# Preliminary CMP Update

**December 07, 2015**

UNIVERSITY *of* WASHINGTON

1 CONTEXT
2 GROWTH PROFILE
3 INDUSTRY & INNOVATION
4 CAMPUS FRAMEWORK
5 CAMPUS PRECINCTS
6 SYNTHESIS

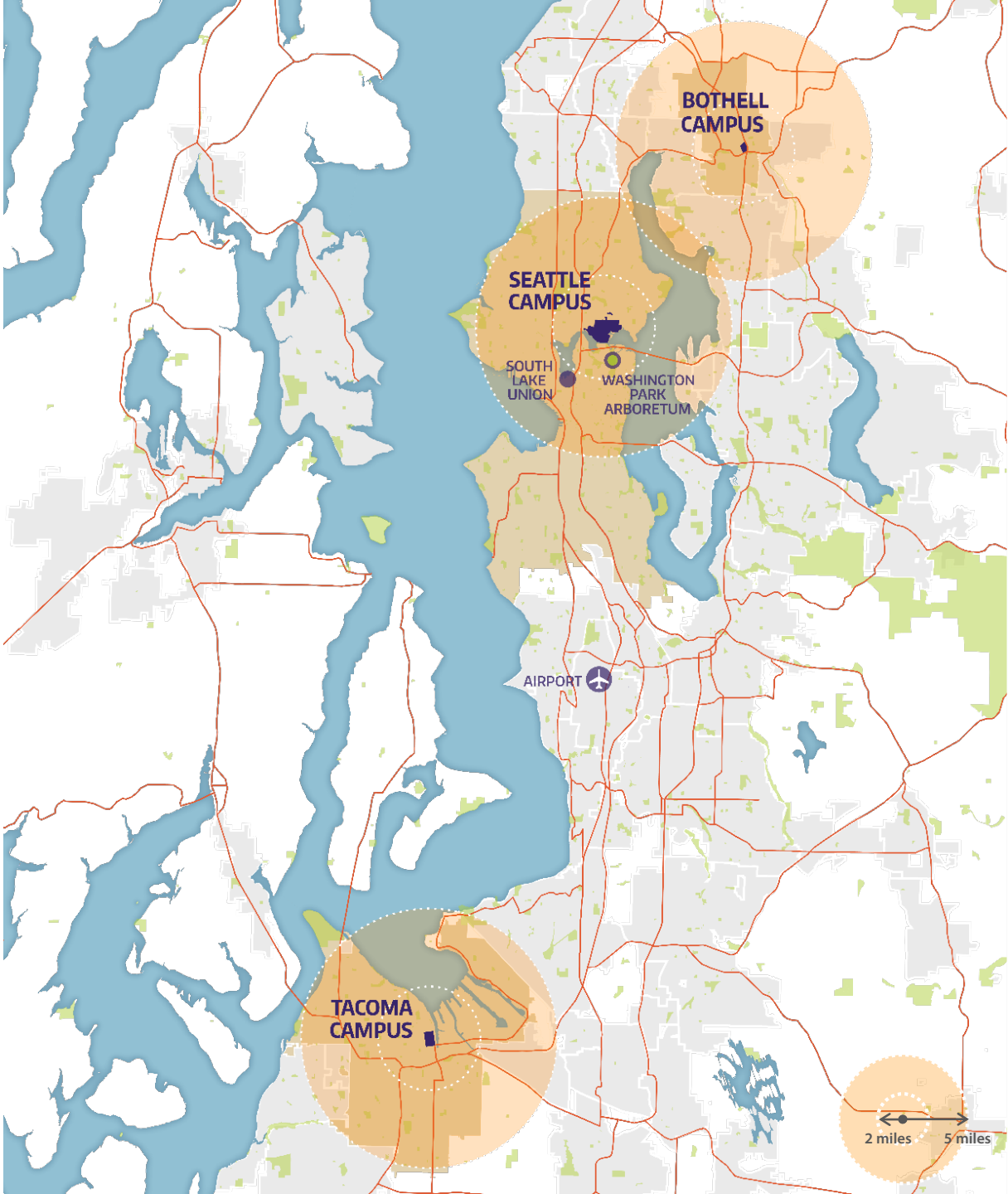
# 1 CONTEXT

# Regional Context

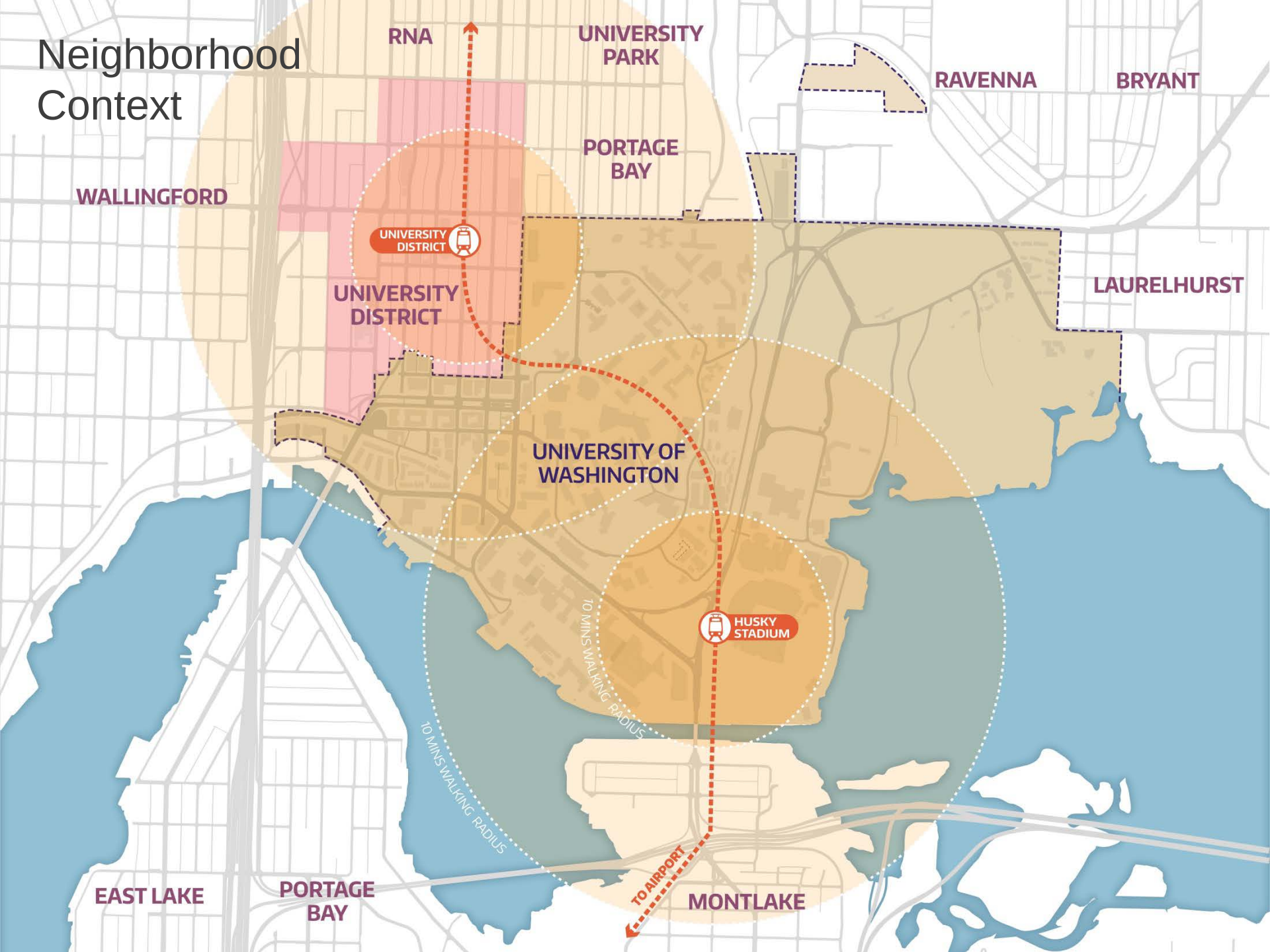
**UW BOTHELL**

**UW SEATTLE**

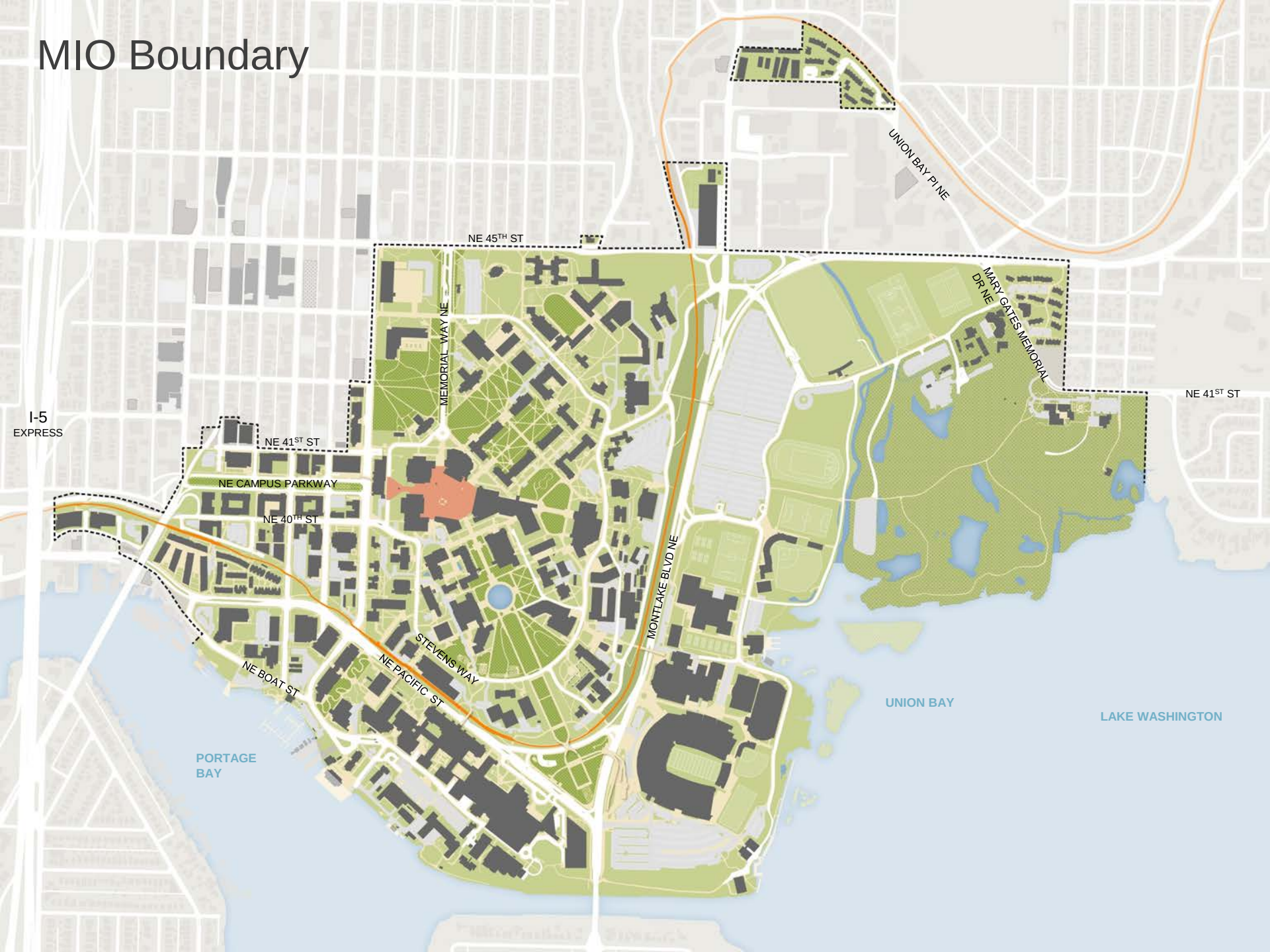
**UW TACOMA**



# Neighborhood Context



# MIO Boundary



# MIO Boundary

# 2 GROWTH PROFILE

enrollment trends

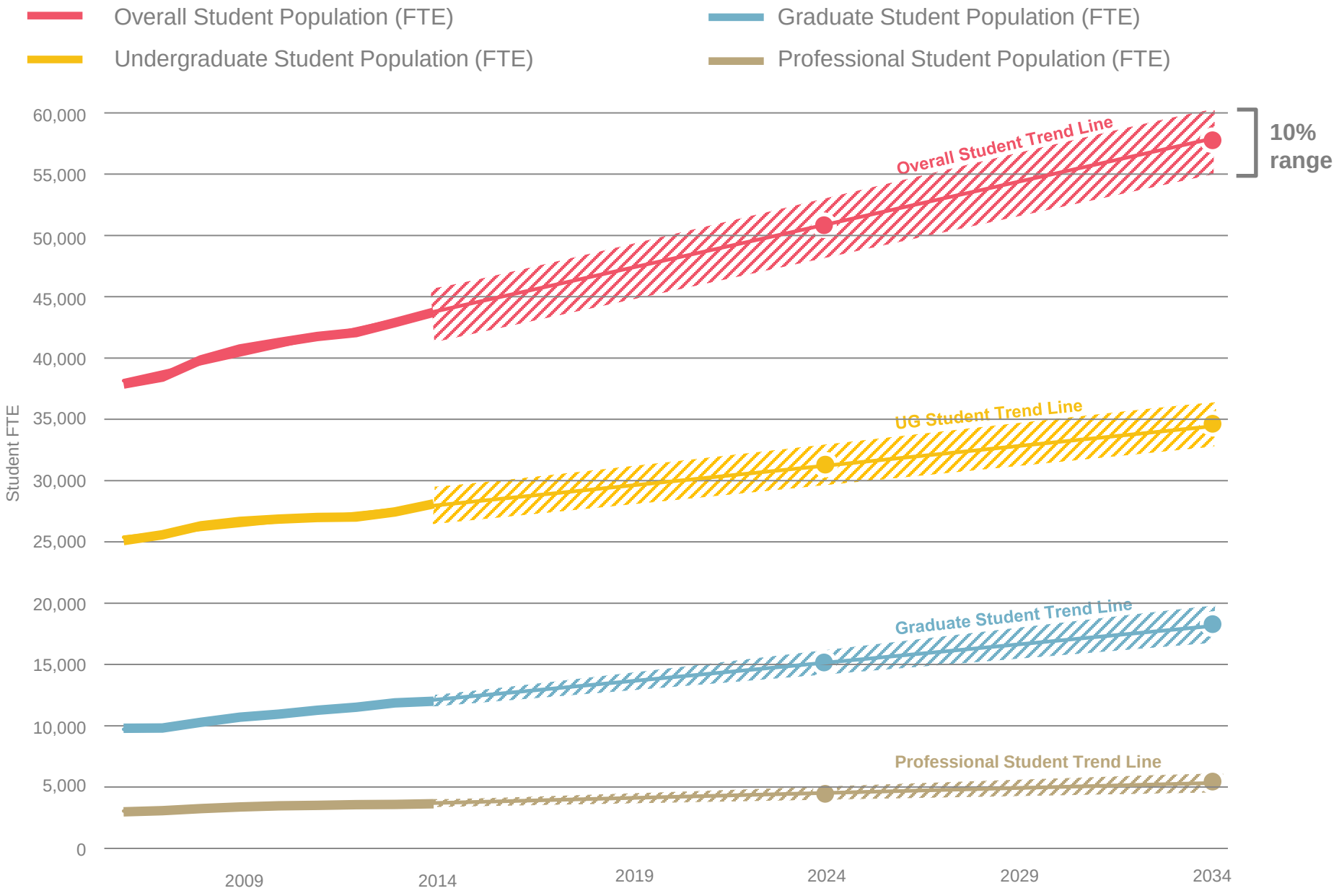
space needs model

benchmarking

industry case studies

# enrollment trends

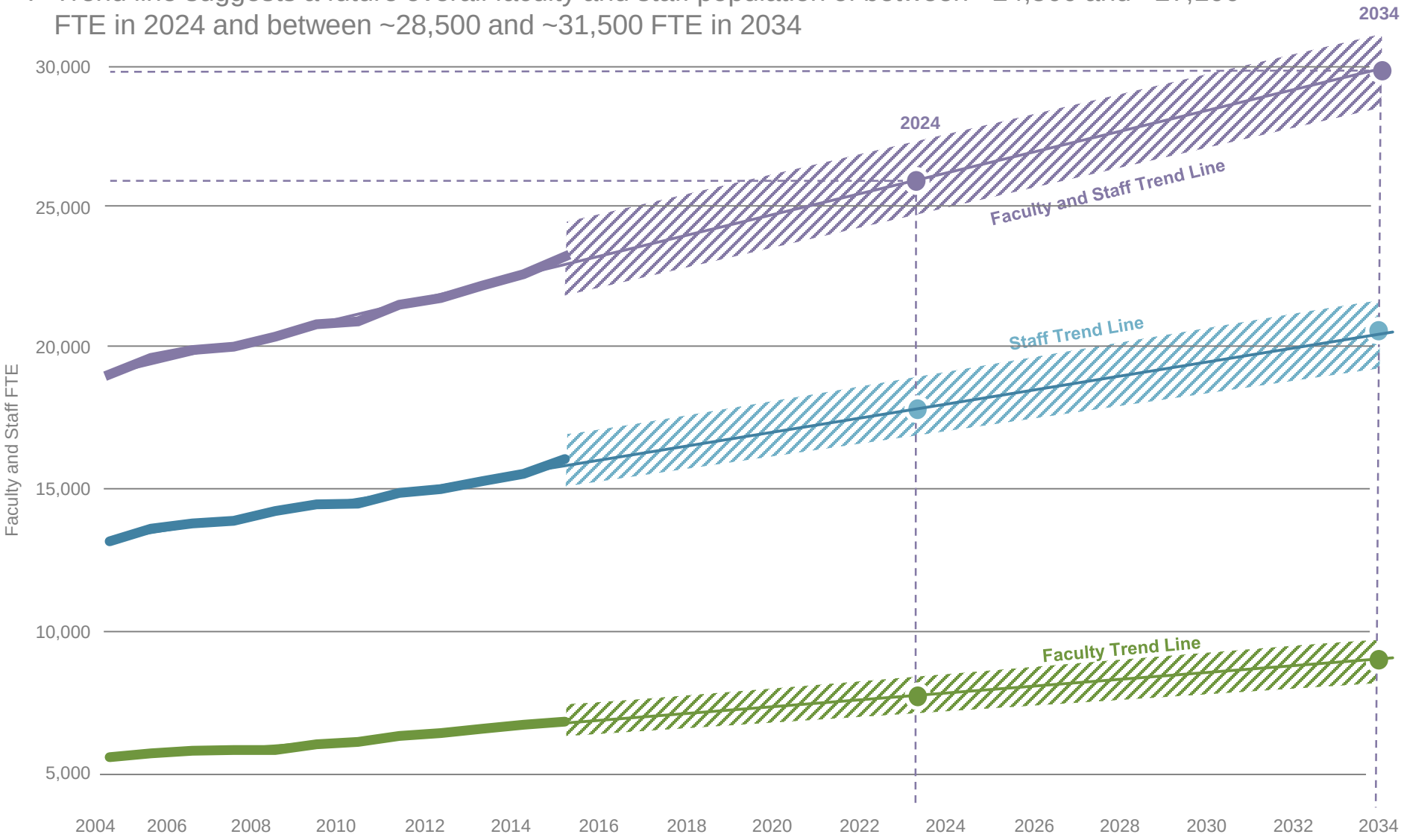
# Enrollment Trends by Student Population




Source: Office of Institutional Analysis, UW Seattle FTE Enrollment by Level

# Enrollment Trends – Faculty and Staff

- Faculty and staff FTE grew by 16% between 2006 and 2014 (3,160 FTE)
- Trend line suggests a future overall faculty and staff population of between ~24,500 and ~27,100 FTE in 2024 and between ~28,500 and ~31,500 FTE in 2034




Source: HRIS, numbers are Seattle Campus and UWMC and are FTE Sums

# Enrollment Summary

**Current Enrollment**

- **Students: 46,100 FTE, Fall 2015**
- **Faculty/Staff: 20,600 FTE, Fall 2015**

**Significant growth projected across all populations**

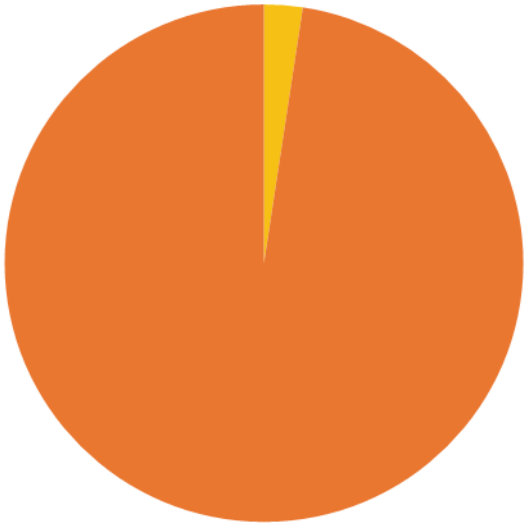
- **Students: Range from about 50,000 FTE by 2024;  57,500 FTE by 2034**
- **Faculty: between 7,100 and 7,700 FTE by 2024; between 8,100 and 9,000 FTE by 2034**
- **Staff: between 16,600 and 18,200 FTE by 2024; between 19,400 and 21,400 FTE by 2034**

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

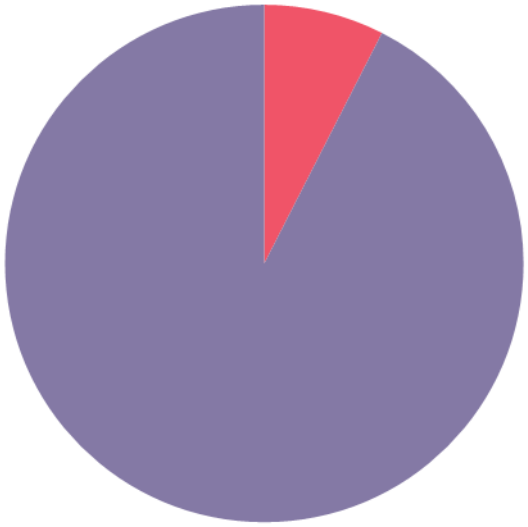
# space needs model

# Overall Existing Space

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



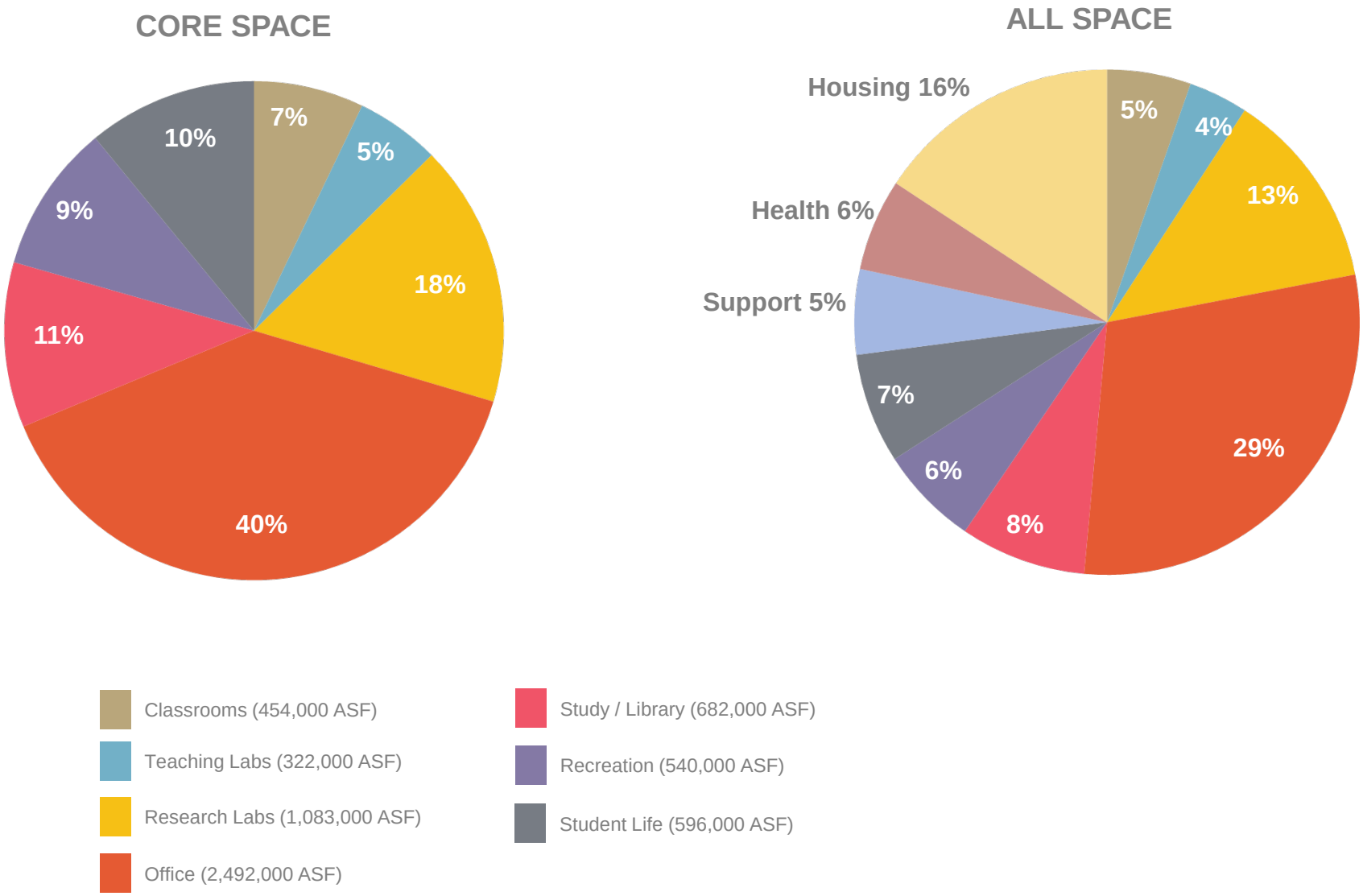
98% (17,600,000 GSF)
Owned by UW



92% (16,600,000 GSF)
Inside the Major Institutional Overlay (MIO)

