



# **OMSI** **CENTRAL CITY** **MASTER PLAN**

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## **Design Advice Request #2**

**EA 19-137711**

**September 5th, 2019**

**OMSI**



An aerial photograph of a city, likely San Francisco, featuring a prominent bridge (Golden Gate Bridge) and a dense urban skyline. Overlaid on the left side of the image are several concentric circles of varying opacities, creating a graphic design element.

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OHSU

Portland

Tilikum Crossing

Marquam Bridge

Central Eastside

Central Railroad





# 1. Overview

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# 1.1. Our Story

Portland is a boomtown. A growing economy, relative affordability, a progressive culture, access to an outdoorsy lifestyle and a world-class food and beverage scene are a few reasons why people are flocking here from all over the country.

Despite rapid growth and signs of urban prosperity, something seems to be missing. A destination that nurtures and stimulates people to innovate and, in turn, experience innovation.

The OMSI Development plans to change that.

The OMSI Development is a one-of-a-kind mixed-use development. A thriving ecosystem brought to life through partnerships between a diverse community of makers, thinkers and educators in the arts, science and technology. OMSI is an anchor championing a culture of learning and experimentation.

Innovation is a mindset which is built into the fabric of the place and reflected in every stage: planning, design, programming and operations. Digital technologies are integrated seamlessly into the urban landscape. Data collection is open and transparent to make better decisions about mobility, energy and water use, waste, security, economic and community development.

## Our Vision

“OUR VISION IS TO BECOME A REGIONAL DESTINATION THAT CONNECTS CREATORS AND THINKERS TO FOSTER EXPLORATION, COLLABORATION AND INCUBATION AND CATALYZE POSITIVE CHANGE.”

OMSI developed this vision concurrent with Portland’s 20-year comprehensive plan update and with the input of the local community.

Systems and policies that strengthen and build startups without stifling the more mature firms are in place to promote diversity and advance inclusive growth. The result is an urban environment that sets a new standard for sustainability, resiliency, affordability, and livability in Portland.

The OMSI Development sparks a revitalization of the southeast waterfront through riverfront walkways, parks and plazas. These vibrant public spaces are activated with opportunities for discovery, learning and entertainment and are sought out by people of all types and their families. This is not a place of privilege. The OMSI Development for everyone.



Ross's Landing Park and Plaza, Chattanooga , Tennessee - James Wines & SITE



An interactive bench - “Block by Block”by Hyphae Design Laboratory, part of San Francisco’s Light up Central Market.



# 1.2. Executive Summary and Goals

## Executive Summary

This document has been prepared for the second DAR, focusing on verticality and massing as well as responding to feedback provided at the first DAR on June 6<sup>th</sup>.

This is the third in a series of master plans for OMSI and neighboring properties, prepared in 2014, 2017 and 2019. The purpose of this current master plan is to carry forward OMSI’s vision and intentions, adapt these to current development realities, and meet approval criteria for a Central City Master Plan.

The 2017 master plan was presented to the Design Commission in October 2017 for a Design Advice Review, the feedback from which has been considered in this effort.

During 2018, the Central City 2035 code updates took effect, including adoption of the new Central City Master Plan (CCMP) code in title 33.510.255. OMSI hired master developer Gerding Edlen to provide input on markets and financial feasibility. OMSI engaged ZGF Architects to evaluate the 2017 master plan relative to the CCMP code and to modify it as needed to comply with the new code and the development feasibility advice.



## Goals

The OMSI Central City Master Plan (CCMP) is an opportunity to create an innovative, mixed-use neighborhood that contributes to the overall quality of life and experience in Portland’s Central City and provides an important riverfront open space on the east side. The goals of the CCMP are:

- A mix of land uses, including residential, and commercial development that is integrated with on-going operation and development of OMSI programming to create a unique and vibrant destination.
- An inclusive, equitable and visually stimulating public realm that is pedestrian oriented and capitalizes on the spectacular Willamette riverfront site, a waterfront education park with Greenway trail, public gathering places, and smaller educational “moments” incorporating OMSI programming.
- A more functional riverbank below Top of Bank, including shallow water and riparian habitat as appropriate, plus educational access to the water in support of OMSI programming.
- An active transportation emphasis to move bicycles and pedestrians through the site,

- connecting Tilikum Station, the Central Eastside, and points east and west with multiple north-south connections along the river and through the site.
- Vertical development with a permanence and quality that enriches the skyline and offers human-scale features at the ground floor that will activate the pedestrian realm.
- Active ground-floor uses reflecting OMSI’s location in the Innovation Quadrant and the Central Eastside light industrial context.
- Support for sustainable, financially feasible development practices that address:
  - Habitat
  - Health and social equity concerns
  - Energy use and production
  - Carbon emissions
  - Water management strategies using measurable objectives and evolving phase by phase toward the highest performance possible.

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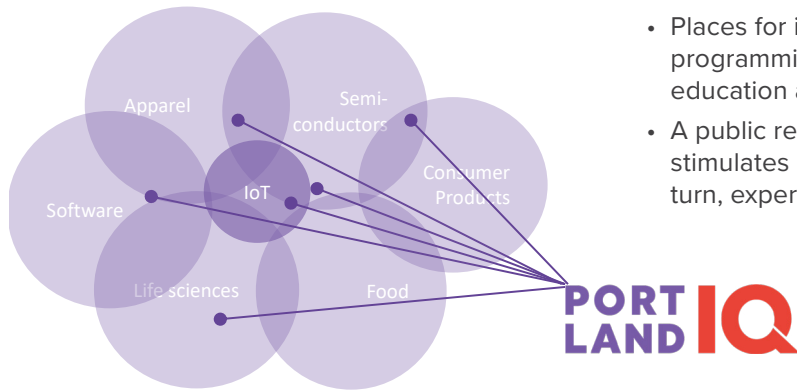




# 1.3. Innovation Quadrant

The Portland IQ (Innovation Quadrant) is an emerging innovation district in Portland’s urban core, a geographic area where anchor institutions (OMSI, PSU, OHSU, PCC), companies, and government cluster and connect with startups, incubators, and accelerators to spur investment, job creation, and economic growth. The Portland IQ is the center of gravity for a flourishing innovation ecosystem that attracts talent, entrepreneurs, and investment while propelling Portland, Oregon, to global prominence at the intersection of health, science, technology, and product design.

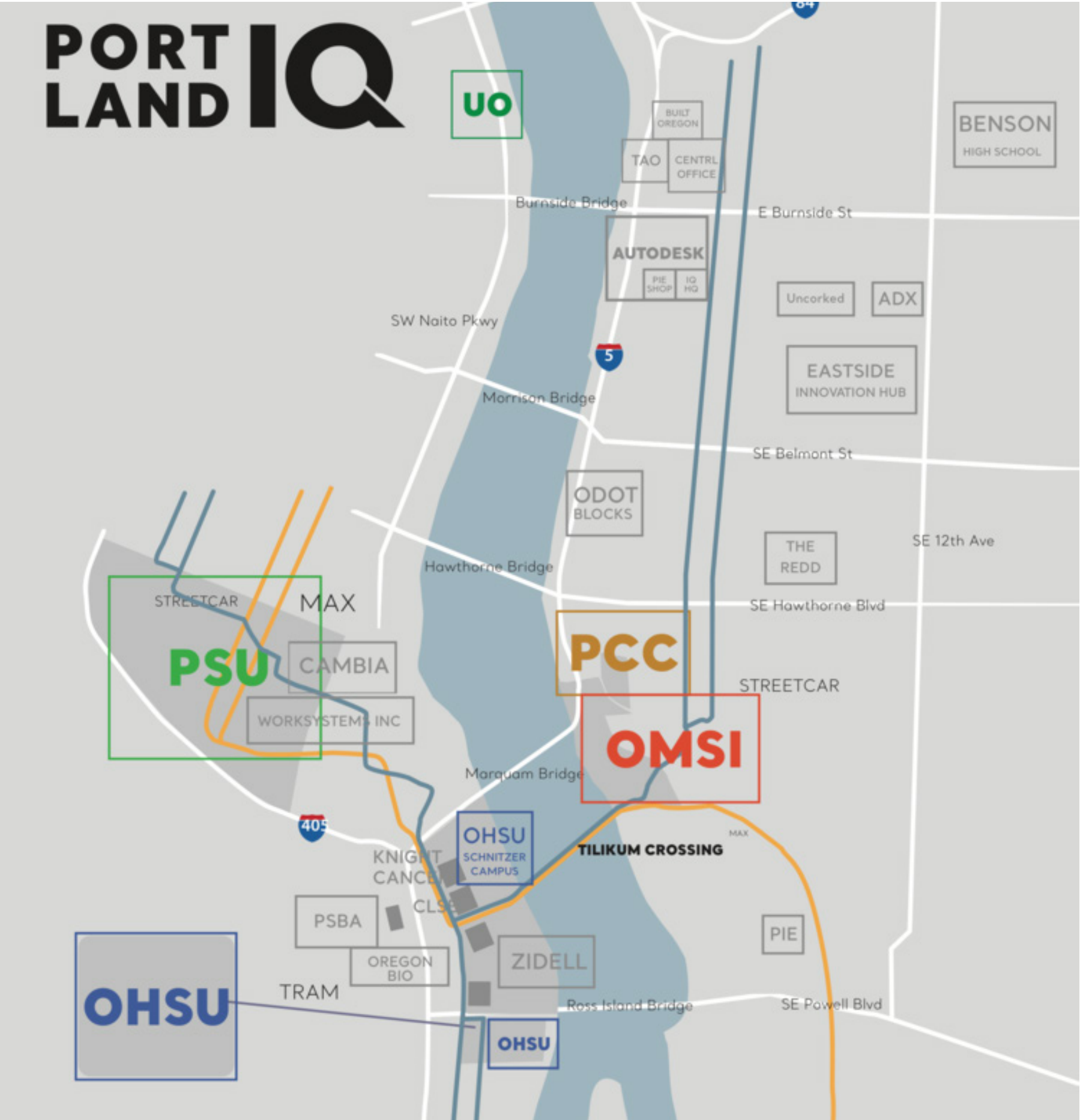
The first signs of this emerging collaborative ecosystem are already part of Portland, materializing in signature projects like the OHSU Collaborative Life Sciences Building, a joint project among OHSU, Oregon State University (OSU), and PSU located at the Tilikum Crossing bridgehead on Portland’s South Waterfront. This area — fed by bicycle and pedestrian paths, light rail, streetcars, buses, and the Portland Tram — is quickly emerging as a hotbed for life science, medical device, and digital health startups.



## IQ Goals

- **ACCELERATE** technology commercialization, innovation, and entrepreneurship
- **ATTRACT** talent and investment
- **BUILD** local workforce pipeline
- **UTILIZE EXPERTISE** of region’s largest health, science, technology and design companies
- **PROMOTE INSTITUTIONAL PARTNERSHIPS** and joint research and development
- **LEVERAGE COMBINED PARTNER RESOURCES** to advocate for and realize shared goals
- **SHOWCASE PORTLAND’S INNOVATION LEADERSHIP** in a tangible, geographic district

- The OMSI Central City Master Plan will reflect its Innovation Quadrant connection by providing:
- A place for IQ businesses and institutions to build facilities in which to pursue their mission.
  - A place for people working at IQ institutions on both sides of the Willamette to live.
  - Pedestrian and bicycle connections allowing IQ workers who live elsewhere to get to their jobs.
  - Places for indoor and outdoor exhibits and programming that will manifest OMSI’s education and science-based mission.
  - A public realm that nurtures and stimulates people to innovate, in turn, experience innovation.



## 1.4. What We Heard

SUMMARIZED FROM EA 19-137711 DA SUMMARY MEMO DATED JULY 22, 2019:

- Clarify the connection between the plan area, the rest of the Central Eastside, and the Innovation Quadrant.
- Embrace the river with the combined street and open space pattern. Explore how to activate the west side of the plan area to truly take advantage of the river.
- Clarify the hierarchy of the street network.
- Strengthen east-west connections to the river and the Central Eastside.
- Explore how the Green Loop might be brought through the site.
- Establish the size and function of each open space and show how they are intended to be used during both normal and peak activity.
- Explore how to connect the plaza on Tract B with the development on Tract E and its other adjacencies.
- Create a fantastic place in the open space on Tract C at the south end of the Central Pedestrian Spine.
- Explore how best to create an active ground floor frontage along New Water Avenue, including consideration of on-street parking and the location of the cycle track on the east or west side of the street.
- Consolidate parking entries as much as possible to improve the pedestrian realm.

OMSI AND ITS PROJECT TEAM HAVE ALSO DISCUSSED THE CCMP WITH NEIGHBORING PROPERTY OWNERS AND THE HOSFORD-ABERNETHY NEIGHBORHOOD ASSOCIATION.





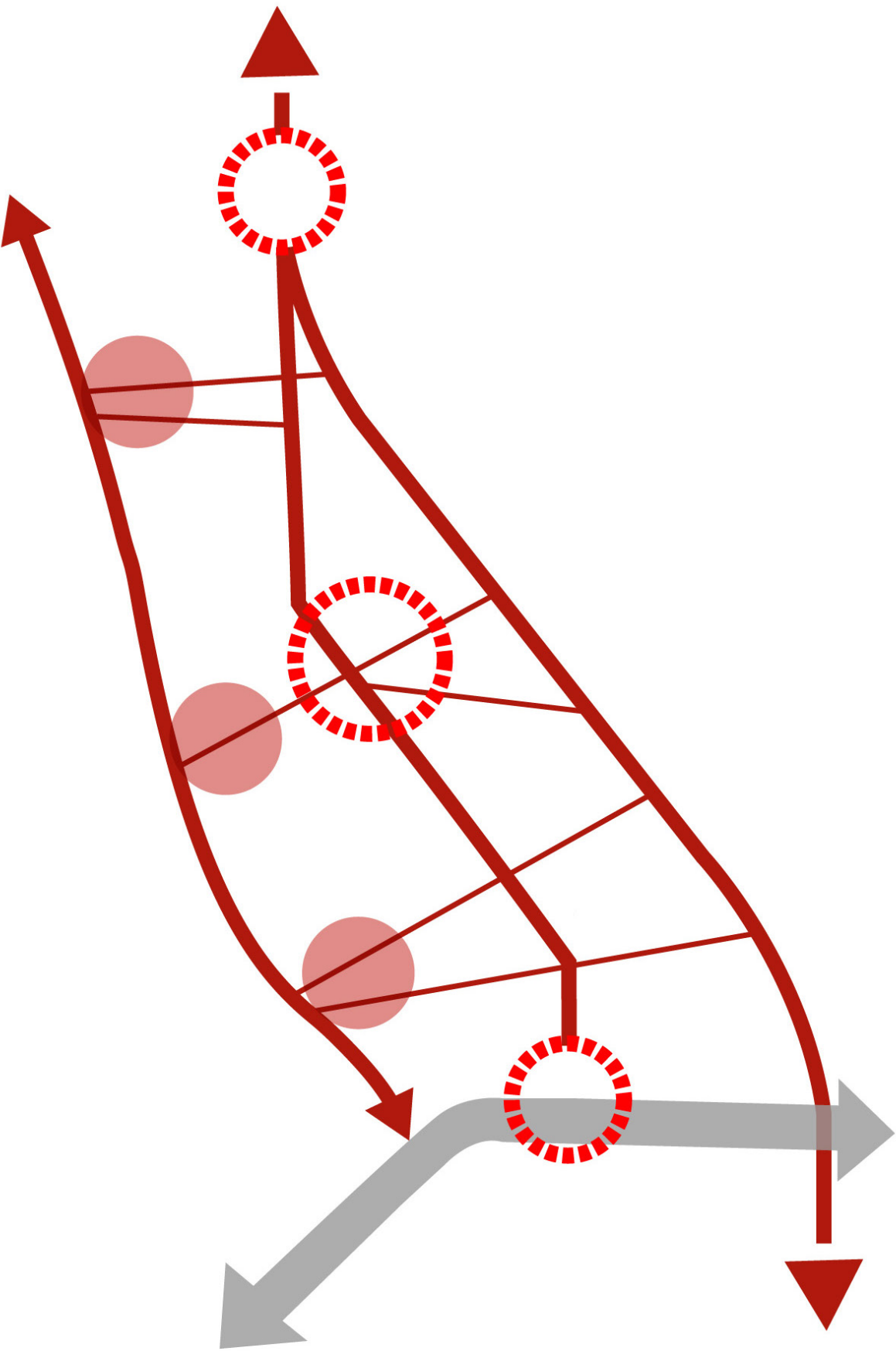
## **2. DAR #1 Response**

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# 2.1. Development Parti

In response to the DAR #1 feedback the parti diagram has been clarified to represent the master plan framework concept. The primary north-south routes through the district are reinforced with a “ladder” of east-west connections. These coincide with active and passive nodes along the west (river) edge, and are centrally organized by a main focal point in the heart of the site.





# 2.2. Street Hierarchy

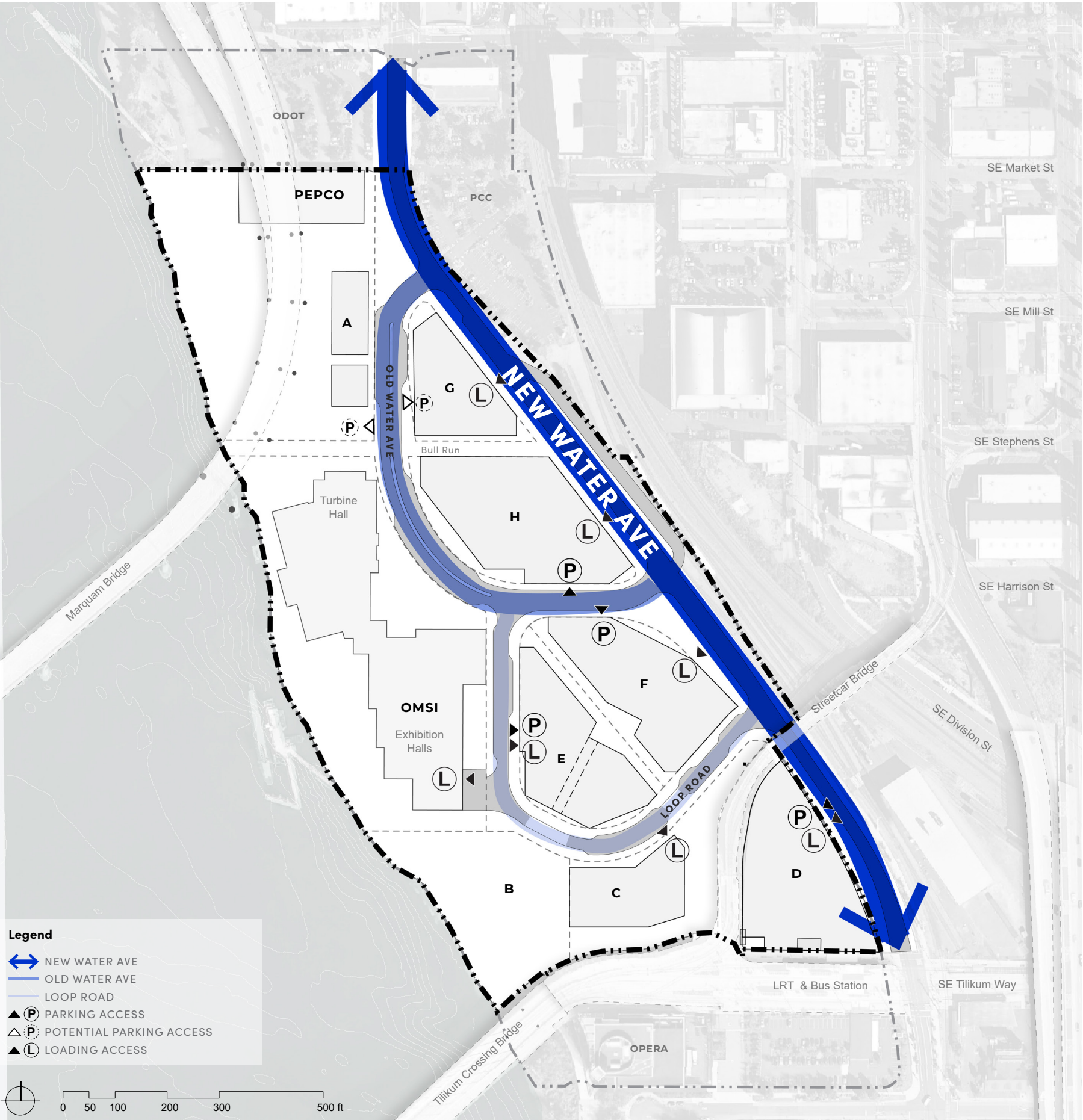
## Existing District Streets and Trails

The existing Water Avenue is the single public street within the OMSI plan area and it is designated as a Neighborhood Main Street, a City Walkway, a Major City Bikeway and a Priority Truck Street. The Willamette River Greenway trail is designated as an Off-Street Path. Tilikum Way with the OMSI LRT Station is designated as Central City Transit/Ped Street and a Major city Bikeway. No changes are proposed for Tilikum Way in the OMSI CCMP.

## CCMP Street Hierarchy

The OMSI CCMP proposes a more fully developed street hierarchy to support a thriving, mixed use district. The hierarchy of public streets is as follows:

1. New Water Avenue: will be realigned to the eastern edge of the plan area. It will serve district through-traffic but also serve as the direct connection between OMSI Station LRT, the Streetcar stop, and the Springwater Corridor and the Hawthorne Bridge and points north in the Central Eastside via Water Avenue. It is proposed to carry the Neighborhood Main Street/City Walkway/Major City Bikeway/Priority Truck Street classifications because it will be a multi-modal street including sidewalks, landscaping, protected bike lanes, parking/loading lanes, and travel lanes. Three intersections are planned:
  - North, with Old Water/New Water, realigned to a perpendicular 3-way intersection with stop signs on Old Water;
  - Middle, with Old Water/New Water at 3-way intersection with full signalization. This is the primary access point to OMSI; and
  - South, with the Loop Road/New Water at a 3-way intersection with stop signs on the Loop Road.
2. Old Water Avenue (existing alignment): will be proposed to retain its Neighborhood Main Street/City Walkway classifications.
3. Loop Road: a new ROW, will link Old Water to New Water and serve future development tracts in the south end of the plan district and OMSI. It is proposed to be designated a Local Street: ...multi-modal....important for local circulation of trucks in commercial areas...frequent street connections...sidewalks, stormwater facilities,...street trees and ground covers...traffic volumes...low.





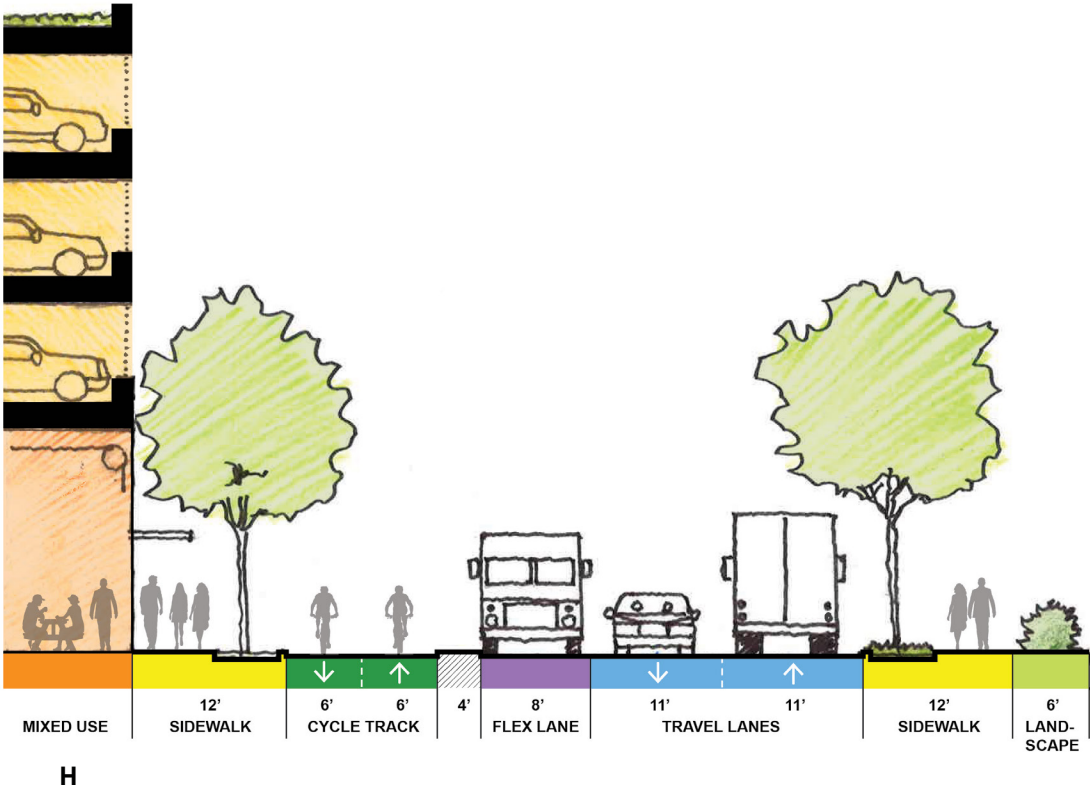
# 2.2. Street Hierarchy

## New Water Ave

The New Water Avenue alignment is currently carrying two alignment options for a Protected Bike Lane (2-way Cycle Track). An evaluation of both options follows:

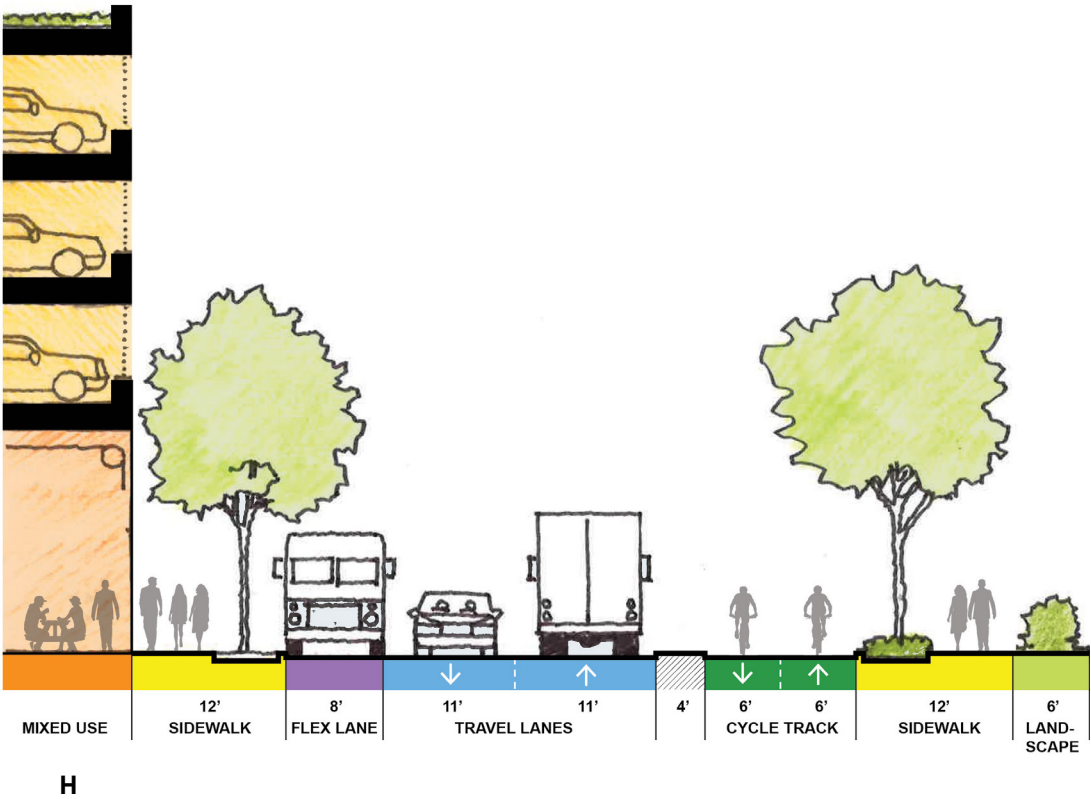
West Side PBLs	
Pros	Cons
PBOT plans to implement west side PBLs north of Clay/Water Ave, connecting to the Hawthorne Bridge and farther north and south of Tilikum Way, connecting to the Springwater Corridor. Both are Major City Bikeways, avoiding the need to cross New Water Ave twice.	Between Tilikum Way and Clay Street, cyclists may have to stop or slow down for 3 intersections and 4 driveways that would cross West Side PBLs.
There are international and national precedents for design of PBLs and driveway interfaces.	West-side alignment north of Clay involves conflicts with bridge and freeway off ramps.
For cyclists destined for the OMSI district, West Side PBLs connect directly to the campus and bike lanes on Old Water Ave.	

