A Safe and Accessible Pathway Concept

From Terwilliger Parkway to
OHSU, the VA Medical Center and Homestead Neighborhood

November 2018

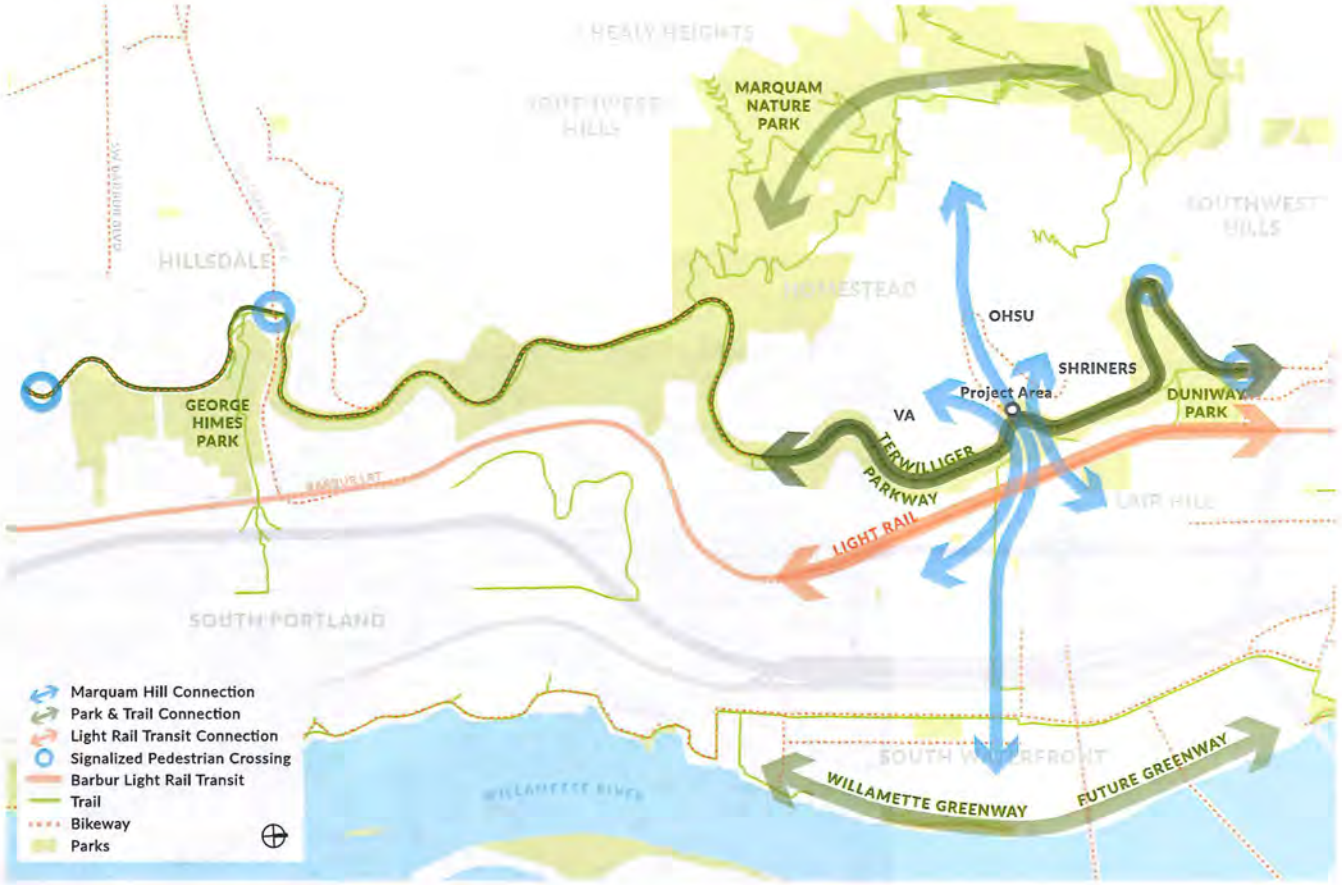
Developed by **Mayer/Reed**

OHSU

INTRODUCTION

The Safe and Accessible Pathway concept presents an opportunity to create enhanced multi-modal links to Oregon Health & Science University (OHSU), the Veteran Affairs Medical Center (VA), Terwilliger Parkway, future light rail transit, regional trails, Portland's waterfront and nearby neighborhood amenities. The majority of the project site is located on Portland Parks and Recreation (PP&R) property at the intersection of SW Campus Drive (a private drive) and SW Terwilliger Boulevard. The site encompasses a half-acre of Terwilliger Parkway land to the northwest of the intersection abutting the east façade of the Casey Eye Institute (see below).

This site is traversed by many OHSU employees and visitors entering the campus as well as residents and other parkway users. The project aims to



restore the health of the park land adjacent to the OHSU campus. The site has a history of intense past use for construction staging for two OHSU projects. Compacted soils and grading have compromised reforestation efforts by OHSU, Portland Parks & Recreation and community members.

Improvements to the landscape and pedestrian access were originally recommended in the City of Portland's Marquam Hill Plan. The project site has recently risen to a greater level of importance in relation to TriMet's and Metro's planning efforts on the SW Corridor Light Rail project. The proposed SW Corridor is a 12-mile MAX line from downtown Portland to Tigard and Bridgeport Village in Tualatin, OR. The line includes a critical transit connection to the OHSU and VA campuses on Marquam Hill, given the closest station is located to the east on SW Barbur Blvd. Planning studies estimate that approximately 10,000 daily trips,* roughly equal to the daily number of Portland Aerial Tram riders, will be made from this light rail station to Marquam Hill.

