

# University of Washington Campus Master Plan Update

Architectural Commission  
Discovery and Analysis Presentation  
September 28, 2015



# Agenda

**1 GOALS AND PRINCIPLES**

**2 GROWTH PROFILE**

**3 PHYSICAL SITE ANALYSIS**

**4 DEVELOPMENT SITES**

# Scope & Schedule

● Work Sessions

● Web Ex Check In

July      Aug      Sept      Oct      Nov      Dec      Jan      Feb      Mar      Apr

## Phase 1: Discovery & Analysis



- Review existing data
- Kick-off work session & stakeholder interviews
- Compile previous documentation
- Site reconnaissance
- Develop growth profile
- Prepare site analysis
- Development site analysis & confirmation
- Develop guiding principals

## Phase 2: Development of Preliminary Plan



- Prepare preliminary plan
- Interactive charrette
- Refine the preliminary plan
- Compose the Preliminary Draft CMP Document

## Phase 3: Development of Draft Plan



- Develop draft plan
- Prepare detailed graphics and street level views to support plan ideas
- Compose the Draft CMP Document

1

# GOALS AND PRINCIPLES

# Goals & Principles

Accommodate anticipated growth to support the University's academic, research and service missions

Be **good stewards** of historic, natural, and cultural resources

Embrace identity as an **urban institution**

Foster a culture of **collaboration, innovation, and industry** partnership

Create a **welcoming environment** that seamlessly integrates with the surrounding community

Promote a safe, walkable, bikable and accessible **public realm**

Create strong connections to the **waterfront**

Promote the integration of **sustainable strategies** at all levels

Support **multi-modal** transportation options

# 2 GROWTH PROFILE

**articulated needs**

**enrollment trends**

**space needs model**

**benchmarking**

**trends / best practices**

**industry case studies**

**articulated needs**

# Articulated Needs from Stakeholder Interviews

## Classrooms

- : **Well-exceed** the 67% utilization target
- : Most significant need is for **large lecture halls** and spaces that support **new pedagogy**

## Engineering

- : **40% increase in students** since 2009, with 5% increase in space
- : In addition to CSEII, the College of Engineering will **need a couple hundred thousand additional sf**
- : **Shift toward a team-based model** prompts the need for maker space, collaborative team and group learning spaces; the definition of lab space has shifted
- : Increased visibility of **industry partners**

## Research

- : Research awards increased by 43% from \$967M in 2006 to \$1,386M in 2014 (Source: UW Profiles)
- : Anticipate **2 to 3% annual growth** in research moving forward
- : Anticipate **increase in industry sponsored research**

## Innovation and Industry

- : Anticipate growth in industry and academic partnerships, e.g. Facebook, Google, Amazon, Tableau
- : Generates new space needs including high quality **wet lab incubator** space; consolidated **industry interaction** space; **student-focused** space; and space for **start-ups and business incubators**

## Intercollegiate Athletics (ICA)

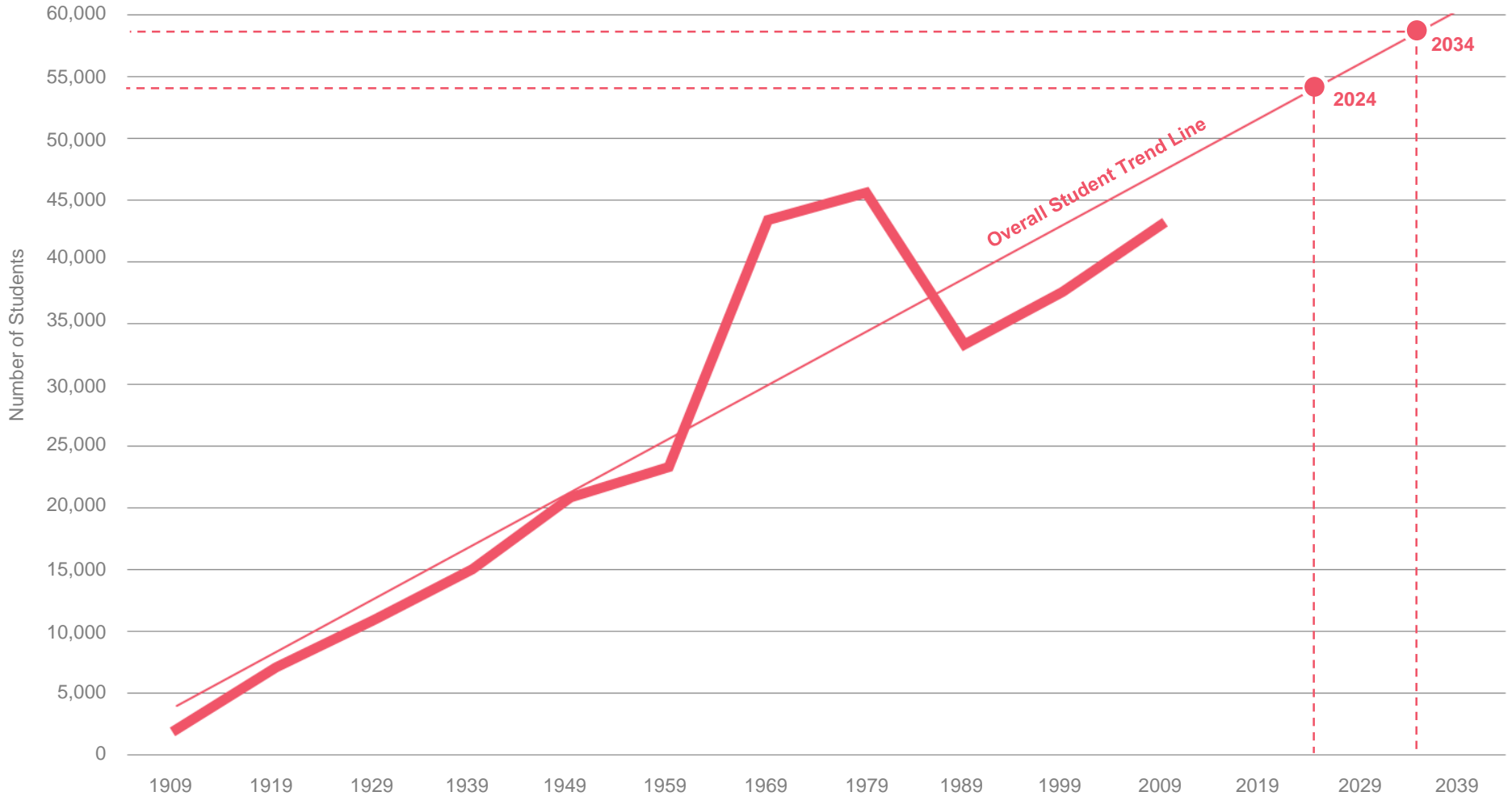
- : Need for both **built space** (Basketball Operations Project, indoor practice facility, support spaces) and **outdoor playfields**
- : Would like to **introduce** Women's Lacrosse and Women's Triathlon



# enrollment trends

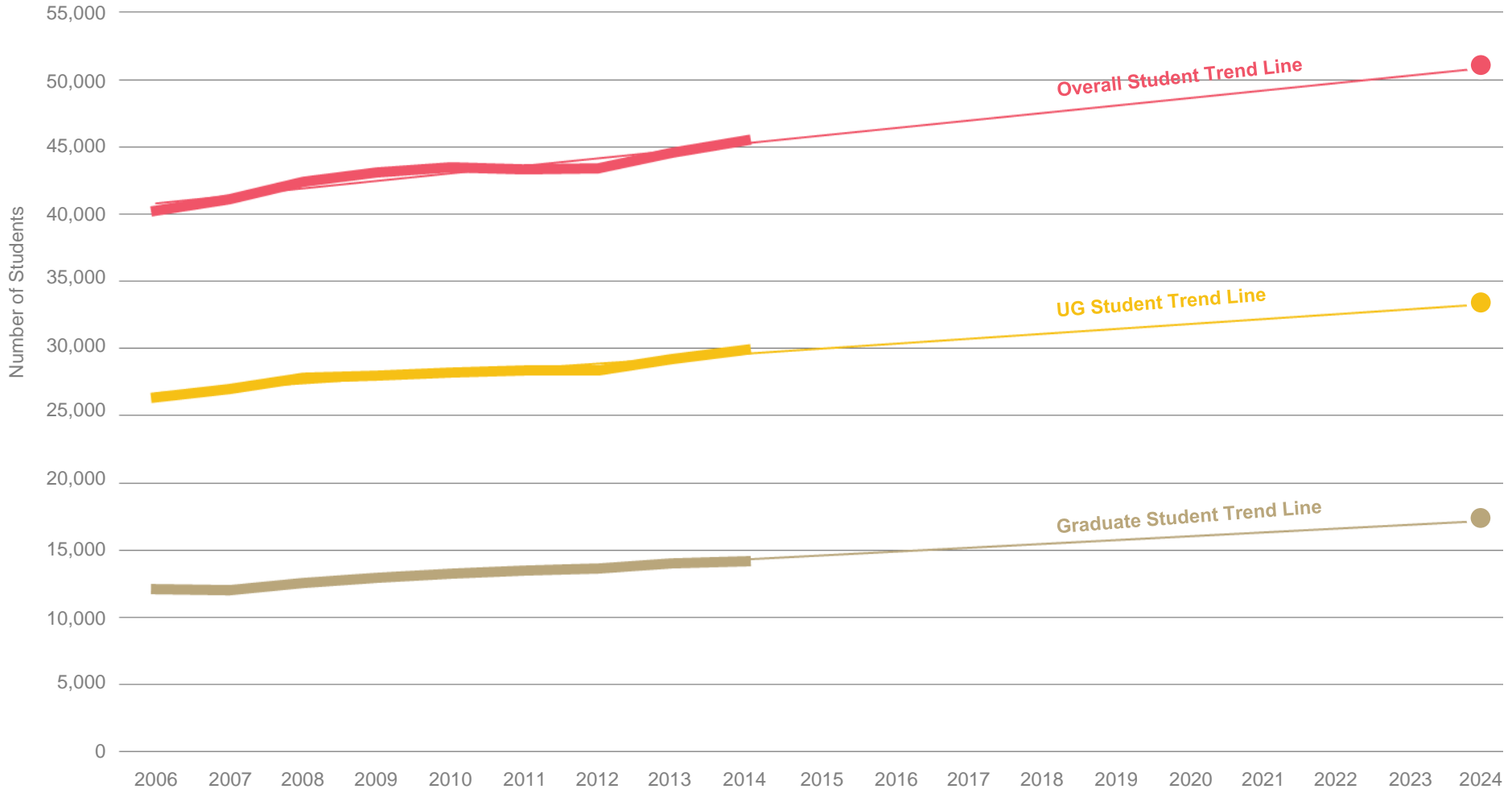
# Enrollment Trends – Students

: Historic assessment of overall student enrollments on the Seattle campus generates a trend line that projects a future student population of ~54,000 students in 2024 and ~58,000 students in 2034



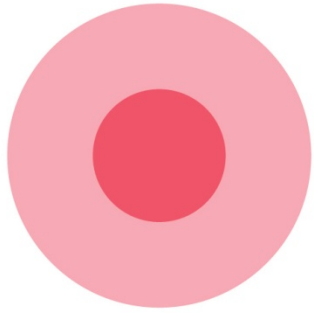
# Enrollment Trends – Students

- : Overall population grew by 13% (5,255 students) between 2006 and 2014 (40,259 to 45,514 HC)
- : Undergraduates similarly grew by 13% (3,515 students) between 2006 and 2014 (26,359 to 29,874 HC)
- : Graduate students grew by 17% (2,083 students) between 2006 and 2014 (12,069 to 14,152 HC)
- : Trend line suggests a future overall student population of ~51,000 HC students by 2024

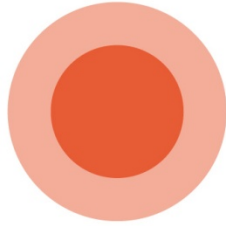


# Enrollment Trends – Students by College / School

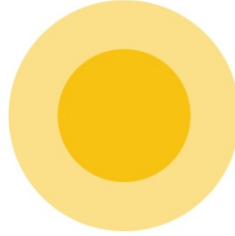
Reflects period from 2006 – 2014 , and includes both UG and Graduate



College of Engineering  
+3,595 (129%)



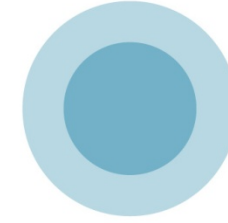
College of the Environment  
+604 (65%)



School of Public Health  
+474 (74%)



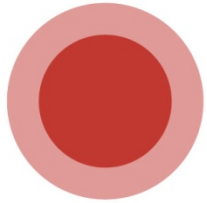
School of Business  
+471 (19%)



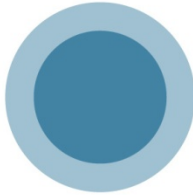
College of Education  
+465 (62%)



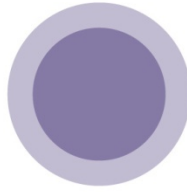
School of Medicine  
+328 (22%)



Information School  
+285 (48%)



Inter School/Coll Prog  
+139 (43%)



School of Public Policy  
+136 (38%)



College of Built Env  
+88 (13%)



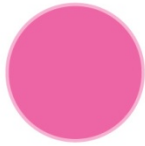
School of Social Work  
+68 (12%)



School of Dentistry  
+46 (15%)



School of Pharmacy  
+41 (9%)



School of Law  
+32 (5%)



School of Nursing  
-11 (-2%)



Interdisciplinary Grad Prog  
-155 (-21%)



Interdisciplinary UG Prog  
-479 (-27%)

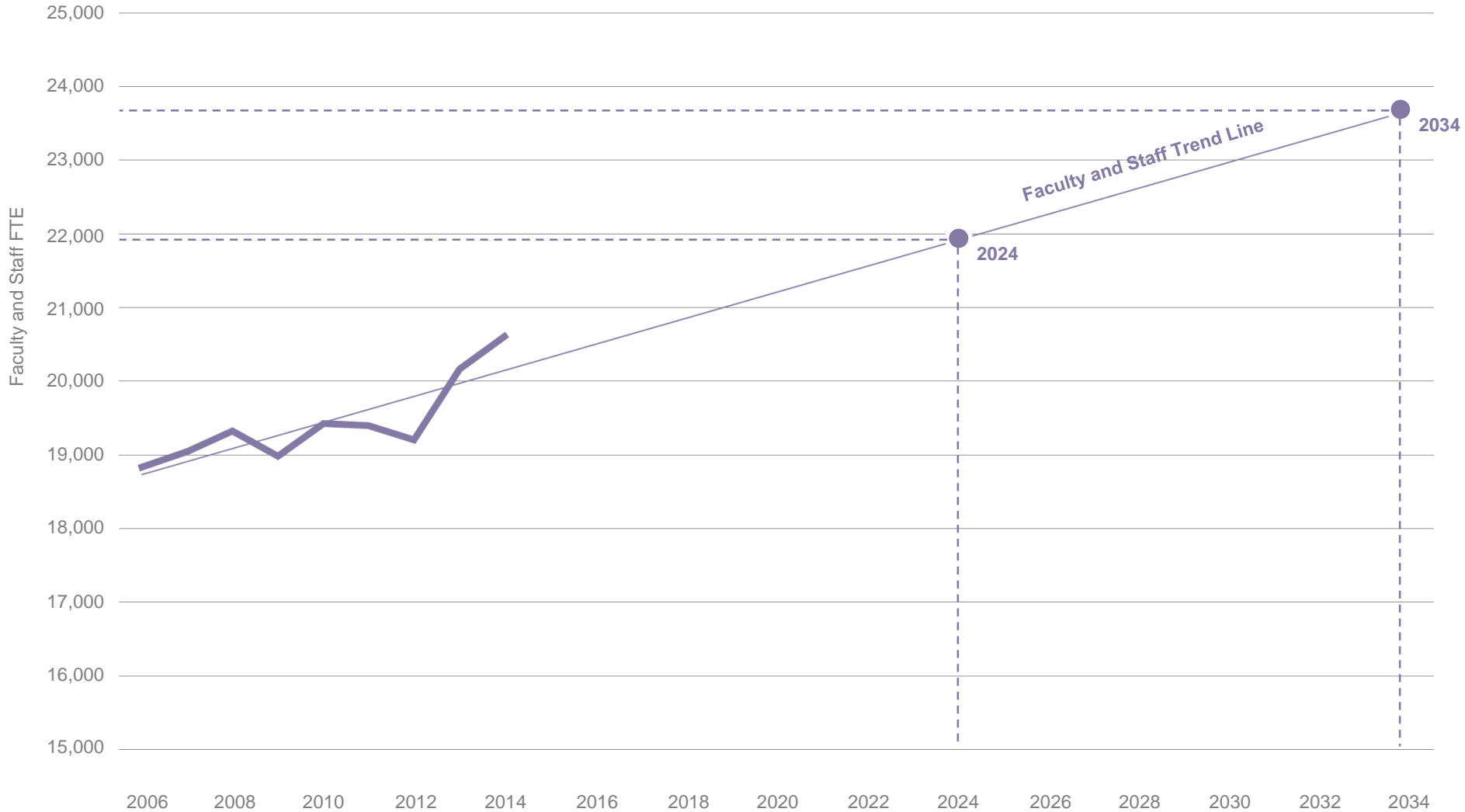


College of Arts and Sci  
-1,037 (-4%)

# Enrollment Trends – Faculty and Staff

: Faculty and staff FTE grew by 9% between 2006 and 2014 (1,770 FTE)

: Trend line suggests a future overall faculty and staff population of ~22,000 FTE in 2024 and ~23,600 FTE in 2034



## Enrollment Summary

### Significant growth projected across all populations

- : Students: Range from 51,000 FTE to 54,000 FTE by 2024; 58,000 FTE by 2034
- : Faculty and Staff: 22,000 FTE by 2024; 23,600 FTE by 2034

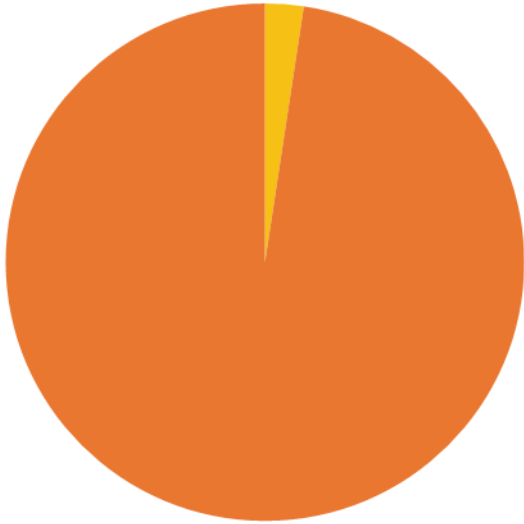
**CMP will test a range of growth projections**

# space needs model

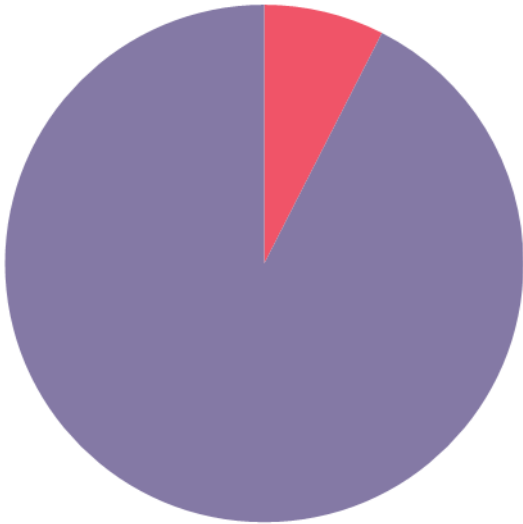
# Overall Existing Space

Total UW Seattle Built Space ~18,300,000 GSF

*Figures include space both above and below the ground*



97% (18,000,000 GSF)  
Owned by UW



93% (17,000,000 GSF)  
Inside the Major Institutional Overlay (MIO)