Section 1



East Side PBLs	
Pros	Cons
Between Tilikum Way and Clay Street, cyclists won't have to stop or slow down for 3 intersections and 4 driveways that would cross West Side PBLs	Will require cyclists to cross New Water Avenue from west to east and back from east to west at south and north ends of the district.
There are international and national precedents for design of PBLs turning/crossing at intersections.	Clay Street is confined and could require a special signal for diagonal bike crossing.
	For OMSI-destined cyclists, East Side PBLs require crossing Water Avenue at one of the three intersections.

Section 1 alternate



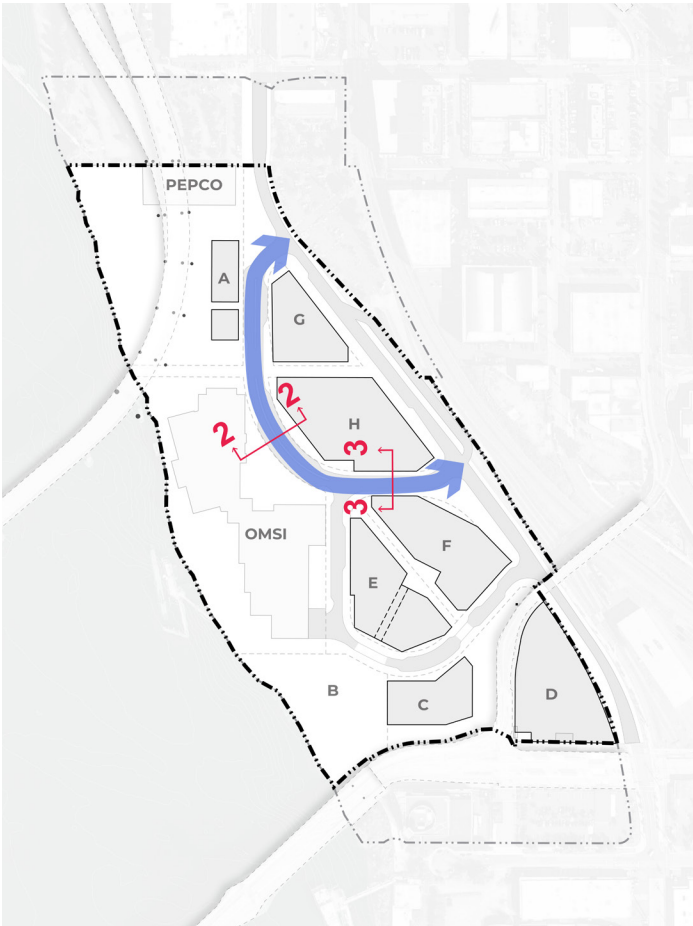
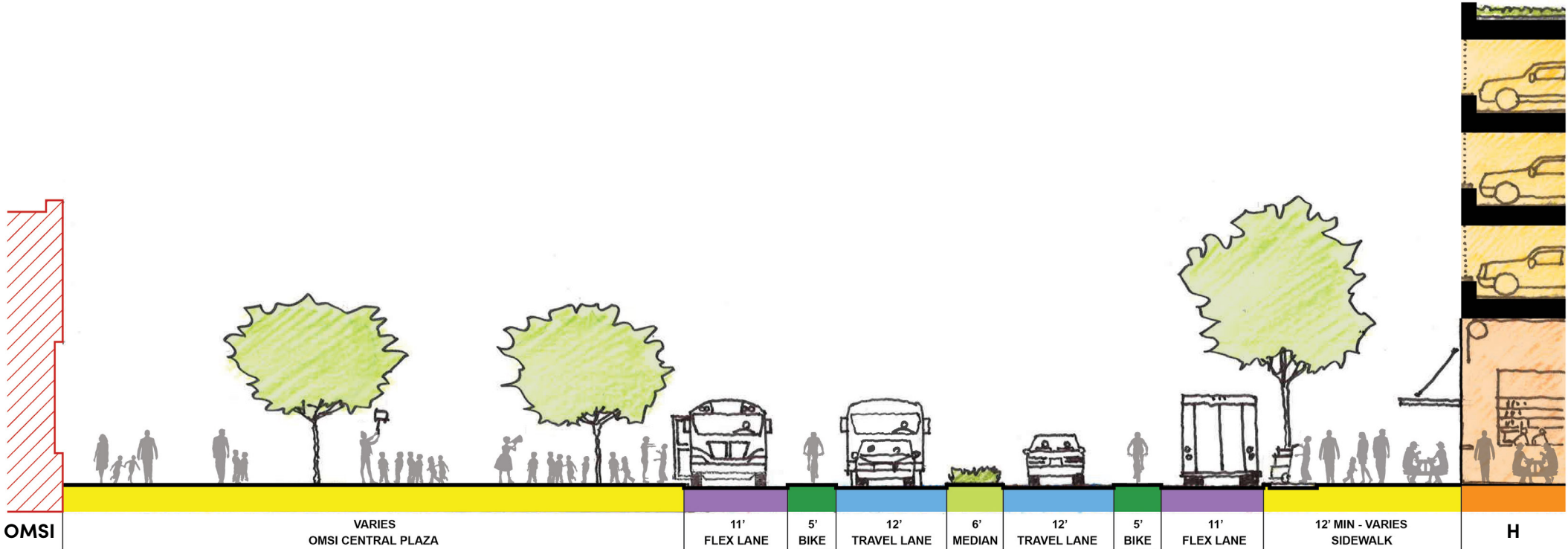


# 2.2. Street Hierarchy

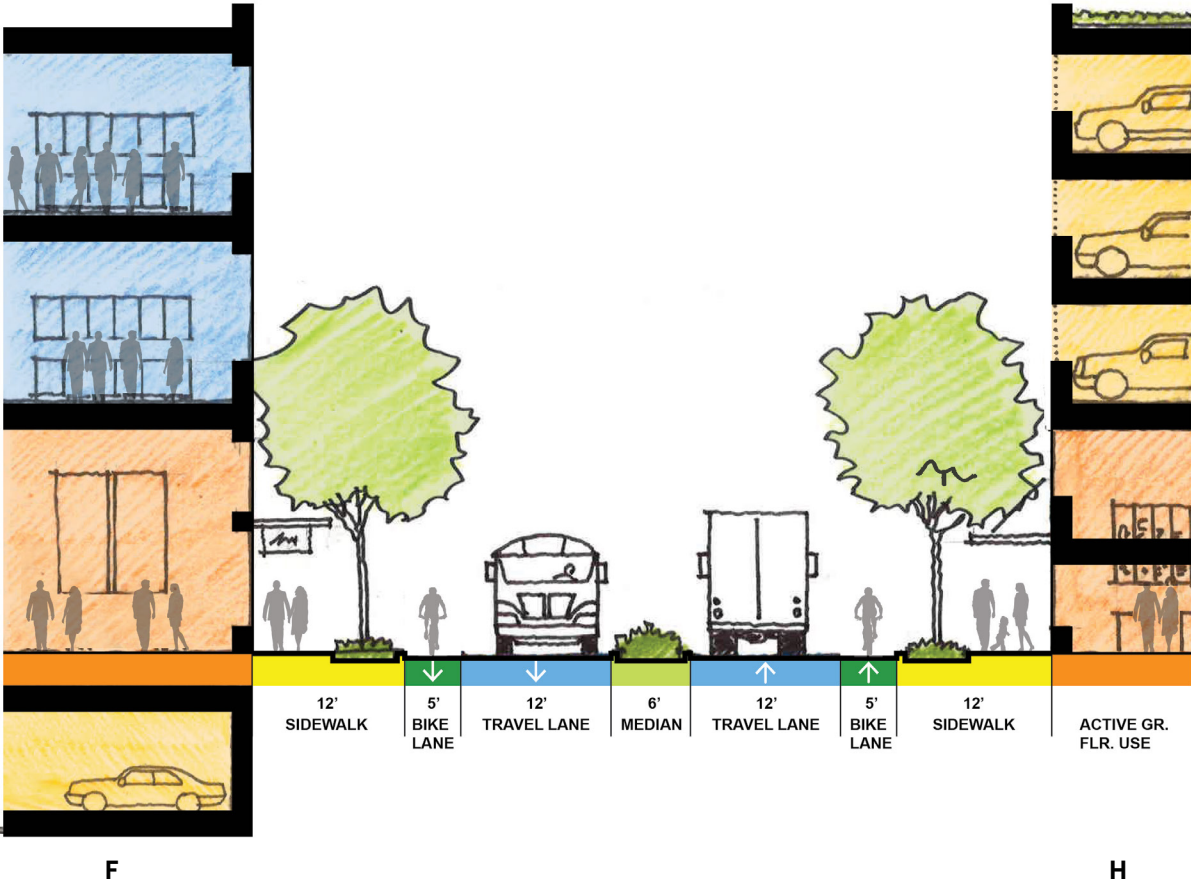
## Old Water Ave

Its cross-section design with sidewalks, landscaping, parking/loading lanes, striped bike lanes, travel lanes and median will remain but primarily serve OMSI-destined school buses, cars, bikes and pedestrians.

Section 2



Section 3



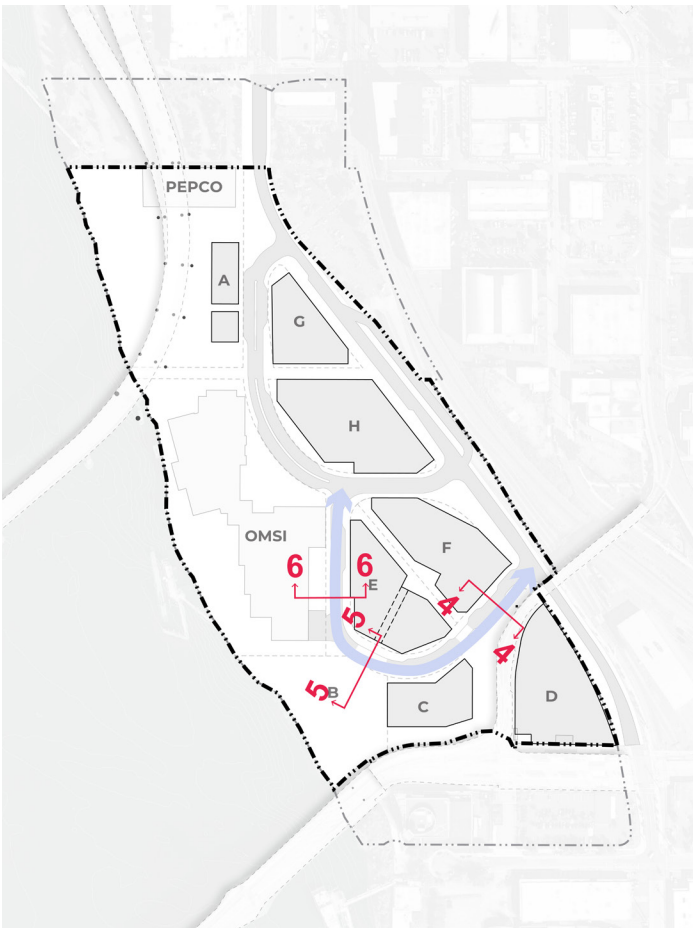
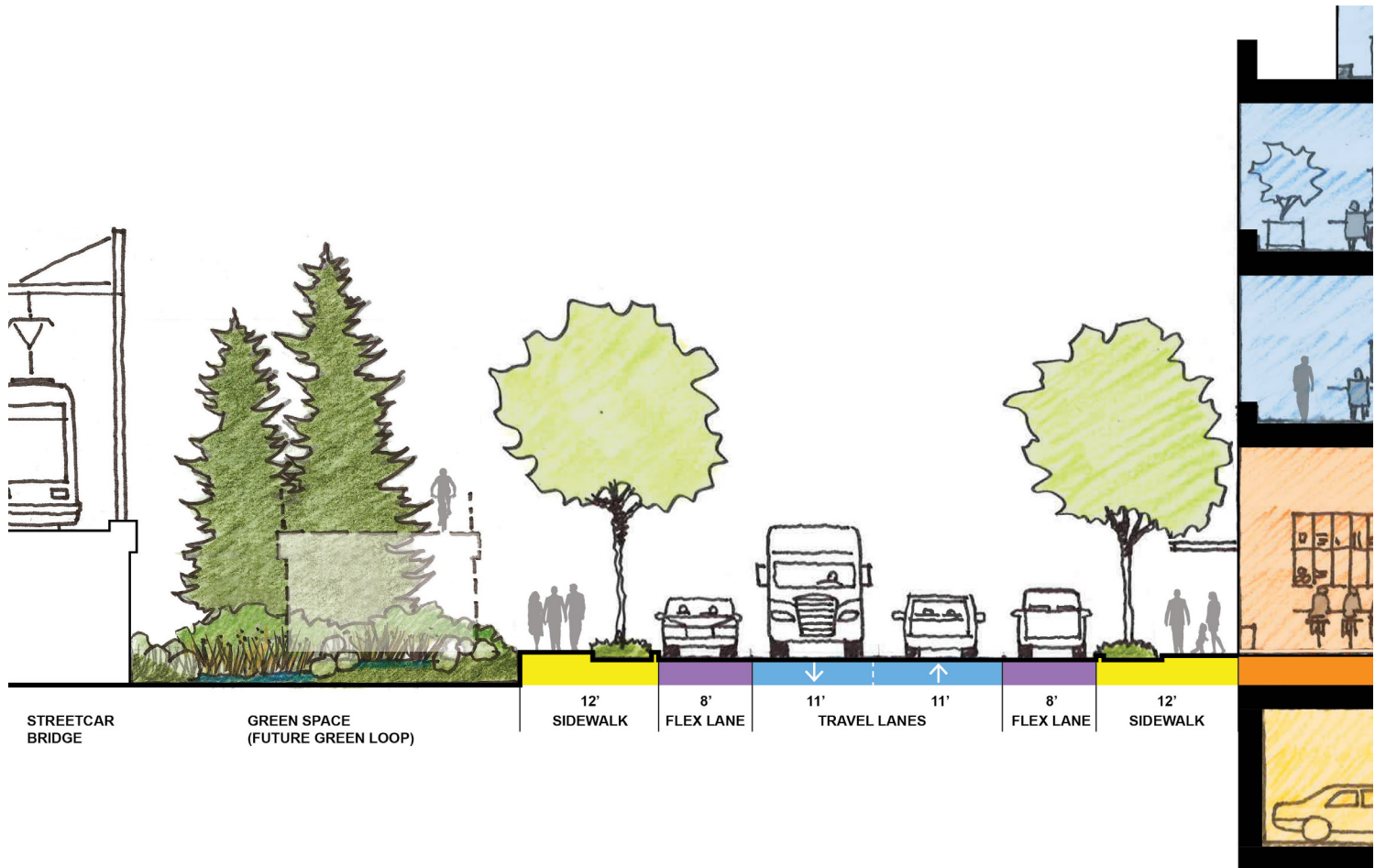


# 2.2. Street Hierarchy

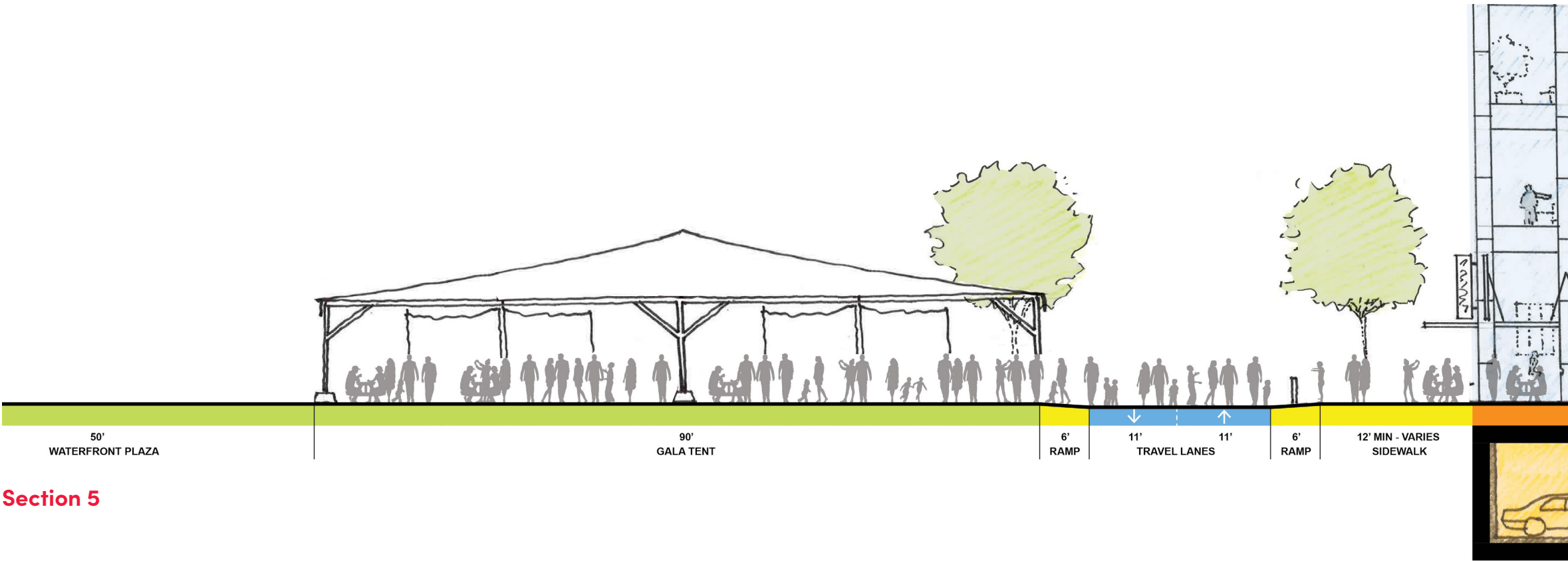
## Loop Road

The Loop Road is being designed to accommodate infrequent, seasonal large truck deliveries which can be accommodated by OMSI staff-assisted traffic control without over-designing the street for large truck geometry. Otherwise the Loop Road is intended to provide comfortable sidewalks, landscaping, parking and loading lanes and two travel lanes. Bikes can share the travel lane with slow-moving vehicles.

Section 4



Section 5









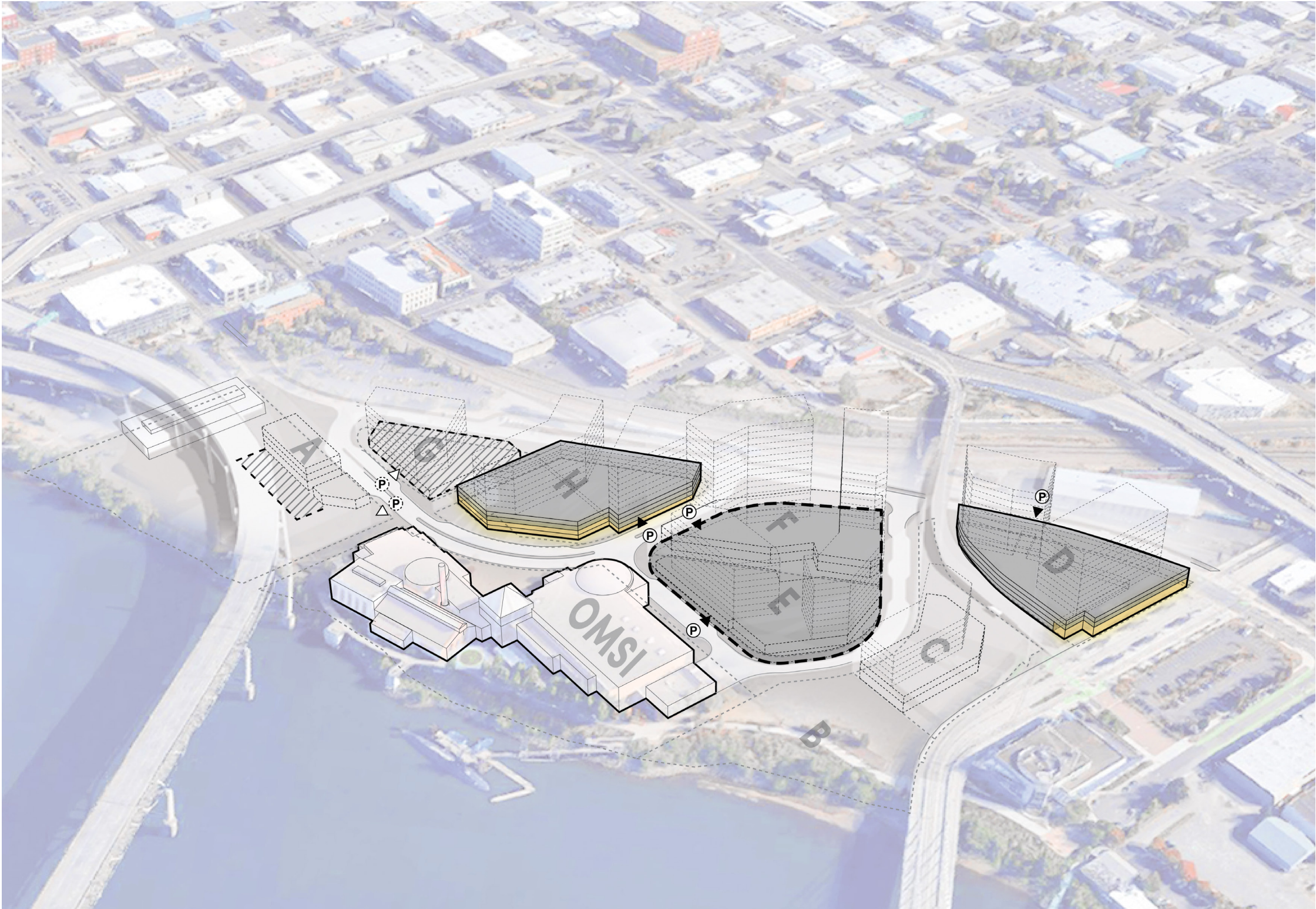
# 2.3 Site Parking

## Above and Below Grade

The parking approach for the OMSI CCMP is to build as little parking as feasible and encourage as much sharing among users as possible.

Due to the expected geotechnical and water table issues, underground parking is very expensive, and is only proposed underneath Tracts E and F. Above-ground parking is proposed for Tracts H and D, which have floor plates large enough to allow a limited number of efficient, flat parking trays above active ground floor uses.

Parking entrances are located along Old Water Avenue and the Loop Road such that users do not need to cross critical pedestrian zones to enter and exit.



- Legend**
- ABOVE PARKING & SURFACE PARKING
  - UNDERGROUND PARKING
  - POTENTIAL PARKING
  - ACTIVE FRONTAGE
  - PARKING ACCESS
  - POTENTIAL PARKING ACCESS



# 2.4. Open Space Framework

## GATEWAYS

- Easy, safe access to transit
- Entry markers and wayfinding
- Strong connections
- Emphasis on pedestrians and leisure biking

## CENTRAL SPINE

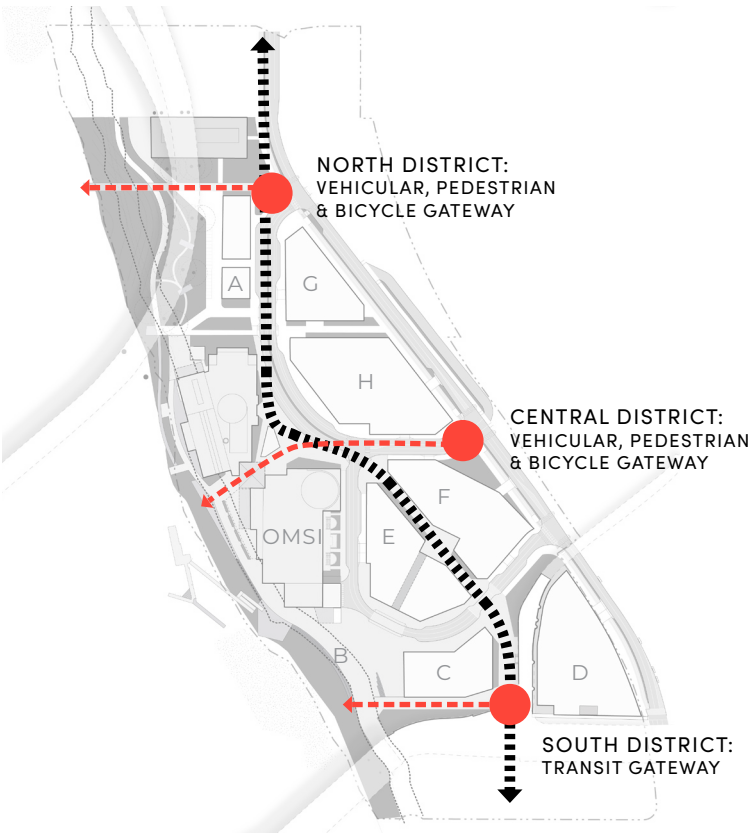
- Activated pedestrian environment
- Strengthen connection between transit hub to OMSI and Central Eastside
- North-south pedestrian corridor
- Opportunities for seating, cafes, small nodes

## PASSIVE RECREATION

- Public use and enjoyment of riverfront
- Education, demonstration & interpretive opportunities
- Small group classes
- Nature play potential
- Expanded submarine dock

## PLAZAS

- Gathering spaces
- Mixing zones
- Connection hubs
- Expansive river views
- Public & private events and OMSI programming



