

POPULATION HEALTH FACILITY

UNIVERSITY OF WASHINGTON
SEATTLE, WA
SDCI#: 3028469

STREAMLINED DESIGN REVIEW
SEPTEMBER 25, 2017

Prepared by:

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POPULATION HEALTH FACILITY

STREAMLINED DESIGN REVIEW

SEPTEMBER 25, 2017

PROJECT TEAM

Client

University of Washington

Design-Builder

Lease Crutcher Lewis | The Miller Hull Partnership

Landscape Architect

Site Workshop

CMG

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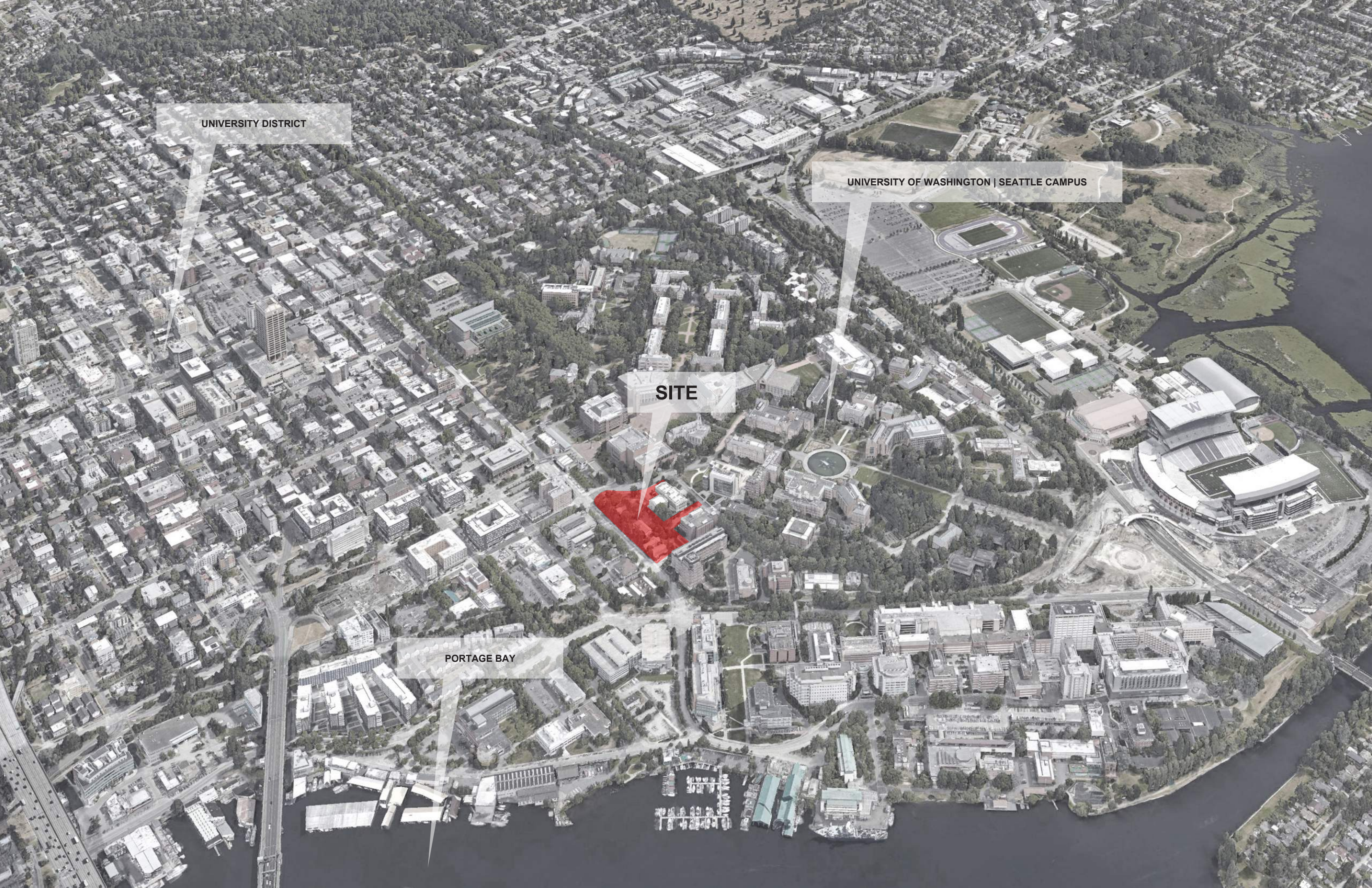
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UNIVERSITY DISTRICT

UNIVERSITY OF WASHINGTON | SEATTLE CAMPUS

SITE

PORTAGE BAY



I. PROJECT OVERVIEW

Project Summary:

The University of Washington is poised to accelerate research and advancement in Population Health. The Population Health Facility will serve as a powerful catalyst for the University’s new Population Health Initiative and be an idea laboratory and collaboration incubator. It will house the Institute for Health Metrics and Evaluation, the Department of Global Health, and elements of the School of Public Health, all of which will greatly benefit from close proximity. The facility will also provide central gathering spaces for faculty, students, staff, partners, and visitors from a wide range of disciplines across campus, the region, the nation, and the world to address important global health concerns.

The Population Health Facility will be located on the west edge of Central Campus with the northwest corner of the site being a major gateway into campus at the intersection of NE 40th and Grant Place. The estimated size of the facility is 300,000 GSF, with 8-story of above grade space, and 2 partial levels of below-grade space. We anticipate the program to include offices, collaborative group work areas, conference rooms, active learning environments, and technology-rich spaces to accommodate data visualization and online interactive global teaching and training. Other possibilities include street-facing, community-oriented destinations that help activate the neighborhood. Research wet labs are not part of the scope.

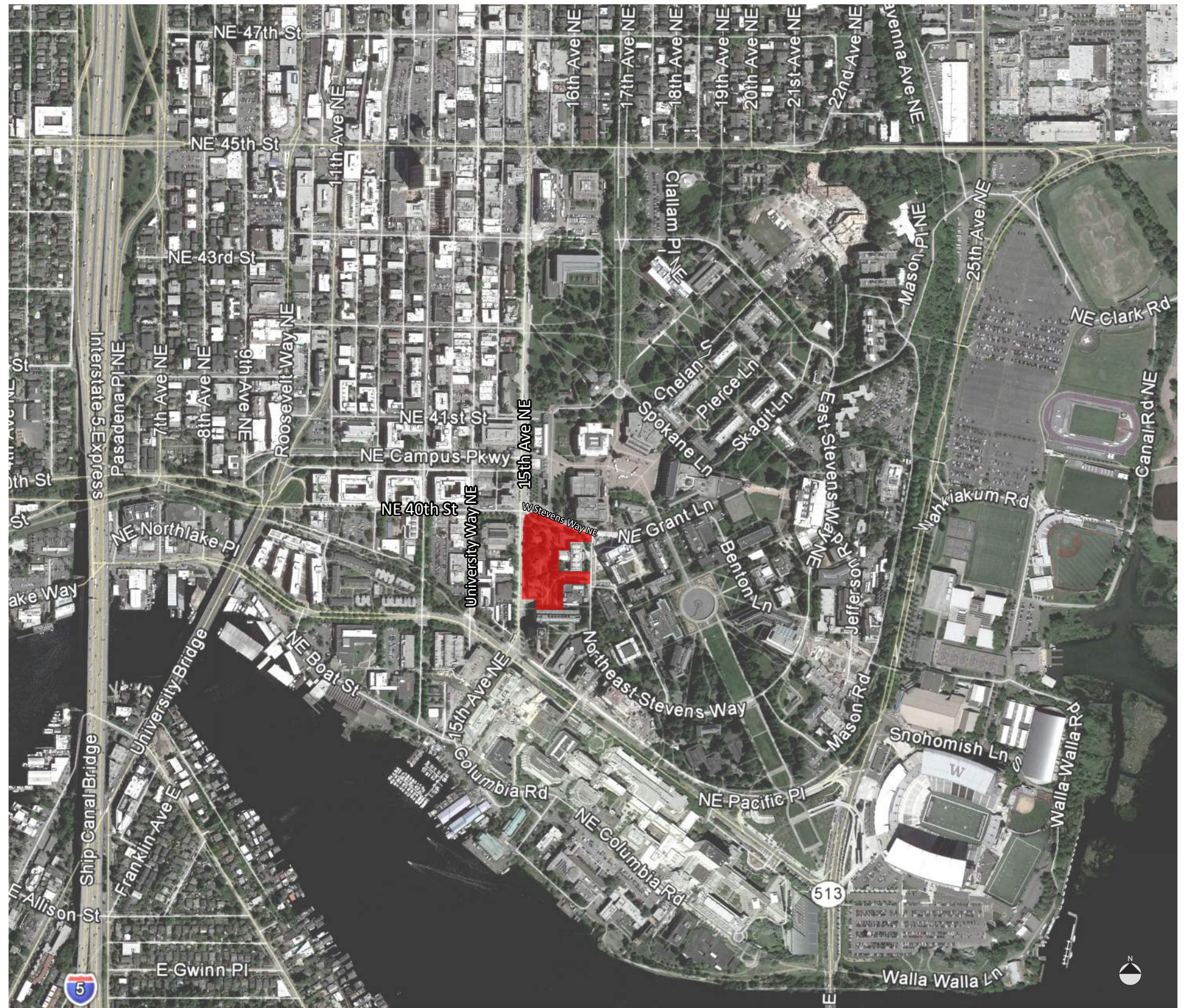
Project Goals:

- Foster collaboration and connectivity amongst those working within the facility, with other programs and with researchers at the UW, local and global partners, and students.
- Promote healthy living within and around the new facility.
- Design space that is flexible and adaptable to meet the evolving needs of IHME, DGH, and SPH.
- Employ best practices in sustainable building to reduce energy and water use, lower life cycle costs, and improve occupant satisfaction and health.
- Support and further the institution-wide Population Health Vision.

Limit of Work: 124,669 Square Feet

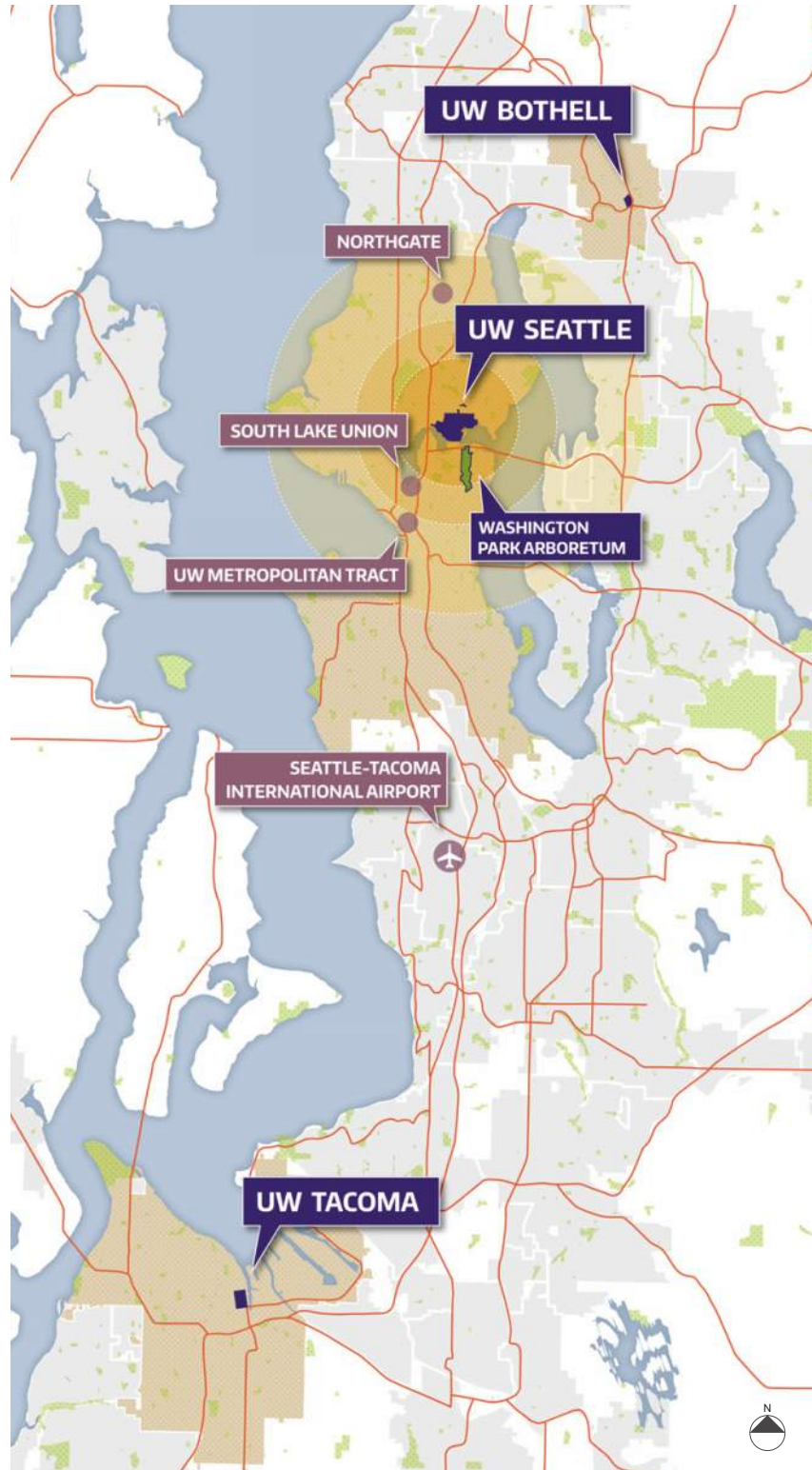
Number of Parking Stalls: The project is working with UW Transportation Services to determine the required number of ADA parking stalls for the project. The project is currently planning for 2 - 5 parking stalls along Asotin Lane.

 SITE LOCATION

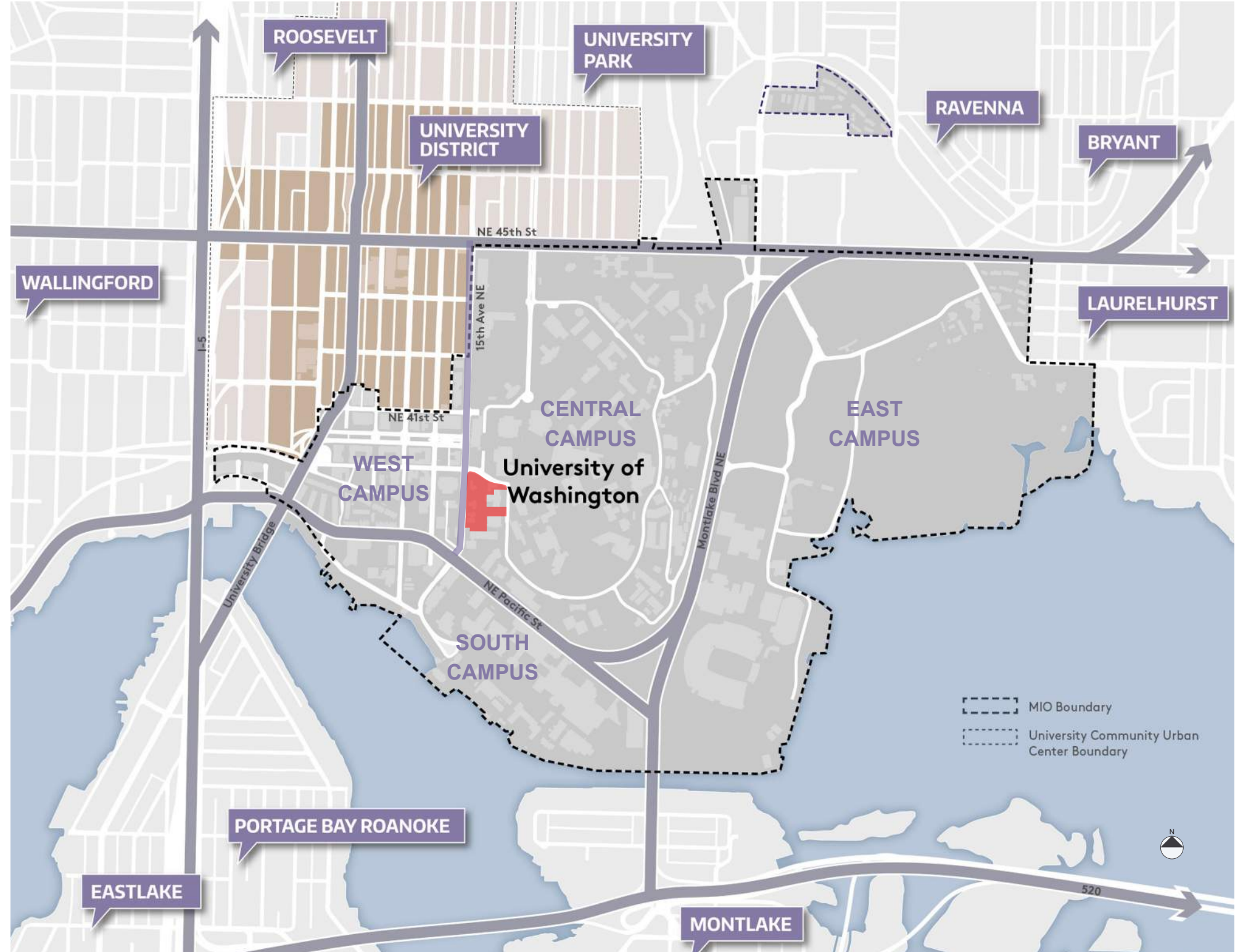


Vicinity Map / Site Location

2. CONTEXT ANALYSIS



City of Seattle, Regional Context



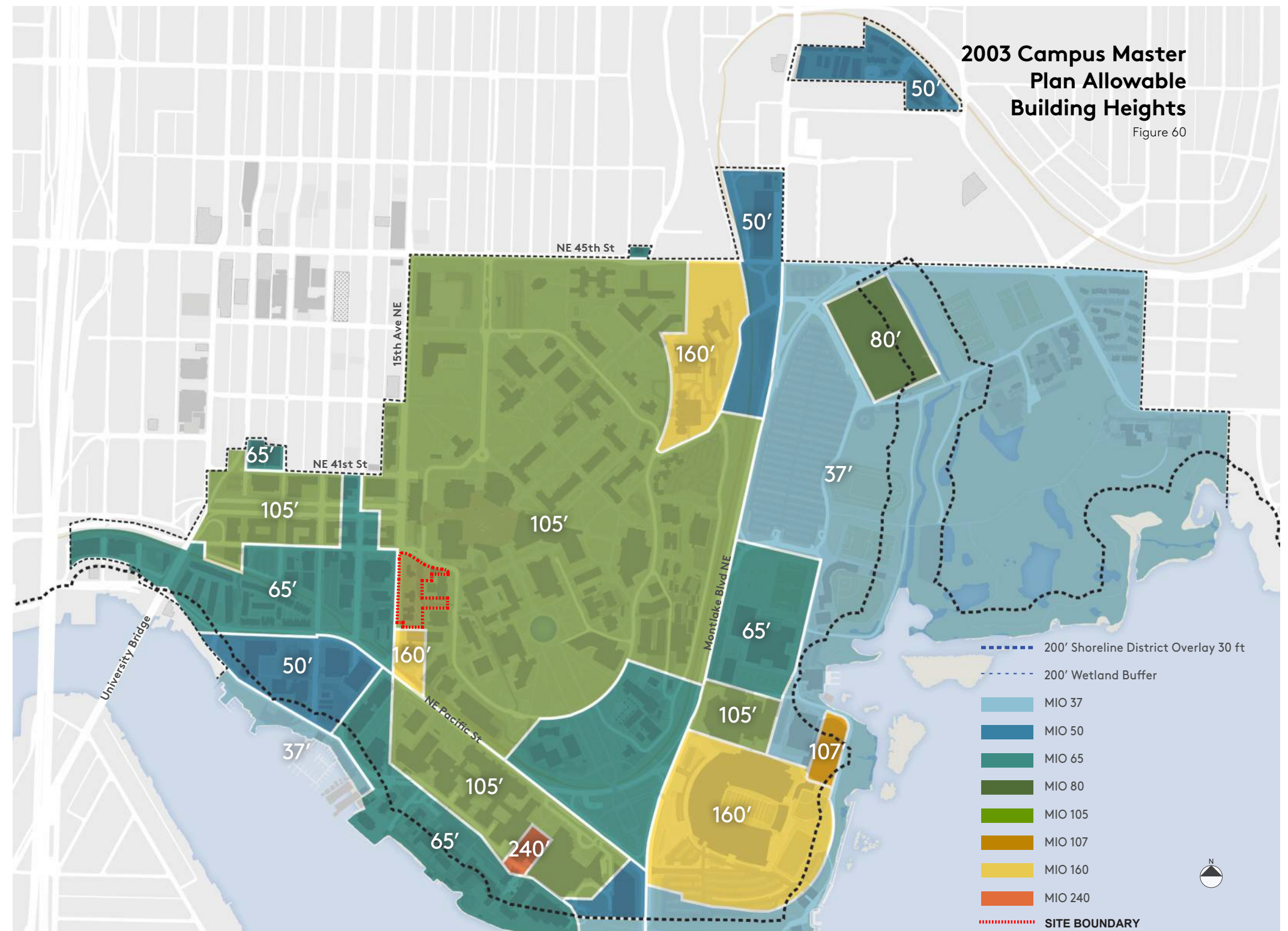
Neighborhoods around the University and Campus Sector Map

Project Context:

The University of Washington main campus in Seattle is situated on the shores of Union and Portage Bays. The physical assets of the campus are located within boundaries designated by a Major Institutional Overlay (MIO) zone as defined in the City of Seattle Land Use and Zoning Code.

The site is located on the Central campus western edge 15th Ave NE with the northwest corner of the site at the intersection of NE 40th and Grant Place.

According to the 2003 Campus Master Plan (CMP), the project is anticipated to be close to the 2003 CMP 105' building height limit, including a 15' mechanical penthouse over the height limit.

