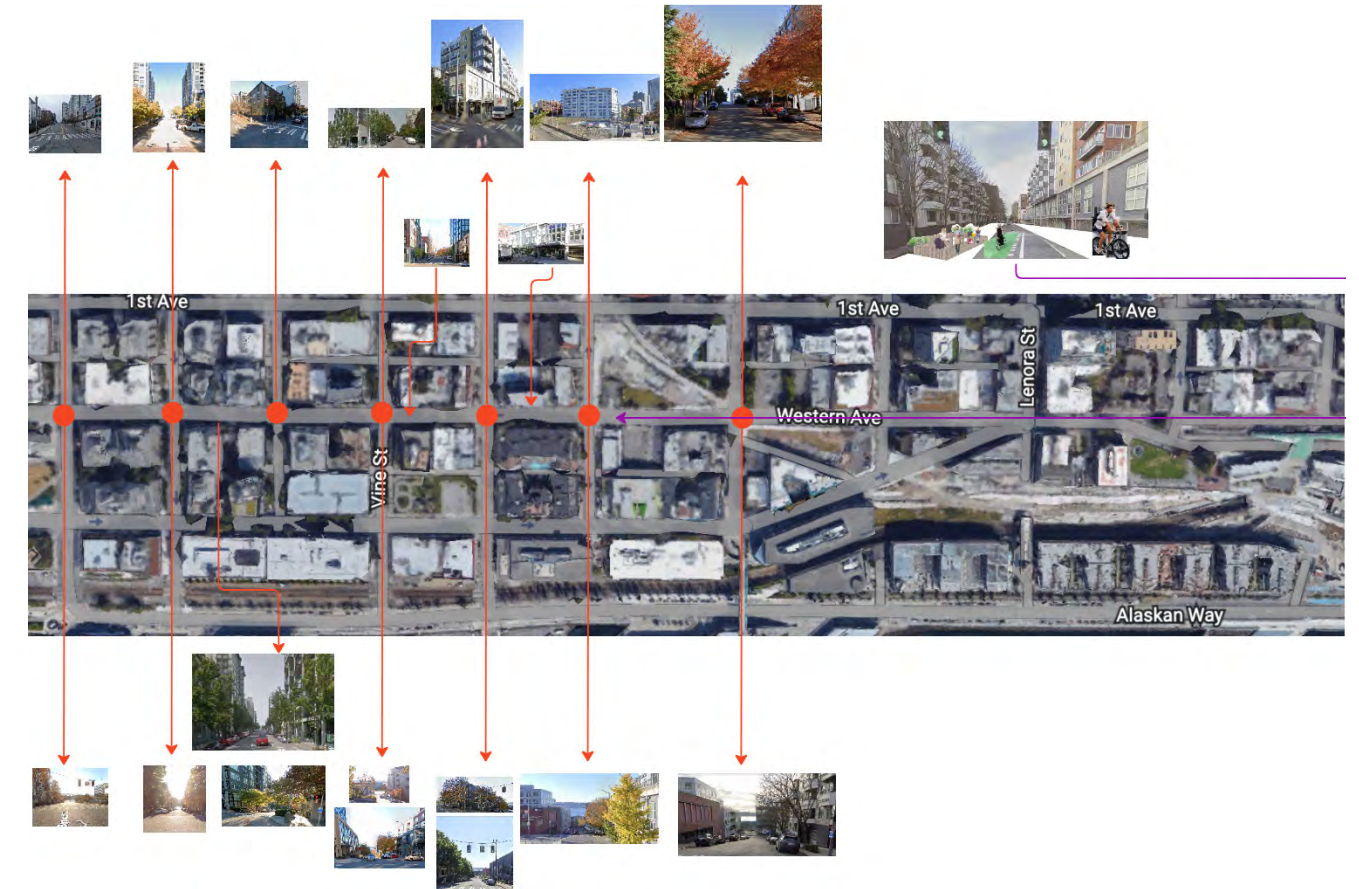
### Western Avenue is an ideal location for a Complete Street:

- Connects Olympic Sculpture Park to Pike Place Market (and the future Waterfront Park)
- Wide roads (66ft) to allow for addition of bike lanes and medians
- Existing partial bike lane
- Flat road, good for accessibility
- Mix of apartments and businesses adjacent
- Connection to visitor hotspots creating street activation by tourists
- Key connections and attractive walkable space with a water view for Belltown residents
- Addresses Belltown residents' key concerns for safety

### Needs on Western Avenue:

- Currently an undesirable walking route according to a Belltown survey
- Lack of public transit stops - need for public transit and/or safe and enjoyable pedestrian and cycling routes
- More crosswalks and safe/desirable pedestrian space

## VIEWS FROM WESTERN AVENUE:

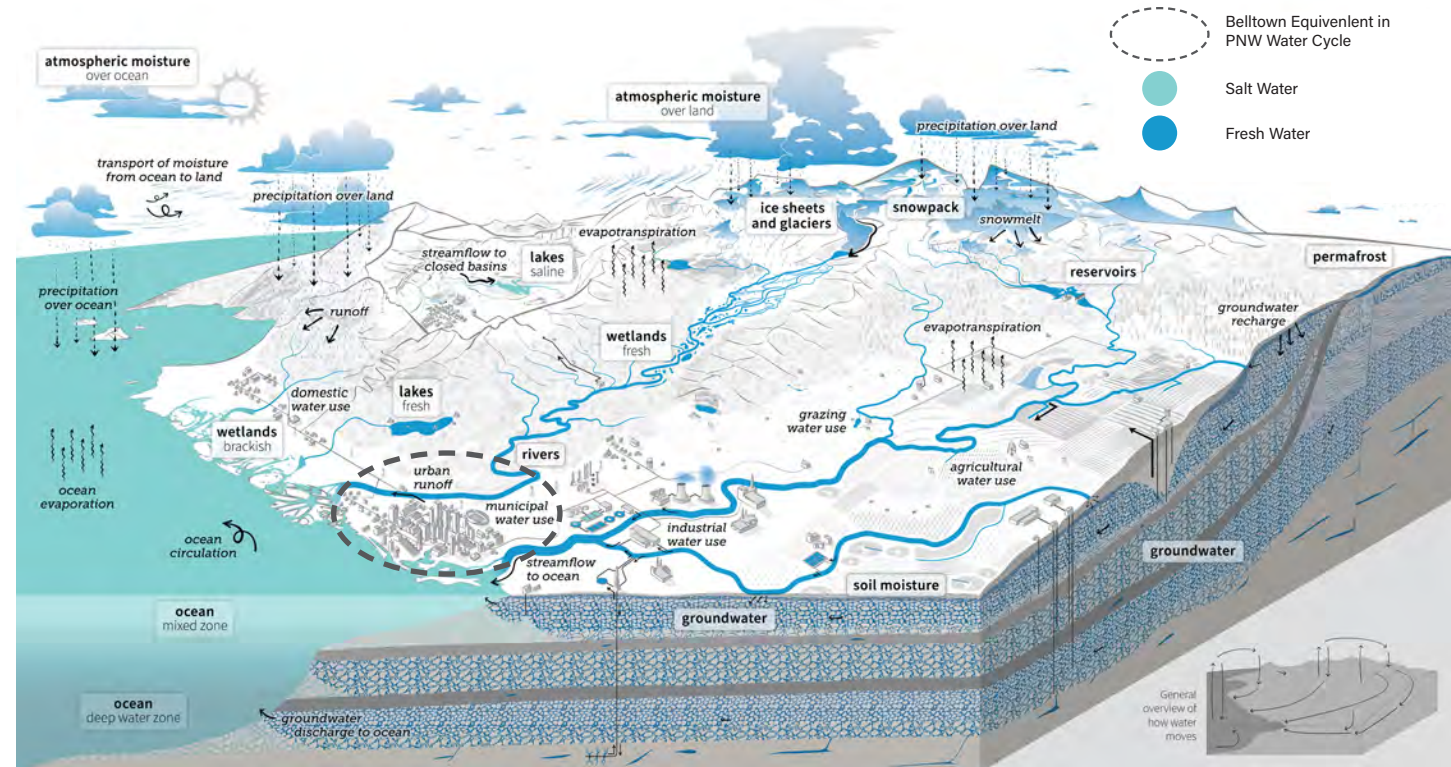


## VIEWS FROM VINE STREET:

Views along the Complete Street will impact pedestrian and cycling experience.



## PACIFIC NORTHWEST WATER CYCLE - VISUAL EXAMPLE



Water cycle graphic from USDA

## BELLTOWN GREEN STORMWATER INFRASTRUCTURE



## BELLTOWN STORMWATER SYSTEM DIAGRAM & MAP

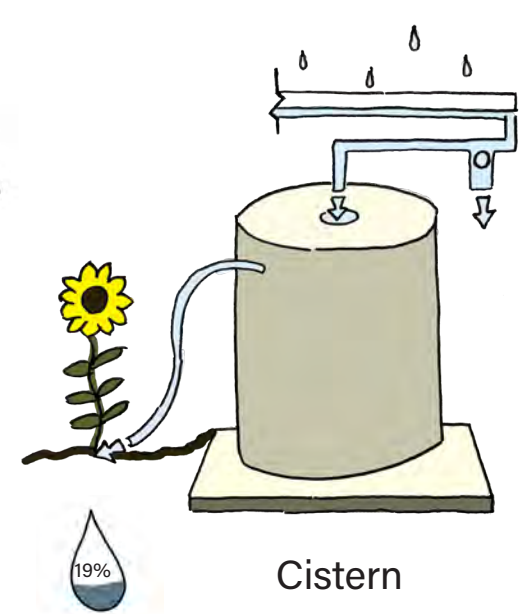
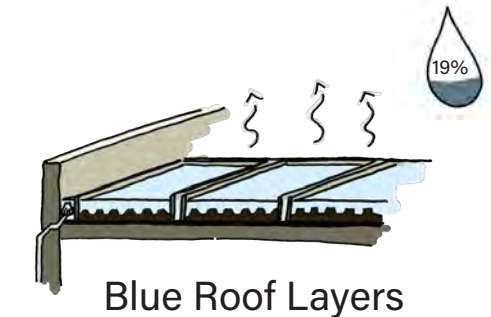
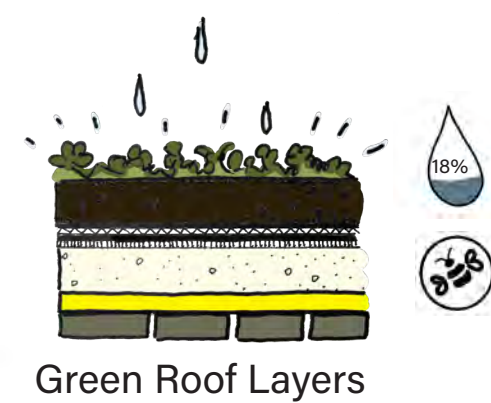
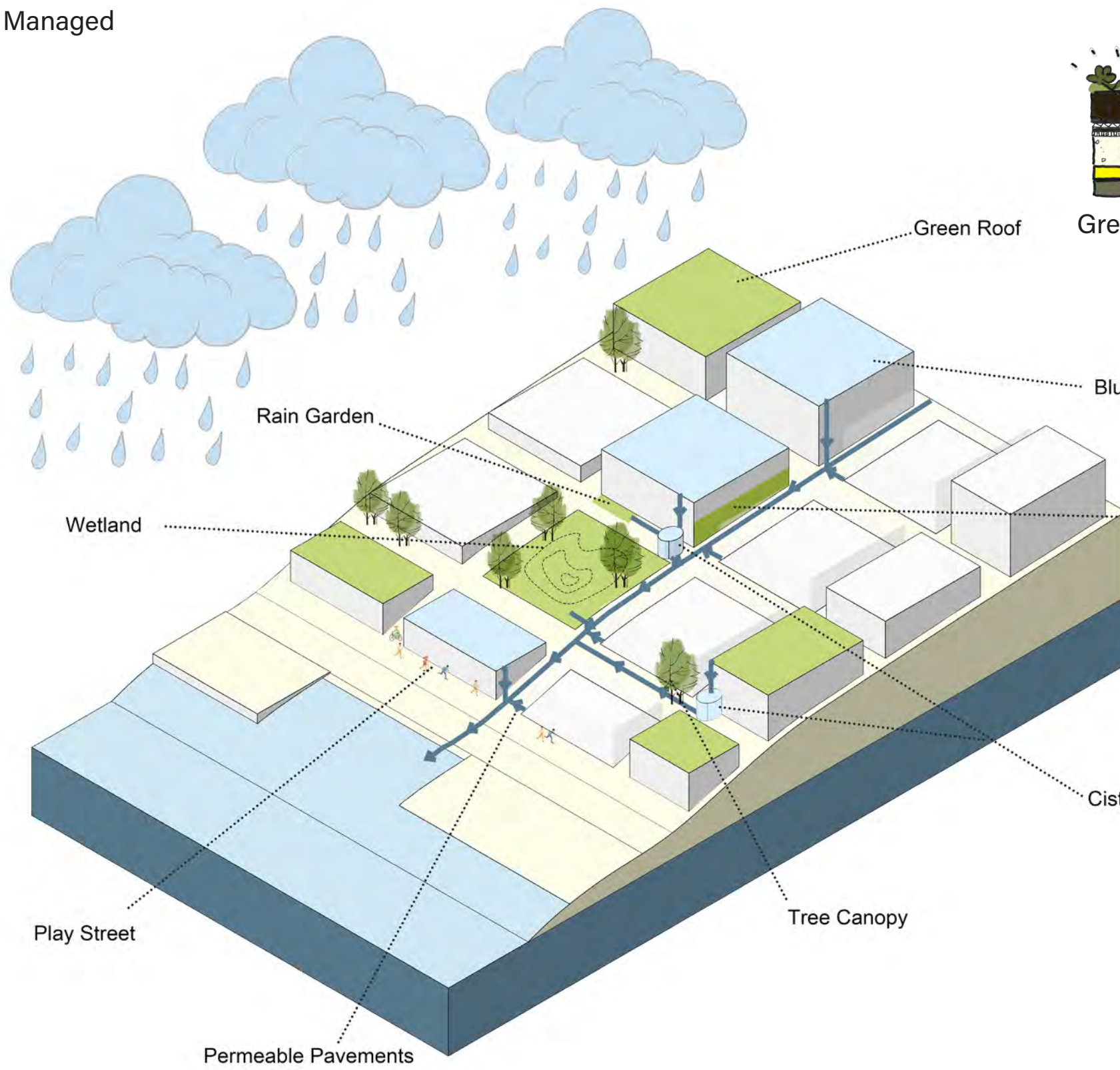
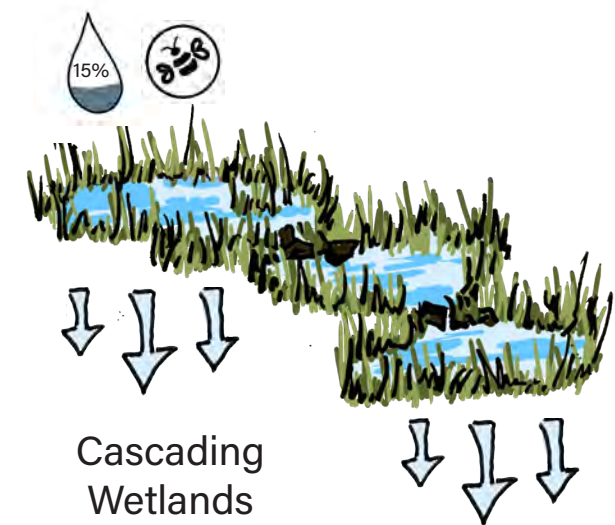
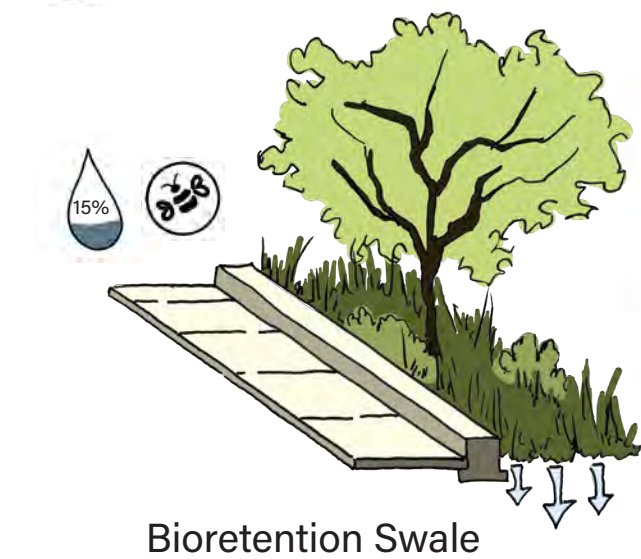


(Left) Diagram created from King County Wastewater Treatment Facilities & Elliot West Wet Water Treatment (Above & Right) Maps created from GIS data from King County and City of Seattle

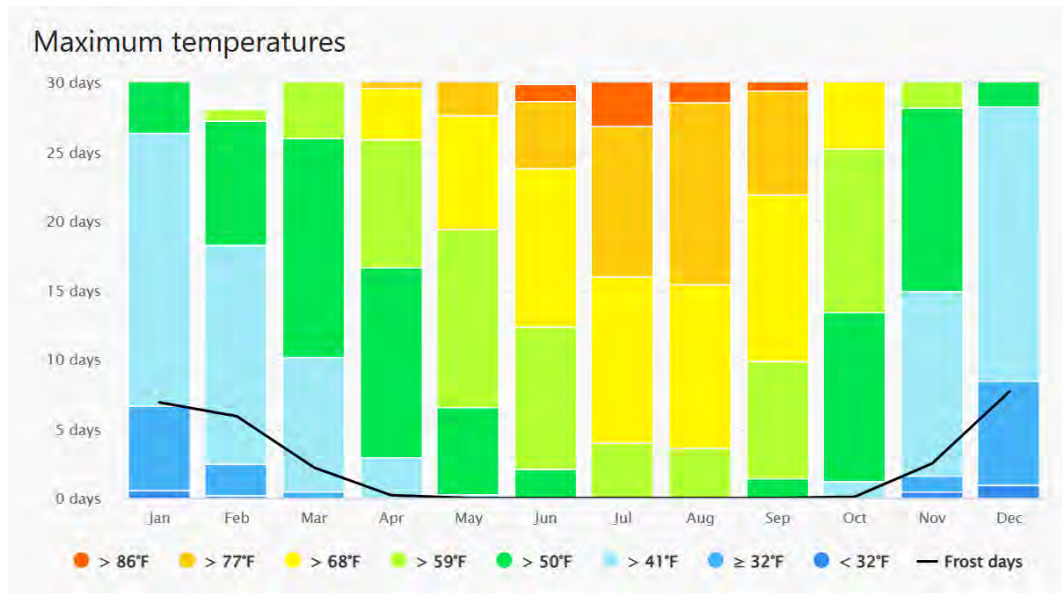
## POTENTIAL PROJECT SITES



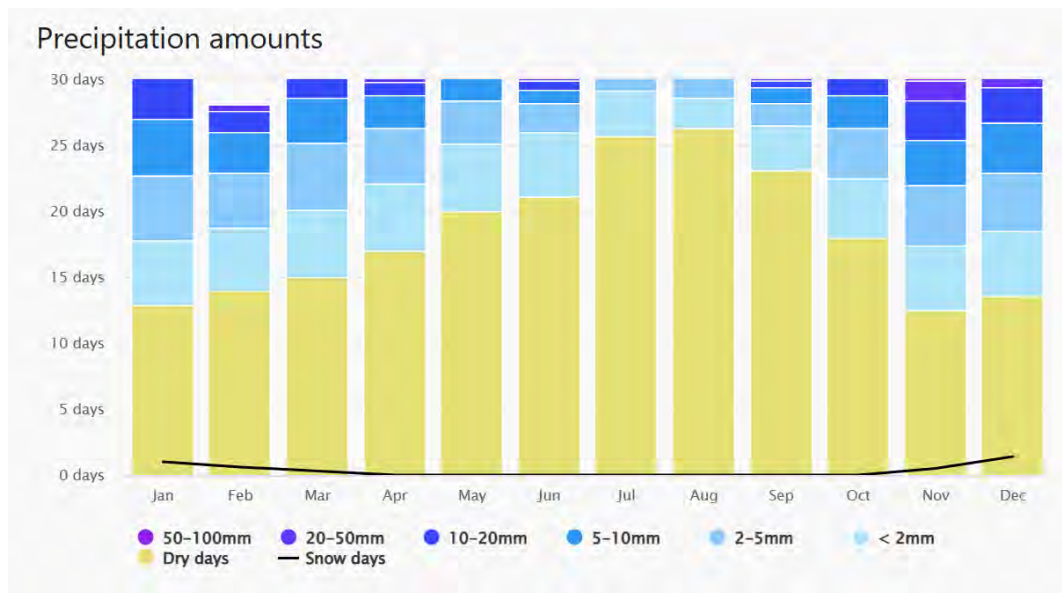
Percentage of Stormwater Managed  
 Habitat Area



Information from Seattle Public Utilities GSI Implementation Plan

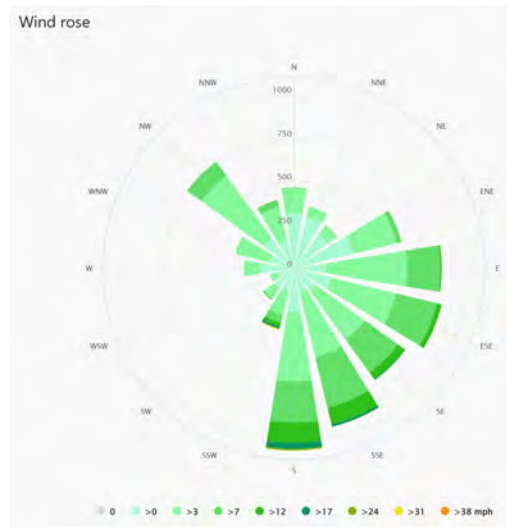


The Maximum Temperatures diagram shows how many days reach a certain temperature in Seattle. The hottest month is July with about 4 days reaching over 86 degrees. The coldest month is December with 8 frost days.



The Precipitation Amounts diagram indicates how much it rains and snows in Seattle throughout the year. There is not a high amount of snow days, with Jan and Dec having less than 5 snow days each. However, there is a high amount of precipitation throughout the year. Only Jun, Jul, Aug, and Sep have more than 20 dry days.

The Wind Rose shows how many hours per year the wind blows from the indicated direction. For instance the S wind is blowing wind from the South to the North. A common high wind speed from the south is 17 mph, however most of the time the wind speed is below 7 mph.



3/21 12 PM



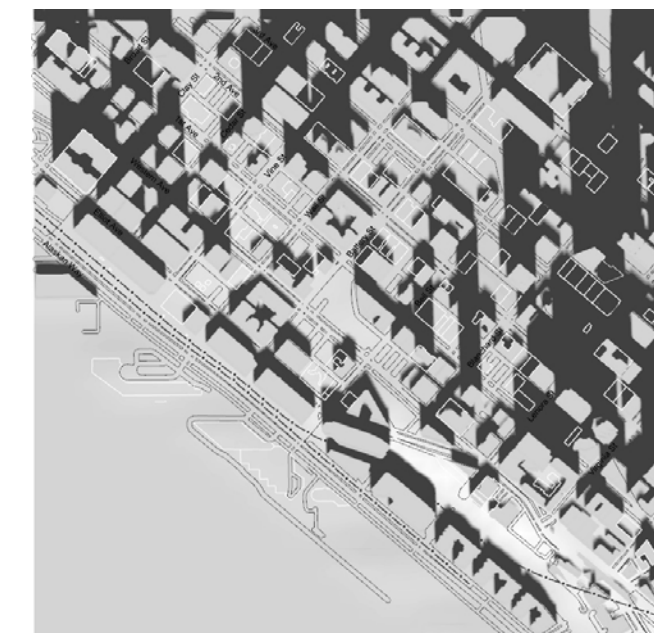
6/21 12 PM



9/21 12 PM



12/21 12 PM



The maps above show the shadows created by the buildings in the Belltown neighborhood. It is important to consider that more shadows will be created as new buildings are put up, especially in vacant areas and near the location of the old viaduct. Shadows have a strong impact in the winter months as there are few hours of sunlight and the sun angle is low. The fall and spring shadows are mostly very similar as the sun angle is about the same. However, during the spring there will be less cloudy days and days of precipitation than in the fall, so there will be more access to sunlight. The summer offers the most sunlight coverage and the least amount of precipitation days.

## EXPERIENTIAL EMOTIONS:



Views

## EMOTIONAL EXPERIENCE ON SITE:

### 1. Olympic Sculpture Park

Close to water  
Sense of peace



### 2. 1st Ave/Denny Way Intersection

Noisy massive street



### 3. Steep slope between mural and portal porch

Fun to explore



### 4. Mural

Reflection, artistic  
Celebrate the past, present and future of Belltown



### 5. Battery Portal Porch

Green area  
Relaxed outdoor space



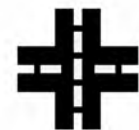
### 6. Bars and restaurants

Happy, relaxed, casual  
Need to increase public social spaces



### 7. Some intersections

Walk quickly  
Safety problem



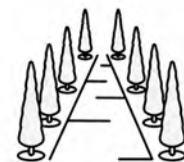
### 8. Cedar

Eye-catching  
Memories of how Battery used to be



### 9. Alleys

Sense of connection

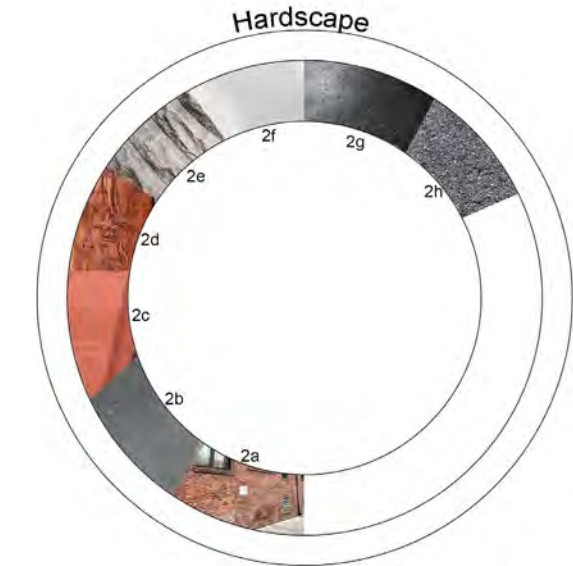
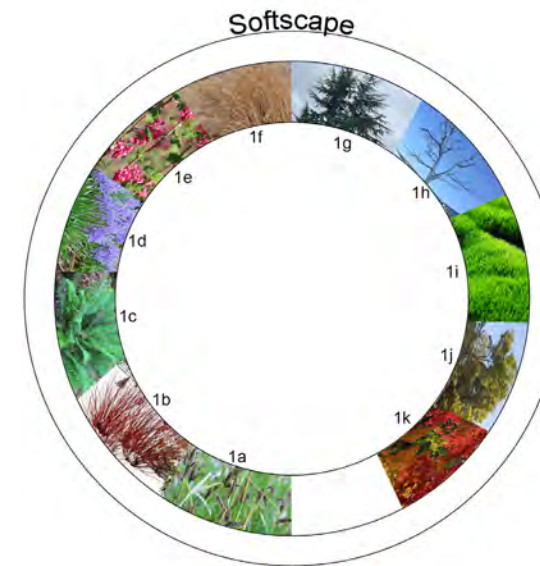


### 10. Market to MOHAI

Visual identity  
Feel more grounded in understanding of history



## MATERIALS / TEXTURE:



### 01 Softscape

1a	Carex obnupta, Slough Sedge	1g	Cedar
1b	Cornus sericea	1h	Metal Tree
1c	Sword Fern	1i	Moss
1d	Camassia quamash	1j	Gleditsia
1e	Ribes sanguinum	1k	Maple
1f	Miscanthus		

### 02 Hardscape

2a	Brick	2f	Glass
2b	Concrete	2g	Cast iron
2c	Terra Cotta	2h	Asphalt
2d	Wood		
2e	Rusticated stone		

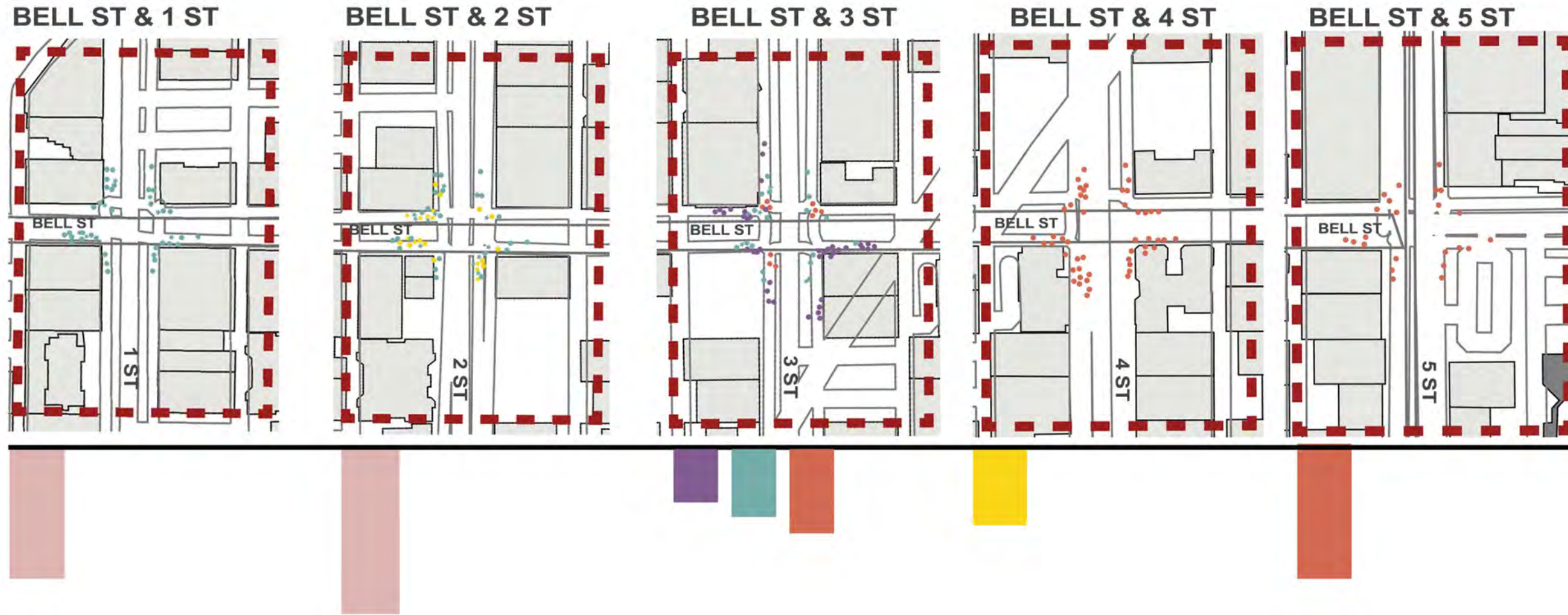
## SOUND ANALYSIS:



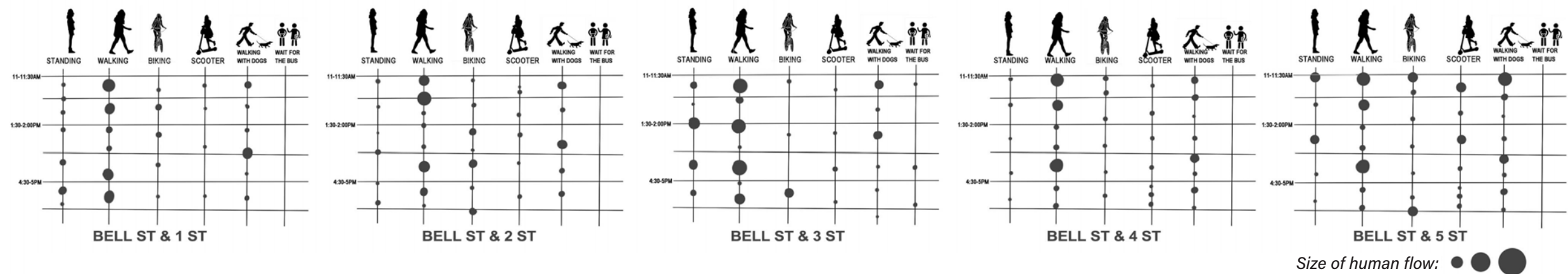
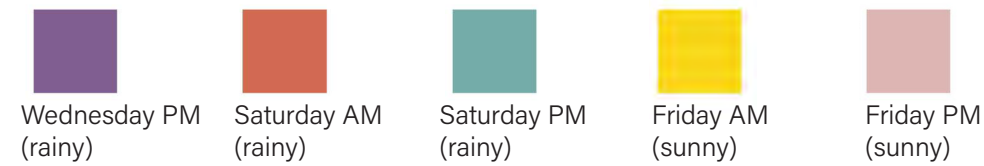
50 dB 55dB 60dB 65dB 70dB

The noise level is much lower near the water. However, this may be due to low traffic due to current construction zones. Traffic noise may be reinstilled after streets fully open again.

Summary of Walking Observed:



Days, Times, & Weather:



# GOLDEN CORNERS

Looking at strategies for neighborhood and street activation, the most desirable locations with the highest retail value are defined as “Golden Corner” in an old Chinese trading proverb. The Golden corner is “a street intersection where the traffic is the highest and the visibility the best from all four directions” (Wen & al., 2022 page 3). Students have investigated the potentials of several Golden Corners thought-out the Belltown neighborhood, conducting surveys with Jan Gehl’s method to observe and analyze public life, uses and flows across these public spaces. Observation points were defined, from which the number of people moving through the space were recorded every 10min during 30min observation slots: activity types and movements were translated into the adjacent graphics and diagrams, allowing for comparisons between weekdays and weekends, day times and weather patterns. From their findings, students began to draw conclusions about usages through time, space and weather patterns, which then informed their design proposals.

REFERENCE:  
 Wen, L.; Marinova, D.; Kenworthy, J.; Guo, X. Street Recovery in the Age of COVID-19: Simultaneous Design for Mobility, Customer Traffic and Physical Distancing. Sustainability 2022, 14, 3653.



# NARRATIVE STROLLS

Adopting a slow pace walk to generate place-based conversations with Belltown residents: welcome to the narrative strolls!

Almost like painters, students have been collecting moments, stories and knowledge attached to specific places in Belltown by residents who volunteered for a narrative stroll. Then their experience was depicted with words, images and maps and provided useful information that sustained the design process.

- Jessica, Katherine, & Shantol Route
- Ruthie & Tianyi Route
- Helen & Bing Route
- Joe & Yuqing Route
- Sinong & Roxie Route
- Hunter & Eve Route
- Alex & Pedro Route

- Landmark
- Public Space
- Art
- Eatery
- Accessibility
- Entertainment
- Playground
- View
- Building
- Concern
- Shopping
- Restroom
- Bar
- Stairs

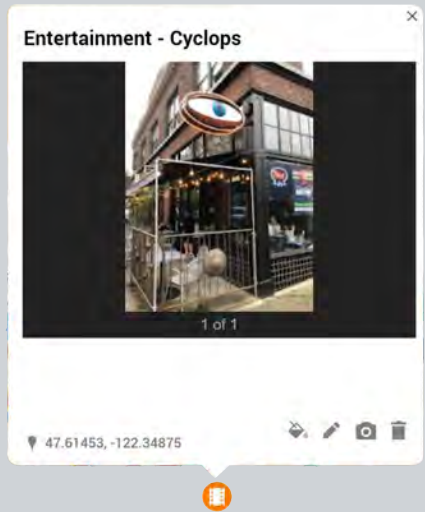
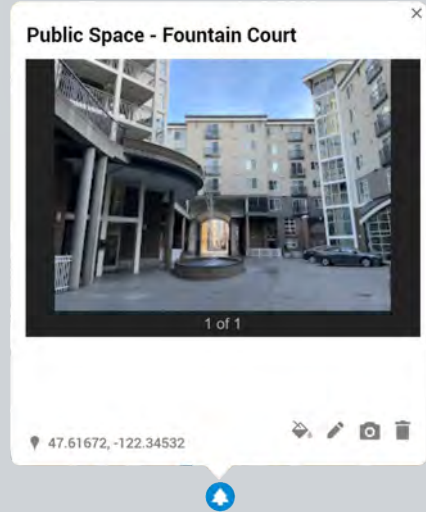
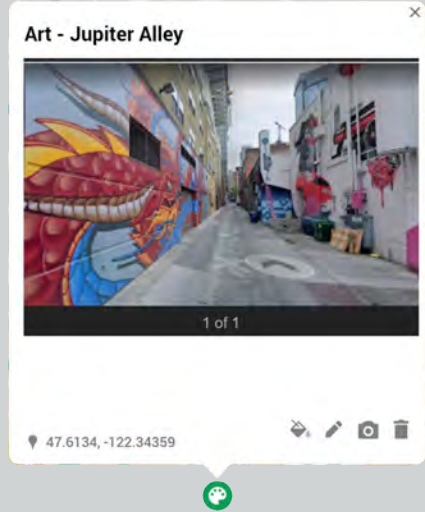
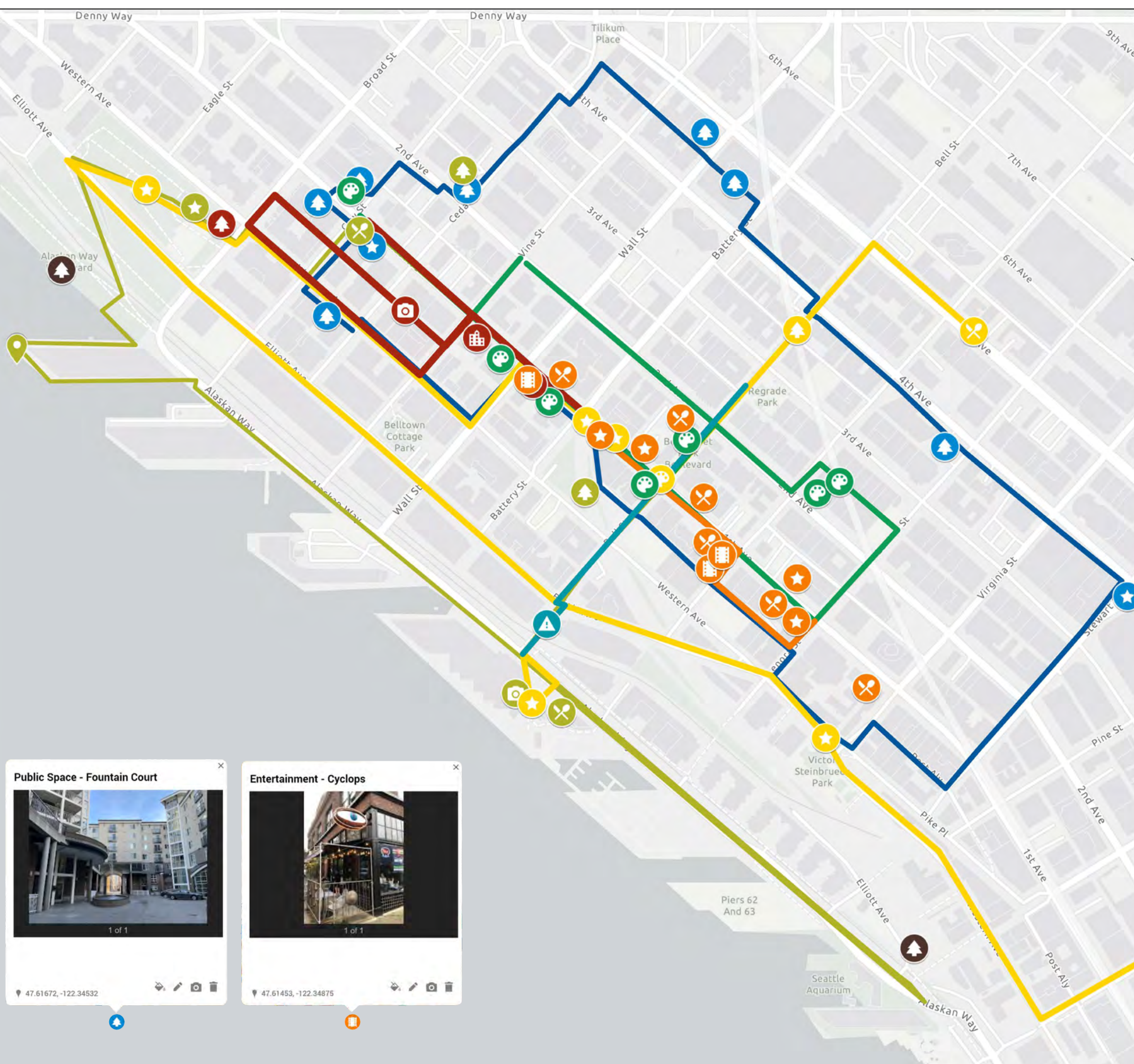


Image: Class Compilation by Hunter Ottman

**Narrative Stroll 01.30.2023**  
 Jessika Gill, Katherine Magee, & Shantol Morgan

**KEY**

-  NARRATIVE STROLL ROUTE
-  STOPS ON THE STROLL
-  SIGNIFICANT HISTORY
-  FAVORITE SPOTS
-  WHERE TO TAKE A WALK
-  PRIMARY WALKING ROUTES, according to this Belltown resident



**Map Callouts:**

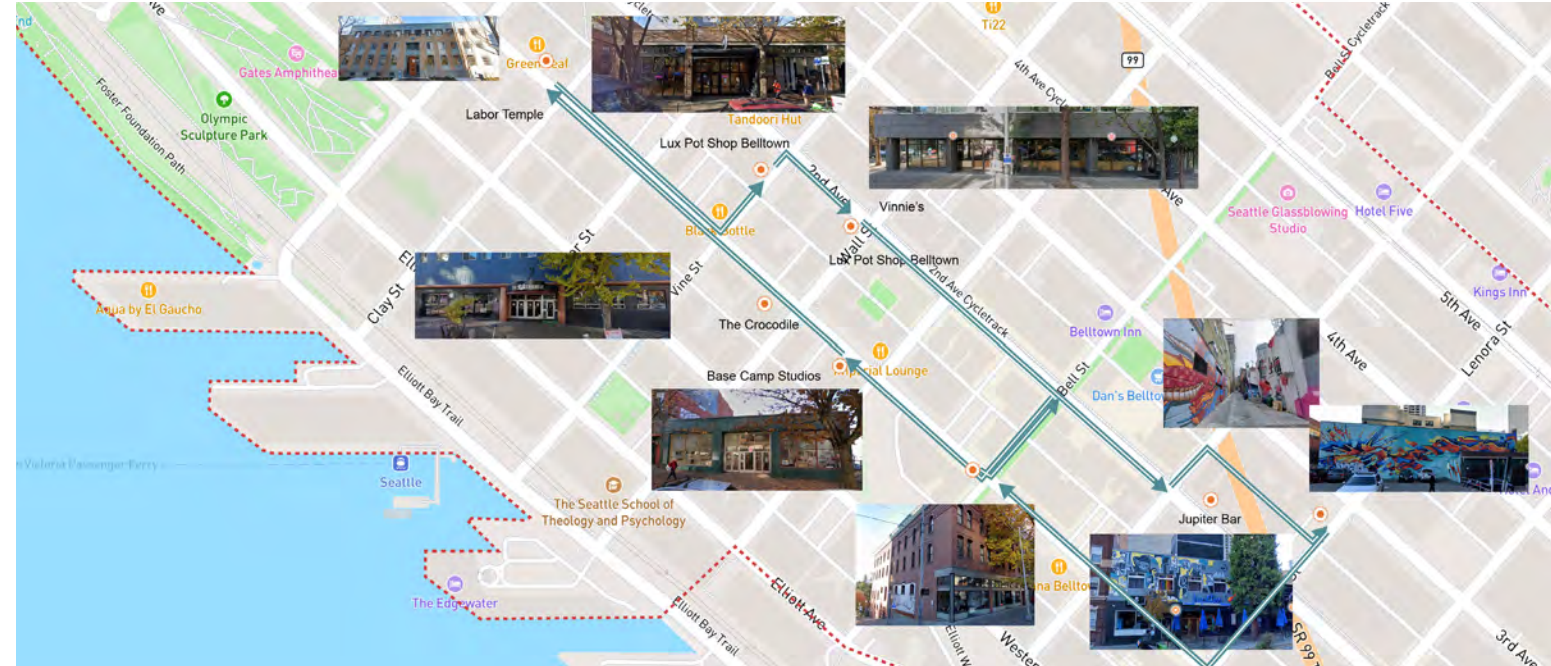
- BEST GREEN SPACE**
- "From 1986-97, 1st Street was packed with people, parties, and boutique shops."**
- Belltown Pizza IS THE BEST PIZZA.** where you can watch the game
- GREAT PIZZA** without sports, but great atmosphere (Rosa's)
- Cyclops** The essence of belltown is captured between "La & Wall" by Cyclops to 1st and Belltown.
- "SIT AND CHILL IN THE PATCH IN THE SUMMER"**
- Wasabi's is "2ND BEST SUSHI"**
- Home of the former hot club The Twist.** Now, THERE ARE SOME COOL CONDOS, AND THERE WAS A MURDER BACK IN THE 90s.
- Umi's is "#1 SUSHI"**
- Ohana's is the best nightlife. THE PLACE TO BE AFTER 9PM"**
- Queen City was a "meeting place for a lot of things... business, relationships, drugs"**
- "Belltown Billiards WAS THE SPOT"**
- the historic Army Surplus Store**
- a historic building, a former hotel**
- THE PURPLE COFFEE SHOP... I LOVE THE ROCKING CHAIRS**
- PIER 66**
- "THERE'S NOTHING DOWN THERE"**
- Mike's Convenience "I LOVE THAT GUY"** Mike's Here to Market Grocery and Deli

**Photo Callouts:**

- Looking down Lenora toward the Waterfront. The High Line (photo by Brian Frown)**
- before the Waterfront project began, a group in Belltown advocated for an elevated park to centralize the city, like the High Line in NYC.**

NARRATIVE STROLLS

**Ruthie Hoglen & Tianyi Liu**



**Map Callouts:**

- Gates Amphitheater
- Olympic Sculpture Park
- Labor Temple
- Green Kaf
- Lux Pot Shop Belltown
- Landoort Hut
- Vinnie's
- Seattle Glassblowing Studio
- Hotel Five
- Angia by El Gaucho
- The Crocodile
- Base Camp Studios
- Seattle
- The Seattle School of Theology and Psychology
- Jupiter Bar

**Narrative Stroll 01.30.2023**  
 Bing Wan & Helen Arnold

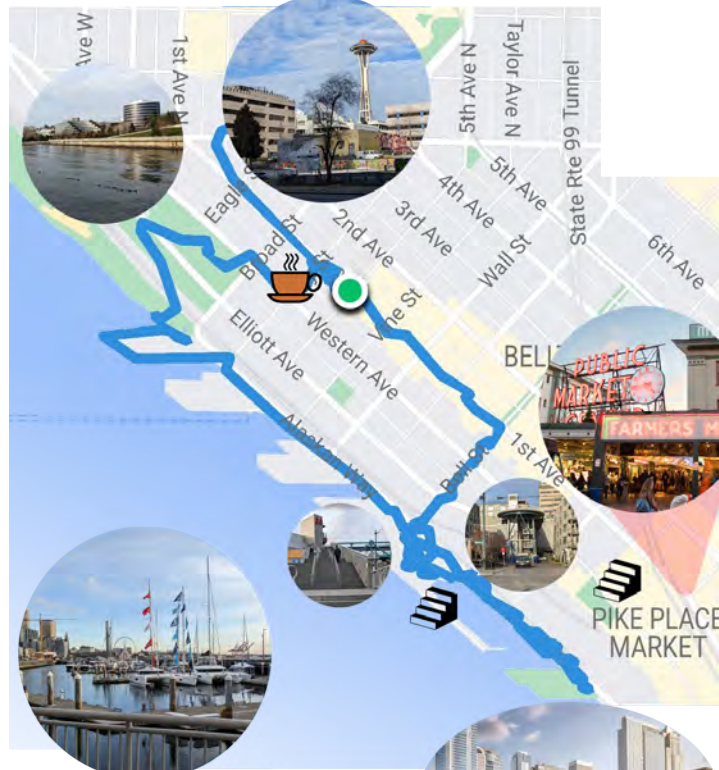
- Some apartments are airbnbs/condos: lots of non-resident owners
- knowing each other in the neighborhood is unique
- paying for services like water can cause friction w/in housing/mixed use buildings
- doesn't get the same joy of walking through the alley that he used to
- fave walk spot is Olympic sculpture park
- people who get involved are people with time and money
- representatives of diversity are people who don't have the capacity to get involved
- seattle bad at managing public spaces
- likes to use lime bikes and scooters
- not a lot of people have lived in belltown for a long time. Lots of empty nesters
- belltown is expensive and small-not very kid friendly
- first Friday wine share!
- Seattle has giant parks but lacks green spaces in the city



**Map Callouts:**

- low income housing

Alex Holbrook & Pedro Ramos



- Takeaways:**
- \_ There are no food truck areas
  - \_ Alleys as bike lanes
  - \_ Cafes are used by people who bring lunch
  - \_ Portal Park has the greatest potential in Belltown
  - \_ Parks Waterfront connections are important in daily walks
  - \_ The waterfront development will help bring people in as Belltown's "getaway"
  - \_ Is there a central idea that is Belltown? If not, can we help them find their voice?

Tilikum Place Plaza. Poorly maintained, but people use it a lot. Think about why it's not the case for private plazas we visited

This is the old Labor Temple. It's currently a shared office space. Super cool private courtyard. The light was from the vent of the old building.

This private corporate courtyard... nicely done and maintained, never used

The thing I don't like about this area is the roof top situation. Look at all these apartments. Some of them have great rooftops, but most are just elevators. I would love to see more greens from my condo, but ADA makes it hard to approve new rooftops.

Alley between old buildings are always a problem... Trash everywhere, and not safe at night. Great shortcuts though.

This alley was purchased by this property owner and became a courtyard (parking lot)

This plaza is technically a private plaza, but it's open to the public before COVID. They closed it with this plant trellis recently to keep people out

This tree in the middle of the road is owned by SDOT. It's at a wrong location obviously, really stressed, but it looks great in Christmas season.

Bye y'all, I am heading back to office. It was great to meet with you. Looking forward to seeing your designs!

Yixuan Wang & Hunter Ottman (graphics by Yixuan Wang)

Narrative Stroll 01.31.2023  
Sinong Wu & Roxie He



Context: A mystery of Mount Rainier and Mount Olympus  
Mount Rainier marry with Olympic mountain and had child, Mount Rainier and the little mountain(their child) beside it bringing water to the land after the glaciers recede. The water joins the Duwamish River.

Steve mentioned "Issues coming from by design". Many problems such as rats are caused by bad design, the edges of the concrete are not sealed after the slab is covered, which leads to rat problems.