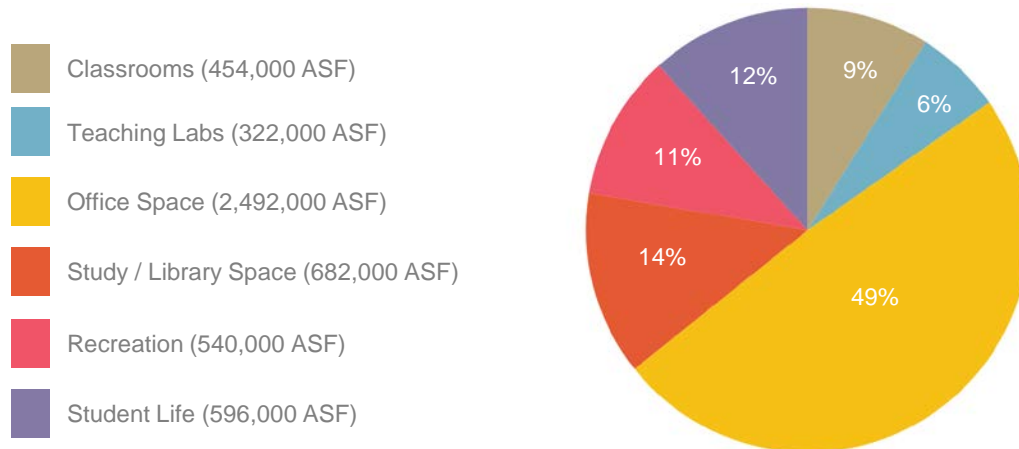
# Space Needs Model

## Background and Inputs

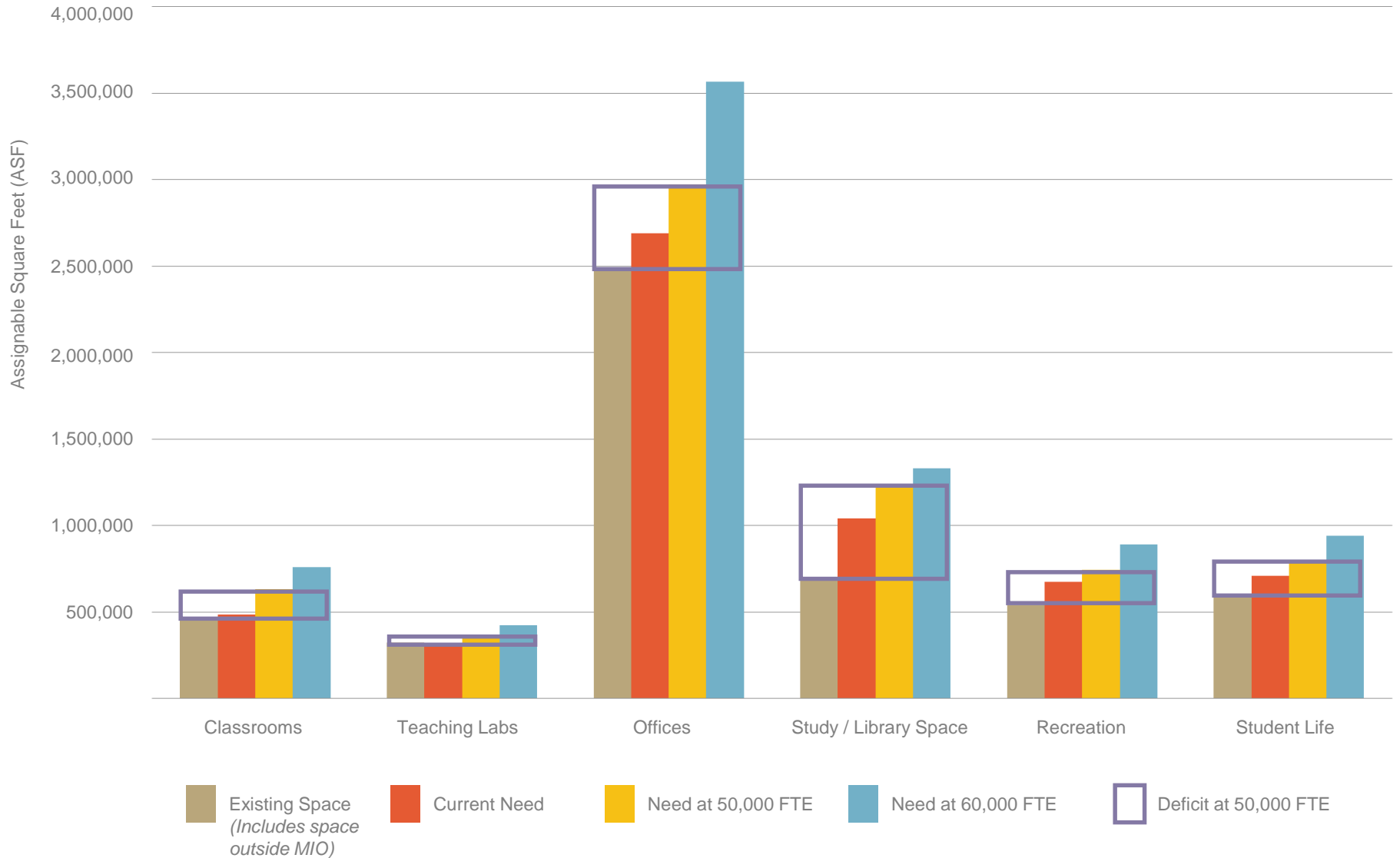
- : Projects space need for a number of higher education space categories
- : Model is based upon national space guidelines
- : Inputs include:
  - › UW student, faculty and staff counts
  - › WSCH for instructional spaces
  - › Best practices for station sizes
  - › Assumptions around utilization and occupancy levels
- : Does not assess research space, ICA athletics facilities, or industry and innovation spaces

## Existing Space

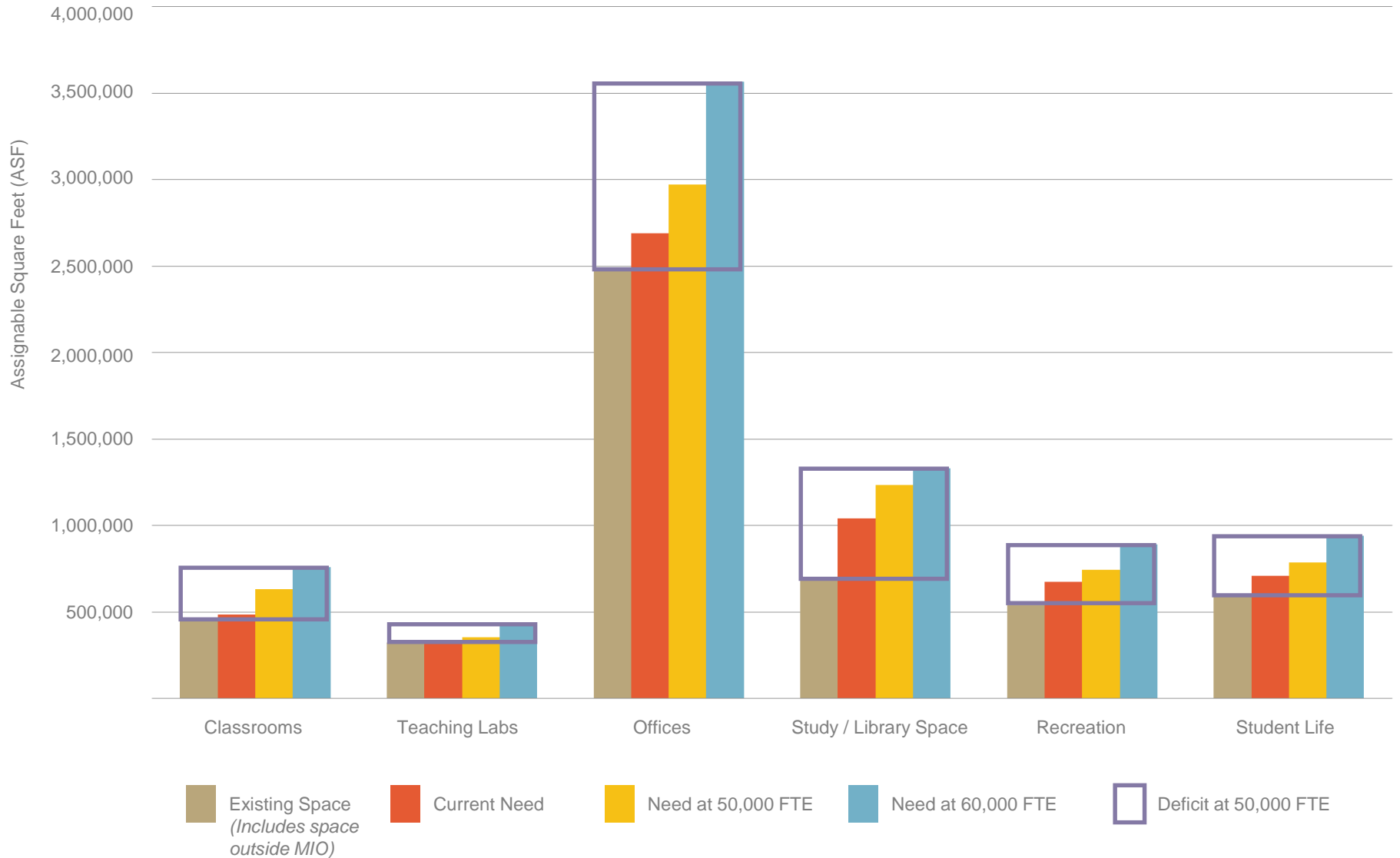
- : Captures a 2014 snapshot of existing space
- : Excludes all parking facilities, both underground and structured
- : Represents assignable square feet, not gross square feet



# Deficit at 50,000 FTE (1,600,000 ASF / 2,500,000 GSF)



# Deficit at 60,000 FTE (2,800,000 ASF / 4,300,000 GSF)



# Development History / Projection Analysis

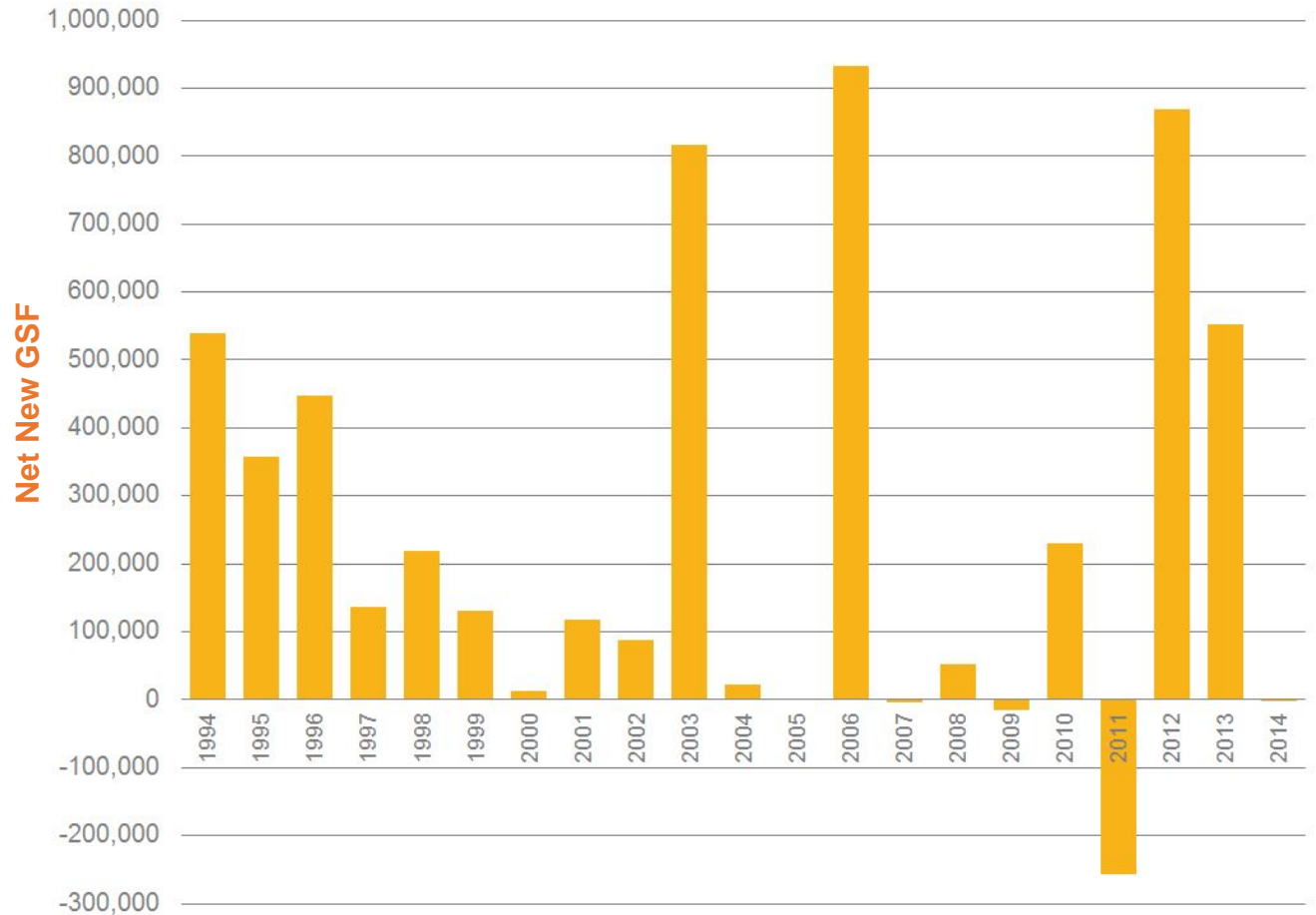
Development history reflects periods of growth and restraint

On average, the UW introduced roughly:

: **250,000 GSF per year, taking into account buildings that were demolished**

: **290,000 GSF per year of new construction**

If the University was to grow by the same rate it has over the last 10 years, it would suggest a need for ~5.8M GSF of new construction over the next 20 years



## Space Needs Model Summary

Model projects the potential need for 2.5M GSF (at 50,000 FTE) to 4.3M GSF (at 60,000 FTE) of space in the future.

Projections do not account for research space, industry & innovation space, ICA facilities, or student housing.

If the University was to grow by the same rate it has over the last 10 years, it would suggest a need for ~5.8M GSF of new construction over the next 20 years

**benchmarking**

# Benchmarking

Another lens to situate the University's existing space relative to other higher education institutions, including **peers institutions**:

- : University of Michigan
- : University of Texas at Austin
- : Ohio State University
- : Rutgers University
- : Johns Hopkins University

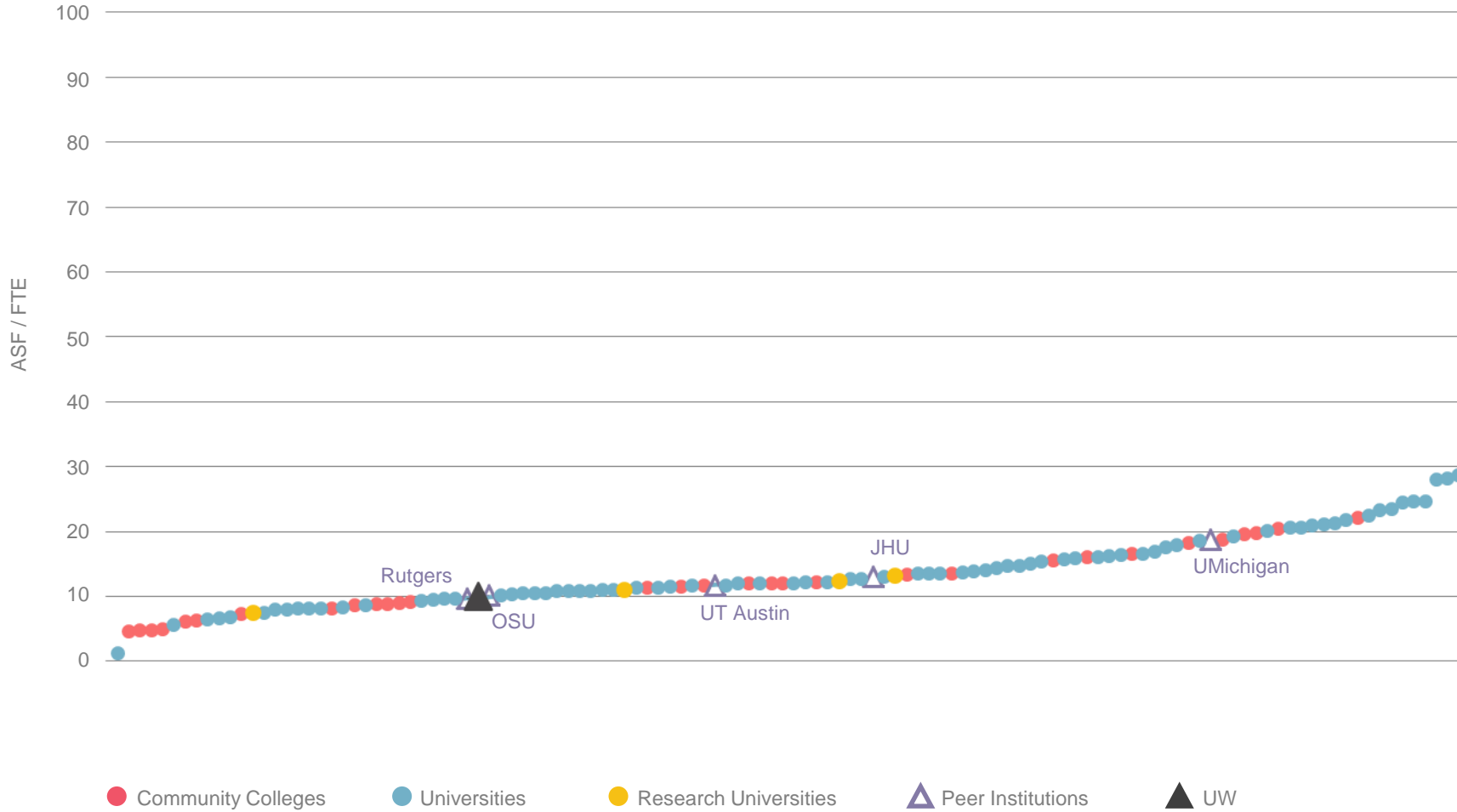
Draws upon an institutional database of **more than 100 institutions**

Benchmarks UW's space for the following categories on an **ASF per FTE basis**

- : Classrooms
- : Teaching and Research Labs
- : Offices
- : Study and Library Space
- : Athletics and Recreation
- : Student Life Space