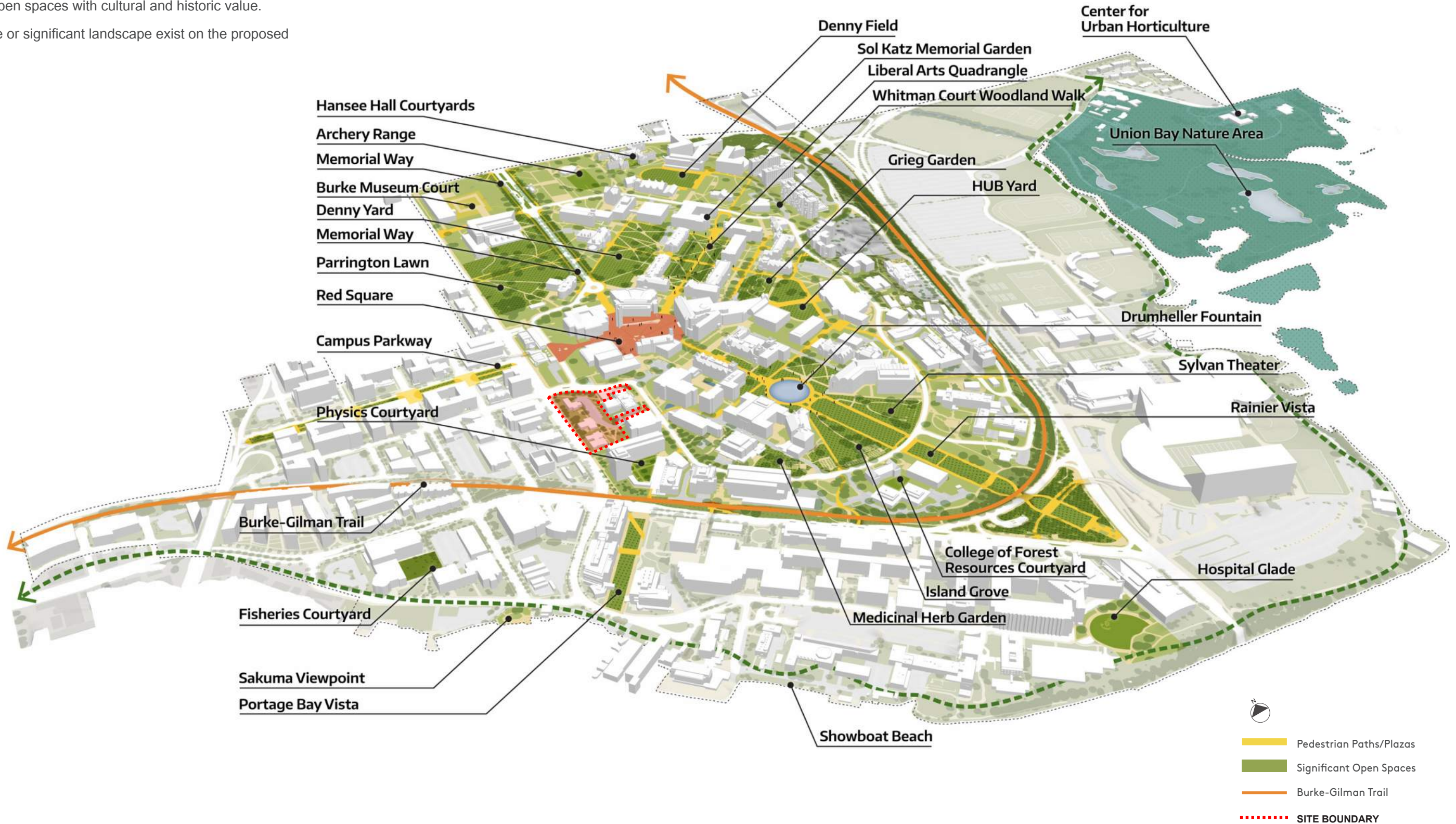


Zoning Map

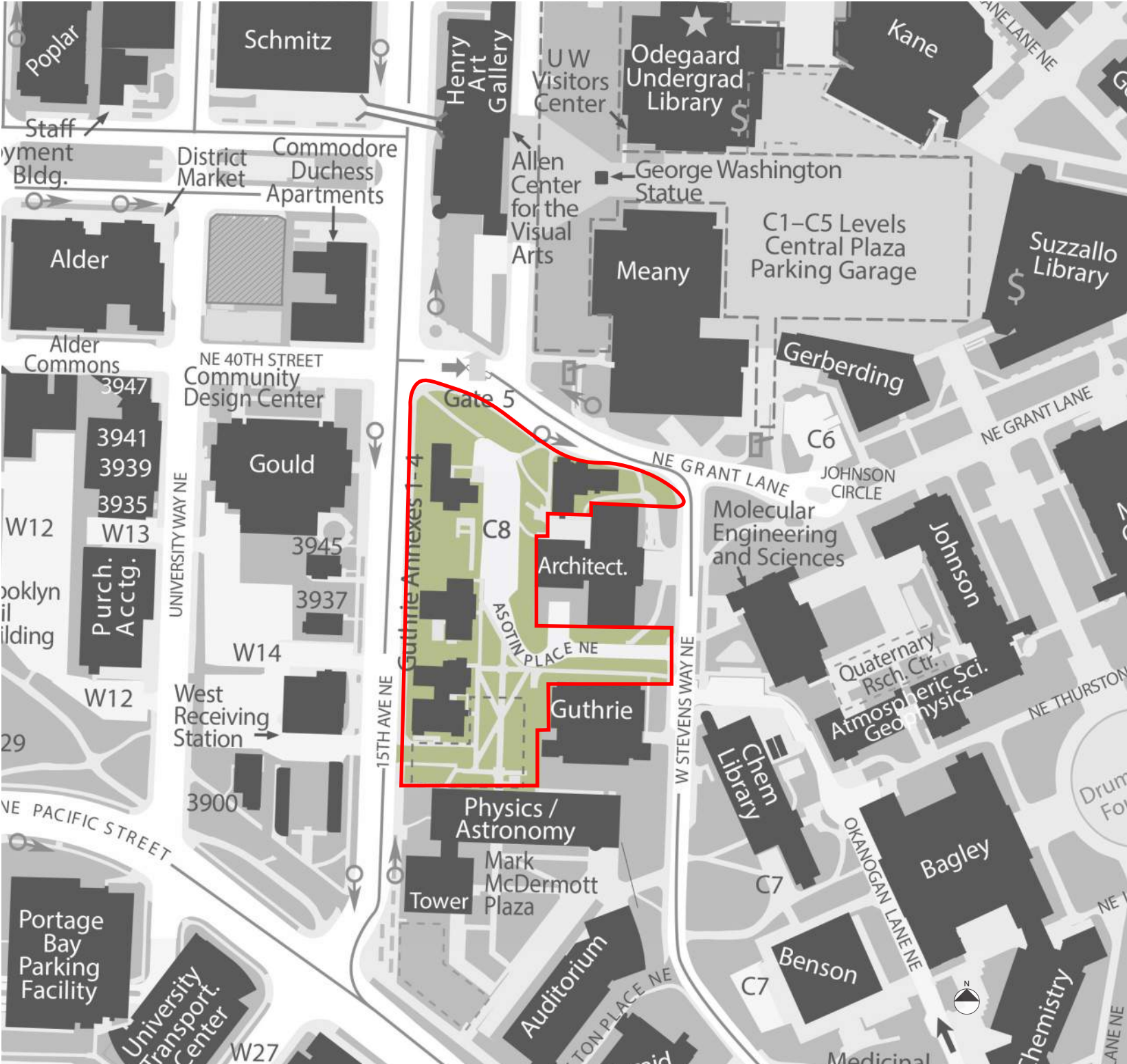
Unique and significant Landscape:

Significant landscapes are identified. They function as primary open spaces with cultural and historic value.

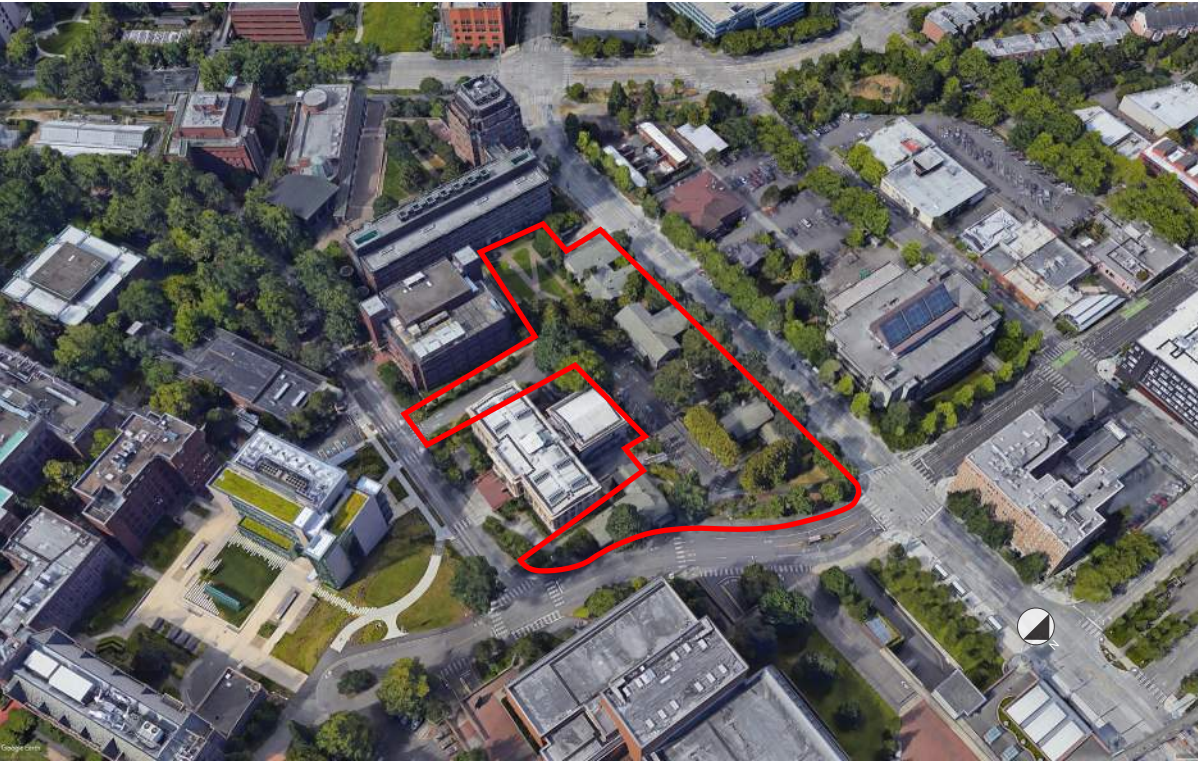
No unique or significant landscape exist on the proposed site.



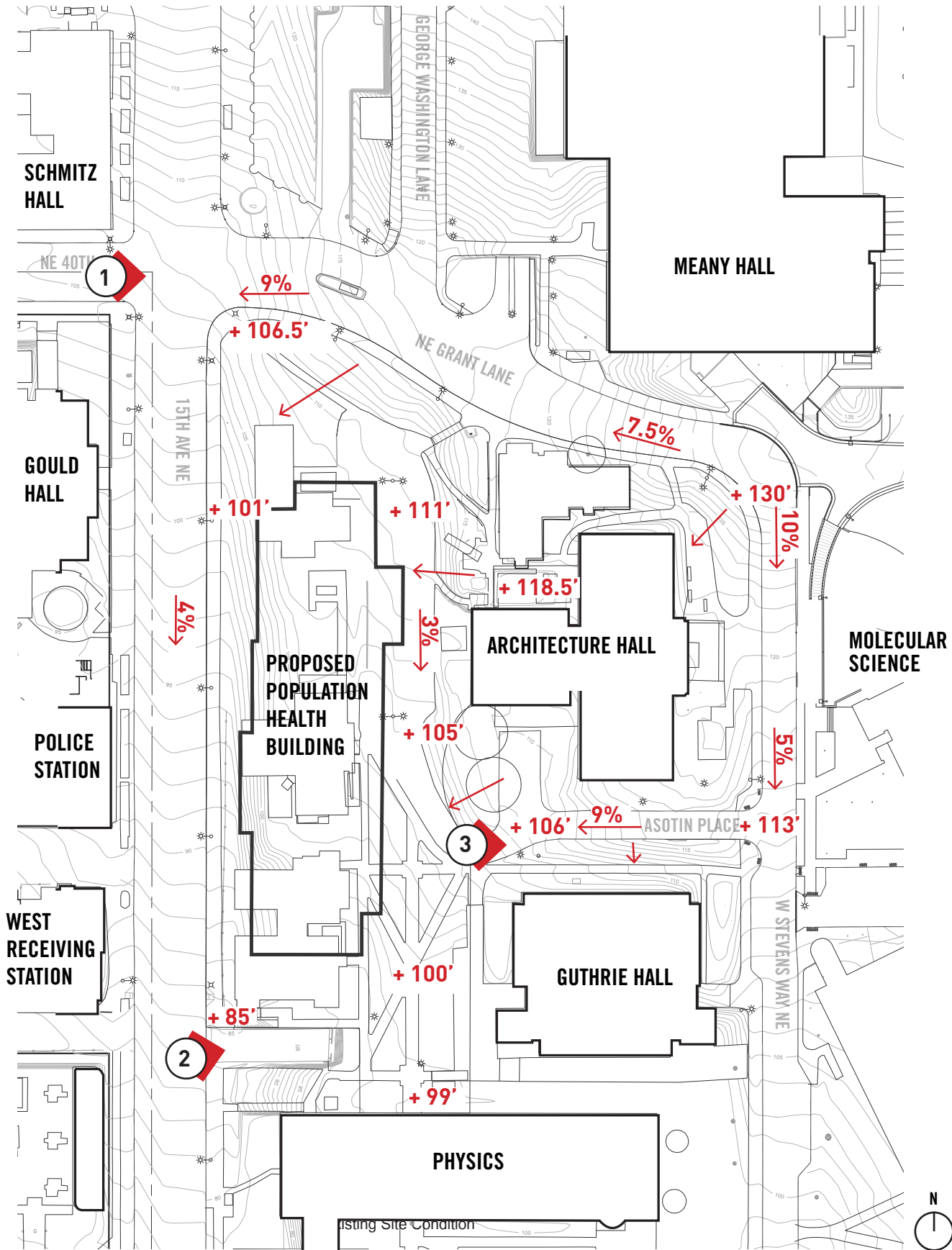
3. SITE ANALYSIS



Partial Campus Plan of University of Washington



Aerial of Project Site



(1) NE 40th & 15th Ave Intersection



(2) Stairs to Physics/ Astronomy



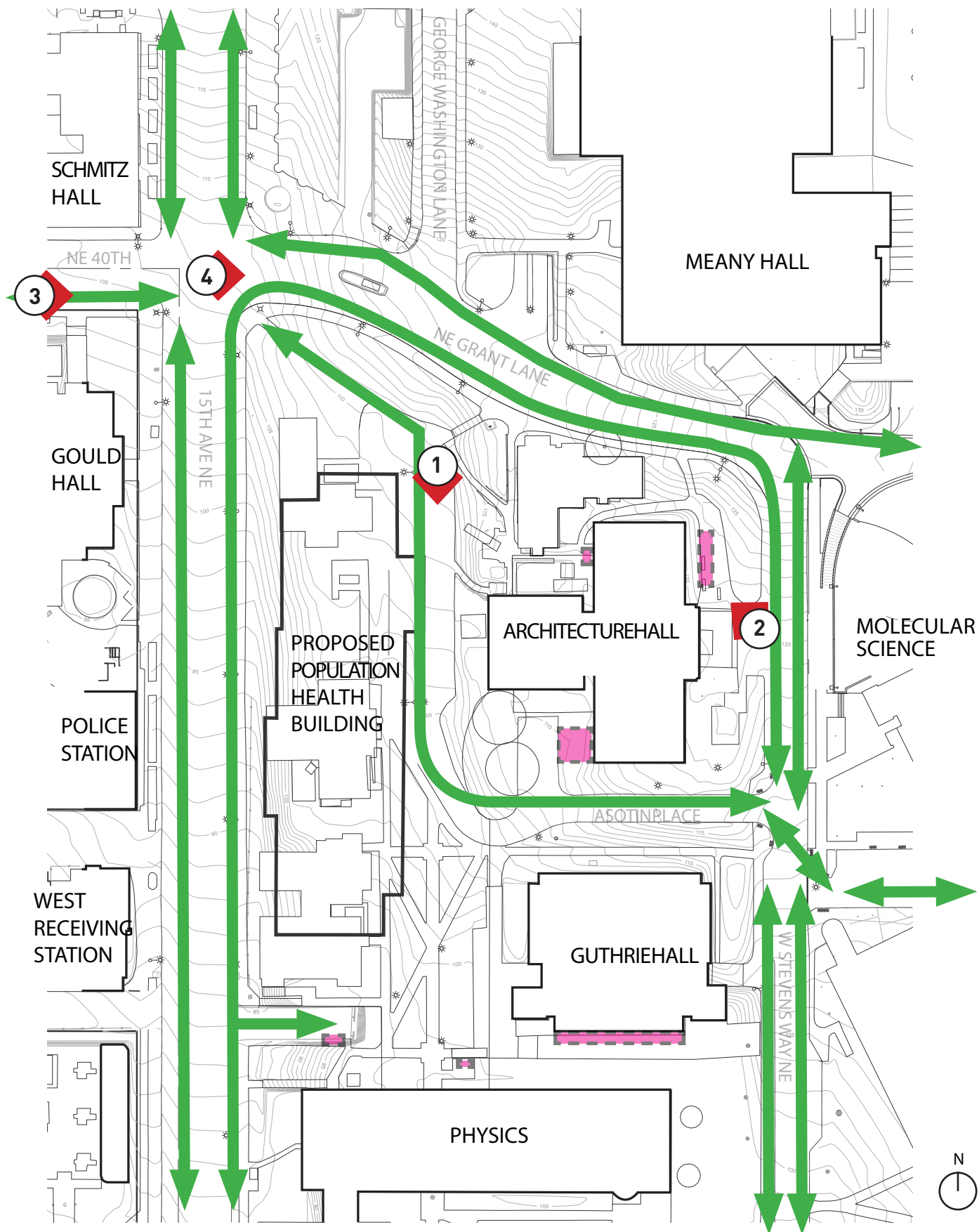
(3) Asotin Lane

Existing Topography

The site's existing topography slopes predominantly South-West with a high point of 130' at the intersection of NE Grant Lane and W Stevens Way NE and a lowpoint of approximately 85' at the SW corner of the site. An existing retaining wall along 15th Avenue NE holds the existing Annex buildings several feet above the street.

Due to this challenging topography and the location of existing buildings and the Guthrie Annexes, many routes through the site are not accessible, including the majority of the sidewalk along Grant Lane NE and W Stevens Way NE and Asotin Place between Architecture Hall and Guthrie.

The Population Health Facility is proposed to be located to work with existing grades, resulting in building entries at three different floor plates: SW entry at level 88.5', NW and SE entries at 101.5' and NE entry at 114.5'.



Existing Bicycle Circulation



EXISTING BICYCLE ROUTES



EXISTING BICYCLE PARKING FACILITIES

Primary bicycle circulation into the Population Health Facility site is from the two-way protected bike lane on NE 40th (See Image 3) and from sharrow on Okanogan Lane, W Stevens Way NE and Grant Lane NE. Currently, the C8 parking lot (See Image 1) and its driveway are the primary bicycle route through the site. Though there are no cyclists on 15th Ave NE, this roadway is occasionally used by skilled cyclists.

Bicycle parking is currently located at three locations around Architecture Hall and along the south edge of Guthrie Hall. Physics has located some of its bike parking within its loading dock.



(1) Existing parking lot commonly used as bicycle route.



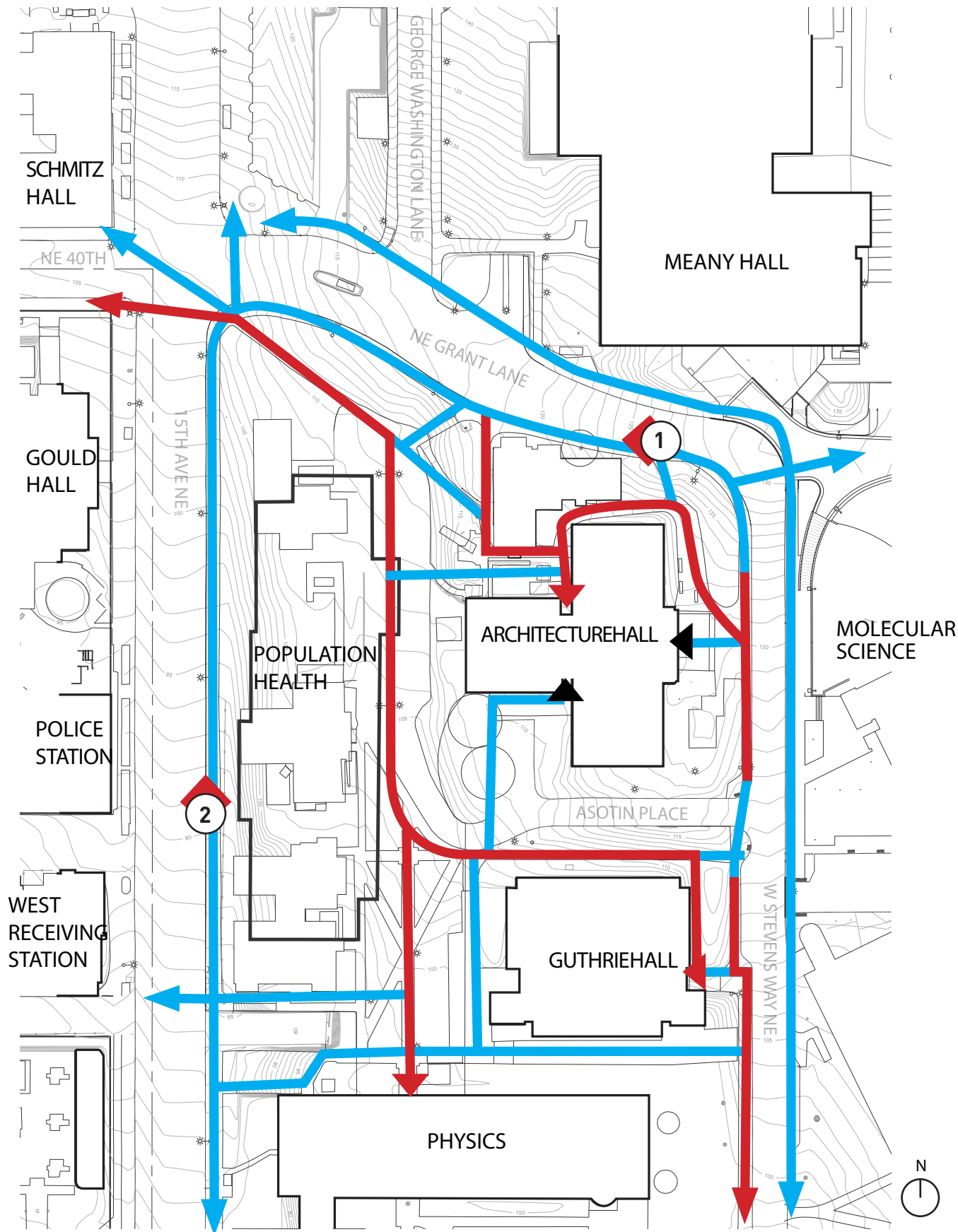
(2) Existing bicycle parking at Architecture Hall



(3) Existing two-way protected bicycle lanes on NE 40th St.



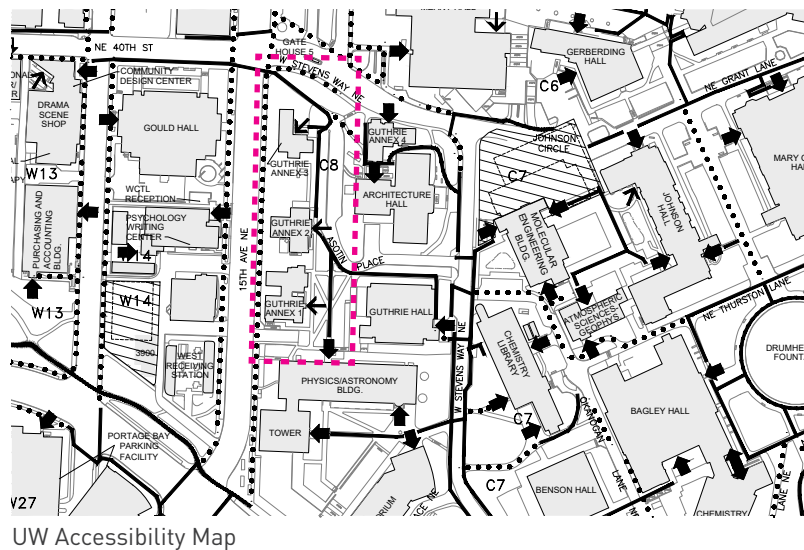
(4) Existing sharrow on Grant Lane NE.