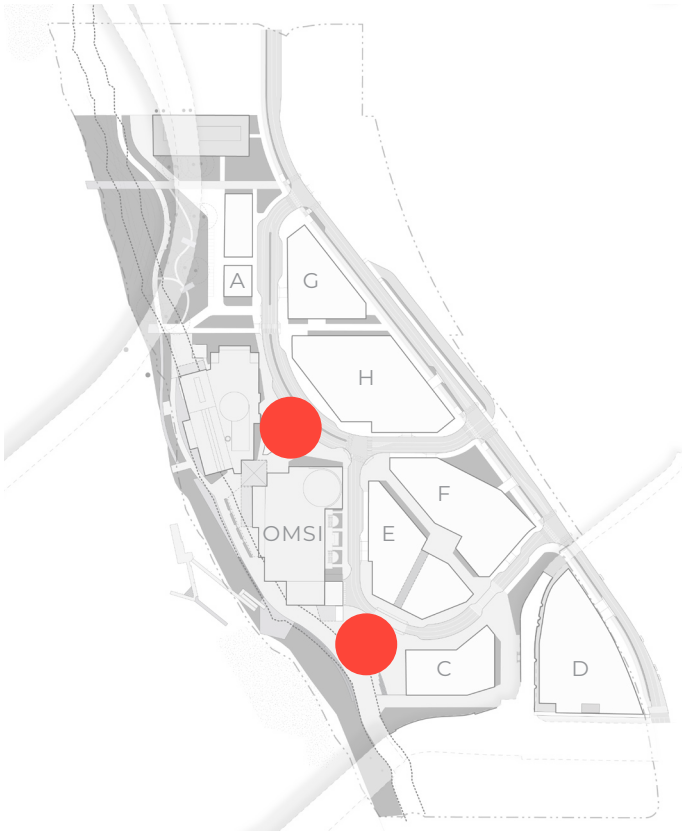
Gateways



Passive Recreation



Central Spine



Plazas

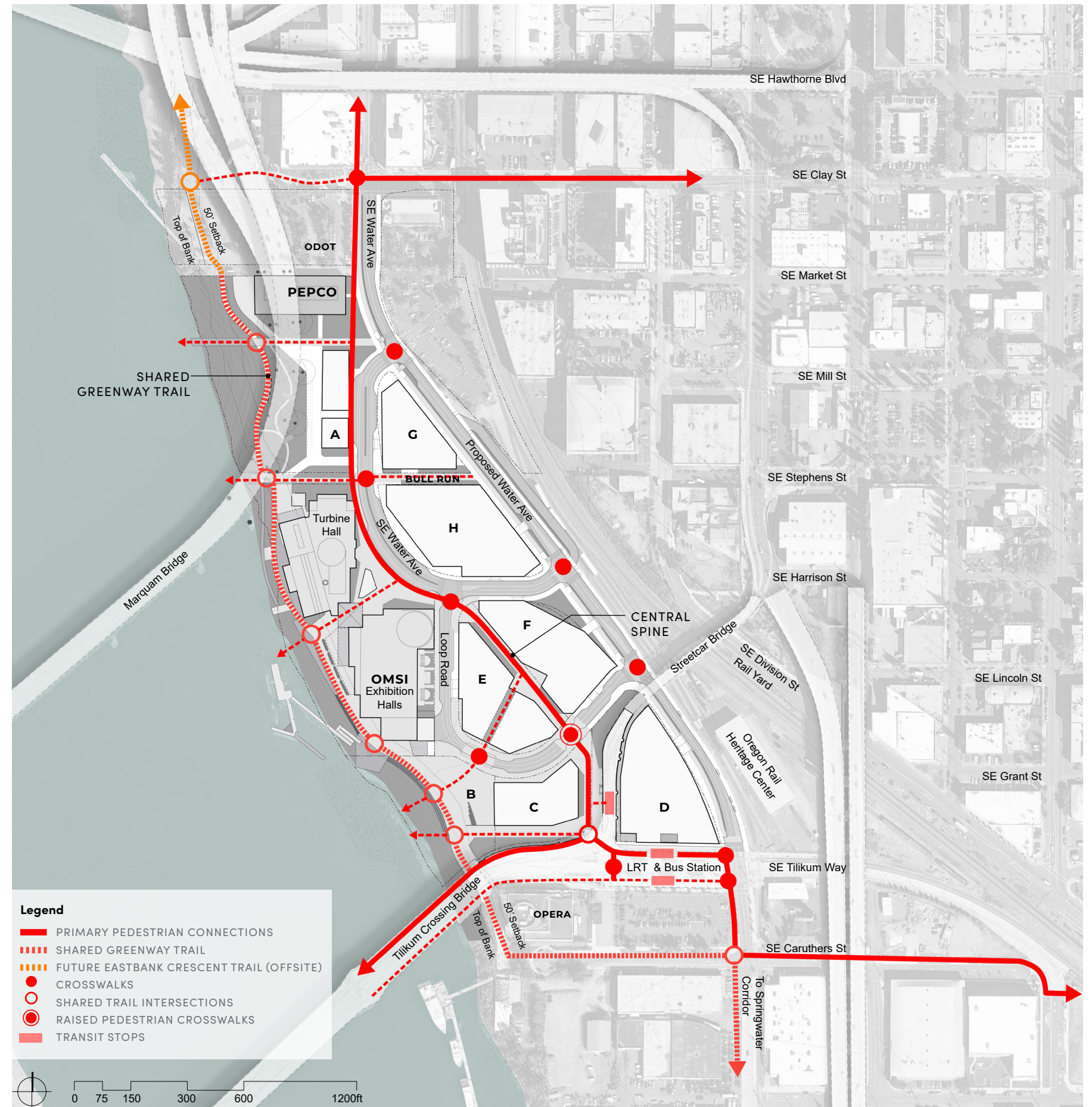




## 2.5. Circulation

### Pedestrian Circulation

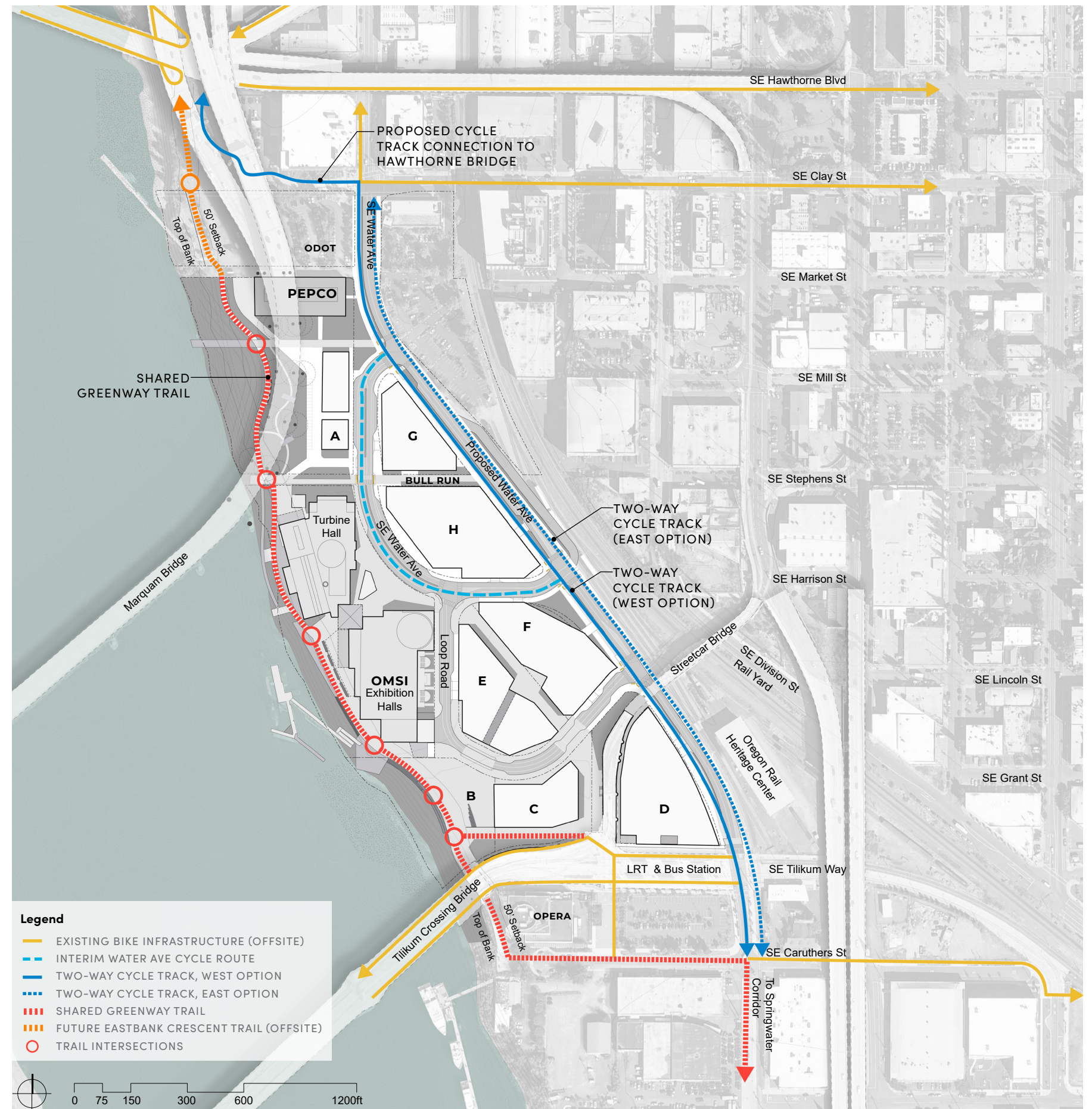
- The OMSI master plan area plays a key role in the local bike and pedestrian network of southeast Portland; few places in the city offer as much opportunity for connectivity with alternative modes.
- Key role in Central Eastside connectivity
- Family-friendly pedestrian-oriented environment
- Provides multiple east-west connections to the river and districts beyond
- A key master plan feature is improvement of the Willamette Greenway Trail connecting to the Eastbank Esplanade and Springwater Corridor.
- Direct north-south connections to transit stations through OMSI district and to OMSI's main entry





## Bicycle Circulation

- Commuter cyclists, whose primary goal is to move efficiently through the district, will be encouraged to use Water Avenue
- A key feature is a new two-way cycle track. This may be located on the west or the east side of the new Water Avenue.
- Work with city transportation bureaus to improve wait time at SE Tilikum way intersection.
- New off-site improvements at the Hawthorne Bridgehead were proposed in the Eastbank Crescent Plan to help re-route cyclists onto Water Avenue and the cycle track.
- The Willamette Greenway Trail is an opportunity to enjoy a slower bike ride along the waterfront at safe speeds that are compatible with pedestrians sharing the trail.

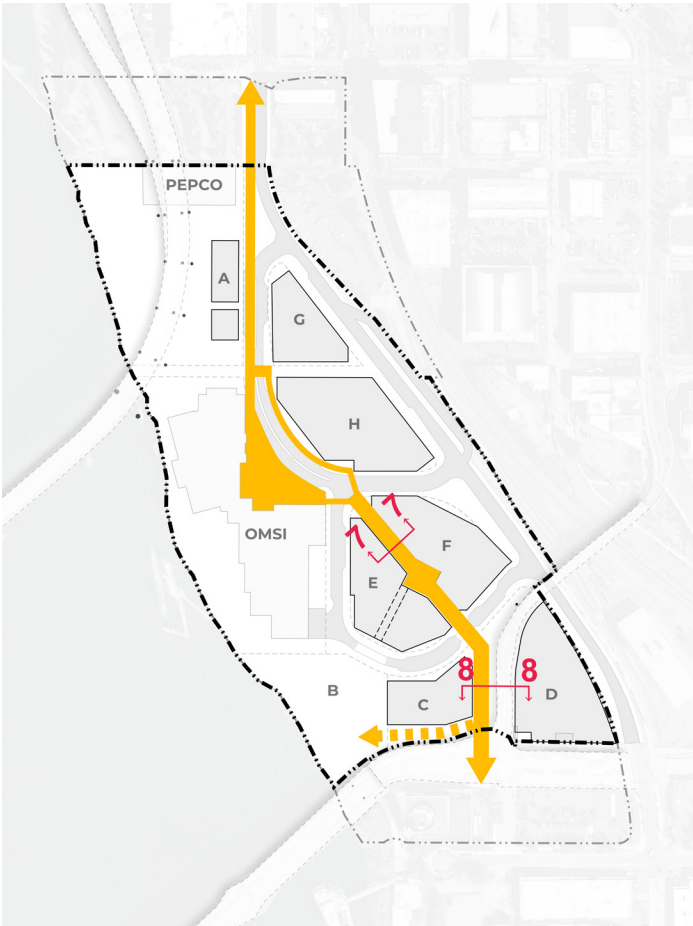




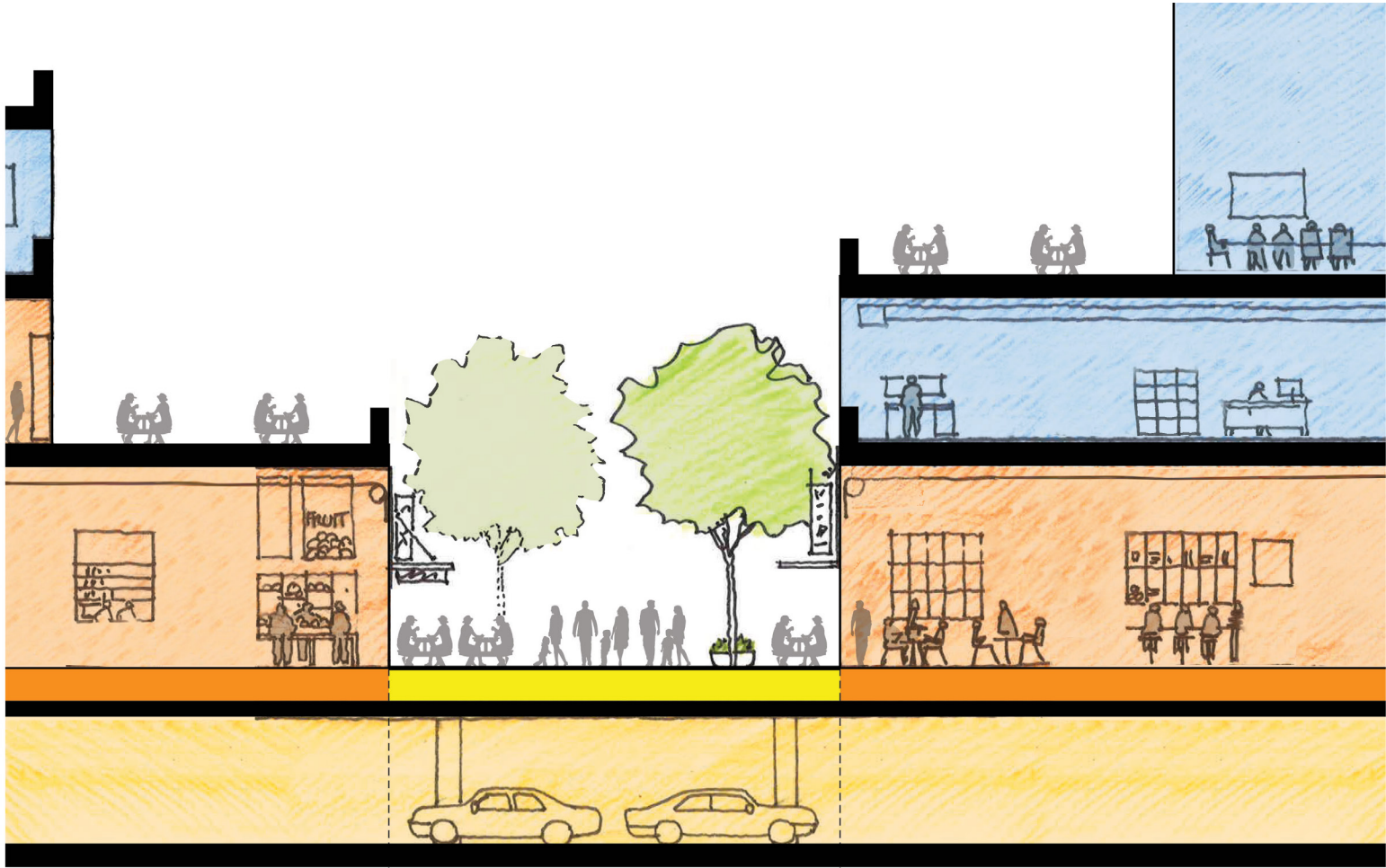
# 2.5. Circulation

## Major Pedestrian Streets

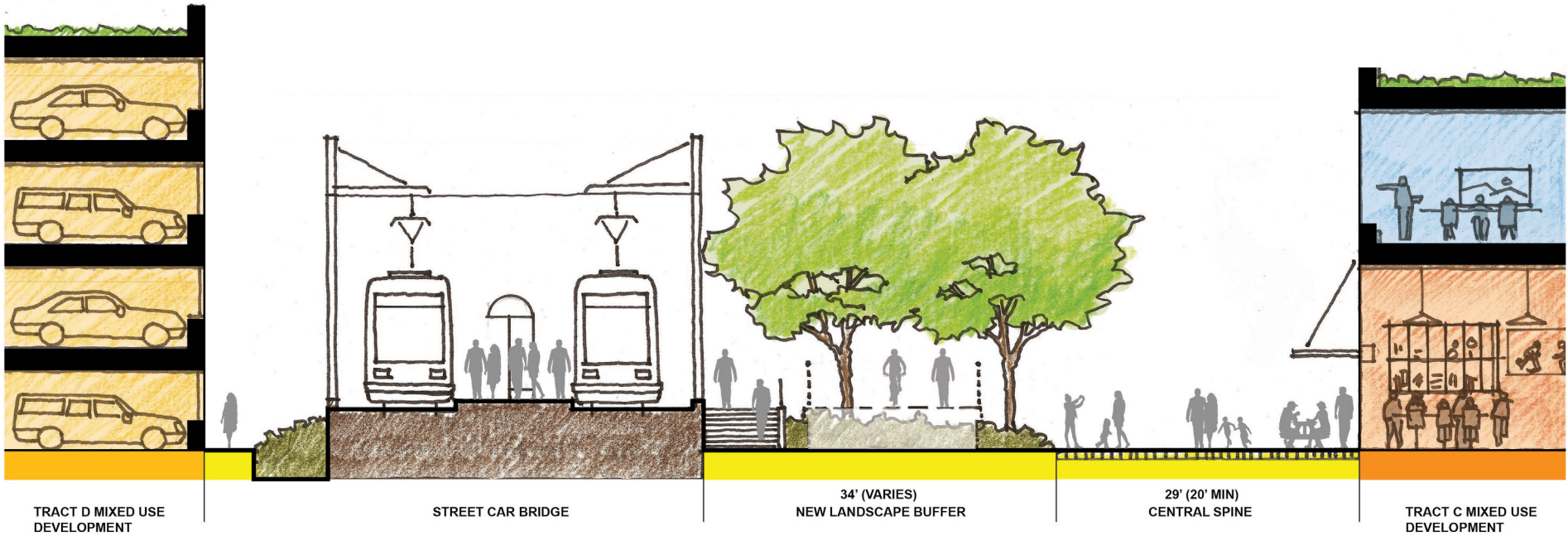
The central spine is proposed as an all-pedestrian way that will provide the most direct link for pedestrians from the OMSI Station to OMSI's East Plaza and points north along Water Avenue. It is being planned as a 40-foot passage between Tracts E and F, with fully developed enhanced paving, lighting, landscaping, signage and very active ground floor uses within new mixed-use buildings.



Section 7



Section 8





# 2.5. Circulation

## Bicycle Management

- Provide multiple cues for cyclists to ride slowly along shared pedestrian zones
- Signage to walk or ride slowly at all key pedestrian/cyclist nodes
- Paving changes at key pedestrian/cyclist intersections
- Jog shared trail where appropriate



Paving Indicators at South Waterfront, Portland, OR (Photo Credit: Mayer/Reed)



Integrated Signage at OHSU South Waterfront, Portland, OR (Photo Credit: Mayer/Reed)



Textured Paving, South Waterfront, Portland, OR (Photo Credit: Mayer/Reed)

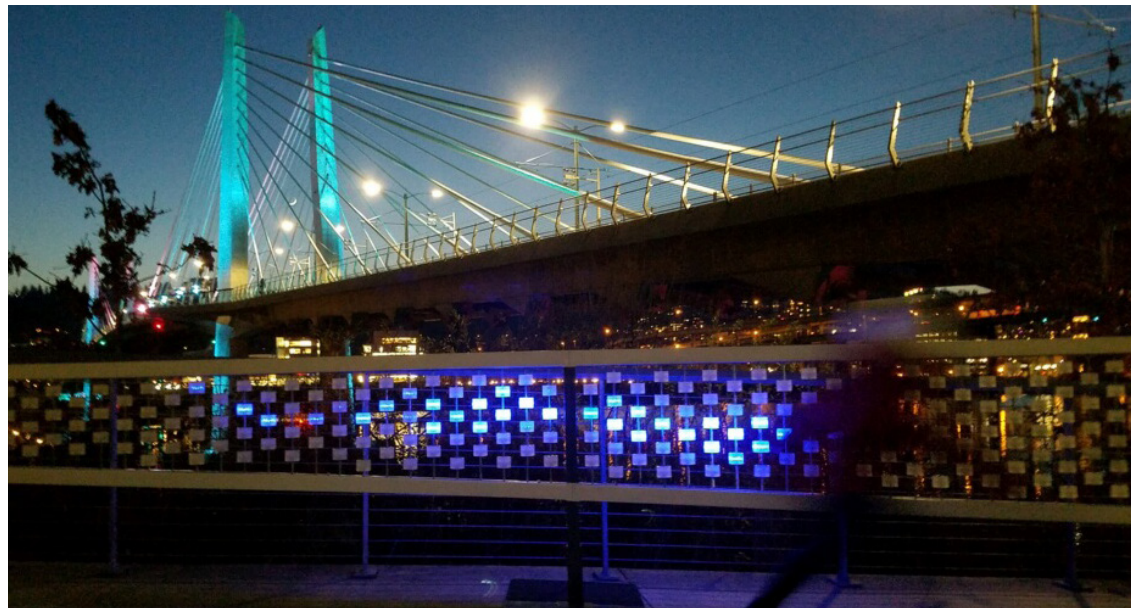


Paving Undulations, Vienna, Austria



## 2.6. Public Realm Plan

- OMSI's vision is to create a series of vibrant, inviting plazas and pedestrian-oriented outdoor spaces that host events, interpretive displays, public art, play opportunities, and outdoor classrooms.
- Plazas will become multi-use flexible gathering places for programming events so that educational content can be exported outside the museum walls.
- Pedestrian & transit-oriented development
- Vibrant, active, visually-rich environment
- Flexible use gathering spaces
- Intimate to grand scale open spaces
- Outdoor educational opportunities
- Programmed events, large & small
- Public art, exhibits, active play & interpretation



Knetic De Light, Winter Light Festival, Portland, OR (Mayer/Reed, Photo: Adam Pond)





# 2.6. Public Realm Plan

## South Plaza

### Active Urban Waterfront Program

- Programmed events that will occupy many locations in the OMSI District include the annual Makers Fair and the Portland Winter Lights Festival.
- A key master plan feature is a flexible, programmable plaza south of the OMSI building framed with new multi-story development with active ground floors and podiums; the OMSI Gala will be relocated here. Music, performances and festivals will be hosted here.
- Opportunities include water play, large scale events, outdoor classrooms, multiple scale public and private events, varied activity and seating areas.
- The open plaza adjacent to the Greenway Trail provides expansive river views



Armentieres Square, France (Atelier des Paysages Bruel Delmar)



Pomarius Nursery, Portland, OR



Tango Fesitval, Pier 45, New York, NY



NEMO Science Museum, Amsterdam



# 2.6. Public Realm Plan

## South Plaza

### Active Urban Waterfront Program



Simon & Helen Director Park, Portland, OR (Photo Credit: ZGF)



Bill Naito Legacy Fountain, Portland, OR

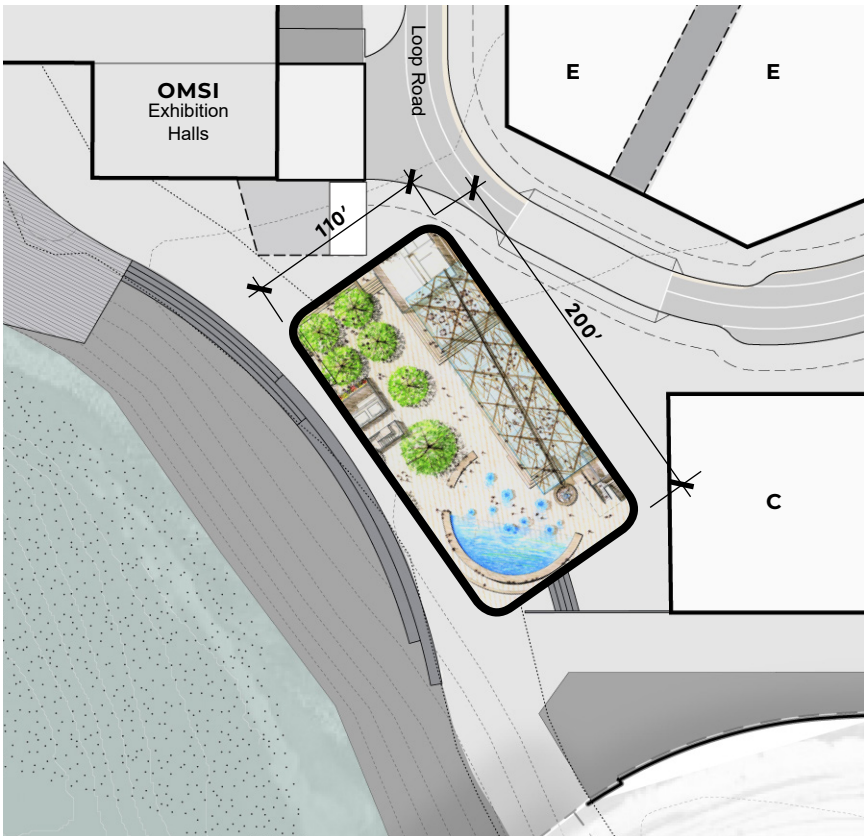
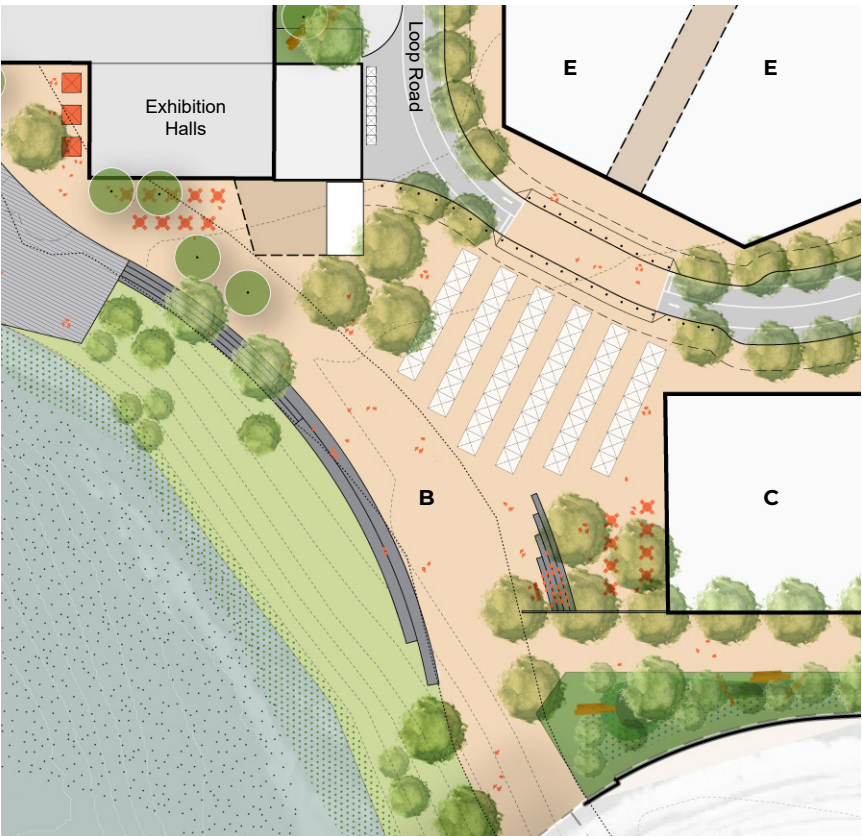
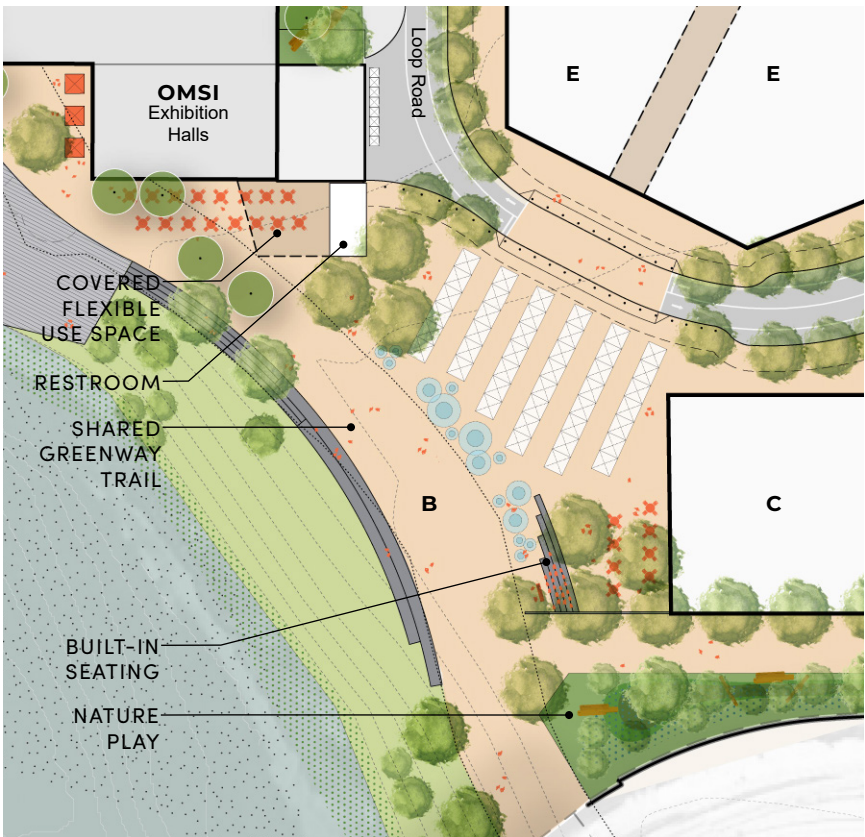