# Benchmarking – Classrooms

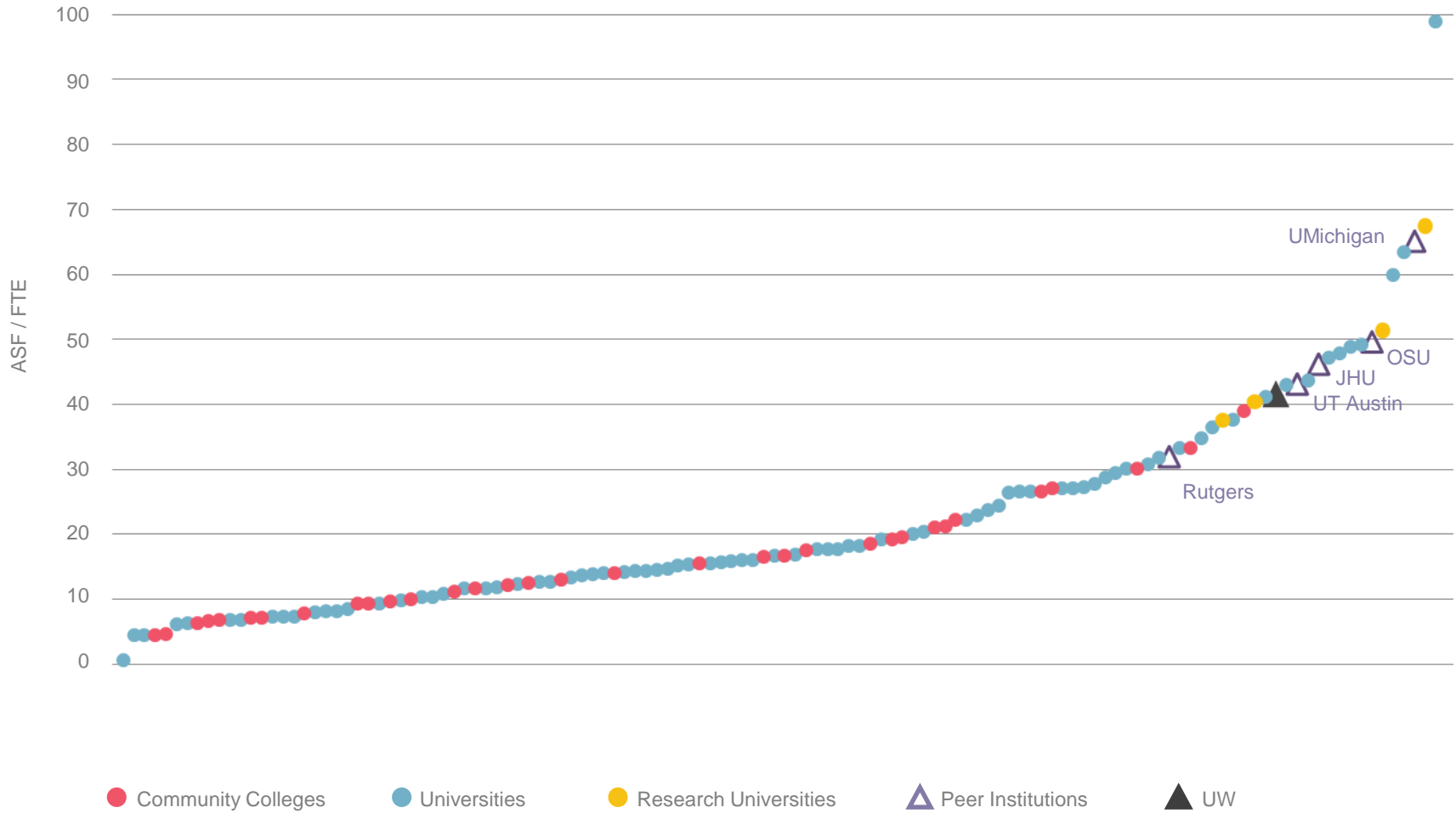
UW – 10.04 asf / FTE





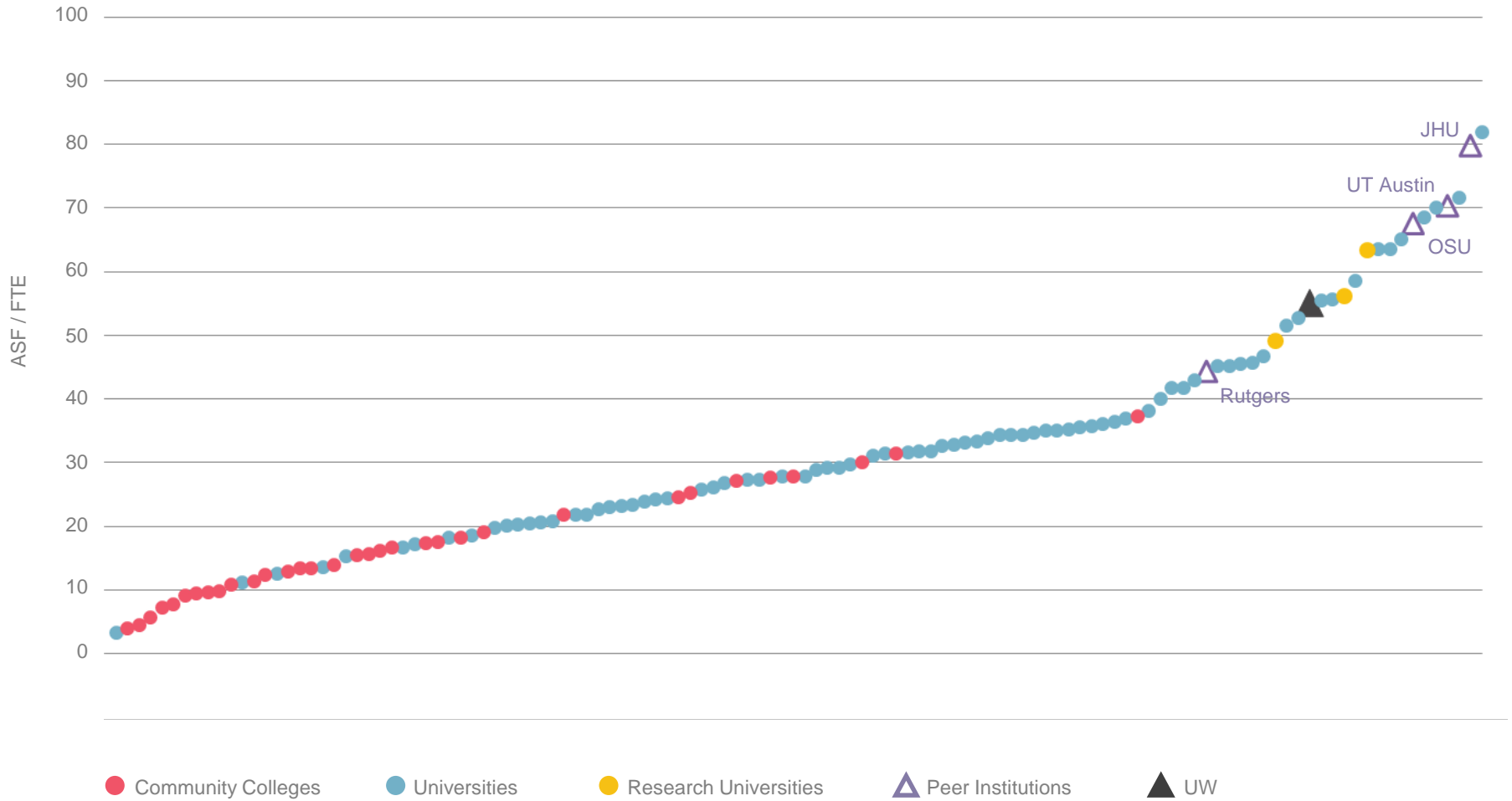
# Benchmarking – Teaching and Research Labs

UW – 41.6 asf / FTE



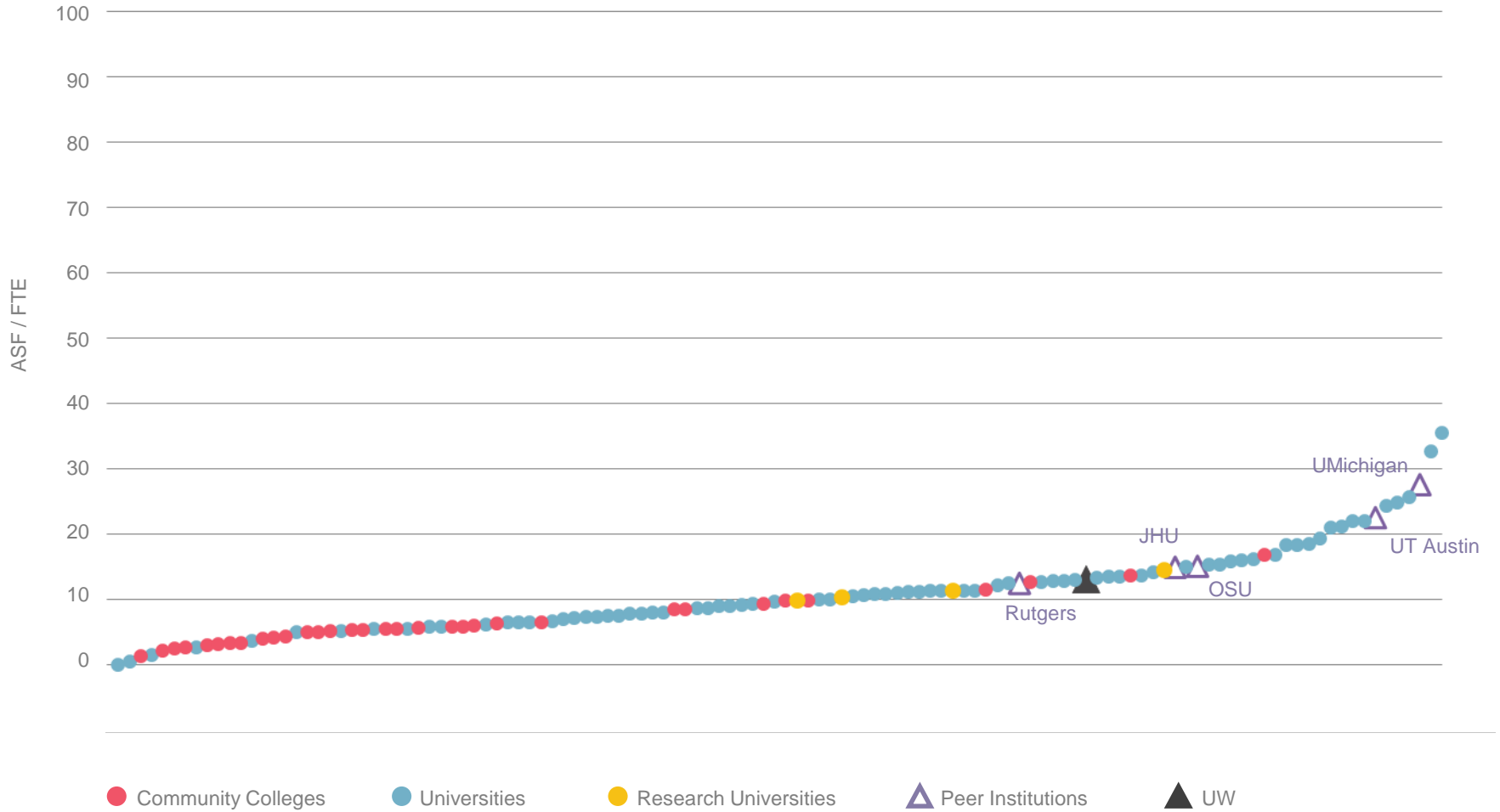
# Benchmarking – Offices

UW – 55.1 asf / FTE



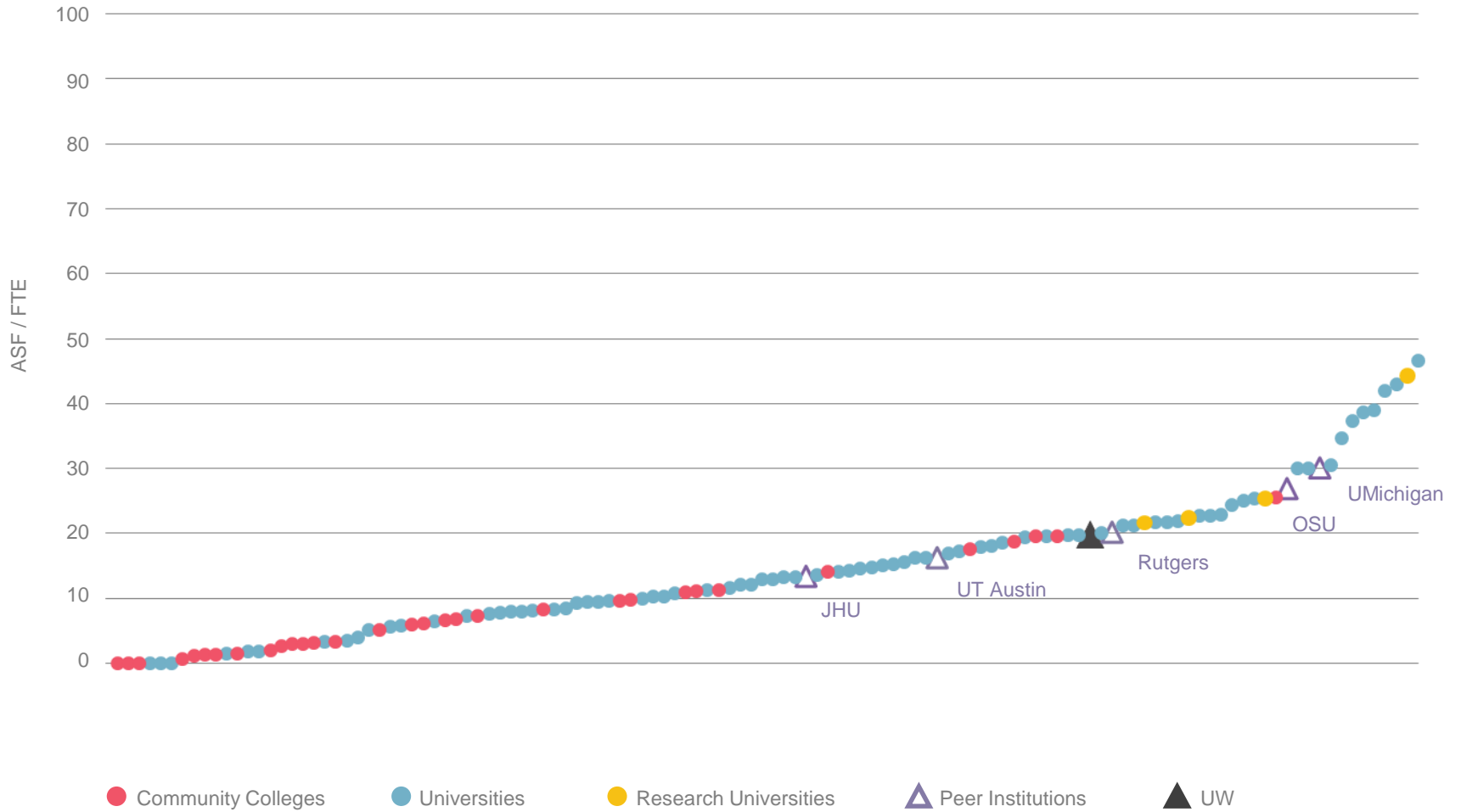
# Benchmarking – Study Space

UW – 13.2 asf / FTE



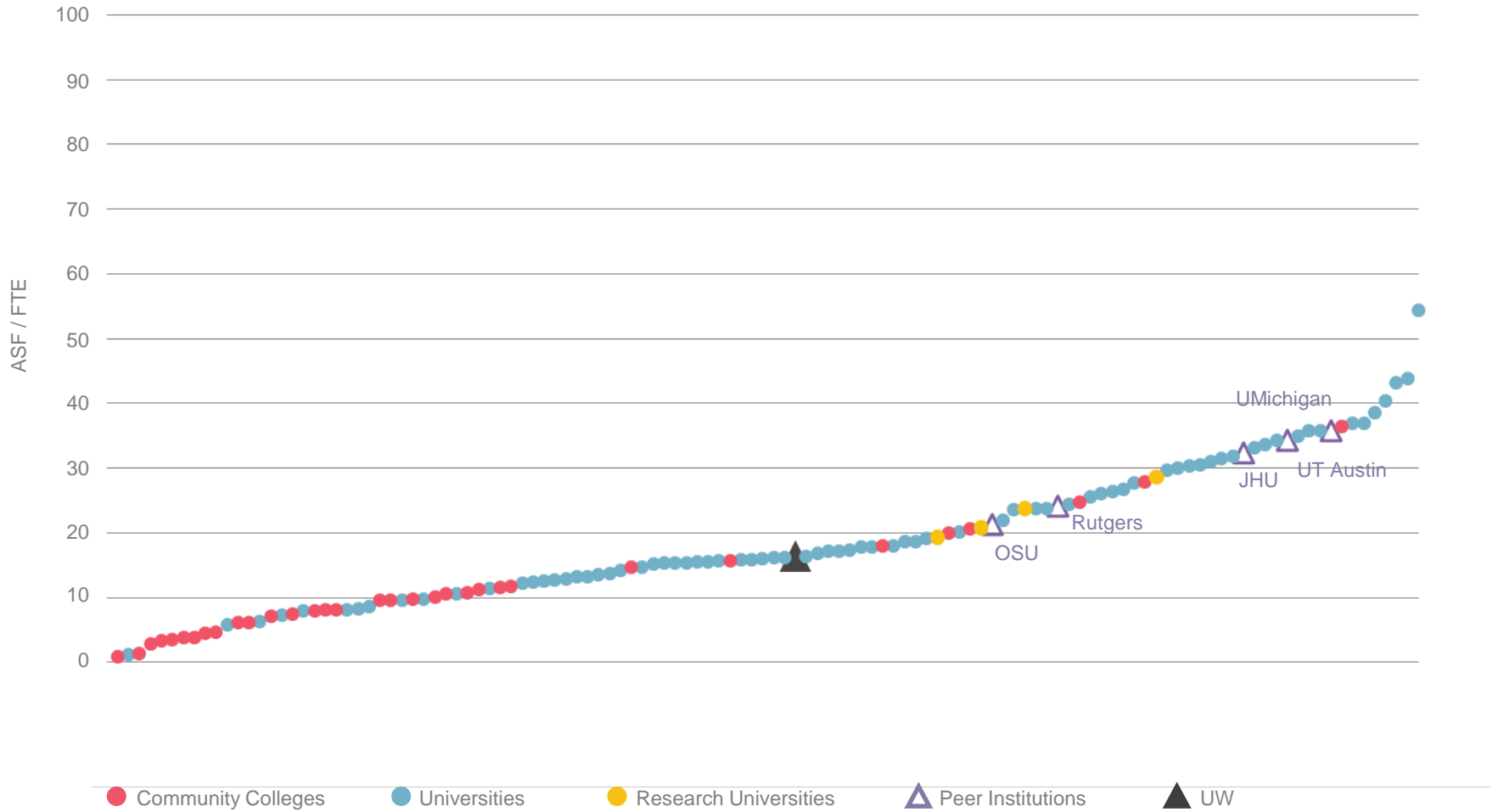
# Benchmarking – Athletics and Recreation

UW – 19.8 asf / FTE



# Benchmarking – Student Life

UW – 16.3 asf / FTE



## Benchmarking Summary

Relative to peers, UW records lower levels of space per FTE across most categories

**trends / best practices**

## **LEARNING STYLES**

**collaborative learning**

**pervasive learning**

**applied, experiential learning**

**career-oriented learning**

**interconnected learning**

## **LEARNING ENVIRONMENTS**

**active learning environments**

**learning beyond the classroom**

**student amenities**

**interdisciplinary research**

**fostering innovation and industry**



# Active Learning Environment



**Active Learning Classrooms**  
Odegaard Undergraduate Library and Learning Commons



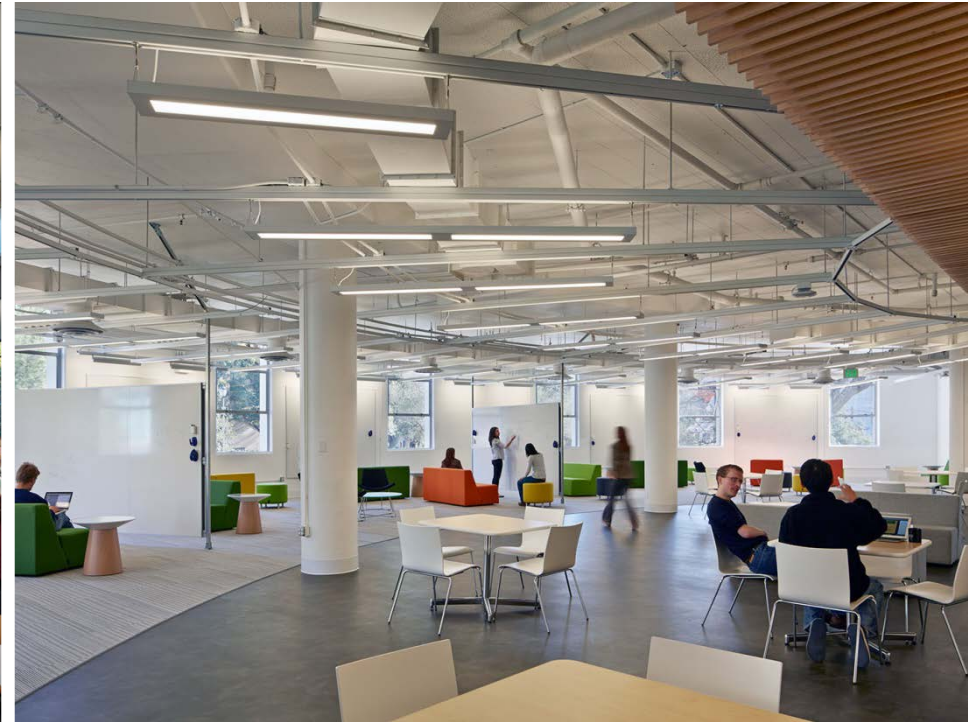
**Lecture Halls**  
Paccar Hall, UW Seattle

*Typical ALC is roughly 25 asf per student versus 20 asf per FTE for traditional classrooms*