(1) Tree in sidewalk along Grant Place





(2) Sidewalk along 15th Ave



UW Accessibility Map

Existing Pedestrian & ADA Circulation

-  EXISTING PEDESTRIAN ROUTE
-  EXISTING ADA ACCESSIBLE ROUTE

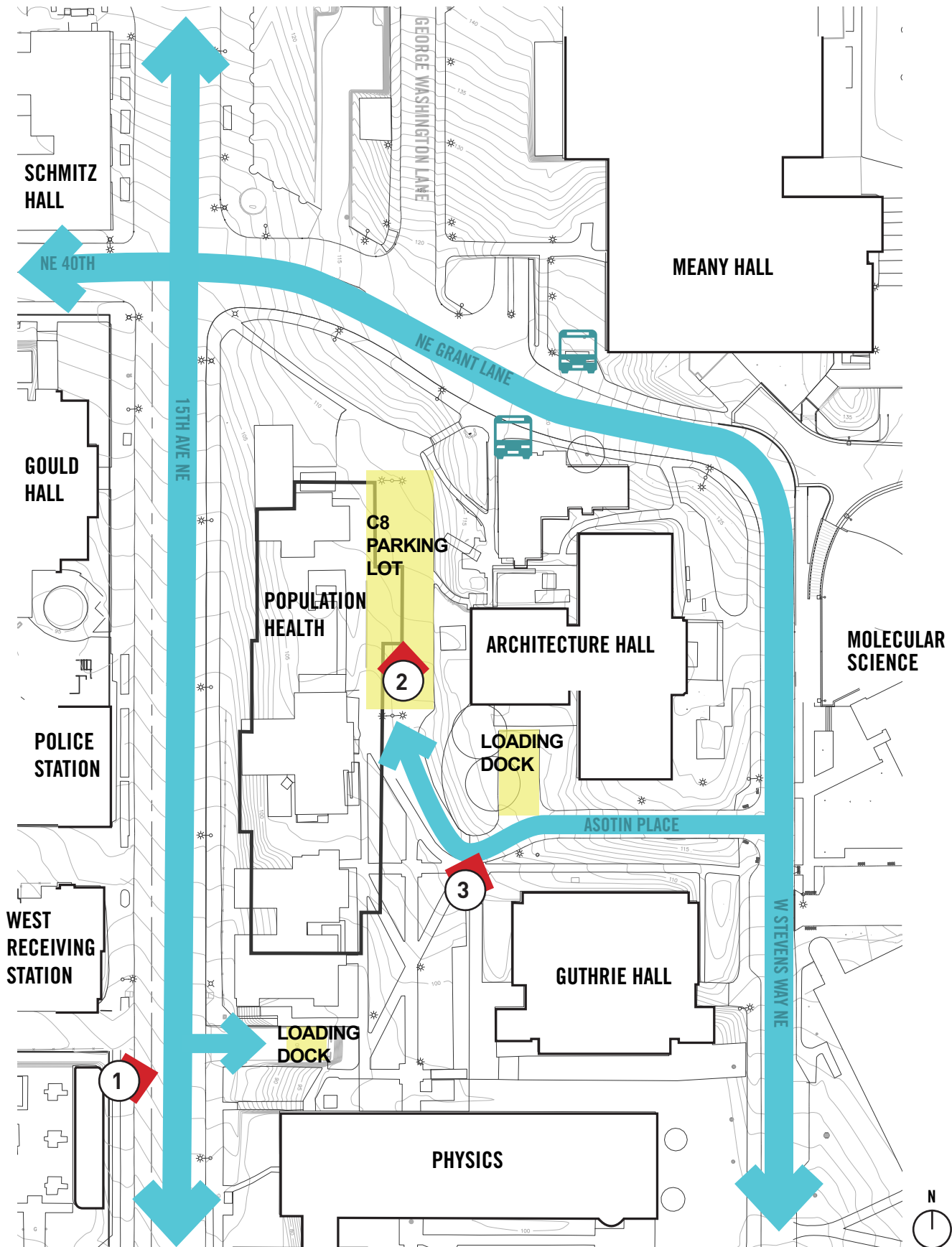
Pedestrian circulation into the site has a variety of experiences depending on from where the site is entered:

NE 40th & 15th Ave NE- This intersection is a scramble with a signalization cycle of East-West vehicles > Pedestrian Scramble > North- South Vehicles.

NE Grant Lane - Each side of the street has a sidewalk that has no buffer from the roadway. Currently there is not a direct ADA path along NE Grant Lane into Central Campus. An existing Ponderosa Pine has impacted the sidewalk creating a difficult surface to navigate (See Image 1).

C8 Parking Lot - The most frequently used path through the site has pedestrians walking through the C8 parking lot that connects the corner of NE 40th St and 15th Ave NE to Guthrie, Architecture Hall, Physics, and Stevens Way.

15th Ave NE - The sidewalk along 15th Ave NE has a retaining wall that steps with the slope creating an impenetrable edge to the campus. The entrance to the shared Guthrie Hall and Physics Astronomy Building loading dock is located at the south edge of the site. The loading dock is framed by vegetation and two stairways that connect 15th to an upper courtyard. There is an existing mid-block crossing of 15th Ave NE at the south end of the site that provides pedestrians from West Campus access to the stairways adjacent to the loading dock entrance.



(1) Physic Building Loading Dock Entrance






(2) Existing Parking Lot



(3) Architecture Hall Loading Dock

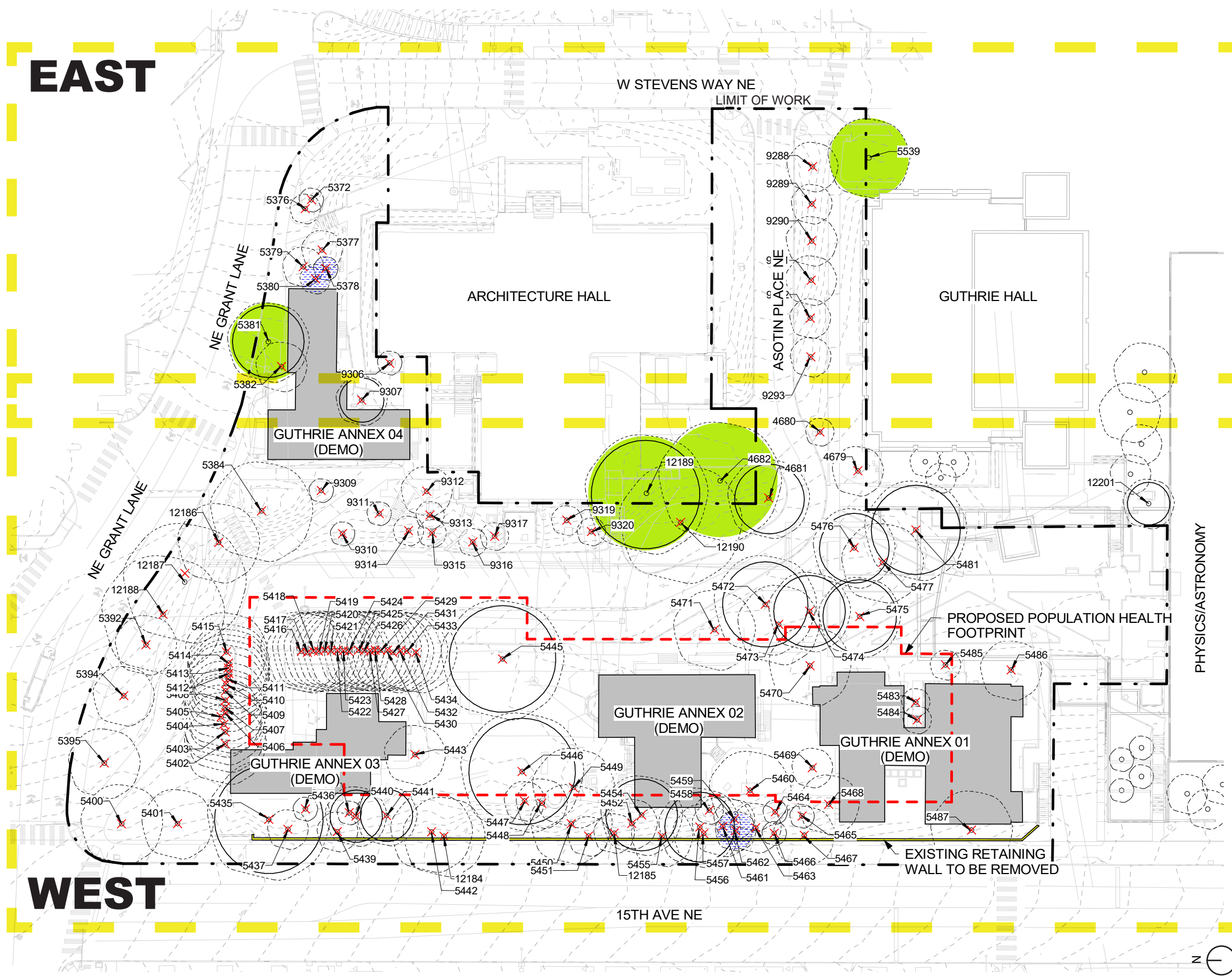
Existing Vehicle Circulation

-  EXISTING VEHICLE CIRCULATION
-  EXISTING PARKING & LOADING DOCKS
-  EXISTING BUS STOPS

Vehicles currently use 15th Ave NE, NE Grant Lane, and W Stevens Way NE for accessing the site and existing loading docks. The C8 parking lot, located between Architecture Hall and Guthrie Annexes 1-3, is accessed from Stevens Way using Asotin Place and has 17 parking stalls, including 5 ADA stalls. The Architecture Hall loading dock is accessed from Asotin Place and is exterior to the building. The Physics/Astronomy and Guthrie Loading dock is accessed from 15th Ave NE and is below grade, underneath an existing landscaped space.

Grant Lane NE to W Stevens Way NE is heavily used by Metro buses. An existing pair of bus stops is located along Grant Lane NE adjacent to Guthrie Annex 4 and Meany Hall. The Guthrie Annex 4 bus stop shelter is attached to the existing building.

4. SITE DESIGN



EAST

WEST

EXISTING TREE PLAN

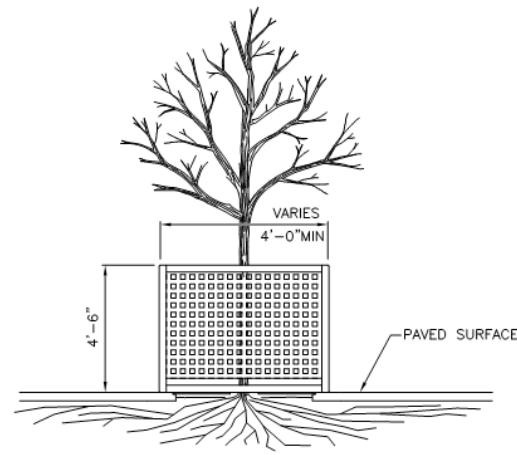
** Reference arborist report for full evaluation of existing trees.*

- TOTAL # OF EXISTING TREES = 125
- # OF EXCEPTIONAL TREES = 16
- TOTAL # OF TREES TO BE PRESERVED = 4
- # OF EXCEPTIONAL TREES TO BE PRESERVED = 2
- TOTAL # OF TREES TO BE REMOVED = 121
- # OF EXCEPTIONAL TREES TO BE REMOVED = 14

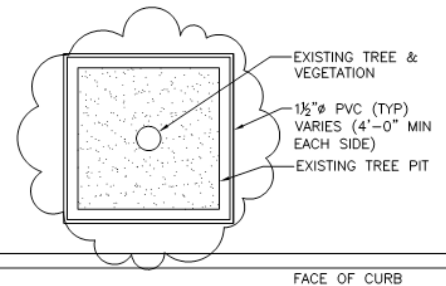
100 LANDSCAPE PLANTING

STANDARD PLAN NO 132b

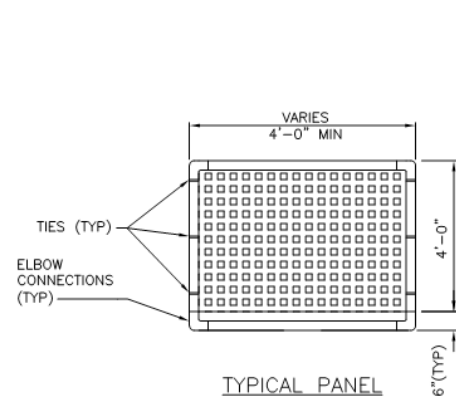
REV DATE: JAN 2017



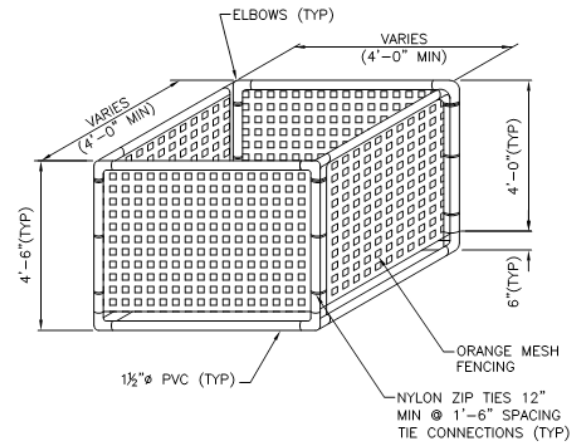
TYPICAL TREE GUARD RAIL



PLAN VIEW



TYPICAL PANEL



NOTES:

1. REUSABLE TEMPORARY PROTECTION FENCING USED TO PROTECT TREES IN TREE PITS MUST SURROUND THE ENTIRE UNPAVED TREE PIT AREA AND BE ANCHORED AND MAINTAINED IN A STABLE UPRIGHT CONDITION. SEE SECTION 8-01.3(2)B.

REF STD SPEC SEC 1-07.16(2) & 8-01



NOT TO SCALE

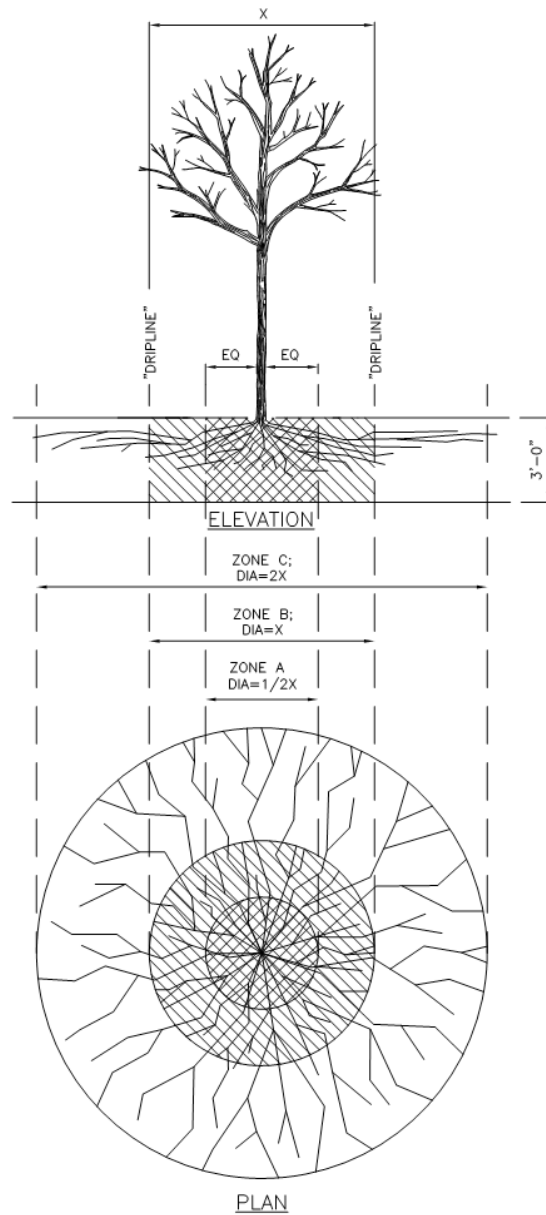
REUSABLE TEMPORARY PROTECTION FENCE

2017 Edition City of Seattle Standard Plans for Municipal Construction

100 LANDSCAPE PLANTING

STANDARD PLAN NO 133

REV DATE: DEC 2010



PLAN

TRENCHING/EXCAVATION

ZONE A (CRITICAL ROOT ZONE)

1. NO DISTURBANCE ALLOWED WITHOUT SITE-SPECIFIC INSPECTION AND APPROVAL OF METHODS TO MINIMIZE ROOT DAMAGE
2. SEVERANCE OF ROOTS LARGER THAN 2" DIA REQUIRES ENGINEER'S APPROVAL
3. TUNNELING REQUIRED TO INSTALL LINES 3'-0" BELOW GRADE OR DEEPER

ZONE B (DRIPLINE)

1. ZONE B FOR ASYMMETRICAL COLUMNAR AND NARROW CONICAL TREE FORMS. ZONE B = 1" RADIUS FOR EVERY 1" OF TRUNK DIAMETER.
2. TUNNELING MAY BE REQUIRED FOR TRENCHES DEEPER THAN 3'-0".

NOTE:

A TREE, VEGETATION, AND SOIL PROTECTION PLAN (TVSPP) IS REQUIRED FOR ALL PROJECTS. APPROVAL OF PLAN REQUIRED PRIOR TO MOBILIZATION. SEE SECTION 8-01.

REF STD SPEC SEC 1-07.16(2) & 8-01



NOT TO SCALE

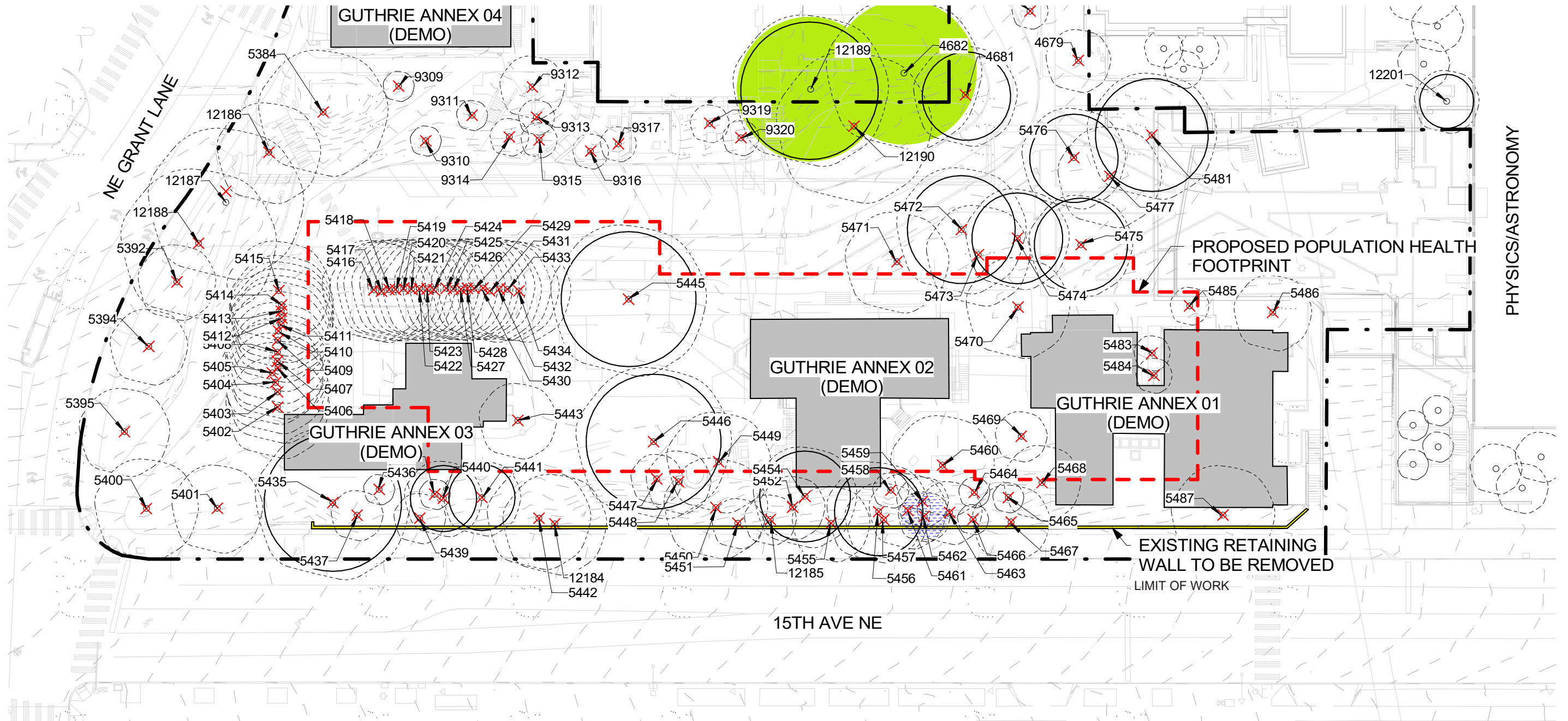
TREE PROTECTION DURING TRENCHING, TUNNELING OR EXCAVATION

2017 Edition City of Seattle Standard Plans for Municipal Construction

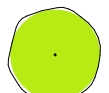
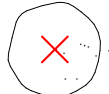

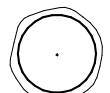
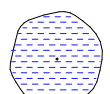

TREE PROTECTION MEASURES

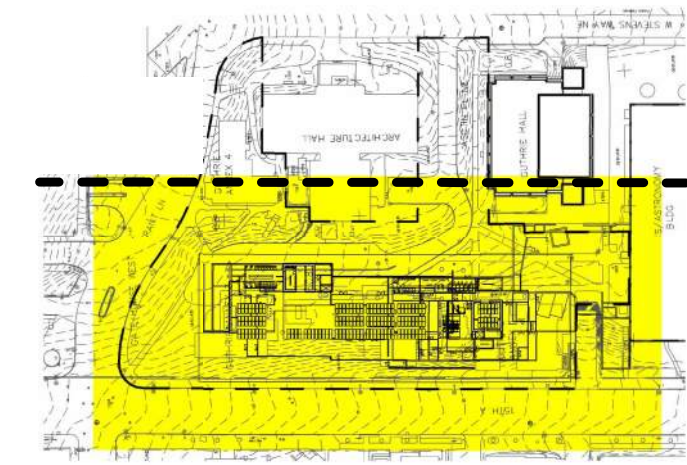
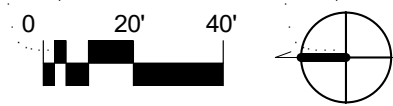
Four existing trees (including 2 exceptional trees) are to be protected as part of the Population Health Facility development. Tree protection measures will follow City of Seattle requirements, including:

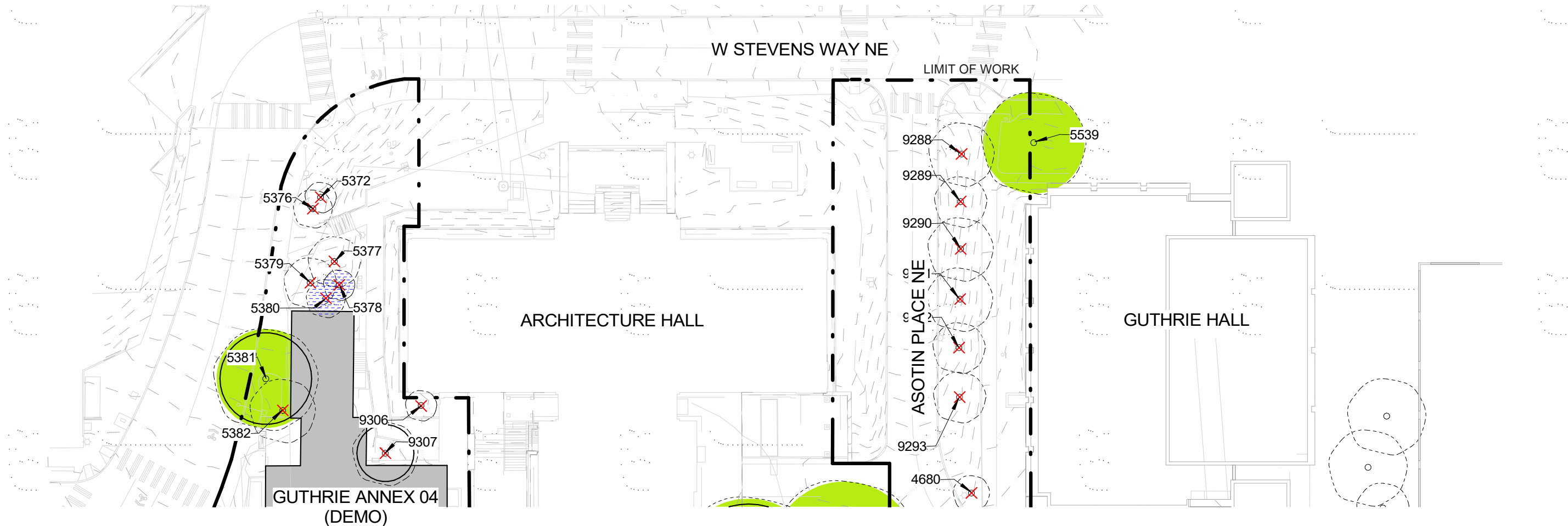
- Installation of tree protection fencing at limit of Critical Root Zone prior to start of construction activities. Additional protective measures to include a thick layer of mulch over the critical root zone.
- Limiting work and method of work within tree protection fencing per City of Seattle requirements.
- Arborist review of tree protection measures, canopy and root pruning as required.
- Immediate soil cover, watering and protection of exposed roots.