**Source: Capital Planning and Development**

# Existing Space Breakdown



# Methodologies for Assessing Space Need

1. Space Needs Model
2. Development history / Projection analysis
3. Benchmarking
4. Industry and Innovation

# Space Needs Model

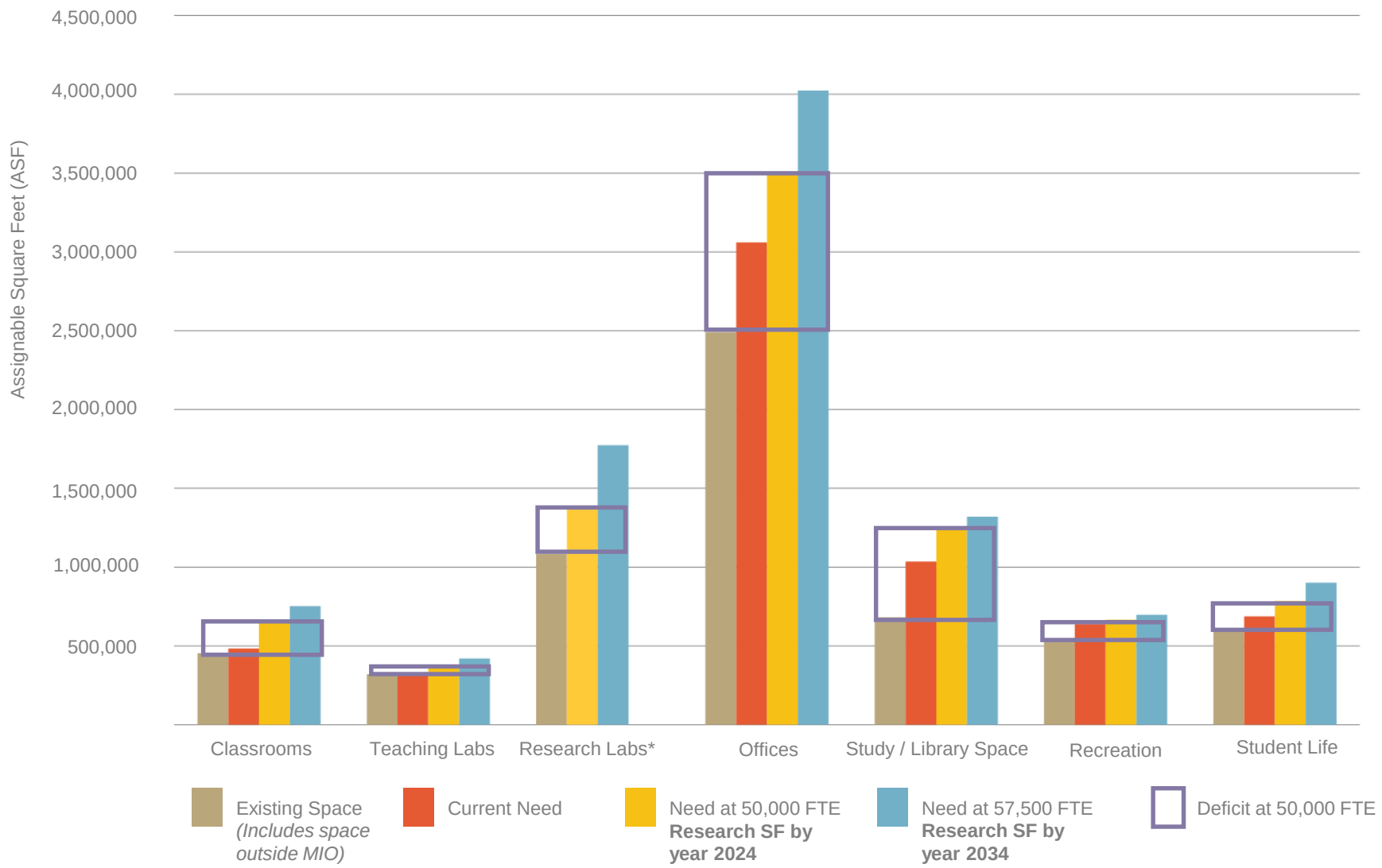
## Background and Inputs

- 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 industry and innovation spaces

## Existing Space

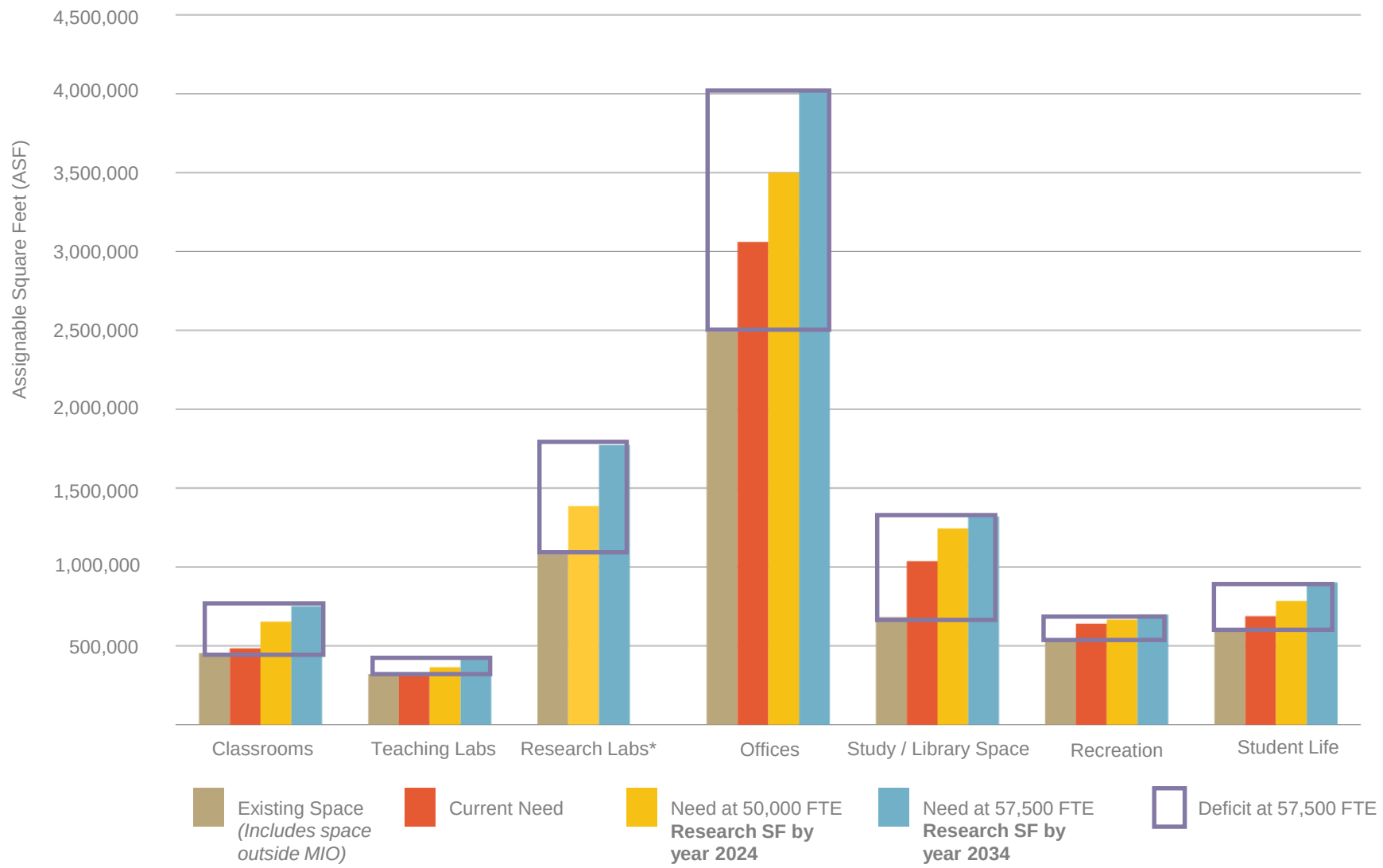
- Captures a 2014 snapshot of existing space
- Excludes all parking facilities, both underground and structured
- Represents assignable square feet, not gross square feet

# Deficit at 50,000 Student FTE (3,400,000 ASF / 5,200,000 GSF)*




*Research assumes 2.5% growth annually, Research is not dependent on FTE but is included as part of the ASF/GSF totals for the purpose of this exercise.

# Deficit at 57,500 Student FTE (4,800,000 ASF / 7,400,000 GSF)*

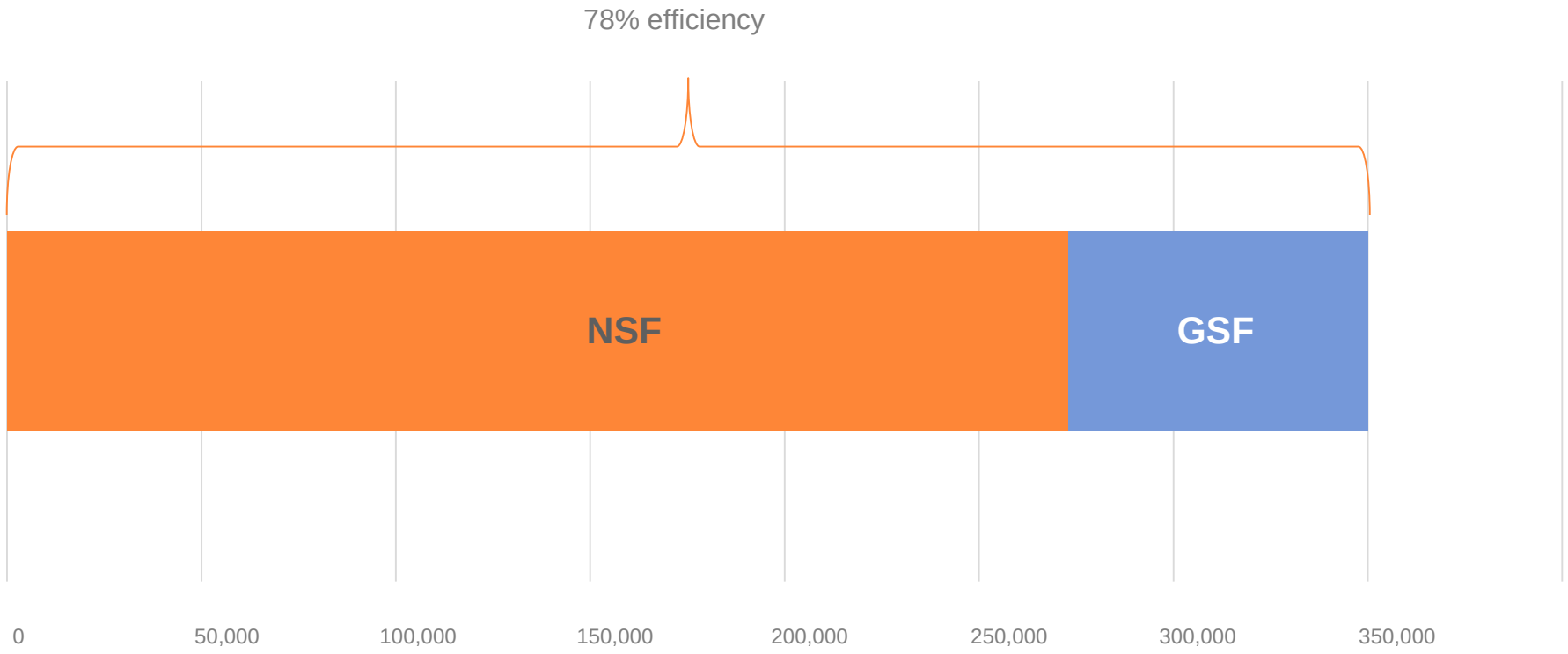



*Research assumes 2.5% growth annually, Research is not dependent on FTE but is included as part of the ASF/GSF totals for the purpose of this exercise.

# Housing

1,000 beds @ 350 GSF per bed = 350,000 GSF

*Allocation assumes suite dormitory configuration*




**TEST AT CURRENT RESIDENTIAL RATIO (20% of Student FTE):**

- For a population of 50,000 Student FTE at current ratio: 700 beds @ 350 GSF per bed = 245,000 GSF
- For a population of 57,500 Student FTE at current ratio: 2,200 beds @ 350 GSF per bed = 770,000 GSF

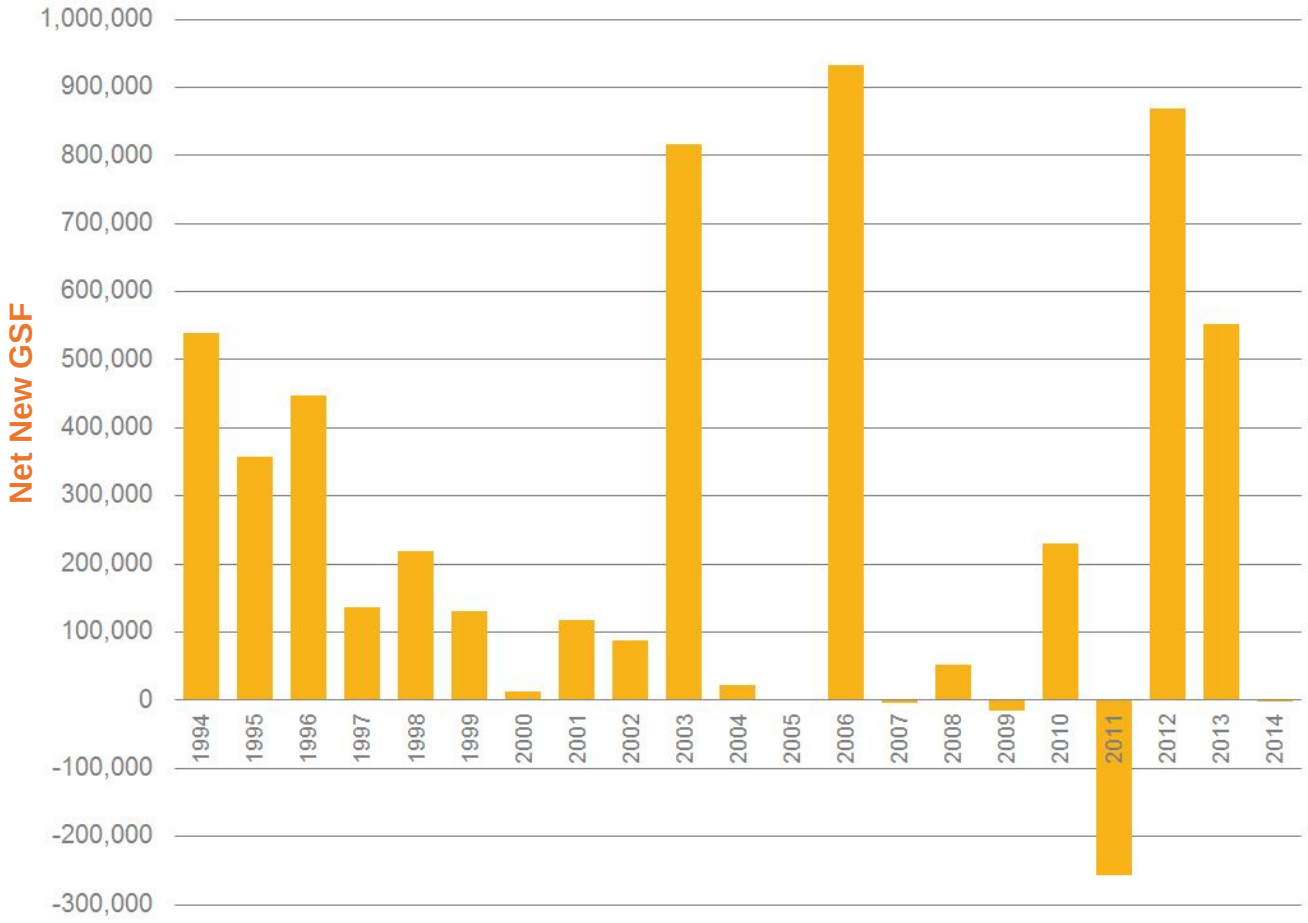
# Development History / Projection Analysis

Development history reflects periods of growth and restraint

On average, the UW introduced roughly:

- **250,000 Net 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




Source: Capital Planning and Development

# 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

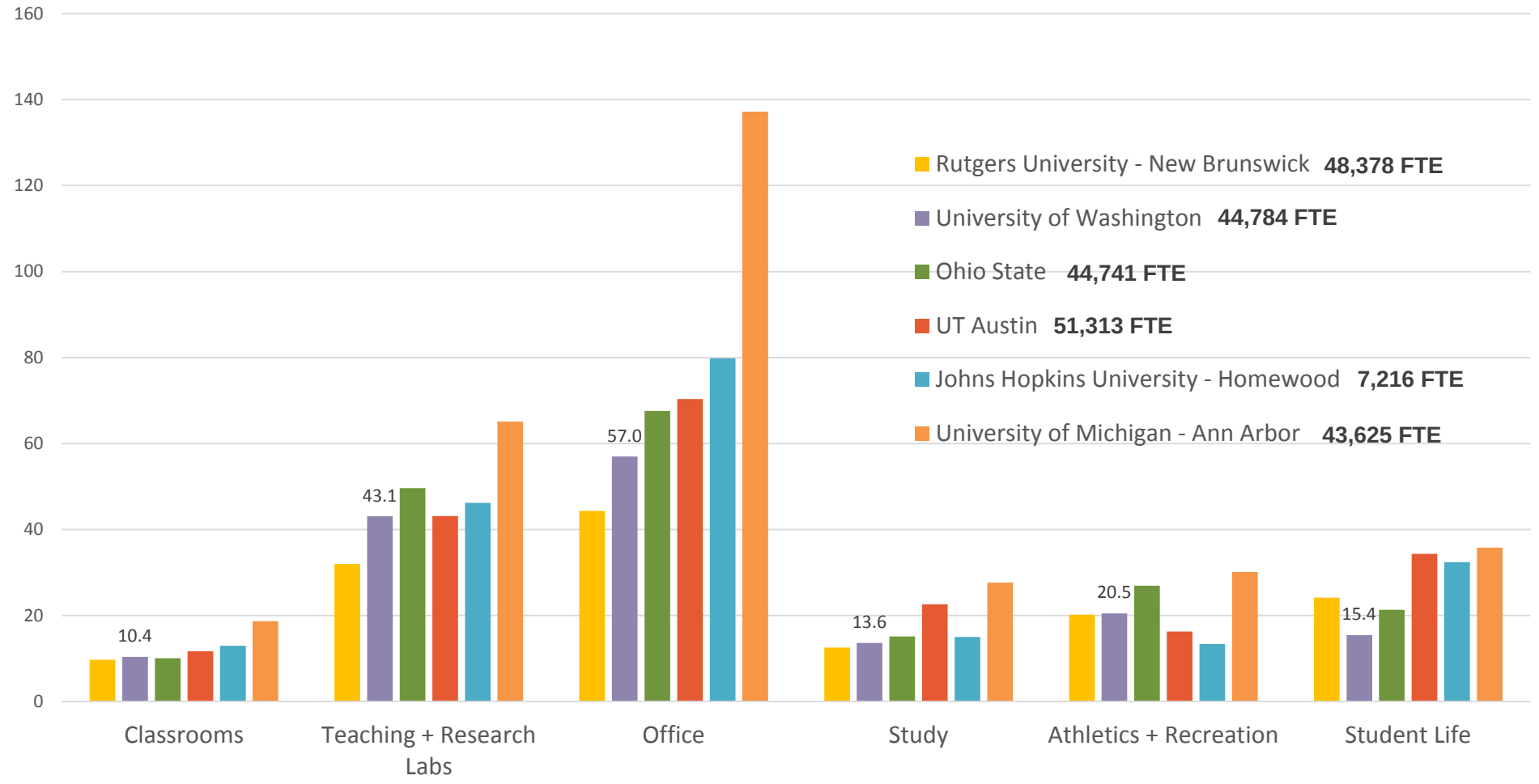
Draws upon an institutional database of **more than 100 institutions**

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

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

# Benchmarking – Assignable Square Feet (ASF) / Student FTE

## Peer benchmarking comparisons, 2014-15 Common Data Set



# Space Needs Summary

**Model projects the potential need for 5.6M GSF (at 50,000 FTE) to 7.8M GSF (at 57,500 FTE with research and housing projections) of space in the future.**

**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**

**Across all categories UW's ASF per student is low compared to the peers evaluated**

**Projections do not account for industry & innovation space**

# 3 INDUSTRY & INNOVATION

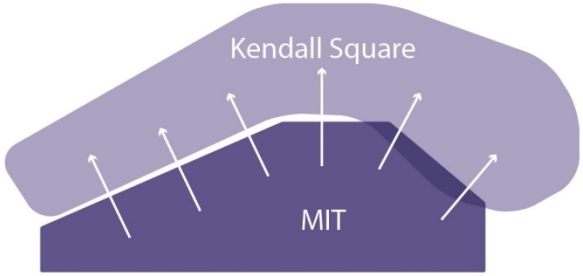
# Why University Related Innovation Districts

Federal funding in academic research is waning and institutions are finding new ways to adjust to this continuing trend by engaging allied industries in the private sector.

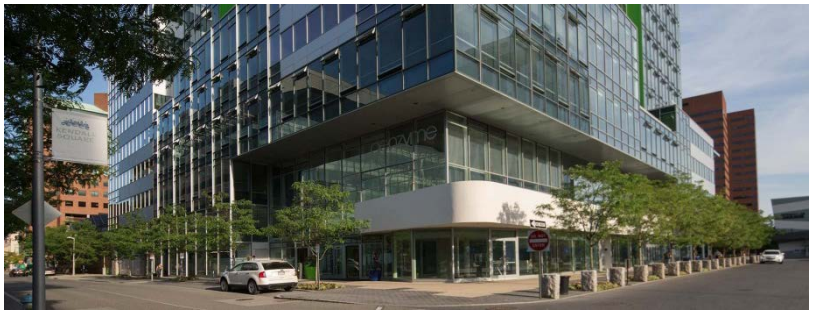
Urban institutions are leveraging their proximity to economic centers, access to transit, and an educated workforce to develop long-lasting partnerships with cities and corporations and secure continued research growth in the future. The physical relocation of key innovation assets has now become a critical competitiveness strategy for companies, universities, and even states.

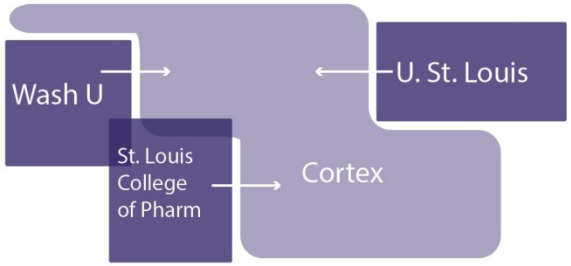
Companies also realize the benefits of partnering with research-intensive institutions as a way to develop new ideas. More and more companies are outsourcing research to universities and realize the benefits of a captive talent pool.