*Metro. August 30, 2017. *SW Corridor Decision Briefing Book Marquam Hill Connection Version 1*. Portland, OR

INTRODUCTION

Overcoming the elevation gain and steep slopes of Portland's West Hills presents a significant engineering challenge. Metro's and TriMet's planning efforts explored numerous routes and mechanisms (elevators, bridges, escalators and tunnels) that would enable ADA-accessible connections to OHSU and the VA. The engineering studies presented infrastructure options that carried potential impacts that were not necessarily in keeping with the Terwilliger Parkway Design Guidelines adopted by the city in the early 1980s.

OHSU commissioned Mayer/Reed to develop alternative design concepts that accommodate pedestrian access from Terwilliger Boulevard to OHSU and the VA and minimize impacts. Further, site and landscape improvements would enhance the main patient entry to the campus as a welcoming portal to an institution of healing and well-being and demonstrate strong community partnerships with the neighborhoods and PP&R.

Through a process of discussions with the Homestead Neighborhood Association, Friends of Terwilliger, PP&R and OHSU representatives, an overall vision statement and guiding principles for the project were developed.

Vision Statement:

The pathway will provide safe access for daily visitors, including OHSU and VA Medical Center employees, patients, visitors, park users and neighbors. Through a healing approach, the quality of the park land will be restored in a way that reinforces the character of the historic Terwilliger Parkway, while accommodating increased access to nature.

Guiding Principles:

- Create an attractive park destination.
- Provide safe ADA-accessible connectivity to OHSU, Terwilliger Parkway, and the future SW Corridor Light Rail.
- Restore the quality of the park land to create a healing forest environment that reinforces the character of the Terwilliger Parkway, and increases users' connections to nature.