EXISTING TREE LEGEND

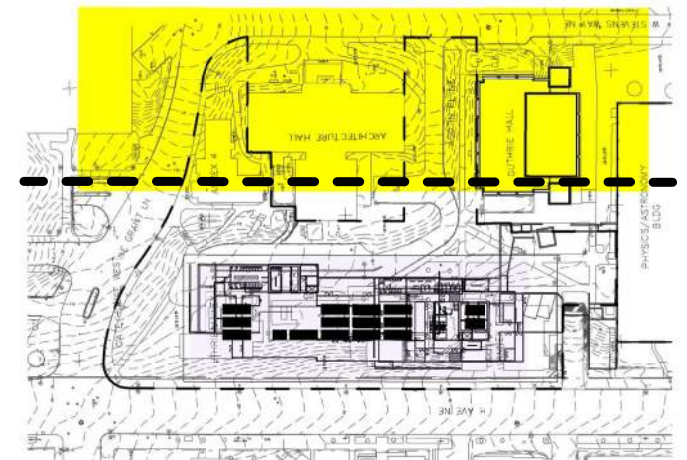
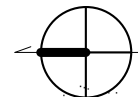
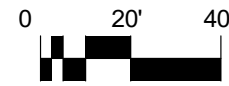
-  EXISTING TREE UNDER CONSIDERATION FOR PRESERVATION
 -  EXISTING TREE TO BE REMOVED
 -  LIMIT OF WORK
-  EXCEPTIONAL TREE
 -  EXISTING TREE IN POOR CONDITION
 -  PROPERTY LINE





EXISTING TREE LEGEND

-  EXISTING TREE UNDER CONSIDERATION FOR PRESERVATION
-  EXISTING TREE TO BE REMOVED
-  LIMIT OF WORK
-  EXCEPTIONAL TREE
-  EXISTING TREE IN POOR CONDITION
-  PROPERTY LINE



Site ID	Tree ID	Scientific Name	Common Name	DSH (inches)	Multi-stem (inches)	Drip Line (feet)	Health Condition	Structural Condition	Exceptional Threshold	Exceptional (Y/N)	Notes
B	5381	<i>Pinus ponderosa</i>	Ponderosa pine	33.0		23	Good	Good	30.0	Yes	Pavement displacement
B	12189	<i>Quercus nigra</i>	Water oak	39.7		30	Good	Fair	25.0	Yes	Massive crown, overall in good shape, some unions with included bark, minimal visible decsy
B	4682	<i>Acer macrophyllum</i>	Bigleaf maple	28.4		30	Good	Fair	30.0	No	Tag 33, central trunk die back
B	5539	<i>Pinus contorta</i>	Shore pine	5.4		8	Good	Good	12.0	No	

EXISTING TREE NARRATIVE

121 Trees are proposed to be removed in order to construct the Population Health Facility, associated open spaces and circulation routes. Following is a summary of proposed mitigation measures and the reasons for removal of trees.

Proposed Mitigation - Tree Preservation, Replacement, Transplant and Salvage

Tree Preservation - 4 trees, including 2 exceptional trees are to be preserved based on their size, condition, location and current elevation.

Tree Replacement – 121 new trees (1:1 ratio of trees to be removed) will be planted at the UW campus as part of the Population Health construction. Approximately 77 trees are to be installed within the project limit of works. The remaining approximately 44 trees are to be installed at various locations on Campus where best needed in coordination with the Campus Landscape Architect and Campus Arborist.

Transplant - The team is also exploring the potential for transplanting specimen species to a new location on campus. All trees to be preserved will be protected based on the details and measures outlined by the city of Seattle. Additional tree protection information will be provided in the construction document set.

Salvage - Trees with wood of value for re-use are to be salvaged and given to University Facilities as part of their existing tree salvage program.

Reasons for Tree Removal

Existing Structure Demolition – As part of construction, the existing Guthrie Annexes 1-4 and the existing retaining wall along 15th Ave NE are to be removed. A large percentage of the existing trees are at the top of the 15th Ave retaining wall or in immediate proximity to the Guthrie Annexes and will need to be removed as part of site demolition.

New Building Footprint & Construction – The proposed building is to be developed to the footprint allowed in the current Campus Master Plan. The majority of trees to be removed fall within or immediately adjacent to this footprint and are required to be removed in order to construct the building.

Site Open Space, Grading & Accessibility Improvements – Following the existing tree plans are a series of plans highlighting proposed accessibility, pedestrian, bicycle, vehicular and open space improvements. Due to the challenges of the existing topography and project goal to increase ADA accessibility, improve circulation and public open spaces, tree protection opportunities are limited.



Existing C8 parking lot and Guthrie Annex 02 to be demolished. Tree #12189, an exceptional Water Oak, is to be preserved.



Guthrie Annex 01 on the right hand side to be demolished.



Asotin Place NE to be re-built and regraded to provide an ADA accessible, pedestrian oriented route.



Existing trees to be removed as part of building construction, C8 parking lot demolition, pedestrian and accessibility improvements.



Existing trees along Grant Lane to be demolished as part of pedestrian circulation and accessibility improvements.



Guthrie Annex 04 to be demolished. Existing Tree #5381, an exceptional Ponderosa Pine, to be preserved.



Asotin Place to be rebuilt and regraded to provide a pedestrian oriented accessible route.



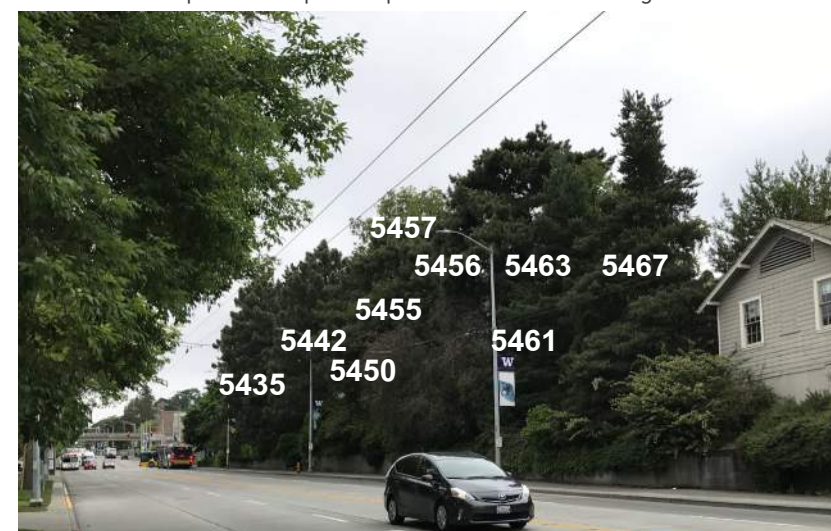
Guthrie Annex 04 and associated existing trees and pathway to be demolished to provide improved pedestrian routes along Grant Lane NE.



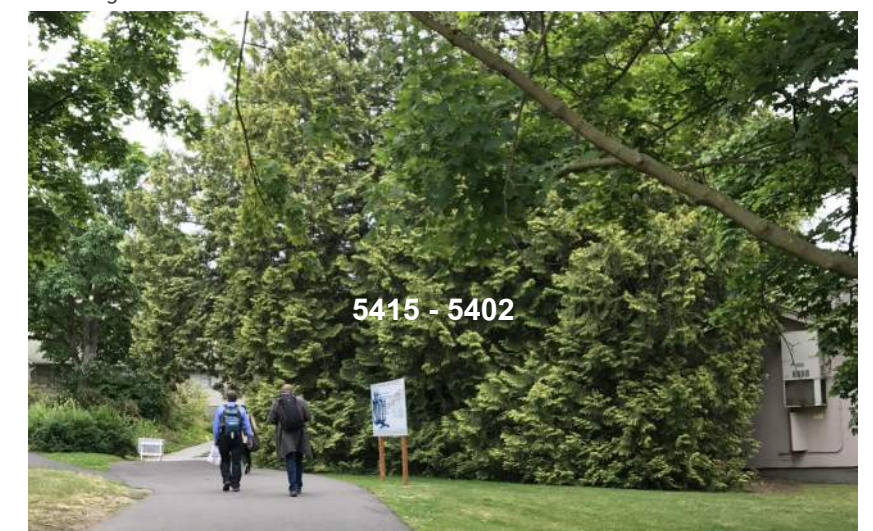
C8 parking lot, existing trees and Guthrie Annex 03 to be demolished for building construction.



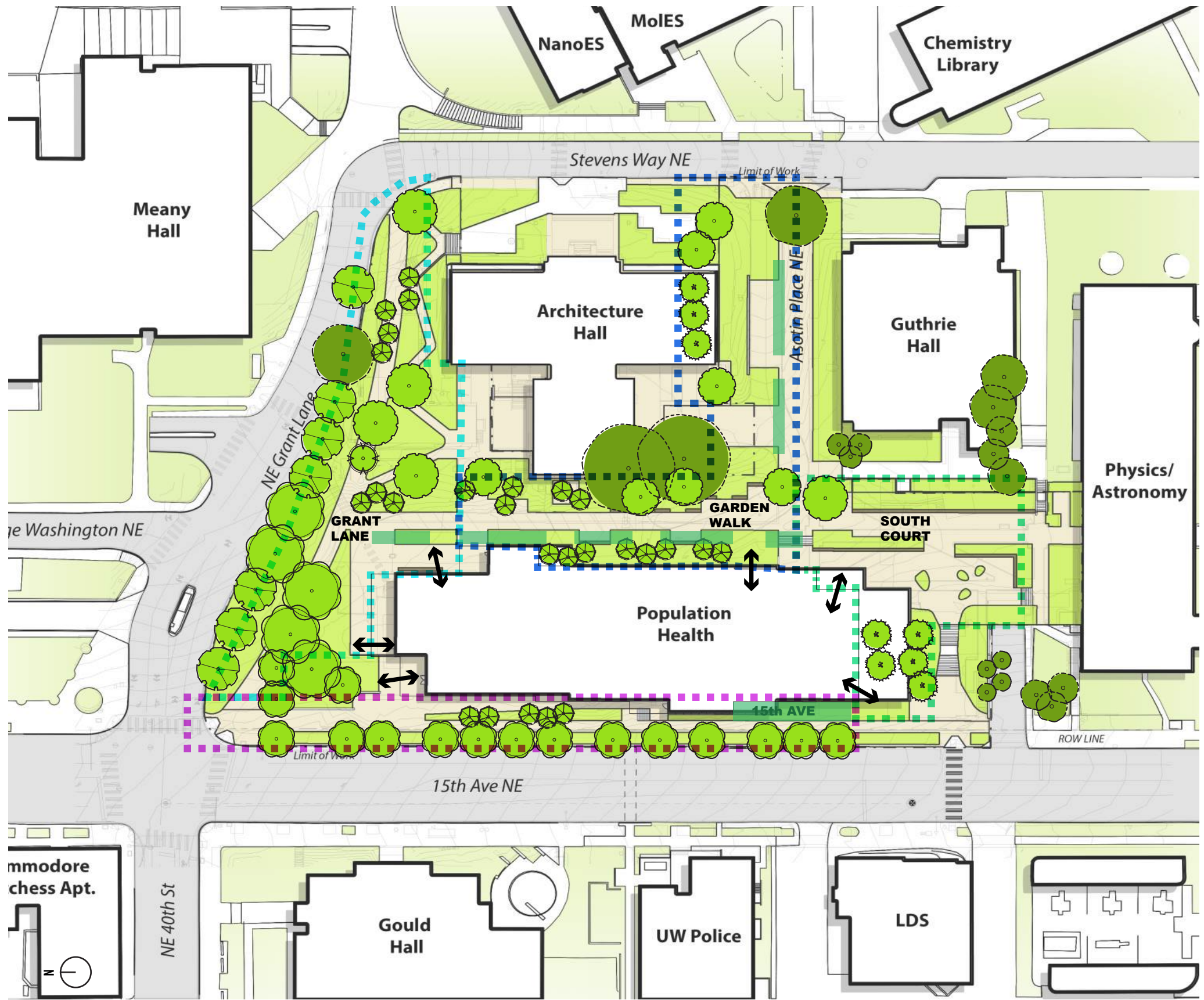
Existing C8 parking lot to be demolished for building construction and to create a pedestrian oriented, ADA accessible route. Existing tree #12189, an exceptional Water Oak to be preserved, is visible in the background.




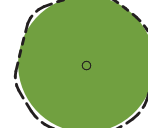

Existing trees at the top of the 15th Ave NE retaining wall to be demolished to provide streetscape improvements.



Guthrie Annex 03 and associated trees to be demolished.



Proposed Trees & Public Open Space

-  PROPOSED TREES (77)
-  EXISTING TREES TO REMAIN
Note: includes existing trees outside of project limit of work for context.
-  PROPOSED BIO-RETENTION AREAS

Landscape improvements associated with the new Population Health Facility will replace lost tree canopy by planting (approx. 77) new trees on site and an additional (approx. 44) trees at other locations on Campus to meet the UW's 1:1 tree replacement policy. Tree and plant species are to be selected to work with site micro-climates, to improve the character and experience of pathways and open spaces and for long-term health and drought tolerance.



Proposed Tree species to be planted. Top Left: Kentucky Coffee Tree; Top Right: Pacific Dogwood; Bottom Left: Evergreen Magnolia; Bottom Right: Mountain Hemlock.



Grant Lane The Grant Lane corridor will have a mix of large canopy trees and small/medium deciduous trees with a low and open understory to allow for open views along a highly used pedestrian and bicycle route.



Grant Lane Existing Photos



Grant Lane Proposed Tree Species: *Gymnocladus dioica* 'Espresso', *Amelanchier alnifolia*



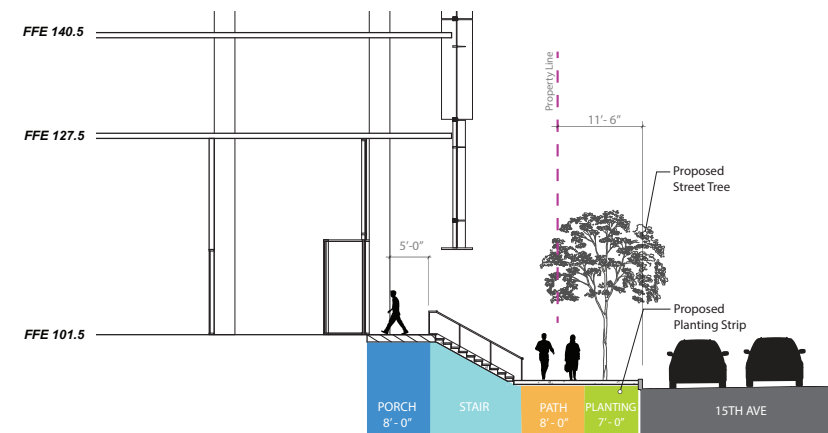
Garden Walk The garden walk will have a lush variety of native and NW adapted tree species to create a wellness experience between Architecture Hall and the Population Health facility and along Asotin Place with a dense understory of perennials, shrubs and groundcovers.



Garden Walk Existing Photos



Garden Walk Tree Species: *Calocedrus decurrens*, *Cornus x Galaxy*



15th Avenue The east side of the 15th Avenue corridor currently does not have street trees within the right-of-way. The project proposes a new 8' width planting strip and 8' sidewalk requiring removal of the existing retaining wall and trees on top of this wall. New street trees will be planted at regular spacing (25' to 30' apart).



South Court Most of the existing South Court currently does not have existing trees as it is over the existing Physics/Astronomy and Guthrie Hall loading dock. New tree plantings will be located at the perimeter of this area and along the new public staircase entry to the Campus from 15th Avenue NE.



15th Ave Existing Photos



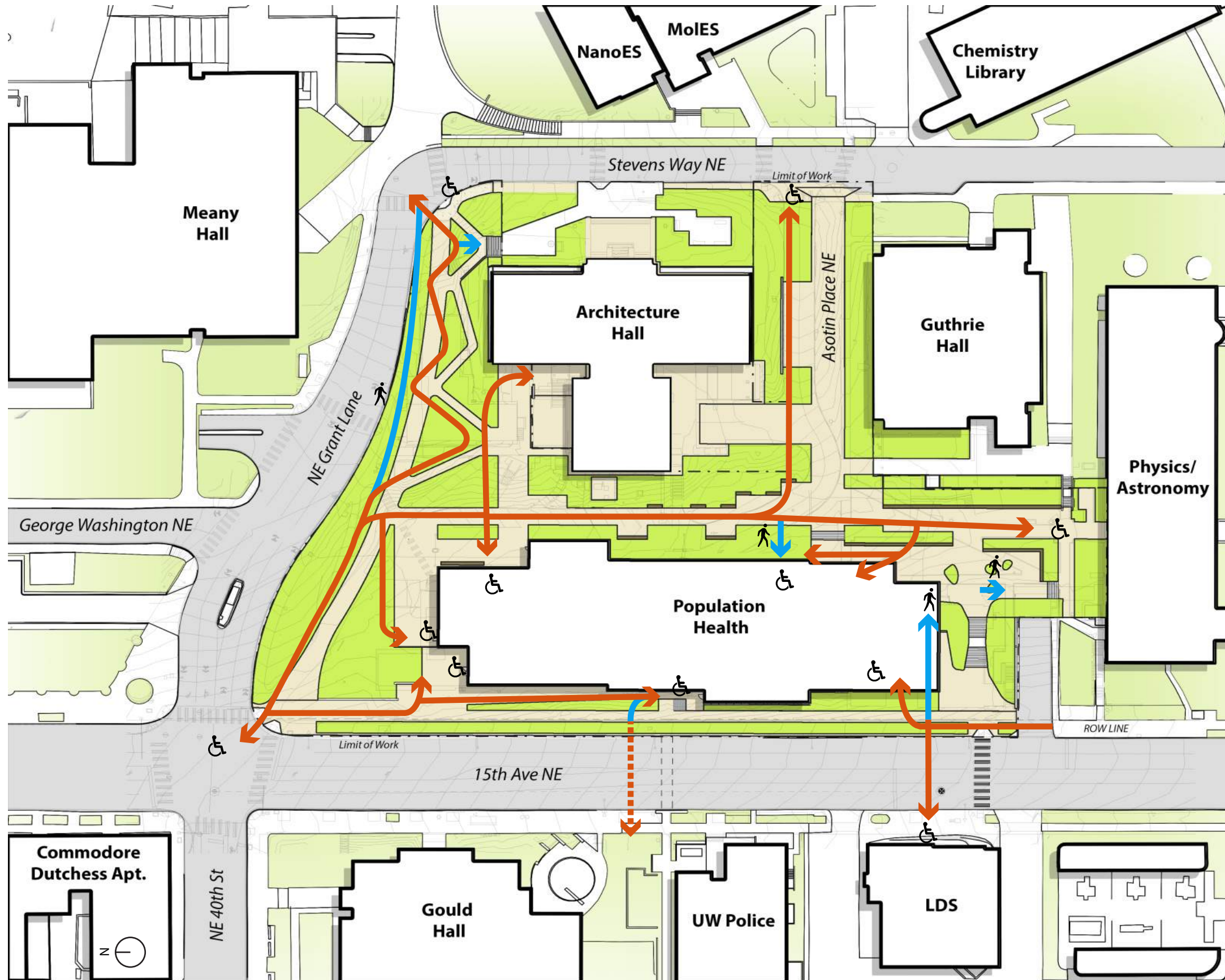
15th Ave Proposed Street Tree Species: *Liriodendron tulipifera* 'Emerald City'






South Court Existing Photos



15th Ave Staircase Entry Tree Species: *Magnolia virginiana*



Proposed Pedestrian & ADA Circulation

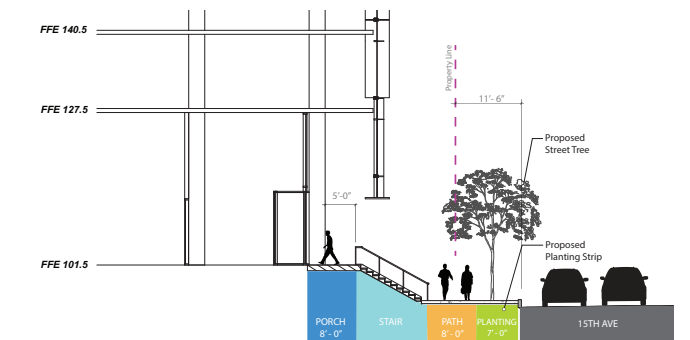
-  PEDESTRIAN ROUTE
-  ADA ACCESSIBLE ROUTE
-  POTENTIAL FUTURE MID-BLOCK CROSSING

The Population Health project will increase accessibility, increase connectivity and improve the pedestrian experience. The major pedestrian and ADA improvements are as follows:

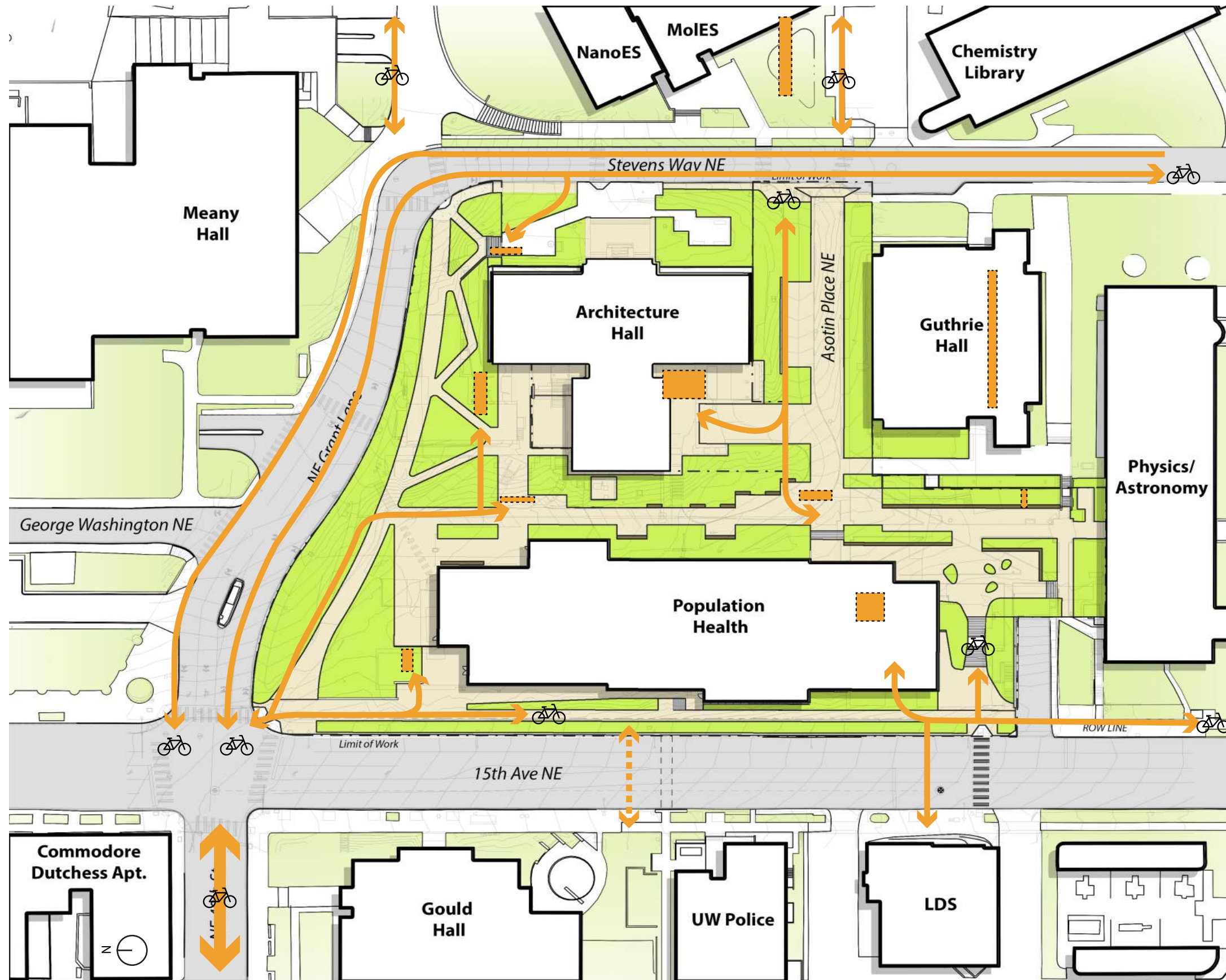
15th Ave Streetscape – The existing sidewalk is 6' width with no street trees or buffer from the street. Proposed streetscape improvements will add a 2' width concrete courtesy strip for maintenance use, 8' planting strip with street trees and an 8' sidewalk. The building will have an additional landscape setback of 6' to 12' from the back of sidewalk to improve the pedestrian experience along this heavily trafficked route.

