

FACILITIES PLAN TECHNICAL REPORTS

# Landscaping and Open Space

In partnership with:

2.Ink Landscape Architects

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WASHINGTON COUNTY



# **DISTRICT WIDE FEATURES**

The purpose of this map is to classify and categorize the PCC Campuses and Centers by defining features. Corresponding icons will be located on each Campus/Center description page.

#### **Definitions:**

Context:

Urban

Suburban

Rural

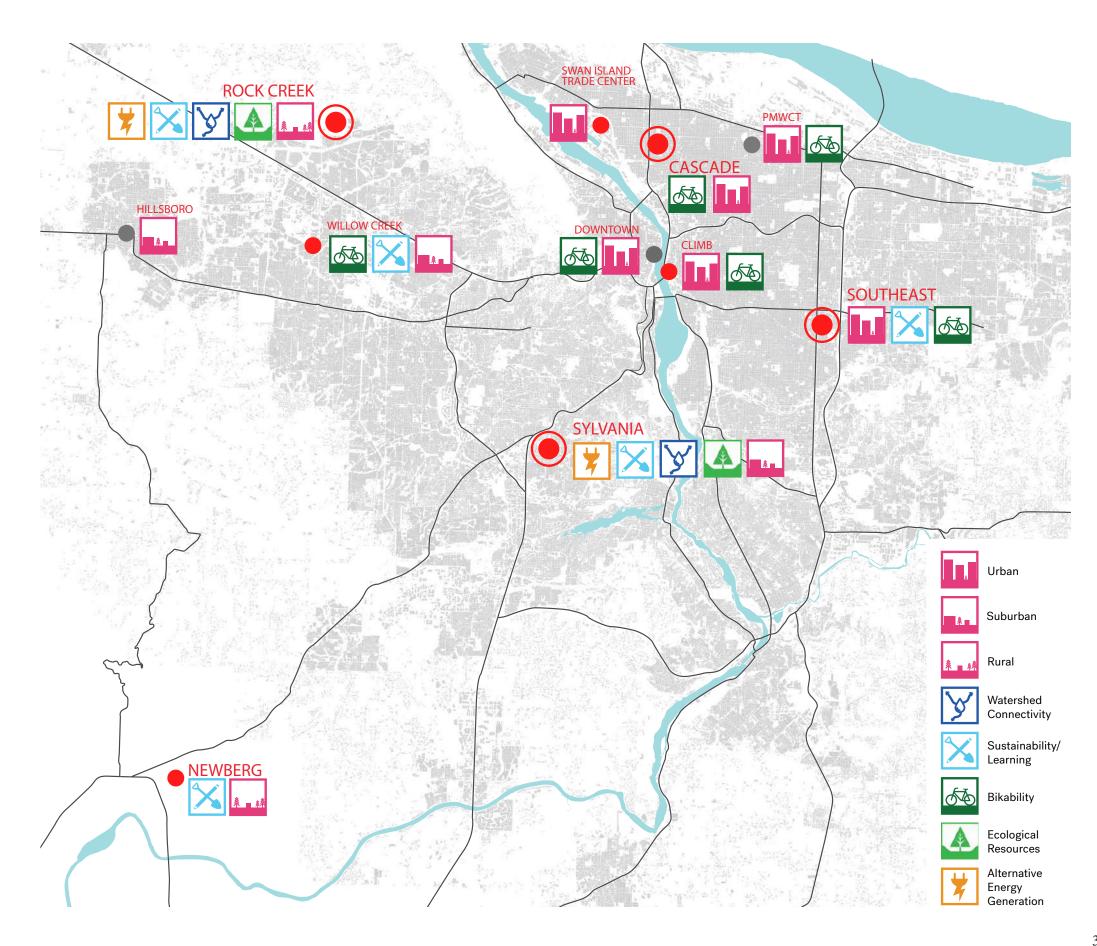
Watershed Connectivity: Has on-site wetlands or water body that connects to larger system.

Sustainability/Learning: Features highly utilized sustainability features on-site.

Bikability: significant bike infrastructure as well as

Ecological Resources: connection to larger habitat systems or significant wetlands, forest or protected species on-campus.

Alternative Energy Generation: On-site production of energy.



# DISTRICT WIDE GROUNDS STAFF

PCC Grounds is responsible for the care of four campuses and four centers (PCC Grounds has no scope of work at the Downtown Center and Hillsboro Center). It is a well organized hierarchy divided into core teams that are responsible for specific campuses and centers. In addition to the core teams, Grounds also employs "Casuals", seasonal workers that help fill in the gaps in the workload. The Casuals Program works well on two levels; first, as on the job training for potential new full-time hires, and second, their use allows for the core team to focus on the more skilled tasks.

As part of the Facilities Plan, meetings and interviews were held with every PCC Grounds Team, with many individuals participating in more than one meeting. For a complete Grounds/Landscape Maintenance Contact list, see appendix

#### District Wide

Jack Lussier - Grounds Manager Rich Weber- Grounds Foreperson Cody Lees - Irrigation Tech Russell Lampton - Irrigation Tech Bill Welty - FOMS III Mechanical Specialist

#### Sylvania/Newberg

Daniel Morena - Grounds Keeper II Luke McKinnon - Grounds Keeper II Nico Schmutz - Grounds Keeper II Karl Dawson- Grounds Keeper II

#### Rock Creek/Willow Creek

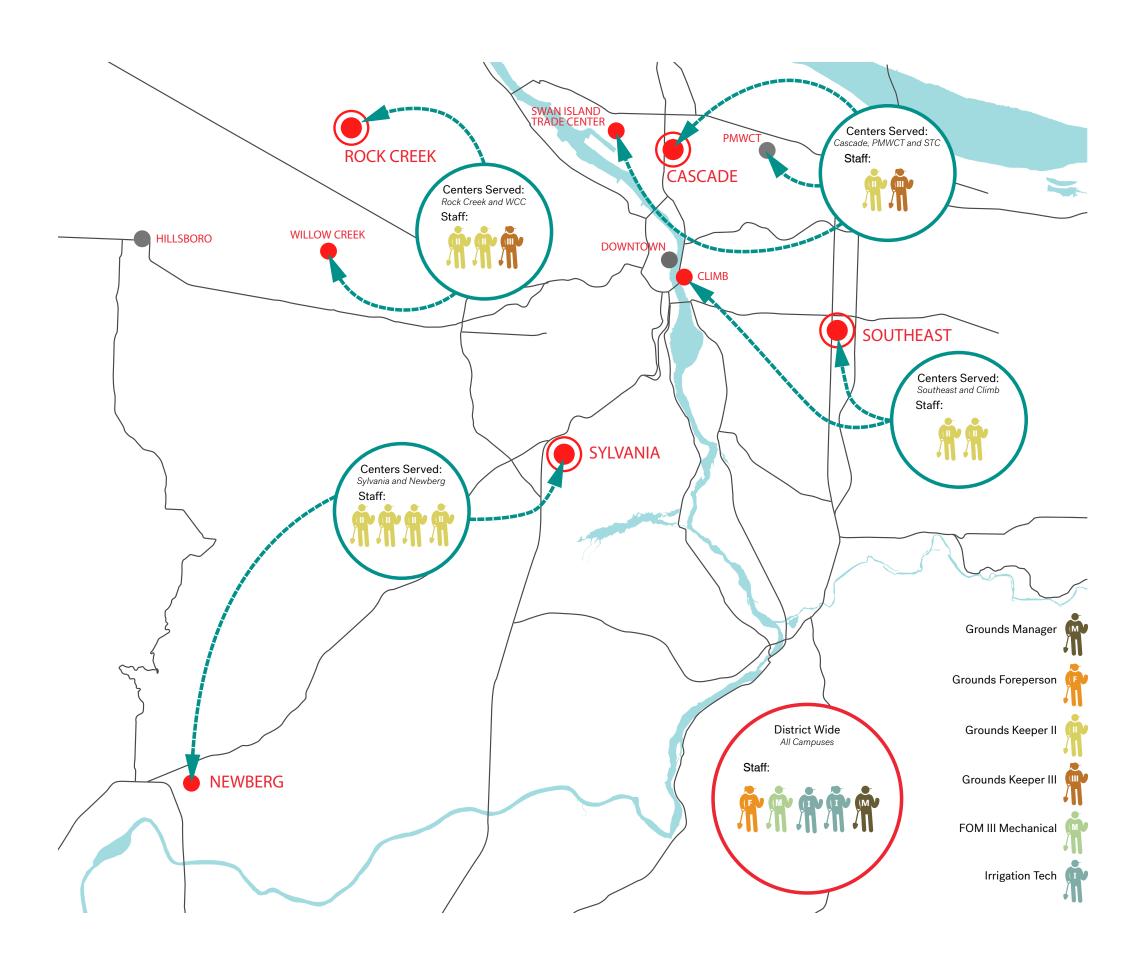
Jeremy Contrell - Grounds Keeper III Arturo Portera - Grounds Keeper II Jay Thornton - Grounds Keeper II

#### Cascade/PMWTC/STC

Charles Larrabee - Grounds Keeper III open position - Grounds Keeper II

#### Southeast/ CLIMB

Bill Rude - Grounds Keeper II
Nate Scott - Grounds Keeper II



# DISTRICT WIDE GROUNDS STAFF HOURLY DISTRIBUTION

The amount of work performed by the PCC Grounds staff is immense, and the level of care and pride in their work is evident the moment you arrive at a campus or center. With a core team of only sixteen people covering a wide variety of landscapes over a large geographic area, efficiency is paramount.

Based on the interviews held with PCC Grounds Staff, and the repeated comments on the subject, the limited number of yards throughout the District is a topic of concern, as is the need for additional storage.

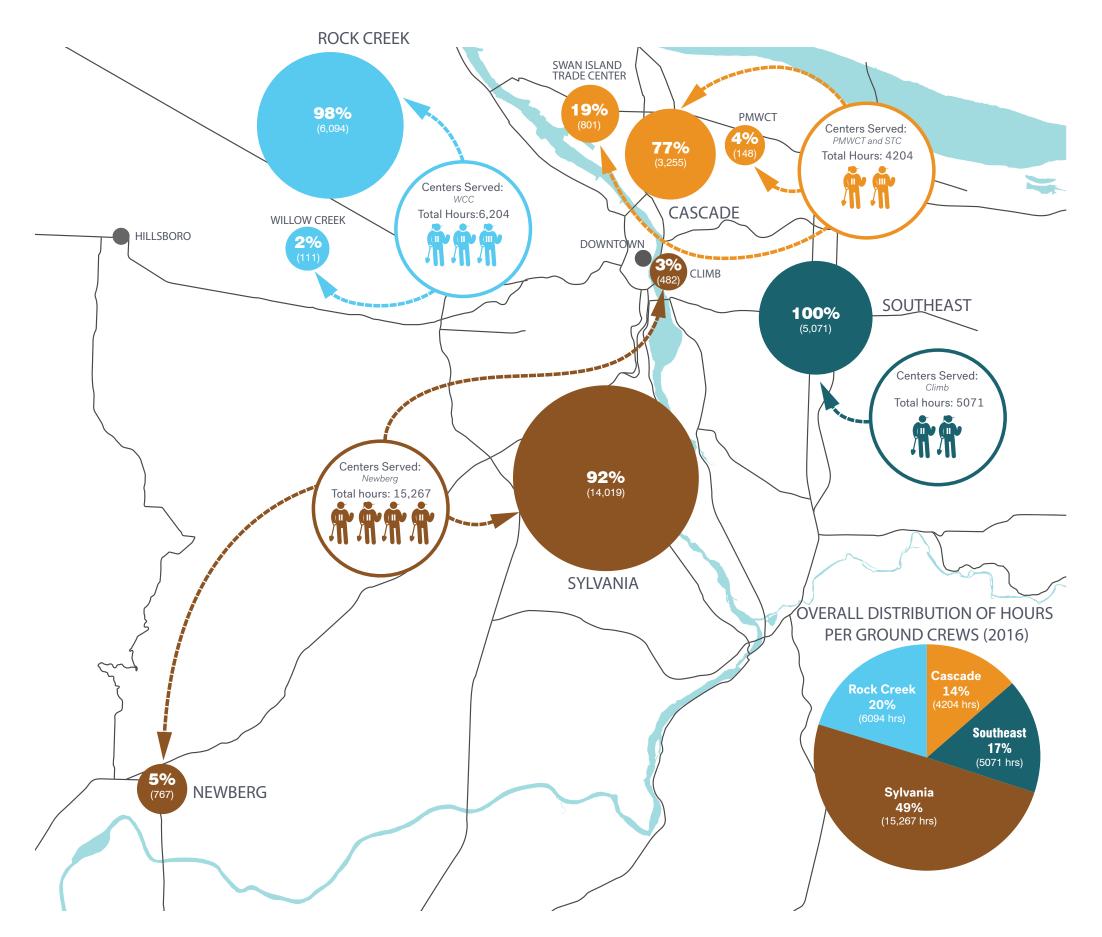
Snow removal has become an increasingly large issue, and is especially problematic at vehicular entrances. There are few snow storage areas available that do not impact parking or damage existing landscape areas.

#### **Recommendations:**

At the request of PCC Grounds Staff, every new building project needs to include more storage space in order to have adequate space to manage the new work. This would allow PCC Grounds to be more efficient in storing additional equipment on site, including for snow removal, rather than having to use additional resources to relocate equipment from off-site locations. The constant relocation of equipment also poses sustainability issues in the use of additional fuel and resulting emissions.

#### Notes:

-Work Order Excel File was edited with hours organized by campus/center. This file excludes items such as vacations and sick hours.
-At the time of this study the CLIMB Center was maintained by Sylvania staff, but is currently maintained by Southeast.



# DISTRICT WIDE IRRIGATION SYSTEM

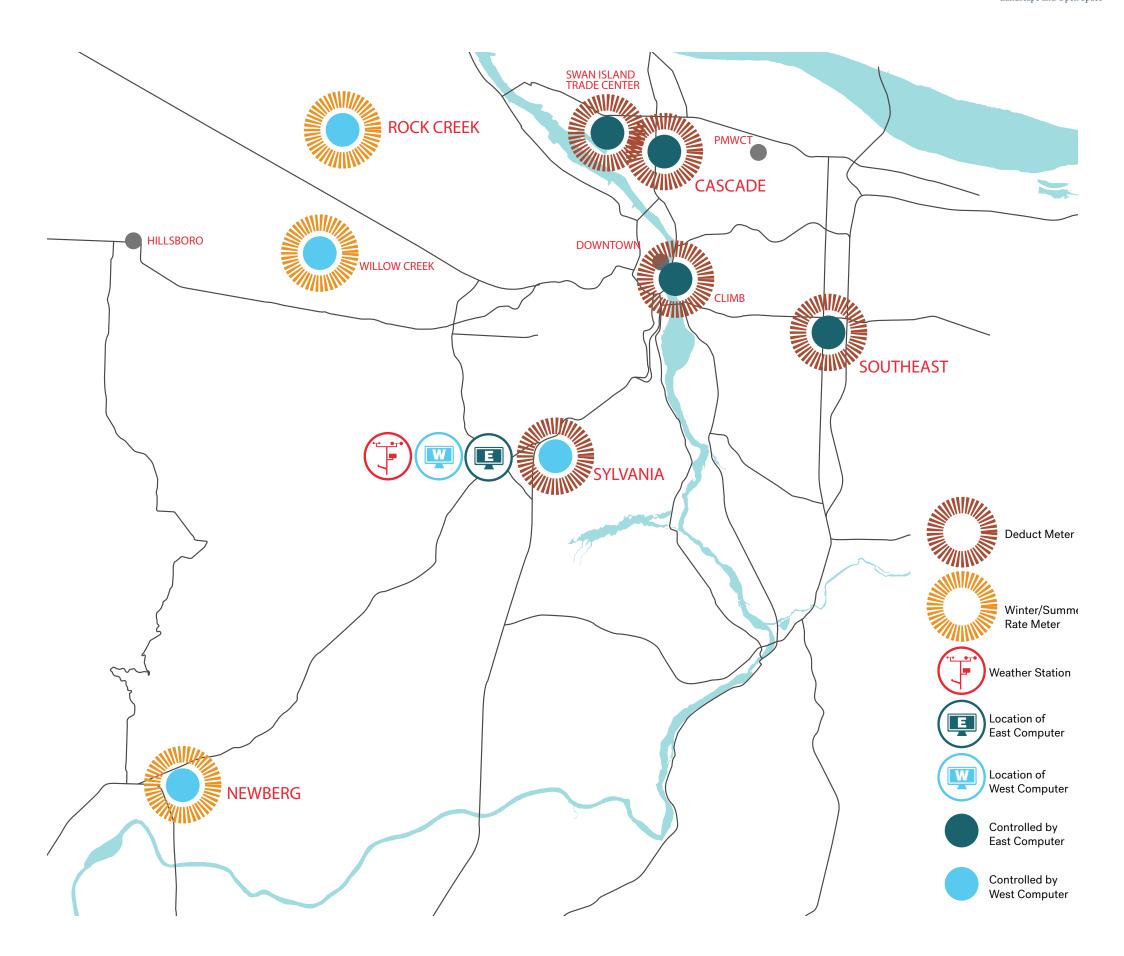
Portland Community College uses a Maxicom system for their district-wide irrigation control, which is now internet/ethernet based. Wherever possible the irrigation is on a deduct sub-meter; this includes all campuses and centers within the City of Portland. Two computers, east and west, are located at PCC Sylvania; the west computer controls Sylvania Campus, Rock Creek Campus, Willow Creek Center, and Newberg Center, while the east computer controls Southeast Campus, Cascade Campus, Swan Island Trade Center, and CLIMB Center. PCC Portland Metropolitan Workforce Training Center (PMWTC) uses a simple drip irrigation system and is not on the Maxicom System. The Downtown Center and the Hillsboro Center have no irrigation under PCC management. PCC currently has a single weather station, located at the Sylvania campus. All campuses and centers have rain sensors.

#### **Recommendations:**

In order to increase efficiency in the existing system, Sylvania's Weather Station should be moved to a more useful location.

Weather stations should be added to PCC Rock Creek and PCC Southeast; each of those campuses receive different weather patterns and rainfall numbers compared to PCC Sylvania, and the addition of weather stations would increase system efficiency and improve sustainability by providing more accurate numbers regarding watering needs.

Based on the variety of systems used and PCC's Sustainability goals, an in-depth District Wide Irrigation Master Plan should be commissioned and implemented. An Irrigation Master Plan would review the existing systems at each campus and center in depth, identify existing trouble zones, and create standards that will maximize efficiency, both within the PCC Grounds Crew, as well as from a budget and water conservation standpoint.



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# **GROUNDS & OUTDOOR SPACES:** STUDENT SURVEY RESULTS

As part of the Facilities Plan study, additional questions for students and faculty/staff, primarily related to the outdoor Campus environment, were added to PCC's annual Sightlines Survey. The following pages display results, trends, and selected quotes from responses to these questions.

Full results of the entire survey will be provided to PCC by Sightlines at a later date.

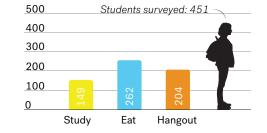
**SYLVANIA: ROCK CREEK: CASCADE: SOUTHEAST:** 

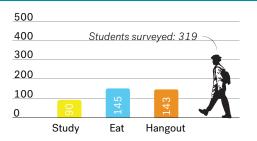
Is public outdoor space important to you?

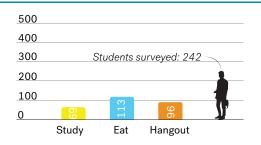
84% said yes 89% said yes 86% said yes 85% said yes

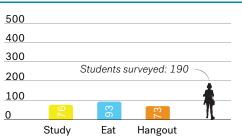
#### Condition of grounds rated by students: Hardscape: Hardscape: Hardscape: Hardscape: Excellent: 26% Excellent: 45% Excellent: 56% Excellent: 51% Good: 51% Good: 46% Good: 40% Good: 43% Fair: 8% Fair: Fair: Fair: 6% Poor: 0% Poor: 1% Poor: 4% Poor: 1% Very Poor: 0% Very Poor: 0% Very Poor: 0% Very Poor: 1% Lawn/Turf: Lawn/Turf: Lawn/Turf: Lawn/Turf: Excellent: 53% Excellent: 65% Excellent: 56% Excellent: 32% Good: Good: 38% Good: Good: Fair: 9% Fair: Fair: 6% Fair: Poor: 4% Poor: 0% Poor: 0% Poor: 1% Very Poor: 0% Very Poor: 0% Very Poor: 0% Very Poor: 0% Flowers/ Ornamental: Flowers/ Ornamental: Flowers/ Ornamental: Flowers/ Ornamental: Excellent: 28% Excellent: 46% Excellent: 50% Excellent: 42% Good: 42% Good: 41% Good: Good: 45% Fair: 22% Fair: 12% Fair: Fair: Poor: 4% Poor: 6% Poor: 3% Poor: 1% Very Poor: 2% Very Poor: 0% Very Poor: 0% Very Poor: 1% Trees: Trees: Trees: Trees: Excellent: 44% Excellent: 57% Excellent: 57% Excellent: 50% Good: Good: Good: 41% Good: Fair: Fair: 6% Fair: Fair: Poor: 1% Poor: 0% Poor: 0% Poor: 2% Very Poor: 1% Very Poor: 0% Very Poor: 0% Very Poor: 0%











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#### **Sample Reponses to Survey:**

Favorite outdoor space on campus:

Either over by the fish fountain The area in front of PAC. by building 3 or the fountain by Very open and inviting.

the green houses. The little

The big benches. In sunlight (when there is some),

Garden area spacious, away from the bustle. Behind the cafeteria there's a bench where you can sit and view Portland. I love it.

in-between Mt. Tabors classrooms A nice peaceful place.

The Forest at RC!!

The middle part where all the building surround the area. By the forest because it's calming Its a big space and a lot of people come outside when it's nice out because it's

l like the green in the middle kind of the only outdoor space to hang out

I like the lawn area outside of

the soccer fields and trails on of the cascade campus the border lines of campus. The little pockets of nature, running water, building 7. It's inviting.

etc. that you can randomly find on the Sylvania campus the large green space outside the community hall

By the cafeteria because it's nice and open with seating and plants

In the back, overlooking the valley.

#### Comments about grounds conditions:

"I would love to see a better walking path around the perimeter road on There really isn't anywhere on campus outside to congregate. campus" I think since Portland is a big tree city you guys should plant more trees. A few gravel paths that I wish were paved because they're more direct

it's comfortable and clean and I can find quiet spaces.

very nice. Maybe put in more benches to sit

between buildings is

A natural and/or food garden would be nice These people do great

between art building and food service building.

underutilized." There are two concrete ramps on campus that have not been operational for over 3 years now The grounds at Sylvania are beautiful as they are. The only thing which could

Please maintain smoking areas!

i think this is a wonderful comfortable campus.

The sculpture here is awesome The campus is a landscaping masterpiece.

The campus is constantly being improved.

work I see them

throughout the

day and are always

doing something to

make the campus look its best. Huge

props to them for their hard work.

Key:

**CASCADE** 

**ROCK CREEK** 

**SOUTHEAST** 

**SYLVANIA** 

I find it encouraging.

The center of the college (particularly) the T-intersect leaving building 7 (Metal art display), tends to have water build up during the heavier

Need to have sidewalks going up by P9 parking to the entrance.

raining seasons.

"More seating in green spaces/under trees would be great."

"The sidewalks between the buildings are "The [central] square on in the sunlight?"

improve it would be more colorful flowers

in some areas.

8

7

# GROUNDS & OUTDOOR SPACES: STAFF SURVEY RESULTS

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Full results of the entire survey will be provided to PCC by Sightlines at a later date.



CASCADE

**ROCK CREEK** 

**SOUTHEAST** 

**SYLVANIA** 

# **GROUNDS & OUTDOOR SPACES:** STAFF SURVEY RESULTS

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Full results of the entire survey will be provided to PCC by Sightlines at a later date.

#### **Sample Reponses to Survey:**

#### Favorite outdoor space on campus:

The community garden because it is welcoming PAC courtvard.

So civilized, the center of the community.

The small gardens in the nooks around Mt. Tabor Hall. The open space in front of the Library

overlooking the farmland. Its a

the walkway behind building 2 The court by the water fountain

beautiful view. Grounds are looking better and better.

#### Balcony of CC building. We are coming up on two years of herbicide free landscape

The area in front of Cascade Hall - Main thoroughfare between buildings The big tree in front the tables, umbrellas, rain gardens, running from between buildings 2 and

and permeable pavers are a 3 down to bus area - it has a campus

of Jackson

great example of our sustainability efforts. feeling Trails near the track. You can feel isolated and get away In front of MT because I love the environment and benches from it all without actually leaving.

The grassy center space I love the benches between

My favorite is the the small courtyard between ST and TCB building 2 and building 5.

Green space behind annex. It feels like a park.

Key:

Comments about grounds conditions:

#### Well Done- Bravo!!

# The benches placed all around the campus, most are in areas where there is no shade.

The Service yard area at Rock Creek needs to be To have more side walk along G street will be a good call, a lot of students or staff have to walk on the road to get their cars or buses. repavedand re-striped(can't see the stripes).

The large pine tree on the first row The campus overall is How about more resources to hold a in front of TH drops sap on the car very beautiful but the class outside in the green spaces.

the stairwells to CC building are often west end of building cluttered with leaves and branches for 3 is a forgotten zone. weeks at a time, making it difficult to find a

safe place to step. I would like it to be in the Green space

The grounds at Cascade are lovely near the ADM Hall, but there are no and getting lovelier. tables. Please add a picnic table.

All the daffodils that got planted are amazing. I love that that happened. Thank you. It would be nice if our Cascade Campus grounds keeper(s) could congenially work with the PCC faculty to set-up and ntain plants that could be used by the biology labs. These

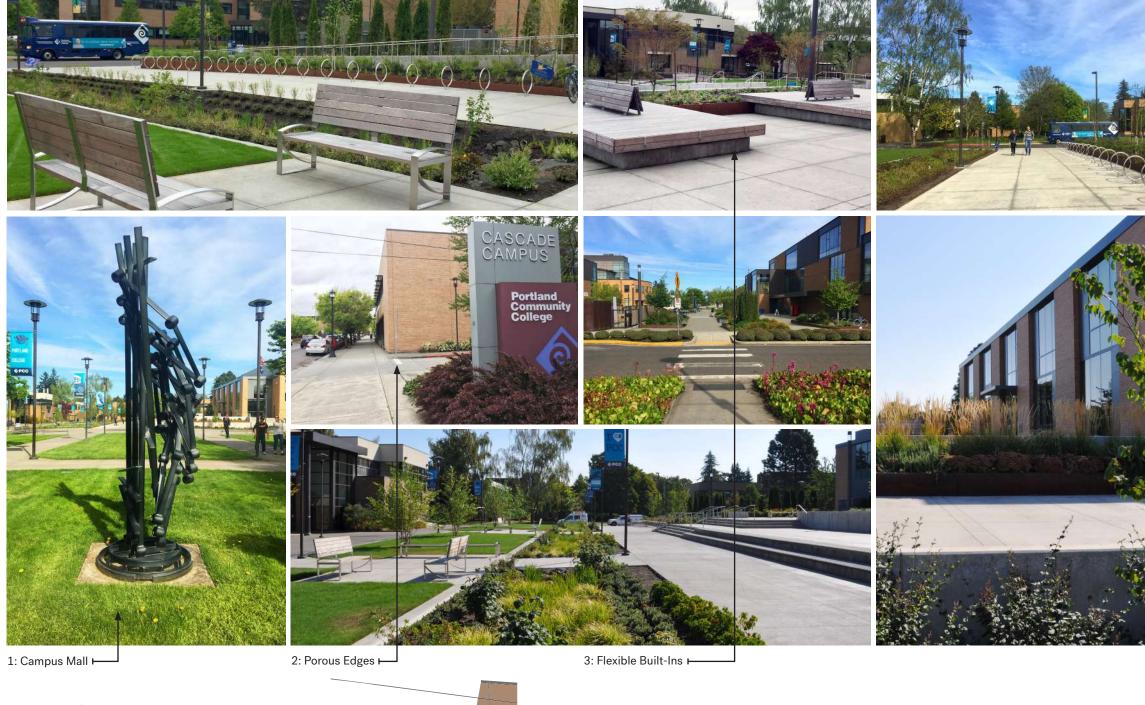
the hardscapes are in good order, but it would be nice to have a more permanent walkway going directly (in a straight line) from the Student Commons to Mt. Scott Hall.

> More trees in parking lot for summer shade Drainage issues on some walkways

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# **CASCADE CAMPUS**

The Cascade Campus is immersed within its surroundings, fitting into the urban grid with a great amount of porosity. Despite mimicking the city grid in its building placement and access, it still maintains a strong campus mall throughout its central core. Through use of expansive walks and open lawn, these areas are flexible and able to host a variety of uses. Built in features, including wooden benches and the multi-tiered seating area outside of the Library, create flexible spaces/objects that are integrated into the overall site design.









Cascade Campus

# **SITE FEATURES**

Most access into campus runs north to south within the existing urban grid. Internal circulation runs east to west, through the central mall and plazas. One area that breaks this conformity with the urban fabric is the informal vegetated space in front of the library, and the library itself with its circular form.

N. Killingsworth St. features restraurants, coffee shops and stores, with a wealth of crosswalks to access these ammenties. This creates a notibly porous edge on the south side of campus. The Cascade Campus could, however, do more to embrace this relationship and activate the PCC stretch of Killingsworth St. through programming and design that emabraces this lively edge.

Given its urban location and porosity, Cascade is a notably bikable campus. While it is a certified tree and bee campus, sustainable site features are not as prevalent at Cascade as on other campus's.