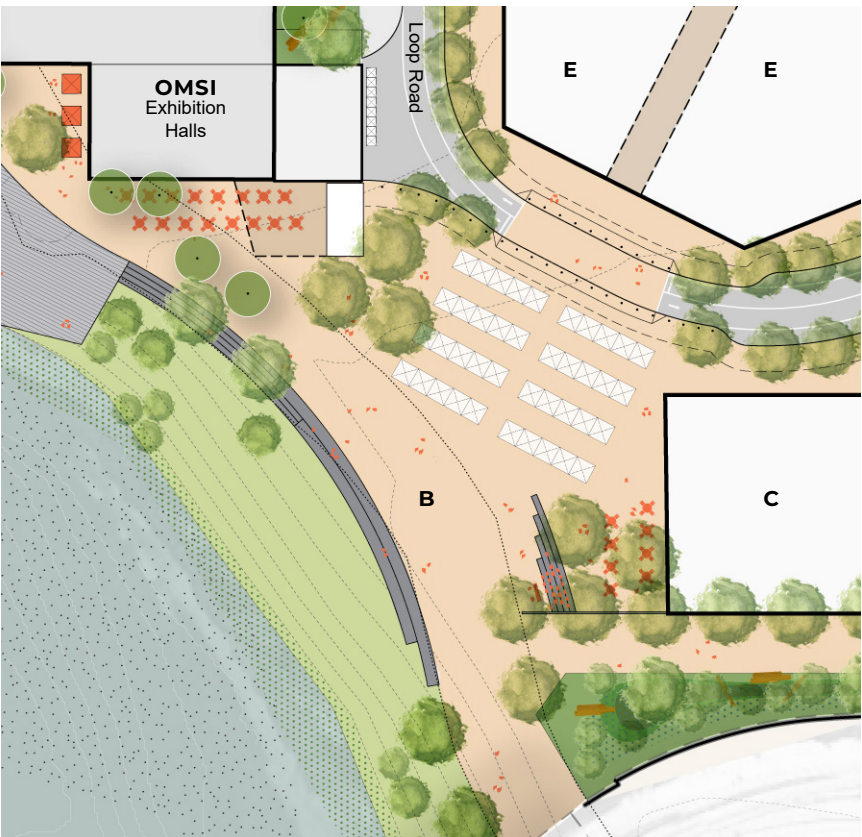
Illustration of Scale: Simon & Helen Director Park



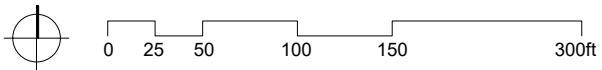
Market, Layout 1 (10'x10' stalls, 12' aisles)



Market with Fountain, Layout 2



Market, Layout 3





# 2.6. Public Realm Plan

## South Plaza

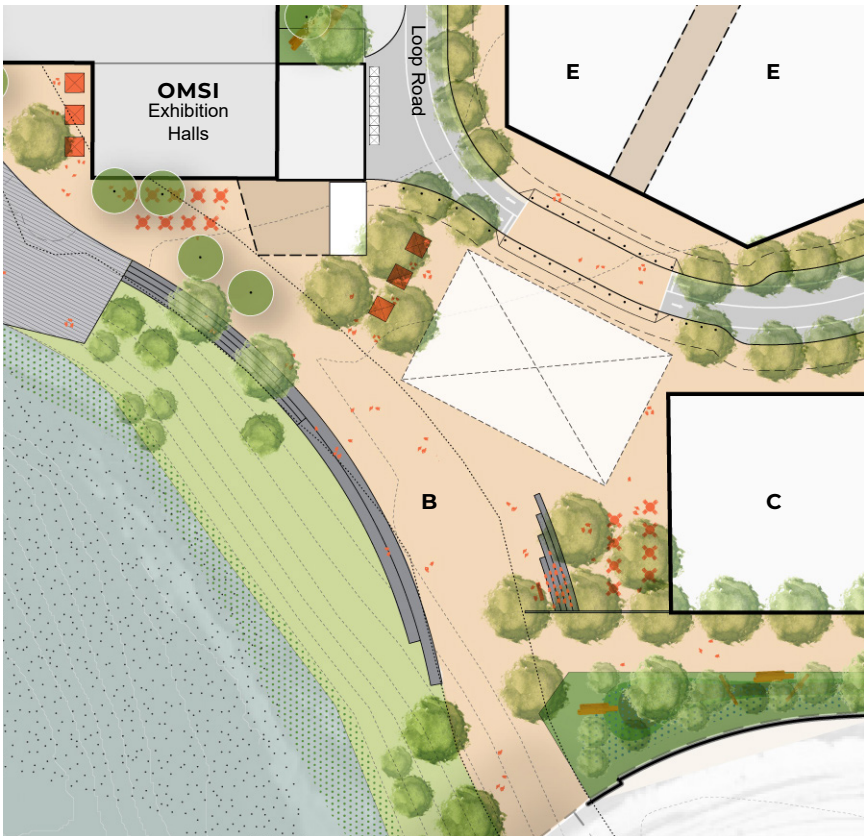
### Active Urban Waterfront Program



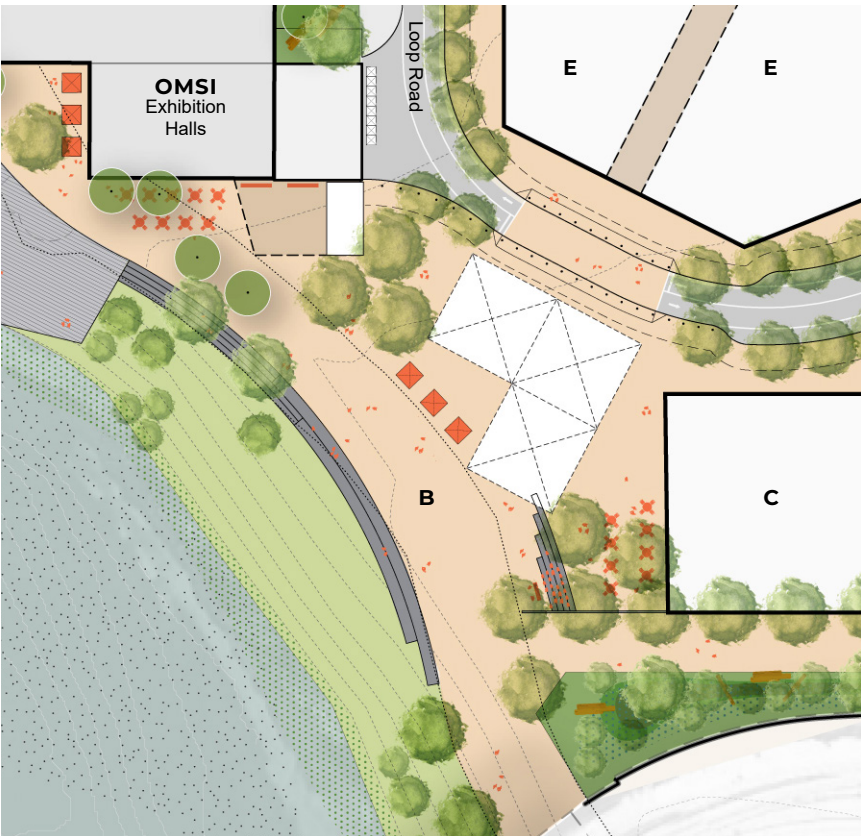
Philadelphia Science Festival



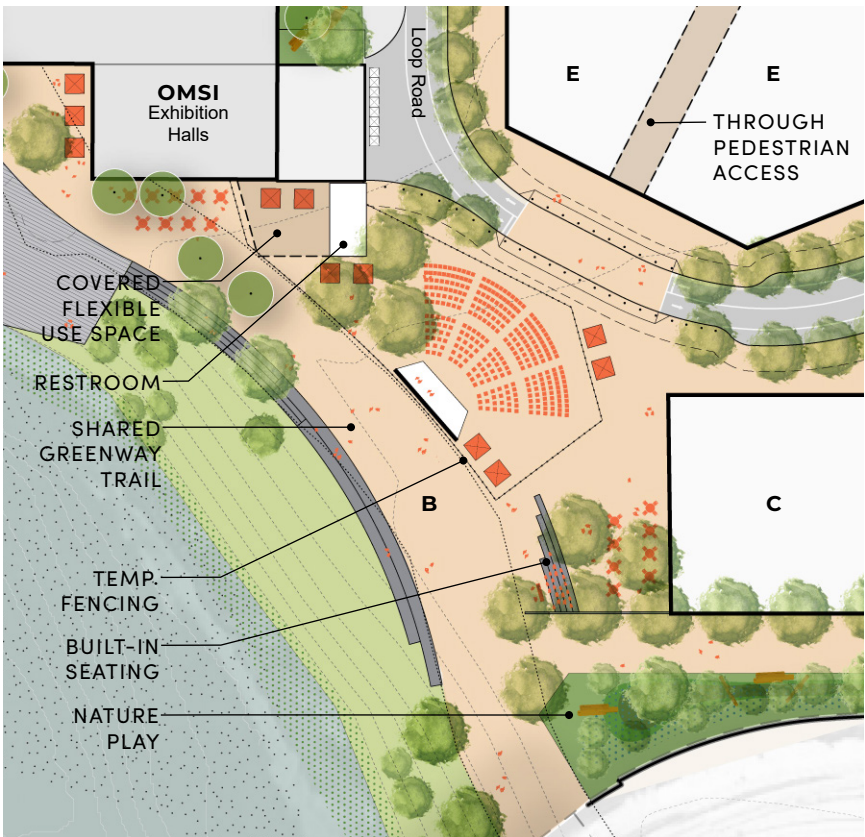
Brooklyn Bridge Park, Brooklyn, New York



OMSI Gala Tent (120'x80')



Maker's Faire (50'x50' tents)



Ticketed Performance



Movie Night

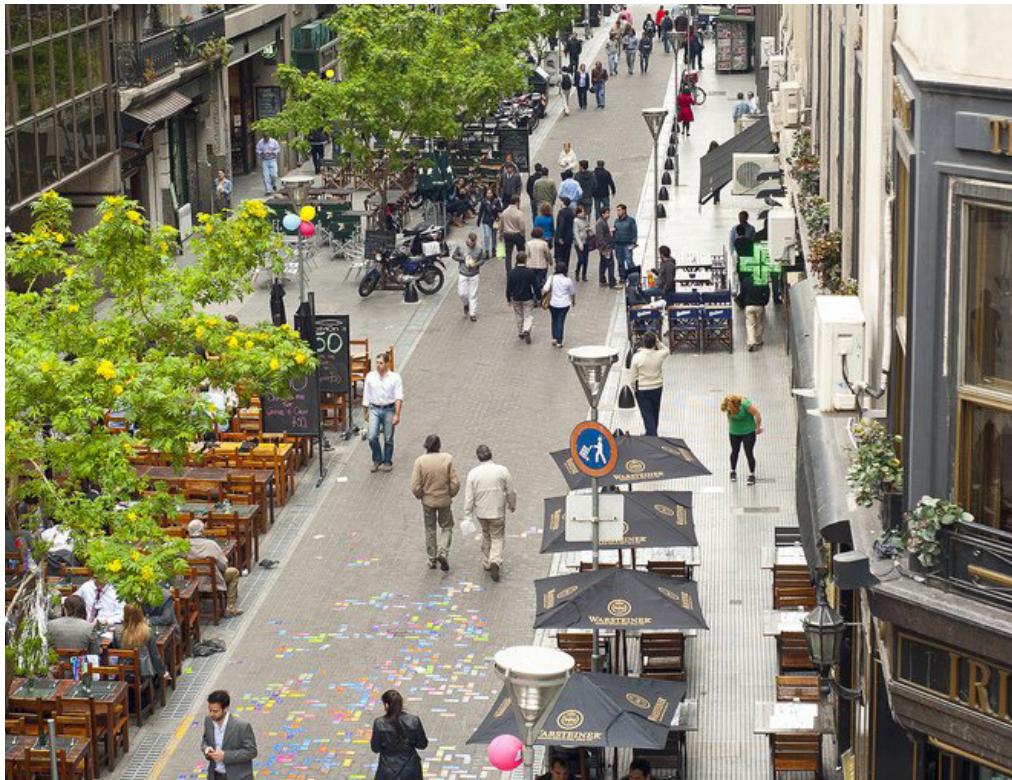
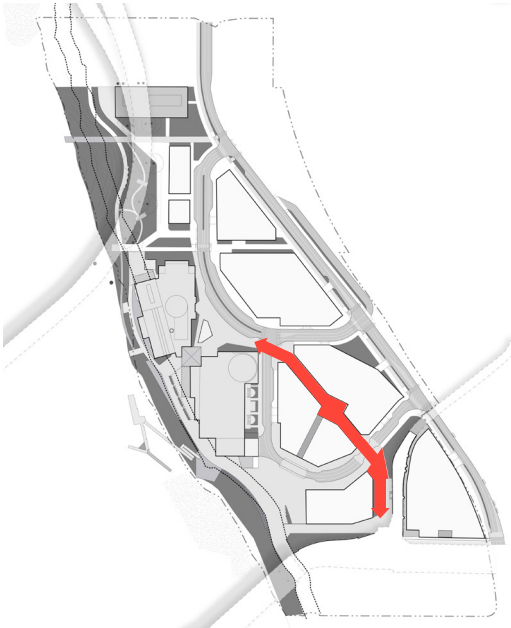




# 2.6. Public Realm Plan

## Central Spine

- Along the pedestrian street of the Central Spine will be opportunities for a farmer's market, art shows, maker displays, farm-to-table celebrations, and special events
- Clear, vibrant north-south connection of transit hub to OMSI entry
- Active ground floor uses
- Prioritize pedestrian experience
- Plazas provide various OMSI branding programming opportunities



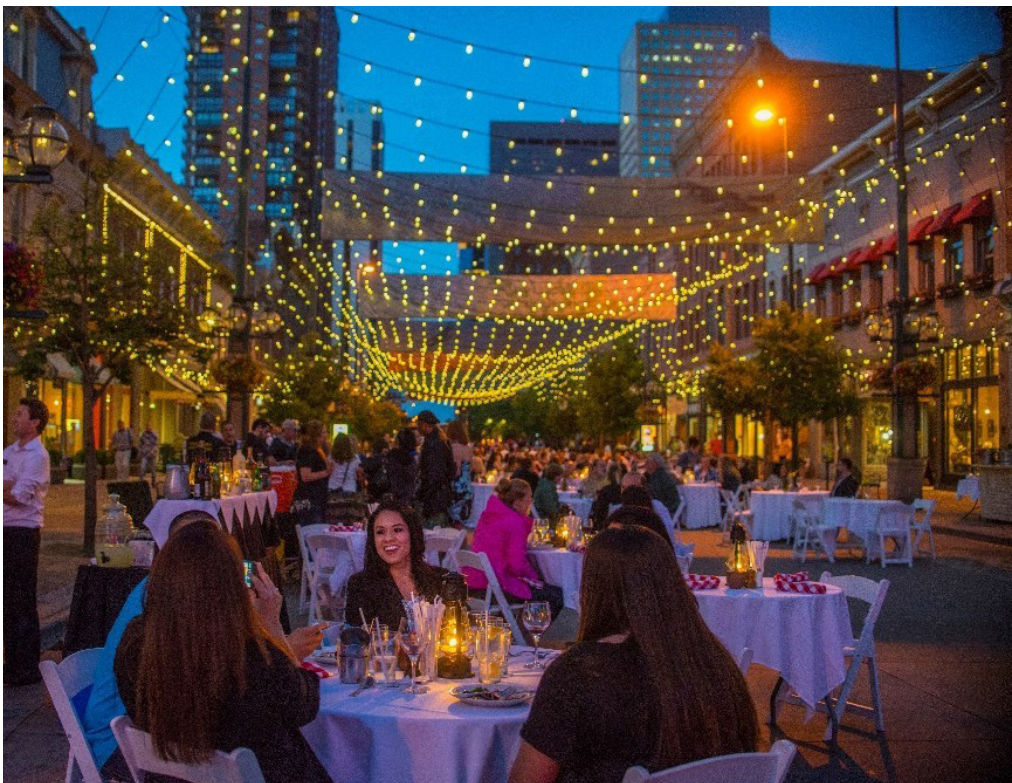
Buenos Aires, Argentina (Photo: Fabrico Di Dio)



Penneyer Street, Portland, OR (Mayer/Reed, Photo: Bruce Forster)



Internal Pedestrian Spine Precedent: Chophouse Row, Seattle, WA (Graham Baba Architects/SKL Architects)



Larimer Square, Denver, CO



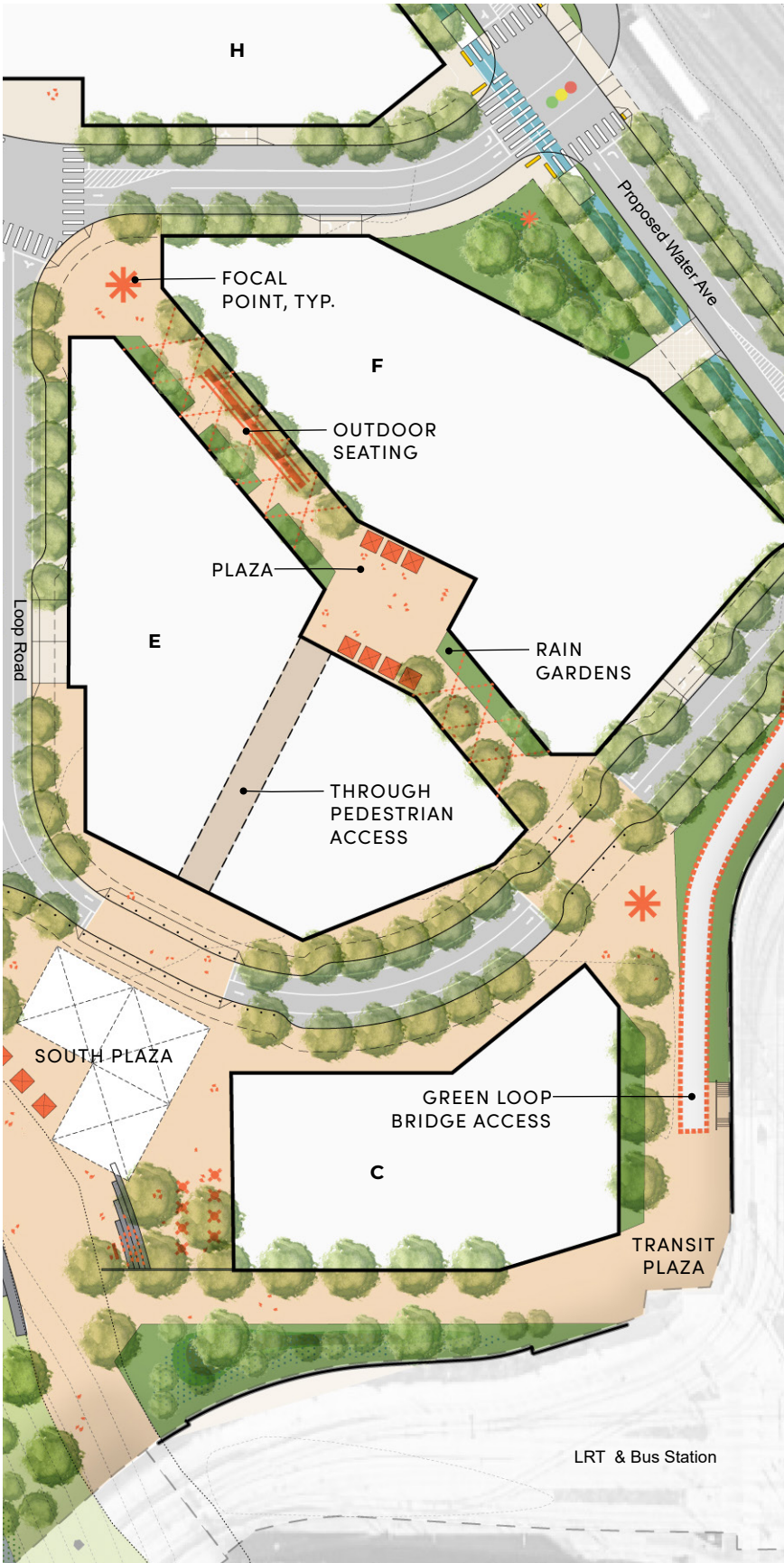
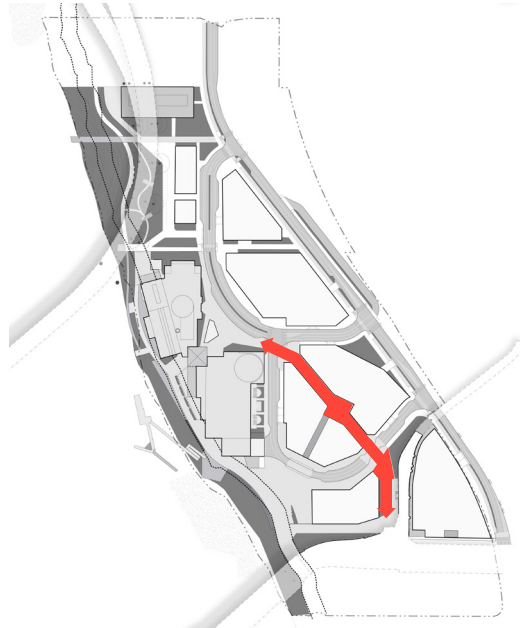
# 2.6. Public Realm Plan Central Spine



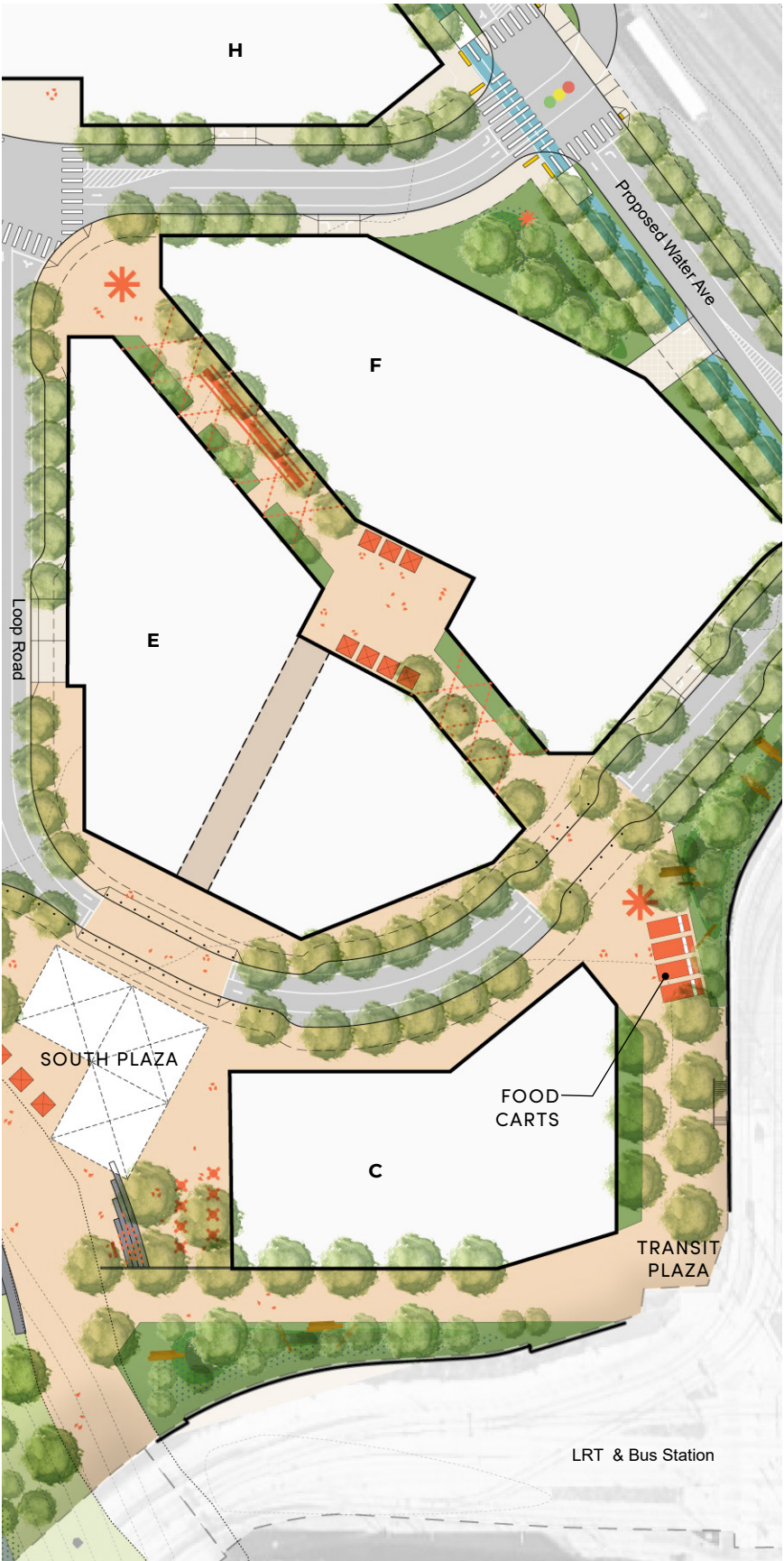
Diverse Seating Opportunities



Communal Table



Possible Programming with Green Loop



Possible Programming without Green Loop

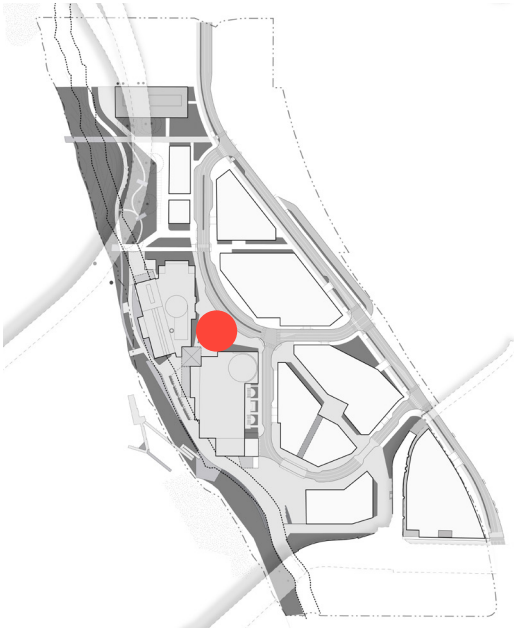




# 2.6. Public Realm Plan

## OMSI Plaza

- OMSI’s entry plazas on the east and west will flank the museum’s pass-through lobby; Special events, parties and festivals will be located in these spaces.
- Three semi-private, flexible covered spaces next to the building will be programmed by OMSI as outdoor classroom, “pop-up” play and display spaces.
- A strong vision for the district is to establish a series of “green fingers,” that knit the district together with landscape elements to support clean water and habitat. The rain garens at the entry plaza demonstrate the importance of continued education on the care & stewardship of our natural resources.