The white building was originally a landmark, but because they want to increase the commercial value, they want to flatten the building to make a highrise or a complex, resulting in high sky coverage.

Gateway of Belltown: Connect the low land&high land/ Ocean part & Land part, need to refine and create more places for visitors to sit or chat.

Tulips: If don't use native plants it is meaningless and may require more effort to maintain

Grocery store: is Steve's favorite place to go, close to where he lives, but later may also be bulldozed, local residents want multifunction streets & street activities, but the government believes that these activities are not legal, the government wants greater benefits

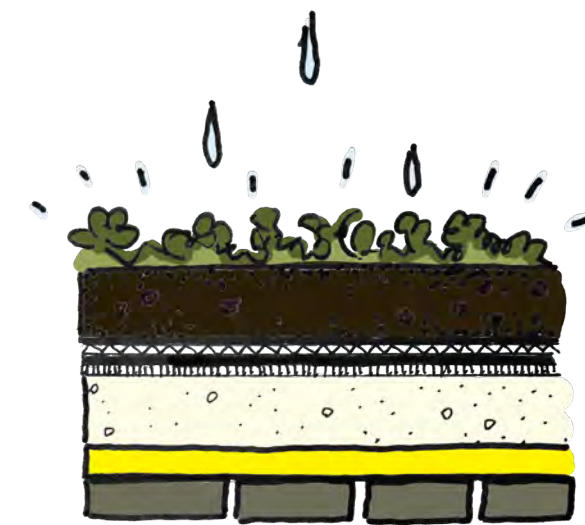
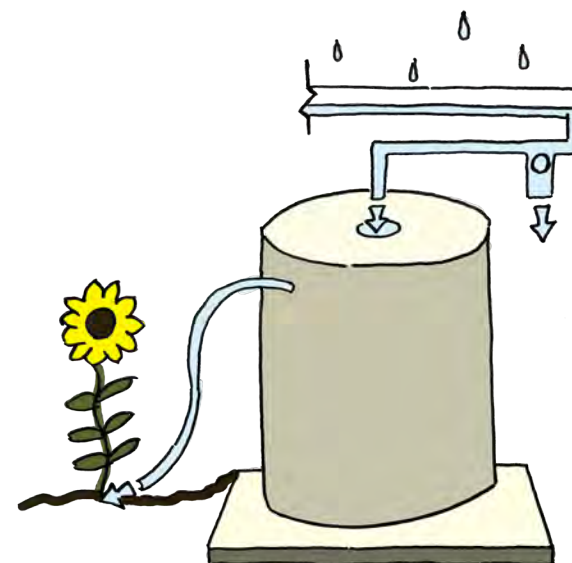
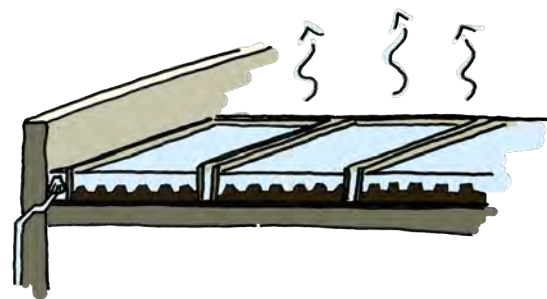
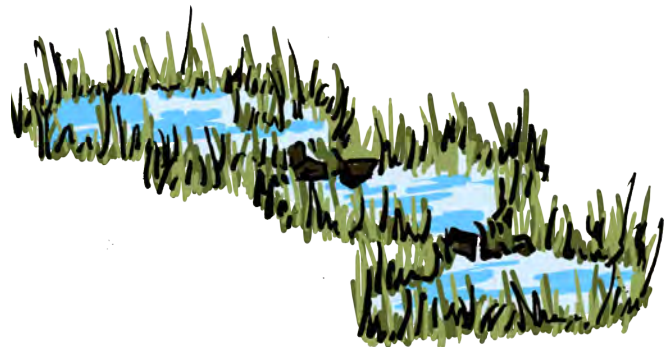
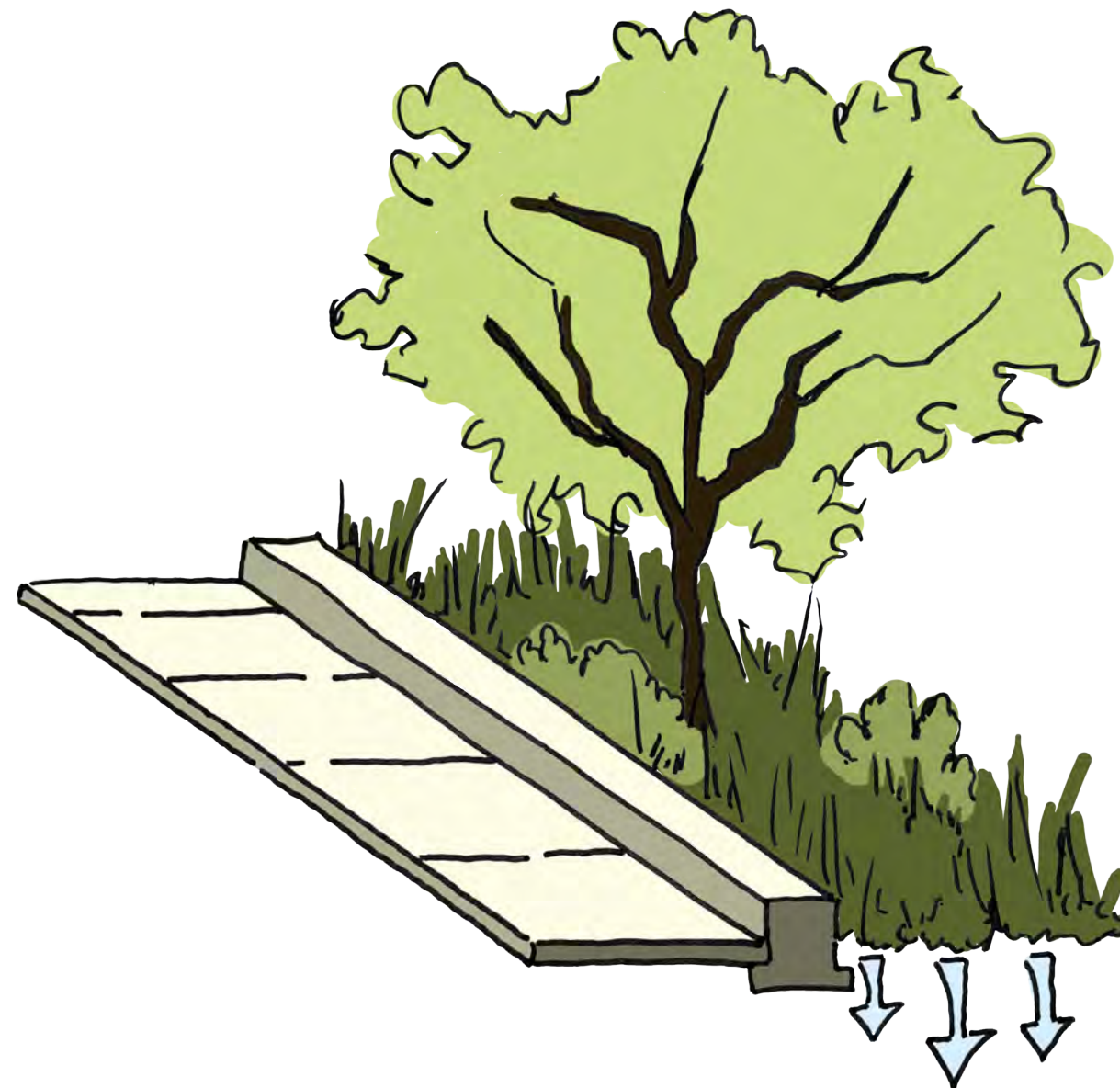
In terms of park, it is recommended to use native plants to increase the survival rate of plants.

Railway & Parking lot  
The oil that comes from Vancouver every day affects the functionality of belltown's roads, the railway and the parking lot split the urban grain of belltown, and these things built by the government for profit drive away many natives.

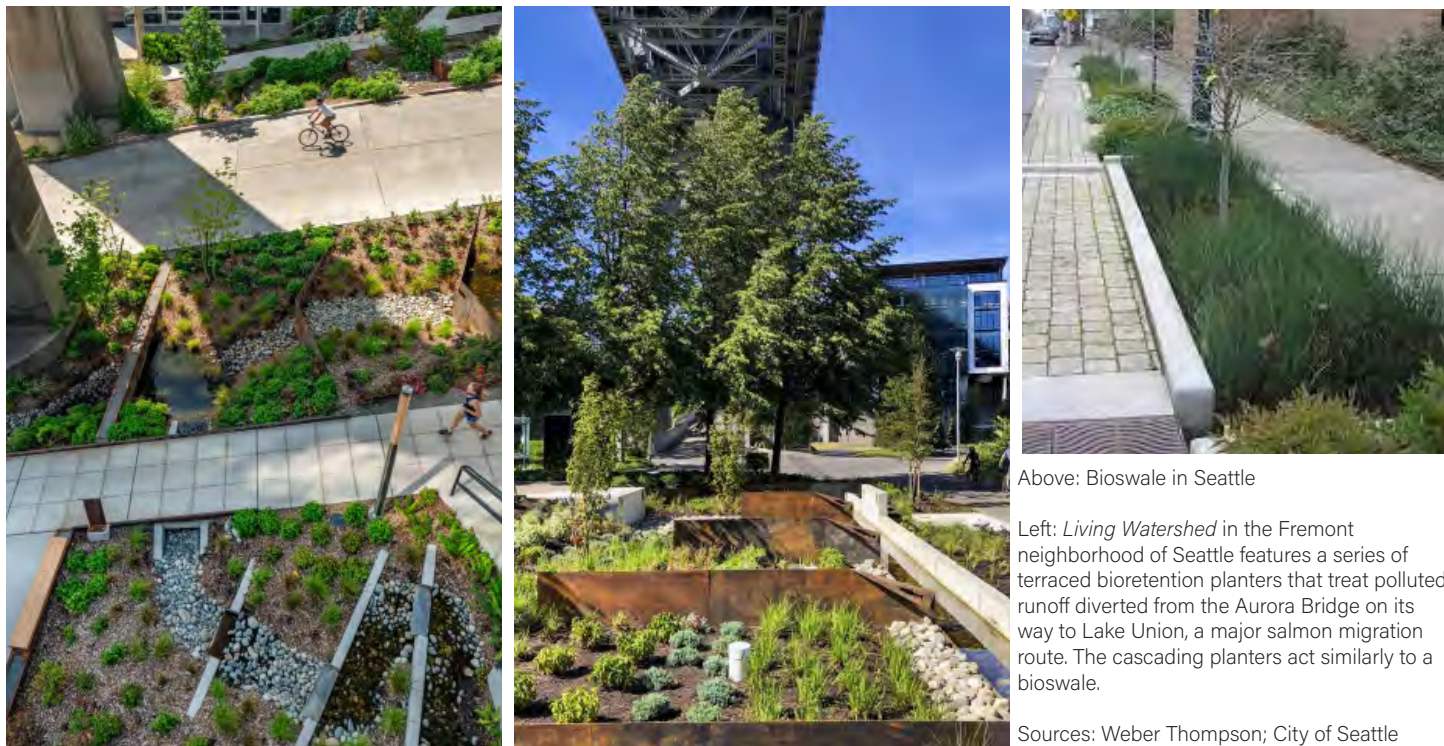
Joe Yan & Yuqing Huang

# 15-MINUTE CITY TOOLKIT

The following pages outline strategies for urban activation, including design techniques for improving nature access and water systems as well as activating streets and right-of-ways. These tools can be applied throughout Belltown in a variety of different circumstances in order to improve the neighborhood in the context of the 15-minute city.



Drawings by Jessika Gill



Above: Bioswale in Seattle

Left: *Living Watershed* in the Fremont neighborhood of Seattle features a series of terraced bioretention planters that treat polluted runoff diverted from the Aurora Bridge on its way to Lake Union, a major salmon migration route. The cascading planters act similarly to a bioswale.

Sources: Weber Thompson; City of Seattle

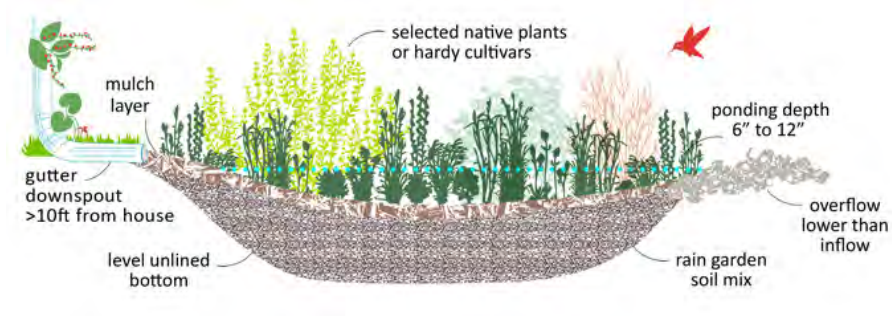
## Bioretention Planters, Bioswales, Raingardens

### Requirements:

- Required maintenance includes **removing sediment, leaves, or trash** from the bioretention areas, inlets, and outlets to prevent blockage.
- Bioretention areas require an **engineered soil media with high organic content** and an underdrain to enhance pollutant removal.
- Bioswales should have a **longitudinal slope of less than 4%**.
- The interaction of soil, plants, and microbes provide the benefit of bioretention areas. **The more plants the better!** Trees, shrubs, grasses, and groundcovers should be densely planted to maximize water treatment.
- **Riprap or a catch basin can be placed at inlets to prevent erosion** of soil. Water from a catch basin is then overflowed into the bioretention area. A benefit of a catch basin is the ability and ease of cleaning out debris.

### Uses:

- Bioswales are frequently used parallel to roadways
- Raingardens successfully manage runoff from both impervious and pervious surfaces and are generally sited in front or backyards, parking lots, and streets.
- Bioswales, planters, and raingardens are great solutions for stormwater hotspots like vehicle fueling areas, industrial loading/unloading, or material storage areas.
- Raingardens can also be used as an infiltration method rather than just filtration and movement into the sewer system. Infiltration raingardens do not require an underdrain and act similarly to infiltration trenches or planters. For infiltration, the groundwater table should be lower than 24in. from the bottom of the raingarden, and bedrock should be lower than 18in. from the bottom of the garden.



Left: Raingarden Diagram / Right: Example of Urban Rain Gardens in Queens, New York City  
Sources: Snohomish Conservation District; NYC Environmental Protection



Sources: The City of Portland Environmental Services; University of Georgia & Georgia Coast Guard; Maria Cahill, Derek Godwin, Jenna Tilt, & Oregon State University.

Bioretention areas (including bioretention planters, bioswales, and raingardens) and infiltration planters are all tools for capturing, diverting, and treating stormwater runoff. All of these strategies are successful in removing pollutants of various kinds as well as slowing water percolation into groundwater and sewer systems, preventing system overloads in large storm events.

Raingardens and bioswales are landscaped areas, typically between the street and sidewalk, that use plants and soil at a low point (a swale or small ditch) to slow, filter, and clean stormwater runoff before it enters the sewer system. Raingardens and bioswales remove up to 80% of suspended solids, 50% of phosphorus, 50% of nitrogen, and 95% of metal pollutants. Infiltration trenches and planters are structures or containers that collect, filter, and infiltrate runoff. Containing a layer of gravel, soil, and vegetation, water collects and pools on the top of the soil, then slowly infiltrates through the planter and into the ground, allowing any pollutants to settle and filter out before the water percolates into the ground. These provide for groundwater recharge. Infiltration trenches remove up to 80% of suspended solids, 60% of phosphorus, 60% of nitrogen, 90% of metals, and 90% of pathogen pollutants.

**All of these solutions help prevent sewer backups into streets and basements, as well as protects water quality in rivers, streams, and groundwater by removing pollutants.**

Source: Imagining Seattle Streets: Green Infrastructure Demonstration Gardens for 34th Ave



Left: Beaumont Village Lofts (Portland, OR) / Middle: Mississippi Commons (Portland, OR) / Right: diagram of infiltration planter  
Sources: City of Portland Environmental Services & Clean Water Services

## Infiltration Planters

### Requirements:

- A **minimum planter width of 30in.** is needed to perform adequate treatment.
- Setbacks from building structures and vehicular traffic are required and determined by local building departments. Generally **setbacks are minimum 10ft**, and planters should not be located immediately upslope from structures.
- **Soil should be composed of organic compost, gravelly sand, and topsoil.** Planters are not suitable for soils that do not drain well.
- The entire area should be planted with **herbaceous rushes, sedges, perennials, ferns, and shrubs that are suited to wet soil conditions.** **Vegetation should be planted densely and evenly** for proper hydrological function. No trees in planters.
- Planters should have an **overflow structure** to help manage large storms. Common solutions are beehive grates or U-shaped overflows. Overflow should drain to an approved disposal point.
- Maintenance requirements include **removing sediment and debris, periodically replacing mulch, cleaning and repairing inlets and outlets** to prevent clogging and control erosion, and removing weeds. Depending on plant choices, maintenance demands might be heavier in the first 2-3 years as plants are established.

### Uses:

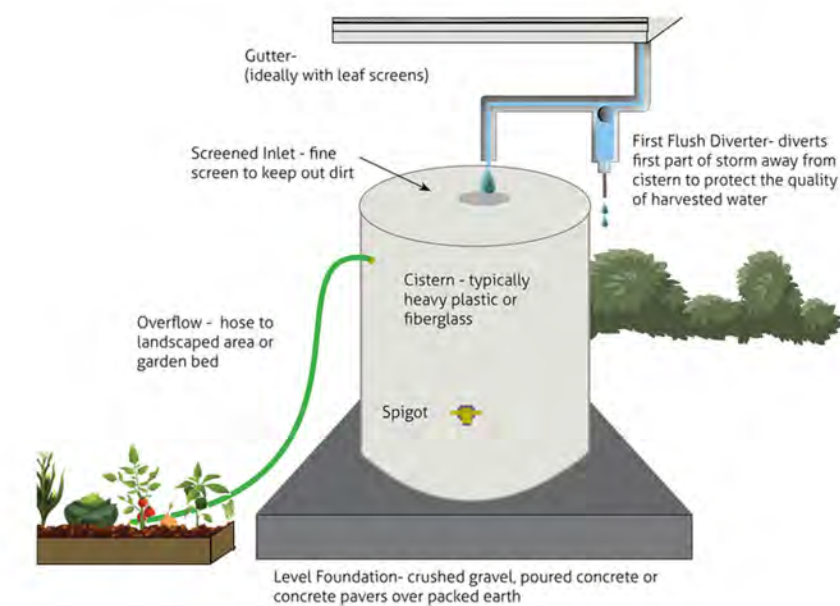
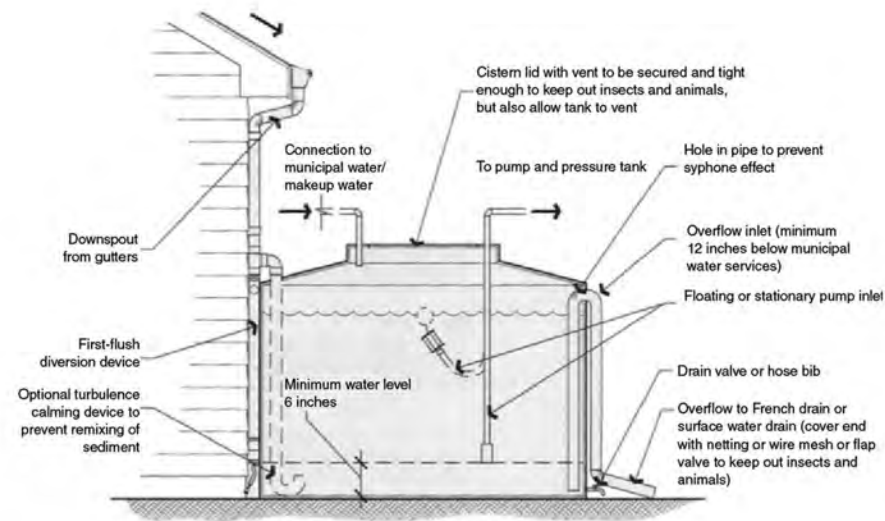
- Infiltration planters can be used to manage stormwater runoff from impervious surfaces, making them a great solution for the public right-of-way.
- The structure of infiltration planters allow them to typically hold more water than similarly sized raingardens, making them ideal for dense urban spaces and parking lots.
- Because the vertical sides should be constructed out of concrete, wood, or a similar material, they cost more to construct than raingardens. However, the cost is typically less expensive than more conventional stormwater management tactics,
- If properly maintained, plants can last indefinitely.

Sources: City of Portland Environmental Services & Clean Water Services; Maria Cahill, Derek Godwin, Jenna Tilt & Oregon State University; National Association of City Transportation Officials.

## What are Cisterns?

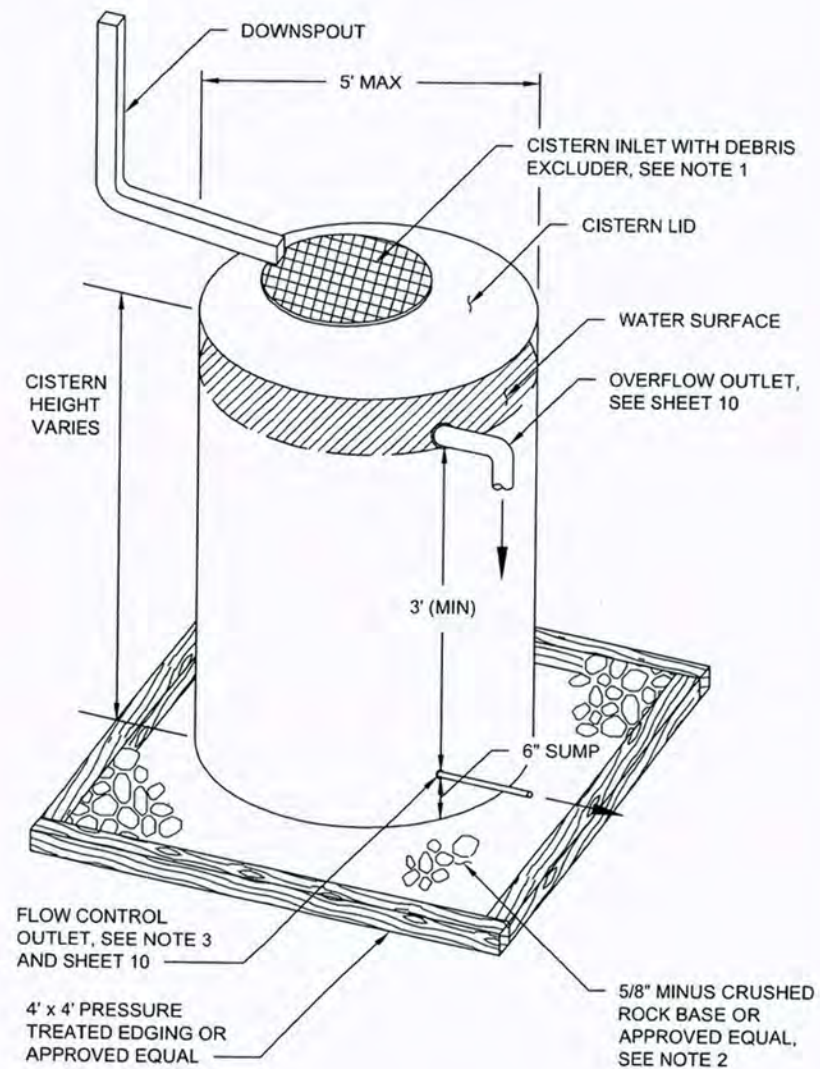
A cistern is a large above-ground container used to collect water from your roof.

Though Western Washington receives significant annual rainfall, our summers are dry - and climate predictions indicate more prolonged seasonal droughts.



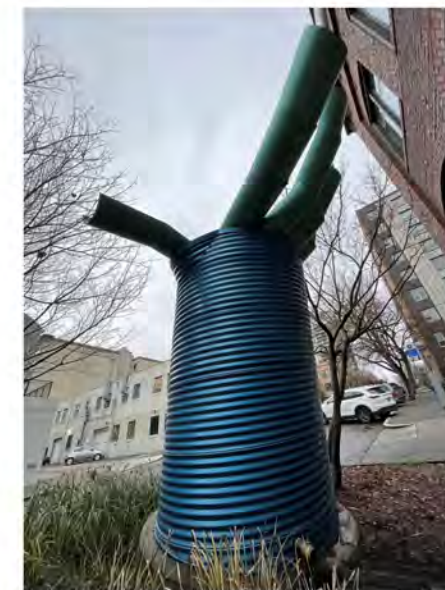
## Benefits of Cisterns:

- Reduce mud and runoff after large rain storms, which can pollute waterways
- Easy to install
- Provide a significant amount of water for irrigation or emergency use
- Conserve water and save money on summer water bills
- Provide optimal water chemistry for plants



## Seasonal Function

During the winter, cisterns store rain temporarily to reduce the amount of water entering the sewer system during a storm surge. Then slowly release the water back into the sewer system. In the summer the water can be stored and used for watering.



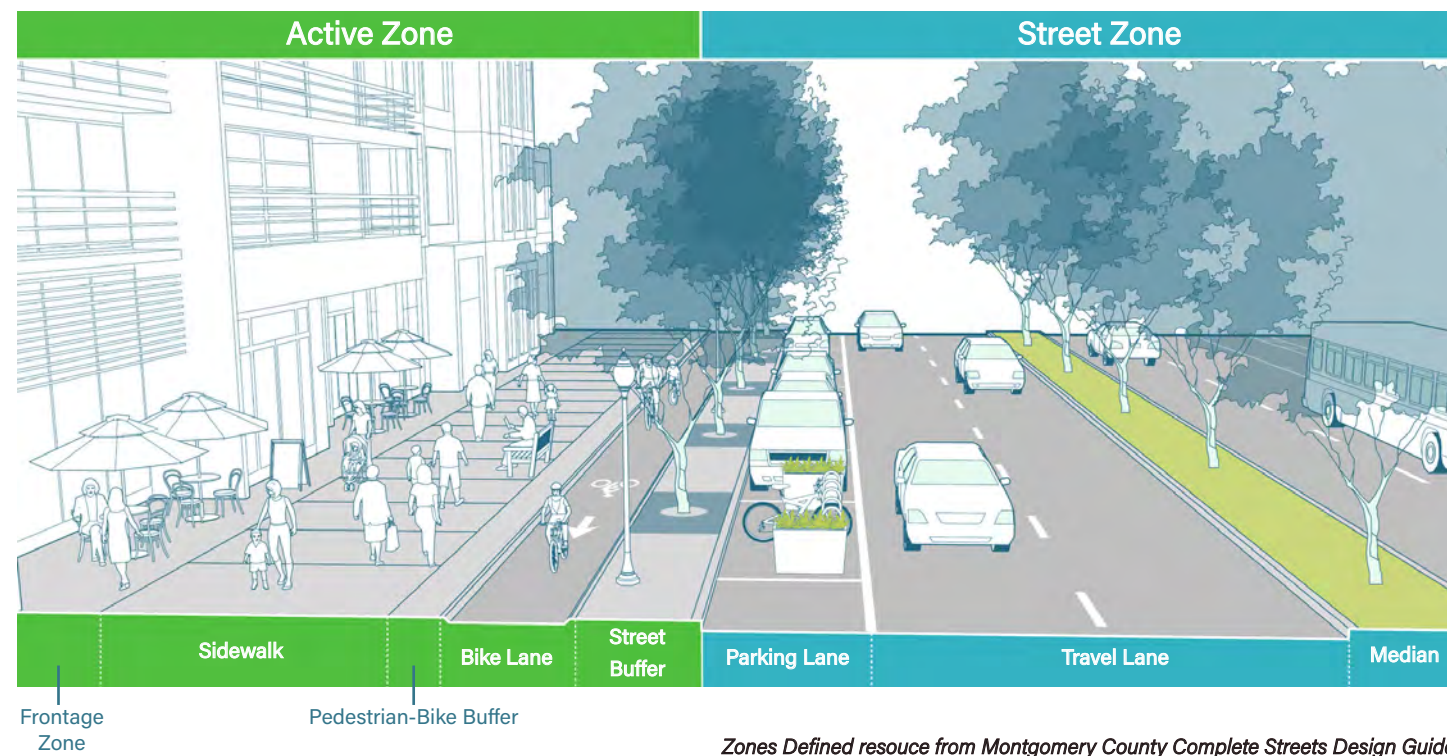
## Complete Streets

Complete Streets are streets that are well-designed and operated to provide a safe, accessible, and healthy environment for all transportation users, prioritizing pedestrians and bicyclists while also providing space for buses, private cars, and so on. All individuals will have a pleasant and safe experience crossing the road, biking along the street, and sitting on the side.

Streets are vital to the quality of life for Belltown's residents, workers, businesses, and visitors. Complete Streets would contribute to the design of great places with safe and efficient transportation systems. This toolkit tries to build an ideal street to satisfy the demands of citizens and equally build a diverse city. The Complete Street's right-of-way is composed of two zones, the Street Zone and the Active Zone:

**The Street Zone** is typically between the edge of pavement, including traffic lanes, Median, street parking, and so on. Vehicles and bicycles dominate this area. The Street Zone is essential to providing a safe transportation system that embodies the Vision Zero principle that transportation-related deaths and severe injuries are preventable and unacceptable.

**The Active Zone** is typically inside the edge of pavement, or just the sidewalk, with separated bike lanes. Pedestrian is the main user of this place. The Active Zone is crucial to providing an active and pleasant pedestrian environment and supporting walking, sitting, playing, and even eating on the street.



Basically, vehicular travel is always in the street zone and pedestrian travel is in the active zone. But, bikes can be located in either the active zone or the street zone.

### 1. Separated bike lanes

### 2. Sidepaths

### 3. On-street bike lanes or bikeable shoulders

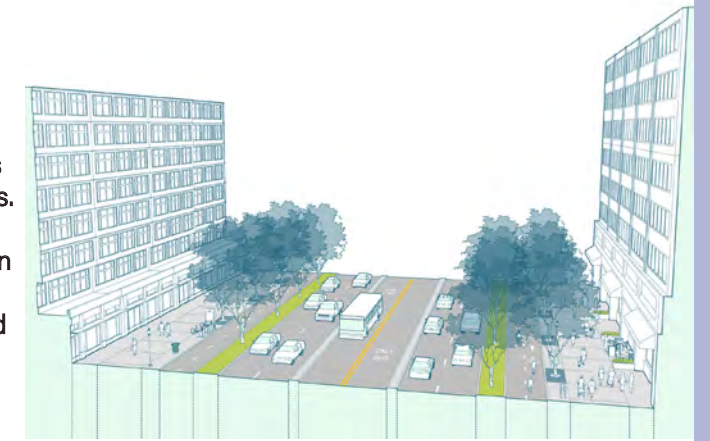


*Bike lanes location resource from Montgomery County Complete Streets Design Guide*

## The Image of Downtown Street

### Downtown Boulevards

Belltown downtown boulevards are the highest intensity street with swarming vehicle traffic, transit, dense development, walking, and biking. Downtown Boulevards are located in central business districts and urban centers. Buildings are located close to the street and offer a blend of places to live, work, shop, and visit. Because Downtown Boulevards carry significant vehicle traffic that operates in potential conflict with high numbers of pedestrians and bicyclists, reducing vehicle speeds is essential to safety.



*Downtown Boulevards resource from Montgomery County Complete Streets Design Guide*



*Downtown Boulevards resource from Montgomery County Complete Streets Design Guide*

### Downtown Streets

Downtown Streets are also found in bustling, mixed-use and commercial areas; however, the building heights tend to be lower than on Downtown Boulevards. Downtown Streets are often the side streets in busy commercial areas that connect to Downtown Boulevards. Because of the density of shops and other destinations located on these streets, pedestrian and bicycle volumes are high. Buildings are oriented close to the street, and on-street parking is currently common.

## Active Zone Design



TOOLKIT: COMPLETE STREETS

# GREEN ROOFS



Source: My Ballard, "Seattle's rooftops are going green"

Green roofs are category of Green Stormwater Infrastructure primarily used to detain as well as retain storm water through absorption into the soil and uptake via plant material.

### GREEN ROOF BENEFITS:

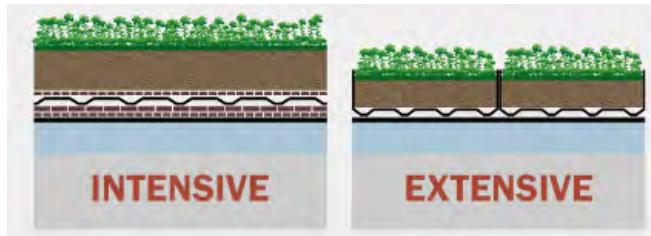
- Reduce stormwater runoff
- Provide habitat and increase biodiversity
- Reduced urban heat island effects
- Increased lifespan of roof
- Reduced air pollutants

The social and experiential benefits can include reducing sound pollution, greening urban spaces, and providing more opportunities for urban farming and gardening.

### Disadvantages/Limitations:

- Can be costly to install and maintain
- Liability and Insurance considerations
- Ease and quality of maintenance

There are two types of Green Roofs:



Source: ArchToolbox, "Green roof systems"

**Intensive:** Deeper (typically between 6-48 inches)

**Extensive:** Shallower (typically between 3-6 inches), lighter weight, lower maintenance



Source: ASLA, "Professional Practice: RESIDENTIAL GREEN ROOFS"

**BUS STOP STRUCTURES CAN BE USED FOR SHALLOW DEPTH (EXTENSIVE) GREEN ROOFS**

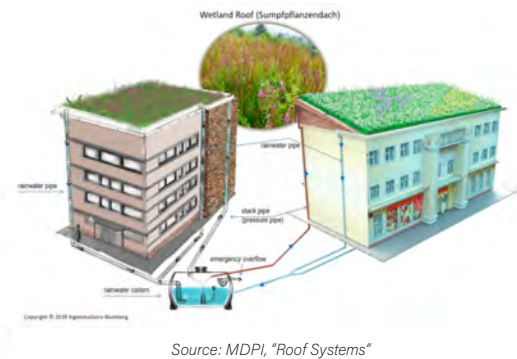


Source: Brighton & Hove City Council, "Bee Bus Stop a first in the south of England"

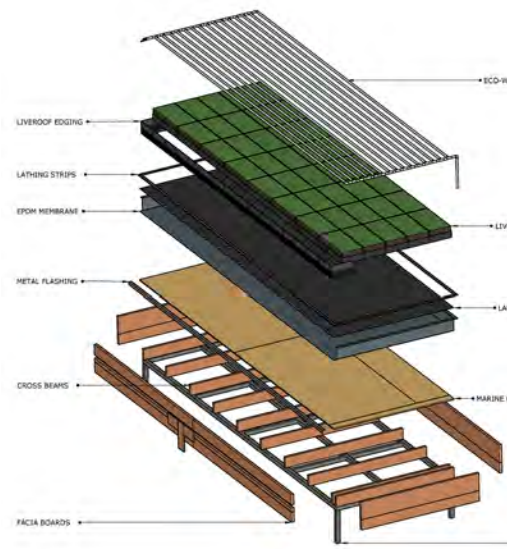


Source: ICB Systems, "Blue Roof Systems"

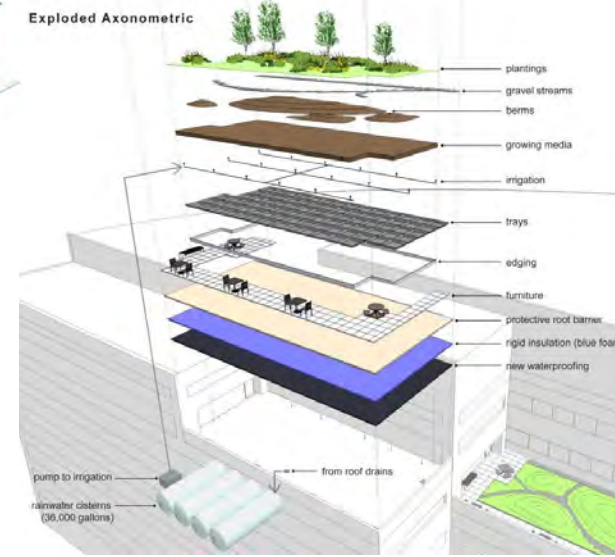
### WHAT ABOUT USE IN COMBINATION?



Source: MDPI, "Roof Systems"



### CONSTRUCTION AND MATERIAL



Source: Green Above Ground, "Deconstructing the BPA Green Roof Terraces"

### OPPORTUNITIES MAPS FOR BELLTOWN, SEATTLE

Source: UW SCAN Design Booklet Pages



"If 45% of Seattle's 2015 roof space were covered with vegetation, that would provide more greenspace than all of Seattle's 489 city parks, which comprise just over 10 square miles." (Credit: A Reedie, Creative Commons)

# BLUE ROOFS



Source: Philadelphia Water Department, "Blue Roofs"

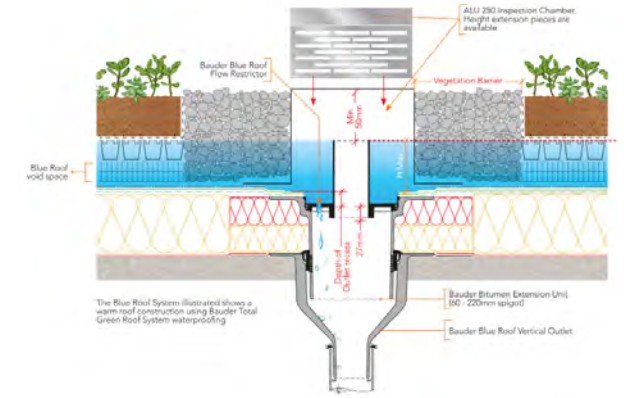
Blue roofs are a category of stormwater Infrastructure that are primarily used for temporarily storing water, whereas Green Roofs have some absorption capacity.

### BLUE ROOF BENEFITS

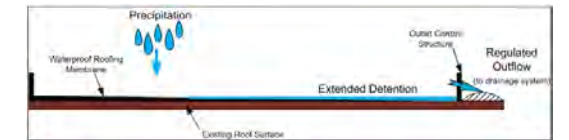
- Often less expensive than Green Roofs
- Can assist and improve the effectiveness of downstream best management practices
- Relatively easy to install
- Commercially available products for installation
- Easy to couple with other storage techniques

### Disadvantages/Limitations

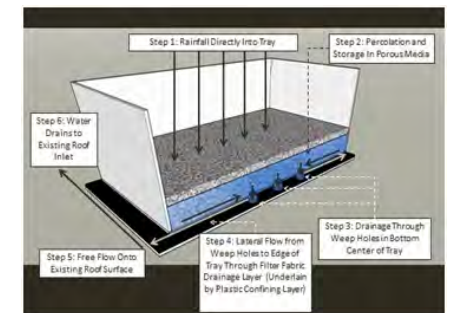
- Generally limited to flat roofs or roofs with shallow slopes (e.g., < 1 percent) because of ponding depth. This could be addressed with modular tray designs or roof-dams.
- Regular maintenance varies but is important consideration. Verification of system performance may be necessary.
- Risk of tampering



Source: Bauder, "Blue Roof design considerations"



### MODULAR TRAY DESIGN



Source: Massachusetts Clean Water Toolkit, "Rooftop Detention"



Source: Philadelphia Water Department, "Blue Roofs"





A parklet is a sidewalk extension that provides more space and amenities for people walking along urban streets. Parklets are installed on parking lanes and use one or more parking spaces, offering a place to stop, to sit, and to rest while taking in the activities of the street.

**Case Study: Chromer Building Parklet & Streatery**  
 Located within downtown Seattle's most active pedestrian area, the Chromer Building Parklet serves as a local precedent for converting parking spaces into pedestrian space.

GGN's modular design strategy uses durable elements – metal frames, wooden decks, and concrete blocks – to create a series of flexible, level spaces on a sloped Seattle street.

**DETAILS**

Location: Seattle, WA  
 Size: 680 sq ft  
 Client: Urban Visions Completion  
 Date: 2014  
 Project Team: GGN, Landscape Architect

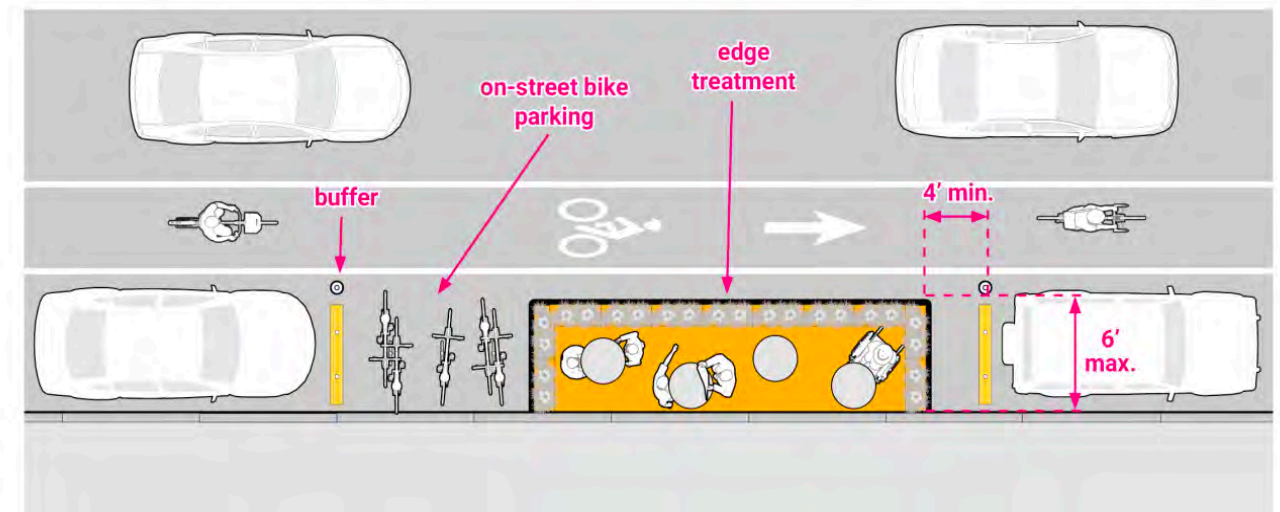
**Benefits of the Parklet:**

- More affordable than custom designed & fabricated decks
- Avoids expensive architectural design work
- No skilled labor or special tools required for assembly
- Uses a minimal number of pre-fabricated modular components
- Avoids custom fabrication and cutting to size on site
- Strong, damage-resistant, stainless steel perimeter
- Adjustable pedestal supports ensure level deck surface over sloping ground



**StreetDeck by ArchatrakUrban**

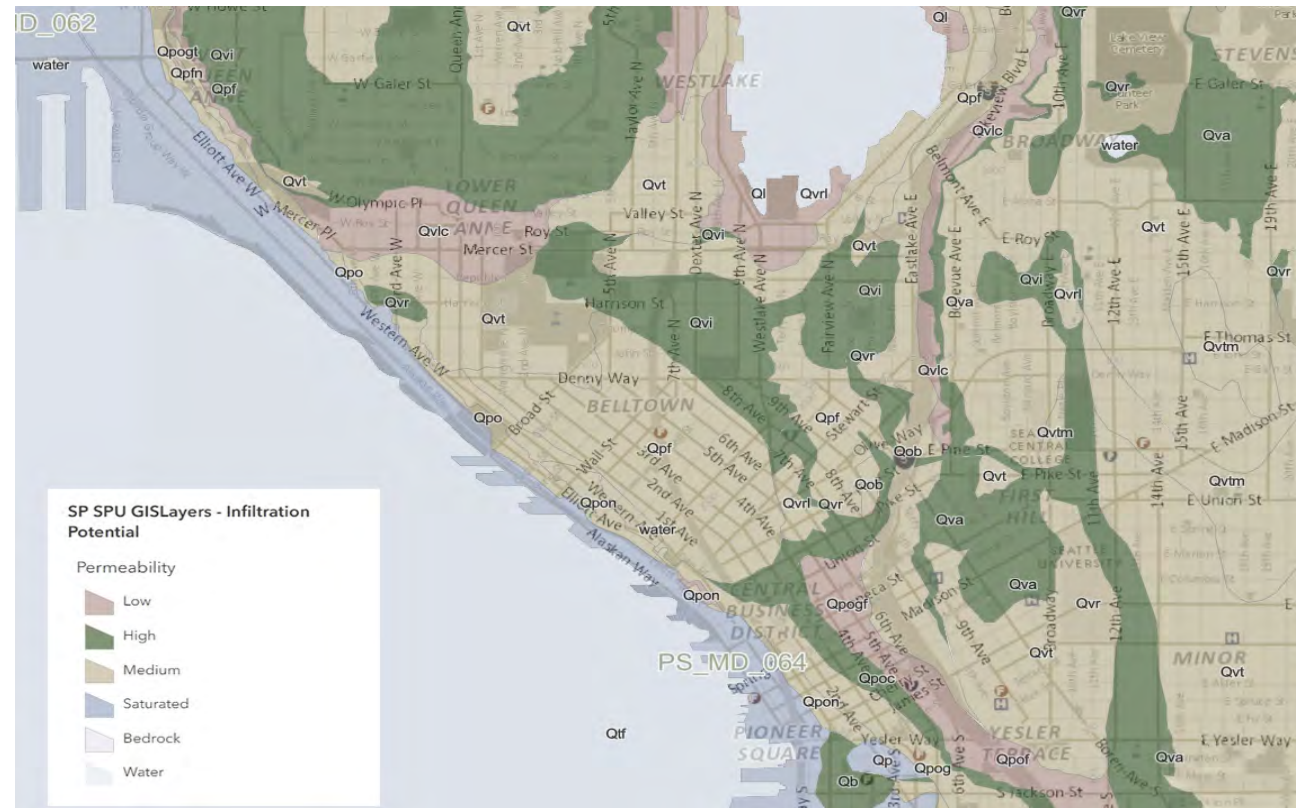
- Provide outdoor space to restaurants that have restricted dining space indoors
- Opportunity for additional seating space outdoors
- Ideal for temporary or permanent display stages
- Seating platforms, special event flooring, pop-up cafes, music stages
- Developed ready-to-go kits for both 1 car space (12' x 6') and 2 car spaces (32' x 6').
- Completely customizable with 3rd party components and furniture



## WHAT IS PERMEABLE PAVEMENT?

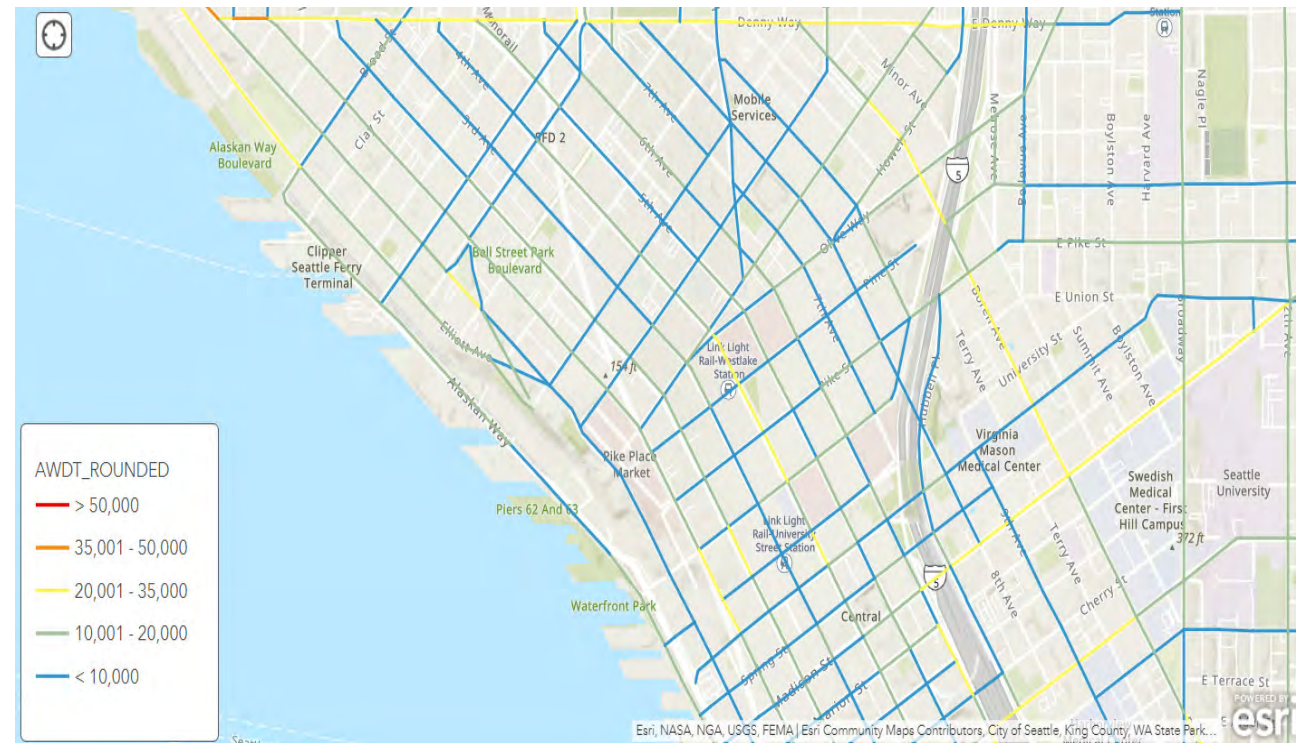
Permeable pavement catches precipitation and surface runoff, storing the water in a reservoir while allowing it to slowly infiltrate into the soil below or discharge via drain tile.