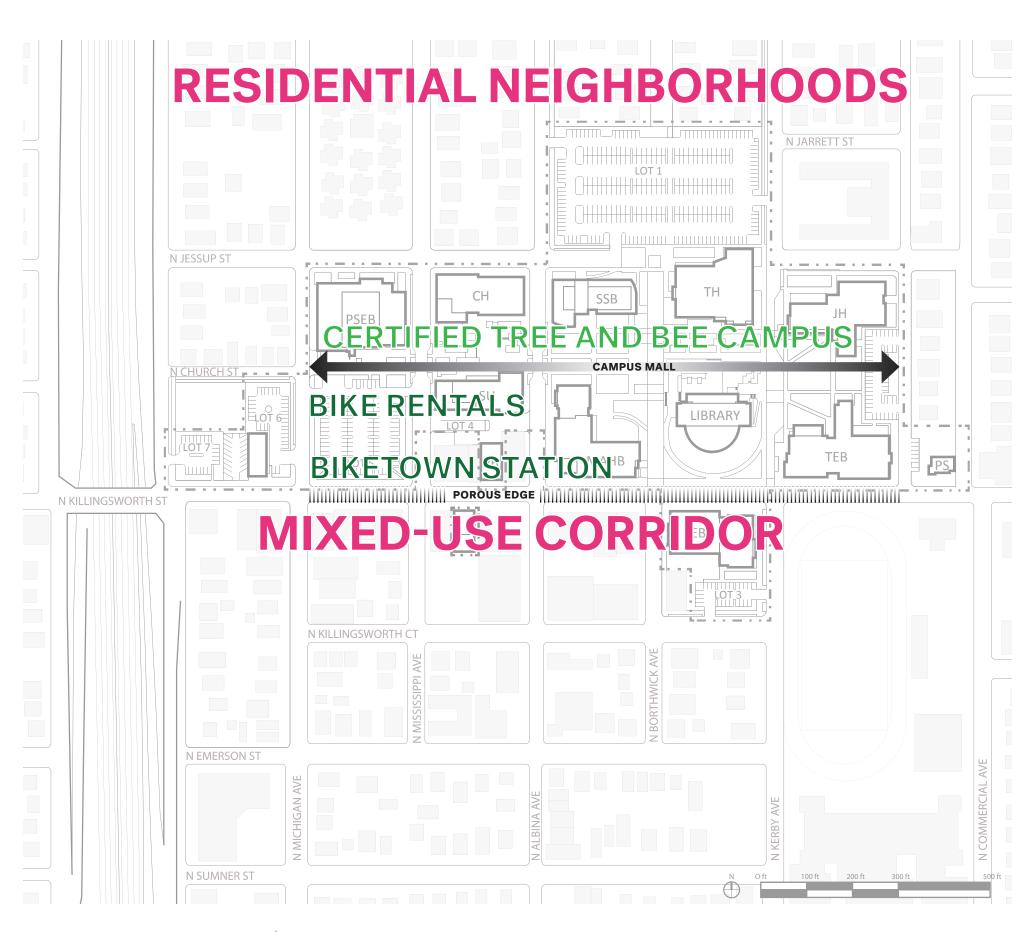
BIKE



URBAN

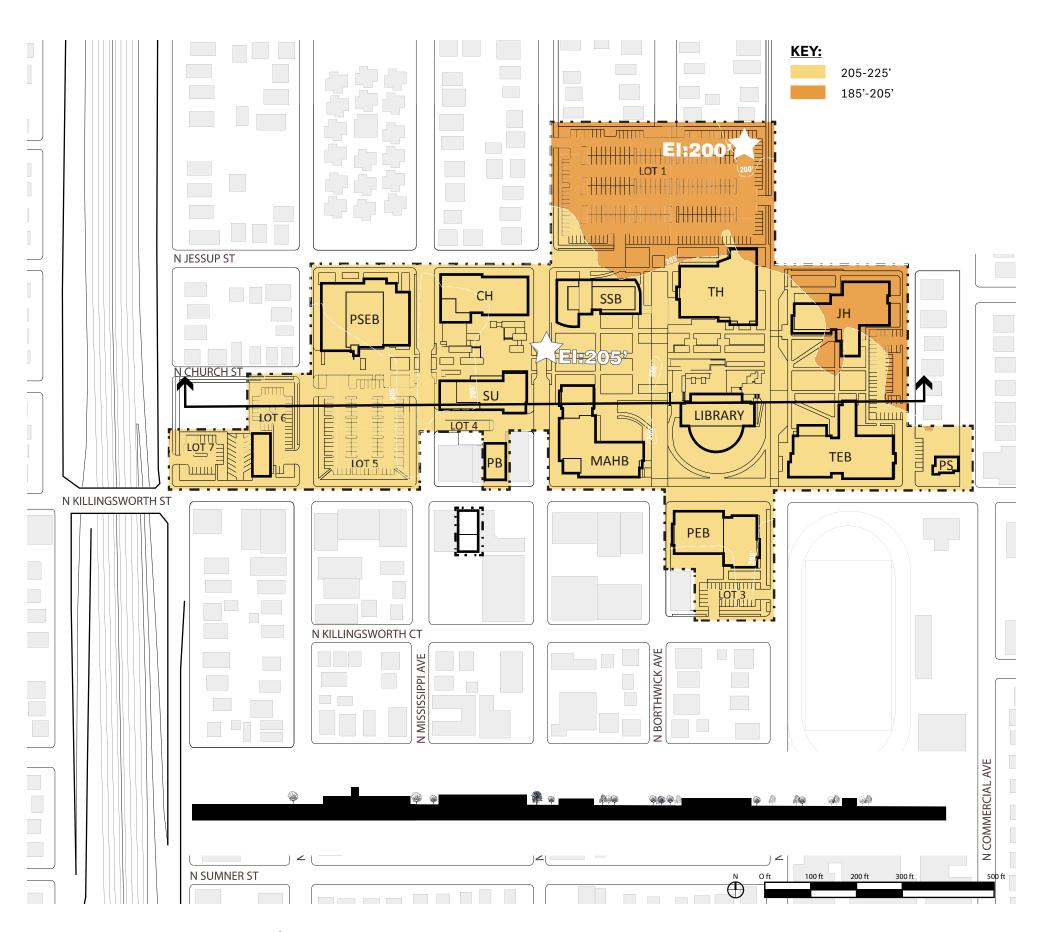


ECOLOGICAL RESOURCES



# **TOPOGRAPHY**

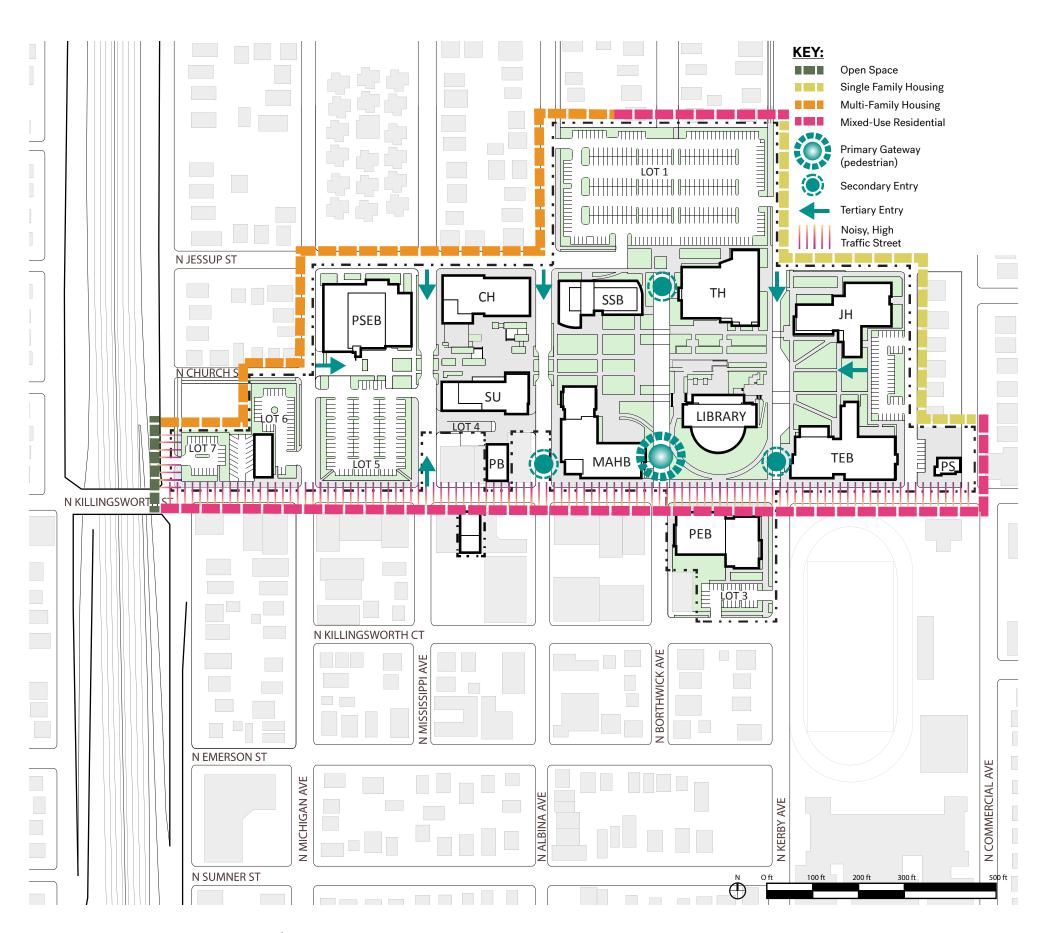
Topographic change at the Cascade Campus amounts to a total of approximately 5', in a primarily south to north direction. The high point of campus is at elevation 205, located on N. Albina Ave, east of the Student Union Plaza.



# **CAMPUS EDGES**

An urban campus, PCC Cascade receives a lot of local and non-student foot traffic at all times of the day. It is also the only campus in the PCC system that is divided by city streets and right-of-ways, which presents unique challenges. The southern edge of campus (Killingsworth Street) is zoned mixed-use residential and serves as a commercial corridor. Single-family and multi-family housing mainly comprise the northern and eastern edges, Interstate 5 creates the western campus boundary and Rosemary Anderson High School is also nearby.

Because of its placement in the urban grid and dispersed parking lots, there is no noticeable vehicular primary gateway. Borthwick Mall serves as a formalized pedestrian primary gateway because of its central location and signage (with dead-end vehicular access for service vehicles).



#### LANDSCAPE TYPES

Vegetative patterns have a powerful impact on the overall character of a Campus. Significant stands of mature trees can produce an effect similar to architectural walls, creating spatial definition and directional orientation, while large expanses of manicured lawn can encourage informal gathering or allow for long sweeping vistas.

Open lawn is a defining feature at PCC Cascade. The campus currently has 66,000 square feet of lawn, which has been reduced from a peak of 90,000 square feet. In an effort to save time, money, and irrigation costs, PCC Grounds has strategically eliminated four lawns, with three additional lawns slated for removal, focusing on eliminating lawns on the north sides of buildings and hard to maintain sloped areas and replacing them with easier to maintain shrub plantings.

A challenge unique to Cascade are right-ofway street tree plantings which need to be managed through the City of Portland.

The stormwater swales at Cascade are fairly new and easy to maintain.

The PCC Grounds crew in charge of PCC Cascade Campus, PCC Swan Island Trades Center, and PCC Portland Metropolitan Workforce Training Center still uses chemicals and feel that it is currently the only way to manage these properties with the man-power available.

#### **Additional Facts:**

- PCC follows the City of Portland Tree Code (Chapter 11)

#### **Recommendations:**

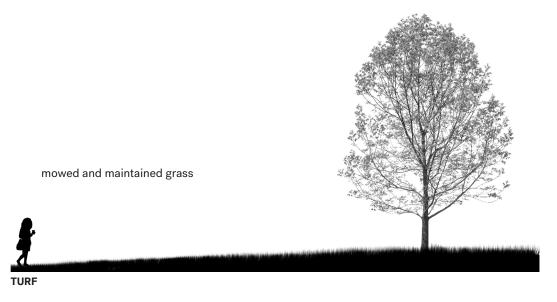
Follow Best Management Practices.

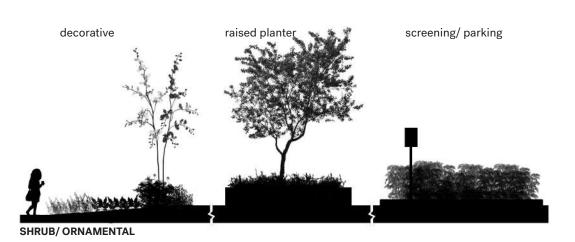
Plant more trees for canopy cover. Reduce amount of turf and replace with more sustainable, lower maintenance planting alternatives.

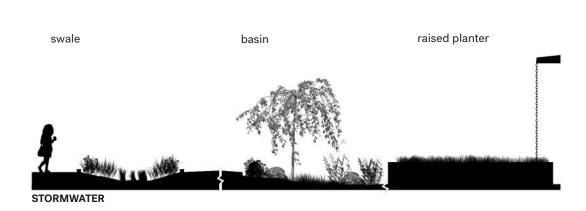


# **LANDSCAPE TYPES**

PCC Cascade has a variety of landscape types, each creating a different visual and experiential character, and each requiring a specific maintenance regime. These types are mapped per campus on the "Landscape Types" map. Pictured right are sectional explorations of what each of these typologies may include.







# **OPEN SPACE**

Open space is defined as any outdoor inhabitable area utilized for passive or active recreation, and combines both quantitative as well and qualitative aspects.

#### **Primary:**

The main open space on campus is the central quad area, running in an east/west direction from Jackson Hall (JH) to the plaza north of the Student Union (SU). Borthwick Mall is also a primary open space running in a north/south direction.

#### Secondary:

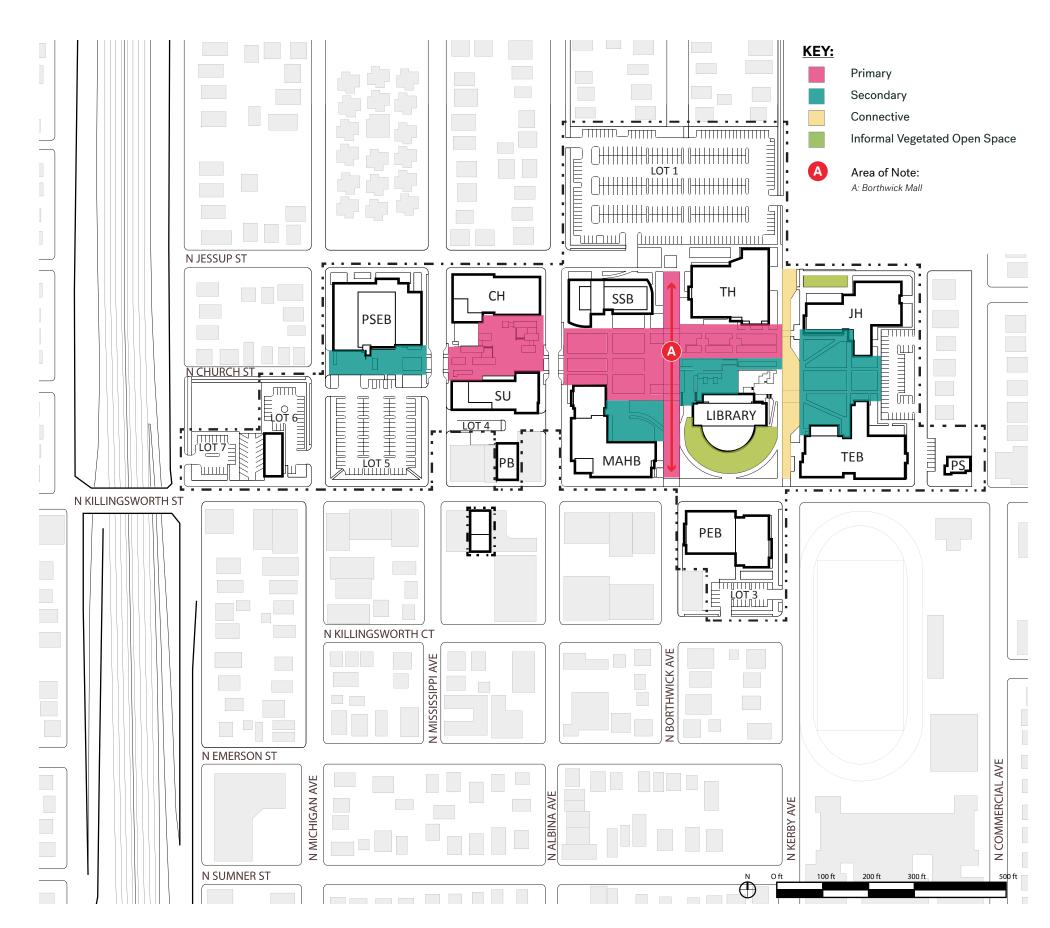
Secondary open spaces at Cascade are located between the primary open spaces and building faces and include a mixture of hard and softscape. The largest of these secondary spaces is between Jackson Hall (JH) and the Technology Education Building (TEB) on the east side of campus, where lawn areas invite smaller groups of students to gather outside of the busier central quad area.

#### **Connective:**

Connective spaces are large, open, move-through spaces that support the additional circulation paths between primary and secondary open spaces. Borthwick Mall is unique in that it serves as a gathering space as well as a strong north/south connector that does not have a City of Portland street adjacent to it.

#### **Informal Vegetated Open Space:**

These areas are generally maintained turf with an informal/undefined program. They stand alone from other organizing features or are scattered along the edge of campus. The green space south of the library is an example of an informal vegetative space.



## **WAYFINDING**

The primary goal of a wayfinding system is to give students, faculty, staff, and visitors a sense of clarity, convenience and safety through the implementation of signage that denotes clear circulation routes.

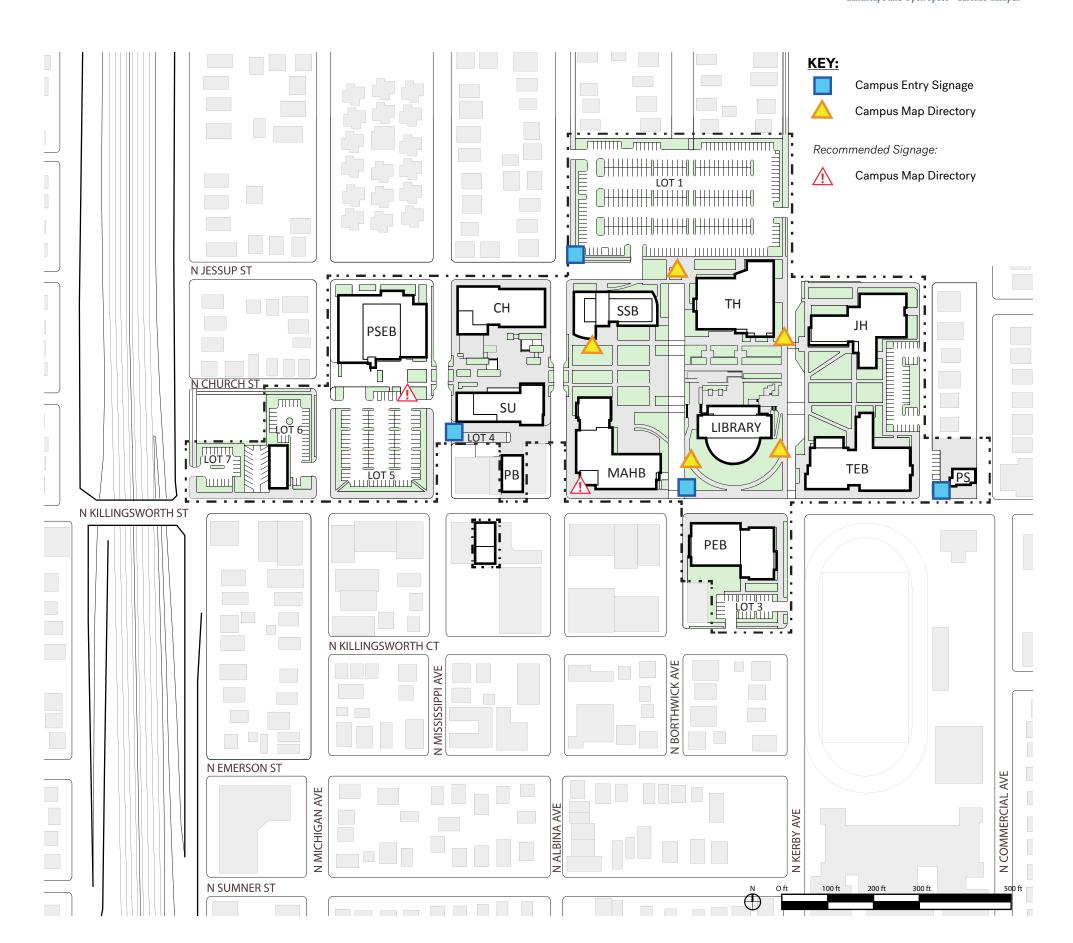
For the purpose of this report, wayfinding focused on directional and identification signage such as map directories and entry signs, rather than smaller, instructional types of signage such as parking permits and stop signs. By simplifying the types of signage reviewed, it allowed us to see trends, both on the individual campus scale as well as the District as a whole, and give recommendations based on our experiences.

In addition to our general review, PCC has been working with Anderson Krygier to develop a full Exterior Signage Master Plan for each PCC campus. At of the time of this report, these Master Plans are at various levels of completion, and therefore our diagrams reflect what has been installed thus far.

Recommendation: The importance of a complete, consistent, and unified wayfinding program for the entire PCC System cannot be understated. It not only creates a unique sense of place for each individual campus, but becomes part of PCC's brand and identity. It makes each campus a more inviting place, for both students and faculty as well as the outside community, by promoting interaction through information about destinations beyond the campus boundaries, and by providing a sense of welcome to the outside community. Our recommendation is to complete the installation of the Exterior Signage Master Plan signs as expediently as possible.

### **External Reference:**

Anderson Krygier Exterior Signage Master Plan.

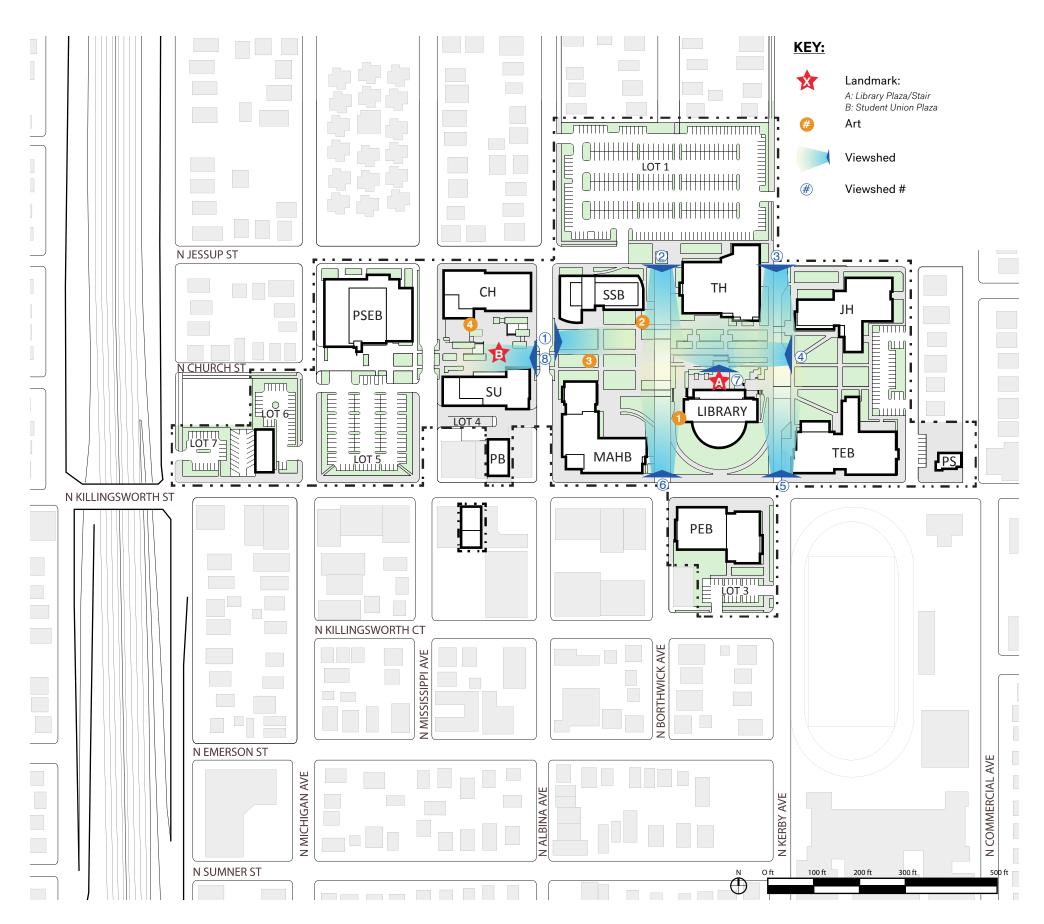


# LANDMARKS, VIEWSHEDS, AND ART

Landmarks and viewsheds work together as a way of organizing a campus, taking advantage of open spaces, and connecting the campus visually as well as physically. To be most effective, landmarks and viewsheds must remain untouched by building development.

Landmarks are monuments, built or natural, that serve as large-scale wayfinding devices. Viewsheds can either highlight these internal campus landmarks, or when aimed at the edges of campus, visually connect to elements beyond a campus' borders. They reinforce identity both within the campus and from the outside.

Due to the lack of topography and mature tree plantings to create visual barriers, PCC Cascade's viewsheds are framed entirely by building edges which channel the focus into and through the central open space. Site art, clustered mainly in this zone, reinforces the central spine. This organization dissolves at the PSEB building, as parking lot 5 breaks the typical building cradled lawn.



## **BIKE INFRASTRUCTURE**

The Cascade Campus is located in an area that possesses a robust cycling infrastructure, including a BIKETOWN Bikeshare location at the intersection of N. Albina Avenue and N. Killingsworth Street. PCC Cascade has provided a large number of bike rack and bike locker locations throughout the campus, and showers are located in the Physical Education Building (PEB). However, there is a deficiency between the off-campus infrastructure and the on-campus amenities, and the lack of clear bike routes on campus can create user conflicts between bikes, cars, and pedestrians and discourage potential bike commuters.

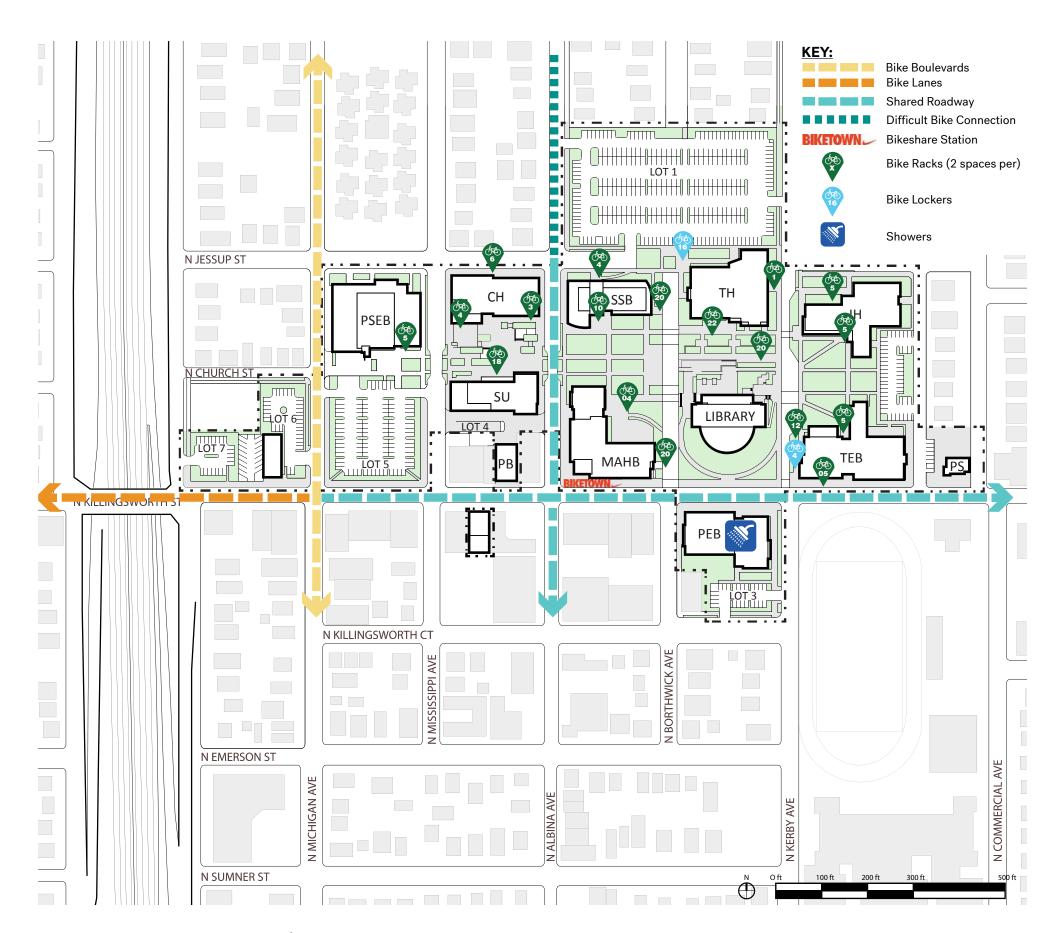
#### 2017 Sightlines Survey

Percentage that use bike to commute to campus:



#### **Recommendation:**

Our recommendation would be for PCC to commission a study with a bicycle transportation consultant to look at the existing on-campus amenities and how they can be connected to the surrounding infrastructure. A full Bicycle Transportation Master Plan would maximize the existing infrastructure, create routes and signage that minimize bike/car/pedestrian conflicts, and help identify future growth opportunities.

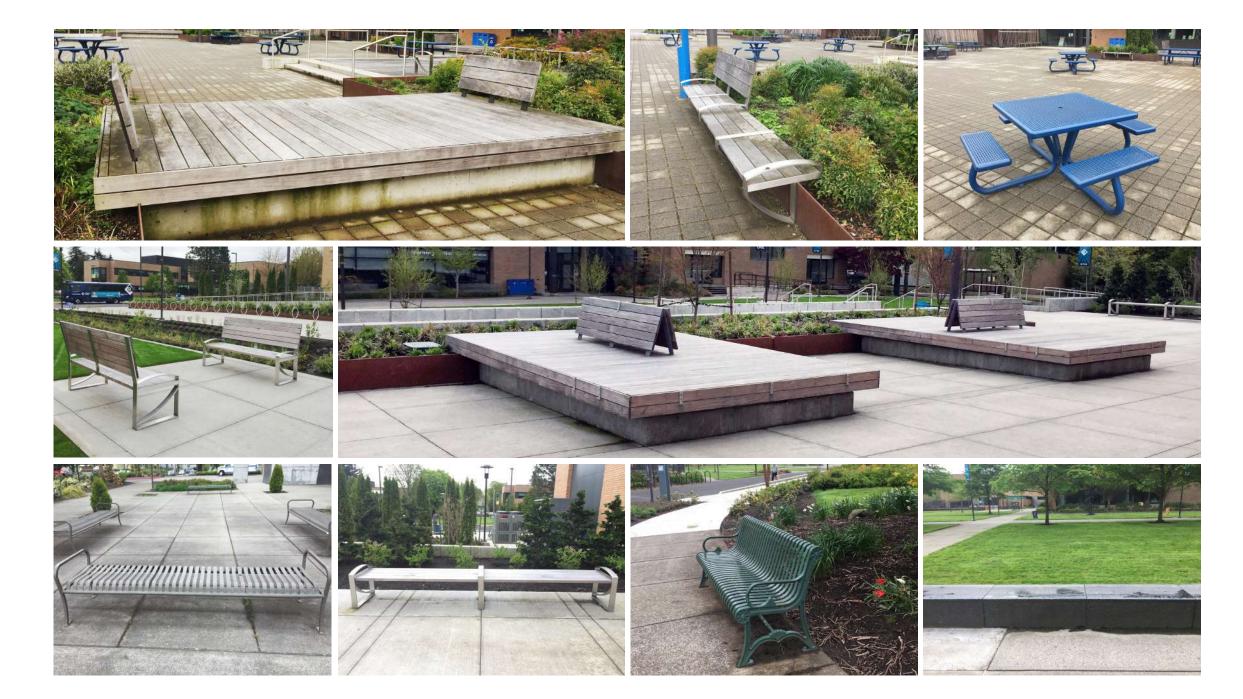


# **SITE AMENITIES**

For the purposes of this report, a brief overview of site amenities and site furnishings has been completed. This overview is not meant to be a full inventory of current placement, nor as documentation of the exact equipment brands and model numbers used, but is instead intended to identify the diverse product ranges and typologies used throughout the college.

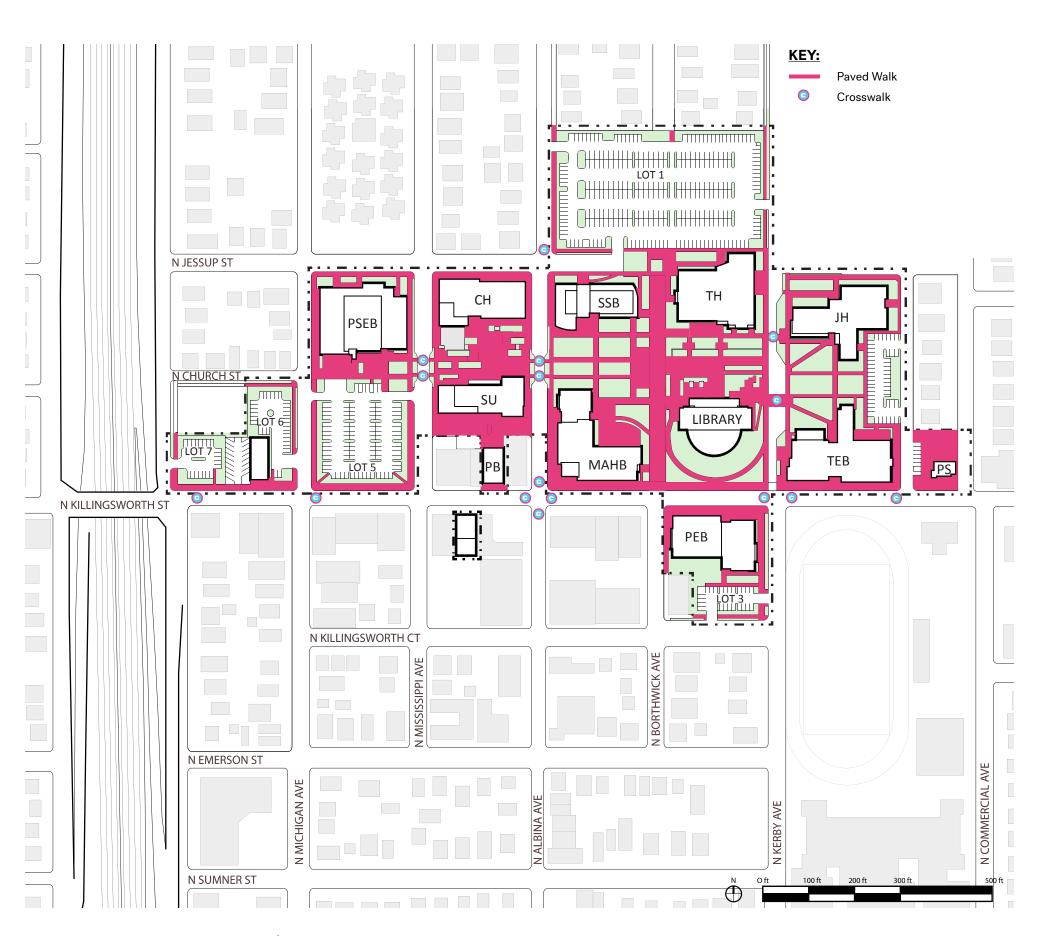
Amenities at Cascade are clustered in the central gathering spaces of the campus, with a relatively even distribution. One area that has potential to host more ammenities is the open green space to the south of the library. Programming this space would allow the Cascade Campus to better embrace the lively Killingsworth Street.