# Innovation District Precedents

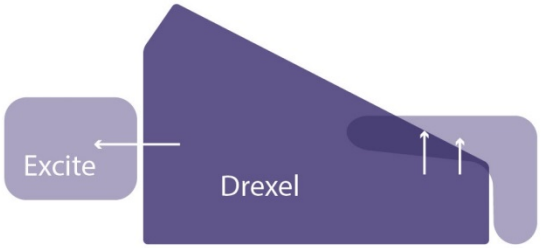


80%
Biotech

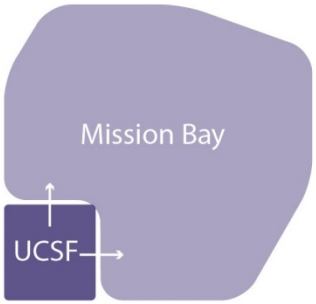




70%
Tech



90%
Tech

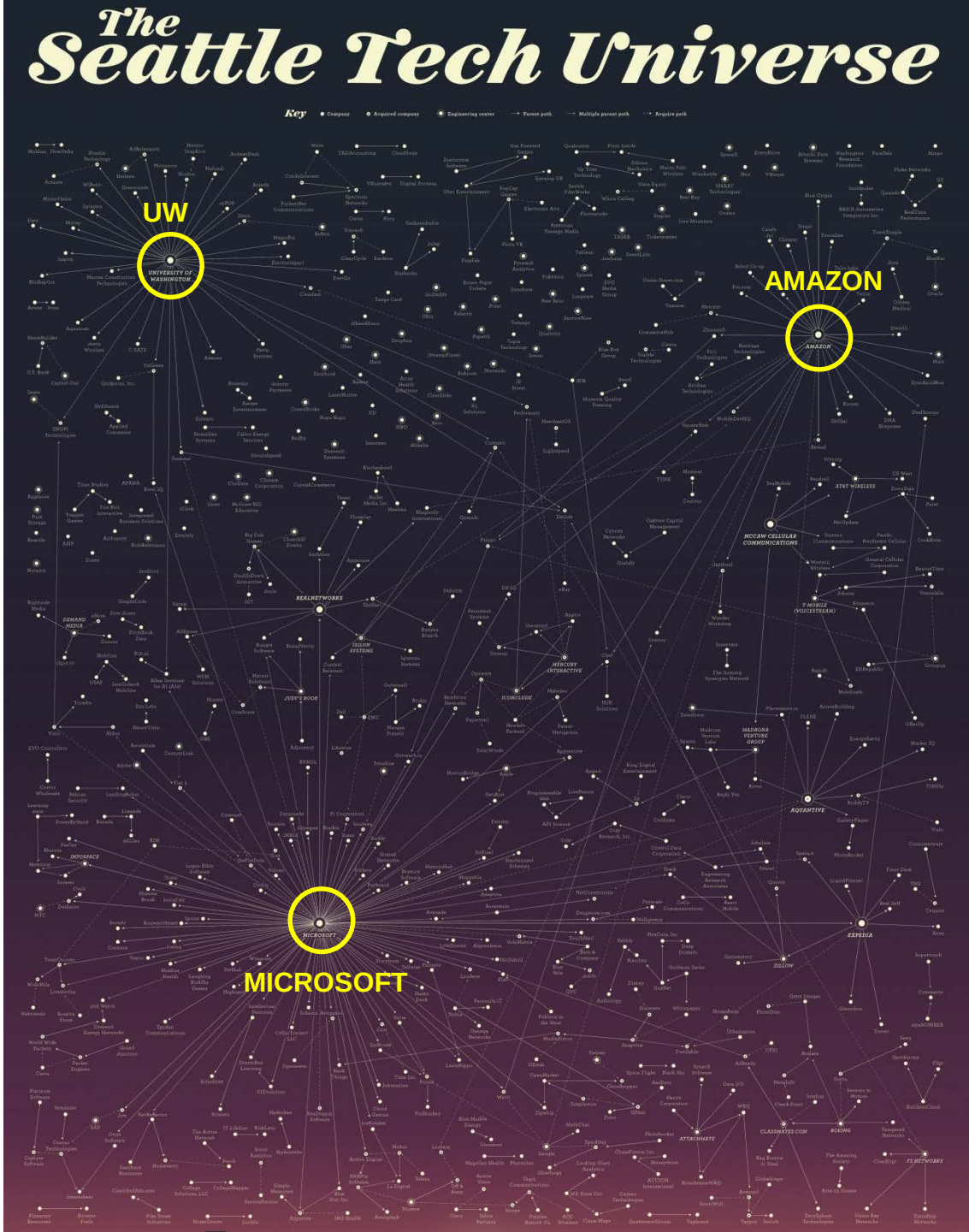


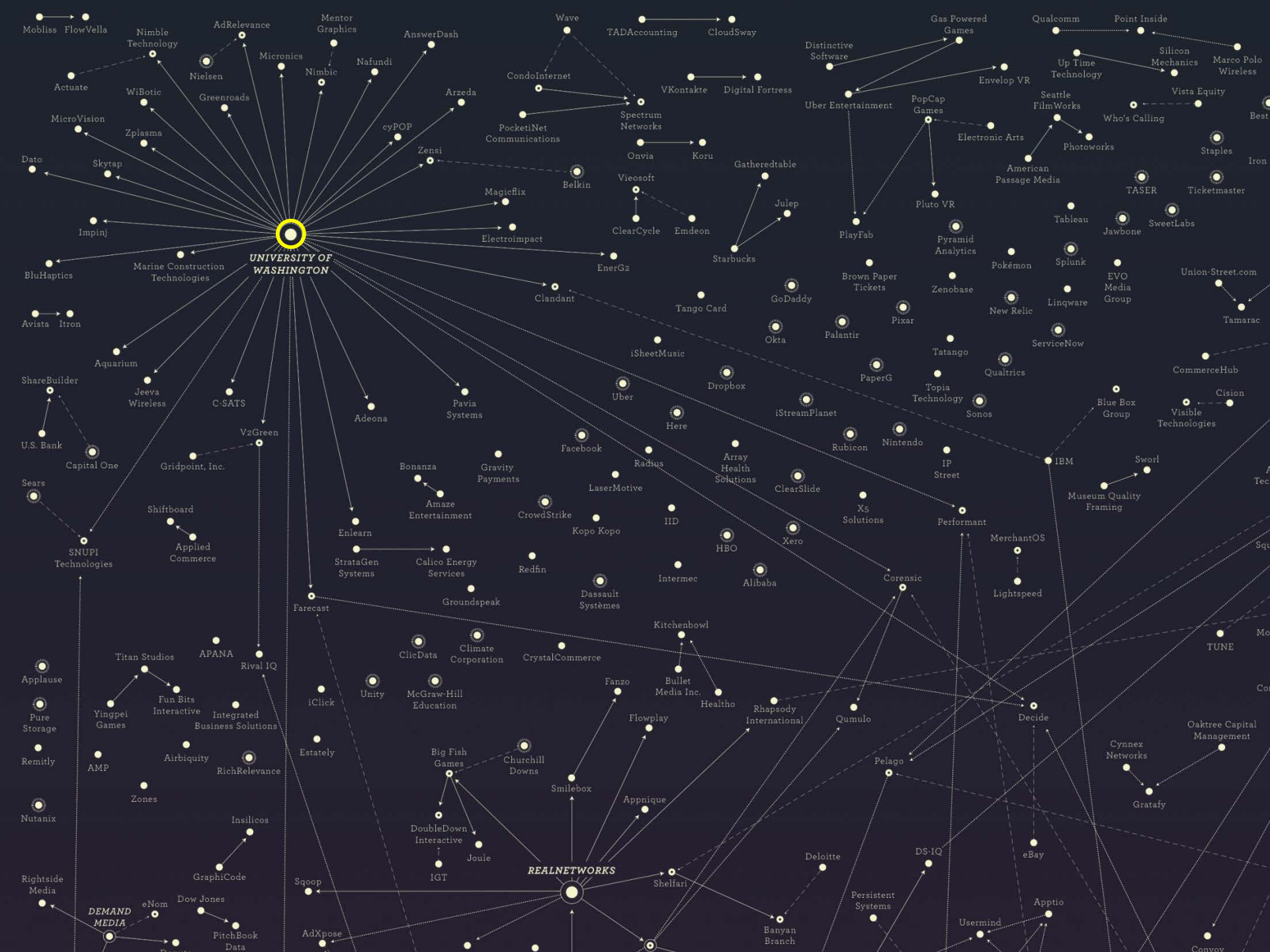
90%
Health

# Innovation District Precedents

| Institution | % of institutional land allocated to industry partnerships | District Site Area | Total GFA potential | Total GFA executed | Land Use Mix | Development Mechanism |
|---|---|---|---|---|---|---|
| **MIT** | 75 Acres<br>**30% of MIT-owned land** | **420 Acres** | **6 mil sf** | 1.5 mil sf (+8% in office, +10% in residential) | 4% Retail<br>16% Housing<br>40% Industry<br>35% Institutional<br>5% Non-Building | MITIMCO(MIT Endowment) |
| **UC - San Francisco** | 1.5 Acres<br>**2% of UCSF-owned land** | **300 Acres** | **2.67 mil sf** | 1.9 mil sf | 6% Retail<br>5% Housing<br>34% Industry<br>20% Institutional<br>35% Non-Building | Traditional university Development |
| **Cortex (St Louis U, Wash U, etc.)** | **Approximately 10% of university-owned land** | **200 Acres** | **4.5 mil sf** | 1 mil sf | 10% Retail<br>5% Housing<br>50% Industry (tech)<br>20% Institutional<br>15% Non-Building | Joint nonprofit institutional collaboration |
| **University of Pennsylvania** | 23 Acres<br>**8% of Penn-owned land** | **23 Acres** | **1.5 mil sf** | 52,000 sf | 60% Industry<br>20% Institutional<br>20% Non-Building | P3 + PIDC |
| **Drexel University** | 12.1 Acres<br>**17% of Drexel land** | **20 Acres** | **6.4 mil sf** | 528,000 sf | 5% Retail<br>4% Housing (not incl.P3)<br>15% Industry<br>50% Institutional<br>26% Non-Building | P3 - American Campus Communities + State Funding (KIZ) |

# Current Innovation Landscape in Seattle




Mobliss
FlowVella
Nimble Technology
AdRelevance
Mentor Graphics
AnswerDash
Wave
TADAccounting
CloudSway
Gas Powered Games
Qualcomm
Point Inside
Distinctive Software
Silicon Mechanics
Marco Polo Wireless
Up Time Technology
Actuate
Nielsen
Micronics
Nimbic
Nafundi
CondoInternet
VKontakte
Digital Fortress
Envelop VR
Uber Entertainment
Vista Equity
WiBotic
Greenroads
Arzeda
Spectrum Networks
PopCap Games
Seattle FilmWorks
Who's Calling
Best
MicroVision
Zplasma
cyPOP
PocketiNet Communications
Electronic Arts
Photoworks
Dato
Skytap
Zensi
Onvia
Koru
Staples
Iron
Belkin
Gatheredtable
American Passage Media
TASER
Ticketmaster
Vieosoft
Magicflix
Julep
Pluto VR
Impinj
ClearCycle
Emdeon
Tableau
Jawbone
SweetLabs
Electroimpact
PlayFab
Pyramid Analytics
Starbucks
BluHaptics
Marine Construction Technologies
UNIVERSITY OF WASHINGTON
EnerG2
Pokémon
Splunk
Union-Street.com
Brown Paper Tickets
Zenobase
EVO Media Group
Clandant
Tango Card
GoDaddy
New Relic
Linqware
Tamarac
Avista
Itron
Pixar
Okta
Palantir
ServiceNow
Tatango
Aquarium
iSheetMusic
Qualtrics
CommerceHub
PaperG
Dropbox
Topia Technology
Cision
ShareBuilder
Jeeva Wireless
C-SATS
Uber
Sonos
Blue Box Group
Visible Technologies
Pavia Systems
Adeona
Here
iStreamPlanet
U.S. Bank
Capital One
V2Green
Facebook
Rubicon
Nintendo
IBM
Sworl
Gridpoint, Inc.
Radius
Array Health Solutions
IP Street
Museum Quality Framing
Bonanza
Gravity Payments
ClearSlide
Sears
Amaze Entertainment
LaserMotive
Shiftboard
CrowdStrike
X5 Solutions
Performant
Enlearn
IID
Kopo Kopo
Xero
Applied Commerce
HBO
MerchantOS
SNUPI Technologies
StrataGen Systems
Calico Energy Services
Redfin
Intermec
Alibaba
Lightspeed
Corensic
Dassault Systèmes
Groundspeak
Farecast
Kitchenbowl
TUNE
ClicData
Climate Corporation
CrystalCommerce
APANA
Titan Studios
Rival IQ
Applause
Fanzo
Bullet Media Inc.
Healtho
Unity
McGraw-Hill Education
iClick
Rhapsody International
Qumulo
Decide
Pure Storage
Yingpei Games
Fun Bits Interactive
Integrated Business Solutions
Flowplay
Oaktree Capital Management
Remitly
Estately
Big Fish Games
Churchill Downs
Pelago
Cynnex Networks
AMP
Airbiquity
RichRelevance
Smilebox
Gratafy
Zones
Appnique
Nutanix
DoubleDown Interactive
Insilicos
Joule
eBay
GraphiCode
IGT
DS-IQ
Deloitte
REALNETWORKS
Rightside Media
Sqoop
Shelfari
Persistent Systems
Apptio
DEMAND MEDIA
eNom
Dow Jones
Banyan Branch
Usermind
AdXpose
PitchBook Data
Convoy

# Current Innovation Landscape at UW

**UW ranked as the most innovative public university by Reuters (Sept 2015)**

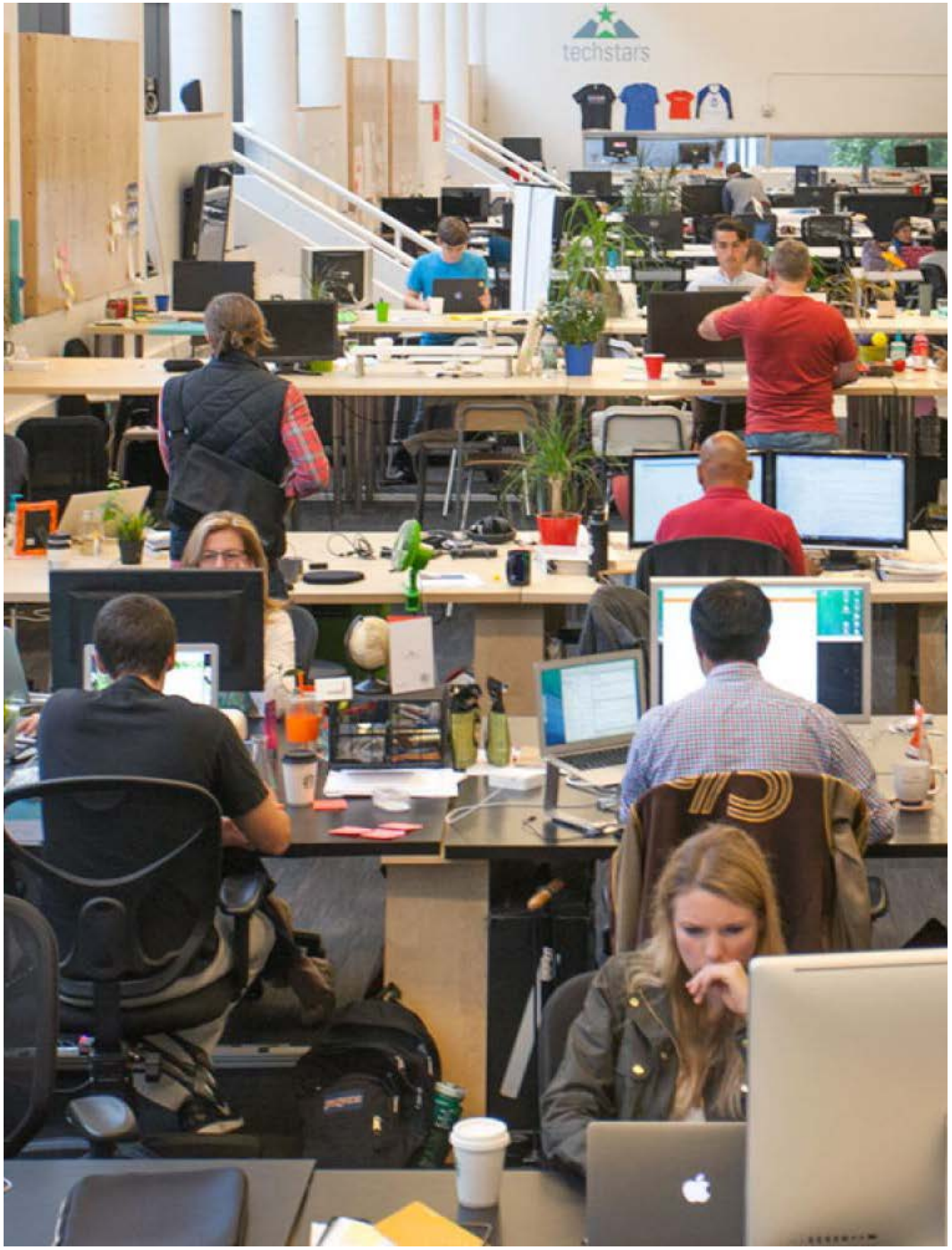
UW is the top recipient in the nation among public universities for federal research dollars and second overall; it generates $12.5 billion in economic impact for the state and ranks among the top universities for tech startups

Establishment of Comotion

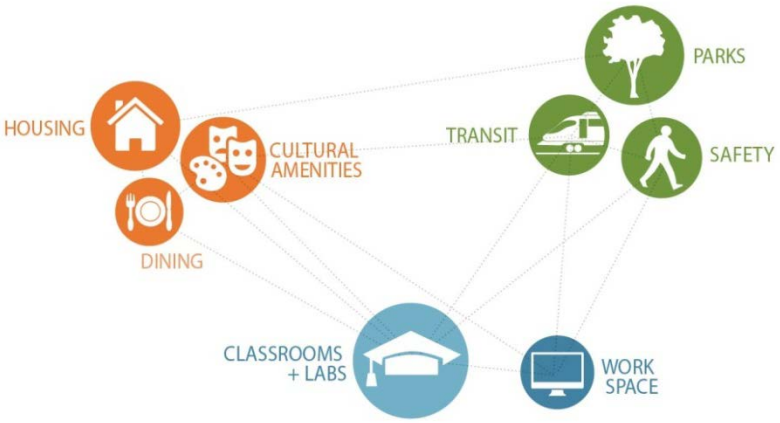
Global Innovation Exchange opening in Fall 2016

In 2014 **18 new startups** based on UW research technologies were launched

Totally **103 startups** launched



# Mixed Use versus Innovation District



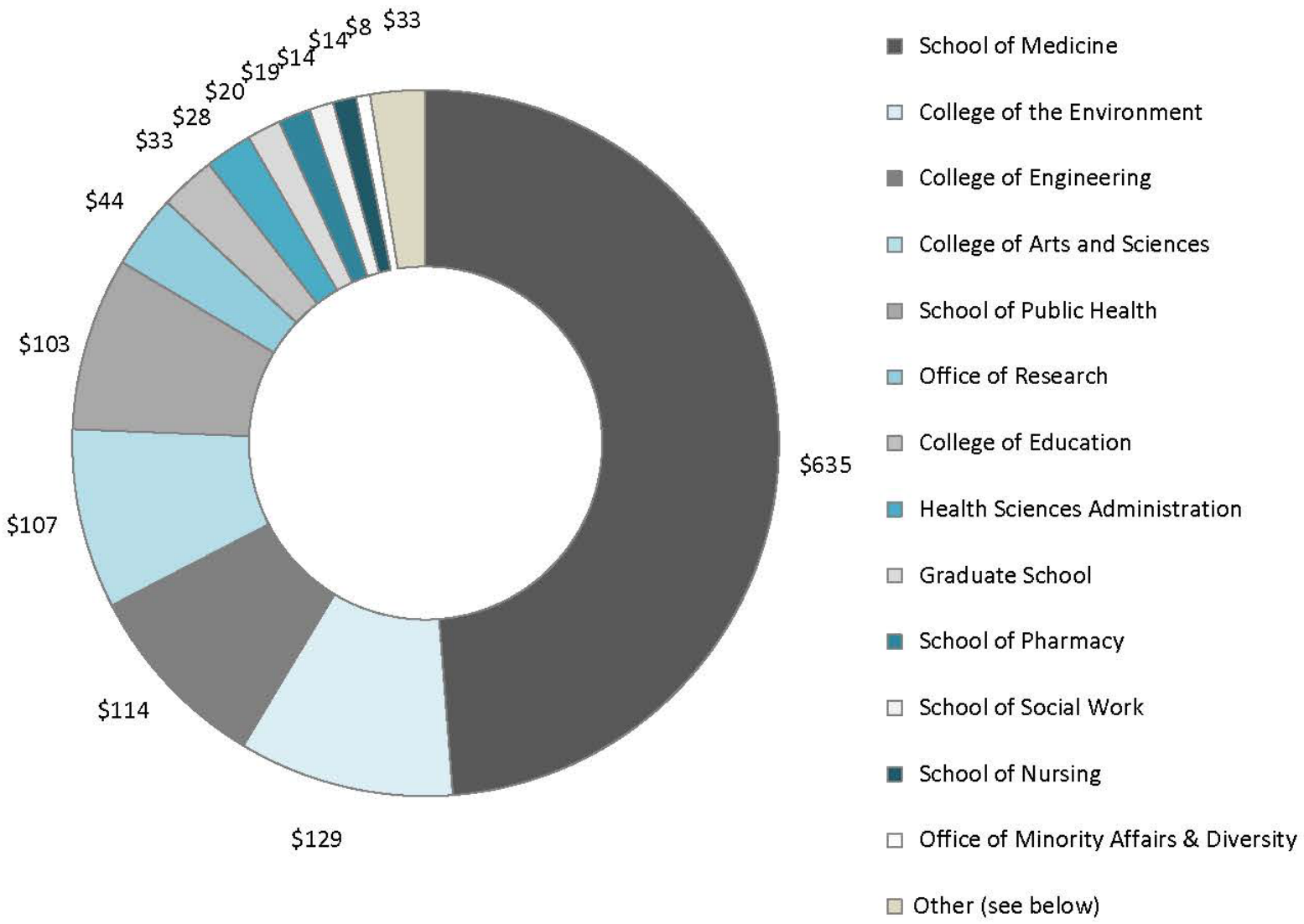

Mixed Use District

Innovation District

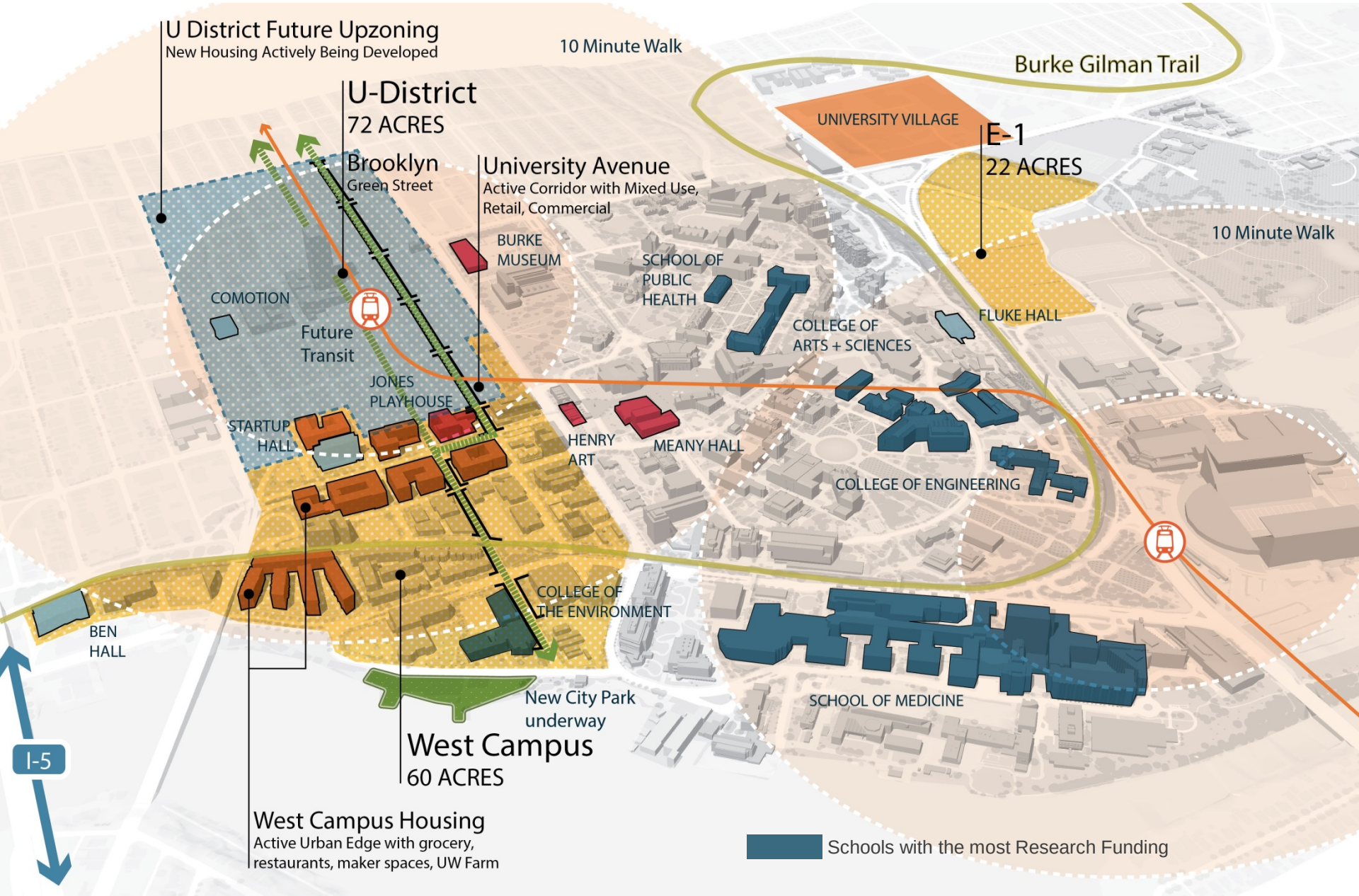
**Innovation districts primarily focus on production by capitalizing on programmatic synergies and fostering collaboration**