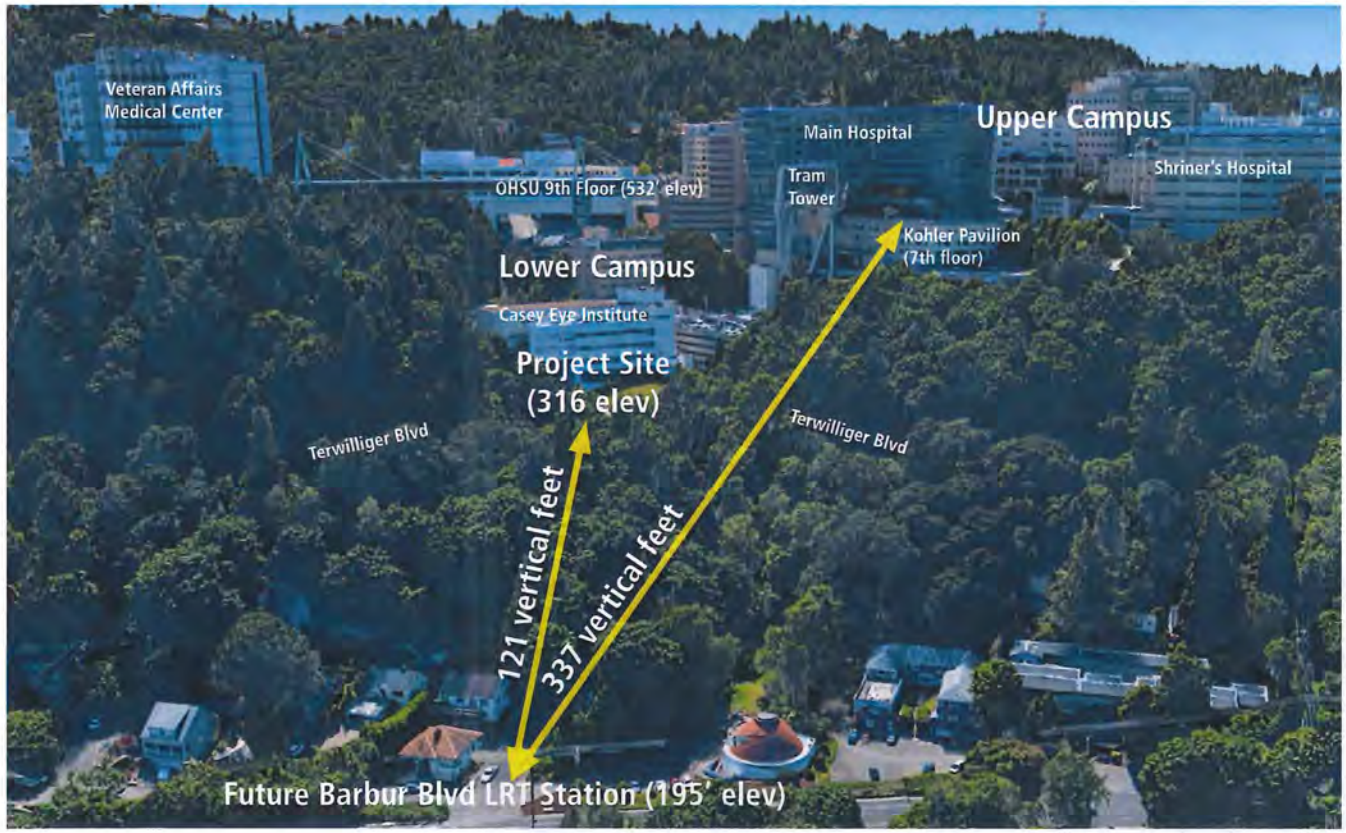
OHSU CAMPUS CIRCULATION CONTEXT

The project sets the stage for how visitors and staff enter and connect to OHSU's lower campus through an internal network of pathways. The lower campus consists of Casey Eye Institute (CEI), the future Elks Children's Eye Clinic (ECEC) and Parking Garage E, as well as other destinations further west. Current transit service includes two bus stops on SW Terwilliger at Campus Drive. The public 9th floor of OHSU's upper campus serves as the common connection level among the Kohler Pavilion (KPV), the main hospital (OHS), Doernbecher Children's Hospital (DCH), the VA Medical Center, and the Upper Tram Terminal.

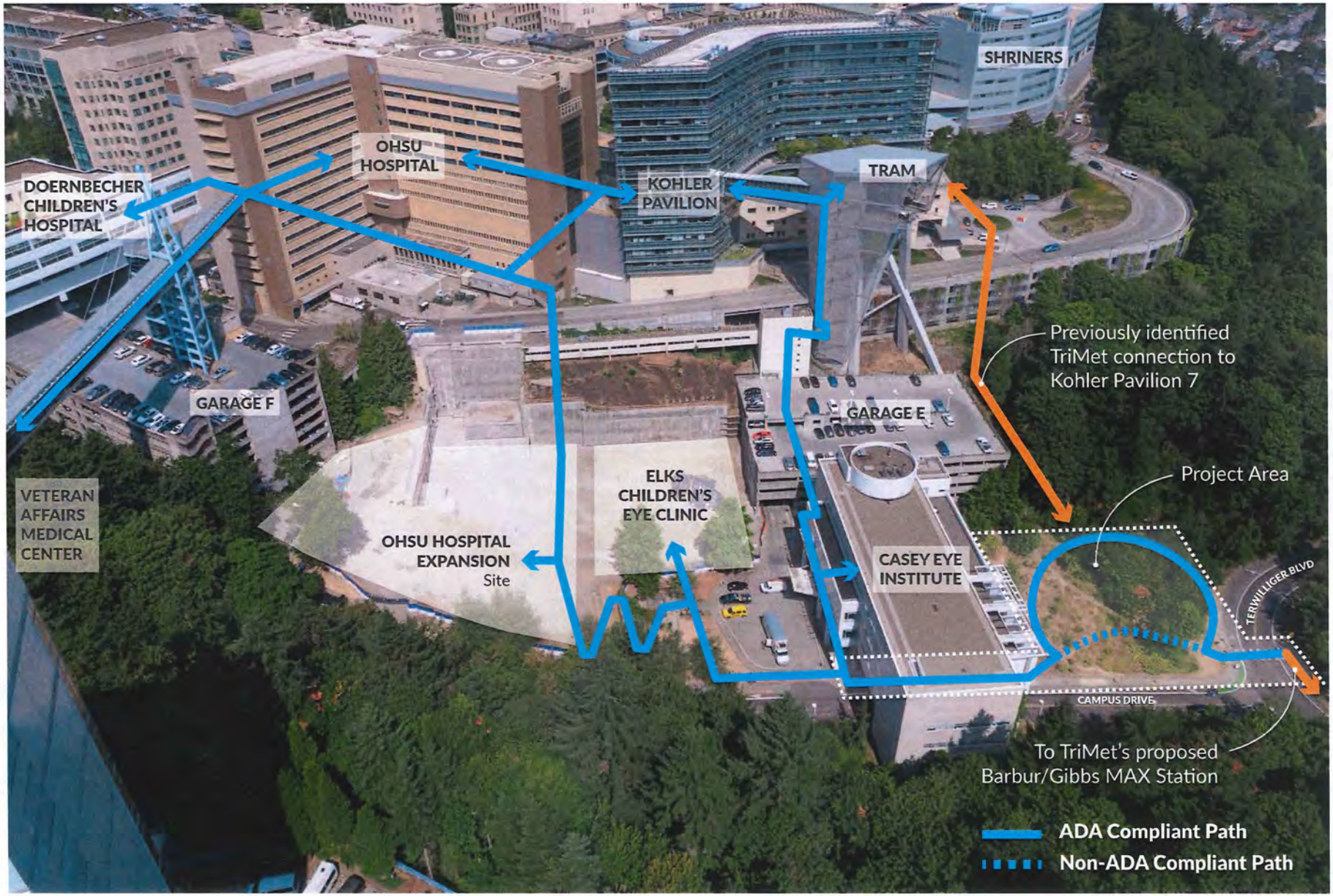
People who currently arrive at lower campus from Terwilliger reach the 9th floor by following a rough foot trail, then through elevators in Garage E and the Tram Tower. The current connection is indirect and circuitous. The narrow sidewalk along Campus Drive is steep. The routes are not ADA-accessible and do not offer adequate routes to the bus stops. Should the project be incorporated into TriMet's larger Marquam Hill Connector project, the existing infrastructure will not meet the capacity of the SW Corridor Light Rail Transit.