# HUMAN TRAVEL-BUILT SYSTEM

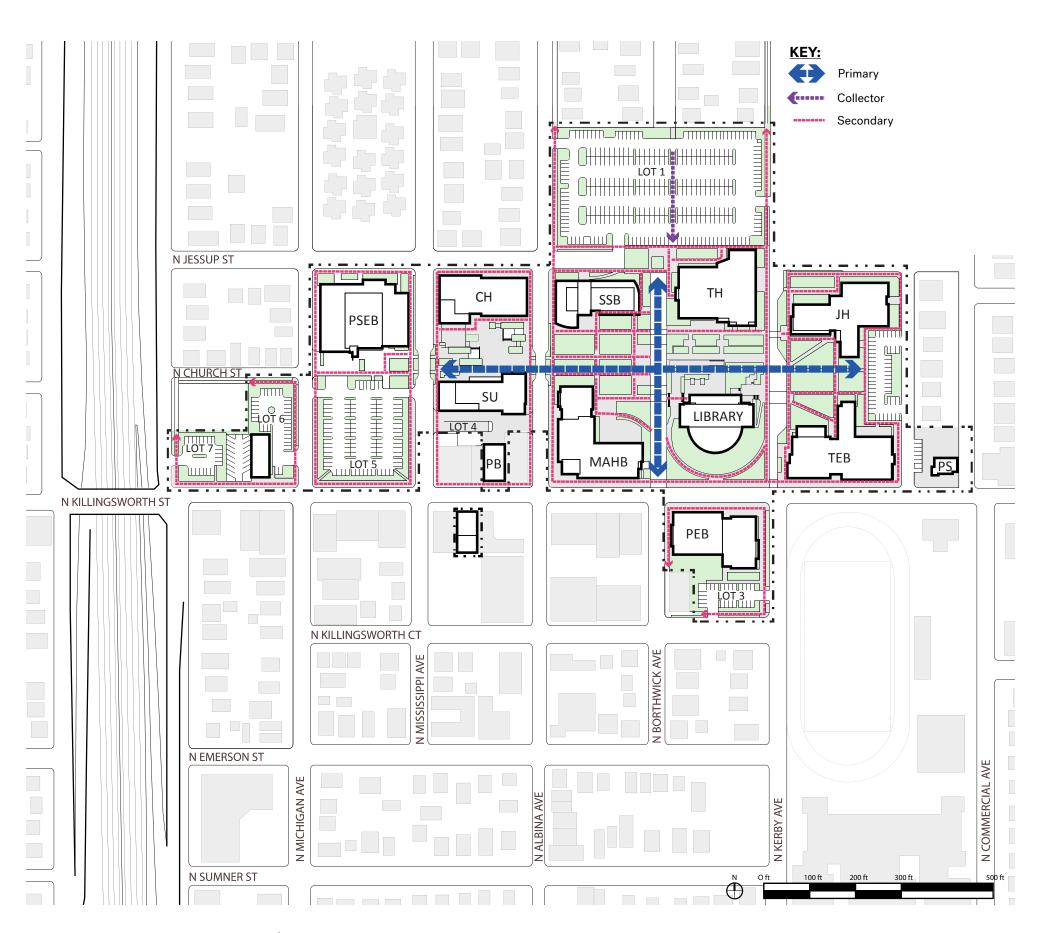
PCC Cascade is an urban campus with a classic, flat internal quad, laid out in a typically orthogonal manner. Occational diagonal and curved sidewalks express desire lines rather than allowing informal paths to form. The one exception to the orthogonal layout is the curvilinear walk south of the Library. It is also the only campus in the PCC System to have city streets run through campus, which causes break points in the pedestrian experience and creates additional vehicular/pedestrian/bike user overlap zones. However, a benefit of the city street grid is that circulation from parking lots to main campus buildings works well and allows for use of city sidewalks.



# HUMAN TRAVEL-CIRCULATION

Pedestrian circulation looks at the existing built system and overlays the daily foot traffic pattern. The resulting use patterns represent how a campus operates at a human scale, and can provide important information about how best to maintain the existing system, plan for future growth, and help PCC Grounds prioritize particular routes and areas in cases of inclement weather.

As a result of the flat topography and orthogonal layout, PCC Cascade's primary pedestrian routes result largely from where people arrive on campus and where classes are located rather than having to negotiate around barriers. East/west circulation occurs in the main quad area, while north/south circulation occurs primarily on Borthwick Mall or along city sidewalks. The many smaller plazas located throughout the campus allow for localized and informal routes to occur at the whim of the pedestrian.

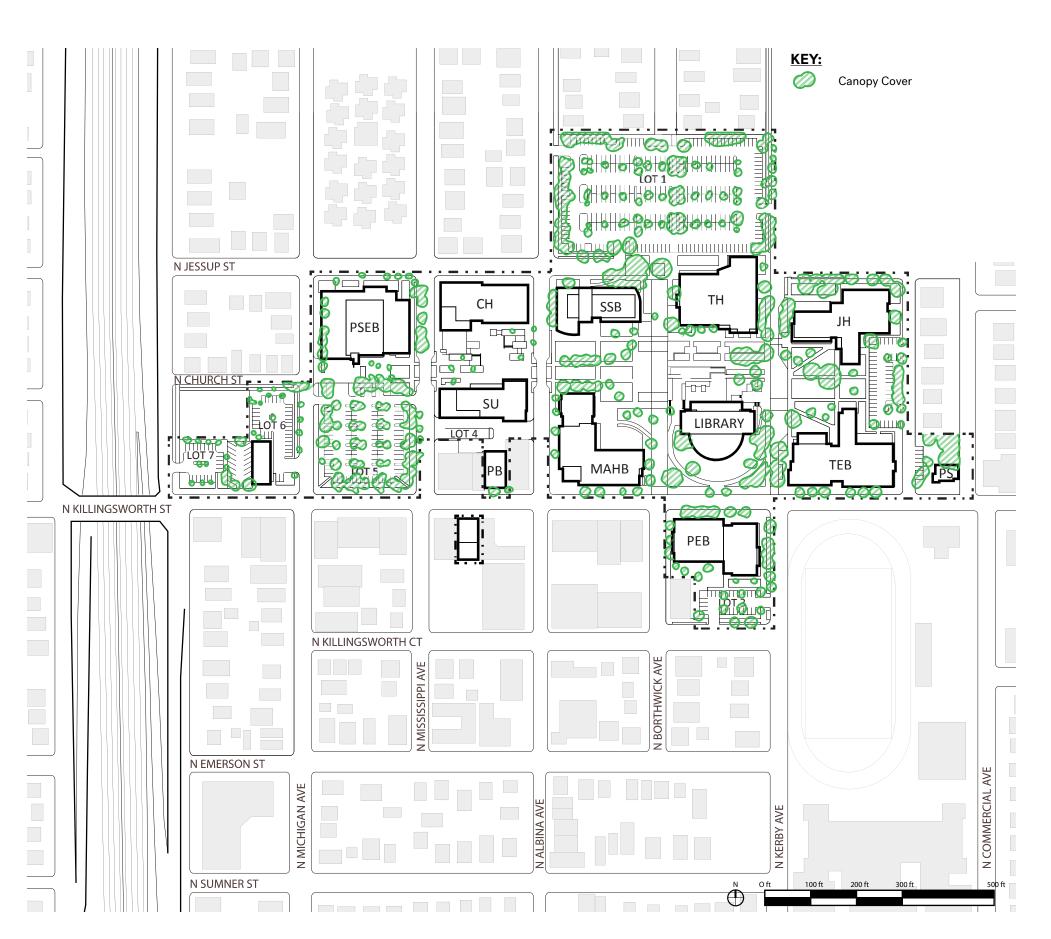


# **ECOLOGICAL RESOURCES**

PCC Cascade is located within the City of Portland and does not contain any creeks, watersheds, riparian zones, or environmental conservation zones. Extensive renovation work and new building construction has taken place on the campus recently, and while there are a few larger canopy trees located primarily along the outer edges of campus and in parking lots, the majority of the trees throughout campus are still small and do not currently influence gathering spaces by creating shade or producing localized micro-climates. The exception are larger trees outside Jackson Hall (JH) and along Kerby Avenue, southeast of the Library,

#### **Recommendation:**

Plant more trees for better canopy coverage.



#### **SUSTAINABILITY**

PCC is working on a substantial number of sustainable campus-wide initiatives, while also focusing on specific curriculum program elements.

At Cascade, the notable landscape initiaves include:

**Tree Campus USA Certified:** Cascade continues to abide by the key five standards needed to reach that achievement.

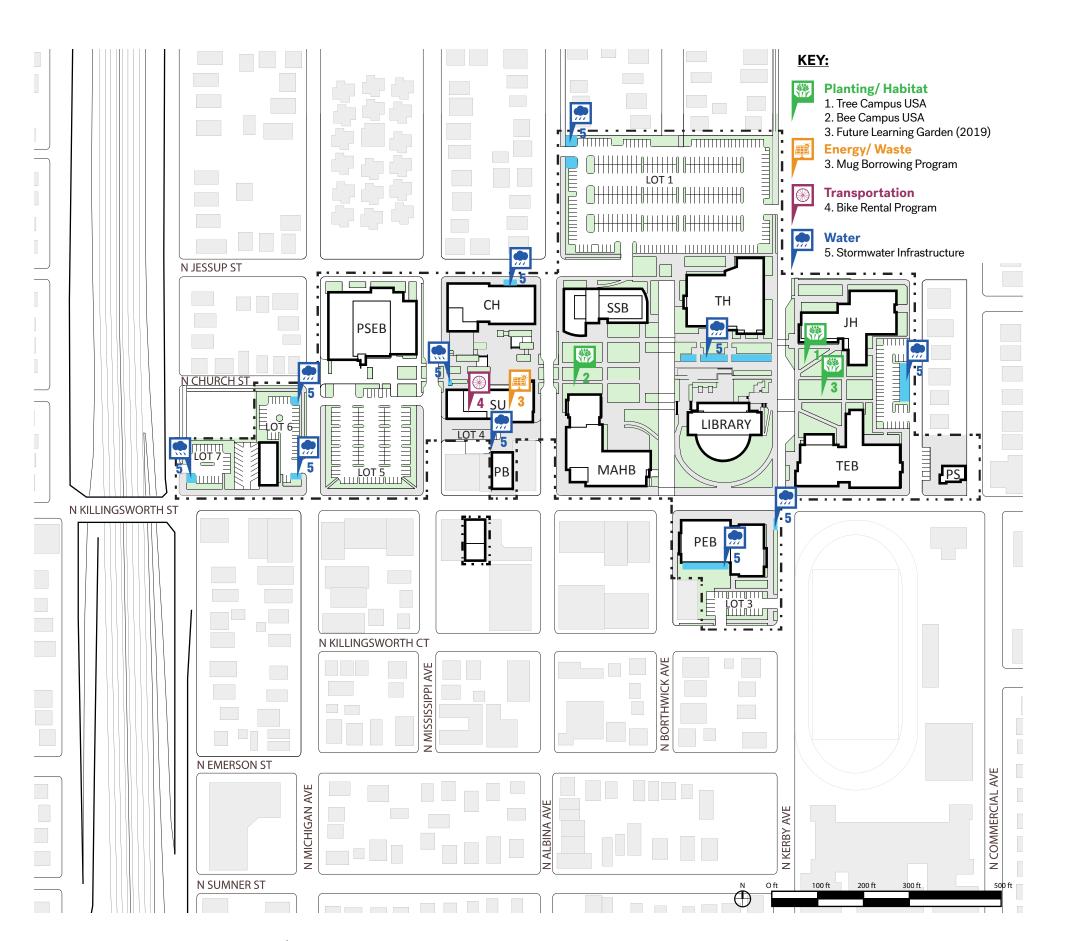
Bee Campus USA Certified; Cascade continues to look for ways to expand pollinator habitat, such as overseeding previously mulched areas with wildflower mixes and using native plants.

Follows Integrated Pest Management(IPM).

#### **Recommendations:**

PCC Cascade is one of two Campuses that uses herbicides. Moving forward, consideration to how this campus can also become herbicide free should be considered.

Cascade is currently the only campus without a highly visible sustainability site feature, like Rock Creeks Environmental Studies Center or the wind turbine at Sylvania. Sustainability is built into less visible systems at Cascade and this fact does not mean that Cascade is any less sustainable than other campuses. However, this absence does present an opportunity for future build-outs and renovations. Visibility and artful expression of sustainable practices allows the public to better notice, celebrate and interact with these important systems. Note: A Learning Garden is planned to be added to Cascade in 2019, but we invite all future development to consider how sustainability can be a highly visible feature.



## **IRRIGATION**

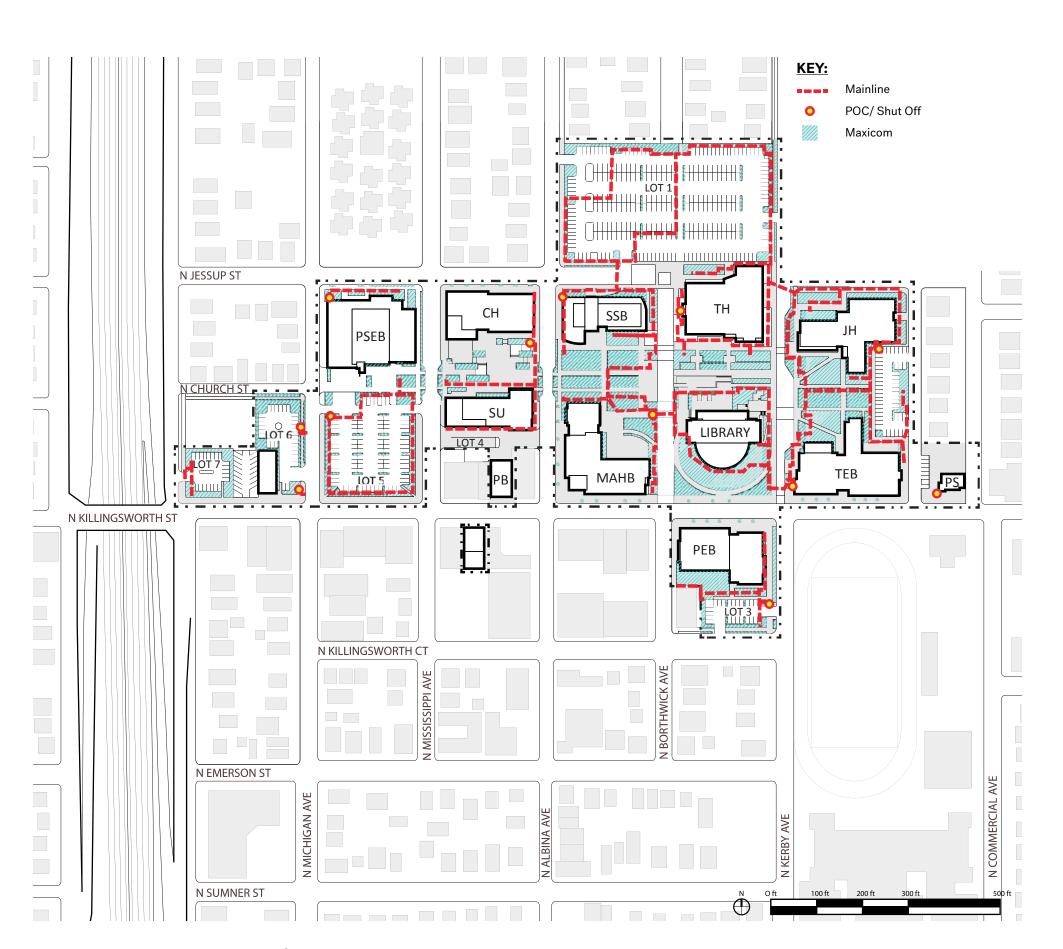
The Cascade campus is a patchwork of old systems and old properties that PCC Grounds has slowly been integrating into a single system. The entire campus is on the college's Maxicom system, except for the Public Safety Building which is currently a stand-alone system.

#### **Additional Facts:**

PCC prefers for all swales to be irrigated, which is in conflict with BES guidelines. Recent summer temperature heat records create cause for this desire.

#### **Recommendations:**

Update and replace as needed.

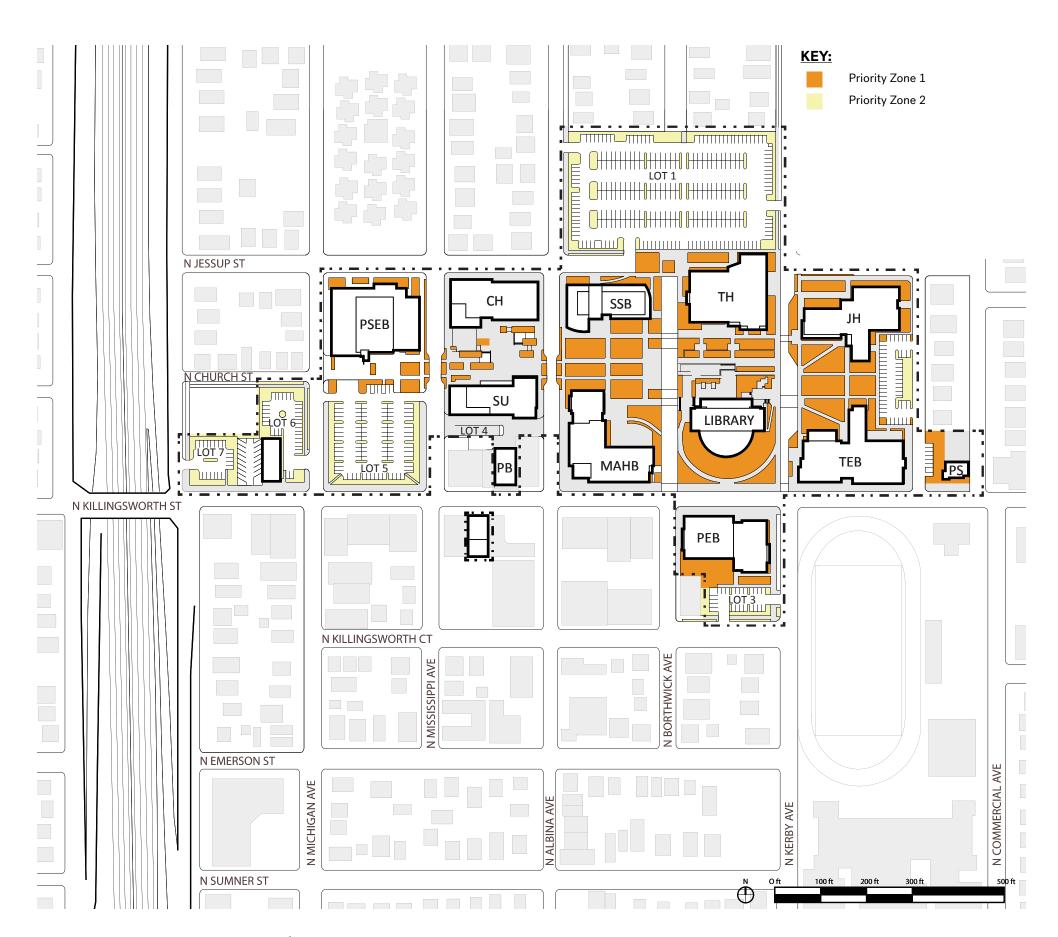


# LANDSCAPE MAINTENANCE PRIORITY

The purpose of this map is to identify the areas within each campus where PCC Grounds spends the majority of their time annually. Priority zones are noted sequentially in order of importance, with "1" signaling the highest priority.

Understanding areas of high intensity maintenance can:

- 1) Help prioritize how resources are allocated on a weekly basis,
- 2) Highlight current problem areas in order to initiate longer term maintenance strategies, and
- 3) Create a framework for communication where overlap and/or scope responsibility occurs between PCC Grounds and other PCC Departments in order to maximize efficiencies and meet PCC's sustainability and best practice management goals.



# **EMERGENCY ACCESS**

The consultant team, as well as the PCC team, has had a difficult time locating maps and documents that indicate emergency access, fire access, and evacuation routes. As a starting point, we have mapped the red "no parking" curbs on campus. The locations of these curbs are usually designated by the Fire Marshal as part of new projects, and give an indication of how the Fire Department would access the site in case of an emergency.

#### **Recommendation:**

This area is a deficiency. Emergency Access, Fire Access, and Evacuation Route Maps should be commissioned as part of a separate study, and their creation should involve multiple departments at PCC, including Parking/Transportation, ADA, EHS, Grounds, and Public Safety as well as the local Fire Marshal and emergency responders.

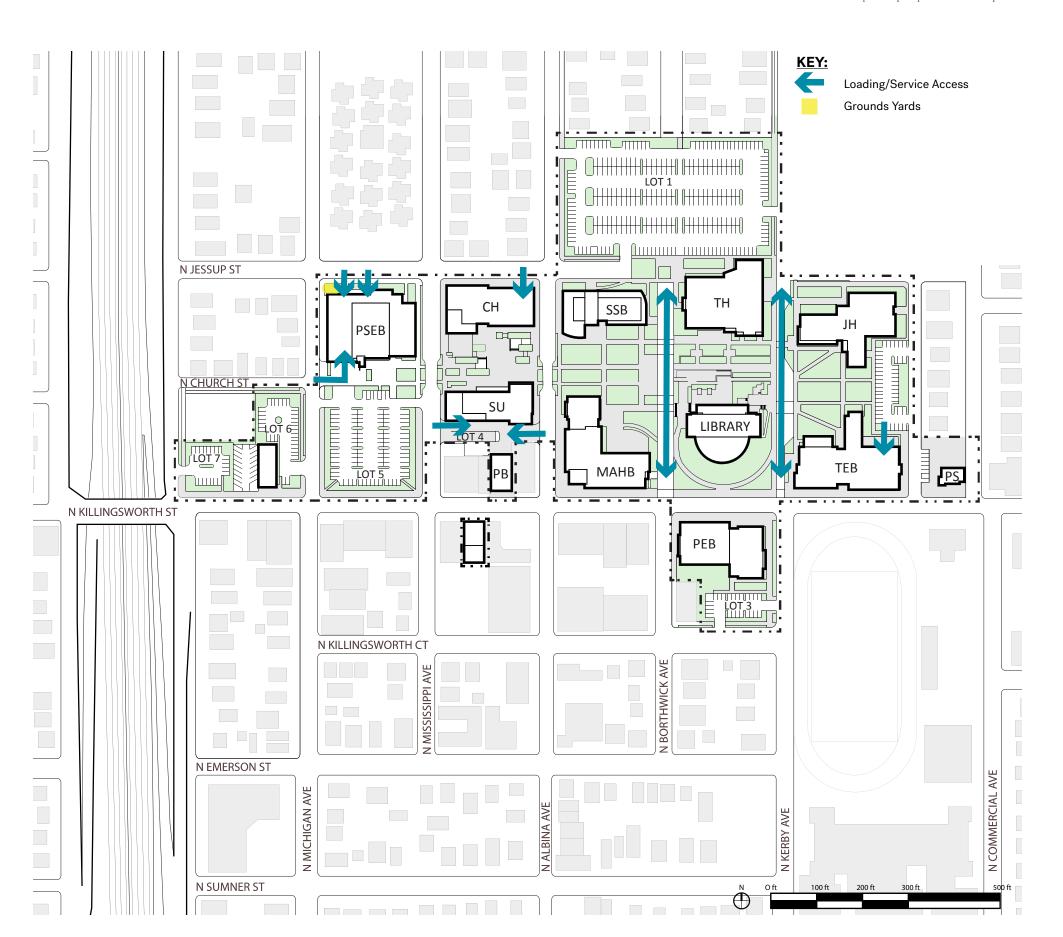


# YARDS, LOADING, AND SERVICE AREAS

The consultant team, as well as the PCC team, has had a difficult time locating maps and documents that indicate loading docks, service routes, delivery points, and turning radius conflicts. As a starting point, we have mapped loading dock locations based on site visits.

#### **Recommendations:**

This area is a deficiency. Loading Docks, Service Routes, Delivery Points, and Turning Radius Conflict Maps should be commissioned as part of a separate study, and their creation should involve multiple departments at PCC, including Parking/Transportation, Grounds, Dining Services, and Safety & Security. This would be a valuable asset to have in regards to future circulation considerations in a Master Plan.



## **ROCK CREEK CAMPUS**

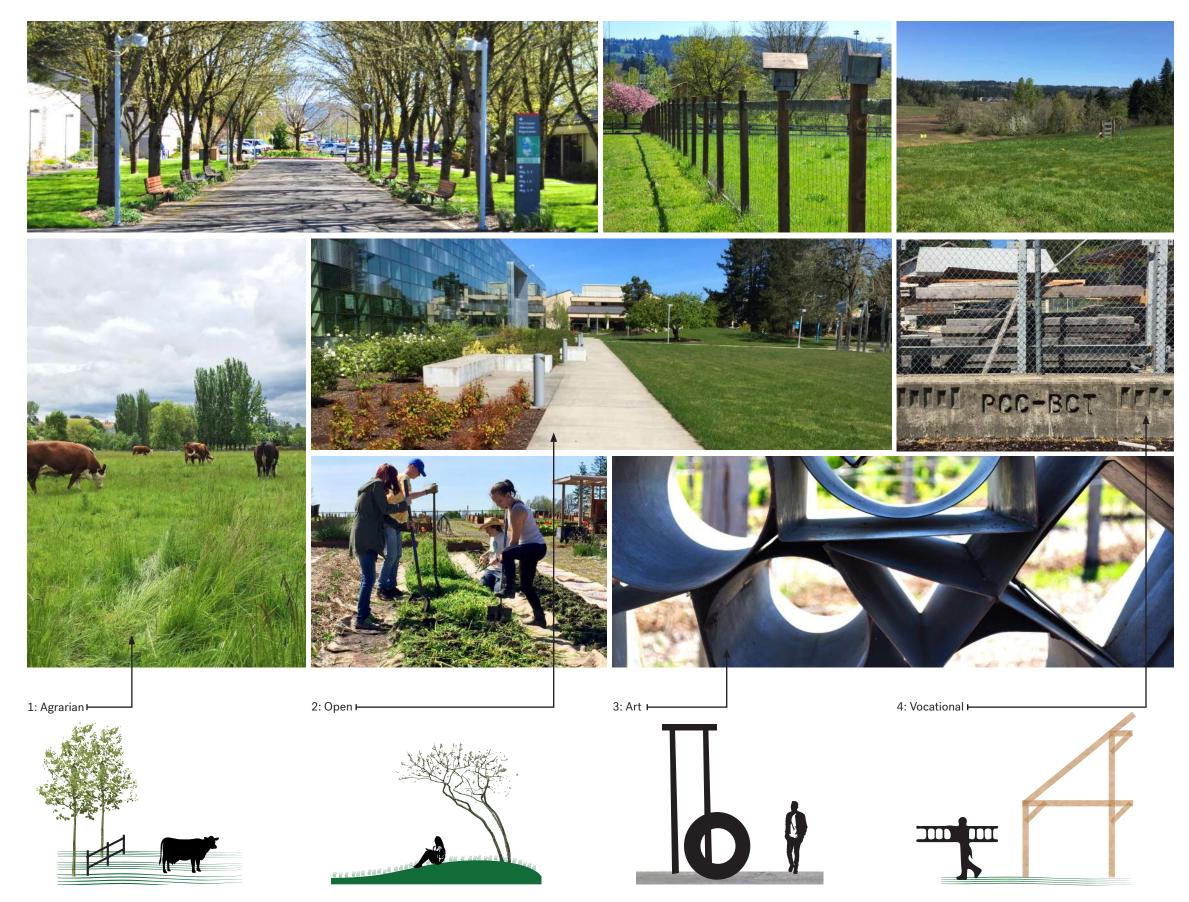
The Rock Creek Campus is unique in that it is located in a formerly rural area that is developing into a more suburban one. Despite this change, Rock Creek maintains a strong rural identity, with vast open spaces and a landscape that is tended, experimented in and monitored. Rock Creek is located in the Beaverton-Hillsboro area of Washington County, yet has a Portland address.

The Rock Creek Campus establishes this rural identity upon entry, with cow pasture adjacent to Springfield Road to the east of the entry drive. A linear windbreak of trees follows this path, leading towards the formal entry and bus drop off. PCC Rock Creeks campus farm has a seperate manager than Grounds, with some coordinated activities.

The buildings of Rock Creek are the most dispersed of all the campuses. This allows for large swaths of open space, such as the rolling lawn of the central green, as well as use of the site/landscape for academic and vocational programs.

Art is featured throughout the campus, in typical places such as the central plaza and also in productive landscapes such as the Learning Garden. The pieces vary in size, style and staging, creating an immersive art experience with works from professional artists to students.

Rock Creek uses its site for hands-on education more than any other campus, incorporating the Vet Tech, Building Construction and Landscape Technology Programs. This creates a sense of flux and flexibility that is not present on more urban campuses.



Rock Creek Campus

## **SITE FEATURES**

A strong north-south line (axial spine) runs through the center of campus, featuring many outdoor site amenities and gathering spaces, including the open central green area and the northern fountain plaza. This line terminates informally between Buildings 2 & 3, with a view overlooking cow pasture, wetlands and forest below. This northern swath of grass features expansive views, with most access/ amenities located beneath building overhangs, creating a clear boundary between the naturalized area below and the edge of campus grounds. Outside of this central campus area are smaller nodes of academic programs with need for outdoor academic space. These programs are decentralized but clustered to the west of campus, and feature less formal pedestrian circulation and signage.

Pasture, wetlands and forest surround and ground the campus, with unprogrammed open space becoming rare within the edges of campus grounds. Once on campus, the suburbanization of the surrounding area is only felt to the east, where views of adjacent housing development can be see across a large swath of grassy, open land. The only public entrance into the campus is from the south, further reinforcing the rural feel, with western access roads for authorized vehicles only, except during emergency situations. The Tualatin Hills PCC Rock Creek Recreational Facility to the southeast ties in with the residential neighborhoods and provides students with various athletic fields. It is, however, maintained by the Tualatin Hills Parks and Recreation District (THPRD), and is thus shown only to give context of use but will not be subject to recommendation.

Several site features express the PCC commitment to sustainability and experimentation. The creeks, wetlands and floodplains on site are monitored and have been restored through PCC effort and the PCC Rock Creek Environmental Studies Center, making PCC a good neighbor within the larger watershed system. The neighboring wildlife sanctuary also provides a testing ground for monitoring habitat and ecology, while allowing for student access on established trails. The solar array, Learning Garden, apiary and hoop houses showcase Rock Creek's emphasis on hands-on sustainability efforts, in both ecology and energy.



WATERSHED



LEARNING/ SUSTAINABILITY



ECOLOGICAL RESOURCES



**SUBURBAN** 



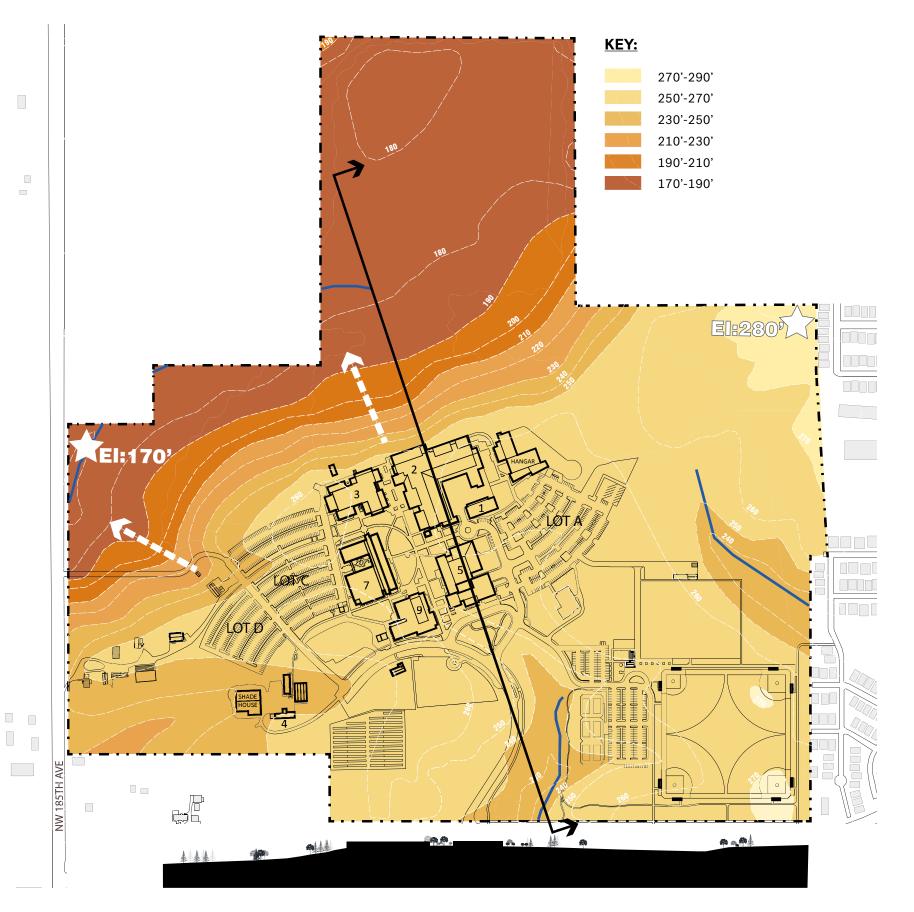


# **TOPOGRAPHY**

Topographic change at the Rock Creek Campus amounts to a total of approximately 110', in a primarily east to west direction. The high point of campus is at elevation 280, located along the eastern property edge at NW 170th Avenue, north of Springville Elementary School.