NEMO Science Museum, Amsterdam



NEMO Science Museum, Amsterdam



Oregon Convention Center, Portland, OR (Mayer/Reed)



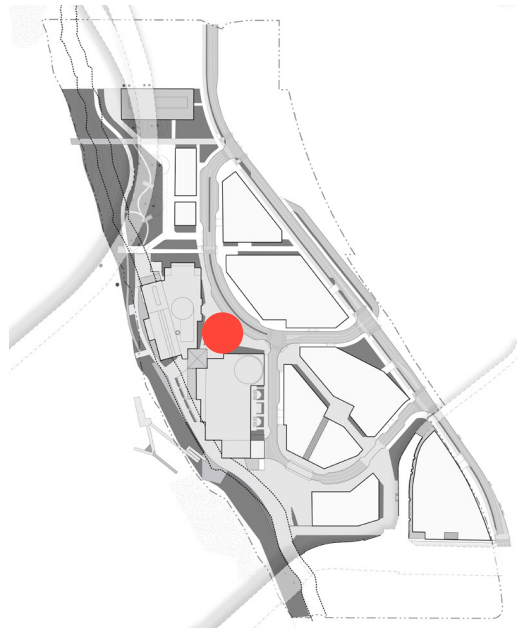
Mirror Labyrinth, Brooklyn Bridge Park, Brooklyn, New York (Jeppe Hein)



# 2.6. Public Realm Plan

## OMSI Plaza

- Demonstration garden opportunities.
- Combined flow-through east & west plazaz provide connectivity for large district wide public events.
- Two flexible plaza spaces for public & private gatherings
- Strong river connection through OMSI main lobby
- Covered public/private areas for everyday use.



Possible Programming

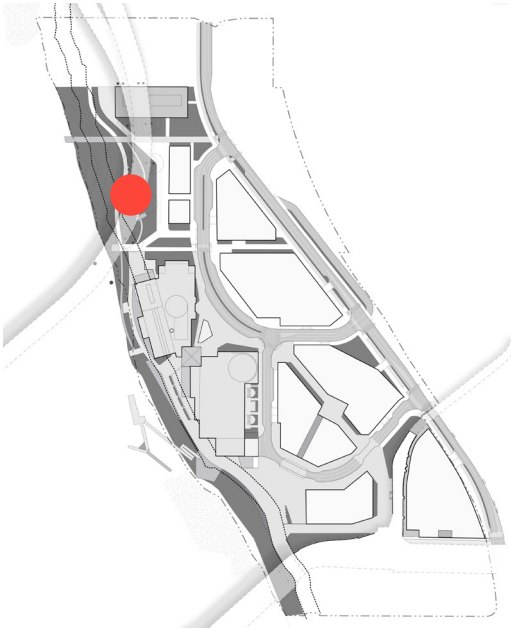




# 2.6. Public Realm Plan

## Tract A

- OMSI’s bioswales are reported to be the birthplace of the green infrastructure movement that has spread across the country. These green spaces will support a variety of vegetation typologies, demonstrate treatment of stormwater, and include nature play opportunities.
- River health and ecology are stewardship themes that focus on urban habitat, native plants and wildlife and human’s role in the environment; an elevated walkway perpendicular to the greenway trail will provide prospect out over the river.
- Focus on habitat, restoration and ecology
- Emphasis on passive uses, people within nature
- Interpretation & education of nature themes
- Walking, slow biking, seating along shared Greenway Trail
- Stormwater collection, treatment & demonstration



Outdoor Education: Water Quality Testing



Outdoor Education



Philadelphia Science Festival



Red Ribbon Park, Qinhuangdao, China (Turenscape)



# 2.6. Public Realm Plan

## Tract A



Tanner Springs Park, Portland, OR (Ramboll Studio Dreiseitl)



Outdoor Education

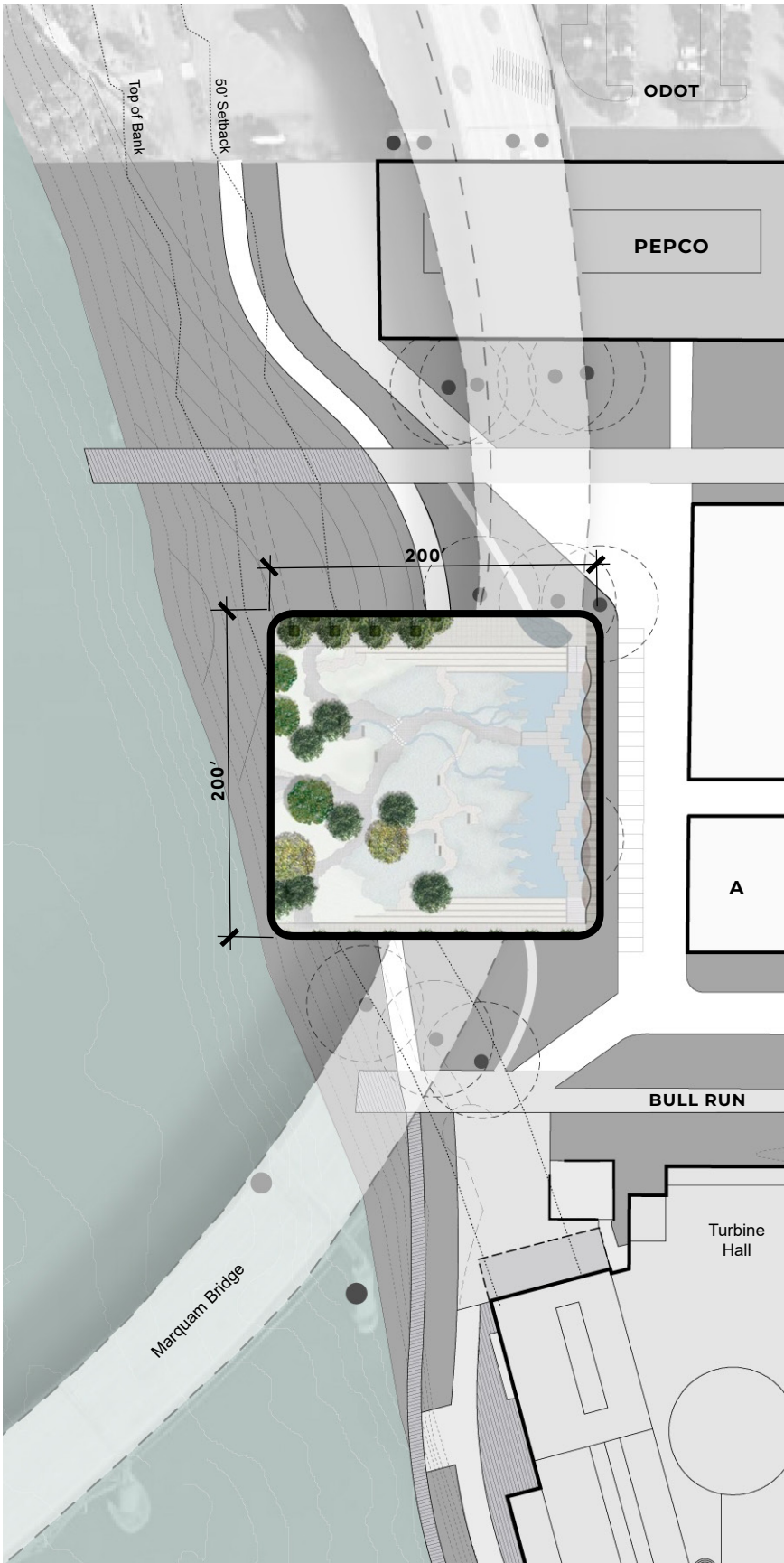
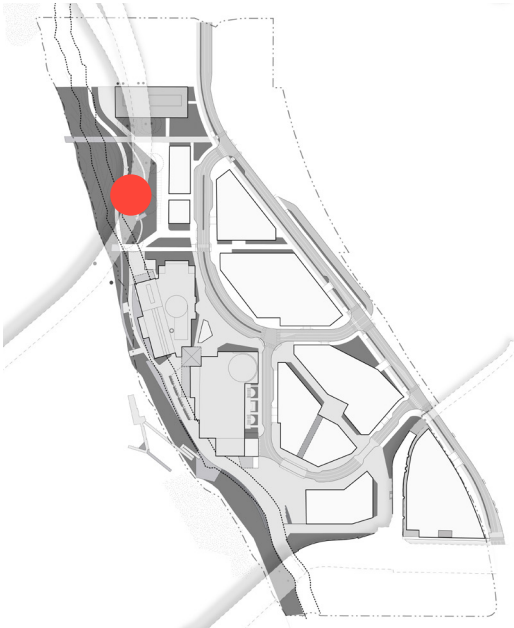
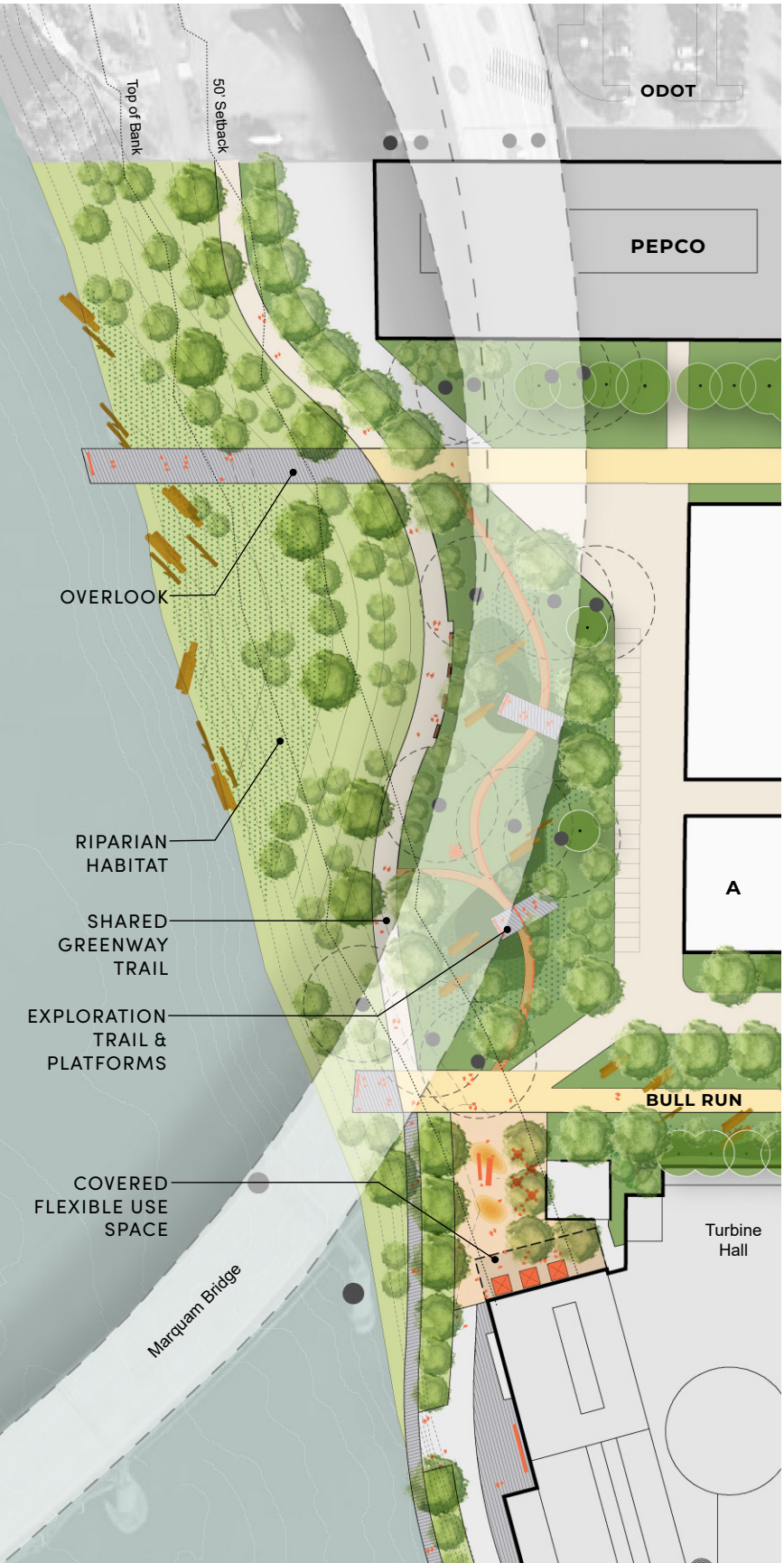


Illustration of Scale: Tanner Springs



Possible Programming



# 2.7. Active Frontages

Active frontages are planned on all the building parcels in the plan area, with primary active frontages reinforcing the Central Pedestrian Spine, plazas and other public open spaces.

The western façade of Tract D meets the streetcar embankment and bridge, so no active ground floor uses are feasible there.

OMSI will work to activate the western frontage of its Turbine and Exhibition Halls, to reinforce the Waterfront Education Park and provide emphasis for its existing western front door.

Active ground floor uses in the new buildings will line the pedestrian ways and streets to support the public realm.







### **3. Massing Approach**

3.1. FAR	34
3.2. Plan Area Allocation	35
3.3. Development Tract Boundaries	37
3.4. Massing Studies	38



# 3.1 FAR

## Base FAR, Bonus FAR

Base FAR in the plan area is 2:1.

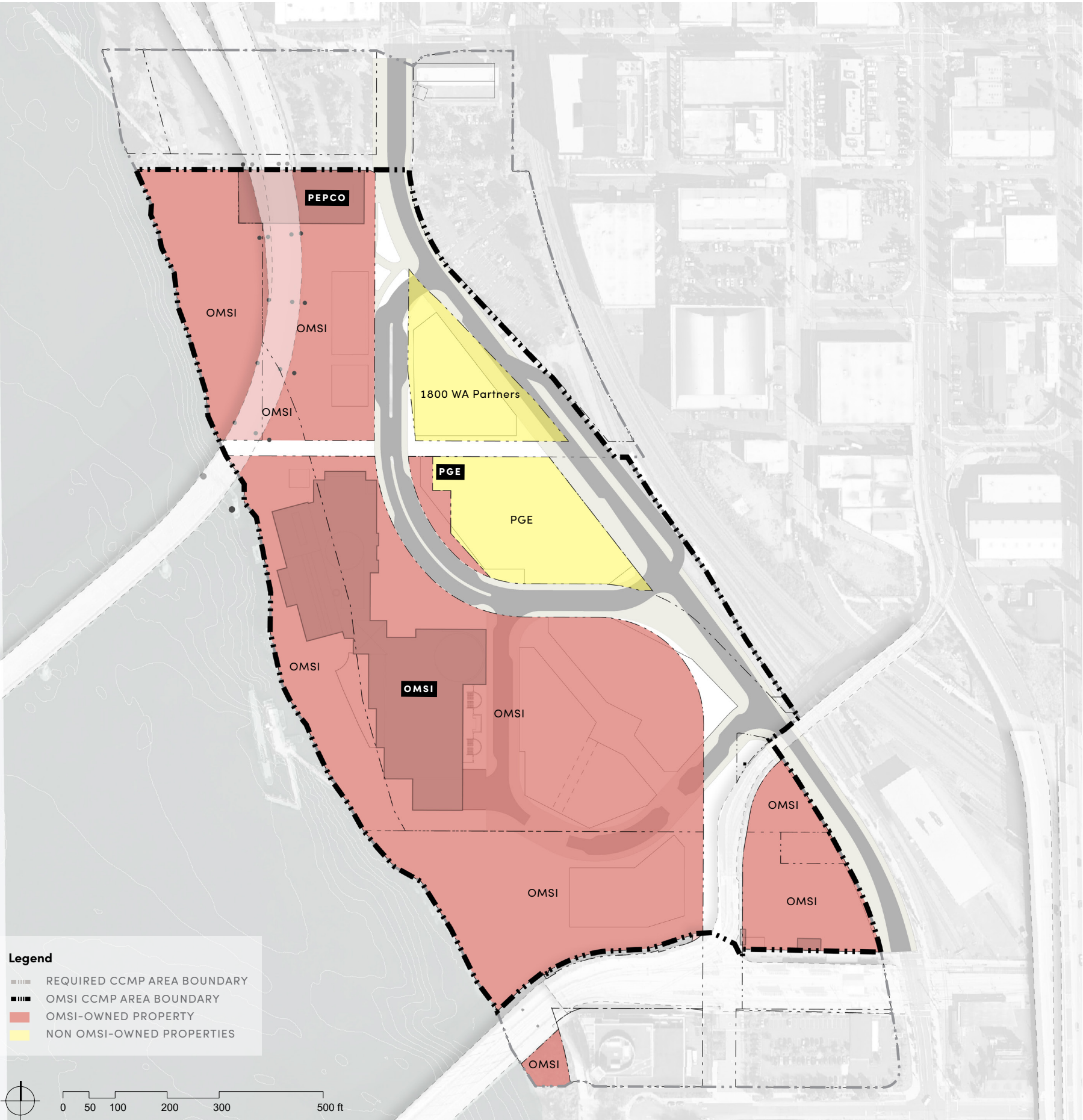
- Some of the Tract A open space east of the 50-foot setback line may qualify for the Riverfront Open Space FAR Bonus of 3:1.
- Some tracts within the Plan Area may qualify for the Inclusionary Housing FAR Bonus of 3:1 if residential uses are built.

Estimates for both of these FAR Bonuses are included in the Total New Development square footage estimate below.

SITE BOUNDARY	BASE FAR	TOTAL DEV SF	( - ) EXISTING BLDG	TOTAL NEW DEVELOPMENT SF, BASE FAR
OMSI-owned 807,167 ft²	2.0	1,614,334 ft²	249,720 ft²	1,364,614 ft²
1800 WA / PGE 118,852 ft²	2.0	237,704 ft²	5,972 ft²	231,732 ft²
				1,596,346 ft²

BONUS AREA	BONUS RATIO	TOTAL NEW BONUS SF
Riverfront OS Bonus** 49,566 ft²	3.0	148,698 ft²
IH Bonus*** 188,310 ft²	3.0	564,930 ft²
		713,628 ft²

2,309,974 ft²



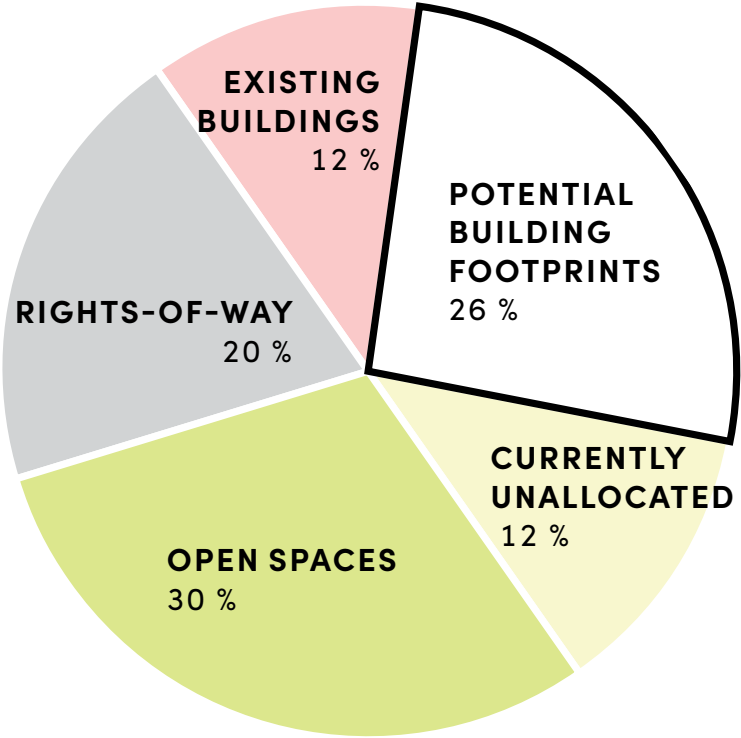


# 3.2 Plan Area Allocation

## PZC 33.510.255.K OPEN AREA REQUIREMENTS:

- A minimum of 20% of CCMP area must be devoted to “open area”, including active or passive recreation areas and pedestrian and bike trails.
- Open areas may include parks, outdoor recreation amenities, plazas, public fountains or landscaped areas.
- A minimum of 20,000 SF, or 50% (whichever is less) of open area must be park or plaza,
  - At least one park or plaza must fit a 50’ x 50’ square within it.
  - Parks or plazas must not be shady according to 33.510.255.K.3.d.
- A maximum of 25% of open area can be bike or pedestrian access-ways.
- Parking, loading or driveways do not count as open area.
- Open area must meet minimum tree density standards listed in 33.510.255.K.3.c.

The Open Space areas illustrated and measured have not yet been tested against the building shadow requirements.





# 3.2 Shadow Analysis

**Mar21<sup>st</sup>** 31%  
( < 75 %)  
3pm



**Jun21<sup>st</sup>** 24%  
( < 75 %)  
3pm



**Sep21<sup>st</sup>** 25%  
( < 75 %)  
3pm



**Dec21<sup>st</sup>** 32%  
( < 75 %)  
12pm



**Mar21<sup>st</sup>** 24%  
( < 50%)  
12pm



**Jun21<sup>st</sup>** 19%  
( < 50%)  
12pm



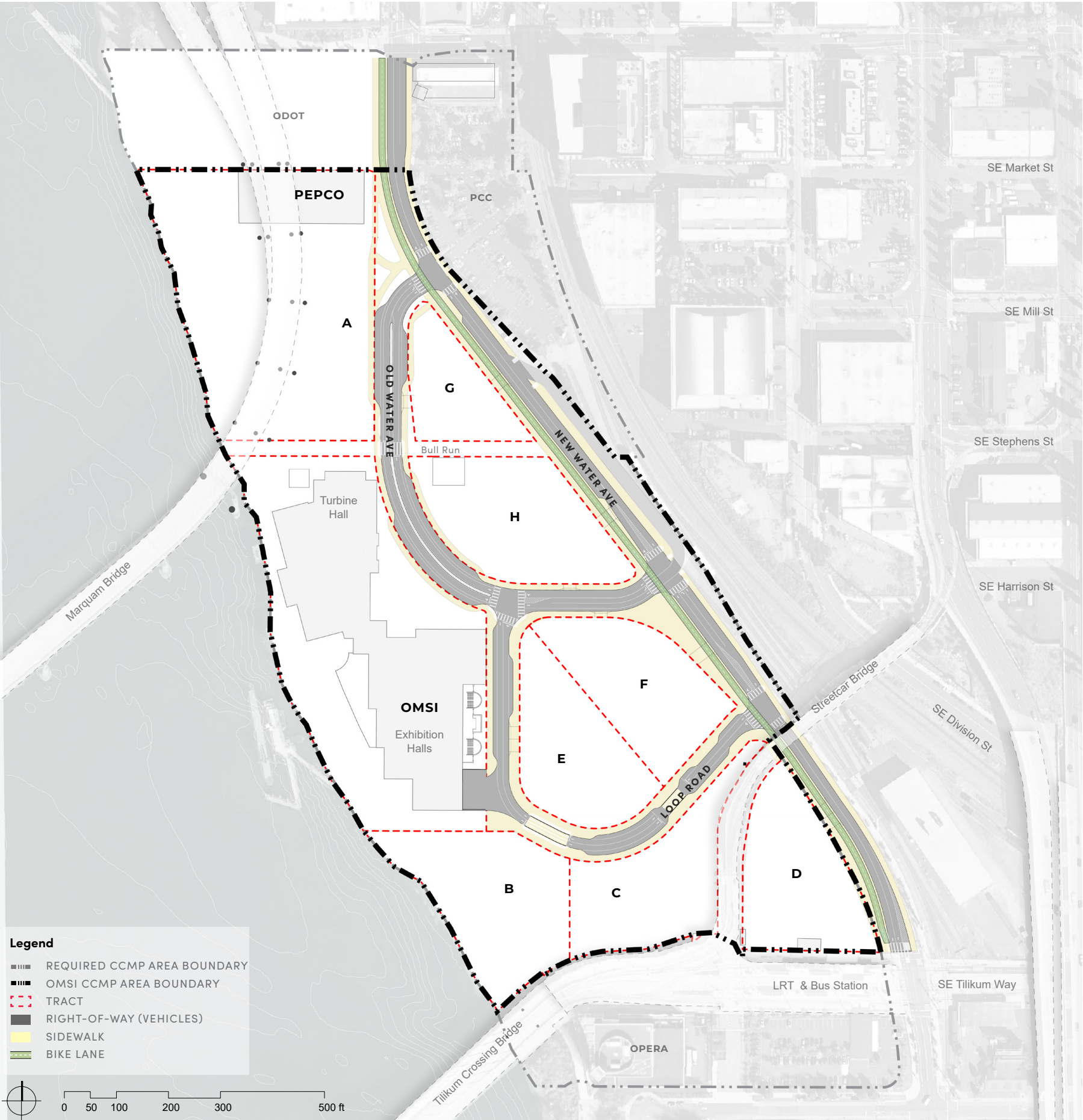
**Sep21<sup>st</sup>** 24%  
( < 50%)  
12pm





# 3.3 Development Tract Boundaries

Development tracts in a variety of sizes are shaped by the existing buildings to remain; desired open areas; pedestrian and bicycle connections; and the street hierarchy.

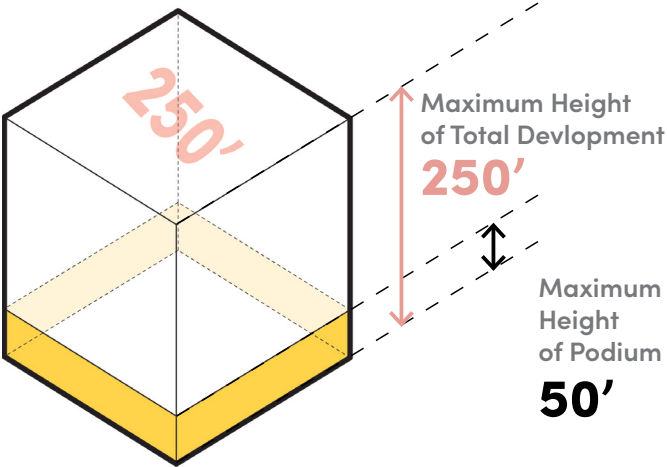




# 3.4 Massing Studies

## Massing Envelope

The height limit for this district is 250 feet. In this CCMP we are proposing a 50-foot maximum podium height to complement the horizontal datum of the OMSI structures.





# 3.4 Massing Studies

## 5 Tenets

These principles form the basis of the proposed Massing Strategies.

**TENET 1: CENTRAL PEDESTRIAN SPINE**

Create space for the Central Pedestrian Spine by pulling the building podiums for Tracts E and F away from the tract boundary between the two tracts. Shape the entrances to support pedestrian wayfinding and include a void along the passage to provide variety along its length.

**TENET 2: EAST-WEST PERMEABILITY**

Create permeability through the skyline of the new development from the east, as well as light and air through the site itself.

**TENET 3: NORTH AND SOUTH ENTRANCES**

Emphasize the north and south entrances of the district with buildings that define the north and south edges of those tracts, respectively.