# Learning Beyond the Classroom

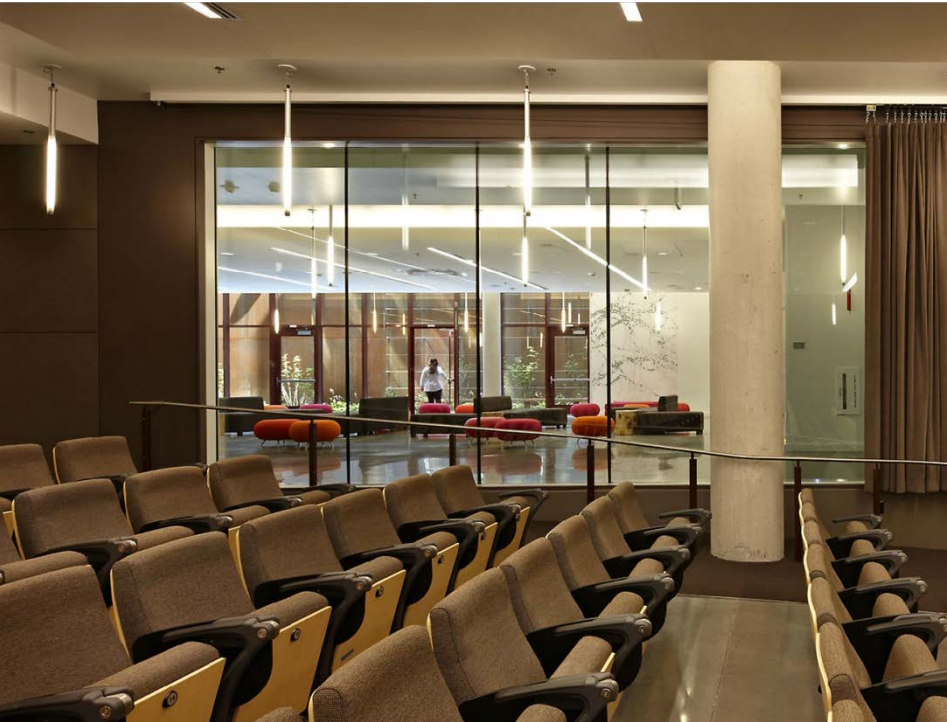


**Multi-Use Spaces**  
Paccar Hall, UW Seattle



**Flexible, Collaborative Spaces**  
Student Learning Center, Ryerson University

# Learning Beyond the Classroom



**Informal Study Spaces / Visible Learning**  
Alder Hall, UW



**Different Scales**  
Odegaard Undergraduate Library and Learning Commons

# Student Amenities



**Student Hub, Coventry University**



**Stony Brook University Recreation Center**

# Interdisciplinary Research



**Collaborative Research Commons**  
Allen Library, UW

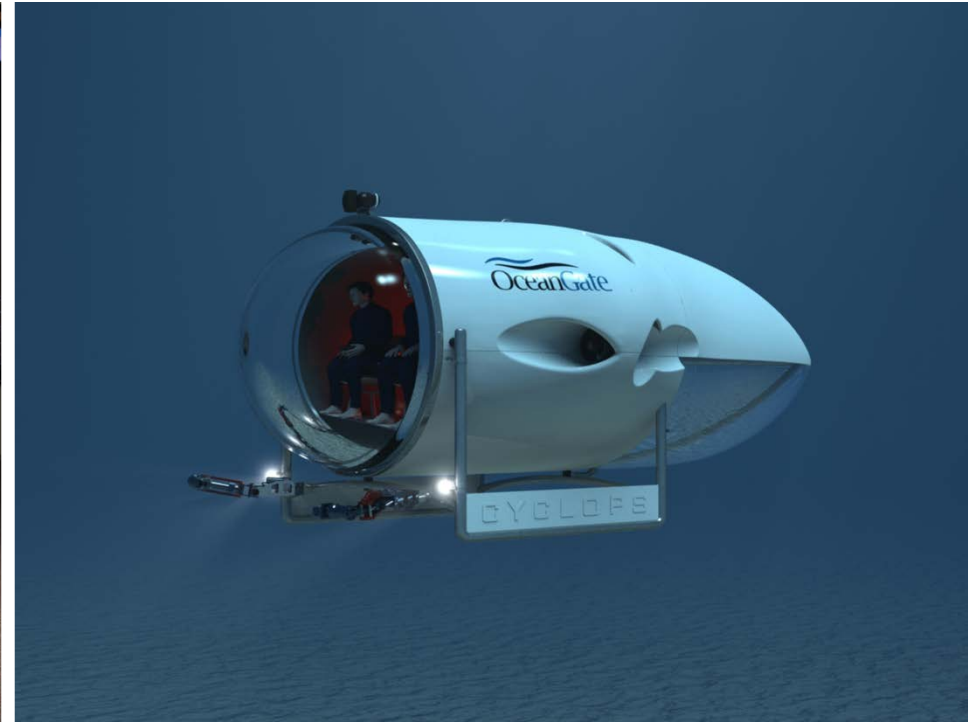


**Modular Research Labs**  
Clark Center, Stanford

# Interdisciplinary Research



**Testing Space**  
Interdisciplinary Research Lab, Paul Allen Center CSE, UW



**Industry Related Research**  
Applied Physics Lab & OceanGate Partnership

# Fostering Innovation & Industry



**Prototyping Lab  
Purdue University**



**Makerspace  
Fluke Hall, UW Seattle**

# Fostering Innovation & Industry



**Startup Hall  
UW Seattle**



**Co-working Spaces  
CoCo, Minneapolis**



## **Trends / Best Practices Summary**

**New models for teaching and learning require more and different types of space**

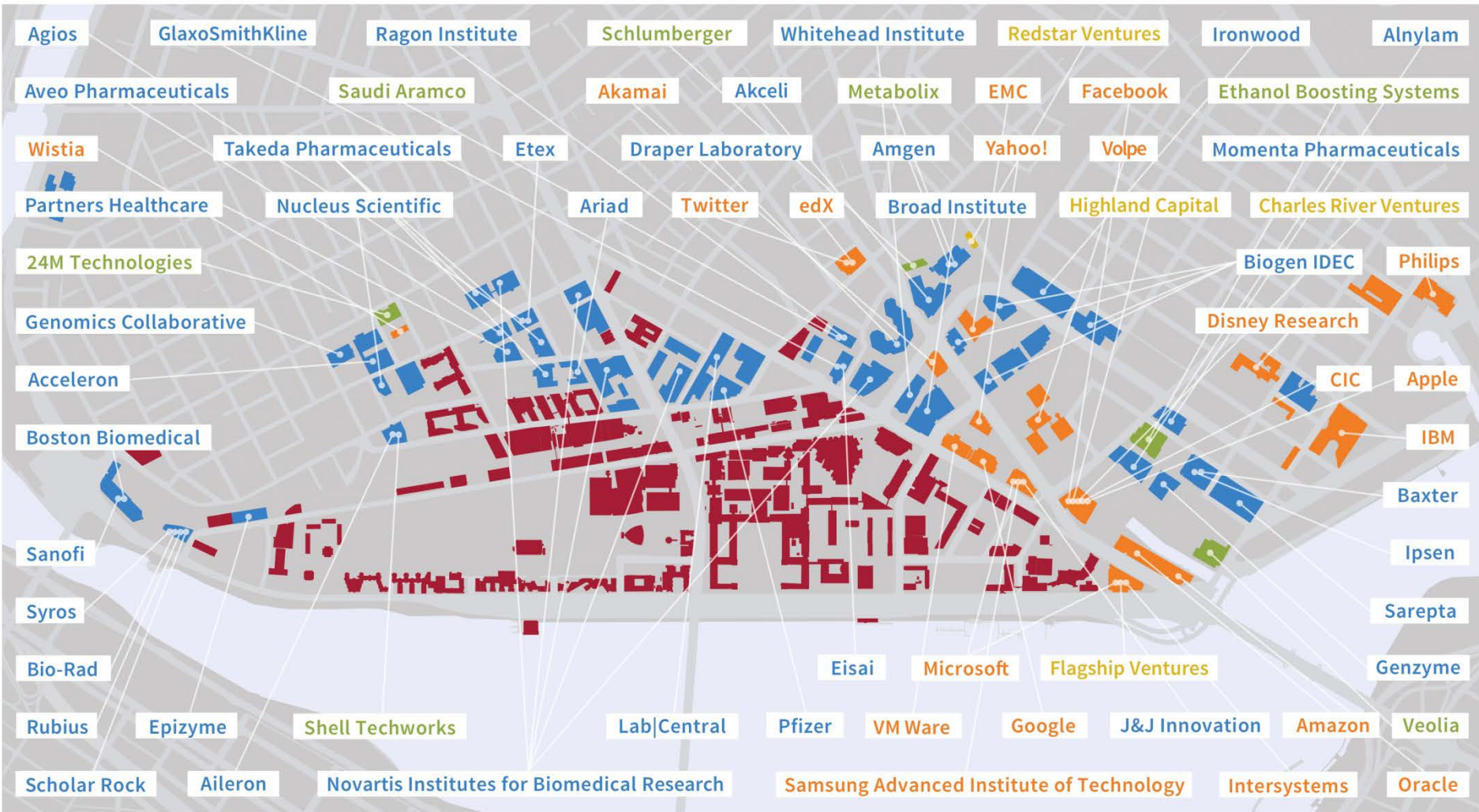
# industry case studies

# Kendall Square

In 1976, Cambridge became the first city in the world to establish a local ordinance regulating research with recombinant DNA. The ordinance set clear guidelines for genetic research, which opened the city's doors to biotechnology, providing agreement between city officials and scientists on how to practice genetic research.

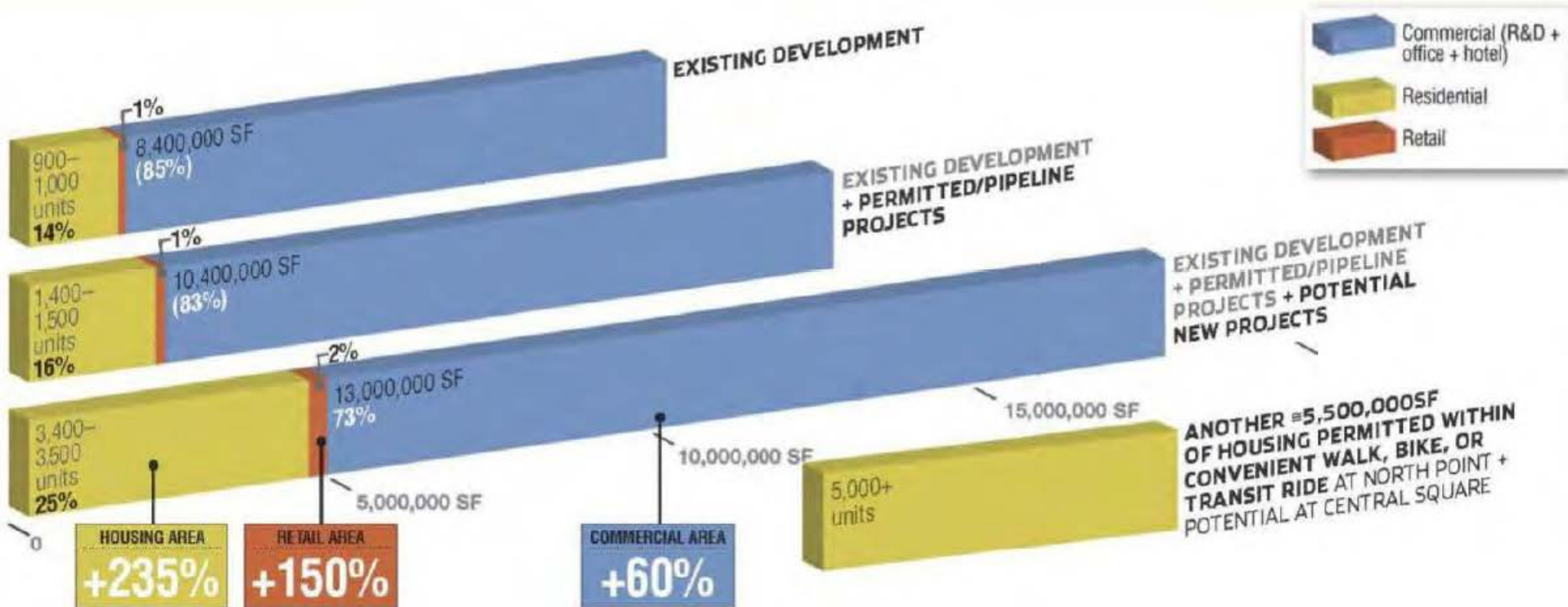
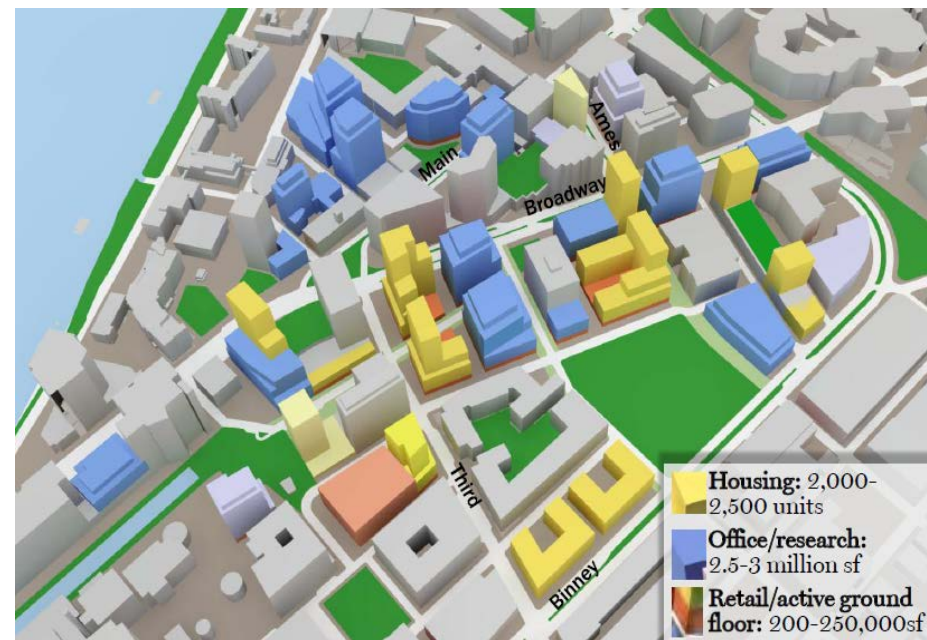


# Kendall Square

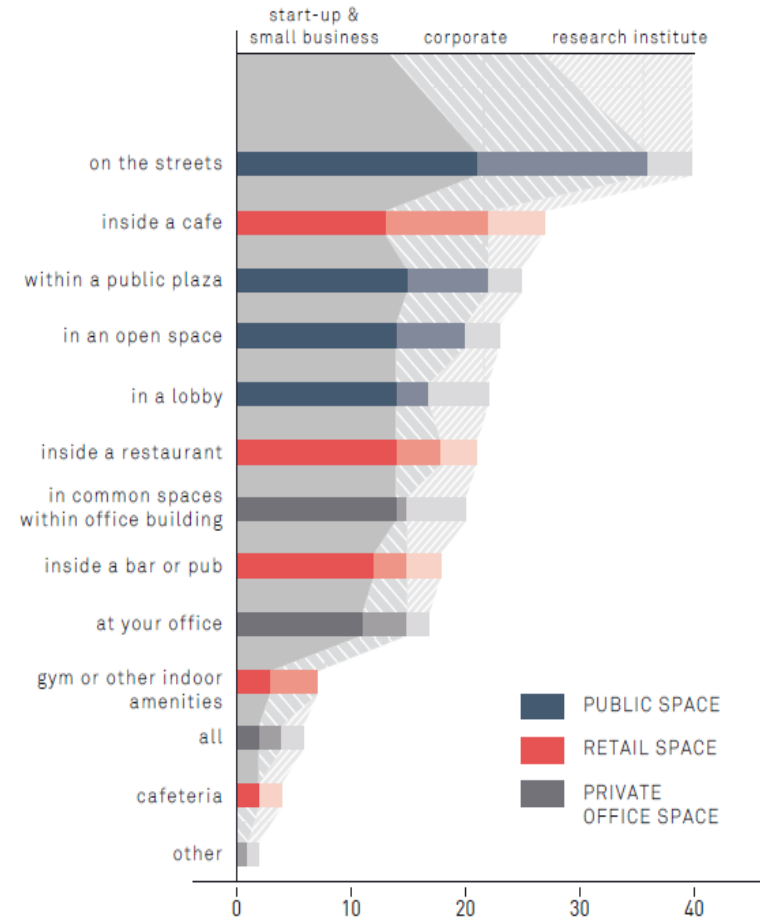
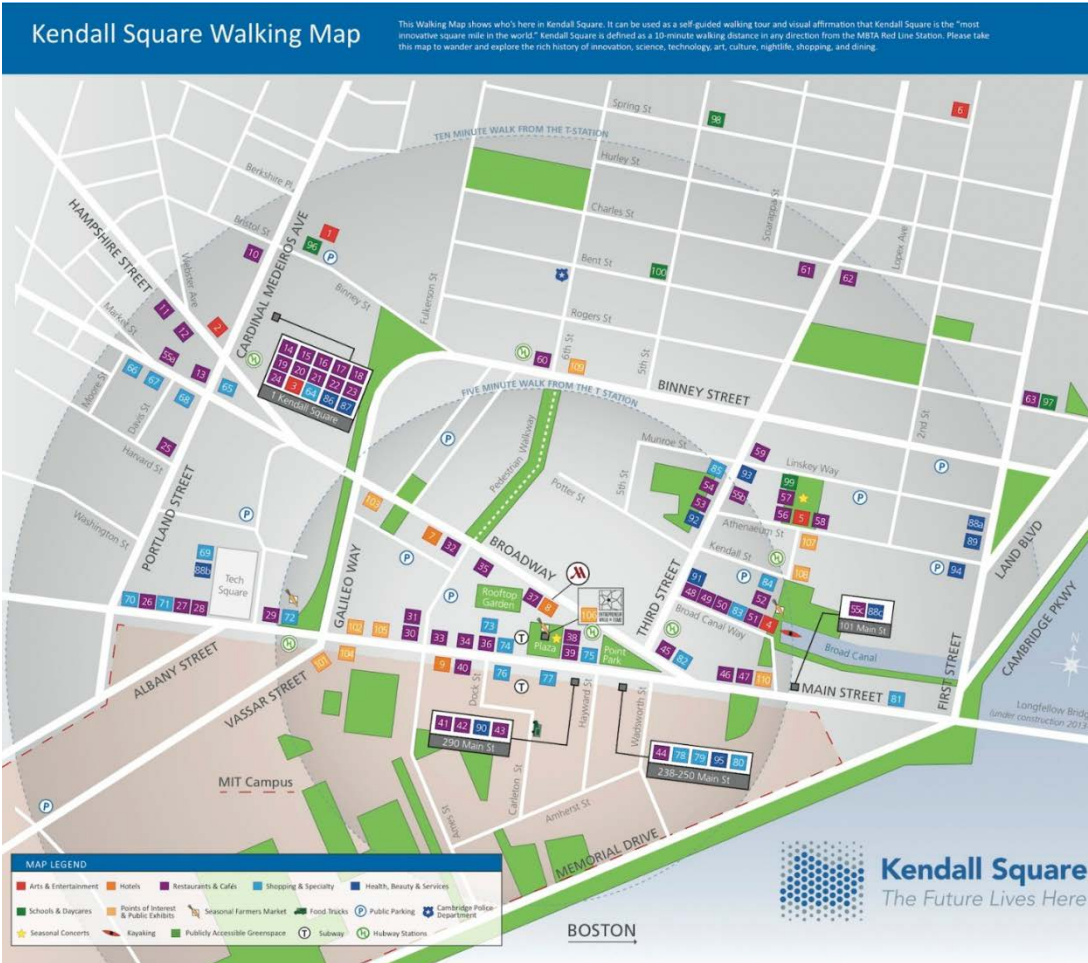


# Kendall Square

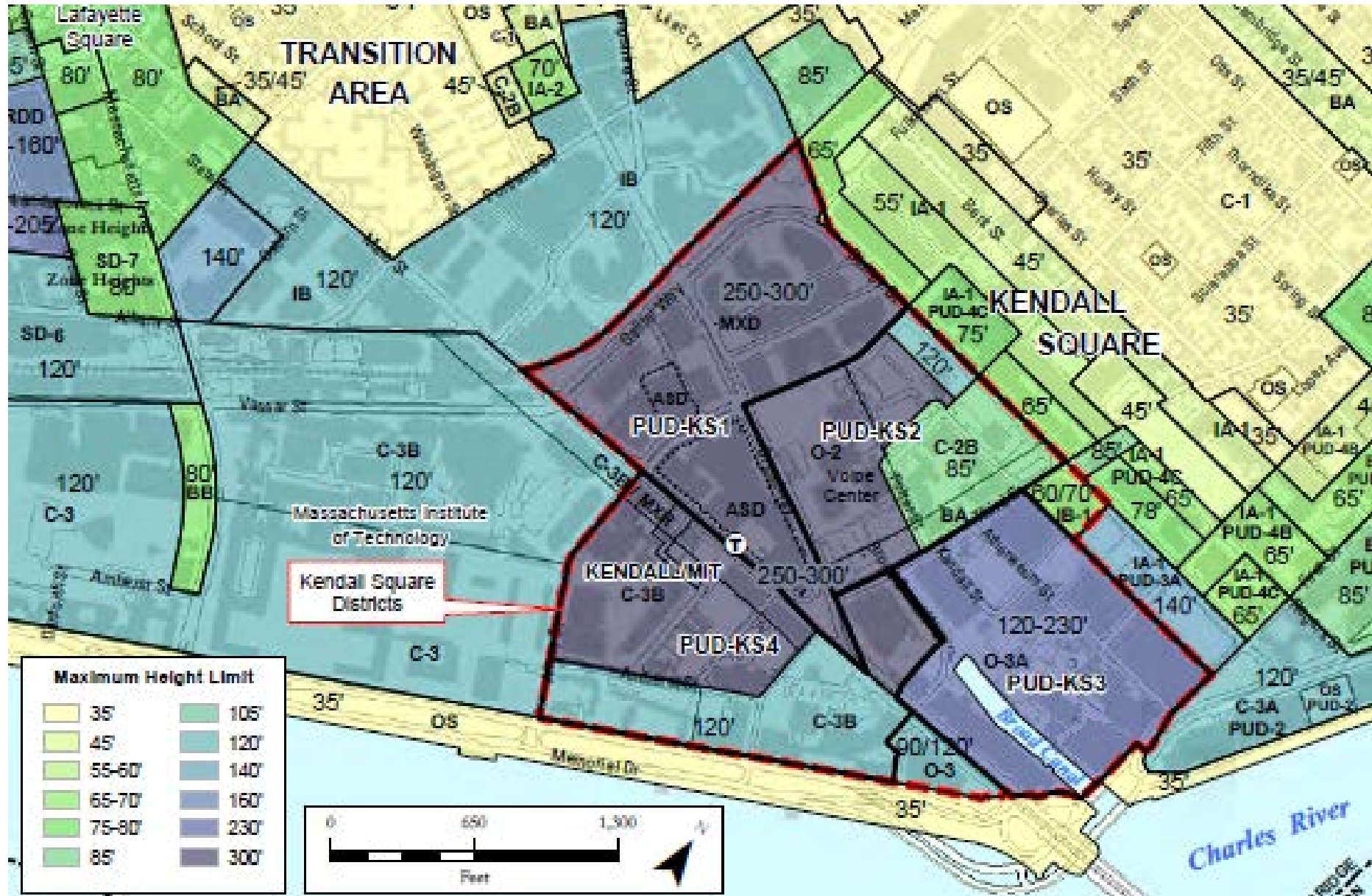
Due to its worldwide recognition, Kendall Square has become increasingly attractive to multi-national corporations. As a result, startups and small businesses have to compete for space with larger, established companies. In response to this strong need, the Plan recommends that 5% of new office development to be designated as innovation space as part of the rezoning process.



# Kendall Square



# Kendall Square



# Kendall Square



MITIMCO

DISCOVER

PARTNER

JOIN



## MASSACHUSETTS INSTITUTE OF TECHNOLOGY INVESTMENT MANAGEMENT COMPANY

OUR MISSION IS TO DELIVER **OUTSTANDING LONG-TERM INVESTMENT RETURNS** FOR MIT.