The main campus area is relatively flat and acts as a localized high point, with grades gently sloping away consistently in all directions. The exception is at the northern edge of the main campus, where the grade slopes away more steeply to the natural area to the north.

The main campus area is organized to take advantage of the surrounding topography, creating sweeping vistas in almost every direction. The topography also supports a variety of different vegetative zones.



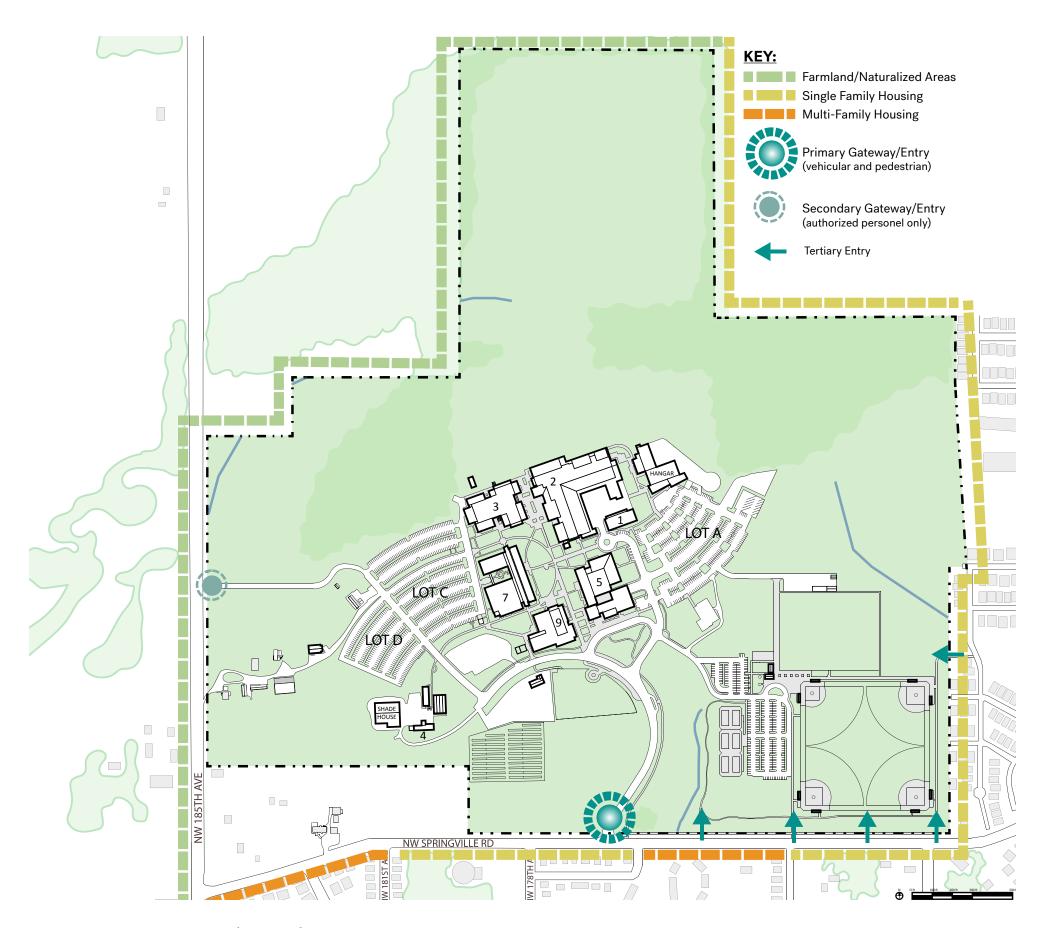
Rock Creek Campus

# **CAMPUS EDGES**

Lending to the campus's pastoral character on the edge of Portland's Urban Growth Boundary, PCC Rock Creek is surrounded by farmland and naturalized areas to the north and west, and largely new single and multifamily housing to the east and south. St Juan Diego Parish is to the south of the campus, and Springville Elementary school is to the east.

The campus's primary entrance and main campus gateway is off of NW Springville Road to the south. A secondary access point has recently been added off of NW 185th Avenue to the west, but is open to authorized personnel only, except in special situations.

Note: There are currently road updates happening on Springville and 185th.



# **LANDSCAPE TYPES**

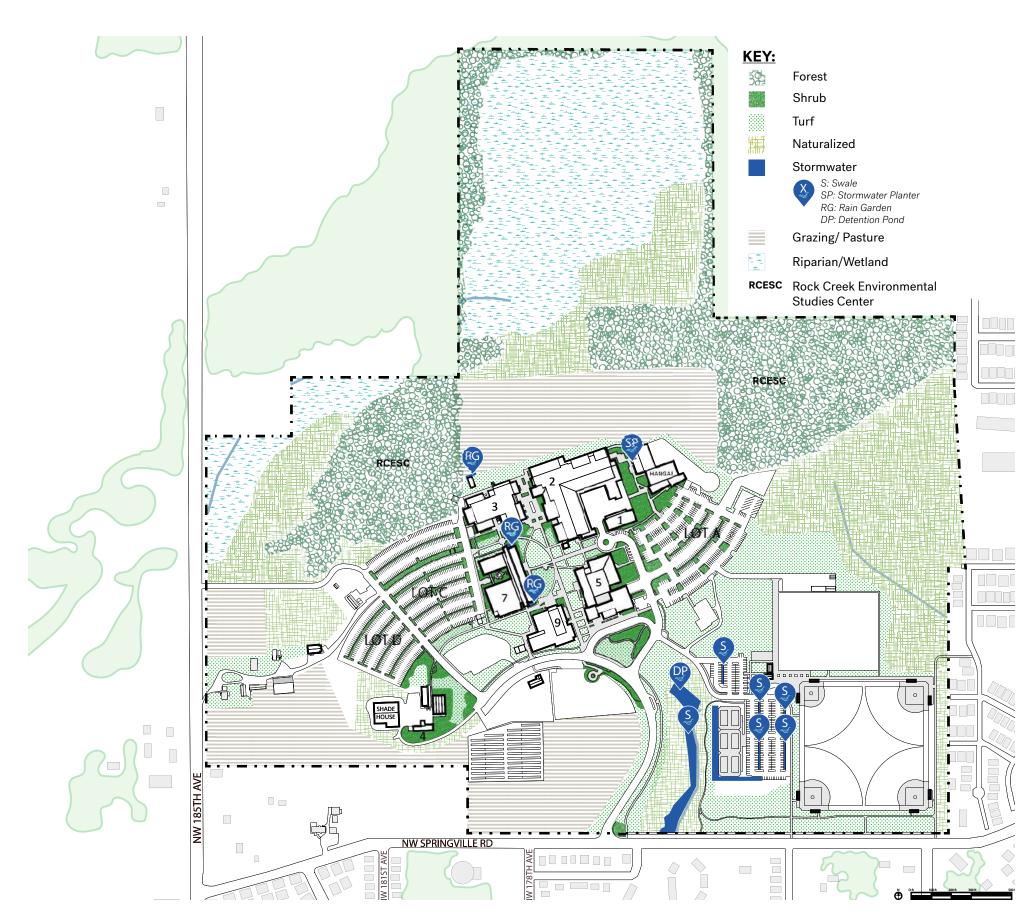
Vegetative patterns have a powerful impact on the overall character of a campus. Significant stands of mature trees can produce an effect similar to architectural walls, creating spatial definition and directional orientation, while large expanses of manicured lawn can encourage informal gathering or allow for long sweeping vistas.

PCC Rock Creek is situated on 260 acres containing a large variety of landscape types. There are two forests, wetlands/swales, pastures, a small orchard, and a one-acre Learning Garden, which is the largest in the PCC system. The curriculum offered at the campus has an agricultural focus, which supports hands-on learning opportunities for students. In addition to the numerous landscape types, the Rock Creek Campus also contains a farm as part of the Vet Tech program and the Biology and Management of Zoo Animals (BAMZA) program, which is a partnership with the Oregon Zoo and the Oregon National Primate Research Center at Oregon Health & Science University. The main campus area is composed primarily of shrub beds, used in both manicured masses and as building foundation plantings, along with large areas of lawn.

PCC Grounds coordinates with Clean Water Services (CWS) for the management of the wetlands and swales on-site, and two CWS groups are currently working in the wetland; one group is working to remove invasive species such as reed canary grass, and the other group is looking at on-campus mitigation opportunities to improve ecological conditions. PCC and CWS have also collbaborated on a training curriculum called "Vegetated Private Water Quality Facility Management."

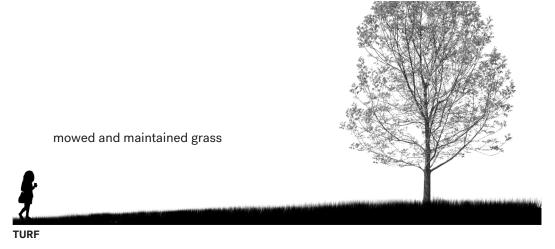
Tualatin Hills Park and Recreation District (THPRD) maintains the 32-acre active recreation facility on the southeast portion of the site as part of a 50-year lease.

Grazing sheep are used to maintain the landscape under the solar array.

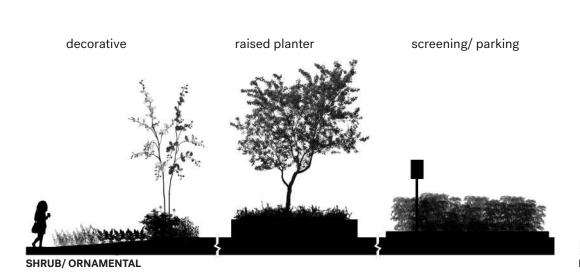


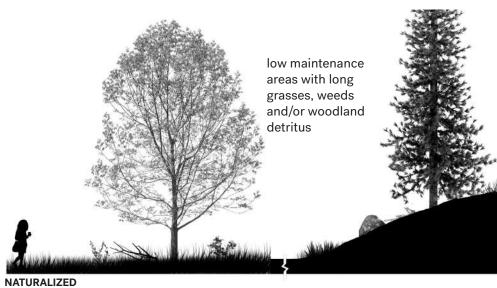
# **LANDSCAPE TYPES**

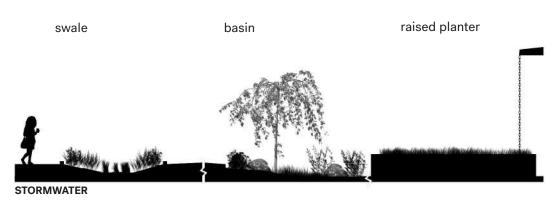
PCC Rock Creek has a variety of landscape types, each creating a different visual and experiential character, and each requiring a specific maintenance regime. These types are mapped per campus on the "Landscape Types" map. Pictured right are sectional explorations of what each of these typologies may include.

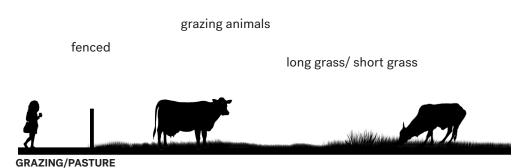












## **OPEN SPACE**

Open space is defined as any outdoor inhabitable area utilized for passive or active recreation, and combines both quantitative as well as qualitative aspects.

#### **Primary:**

The central green space east of Building 7 acts as the campus hub for PCC Rock Creek. This space sees the most pedestrian traffic due to its location in the center of campus and proximity to numerous adjacent buildings, and has the most potential for hosting larger special events. It features open lawn areas, periphery seating areas, a tree-lined allee, and walks of various widths. It has a nice balance of unprogrammed hardscape, along with some installed amenities. It is unrivaled on campus in scale and use and is the primary open space.

#### Secondary:

Secondary open spaces at Rock Creek are typically paved areas between buildings that contain benches and other site furnishings. They provide a contrast to the primary central green space by providing smaller, more intimate areas with a courtyard feel that invites students to study or gather in small groups.

#### Connective:

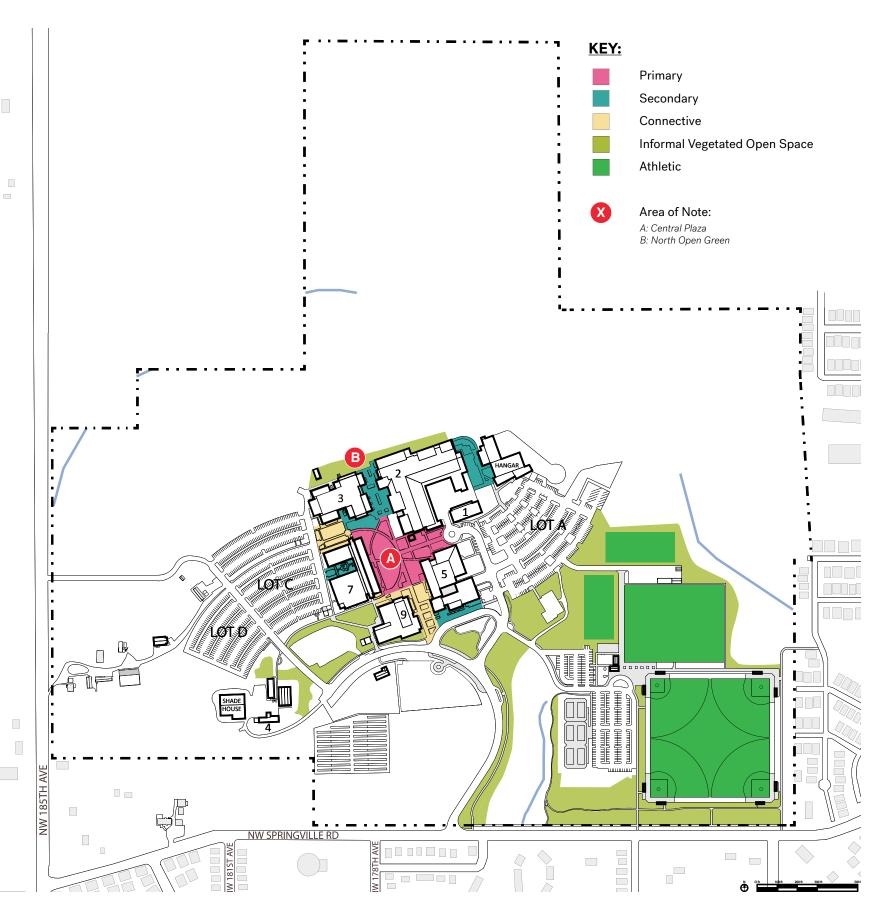
Connective spaces are large, open, move-through spaces that serve as a main circulation paths. The connective space between Building 3, Building 7, and the western parking lots contains a wide sidewalk and a large lawn area that can be used for flexible occupation as well as circulation.

#### **Informal Vegetated Open Space:**

These areas are generally maintained turf with an informal/undefined program. They stand alone from other organizing features, and true to the pastoral feel of Rock Creek, are often connected to create large swaths of open lawn that reflect the scale of the surrounding landscape.

#### Athletic:

These areas are used specifically for athletic/ recreational program. At PCC Rock Creek, this consists of the 32-acre Tualatin Hills Park and Recreation Distric (THPRD) facility on the southeast portion of the site.



Rock Creek Campus

## **WAYFINDING**

The primary goal of a wayfinding system is to give students, faculty, staff, and visitors a sense of clarity, convenience and safety through the implementation of signage that denotes clear circulation routes.

For the purpose of this report, wayfinding focused on directional and identification signage such as map directories and entry signs, rather than smaller, instructional types of signage such as parking permits and stop signs. By simplifying the types of signage reviewed, it allowed us to see trends, both on the individual campus scale as well as the District as a whole, and give recommendations based on our experiences.

In addition to our general review, PCC has been working with Anderson Krygier to develop a full Exterior Signage Master Plan for each PCC campus. At of the time of this report, these Master Plans are at various levels of completion, and therefore our diagrams reflect what has been installed thus far.

Recommendation: The importance of a complete, consistent, and unified wayfinding program for the entire PCC System cannot be understated. It not only creates a unique sense of place for each individual campus, but becomes part of PCC's brand and identity. It makes each campus a more inviting place, for both students and faculty as well as the outside community, by promoting interaction through information about destinations beyond the campus boundaries, and by providing a sense of welcome to the outside community. Our recommendation is to complete the installation of the Exterior Signage Master Plan signs as expediently as possible.

### **External Resources:**

Anderson Krygier Exterior Signage Master Plan.



Rock Creek Campus

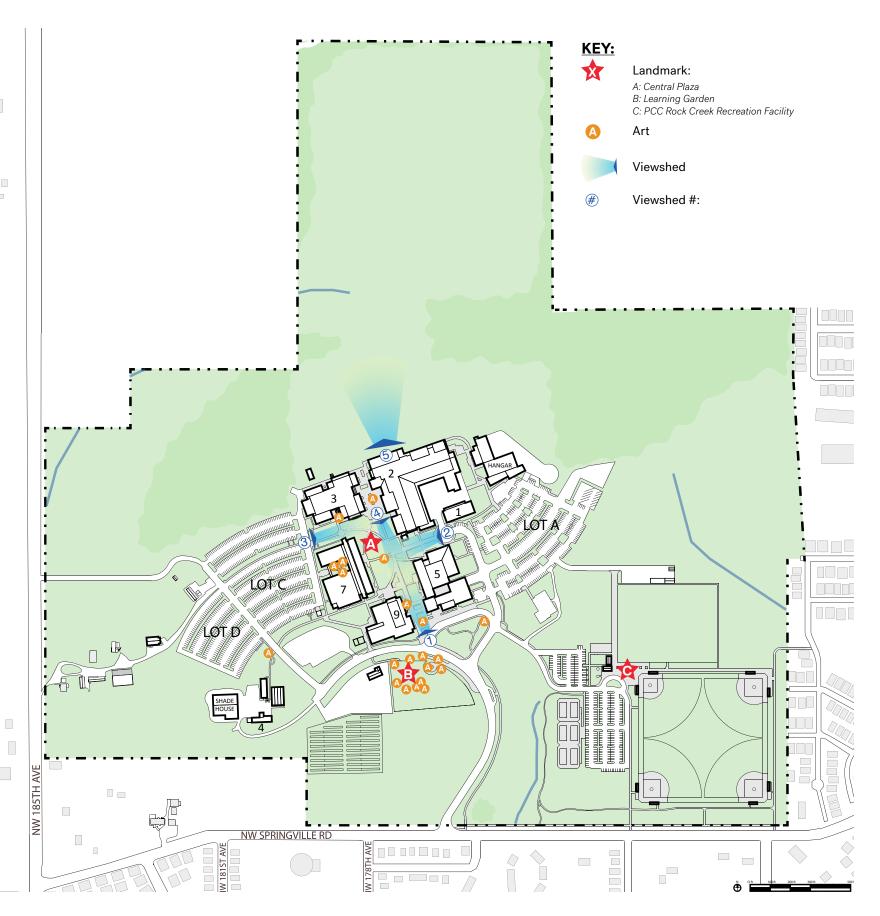
# LANDMARKS, VIEWSHEDS, AND ART

Landmarks and viewsheds work together as a way of organizing a campus, taking advantage of open spaces, and connecting the campus visually as well as physically. To be most effective, landmarks and viewsheds should remain uninterrupted by building development.

Landmarks are monuments, built or natural, that serve as large-scale wayfinding devices and often act as "calling cards" for the campus, strengthening its unique identity. Viewsheds can either highlight these internal campus landmarks, or when projected from the edge of campus, visually connect to elements beyond a campus's borders. They reinforce identity both within the campus and from the outside.

PCC Rock Creek's viewsheds can be classified into two categories: internal and external. Due to the hub-like layout of buildings around the central green space, internal viewsheds are framed by adjacent building edges and are typically terminated at building entrances, although some viewsheds are terminated by mature trees. External viewsheds are plentiful in nearly every direction at the perimeter of the main campus, although the forests to the north do restrict longer vistas in the eastern and western direction.

Unlike other PCC campuses where site art is typically focused within a centralized area to reinforce landmarks, PCC Rock Creek has an extensive collection spread throughout the campus, allowing art to be seen in nearly every direction.



Rock Creek Campus

## **BIKE INFRASTRUCTURE**

PCC Rock Creek is located in an area that possesses few bike lanes or a dedicated bike transportation infrastructure, however many of the surrounding roads carry a large amount of bike traffic. A bike lane into campus on the main entry drive from NW Springville Road is provided, showers are located at the THPRD Facility, and there is a limited number of bike rack locations in the central campus area. However, there is a deficiency between the entry drive bike lane and the on-campus amenities, and the lack of clear bike routes on campus can create user conflicts between bikes, cars, and pedestrians and discourage potential bike commuters.

#### 2017 Sightlines Survey

Percentage that use bike to commute to campus:



#### **Recommendation:**

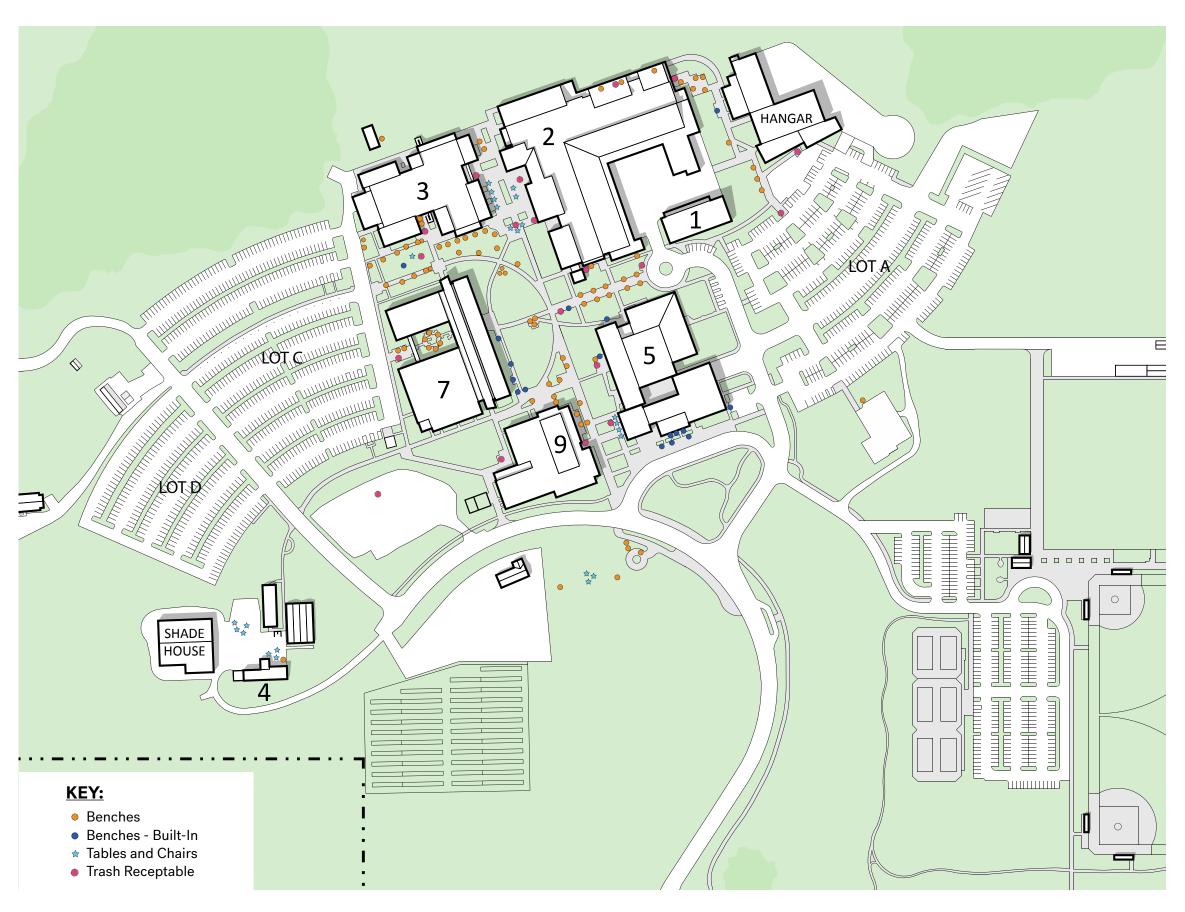
Our recommendation would be for PCC to commission a study with a bicycle transportation consultant to look at the existing on-campus amenities and how they can be connected to the surrounding infrastructure. A full Bicycle Transportation Master Plan would maximize the existing infrastructure, create routes and signage that minimize bike/car/pedestrian conflicts, and help identify future growth opportunities.



Rock Creek Campus

## **SITE AMENITIES**

For the purposes of this report, a brief overview of site amenities and site furnishings has been completed. This overview is not meant to be a full inventory of current placement, nor as documentation of the exact equipment brands and model numbers used, but is instead intended to identify the diverse product ranges and typologies used throughout the college.



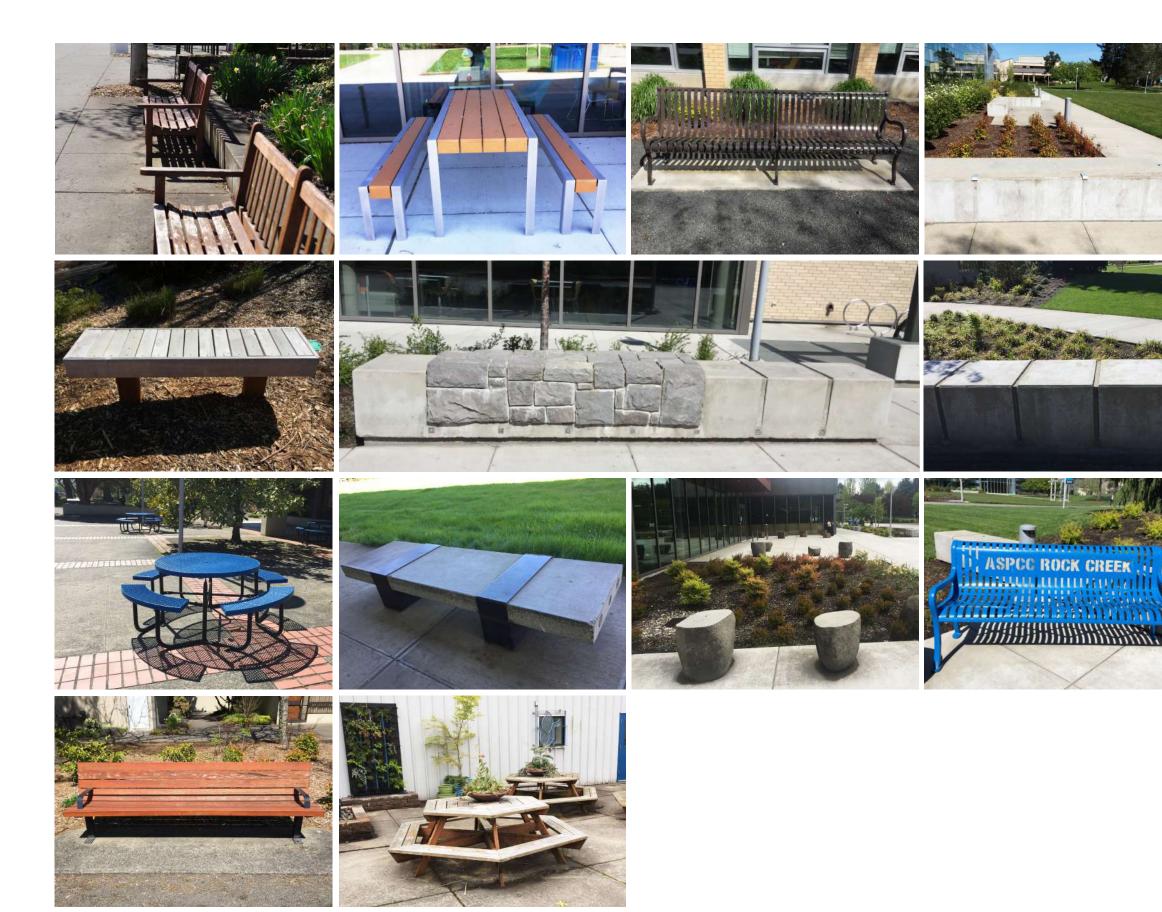
#### **Recommendation:**

Our recommendation would be for PCC to commission a full Site Furnishings Master Plan that reviews all existing inventory and develops site furnishing standards for the entire PCC system.

# **SITE AMENITIES - PHOTOS**

While amenity styles vary, there are several common themes on the Rock Creek Campus, including:

- Wooden, country style furnishings
- Blue as accent color
- Rocks integrated into/used for seating



# HUMAN TRAVEL-BUILT SYSTEM

Circulation at PCC Rock Creek is comprised of both straight/direct sidewalks as well as more general direction curvilinear sidewalks. Campus circulation is largely informal outside of the central campus area where developed and undeveloped paths lead to and from parking lots, periphery classrooms, barns, and other learning areas. True to its largely agricultural based curriculum, the edges of campus feel like a farm with informal paths and dirt walks.

The lack of developed pedestrian circulation routes within the parking lots, as well as from the parking lots to the central campus, creates a pedestrian/vehicular conflict; many pedestrians walk in the drive lanes.

A series of trails through the forest and naturalized areas to the north are used often by faculty, staff, and students. Citizen groups, local colleges, high schools, and grade schools also use these trails.

#### **Recommendation:**

The lack of sidewalks and clearly delineated routes within the parking lots creates the potential for pedestrian/vehicular conflict. Our recommendation would be to add sidewalks within the parking lots that act as larger pedestrian collectors leading to the central campus area.



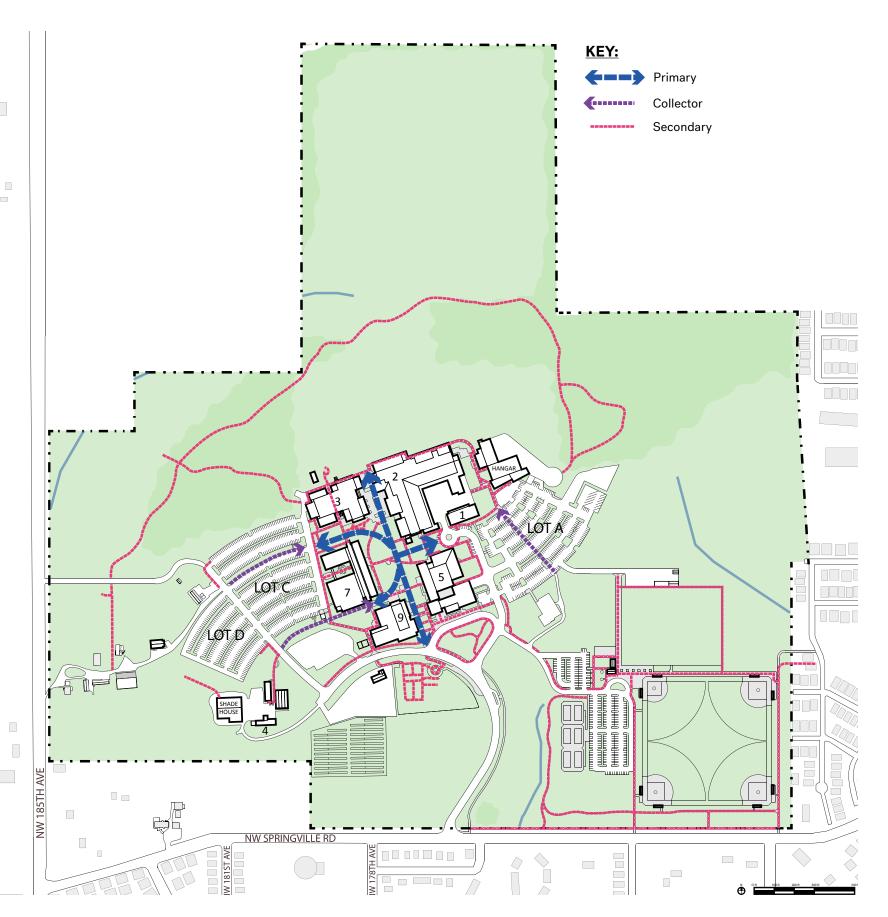
Rock Creek Campus

# HUMAN TRAVEL-CIRCULATION

Pedestrian circulation looks at the existing built system and overlays the daily foot traffic pattern. The resulting use patterns represent how a campus operates at a human scale, and can provide important information about how best to maintain the existing system, plan for future growth, and help PCC Grounds prioritize particular routes and areas in cases of inclement weather.