### POTENTIAL INFILTRATION

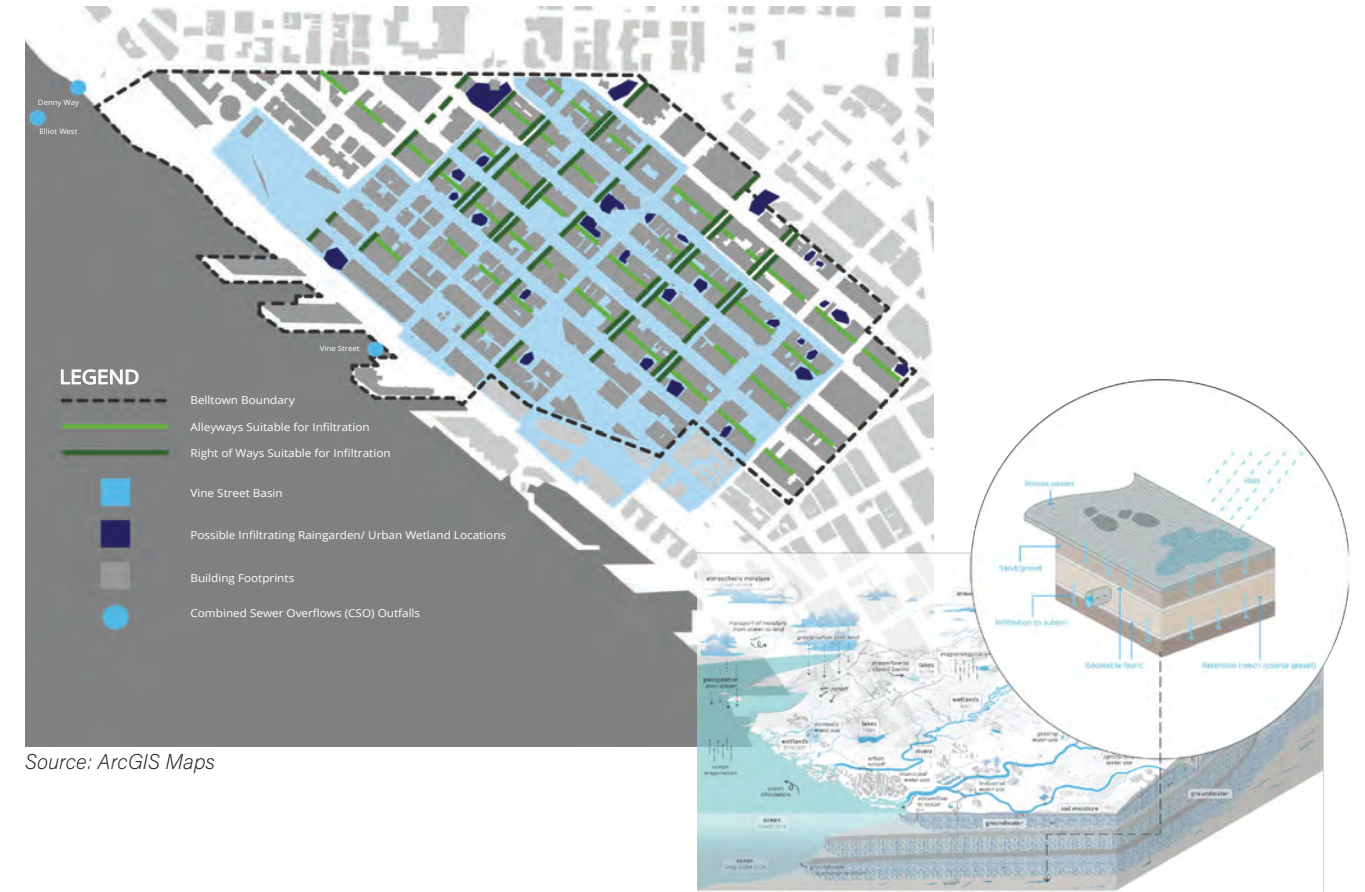


Source: ArcGIS Maps

### ANNUAL WEEKDAY DAILY TRAFFIC



Source: ArcGIS Maps



Source: ArcGIS Maps

### BENEFITS:

- Reduction of runoff, which reduces flood risk, stream erosion, and damage to downstream infrastructure
- Removal of contaminants from infiltrated stormwater
- Reduction in heat flux from the pavement surface to the atmosphere, which helps mitigate the the urban heat island

### LIMITATIONS:

Permeable pavement should not be used in high pollutant loading sites. High pollutant loading sites are those that receive constant sediment or trash and/or debris. Places where fuels and chemicals are stored or handled can be potential stormwater hotspots and permeable pavement should not be constructed in these places. Likewise, areas subject to wind borne dust and sediment should not use permeable pavement unless the pavement can be vacuumed regularly.

Permeable pavement is suitable for pedestrian-only areas, low-volume roads, low speed areas, overflow parking areas, residential driveways, alleys, and parking stalls. These can be residential collector roads or other applications with similar traffic loads.

Permeable pavement can be prone to clogging from sand and fine sediments that fill void spaces and joints between pavers. As a result, it should be used carefully where frequent winter sanding is necessary because the sand may clog the surface of the material. Periodic maintenance is critical, and surfaces should be cleaned with a vacuum sweeper at least two times a year.

Fuel may leak from vehicles and toxic chemicals may leach from asphalt and/or binder surface. Permeable pavement systems are not designed to treat these pollutants.

Source: Minnesota Pollution Control Agency Stormwater Manual, "Design Criteria for Permeable Pavement"

## KEY FEATURES

- Resident-led and organised
- Short, regular road closures
- Free, child-led play
- All neighbours consulted and included
- Road legally and safely closed to through traffic
- Stewarded by residents
- Car access at walking pace
- Simple, 'normal' – not a street party!



Source: *Playing Out (Bristol, UK), "Play Streets"*



Source: *Playing Out (Bristol, UK), "Play Streets"*

## FOUR SIMPLE STEPS TO ORGANISING A PLAY STREET

Source: *Playing Out (Bristol, UK), "Play streets in four simple steps"*



Talking to people on your street about the idea of outdoor play is an important first step and will help you gather views and understand any concerns.



You need to invite them to join you, clarify the rules of the road, and make sure parents understand that they are responsible for their children.



Apply to city council for permission to close the road and make sure you have enough people willing to do stewarding and other jobs.



As long as the road is closed and stewarded safely - children AND adults will make their own fun!

Source: *Playing Out (Bristol, UK), "Play Streets"*

## IMPACT OF PLAY STREETS

Here's the deeper impact taking place each time residents open their front doors to meet, play, and use the shared space:

<p><b>Children's health</b> Playing out gives children space and freedom to get exercise outdoors, play freely, gain independence and skills, and make new friends close to home</p>	<p><b>Stronger communities</b> Opening a street for play increases connections, friendship and trust between neighbours of all ages and backgrounds</p>	<p><b>Active travel</b> Playing out encourages and enables "active travel". Reducing car use, making streets safer and increasing walking and cycling.</p>	<p><b>Active citizenship</b> Organising play streets demonstrates citizenship in action to children growing up on the street. Often residents feel inspired to do more</p>	<p><b>Culture change</b> All this activity is part of a wider, growing movement for children's freedom. Together we are all beginning to change things. Can you join us?</p>
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## POTENTIAL PLAYSTREET SITE IN BELLTOWN

Bell Street Park is the City of Seattle's first shared street project, establishing a new typology for streets as parks and open space. Initiated by Belltown neighborhood residents, Bell Street demonstrates how a bold vision for transformation can be realized through inclusive design and strong city/community collaboration. Proven as a successful shared street project, its application provides cities with a model case to reimagine the right-of way as both a thriving open space and an important transit connection.



Source: *National Association of City Transportation Officials, "Bell Street Park Shared Street, Seattle"*

## PLAY STREET ACTIVITIES



Potato-sack race



Hopscotch



Pin the tail on the donkey



Test your cycling skills



How low can you go?



Plan a nature scavenger hunt

## PLAY STREETS SUPPORT CHILDREN'S INDEPENDENT MOBILITY IN SEVERAL WAYS:

- Making streets safer
- Building children's skills and confidence
- Normalising children being out in the street



Percentage of primary aged children who are allowed to cross a main road alone

University of Westminster, PSI (2013)

Independent mobility is an important factor in the health and physical, social and mental development of children.

- Shaw (2011)



Percentage of parents who allow their primary aged children to travel to school independently

University of Westminster, PSI (2013)

Source: *Playing Out (Bristol, UK), "Play Streets and active travel"*

## DE-PAVING



**Tactical Urbanism is a low-cost, temporary change to the built environment.** Usually done in cities and intended to improve local neighborhoods and city gatherings spaces. Strategies are often citizen-led but can sometimes be initiated by the government. Communities often use it as a method to pressure the government to establish a more permanent, expensive and improved version.

The term was coined back in 2010 with 5 main goals:

1. Phased approach to instigate change
2. Offering local solutions for local challenges
3. Short-term commitment as a step towards long-term change
4. Low risk and high reward
5. Developing social capital between citizens and the building of organizational capacity between public and private institutions, non-profits, and their constituents.

Some strategies include:

### DE-PAVING

The high amount of paved streets contribute to pollution of waterways through stormwater runoff. By removing unnecessary pavement, not only is storm-water pollution reduced but more green spaces and gardens can be given to the community. This helps build strong ties between neighbors and the cities they live in.

### CHAIR BOMBING

Increasing public seating almost always makes a neighborhood/street more livable. Chair bombing is the act of taking material that would go to waste and using it to build public seating. The process requires a thoughtful approach to design and understanding where seating will fit in with existing social activity. Chair bombing typically begins by retrieving discarded materials such as shipping pallets from dumpsters and construction sites and re-purposing them into chairs.

### INTERSECTION REPAIR

Intersection repair reclaims neighborhood streets as public gathering spaces. While the brightly painted intersections communicate to cars that they are entering a place of neighborhood importance, the process of making these also has a big impact. Once the process begins, neighbors take it upon themselves to improve the scene.

## CHAIR BOMBING



## INTERSECTION REPAIR



Source: Street Plans Collaborative, "Tactical Urbanism, Volume 2"

## EXAMPLE IN SWEDEN



An area outside Malin Henriksson Talcoth's gourmet sausage shop in Gothenburg has a bench, a picnic table and racks for cycles and e-scooters. These kind of spaces orient seating towards the sidewalk and creates a mini hang out space. Despite subzero temperatures, people take advantage by talking, eating, and enjoying themselves. The urban environment has an extraordinary amount of street space. This is all addressable space for planning and testing the future. This example replaces parking spaces with a space that is more viable for public interaction. Overall, the citizens found this change to be a very positive one and the amount of foot traffic around these units were greatly increased.



Source: Richard Orange in The Guardian, "How Sweden is taking back parking spaces to improve urban living"



Source: Street-Plans.com, "Little Prince Plaza, Soho NY"

**Little Prince Plaza, NYC  
by Street Plans**

Prince Street was closed for four Saturdays in a row in order to test it out as a pedestrian street. Signs, painting, and barriers were used to divert traffic to other streets.



Source: PBS NewsHour, "Urban Designers Transformed These Five Plazas into Pedestrian Paradise"

**Pearl Street Triangle Plaza, NYC  
by the Dept. of Transportation**

Surface parking in leftover nook of the city transformed into a pedestrian plaza through the use of barriers, paint, and seating.



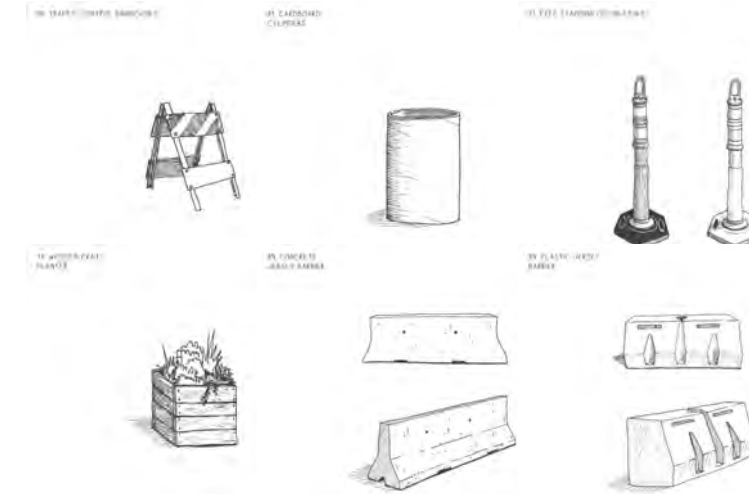
Source: Street-Plans.com, "A Safer Prospect, Hermosa Beach CA"

**Hermosa Beach, California  
by Street Plans**

Safer streets were implemented in Hermosa Beach, California through painting and barriers. These tactics helped increase rates of cars yielding to and stopping for bikes and pedestrians.

**MATERIALS:**

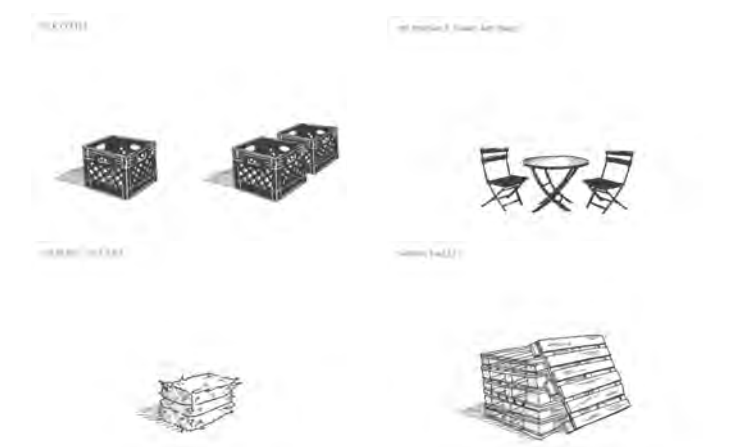
**BARRIERS**



**SIGNS**



**STREET FURNITURE**



**SURFACE TREATMENTS**



Source: Tactical Urbanism Guide, "Materials"

Through quick and affordable methods, neglected, boring, or less welcoming spaces in the city can be transformed to prioritize the pedestrian and invite opportunities for local engagement.

Tactical Urbanism can be applied in many different ways: scale and context should be kept in mind. Each project should be extremely specific to the space that it is altering, including the attitude of the community, niches of the city, and outside factors that may impact success, like weather and public events.

The materials that can be used to implement Tactical Urbanism strategies should be accessible and affordable. The goal is to clearly designate a space's new use with paint, barriers, and/or signs. Adding structural elements such as seating and tables, umbrellas, or elevated surfaces are even more effective in programming a space. Ideally, these materials can be repurposed items such as tires, crates, shipping pallets, and traffic cones.

Tactical urbanism shows us that it doesn't take a lot to activate a space and make improvements in cities. Just a few quick changes invite immediate community engagement and increased pedestrian use.

## Community Gardens: P-Patches & Rooftop Gardens



Belltown P-Patch, established 1995. Not only a food source, but also a place for community gathering and public art. P-Patch is the name given to the City of Seattle's community gardens. All P-Patch gardens are open to the public to enjoy and give back to the community through volunteer hours and by supplying fresh, organic produce to Seattle food banks and feeding programs.

### Requirements:

- Size should be **minimum 4000sf in residential areas, minimum 2000sf in denser areas** of city.
- Garden locations must have **full sun in residential areas** and best available in dense urban areas (adjacent buildings/zoning will be checked)
- **Flat terrain** and ability for materials to be delivered
- **Publicly owned or a 5-year lease** for privately owned land
- **Neighbors should be able to see the site** for security reasons
- Should have capacity to **serve a neighborhood priority area** - which includes areas with limited food access, areas designated as urban village(s) under the Seattle Comprehensive Plan, and areas aligned with mayoral focus on revitalization.

Sources: Seattle Department of Neighborhoods, Seattle.Gov



A rooftop garden above Ravish Restaurant in the Eastlake neighborhood of Seattle. Developed by the restaurant owners and Seattle Urban Farm Co. Rooftop gardens have similar requirements to green roofs.

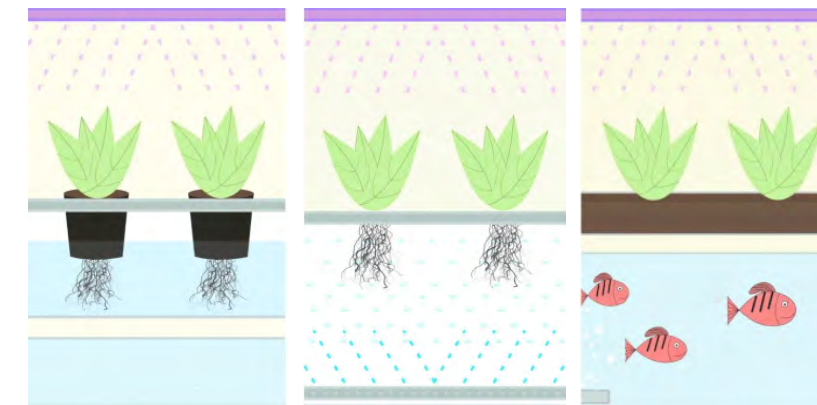
Source: Eater

Urban Agriculture is the cultivation, processing, and distribution of agricultural products in urban areas. Modes and methods include community gardens, rooftop gardens and farms, vertical farms, and hydroponic, aeroponic, and aquaponic facilities.

*Proliferation of urban agriculture practices reduces transportation costs associated with food, helps with runoff reduction by providing dense groundcover, and helps improve air quality. There are also opportunities to improve communities' food security and mental and physical health.*

Source: USDA

## Indoor Agriculture - Ponics & Vertical Farming



Hydroponics

Aeroponics

Aquaponics

Hydroponics is the practice of growing plants in just water with a liquid nutrient solution. In aeroponics, roots are suspended in the air and periodically misted.

Aquaponics allows plants to grow hydroponically, with the water building nutrient richness through aquaculture (fish and other aquatic life). Aquaponics creates a symbiotic system between plants and fish, using less water than other gardening and with the plants doing much of the tank-cleaning.

Source: Ponics Area

Vertical Farming can be done with traditional soil or integrating hydroponics.

### Requirements:

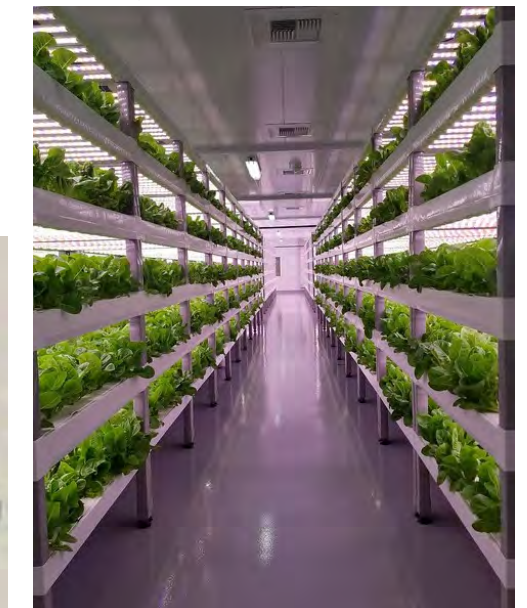
- There must be **running water, a sewage system and electricity**
- **Growing lights** selected depending on crop selection, location, and access to natural light
- The space should have **thermal insulation and an effective interior waterproof layer**
- Effective airflow design and **climate control**
- **Spacing strategies** for plants, depending on crop selection
- **Irrigation** and nutrition, depending on crop selection
- **Sensors and a software platform** to help control, monitor, and automate processes

Another innovative technique for vertical farming involves a rotating system that relies on a water pulley system that rotates the plants to ensure all plants get equal access to sunlight, irrigation, and water. These systems, developed by a European company called upfarming, can be placed in greenhouses, **eliminating the need for LED lighting.** (pictured below)

Sources: KUOW; USDA; iFarm; upfarming



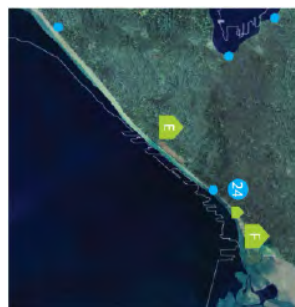
Above: Vertical farm in a Seattle-area QFC  
Below: A typical vertical farm



CURRENT URBAN CANOPY IN BELLTOWN



(1) Queen Charlotte Islands Conifer Forests (2) British Columbia Coastal Conifer Forests (3) Central Pacific Northwest Coastal Forests (4) Puget Lowland Forests (5) Klamath-Siskiyou Forests (6) Northern California Coastal Forests. (Source: OneEarth, "Bioregions: Pacific Northwest Coastal Forests")



Credit: Waterline Project



Credit: Google Earth

Before colonization, what is now known as Belltown used to be a Puget Sound lowland forest.

The indigenous village here was known as babáqWab ("little prairie" or "large prairie"). Sophie Frye Bass, one of the first few settlers in this region, described this region as "a fine and sandy beach at the foot of Bell Street, with springs of good water, where Indians camped while they hunted and fished." Dominating the remaining prairie remnants is Idaho fescue, with the intervening space between grass clumps covered by a thick moss layer.



URBAN CANOPY: HOW TO STEWARD CURRENT AND FUTURE GENERATIONS OF TREES

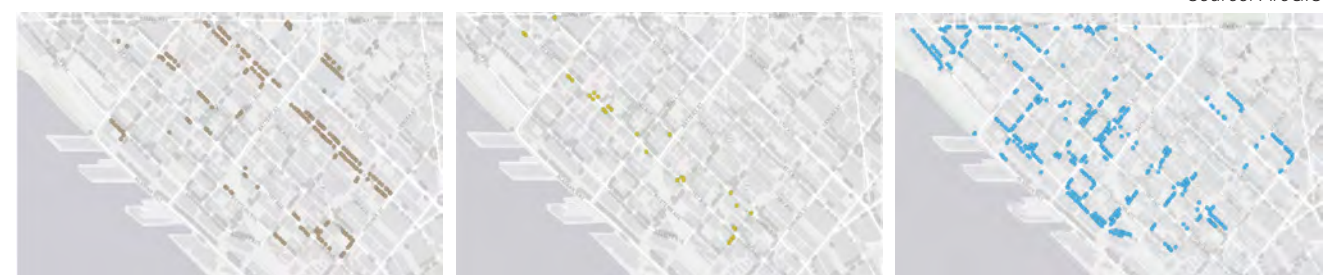
In this part of the toolkit, we are going to look at ways urban canopy helps to enhance the identity of place as well as providing better urban ecosystem for future Belltown development and design.

- There will be four main sections of this tool:
1. Looking at the current canopy situation
  2. Planting toolkit and typologies
  3. Analyzing benefits of each typology
  4. Stewardship toolkit for future urban forestry

**Toolkit Benefits Legend**

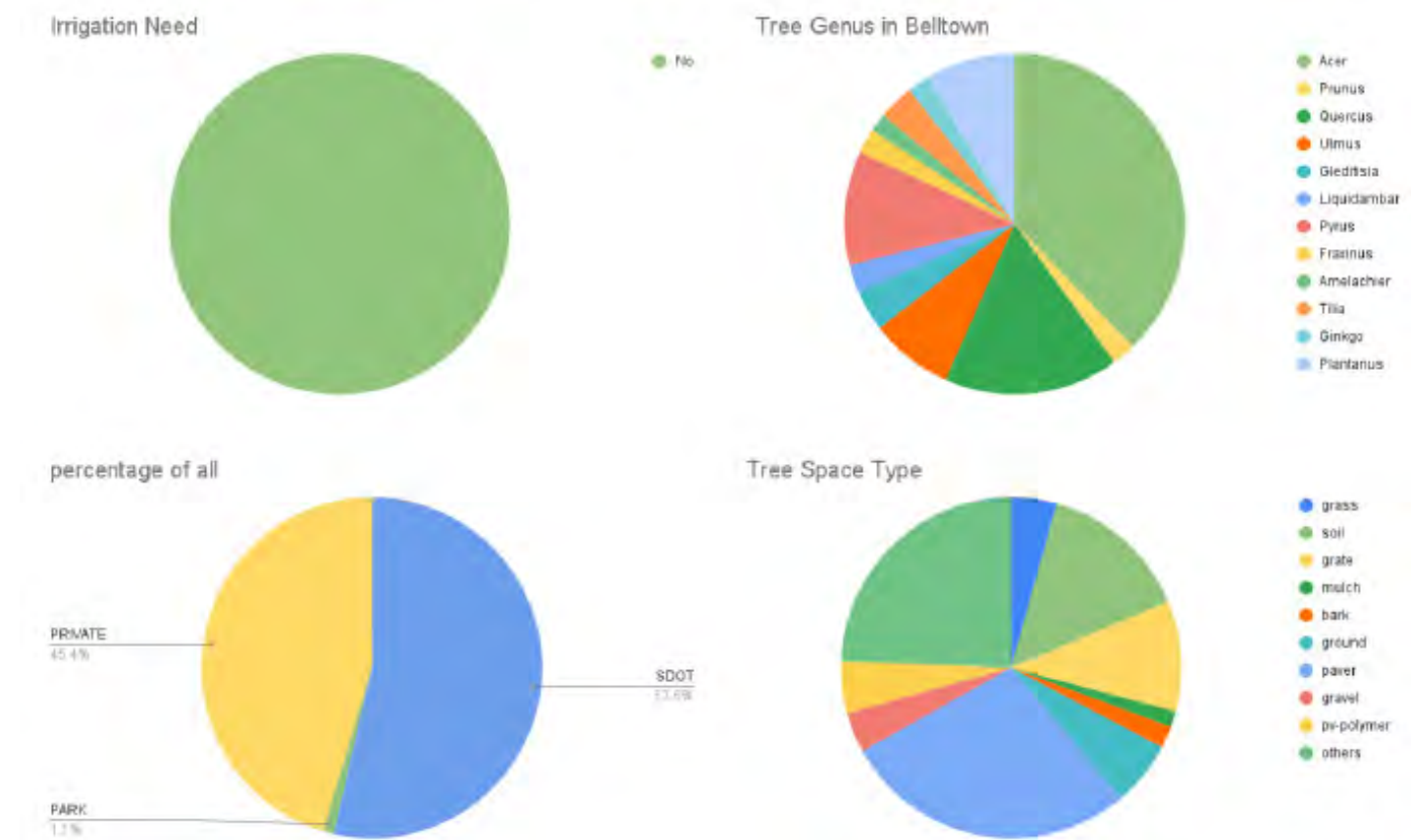
- Healthy Trees
- Healthy Soil and Root systems
- Expand Pedestrian Spaces
- Better Storm Water Management
- Environmental Stewardship

MAJOR TREE SPECIES AND LOCATIONS



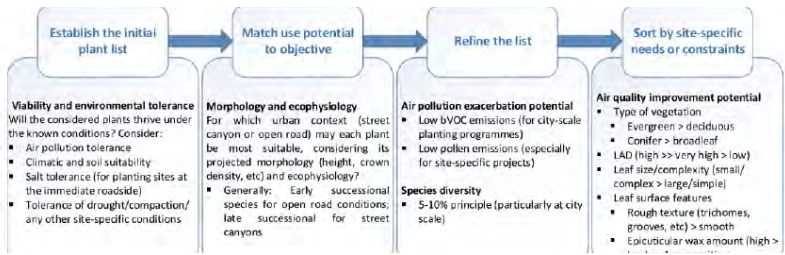
Source: ArcGIS

TREE INVENTORY IN BELLTOWN



Source: ArcGIS

PLANNING THE NEXT STEP FOR PLANTING

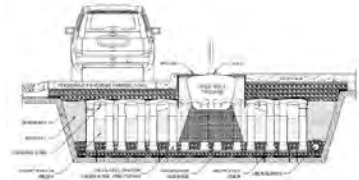


RE-ESTABLISHING BELLTOWN URBAN FORESTRY

The climate of Puget Lowland forest is known for having warm and dry summers and cool, wet winters. Before colonization, there were a wide range of native species growing on this land, including Garry oak, Pacific dogwood, Pacific madrone, and ponderosa pine.

	Garry Oak	Douglas Fir	Pacific Dogwood	Pacific Madrone	Ponderosa Pine
	1-2 time/week in dry season	Between 1-4 times per month	2-4 times per week during summer	2-4 times per week during summer	2-4 times per week during summer
	Plant in late fall to early winter	Height increase 13-24" per year	Plant in late fall to early winter	Plant in late fall to early winter	Plant in late fall to early winter
	Open, sunny sites	Full sun and partial shade	Full sun	Full sun to partial shade	Full sun
	Well-drained soil is preferred	Acidic or neutral soil, well drained	Soil with a ph between 5.5 and 6.6	Well drained to minimize fungi disease	Well drained sandy soil is preferred

**TOOL 01: SILVA CELL DEEP ROOTS**



Credit: Deep Roots Silva Cell



Credit: LAF Landscape Performance Series

Deep Roots designed and developed Silva cell, which allows unlimited amount of soil storage below the urban pavement surface. In a recent study conducted by LAF Landscape Performance Series, they evaluated 10 projects that have adopted Silva Cell in their design. The research is still in progress, and you can check more about their methodology here: [Tracking the Performance of Urban Trees in Silva Cells](#)

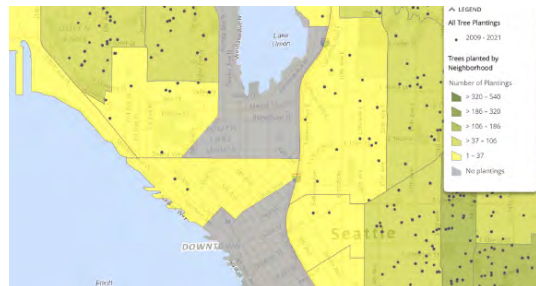
**SILVA CELL EXAMPLE PROJECT**



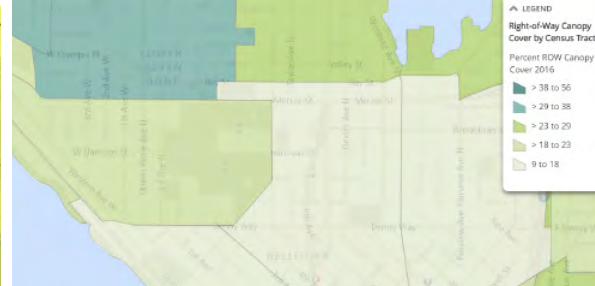
Location: Pike and Rose, Maryland  
Left: 2014 Right: 2019



**TOOL 02: STRATEGIES FOR URBAN FORESTRY STEWARDSHIP**



Current Urban Canopy Stewardship Program in Belltown & surrounding neighborhoods (Source: Seattle City GIS Map)



Current Urban Canopy Deficiency showing Belltown & surrounding neighborhoods (Source: Seattle City GIS Map)

One of the best way of improving the wellbeing of citizens is through getting your hands dirty in soil, and for Belltown, it is through taking care of community trees and the expanding urban canopy. What are some ways of enhancing community engagement and fostering better urban canopy?

**URBAN TREE STEWARDSHIP EXAMPLE PROJECT**

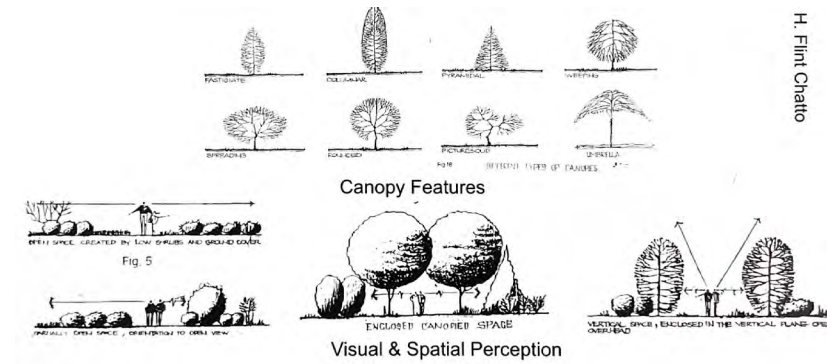


Tree Care Training Program  
Credit: Tree New York



Matthew Jensen (b. 1980, *The Forest Between: Street Trees and Stewardship in New York City*)

**TOOL 03: DEVELOPING BETTER GATHERING SPACES WITH URBAN CANOPY**



Credit: Imaging Seattle Trees

Using current Belltown Canopy Coverage as a spatial framework, we start to mark possible locations for future gather spaces and parklets, and start to make spatial ecological connections based on spatial data.

The next step will be to zoom into finer street detail and design foci for urban canopies.



Current Canopy Coverage in Belltown



Bell Street Park

**TOOL 04: PERVIOUS PAVING FOR URBAN CANOPY**



Process of implementing porous treepit material  
Credit: RootCauseSeattle.com



Credit: New Dawn





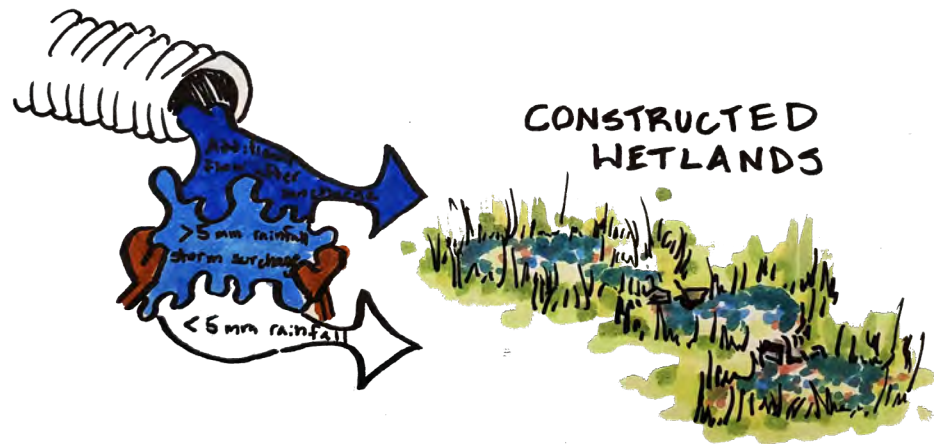
## What is an urban wetland?

Wetlands are areas where water is present either at or near the surface of the soil all year or for varying periods of time during the year. Generally wetlands are at a depth varying from two inches to three feet, but can also dry out completely on a seasonal cycle. Constructed wetlands in urban areas are often created in urban areas for more-than-human habitat, polluted water treatment, mitigate flooding, and breaking up urban heat islands.

Main categories of wetlands include:

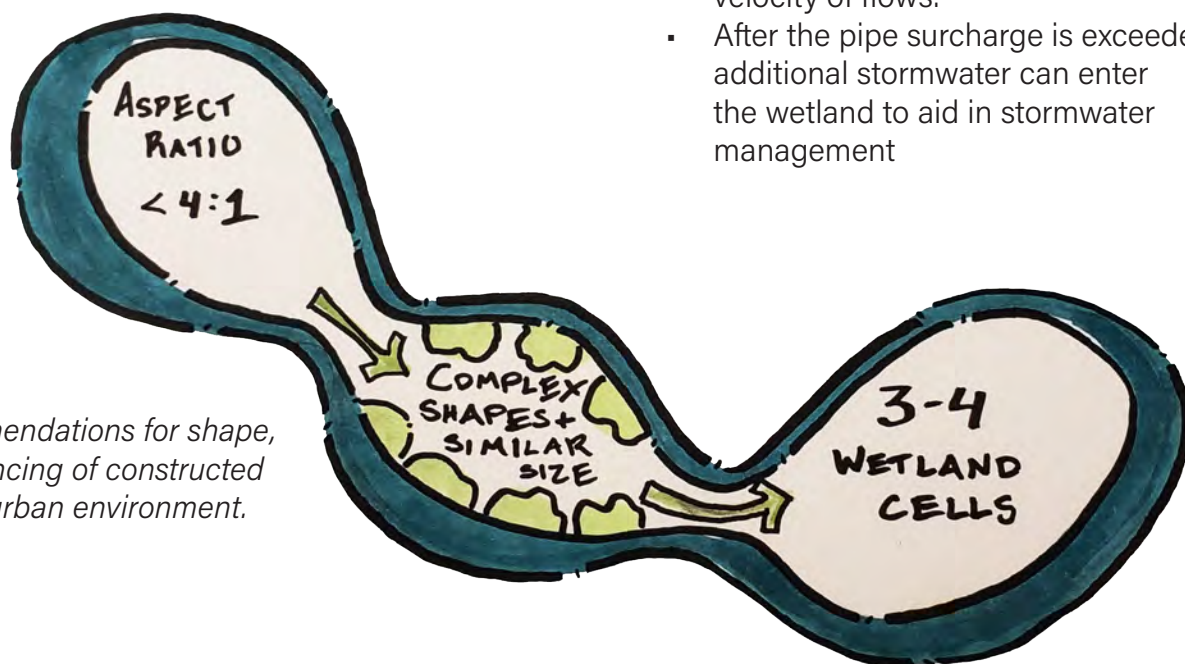
- Tidal
- Non-tidal
- Freshwater
- Saltwater

## How do urban wetlands work during a storm event?



To maximize flood mitigation benefits, the following inflow is recommended during storm events:

- First 5 mm of rainfall drains directly into the wetland area. This is often referred to as the 'first flush' and is the most polluted stormwater.
- Storage in pipe systems after the first 5mm of rainfall, but before pipe surcharge, is recommended to reduce damage to plants in the wetland from high volume and velocity of flows.
- After the pipe surcharge is exceeded, additional stormwater can enter the wetland to aid in stormwater management

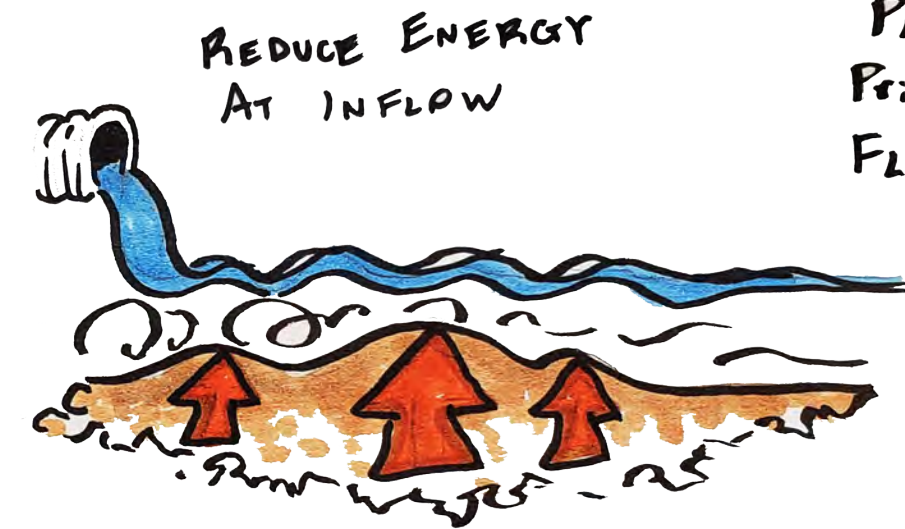


(Right) Recommendations for shape, size, and sequencing of constructed wetlands in an urban environment.

## What to consider when constructing an urban wetland?

The following are design principles to consider to maximize water quality and habitat creation in constructed urban wetlands:

- Site location
- Shape of wetland cells
- Number of wetland cells in a system
- Inflows
- Flow controls
- Outflows
- Sedimentation control
- Water depth
- Management and maintenance



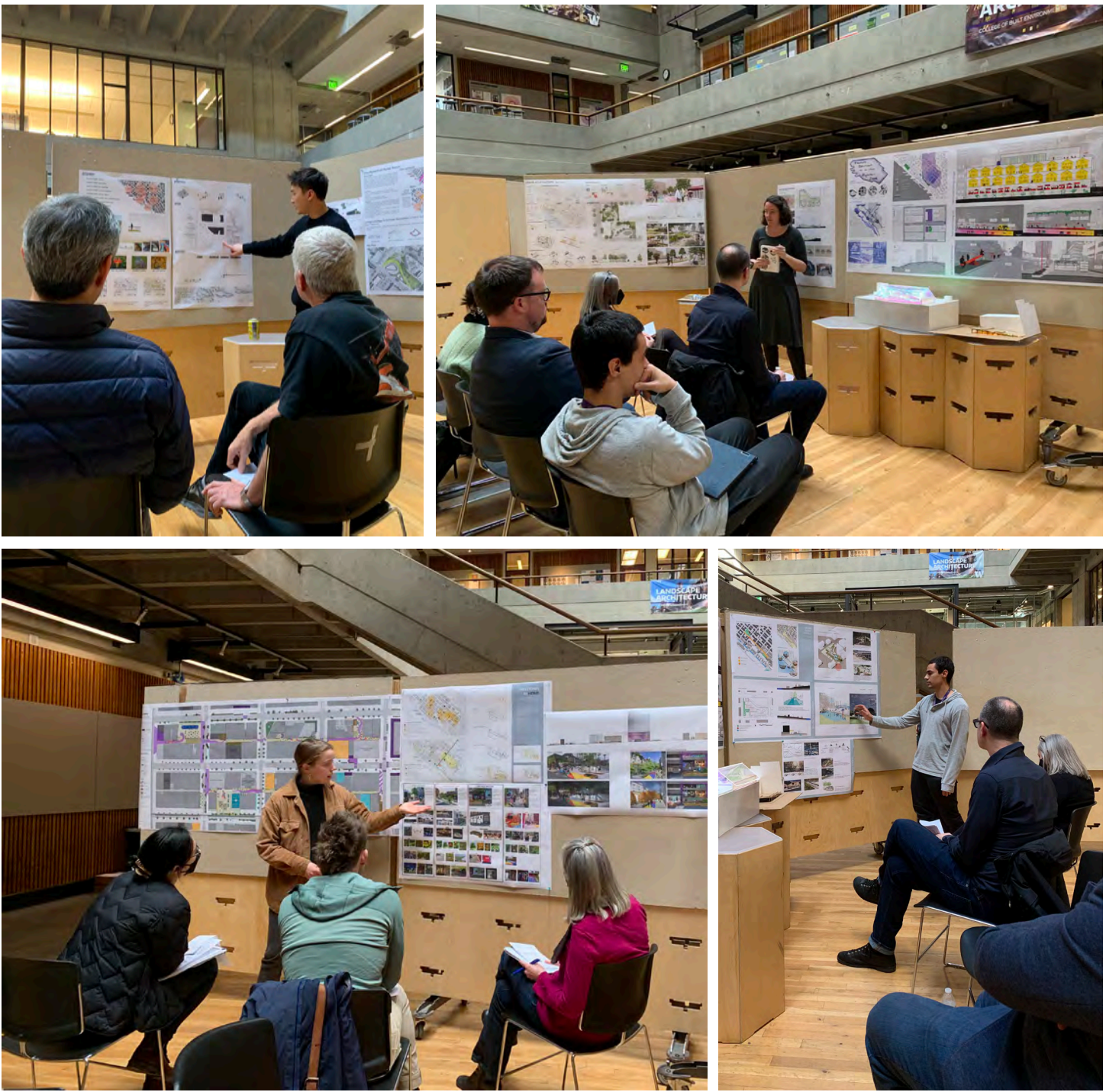
## Would an urban wetland work for Belltown?

Yes! There are a variety of opportunities for urban wetland construction in Seattle's Belltown neighborhood. Cascading through a series of pools down East-West oriented streets, sitting at more level spots near Denny Park, or even floating saltwater wetlands below Olympic Sculpture Park are all possibilities that will aid in habitat creation, stormwater management, and creating a more complex, livable urban fabric for Belltown.

# DESIGN PROPOSALS

During the first phase, groups of students identified a set of values and infrastructure framework in which to ground their scenarios proposal to envision the future of Belltown as a 15 min neighborhood. Then, each student has been working individually to develop a design project within these scenarios, which includes improving and increasing pedestrian and bike mobility, stimulating small businesses and retails to activate public space and provide a feeling of safety, contributing to population and ecosystem health.

These final designs were inspired and informed by a series of resources. They ranged from the principles of the 15 min neighborhood as introduced by C. Moreno and developed in several cities, exploration of precedents projects, the community desires explored through accompanied sites visits and walks through the neighborhood with Belltown residents, understanding the existing conditions and in-progress plans; and guidance from faculty and design professionals.

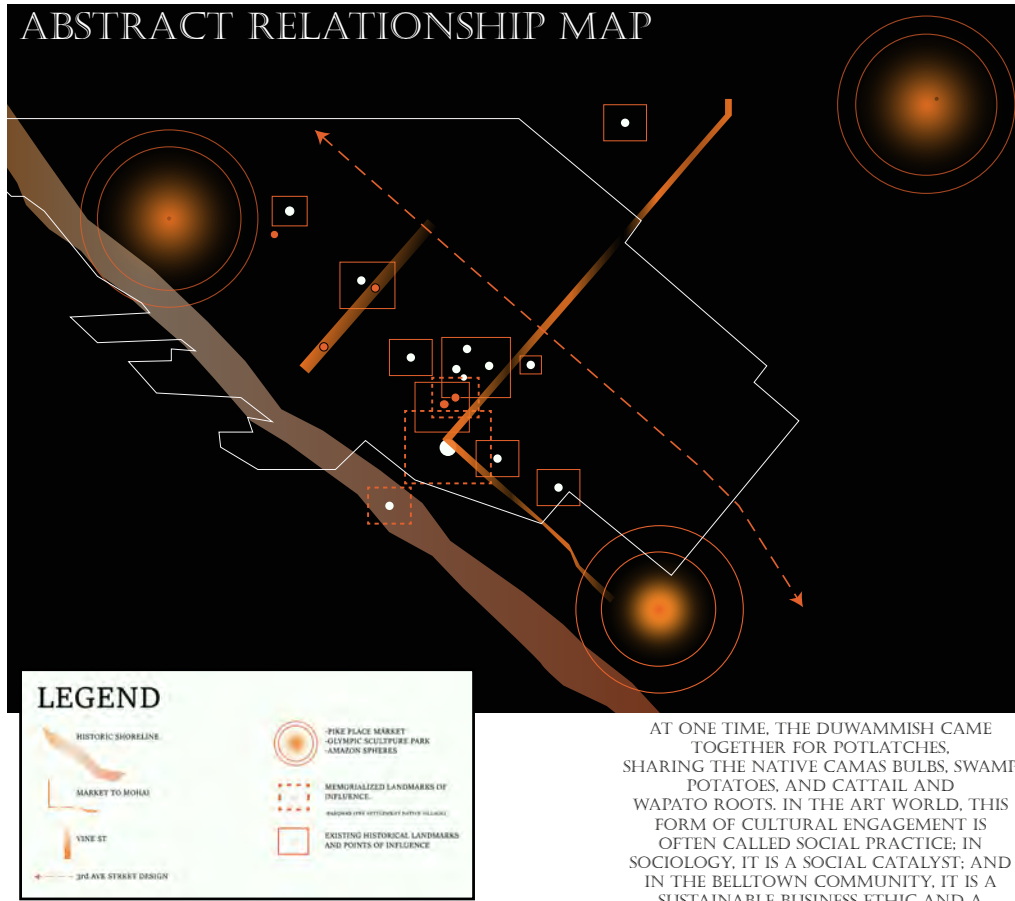


STUDIO FINAL REVIEW | March 6, 2023 | Photos by Laure Heland

-  **Belltown Village**  
*Shantol Morgan*
-  **Salish Coast Avenue**  
*Pedro Ramos*
-  **Ocean Platform**  
*Joe Yan*
-  **Belltown to Bee...**  
*Yixuan (Eve) Wang*
-  **The Rebirth of Portal Porch**  
*Yuqing Huang*
-  **Belltown as HOME**  
*Katherine Magee*
-  **Framing Belltown as an Urban Hyporheic Zone**  
*Jessike Gill*
-  **Art District in Belltown**  
*Tianyi Liu*
-  **Extended Post Alley**  
*Helen Arnold*
-  **Have Fun**  
*Roxie He*
-  **Belltown Public Park**  
*Ruthie Hoglen*
-  **Urban Acupuncture**  
*Bing Wan*
-  **Battery Park**  
*Sinong Wu*
-  **Bell Theater Park**  
*Alex Holbrook*
-  **A Breath of Belltown**  
*Hunter Ottman*

# BELLTOWN VILLAGE

SHANTOL MORGAN



AT ONE TIME, THE DUWAMMISH CAME TOGETHER FOR POTLATCHES, SHARING THE NATIVE CAMAS BULBS, SWAMP POTATOES, AND CATTAIL AND WAPATO ROOTS. IN THE ART WORLD, THIS FORM OF CULTURAL ENGAGEMENT IS OFTEN CALLED SOCIAL PRACTICE; IN SOCIOLOGY, IT IS A SOCIAL CATALYST; AND IN THE BELLTOWN COMMUNITY, IT IS A SUSTAINABLE BUSINESS ETHIC AND A BELLWETHER FOR LOCAL CIVIC URBANISM. -BUSTER SIMPSON

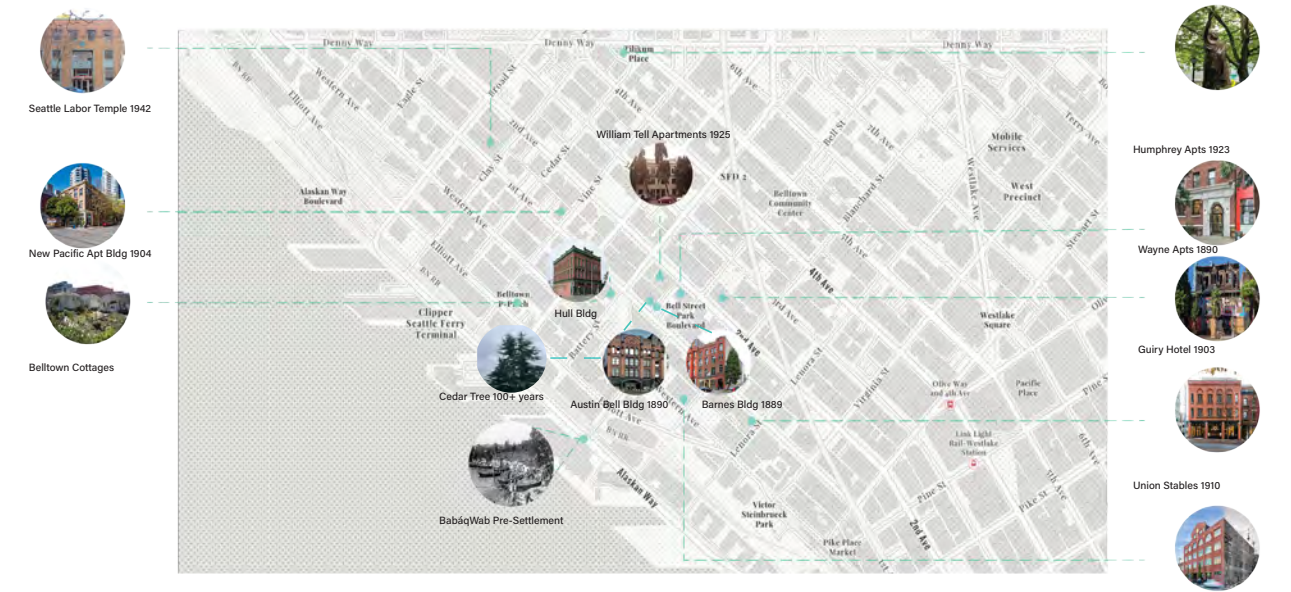
## NATIVE VILLAGE MODEL



CEDAR TREES PROVIDED FUEL, CLOTHING, SHELTER AND TRANSPORTATION. CANOES AND PADDLES CARVED FROM... WATERPROOF CLOTHING, HATS AND BASKETS MADE FROM THE BARK... LONGHOUSES SHELTERED SEVERAL FAMILIES MADE THE CEDAR TREE TEMPORARY VILLAGES DOTTED THE SHORELINE DURING THE SPRING AND FALL FISH RUNS

THE NATIVE POPULATION DEPENDED ON THE CONNECTION BETWEEN THE SEASONAL RHYTHM OF LIFE, THE SHORELINE AND OPEN WATER FOR SUSTENANCE, TRANSPORTATION, COMMUNICATION AND TRADE...