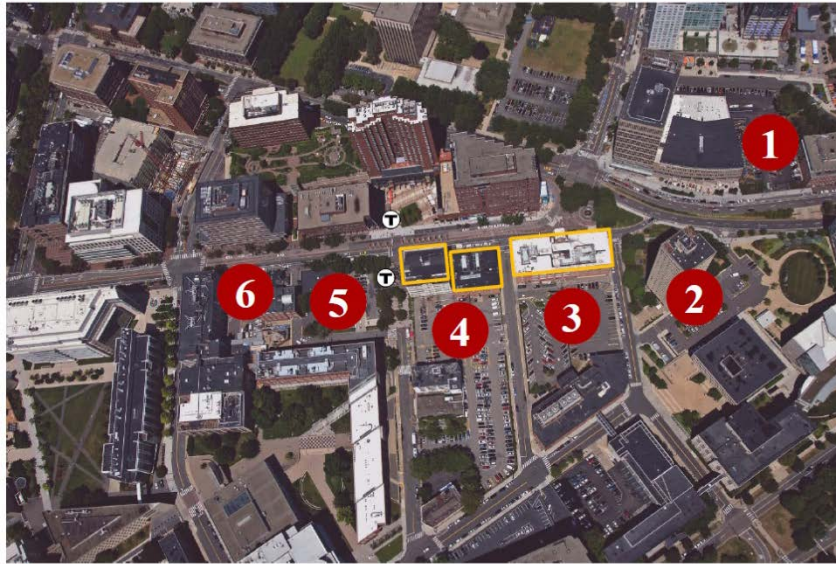
We cultivate an ecosystem of exceptional people and enduring partnerships to sustain MIT's pursuit of world-class education, cutting edge research, and groundbreaking innovation.

**The MIT \$100k Entrepreneurship Competition challenges students to pitch ideas, build products, and launch companies. Similarly, the Deshpande Center for Innovation helps faculty and students commercialize their technologies and inventions. So far the Center has funded over 100 projects and helped spur the creation of 29 spinout companies.**



# Kendall Square

## TRANSFORMING SIX PARKING LOTS

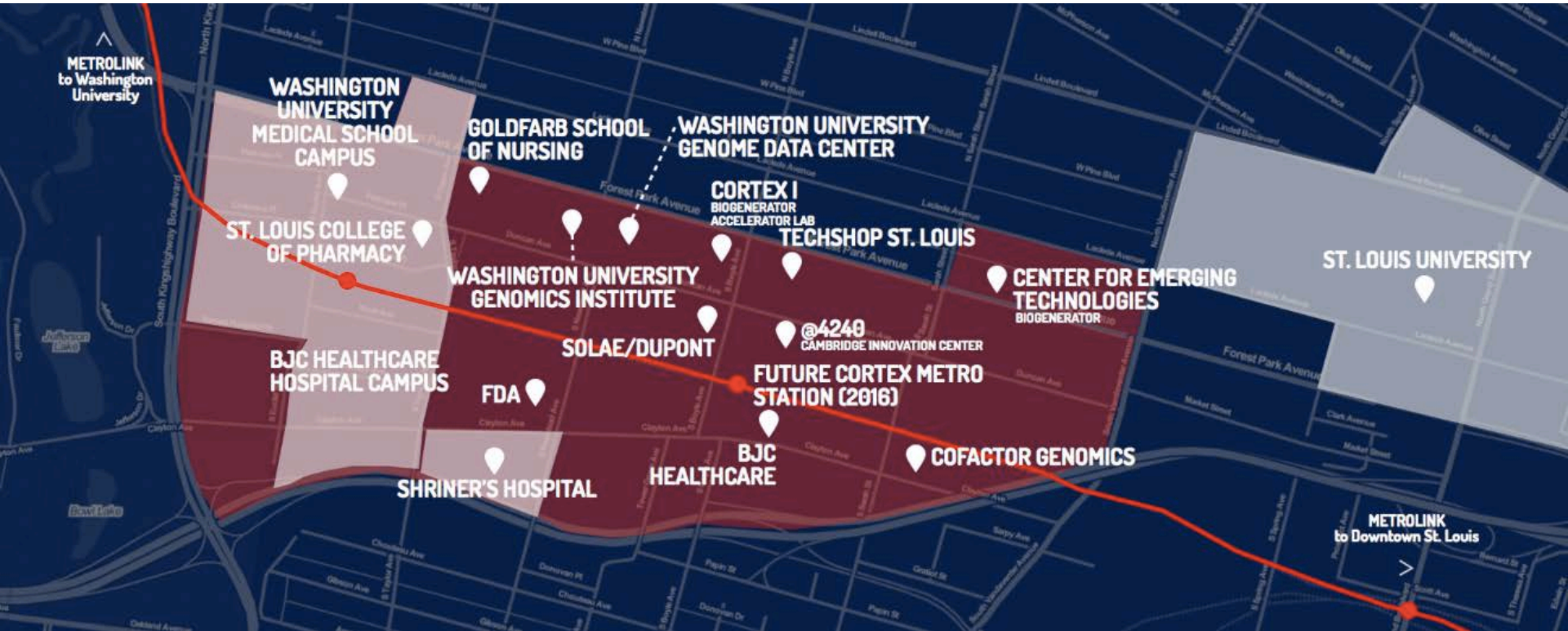


- Existing Parking Lots
- Retaining Kendall Square's historical roots



- 6 Buildings: Three – R&D, Two – Housing, One – Retail and Office
- 500 net new housing units that will bring added vitality to Kendall Square
- 100,000 square feet of new and repositioned ground-floor retail
- 3 acres of new and repurposed connected open spaces
- Retention of 800,000 square feet for future Academic use.

# CORTEX

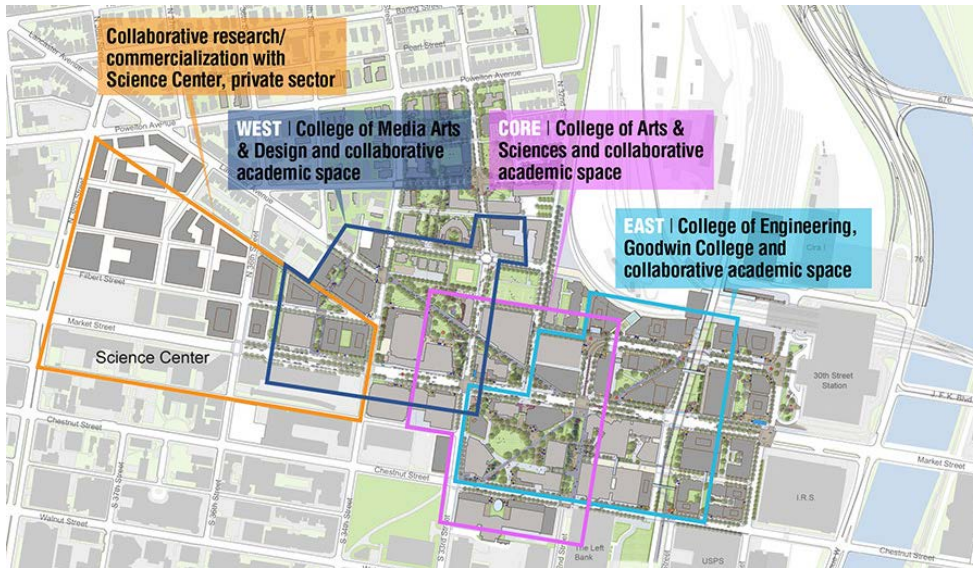


CORTEX – Center of Research, Technology and Entrepreneurial Exchange is a not-for-profit partnership of major Universities in St. Louis. The 240 acre district is strategically located near to these institutions to take advantage of their resources as well as community amenities and cultural assets. **Cortex has been designated the Master Developer by the City of St. Louis, and can develop properties itself or confer development rights on other developers through a Parcel Development Agreement (PDA).** As the Master Developer, Cortex has responsibility and authority to master plan the District, implement the master plan, manage the District, levy property assessments to sustain the District, provide subsidies, and acquire property through eminent domain, if necessary.



# Drexel University Innovation District

- 12 Acres
- Technology Partnerships, Industrial Joint Ventures, Interdisciplinary Academic and Research Programs, Business Incubators
- Supported by Offices, Classrooms, Labs, Residential and Retail to create a Mixed Use Neighborhood



6.4M  
sq. ft. Buildable

528K  
sq. ft. of Existing Buildings

12.21  
Acres

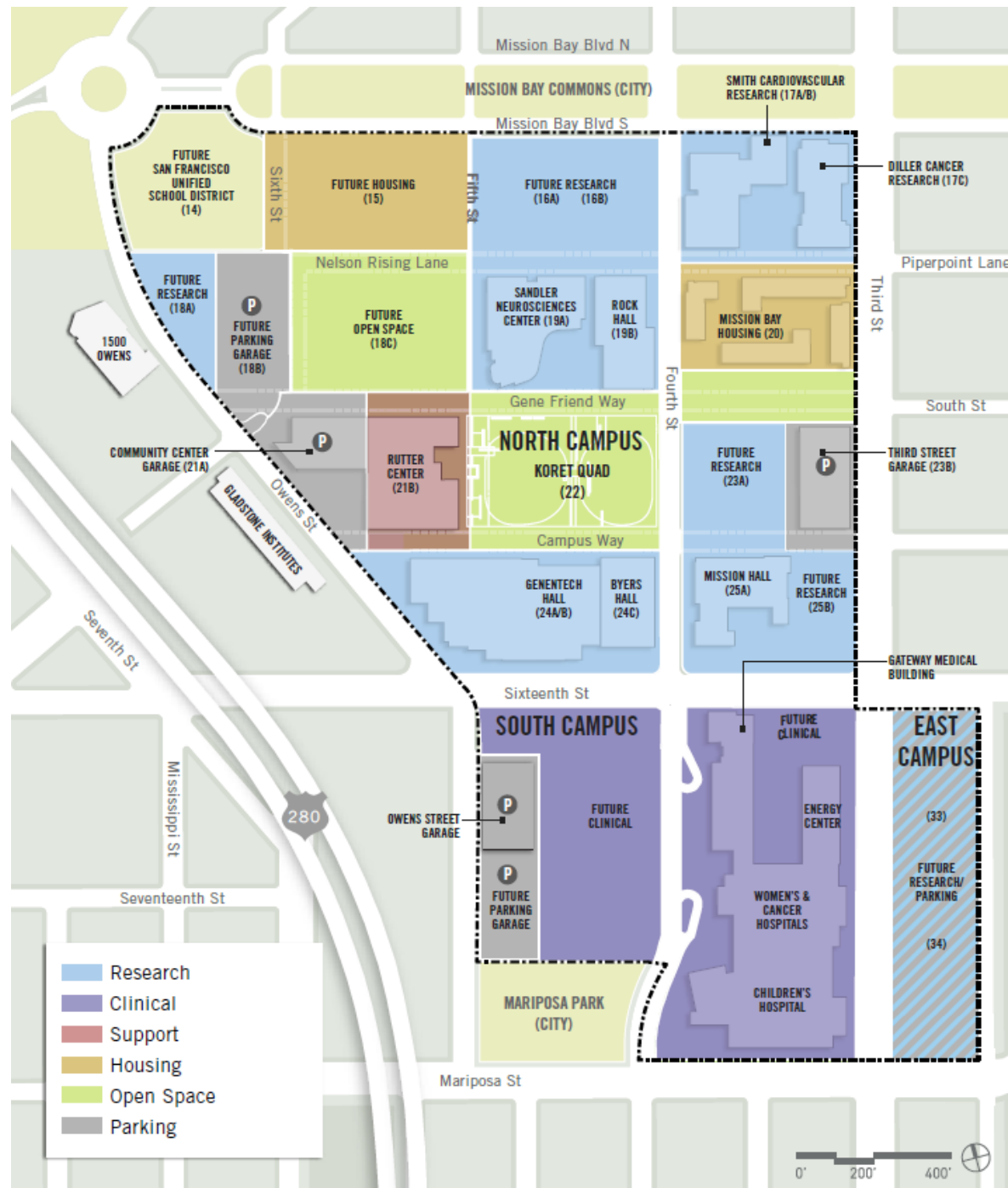


## Keystone Innovation Zone (KIZ)

All of the parcels are included within the University City Keystone Innovation Zone (UC KIZ). The UC KIZ is a state-funded program with substantial economic incentives for startups located within the zone. The KIZ Tax Credit program is a key component of the Keystone Innovation Zone program and offers up to \$100,000 in tradable tax credits annually to eligible companies. Eligible companies must be for-profit and in operation for less than eight years. The companies must also be commercializing or are seeking to commercialize new technologies, innovative products or processes within the targeted life sciences or technology industry sector as adopted by the UC KIZ.

# UCSF Mission Bay

Use	Square Feet <sup>3</sup>	Percent of Total Space
Instruction	160,000	4%
Research	1,220,000	27%
Support Services	870,000	20%
Housing	400,000	9%
Clinical	1,787,000	40%
<b>TOTAL</b>	<b>4,437,000</b>	<b>100%</b>



# UCSF Mission Bay

- 60 Acres

- 1.9 million SF built (6 Research Buildings, Campus Community Center, 430 units of Housing)



## Industry Case Studies Summary

<b>Kendall Square :</b>	<b>Bio Tech</b>
<b>CORTEX:</b>	<b>Tech</b>
<b>Drexel Innovation District:</b>	<b>Tech</b>
<b>UCSF Mission Bay:</b>	<b>Health Sciences</b>

**UW – Opportunity to create a new kind of Innovation / Collaborative Neighborhood in the West Campus that engages multiple disciplines**

# 3

## PHYSICAL SITE ANALYSIS

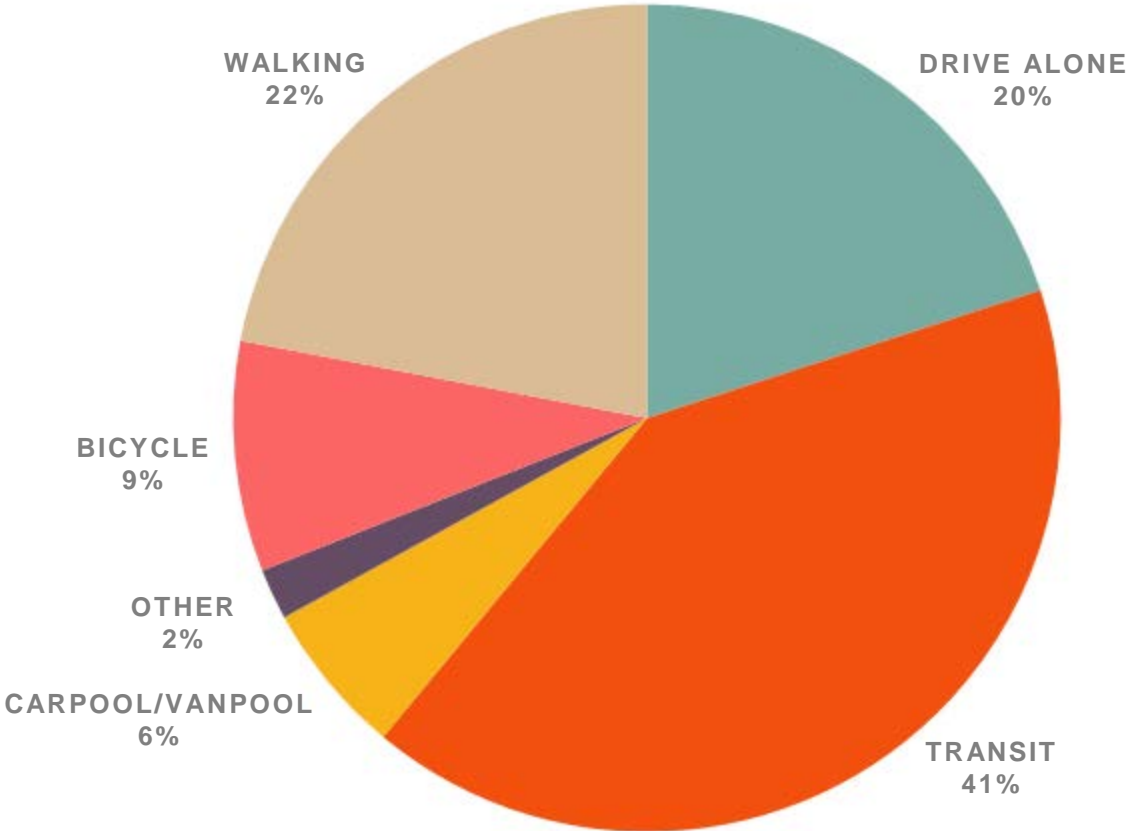


# MIO Boundary

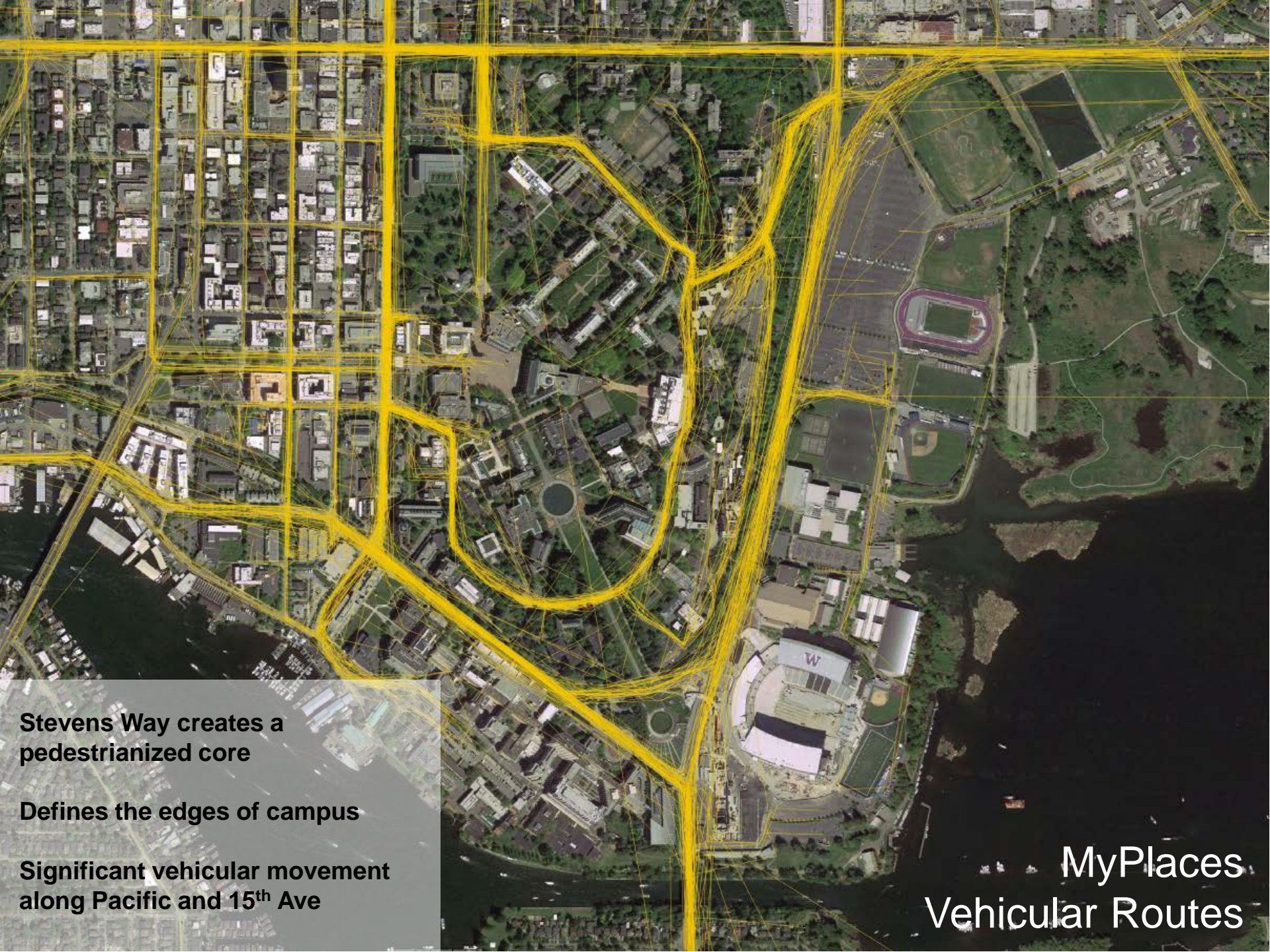


**circulation and parking**

# Mode Split



Source: Mode Share of Commute Trips to University of Washington – All Populations, Seattle, 2013