As a result of the hub-like layout of buildings around a central green space and pedestrian corridor, PCC Rock Creek has a simple and efficient pedestrian circulation pattern through the central campus area. Collector routes through the parking lots most often occur within the traffic lanes rather than on consistent pathways, creating a general directional movement towards the central campus area and building entries.

Severl sidewalks connect the adjecent east neighborhood to the PCC Rock Creek Recreation Facility, and thus to the campus at large. Aside from this area, other secondary paths are internally focused and do not provide connections to areas outside of PCC property.



Rock Creek Campus

## **ECOLOGICAL RESOURCES**

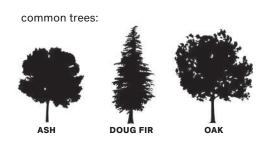
Rock Creek, for which the campus is named, flows through the northern portion of PCC Rock Creek's property, resulting in a large floodplain and approximately 11-acres of wetland. Several springs and a small pond ecosystem are also present in this area. Referred to as the Rock Creek Environmental Studies Center (RCESC), and considered to be an important natural history area by both the Portland Audubon Society and the Oregon Department of Fish and Wildlife, this portion of PCC Rock Creek also includes around 44-acres of grasslands and 44-acres of woodland, with two main sections of Douglas-fir dominated forest. The woodlands contain significant amounts of Western Hemlock, Western Red Cedar, Pacific Yew, and Bigleaf Maple, along with a wide variety of native shrubs and understory plants. The RCESC provides habitat for several types of wildlife, including waterfowl, quail, pheasants and song birds, along with larger mammals such as deer, coyote, fox, raccoon, beaver, and muskrat.

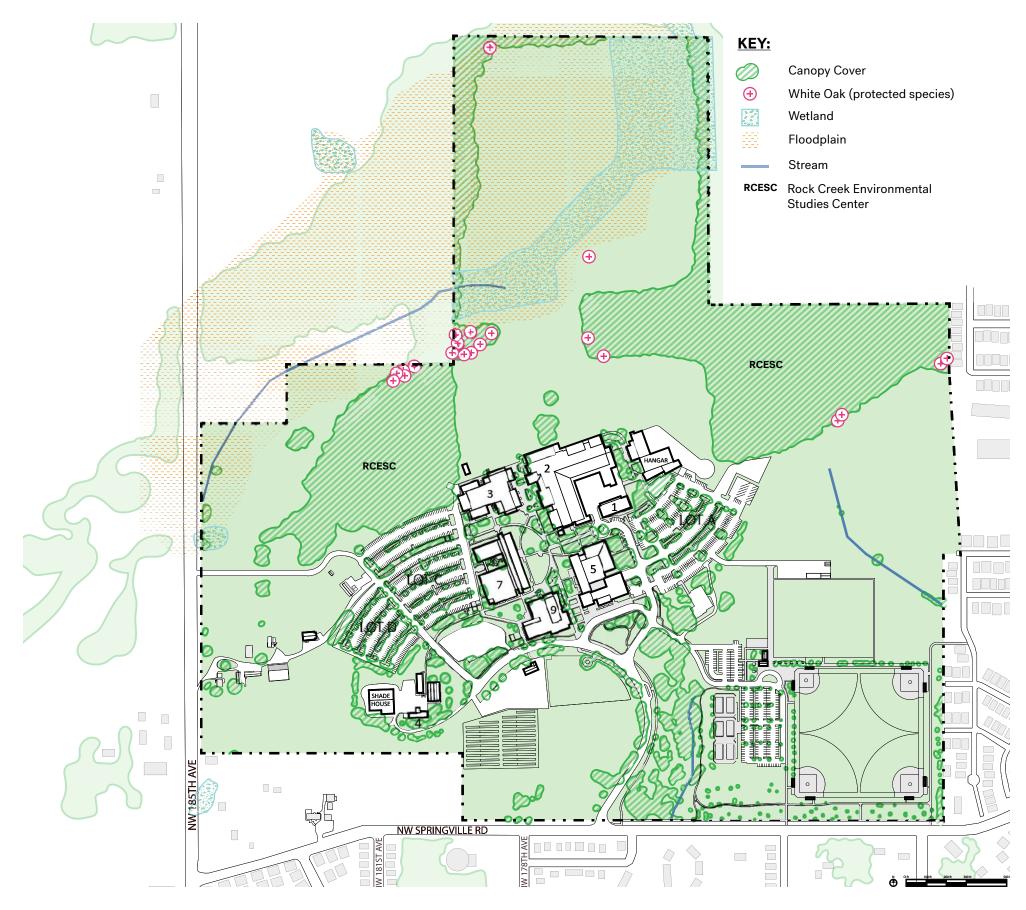
Several Oregon White Oak (Quercus garryana) have been mapped on campus. This native tree is significant as it provides food and shelter for many animals and has a long standing history in the ecology of the Willamette Valley.

2015 Student Conducted Tree Inventory:

81% deciduous

19% coniferous





## **SUSTAINABILITY**

PCC is working on a substantial number of sustainable campus-wide initiatives, while also focusing on specific curriculum program elements.

At Rock Creek, the notable landscape initiaves include:

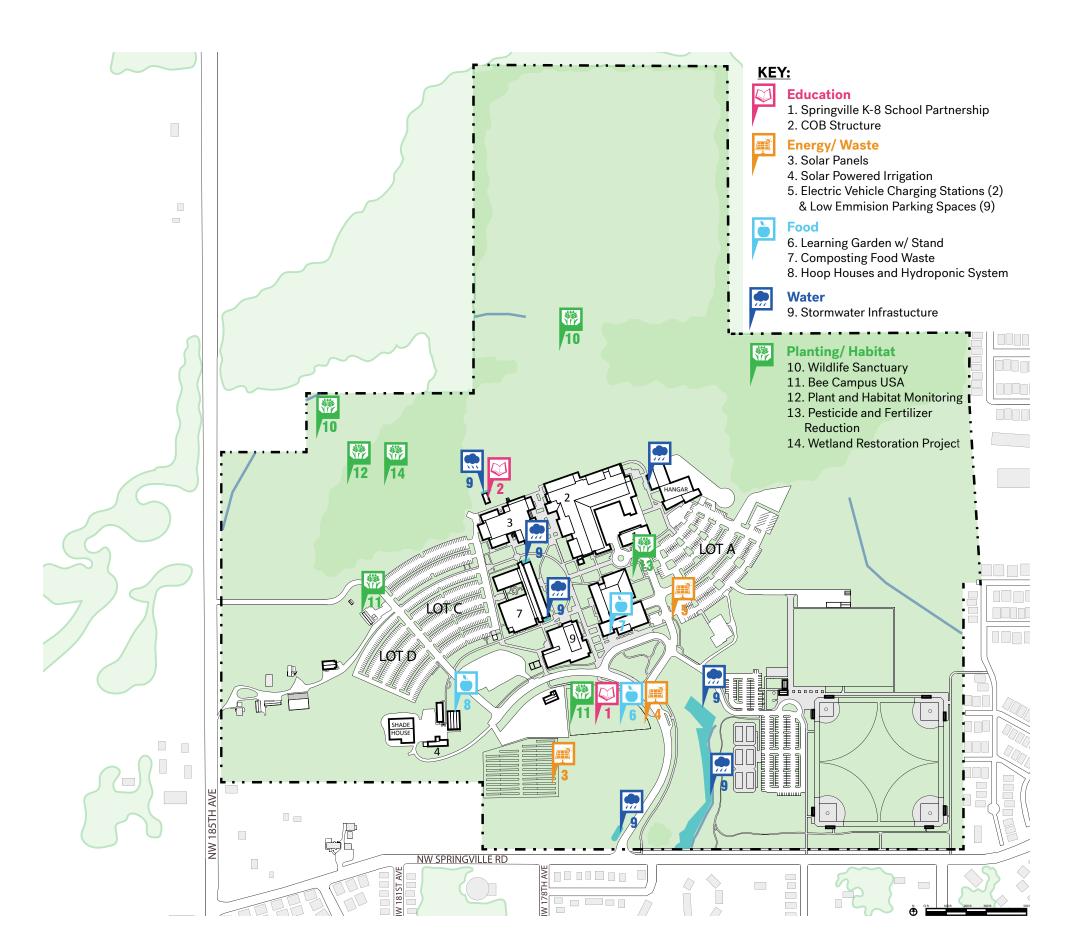
**Tree Campus USA Certified:** Rock Creek continues to abide by the key five standards needed to reach that achievement.

Bee Campus USA Certified; Rock Creek continues to look for ways to expand pollinator habitat, such as overseeding previously mulched areas with wildflower mixes. Rock Creek also features an Apiary on-site and spearheaded the Bee Campus USA Certification efforts.

The Rock Creek Environmental Studies Center (RCESC) hosts habitat restoration projects and other stewardship opportunities for students and the community.

The **PCC Solar Array** is a 35,000 square foot solar power system that has produced 3,176,150 kWh since its inception in 2012 to October 2017, and has offset 4,068,649 lbs of CO<sub>2</sub>.

The Rock Creek Farm Stand and the Rock Creek Learning Garden provide opportunities for students and community members to learn about gardening and creates a source for healthy food.



## **IRRIGATION**

The majority of Rock Creek's campus operates on the college's Maxicom system with only a few areas relying on Uniks for irrigation. Due to the relatively open nature of the campus, the Maxicom system works well, and areas currently on Uniks could likely be added to Maxicom with fairly minimal time and financial considerations at a later date as resources become available. Sections of old transite mainline are still installed at Rock Creek and should be replaced as soon as possible.

#### **Recommendations:**

PCC Rock Creek receives different weather patterns and rainfall numbers compared to PCC Sylvania, where the weather station is currently located. The addition of a weather station at Rock Creek would increase system efficiency and improve sustainability by providing more accurate numbers regarding watering needs.

Add 3" mainline as shown on map.



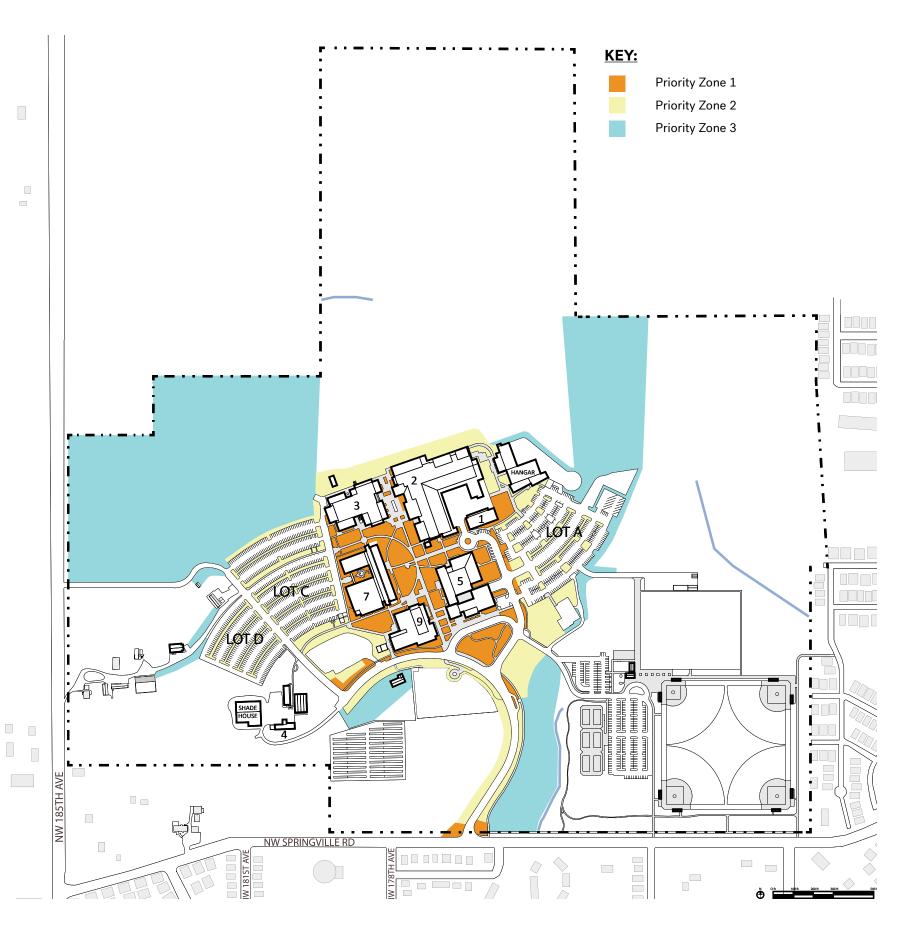
Rock Creek Campus

# LANDSCAPE MAINTENANCE PRIORITY

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Rock Creek Campus

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#### **Recommendation:**

This area is a deficiency. Emergency Access, Fire Access, and Evacuation Route Maps should be commissioned as part of a separate study, and their creation should involve multiple departments at PCC, including Parking/Transportation, ADA, EHS, Grounds, and Public Safety, as well as the local Fire Marshal and emergency responders.



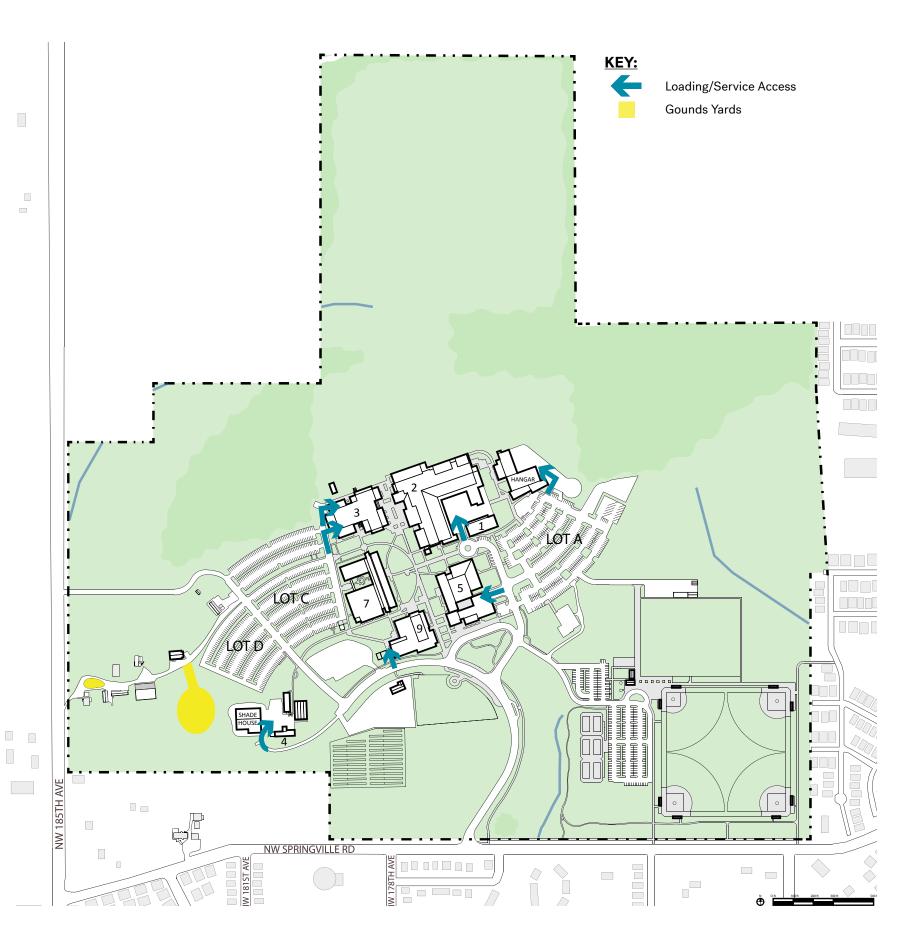
Rock Creek Campus

# YARDS, LOADING, AND SERVICE AREAS

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#### **Recommendations:**

This area is a deficiency. Loading Docks, Service Routes, Delivery Points, and Turning Radius Conflict Maps should be commissioned as part of a separate study, and their creation should involve multiple departments at PCC, including Parking/Transportation, Grounds, Dining Services, and Safety & Security. This would be a valuable asset to have in regards to future circulation considerations in a Master Plan.



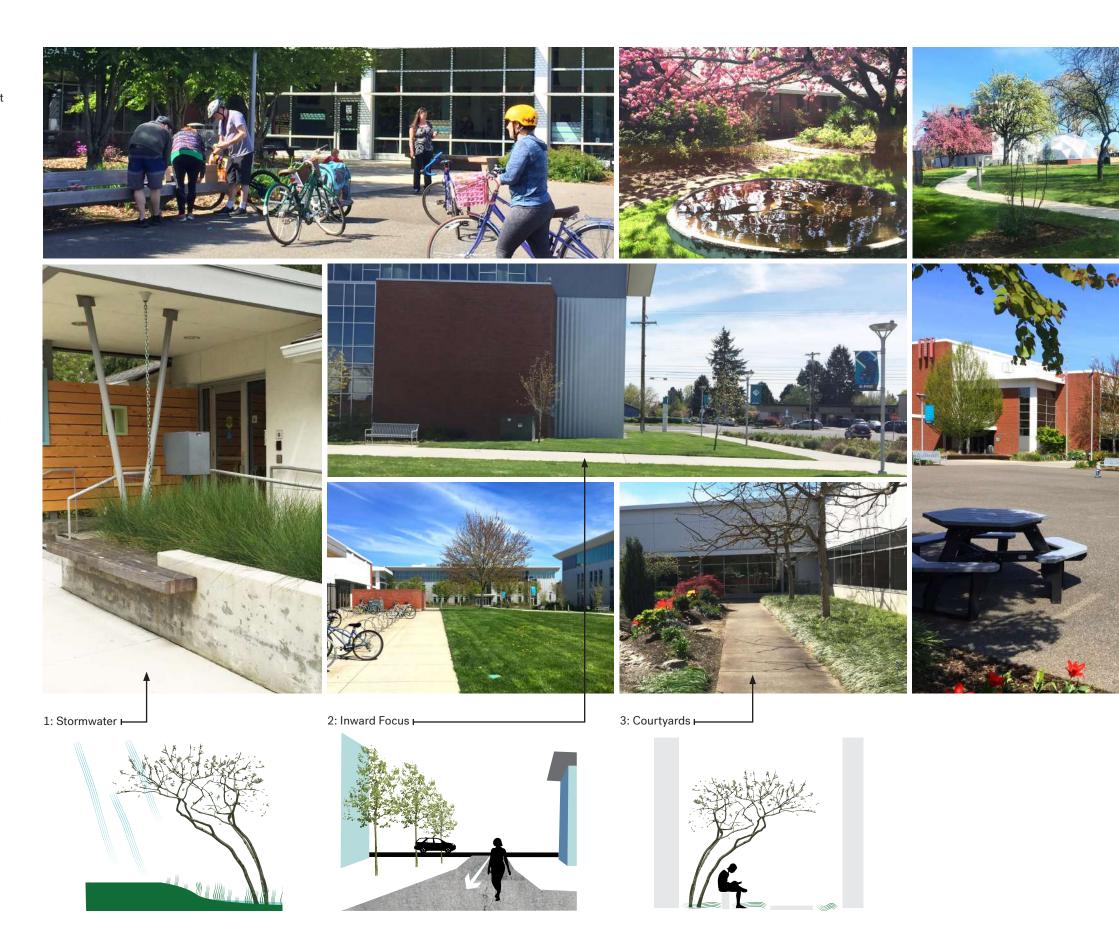
Rock Creek Campus

## **SOUTHEAST CAMPUS**

The newest and most diverse campus, Southeast is in the Montavilla neighborhood, between Mt. Tabor Park and Highway 205. Southeast creates its own internally focused organization, standing out against the adjacent urban grid. Most gathering spaces and site amenities are thus located in the center of campus and between the internal edges of buildings.

This campus has the most visible stormwater presence, including rain gardens flanking buildings, parking lot stormwater planters, and rain chains running off the bus shelters. Open, flexible space is also common, with swaths of turf in the center of campus and a large open central plaza. A unique feature of this campus is the many courtyards and nooks found within Mt. Tabor Hall and the Community Hall Annex. With landscaping and occasionally simple features/amenities, these spaces are welcoming, but could be better utilized (the Japanese Garden a precedent for ideal program).

While this campus has the most diverse student body of the four campuses, this fact is primarily celebrated through the interiors of the buildings. Our recommendation is a challenge to see how the landscape can better reflect the campus's diverse cultures.



Southeast Campus

## **SITE FEATURES**

Southeast is surrounded by neighborhoods and adjacent to a business corridor along SE 82nd Avenue. This urban edge, adjacent to mass transit, along with designated bike routes and on-site bike amenities, makes this a significantly bike friendly campus. The entrances to the campus, along SE 82nd and Division, generally pull users to the center of campus before providing gathering space. This results in an inward focus, using the buildings to buffer the central outdoor gathering areas.

The new Learning Garden to the west edge brings PCC's focus on sustainability and hands-on learning to this urban campus, which otherwise features limited outdoor academic programs, unlike Rock Creek or Sylvania. This garden is also visible from SE Division, breaking the inward focus that dominates the rest of the campus features and layout. Like the other campuses, it is a certified tree and bee campus.



**BIKE** 

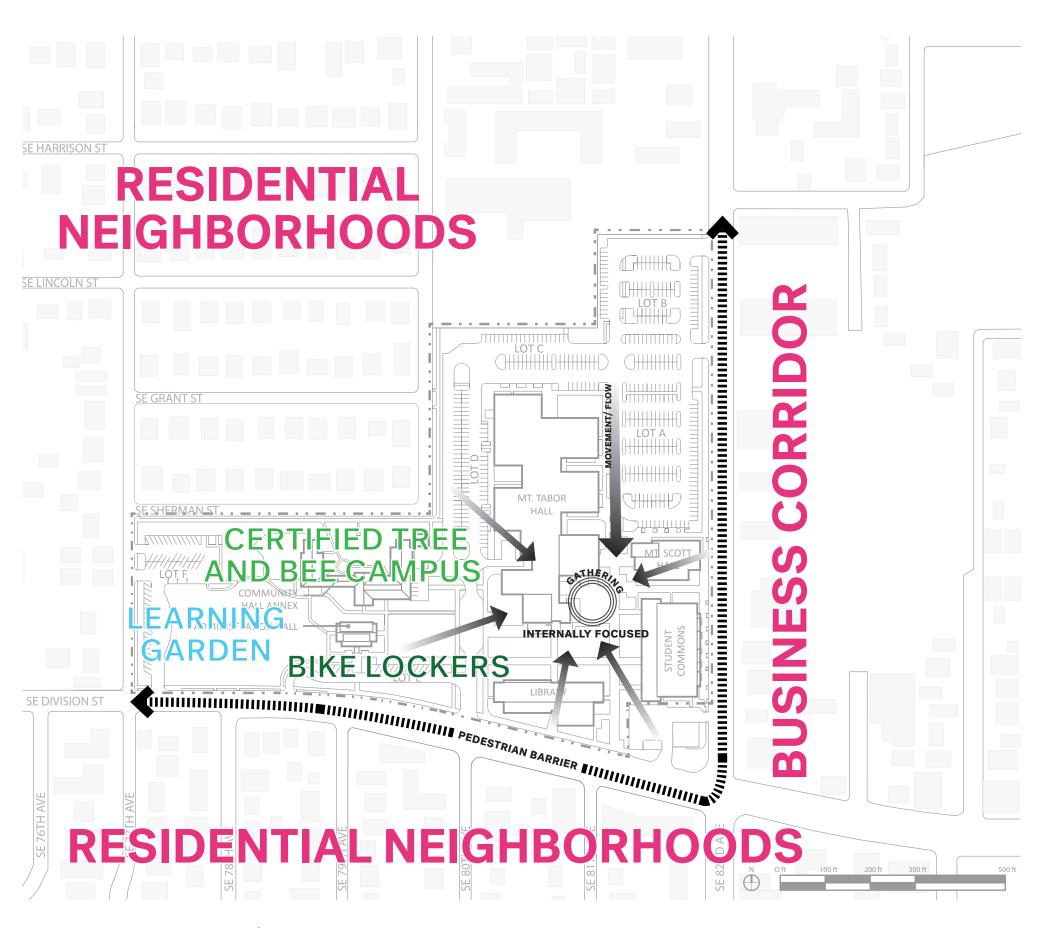


LEARNING/ SUSTAINABILITY



**URBAN** 





## **TOPOGRAPHY**

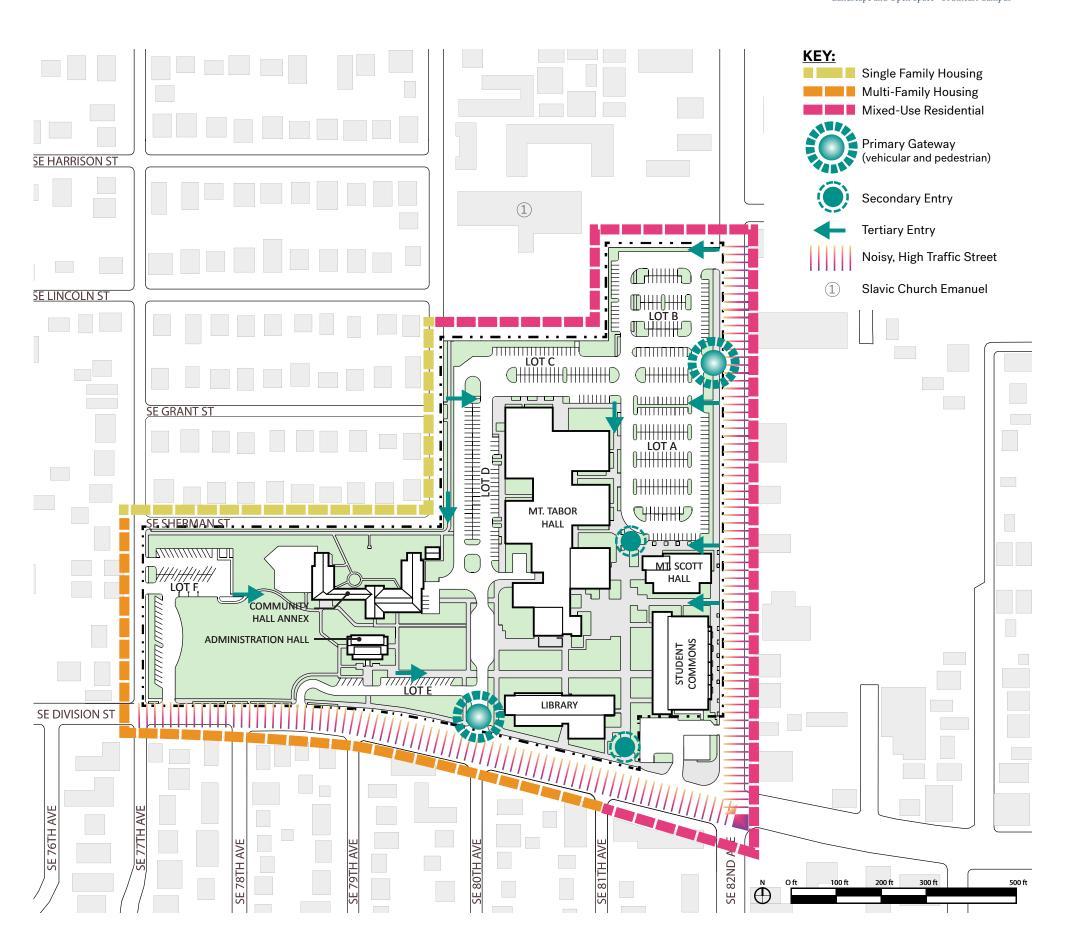
Topographic change at the Southeast Campus amounts to a total of approximately 10', in a primarily east to west direction. The high point of campus is at elevation 270, located along the western edge of Mt. Tabor Hall.



## **CAMPUS EDGES**

An urban campus, PCC Southeast is bordered on two sides by busy streets; SE 82nd Avenue to the east, and SE Division Street to the south. Beyond the east edge of campus, SE 82nd Avenue is comprised of mixed-use residential, with Harrison Park School nearby. The northeast and southeast corners of the campus are also bordered by mixed-use residential, with the Slavic Church Emanuel located to the north of Parking Lot C. The rest of the campus is bordered by single family and multifamily housing.

The primary vehicular entry is located off of SE Division Street to the south of campus, although significant vehicular traffic enters from SE 82nd Avenue. There are also secondary entries off of SE Division Street and SE 82nd Avenue, although these are primarily pedestrian entries.



## **LANDSCAPE TYPES**

Vegetative patterns have a powerful impact on the overall character of a campus. Significant stands of mature trees can produce an effect similar to architectural walls, creating spatial definition and directional orientation, while large expanses of manicured lawn can encourage informal gathering or allow for long sweeping vistas.

Open lawn is an important feature at PCC Southeast, and PCC Grounds is trying to create a maintenance program for turf management. Soil compaction on new projects has been an issue, and future projects should focus on better soil preparation, as well as the crowning of lawns for better drainage.

The stormwater swales at PCC Southeast are a mix of older-style swales in Parking Lot A, and newer-style swales elsewhere on campus. Newer swales are performing better than older swales. PCC Grounds, EHS and PCC Parking/Transportation have a role in maintaining the swales.

The Southeast Campus has been a leader in sustainability with the integration of Food Forests into the landscape, and has recently installed a Learning Garden.

#### **Additional Facts:**

- PCC Southeast has been herbicide free for over seven years.
- PCC follows the City of Portland Tree Code (Chapter 11)

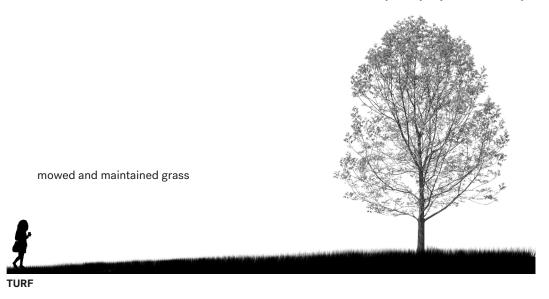
## **Recommendations:**

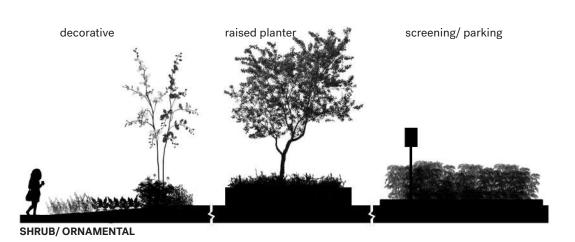
With only two PCC Grounds Staff, the ability to manage more work at PCC Southeast is difficult. Add 1 Grounds Keeper III role to the site.

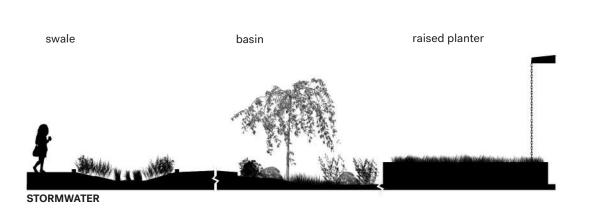


# **LANDSCAPE TYPES**

PCC Southeast has a variety of landscape types, each creating a different visual and experiential character, and each requiring a specific maintenance regime. These types are mapped per campus on the "Landscape Types" map. Pictured right are sectional explorations of what each of these typologies may include.







## **OPEN SPACE**

Open space is defined as any outdoor inhabitable area utilized for passive or active recreation, and combines both quantitative as well as qualitative aspects.

#### **Primary:**

The main open space on the Southeast campus is Mt. Tabor Plaza, located to the southeast of Mt. Tabor Hall, and near the intersection of the main north/south and east/west axes. Centrally located between Mt. Tabor Hall, Mt. Scott Hall, Student Commons, and the Library, it features a large unprogrammed paved area with seating along the edges in close proximity to open lawn areas. Based on input from the campus forums and surveys, additional programming and inclusion of a structure to provide cover from sun and rain area would encourage additional use, as would additional tables and chairs.