# Schools with the most Research Funding

GRANT AND CONTRACT AWARDS BY COLLEGE/DEPARTMENT, IN MILLIONS, FY 2015



# Innovation District Potential at UW



# Innovation District Potential at UW

# Innovation District Ingredients - Livability

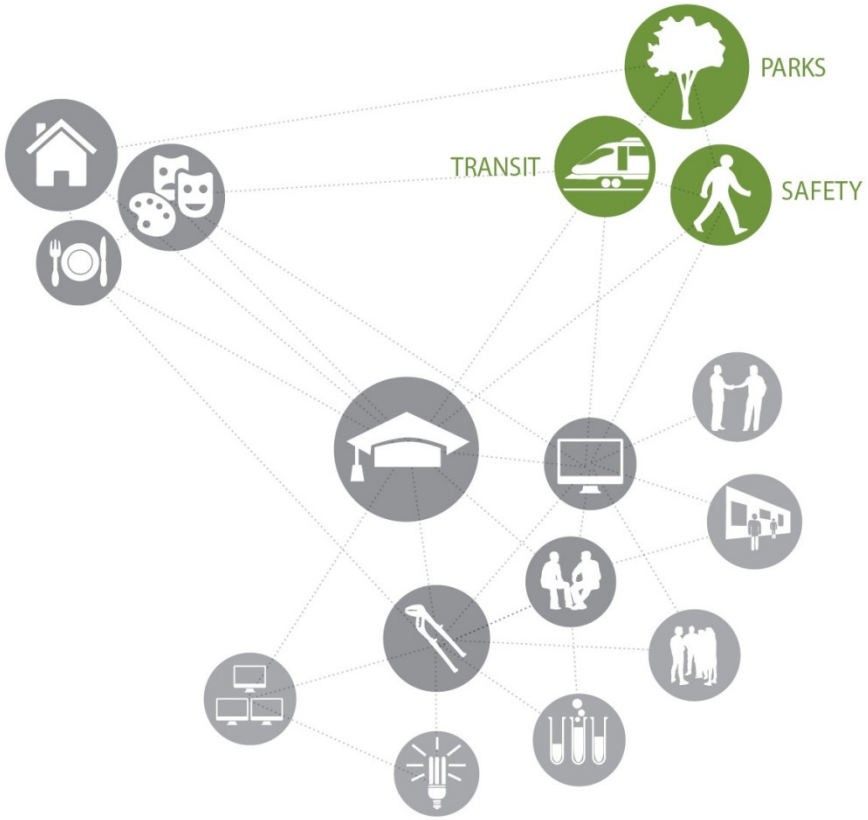
## HOUSING
LIVE/WORK
MULTI-FAMILY
PROXIMITY
STUDENT HOUSING MIX

## FOOD
CAFES
BARS
FOOD TRUCKS
RESTAURANTS

## CULTURAL AMENITIES
PERFORMANCES
PUBLIC ART
STUDIOS/ GALLERIES
INSTALLATIONS
GAME DAY

## COMMUNITY SPACES
SCHOOLS
DAYCARES
RECREATION CENTERS
YOUTH CENTERS

# Innovation District Ingredients – Public Realm




## PUBLIC SPACES

PLAZAS
GREEN SPACES
PLAYGROUNDS
RECREATION
WATERFRONT

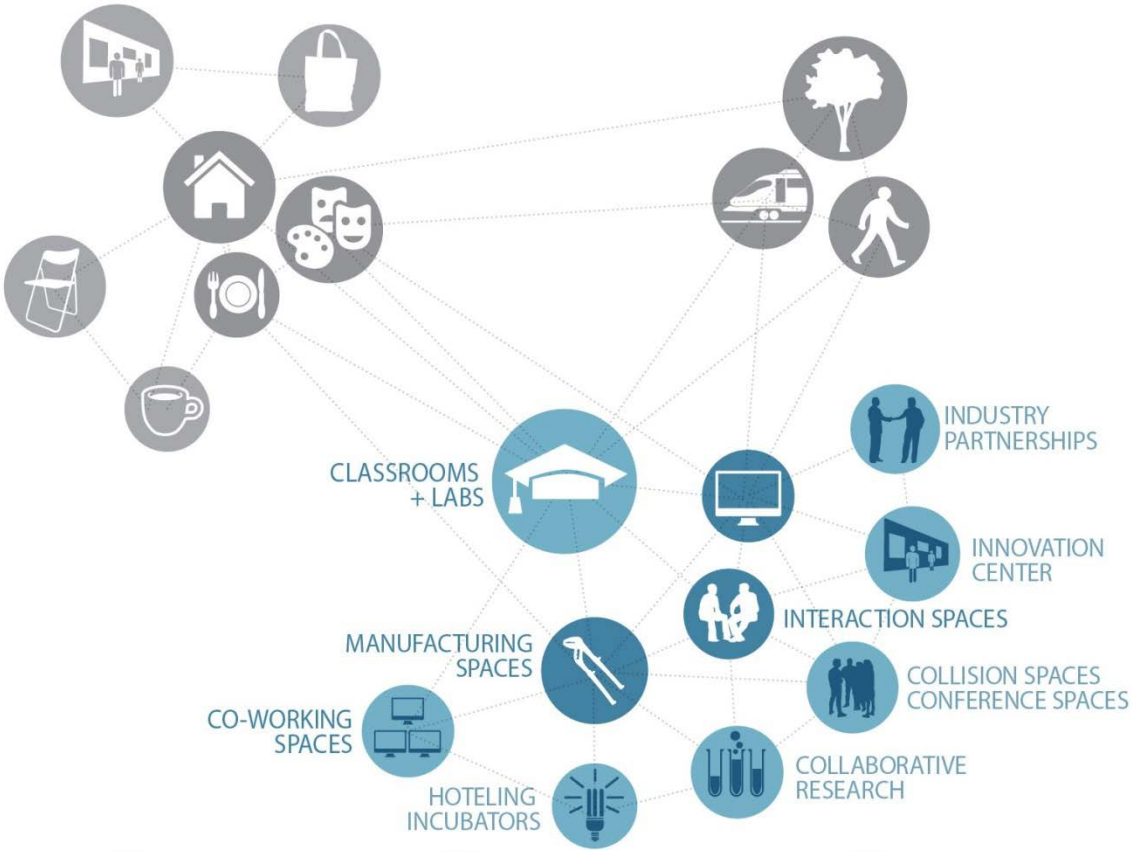
## ACCESS

PEDESTRIAN FRIENDLY STREETS
BIKE LANES
COMPLETE STREETS
RELIABLE TRANSIT CONNECTIONS
ACCESSIBLE ROUTES

## SAFETY

EYES ON THE STREET
LIGHTING
ACTIVE STREET EDGESE34

# Innovation District Ingredients – Innovation




## LEARNING SPACES

HIGH QUALITY TEACHING + RESEARCH SPACES
FACULTY SPACES
STUDENT MENTORING
ENTREPRENEURSHIP SPACES

## WORK PLACES

INDUSTRY OFFICE SPACES
CO-WORK SPACES

## COLLAB SPACES

INDUSTRY INTERACTION SPACES
CORE LABS
START-UP SPACES
STUDENT SPACES
INNOVATION CENTER
MAKER SPACES

## MANUFACTURING SPACES

ADVANCED MANUFACTURING
FABRICATION LABS
TESTING SPACES

## INDUSTRY SUPPORT

WORK HOTELING
CONFERENCE SPACES
WORK-STUDY
BUSINESS INCUBATORS

# Innovation Districts Ingredients

## PUBLIC SPACES

PLAZAS
GREEN SPACES
PLAYGROUNDS
RECREATION
WATERFRONT

## ACCESS

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BIKE LANES
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RELIABLE TRANSIT CONNECTIONS
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EYES ON THE STREET
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ACTIVE STREET EDGES

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PROXIMITY
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## FOOD

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STUDIOS/ GALLERIES
INSTALLATIONS
GAME DAY

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SCHOOLS
DAYCARES
RECREATION CENTERS
YOUTH CENTERS

## LEARNING SPACES

HIGH QUALITY TEACHING + RESEARCH SPACES
FACULTY SPACES
STUDENT MENTORING
ENTREPRENEURSHIP SPACES

## WORK PLACES

INDUSTRY OFFICE SPACES
CO-WORK SPACES

## COLLAB SPACES

INDUSTRY INTERACTION
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## MANUFACTURING SPACES

ADVANCED MANUFACTURING
FABRICATION LABS
TESTING SPACES

## INDUSTRY SUPPORT

WORK HOTELING
CONFERENCE SPACES
WORK-STUDY
BUSINESS INCUBATORS

# UW Initiatives To-Date

## PUBLIC SPACES
**PLAZAS**
**GREEN SPACES**
PLAYGROUNDS
**RECREATION**
WATERFRONT

## ACCESS
**PEDESTRIAN FRIENDLY STREETS**
**BIKE LANES**
COMPLETE STREETS
RELIABLE TRANSIT CONNECTIONS
**ACCESSIBLE ROUTES**

## SAFETY
**EYES ON THE STREET**
LIGHTING
**ACTIVE STREET EDGES**

## HOUSING
LIVE/WORK
MULTI-FAMILY
**PROXIMITY**
**STUDENT HOUSING MIX**

## FOOD
CAFES
BARS
**FOOD TRUCKS**
**RESTAURANTS**

## CULTURAL AMENITIES
**PERFORMANCES**
**PUBLIC ART**
**STUDIOS/ GALLERIES**
**INSTALLATIONS**
**GAME DAY**

## COMMUNITY SPACES
**SCHOOLS**
**DAYCARES**
RECREATION CENTERS
YOUTH CENTERS

## LEARNING SPACES
**HIGH QUALITY TEACHING + RESEARCH SPACES**
FACULTY SPACES
STUDENT MENTORING
ENTREPRENEURSHIP SPACES

## WORK PLACES
INDUSTRY OFFICE SPACES
CO-WORK SPACES

## COLLAB SPACES
INDUSTRY INTERACTION
CORE LABS
**START-UP SPACES**
**STUDENT SPACES**
INNOVATION CENTER
**MAKER SPACES**

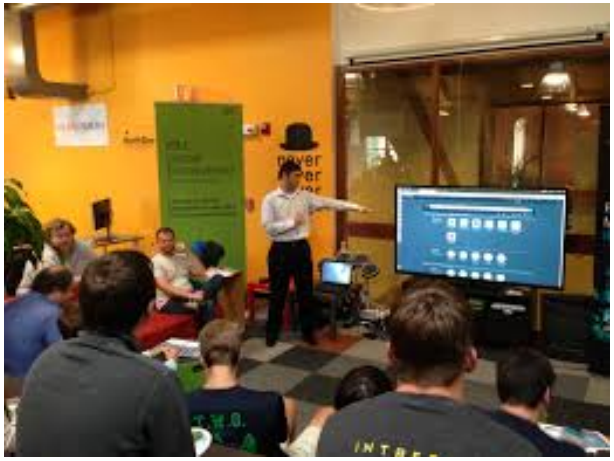
## MANUFACTURING SPACES
ADVANCED MANUFACTURING
FABRICATION LABS
TESTING SPACES

## INDUSTRY SUPPORT
WORK HOTELING
CONFERENCE SPACES
WORK-STUDY
BUSINESS INCUBATORS

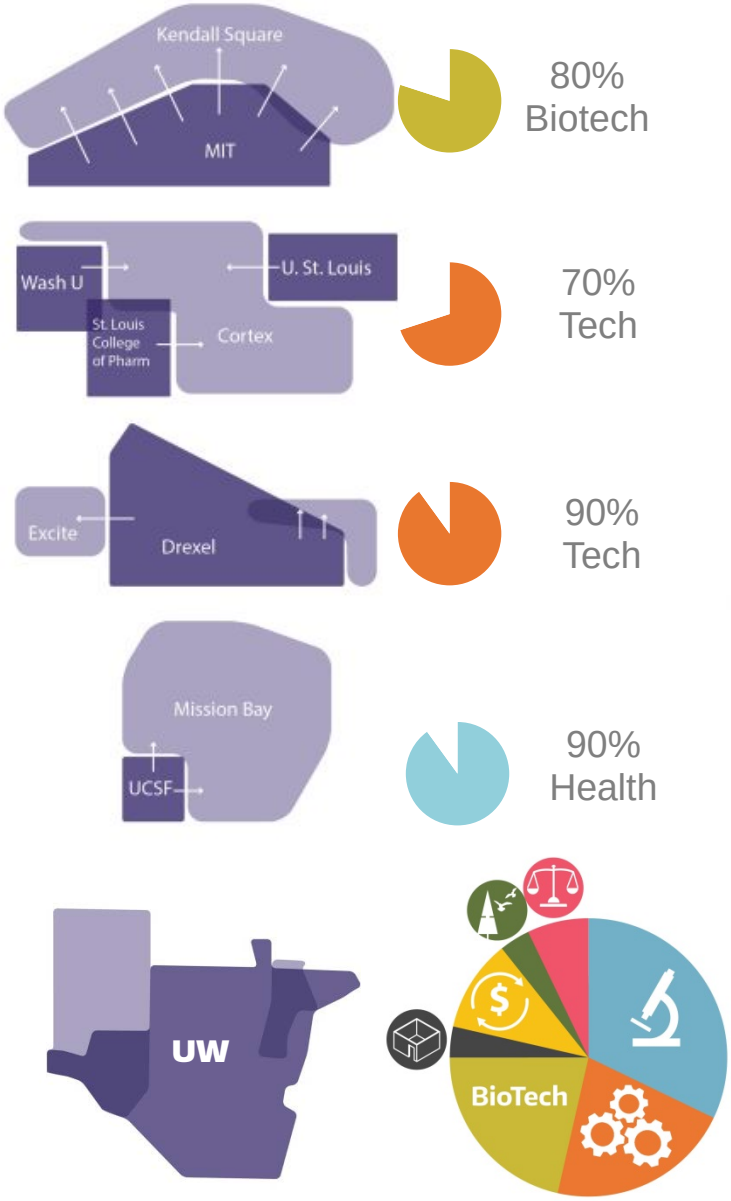
# Innovation Centers

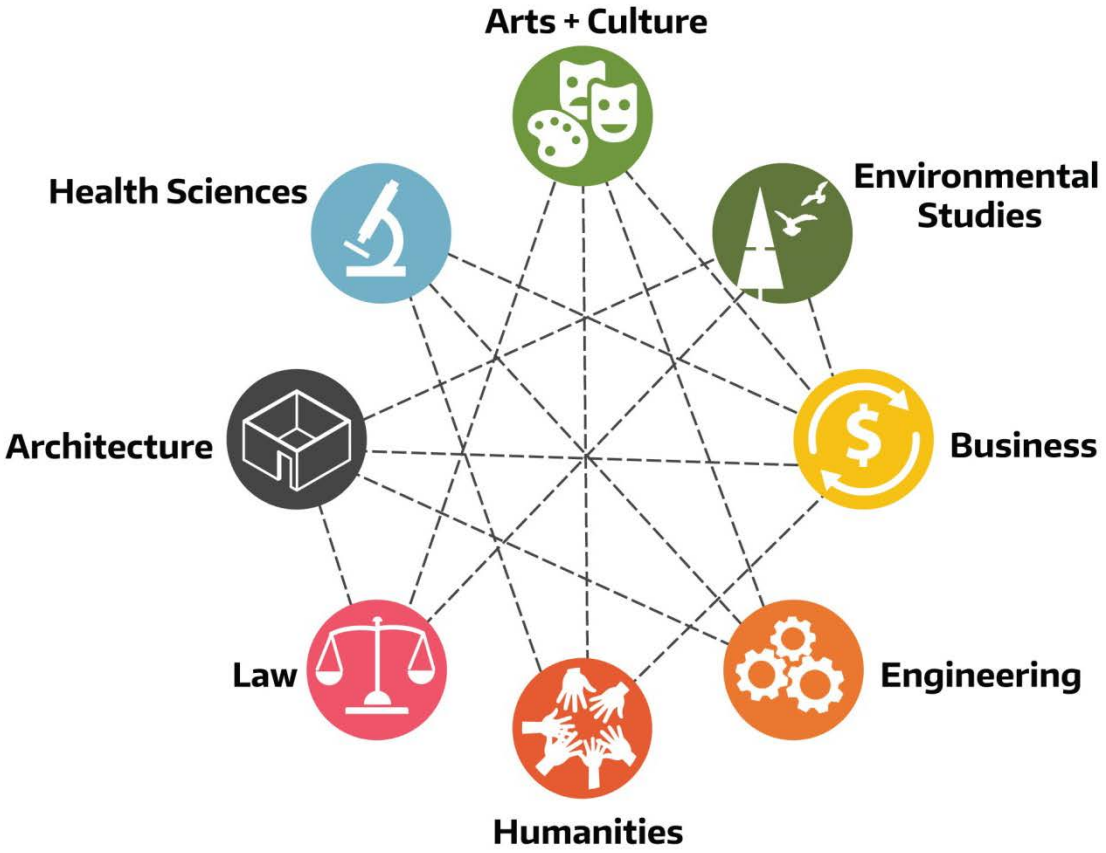
| Institution | Industry Focus | Innovation Center | Program | IC Size (sf) |
|---|---|---|---|---|
| **MIT** | Biotech | Deshpande Center for Innovation | **Hoteling spaces, offices, conference rooms - on MIT Campus** | - |
| **Cortex** | Technology | TechShop<br>Cambridge Innovation Center | **TechShop – Maker spaces (membership system)**<br>**CIC St. Louis - Workspaces, kitchen, conference rooms**<br>**Venture Café – programmed café for start-ups and existing area companies and employees** | 16,000 to 22,000 |
| **Drexel University** | Technology | Excite Center | **Classrooms, Technology/Maker spaces, Offices** | 11,000 |
| **UC - San Francisco** | Health Sciences | Various: QB3, CoLaborator, US Innovation Center | **Private office suites, labs, conference rooms, event spaces, co-working spaces with 200 desks for startups** | 15,000 SF each |
| **University of Pennsylvania** | Science & Health Science | Pennovation Center | **Bio-tech incubator spaces, labs, office space, access to QB3 network** | 52,000 |
| **University of Washington** | **Hybrid** | **New Ventures Facility + Start Up Hall** | | **35,000** |

# Innovation Centers

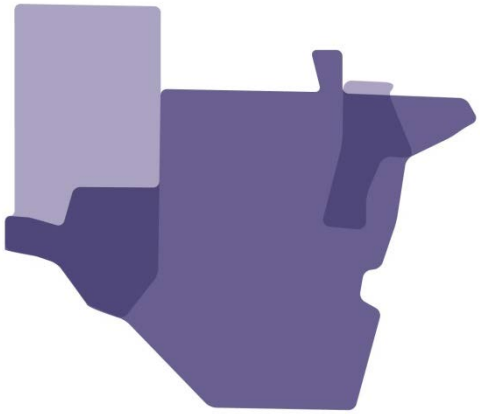


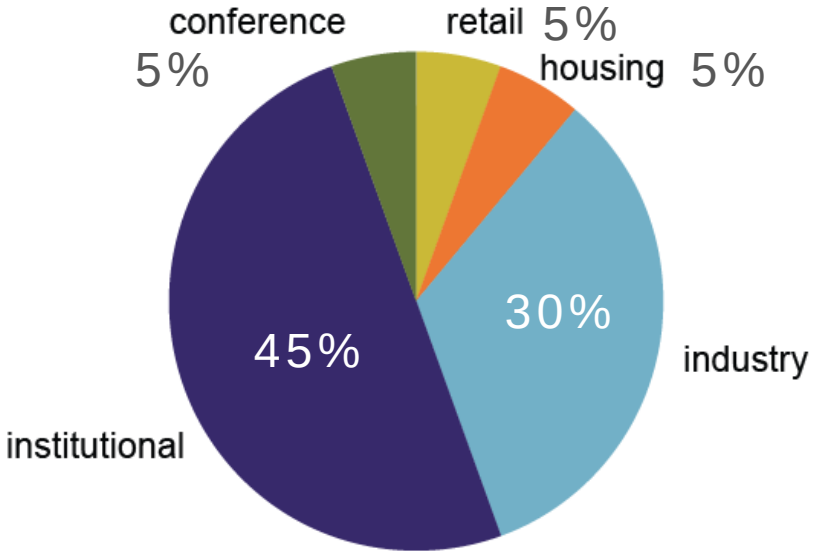
# Multidisciplinary Innovation District



# Components of the Innovation District at UW






## West Campus

60 Acres, 3.7 million GFA

## East Campus (E1)

22 Acres

# 4 CAMPUS FRAMEWORK

big ideas

public realm framework

circulation framework

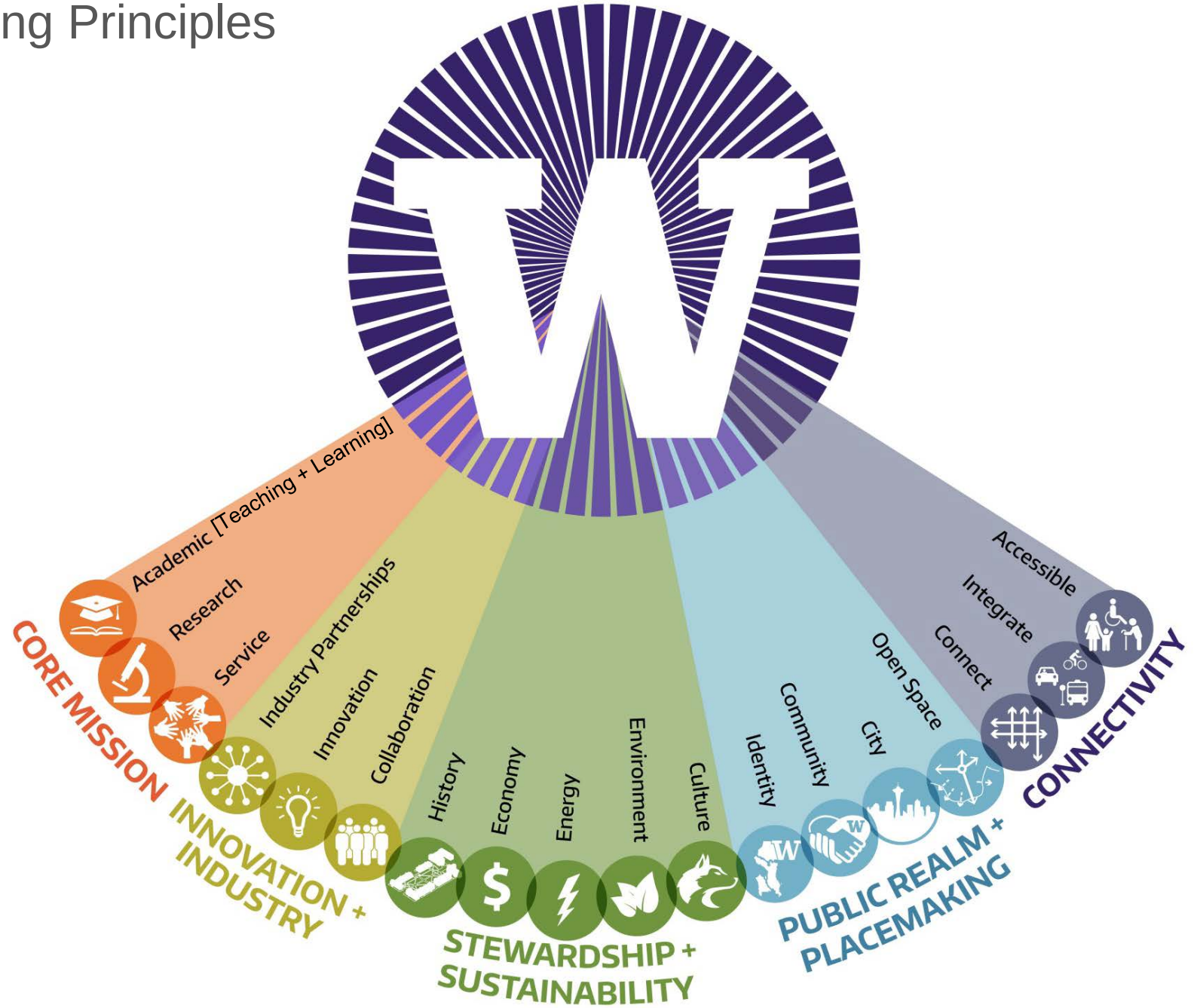
built environment framework

infrastructure

# Opportunities

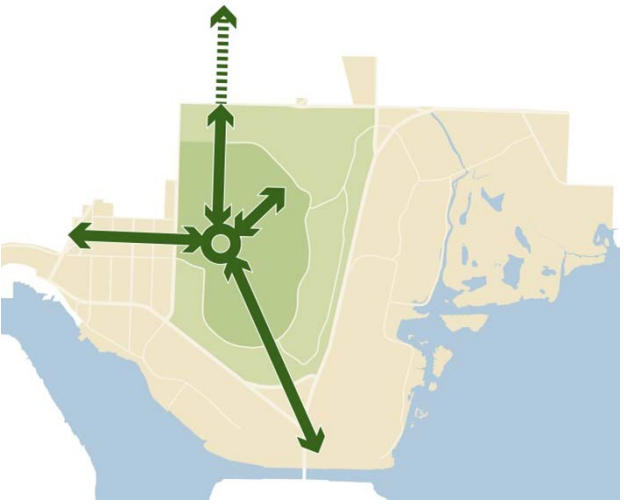
- Pedestrian Connections
- Major Road
- Stevens Way
- Burke Gilman Trail
- Retaining Wall
- Building Edges
- Waterfront
- Steep Slope