Grant Lane Walkway – The existing sidewalk along Grant Lane is 3' to 8' width with no buffer from the street. Proposed walkway improvements will provide a 12' width walkway buffered from the street with landscape and trees. An ADA accessible route will be created from 15th Ave to Stevens Way utilizing this walk and diverging where switchbacks are required to meet ADA grades.

Asotin Place - Asotin Place is currently a driveway with a separated pedestrian pathway. Proposed improvements will regrade this lane to meet accessibility and prioritize it for pedestrian use with secondary use for service, fire lane and ADA parking.



Section of building and streetscape at 15th Ave NE.



Proposed Bicycle Circulation & Parking

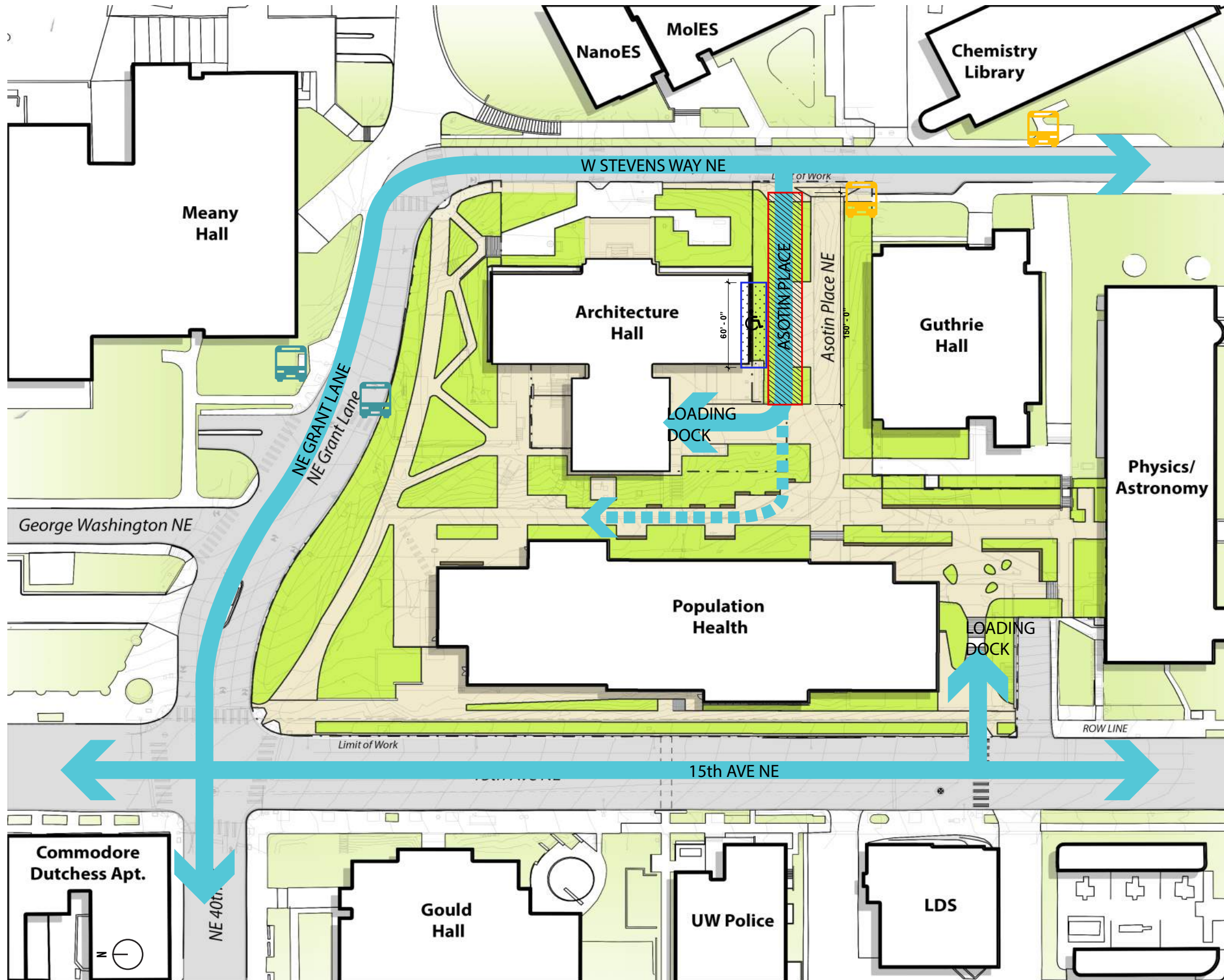
-  BIKE ROUTE
-  BIKE PARKING FACILITIES (EXISTING & PROPOSED)
-  POTENTIAL FUTURE MID-BLOCK CROSSING

The Population Health project will increase bicycle parking and improve bicycle circulation as follows:







Short-term Bicycle Parking - A minimum of 33 short-term bicycle parking spaces are to be provided exterior to the building at building entries. High visibility safe locations under building canopy are prioritized.

Long-term Bicycle Parking - Approximately 200 long-term bicycle parking spaces are to be provided interior to the building for building users in a secured bicycle storage room with access from 15th Ave NE at the SE corner of the building.

Grant Lane improvements - The project is studying improvements to bicycle circulation from 40th Ave NE to Stevens Way NE in coordination with UW Transportation Services and Metro. It is yet to be determined what improvements are possible within the roadway.



Proposed Vehicle Access & Circulation

-  VEHICLE ACCESS ROUTES
-  VEHICLE MAINTENANCE ACCESS
-  EXISTING BUS STOP LOCATION
-  PROPOSED BUS STOP RELOCATION
-  FIRE LANE - 150'
-  PROPOSED PARKING STALLS

The University of Washington manages parking needs on a campus wide basis. The Population Health Facility will provide 2-5 parking stalls along Asotin Lane. The priority for those parking stalls is ADA first and service vehicle parking second. The final allocation and number of parking stalls will be determined by UW Transportation Services to meet campus needs.

The existing loading dock at Architecture Hall will remain in its existing footprint with vehicular access provided from Asotin Lane. The existing Physics/Astronomy & Guthrie Hall loading dock will be modified to add (2) new loading dock bays for the Population Health facility. No additional parking is proposed at this loading dock.

The existing pair of bus stops on Grant Lane NE may need to be relocated during construction to a location on Stevens Way adjacent to Guthrie Hall. The project team is working with UW Transportation Services and Metro to coordinate interim and final bus stop facilities.

5. DESIGN GUIDELINES

The Population Health Facility Site is located on the western edge of The University of Washington Central Campus. In order to contribute to a campus environment that supports and facilitates the mission of “the University as a public institution dedicated to learning, teaching, research, and community service” (UW Campus Master Plan 2003 p8), the design of the building will follow the design guidelines in the Campus Master Plan, while also acknowledging the guidelines set forth in the Seattle Design Guidelines.

**2003 CAMPUS MASTER PLAN (CMP)
SEATTLE 2003 Building Design (CMP pp. 21-23)**

“ Maintain continuity with the context of surrounding buildings, or if the existing context is not clear or valued, contribute to the establishment of a new context.” - 2003 CMP

**“ Strengthen the most desirable forms, characteristics and patterns of the streets, block faces, and open spaces in the surrounding area”
- Seattle Design Guidelines CS2**

RESPONSE:

The Population Health Facility will anchor and provide an important gateway into Central Campus and link to West Campus. The project will provide a network of open spaces that allow for a rich, landscaped entry into campus as well as accessible routes throughout the site. The building's design speaks both to the urban scale and modern context of West campus while providing a quiet and respectful backdrop to the historic context of Architecture Hall and Central Campus to the East.

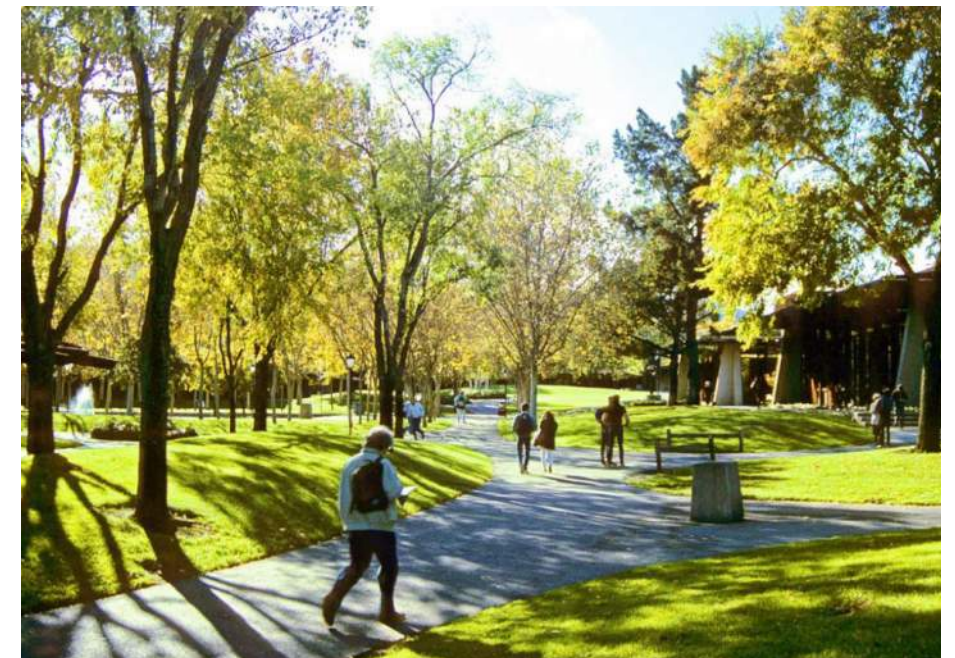
New open spaces integrated at the building entries will provide inviting campus open space for social events, quiet study, and active collaboration. These courts and walks allow for planned and unplanned meet ups and opportunities to engage with neighboring populations. Glazing at the ground level and at key areas on upper levels will provide views into the interactive spaces inside and showcase the work of the Population Health Initiative. Through right-sizing, integration of a variety of seating and indoor/outdoor connections, the project aims to maximize opportunities for human and campus connectivity.

“ Building design and placement should accommodate convenient pedestrian circulation.” - 2003 CMP

“Complement and contribute to the network of open spaces around the site and the connections among them.” - Seattle Design Guidelines PL1

RESPONSE:

The development of this site affords the opportunity to improve campus and neighborhood connectivity through improved facilities for pedestrians, cyclists and transit users. This project will improve circulation in an area of the campus that is not currently fully accessible, will promote cycling through improved routes, bicycle parking and facilities, and will create an inviting green entry for pedestrians, cyclists and transit users. Pedestrian circulation and open spaces will maximize accessibility and provide inviting and safe ways to circulate both during the day and night.



“ Express entrances, places of gathering, transition from outside to inside, and protection from weather.” - 2003 CMP

“ Create a safe and comfortable walking environment that is easy to navigate and well-connected to existing pedestrian walkways and features.” - Seattle Design Guidelines PL2

RESPONSE:

Key to a healthy experience are places that are equitable, inviting, and safe. Ground level uses are transparent and are encouraged to spill out to exterior open spaces. The ground plane program of the building allows for active, public engagement and transparency along 15th Avenue and NE Grant Lane. Public access will be welcoming, but balanced with features, lighting, and signage that protect building user’s personal safety.

The main entrances to the building will announce themselves through cues in building form, ground level setbacks, landscape and materiality. Weather protection will be provided at all 5 building entrances, as well as along portions of 15th Avenue.

Pedestrian circulation and open spaces will maximize accessibility and provide inviting and safe ways to circulate both during the day and night. Garden walks and usable open spaces will provide restorative opportunities by allowing for access to nature, meditative experiences, exercise and social interaction.

“ Express function in the design concept of the building through form and organization.” - 2003 CMP

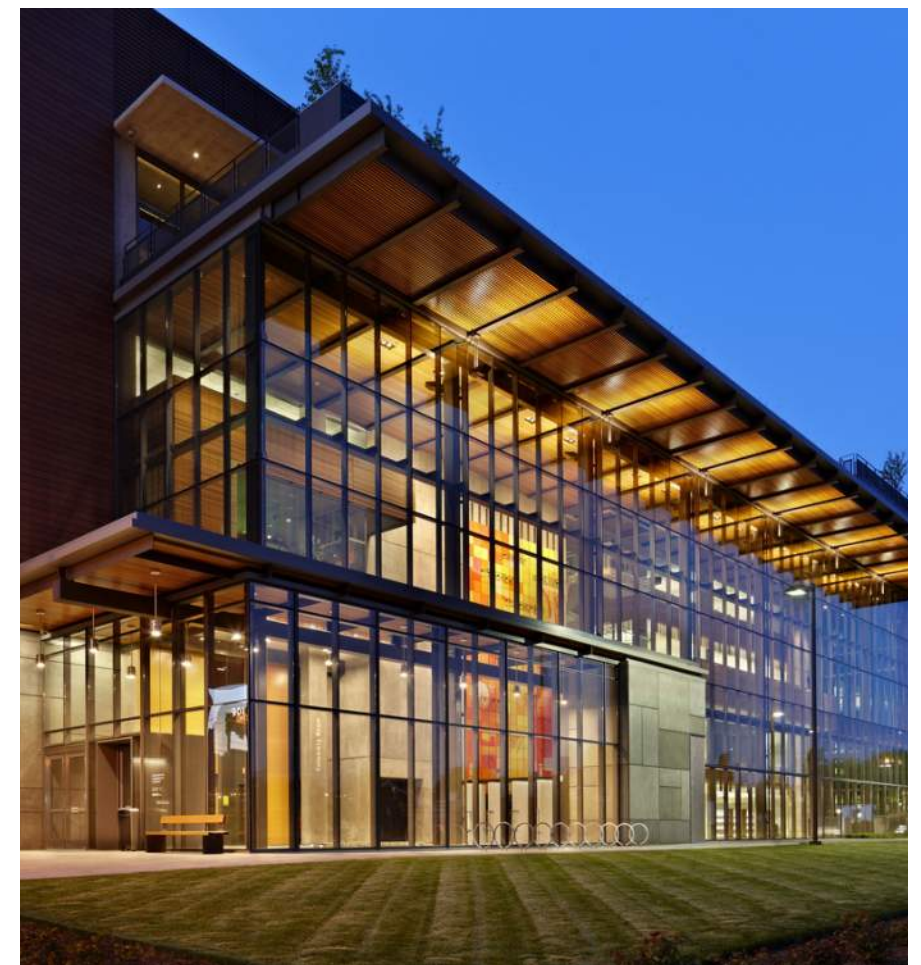
“Develop an architectural concept that will result in a unified and functional design that fits well on the site and within its surroundings.” - Seattle Design Guidelines DC2

RESPONSE:

Connectivity - both internal and external- is the guiding concept for the Population Health Facility. Design for the UW Population Health facility considers Connectivity through three lenses – *Campus, Environmental and Human* - in a layered approach that gives consideration to both the scale of the individual and the scale of the globe.

The building design will have a long life/loose fit approach, with a structural system that allows for programmatic flexibility and adaptability. The project will consider Life Cycle Cost Analysis when choosing important building systems and cladding options in order to provide a long-lasting and durable building for the programs to evolve over time.

Clean simple forms will create a visual identity for the building that is distinct, while respecting the historic structures in its context. Color and material choices will be made carefully, to be timeless in quality and to respect local cultures and materials. Material selections will be authentic, humble and reclaimed when possible. Detailing will embrace craft, durability, and create appropriate scale at areas of human interaction.



“ Design solutions responsive to context, climate, and energy conservation are encouraged unless the project is an addition to a historically designated building and deviation from the original is not suitable. Contextual responses can be accomplished through siting, choice of materials, form, scale, massing, and aesthetic references.”
- 2003 CMP

“Use natural systems and features of the site and its surroundings as a starting point for project design” - Seattle Design Guidelines CS1

RESPONSE:

In keeping with the established goals for the project, Population Health facility will implement sustainable energy, water, and stormwater solutions. The project will preserve exceptional trees, replace trees removed at a 1:1 rate, and salvage trees with re-use potential. New plantings will be selected for their adaptability, drought tolerance and native qualities, enhancing pathways and open spaces to provide a garden like experience.

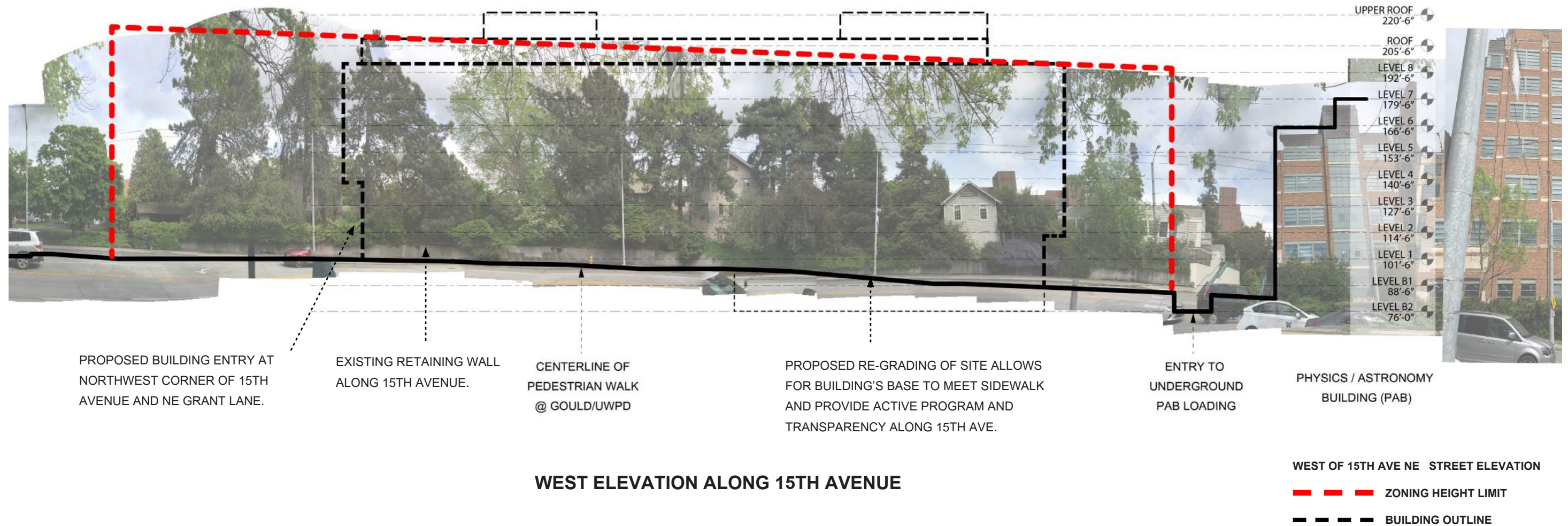
Sustainability goals for the Population Health Facility site are targeting holistic solutions to minimize potable water use, decrease stormwater runoff, decrease heat island effects and enhance the urban forest. With an integrated approach to the design of irrigation, stormwater facilities, planting, roofs and hardscape, the project is on a path to furthering the goals of the UW Urban Forestry Master Plan, the UW Climate Action Plan and the UW Campus Master Plan.

The project team is assessing the available rainwater, greywater, and solar energy to use in the building's operation. Coupled with efficient water and energy systems, and a high performance facade, the project is targeting exceptional sustainability achievements, furthering the goals of the UW Climate Action Plan.

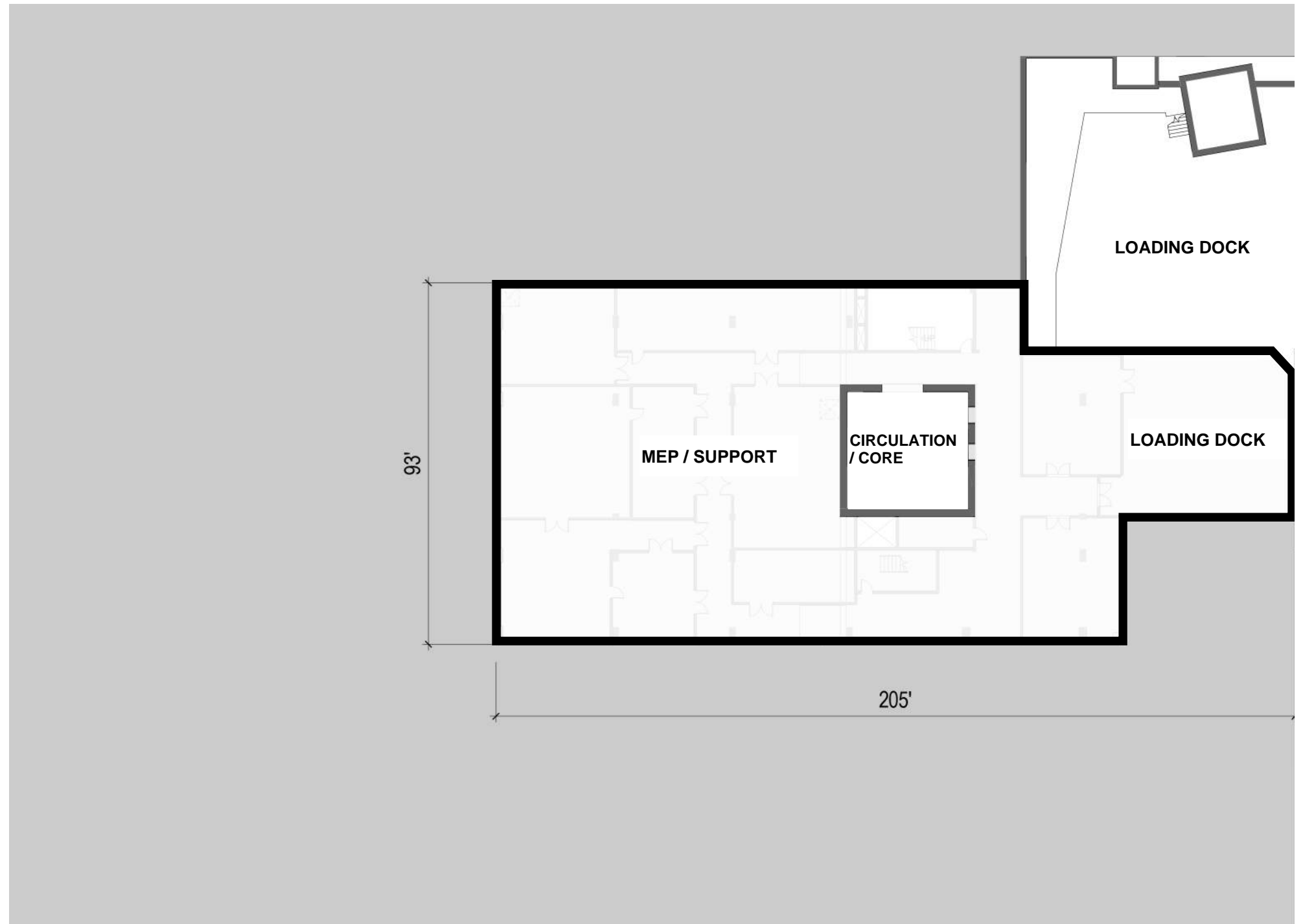


6. ARCHITECTURAL CONCEPT

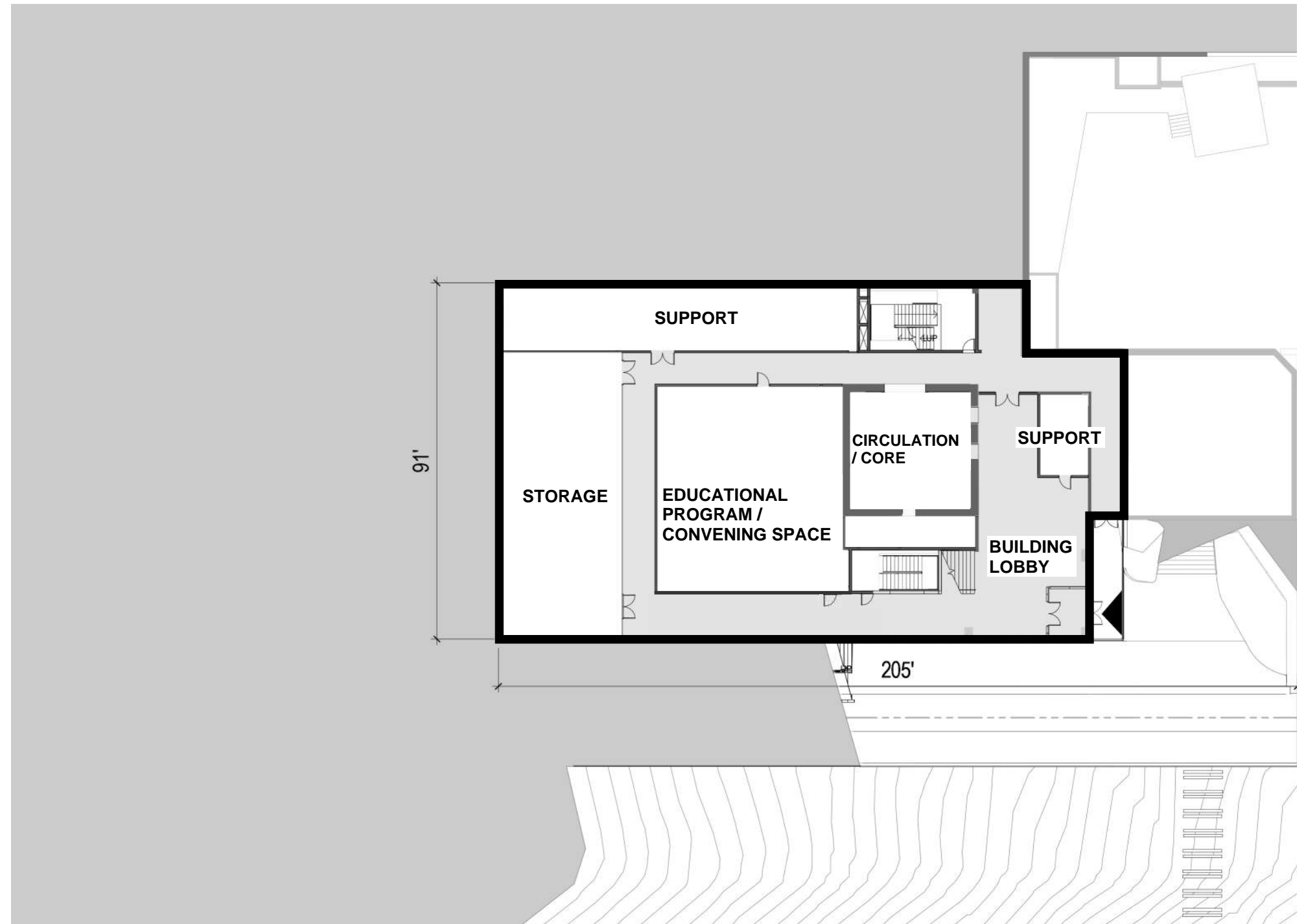
The building will be developed according to the 2003 Campus Master Plan, the project is anticipated to be close to the Campus Master Plan 105' building height limit, including a 15' mechanical penthouse over the height limit. The estimated size of the facility is 300,000 GSF, with 8-stories of above-grade space, and 2 partial levels of below-grade space.