## HISTORICAL & ECOLOGICAL LANDMARKS



## PROPOSED, EXISTING & IN PROGRESS PLANS

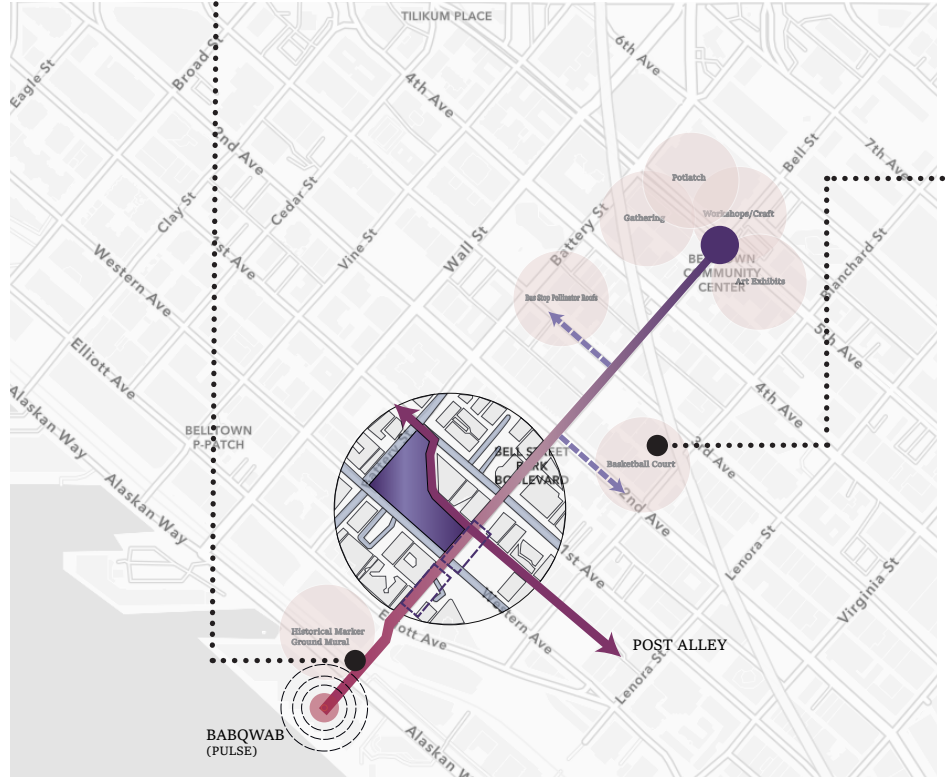


## 15 MINUTE FRAMEWORK

BELL STREET PEDESTRIAN BRIDGE



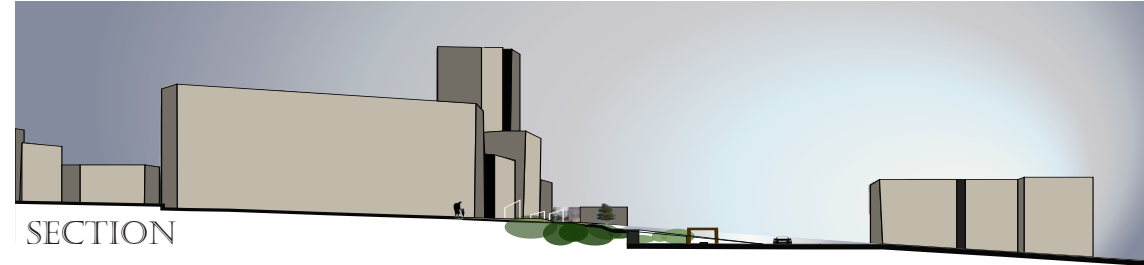
INDIGENOUS ART INSTALLATIONS & MURALS



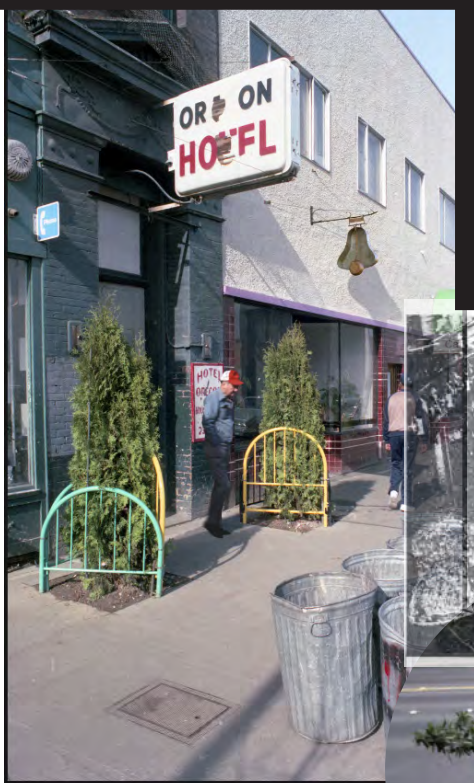
BASKETBALL COURT

MOUNDS: SEATING, EXPLORING, PLAY

CAST IRON TREEGUARDS FROM MOLDS OF HISTORIC RELICS (BEDFRAME AND CRUTCH) WHICH WERE PART OF AN EARLIER VERNACULAR.



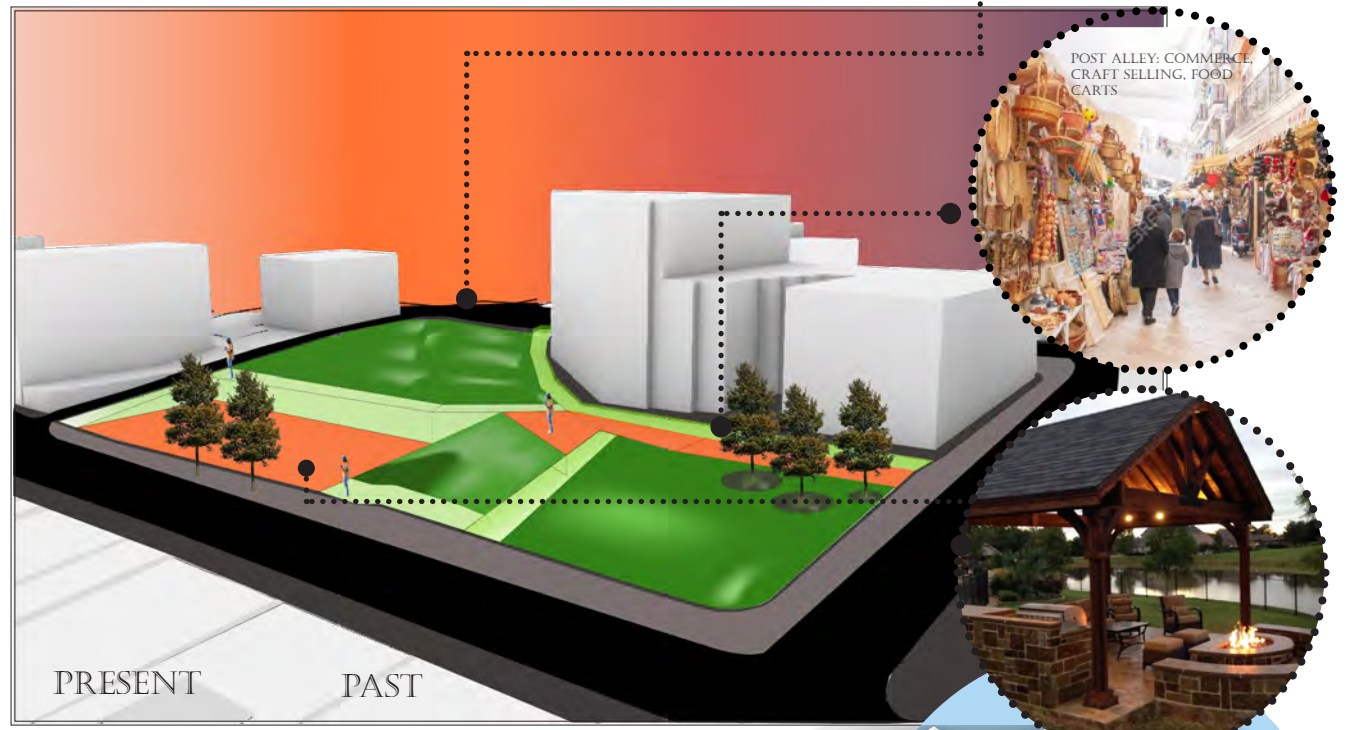
SECTION



Saturday, February 7, 1981 The Seattle Times A 9  
**At the sign of the bell, they root for tradition**  
 By Dan Duncan  
 Times staff reporter  
 The Belltown Bell's bell-shaped copper sign, with the copper copper, is hanging in front of the building again after a day to the end.  
 Two years ago the bell of the previous sign was at 230 First Ave. decided to have the sign down every year on Groundhog Day.  
 They would use it to mark an enormous "root pie."  
 This year's pie featured roses, pine, pistachio, carrots, mushrooms, celery, green onions and white potatoes. "Things that come out of the ground," said Dan Marko, who owns the cafe along with Pat Lane and PEG Maloney.  
 Susan Stronach, who manages the sign and water, who she constructed it, went about 1000 who paid \$100 for root pie, including a full-sized bell-shaped root pie.  
 "It's really just getting started," said Marko, pointing out a variety of the work he had done this year.  
 "I just finished the bell, and we spent a huge percentage of our gross for art that the 1 get out of the city," Marko said.  
 The copper bell survives the street scene. Patricia, who designed the sign, is proud of the pie, and leaves.



SRO TREE GUARD PROTECTING GINKGO TREE ALONG WITH AN UNDERSTORY OF VOLUNTEER PLANTS, 2018 FIRST AVENUE. PHOTO: B. SIMPSON. CIRCA 1983.



PRESENT

PAST



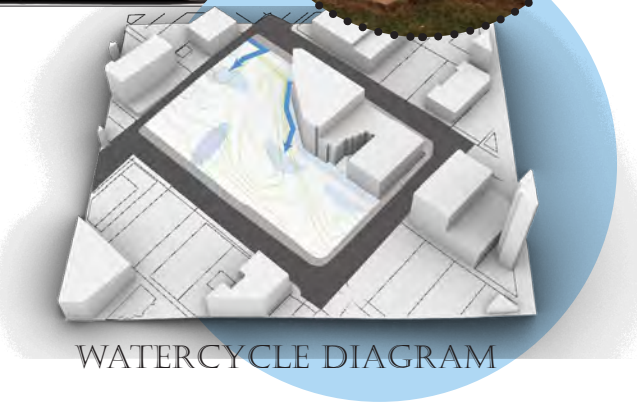
POST ALLEY: COMMERCE CRAFT SELLING, FOOD CARTS



ELEVATED CISTERNS FOR WATER REDISTRIBUTION



WHALE BONE DRAINAGE ALONG LONGHOUSES

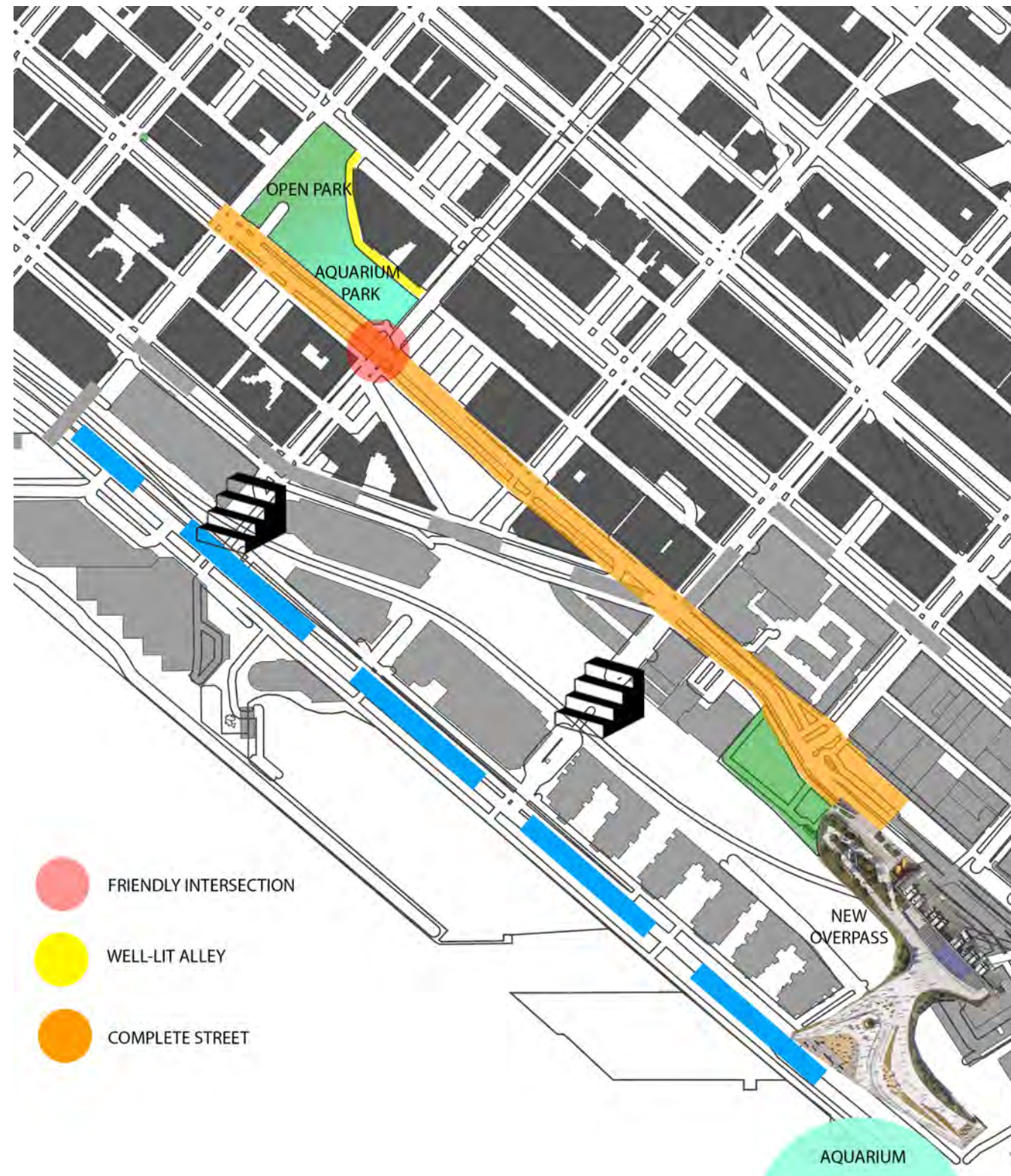


WATERCYCLE DIAGRAM

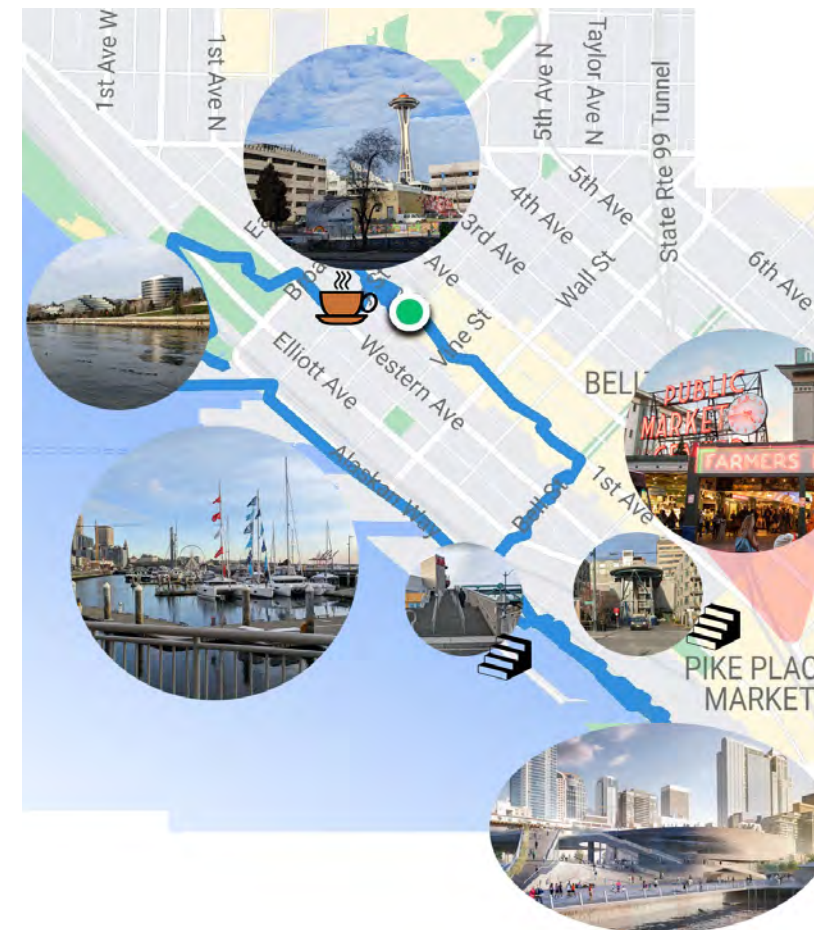
BUSTER SIMPSON PRECEDENTS

BELLTOWN VILLAGE

SALISH COAST AVENUE PROPOSAL



BELLTOWN MOBILITY MAP



BELLTOWN STROLL MAP

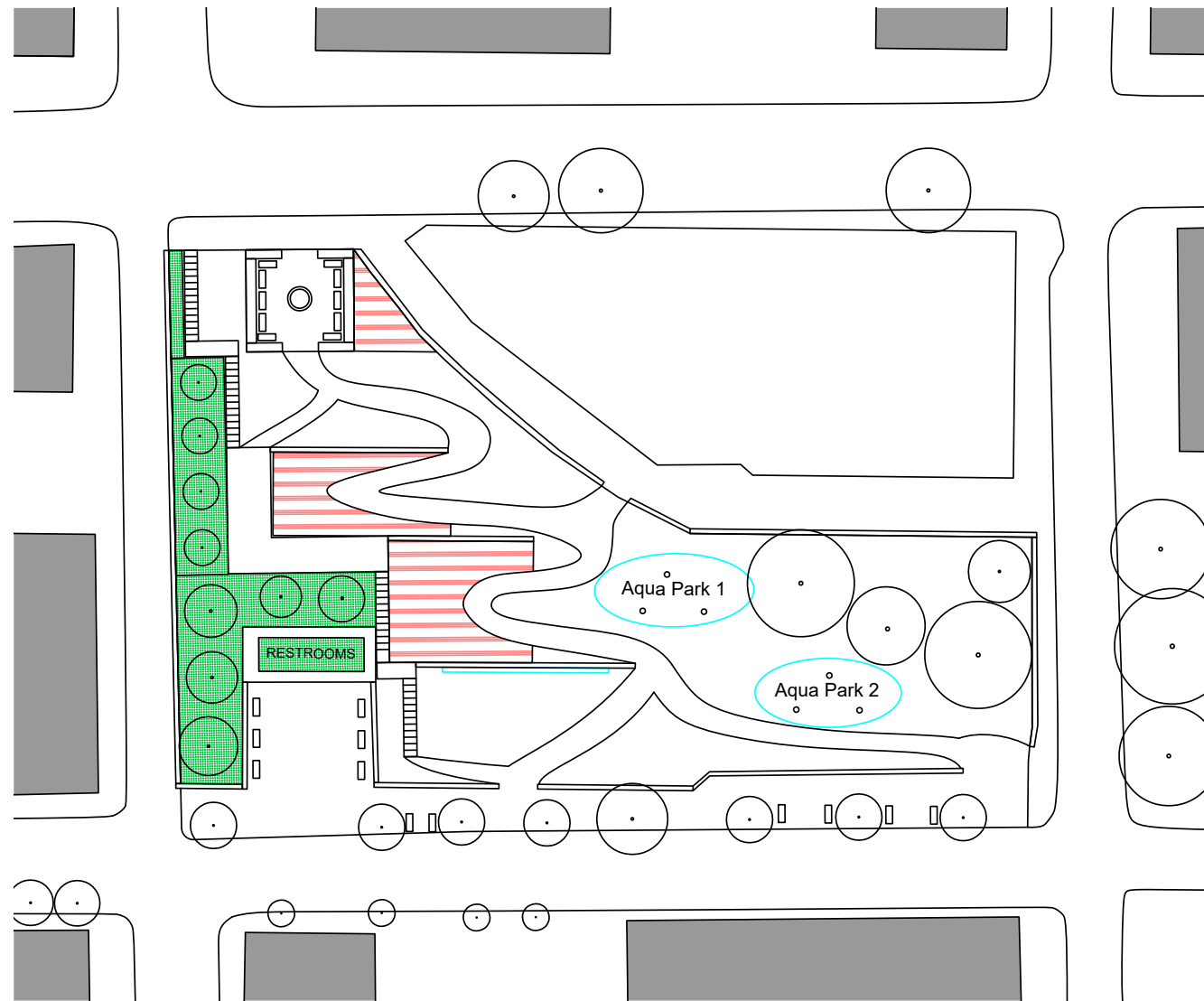
# SALISH COAST AVENUE

REMODEL OF WESTERN AVENUE AND PORTAL PARK

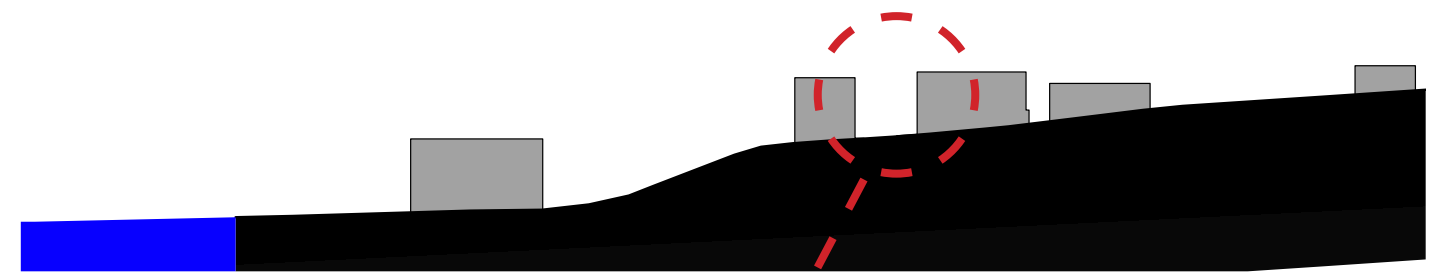
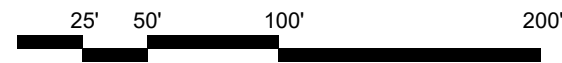
PEDRO RAMOS

The introduction of Salish Coast Avenue is a means to connect Western Avenue to the waterfront below. The portal park will be turned into an aquarium park to create a circuit with the new aquarium overpass that is being built. Western Avenue will be turned into a complete street between the two points to promote street activity. Along Western Avenue will be pockets of interaction that are related to the Salish Coast; for example, information signage about marine life, art, water fountains and sprinklers for children etc.

PORTAL PARK PLAN

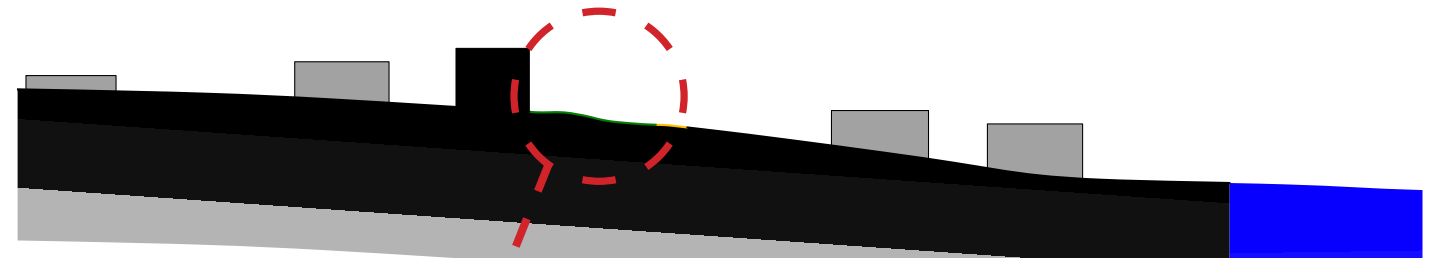


- STORM WATER MANAGEMENT
- FLOWERS/PLANTINGS
- WATER ELEMENTS

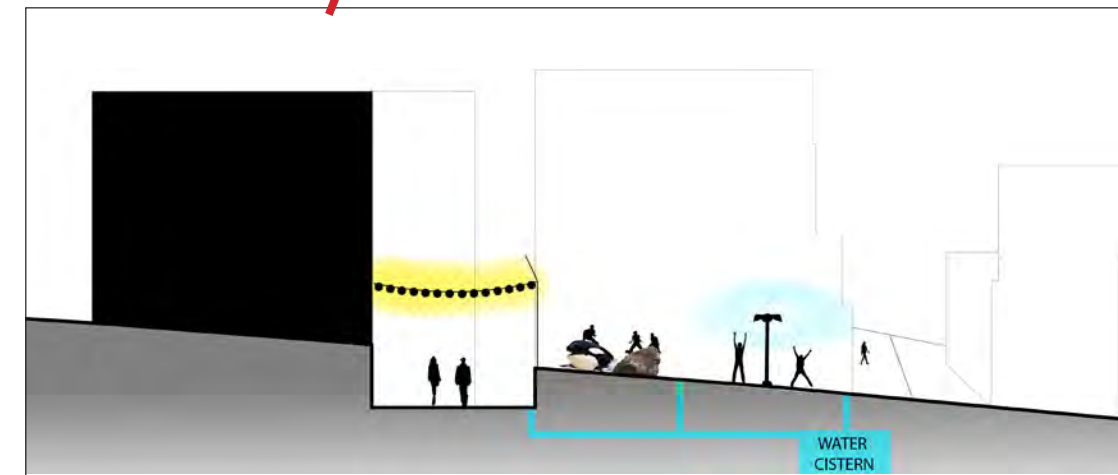


COMPLETE STREET PEDESTRIAN ELEMENTS:

- 1) FRONTAGE ZONE - EXTENSION OF THE BUILDING WITH ACCESS TO ENTRANCES
- 2) PEDESTRIAN THROUGH ZONE - 8-12 FEET FOR PEDESTRIANS TO WALK THROUGH
- 3) STREET FURNITURE/ CURB ZONE - SPACE FOR LIGHTING, BENCHES, BIKE PARKING ETC.
- 4) ENHANCEMENT BUFFER ZONE - SPACE FOR BIKE LANE, PARKLETS, STORM WATER MANAGEMENT ETC.



NEW PARK SECTION





STORM WATER MANAGEMENT - BIORETENTION CELLS AND RAINWATER CATCHMENT GARDENS USED TO CAPTURE AND CLEANSE STORM WATER



URBAN VEGETATION - PLANT BOXES, STREET TREES AND GREEN ROOFS REINTRODUCE PERMEABLE SURFACES TO DEVELOPED AREAS



INTERSECTION REPAIR - BRIGHTLY PAINTED INTERSECTIONS COMMUNICATE TO CARS THAT THEY ARE ENTERING A PLACE OF NEIGHBORHOOD IMPORTANCE. THE PROCESS OF MAKING THESE ALSO HAS A BIG IMPACT; ONCE THE PROCESS BEGINS, NEIGHBORS TAKE IT UPON THEMSELVES TO IMPROVE THE SCENE.

WATER PLAY ZONE

STREET LIGHTING

VEGETATION



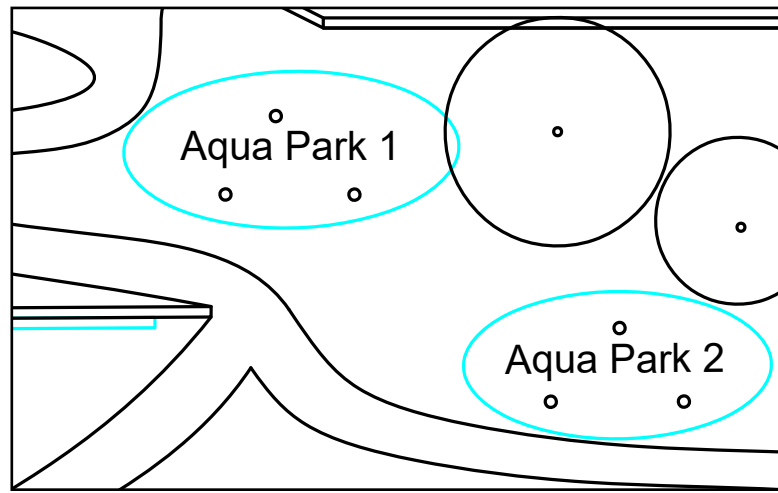
CLIMATE TILE

ACCESS TO PUBLIC TRANSPORTATION

PUBLIC SEATING

SALISH COAST AVENUE

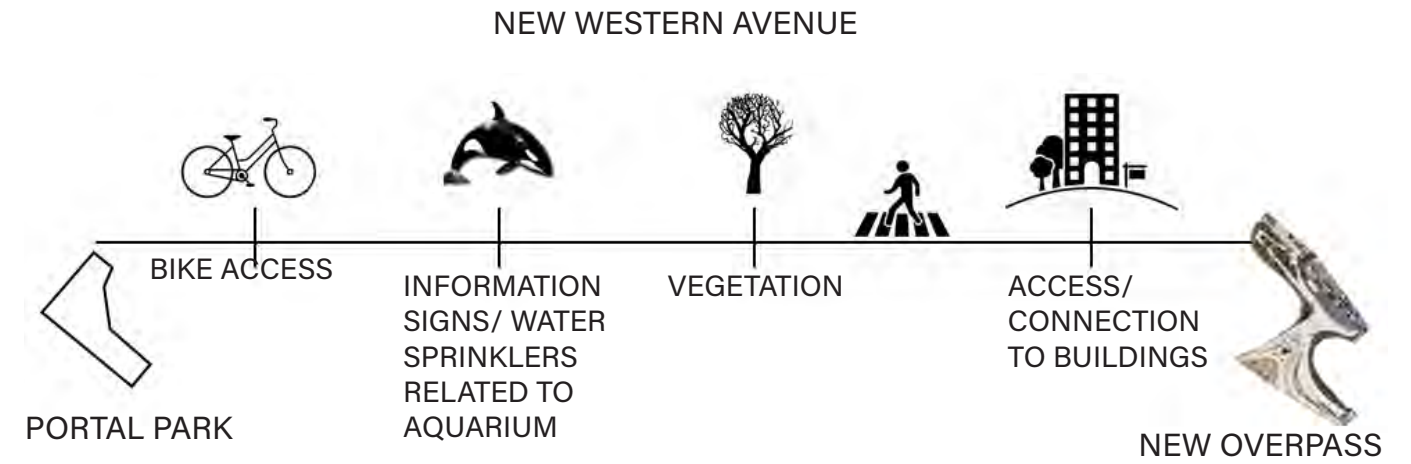




AQUARIUM PARK PLAN



WATER PLAY ZONE-  
WADING POOLS, SPAY PARKS, ETC.



COMPLETE STREET STRATEGIES



TRIANGLE PLAZA-  
POTENTIAL INTERVENTION AT A DIAGONAL INTERSECTION TO TURN INTO AN URBAN PLAZA WHERE THERE WAS ONLY UNUSED ASPHALT.



LINEAR PARKS-  
OCCUPY PART OF THE RIGHT OF WAY AND TURN STREETS INTO URBAN ROOMS



STREET VEGETATION/ SEATING-  
STREET VEGETATION CAN HELP MANAGE STORM WATER RUNOFF AND STREET FURNITURE CAN KEEP PEOPLE OCCUPYING THE STREETS



CLIMATE TILE-  
THE CLIMATE TILE CAPITALIZES ON MAKING NON PERMEABLE PAVEMENT PERMEABLE. WATER CAN BE HELD TO REDUCE DOWNSTREAM FLOODING AND BE FILTERED THROUGH THE TILE AND BACK INTO THE URBAN WATER SYSTEM



RAINWATER MANAGEMENT-  
ABILITY TO CATCH AND MANAGE EXCESSIVE RAINWATER



WATER FOUNTAINS

# OCEAN PLATFORM

PUBLIC SPACE FOR REST

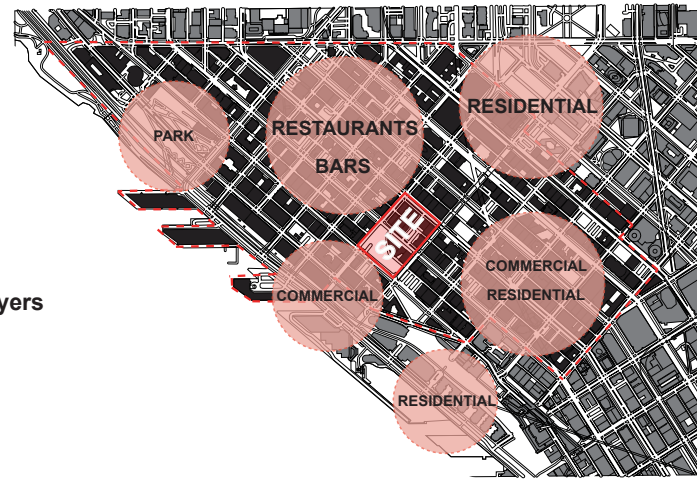
JOE YAN

This design is a platform providing people with a public space and rest space. In Belltown currently, there is very little public space, and residents need to walk many blocks to access parks and the waterfront for activities and rest.

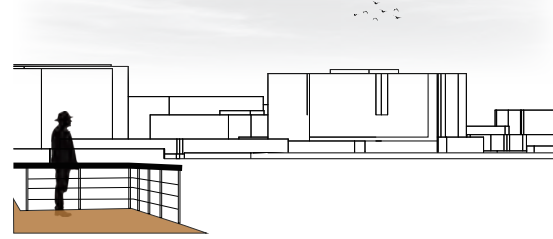
Responding to the high demand for public space in Belltown, this project transforms the portal porch into two floors, adding more space for residents to enjoy rest and activities. The first floor is a natural space where people can choose to move freely on the green space, play Frisbee, gather with family or friends, or walk the dog. The second floor is the people's public space, for rest, sitting and lying down, or drinking coffee. With both natural green space and public rest space, local biodiversity will grow and Belltown residents will have plenty of space for rest and activity.

## CONTEXT

- Lack of public space
- Lack of native greenery
- Lack of space for activities
- Lack of street cultural facilities
- Increase open public space
- Turn the portal porch into a double layers
- First layer as a natural landscape
- Second layer as public space



## COLLAGE



## PLANT SELECTION



VINE MAPLE



RED COLUMBINE

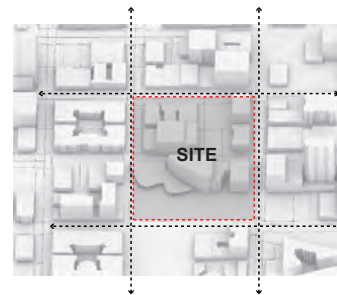


COMMON CAMAS

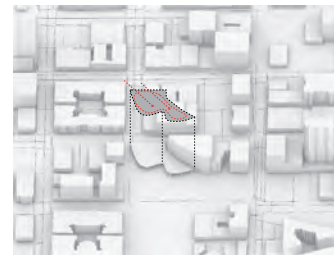


BIG LEAF MAPLE

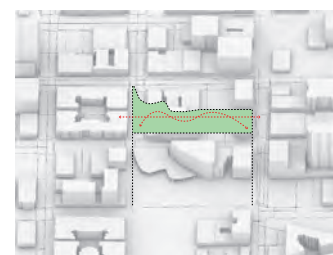
## GENERATION



Need more efficient pedestrian traffics, and more public spaces



Creating a space above the ground to introduce flow into the site

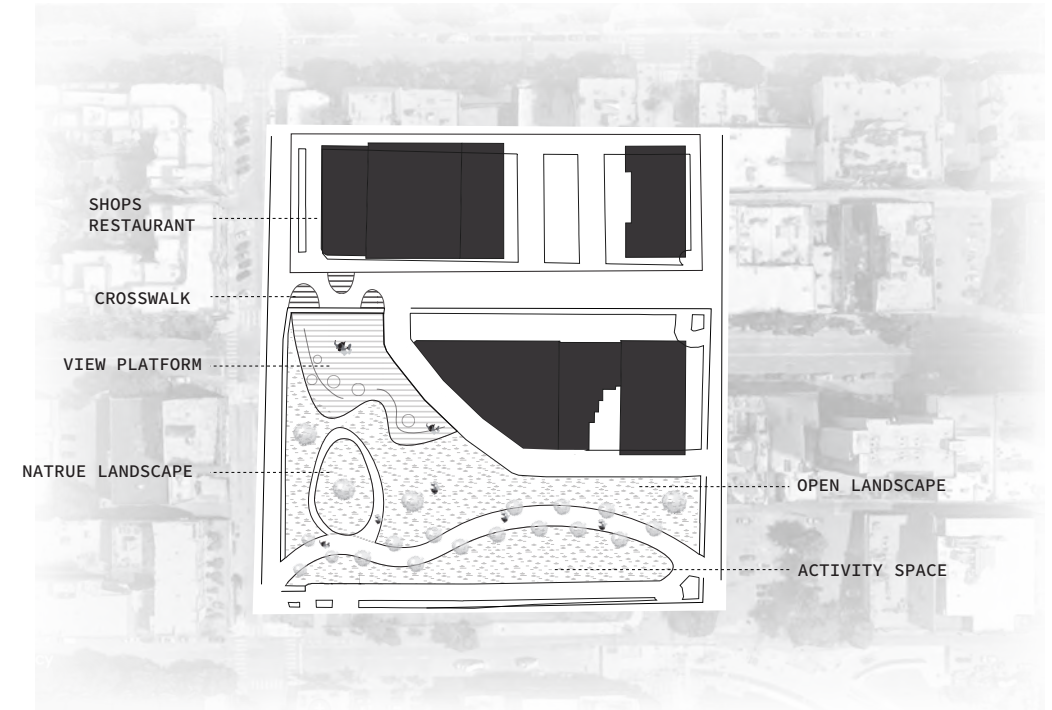


New space improve people's activities and increase more green spaces

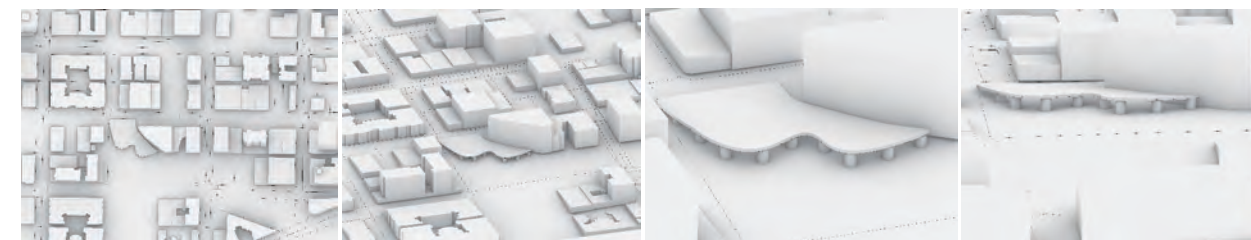
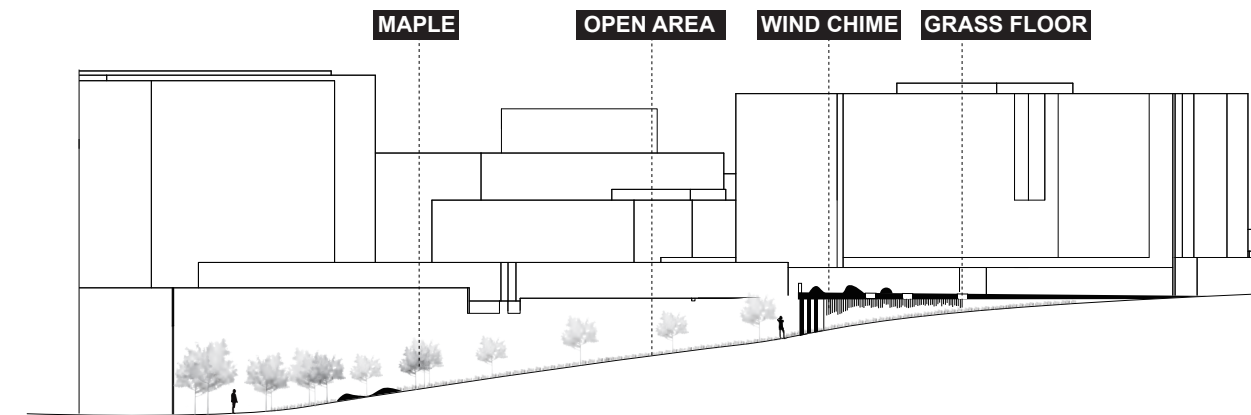
## FUNCTION



## PLAN



## SECTION

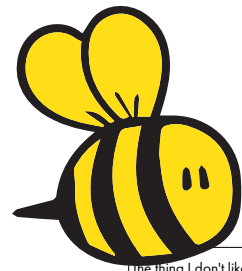


# BELLTOWN TO BEE...

IMAGINING A ECO-FRIENDLY FUTURE NEIGHBORHOOD

YIXUAN WANG (EVE)

What kind of neighborhood will Belltown be in the next ten to twenty years? The vision of Belltown is always changing and evolving, but recently, that vision has been affected by many prominent issues. Belltown, just like many post-Covid neighborhoods, is recovering from the pandemic. The streets are much more empty than before 2020, and because of this, streets become less well-maintained and more dangerous. In this project, I will provide a future vision for Belltown neighborhood from small-scale interventions using the 15-minute city framework as conceptual framework as well as the superblock concept as a physical framework. What will Belltown be like from the vision of a bee? How can we restore its vitality and vibrancy through restoring the urban ecosystem in Belltown?



Tell me about Belltown...what is this place? I want to know, buzz...

The thing I don't like about this area is the roof top situation. Look at all these apartments. Some of them have great rooftops, but most are just elevators. I would love to see more greens from my condo, but ADA makes it hard to approve new rooftops.

This is the old Labor Temple. It's currently a shared office space. Super cool private courtyard. The light was from the vent of the old building.

Tilikum Place Plaza. Poorly maintained, but people use it a lot. Think about why it's not the case for private plazas we visited

This private corporate courtyard... nicely done and maintained, never used

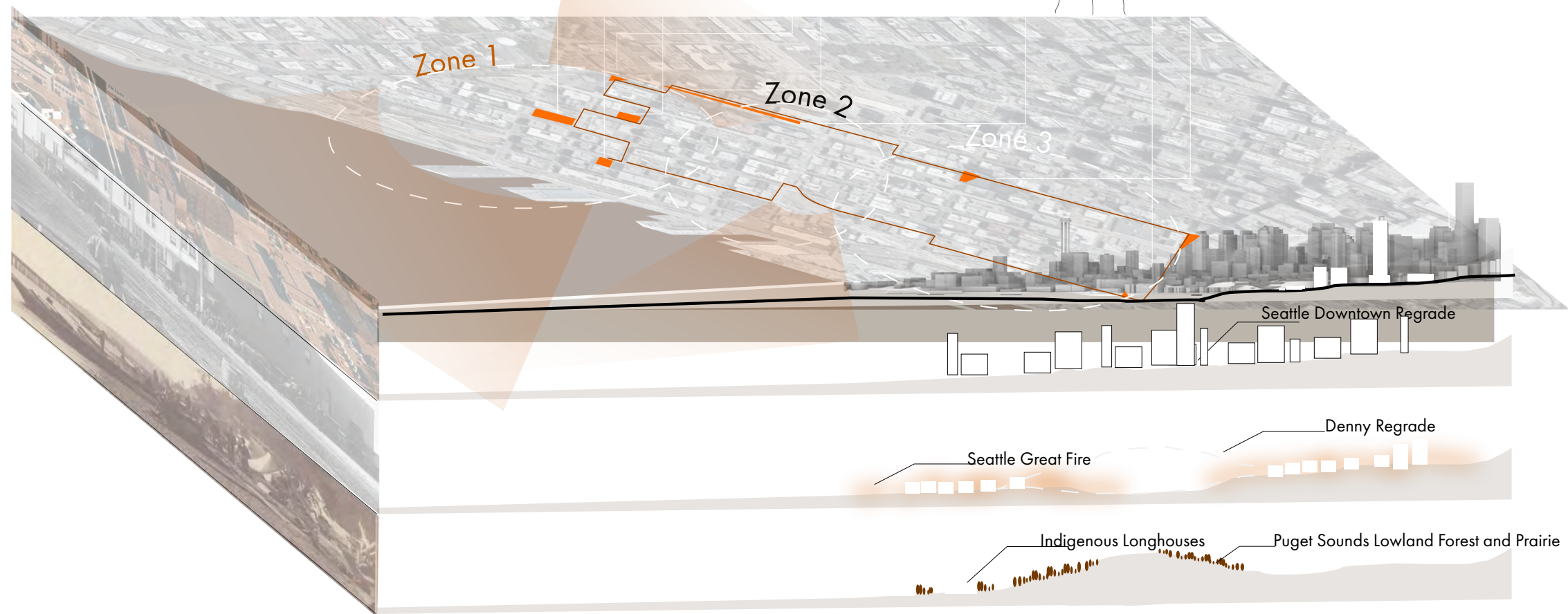
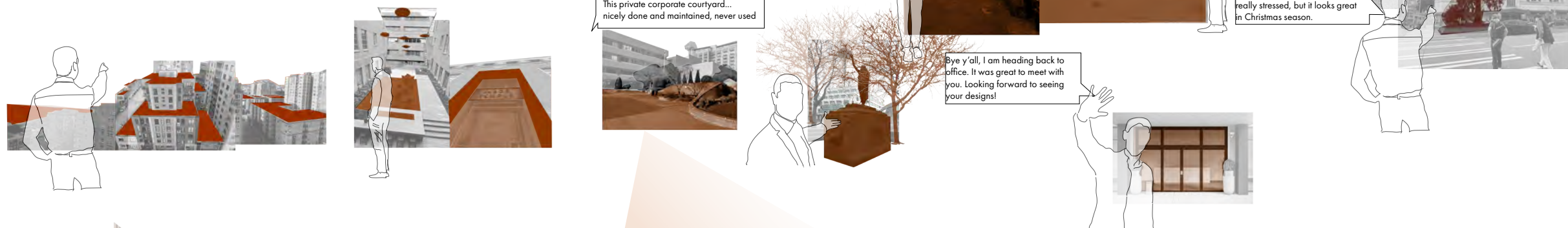
Alley between old buildings are always a problem... Trash everywhere, and not safe at night. Great shortcuts though.

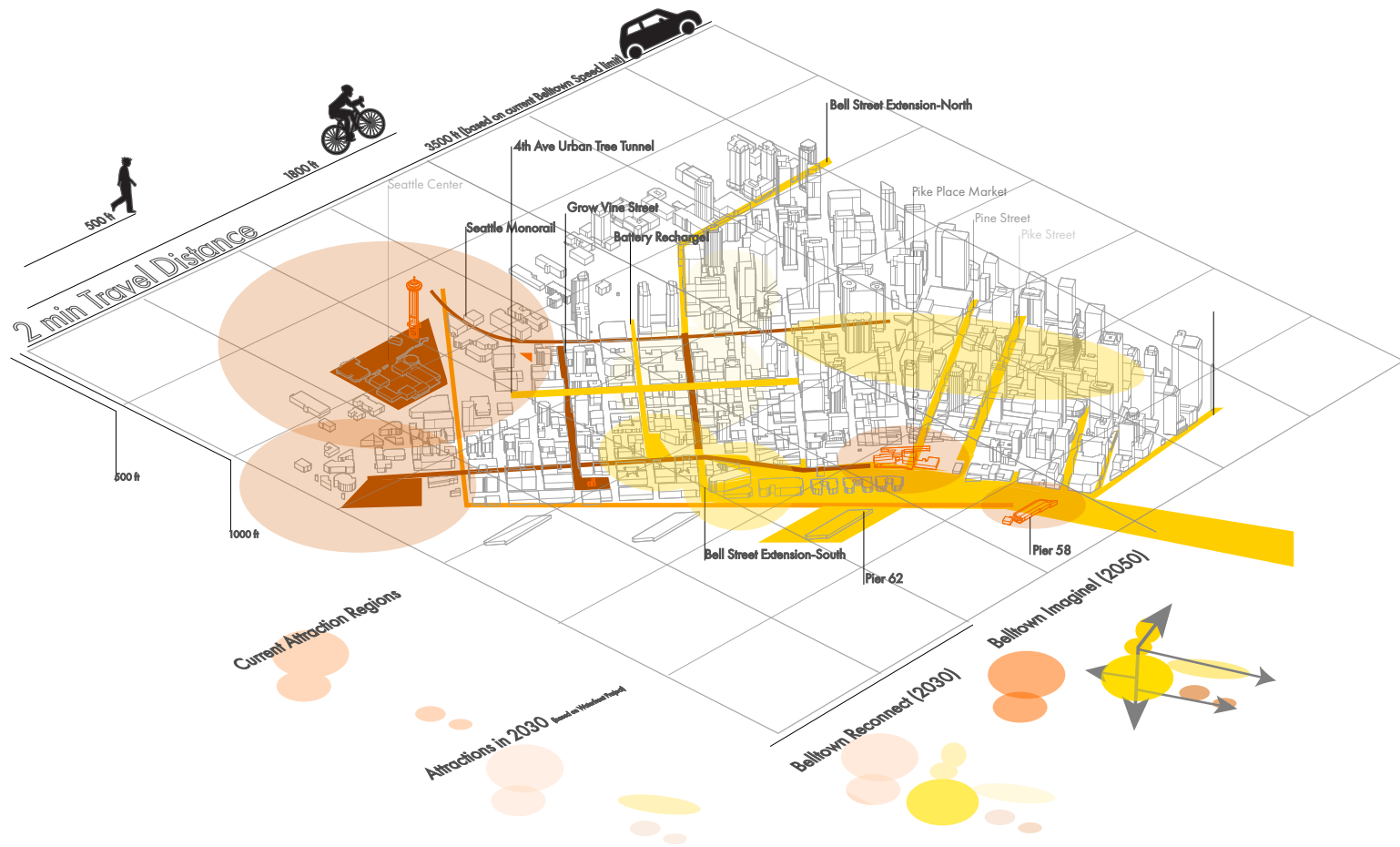
This alley was purchased by this property owner and became a courtyard (parking lot)

This plaza is technically a private plaza, but it's open to the public before COVID. They closed it with this plant trellis recently to keep people out

This tree in the middle of the road is owned by SDOT. It's at a wrong location obviously, really stressed, but it looks great in Christmas season.

Bye y'all, I am heading back to office. It was great to meet with you. Looking forward to seeing your designs!