# Guiding Principles



# big ideas

# Conceptual Strategies



Organizational Axes

Existing Primary Open Spaces

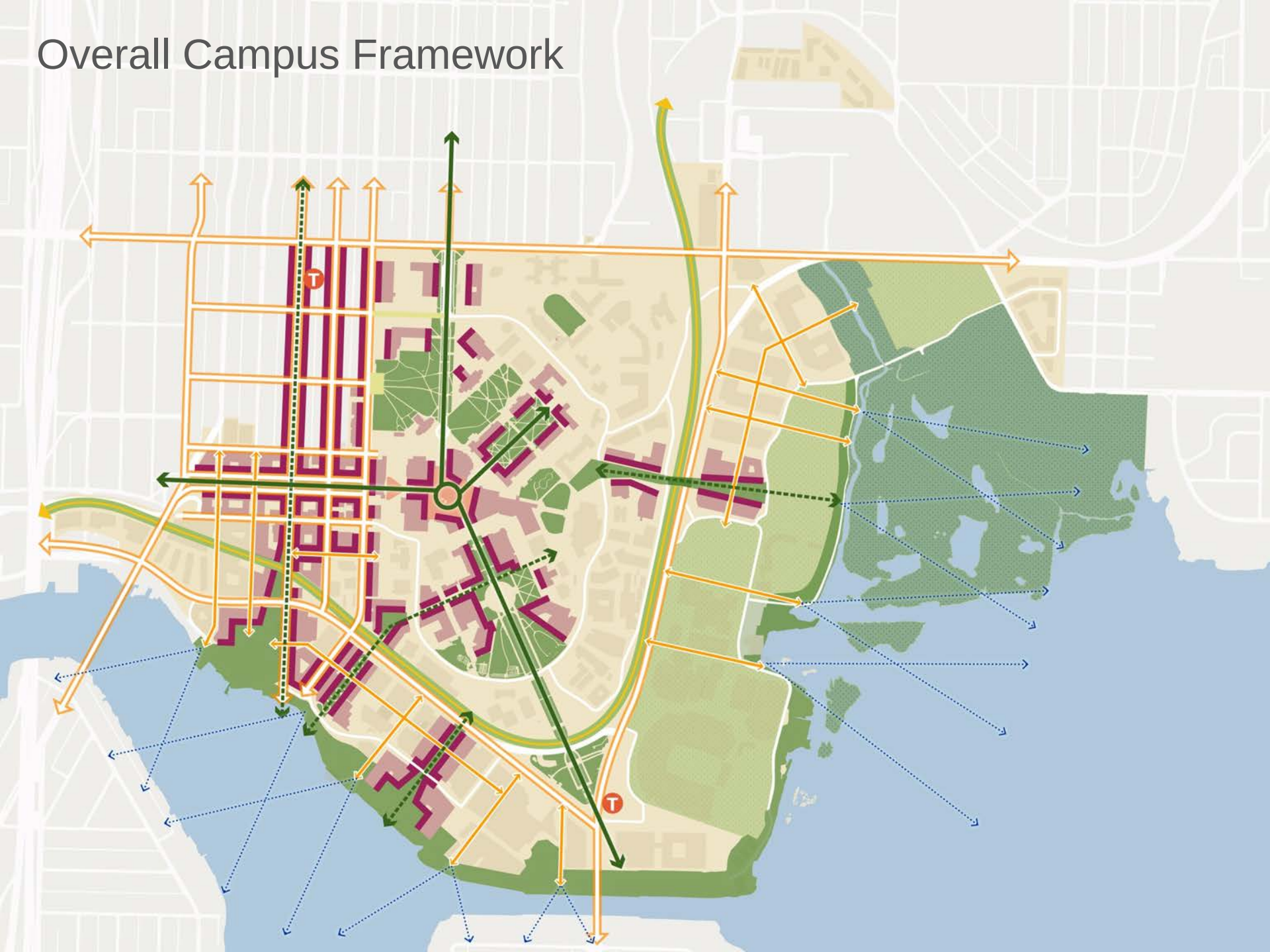
Primary Open Space Interventions

Connecting to the Shoreline

Integration with the City

Activating the Public Realm

# Overall Campus Framework

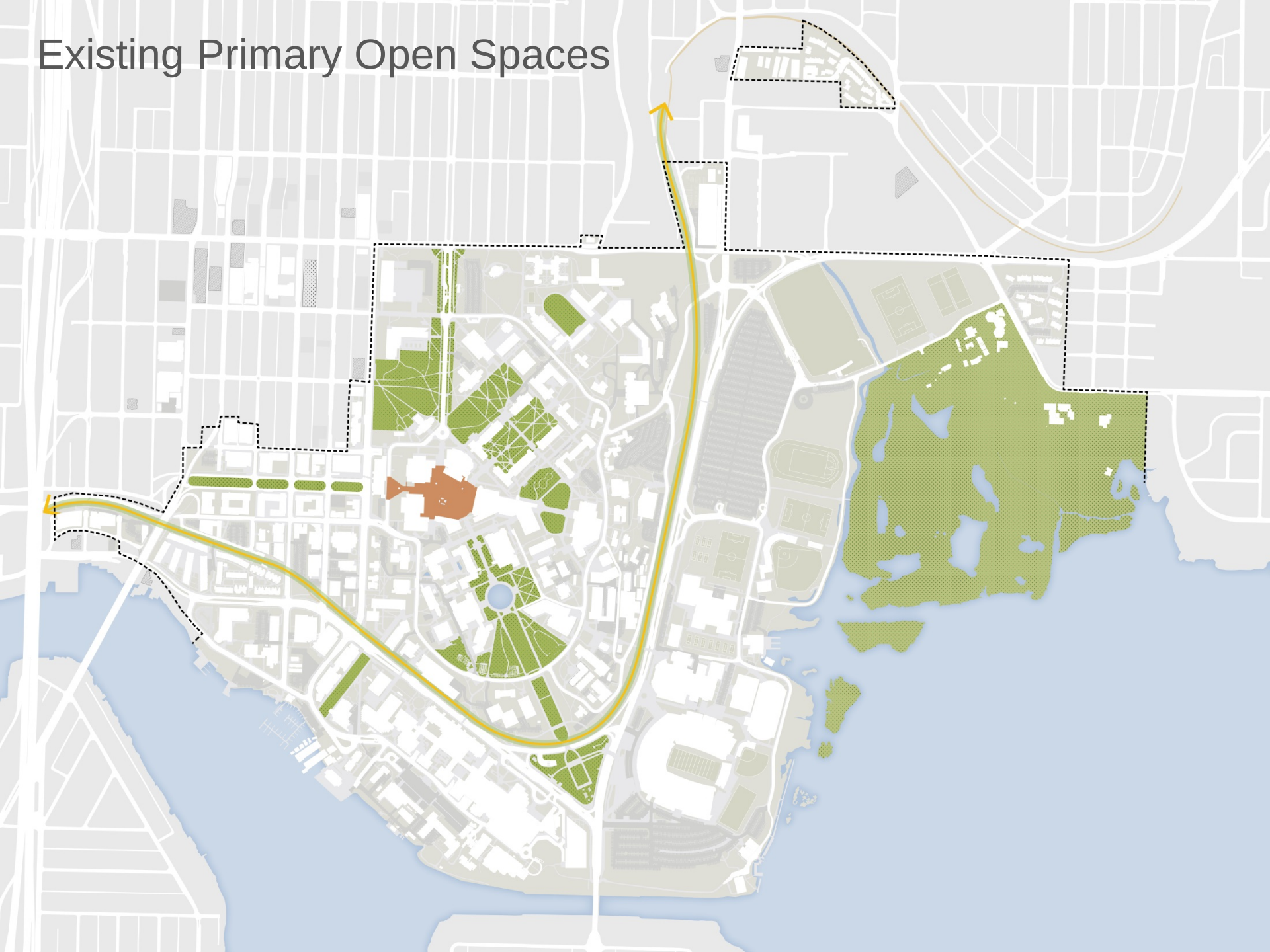


# Proposed Building Fabric

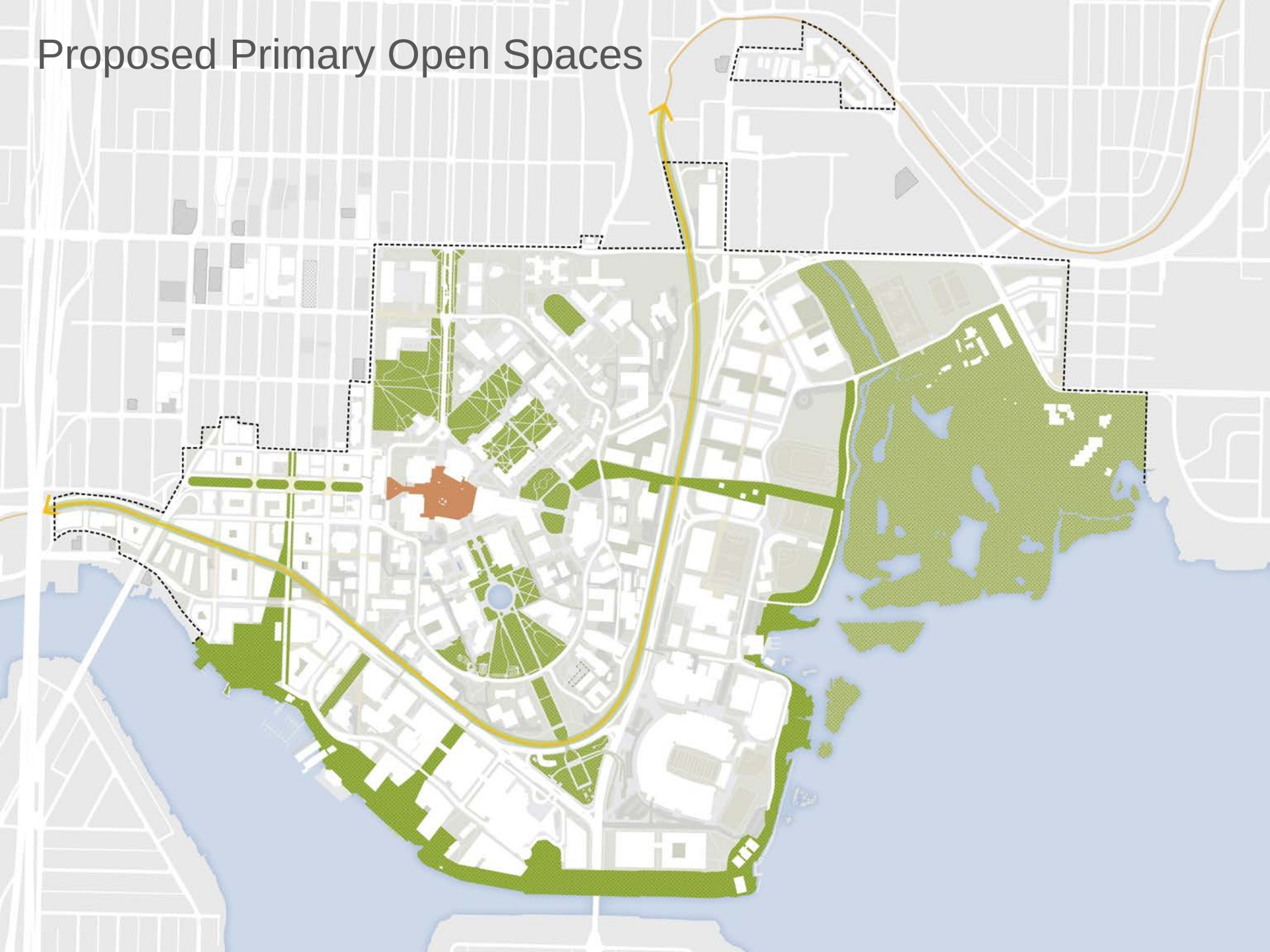
# public realm framework

# Organizational Axes

# Existing Primary Open Spaces

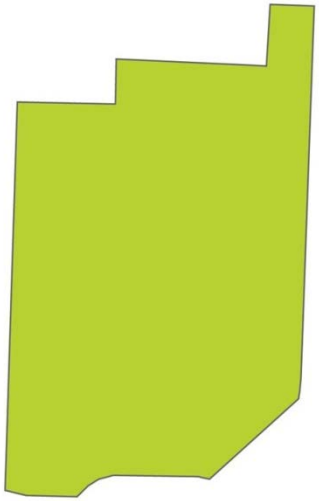


# Proposed Primary Open Spaces



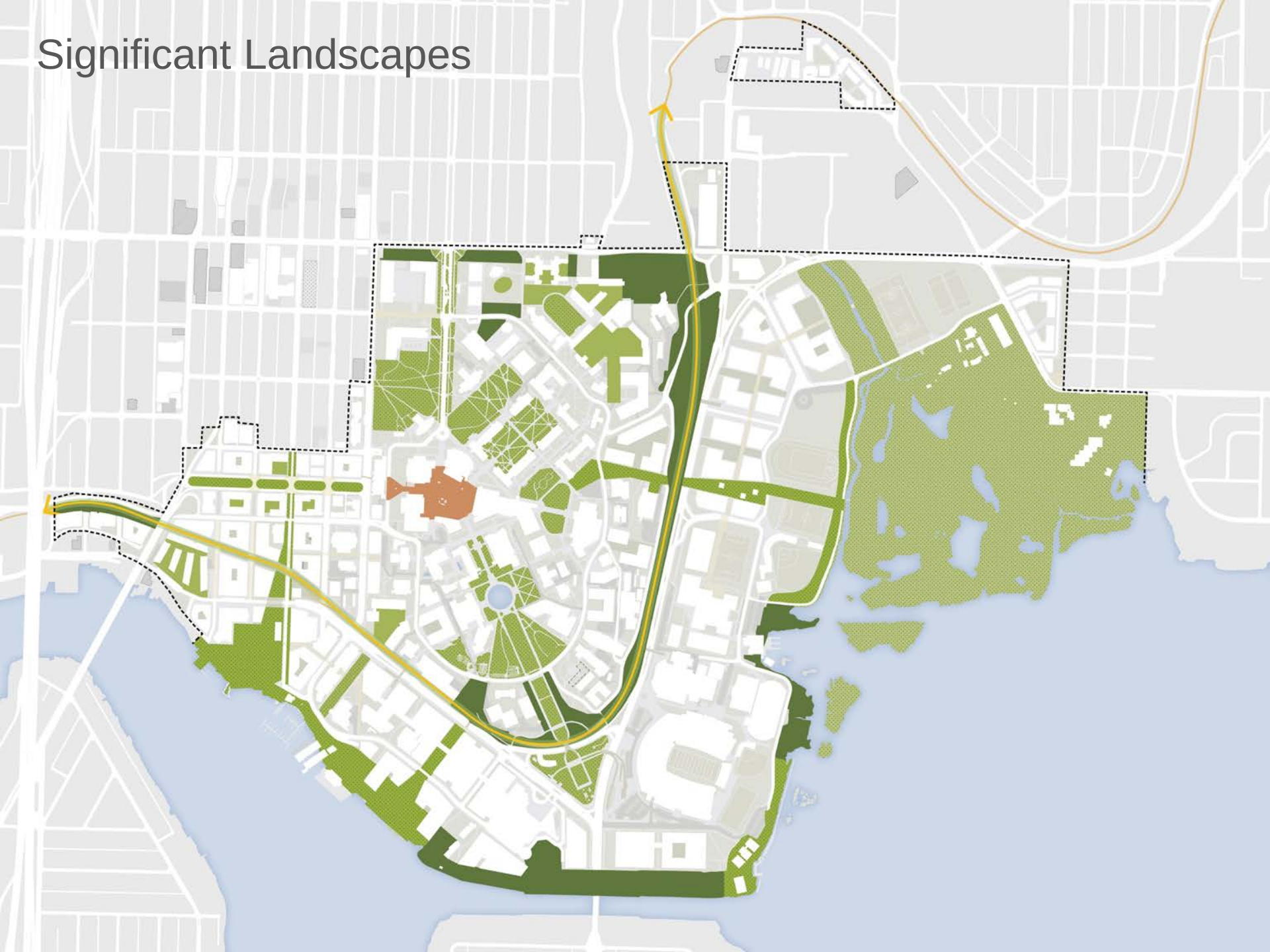
# Proposed Waterfront Park

**Waterfront Park** – 7.0 acres

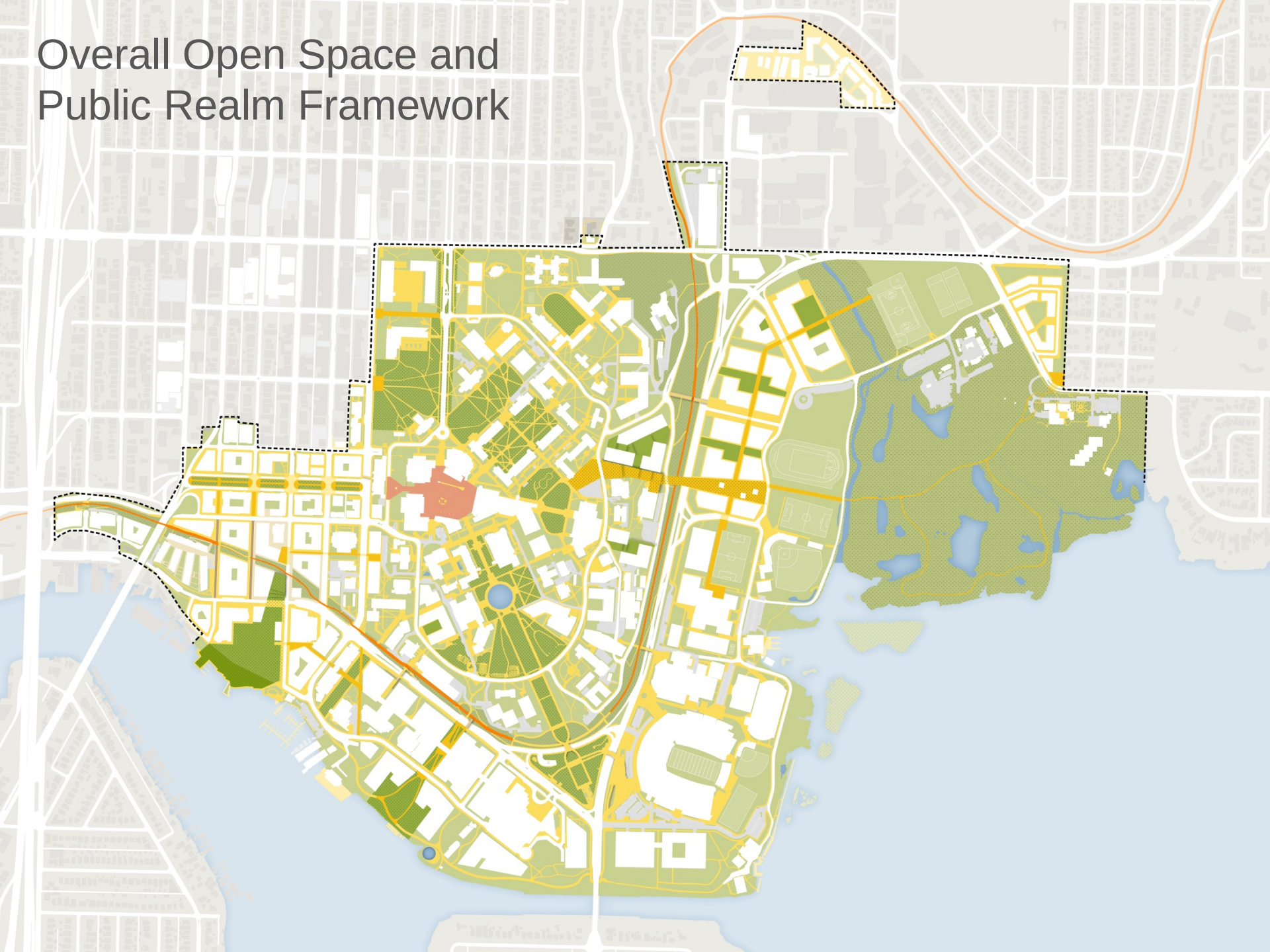


**Parrington Lawn** – 7.8 acres

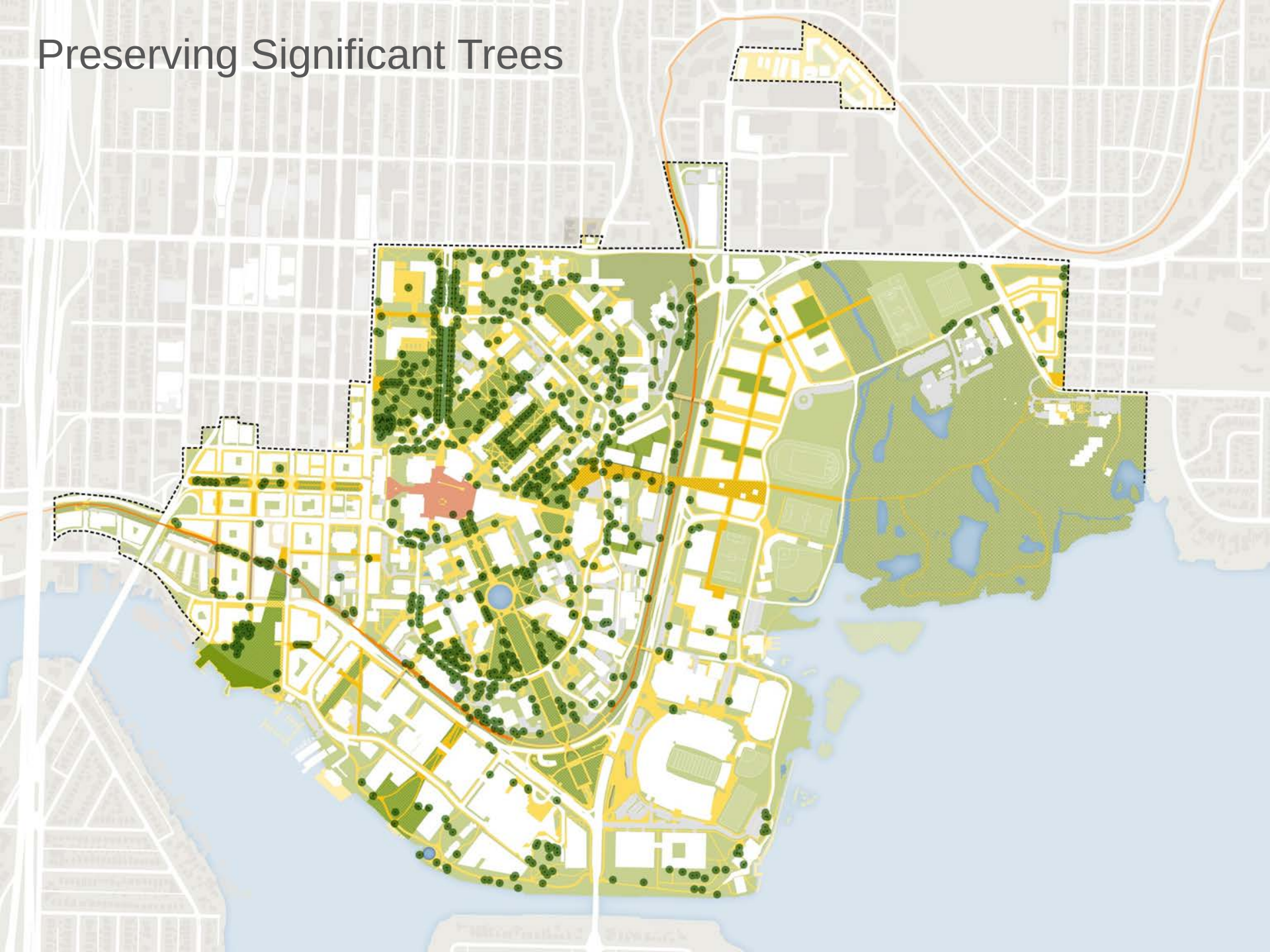
# Significant Landscapes



# Overall Open Space and Public Realm Framework



# Preserving Significant Trees



# Pedestrian Circulation

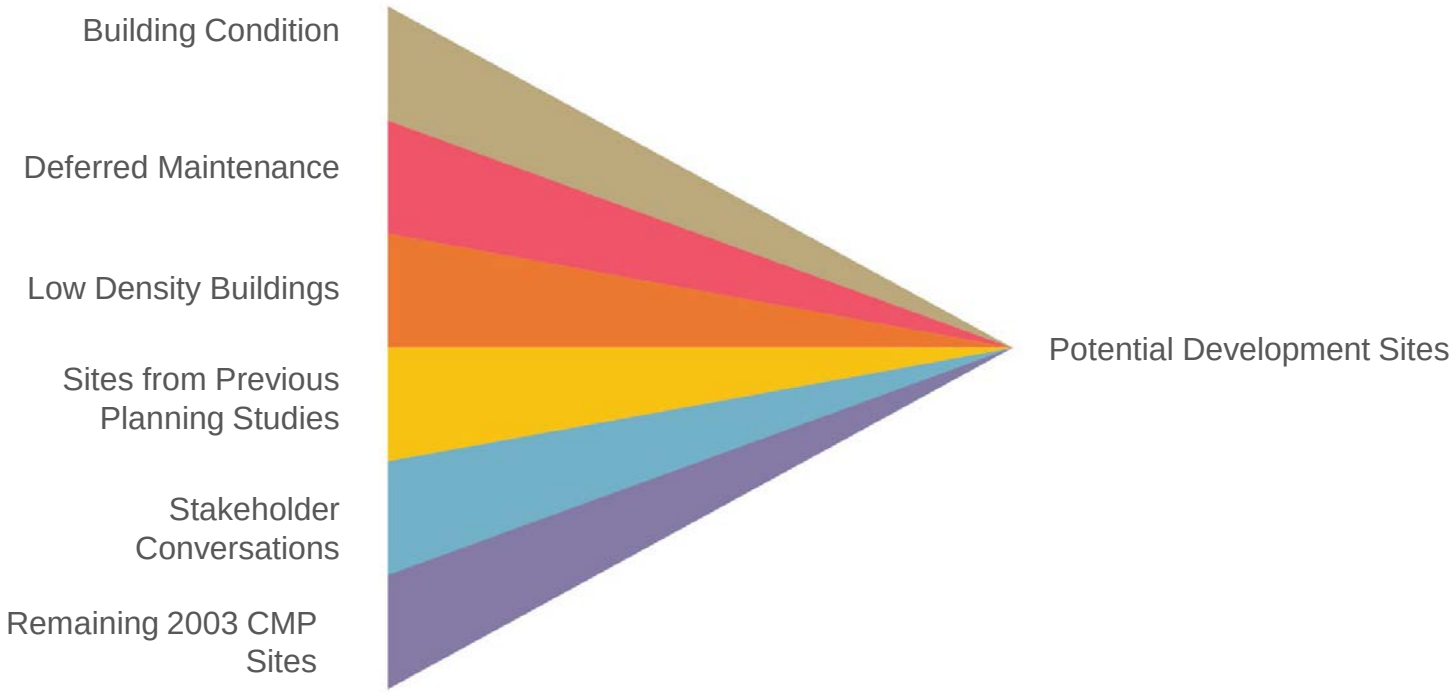
Major

Minor

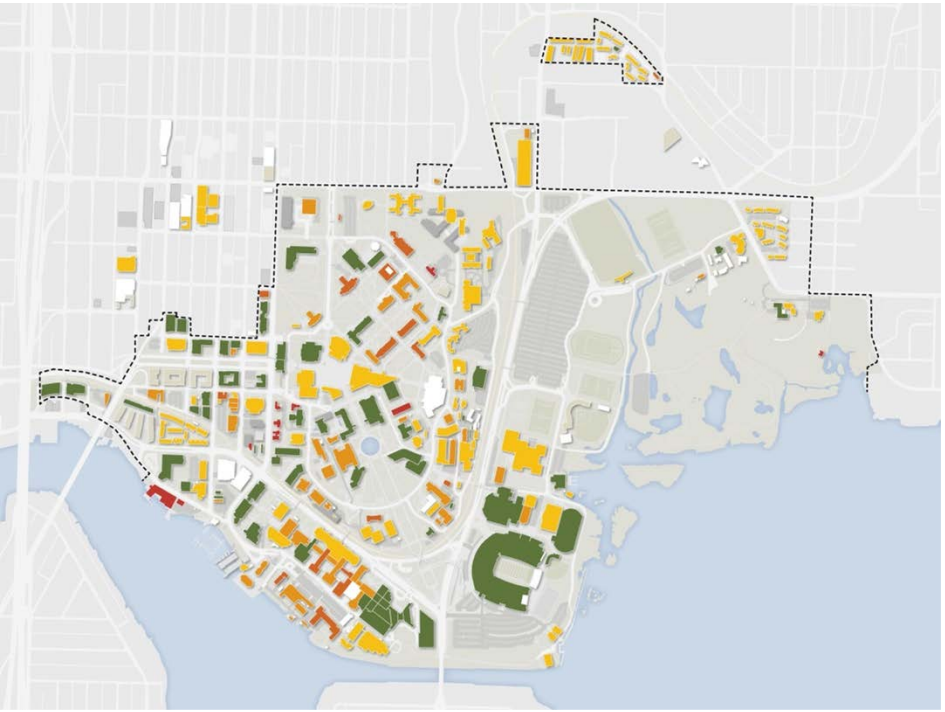
Connector

# built environment framework

# Rationale for Development Sites



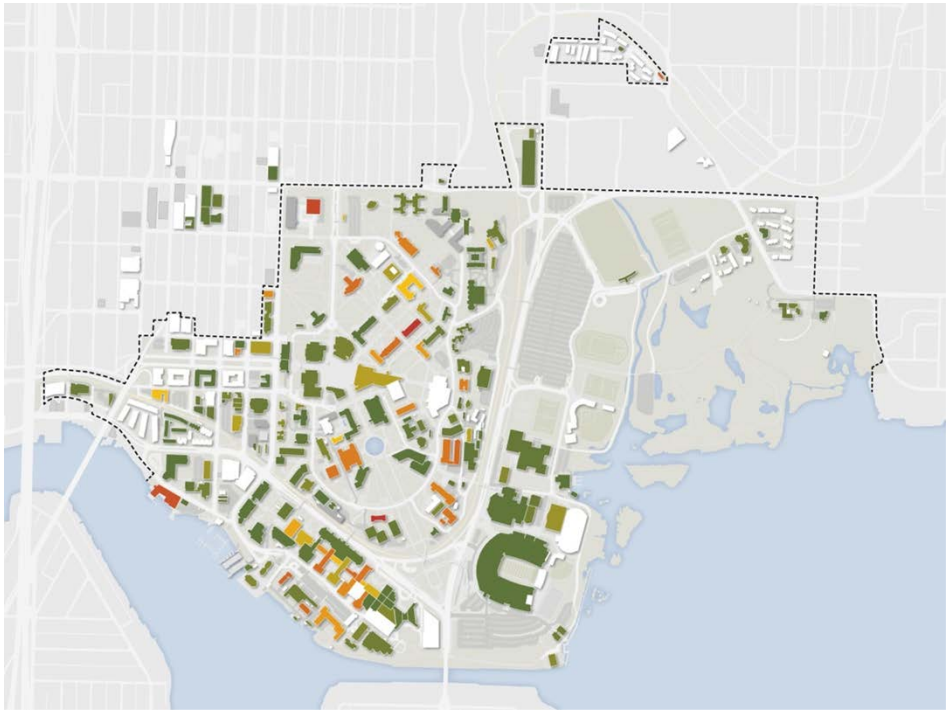
# Rationale for Development Sites:
# Deferred Maintenance & Building Condition