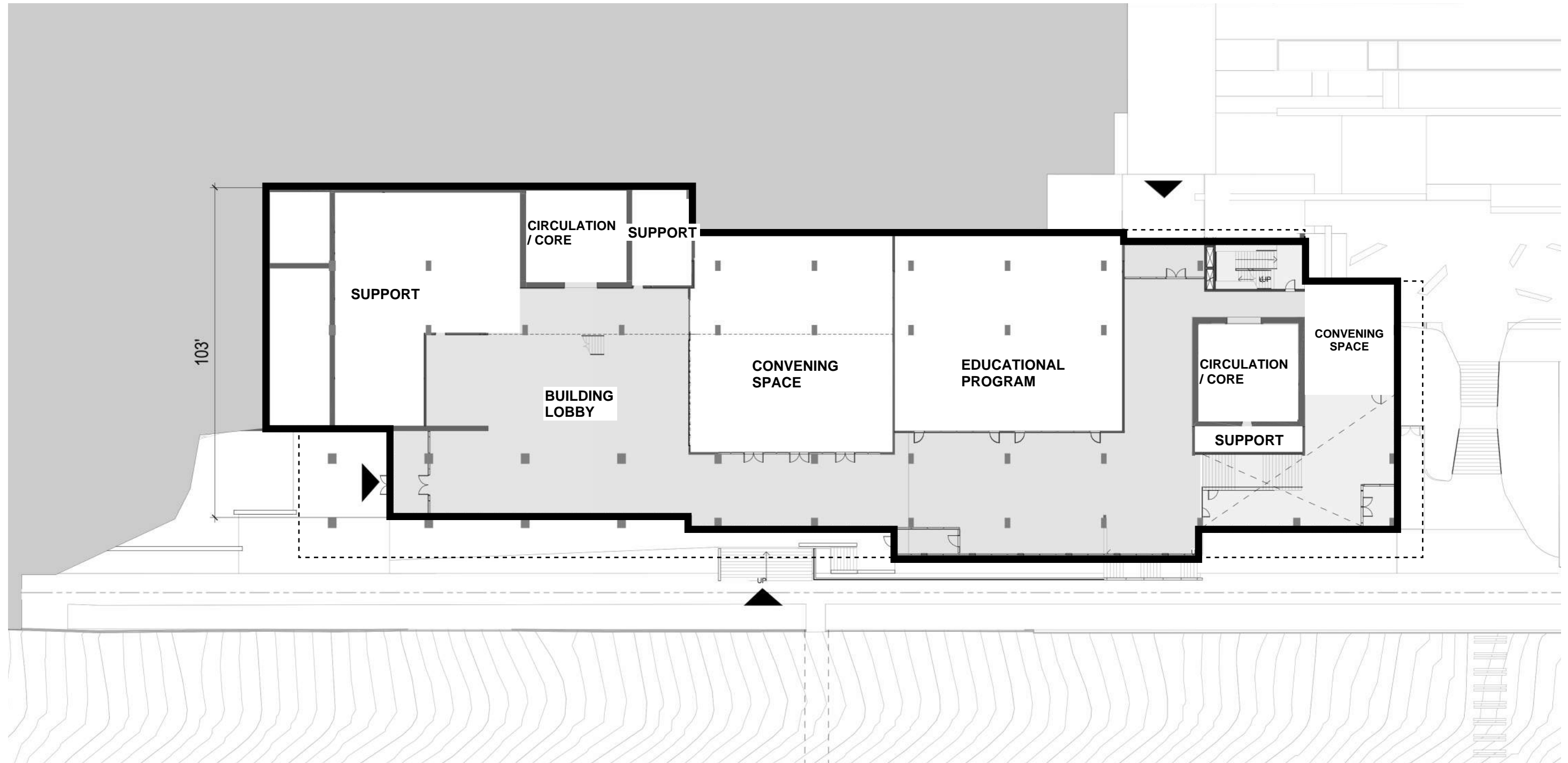
WEST ELEVATION ALONG 15TH AVENUE



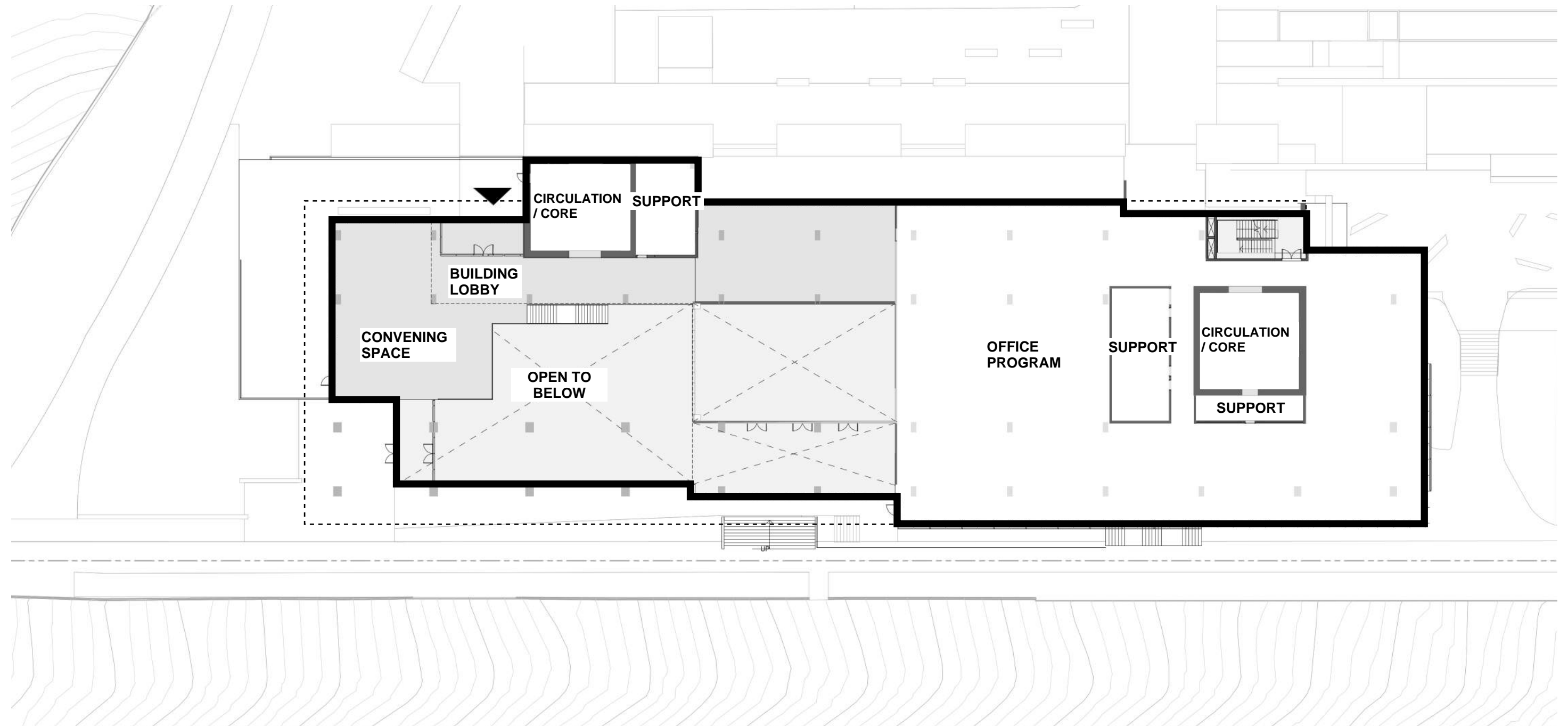
CONCEPT FLOOR PLAN - LEVEL B2



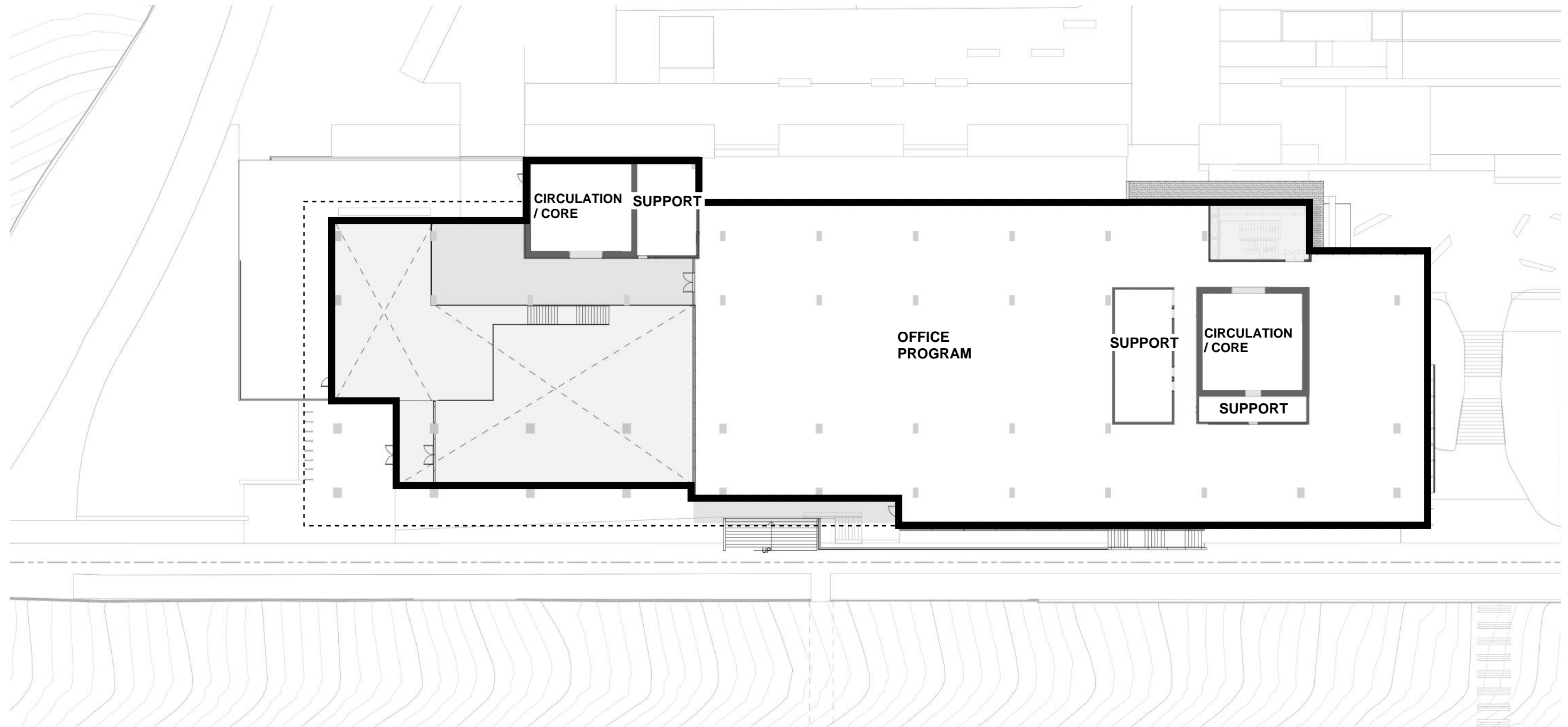
CONCEPT FLOOR PLAN - LEVEL B1



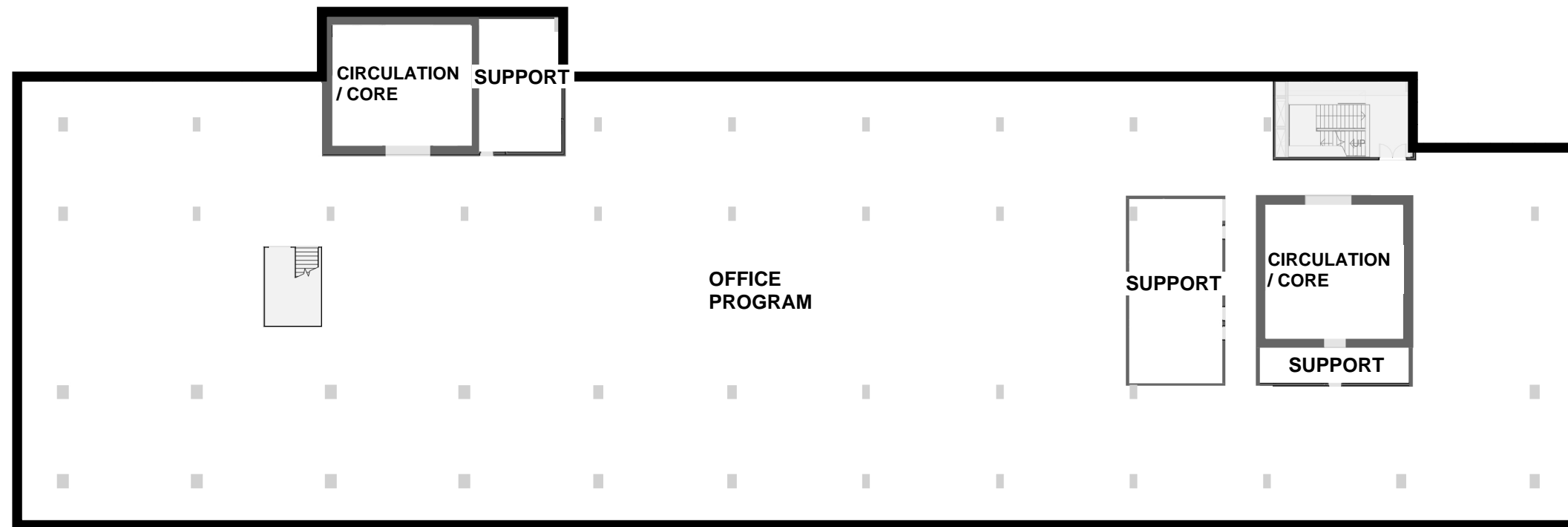
CONCEPT FLOOR PLAN - LEVEL 1



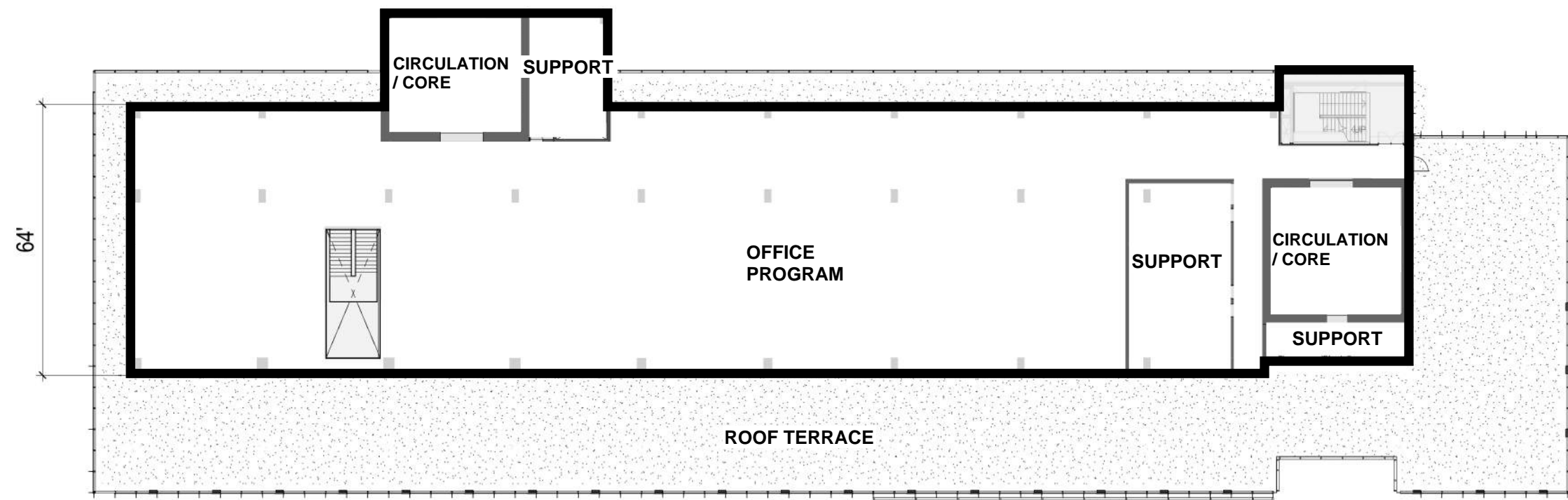
CONCEPT FLOOR PLAN - LEVEL 2



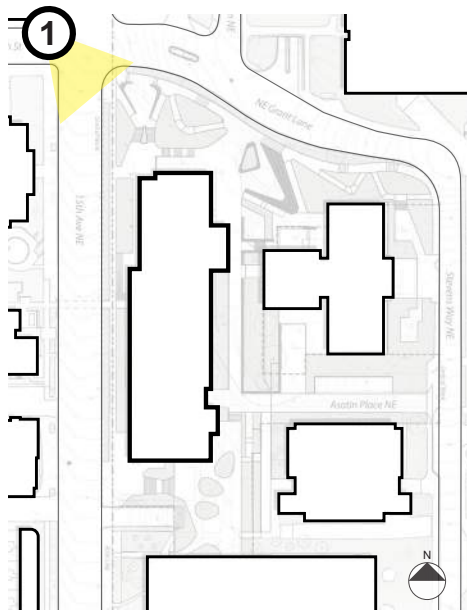
CONCEPT FLOOR PLAN - LEVEL 3



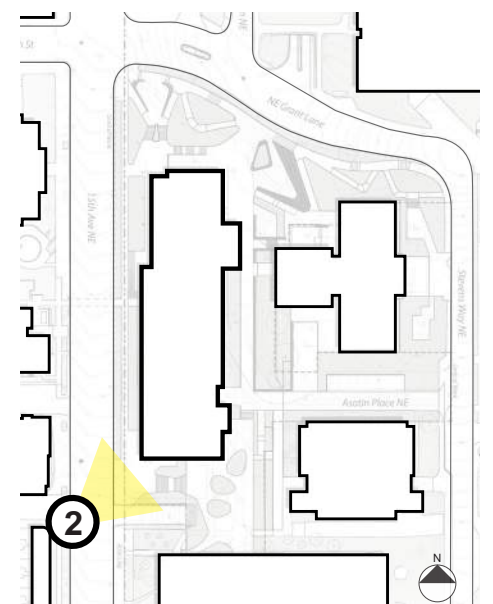
CONCEPT FLOOR PLAN - LEVEL 4 - 7, TYPICAL



CONCEPT FLOOR PLAN - LEVEL 8



1. VIEW LOOKING SOUTHEAST ACROSS 15TH AVE NE



2. VIEW LOOKING NORTHEAST ACROSS 15TH AVE NE

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7. APPENDIX

Land Use Summary:

The Population Health Facility (PHF) site 22C/C19 is zoned MIO-105-MR. It is located within boundaries designated by a Major Institutional overlay (MIO) zone with a height limit of 105 feet as defined in the City of Seattle land Use and Zoning Code.

UW 2003 CAMPUS MASTER PLAN (CMP) DEVELOPMENT STANDARDS		PHF CONSISTENCY
PG.135 <u>DEVELOPMENT REVIEW</u>	<ul style="list-style-type: none"> Development within the MIO is governed by this Campus Master Plan, not the underlying zoning or land use code. If a development standard of the underlying zone is not discussed in this chapter, it does not apply. The lack of specificity in the Campus Master Plan shall not result in application of provisions of the underlying zoning or other provisions in the City's land use code. State and federally mandated regulations such as critical areas and/or endangered species are acknowledged and will be followed. 	Development Standards are governed by the 2003 CMP. No portions of the Seattle Land Use Code for the underlying zone shall apply.
PG.135 <u>USES</u>	<ul style="list-style-type: none"> Academic, open space, transportation, housing, mixed-use, and all other uses that are determined by the University to be necessary to fulfill the mission of the University of Washington are allowed. (Table IV-4, on page 86 of the Campus Master Plan) 	Proposed uses include office spaces, lecture room, light food service, exhibition space, bike storage, locker room, which are all allowed in the 2003 CMP.
PG.128 <u>DEMOLITIONS</u>	<ul style="list-style-type: none"> Demolitions are permitted as long as sites are left in a safe condition and free of debris. Demolition may be permitted prior to future development. 	Demolition of four structures will occur prior to construction of the Population Health Facility per the 2003 CMP.
PG.128 <u>GROUND FLOOR USES</u>	<ul style="list-style-type: none"> A variety of ground floor uses are encouraged, particularly in West Campus. Offices, commercial, academic, housing, mixed use, and parking are acceptable. 	Ground Floor Uses include flexible lecture room, classroom, café, exhibition space, which are allowed in the 2003 CMP.
PG.130 <u>MODULATION</u>	<ul style="list-style-type: none"> Modulation is not required, however the design of buildings will incorporate measures that provide for appropriate variety, express carrying functions of the building and respect the pedestrian scale at the ground level. 	Building design and modulation will be addressed with the UW Architectural Commission.
PG.130 <u>STRUCTURE HEIGHT</u>	<ul style="list-style-type: none"> Maximum height for zone H5 is 105 feet (Table V-2). Measured from finished or existing grade, whichever is lower, up to a plane parallel to the existing or finished grade. On sloped sites, when more than 50% of the roof area is below the height limit, the remainder of that floor may be built above the height limit, not to exceed 15 feet. Central Utility stack, communication aerials, flagpoles, light poles, and exhaust ducts are exempt from height limits. Stair and elevator penthouses, chimneys, mech equipment, telecomm utilities, greenhouses, and open mesh fencing may extend up to 15 feet above max height limit if combined rooftop coverage does not exceed 25% Screening may exceed height and coverage limits to insure views and vistas are not adversely impacted. 	Structure height and exceptions shall be per the 2003 CMP.