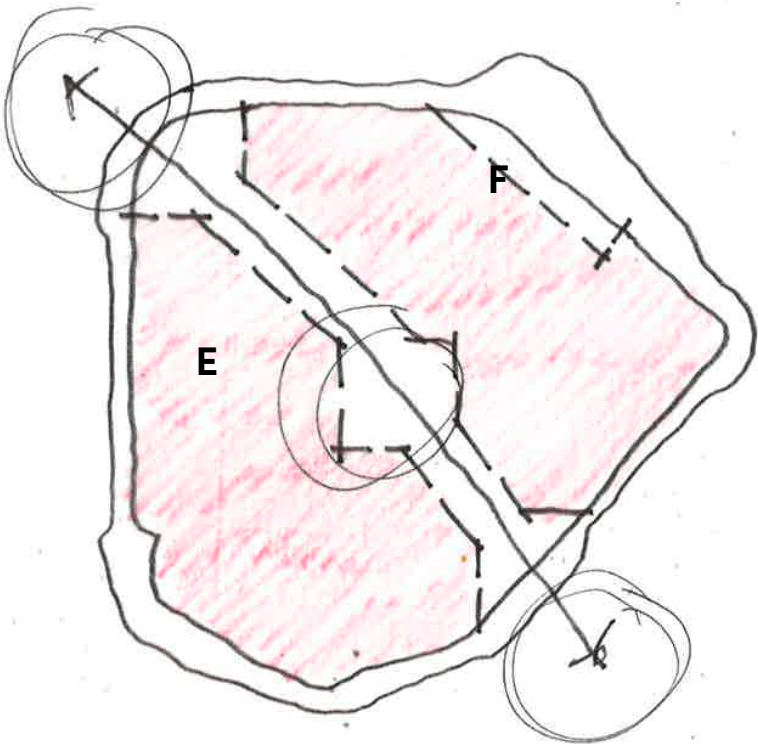
**TENET 4: STEPPING DOWN TO THE RIVER**

Step building heights up from the river to the east.

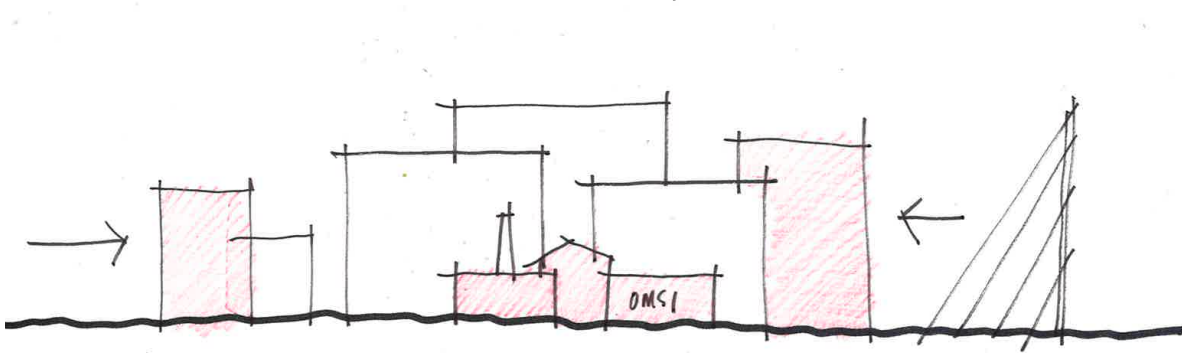
**TENET 5: VARIED SKYLINE**

Set height ranges that will encourage variation in building heights relative one another.

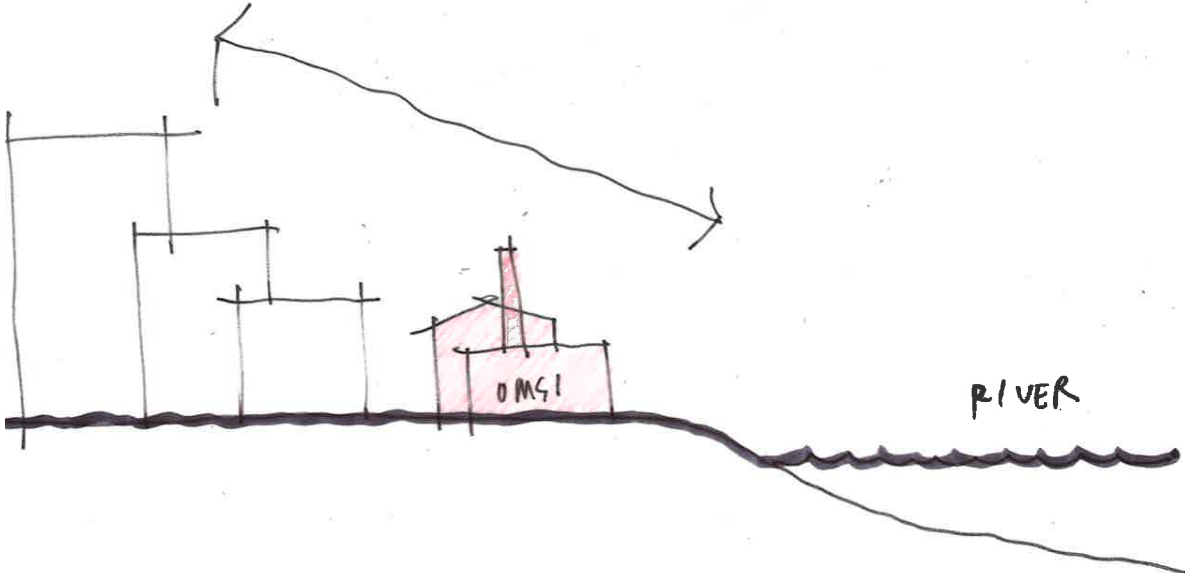
Central Pedestrian Spine



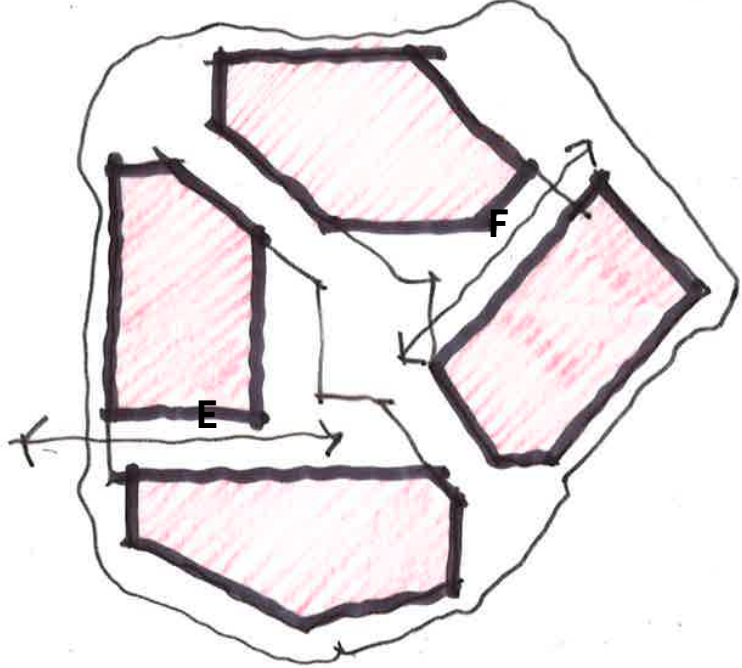
North-South Entry



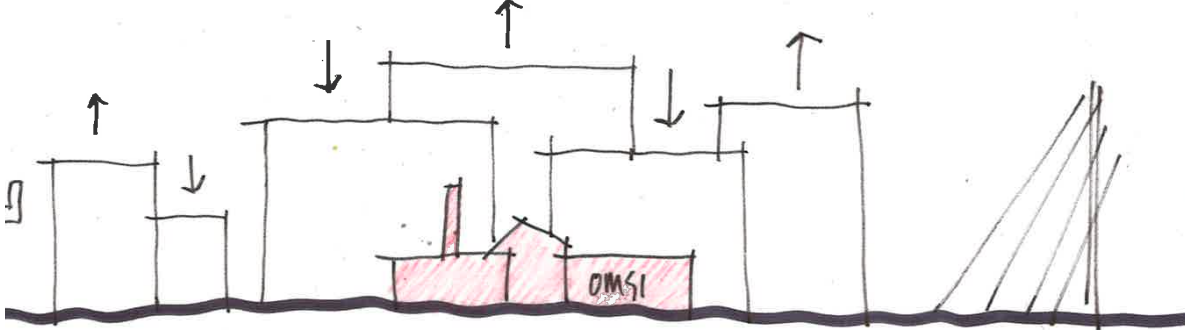
Stepping Down to River



East-west Permeability



Varied Skyline

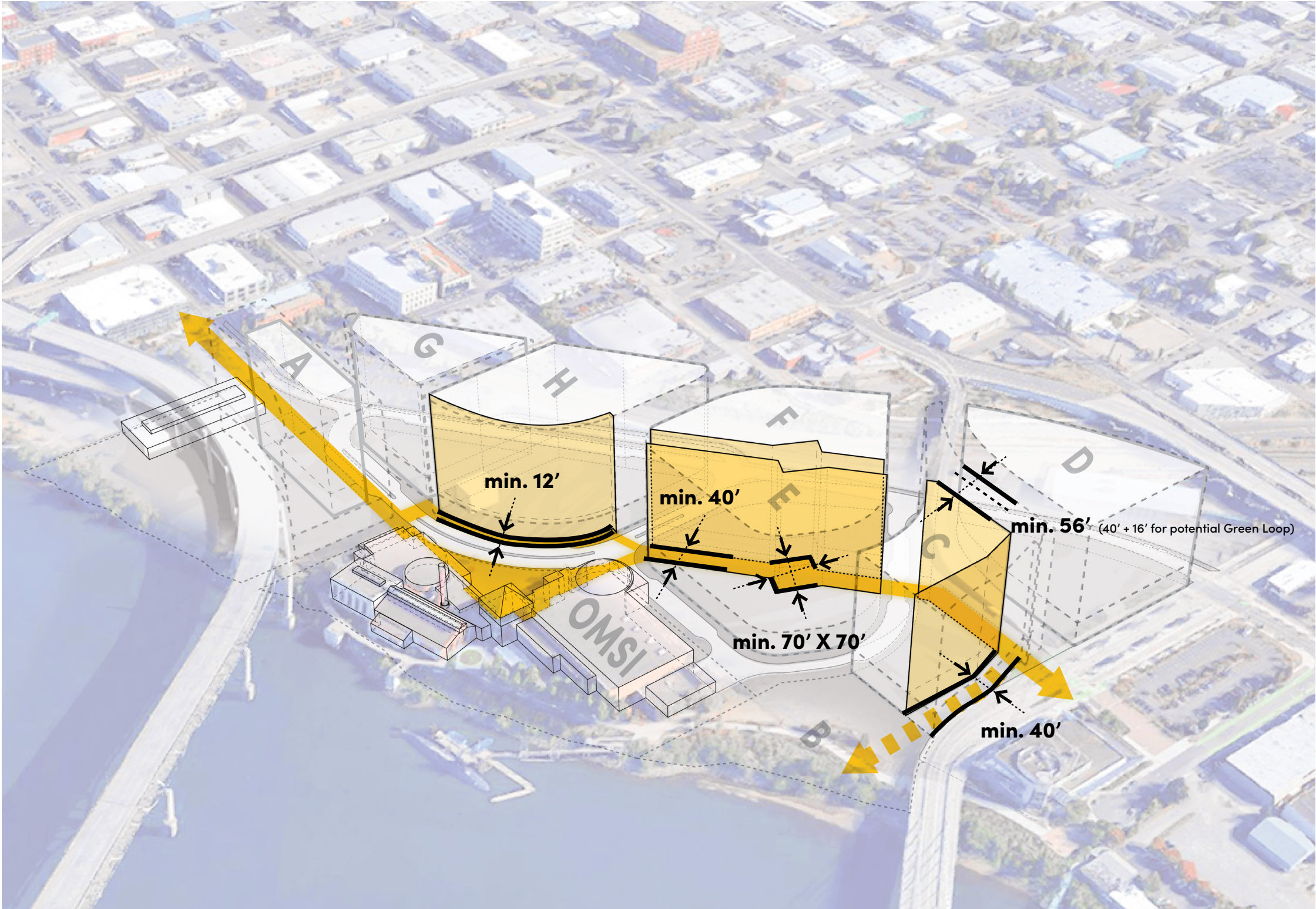
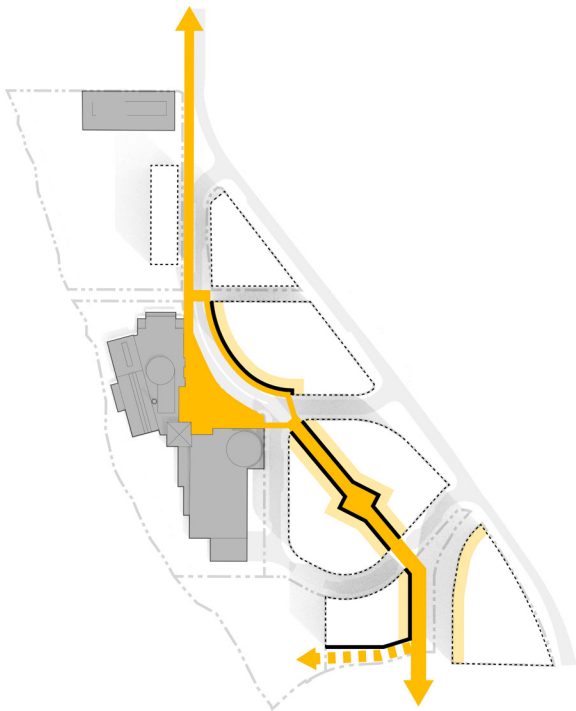




# 3.4 Massing Studies

## Central Spine

Tracts C, E and F are shaped to create the primary pedestrian route between OMSI Station and the heart of the plan area, the river and points north along SE Water Avenue.



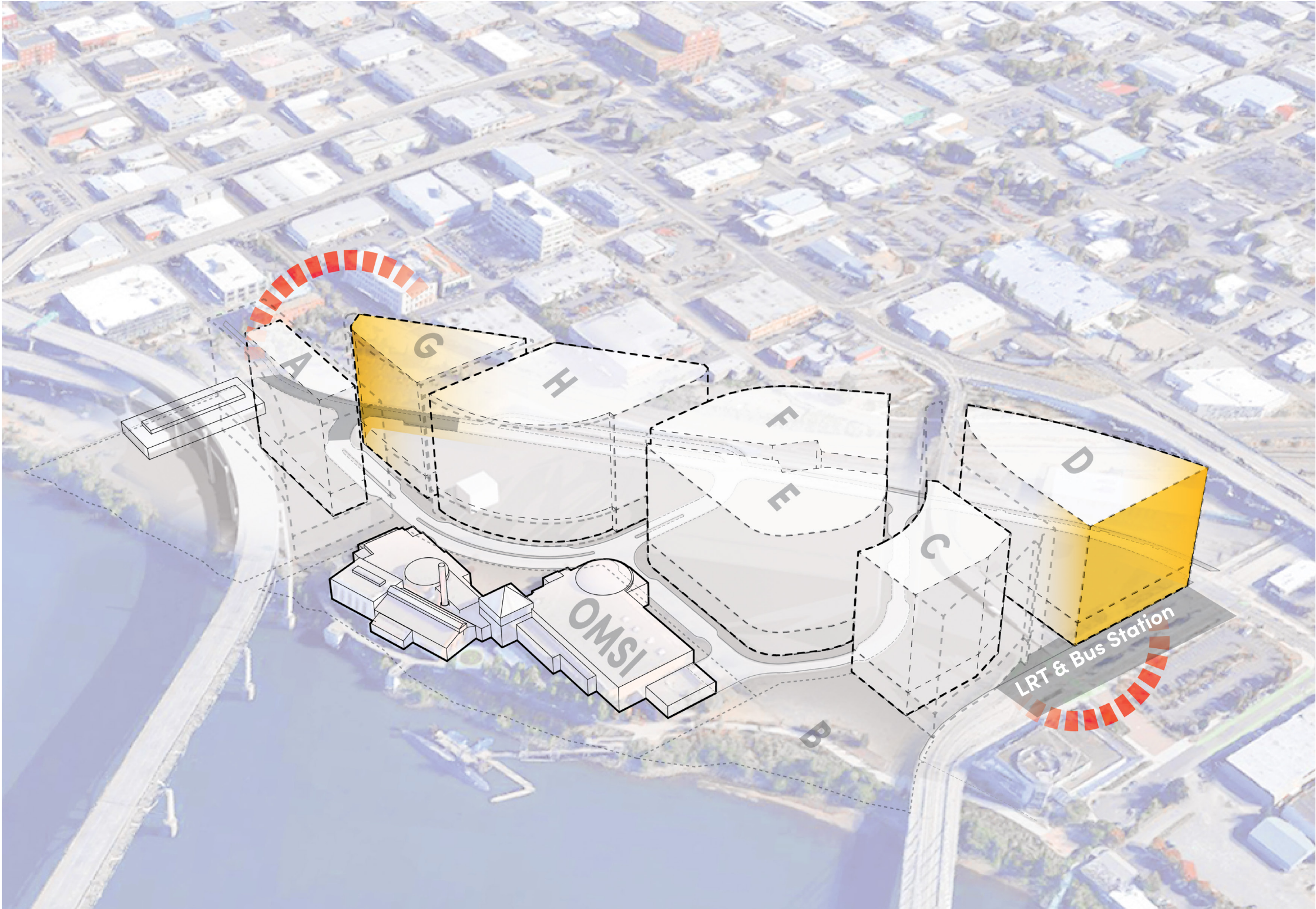
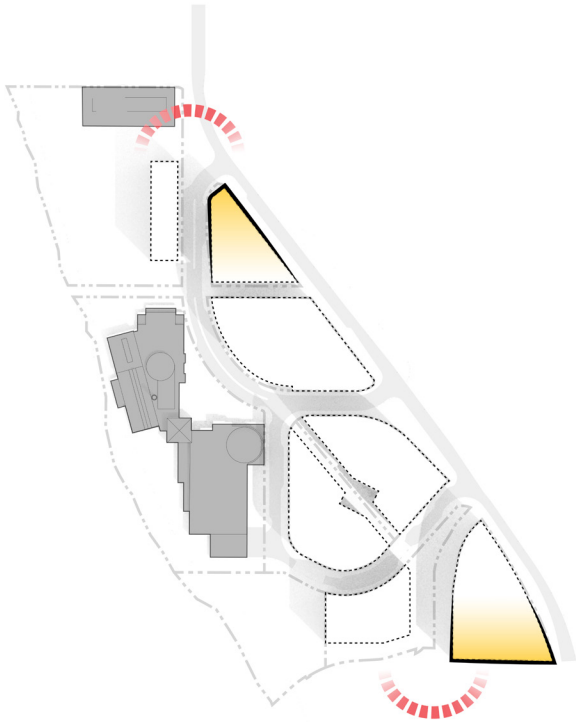


# 3.4 Massing Studies

## North-South Entrances

The massing of Tract G will be concentrated at the northern apex of the building envelope to form a marker of the northern entrance to the district.

The height and mass of the podium and tower ensemble of Tract D will be aligned at the southern edge of the building envelope to mark the southern entrance to the district, along with OMSI Station.

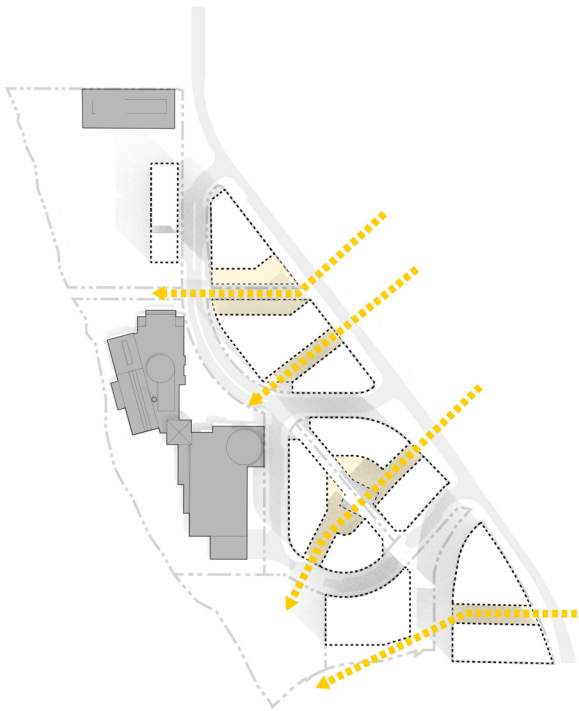




# 3.4 Massing Studies

## East-West Permeability (Multiple towers)

If the Tracts on the eastern edge of the plan area (G, H, F and D) develop with two towers, a space will be left between the towers of sufficient size to allow skyline permeability from the east, and light and air into the district.

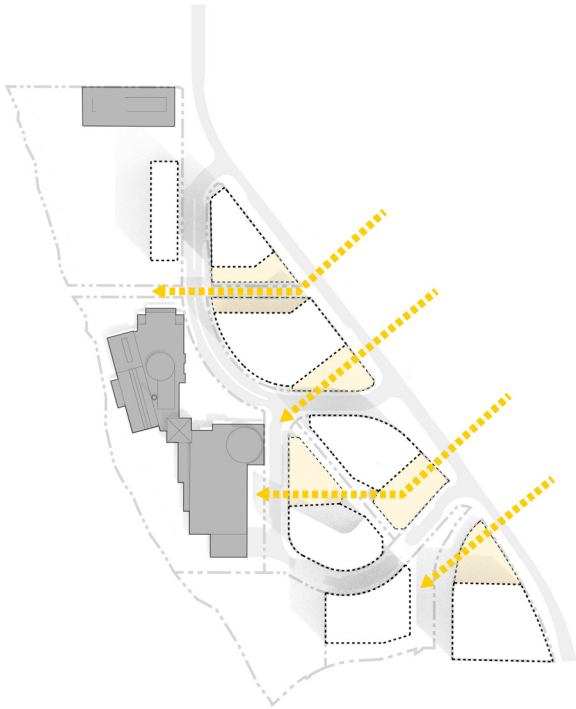




# 3.4 Massing Studies

## East-West Permeability (Single tower)

If the Tracts on the eastern edge of the plan area (G, H, F and D) develop with one tower, a maximum length for the eastern façade will be required to allow skyline permeability from the east, and light and air into the district.





# 3.4 Massing Studies

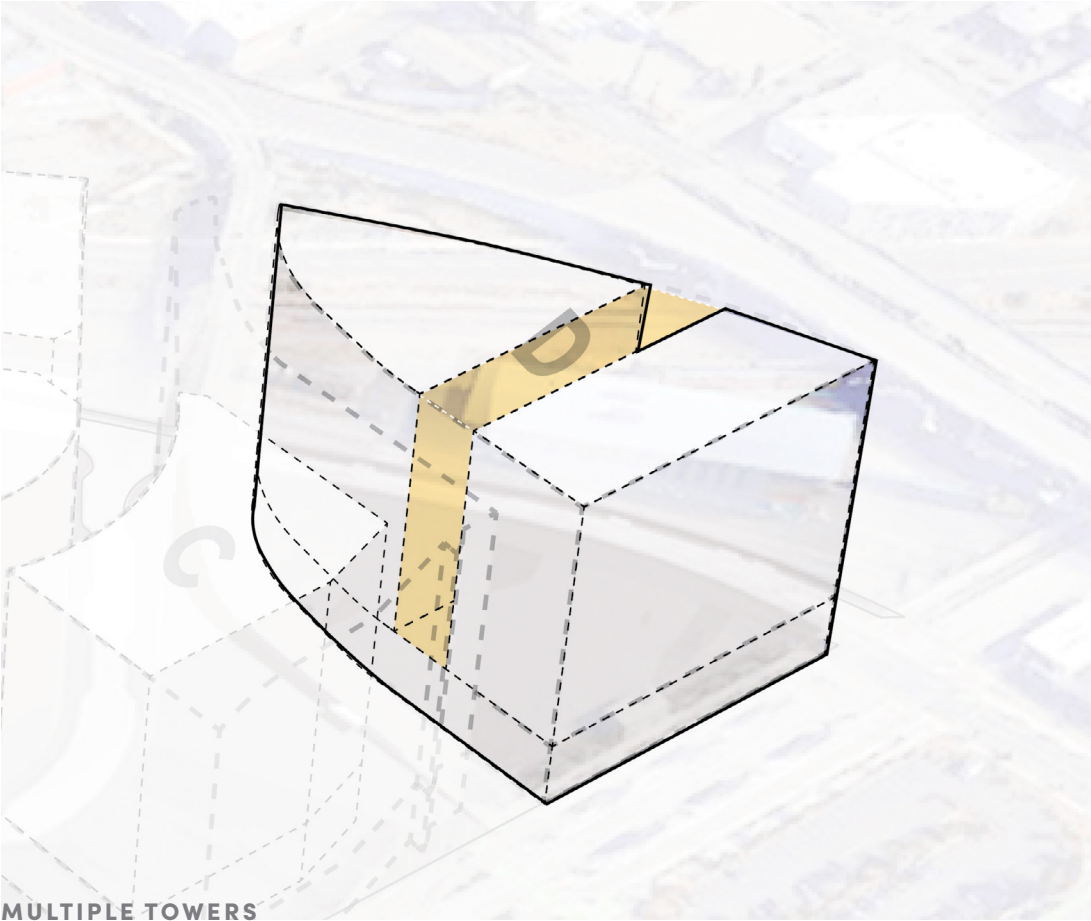
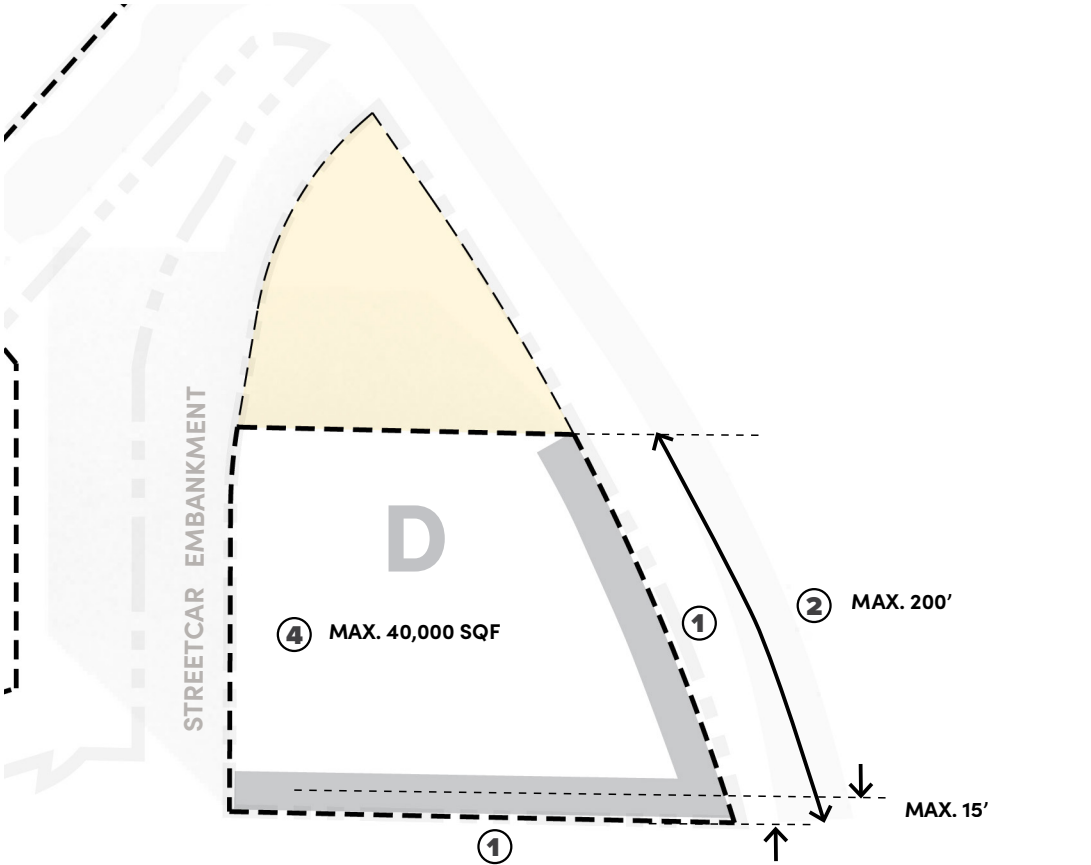
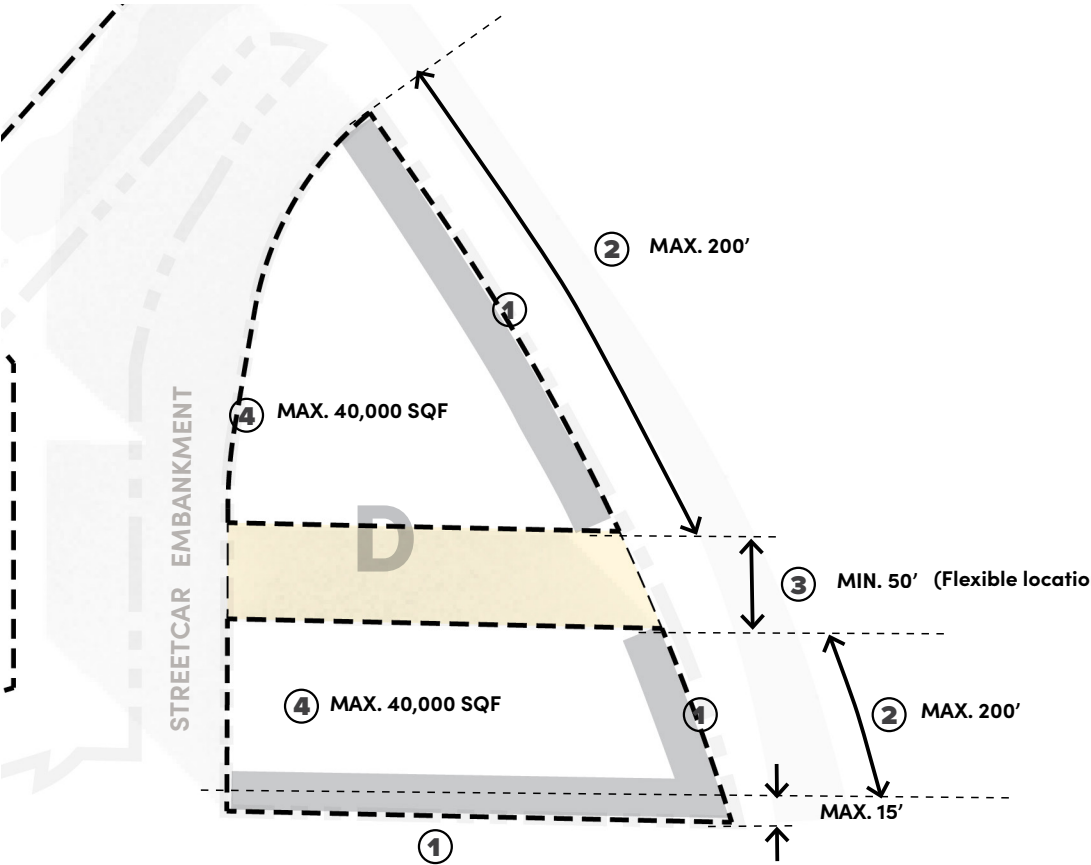
## Tract D