**Building Condition**

Good Condition (5 FIS)

Worse Condition (1 FIS)



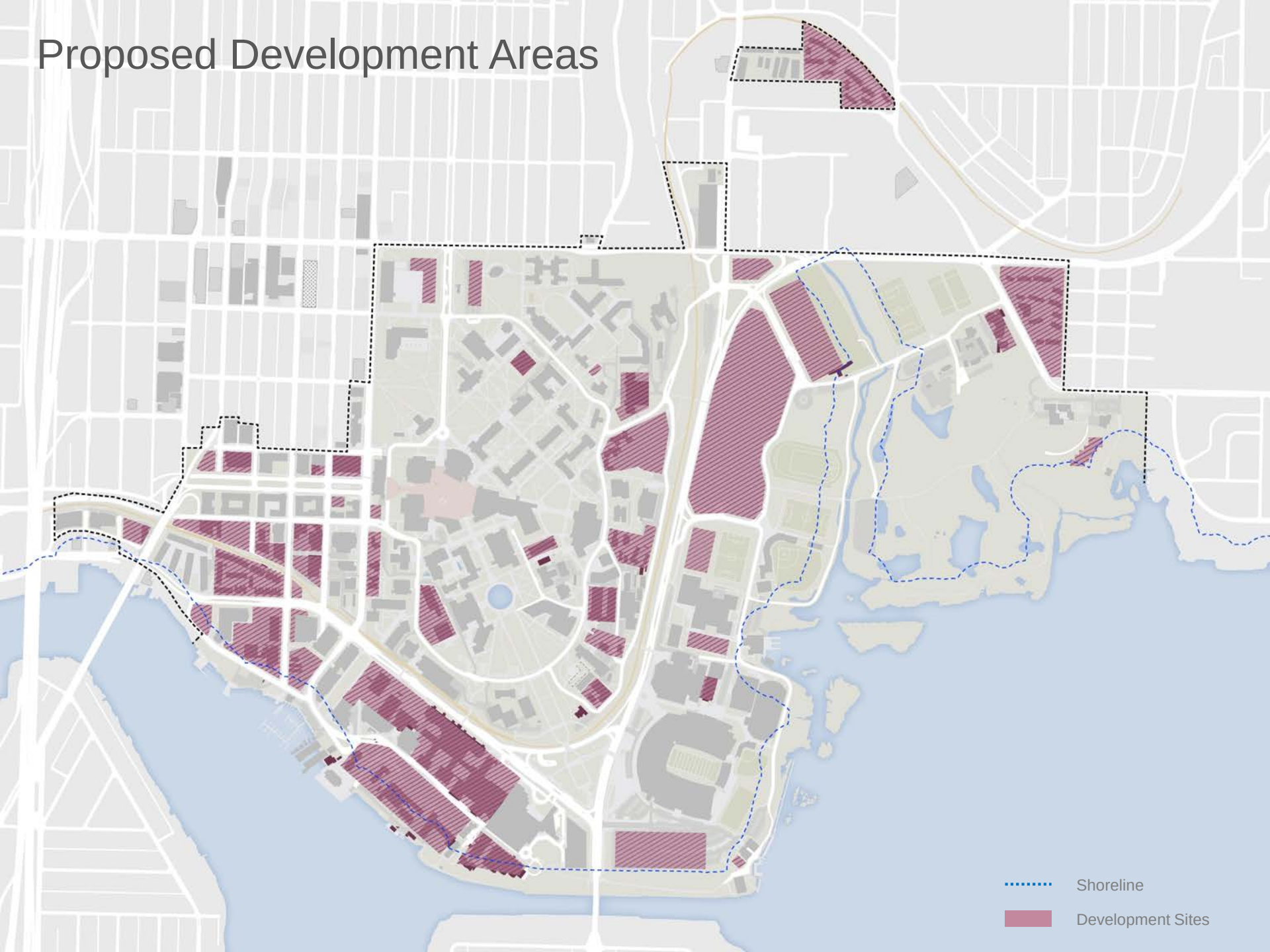
**Deferred Maintenance**

$0 / SF

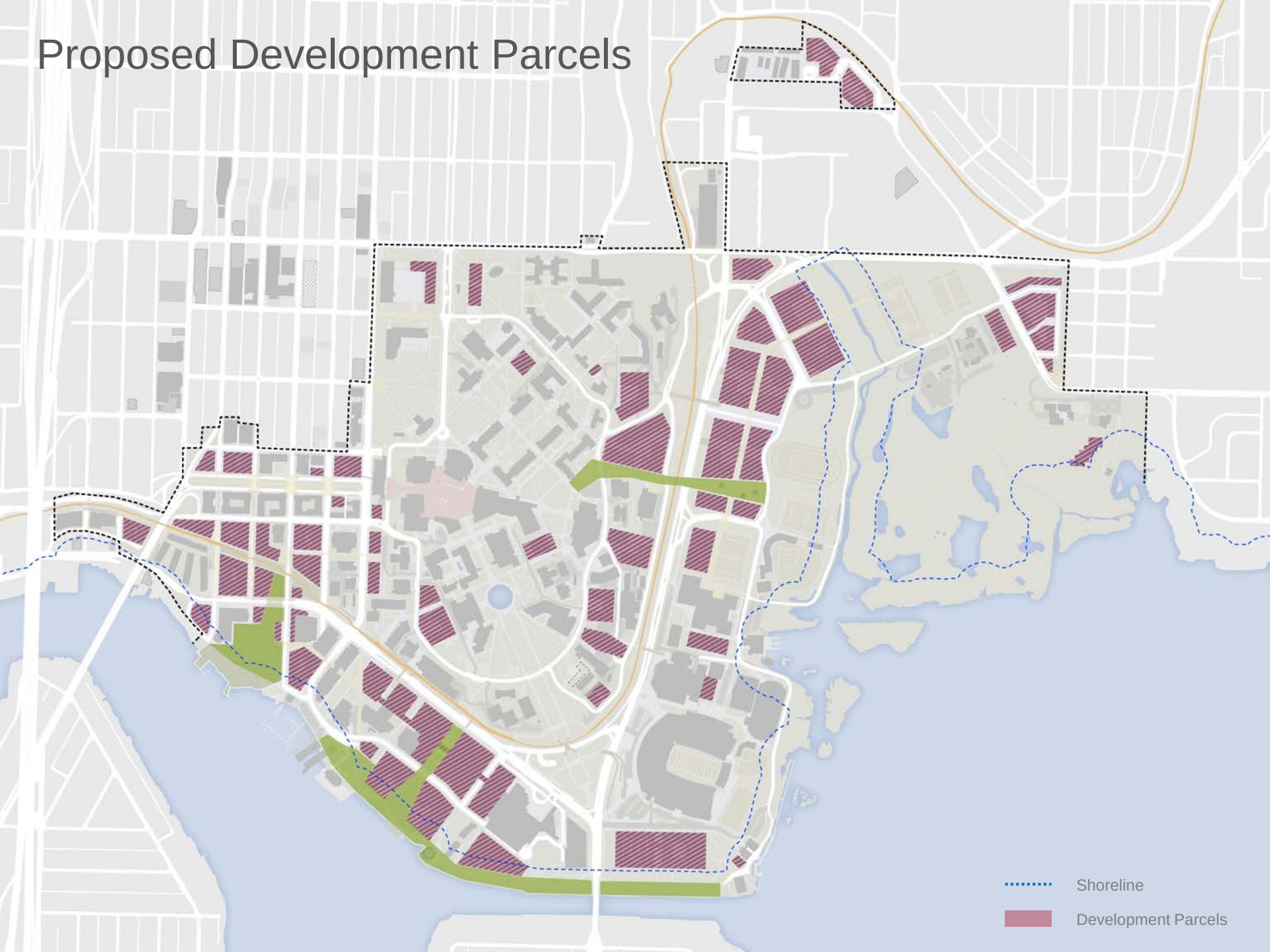
$635 / SF

Source: Facilities Services Data

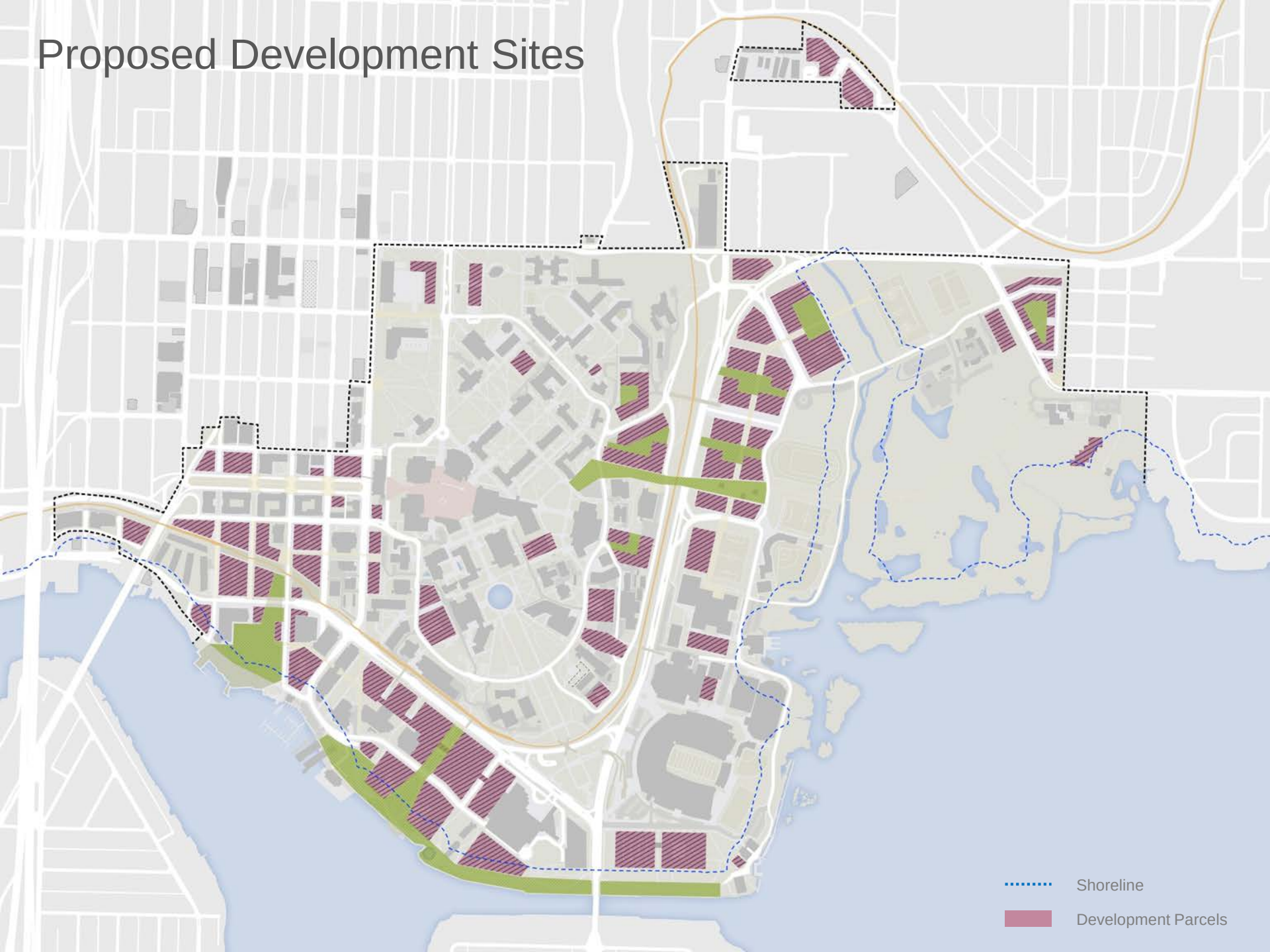
# Proposed Development Areas



# Proposed Development Parcels



# Proposed Development Sites



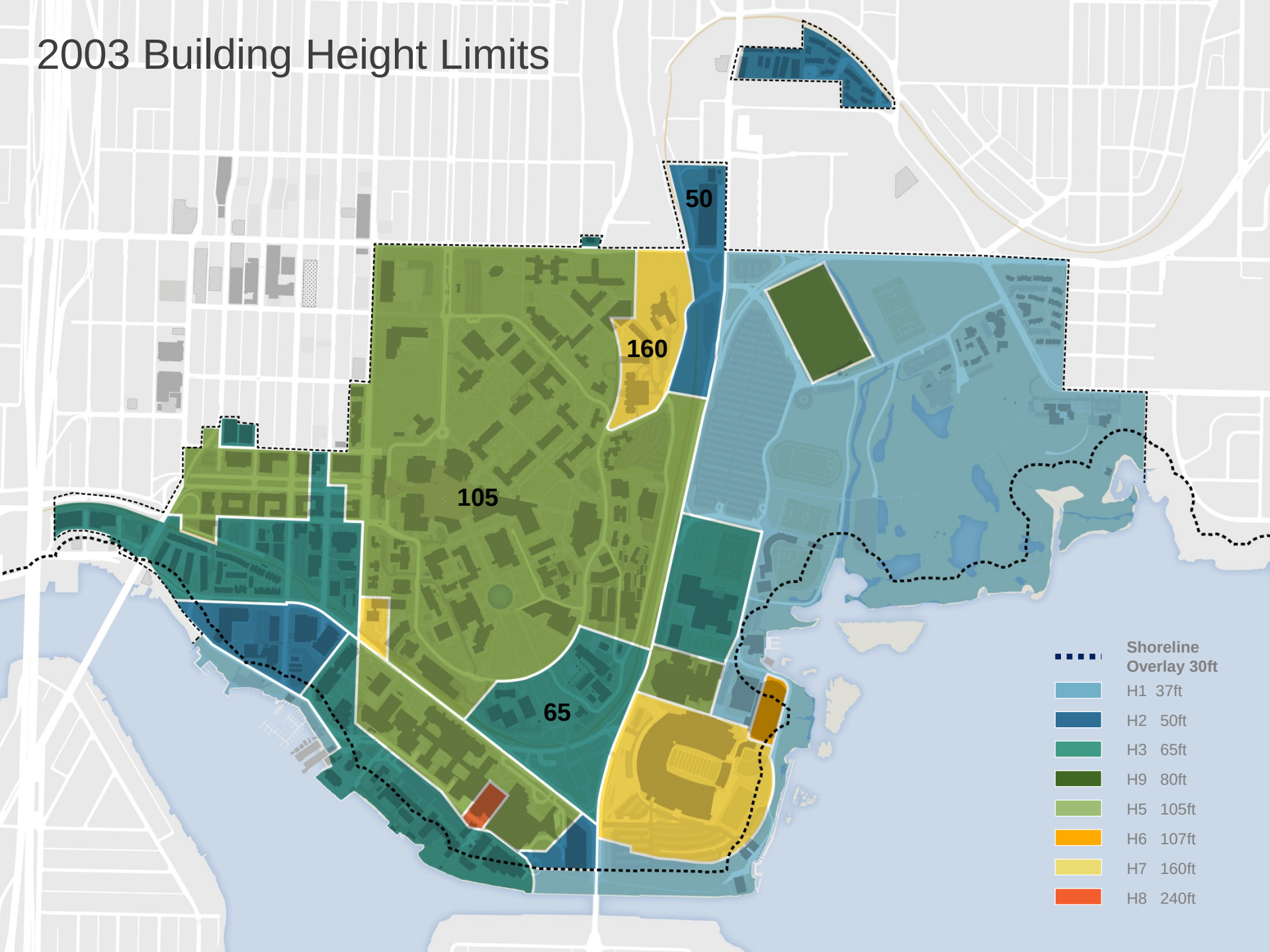
# Overall Campus Framework

# Existing Massing

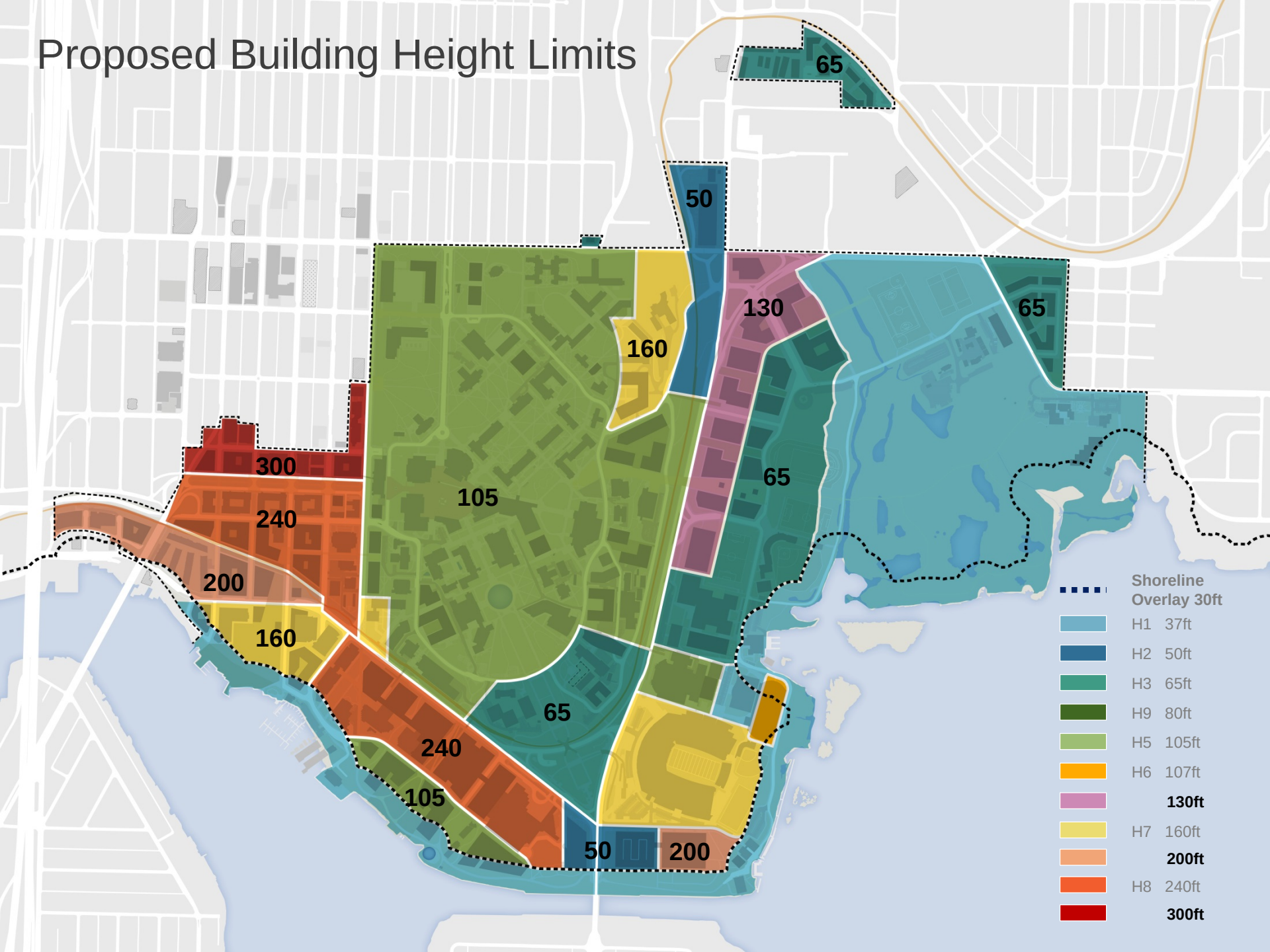
# Proposed Massing

| | |
|---|---|
| West Campus: | 3,700,000 GSF |
| Central Campus: | 2,200,000 GSF |
| South Campus: | 7,100,000 GSF (including UWMC) |
| East Campus: | 4,800,000 GSF |
| **Total:** | **17,800,000 GSF** |