OHSU's early conversations with TriMet about the SW Corridor connections to campus focused on reaching the Kohler Pavilion 7th floor terrace because it links to an exterior access point where people could either descend to Sam Jackson Park Road or enter the KPV. While this project concept does not preclude this option, the focus of the study was shifted to improving connections along Campus Drive to the ground floor lobby of a future OHSU Hospital Expansion to the west of the ECEC. When this expansion is completed, the project would enable an ADA-accessible route from the intersection of SW Campus Drive and Terwilliger, past the CEI and ECEC to the front door of the hospital expansion. This option could serve the projected transit capacities through an express elevator to the 9th floor in the hospital expansion.

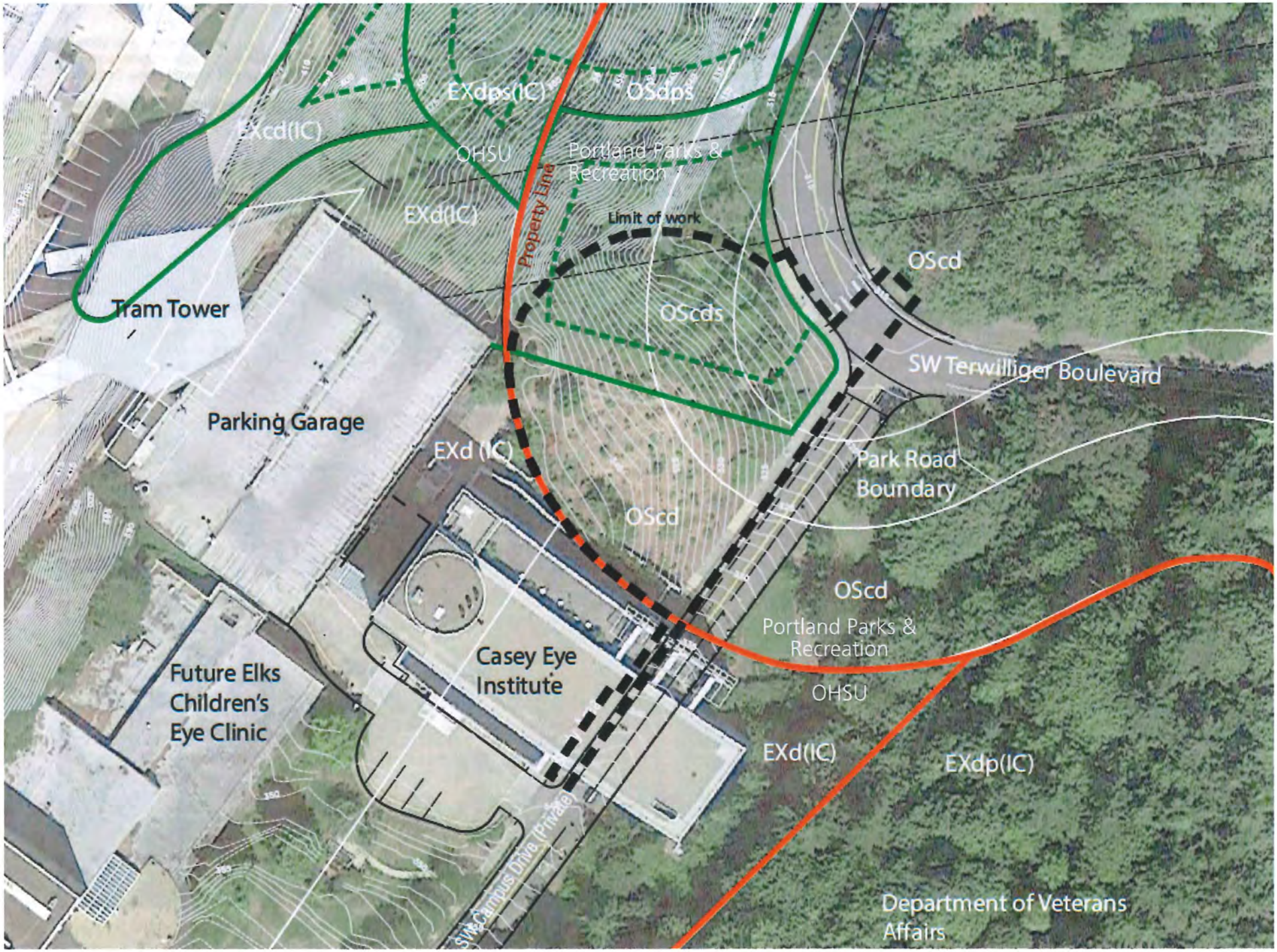
The other critical component of TriMet's Marquam Hill Connector (outside of the scope of this concept development) is an ADA-accessible connection between Terwilliger Blvd. to the proposed light rail station on Barbur Boulevard. This segment of the connection will need to accommodate an elevation change of over 100 vertical feet, with the upper landing on Terwilliger near Campus Drive intersection (as shown), or within a hundred yards to the southeast. Despite the unknown elements of future light rail connections to this project, this proposed concept is able to fulfill the ADA-accessible connections to lower campus, existing bus transit, the Terwilliger Parkway, and other neighborhood destinations.



OHSU CAMPUS CIRCULATION CONTEXT



This project would provide ADA-accessible connections to lower campus destinations, and to the existing Garage E and Tram elevators to provide ADA access to OHSU's upper campus. A future hospital expansion could provide additional express access to upper campus. Under this proposal, the previously proposed connection to Kohler Pavilion's 7th floor terrace remains a viable option for a later phase, although may not be needed.