**PODIUM:**  
Should meet the tract boundary and base zone guidelines, except where adjustments are proposed.

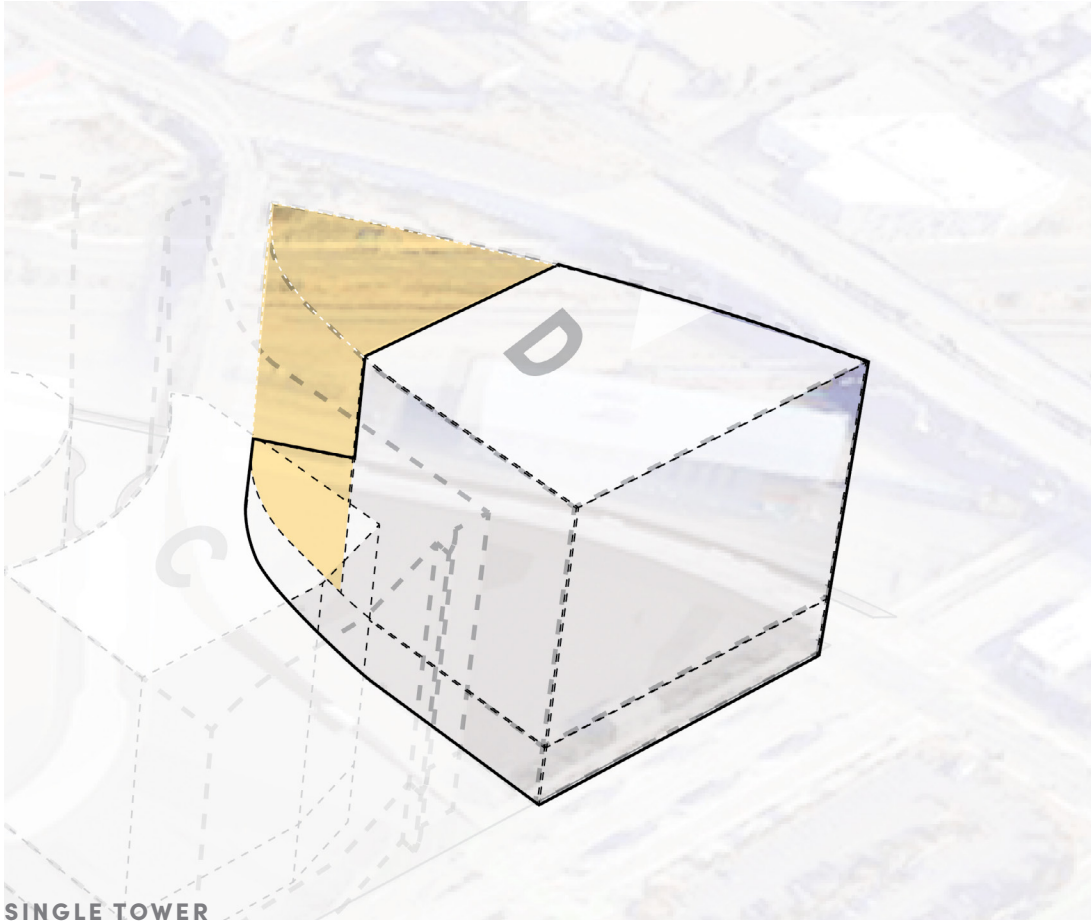
**TOWER:**  
Footprint is large enough to hold two smaller towers or one larger tower. If two towers are desirable, a minimum of 50 feet should be left in between. If one tower is desirable, the eastern façade should be a maximum of 200 feet.

For either the one- or two-tower scenario, the southern façade should meet the tract boundary, except that the tower could be set back from the podium on the southern edge a maximum of 15 feet.

- GUIDELINES:**
- ① Important Facade Edge (MAX 15' setback is allowed)
  - ② MAX 200' Facade Length without Break
  - ③ MIN 50' between Towers
  - ④ MAX 40,000 SQF



MULTIPLE TOWERS



SINGLE TOWER



# 3.4 Massing Studies

## Tracts E+F

**PODIUMS:**  
Should meet the tract boundary and base zone guidelines, except where adjustments are proposed.

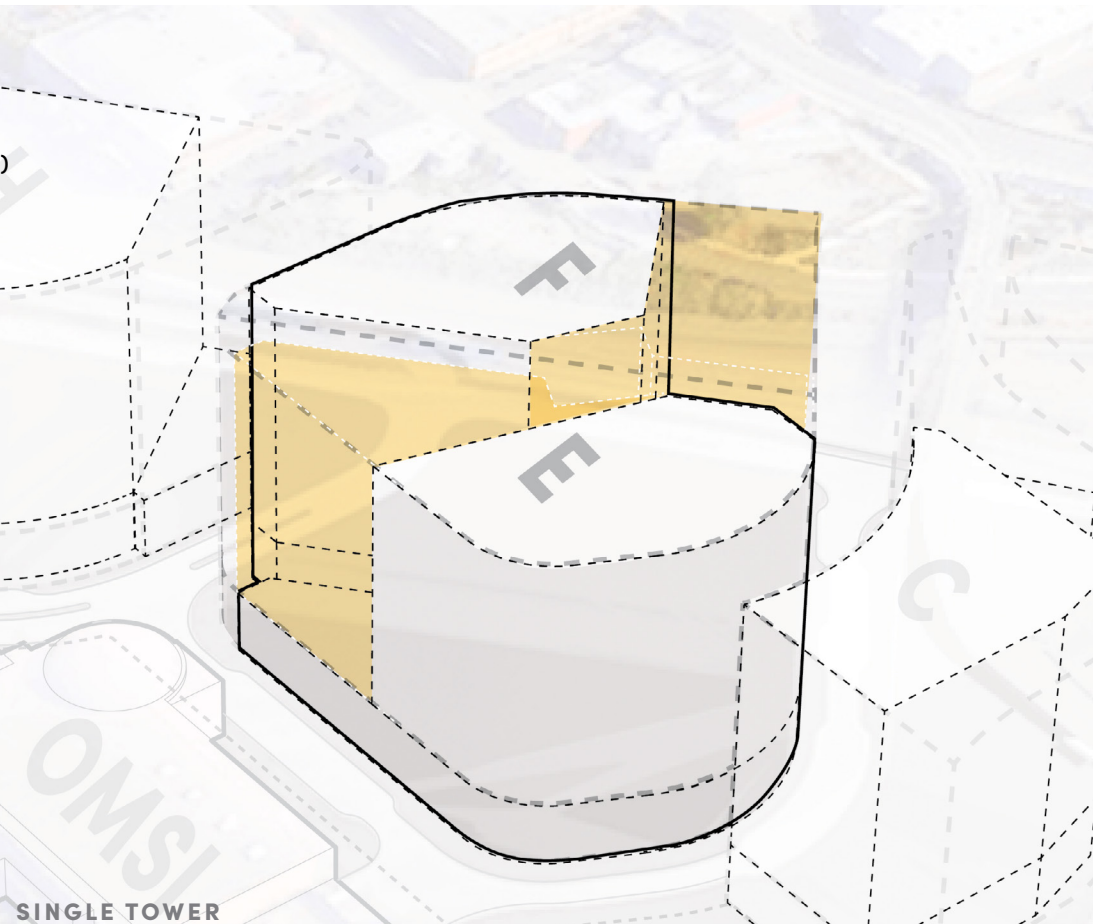
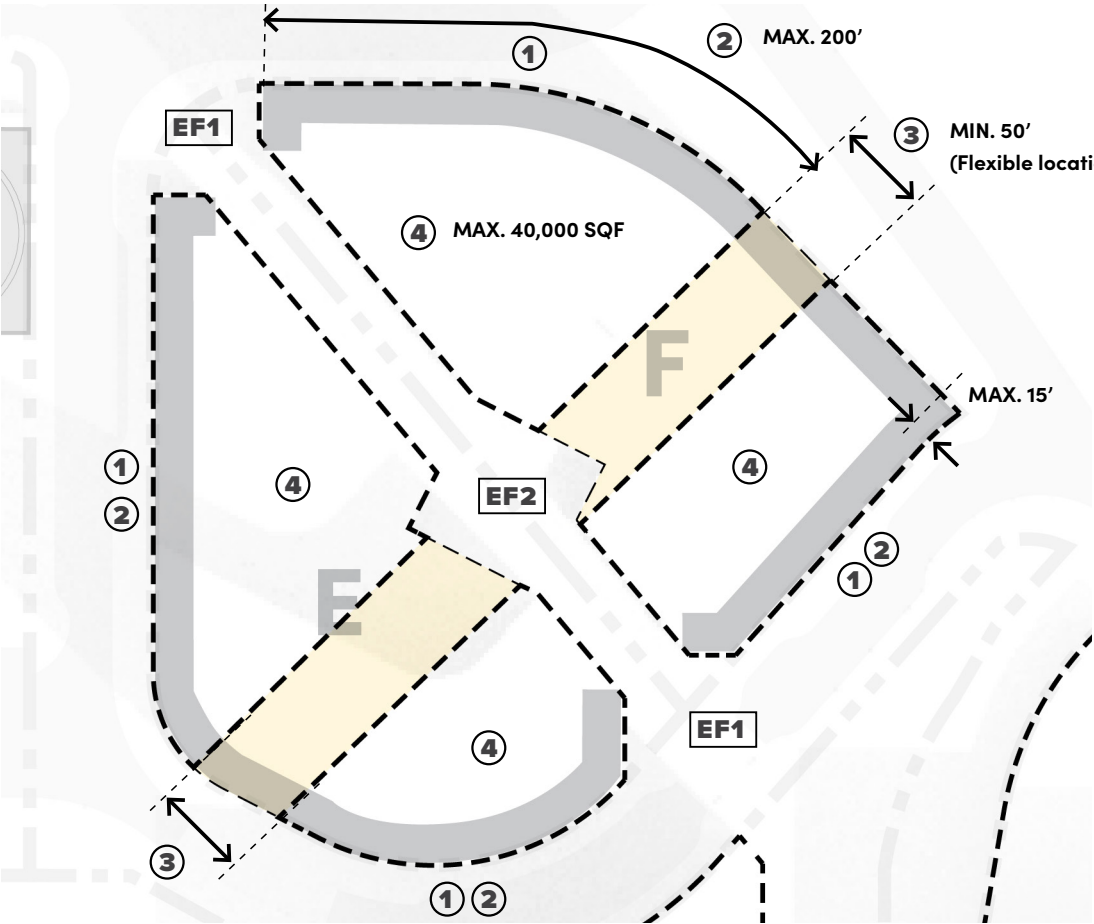
The passageway at the podium level should be a minimum of 40 feet wide, and the central notch should be approximately 70 feet by 70 feet.

**TOWERS:**  
Both tracts are large enough to hold one or two towers. If two, they should be separated by a minimum of 50 feet and, to the degree possible, allow light and air down into the Central Pedestrian Spine.

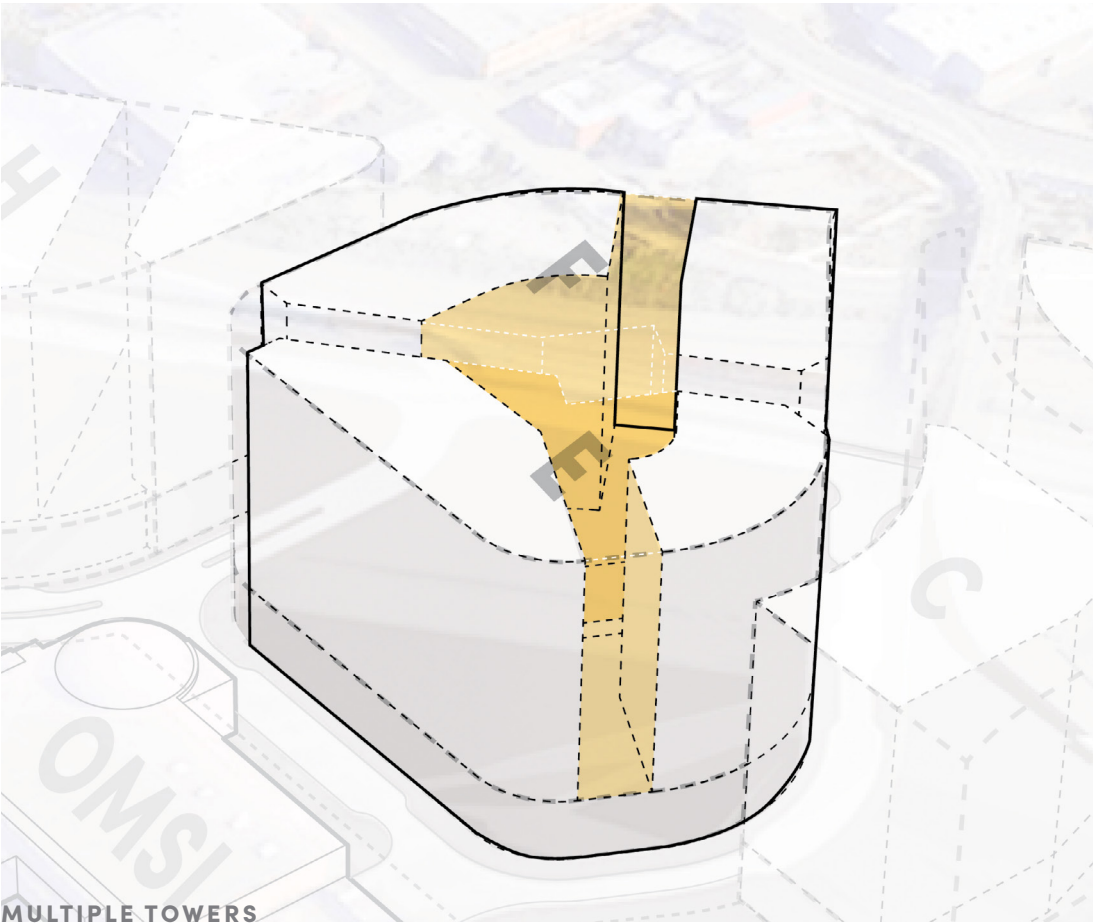
- GUIDELINES:**
- ① Important Facade Edge (MAX 15' setback is allowed)
  - ② MAX 200' Facade Length without Break
  - ③ MIN 50' between Towers
  - ④ MAX 40,000 SQF

**SPECIAL GUIDELINES FOR TRACT E+F:**

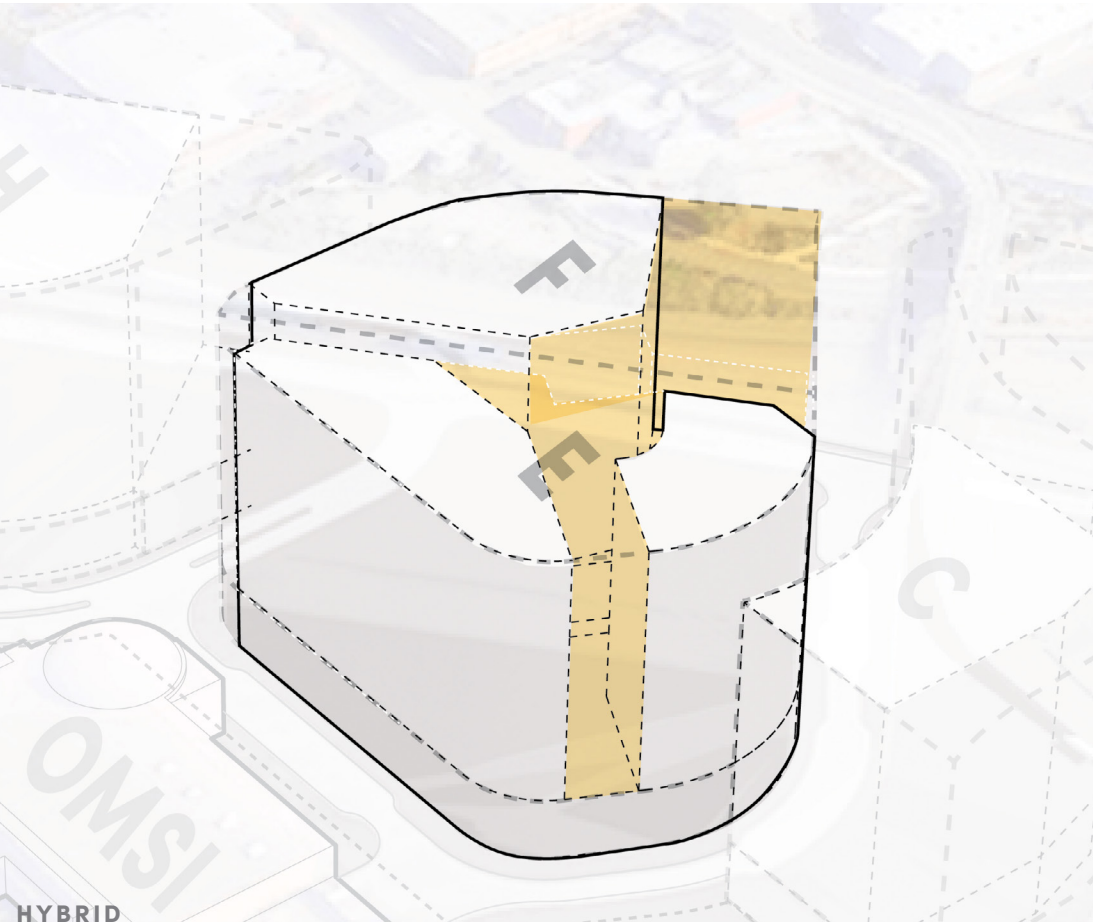
- EF1** Chamfer the Corner to Create the Plaza
- EF2** Provide 70'x 70' Open Space



SINGLE TOWER



MULTIPLE TOWERS



HYBRID



# 3.4 Massing Studies

## Tract H

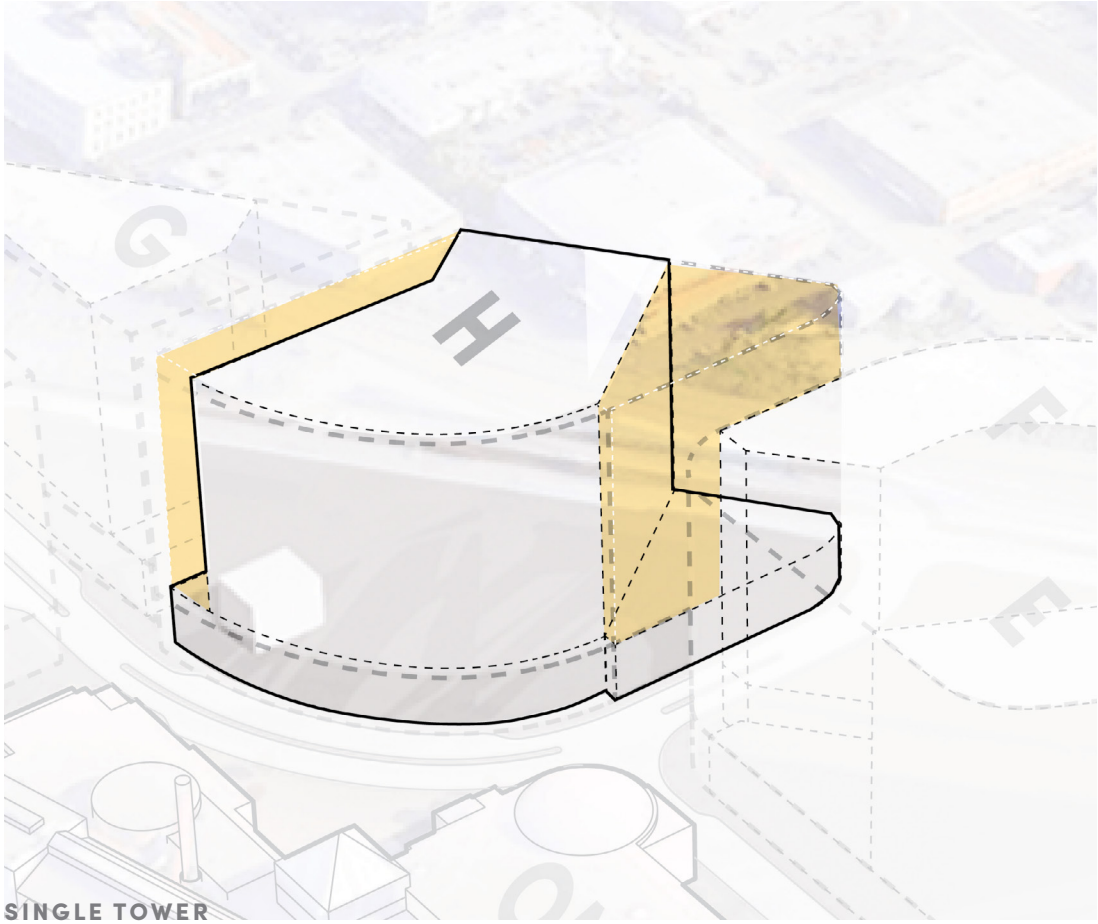
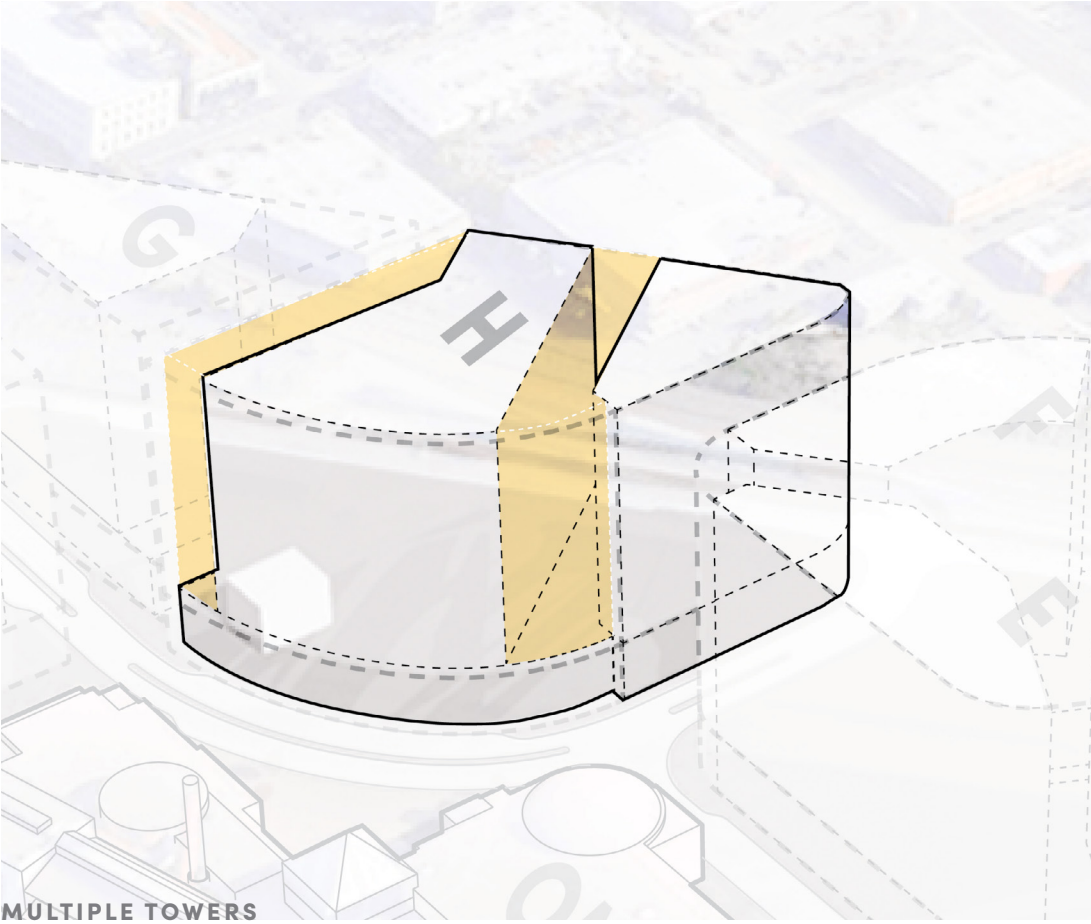
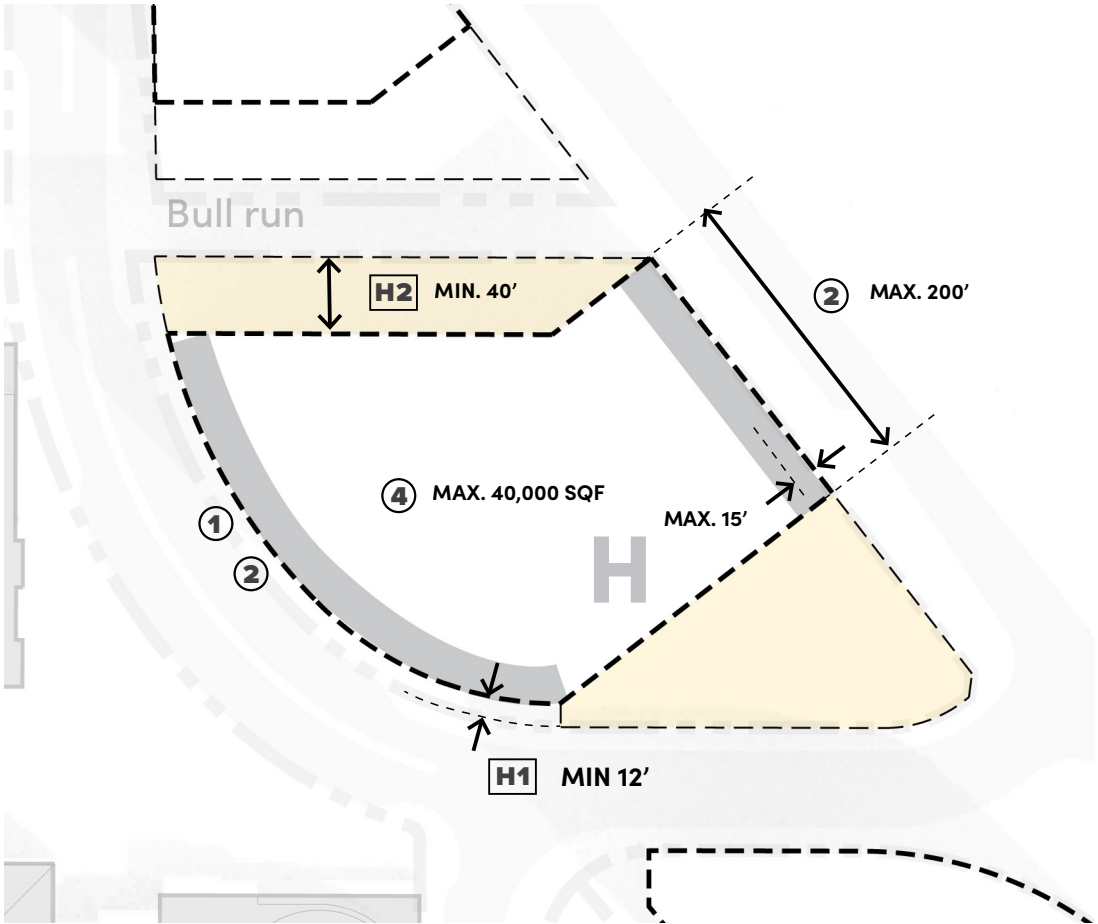
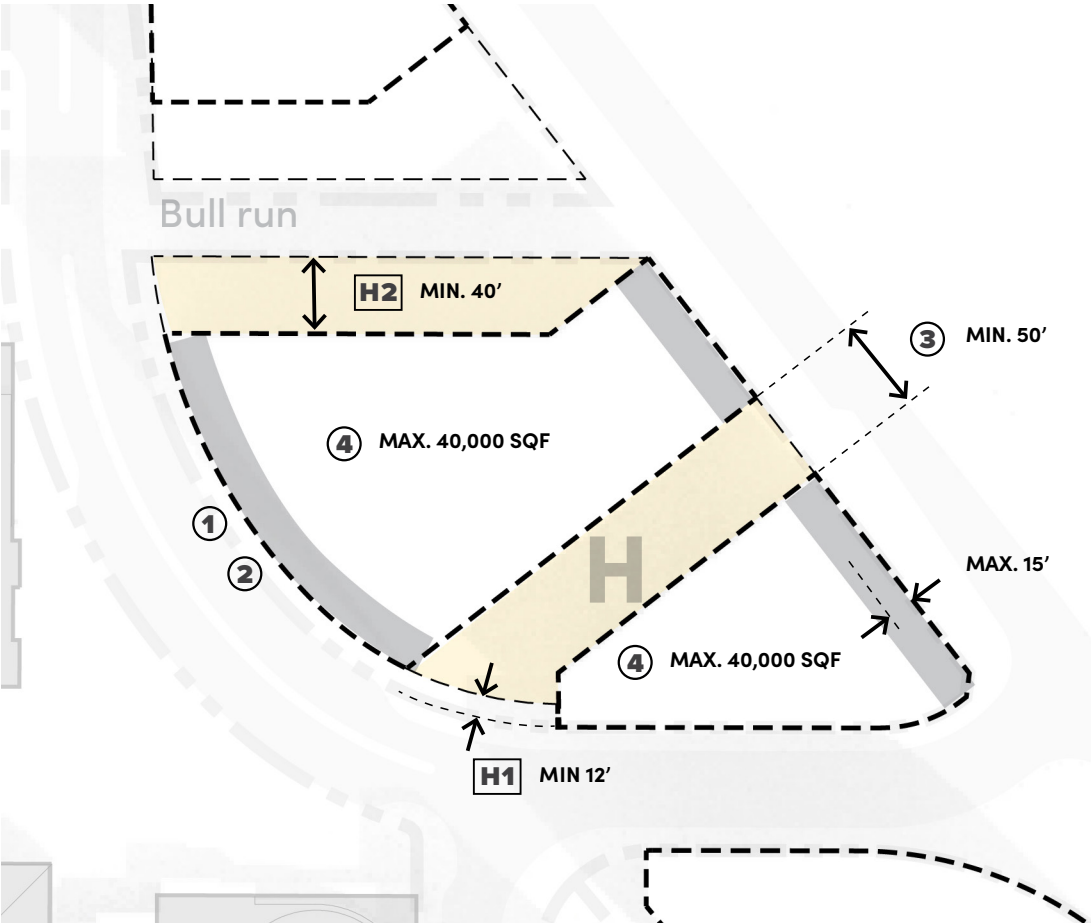
**PODIUM:**  
Should meet the tract boundary and base zone guidelines, except where adjustments are proposed.