#### Secondary:

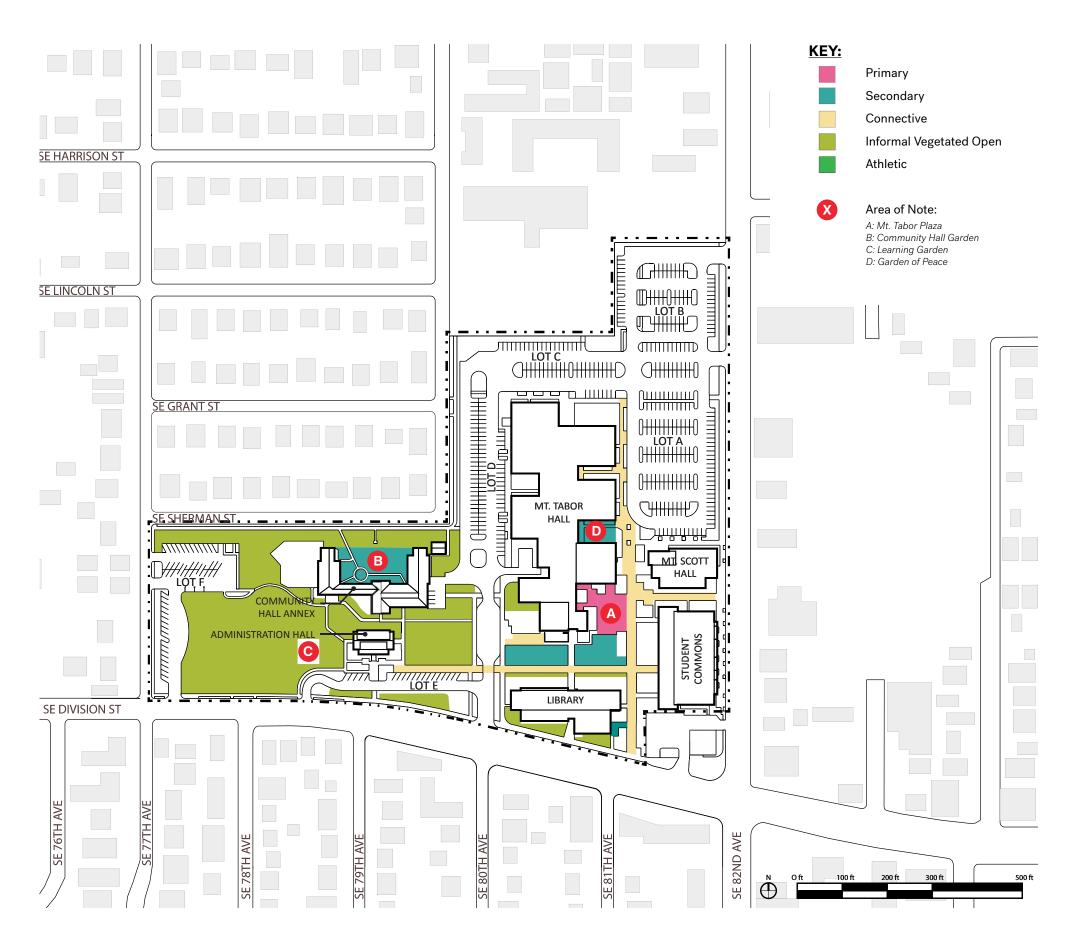
Secondary open spaces at PCC Southeast are a mix of larger open lawn areas, and smaller courtyard spaces. The Garden of Peace is located adjacent to Mt. Tabor Hall, and can be accessed from doors within the Hall. The Community Hall Garden is a space largely hidden from the main pedestrian routes and offers students and staff a quieter, more private location to meet in smaller groups.

#### **Connective:**

Connective spaces are large, open, move-through spaces that serve as the main circulation paths. The Southeast Campus has primarily a two-axis layout; the north/south axis running along the eastern face of Mt Tabor Hall, and the east/west axis connecting the Student Commons on the east with Administration Hall to the west. Additional connectors are the walk between the Student Commons and Mt. Scott Hall, and the path leading from the bike locker area SW of Mt. Tabor Hall to the entrance of Mt. Tabor Hall.

#### **Informal Vegetated Open Space:**

These areas are generally maintained turf with an informal/undefined program. They stand alone from other organizing features or are scattered on the periphery of campus. The west campus area is primarily an informal vegetative open space.



## **WAYFINDING**

The primary goal of a wayfinding system is to give students, faculty, staff, and visitors a sense of clarity, convenience and safety through the implementation of signage that denotes clear circulation routes.

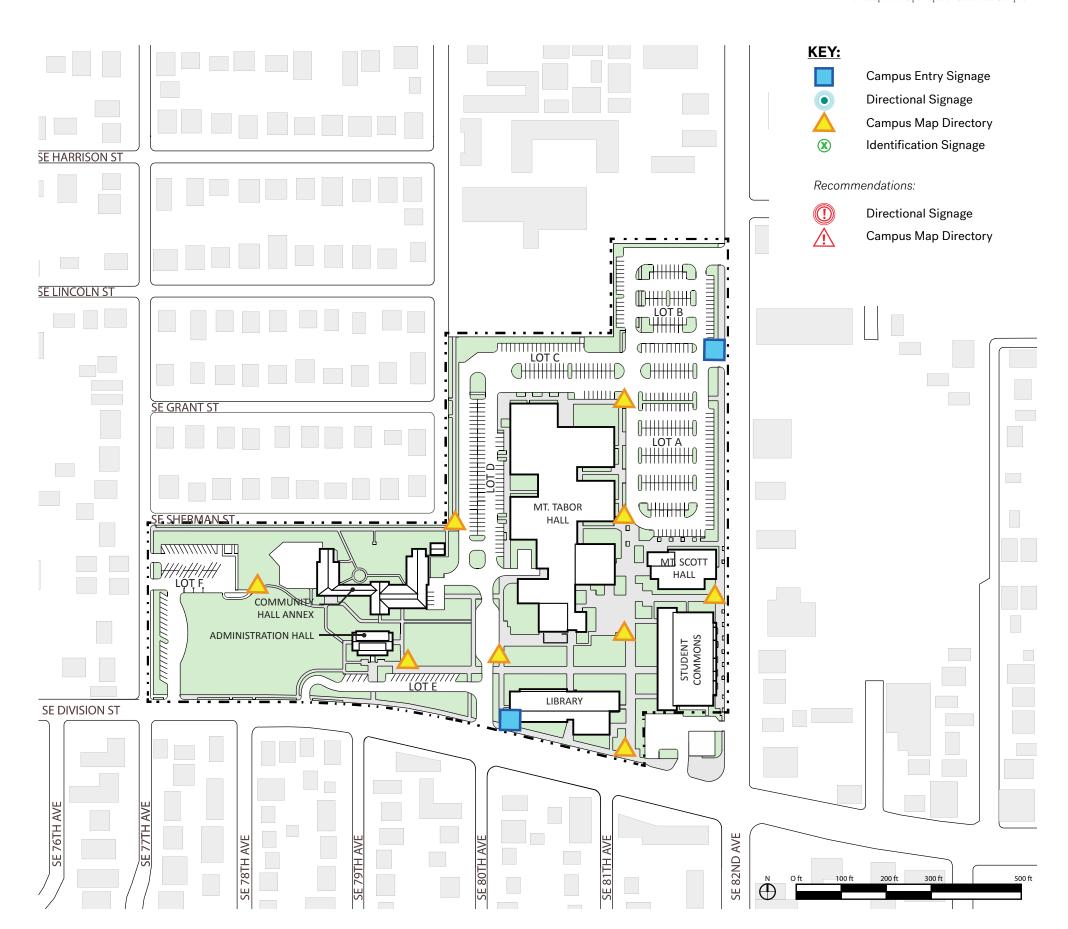
For the purpose of this report, wayfinding focused on directional and identification signage such as map directories and entry signs, rather than smaller, instructional types of signage such as parking permits and stop signs. By simplifying the types of signage reviewed, it allowed us to see trends, both on the individual campus scale as well as the District as a whole, and give recommendations based on our experiences.

In addition to our general review, PCC has been working with Anderson Krygier to develop a full Exterior Signage Master Plan for each PCC campus. At of the time of this report, these Master Plans are at various levels of completion, and therefore our diagrams reflect what has been installed thus far.

Recommendation: The importance of a complete, consistent, and unified wayfinding program for the entire PCC System cannot be understated. It not only creates a unique sense of place for each individual campus, but becomes part of PCC's brand and identity. It makes each campus a more inviting place, for both students and faculty as well as the outside community, by promoting interaction through information about destinations beyond the campus boundaries, and by providing a sense of welcome to the outside community. Our recommendation is to complete the installation of the Exterior Signage Master Plan signs as expediently as possible.

### **External Reference:**

Anderson Krygier Exterior Signage Master Plan.



# LANDMARKS, VIEWSHEDS, AND ART

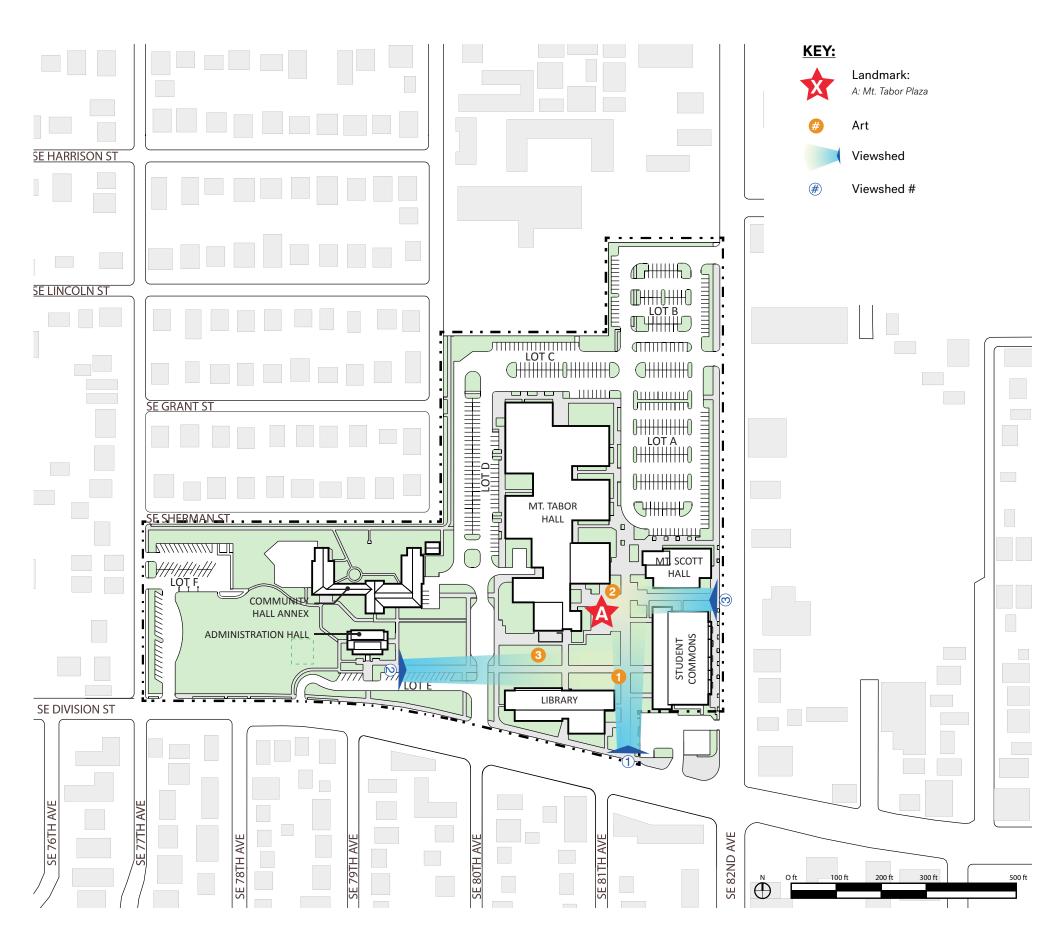
Landmarks and viewsheds work together as a way of organizing a campus, taking advantage of open spaces, and connecting the campus visually as well as physically. To be most effective, landmarks and viewsheds should remain undisturbed by building development.

Landmarks are monuments, built or natural, that serve as large-scale wayfinding devices. Viewsheds can either highlight these internal campus landmarks, or when aimed at the edges of campus, visually connect to elements beyond a campus' borders. They reinforce identity both within the campus and from the outside.

PCC Southeast's viewsheds are framed by building edges along its two-axis system and are mainly focused into and out from the plaza at the SE corner of Mt Tabor Hall. Site art is minimal at the Southeast campus and does not greatly enhance identity or wayfinding,

#### **Recommendation:**

Site art often has a strong presence on other PCC Campuses and Centers, and as a campus with a rich blend of cultures and ethnicities, PCC Southeast is well-suited to have a large and diverse collection. We would encourage the campus to incorporate additional site art.



## **BIKE INFRASTRUCTURE**

The Southeast Campus is located in an area that possesses a robust cycling infrastructure, including bike lanes along SE Division Street and designated bike boulevards on SE 77th Avenue and SE 79th Avenue. PCC Southeast has provided a large number of bike rack and bike locker locations throughout the campus, and showers are located in Mt Tabor Hall; these showers are currently not ADA compliant. However, there is a deficiency between the off-campus infrastructure and the on-campus amenities, and the lack of clear bike routes on campus can create user conflicts between bikes, cars, and pedestrians.

#### 2017 Sightlines Survey

Percentage that use a bike to commute to campus:



#### **Recommendation:**

Our recommendation would be for PCC to commission a study with a bicycle transportation consultant to look at the existing on-campus amenities and how they can be connected to the surrounding infrastructure. A full Bicycle Transportation Master Plan would maximize the existing infrastructure, create routes and signage that minimize bike/car/pedestrian conflicts, and help identify future growth opportunities.

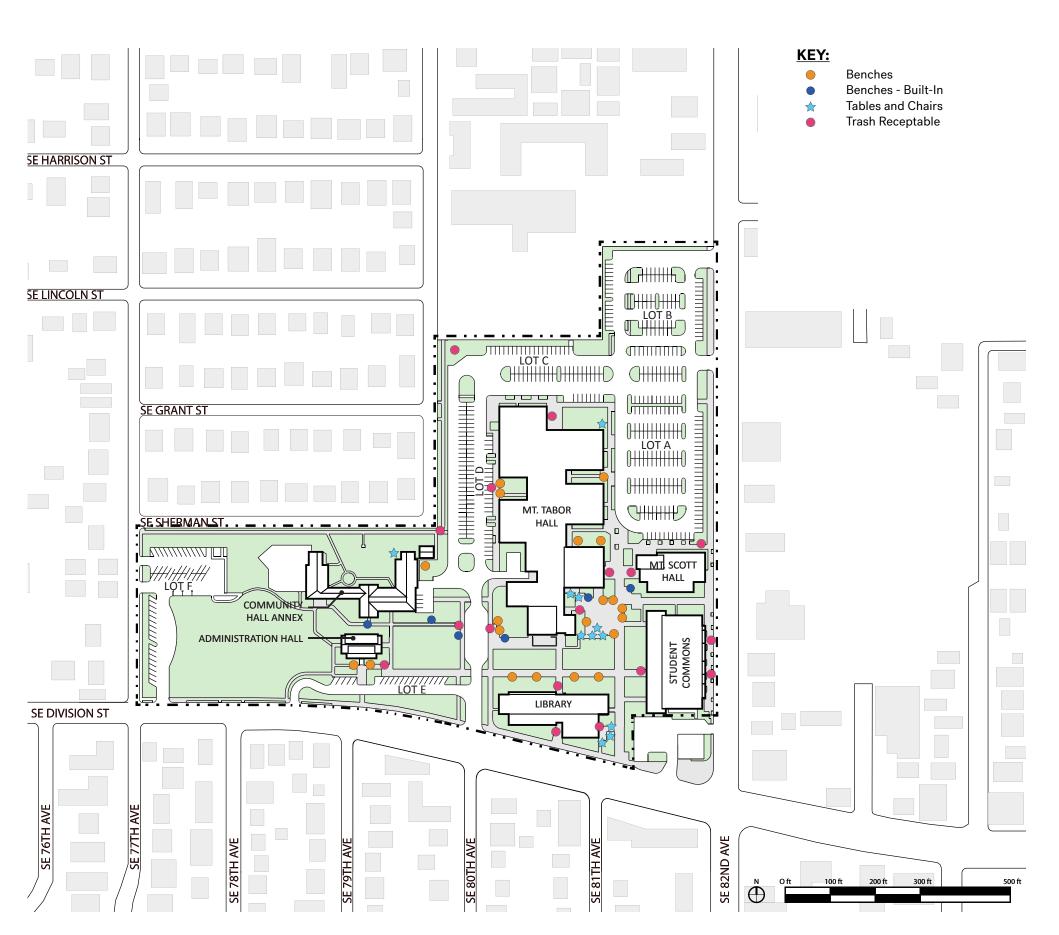


## **SITE AMENITIES**

For the purposes of this report, a brief overview of site amenities and site furnishings has been completed. This overview is not meant to be a full inventory of current placement, nor as documentation of the exact equipment brands and model numbers used, but is instead intended to identify the diverse product ranges and typologies used throughout the college.

## **Recommendation:**

Our recommendation would be for PCC to commission a full Site Furnishings Master Plan that reviews all existing inventory and develops site furnishing standards for the entire PCC system.





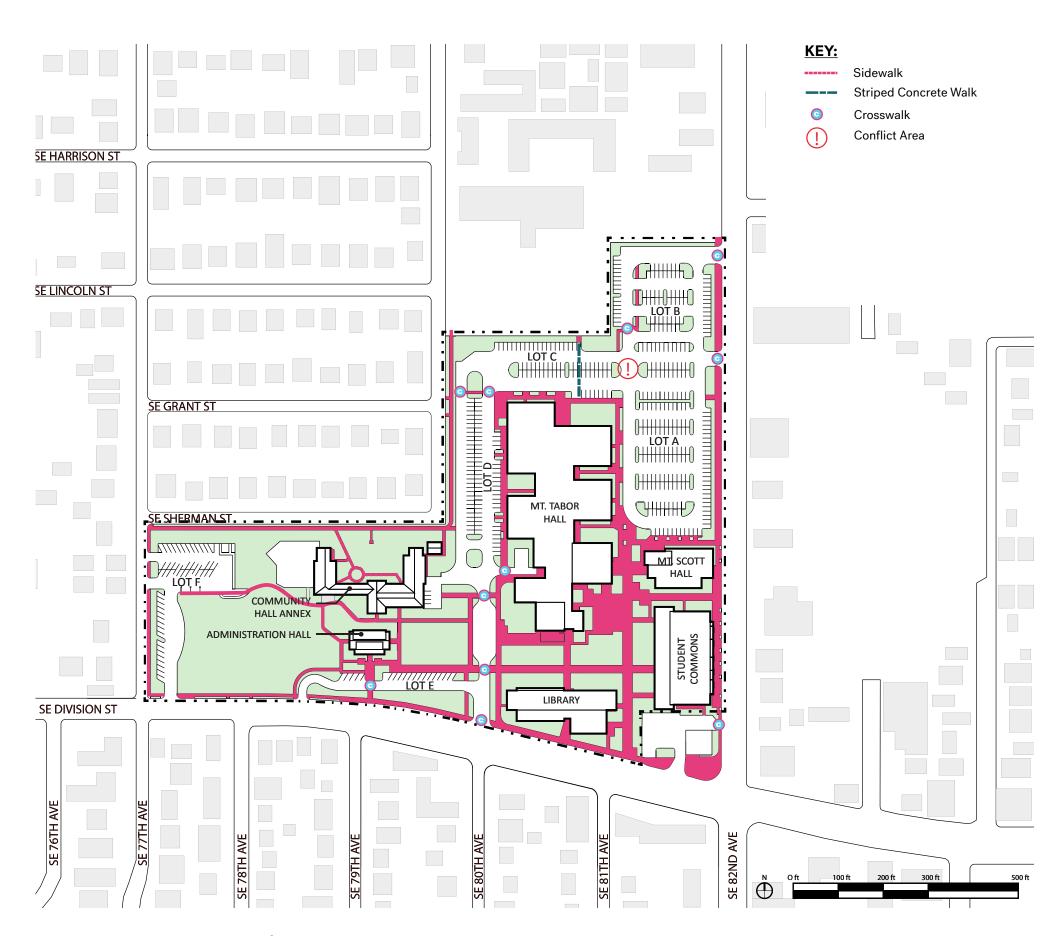
# HUMAN TRAVEL-BUILT SYSTEM

PCC Southeast is an urban campus with a classic, flat internal quad, laid out in a typically orthogonal manner. The exception to the orthogonal layout are the curvilinear walks on the west end of campus.

The east side of campus is comprised of wider sidewalks and paved plaza areas, while the west side contains more modestly sized sidewalks.

Flat, orthogonal campuses with large internal lawn panels often have a tendency to form informal paths diagonally through the lawn areas. As a precaution against the formation of such paths, the Southeast Campus often has shrub bed buffers between the sidewalks and lawn panels.

There is a notable conflict zone to the north east entrance of campus. Sidewalks terminate and there is no striping or designated pedestrian path across the road, from parking lot B towards the central campus. Student accounts attest to this area as feeling dangerous, with near miss pedestrian/car conflicts witnessed. It is extremely important that this conflict zone is resolved ASAP.



# HUMAN TRAVEL-CIRCULATION

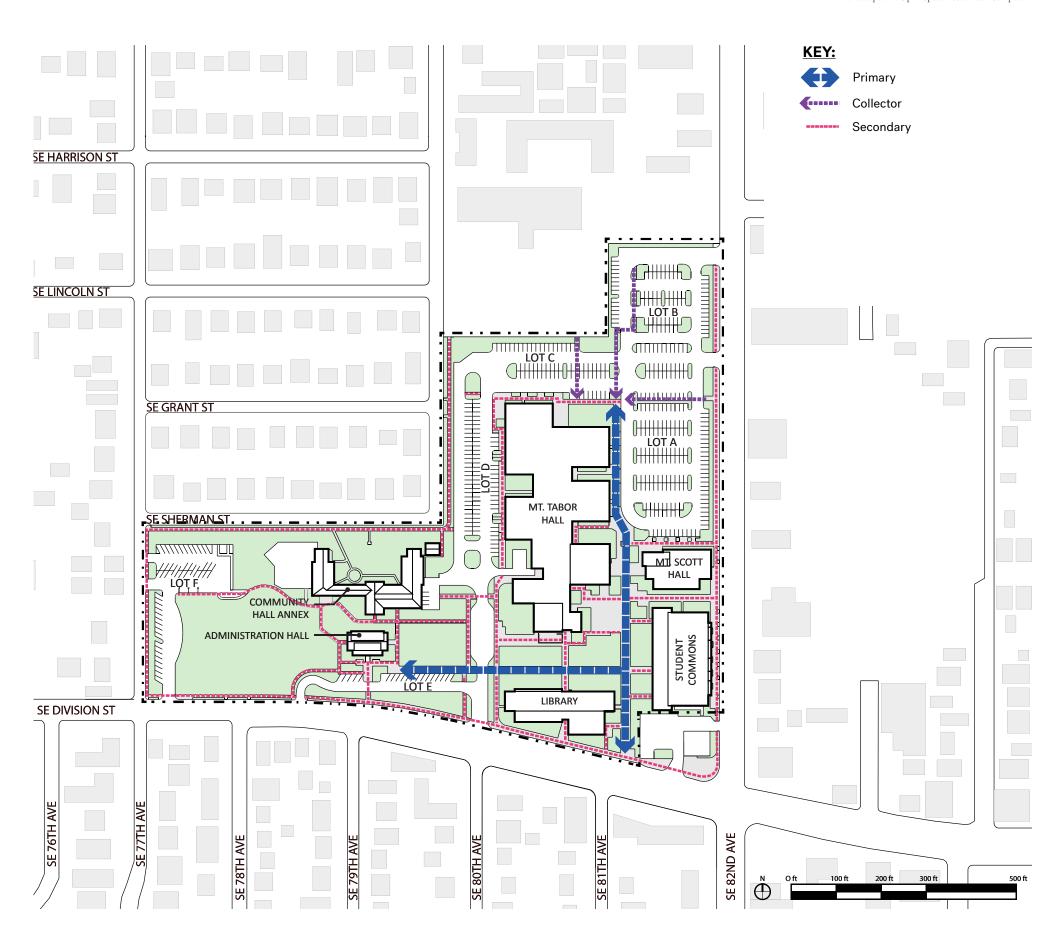
Pedestrian circulation looks at the existing built system and overlays the daily foot traffic pattern. The resulting use patterns represent how a campus operates at a human scale, and can provide important information about how best to maintain the existing system, plan for future growth, and help PCC Grounds prioritize particular routes and areas in cases of inclement weather.

PCC Southeast's primary pedestrian route is based on a two-axis system; the north/south axis runs along the eastern face of Mt Tabor Hall, from Parking Lots A, B, and C on the north side of campus down to SE Division St. on the south edge of campus. This axis receives a very high volume of pedestrians and is the primary walk on campus and a major dropoff/pickup point from Parking Lot A. A major point of vehicular/pedestrian conflict occurs at the northern point of this axis, at the NE corner of Mt. Tabor Hall; the sidewalk ends abruptly into a drive lane and does not connect directly to another sidewalk.

East/west circulation connects the Student Commons with Administration Hall, although this route is interrupted by the driveway connecting parking Lot D to SE Division St. While identified with bollards and tactile warning strips, the crossing occurs quite close to the intersection with SE Division St and creates a vehicular/pedestrian conflict.

#### **Recommendation:**

The two major points of vehicular/pedestrian conflict noted above create unsafe situations that are a liability to PCC. The conflict point NE of Mt. Tabor Hall is particularly unsafe, and an immediate effort to create a better connection to the parking lot should be a priority.

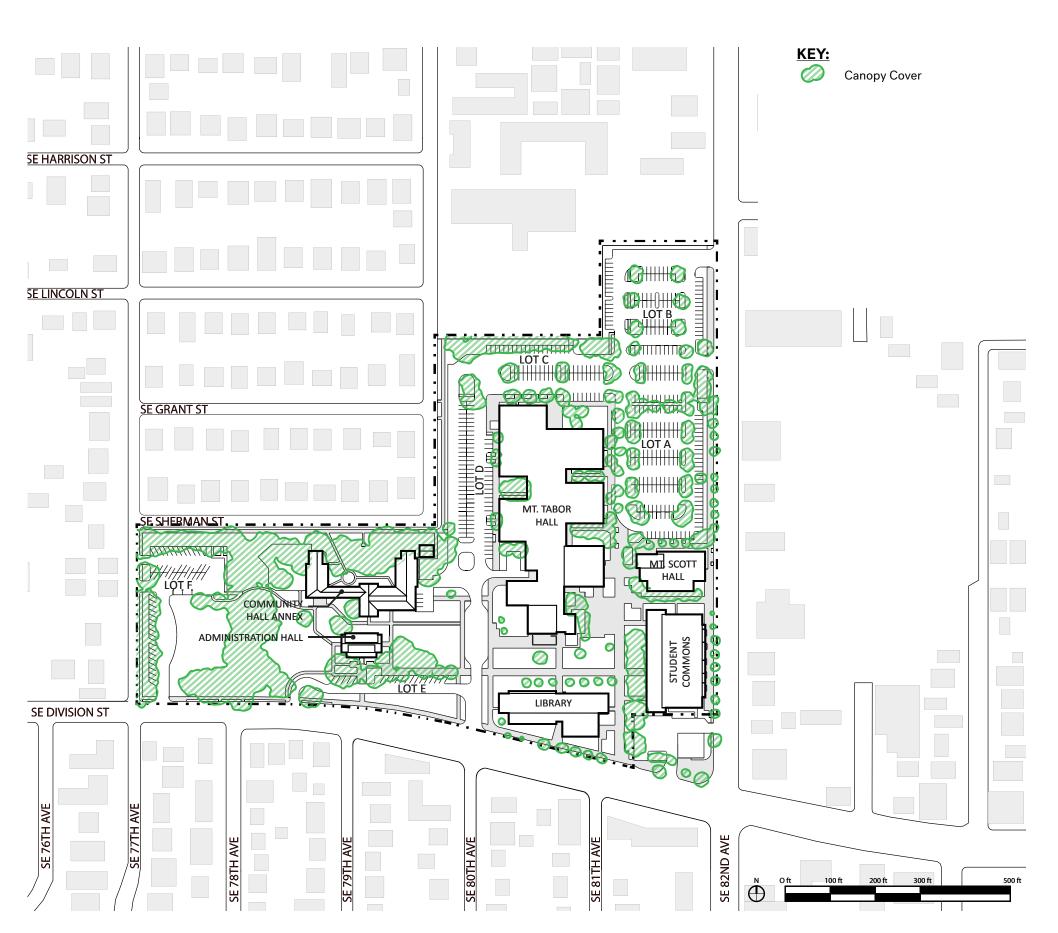


## **ECOLOGICAL RESOURCES**

PCC Southeast is located within the City of Portland and does not contain any creeks, watersheds, riparian zones, or environmental conservation zones. The center of campus between the Library, Mt. Tabor Hall, Community Hall Annex, and Administration Hall contains smaller trees and generally has a more open feel. The west side of campus is full of large shade trees that create a robust canopy. Parking Lots A and C also contain larger, mature trees.

#### **Recommendation:**

Plant more trees for better canopy coverage.



## **SUSTAINABILITY**

PCC is working on a substantial number of sustainable campus-wide initiatives, while also focusing on specific curriculum program elements. At Southeast, the notable landscape initiatives include:

**Tree Campus USA Certified:** Southeast continues to abide by the key five standards needed to reach that achievement.

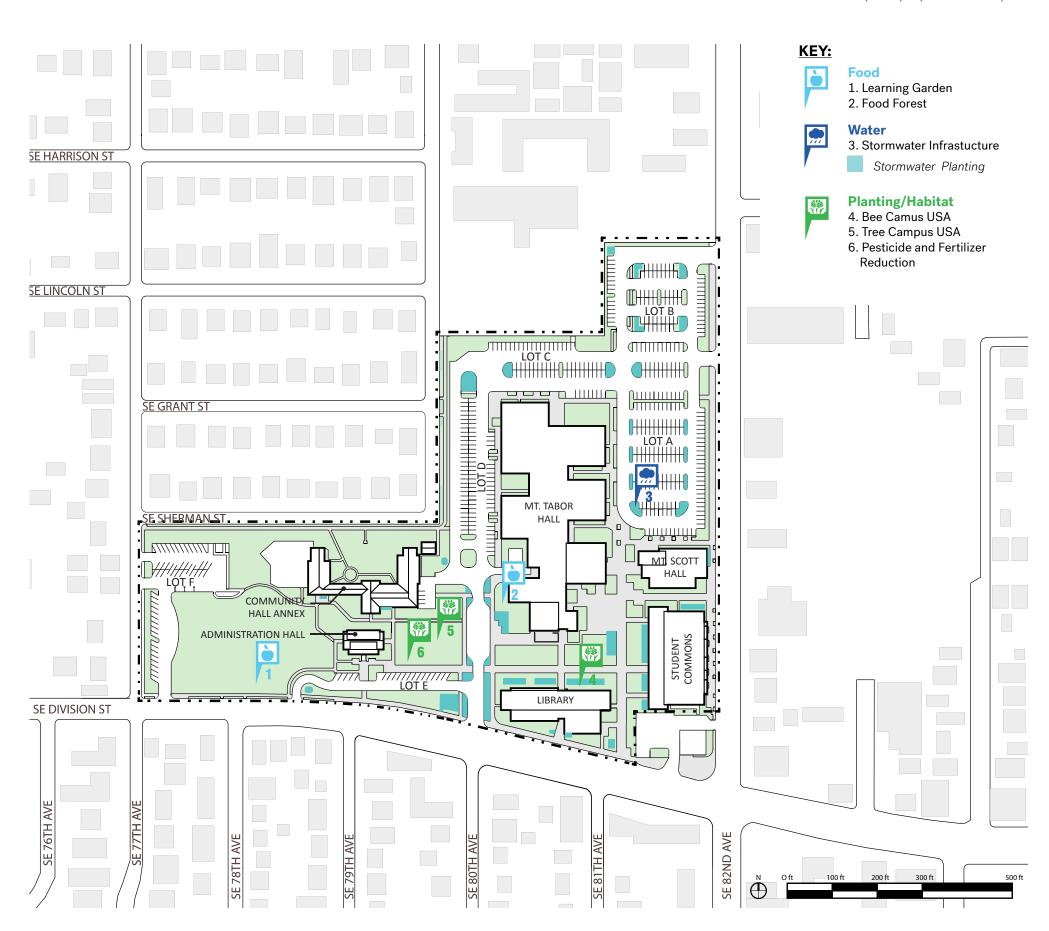
Bee Campus USA Certified; Southeast continues to look for ways to expand pollinator habitat, such as overseeding previously mulched areas with wildflower mixes and using native plants.

Follows Integrated Pest Management(IPM).

**Herbicide-free** at Southeast and pesticide-free for 60 days; looking to eliminate use of all synthetics.

A new **Learning Garden** has been installed at PCC Southeast as of Spring 2017. This will provide opportunities for learning organic urban agricultural and related sustainable practices.

The **Food Forest** at Southeast features edible landscaping, with nut, fruit and berry plantings. There is an Online map available to identify the edibles and their locations. This is a great resource for humans and animals alike.



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## **IRRIGATION**

The majority of the Southeast campus operates on the college's Maxicom system with only a few areas relying on Uniks for irrigation. Due to the relatively open nature of the campus, the Maxicom system works well, and areas currently on Uniks could likely be added to Maxicom with fairly minimal time and financial considerations at a later date as resources become available.