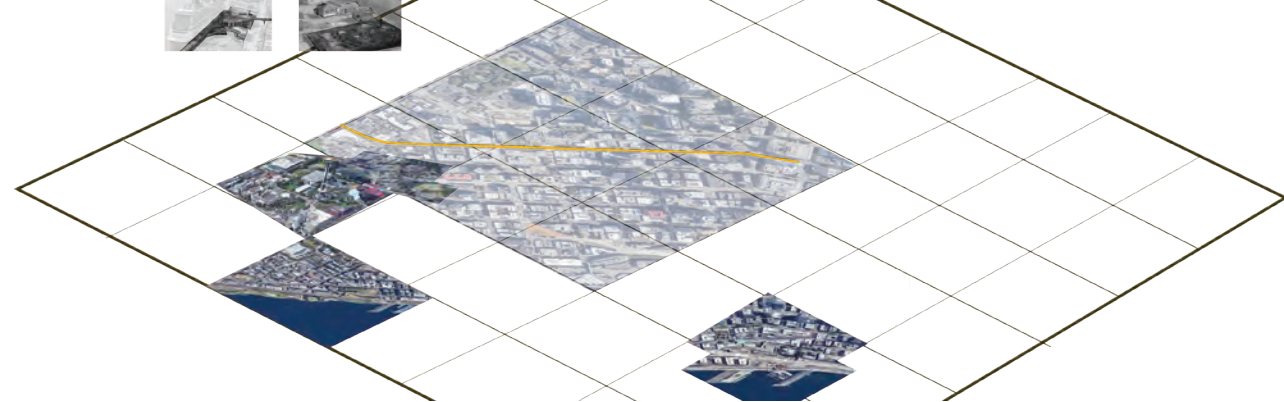
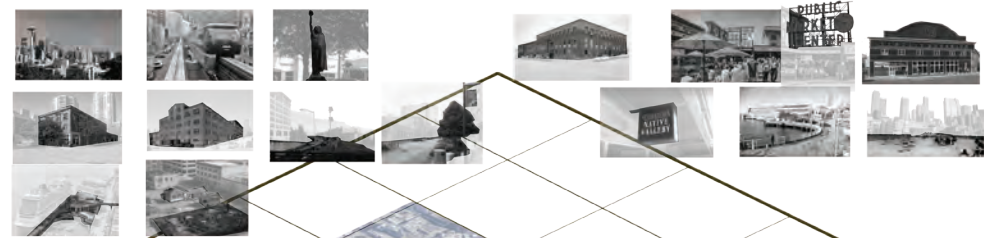
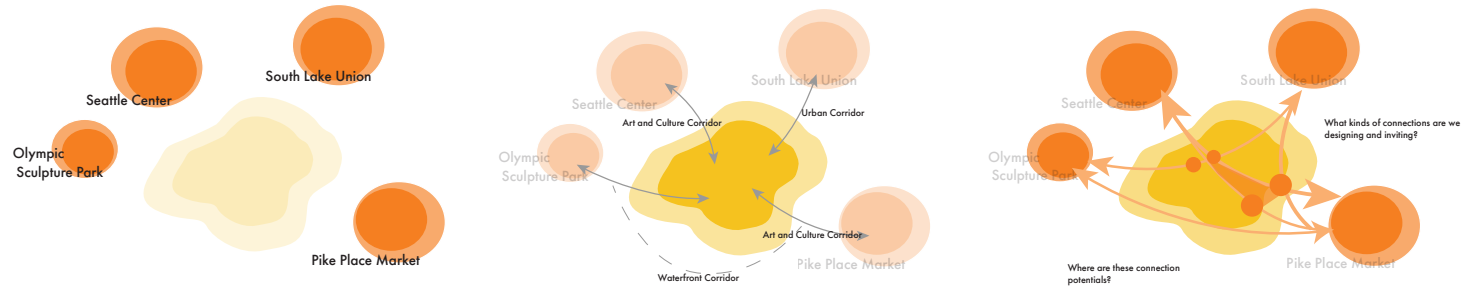




CURRENT ATTRACTIONS WITHIN 15 MIN

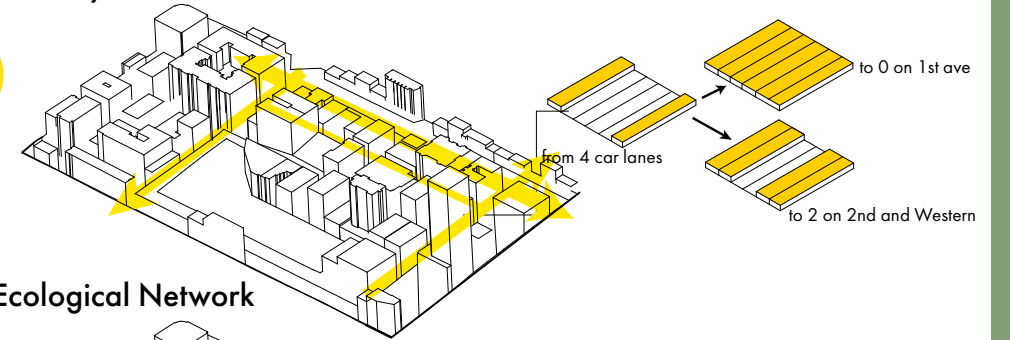
CONNECTION CORRIDORS

CONNECTION POTENTIALS IN BELLTOWN

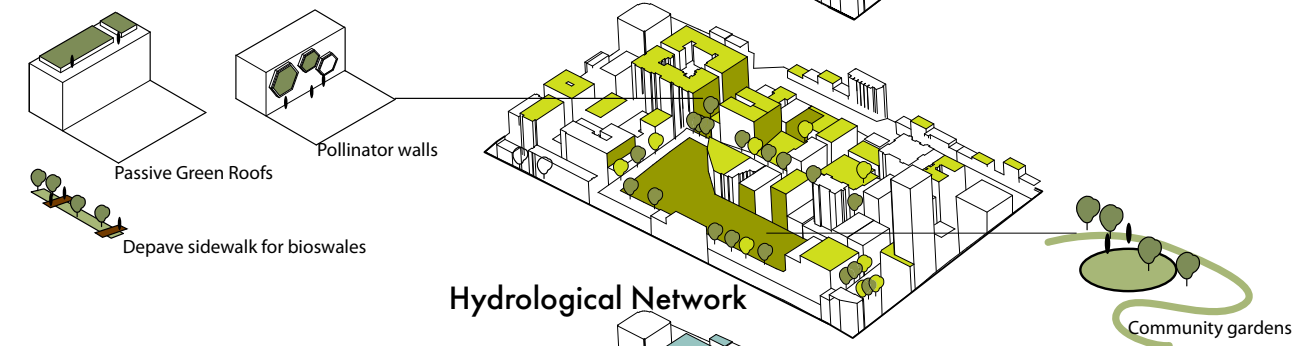


Buzz buzz...  
So how will you design for Belltown bee community?

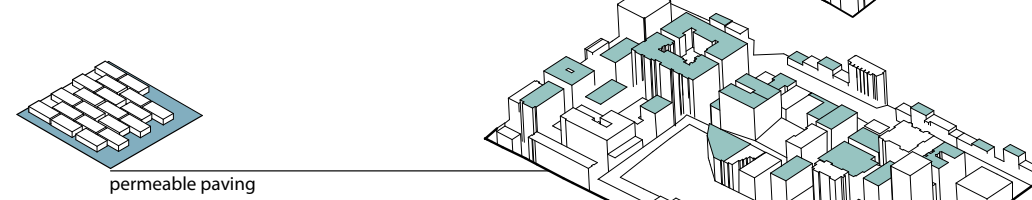
### Mobility Network



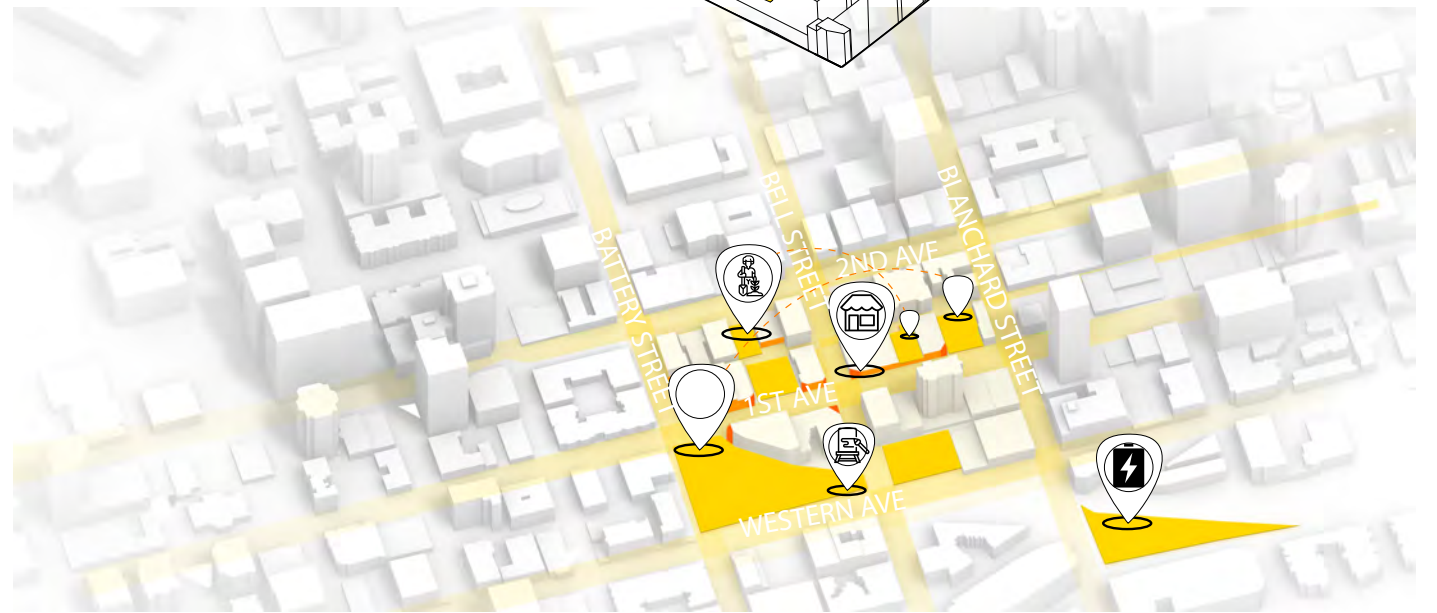
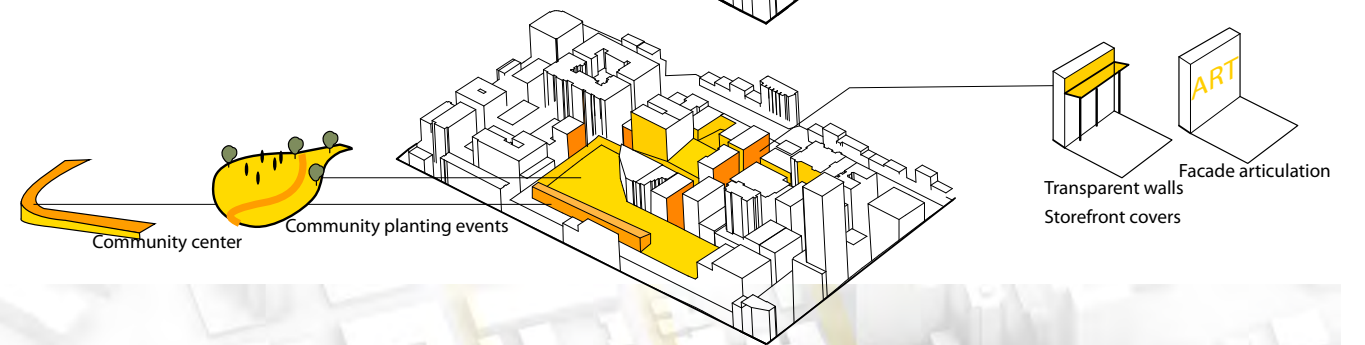
### Ecological Network



### Hydrological Network



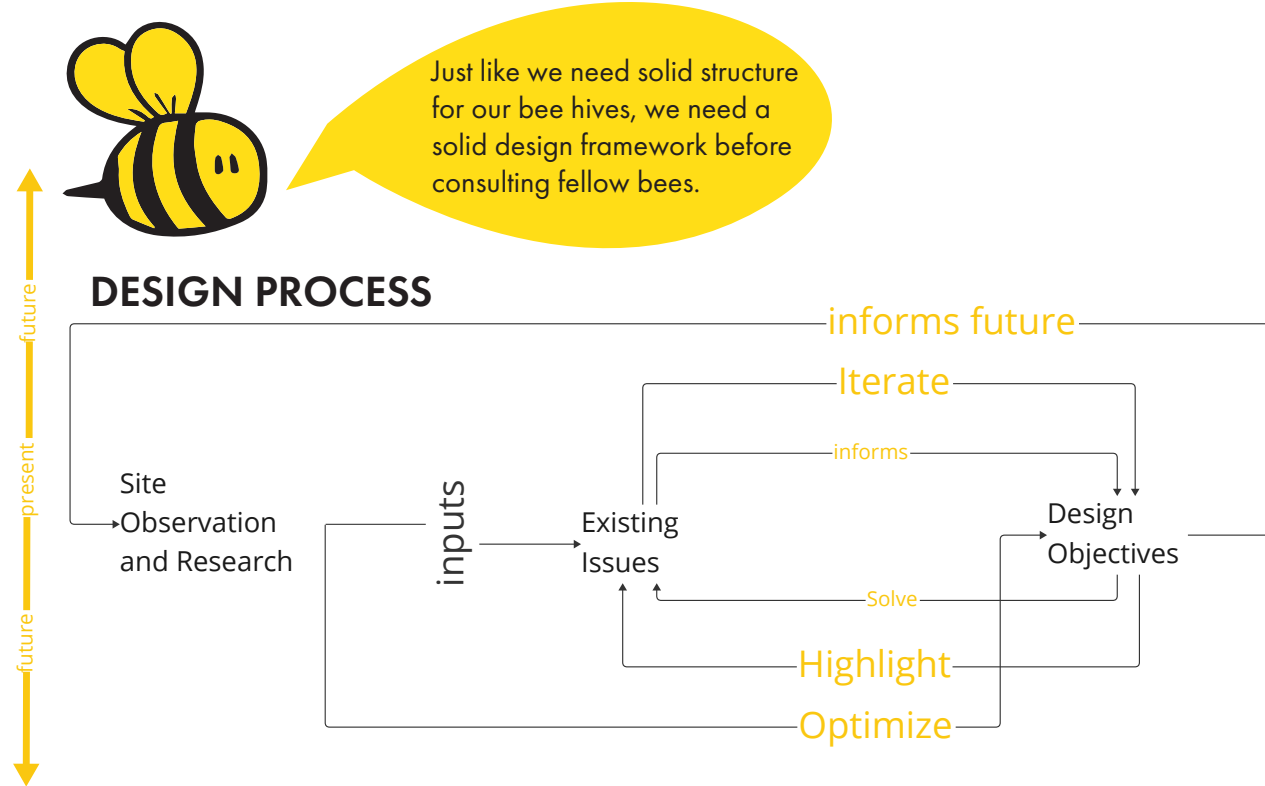
### Social Network



BELLTOWN TO BEE...

## SPATIAL AND TEMPORAL STRATEGIES

phase 0.5	phase 1	phase 2	phase IMAGINE!
parklet	rooftop garden	rooftop farming	
depaving	moss garden Floating pavers	community center and healthcare center	
planting	more depaving	repave allies	
tactical urbanism	community farm and garden new road pavement for lower speed remove traffic light	street and Ave GSI	
objective: encourage imaginative effort through starting with smaller projects, defining initial sites	objective: define Belltown specific Super block model and push forward design-build effort	next phase of greening effort that focus on bringing back relationship people have with streets and the neighborhood	



### GREEN ROOF AND FACADE NETWORK

Develop a series of extensive green roof for storm water harvesting and attracting wildlife for healthier urban ecosystem.

### SPONGE STREETS

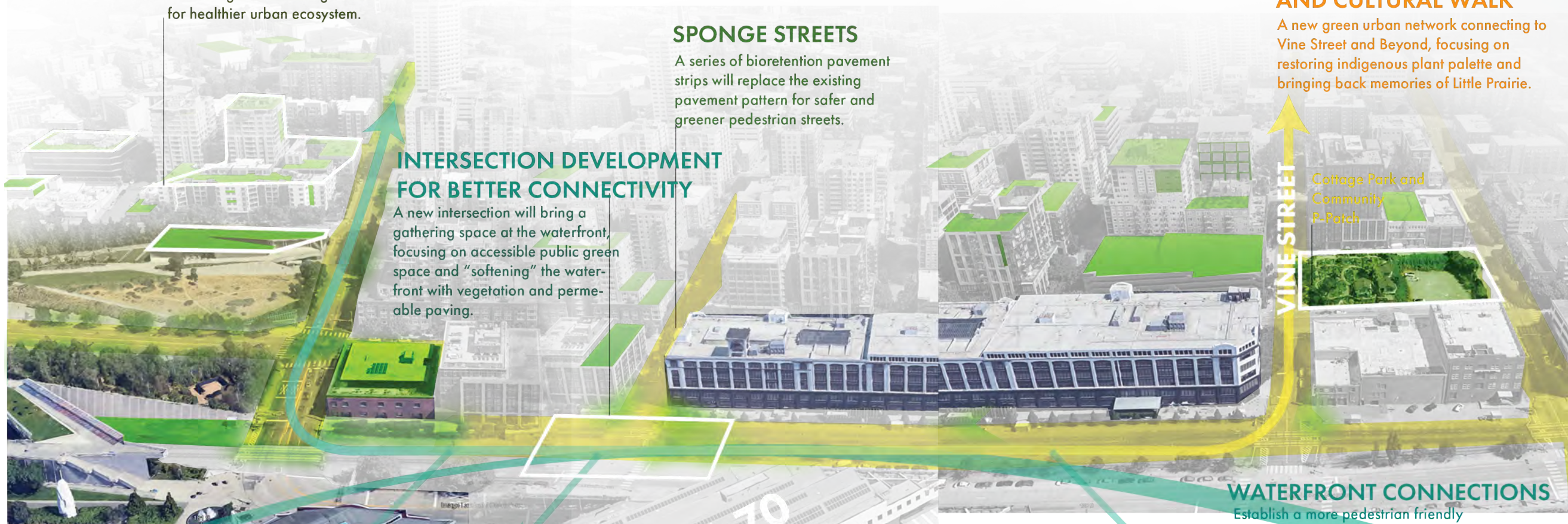
A series of bioretention pavement strips will replace the existing pavement pattern for safer and greener pedestrian streets.

### INTERSECTION DEVELOPMENT FOR BETTER CONNECTIVITY

A new intersection will bring a gathering space at the waterfront, focusing on accessible public green space and "softening" the waterfront with vegetation and permeable paving.

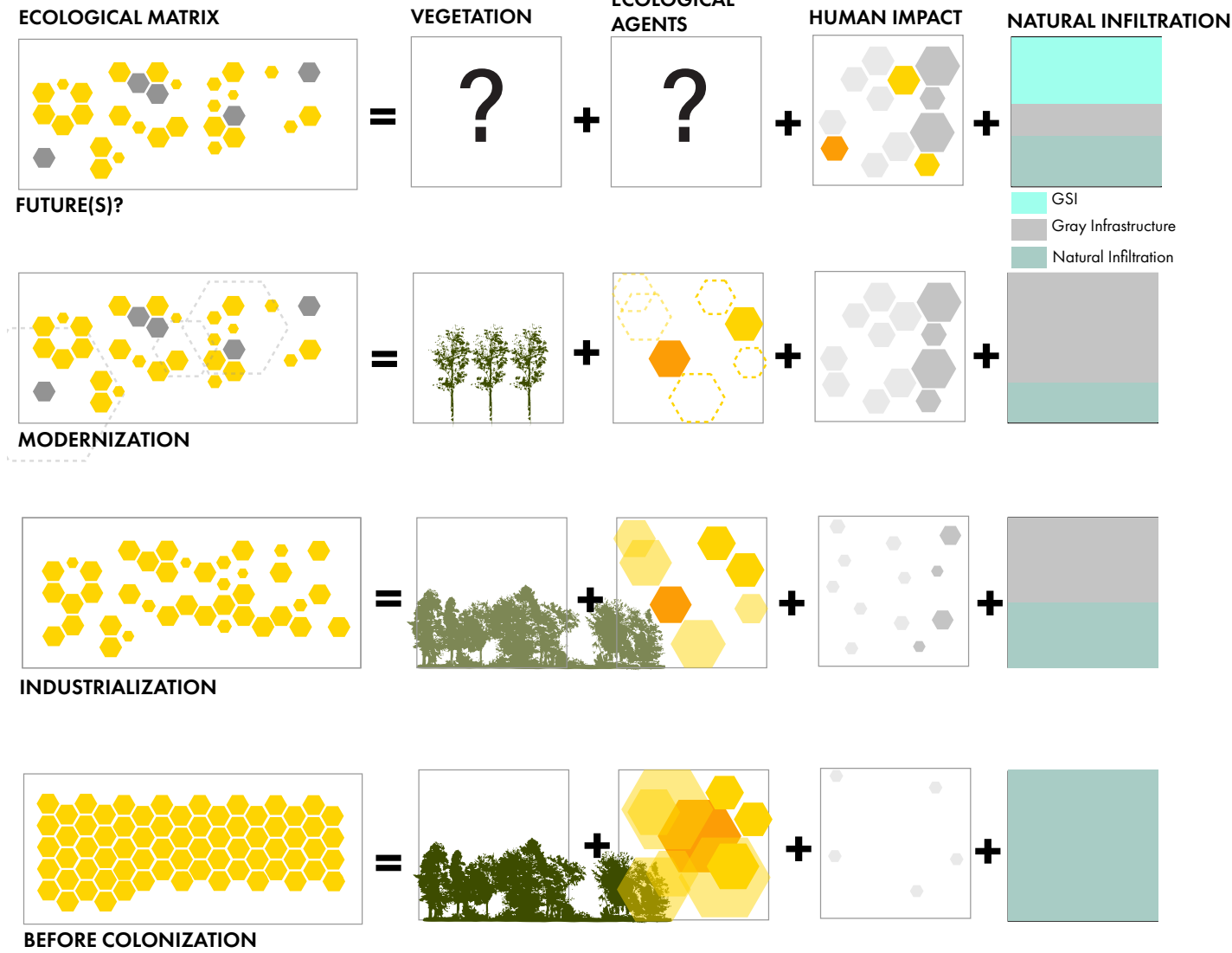
### EXTENDED ECOLOGICAL AND CULTURAL WALK

A new green urban network connecting to Vine Street and Beyond, focusing on restoring indigenous plant palette and bringing back memories of Little Prairie.

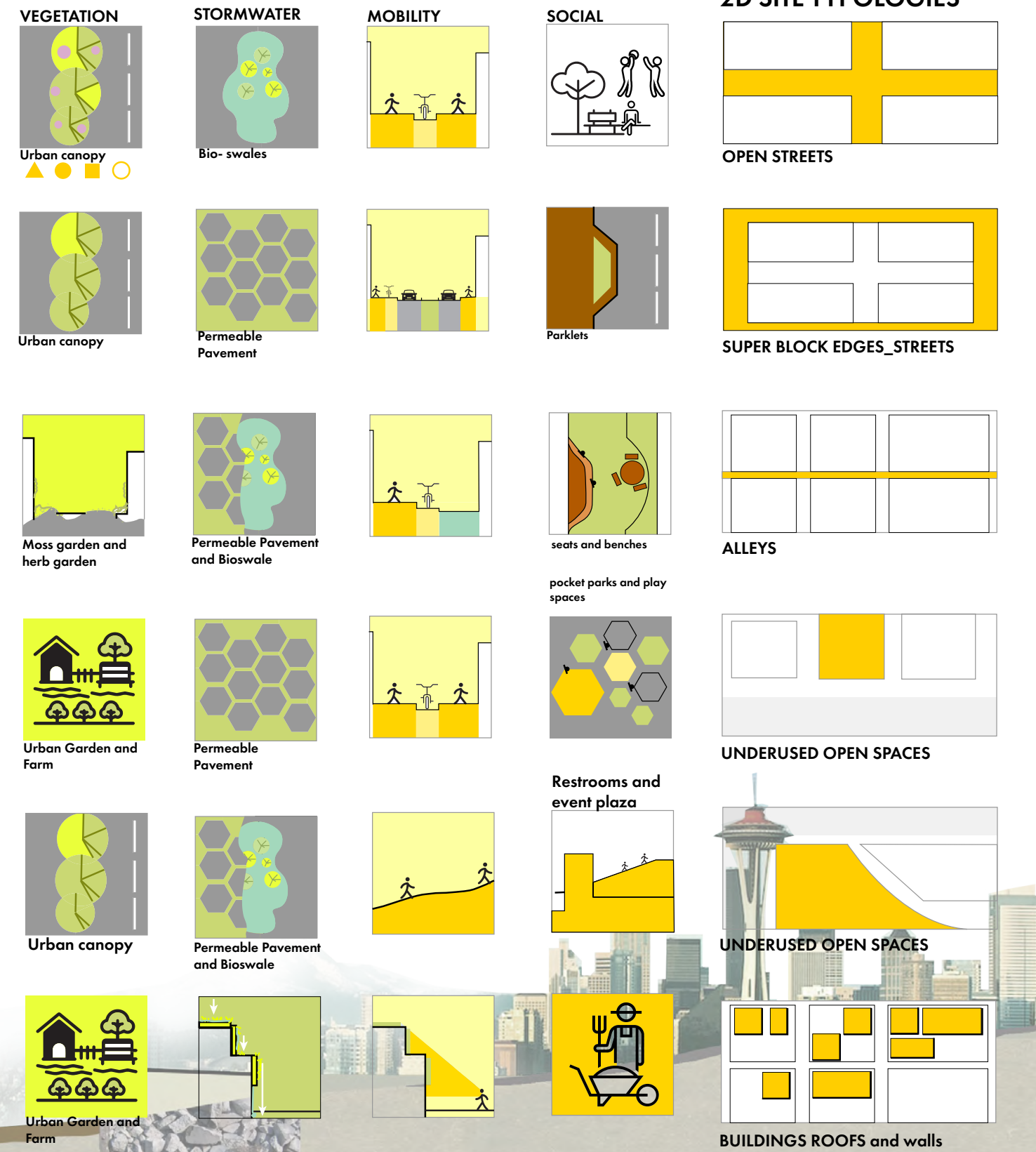


BELLTOWN TO BEE...

# ECOLOGICAL CHANGES



# BLOCK-SCALE URBAN ECOLOGY TOOLKIT



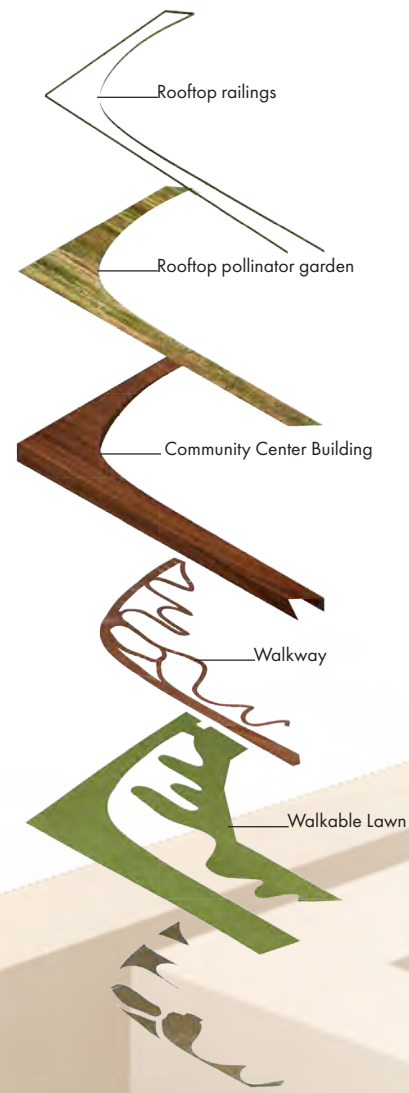
Bees pollinate seeds along the Puget lowland before colonization, stewarding a healthy and robust ecosystem.



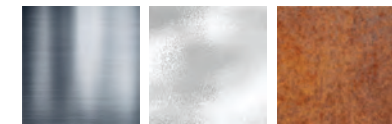
BELLTOWN TO BEE...



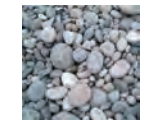
### EXPLODED SITE LAYERS



### MATERIAL PALETTE



Steel, glass, corten steel



Stone Garden

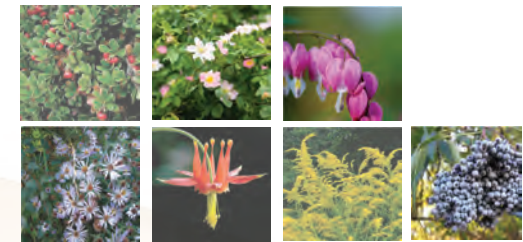


Wood

### PLANT PALETTE




Red flowering currant, Oregon grape, moss, salal




Kinnikinnick, douglas aster, wild rose, western columbine, pacific bleeding heart, goldenrod, Blue elderberry




Fine-Leaved Fescues

 Belltown Community Center entrance

 Rain garden

 Fruit Trees

 Pollinator garden

 Rain garden

1ST AVE

BATTERY STREET

BELLTOWN TO BEE...



Belltown to bee...  
Let's ask what a Belltown bee wants in their neighborhood



BELLTOWN TO BEE...



# THE REBIRTH OF PORTAL PORCH

CONNECTION BETWEEN LAND AND WATER

YUQING HUANG

This project site can be seen as a connection between land and water. Due to the diversified land uses in Belltown, the neighborhood actually has many visitors, but visitors don't stay in outdoor spaces for long, so there are plenty of opportunities for existing spaces to be transformed to make the Belltown neighborhood more connected. Also there are many landmarks on the project site.

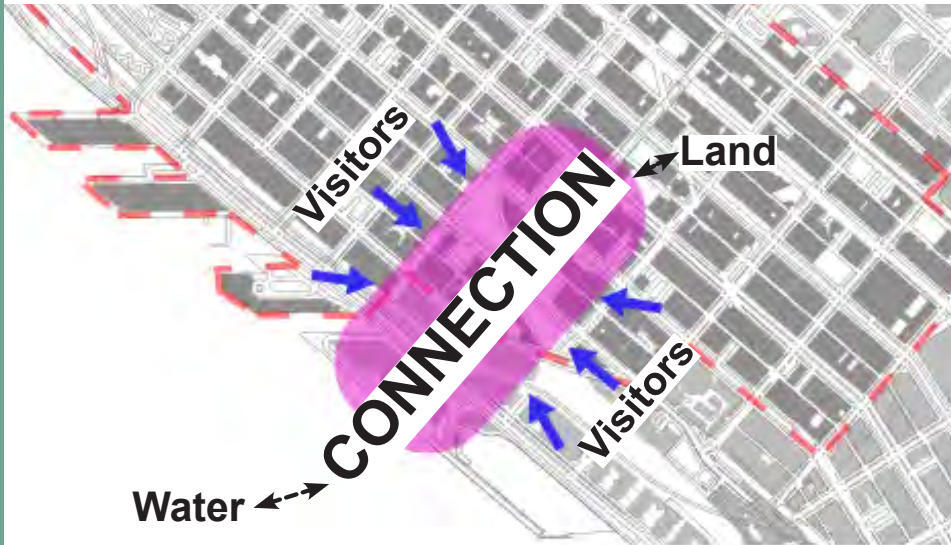
## Questions:

1. Lack of memory to place / people cannot feel grounded to this place / low presence of historic buildings
2. Lack of social interaction space
3. Lack of green space / activity space

## Programs:

1. Showcasing the history of landmark buildings and creating an atmosphere that makes visitors feel more grounded in the site and learn more about Belltown's history ( QR code / Signs)
2. Transform street corner into activity space and stimulate social interaction
3. Reconstruct Bell Street Park, alleys, parking lots, vacant spaces, gateway, adding green spaces and activity spaces

## Site analysis



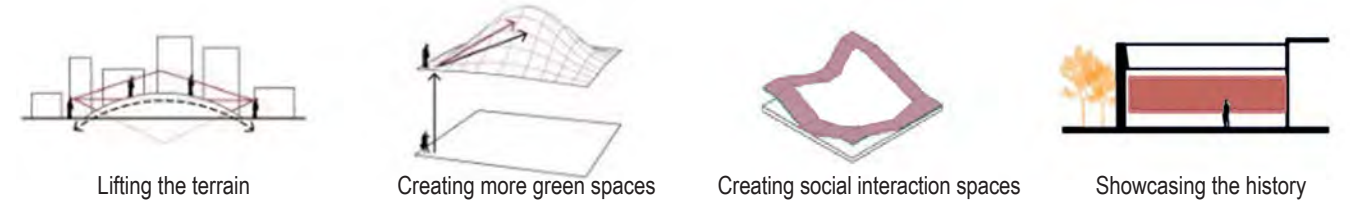
Landuse around Portal Porch

(Residential/ Commercial/ Waterfront/ Attractions/ Vacant space/ Parking lot)

It has all the elements that I can start to renovate.

## Design strategy & Concept Generation — (How to renovate Portal Porch to achieve the goals of the 15min city?)

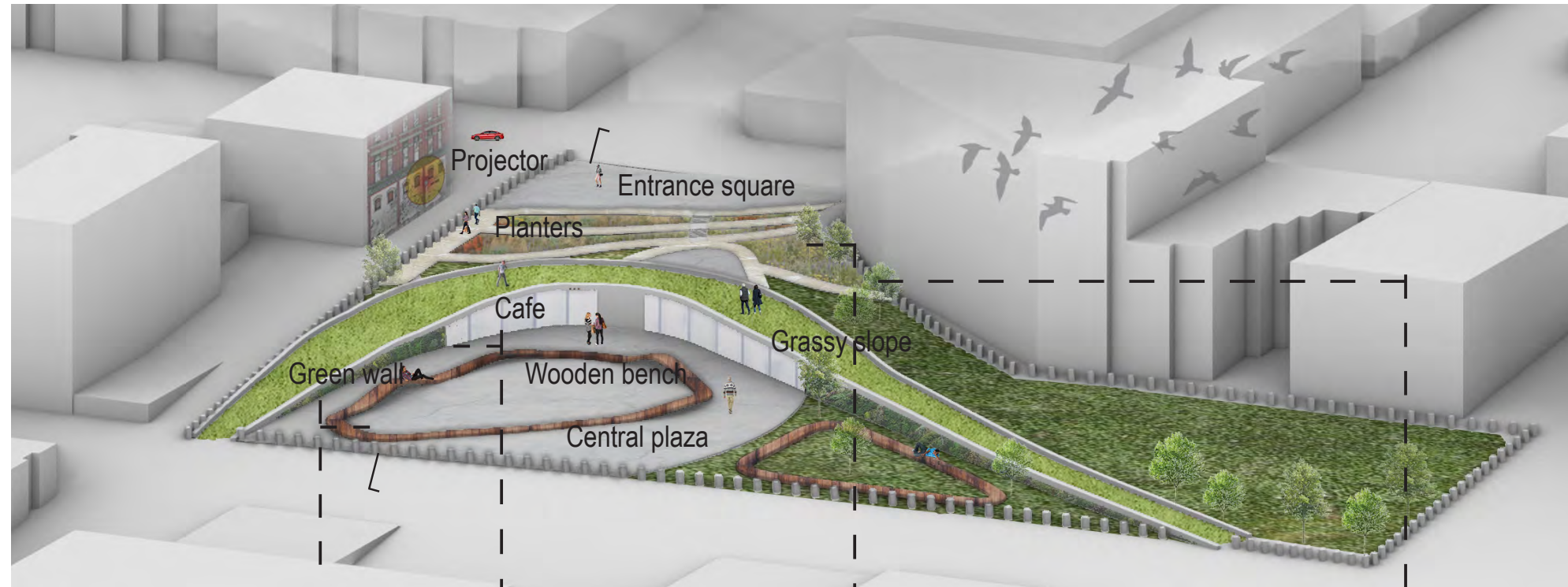
Trying to reverse Portal Porch — Rebuilding Space & Flow (Adding activity space) / Creating social interaction space / Showcasing the history of landmarks



## Site Plan



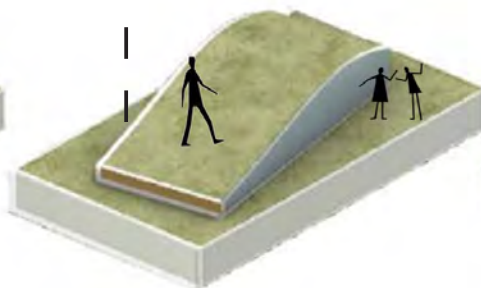
# Perspective & Space perception



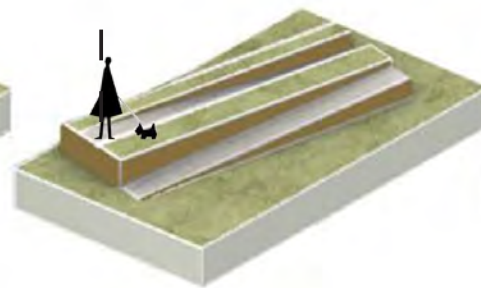
## Activities



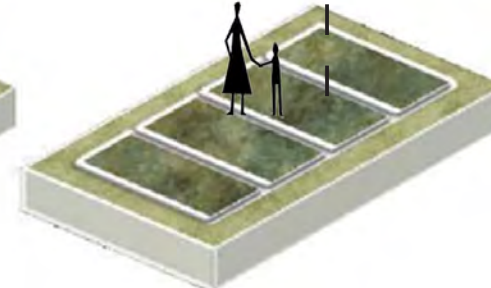
Circular wooden structure seat:  
Seating & Lying & Chatting



Grassy gentle slope & Cafe & Green wall:  
Recreation green space & More activities

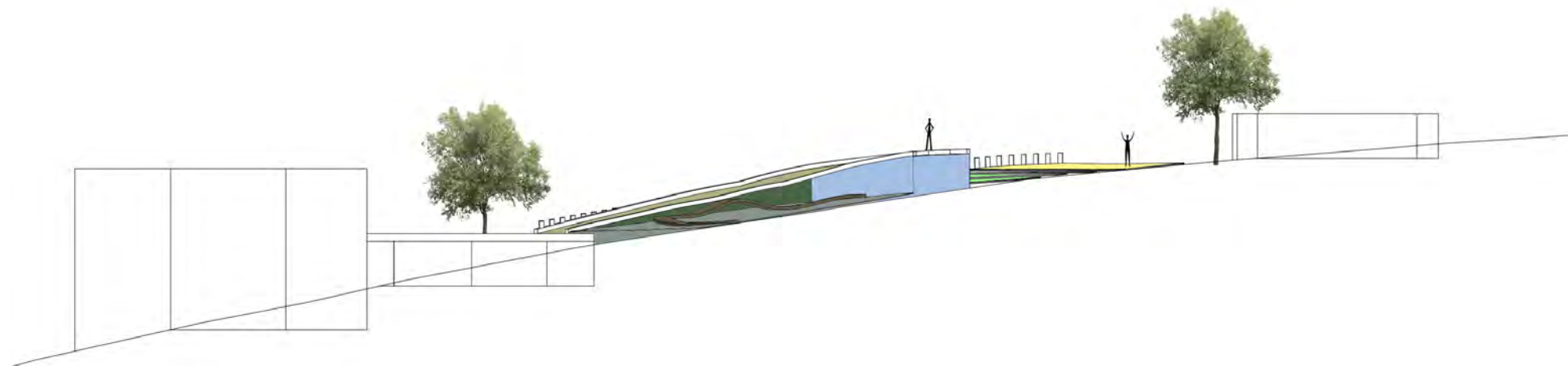


Entrance plaza from 1st Ave:  
More walking space & Provide places for people to walk their dogs, etc.



Planters:  
Adding greenery

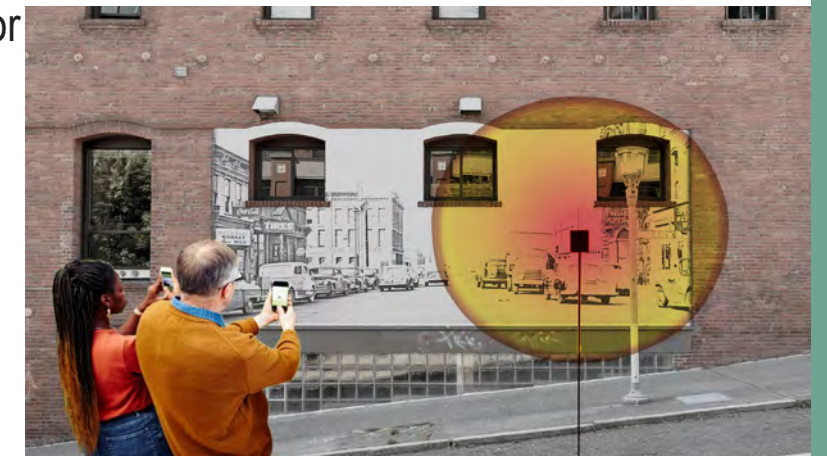
## Section



Central Plaza



Projector



Wooden Bench



Entrance Square



# BELLTOWN AS HOME

ESTABLISHING NEIGHBORHOOD CHARACTER AND INCLUSIVE SPACE FOR ALL BELLTOWN RESIDENTS

HUMAN AND NON-HUMAN, HOUSED AND UN-HOUSED.

KATHERINE MAGEE

With increasing vacancies and number of unhoused individuals who spend their days in the Belltown neighborhood since the start of the pandemic, Belltown residents have expressed increasing concern for safety and desirability of paths and outdoor public space.

This project seeks to understand the challenge of homelessness in Belltown and create a neighborhood-scale solution that will build upon Belltown's existing art community and transform public thoroughfares and gathering spaces to be welcoming and offer activities for all users, including Belltown residents and unhoused residents, tourists and passersby, and native plant and animal species.

DAILY MOVEMENT, composite:

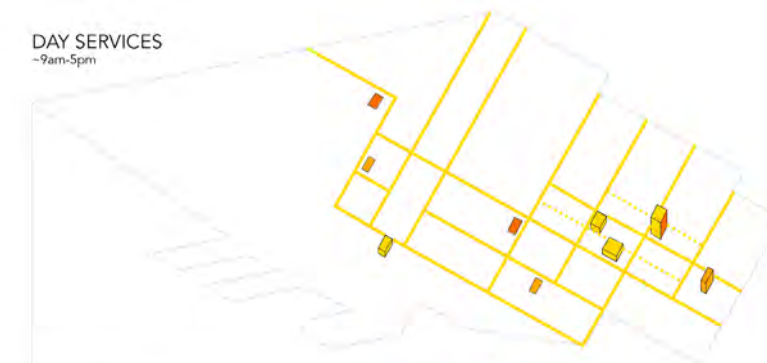


NIGHTLY MOVEMENT, composite:



## MOVEMENT OF HOUSELESS PEOPLE IN BELLTOWN

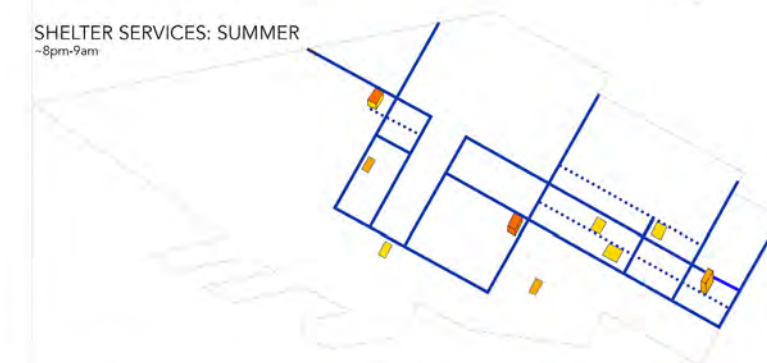
DAY SERVICES  
~9am-5pm



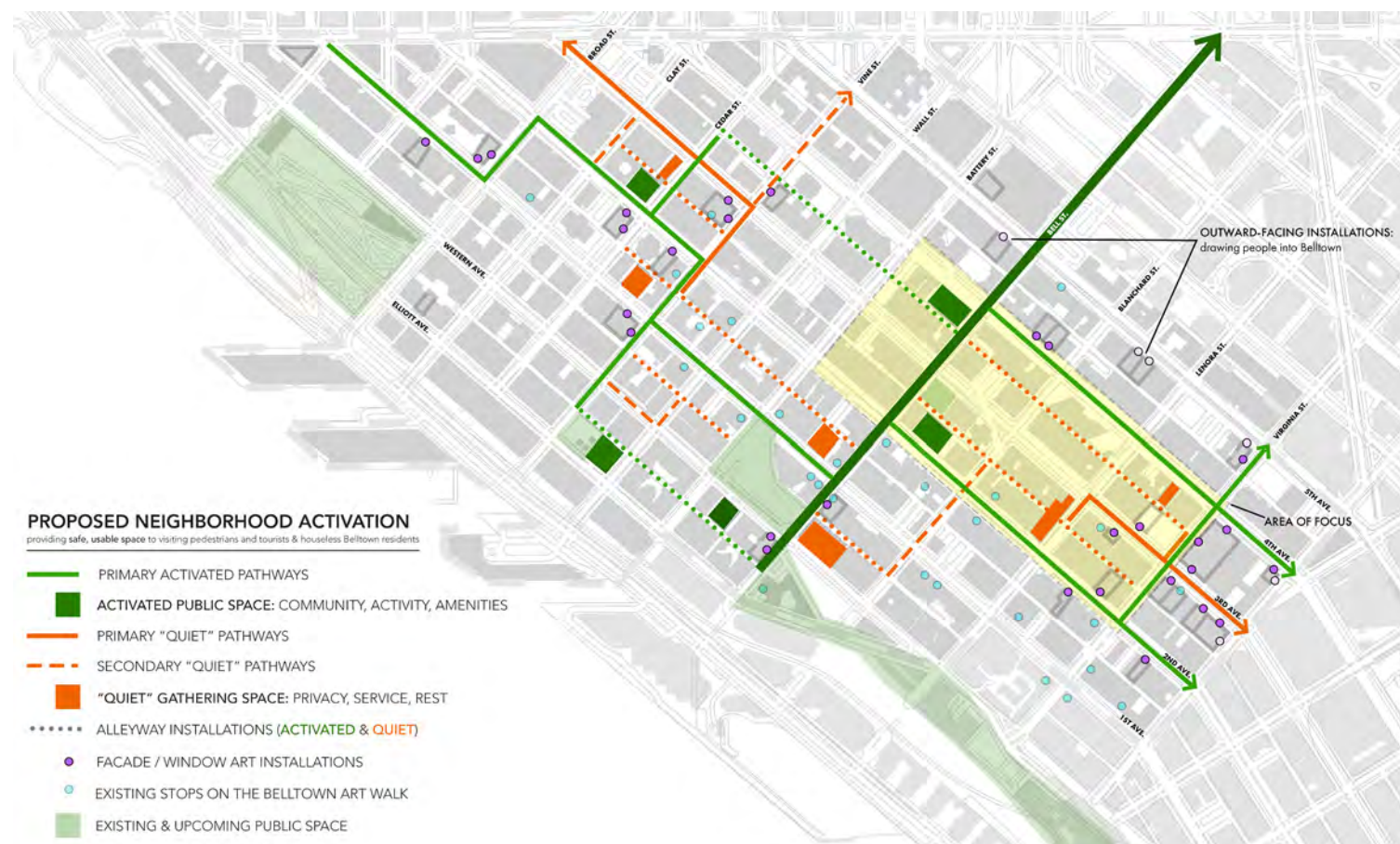
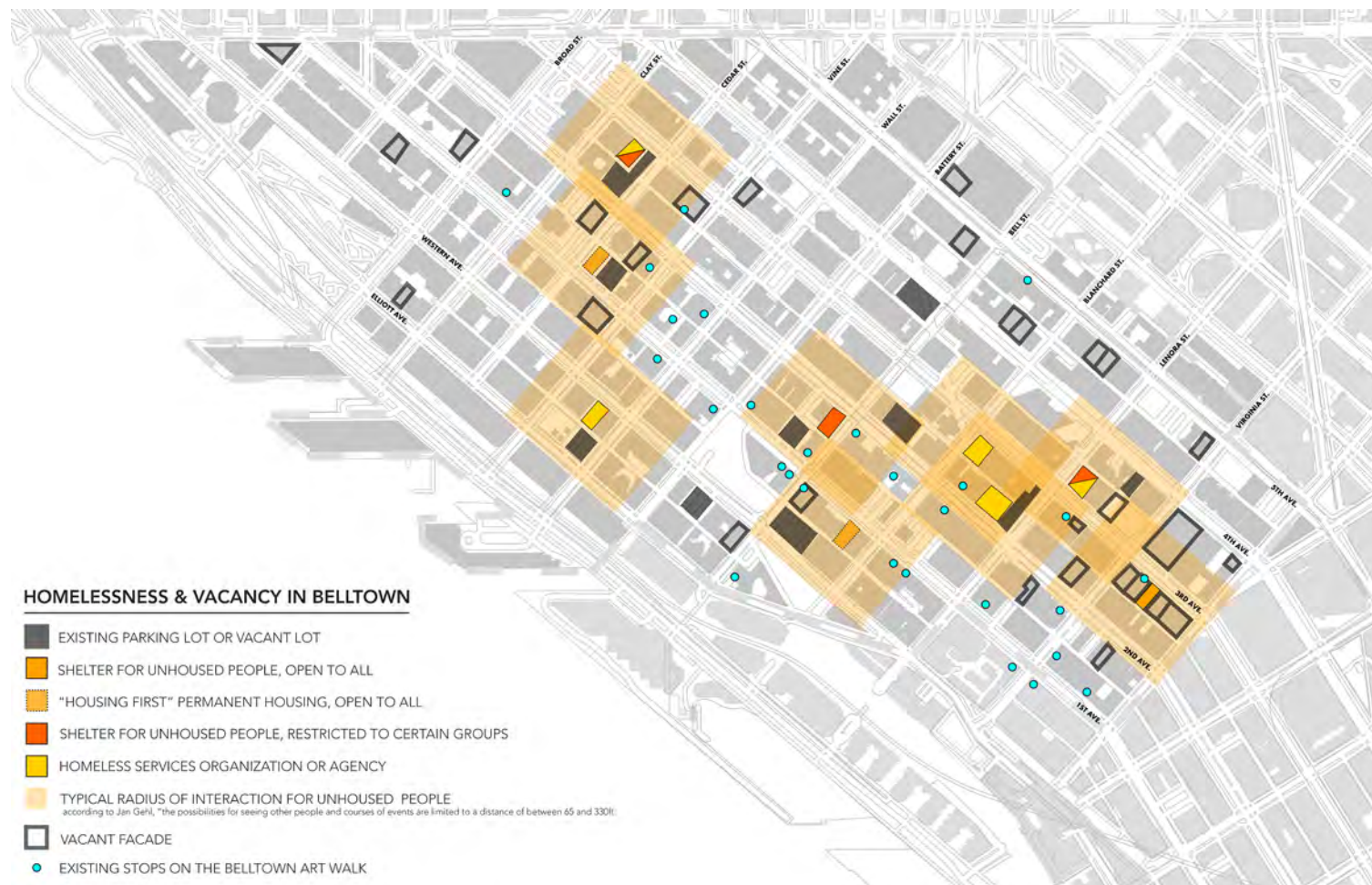
MEALS  
~morning, noon, and evening