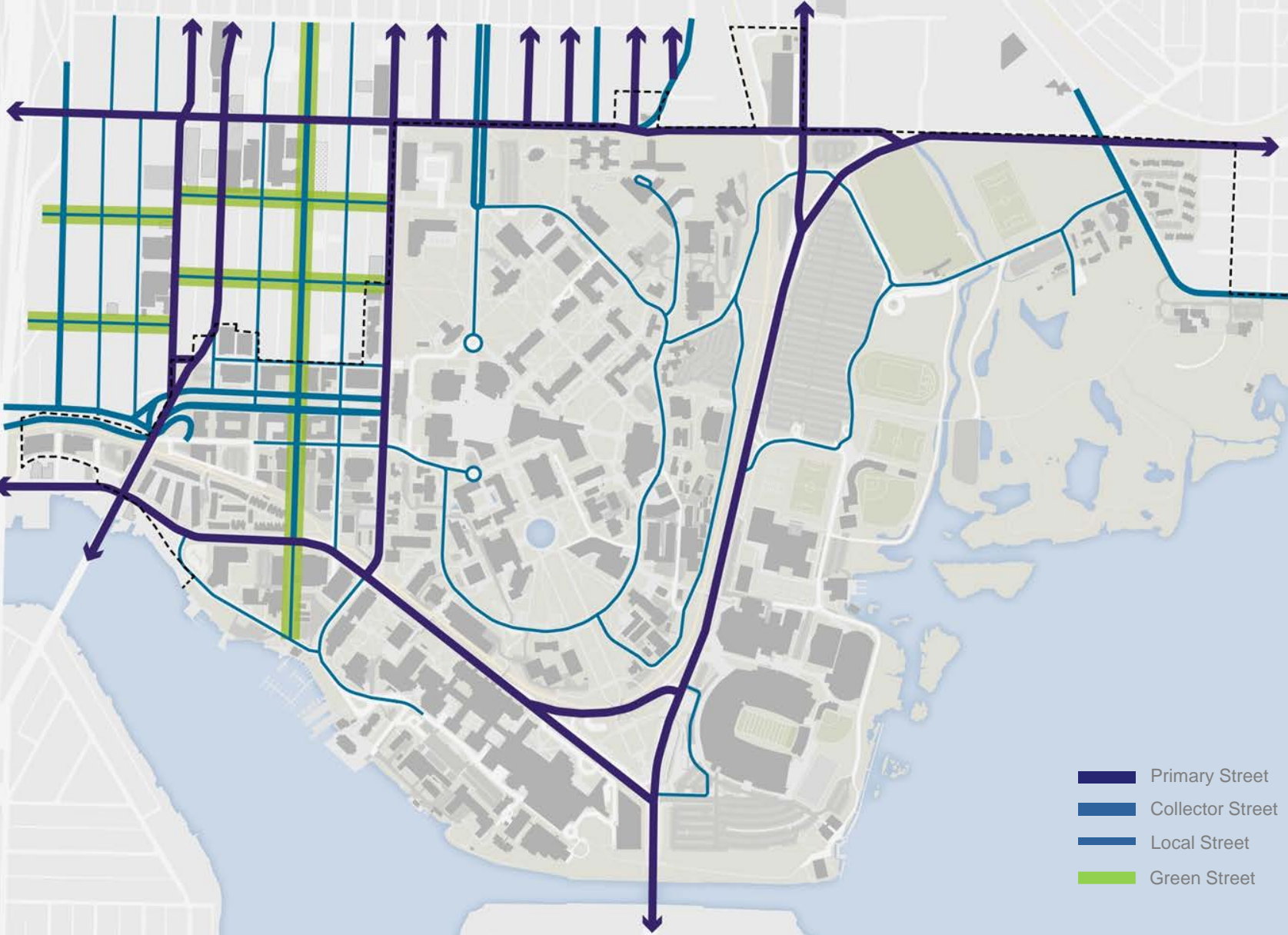
**Stevens Way creates a pedestrianized core**

**Defines the edges of campus**

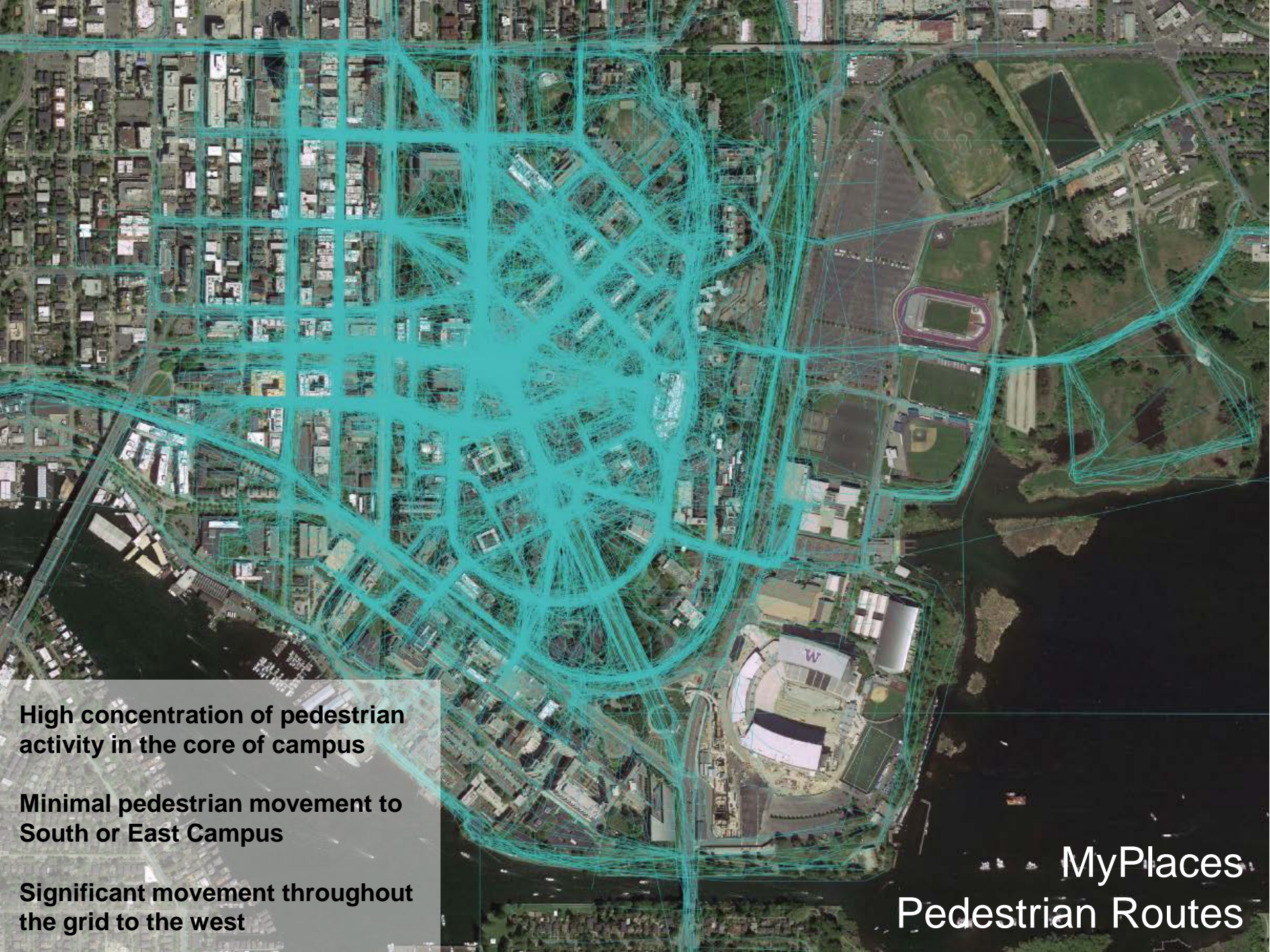
**Significant vehicular movement along Pacific and 15<sup>th</sup> Ave**

**MyPlaces  
Vehicular Routes**

# Existing Vehicular Circulation Network (Draft)



- Primary Street
- Collector Street
- Local Street
- Green Street

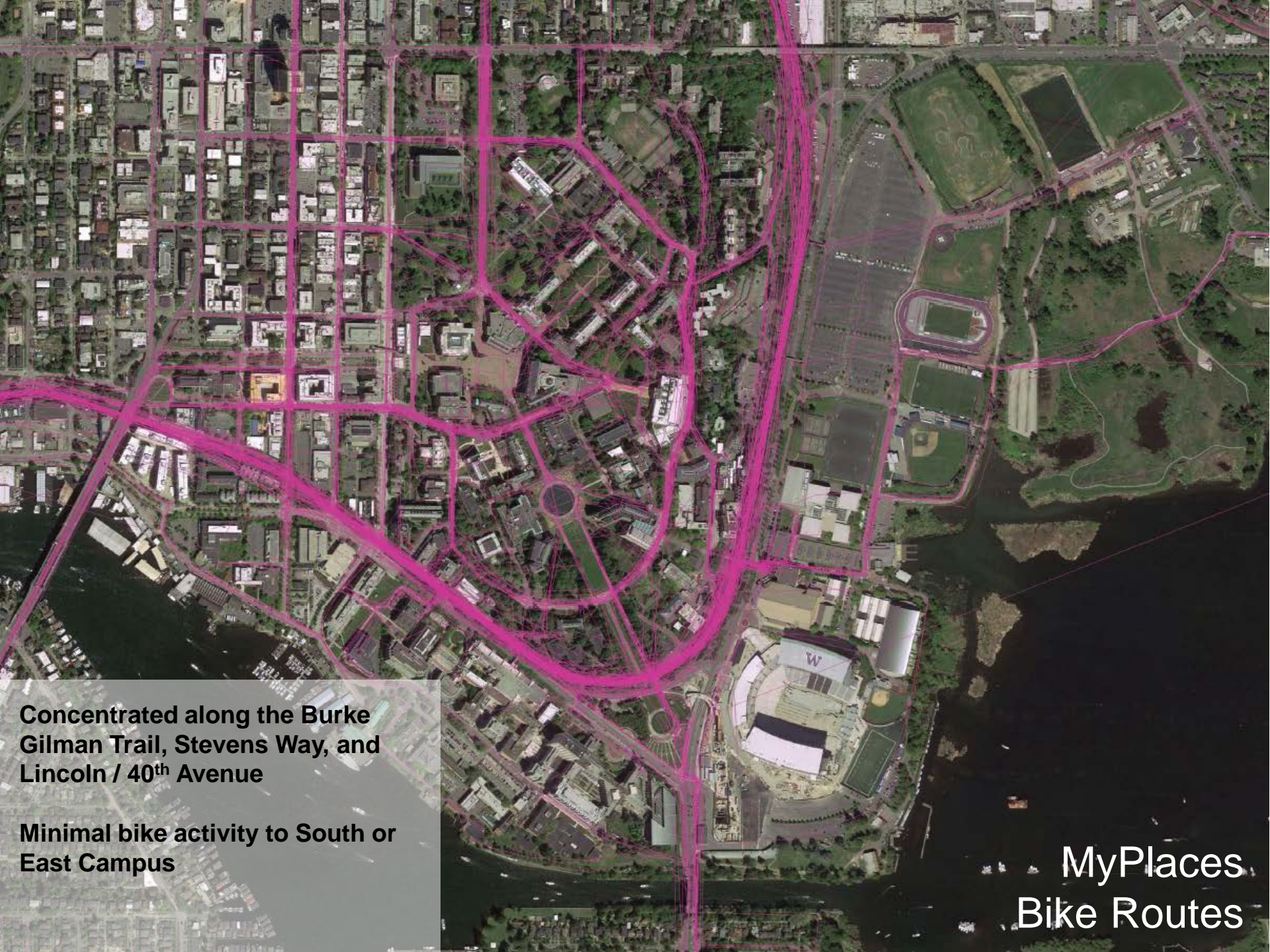


**High concentration of pedestrian activity in the core of campus**

**Minimal pedestrian movement to South or East Campus**

**Significant movement throughout the grid to the west**

**MyPlaces  
Pedestrian Routes**



**Concentrated along the Burke  
Gilman Trail, Stevens Way, and  
Lincoln / 40<sup>th</sup> Avenue**

**Minimal bike activity to South or  
East Campus**

**MyPlaces  
Bike Routes**



Transit

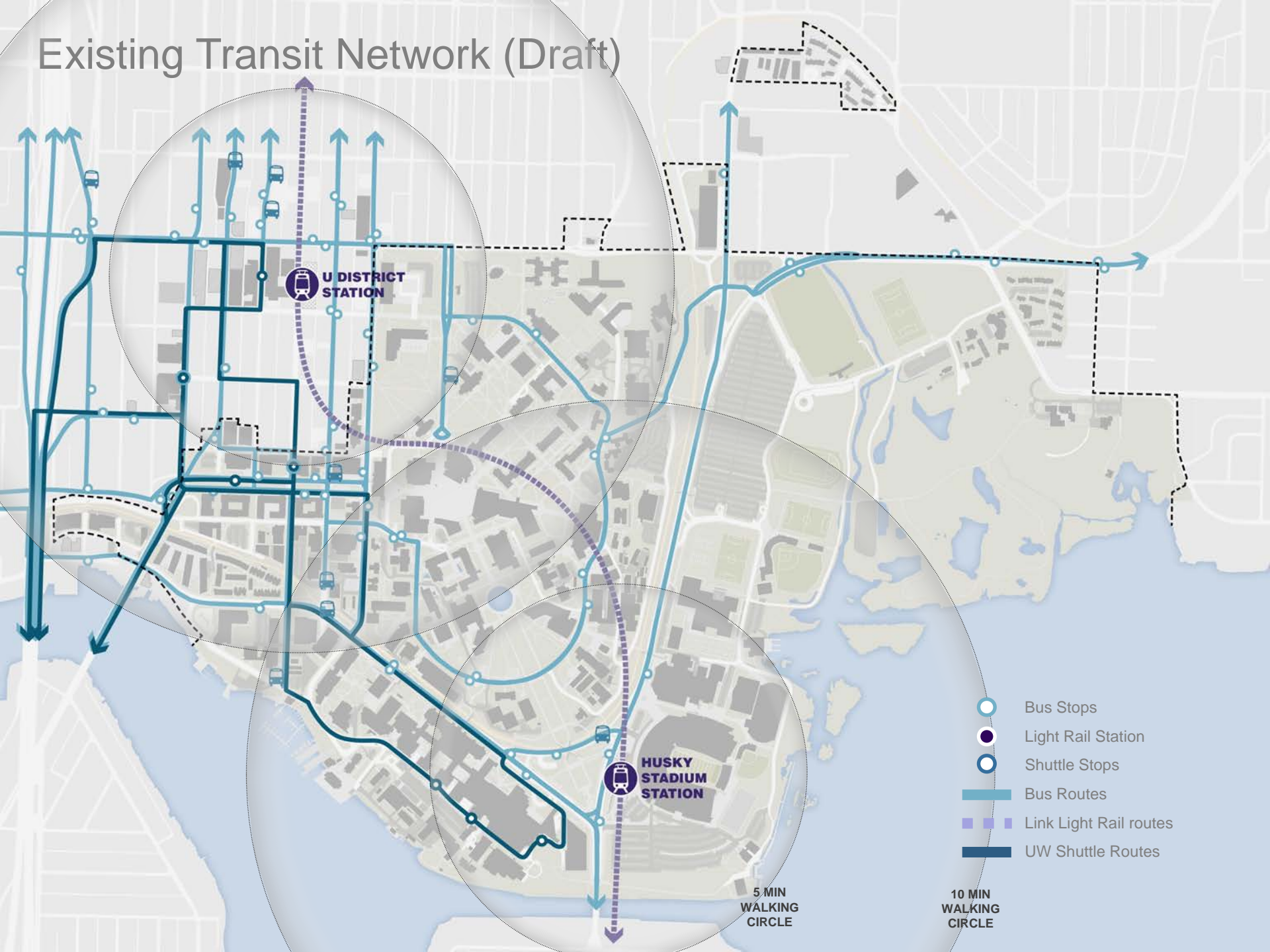
Concentrated along Pacific and 15<sup>th</sup> Avenue, as well as Stevens Way South

Highlights Campus Parkway as a major transit hub

MyPlaces  
Transit Routes



# Existing Transit Network (Draft)



- Bus Stops
- Light Rail Station
- Shuttle Stops
- Bus Routes
- - - Link Light Rail routes
- UW Shuttle Routes

5 MIN  
WALKING  
CIRCLE

10 MIN  
WALKING  
CIRCLE

## Circulation and Parking Summary

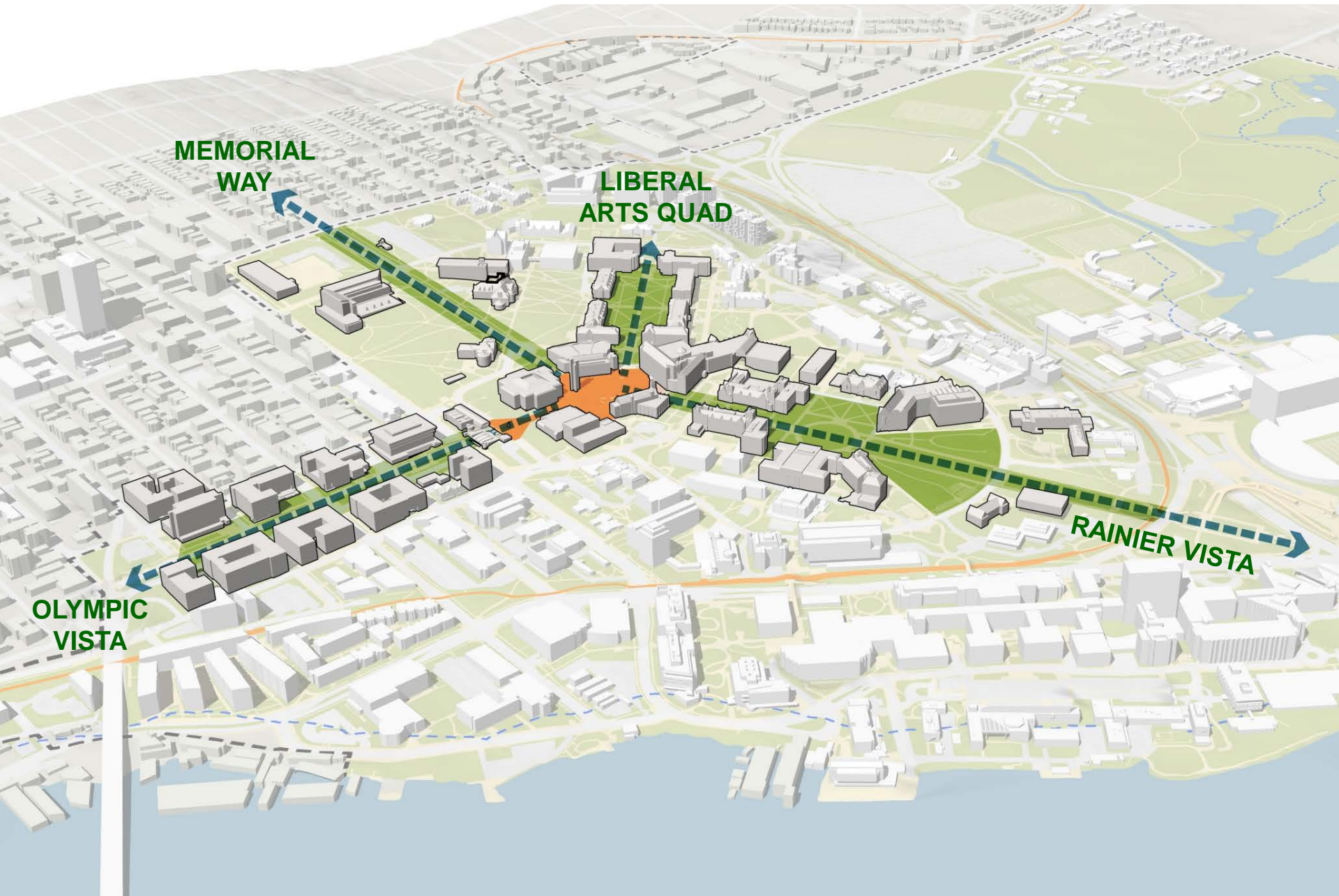
**General lack of connectivity to the waterfront**