UW 2003 CAMPUS MASTER PLAN (CMP) DEVELOPMENT STANDARDS		PHF CONSISTENCY
PG.130 <u>DENSITY: GSF</u>	<ul style="list-style-type: none"> UW Campus Master Plan does not address Floor Area Ratio. 	No FAR limits apply.
PG.130 <u>SETBACKS</u>	<ul style="list-style-type: none"> Setbacks are required only for new structures at the boundary of the campus and along City of Seattle streets or alleys, when property across from the structure is not owned by the University. University structures across a City street or alley from commercial, manufacturing, or industrial zones will have no required setbacks. Pedestrian bridges, retaining walls, raised plazas, sculpture and other site elements shall have no setback req't's in any zone. Underground structures, pedestrian bridges and walkways are permitted within setbacks. 	There are no required setbacks for this project per the 2003 CMP.
PG.129 <u>LANDSCAPE AND OPEN SPACE</u>	<ul style="list-style-type: none"> Open space is planned on a campus-wide basis, not a building specific basis. Proposed and enhanced open spaces are shown in Figure IV-18. Open space ranges from passive to active. The Campus Landscape Advisory Committee will review landscape plans in accordance with the University's Landscape Policies. 	Landscape will be per 2003 CMP. Green Factor is not a requirement.
PG.130 <u>NOISE</u>	<ul style="list-style-type: none"> University facilities will be designed to meet the provisions of applicable noise control regulations. 	Noise control measures will conform to 2003 CMP.
PG.130 <u>ODORS</u>	<ul style="list-style-type: none"> Ventilation devices and other sources of odors will be directed away from residential zoned property. 	Odor control measures will conform to 2003 CMP. Site 29 does not abut a residential zone.
PG.130 <u>LIGHT AND GLARE</u>	<ul style="list-style-type: none"> Lighting shall conserve energy and mitigate adverse impacts of light and glare on campus buildings, spaces, and adjacent residential areas consistent with the needs of safety and security. Exterior lighting will be shielded or directed away from structures in adjacent or abutting residential zones and arterials. Glare diagrams will be provided when a façade has highly reflective material and the facade will be more than 30 percent comprised of clear or tinted glass that either: 1) oriented toward and less than 200 feet from a residential zone, or 2) oriented toward and less than 500 feet from an arterial. 	The project is within 500 feet of 15th Avenue, which according to the 2003 CMP is an arterial. The project will comply by providing glare diagrams as part of the building permit submittal package..
PG.131 <u>SIGNS</u>	<ul style="list-style-type: none"> Signage intent is to minimize its aesthetic impact while serving the purpose of conveying information. Sign shall not compete for attention with natural environment and buildings. 	Signage will be per program needs and consistent with the University standards and development regulations. The project is not across the street, alley or abutting a residential zone.
PG.130 <u>PARKING</u>	<ul style="list-style-type: none"> Minimum parking standards only apply for student housing 	No substantial parking will be included in the project other than 2-5 stalls for accessibility and service access.



Seattle · Portland · Bend

Project #3028469

This letter is in response to the SDR Draft Packet Comments regarding Project #3028469 issued August 23, 2017. The Seattle Department of Construction and Inspections (SDCI) provided the following comment:

"Trees: Please identify or state if there are any exceptional tree groves per the City definition."

Tree Solutions Inc. inventoried and assessed the trees on the subject site on November 8th, 2016 and June 20th, 2017. We determined there to be one-hundred and fifty-nine (159) trees within the project area. Of these trees, twenty-three (23) were determined to be exceptional by size based on the criteria in the Director's Rule 16-2008.

No exceptional tree groves existed on site. The City of Seattle defines an exceptional grove as eight (8) or more trees measuring twelve (12) inches or greater in diameter with a continuously overlapping canopy. There were no continuous areas of trees meeting this criteria within the scope area. The site has many small diameter ornamental trees that do not exceed twelve inches.

Sincerely,

Katie Hogan | Tree Solutions Inc.
ISA Certified Arborist PN-8078A
ISA Qualified Tree Risk Assessor

w. 206.528.4670 | katie@treesolutions.net | www.treesolutions.net | 2940 Westlake Ave N #200 Seattle, WA 98109



Project No. TS - 5977

Arborist Report

TO: White Shield Inc.; Christopher Plein
 SITE: Site B - University of Washington, Seattle Campus
 RE: Tree Inventory & Assessment for Site Feasibility Study – Expanded Scope Area
 DATE: December 5, 2016 and July 27, 2017
 PROJECT ARBORISTS: Katie Hogan
 ISA Certified Arborist PN-8078A
 ISA Qualified Tree Risk Assessor
 Haley Galbraith
 ISA Certified Arborist Municipal Specialist PN-7512AM
 ISA Qualified Tree Risk Assessor

Summary

We were asked to inventory and assess trees located throughout the area of campus designated as Site B. We found that one-hundred and fifty-nine (159) trees exist within this area. The majority of trees we found were tagged or formerly tagged with University of Washington (UW) tree tags, for those that were not tagged, we labeled them starting at tree 1. The locations of these trees are shown on the marked-up site map attached.

Twenty-three (23) of the trees on site qualify as exceptional per Seattle Director's Rule 16-2008. Sixteen (16) of the trees on site measured less than six (6) inches in diameter at standard height (DSH), and are therefore not significant, but were inventoried because they had UW tags and should be tracked for the purpose of keeping the UW tree database up-to-date.

Assignment & Scope of Report

This report outlines the site inspections by Tree Solutions, Inc. on November 8th and 10th, 2016 and June 20th, 2017. Included are observations and data collected at Site B, located on the University of Washington Seattle campus. Chris Plein, of White Shield Inc. requested these services to acquire information for project planning.

Tree identifier, species, size, condition, and additional notes for each tree can be found in the attached [Table of Trees](#). A marked-up version of the provided [Site Map](#) is also attached. Limits of Assignment, Methods, Condition Ratings, Glossary, and References are outlined below. Additional Assumptions and Limiting Conditions are contained in [Appendix A](#).

UW Population Health Arborist Report – Expanded Scope Area
 12.05.2016 and 07.27.2017

pg. 2 of 5

Observations & Discussion**The Trees**

One-hundred and 59 trees currently exist on Site B; 23 of which qualify as exceptional. Sixteen trees were collected that measured less than six inches at DSH and are therefore not significant by size.

Trees less than six inches DSH without UW tags were not inventoried. Trees greater than six inches DSH without UW tags were inventoried and a number was designated for the trees starting at 1.

Several trees that were shown on the maps provided were removed prior to our assessment. These include trees with tag numbers 9296, 9297, 9298, 9303, 9304, 9305, and 12189.

There were several trees located at the south end of the site that did not have UW tags and were not shown on the provided maps at the time of our inventory. The approximate location of these trees are shown on the included site maps, however, exact locations should be determined. We marked these trees with pink flagging for easy identification. These trees were tagged following our assessment by the university arborist.

Once detailed plans are available, we can provide recommendations regarding tree protection and retention.

Limits of Assignment

Unless stated otherwise: 1) information contained in this report covers only those trees that were examined and reflects the condition of those trees at the time of inspection; and 2) the inspection is limited to visual examination of the subject trees without dissection, excavation, probing, climbing, or coring unless explicitly specified. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the subject trees may not arise in the future.

Tree Solutions did not review any reports or perform any tests related to the soils located on the subject property unless outlined in the scope of services. Tree Solutions staff are not and do not claim to be soils experts. An independent inventory and evaluation of the soils on site should be obtained by a qualified professional if additional understanding of site characteristics is needed to make an informed decision.

Methods

We evaluated tree health and structure utilizing visual tree assessment (VTA) methods. The basis behind VTA is the identification of symptoms, which trees produce in reaction to weak spots or areas of mechanical stress. Trees react to mechanical and physiological stresses by growing more vigorously to re-enforce weak areas, while depriving less stressed parts (Mattheck & Breloer 1994). Understanding uniform stress allows us to make informed judgments about the condition of a tree.

We measured the diameter of each tree at 54 inches above grade, the diameter at standard height (DSH), unless noted otherwise. Where a tree had multiple stems, we measured each stem individually at standard height and determined a single-stem equivalent diameter by using the method outlined in the City of Seattle Director's Rule 16-2008. A tree is considered Exceptional based on the single-stem equivalent value.

Condition Ratings

Tree health considers crown indicators including foliar density, size, color, stem shoot extensions, decay, and damage. We have adapted our ratings based on the Purdue University Extension Formula Values for health condition. These values are a general representation used to assist in arborists in assigning ratings. Tree health needs to be evaluated on an individual basis and may not always fall entirely into a single category, however, a single condition rating must be assigned.

Excellent - Perfect specimen with excellent form and vigor, well-balanced crown. Normal to exceeding shoot length on new growth. Leaf size and color normal. Trunk is sound and solid. Root zone undisturbed. No apparent pest problems. Long safe useful life expectancy for the species.

Good - Imperfect canopy density in few parts of the tree, up to 10% of the canopy. Normal to less than ¾ typical growth rate of shoots and minor deficiency in typical leaf development. Few pest issues or damage, and if they exist they are controllable or tree is reacting appropriately. Normal branch and stem development with healthy growth. Safe useful life expectancy typical for the species.

Fair - Crown decline and dieback up to 30% of the canopy. Leaf color is somewhat chlorotic/necrotic with smaller leaves and "off" coloration. Shoot extensions indicate some stunting and stressed growing conditions. Stress cone crop clearly visible. Obvious signs of pest problems contributing to lesser condition, control might be possible. Some decay areas found in main stem and branches. Below average safe useful life expectancy

Poor - Lacking full crown, more than 50% decline and dieback, especially affecting larger branches. Stunting of shoots is obvious with little evidence of growth on smaller stems. Leaf size and color reveals overall stress in the plant. Insect or disease infestation may be severe and uncontrollable. Extensive decay or hollows in branches and trunk. Short safe useful life expectancy.

Tree health condition ratings have been adapted from the Purdue University Extension bulletin FNR-473-W - Tree Appraisal.

Glossary

- co-dominant stems:** stems or branches of nearly equal diameter, often weakly attached (Matheny *et al.* 1998)
crown/canopy: the aboveground portions of a tree (Lilly 2001)
DSH: diameter at standard height; the diameter of the trunk measured 54 inches (4.5 feet) above grade (Matheny *et al.* 1998)
ISA: International Society of Arboriculture
included bark: bark that becomes embedded in a crotch between branch and trunk or between co-dominant stems and causes a weak structure (Lilly 2001)
significant size: a tree measuring 6 inches DSH or greater
structural defects: flaws, decay, or other faults in the trunk, branches, or root collar of a tree, which may lead to failure (Lilly 2001)

References

- ANSI A300 (Part 1) – 2008 American National Standards Institute. American National Standard for Tree Care Operations: Tree, Shrub, and Other Woody Plant Maintenance: Standard Practices (Pruning). New York: Tree Care Industry Association, 2008.
- Sugimura, D.W. "DPD Director's Rule 16-2008". Seattle, WA, 2009.
- Dunster & Associates Environmental Consultants Ltd. Assessing Trees in Urban Areas and the Urban-Rural Interface, US Release 1.0. Silverton: Pacific Northwest Chapter ISA, 2006.
- Lilly, Sharon. Arborists' Certification Study Guide. Champaign, IL: The International Society of Arboriculture, 2001.
- Matheny, Nelda and James R. Clark. Trees and Development: A Technical Guide to Preservation of Trees During Land Development. Champaign, IL: International Society of Arboriculture, 1998.
- Mattheck, Claus and Helge Breloer, The Body Language of Trees.: A Handbook for Failure Analysis. London: HMSO, 1994.

Appendix A - Assumptions & Limiting Conditions

1. Consultant assumes that any legal description provided to Consultant is correct and that title to property is good and marketable. Consultant assumes no responsibility for legal matters. Consultant assumes all property appraised or evaluated is free and clear, and is under responsible ownership and competent management.
2. Consultant assumes that the property and its use do not violate applicable codes, ordinances, statutes or regulations.
3. Although Consultant has taken care to obtain all information from reliable sources and to verify the data insofar as possible, Consultant does not guarantee and is not responsible for the accuracy of information provided by others.
4. Client may not require Consultant to testify or attend court by reason of any report unless mutually satisfactory contractual arrangements are made, including payment of an additional fee for such Services as described in the Consulting Arborist Agreement.
5. Unless otherwise required by law, possession of this report does not imply right of publication or use for any purpose by any person other than the person to whom it is addressed, without the prior express written consent of the Consultant.
6. Unless otherwise required by law, no part of this report shall be conveyed by any person, including the Client, the public through advertising, public relations, news, sales or other media without the Consultant's prior express written consent.
7. This report and any values expressed herein represent the opinion of the Consultant, and the Consultant's fee is in no way contingent upon the reporting of a specific value, a stipulated result, the occurrence of a subsequent event or upon any finding to be reported.
8. All photographs included in this report were taken by Tree Solutions Inc. during the documented site visit, unless otherwise noted.
9. Sketches, drawings and photographs in this report, being intended as visual aids, are not necessarily to scale and should not be construed as engineering or architectural reports or surveys. The reproduction of any information generated by architects, engineers or other consultants and any sketches, drawings or photographs is for the express purpose of coordination and ease of reference only. Inclusion of such information on any drawings or other documents does not constitute a representation by Consultant as to the sufficiency or accuracy of the information.
10. Unless otherwise agreed, (1) information contained in this report covers only the items examined and reflects the condition of the those items at the time of inspection; and (2) the inspection is limited to visual examination of accessible items without dissection, excavation, probing, climbing, or coring. Consultant makes no warranty or guarantee, express or implied, that the problems or deficiencies of the plans or property in question may not arise in the future.
11. Loss or alteration of any part of this Agreement invalidates the entire report.



Table of Trees
 UW Population Health
 Site B - Seattle, WA

Date of Inventory: 11.08.2017; 11.10.2016; 06.20.2017
 Table Prepared: 12.05.2016; 07.27.2017

Site ID	Tree ID	Scientific Name	Common Name	DSH (inches)	Multi-stem (inches)	Drip Line (feet)	Health Condition	Structural Condition	Exceptional Threshold	Exceptional (Y/N)	Notes
B	5400	<i>Acer platanoides</i>	Norway maple	14.6		21	Good	Good	30.0	No	
B	5401	<i>Acer platanoides</i>	Norway maple	15.7		18	Good	Good	30.0	No	
B	5395	<i>Acer platanoides</i>	Norway maple	12.0		17	Good	Fair	30.0	No	
B	5394	<i>Acer platanoides</i>	Norway maple	17.4		17	Good	Fair	30.0	No	
B	5392	<i>Acer platanoides</i>	Norway maple	11.4		16	Good	Good	30.0	No	
B	5393	<i>Carpinus caroliniana</i>	American hornbeam	4.1		6	Good	Good	11.9	No	
B	5390	<i>Carpinus caroliniana</i>	American hornbeam	5.4		6	Good	Good	11.9	No	
B	5384	<i>Acer macrophyllum</i>	Bigleaf maple	27.2		24	Good	Good	30.0	No	
B	5382	<i>Betula pendula</i>	European white birch	9.3		12	Good	Good	24.0	No	Soil mounded at base
B	5381	<i>Pinus ponderosa</i>	Ponderosa pine	33.0		23	Good	Good	30.0	Yes	Pavement displacement
B	5380	<i>Pinus aristata</i>	Bristlecone pine	4.0		8	Poor	Poor	7.6	No	
B	5379	<i>Pinus aristata</i>	Bristlecone pine	5.5		10	Fair	Fair	7.6	No	
B	5378	<i>Pinus aristata</i>	Bristlecone pine	3.6		6	Poor	Fair	7.6	No	
B	5377	<i>Pinus contorta</i> var. <i>contorta</i>	Shore pine	8.4		10	Fair	Fair	12.0	No	Pitch flow
B	9307	<i>Acer circinatum</i>	Vine maple	8.8	6.5, 3.3, 3.7, 3.2	12	Good	Good	8.0	Yes	Tag enveloped
B	9320	<i>Calocedrus decurrens</i>	Incense cedar	10.2		7	Good	Good	30.0	No	
B	9319	<i>Calocedrus decurrens</i>	Incense cedar	9.5		8	Good	Good	30.0	No	
B	9317	<i>Calocedrus decurrens</i>	Incense cedar	14.0		7	Good	Good	30.0	No	Drip irrigation girdling base
B	9316	<i>Calocedrus decurrens</i>	Incense cedar	11.5		7	Good	Good	30.0	No	
B	9315	<i>Calocedrus decurrens</i>	Incense cedar	13.0		7	Good	Good	30.0	No	
B	9314	<i>Calocedrus decurrens</i>	Incense cedar	12.6		8	Good	Good	30.0	No	
B	9312	<i>Cornus 'Eddie's White Wonder'</i>	Eddie's White Wonder dogwood	4.2		12	Good	Good	5.0	No	No tag
B	9313	<i>Cornus 'Eddie's White Wonder'</i>	Eddie's White Wonder dogwood	2.7		7	Good	Good	5.0	No	No tag
B	9311	<i>Amelanchier alnifolia</i>	Serviceberry	3.6		4	Good	Good	6.0	No	No tag
B	9310	<i>Amelanchier alnifolia</i>	Serviceberry	2.4		4	Good	Good	6.0	No	
B	9309	<i>Amelanchier alnifolia</i>	Serviceberry	4.7		5	Good	Good	6.0	No	
B	5415	<i>Thuja plicata</i> 'Zebrina'	Western redcedar	15.6		18	Good	Good	30.0	No	No tag
B	5414	<i>Thuja plicata</i> 'Zebrina'	Western redcedar	11.0		18	Good	Good	30.0	No	
B	5413	<i>Thuja plicata</i> 'Zebrina'	Western redcedar	9.2		18	Good	Good	30.0	No	
B	5412	<i>Thuja plicata</i> 'Zebrina'	Western redcedar	9.5		18	Good	Good	30.0	No	
B	5411	<i>Thuja plicata</i> 'Zebrina'	Western redcedar	6.5		18	Good	Good	30.0	No	
B	5410	<i>Thuja plicata</i> 'Zebrina'	Western redcedar	12.0		18	Good	Good	30.0	No	
B	5409	<i>Thuja plicata</i> 'Zebrina'	Western redcedar	13.7		18	Good	Good	30.0	No	



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B	5408	<i>Thuja plicata</i> 'Zebrina'	Western redcedar	10.9		18	Good	Good	30.0	No	
B	5407	<i>Thuja plicata</i> 'Zebrina'	Western redcedar	16.1		18	Good	Good	30.0	No	
B	5406	<i>Thuja plicata</i> 'Zebrina'	Western redcedar	9.3		18	Good	Good	30.0	No	
B	5405	<i>Thuja plicata</i> 'Zebrina'	Western redcedar	9.5		18	Good	Good	30.0	No	
B	5404	<i>Thuja plicata</i> 'Zebrina'	Western redcedar	16.7		18	Good	Good	30.0	No	
B	5403	<i>Thuja plicata</i> 'Zebrina'	Western redcedar	18.5		18	Good	Good	30.0	No	
B	5402	<i>Thuja plicata</i> 'Zebrina'	Western redcedar	14.1		18	Good	Good	30.0	No	
B	5416	<i>Thuja plicata</i> 'Zebrina'	Western redcedar	15.9		19	Good	Good	30.0	No	
B	5417	<i>Thuja plicata</i> 'Zebrina'	Western redcedar	9.0		19	Good	Good	30.0	No	
B	5418	<i>Thuja plicata</i> 'Zebrina'	Western redcedar	9.6		19	Good	Good	30.0	No	
B	5419	<i>Thuja plicata</i> 'Zebrina'	Western redcedar	11.1		19	Good	Good	30.0	No	
B	5420	<i>Thuja plicata</i> 'Zebrina'	Western redcedar	10.7		19	Good	Good	30.0	No	
B	5421	<i>Thuja plicata</i> 'Zebrina'	Western redcedar	11.0		19	Good	Good	30.0	No	
B	5422	<i>Thuja plicata</i> 'Zebrina'	Western redcedar	10.1		19	Good	Good	30.0	No	
B	5423	<i>Thuja plicata</i> 'Zebrina'	Western redcedar	8.2		19	Good	Good	30.0	No	
B	5424	<i>Thuja plicata</i> 'Zebrina'	Western redcedar	10.5		19	Good	Good	30.0	No	
B	5425	<i>Thuja plicata</i> 'Zebrina'	Western redcedar	11.8		19	Good	Good	30.0	No	
B	5426	<i>Thuja plicata</i> 'Zebrina'	Western redcedar	9.9		19	Good	Good	30.0	No	
B	5427	<i>Thuja plicata</i> 'Zebrina'	Western redcedar	11.6		19	Good	Good	30.0	No	
B	5428	<i>Thuja plicata</i> 'Zebrina'	Western redcedar	4.0		19	Good	Good	30.0	No	
B	5429	<i>Thuja plicata</i> 'Zebrina'	Western redcedar	10.5		19	Good	Good	30.0	No	
B	5430	<i>Thuja plicata</i> 'Zebrina'	Western redcedar	15.3	9.1, 12.3	19	Good	Good	30.0	No	
B	5431	<i>Thuja plicata</i> 'Zebrina'	Western redcedar	9.9		19	Good	Good	30.0	No	
B	5432	<i>Thuja plicata</i> 'Zebrina'	Western redcedar	13.5		19	Good	Good	30.0	No	
B	5433	<i>Thuja plicata</i> 'Zebrina'	Western redcedar	15.7		19	Good	Good	30.0	No	
B	5434	<i>Thuja plicata</i> 'Zebrina'	Western redcedar	14.3		19	Good	Good	30.0	No	
B	5443	<i>Pinus coulteri</i>	Coulter pine	11.8		15	Good	Good	30.0	No	
B	5435	<i>Pinus coulteri</i>	Coulter pine	35.5		28	Good	Good	30.0	Yes	
B	5436	<i>Ilex aquifolium</i>	English holly	3.6		6	Good	Poor	18.8	No	Partially removed