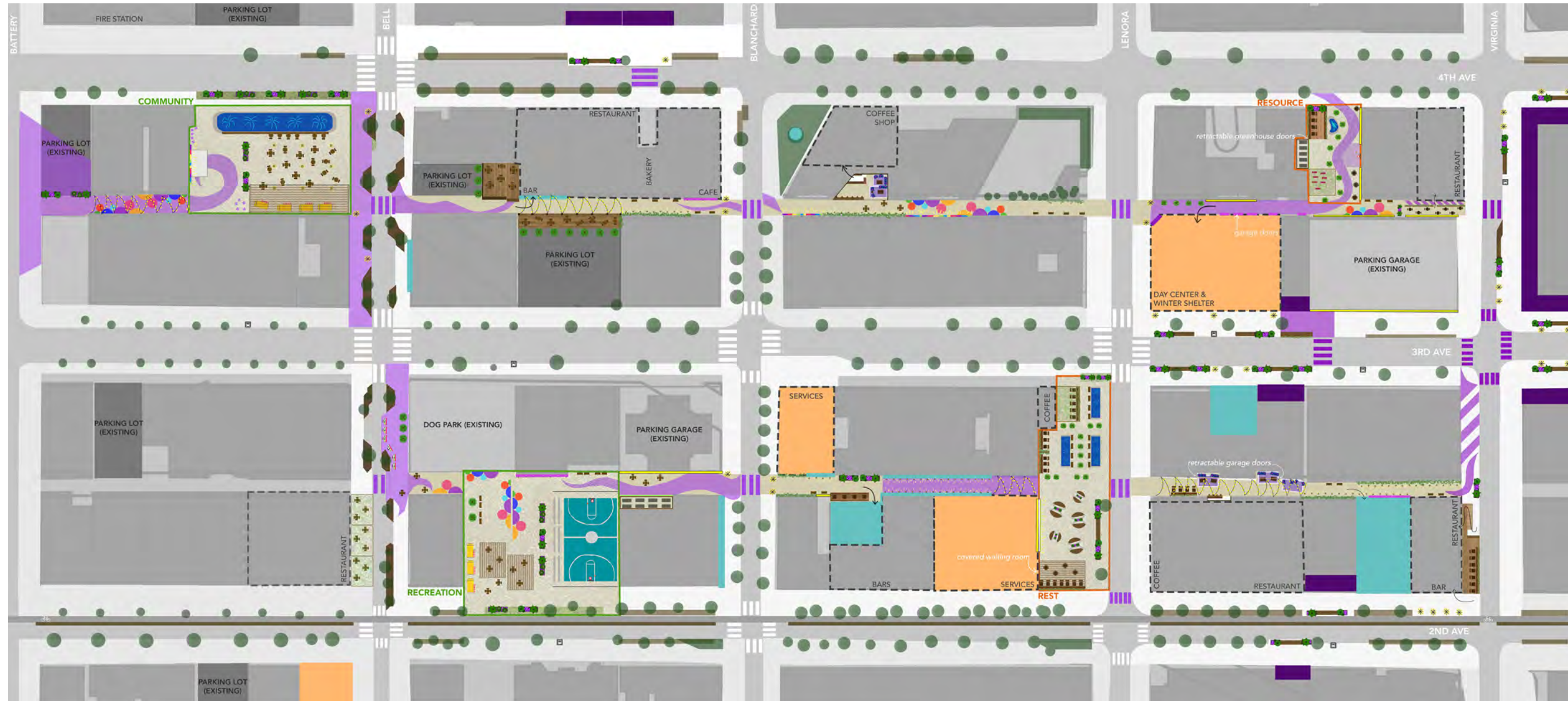


SHELTER SERVICES: SUMMER  
~8pm-9am



SHELTER SERVICES: WINTER  
~8pm-9am





KIT OF PARTS

AMENITIES

- playscape, painted or built
- stage platform
- water feature, interactive or atmospheric
- food truck or pop-up shop
- market stall
- basketball court, full-size or mini
- new mural or art piece
- raised garden beds
- yoga mats, or recreation/meditation activity
- white projector wall

FURNITURE

- MOVEABLE FURNITURE**
- tables and chairs, simple and light
  - rocking chairs
  - outdoor "living room"
- BUILT-IN FURNITURE**
- table and chairs
  - benches, wood and metal or wood and concrete
  - rotating planter benches
  - long planter benches
  - table and chair sets with planter-lined bench

PLANTINGS

- green wall:** five-leaf akebia, evergreen honeysuckle, clematis, boston ivy
- planter box:** golden spring winterhazel, hardy fuchsia, autumn fern, soft field fern, Alaskan cedar, Monroe vine maple
- street trees:** narrow-leaved ash, tulip tree, sour gum, Tupelo, Alaskan cedar, Monroe vine maple

MATERIALS

- street paint, solid colors or murals, professional or community-led
- creative paving: stone or brick pavers
- cedar: decking and seating
- cedar pergola
- iron- or wood-framed pergola with plantings (see green wall plantings above)

LIGHTING

- string lights, white or multi-colored
- light posts
- iron tree sculptures, lit with string lights
- ground lighting
- projector lighting art
- wall lighting

SPATIAL TYPOLOGIES

- PUBLIC GATHERING
- SERVICE & SANCTUARY
- ART WALK WINDOWS

EXISTING CONDITIONS

- Belltown Art Walk galleries
- existing murals
- homeless services organizations
- potential partners
- existing street plantings
- existing trees
- bus stops

## PUBLIC GATHERING



LOCATION: Lot on 2nd Ave between Bell & Blanchard

1. big, open plazas with flexible programming
2. moveable furnishings & divisions of space
3. community-led activities, events, & installations
4. optional paid amenities
5. lighting and plantings for safety and comfort

## SERVICE & SANCTUARY



LOCATION: Lot on Lenora Street between 2nd & 3rd

1. meandering pathways & abundant greenspace create refuge
2. paths, trees, and structures designate separate semi-private space for meetings, personal reflection
3. biodiversity & green strips provide sanctuary for plants and pollinators
4. optional community activities led by nearby service organizations

## ART WALK WINDOWS



LOCATION: 4th Street between Bell & Blanchard

1. vacant storefronts transformed into temporary installations by local artists
2. extends existing Belltown Art Walk
3. addition of plantings & seating to encourage lingering
4. over time, installations are sold and storefronts evolve into new galleries or local businesses

## ACTIVE ALLEYWAYS



LOCATION: Off Blanchard Street between 2nd & 3rd

1. allows for safe, car-free passage through the neighborhood
2. highlights existing community artwork
3. addition of wall & ground murals, green walls, lighting, and interactive spaces to increase activity
4. local businesses & services encouraged to open up and expand into alley space



ALLEYWAY SECTION  
BETWEEN 3RD & 4TH



**PUBLIC GATHERING:** *daily and nightly programming*

**ACTIVE ALLEYWAY:** *safe passage day and night*

**SERVICE & SANCTUARY:** *seasonal uses*

**ART WALK WINDOW:** *phases of activation*



DAY: food trucks and markets, community events, space to rest and socialize

DAY: local businesses occupy setback spaces

SUMMER: abundant greenspace promotes biodiversity and habitat growth, multiple scales of community use

PHASE 1: temporary art installations in windows and on facade



NIGHT: community functions, lighting and colorful projections

NIGHT: abundant creative lighting strategies

AUTUMN/WINTER: weather shelter allows for year-round use, colorful evergreen plantings offer meditative walking space and habitat for key species

PHASE 2: newly activated right-of-ways invite local businesses to occupy vacant space and window installations can be sold to support local artists

BELLTOWN AS HOME

# FRAMING BELLTOWN AS AN URBAN HYPORHEIC ZONE

JESSIKA GILL

Hyporheic zone is a term used in watershed ecology to refer to sites of rapid exchange between surface and groundwater that occur below and to the side of stream beds. I am proposing that Belltown also has the potential to function in this way, and in many instances already does. The edges that make up this neighborhood make up some of the largest tourist attractions in the Seattle area, causing many to move through this space. What if people were to dwell here as they passed as well?

This relates to the larger 15-Minute framework for the 'Seattle Breathe' studio by focusing on breaking up larger surfaces to be experienced at a human scale.



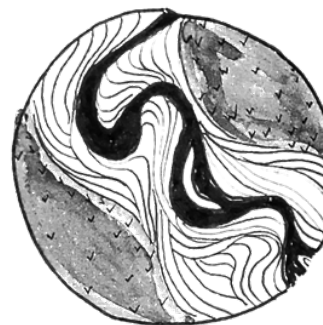
## Site of Rapid Exchange

Like a stream moves water, Belltown has a number of transit lines that move people through the neighborhood. Are there opportunities for people to dwell here longer as they move through?



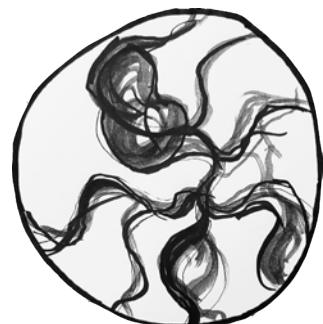
## Edge Complexity

Habitat diversity adjacent to waterways is driven by having a variety of edge types, as opposed to one monotonous edge. How can breaking up continuous edges in Belltown create a diverse, human-scaled experience?



## Meander Belt

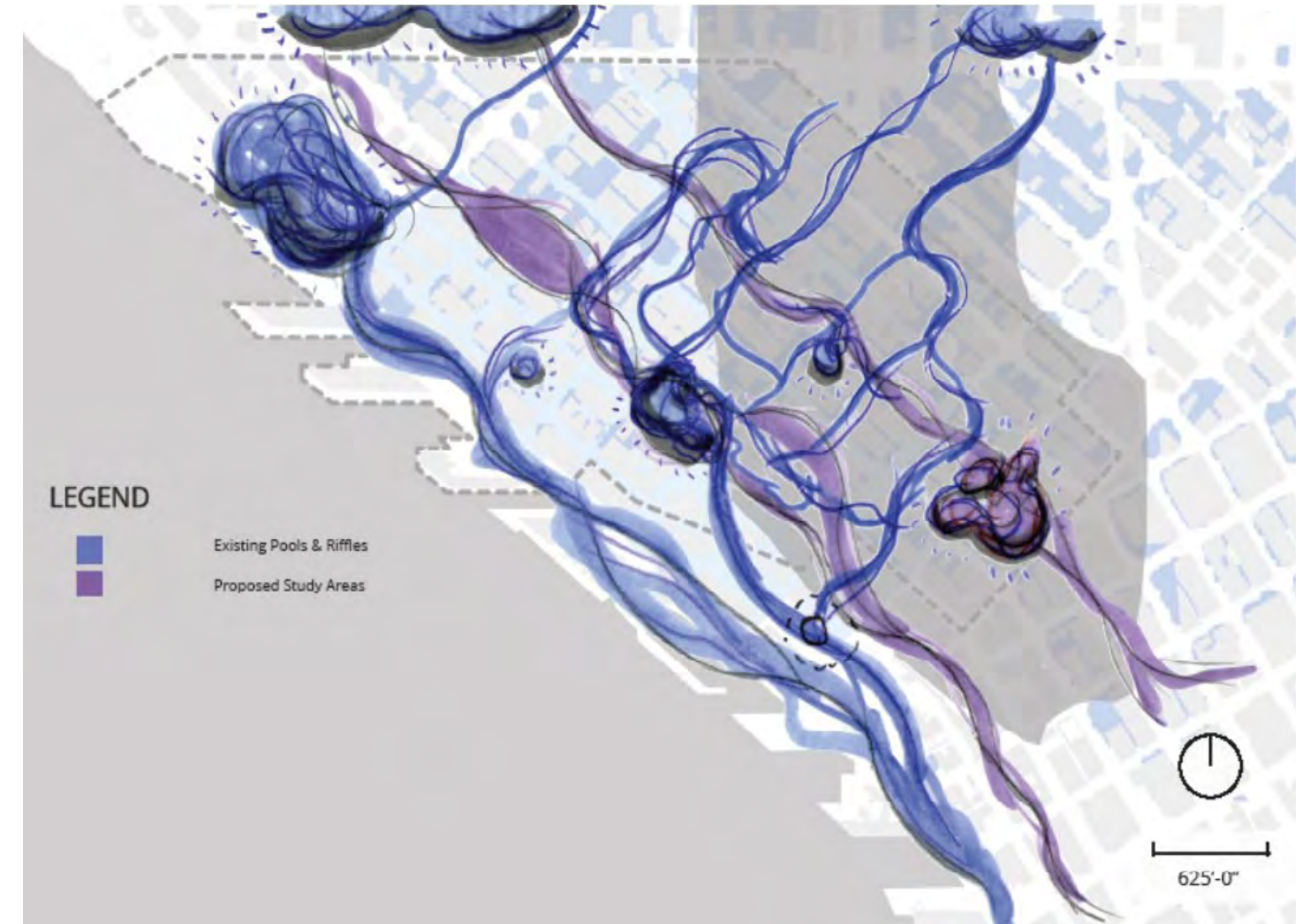
Waterways are temporal - always shifting and changing course within a region known as the meander belt. Where does Belltown have opportunities for more dynamic and temporal spaces?



## Pool-Riffle

Within streams there are areas where water slows and collects - pools, and areas where water speeds up - riffles. Where do these translate to locations in Belltown? Does a confluence of riffles create a pool, or does an overflowing pool generate riffles?

## Pool-Riffle Analysis



## Precedent Projects



### IMPULSE

**Project Name:** Impulse  
**Location:** Multiple Installations  
**Year:** 2015-Present  
**Designer:** Lateral Office and CS Design



### ALTIUS FARMS

**Project Name:** Altius Farms  
**Location:** Denver, CO  
**Year:** 2018  
**Designer:** Tres Birds



### PARKING MARKET

**Project Name:** Sen Hong Theatre Parking Lot Market  
**Location:** Saigon, Vietnam  
**Year:** 2013



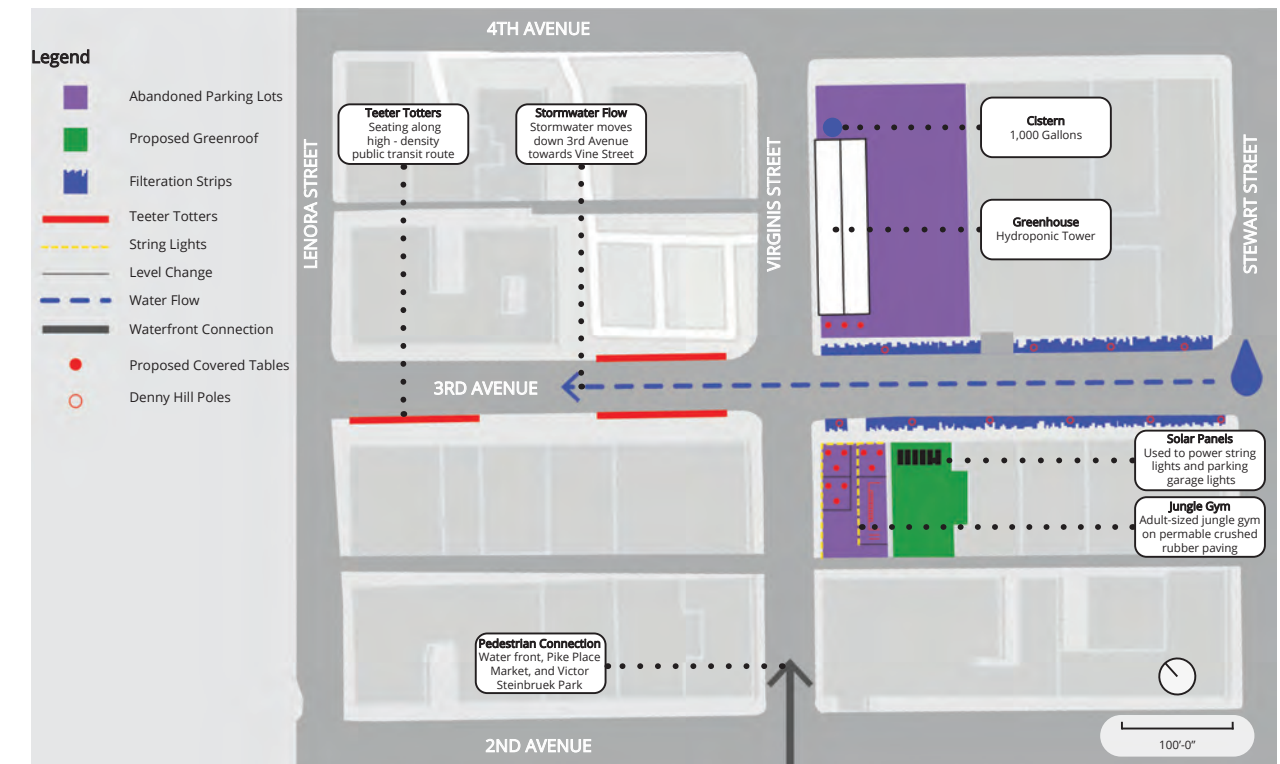
## Site Selection Map



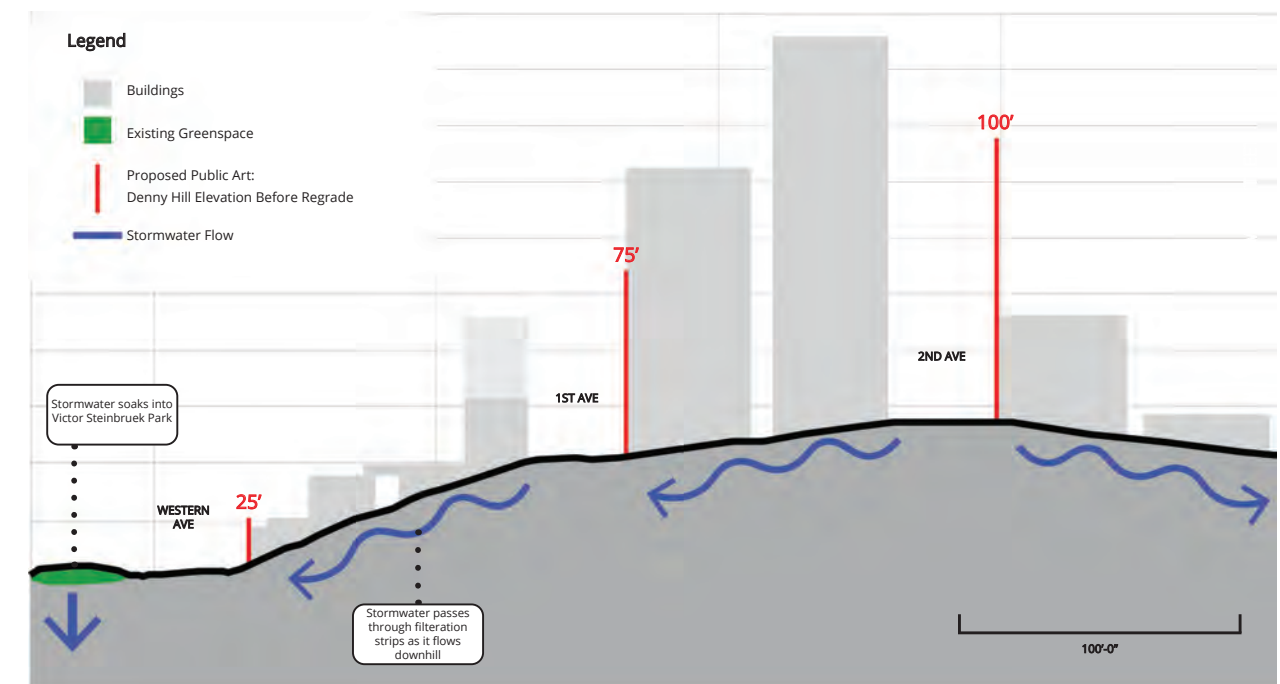
## Site Selection Reasoning

- As part of the class's site analysis, we looked at vacancies since the COVID-19 pandemic. This map shows a high concentration at the southeast edge of Belltown, many of which are parking lot structures.
- The class's site analysis also looked at resources for houseless and low-income communities, many which are in the southeast area of Belltown as well.
- During one of our walking tours with community members of Belltown it was mentioned that 'public space is defined by its edges.' Initially I was curious to see if there were design opportunities that aligned with the urban hyporheic framework along the southern edge of the Denny Hill regrade footprint.
- In a lecture lead by Erica Bush, it was mentioned that since the COVID-19 pandemic, the 40,000 people that used to reside daily in Belltown has been reduced to 20,000 people a day. She suggested that with the increase of folks working from home post pandemic, it would be worthwhile to look at building residential vs. commercial density in Belltown.
- 3rd Avenue supports the densest public transportation infrastructure within Belltown.
- 3rd Avenue's facade is largely homogeneous on a block scale vs. human scale, especially on the south end.

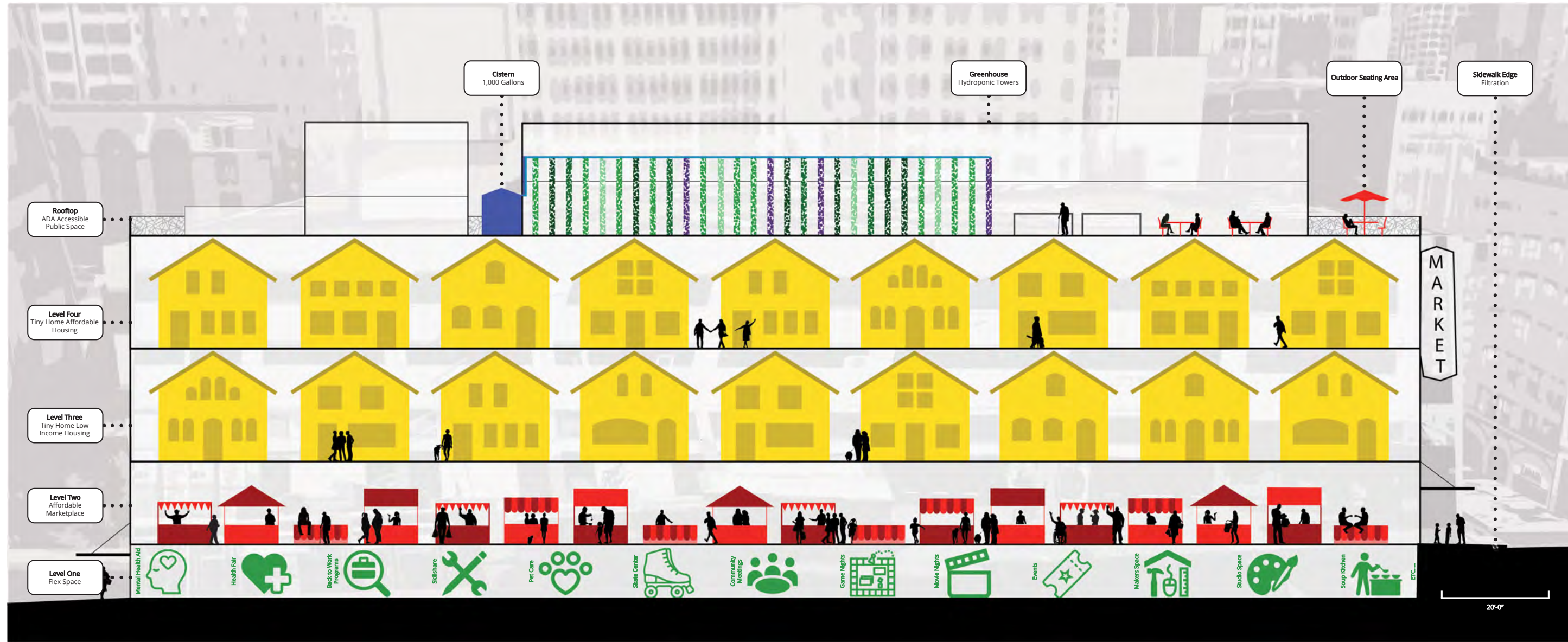
## Proposed Site Interventions



## Virginia Street Section



# Multi-Level Parking Garage



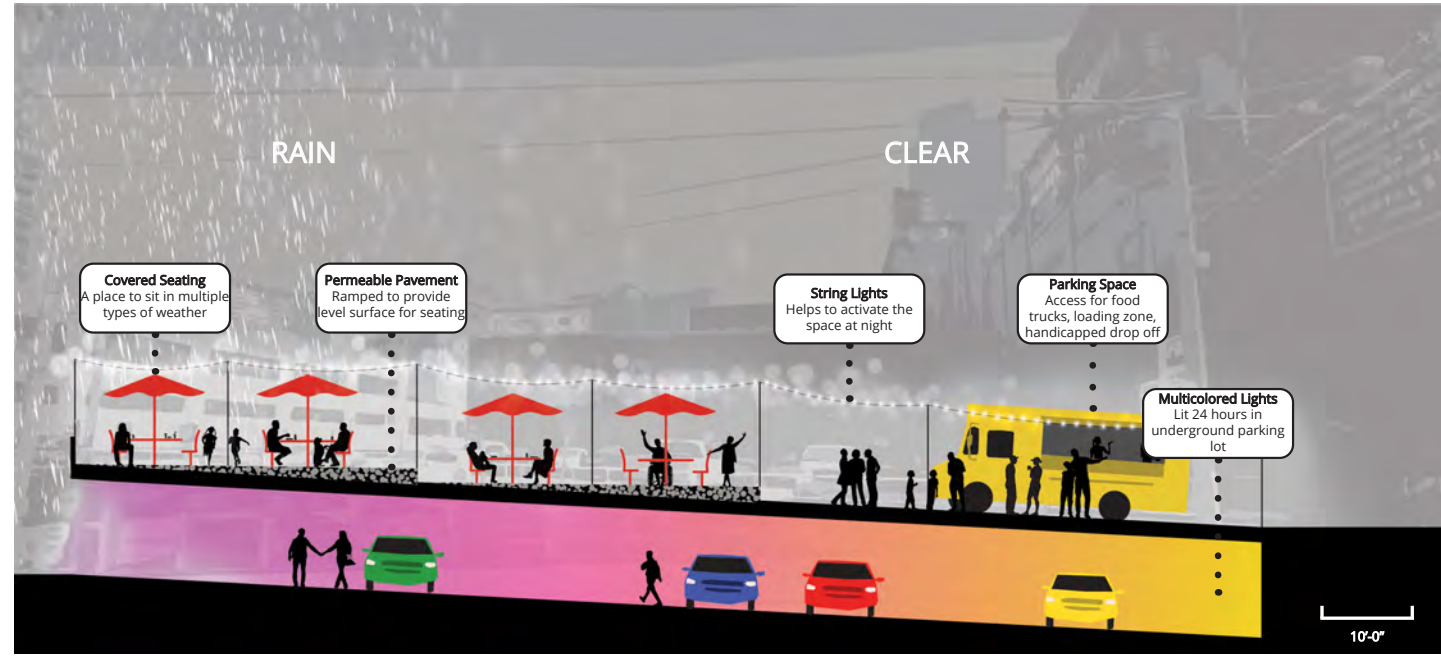
## Building Selection & Proposed Design Reasoning

- This building is sitting vacant: Bed, Bath, & Beyond multi-level parking garage on the east corner of 3rd and Virginia.
- Rooftop is already ADA accessible - car ramps go all the way to the top floor of the building
- The height between the floor and ceiling of the parking garage on levels three and four is approximately 30 feet, which would fit a two-story tiny home.
- The weight of a tiny home is comparable to the weight of two vehicles (footprint of a tiny home would take up approximately 2 parking spaces) so the load bearing capacity of the building could feasibly support building low-income housing density in this way.
- The current population density is not well supported by quality food sources within a 15 minute walking distance. A bi-weekly farmers market with affordable prices for blemished or slightly damaged goods might be a way to activate the space on a regular basis while filling a need the adjacent community has.
- The greenhouse on the rooftop could provide both a local food source and all-weather greenspace to tiny house residents.

## Relation to Urban Hyporheic Zone

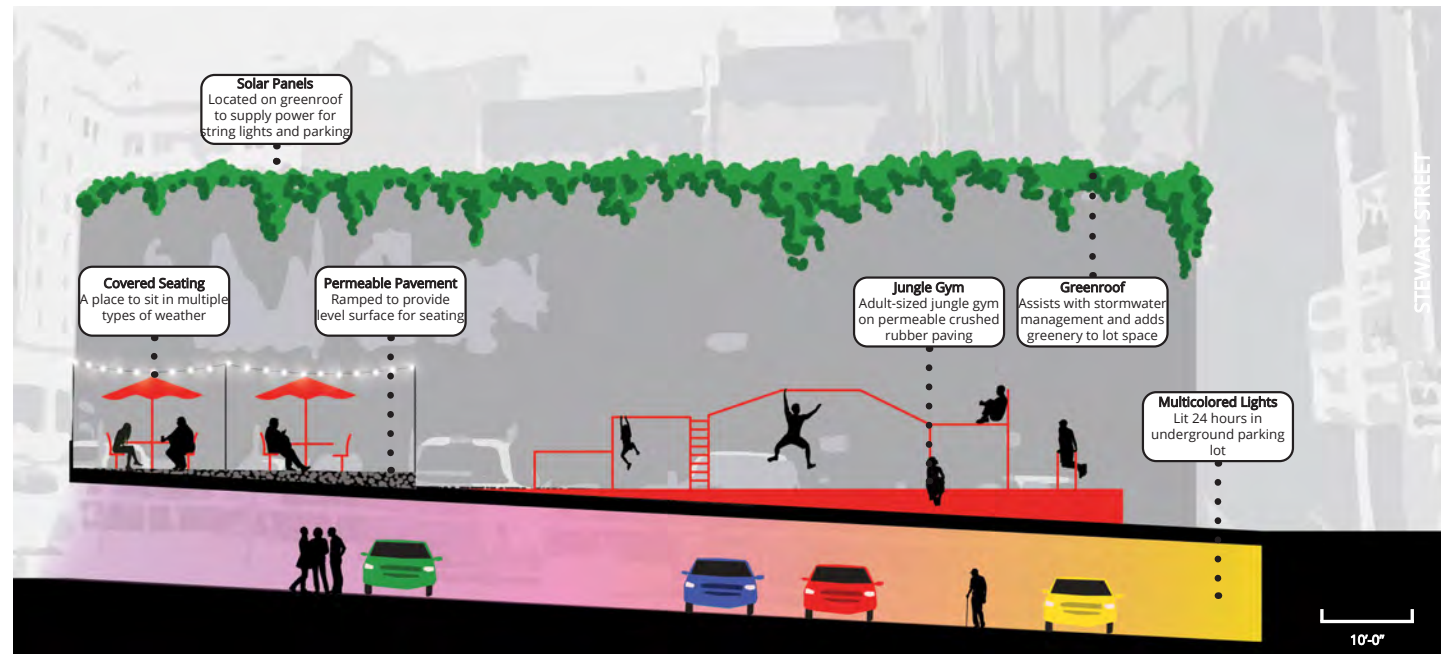
- Site of Rapid Exchange - the flex space on the first level and affordable market on the second level could potentially draw people to the space, both within and outside of Belltown.
- Edge Complexity - one the street level, the proposed filtration strip along the street edge of the sidewalk will break up the large expanse of sidewalk and provide some cleaning functions to stormwater.
- Meander Belt - Level One is meant to consistently change over time based on community needs and desires.
- Pool-Riffle - the proposed redesign of the parking structure could create a 'pool' or dwelling area along the high density transit, or 'riffle,' area.

## Two-Level Parking Lot - Night



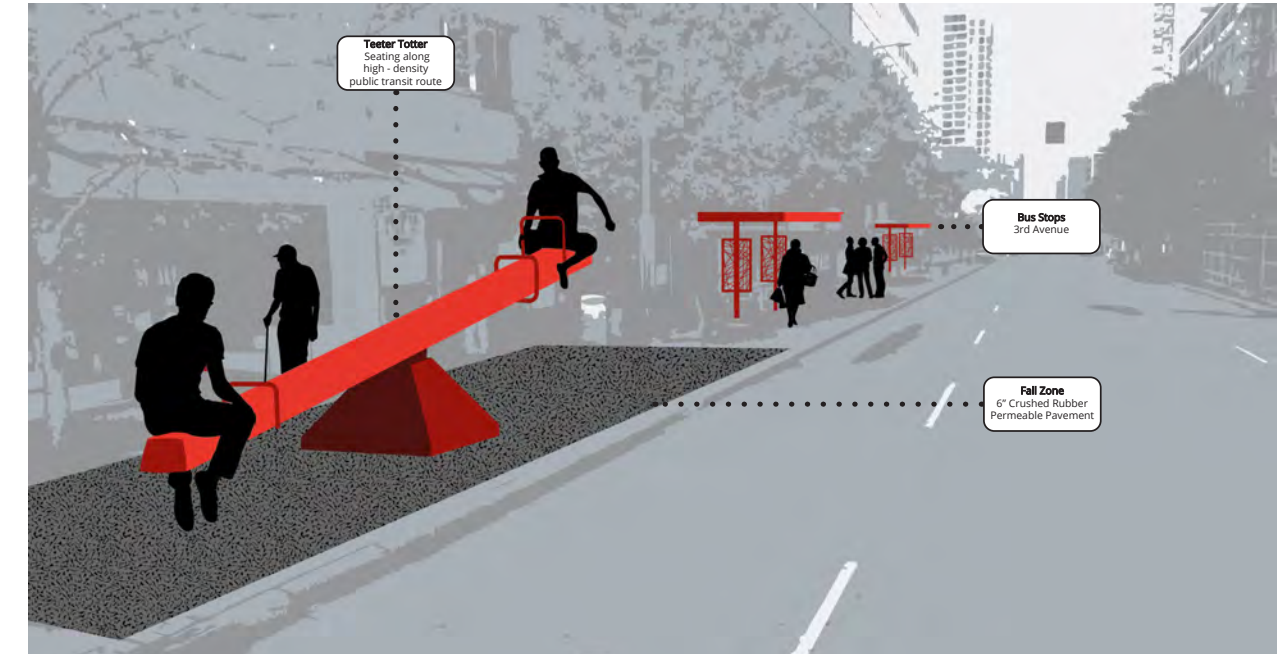
**Description:** The two-level parking lot is located on the south side of the 3rd Avenue and Virginia Street. The lot beneath is currently vacant while the top is used for parking. The proposed design moves the parking underneath, and uses wedges of permeable pavement to level off seating areas, preserving a parking space for food trucks, and adding lighting to both levels to activate the space.

## Two-Level Parking Lot - Day



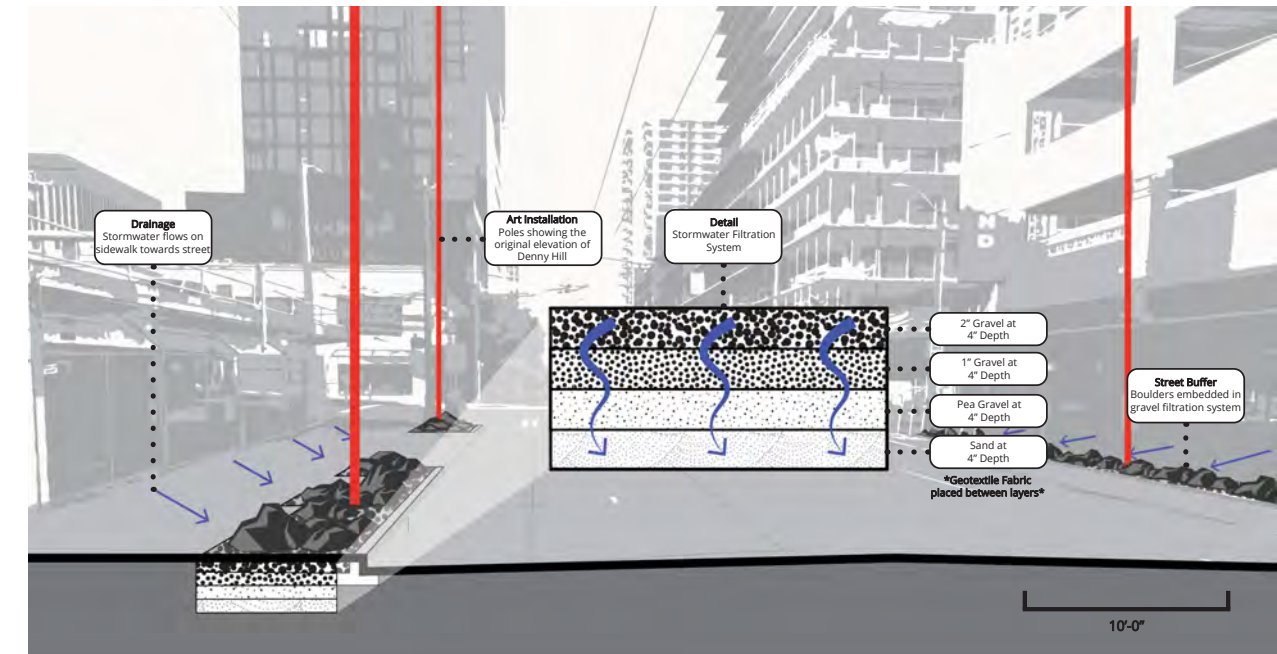
**Description:** Closer to the building, the proposed design includes an adult-sized jungle gym as a way to activate the space through play. The design also proposes a greenroof on the adjacent building, which would visually soften the otherwise hardscape dense area. The greenroof would also help with stormwater management.

## 3rd Avenue Interventions - Teeter Totter



**Description:** The sidewalks along the south side of 3rd Avenue are approximately 18' wide and currently have no seating outside of the bus stop locations. Adding teeter totters along 3rd Avenue would activate the space with play and provide additional seating. The 8' fall zone of the teeter totter would be feasible to implement without impeding pedestrian traffic.

## 3rd Avenue Interventions - Filtration Strips



**Description:** Adding filtration strips further south of the bus stops along 3rd Avenue would aid in stormwater management as well as break up the hardscape to more of a human scale. This area of the Denny Hill Regrade footprint used to be part of the highest historical point of Denny Hill. Adding in red poles that show the historical height would help reveal this history.

# ART DISTRICT IN BELLTOWN

TIANYI LIU

This project is trying to transform Belltown into a livable 15-minute city for urban recovery, public health, and environmental sustainability. According to this overall planning concept, this individual project will focus on how to address current safety and crime issues in Belltown through planning and design methods. The main idea is to attract more people to the streets through building an NMT-oriented (non-motorized transport) city, a livable, sustainable, and equal city.

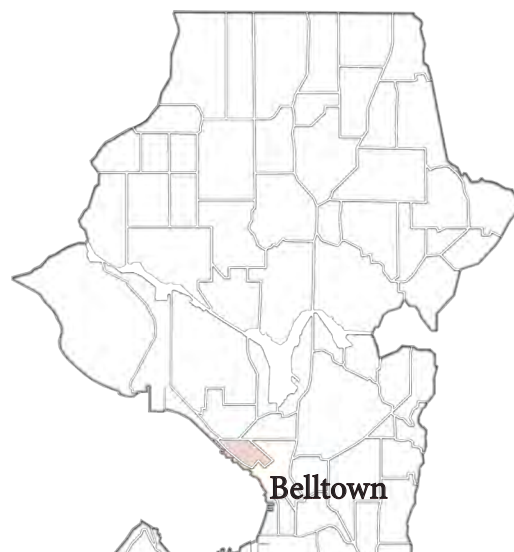
## Site Location

Belltown, named after William Nathaniel Bell, on whose land claim the neighborhood was built, is one of the most densely populated neighborhood in Seattle. Located at the city's downtown waterfront, Belltown has transformed into a neighborhood of trendy restaurants, boutiques, nightclubs, and residential towers as well as warehouses and art galleries.

It is the home to Antioch University, Argosy University, City University of Seattle, and the Seattle School of Theology & Psychology. It lies directly west of the Denny Triangle neighborhood, where online retailer Amazon's three office towers house its downtown headquarters, and where the Cornish College of the Arts is located.



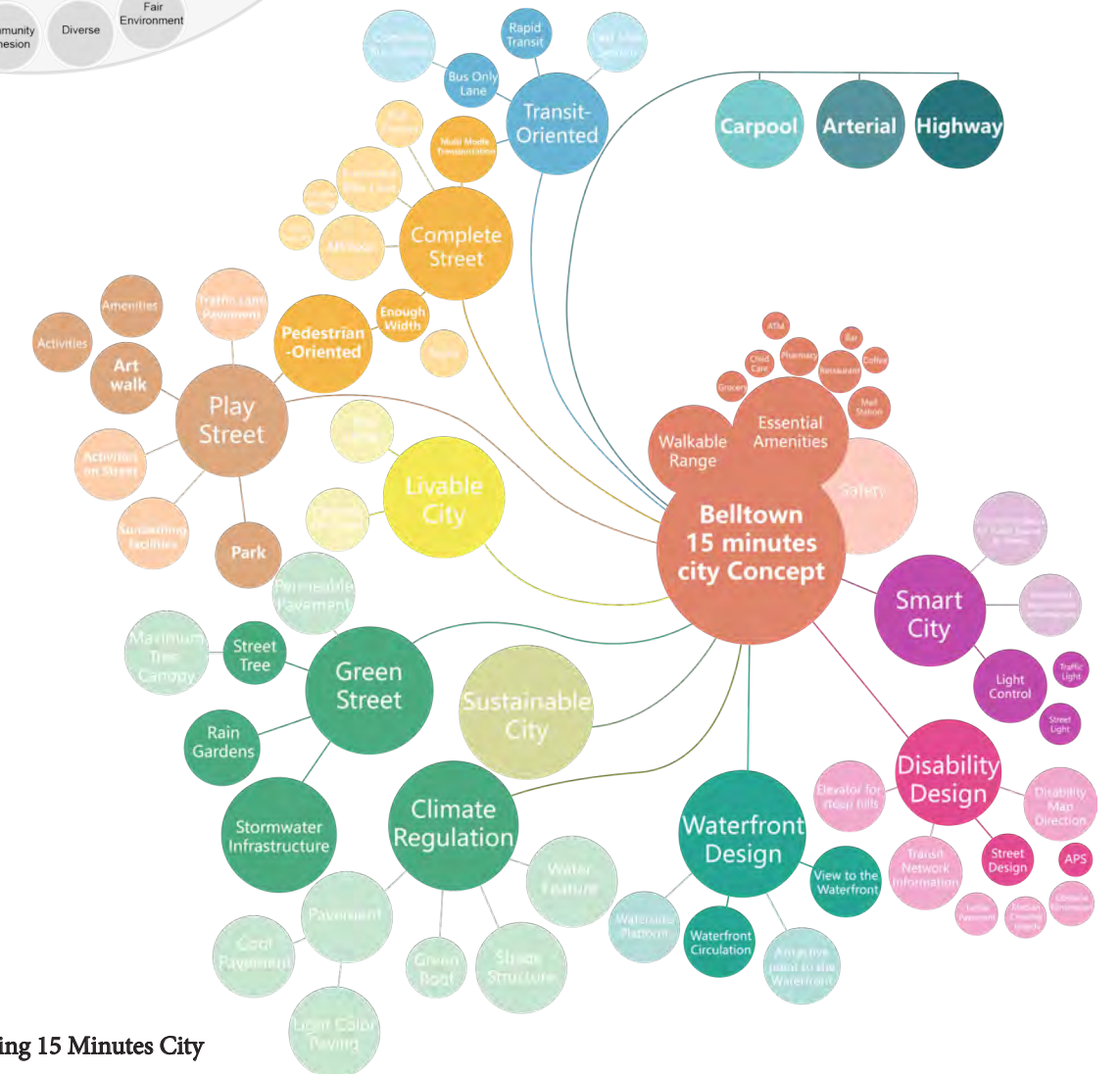
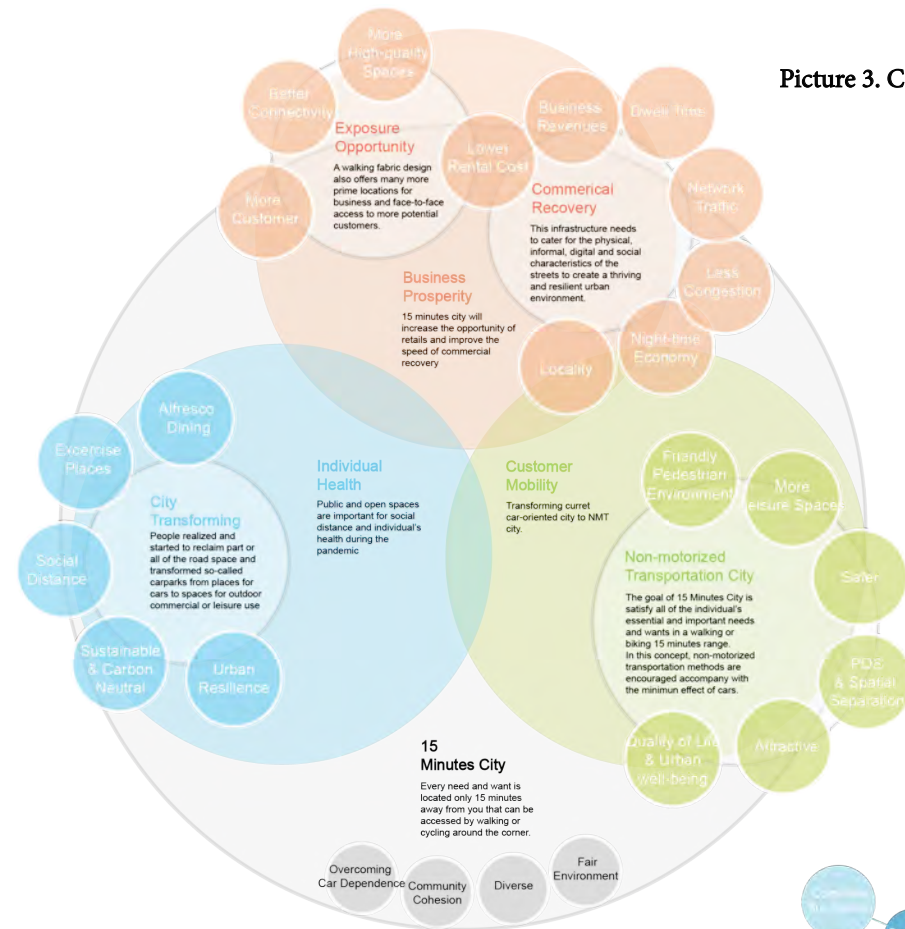
Picture 1. Belltown Site Map



Most Densely Populated Area  
A Thriving Waterfront  
A Walkable Neighborhood

Picture 2. Belltown Location

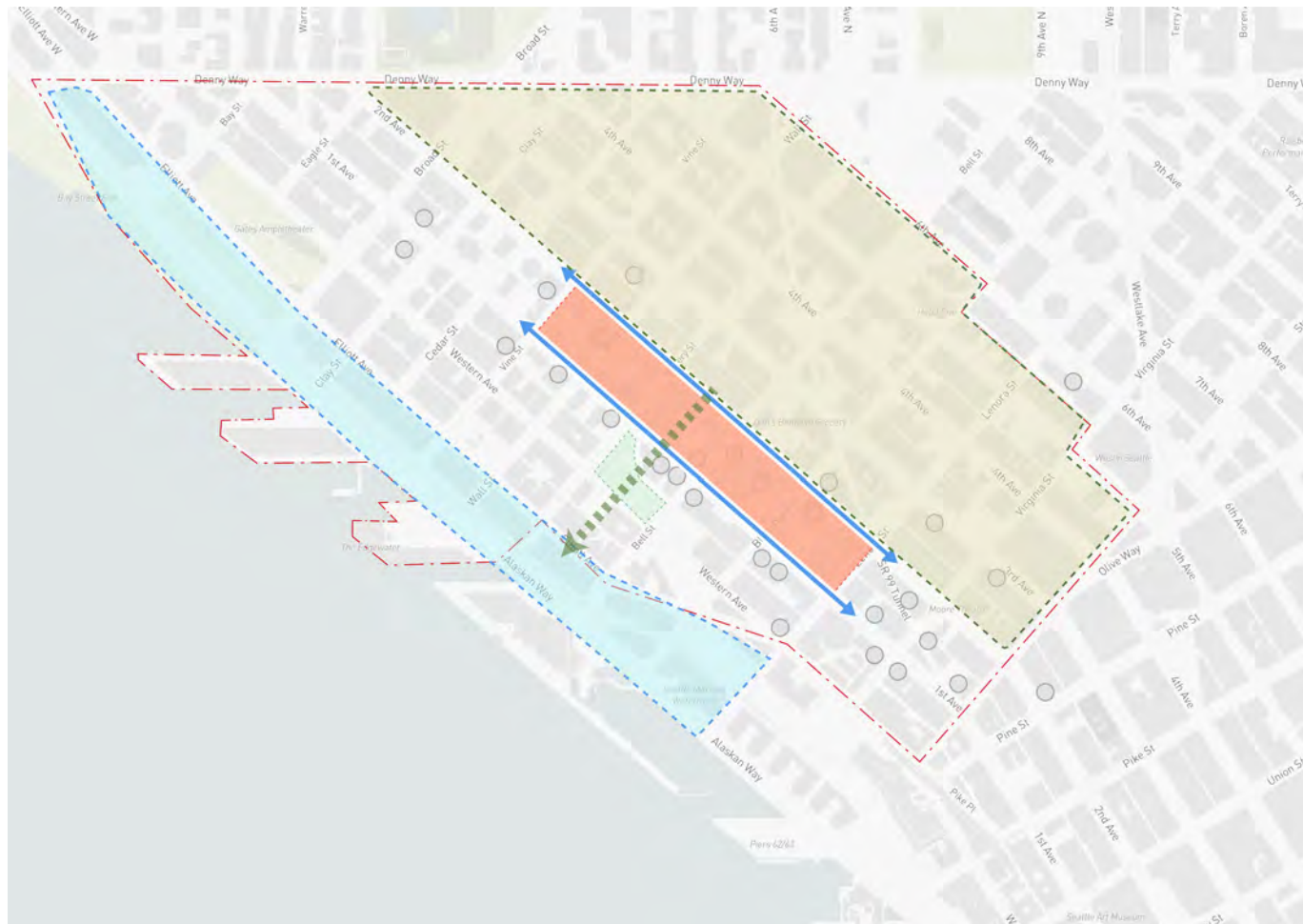
Picture 3. Concept of 15 Minutes City



Picture 4. Ideas for Designing 15 Minutes City

## Site Schematic Planning

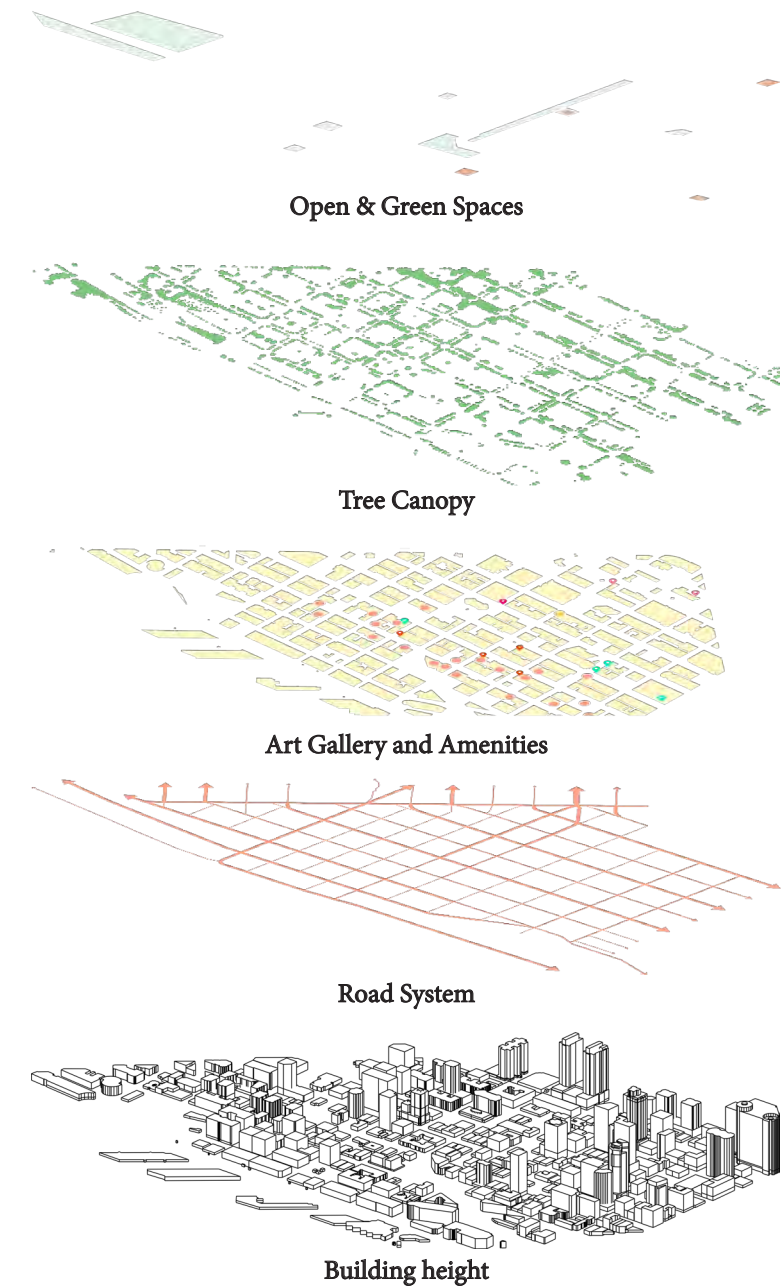
The main idea of this project is to attract as many people as possible on the street to increase the safety in Belltown. This individual work is trying to leverage current Art Walk amenities to construct an Art District between first Ave and Second Ave, build 2nd Ave as a complete street and 1st Ave as a play street. Meanwhile, design the park at the south side of 1st Ave as a terrace park to attract these people in the Art District to the waterfront