**Varied nature of circulation across campus**

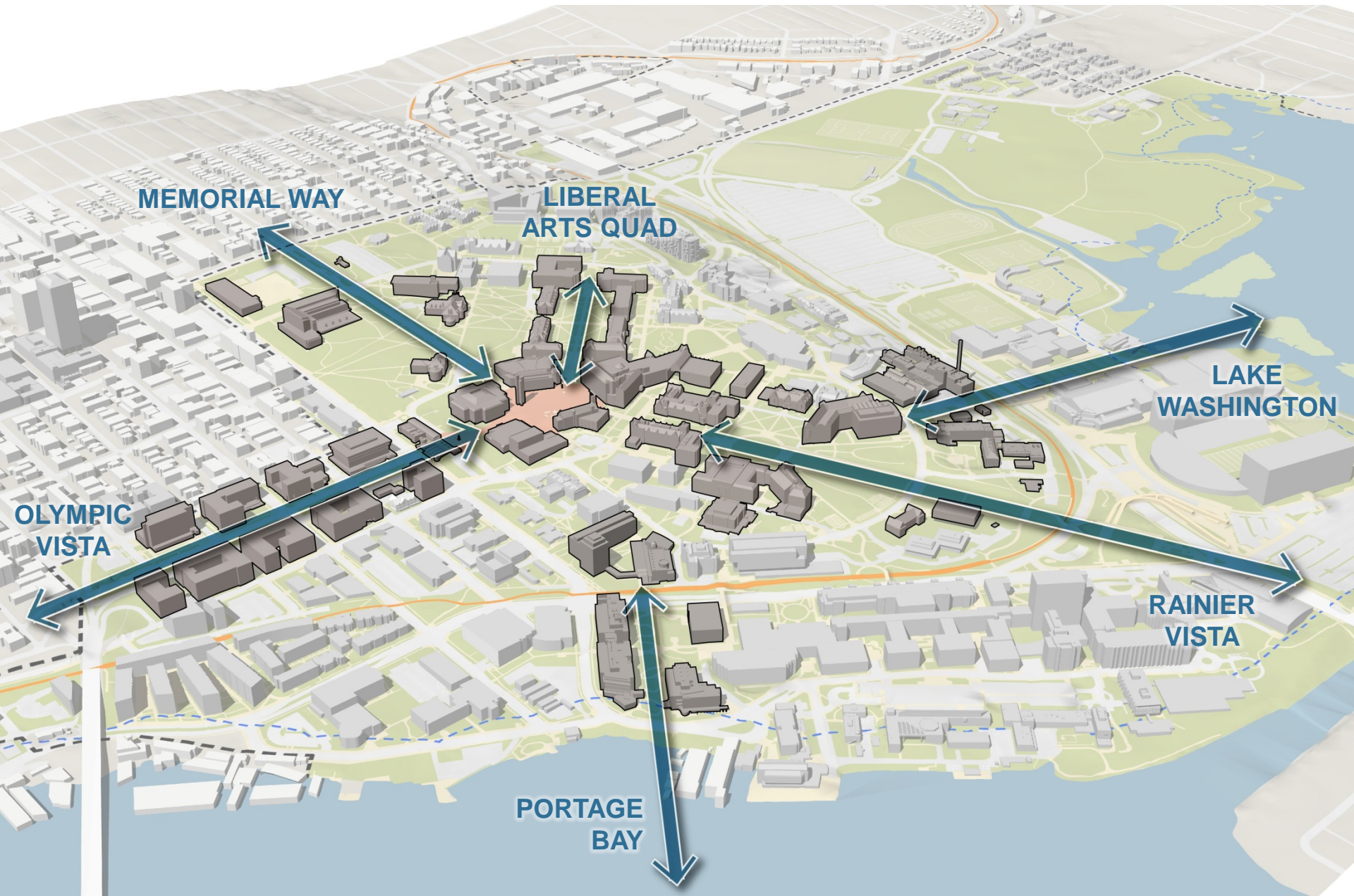
- : Urban grid west of 15<sup>th</sup> Avenue; however, grid dissipates in West Campus**
- : Traditional loop road structure promotes a pedestrian-oriented core campus**
- : Underserved circulation across East Campus and South Campus**

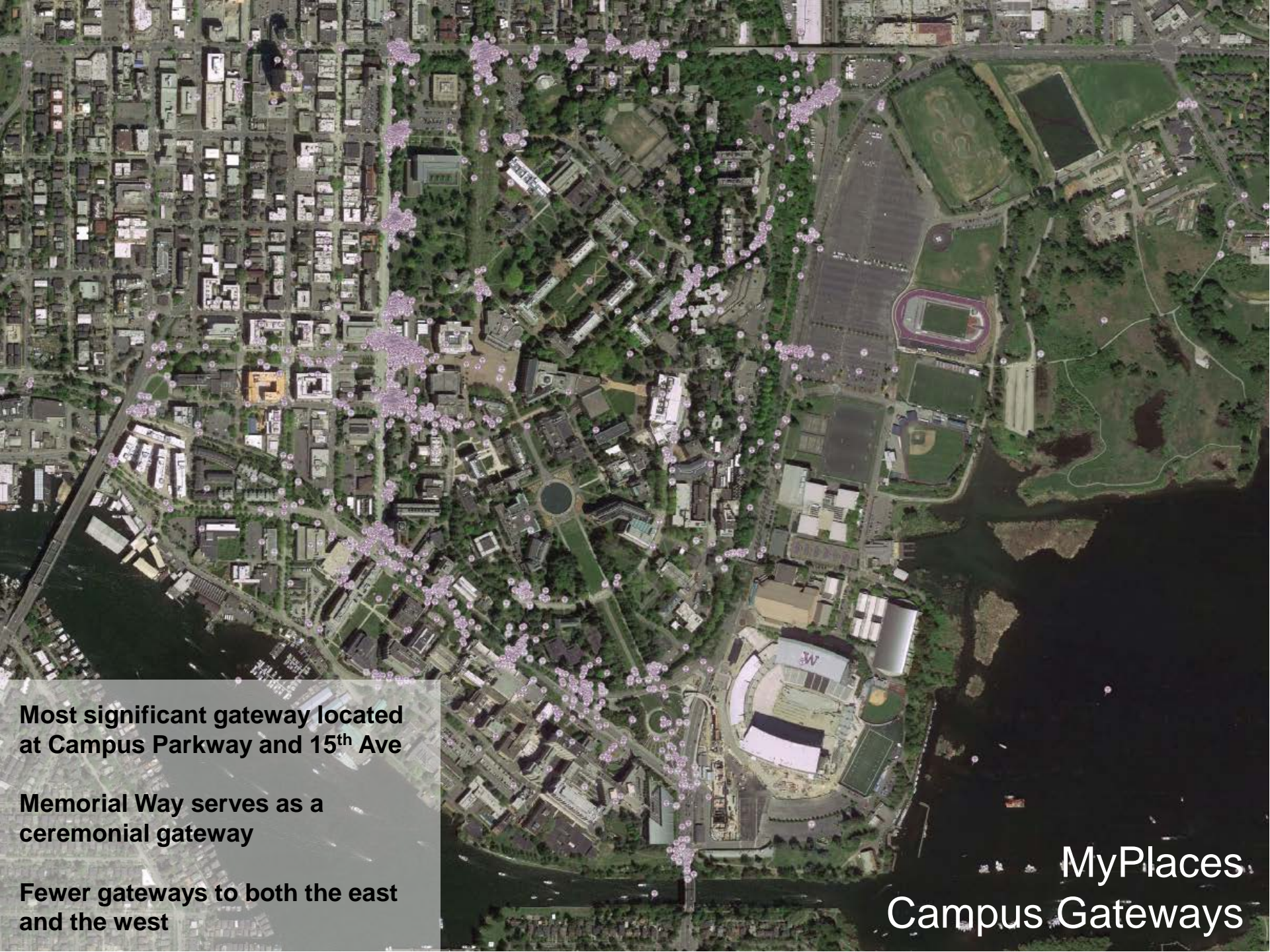
**landscape and public realm**

# Primary Organizing Elements



# Key View Corridors





**Most significant gateway located  
at Campus Parkway and 15<sup>th</sup> Ave**

**Memorial Way serves as a  
ceremonial gateway**

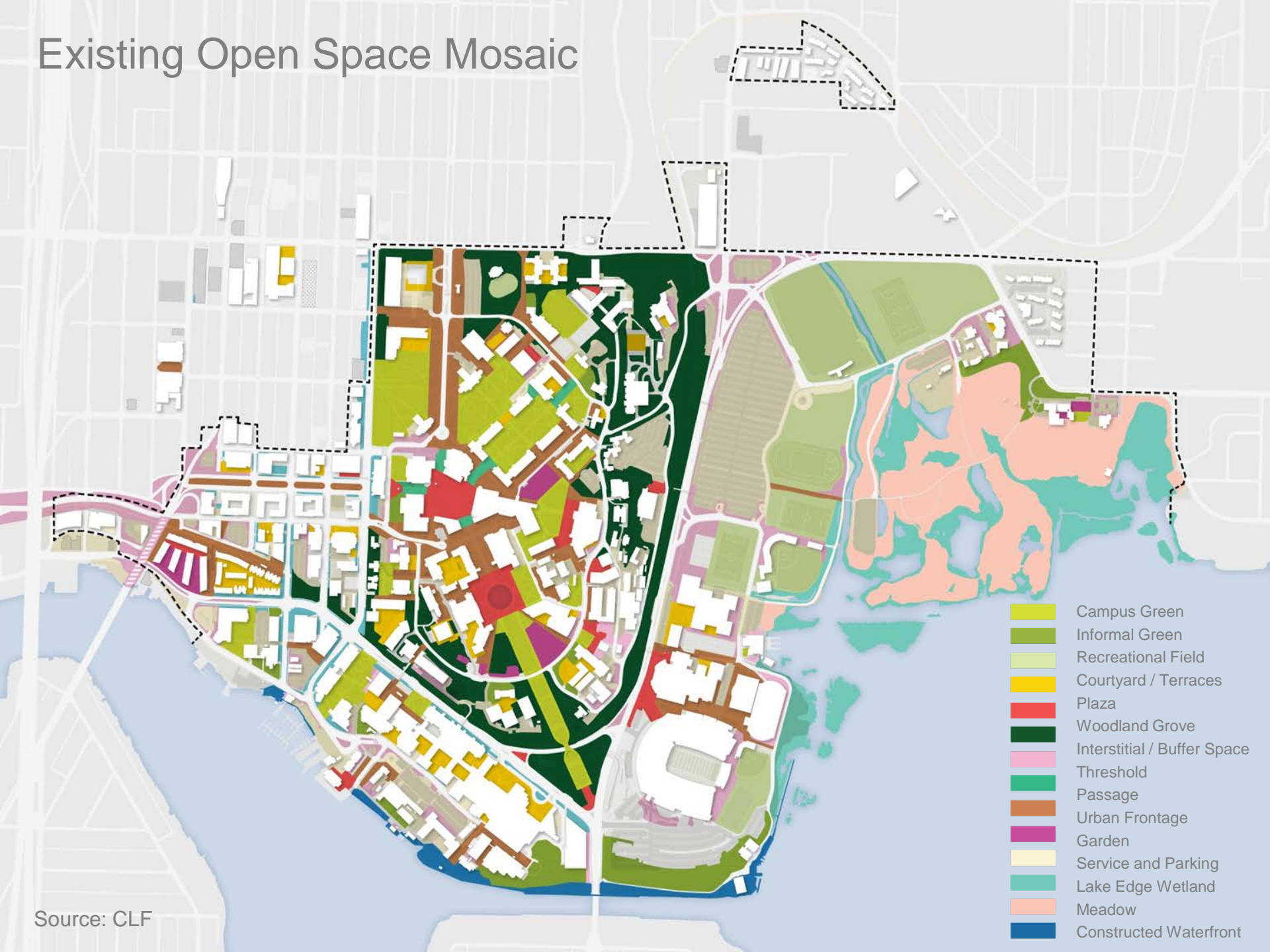
**Fewer gateways to both the east  
and the west**

**MyPlaces  
Campus Gateways**



MyPlaces  
Favorite Open Spaces

# Existing Open Space Mosaic





# Edges



-  Pedestrian Connections
-  Major Road
-  Stevens Way
-  Burke Gilman Trail
-  Retaining Wall
-  Building Edges
-  Waterfront
-  Steep Slope

# Retaining Wall along 15<sup>th</sup> Avenue





Pacific Avenue



Waterfront Conditions



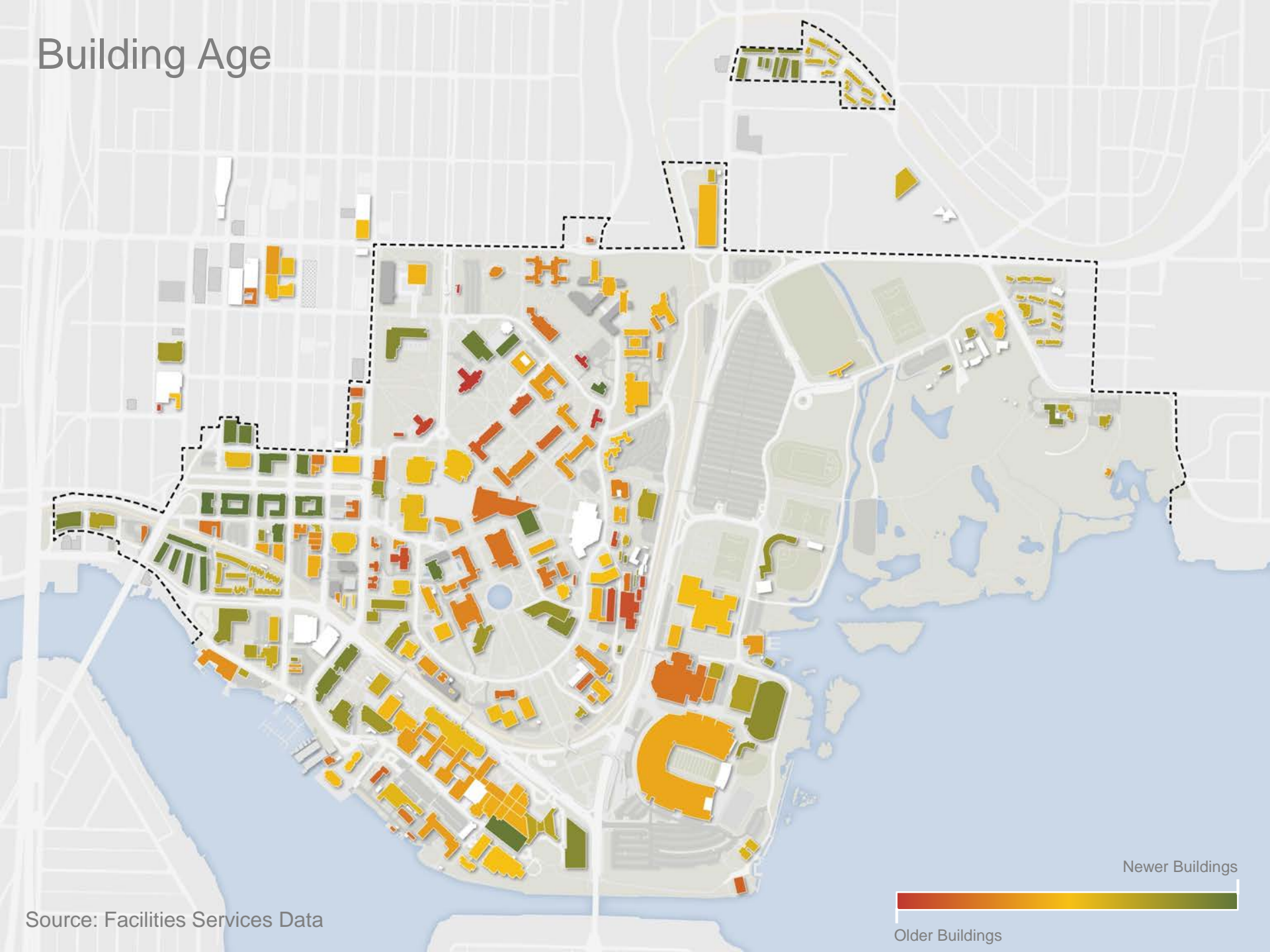
## **Landscape and Public Realm Summary**