EXdps(IC)
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OHSU
Portland Parks & Recreation
Property Line
EXd(IC)
Limit of work
OScd
Tram Tower
OScds
SW Terwilliger Boulevard
Parking Garage
EXd (IC)
Park Road Boundary
OScd
OScd
Portland Parks & Recreation
Casey Eye Institute
Future Elks Children's Eye Clinic
OHSU
EXd(IC)
EXdp(IC)
SW Campus Drive (Private)
Department of Veterans Affairs

BRIEF SITE HISTORY

In 1919, two years after land was donated for a hospital on Marquam Hill, the citizens of Portland passed a bond measure to acquire park land adjacent to SW Terwilliger Blvd. based on recommendations of the 1903 Olmsted Brothers plan. These neighboring properties, now known as the Terwilliger Parkway and OHSU, have evolved together ever since.

The project site has changed dramatically over the years. Most of Marquam Hill was logged during the early settlement of Portland. By the 1940s, forest had re-established on the hillsides.

By 1953, SW Campus Drive was constructed to serve the new hospital building. The Dental School and parking lots followed. The 1990s brought the Casey Eye Institute, where the parking lot was replaced by a lawn as a foreground to the building.

In 2006, the Portland Aerial Tram upper terminal tower utilized the connector site for construction staging. Since the tram tower's completion, PP&R, OHSU and community members have worked to re-establish a forested condition. However, compacted soil conditions have resulted in a landscape that struggles to establish a healthy, functioning eco-system. The proposed connector project preserves as many existing trees as possible and offers opportunity to regrade the disturbed portion of the site, remedy soils and drainage, and establish a healthy forest within the parkway.