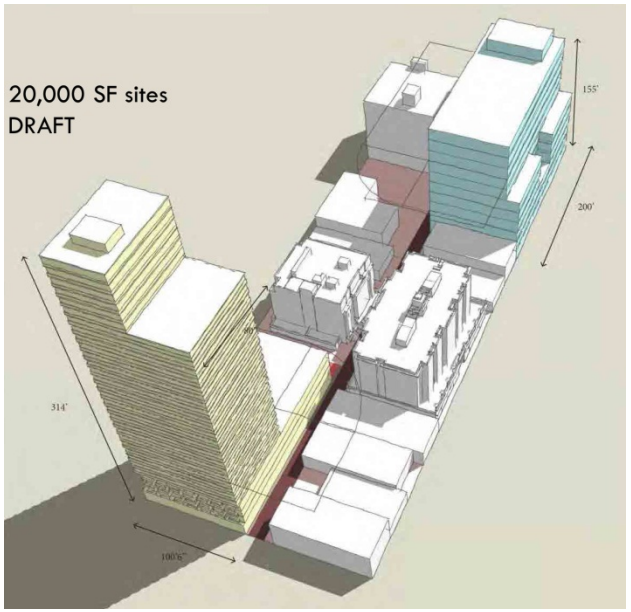
# 2003 Building Height Limits

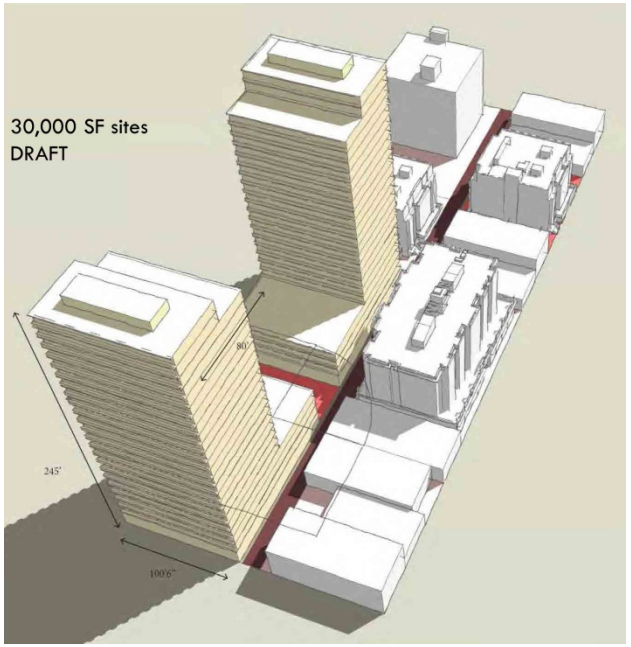


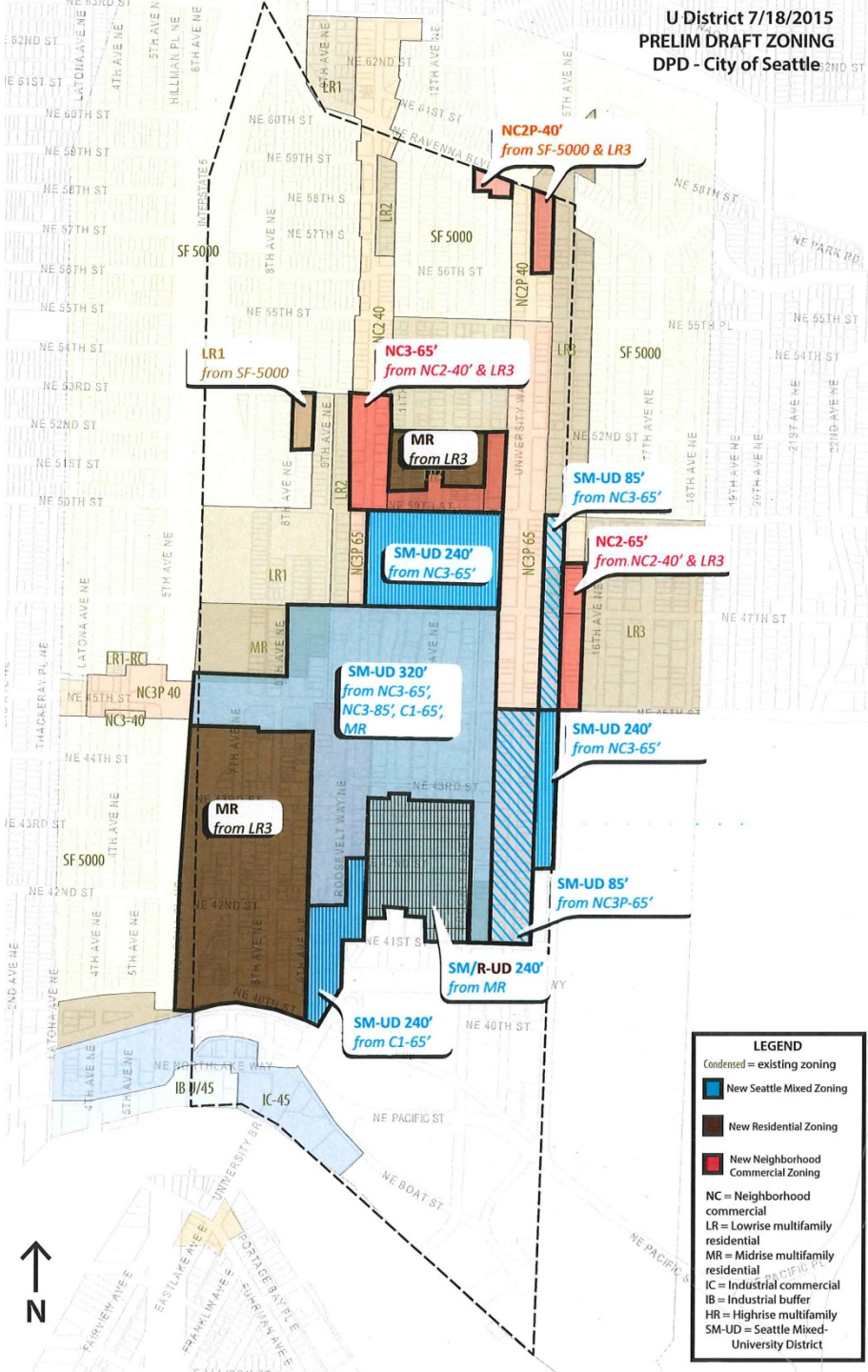
# Proposed Building Height Limits



# U District Proposed Zoning



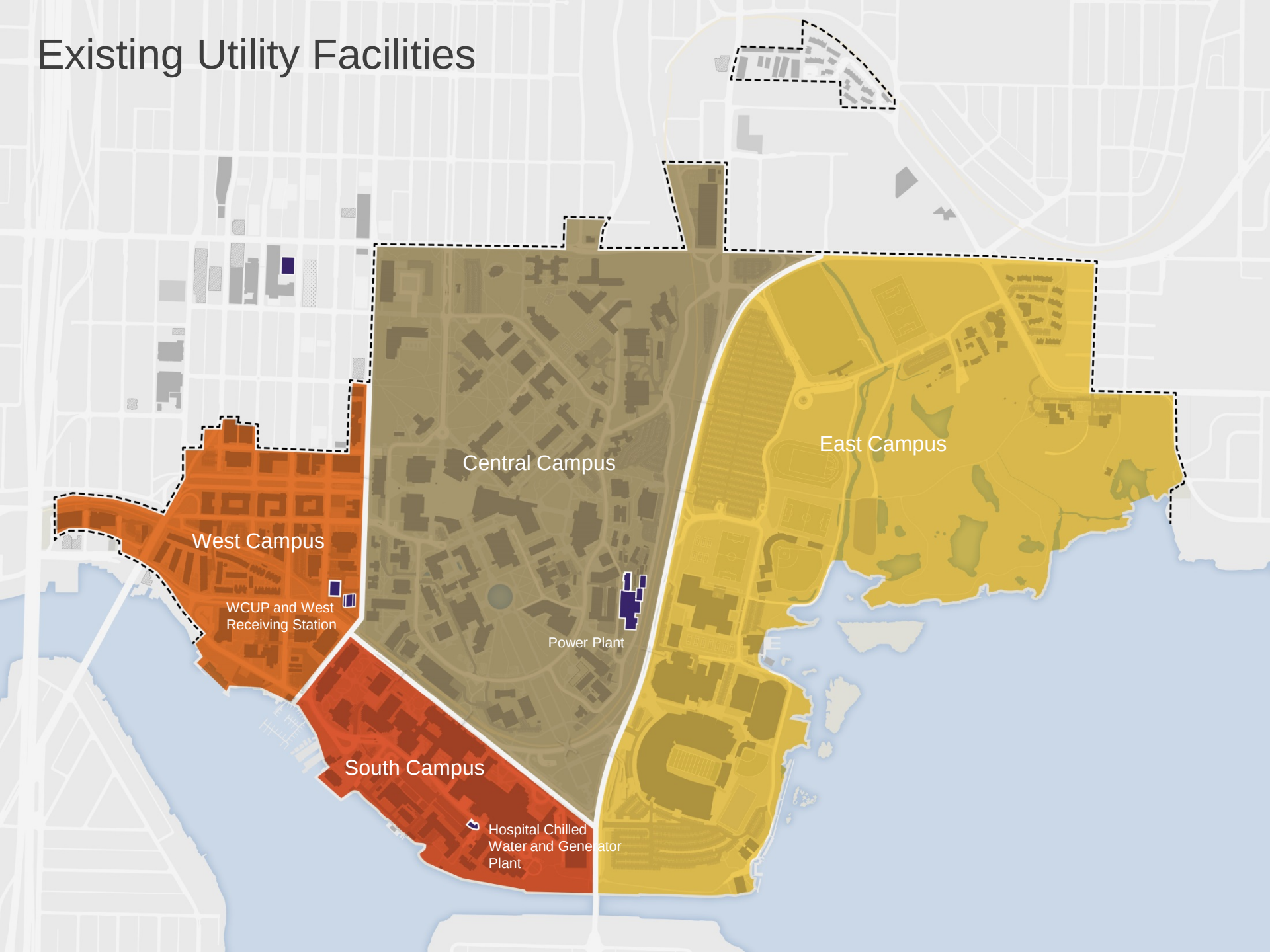
# 2003 Height Limits vs Proposed Height Limits

Capacity within 2003 height limits

Capacity within proposed height limits

# 2003 Height Limits vs Proposed Height Limits

# Existing Utility Facilities



# 5 CAMPUS PRECINCTS

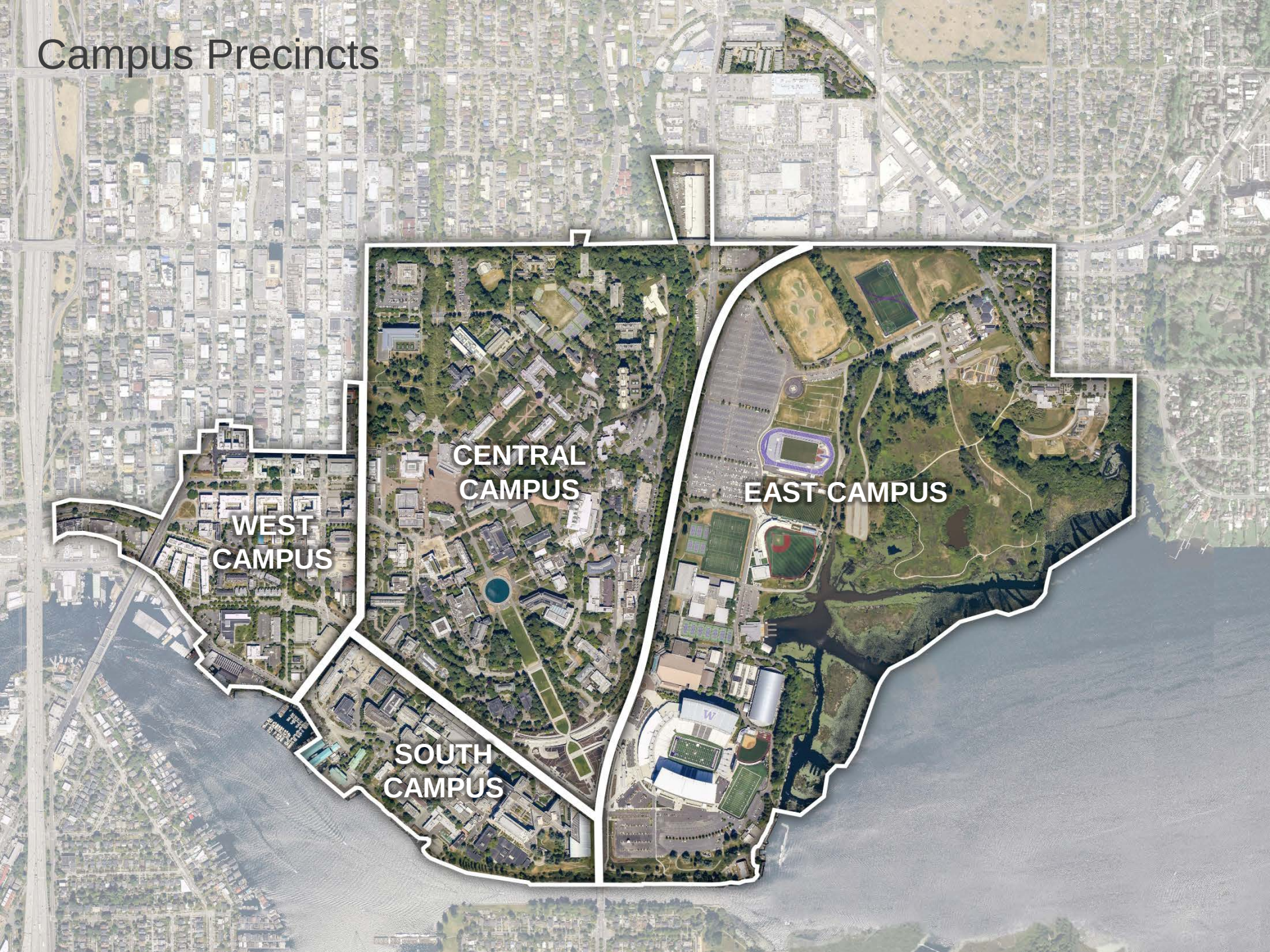
west campus

south campus

east campus

central campus

# Campus Precincts

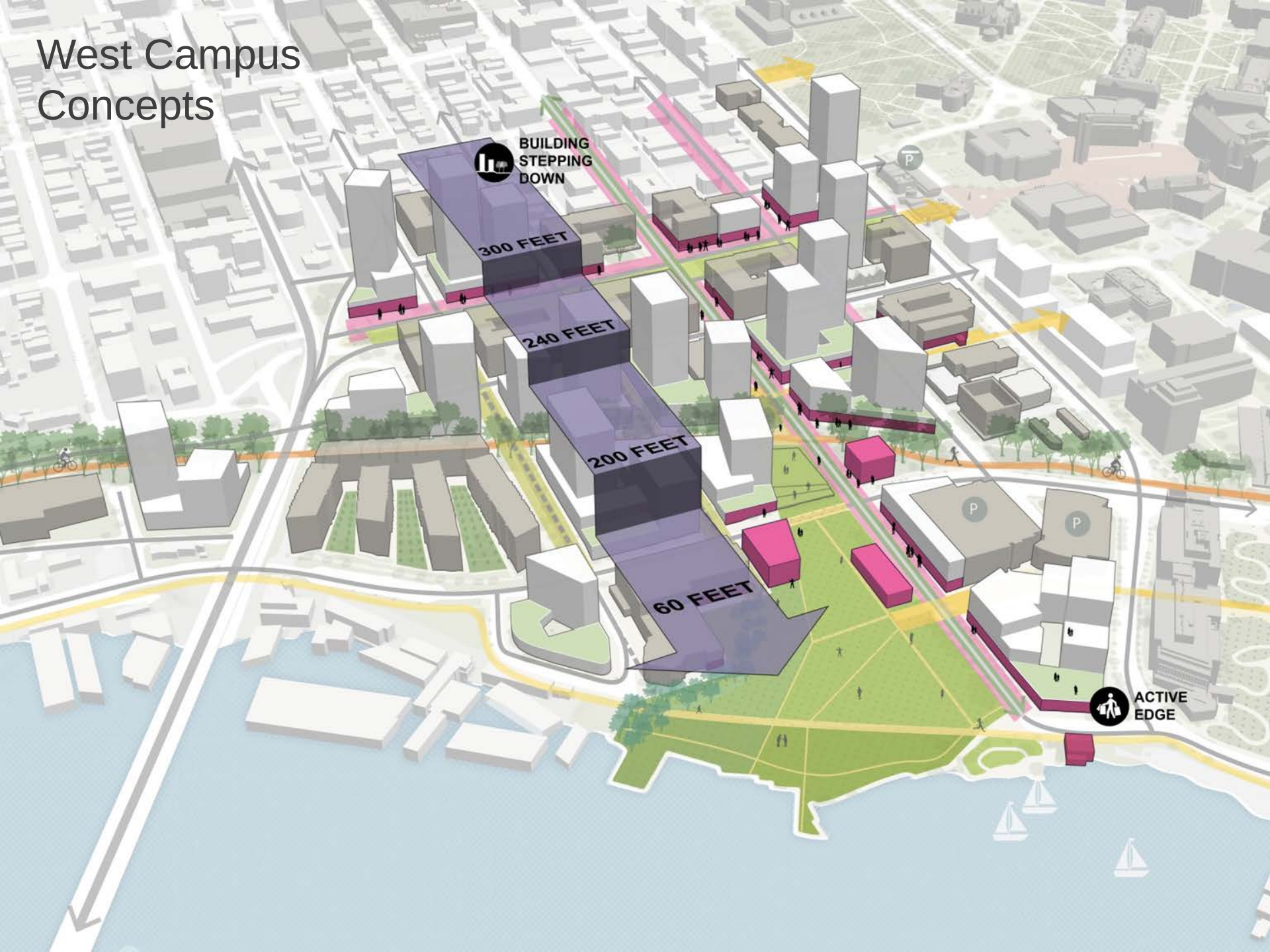


# west campus

West Campus
Concepts
43RD STREET
42ND STREET
41ST STREET
40TH STREET
BROOKLYN AVENUE
11TH AVENUE
12ND AVENUE
ROOSEVELT WAY
UNIVERSITY WAY
15TH AVENUE
CAMPUS PARKWAY
PACIFIC STREET
BURKE G
P
P
P