**Strong overarching historic open space structure complemented by a fine grain fabric of significant open spaces**

**CMP will seek to strike a balance between open spaces to be preserved and development sites**

**building analysis**

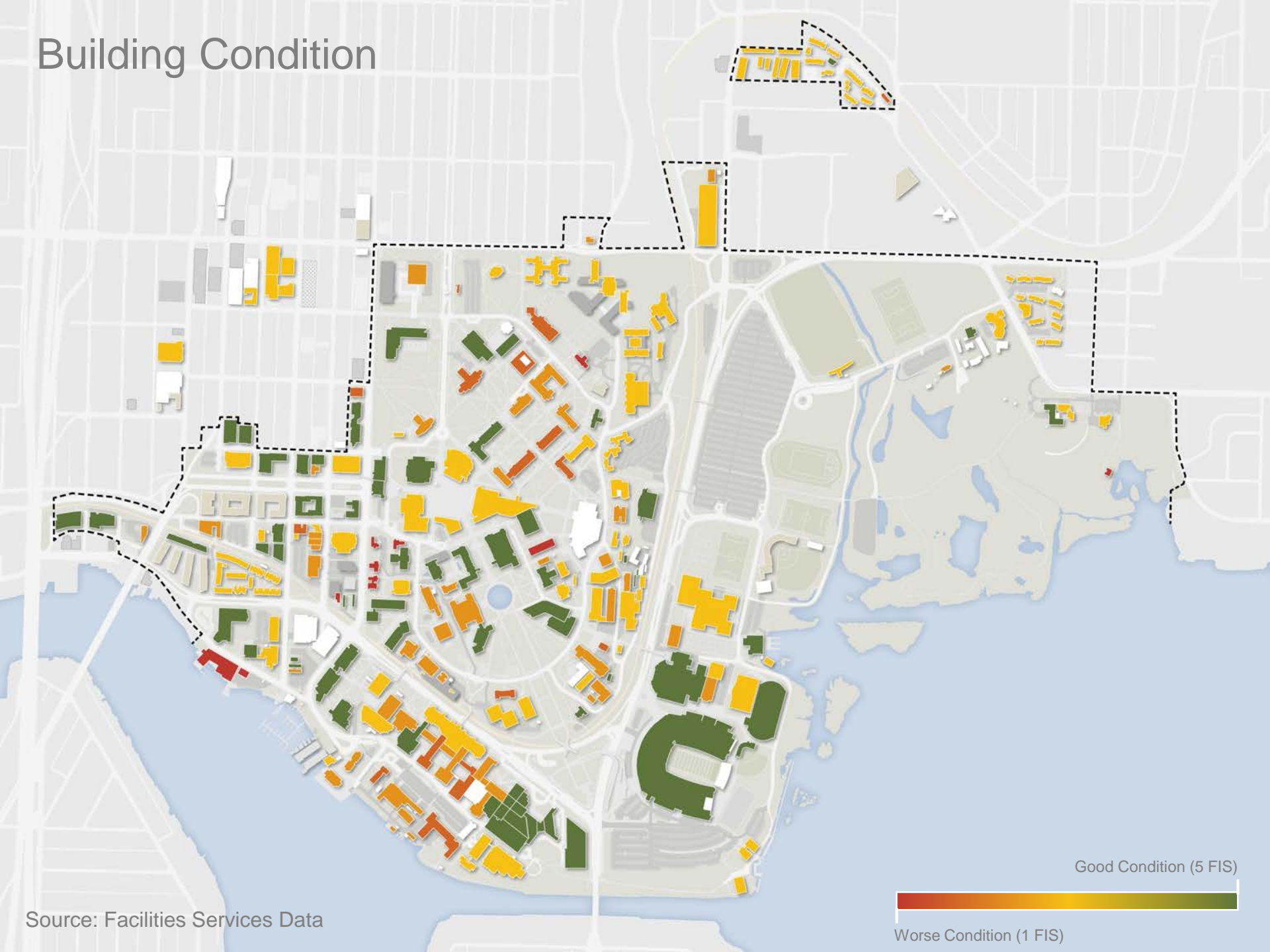
# Building Age



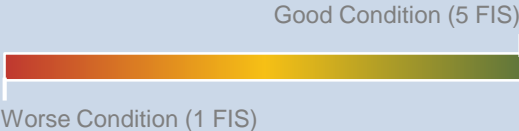
Source: Facilities Services Data



# Building Condition

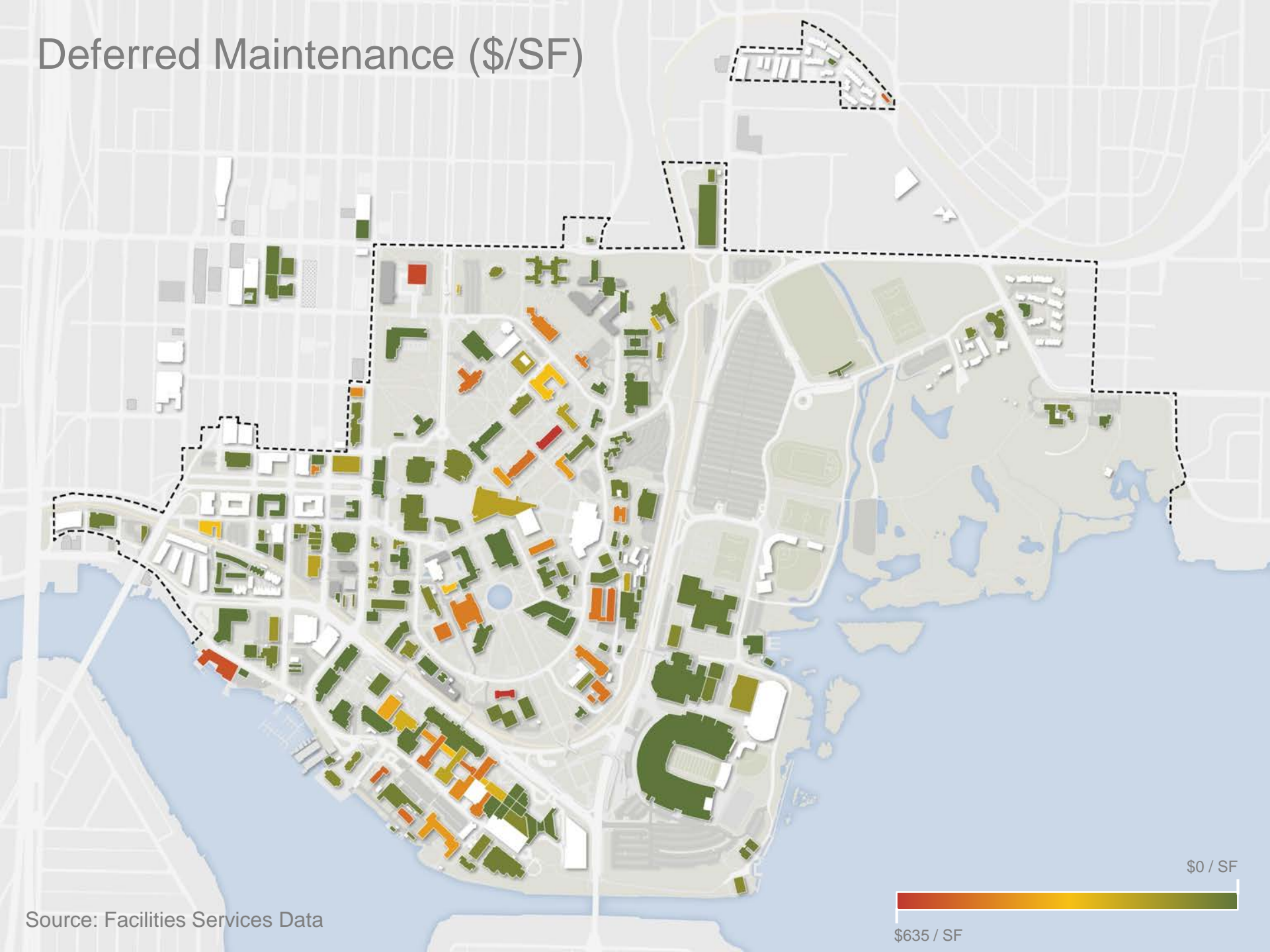


Source: Facilities Services Data





# Deferred Maintenance (\$/SF)



Source: Facilities Services Data



## **Building Analysis Summary**

**Health Sciences and College of Engineering facilities perform less successfully across all categories**

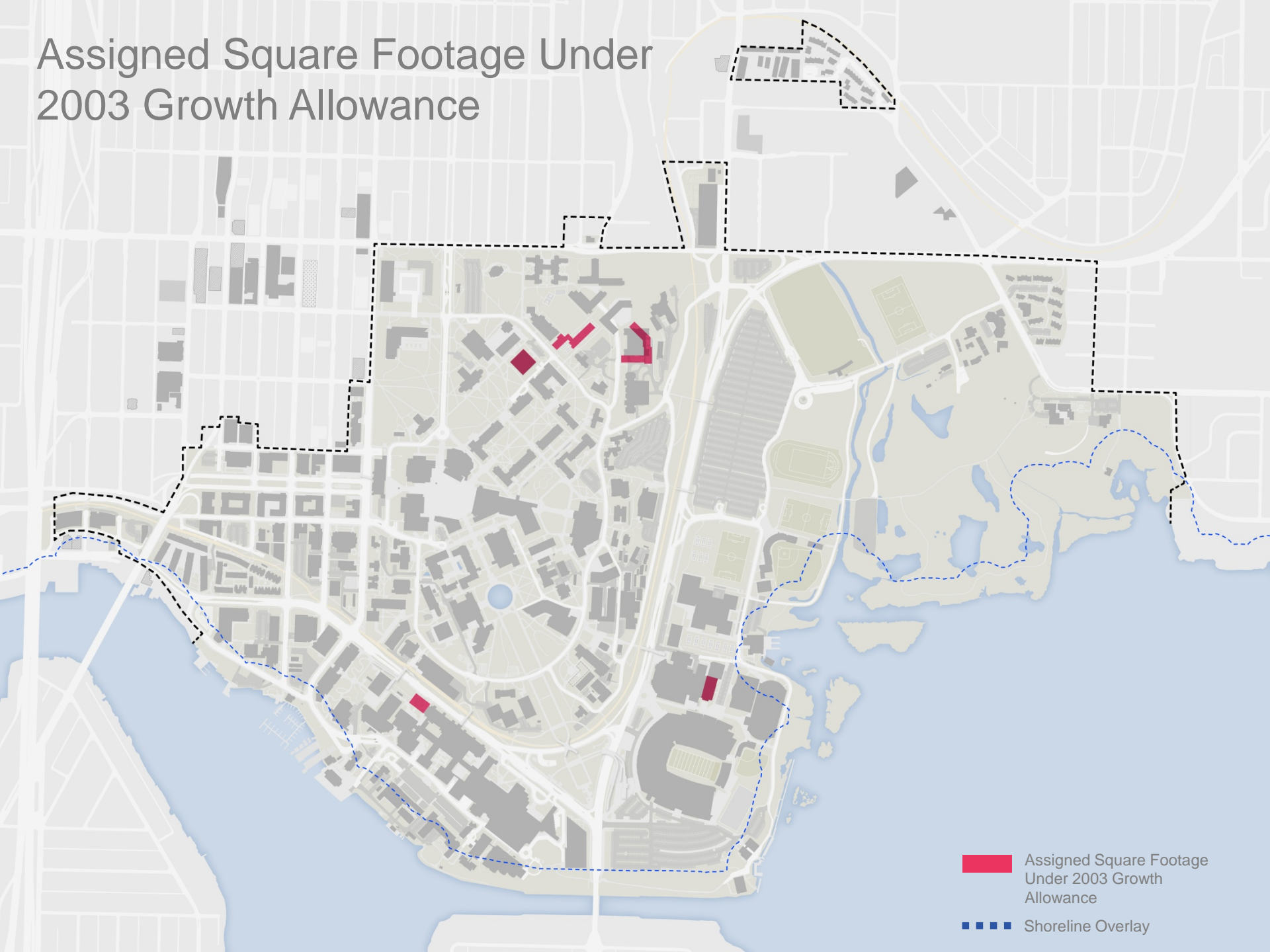
# 4 DEVELOPMENT SITES

# Existing Development



■ ■ ■ ■ Shoreline Overlay

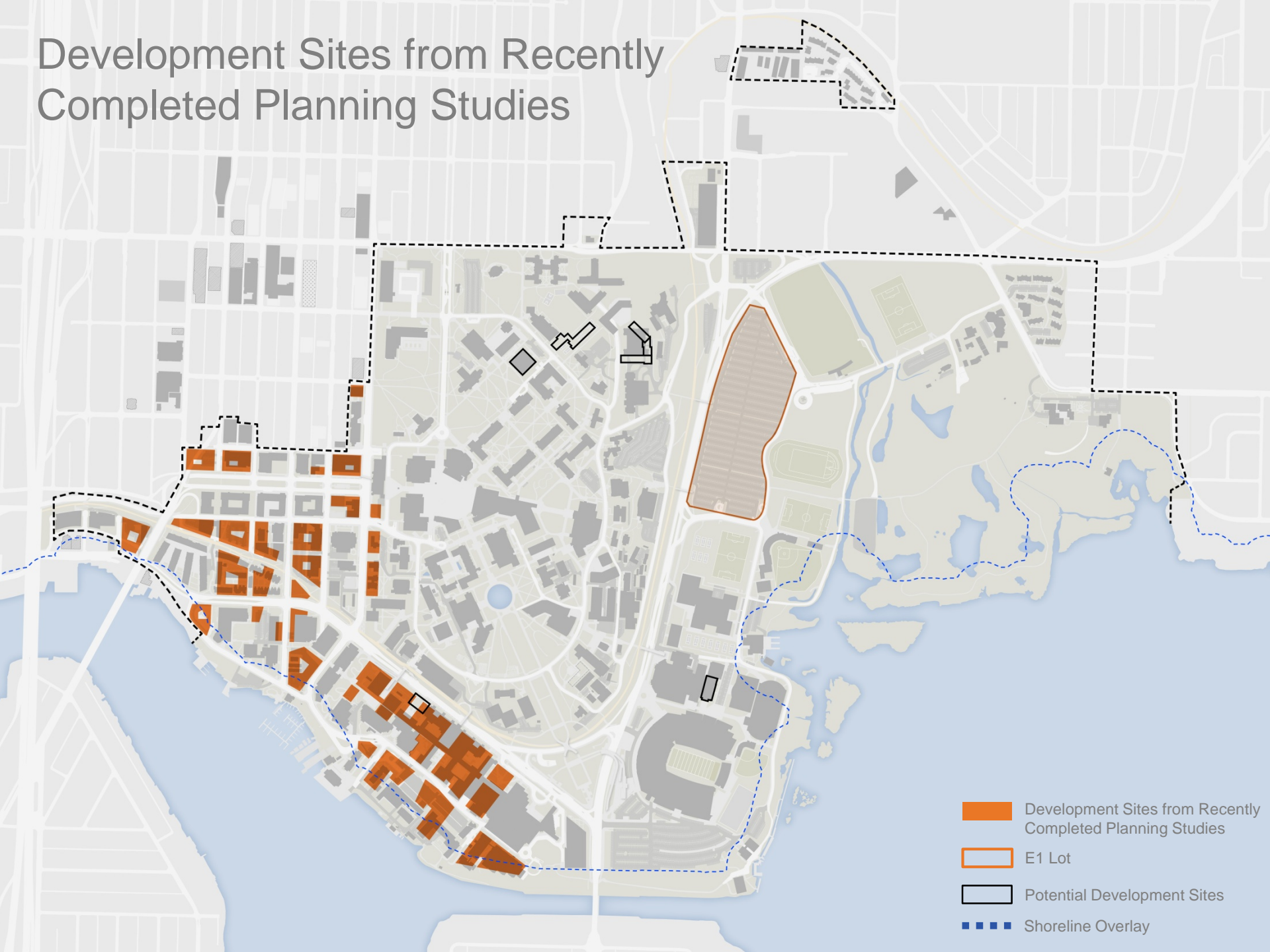
# Assigned Square Footage Under 2003 Growth Allowance







Assigned Square Footage Under 2003 Growth Allowance

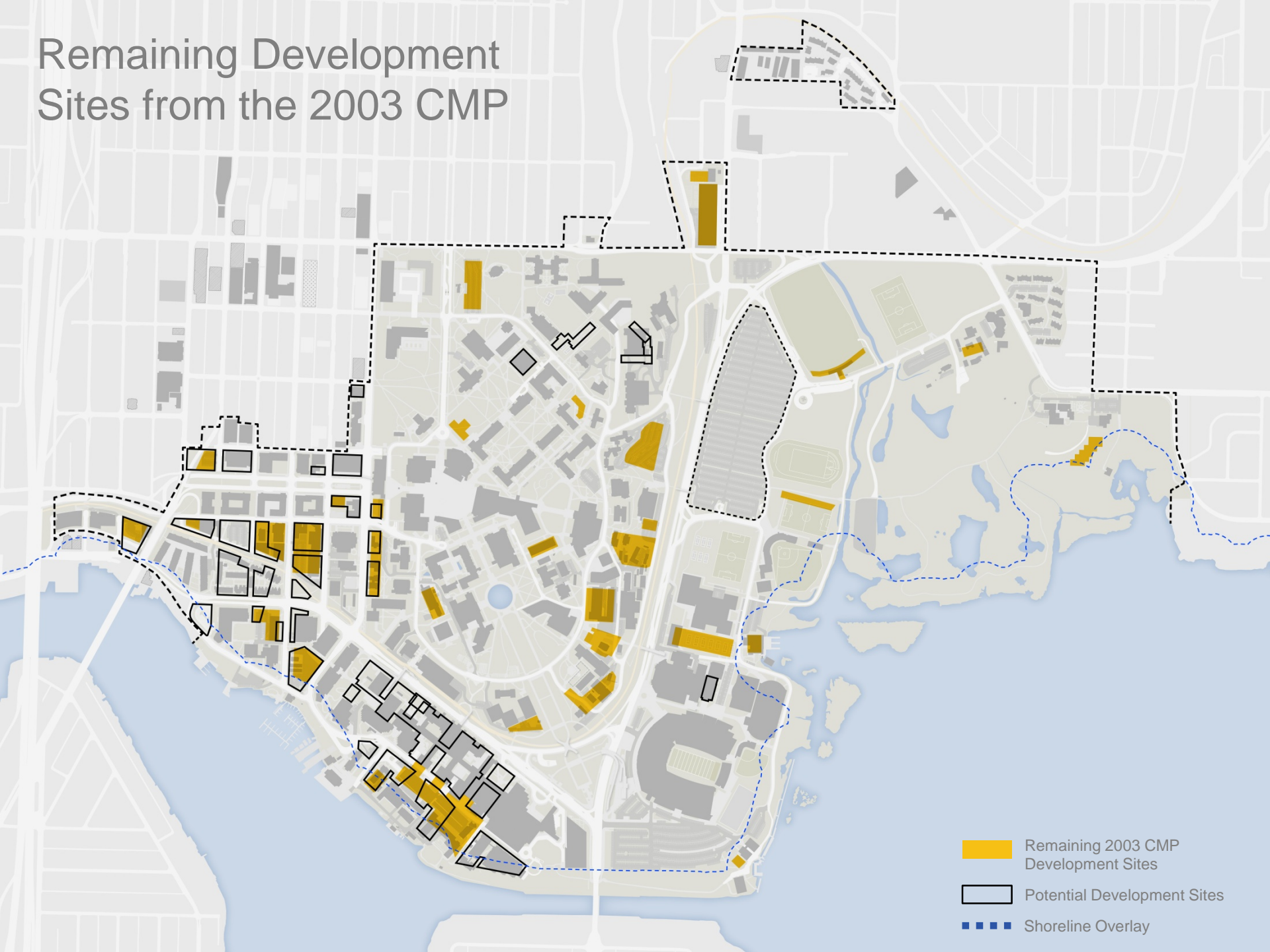
Shoreline Overlay

# Development Sites from Recently Completed Planning Studies



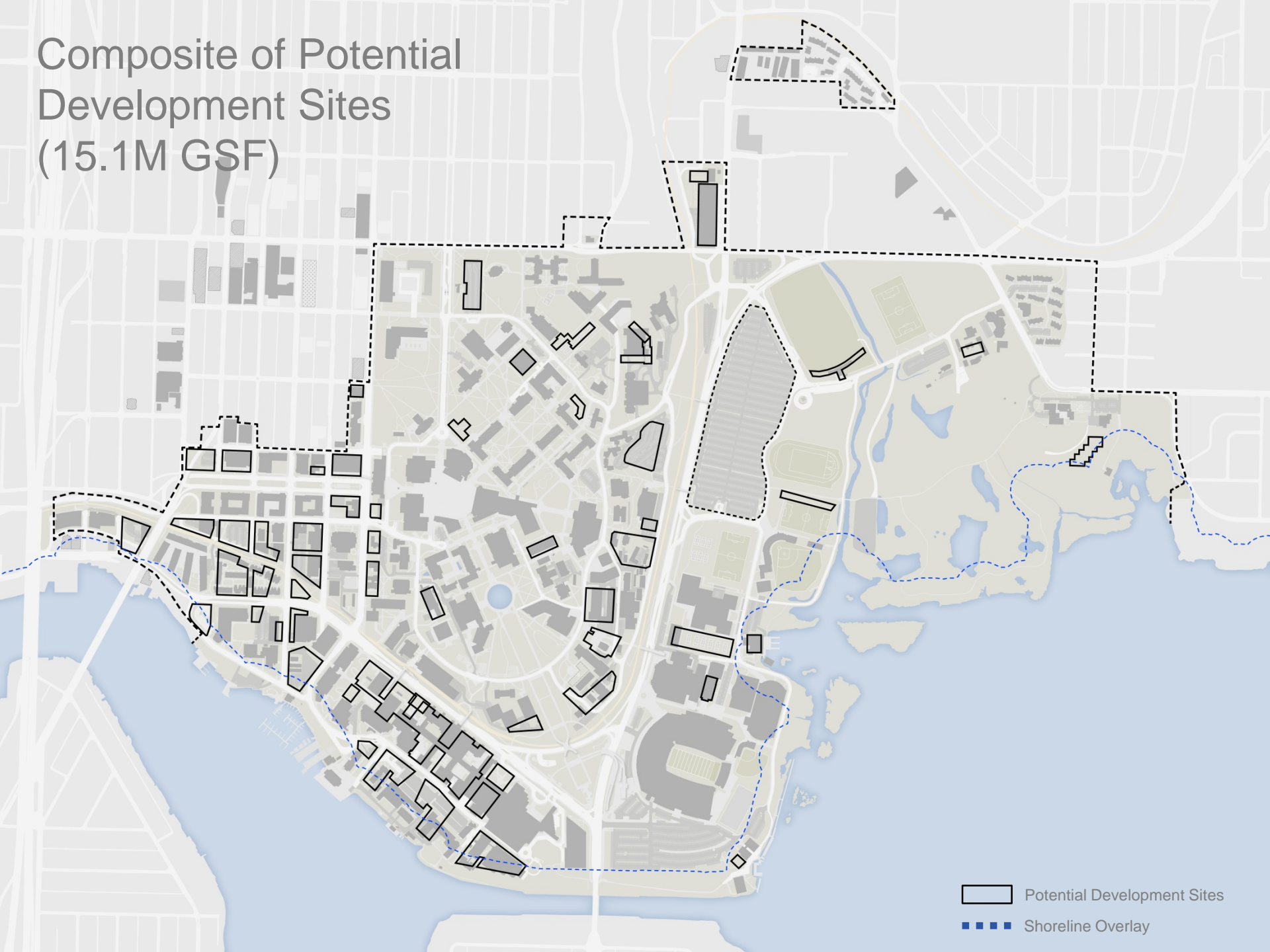
-  Development Sites from Recently Completed Planning Studies
-  E1 Lot
-  Potential Development Sites
-  Shoreline Overlay

# Remaining Development Sites from the 2003 CMP



- Remaining 2003 CMP Development Sites
- Potential Development Sites
- Shoreline Overlay

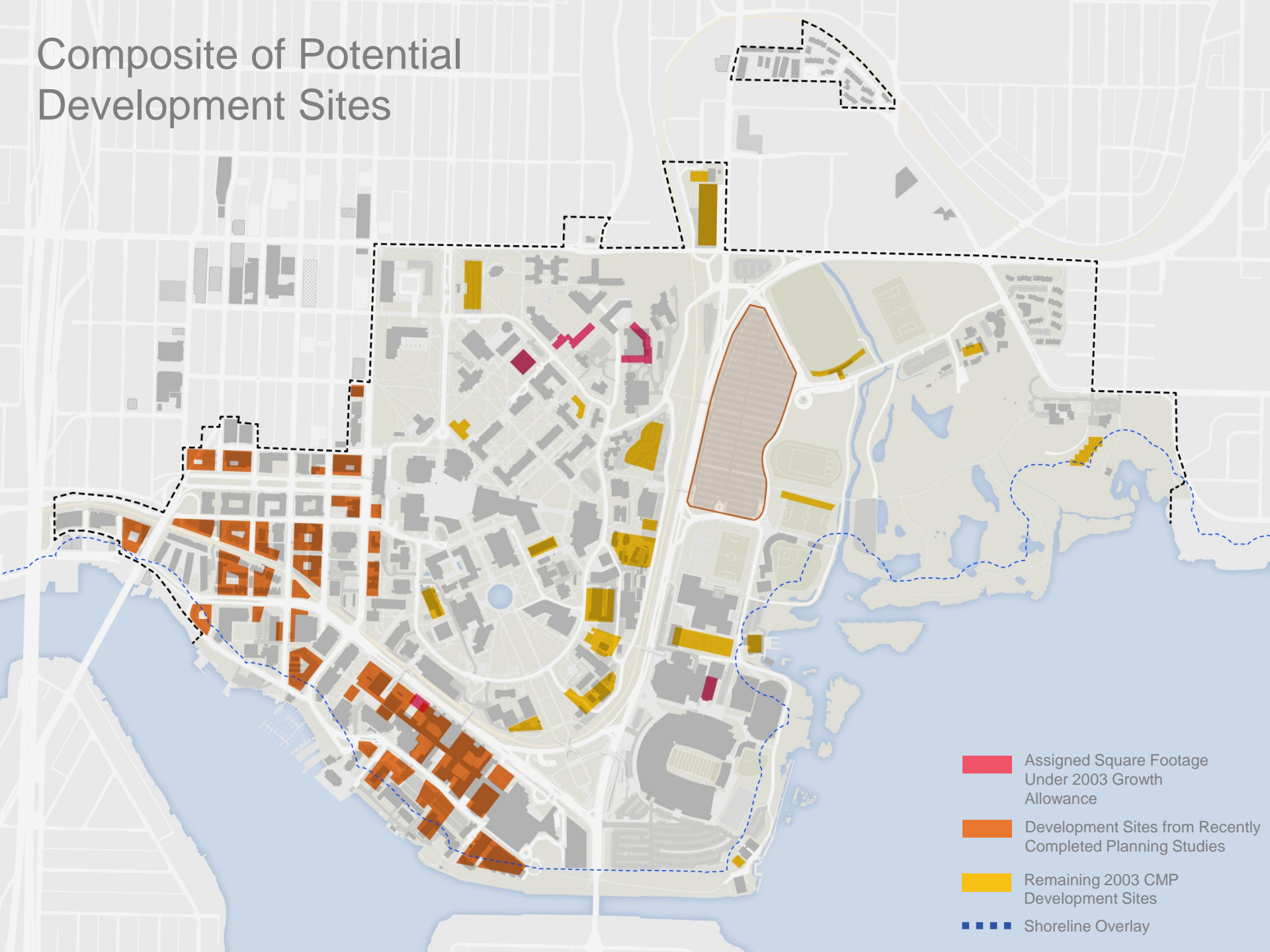
# Composite of Potential Development Sites (15.1M GSF)



- Potential Development Sites
- ■ ■ Shoreline Overlay



# Composite of Potential Development Sites



## Development Site Summary

UW has developed roughly 2.5M net GSF since the 2003 CMP

Majority of potential development sites are located within the West Campus and South Campus

Fewer development sites remain on the Central Campus

What is the desired future for the East Campus?

Are there other development sites to consider / take off the table?