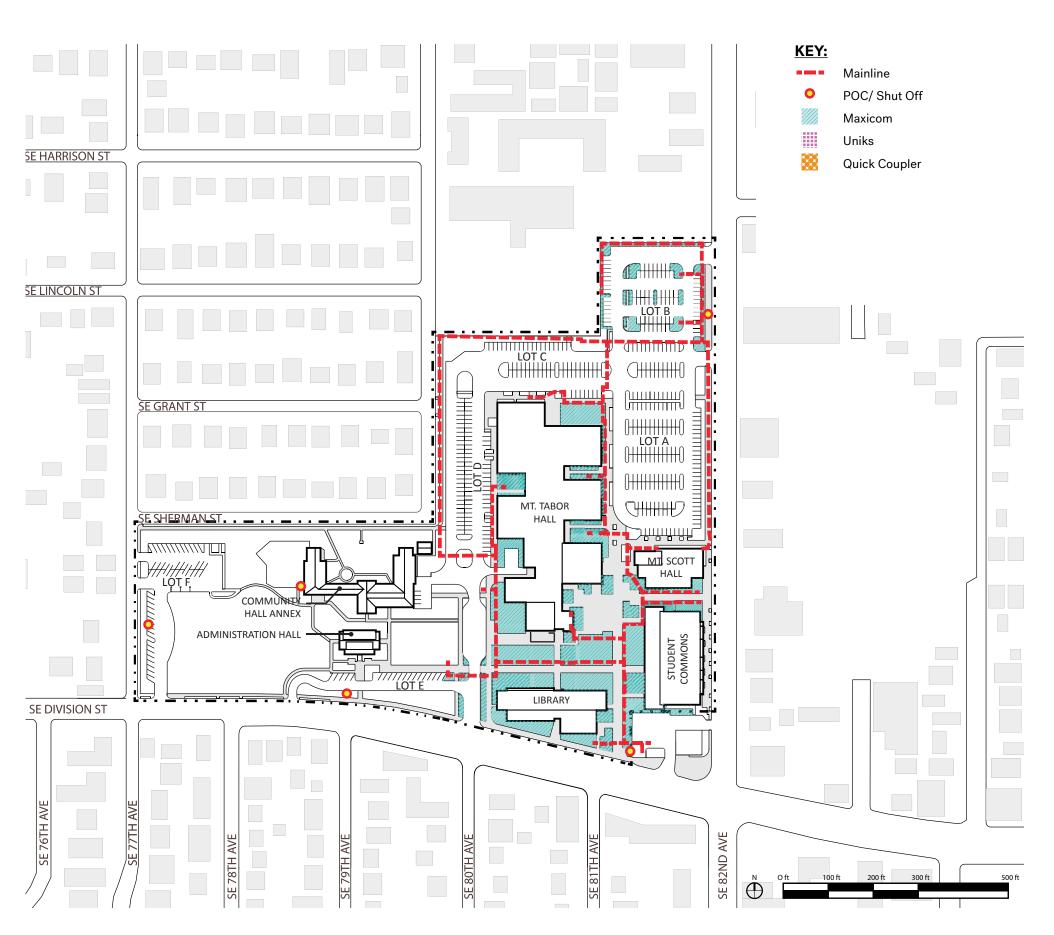
Note: This map is incomplete to the west as a complete data set is not available.

#### **Additional Facts:**

PCC prefers for all swales to be irrigated, which is in conflict with BES guidelines.

#### **Recommendations:**

In order to increase efficiency and comply with PCC's Sustainability goals, all new Bond projects should consider installing sleeves under paving in order to provide usable routes for future irrigation that can be added to the Maxicom system.

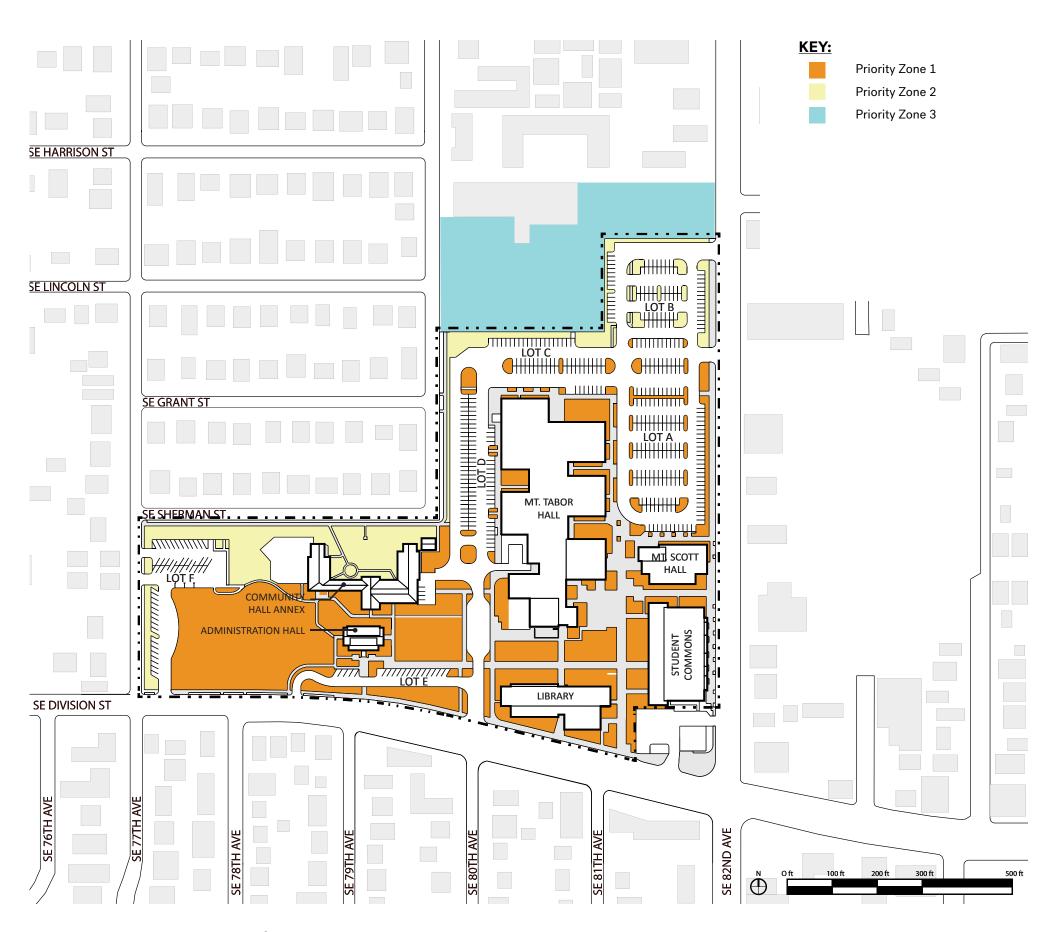


# LANDSCAPE MAINTENANCE PRIORITY

The purpose of this map is to identify the areas within each campus where PCC Grounds spends the majority of their time annually. Priority zones are noted sequentially in order of importance, with "1" signaling the highest priority.

Understanding areas of high intensity maintenance can:

- 1) Help prioritize how resources are allocated on a weekly basis,
- 2) Highlight current problem areas in order to initiate longer term maintenance strategies, and
- 3) Create a framework for communication where overlap and/or scope responsibility occurs between PCC Grounds and other PCC Departments in order to maximize efficiencies and meet PCC's sustainability and best practice management goals.

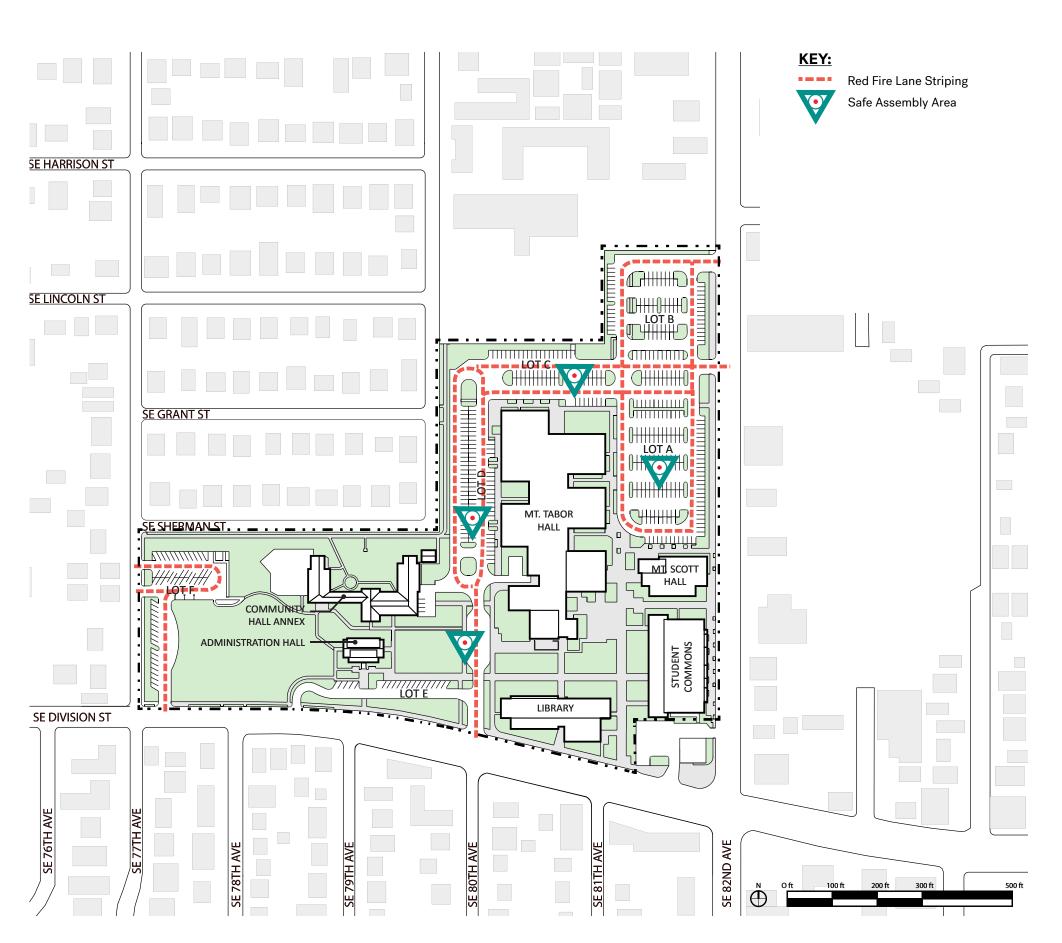


## **EMERGENCY ACCESS**

The consultant team, as well as the PCC team, has had a difficult time locating maps and documents that indicate emergency access, fire access, and evacuation routes. As a starting point, we have mapped the red "no parking" curbs on campus. The locations of these curbs are usually designated by the Fire Marshal as part of new projects, and give an indication of how the Fire Department would access the site in case of an emergency.

#### **Recommendation:**

This area is a deficiency. Emergency Access, Fire Access, and Evacuation Route Maps should be commissioned as part of a separate study, and their creation should involve multiple departments at PCC, including Parking/Transportation, ADA, Grounds, and Safety & Security, as well as the local Fire Marshal and emergency responders.

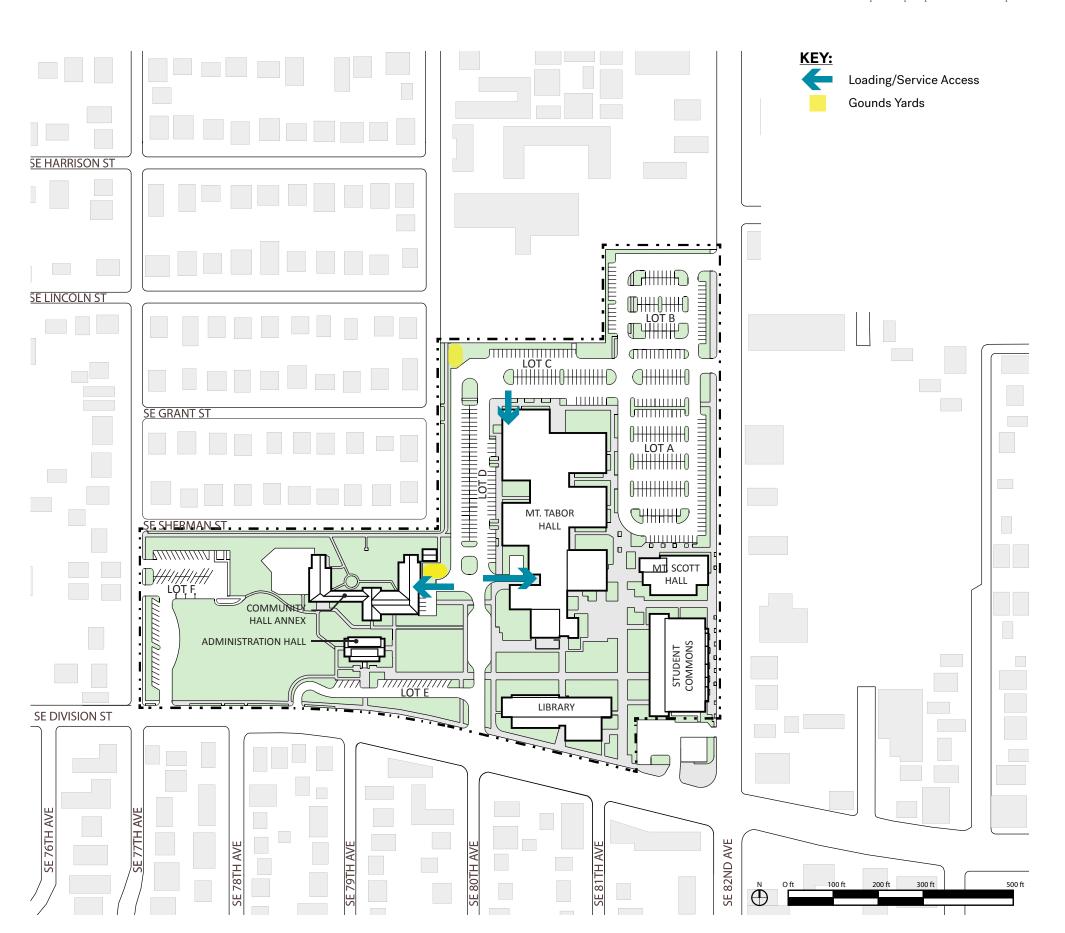


# YARDS, LOADING, AND SERVICE AREAS

The consultant team, as well as the PCC team, has had a difficult time locating maps and documents that indicate loading docks, service routes, delivery points, and turning radius conflicts. As a starting point, we have mapped loading dock locations based on site visits.

#### **Recommendations:**

This area is a deficiency. Loading Docks, Service Routes, Delivery Points, and Turning Radius Conflict Maps should be commissioned as part of a separate study, and their creation should involve multiple departments at PCC, including Parking/Transportation, Grounds, Dining Services, and Safety & Security. This would be a valuable asset to have in regards to future circulation considerations in a Master Plan.



# **SYLVANIA CAMPUS CHARACTER**

The Sylvania campus landscape is largely influenced by its architectural organization and the sloped site upon which it was built. Opening in 1968, many of the Sylvania buildings take on the modernist aesthetic of the 1970's, with its emphasis on massive concrete form. Buildings are connected by a two tier concrete system of paths and corridors, allowing for circulation across the slope of the campus, from building to building. These buildings, while independent forms, feel woven together within the web of these structured routes. Thus, most landscaped space on campus takes on a courtyard feel, enclosed and surrounded by the structured system of the architecture and pathways, despite being technically open spaces. While this style of architecture has been referred to as "brutalist", the strong emphasis on landscaping the interiors and nooks of the courtyards creates a soft, complementary contrast, allowing for a series of moments of relief within the highly structured landscape.

Many of these landscape moments have a contemplative garden aesthetic, with their small scale, use of rocks, emphasis on articulated pruning and their backdrop against the minimalist concrete forms. One notable exception is the PAC plaza, which unlike most other landscaped spaces, creates its' own organizing form rather than playing off architectural boundaries alone.

Throughout the campus a common language has developed across decades of different projects. The use of red for furnishings, and rocks as site features, from the parking lot all the way into the center of campus, being examples. The newer landscape areas to the south, including the AM, SB and HP buildings, focus more on supporting the function of the building programs. There, landscape adjacent to the buildings is largely productive space, used as part of class programming and is not as welcoming for gathering and recreation as the older, more central core of the campus.













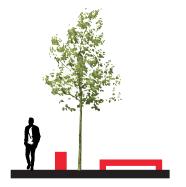


1: Red as accent color -

2: Concrete form/mass -

3: Rocks as features

4: Two tier circulation -









Sylvania Campus

## **SITE FEATURES**

The Sylvania campus is nestled between Lesser Park and residential neighborhoods. It is internally focused, but with a strong east to west movement because of its slope as well as the sequence of entrance to building access. Much of the internal landscape is narrow and corridor like, with the exception of the PAC Plaza which provides a large, flexible open space for gathering.

Sylvania feels enclosed and forested, despite being surrounded by residential suburban neighborhoods. This is in part because of its entry grove of fir trees from Parking Lot 8 on the east side, and its forested connection to Lesser Park to the west. The ring road around the campus reinforces this feeling, but given a lack of pedestrian access, also disconnects the central campus from its wooded surroundings. It is our recommendation that more pedestrian friendly access around and through this road be provided.

Several site features express PCC's commitment to sustainability and experimentation. With Baller Creek to the south, Sylvania is connected to the area's larger watershed, and has been a generator of grants for restoration and monitoring. The Learning Garden to the north allows students space to grow food and experiment on site. A wind turbine at the southeast entry into campus buildings illustrates PCC's interest in promoting sustainable energy production.



WATERSHED



LEARNING/ SUSTAINABILITY

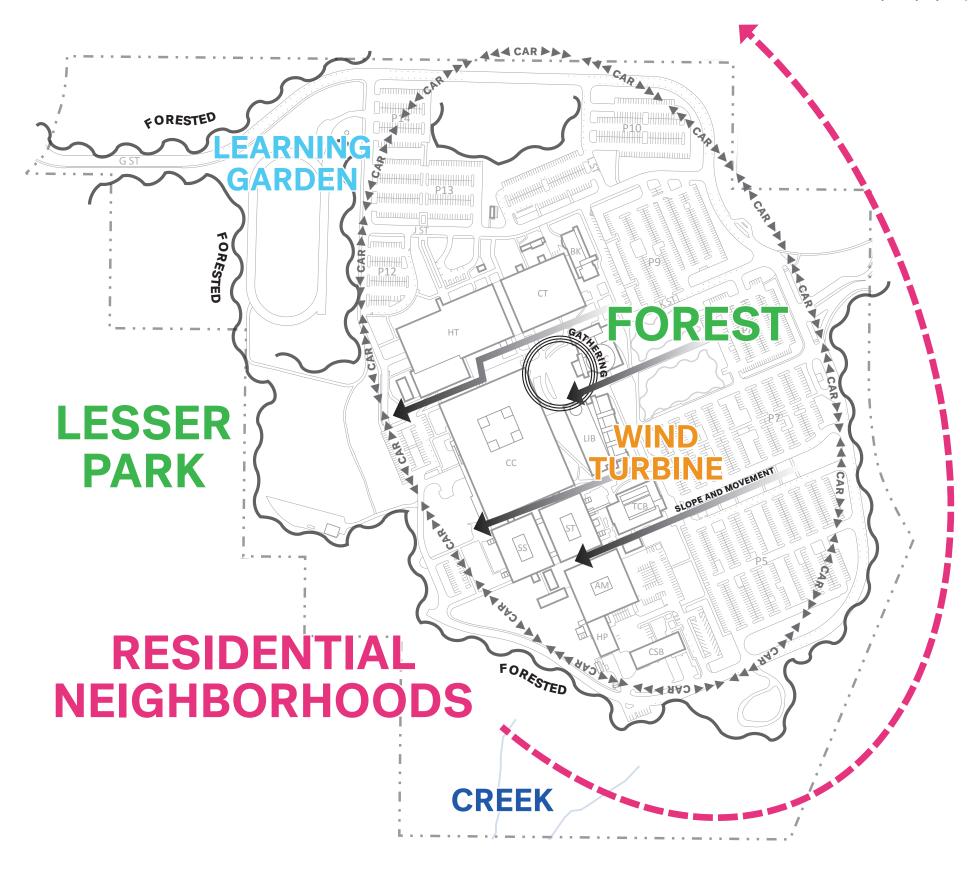


ECOLOGICAL RESOURCES



SUBURBAN



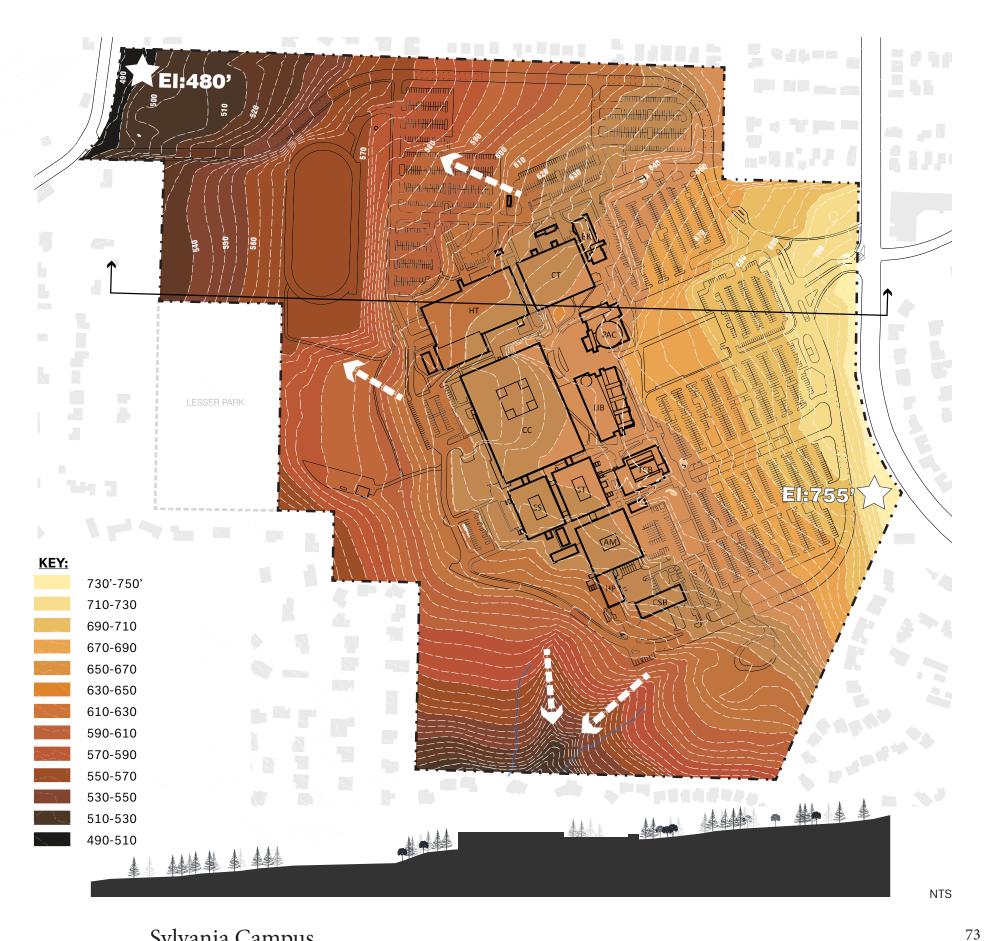


# **TOPOGRAPHY**

Topographic change at the Sylvania Campus amounts to a total of approximately 275', in a primarily east to west direction. The high point of campus is at elevation 755, located along the eastern property edge along SW49th Ave.

A series of ridge lines help organize the site into terraces and levels, including one that separates the main campus area from the athletic fields to the west. The dramatic variation in overall elevation is the site's most significant topographic feature.

The challenging topography creates issues with regard to suitable building sites, parking, vehicular circulation, pedestrian circulation, connections, and access. However, the varied topography also provides the advantage of vistas, both direct and filtered, the opportunity to create site and architectural landmarks, and a hierarchy of different levels that are reflected in the existing character of buildings with bridges and two-tier circulation.



Sylvania Campus

# **CAMPUS EDGES**

Lending to the campus's forested character in the Portland suburbs, PCC Sylvania is surrounded by parks, open space, and a variety of housing types, including single family, multi-family, and mixed-use residential.

The campus has two vehicular entries; a primary entrance off of SW 49th Avenue, and a secondary entrance off of SW Lesser Road that turns onto G Street. In addition, there are a number of pedestrian trails and entries from the adjacent neighborhoods.



# **LANDSCAPE TYPES**

Vegetative patterns have a powerful impact on the overall character of a campus. Significant stands of mature trees can produce an effect similar to architectural walls, creating spatial definition and directional orientation, while large expanses of manicured lawn can encourage informal gathering or allow for long sweeping vistas.

PCC Sylvania is largely defined by the dense forest character that is first encountered as you enter the campus, either as a pedestrian or by car. Mature trees in the east parking lots and the forested grove at P8 reinforce the forest character, as do the large areas of naturalized planting and native plants. In addition, PCC Grounds has begun to overseed previously mulched areas with wildflower seeds supporting pollinators as part of the Bee Campus, USA program.

Another defining element of the Sylvania Campus are the stormwater management facilities. Stormwater swales can be found in the east parking lots, as well as along the ring road to the west of the main campus. The weathering steel storm detention ponds, located at the southern edge of the east parking lots, collect 11 acres of parking lot runoff, and are a completely lined, dry-detention system.

The main campus is composed primarily of ornamental shrub beds, used in both manicured masses and as building foundation planting, along with small isolated pockets of lawn. Large expanses of lawn can be found at the sports fields and open spaces to the west of the main campus.

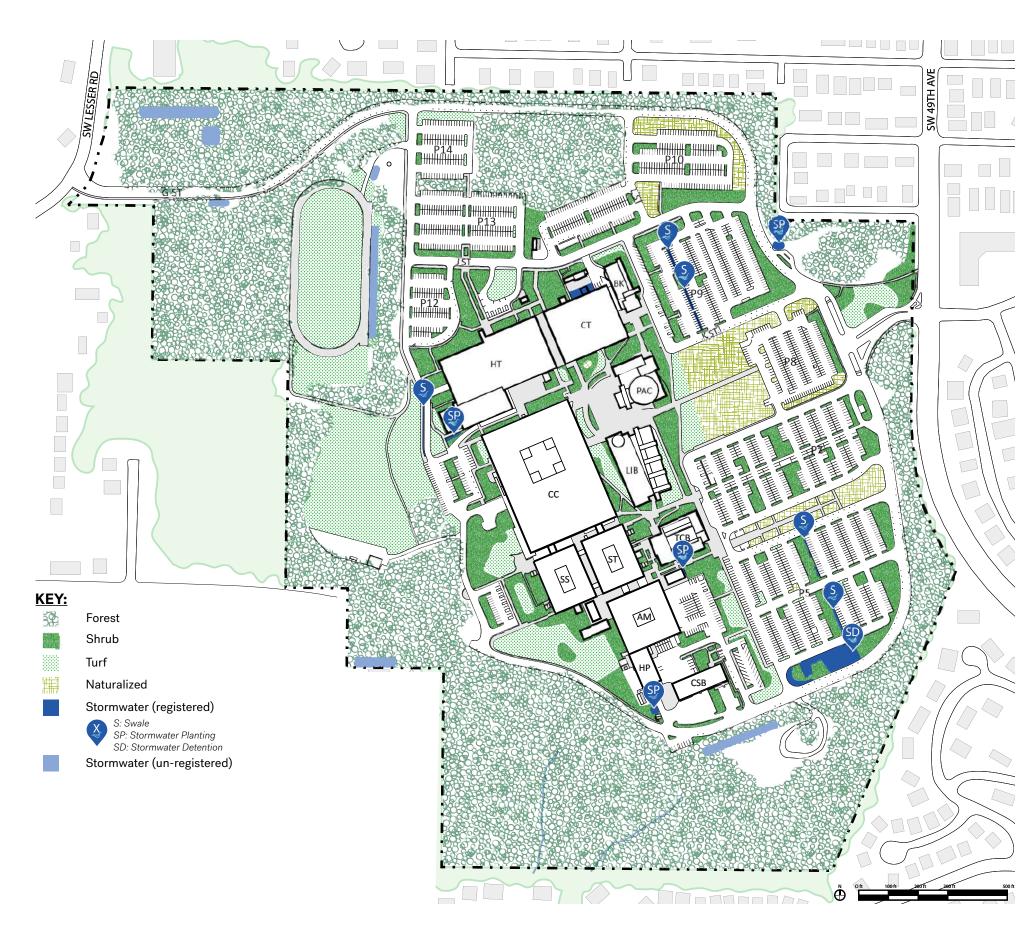
#### **Additional Facts:**

- PCC Sylvania has been herbicide free for over 2 years
- PCC follows the City of Portland Tree Code (Chapter 11)

## Recommendation:

Continue to add more native plants and pollinator species to this campus.

Make preservation of existing forest a priority in regards to future development.



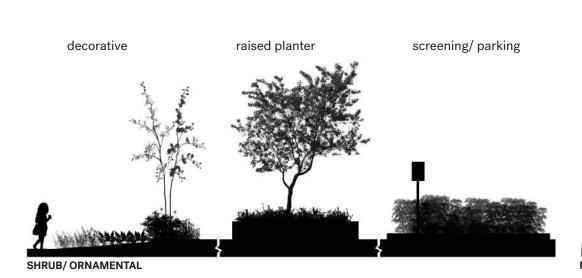
Sylvania Campus

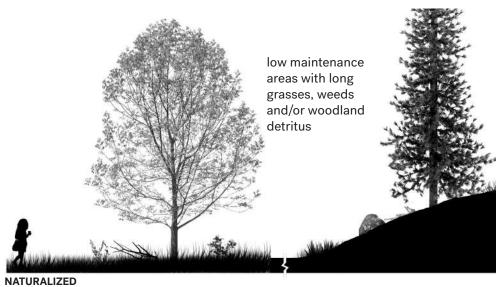
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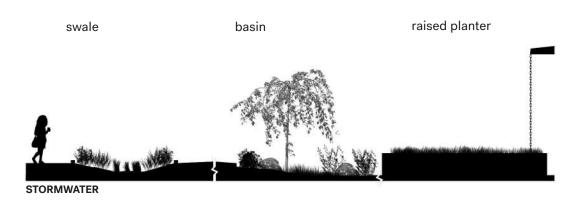
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## **OPEN SPACE**

Open space is defined as any outdoor inhabitable area utilized for passive or active recreation, and combines both quantitative as well as qualitative aspects.

#### **Primary:**

The main gathering space on campus is the central plaza outside of the PAC (B). This space sees the most pedestrian traffic, as well as has the most potential for hosting special events. It features open paved areas, periphery seating areas and a trellis shade structure. It has a nice balance of unprogrammed hardscape, along with some installed amenities. It is unrivaled on campus in scale and use and is the only primary hardscape on the campus.

#### **Secondary:**

Secondary open spaces at Sylvania are often found internally between buildings, and provide a mixture of hard and softscape, along with a few benches. Many are shaded given the adjacency of Sylvania's buildings, and have an internal courtyard feel. They invite students to study or gather in small groups.

#### **Connective:**

Connective spaces are large, open, move-through spaces that serve as the main circulation paths. The Grove at Sylvania (A) is unique in that it features a high canopy of Doug Fir, with an open under-story that could be used for flexible occupation as well as circulation.

#### **Informal Vegetated Open Space:**

These areas are generally maintained turf with an informal/undefined program. They stand alone from other organizing features or are scattered on the periphery of campus. The designated smoking area to the west of campus (C) has become an often used informal space where students gather.

#### **Athletic:**

These areas are used specifically for athletic/ recreational program. At PCC Sylvania, this consists of the Track and Sports Field (D) on the northwest side of campus.



Sylvania Campus

## **WAYFINDING**

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Recommendation: The importance of a complete, consistent, and unified wayfinding program for the entire PCC System cannot be understated. It not only creates a unique sense of place for each individual campus, but becomes part of PCC's brand and identity. It makes each campus a more inviting place, for both students and faculty as well as the outside community, by promoting interaction through information about destinations beyond the campus boundaries, and by providing a sense of welcome to the outside community. Our recommendation is to complete the installation of the Exterior Signage Master Plan signs as expediently as possible.

### **Externial Resources:**

Anderson Krygier Exterior Signage Master Plan.



# LANDMARKS, VIEWSHEDS, AND ART

Landmarks and viewsheds work together as a way of organizing a campus, taking advantage of open spaces, and connecting the campus visually as well as physically. To be most effective, landmarks and viewsheds must remain untouched by building development.

Landmarks are monuments, built or natural, that serve as large-scale wayfinding devices and often act as "calling cards" for the campus, strengthening its' unique identity. Viewsheds can either highlight these internal campus landmarks, or when projected from the edge of campus, visually connect to elements beyond a campus's borders. They reinforce identity both within the campus and from the outside.

Due to topography, PCC Sylvania's viewsheds are in a primarily east-to-west orientation, and its landmarks and viewsheds combine to reveal a contiguous line of interest through the center of campus, starting from the entry grove, through the PAC Plaza, and down to the athletic field and Lesser Park below. Site art, clustered mainly in this zone, reinforces the central spine.