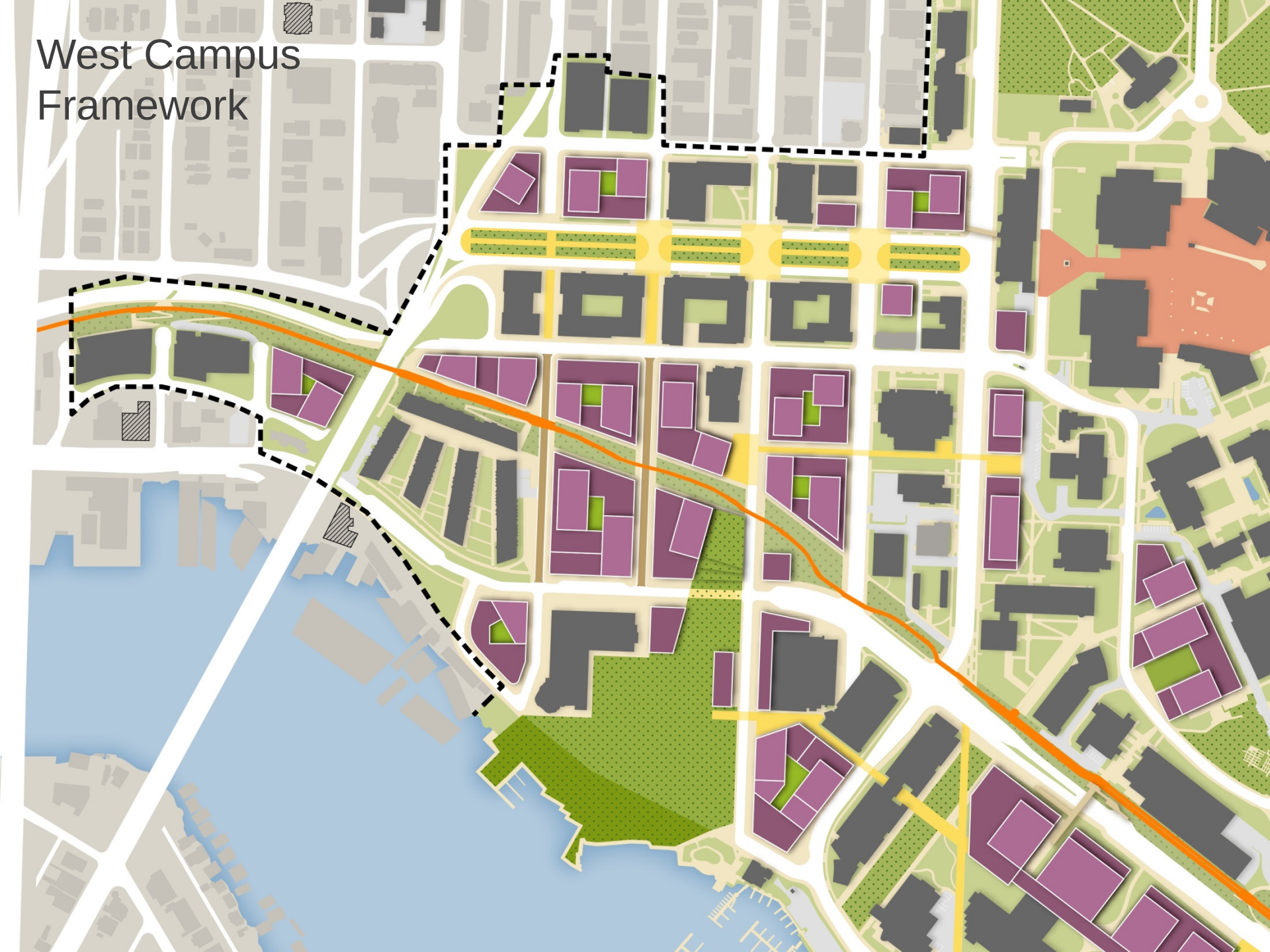
# West Campus Concepts

# West Campus Concepts



Building Heights
294 feet
294 feet
238 feet
126 feet
126 feet

# West Campus Framework

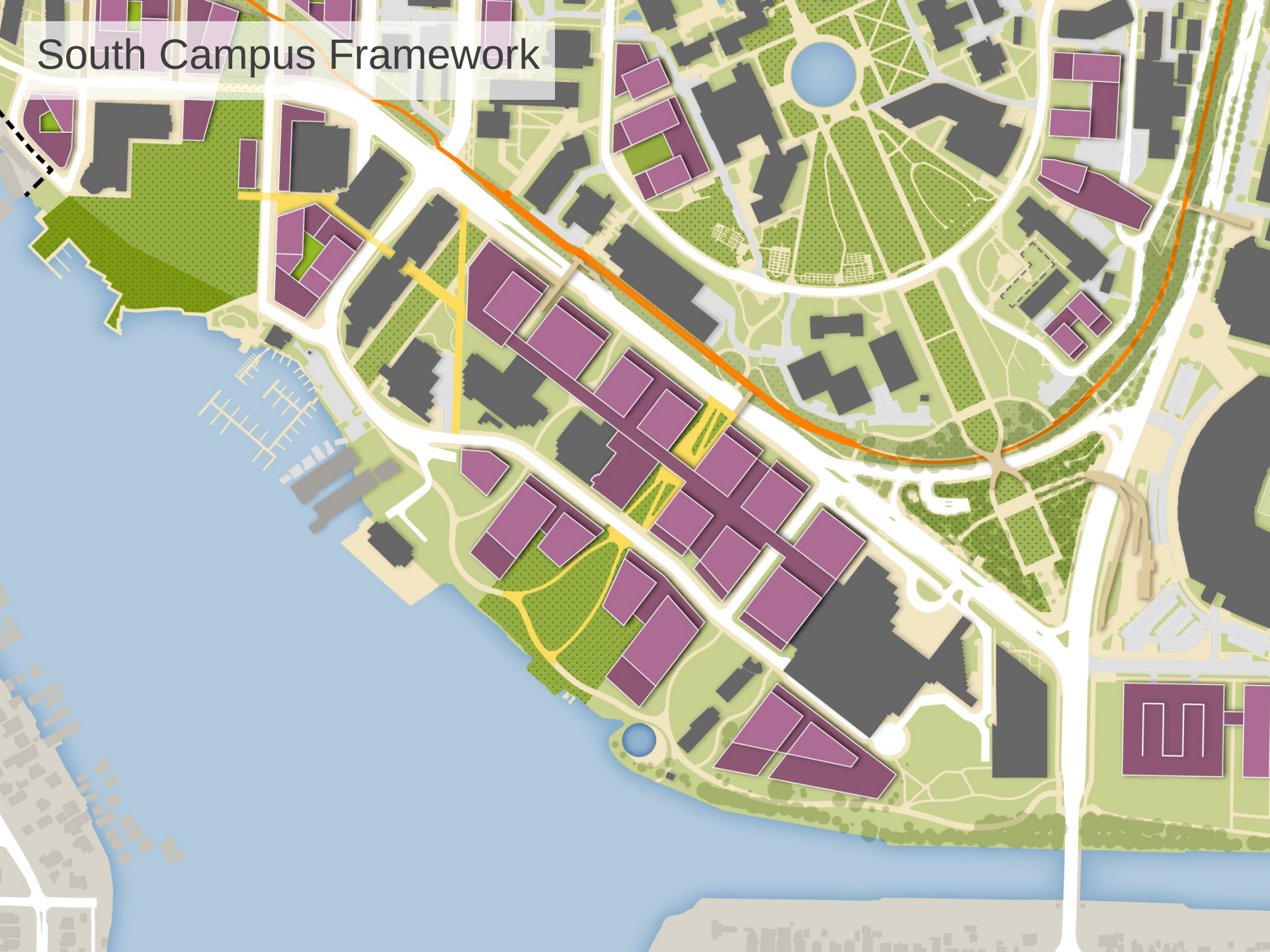


# south campus

# South Campus Today

# South Campus – Big Moves

# South Campus – Integrated Massing


South Campus Framework

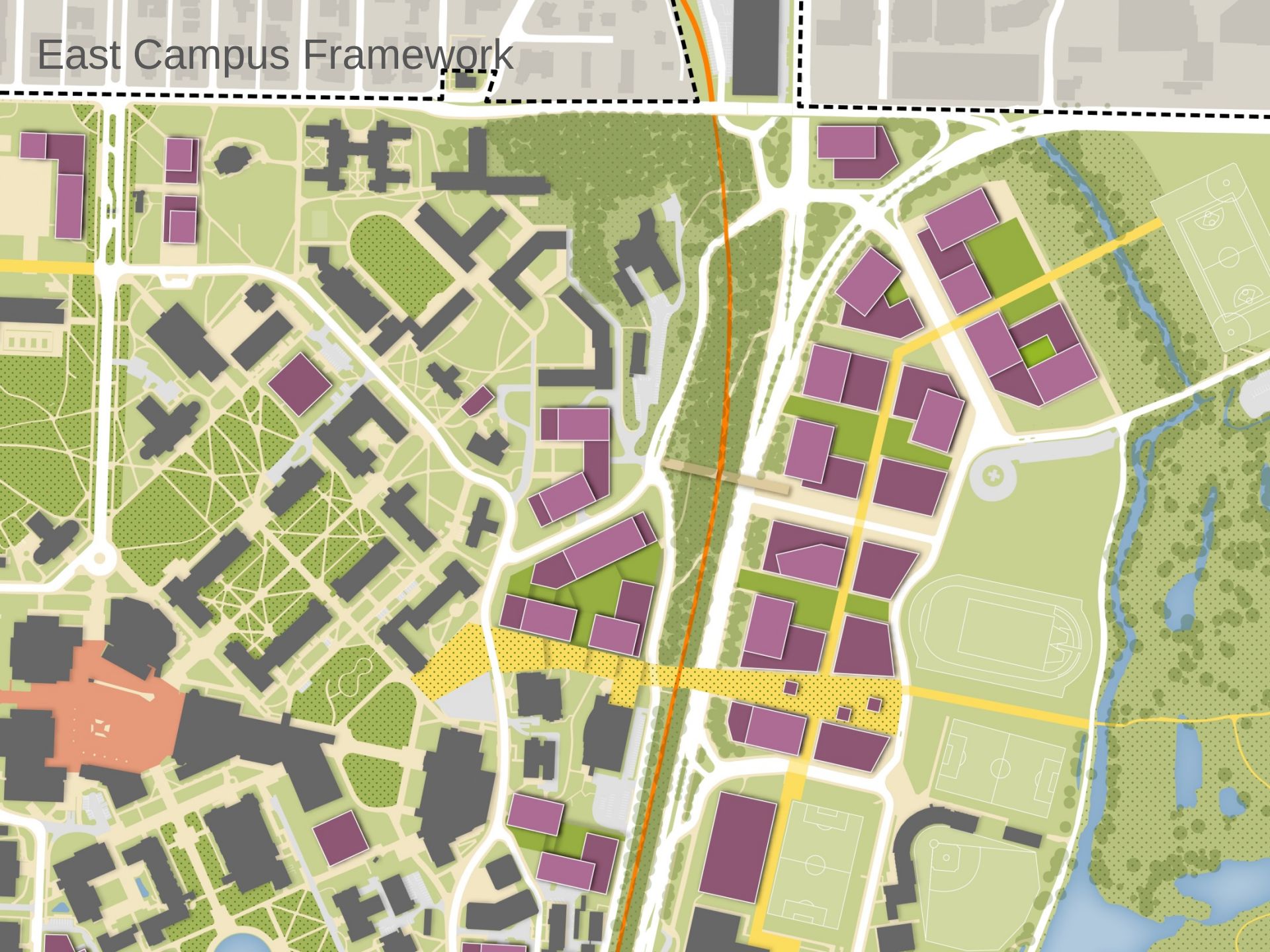
# east campus

# East Campus Today

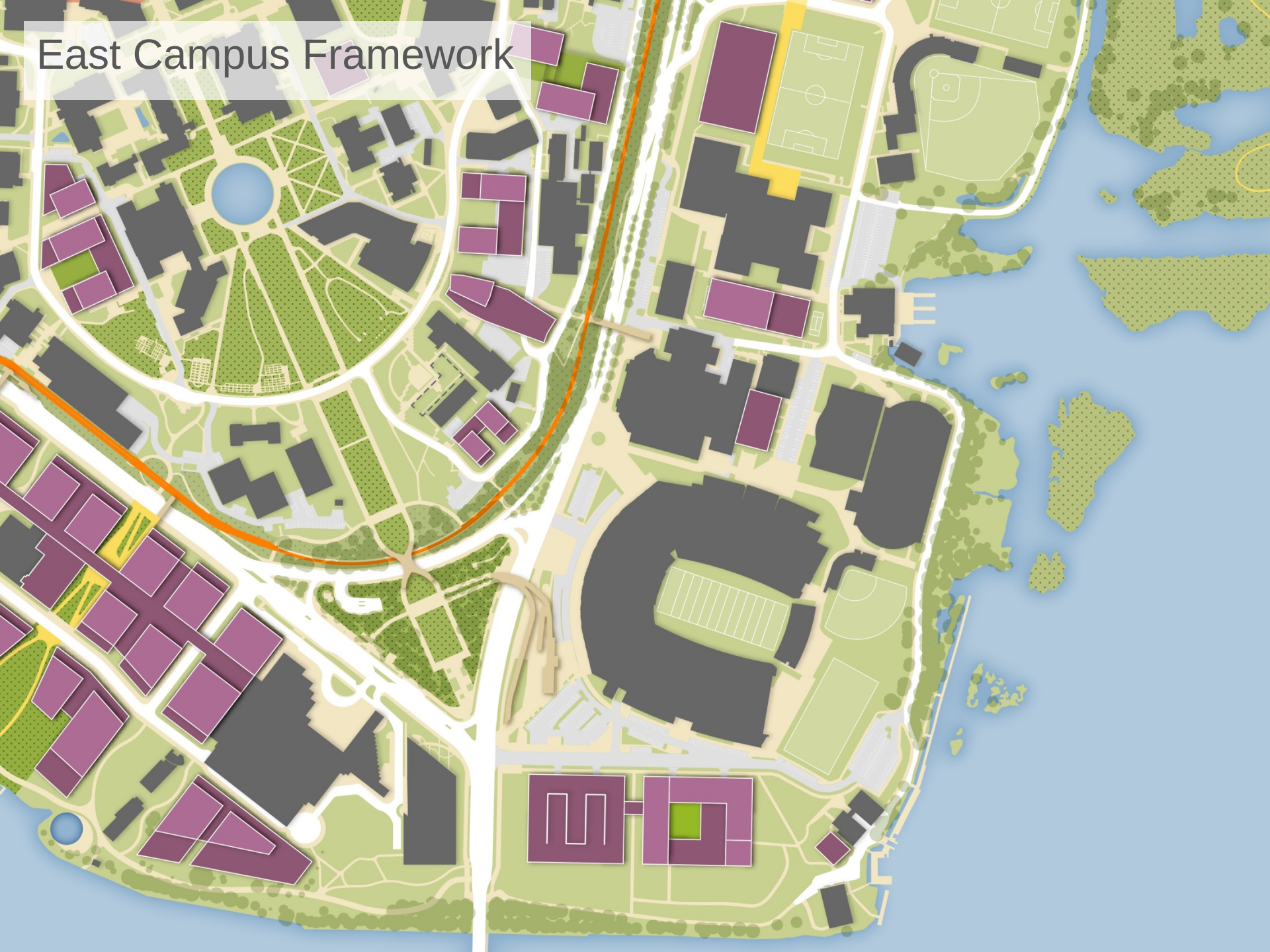
# East Campus Concepts

# Integrated Massing

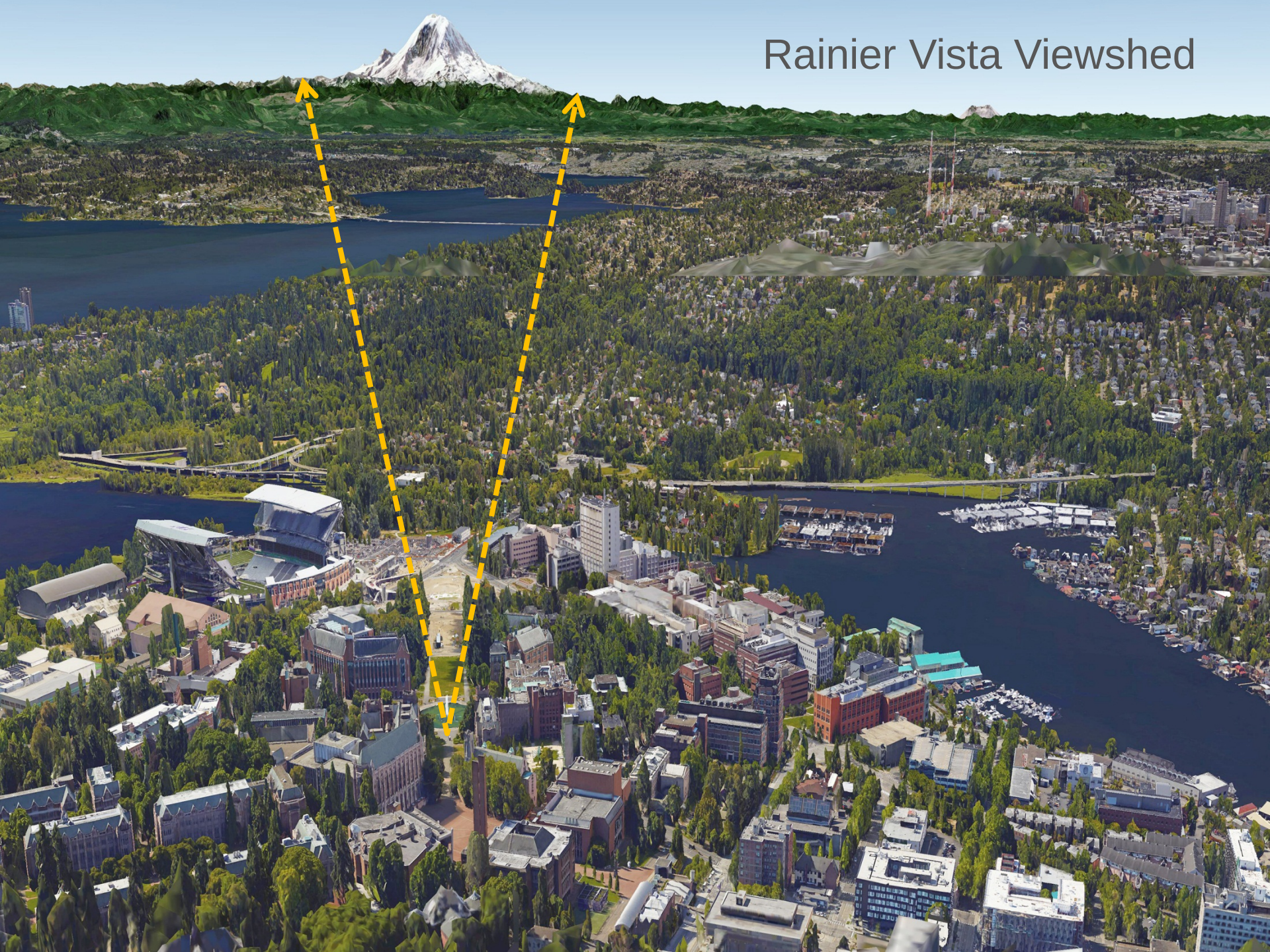
# East Campus Framework



# East Campus Framework



# Rainier Vista Viewshed

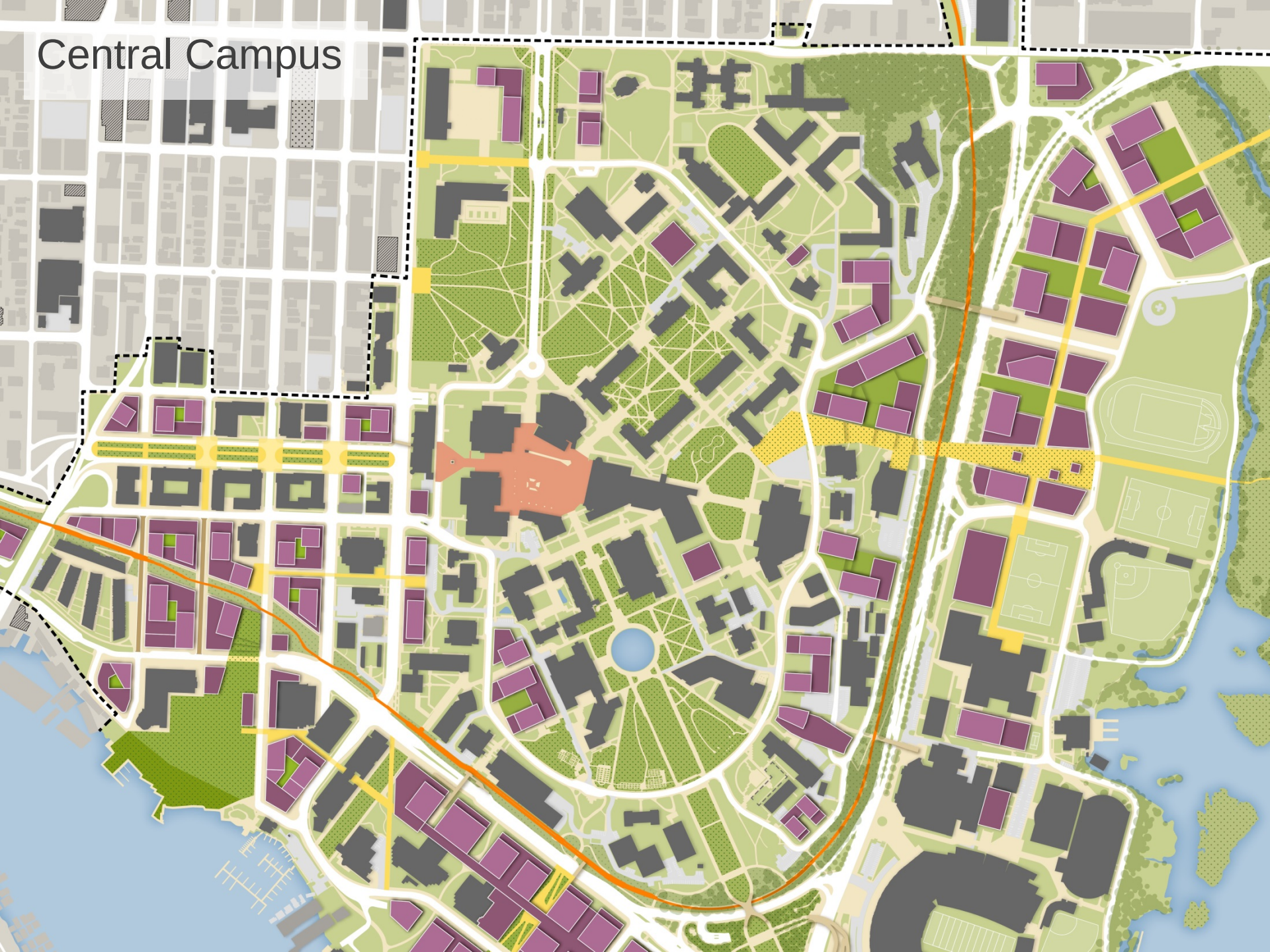


# central campus

# Central Campus Today

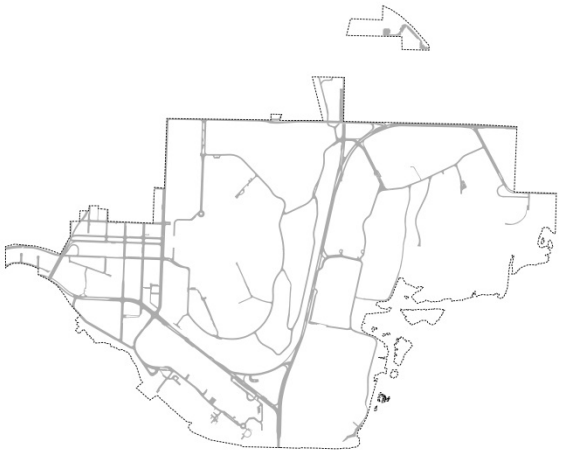
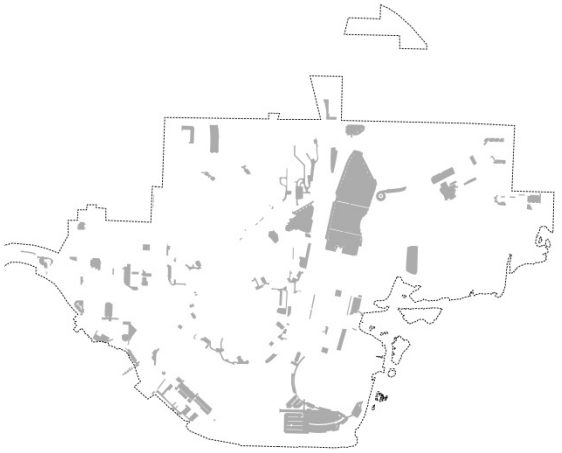
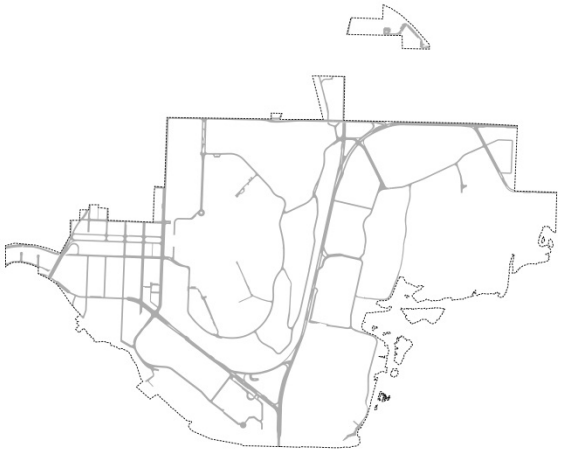
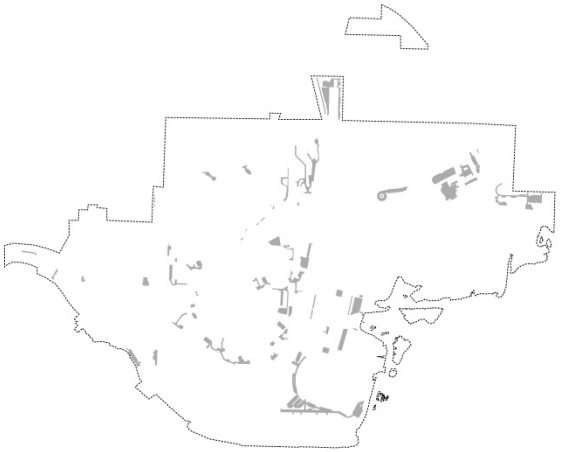
# Central Campus – Big Moves

# Integrated Massing

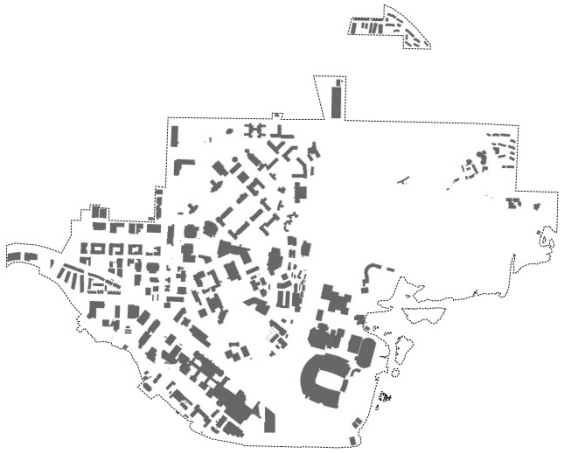
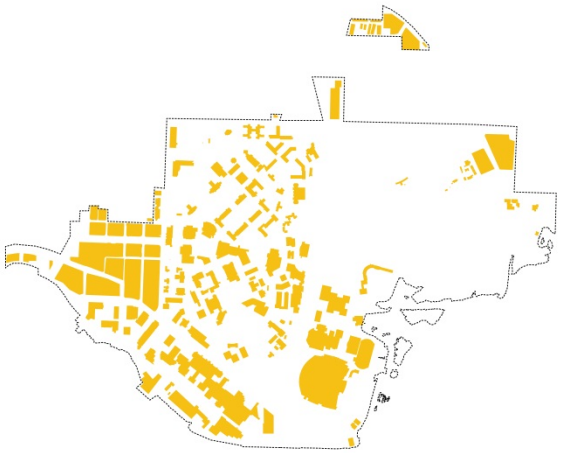
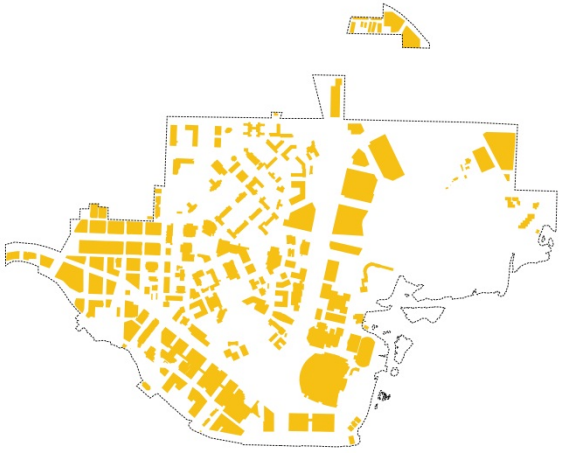

Central Campus

# 6 SYNTHESIS

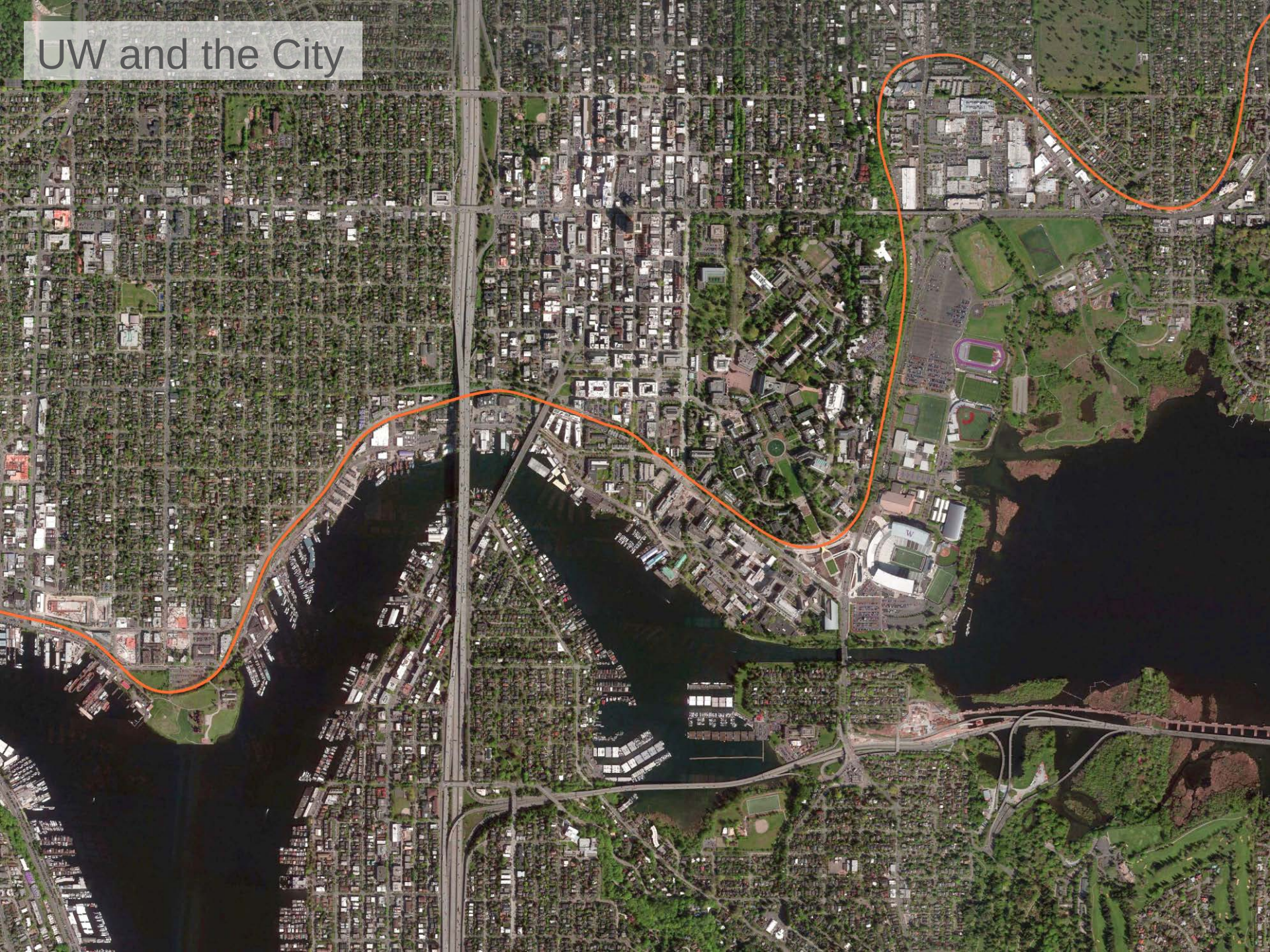
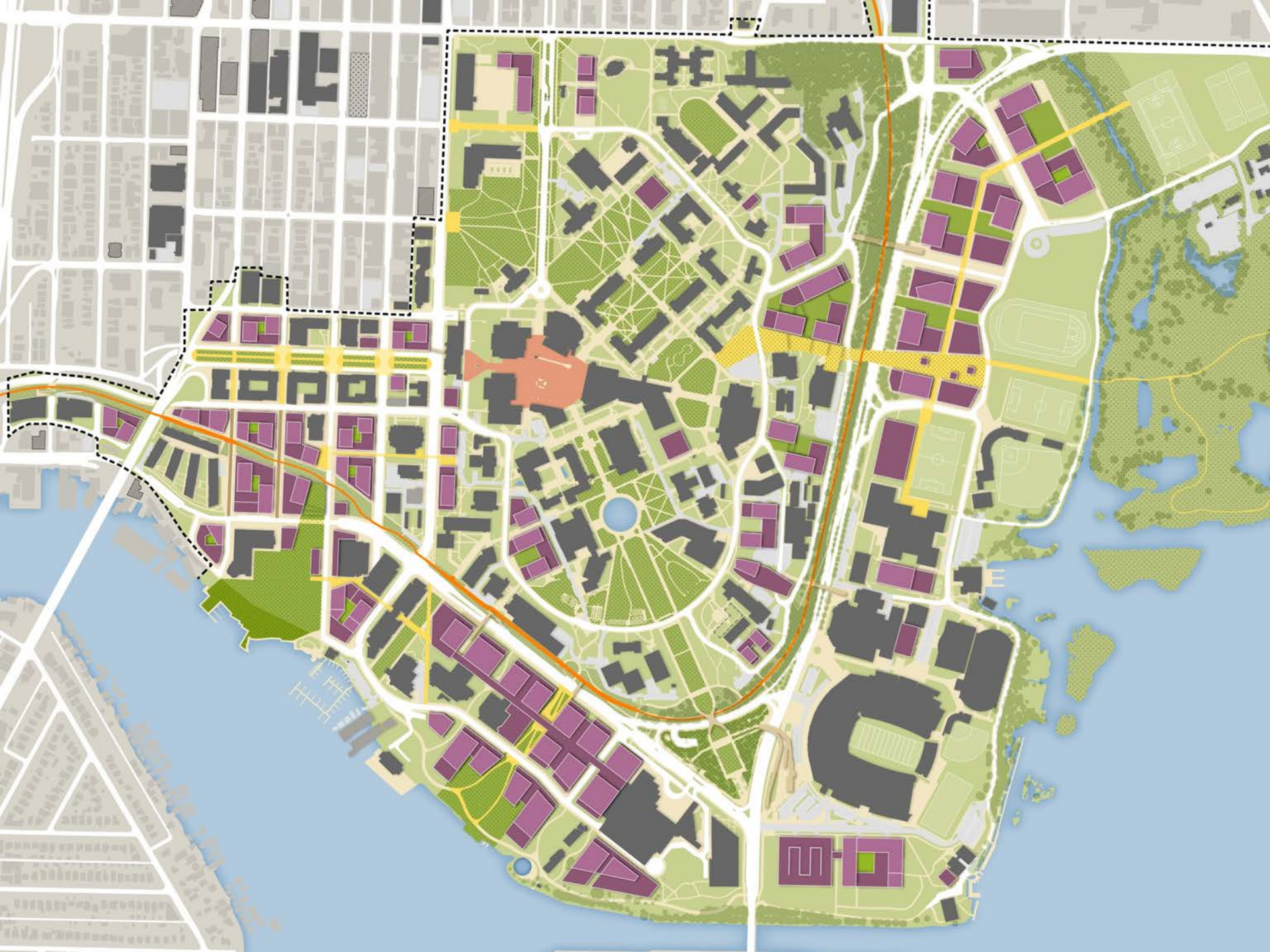
# Campus Transformation

| | SITE | STREET NETWORK | SURFACE PARKING |
|---|---|---|---|
| EXISTING | |  |  |
| | **100%** 620 ac | 10.5% 65 ac | 10.1% 63 ac |
| PROPOSED | |  |  |
| | **100%** 620 ac | 9.8% 61 ac | 3.7% 23 ac |

# Campus Transformation

| | BUILT FABRIC | DEVELOPABLE AREA | PRIMARY OPEN SPACES |
|---|---|---|---|
| EXISTING |  |  | |
| | **17.2%** 107 ac | **21.7%** 134 ac | **19%** 118 ac |
| PROPOSED | |  | |
| | **22.7%** 141 ac | **26.3%** 163 ac | **26.6%** 165 ac |

# UW and the City



# UW and the City