**TOWER:**  
Footprint is large enough to hold two smaller towers or one larger tower. If two towers are desirable, a minimum of 50 feet should be left in between. If one tower is desirable, the eastern façade should be a maximum of 200 feet.

- GUIDELINES:**
- ① Important Facade Edge (MAX 15' setback is allowed)
  - ② MAX 200' Facade Length without Break
  - ③ MIN 50' between Towers
  - ④ MAX 40,000 SQF

**SPECIAL GUIDELINES FOR TRACT H:**

- H1** MIN 12' setback for Central Spine
- H2** MIN 40' setback for Bull Run





# 3.2 Massing Studies

## Tracts A+G

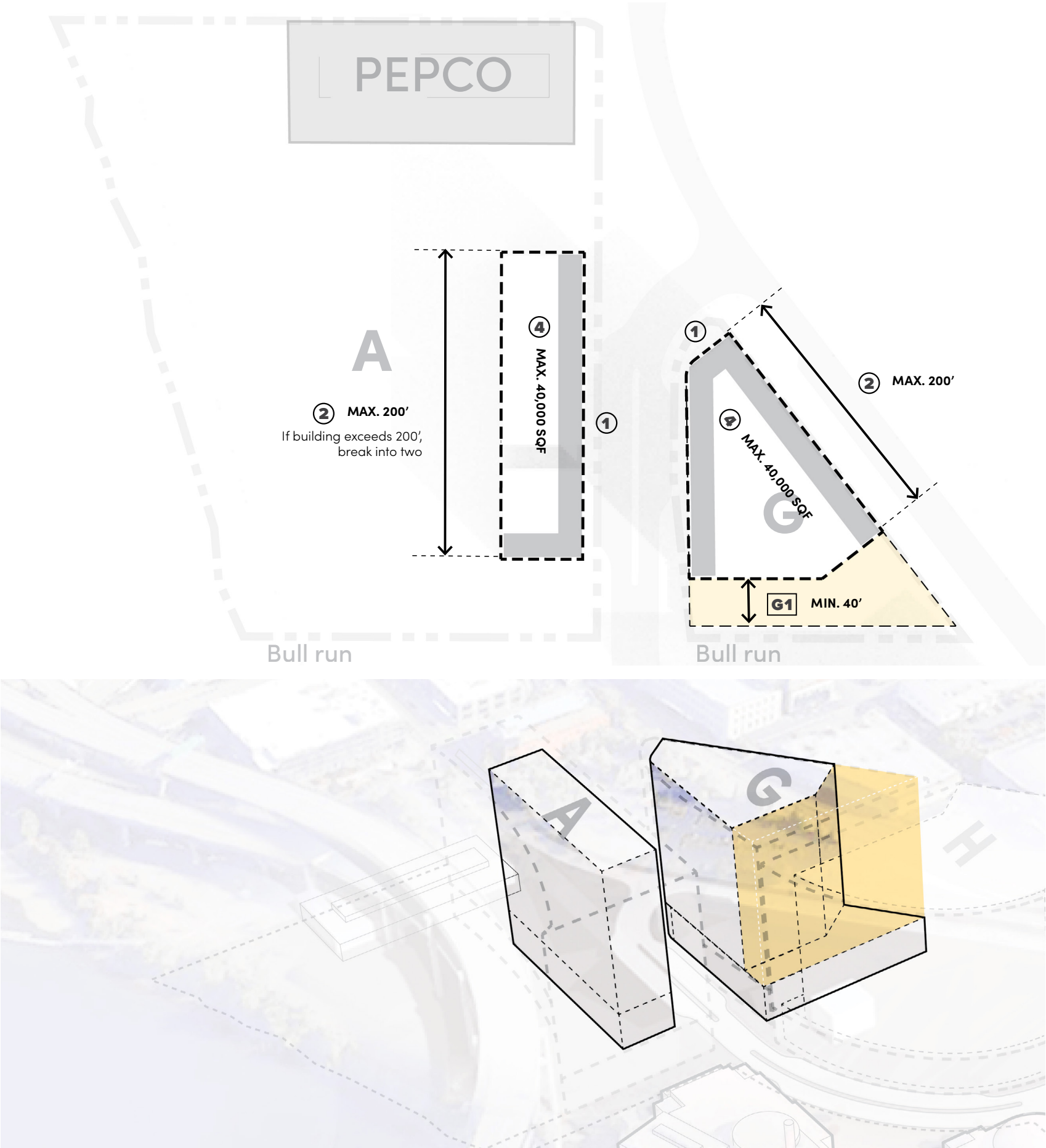
Due to easements over the Marquam Bridge Viaduct and required offsets from its piers, the potential building footprint of Tract A is limited to the eastern edge of the Tract. Along with Tract G, this building will form the northern gateway into the district.

**GUIDELINES:**

- ① Important Facade Edge (MAX 15' setback is allowed)
- ② MAX 200' Facade Length without Break
- ③ MIN 50' between Towers
- ④ MAX 40,000 SQF

**SPECIAL GUIDELINES FOR TRACT G:**

- G1 MIN 40' setback for Bull Run





# 3.2 Massing Studies

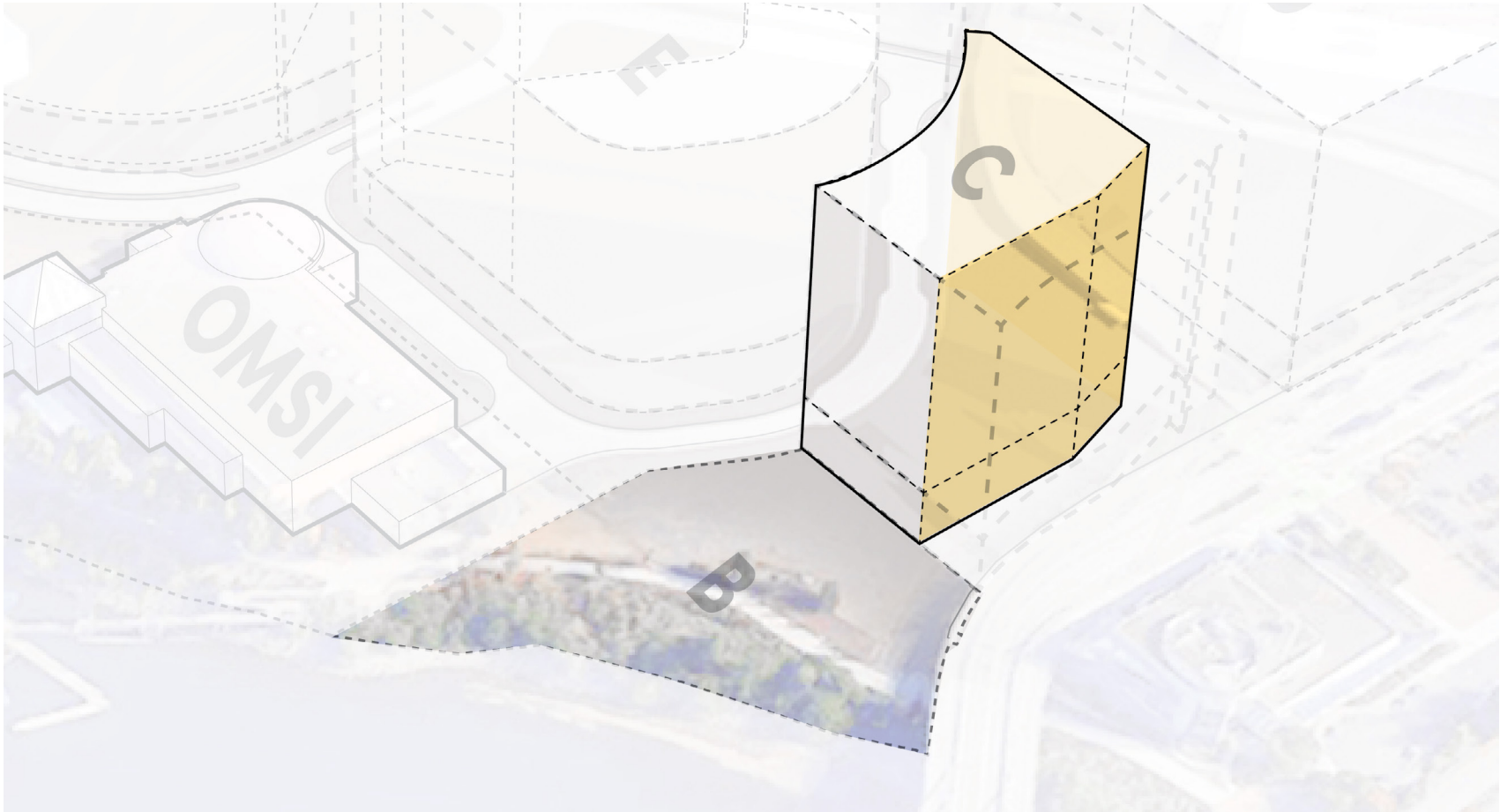
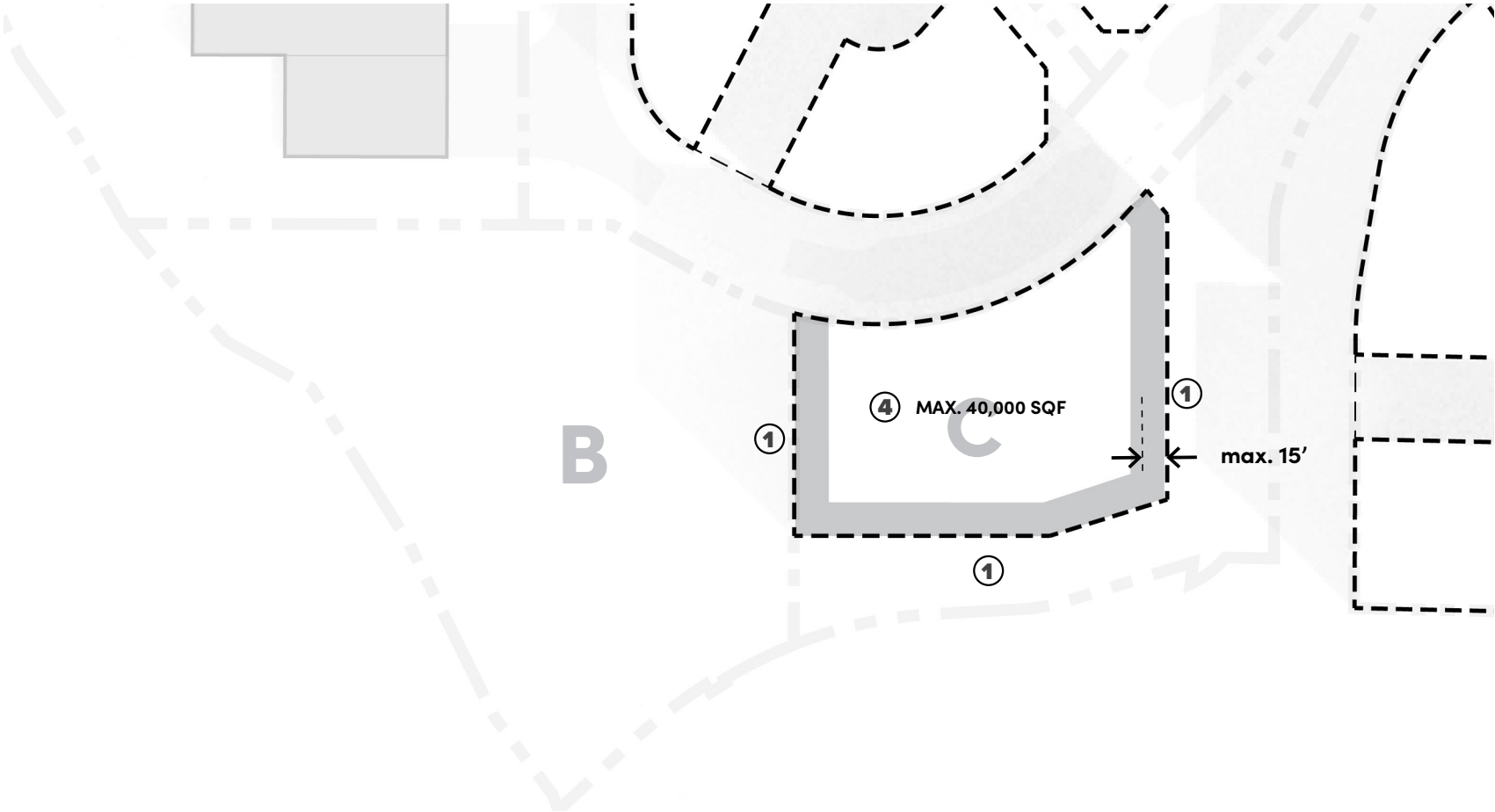
## Tracts B+C

The eastern and southern building footprint edges have been set to allow comfortable widths for the Central Pedestrian Spine and the passage to the waterfront.

This building will be exposed to the pedestrian realm on all sides.

**GUIDELINES:**

- ① Important Facade Edge (MAX 15’ setback is allowed)
- ② MAX 200’ Facade Length without Break
- ③ MIN 50’ between Towers
- ④ MAX 40,000 SQF



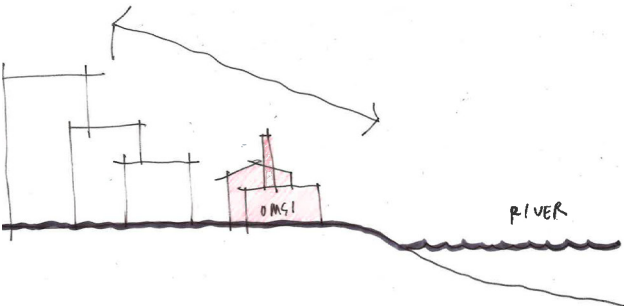


# 3.2 Massing Studies

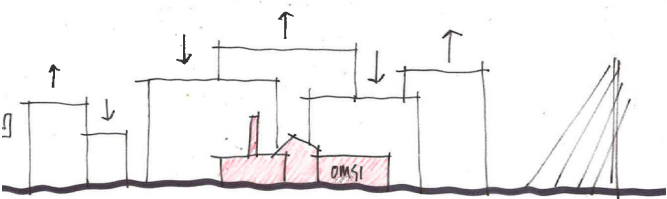
## Massing Example - Multiple Towers

The example to the right illustrates application of the Massing Strategies to each Tract. In this example, the larger tracts all feature two towers.

Stepping down to river



Varied Skyline



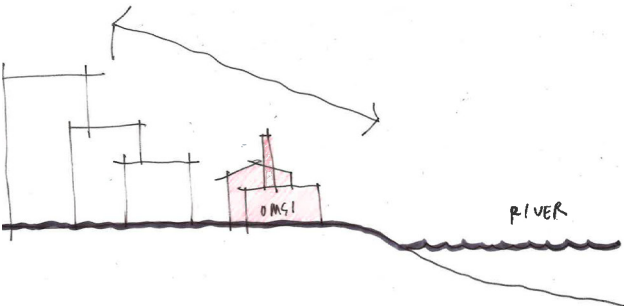


# 3.2 Massing Studies

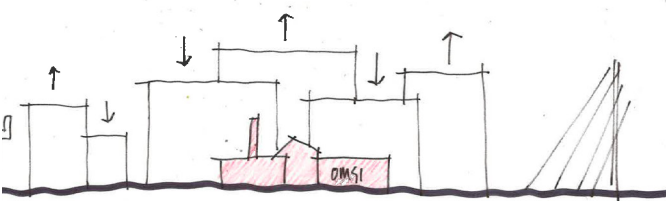
## Massing Example - Single Tower

The example to the right illustrates application of the Massing Strategies to each Tract. In this example, the larger tracts all feature one tower.

Stepping down to river



Varied Skyline



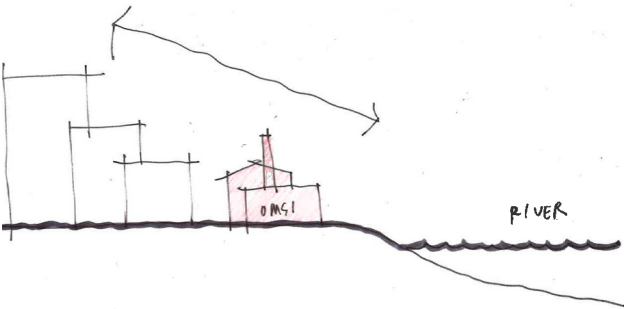


# 3.2 Massing Studies

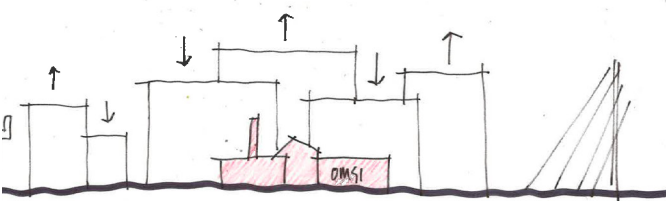
## Massing Example - Hybrid

The example to the right illustrates application of the Massing Strategies to each Tract. In this example, the larger tracts feature a mix of tower configurations.

Stepping down to river



Varied Skyline







## 4. **Utilities**

### 4.1. Utility Infrastructure Zones

53



# 4.1 Utility Infrastructure Zones

Parcel	UTILITIES		
	Water (W)	Sanitary Sewer (SS)	Storm Drainage (SD)
A	W available in Water Ave	Gravity sewer available in Water Ave	Public storm system available in Bull Run easement
B*	W installed with Loop Rd	SS installed with Loop Rd	SD installed with Loop Rd
C	W installed with Loop Rd	SS installed with Loop Rd	SD installed with Loop Rd
D	W available in Water Ave	Temporary SS lift station routing to existing private OMSI lift station.	Public storm system available in Water Ave
		Permanent SS will require Loop Rd development.	
E	W installed with Loop Rd	SS installed with Loop Rd	SD installed with Loop Rd
F	W installed with Loop Rd	SS installed with Loop Rd	SD installed with Loop Rd
G	W installed with New Water Ave	SS installed with New Water Ave	SD installed with New Water Ave.
H	W installed with New Water Ave	SS installed with New Water Ave	SD installed with New Water Ave.

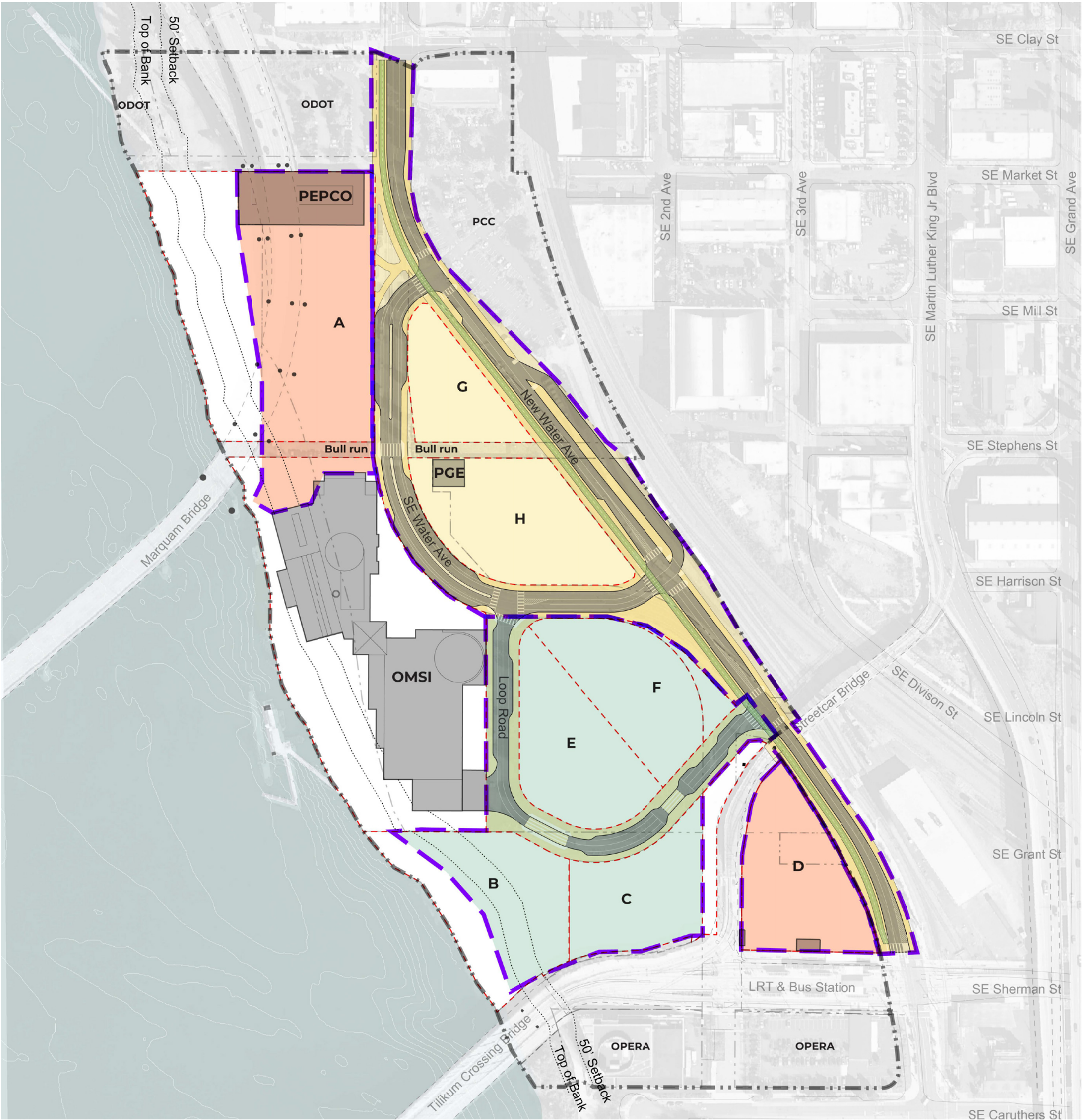
\*B is southern portion of waterfront/plaza area

LEGEND

Stand-Alone Project

Loop Road Zone Projects

New Water Ave Zone Projects





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