c. 1920. View north toward OHSU on Marquam Hill

c. 1918. SW Terwilliger Boulevard

c. 1940. View southeast toward Marquam Hill

c. 1953. View west along SW Campus Dr. during its construction

c. 1965. View northeast toward lower campus

c. 1999. View southeast across Casey Eye Institute during construction

c. 1999. View west from Terwilliger Blvd. of Casey Eye Institute

2006. View northwest with Aerial Tram construction site

c. 2017. View north with revegetation in progress

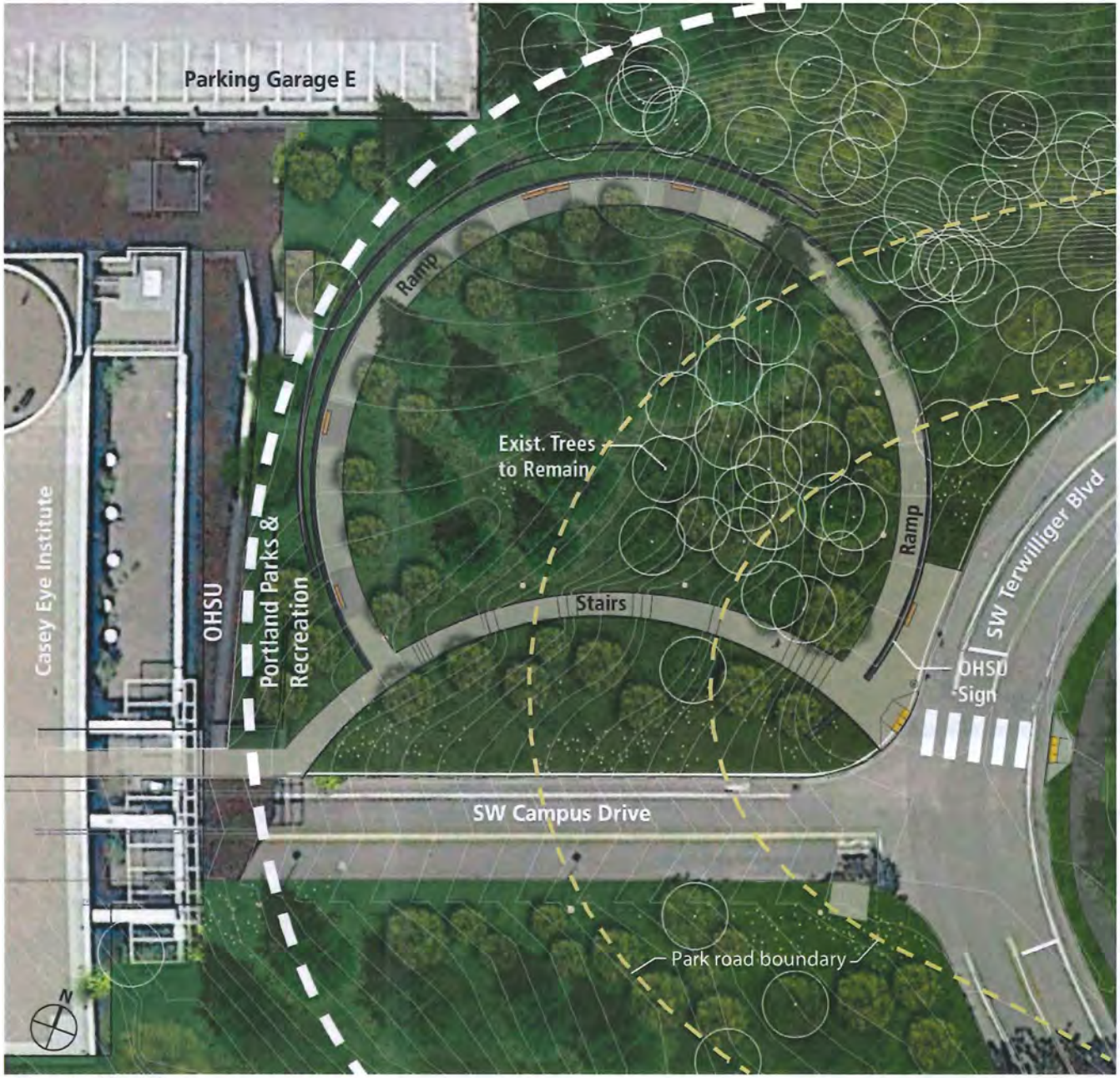
Images courtesy of OHSU Digital Commons

RECOMMENDED CONCEPT

A key feature of the recommended concept is a simple, circular ADA-compliant series of ramps and landings and a stair that connect Terwilliger Blvd. to Campus Drive and the Casey Eye Institute. The lower slope of the ramp closely matches existing grades in an effort to preserve tree groves and minimize retaining walls. Along the ramp, several benches at the landings provide places to rest. In addition to working around existing trees, the project aims to uphold the character of the Terwilliger Parkway through careful consideration of grades, proportion, composition and materiality.

The curved stair to the south of the ramp provides a more direct route up the hill. It intersects with the barrier-free accessible ramps at the top and bottom landings, so that all users start and finish at the same locations. Along Terwilliger Blvd., a widened area creates a distinctive site entry, a bench and waiting space for bus riders.

At the steepest northwest corner of the site, a secondary retaining wall is set back from the main pathway and terraced to enhance visibility and create a welcoming, restful environment. Terraces are located behind the ramp, helping to nest the connector route into the slope. The landing located near the corner of Parking Garage E preserved the option for a future tunnel and tower connection to the KPV.



Approx. 1"=40'

RECOMMENDED CONCEPT

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The existing sidewalk on SW Campus Drive will be removed. West of the stairs and circular ramp, a retaining wall supports another ramp directly adjacent to SW Campus Dr. under the CEI. This route meets the existing grades west of the CEI. The design team evaluated a stair to the service area beside CEI south of the parking garage, but it was concluded that it didn't significantly improve the travel time and drew pedestrian traffic into the area intended for building services such as loading, trash and recycling.

The recommended concept will be more than circulation infrastructure. It will be a place within Terwilliger Parkway to sit within the forest. It is a city-wide amenity that operates at the human scale. Terraced walls create an experiential envelope that is inviting, verdant and safe. Benches offer respite for park visitors.

The proposed materials express the Pacific Northwest landscape vernacular. The plant material will be predominantly native to support the healthy forest ecosystem and wildlife habitat objectives.

The plant list in the Terwilliger Parkway Guidelines will form the basis for the palette. A mix of coniferous and deciduous trees will be planted in natural groupings, while carefully positioned to consider sight-lines and aesthetic compositions horticultural qualities. Understory plants will include native ferns, shrubs, groundcovers and perennials in order to replicate the diverse understory present in mature forests. Throughout this landscape, a higher level of maintenance and establishment by OHSU will enable the landscape to evolve as foreground to the campus.

The series of landings along the accessible ramp offer places to sit and enjoy nature.

RECOMMENDED CONCEPT

The retaining walls and paving also reflect traditions of the northwest region. Basalt stone, the bedrock underlying the region, will be used for the retaining walls and at special paving areas at Terwilliger Blvd. This material fits the character of the historic Terwilliger Parkway and strongly identifies OHSU as an institution set within the context of other city and regional parks of Portland.

RECOMMENDED CONCEPT

Lighting and traffic signals play an essential role in safety and aesthetics for the project. The curved alignment of Terwilliger Blvd. results in difficult sight-lines at the intersection with SW Campus Drive. This intersection is considered dangerous and intimidating for cyclists and pedestrians to cross. Drivers of vehicles are challenged to judge speeds of other intersecting modes of travel. In fact, Portland Bureau of Transportation has identified Terwilliger Blvd. among the city's top thirty high crash streets. A signal is necessary to create safe conditions that support the city's Vision Zero policy.

The Terwilliger Parkway Design Guidelines indicate that traffic signals may be provided when necessary to mitigate serious safety concerns. A simple traffic signal design similar to the one shown could be appropriate within this context and not detract significantly from the parkway's visual environment, given the safety considerations.

The project design team proposes pole lights to illuminate the ring ramp and arcing stairs. While they will blend with the existing Terwilliger Parkway street lights, the new version will be energy-efficient, meet dark-sky requirements and minimize negative effects on wildlife habitat. Within the taller perimeter retaining walls, embedded wall fixtures will light the surface of the walkway.

Traffic signal

Proposed pole light

Existing street light on SW Campus Drive

Portland Bureau of Transportation has identified Terwilliger Boulevard among the city's top thirty high crash streets.