# **BIKE INFRASTRUCTURE**

Sylvania has steep topography that is challenging for biking and is located in an area that possesses limited bike lanes and cycling infrastructure. PCC Sylvania has provided a number of bike rack locations in the central campus area, and showers are located in the Health Technology Building (HT) and CSB Building. However, there is a deficiency between the off-campus infrastructure and the oncampus amenities, and the lack of clear bike routes on campus can create user conflicts between bikes, cars, and pedestrians and discourage potential bike commuters. While G Street is catagorized as a "shared roadway", it does not feature shared roadway markings and should promptly add them per MUTCD outlines in section 9C.07.

#### 2017 Sightlines Survey

Percentage that use a bike to commute to campus:





#### **Recommendation:**

Our recommendation would be for PCC to commission a study with a bicycle transportation consultant to look at the existing on-campus amenities and how they can be connected to the surrounding infrastructure. A full Bicycle Transportation Master Plan would maximize the existing infrastructure, create routes and signage that minimize bike/car/pedestrian conflicts, and help identify future growth opportunities.



## **SITE AMENITIES - LEVEL 1**

For the purposes of this report, a brief overview of site amenities and site furnishings has been completed. This overview is not meant to be a full inventory of current placement, nor as documentation of the exact equipment brands and model numbers used, but is instead intended to identify the diverse product ranges and typologies used throughout the campus.

Sylvanias multi-teared system combined with its sloping topography made it neccisary to split amenity mapping into two "levels" for graphic clarity. Ammenties shown within building outlines are mapping outdoor amenities underneath building over-hangs, not within the building walls.

"Level 1" simply maps the lower elevation ammenities and is not defined by PCC as an applicable term beyond this diagram.

#### **Recommendation:**

Our recommendation would be for PCC to commission a full Site Furnishings Master Plan that reviews all existing inventory and develops site furnishing standards for the entire PCC system.



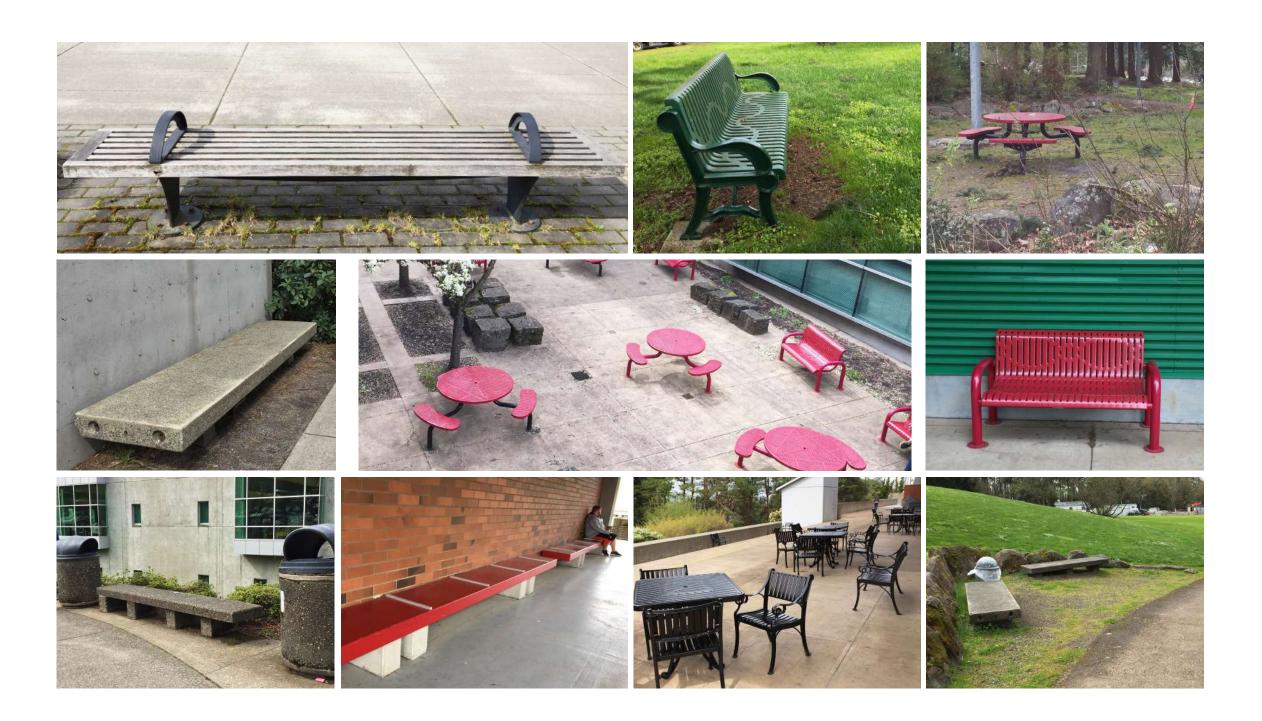
# **SITE AMENITIES - LEVEL 2**

Sylvanias multi-teared system combined with its sloping topography made it neccisary to split amenity mapping into two "levels" for graphic clarity. Ammenties shown within building outlines are mapping outdoor amenities underneath building over-hangs, not within the building walls.

"Level 2" simply maps the higher elevation ammenities and is not defined by PCC as an applicable term beyond this diagram.



# **SITE AMENITIES - PHOTOS**



# HUMAN TRAVEL-BUILT SYSTEM

The pedestrian system consists of developed, undeveloped, paved, and unpaved sidewalks, trails and paths. Worn "informal path" connections represent desired pedestrian routes and illustrate specific spatial characteristics in a particular zone, while highlighting deficiencies in the currently maintained system.

Circulation at PCC Sylvania has an organic quality, often dictated by the steep campus topography; it lacks a clear hierarchy and has an informal feel even in its most formal spaces such as the PAC Plaza. East-west walks often contain stairs to traverse elevation, while north-south walks are often organized at similar elevations. Accordingly, many pedestrian levels are created, with numerous ramps, stairs, landings, and bridges.

Pedestrian access routes from the eastern parking lots are surprisingly aided by the grade and requirement for stairs, curbs, and designated crossings. The spine of stairs and ramps form a strong axis and organizing element for the campus as a whole, while secondary striped asphalt walks provide a minimal level of pedestrian/vehicular separation. However, pedestrian access along the loop road is very poor, with an intermittent sidewalk that often requires pedestrians to walk in the street. There is also a need for a pedestrian specified path to the south of Parking Lot 5 (P5).

A series of trails through the forest connect the campus with the surrounding neighborhoods and Lesser Park, and are often used by both the outside community as well as faculty, staff, and students.

#### **Recommendation:**

The lack of sidewalks along the ring road creates an unsafe pedestrian-vehicular conflict and a potential liability for PCC given the restricted sight-lines. Our recommendation would be to add sidewalks along the ring road, or create additional connections from the ring road to existing routes in the parking lot.



# HUMAN TRAVEL-CIRCULATION

Pedestrian circulation looks at the existing built system and overlays the daily foot traffic pattern. The resulting use patterns represent how a campus operates at a human scale, and can provide important information about how best to maintain the existing system, plan for future growth, and help PCC Grounds prioritize particular routes and areas in cases of inclement weather.

As a result of the topography, PCC Sylvania's primary pedestrian route is through building interiors. This allows for single level movement once a pedestrian has entered a building on campus, and incremental vertical movement can then occur via internal stairs or elevators. Collector paths from the parking lot become vital connections to the nearest building entrance, while the north-south walk along the eastern face of the main campus buildings acts as the conduit between the two.



#### **ECOLOGICAL RESOURCES**

PCC Sylvania is located at the upper portion of Ball Creek, which flows in the southern portion of campus. Part of the Fanno Creek Watershed, this portion of Ball Creek contains high, medium and low riparian value areas, according to the National Resource Inventory (NRI). Riparian value zones are also present at the northwest part of campus as part of the adjacent Red Rock Creek.

An Environmental Conservation zone parallels the tree canopy on the southern edge of campus, joining with Lesser Park and continuing north. This zone is defined by the City of Portland as an area that provides ecological value to the public, and development of such sites should be environmentally sensitive.

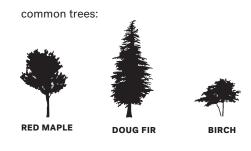
Several Oregon White Oak (Quercus garryana) have been mapped on campus. This native tree is significant as it provides food and shelter for many animals and has a long standing history in the ecology of the Willamette Valley.

Recognizing the important habitat value of the campus, PCC Sylvania has taken part in many Community Watershed Stewardship Projects, including restoration and habitat planting projects, through the Environmental Services Department of the City of Portland.

2015 Student Conducted Tree Inventory:

58% deciduous

42% coniferous





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# **SUSTAINABILITY**

PCC is working on a substantial number of sustainable campus-wide initiatives, while also focusing on specific curriculum program elements.

At Sylvania the notable landscape initiatives include:

**Tree Campus USA Certified:** Sylvania continues to abide by the key five standards needed to reach that achievement.

Bee Campus USA Certified: Sylvania continues to look for ways to expand pollinator habitat, such as overseeding previously mulched areas with wildflower mixes.

The **Habitat Restoration Team** is composed of PCC Grounds, staff, students and community members that work together to remove invasive species, stabilize campus creek beds and install native plantings.

The **Wind Turbine** both generates power and provides a teaching opportunity for students. It can be lowered for use by Electronic Engineering students.

The **Sylvania Learning Garden** allows students to experiment hands-on with organic gardening. It has also hosted a natural building festival, and features a cob structure, bee hives, and a "worm villa" vermiculture facility.

The **Wildflower Demonstration Garden** is a stroll garden that showcases native plants, providing an aesthetic, experiential and educational resource.



# **IRRIGATION**

The majority of Sylvania's campus operates on the college's Maxicom system, however several areas rely on Uniks or quick couplers for irrigation. This is mainly a result of communication challenges between the controller and valves due to topography and the costs associated with retrofitting the system. In addition, installing new sleeving under existing walks to provide better communication and bring isolated zones into the Maxicom system is often cost prohibitive or impossible at certain locations.

#### **Additional Facts:**

PCC prefers for all swales to be irrigated, which is in conflict with BES guidelines.

#### **Recommendations:**

In order to increase efficiency and comply with PCC's Sustainability goals, all new Bond projects should be required to install sleeves under paving as possible in order to provide usable routes for future irrigation to be added to the Maxicom system.

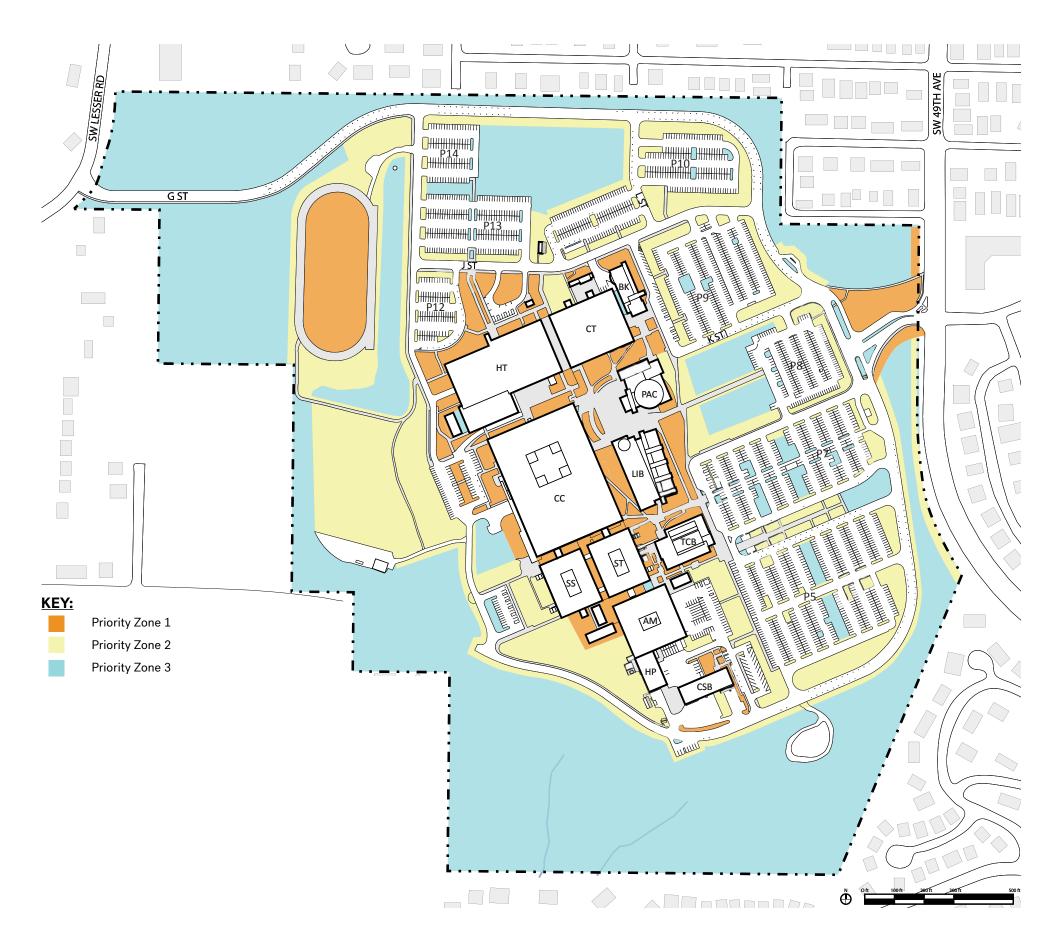


# LANDSCAPE MAINTENANCE PRIORITY

The purpose of this map is to identify the areas within each campus where PCC Grounds spends the majority of their time annually. These maps were drawn in collaboration with PCC Grounds to show existing maintenance priority.

Understanding areas of high intensity maintenance can:

- 1) Help prioritize how resources are allocated on a weekly basis,
- 2) Highlight current problem areas in order to initiate longer term maintenance strategies, and
- 3) Create a framework for communication where overlap and/or scope responsibility occurs between PCC Grounds and other PCC Departments in order to maximize efficiencies and meet PCC's sustainability and best practice management goals.



This area is a deficiency. Emergency Access, Fire Access, and Evacuation Route Maps should be commissioned as part of a separate study, and their creation should involve multiple departments at PCC, including Parking/Transportation, ADA, EHS, Grounds, and Public Safety, as well as the local Fire Marshal and emergency responders.

# YARDS, LOADING, AND SERVICE AREAS

The consultant team, as well as the PCC team, has had a difficult time locating maps and documents that indicate loading docks, service routes, delivery points, and turning radius conflicts. As a starting point, we have mapped loading dock locations based on site visits.

#### **Recommendations:**

This area is a deficiency. Loading Docks, Service Routes, Delivery Points, and Turning Radius Conflict Maps should be commissioned as part of a separate study, and their creation should involve multiple departments at PCC, including Parking/Transportation, EHS, Grounds, Dining Services, and Safety & Security. This would be a valuable asset with regard to future circulation considerations in a Master Plan.



Sylvania Campus

## **WILLOW CREEK CENTER**

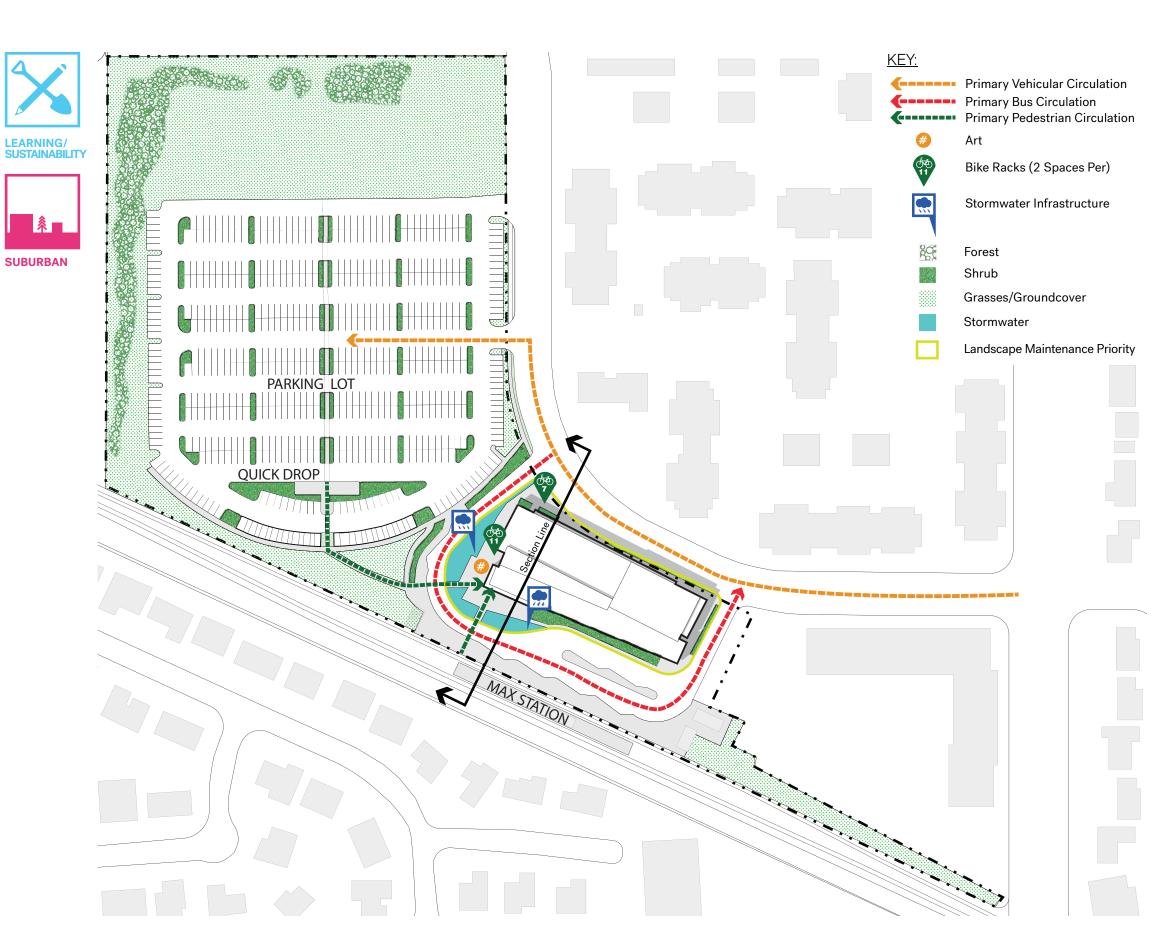
Located in Hillsboro, Oregon, the Willow Creek Center is a 100,000 sq. ft. educational facility that opened its doors in 2009. It is situated adjacent to the Willow Creek Transit Center, providing easy access to public transportation. The Transit Center is serviced by the Trimet Blue Line, bus lines 52, 59, 88, and the PCC Shuttle.

The Willow Creek Center site includes a large parking lot, sidewalks and perennial beds that surround the building, and a small entry plaza located at the southwest corner of the building. The plaza is encircled by a stormwater garden lined with trees, creating an intimate space that is buffered from the Transit Center. An educational art piece featured in the center of the plaza tells the story of stormwater conveyance and storage on-site. Other plaza site amenities include benches, bike racks and trash receptacles. Willow Creek Center's stormwater and decorative planting beds are well-maintained and thriving, and the site amenities are in good condition.

The main entry is located on the southwest corner of the building, facing the Transit Center instead of Edgeway Drive. While this orientation has potential to create an unique entry experience, numerous barriers make wayfinding from the parking lot challenging. A chain link fence separates the parking lot from the Center, forcing people to either move towards Edgeway Drive or towards the sidewalk on the south side of the parking lot that connects to the front entry. This sidewalk and the small directional sign are not clearly visible from most of the parking lot, creating uncertainty about the best way to navigate to the building.

#### **Recommendations:**

- Strengthen street presence on Edgeway Drive by increasing signage, using a bold planting palette, and/or art.
- Strengthen and clarify the entry experience by adding wayfinding elements between the parking lot and the front entry.
- Provide tables and chairs outside the coffee shop for outdoor gathering and studying space.



1

# WILLOW CREEK CENTER





## **NEWBERG CENTER**

Located in Newberg, Oregon, the Newberg Center is a 12,000 sq. ft. educational building that opened in 2011. Designed to be Net Zero, Carbon-Neutral and rated LEED Platinum, the Newberg Center is the newest and most green of all the PCC facilities, exemplifying PCC's dedication to sustainability.

The 16-acre Newberg Center site includes a large parking lot with stormwater bioswales and an entry plaza with many site amenities, including benches, bike racks, art and trash receptacles. The Center's Learning Garden sits prominently on the corner of Brutscher Street and Fernwood Road, showcasing PCC's dedication to sustainability in the site's most prominent location. The garden connects PCC students and facility to the surrounding community by hosting events such as Cob Building, Weeding and Learning, and Planting Parties workshops. Although the garden is located in a highly visible area, its purpose might not be clear to the passerby because there is no signage or other identifying markers.

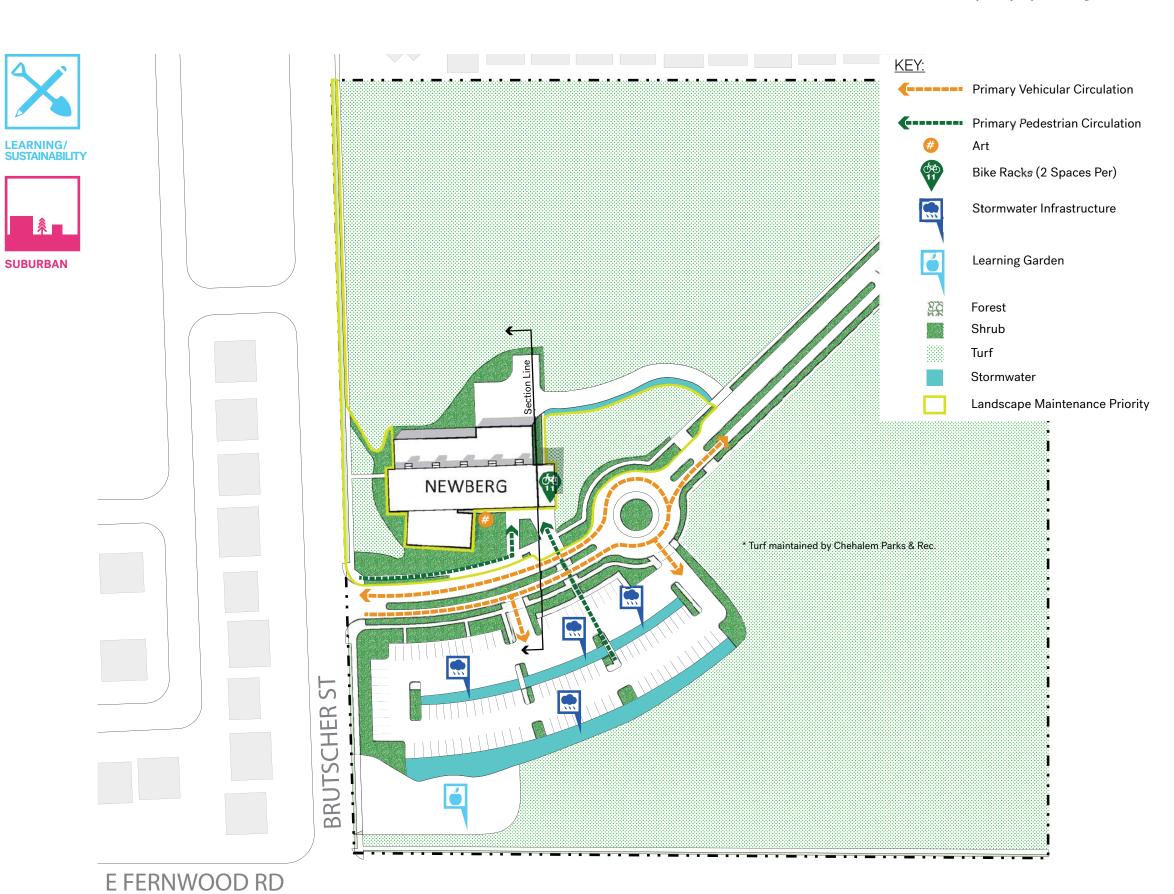
Although the landscape is not fully mature, it is filling in quickly and is immaculately maintained. Lush stormwater bioswales in the parking lot line a portion of the striped walkway leading to the main entry. The entry plaza is surrounded by beds with flowering perennials and healthy birch trees. The sidewalks leading to the Center are lined with shrubs, creating a cohesive streetscape. Newberg irrigation is controlled through PCC's Maxicom system.

#### **Additional Facts:**

- PCC Grounds manages the irrigation for the two turf fields, while Chehalem Parks & Recreation manages the mowing. This has revealed differences between Chehalem Parks practices and PCC's Best Management Practices.
- Irrigation water is supplied from a 2" mainline.

#### **Recommendations:**

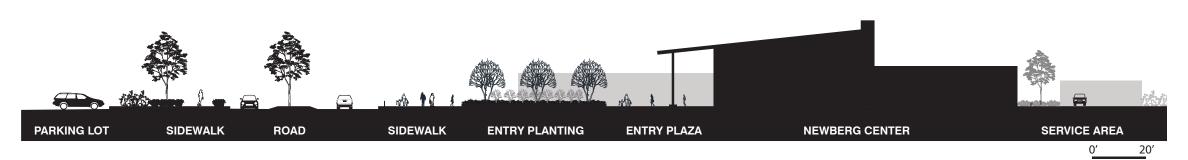
- Place signage, art or other identifying features at the Learning Garden.
- Better communication/management between PCC Grounds and Chehalem Parks & Recreation would improve efficiency.



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# **NEWBERG CENTER**





## **PORTLAND METRO CENTER**

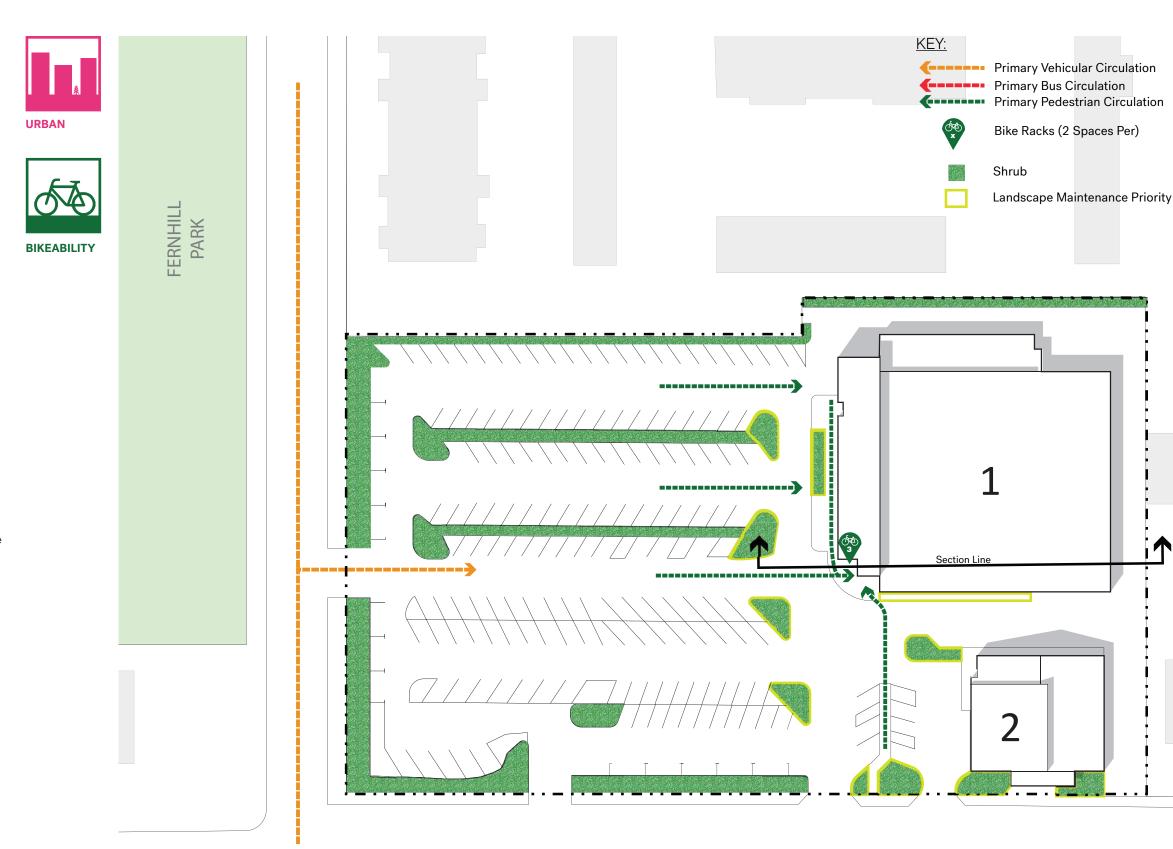
Opened in 1998, the Portland Metropolitan Workforce Training Center (PMWTC) is located in an urban NE Portland neighborhood. Its primary program, Steps to Success, is an employment and training program designed to help people develop skills to be competitive candidates for higher wage jobs. Almost every week, PMWTC hosts a job fair, inviting large local employers to the Center.

The PMWTC is surrounded by a large parking lot, with a small outdoor entry landing that has a few bike racks and a trash receptacle. Sparse benches line a narrow sidewalk on the south side of the Center. There are no stormwater bioswales located in the parking lot or elsewhere on site. While there is one perennial bed next to the entry that has a thriving planting, many of the garden beds in the parking lot are bare and weedy. Both streets are lined with large shrub beds that have open mulched areas. The site is not integrated into PCC's Maxicom system and relies on a simple drip irrigation system.

PMWTC sits at the corner of NE 42nd and Killingsworth Street, serviced by bus lines 72 and 75. The Center is also easily accessible by bike, along one of Portland's interconnected network of bike-friendly routes. Due to the rapid changes in the neighborhood, including increased development both along Killingsworth and 42nd, the PMWTC site should be considered for redevelopment. There is a significant opportunity to engage directly with the surrounding neighborhood by placing any new development along Killingsworth, helping to activate the streetscape.

## Recommendations:

- Conduct a redevelopment study for potential
- Implement demonstrative, sustainable practices such as stormwater management facilities in the parking lot or the addition of a food forest.
- Add more seating to the small exterior space.
- Install more lush, biodiverse plantings in the parking lot and lining the streets.
- Buffer the north side of the site from existing multi-family units.



**NE KILLINGSWORTH ST** 

96

# **PORTLAND METRO CENTER**





0' 2

#### **SWAN ISLAND TRADE CENTER**

With the help of a million dollar budget approved by State Legislature in 2012, PCC created the Swan Island Center, a 20,000 sq. ft. facility located in the industrial core of Swan Island. The Center houses the Apprenticeship and Trades department and works in conjunction with the Cascade Campus and CLIMB Center to coordinate continuing education, training and professional development for its students.

Swan Island Center is surrounded by a large parking lot to the north and east that connects to a sidewalk leading to the front entry and encircling the building. There are minimal outdoor spaces and amenities, aside from a few trash receptacles at the front entry and the back of the building. A stormwater garden is located in the rear of the building, next to the service area. The plantings are well-maintained throughout the parking areas, along the streets and adjacent to the building.

The large parking lot is currently underutilized and offers potential redevelopment opportunities. A new Mechanical/FMS Yard is currently proposed for Swan Island Center, and would provide east side campuses and centers a location to store equipment, road sand for inclement weather, and could include elements such as engineered swales for oil containment and a covered outdoor space.

#### **Recommendations:**

- Conduct a redevelopment study for potential reuse opportunities for the Center's parking lot, including a new Mechanical/ FMS Service Yard.
- Add benches to the entry to provide outdoor seating.
- Add bike racks at the front entry or adjacent to the east parking lot.





# **SWAN ISLAND TRADE CENTER**









20'

## **CLIMB CENTER**

Located in Central Eastside Portland near OMSI, the CLIMB Center, which stands for Continuous Learning for Individuals, Management and Business, is a 31,000 sq. ft. facility that was built in 1996. The CLIMB Center offers a broad range of training programs to employers and employees alike, specializing in overall professional, health-related, and small businesses development.

The CLIMB Center hosts a number of sustainable site features including a large greenroof on top of the 3-story building, a stormwater management interpretive pavilion located adjacent to an artfully designed stormwater downspout, and PCC's oldest bioswales, located in the 158-space parking lot. Due to it's close proximity to the Blue and Red Max Line and the #6 bus, the CLIMB Center is easily accessible by public transportation and by bike. The Center has both bike racks and lockers to accommodate it's riders, located in the small entry plaza.

While most of the Center's site is landscaped with shrubs and perennials, there is a small, tree-lined lawn leading up to the small entry plaza. Tables, chairs and benches provide outdoor seating opportunities outside of the main entry plaza, backed by well-maintained perennial beds. While the site amenities are in fairly good condition, their placement could use reconsideration. Although the entry space is large enough to have a distinct, cohesive design providing outdoor seating for the Center's students and employees, the current site furniture configuration appears to have been developed in a piecemeal fashion.



**URBAN** 



**BIKEABILITY** 



LEARNING/ SUSTAINABILITY

#### **Recommendations:**

- Consider new site amenities and design for front entry.