Picture 5. Schematic Planning Map

## Site Analysis

Picture 6. Site Analysis Map



## Illustrative Precedents

Art District



Waterfront



Terrace Park



## Street Design Idea

1st Ave - Normal Days



1st Ave - Celebrating Days

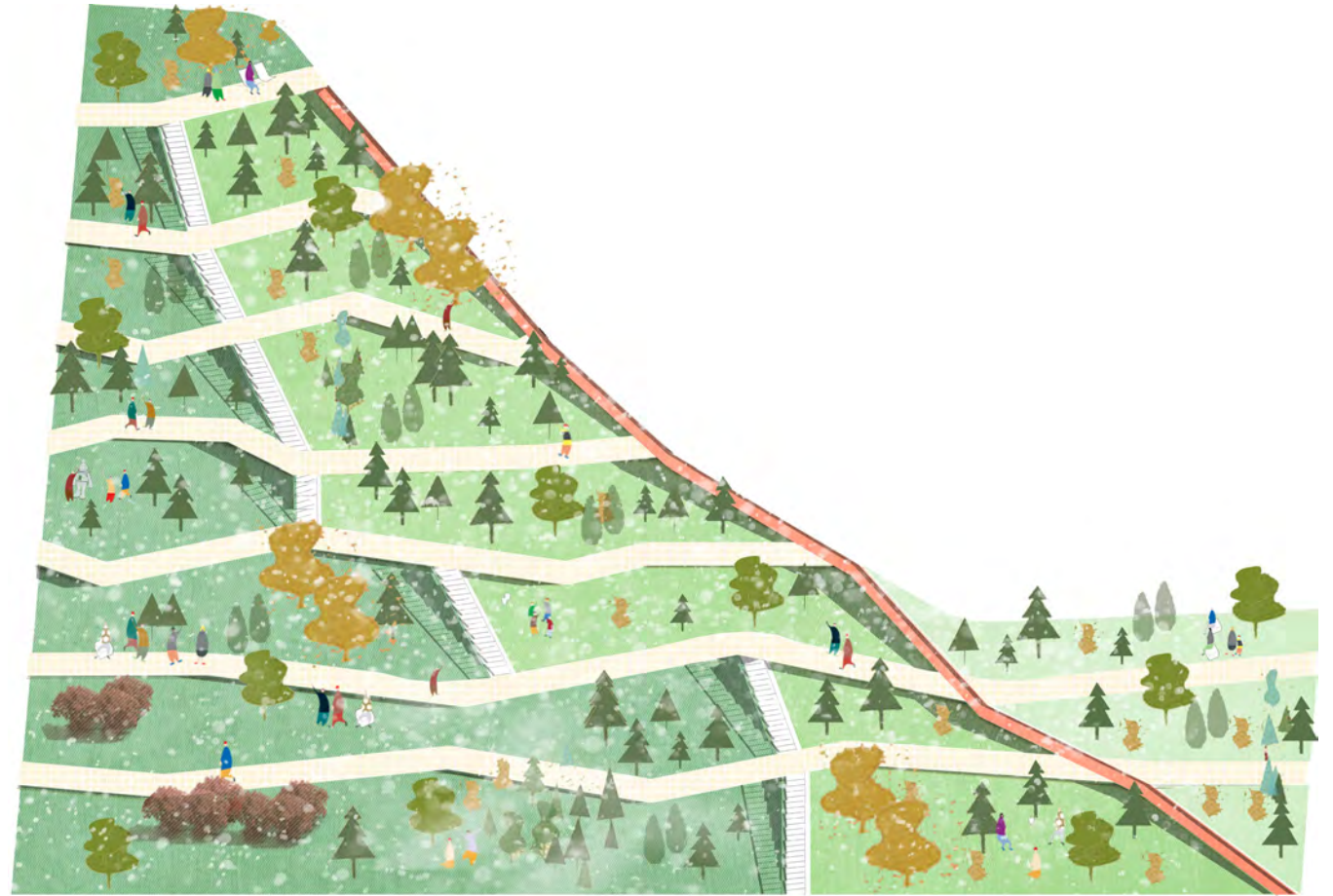


# Art District in Belltown

## Site Plan



## Site Plan Park Design



## Illustrative Complete Street Design



## Perspective Park Design



ART DISTRICT IN BELLTOWN

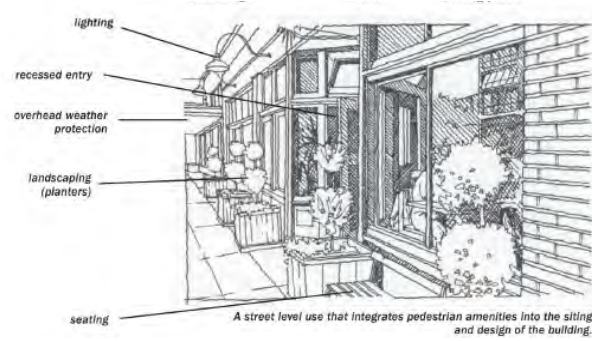
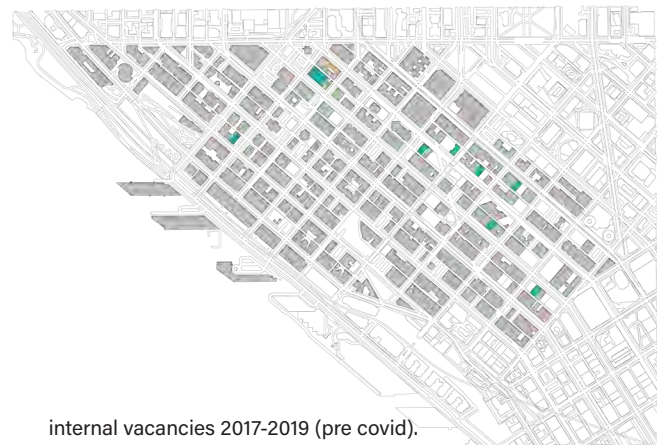
# social+cultural framework

## Existing Neighborhood (Belltown)

1. Belltown is in close proximity to Pike Place Market, South Lake Union, Downtown, Olympic Sculpture Park and Space Needle, providing high pedestrian volumes at each viewpoint.
2. High density of entertainment venues and amenities are located in the central area of Belltown.
3. Vacancies in buildings are found across the neighborhood.



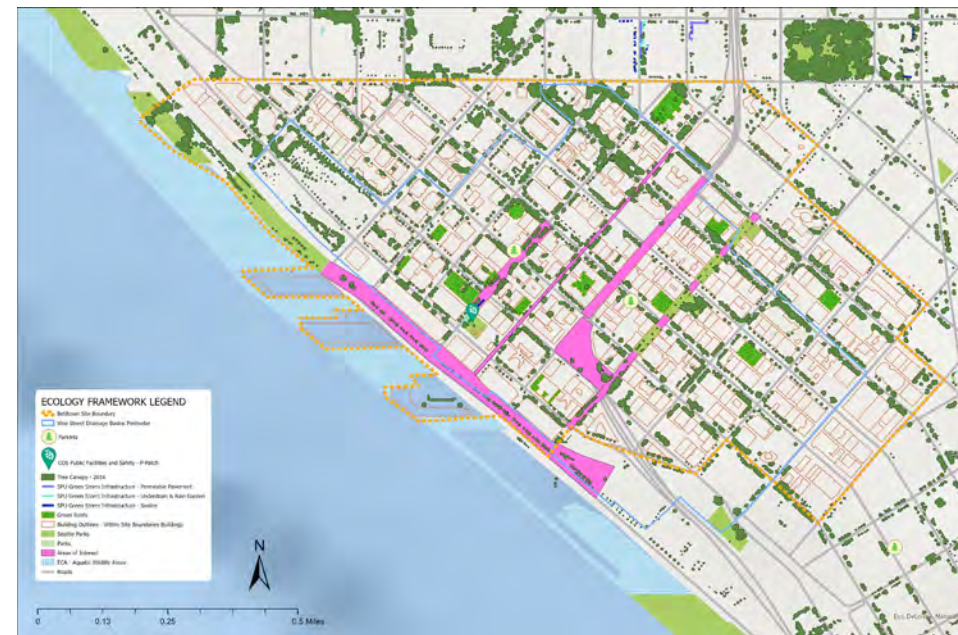
- Interior vacancies: for lease, closed, gated, plywood, boarded up.
- Amenities: Groceries, gym, convenience stores, pharmacies, healthcare.
- Entertainment: Bars, clubs, theaters, music, art.
- Coffee shops and restaurants.
- Tourist + local attractions.



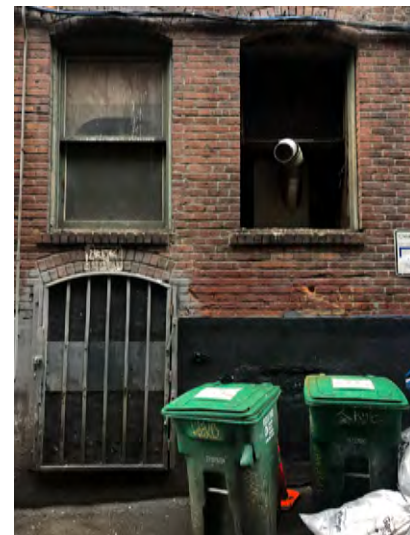
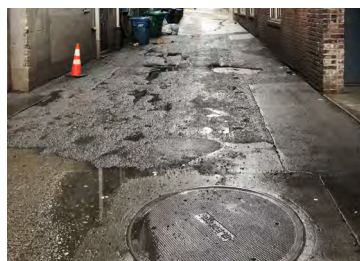
source: City of Seattle, "Design Review: Design Guidelines for the Belltown Urban Center Village," 2004  
 2004 Seattle Belltown Design Review calls for integration of pedestrian amenities into building site.



source: 2210 3rd ave google earth imagery november 2022  
 Current streetscape: pedestrian amenities called forward in design review have not been successfully implemented.



eve wang, hunter ottman, jessika gill

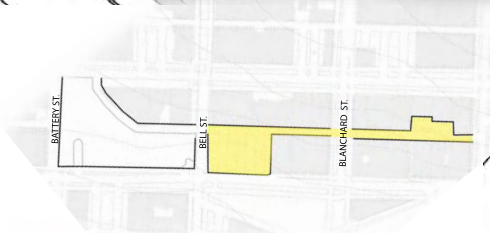
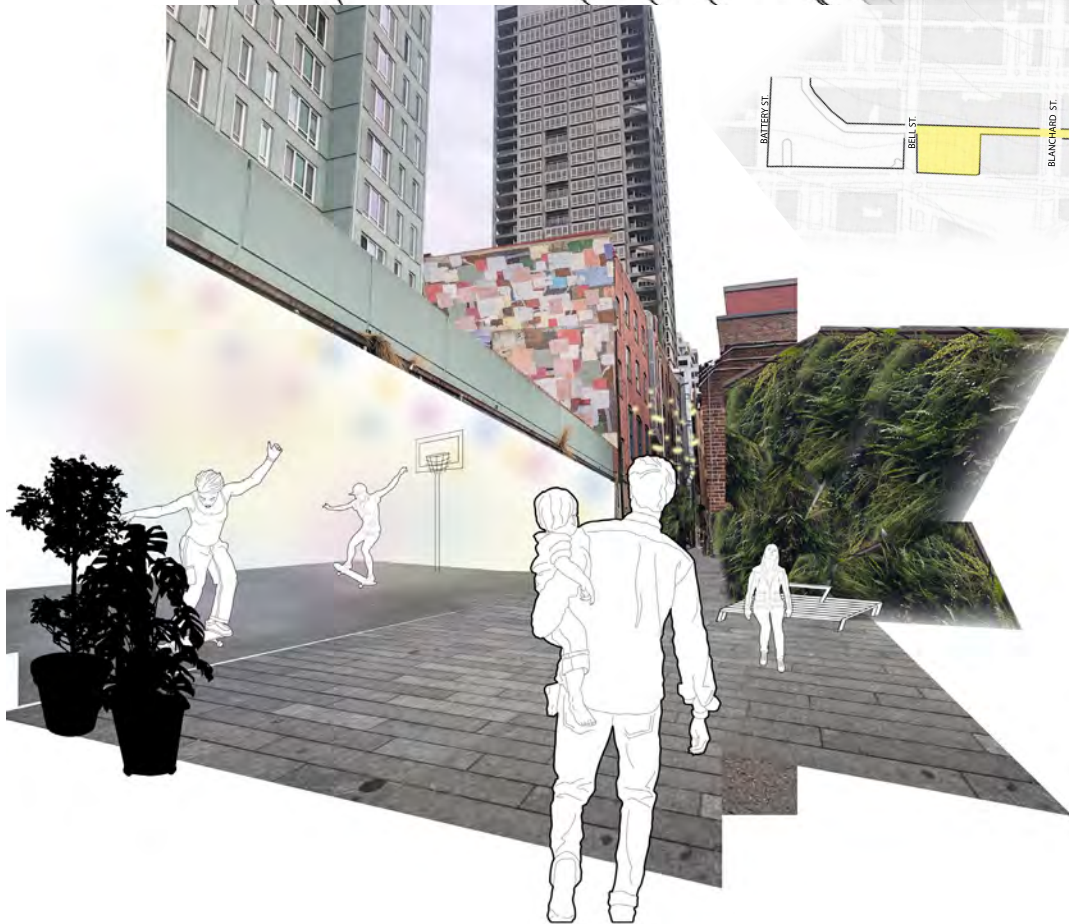
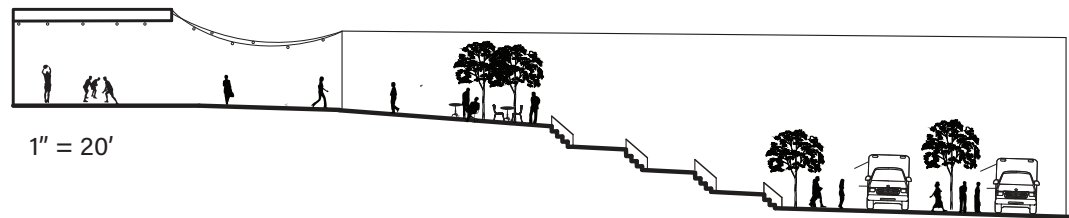


precedents:  
 saint-antoine hospital, paris- chartier dalix architectes  
 activating alleys for a lively city- green futures lab, UW  
 gastropark, CT - linda howley

# EXTENDED POST ALLEY

SOCIAL + ECOLOGICAL ACTIVATION

HELEN ARNOLD



EXTENDED POST ALLEY



# HAVE FUN

ROXIE HE

## SITE STATUS



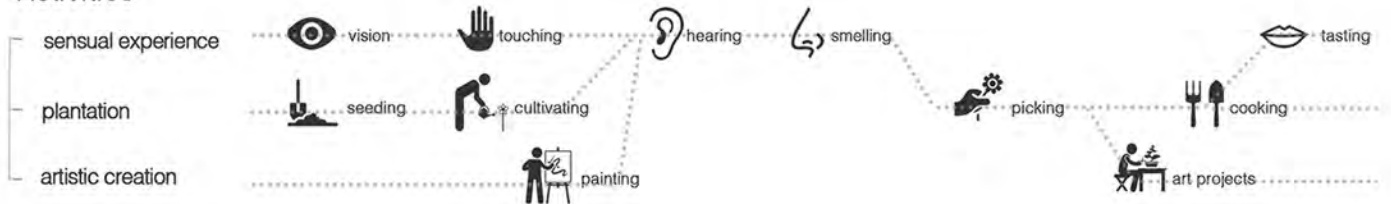
## SITE PLAN



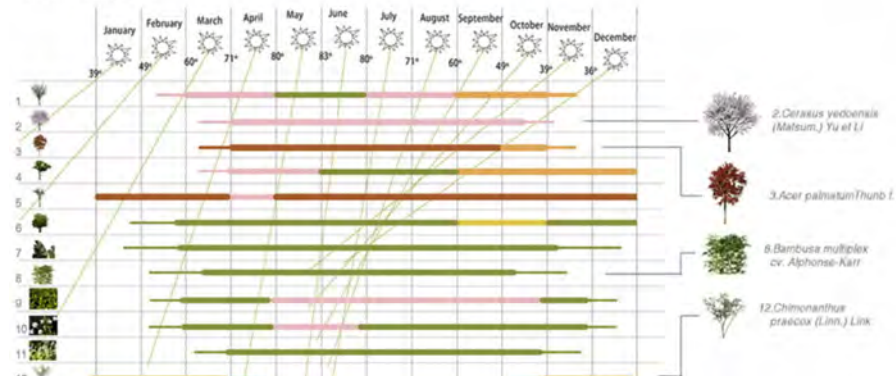
## PLANT DESIGN



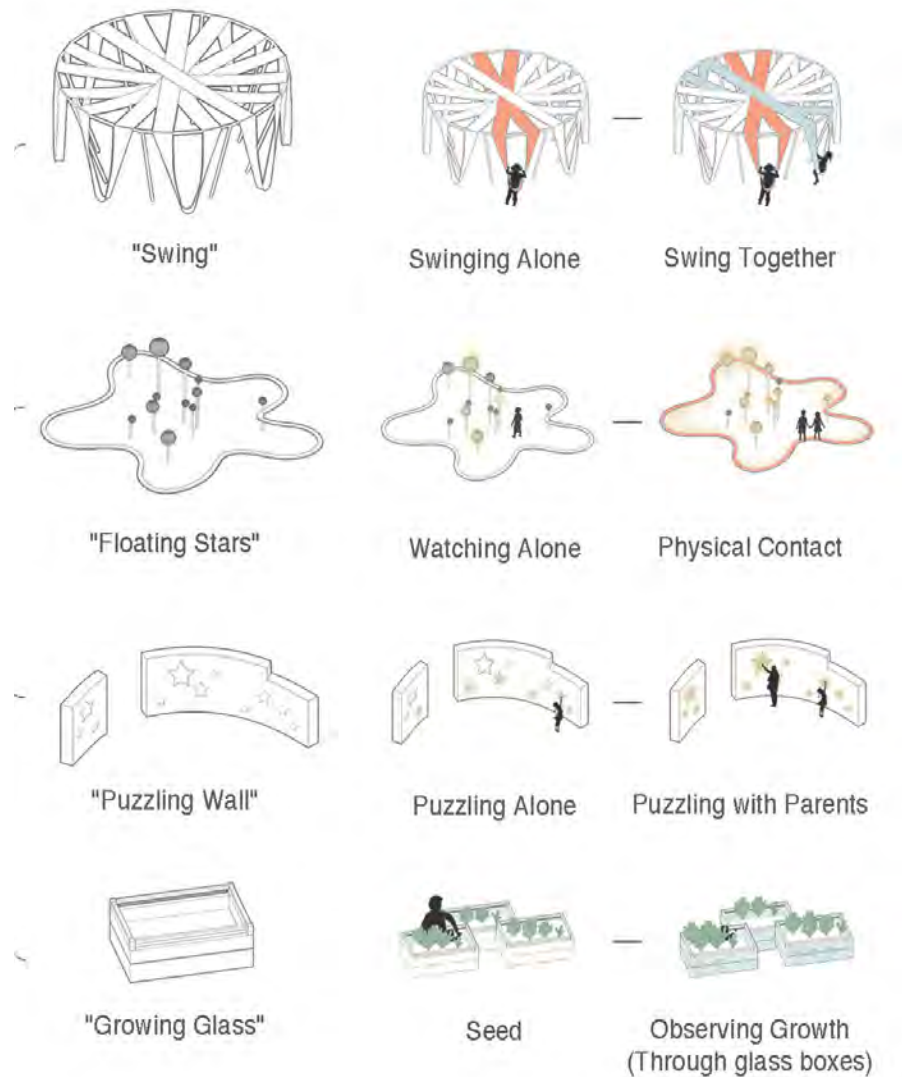
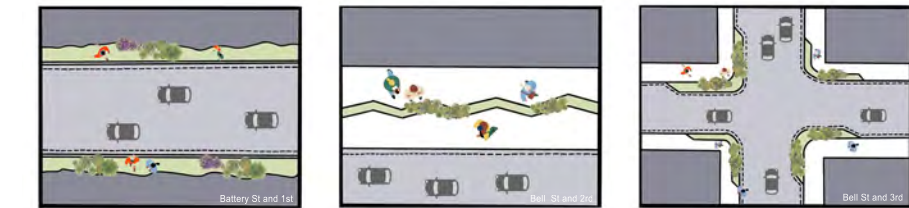
## Activities



## Main Plants List



## STREET VIEW



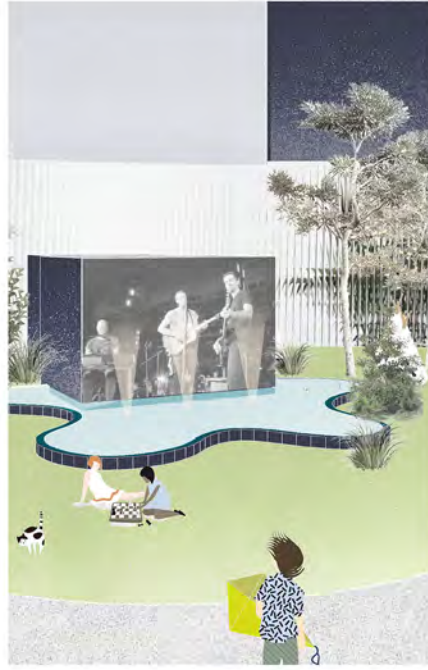
Belltown is already a very convenient place, but it lacks some public places where people can interact.

This site for this project is a parking lot where, long ago, there were open film screenings every summer. I chose this site hoping that the history of this space can re-emerge and continue.

PHYSICAL TRAINING



Children can play on the seesaw for physical exercises, or play in the sand pit for hands-on exercises.



Parents or ordinary people can rest on the grass, watching the water, enjoying the show on the screen.



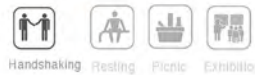
It can be exposed to different textures of plants using vision, hearing, smell, touch— exercises of sense.



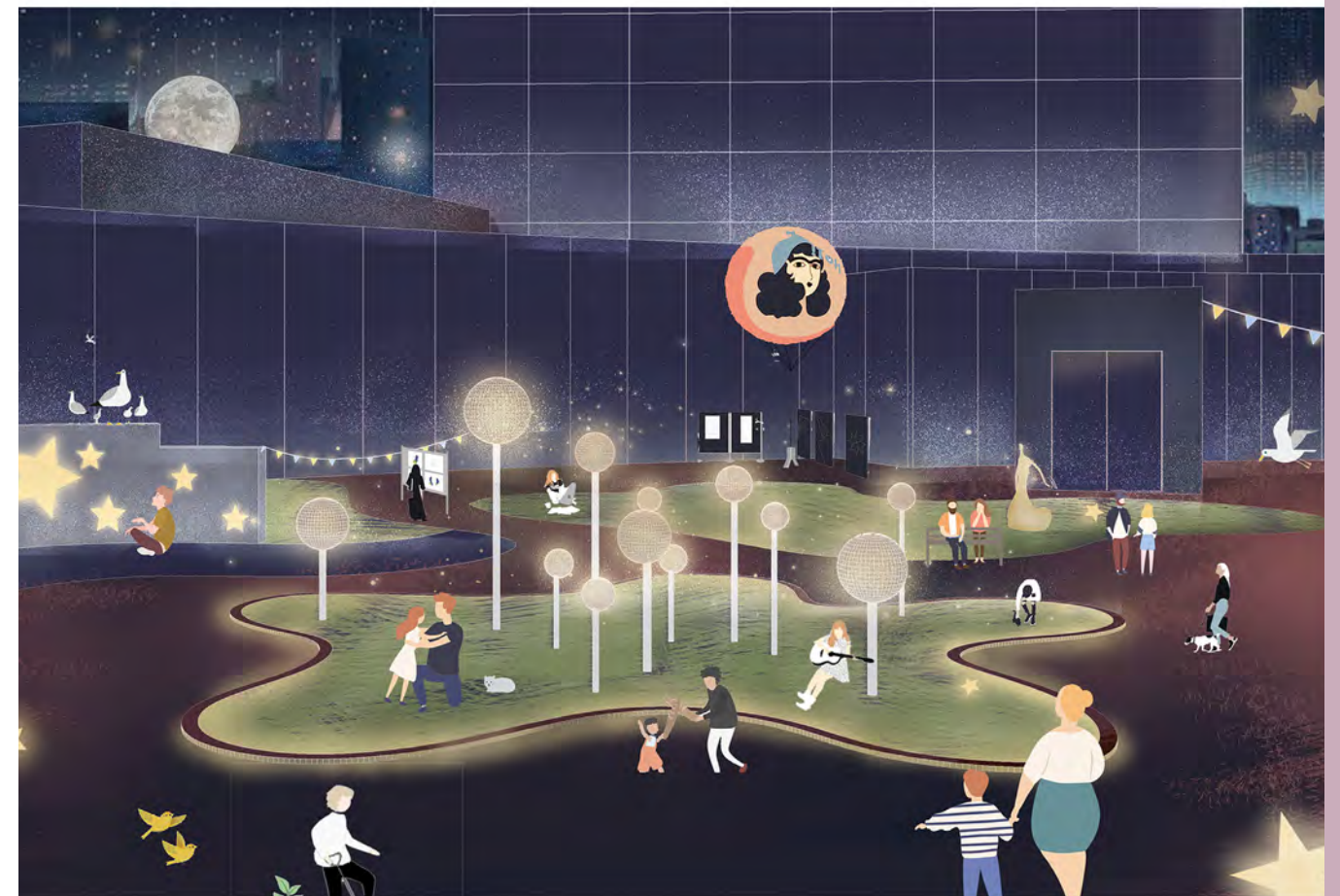
The people children can play on the "swing" set together and have a preliminary communication with other people.



People can collect the "stars" scattered in the garden and put them together on the "puzzle well". People can grow, pick and taste their own fruits and vegetables in the soil and in the growing boxes.



Some of the "stars" can be lit by standing on a strip of light at the edge of the "Floating Stars" and shaking hands or making physical contact with those around them. Visitors can relax on the lawn, have picnics and visit exhibitions.



HAVE FUN

# Belltown Public Park

## Belltown Problems:

- Lack of pedestrian safety
- Lack of green space
- Not family-friendly
- Accessibility issues due to steep slopes
- Safety issues on Bell Street

## Proposed Solutions:

- Complete Street on Western Avenue
- Provide a playground for families
- Create ADA-accessible path
- Provide space for homeless community



Western Ave - Current



Battery St - Current



Popular Routes



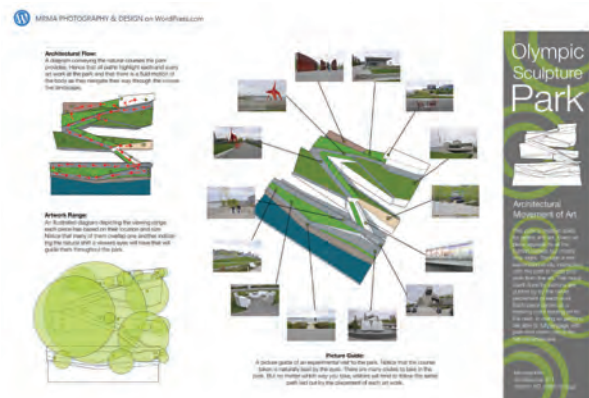
Belltown Homeless Services



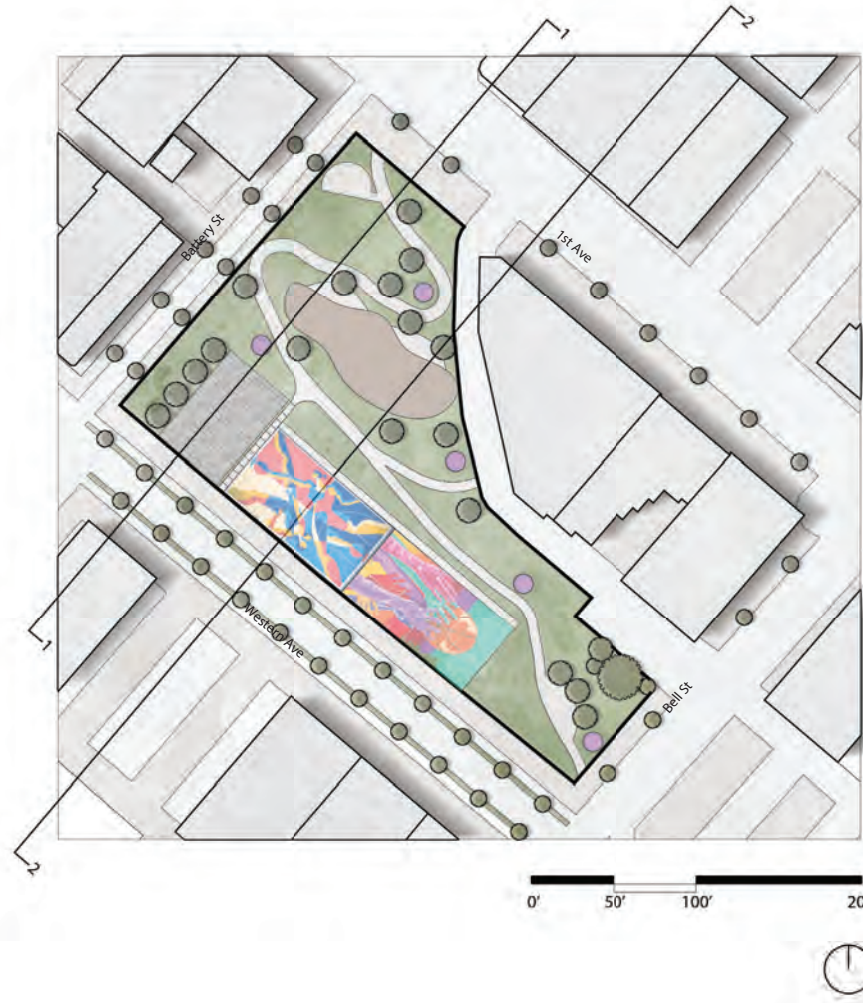
Louisville, Colorado



London, England



Seattle, Washington



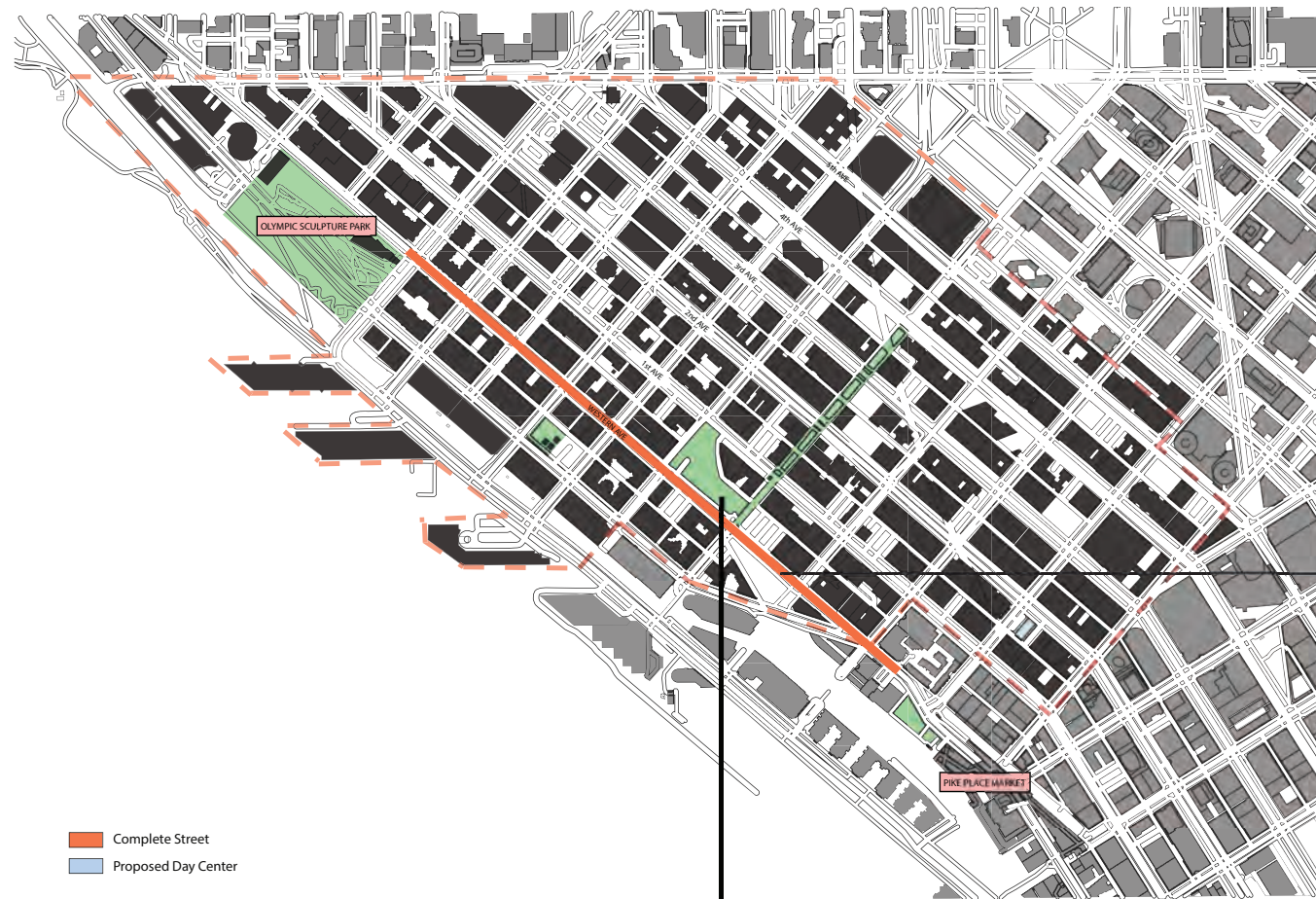
Section 1



Section 2

# BELLTOWN PUBLIC PARK

RUTHIE HOGLEN



Western Ave Section



Local Art



0' 50' 100' 200'



Family Playground



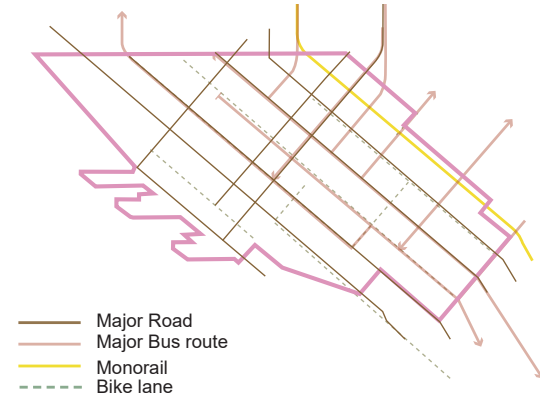
Food and Outdoor Dining



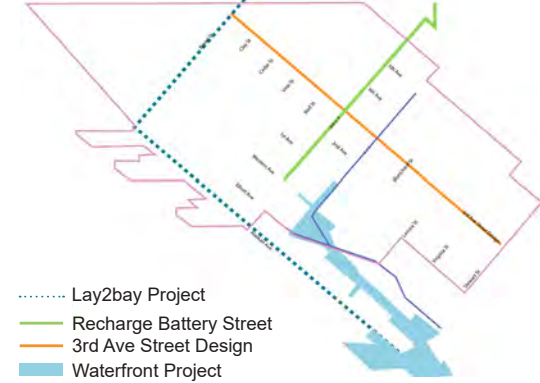
Basketball Courts

# NEIGHBORHOOD CONTEXT

## Transportation



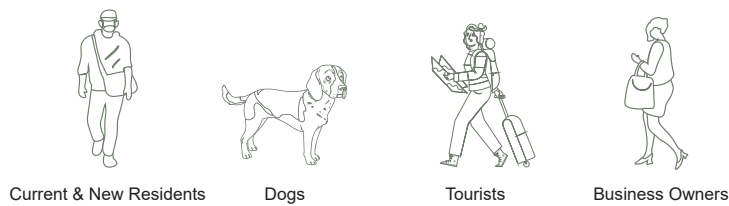
## Current proposed projects



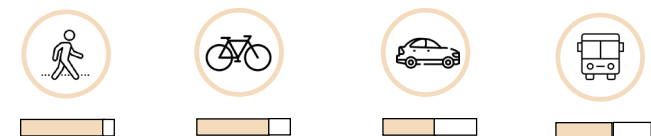
## Vacancy



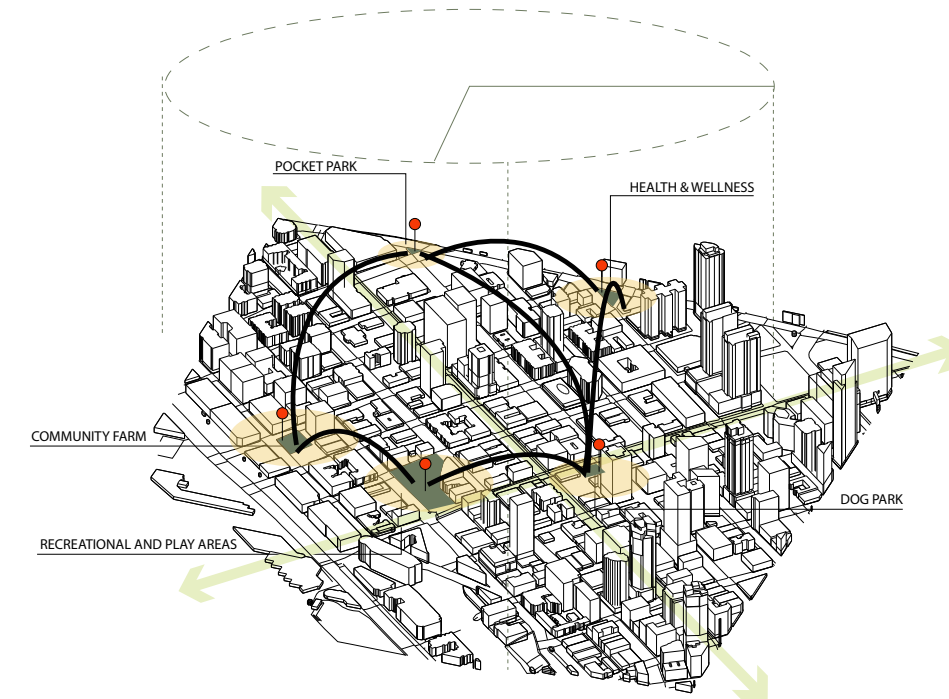
## Demographic



## Mode of travel to work



# CONCEPT DEVELOPMENT



# URBAN ACUPUNCTURE

MULTI-FUNCTIONAL OPEN SPACES

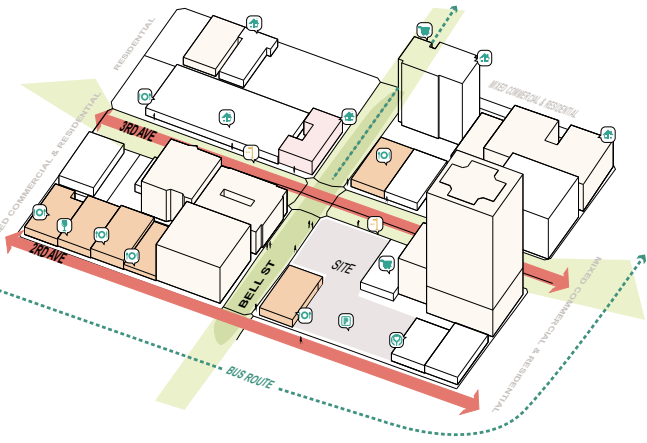
BING WAN

This project focuses on public space activation in Belltown with the concept of Urban Acupuncture, aiming to create multi-functional open spaces with different programs of activities for Belltown community members. The design features four programs of activities including dog play area, exercise area, street activities, and an open plaza.

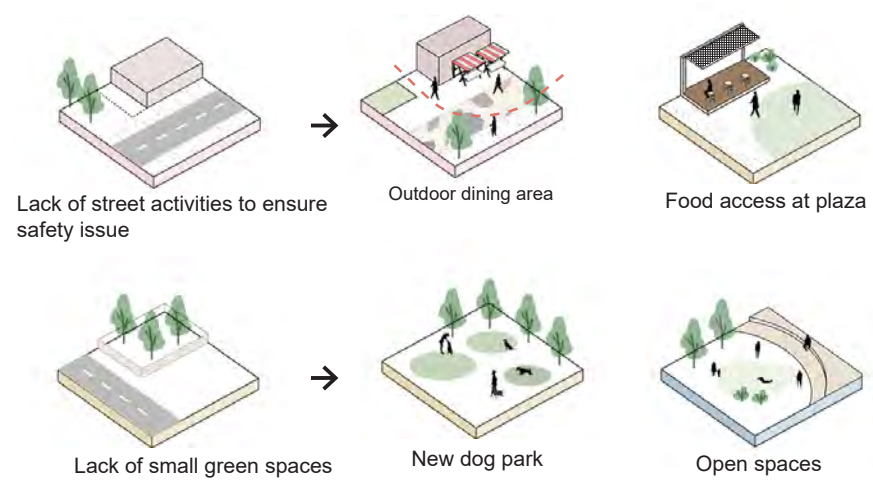
Through analysis of current amenities, entertainment, and vacancies in Belltown, we know that Belltown has the base to support a 15-minute city framework. This project looks to expand the idea of urban acupuncture, setting up small needles in the neighborhood to create more opportunities for neighborhood interactions.

This design proposed starting with the existing dog park on 3rd Ave & Bell St and utilizing the nearby parking lot on 2nd Ave to expand the concept.

# SITE CONTEXT



# PLANNING STRATEGIES



Bell Street & 3rd Ave

# STRATEGIC PLAN



Regrade Park



Dog park-Berm area

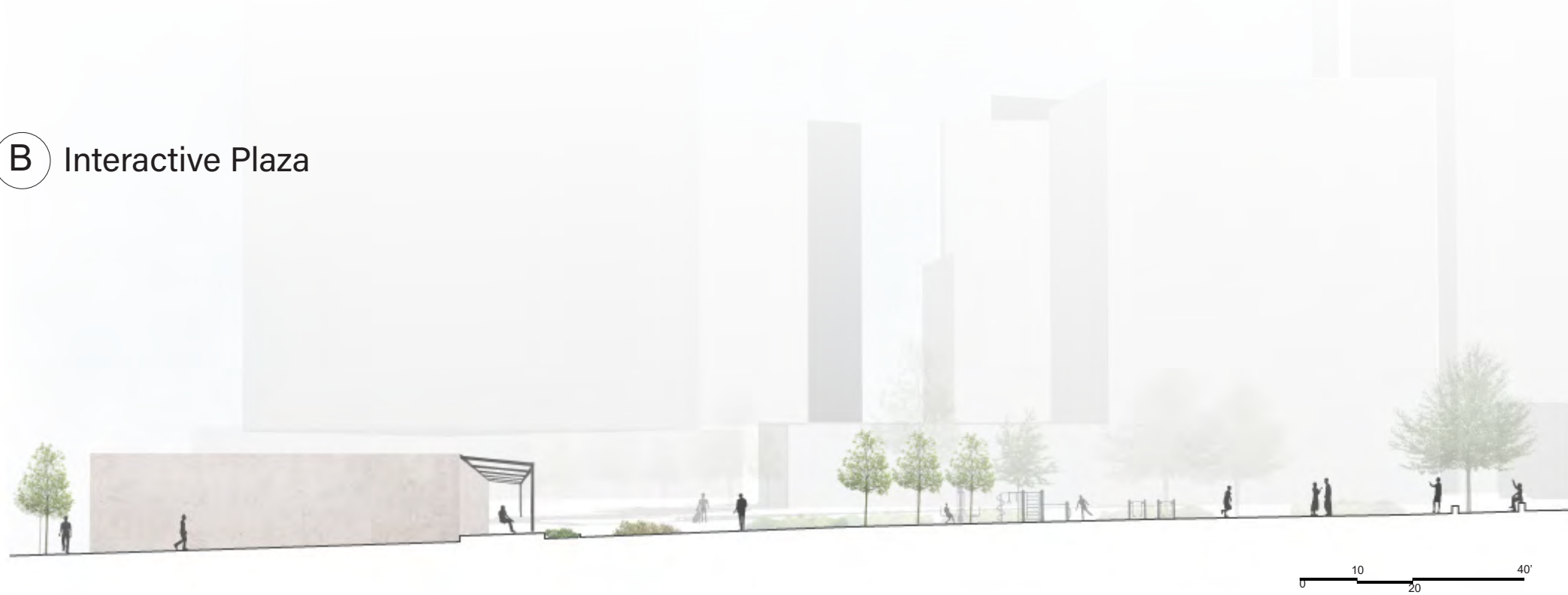
Regrade Park

URBAN ACUPUNCTURE



Temporary events at plaza

**B** Interactive Plaza



Outdoor dining view



Plaza without people

## Neighborhood

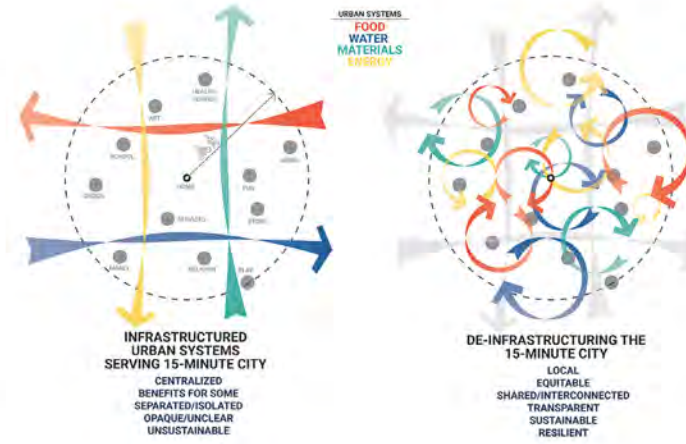


### Questions:

1. The lack of concentrated green space in the central area of Belltown
2. Missing connections between Belltown and surrounding landmarks

### Program:

1. Build the battery park to provide space for residents' activities
2. Combined with the height difference of the site, construct a landmark multifunctional park space



### 15-MIN CITY GOALS:

1. Increase the rate of green space, increase parks, and connect a comfortable walking network
2. Increase convenient and accessible high-quality regional service spaces, such as community activity centers, etc.
3. Increase high-quality, vibrant public spaces

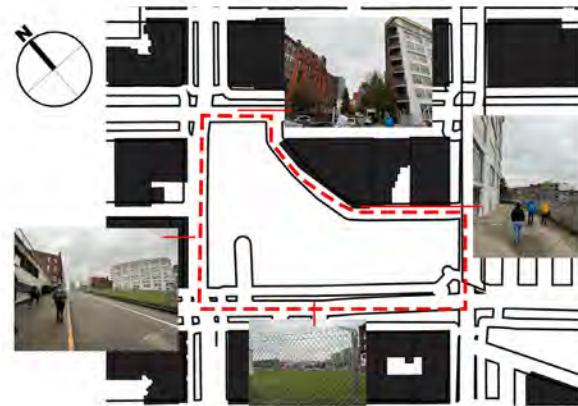
# BATTERY PARK

SINONG WU

Background: This project's site is located in central Belltown at the intersection of 1st Avenue and Battery Street. Because of the high density of buildings and total population in Belltown, a 15-minute living circle is planned to be developed to improve the comfort of people's lives.

Questions: The lack of concentrated green space in the central area of Belltown. Missing connections between Belltown and surrounding landmarks

Solutions: Build the Battery Park to provide space for residents' activities. Working with the steep grade differences on site, construct a landmark multifunctional park space.