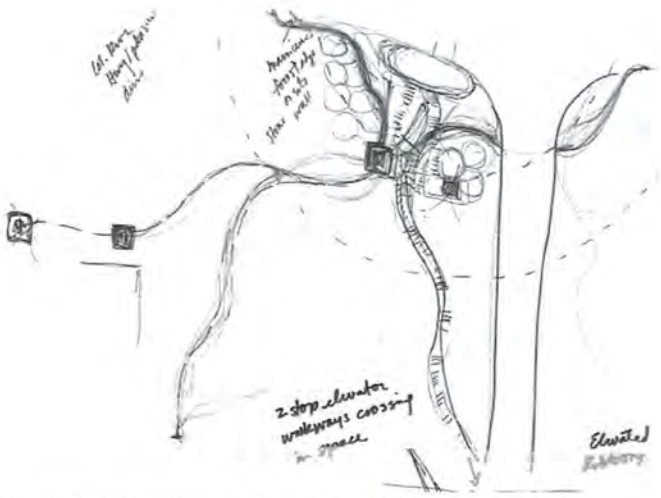
DESIGN PROCESS AND ANALYSIS

OHSU engaged Mayer/Reed to create a vision for future connections to campus, while creating a safer, more hospitable environment for all users, and enhancing the landscape character of Terwilliger Parkway.

Initially, the design team and OHSU representatives met with members of the Homestead Neighborhood Association and Friends of Terwilliger. Participants shared concerns about the potential incorporation of a signalized crossing of Terwilliger Boulevard. Some common design themes emerged in their feedback; and it was concluded from the discussions that pedestrian improvements to the site should have minimal impact, a healthy forest is desirable, and vegetation should screen existing campus buildings. The project site should be a functional space, provide an experience in nature and adhere to existing Terwilliger Parkway guidelines to the greatest degree possible.

OHSU stakeholders were subsequently invited to share ideas for the project. Given the various challenges that exist today, such as difficult access and the slow-to-establish landscape as a foreground to OHSU, participants concluded that the character of the space should be high quality, timeless, represent human health and ecology, and be recognizable as the front door for patients.

Inspirational image selection from the OHSU design charrette.



Sketch of a stair connection and towers with elevated walkways

Other important criteria guided concept development, such as PP&R staff's desire to preserve existing vegetation and habitat; feedback from OHSU participants to create an ADA path that is pleasant and will encourage use by all site visitors; and uphold the Terwilliger Parkway Design Guidelines.

Sketch of an undercrossing of SW Terwilliger Boulevard

DESIGN PROCESS AND ANALYSIS

Mayer/Reed developed a wide variety of study sketches to give form to these ideas and evaluated alternative schemes that included roadway under-crossings, elevators, elevated walkways, bridges and roadway re-alignments.

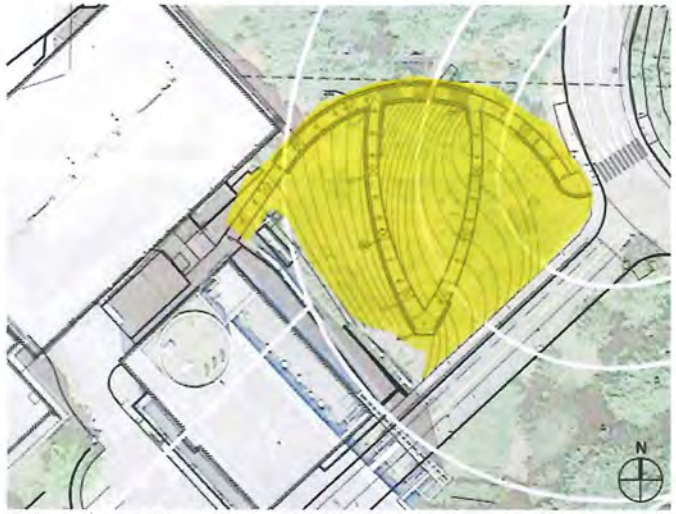
The images to the right are examples of four alternatives with the areas of impact highlighted in yellow. The study on the lower right shows an early iteration of the preferred concept which moves the area of impact away from Terwilliger Blvd. to allow an existing grove of trees to be preserved. This alternative was selected for refinement.

It was evident from the studies that:

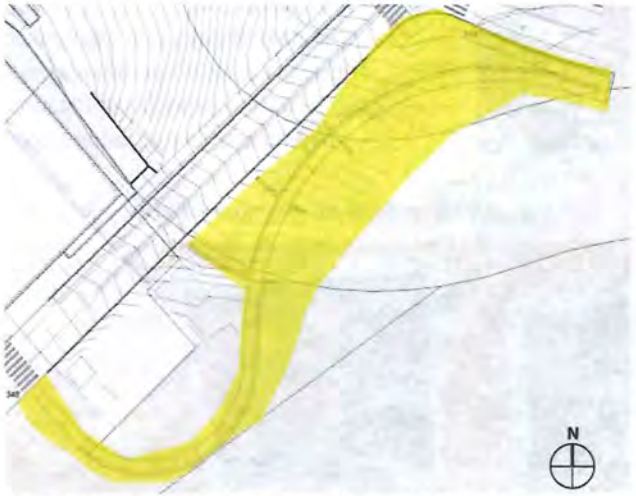
- Below-grade crossing proposals of Terwilliger Blvd. would require significant earthwork, along with large retaining walls to provide ADA access. It would necessitate traversing steep grade changes with switchbacks. The experience and public safety of deep, channelized routes were important considerations. Habitat, drainage and visual impacts would be difficult to mitigate.

- Above-grade options, such as a "forest walk" above grade, would also create a significant visual impact by introducing more architectural elements such as towers and structural supports into the natural parkway environment. While this approach could be interesting from a

Undercrossing with a series of ramps



Stairs and ramps to area between Casey Eye Institute and Parking Garage E



Sloped sidewalk and ramp on the south side of Campus Drive

Stairs and ramps to both the service area and up Campus Drive

Areas of impact

design standpoint, it did not appear to be consistent with the Terwilliger Parkway Guidelines. It was also difficult to create a connection to the parkway.