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B	5437	<i>Malus</i> spp.	Apple	6.0		10	Fair	Poor	20.0	No	Suppressed
B	5439	<i>Malus</i> spp.	Apple	6.0		10	Fair	Poor	20.0	No	Suppressed
B	5438	<i>Ilex aquifolium</i>	English holly	4.0		6	Good	Poor	18.8	No	
B	5440	<i>Pinus densiflora</i>	Japanese red pine	22.7		16	Good	Good	20.0	Yes	
B	5441	<i>Pinus densiflora</i>	Japanese red pine	23.0		15	Good	Good	20.0	Yes	
B	5442	<i>Pinus coulteri</i>	Coulter pine	29.7			Good	Good	30.0	No	Overhangs street, heavy cone load
B	1	<i>Chamacyparis lawsoniana</i>	Lawson cypress	6.5		9	Good	Fair	30.0	No	Not tagged by UW, strange form
B	5446	<i>Ulmus procera</i>	English elm	36.7		34	Good	Good	30.0	Yes	
B	5445	<i>Ulmus procera</i>	English elm	34.7		28	Good	Good	30.0	Yes	Large pruning cut with possible decay, limited root space, overhangs sidewalk
B	5447	<i>Ailanthus altissima</i>	Tree of heaven	17.2		11	Fair	Fair	30.0	No	
B	5448	<i>Fraxinus latifolia</i>	Oregon ash	10.7		13	Fair	Fair	24.0	No	
B	5449	<i>Aesculus hippocastanum</i>	Horse chestnut	18.7	12.1, 14.2	18	Good	Good	30.0	No	
B	5450	<i>Pinus coulteri</i>	Coulter pine	24.9		20	Good	Good	30.0	No	Trunk lean over road, corrected. girdling root
B	5451	<i>Chamacyparis lawsoniana</i>	Lawson cypress	8.8	5.9, 4, 5.2	10	Good	Fair	30.0	No	
B	2	<i>Chamacyparis lawsoniana</i>	Lawson cypress	7.0		10	Good	Fair	30.0	No	Not tagged by UW
B	5452	<i>Malus</i> spp.	Apple	9.9	6.2, 7.7	13	Good	Fair	20.0	No	
B	5454	<i>Pinus densiflora</i>	Japanese red pine	25.5		22	Good	Good	20.0	Yes	
B	5455	<i>Prunus emarginata</i>	Bitter cherry	9.8		14	Fair	Poor	Only in Grove	No	Ivy on trunk, broken top, asymmetrical canopy
B	5456	<i>Pinus densiflora</i>	Japanese red pine	26.9		22	Good	Good	20.0	Yes	Bowed trunk
B	5457	<i>Malus</i> spp.	Apple	16.5		16	Good	Good	20.0	No	Measured at narrowest point below union
B	5458	<i>Pinus sylvestris</i>	Scots pine	6.7		7	Fair	Good	24.0	No	Suppressed
B	5459	<i>Pinus sylvestris</i>	Scots pine	7.3		8	Good	Good	24.0	No	Slightly suppressed
B	5461	<i>Malus</i> spp.	Apple	7.7	4.7, 6.1	14	Fair	Fair	20.0	No	
B	5462	<i>Malus</i> spp.	Apple	6.0		9	Poor	Poor	20.0	No	
B	5463	<i>Pinus sylvestris</i>	Scots pine	13.6		13	Good	Good	24.0	No	
B	5464	<i>Pinus thunbergii</i>	Japanese black pine	3.6		5	Fair	Good	15.8	No	Suppressed
B	5460	<i>Betula nigra</i>	River birch	15.2		18	Fair	Poor	25.4	No	Past top failure, basal hollow
B	5466	<i>Pinus thunbergii</i>	Japanese black pine	3.8		5	Good	Good	15.8	No	
B	5465	<i>Pinus thunbergii</i>	Japanese black pine	2.4		5	Good	Good	15.8	No	
B	5467	<i>Pinus sylvestris</i>	Scots pine	14.6		14	Good	Good	24.0	No	
B	5468	<i>Prunus laurocerasus</i>	Cherry laurel	14.7	7, 7.1, 5.9, 4.9, 7.7	15	Good	Good	26.2	No	No tag
B	5469	<i>Cornus kousa</i>	Kousa dogwood	7.4	2.6, 2, 2, 2.4, 2.4, 2.5, 2.4 2.4, 2.2, 2.5	10	Good	Good	12.0	No	tag enveloped
B	5471	<i>Carpinus betulus</i>	European hornbeam	15.8		22	Good	Good	16.0	No	No tag
B	5472	<i>Carpinus caroliniana</i>	American hornbeam	12.8		24	Good	Good	11.9	Yes	No tag, surface roots
B	5473	<i>Carpinus caroliniana</i>	American hornbeam	9.7		18	Good	Good	11.9	No	No tag, surface roots
B	5474	<i>Carpinus caroliniana</i>	American hornbeam	14.4		20	Good	Good	11.9	Yes	No tag, surface roots
B	5470	<i>Carpinus betulus</i>	European hornbeam	13.1		18	Good	Good	16.0	No	tag enveloped
B	5475	<i>Carpinus caroliniana</i>	American hornbeam	12.1		19	Good	Good	11.9	Yes	No tag, surface roots
B	5483	<i>Pinus sylvestris</i>	Scots pine	7.7		7	Good	Good	24.0	No	Enclosed by building



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B	5484	<i>Pinus sylvestris</i>	Scots pine	8.1		7	Good	Good	24.0	No	Enclosed by building
B	5485	<i>Cinnamomum camphora</i>	Camphor laurel	6.4		8	Good	Good	30.0	No	No tag
B	5486	<i>Chamaecyparis pisifera</i>	Sawara cypress	22.9		15	Good	Good	26.9	No	Some dieback in upper canopy
B	5477	<i>Carpinus caroliniana</i>	American hornbeam	9.9		19	Good	Good	11.9	No	No tag, surface roots
B	5476	<i>Carpinus caroliniana</i>	American hornbeam	12.0		19	Good	Good	11.9	Yes	No tag, surface roots
B	5487	<i>Betula nigra</i>	River birch	12.0		20	Good	Good	25.4	No	Phototropic lean
Additional Scope Area 06.20.2017											
B	12188	<i>Ulmus accolade</i>	Accolade elm	4.5		8	Good	Good	30.0	No	Grafted base
B	12187	<i>Ulmus accolade</i>	Accolade elm	5.8		9	Good	Good	30.0	No	12186 removed
B	9306	<i>Cornus nuttallii</i>	Pacific dogwood	3.1		6	Fair	Good	6.0	No	Poor pruning, damaged from hatchet, foliage chlorotic, branches ripped off
B	5372	<i>Pinus contorta</i>	Shore pine	9.1		6	Good	Good	12.0	No	
B	5376	<i>Pinus contorta</i>	Shore pine	9.0		8	Good	Fair	12.0	No	Codominant union, 9303-5 removed
B	9301	<i>Malus tschonoskii</i>	Tschonoskii apple	4.3		5	Good	Good	30.0	No	
B	12071	<i>Malus tschonoskii</i>	Tschonoskii apple	2.0		2	Good	Good	30.0	No	
B	9302	<i>Malus tschonoskii</i>	Tschonoskii apple	3.9		6	Good	Good	30.0	No	
B	9299	<i>Malus tschonoskii</i>	Tschonoskii apple	5.8		7	Good	Good	7.0	No	
B	9295	<i>Malus tschonoskii</i>	Tschonoskii apple	5.7		7	Good	Good	30.0	No	
B	9300	<i>Malus tschonoskii</i>	Tschonoskii apple	3.5		3	Good	Good	30.0	No	Leaf damage from caterpillar, 9296-8 removed
B	9288	<i>Acer x freemanii armstrong</i>	Armstrong maple	8.6		12	Good	Good	20.8	No	
B	9289	<i>Acer x freemanii armstrong</i>	Armstrong maple	6.8		9	Good	Good	20.8	No	
B	9290	<i>Acer x freemanii armstrong</i>	Armstrong maple	9.3		12	Good	Good	20.8	No	
B	9291	<i>Acer x freemanii armstrong</i>	Armstrong maple	8.0		12	Good	Good	20.8	No	
B	9292	<i>Acer x freemanii armstrong</i>	Armstrong maple	7.2		10	Good	Good	20.8	No	
B	9293	<i>Acer x freemanii armstrong</i>	Armstrong maple	7.0		11	Good	Good	20.8	No	
B	4680	<i>Pinus contorta</i>	Shore pine	6.4		7	Good	Good	12.0	No	
B	4681	<i>Cedrus deodara</i>	Deodar cedar	31.8		24	Good	Good	30.0	Yes	Strong lean west with good compression wood growth, adjacent to fire hydrant, truck damage on branches to south - clearance pruning may be necessary
B	4682	<i>Acer macrophyllum</i>	Bigleaf maple	28.4		30	Good	Fair	30.0	No	Tag 33, central trunk die back
B	12189	<i>Quercus nigra</i>	Water oak	39.7		30	Good	Fair	25.0	Yes	Massive crown, overall in good shape, some unions with included bark, minimal visible decsy
B	12190	<i>Cedrus deodara</i>	Deodar cedar	27.0		18	Good	Fair	30.0	No	Trunk wetted by sprinkler, several codominant trunks with narrow angles, canopy phototropic to west - perform crown reduction to west and adjust sprinkler away from tree trunk
B	4679	<i>Carpinus caroliniana</i>	American hornbeam	9.9		13	Good	Good	11.9	No	Some leaf damage, caterpillar?
B	5481	<i>Carpinus caroliniana</i>	American hornbeam	14.0		23	Good	Good	11.9	Yes	Some leaf damage, caterpillar?
B	5478	<i>Pinus bungeana</i>	Lacebark pine	7.0	2.7, 2.7, 2.5, 3.4, 4	8	Good	Good	9.5	No	
B	5479	<i>Pinus bungeana</i>	Lacebark pine	6.9	3.3, 3.0, 2.8, 3.1, 3.3	7	Good	Good	9.5	No	
B	5480	<i>Pinus bungeana</i>	Lacebark pine	6.7	4.0, 3.1, 2.0, 3.9	7	Good	Good	9.5	No	



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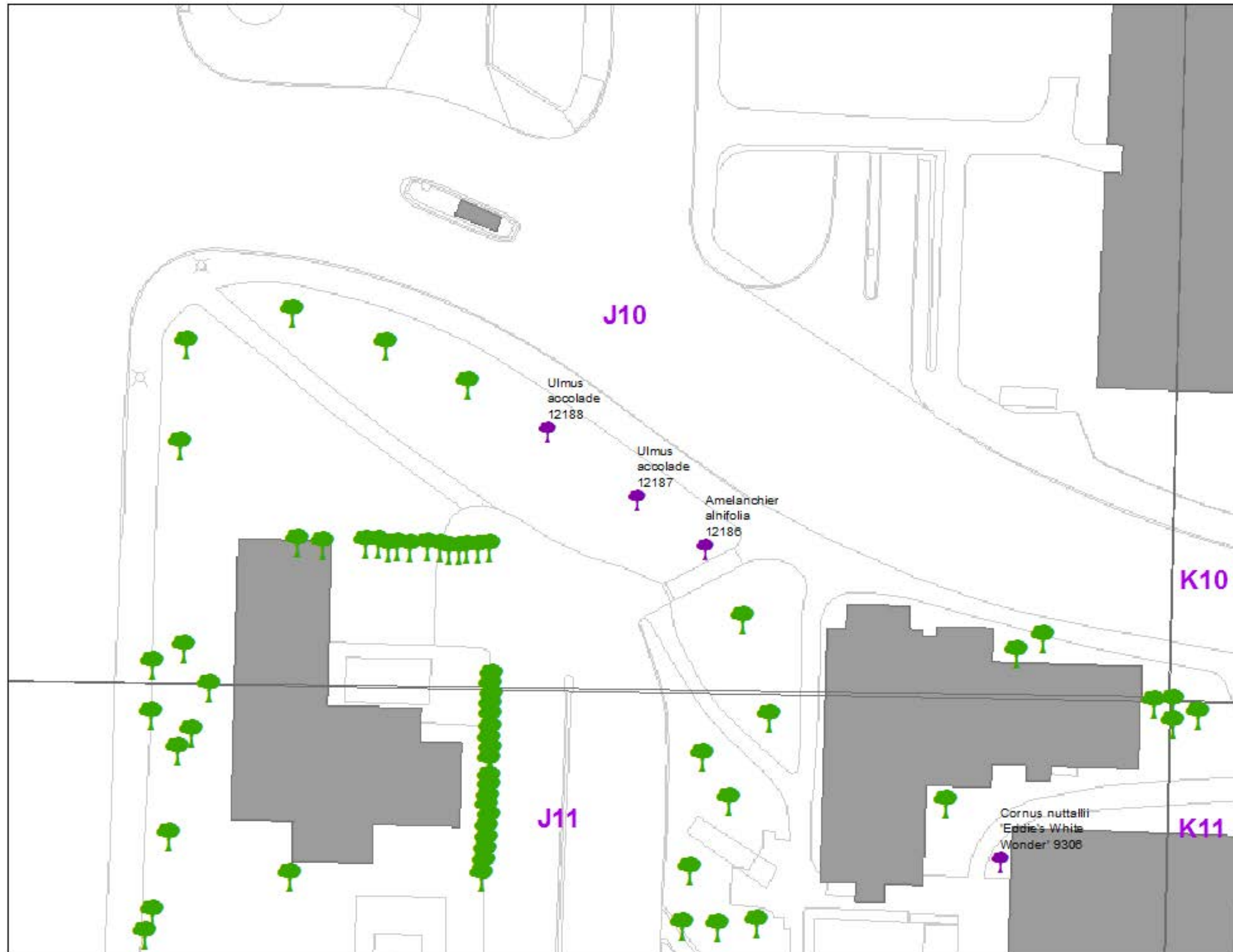
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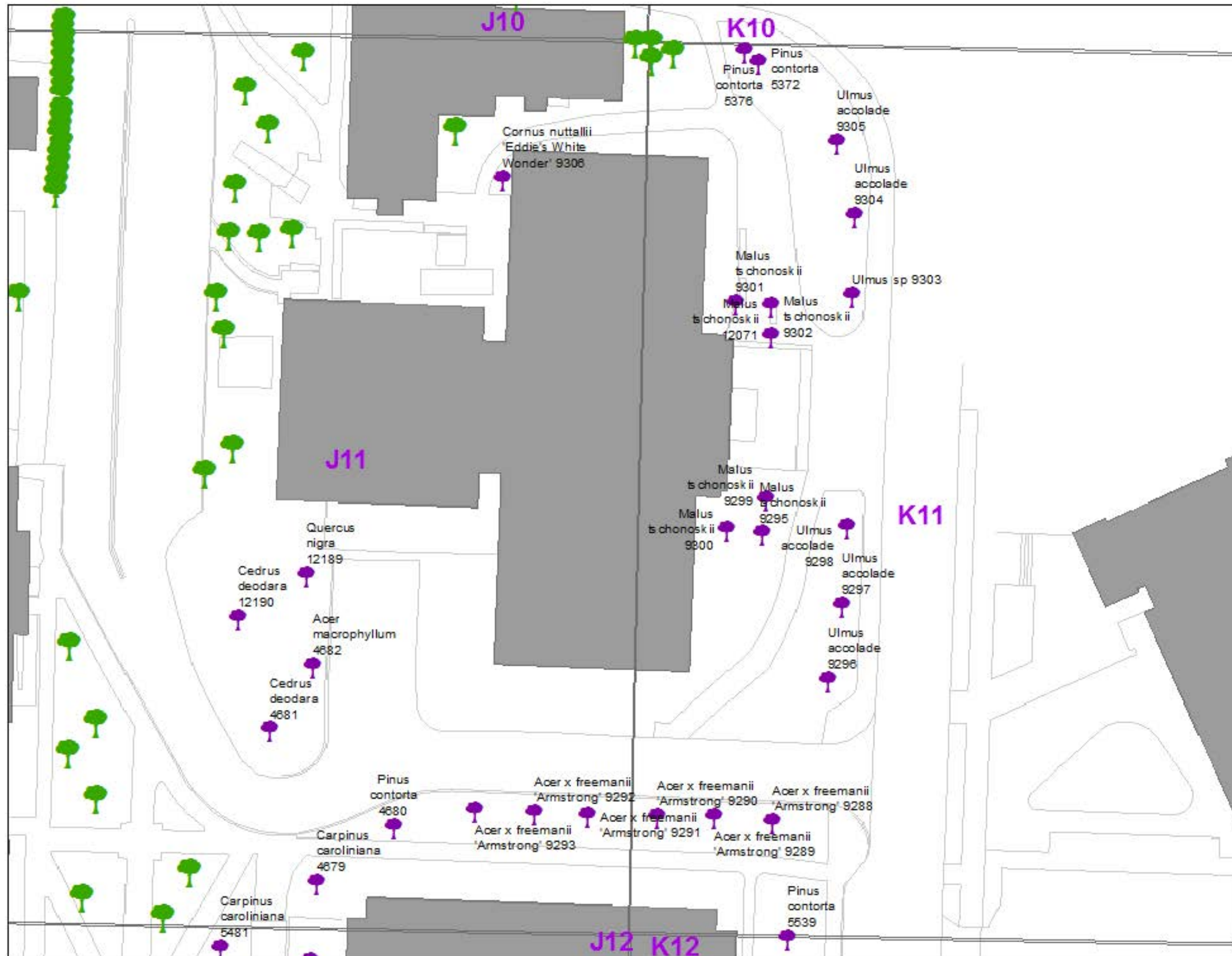
B	5493	<i>Sorbus aucuparia</i> 'Cardinal Royal'	Mountain ash	6.0		10	Good	Good	29.0	No	
B	5494	<i>Sorbus aucuparia</i> 'Cardinal Royal'	Mountain ash	6.7		11	Good	Good	29.0	No	
B	5495	<i>Sorbus aucuparia</i> 'Cardinal Royal'	Mountain ash	6.9		11	Good	Good	29.0	No	
B	5496?	<i>Sorbus aucuparia</i> 'Cardinal Royal'	Mountain ash	8.0		13	Good	Good	29.0	No	Not shown on scope map, no tags found
B	5497?	<i>Sorbus aucuparia</i> 'Cardinal Royal'	Mountain ash	7.6		12	Good	Good	29.0	No	Not shown on scope map, no tags found
B	5491	<i>Sorbus aucuparia</i> 'Cardinal Royal'	Mountain ash	4.5		4	Good	Good	29.0	No	
B	5492	<i>Sorbus aucuparia</i> 'Cardinal Royal'	Mountain ash	4.3		4	Poor	Poor	29.0	No	Barely alive
B	5490	<i>Sorbus aucuparia</i> 'Cardinal Royal'	Mountain ash	6.4		4	Poor	Fair	29.0	No	Decayed, barely alive
B	5489	<i>Sorbus aucuparia</i> 'Cardinal Royal'	Mountain ash	6.2		5	Poor	Poor	29.0	No	Decayed, barely alive
B	5541	<i>Cedrus deodara</i>	Deodar cedar	35.0		31	Good	Good	30.0	Yes	Some browning foliage
B	5542	<i>Cedrus deodara</i>	Deodar cedar	33.4		32	Good	Good	30.0	Yes	Codominant trunks at 30 feet
B	5543	<i>Cedrus deodara</i>	Deodar cedar	35.3		25	Good	Good	30.0	Yes	
B	5544	<i>Cedrus deodara</i>	Deodar cedar	38.8		30	Good	Good	30.0	Yes	
B	12209	<i>Arbutus unedo</i>	Strawberry tree	13.9	3.5, 3.8, 3.7, 3.8, 4.1, 2.9, 6.9, 3.0, 4.2, 2.9, 3.4, 3.0, 3.3	9	Good	Good	10.2	Yes	Not tagged or shown on map
B	12210	<i>Arbutus unedo</i>	Strawberry tree	6.6	5.6, 2, 2, 2	6	Good	Good	10.2	No	Suppressed, not tagged or shown on map
B	12208	<i>Arbutus unedo</i>	Strawberry tree	6.2		9	Good	Good	10.2	No	Not tagged or shown on map
B	5540	<i>Pinus contorta</i>	Shore pine	5.8		7	Good	Good	12.0	No	
B	5539	<i>Pinus contorta</i>	Shore pine	5.4		8	Good	Good	12.0	No	
B	12201	<i>Arbutus unedo</i>	Strawberry tree	11.0	5.4, 4.0, 5.2, 2, 5.8, 3.5	13	Good	Good	10.2	Yes	Canopy in contact with building, not tagged or on shown map
B	12202	<i>Quercus sp.</i>	Oak	7.2	7.2	11	Good	Good		No	Not tagged or shown on map
B	12203	<i>Arbutus unedo</i>	Strawberry tree	9.1	6, 6.8	9	Good	Good	10.2	No	Canopy in contact with building, not tagged or shown on map
B	12204	<i>Prunus laurocerasus</i>	Cherry laurel	8.6		14	Good	Good	26.2	No	Not tagged or shown on map, growing against wall
B	12205	<i>Quercus sp.</i>	Oak	9.1		14	Good	Good		No	Not tagged or shown on map
B	12206	<i>Arbutus unedo</i>	Strawberry tree	11.5	7.1, 6.4, 6.4	11	Good	Good	10.2	Yes	Canopy in contact with building, not tagged or shown on map
B	12207	<i>Arbutus unedo</i>	Strawberry tree	9.5	4.4, 4.3, 4.7, 4.6, 3	11	Good	Good	10.2	No	Not tagged or shown on map

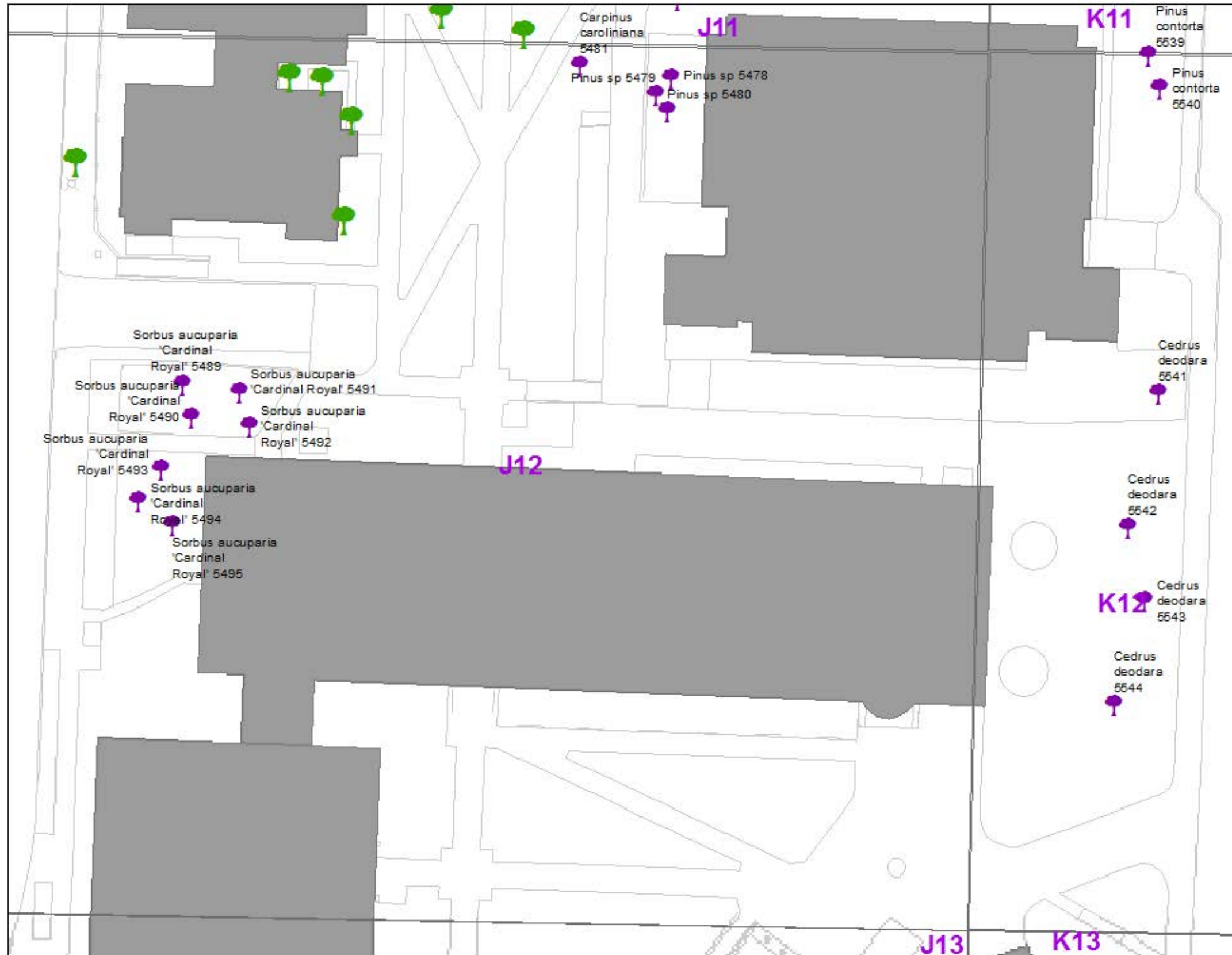
Additional notes:

DSH (Diameter at Standard Height) was measured 4.5 feet above average grade, unless noted otherwise.
 Multi-stem trees are noted, and a single-stem equivalent diameter was calculated using the method defined in the Director's Rule 16-2008.
 Red font in the DSH column indicates a tree less than 6 inches DSH (non-significant).
 Drip line radius was measured from the center of the tree to the outermost extent of the canopy.









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