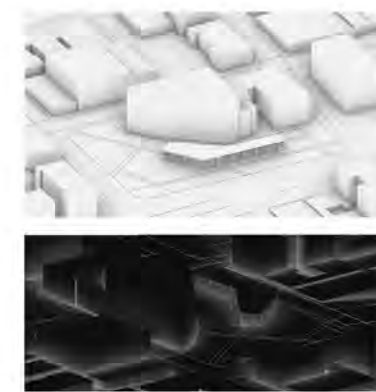
Site



Bubble



Sketch Plan

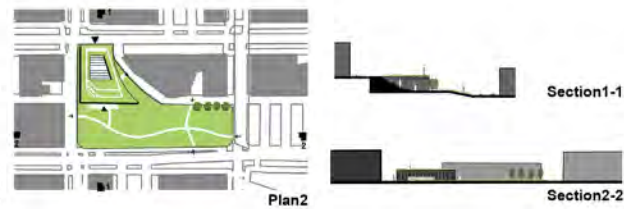


3D Model



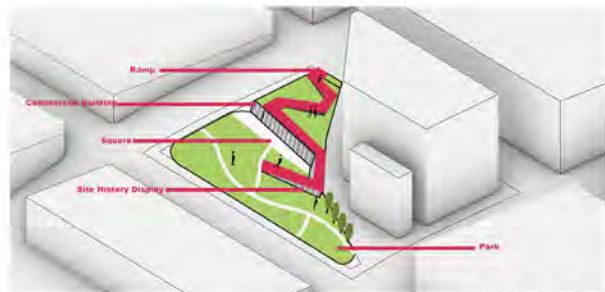
Section1-1

Section2-2

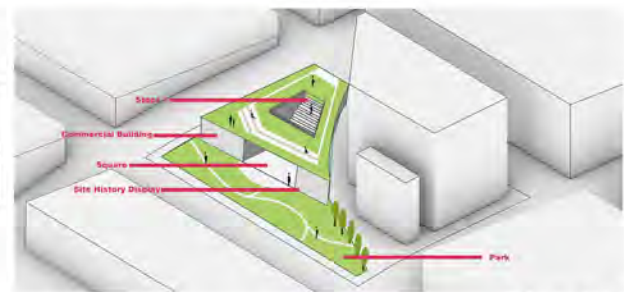


Section1-1

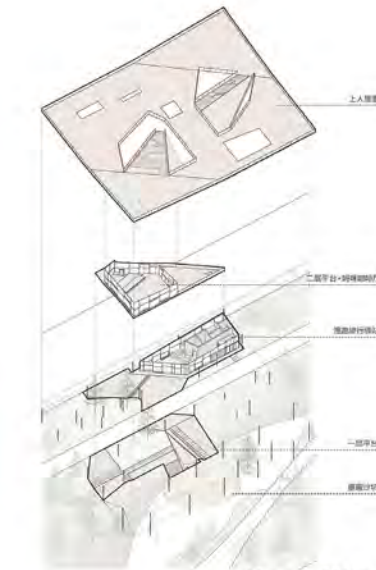
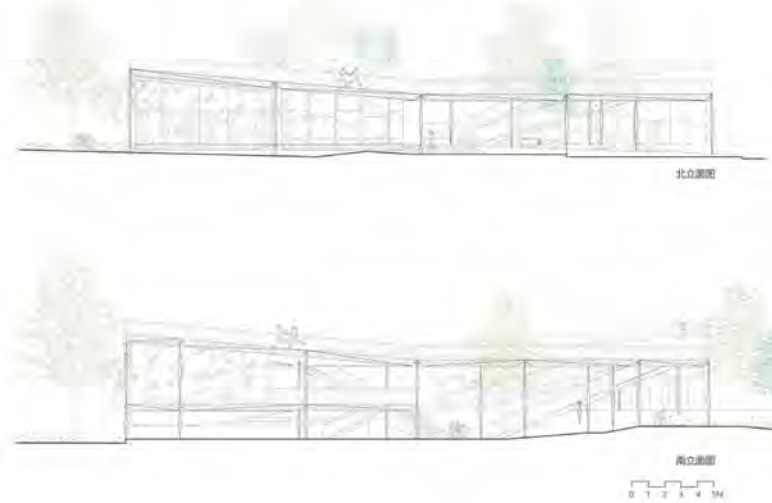
Section2-2



Sketch1

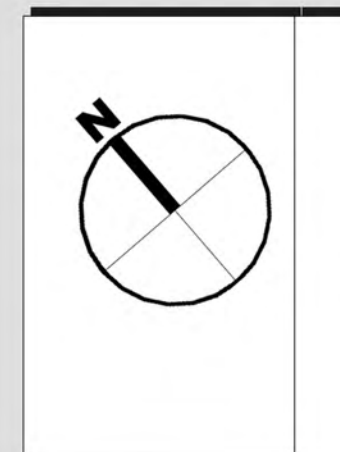
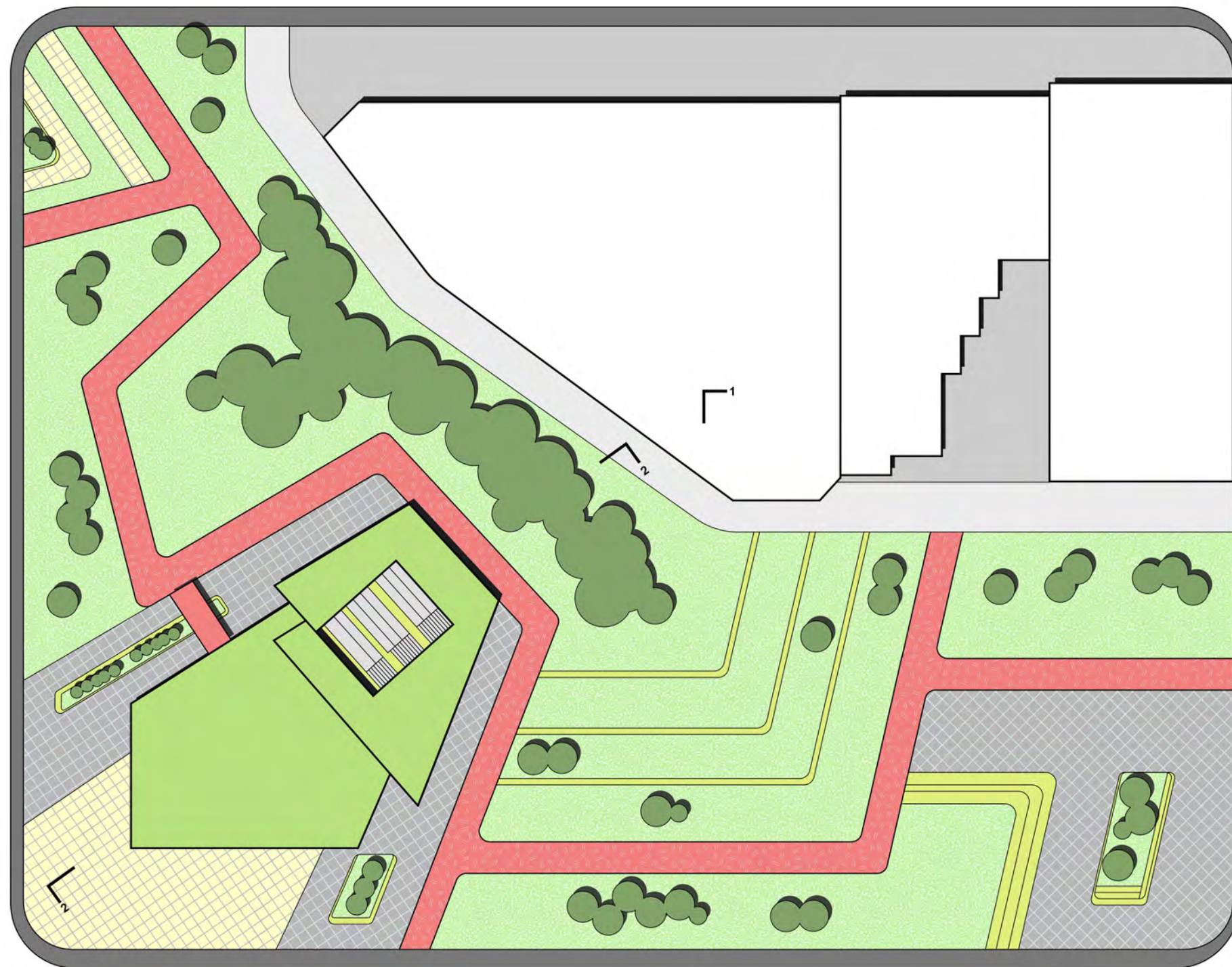


Sketch2



Case Study





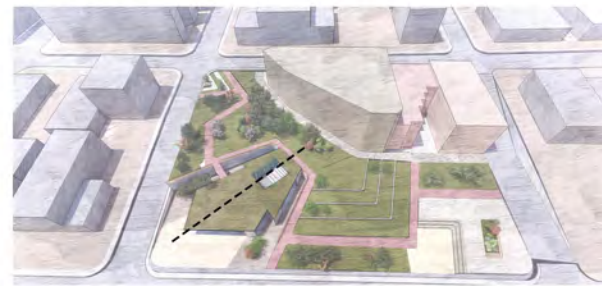
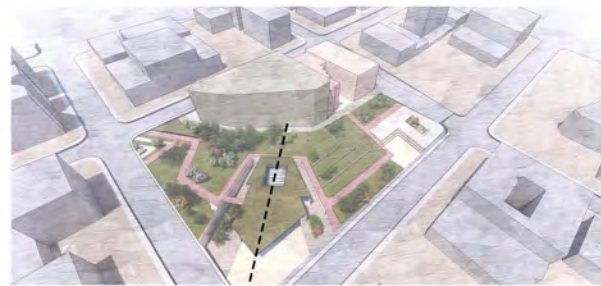
**Function**



- Grassland
- Plateau
- Woodland
- Square
- Existing Building
- New Construction - Activity Center

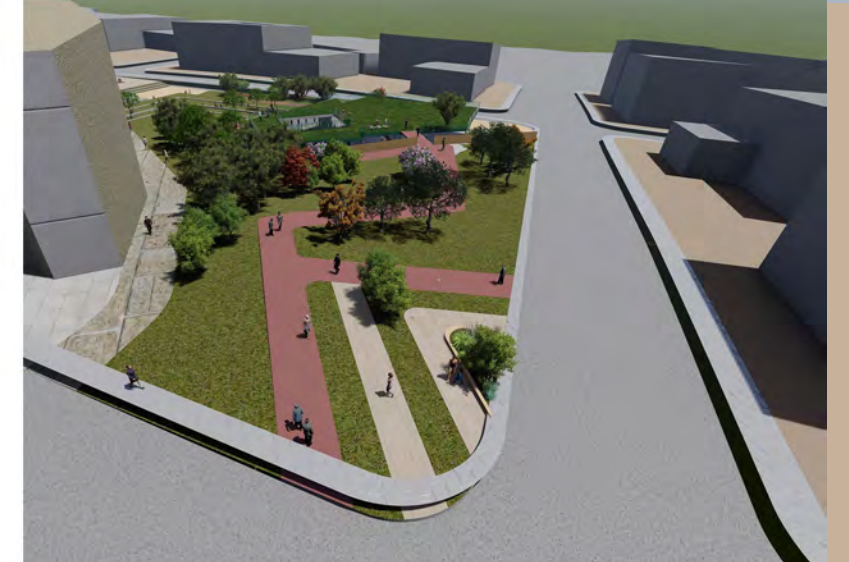


Section1-1



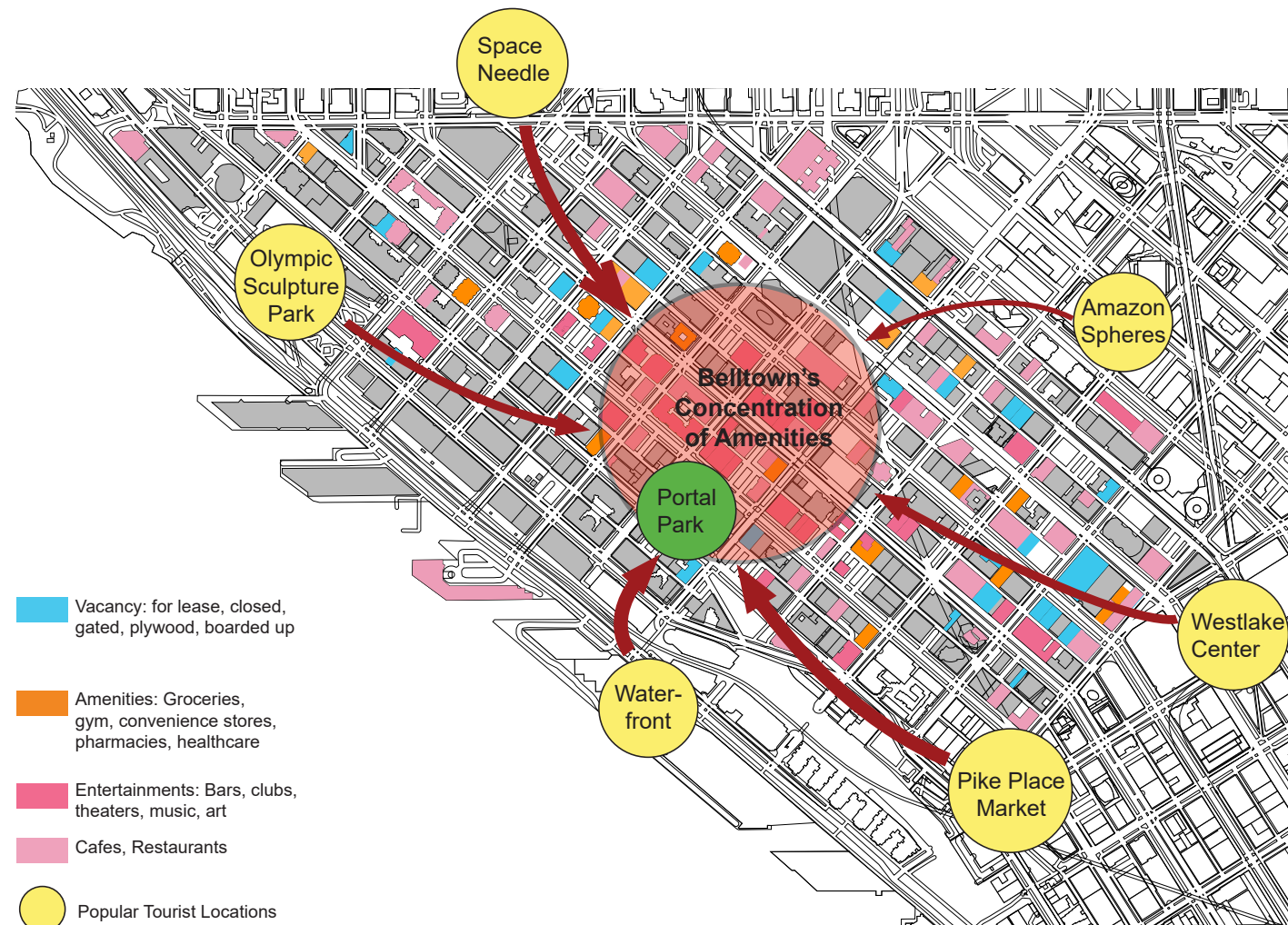
Section2-2

BATTERY PARK

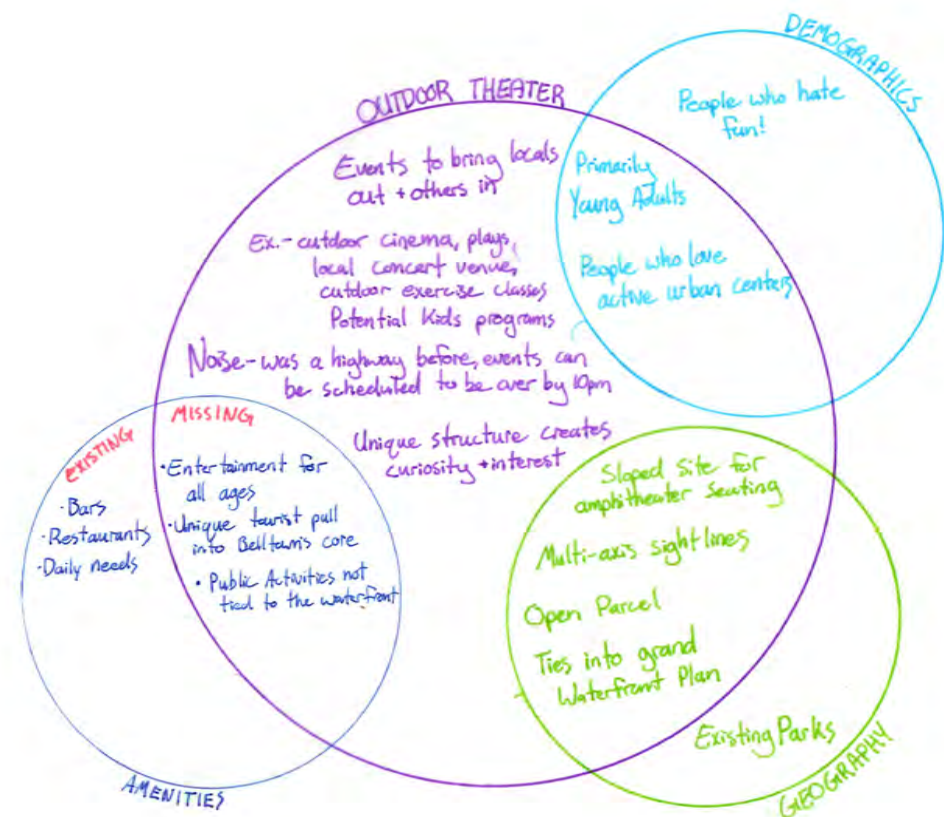


BATTERY PARK

## BELLTOWN'S GREATEST POTENTIAL



## PROGRAM



## UPCOMING INFLUENTIAL PROJECTS



# BELLTOWN'S BELL THEATER PARK

GET LOCALS OUT, & PEOPLE IN  
ALEX HOLBROOK

With the rare opportunity provided by the open lot of the viaduct portal demolition, this project proposal seeks to draw people into the site and neighborhood at large. With Seattle's main tourist attractions all on Belltown's periphery, a space for relaxation, entertainment and taking in the various views will help draw tourists in while bringing the dense local population out of their homes into a public realm.

The large half-dome theater serves as a curved practical art piece set against the square backdrop of downtown. This will help draw the eye from the new aquarium overpass.

KEY PRECEDENTS



Independence, OR



Tongva Park, Santa Monica



Vatican's Nativity Scene, 2022



Little Island, NYC



Florence Duomo, Italy



NYC Pier 35 Swings

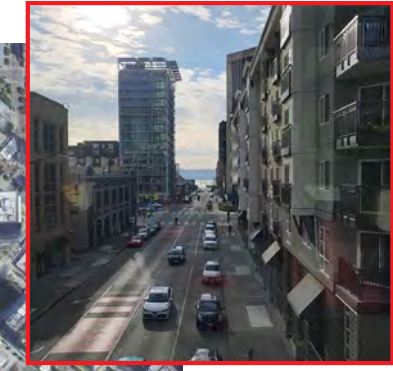


Historical Fences

PORTAL PARK SIGHTLINES



Ferris Wheel, Stadiums & Mt. Rainier



From the Monorail



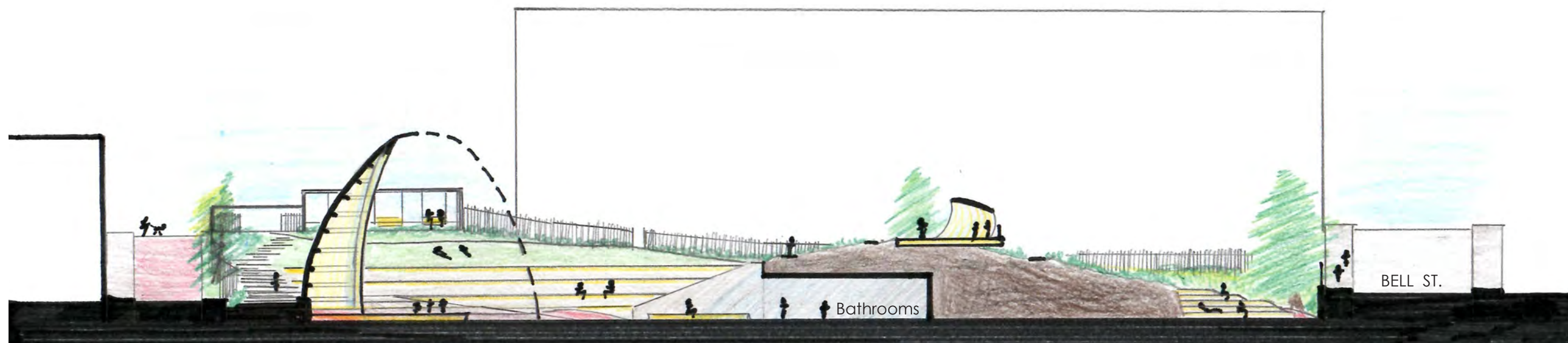
BELL THEATER PARK

PLAN



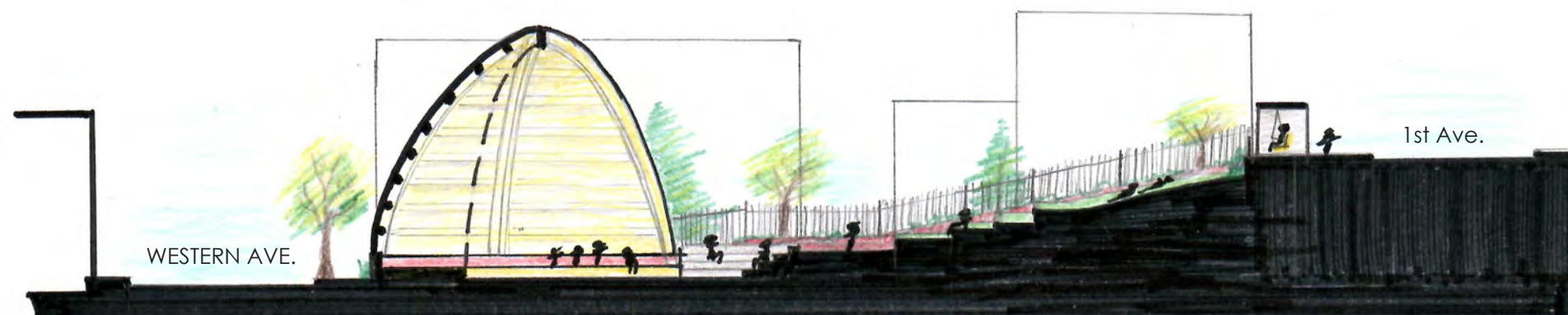
BELL THEATER PARK

NORTH-SOUTH SECTION



1:40

EAST-WEST SECTION

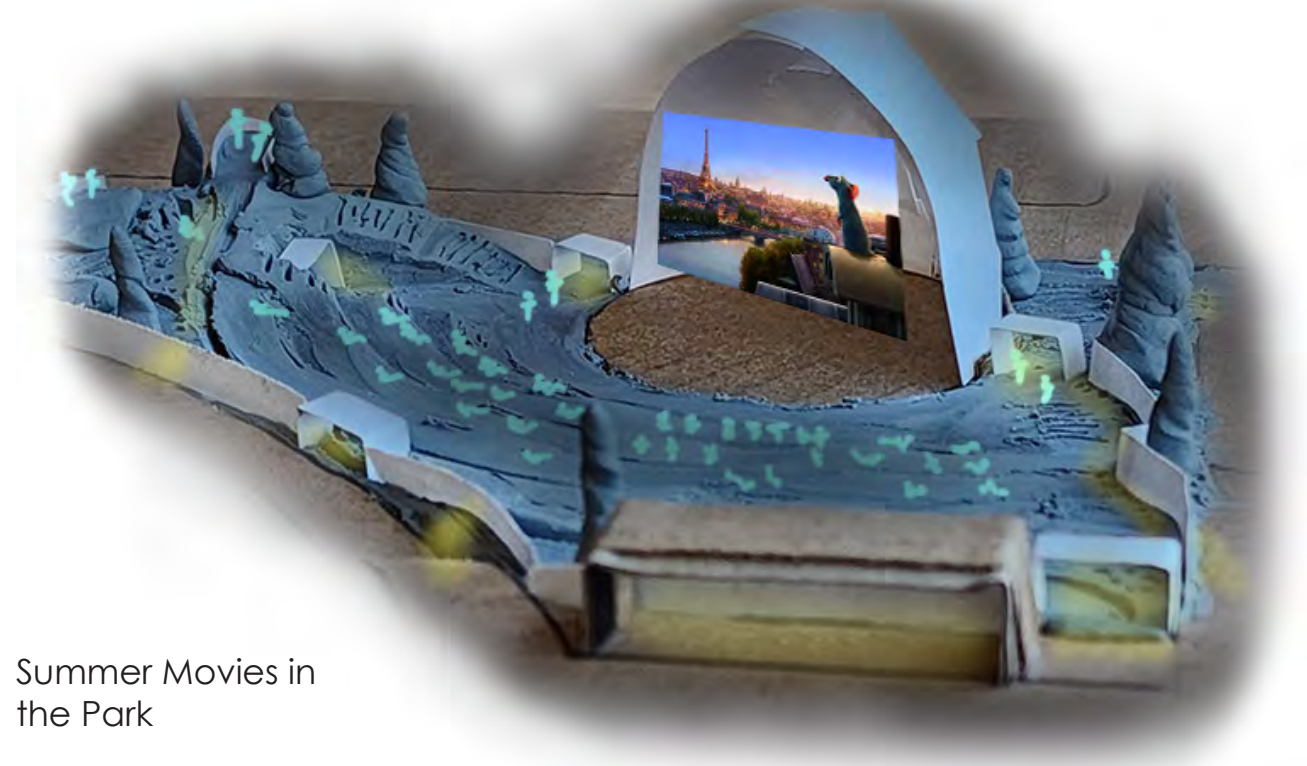


1:40

HALF-DOME VARIETIES

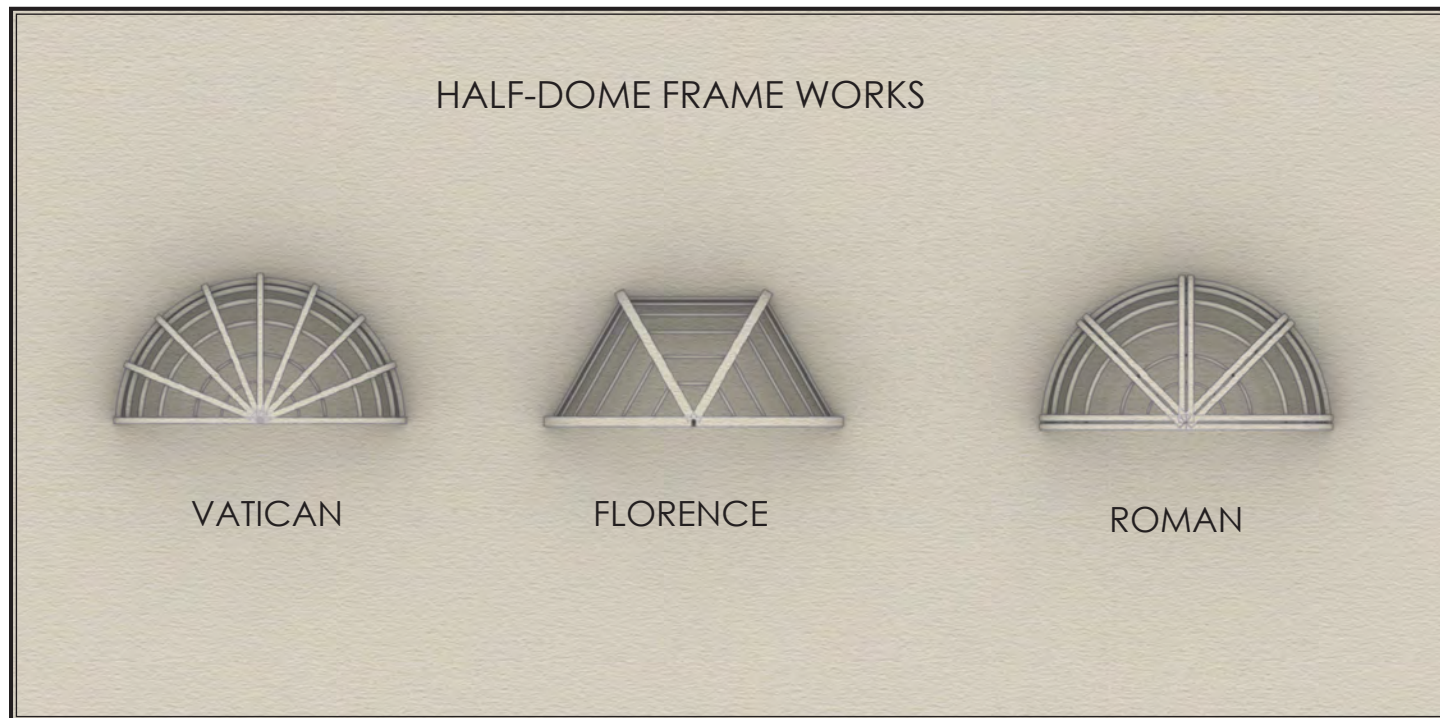


TEMPORAL VIEWS



Summer Movies in the Park

HALF-DOME FRAME WORKS



BELL THEATER PARK



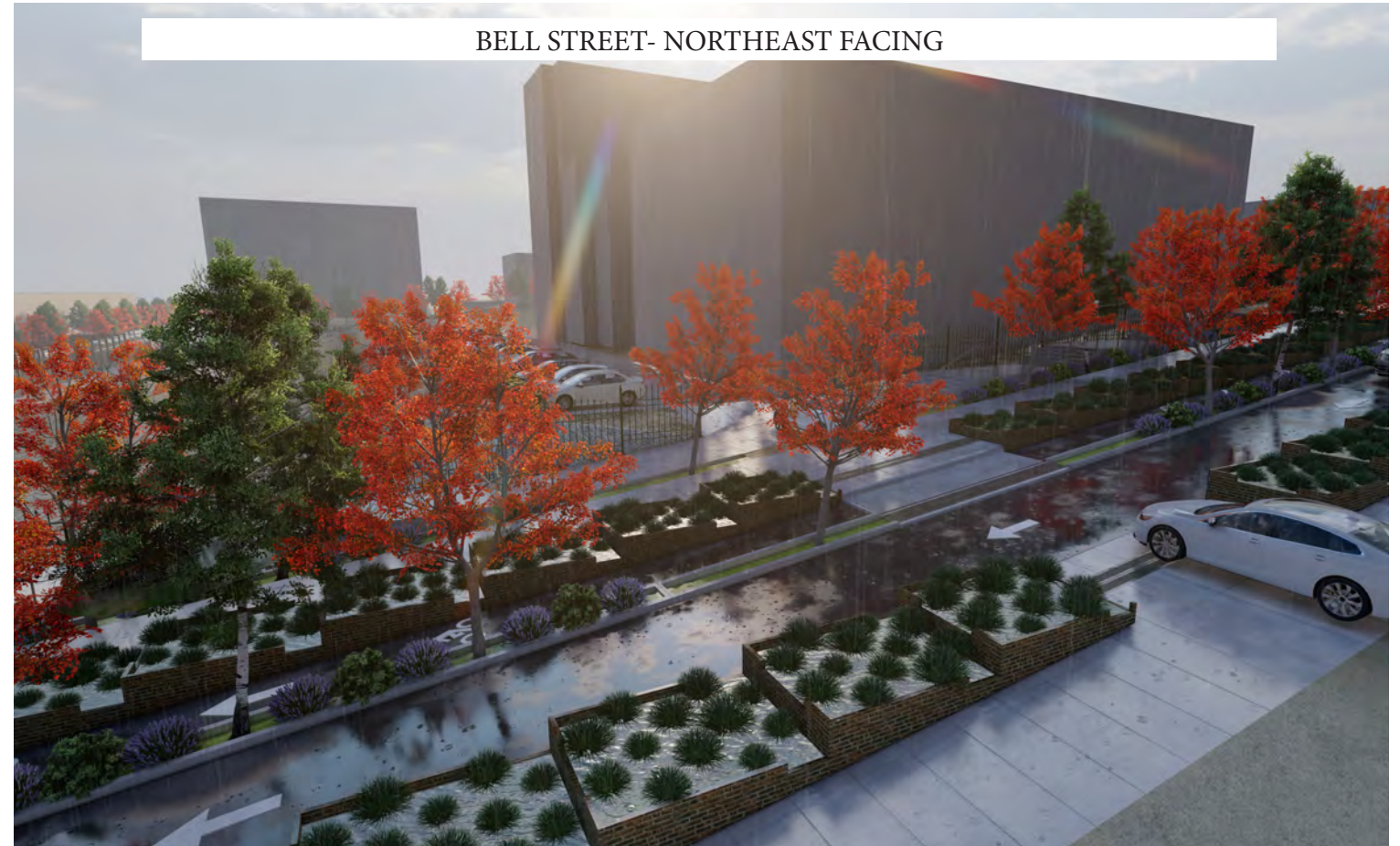
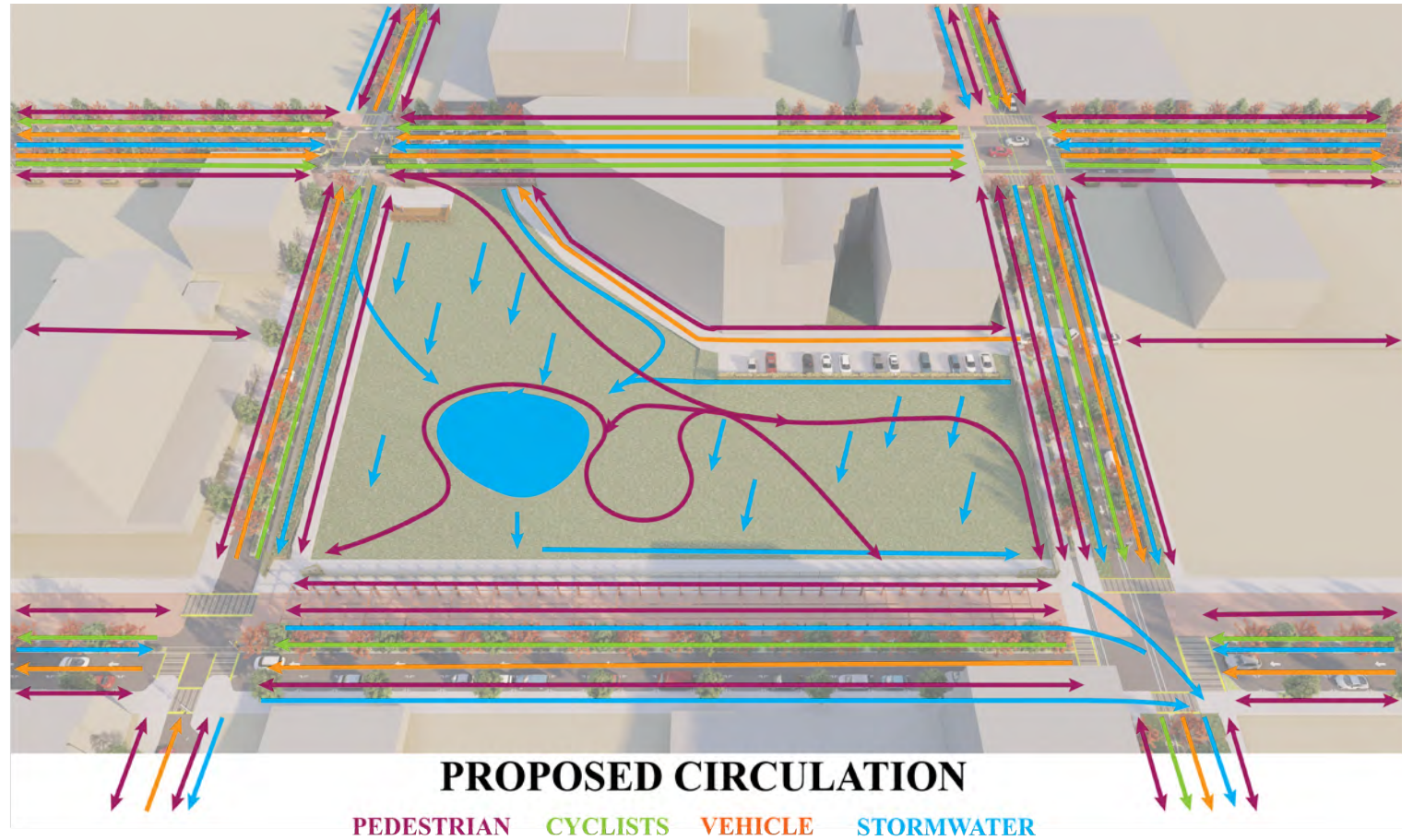
# A BREATH OF BELLTOWN

HUNTER OTTMAN

## PORTAL PARK

The primary focus of this site design is to further activate public spaces, including Portal Park (the central space) and its adjacent streets, as well as its immediate alleyways. Drawing on the 15-minute city framework, improvements to the spaces in between commerce, residency, eateries, etc. can make a city more enjoyable and functional in terms of the circulation networks of people, cyclists, vehicles, and storm-water. The following graphics illustrate a variety of design proposals to reclaim spaces from the right-of-ways for public use, to slow traffic and increase safety, as well as better manage and utilize storm-water.





A BREATH OF BELLTOWN

BELL STREET & WESTERN AVENUE



1ST STREET AND BATTERY STREET (SOUTHWEST)



1ST STREET AND BATTERY STREET (NORTHEAST)

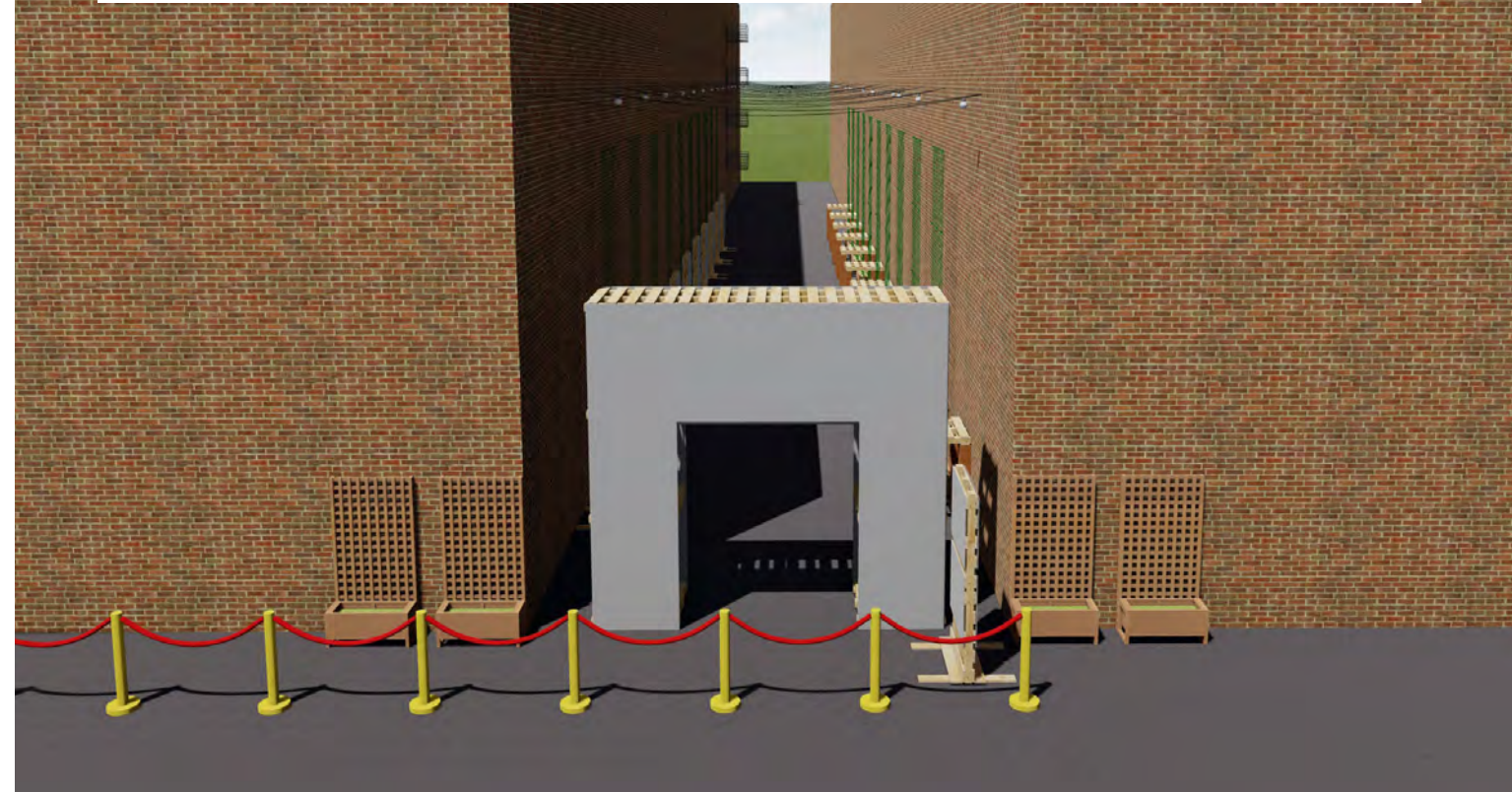


A BREATH OF BELLTOWN

ALLEY DINING OPTION



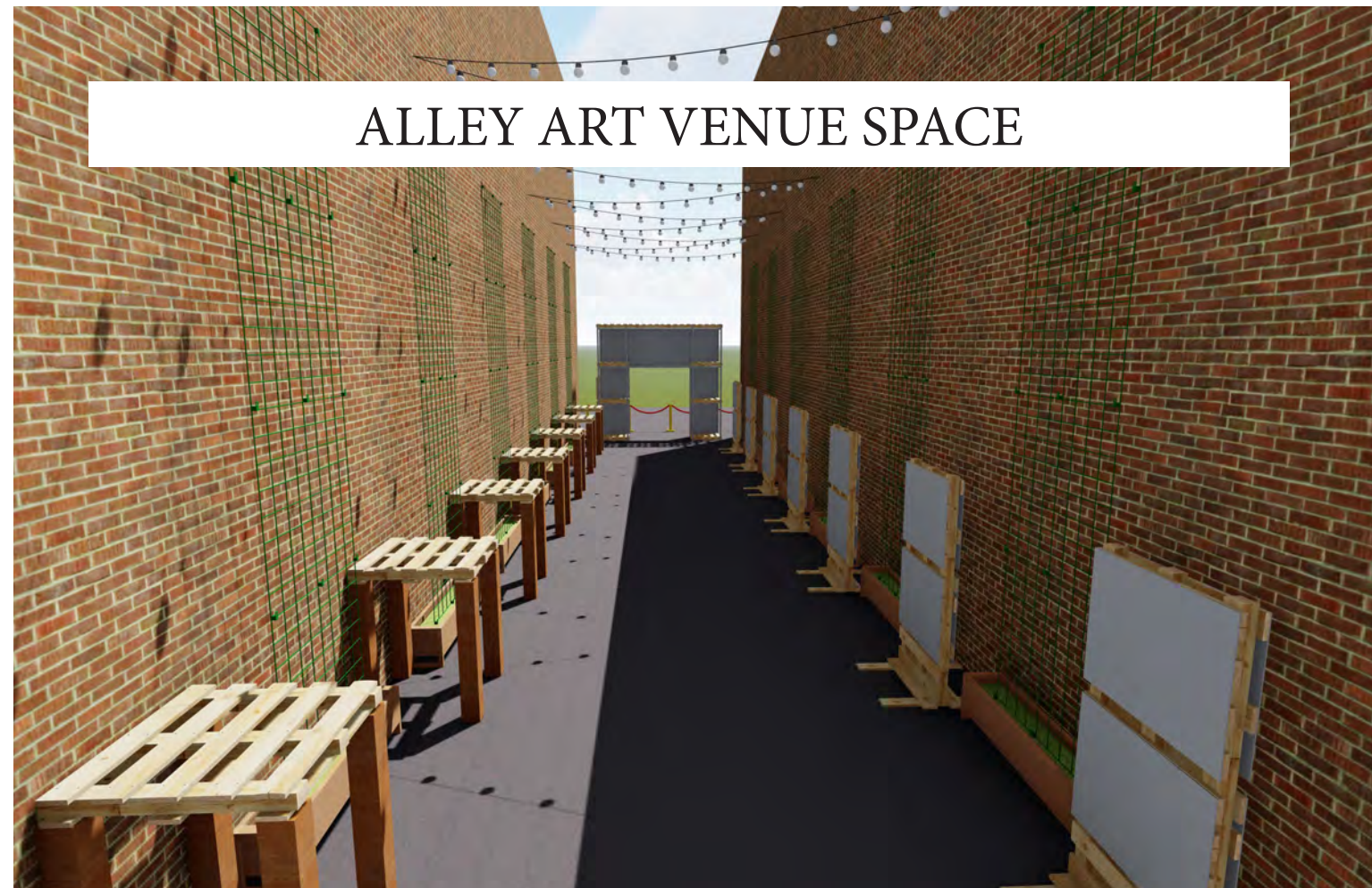
TEMPORARY ALLEY EVENT SPACE



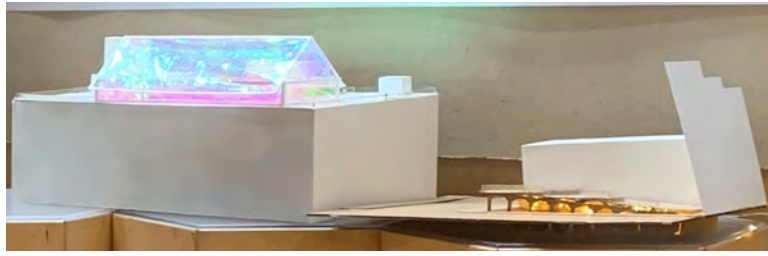
SIMPLE GREEN ROOF FOR DUMPSTERS



ALLEY ART VENUE SPACE



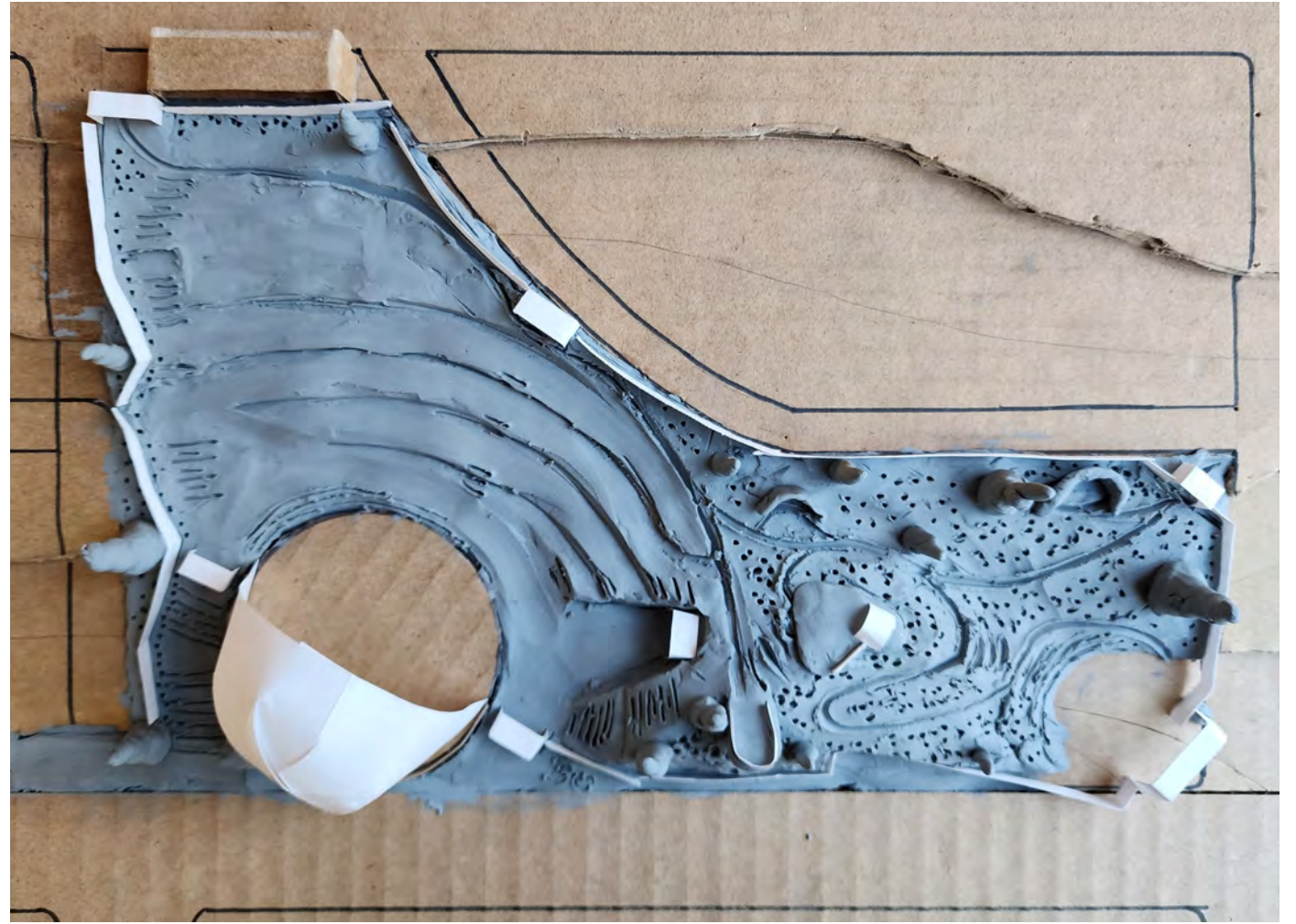
A BREATH OF BELLTOWN



Above: 3D Model & final review presentation, Jessika Gill  
Photos by Laure Heland

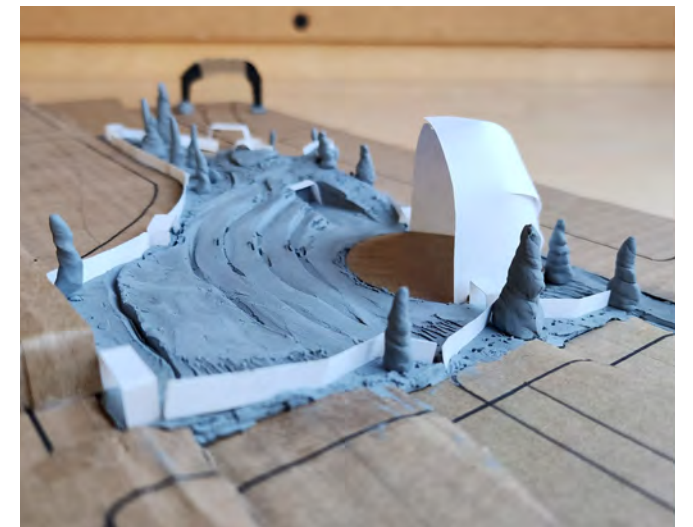


Right: Perspective photo of Jessika's model  
Photo by Jessika Gill



Right: Eve's 3D model & final review presentation

Photos by Yixuan (Eve) Wang & Laure Heland



Above: 3D Model perspective photos  
Model & photos by Alex Holbrook

*Envisioning Belltown as a 15-minute Neighborhood*  
Winter 2023 | Landscape Architecture Advanced Studio  
College of Built Environments | University of Washington



Photo by Hunter Ottman