- Construction of tunnel options would not only present significant costs, they would necessitate temporary shoring and physical and visual impacts to the forest, habitat and drainage on both sides of the roadway that would take decades to re-establish.

- The most simple, on-grade route consisting of ADA ramps and stairs would limit visual and physical impacts to Terwilliger Parkway and the habitat. A signal and crosswalk would provide an efficient, safe and ADA-compliant route with multi-modal benefits. It would also enable connections to the parkway, not just the campus.

In the early stages of concept development, the project team explored basic questions surrounding the project--namely what is the best destination for an accessible pathway to the larger campus? Having acknowledged KPV's 7th floor terrace as a potential future connection, the team explored three more immediate destinations:

- Alternatives along Campus Drive up to the new hospital expansion, where the roadway slope at about 10% exceeds ADA standards.

- A small area between Casey Eye Institute and Garage E currently used for service of three lower campus buildings, which many people currently walk up a rough trail to reach.

- Along the toe of slope on the south side of Campus Drive, which would route people away from their destinations. This route would constitute out-of-direction travel, would be isolated, and would likely only be used by those who are mobility challenged. It would not create the opportunity to repair the landscape east of Casey Eye Institute.

WAYFINDING STUDY

OHSU serves patients from the local community and statewide, and requires a clear identity and wayfinding that can help visitors easily locate the campus. The Marquam Hill Plan designates SW Campus Drive as the main point of access for patients. While the CEI building will remain visible on the parkway, it is only one of the specialized institutions on the campus, and not necessarily a main destination for the majority of visitors, many of which visit OHSU only once.

Advance guide signs are needed along the parkway and clearer reinforcement of the turn into campus is needed at the intersection of Campus Drive and Terwilliger. The existing "OHSU" letters clipped into topiary shrubs located at the southeast corner of CEI are not easily recognizable and serve little if any wayfinding purpose.

As one approaches SW Campus Drive from north or south on Terwilliger, the corner indicated in the yellow is the most visible. While it gives drivers some advance warning to make the turn onto Campus Drive, no other sign location provides the same level of visibility to reinforce the arrival point for OHSU. This location for signage also works well with the proposed connector design since it can be integrated into stone retaining walls.

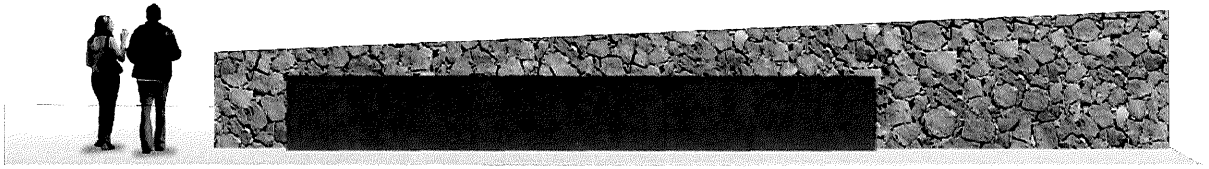
Approaching OHSU from the north on SW Terwilliger Boulevard

Approaching OHSU from the south on SW Terwilliger Boulevard

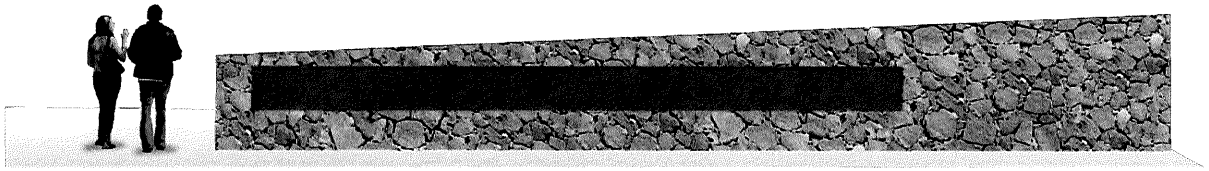
WAYFINDING STUDY

The images to the right show two options for wayfinding signage that would fit within the character of the Terwilliger Parkway. These options respond to the scale and materials of the existing Terwilliger Parkway sign in Duniway Park to the northeast. Both options show a refined stone faceplate mounted to rustic basalt wall. The sign letters would be stainless steel to provide the best contrast and visibility. Illumination of the sign would allow it to be effective 24 hours a day.

The sign may serve as an identifier for OHSU and Terwilliger Parkway, though coordination is needed to determine how to do so effectively.



The stone faceplate extends to the ground surface.



The faceplate is mounted to the wall above the ground that resembles the Terwilliger Parkway sign in Duniway Park

OPEN HOUSE

Date & Time:
Monday, December 3, 2018
6:00-7:30 PM

Location:
OHSU - Marquam Hill
Casey Eye Institute
Macdonald Auditorium
3375 SW Terwilliger Blvd
Portland, OR 97239

The driveway and front door of Casey Eye Institute is located off of SW Campus Drive. Free automobile and bike parking will be available; and the site is served by TriMet bus route 8. For more information about your transportation options, please visit ohsu.edu/xd/about/visiting, or contact OHSU Transportation & Parking at 503- 494-8311.

This proposal requires a Design Review, Environmental Review and Non-Park Use Permit.

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