UNIVERSITY OF WASHINGTON
WEST CAMPUS UTILITY PLANT PROJECT

ENVIRONMENTAL CHECKLIST

UNIVERSITY OF WASHINGTON

April 2015

ENVIRONMENTAL CHECKLIST

FOR

THE UNIVERSITY OF WASHINGTON
WEST CAMPUS UTILITY PLANT PROJECT

Prepared By:

EA Engineering, Science and Technology, Inc.

April 7, 2015

PREFACE

The purpose of this Environmental Checklist is to identify and evaluate environmental impacts that could result from the development of the proposed project and to identify mitigation measures to mitigate those impacts. The proposal would involve the construction of a new utility plant in the West Campus area of the University of Washington. The proposed West Campus Utility Plant would serve the South Campus and West Campus areas and include two levels (basement and ground level) and approximately 11,310 gross square feet of building space. Chillers and cooling towers would be installed to support an initial capacity of 3,000 tons of chilled water, with full buildout capacity for up to 10,500 tons of chilled water. Emergency power generation would also be provided and exterior generators would be installed on the rooftop. Emergency generators would provide an initial capacity of six megawatts of power with space for an expanded capacity of up to 12 megawatts.

The State Environmental Policy Act (SEPA) requires that all governmental agencies consider the environmental impacts of a proposal before the proposal is decided upon. This Environmental Checklist has been prepared in compliance with SEPA (Chapter 197-11, Washington Administrative Code) and the University of Washington's SEPA policies.

This Environmental Checklist is divided into three sections. **Chapter 1** provides an introduction and background information on the proposal, including campus planning context, site location, existing site conditions, surrounding uses, and a summary of the proposal. **Chapter 2** includes the checklist form and responses to checklist questions, which comprise the analysis of the environmental impacts that could result from implementation of the proposal. This chapter also identifies potential mitigation measures. **Appendix A** to this checklist contains the greenhouse gas emissions data sheet. **Appendix B** to this checklist contains the Historic Resources Addendum.

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INTRODUCTION AND PROJECT DESCRIPTION

CHAPTER 1

INTRODUCTION AND PROJECT DESCRIPTION

This chapter of the Environmental Checklist provides a discussion of the planning activities conducted in support of the proposed University of Washington West Campus Utility Plant Project, information on the site and surrounding area, and a description of the proposed West Campus Utility Plant Project.

1.1 BACKGROUND

University of Washington Campus

The University of Washington was founded in 1861 as a public research and education institution and currently has campuses in Seattle, Tacoma, and Bothell, as well as research stations across the state. The University of Washington conducts master planning to guide future development on all campuses. In January 2003, the University of Washington adopted the Seattle Campus Master Plan (*CMP-Seattle 2003*), a conceptual plan for the Seattle Campus that establishes guidelines and policies for up to approximately three million square feet of building area for academic, housing, research, education and support uses. This plan was approved by the University of Washington Board of Regents and the City of Seattle. All new development on the University of Washington Seattle Campus is consistent with the guidelines and requirements that are identified in the *CMP-Seattle 2003*.

For planning purposes, the *CMP-Seattle 2003* divided the Seattle Campus in four different areas, including the Central, West, South/Southwest, and East Sector. Each area is characterized by varying structures and uses, and follows a list of objectives that represent ideas for future development within the area. The proposed West Campus Utility Plant Project site is located in the West Campus Sector, which is generally bounded by 15th Avenue NE on the east, the University Bridge and Roosevelt Way NE to the west, NE Pacific Street on the south, and NE 41st Street on the north. The West Campus is identified in the *CMP-Seattle 2003* as the area of campus with the most development opportunity. Due to its location adjacent to a lower-scale, commercial and residential area, the West Campus has the strongest physical interrelationship with the surrounding community and new development should be of a different character than Central Campus, designed to be reasonably compatible with the scale of adjacent development, and reinforce the existing street grid.

Specific objectives of the *CMP-Seattle 2003* for the West Campus include:

- Create new facilities that better define the form of West Campus, utilizing the grid of existing streets as the structure for buildings and open space.

- Create a mix of uses that best serve the needs of the University and surrounding community.
- Make better use of the Campus Parkway area by improving traffic and circulation, the quality of open space, and the image of the community and University.
- Strengthen connections to the Central and South Campus.
- Create more inviting campus edges and entrances.
- If the City of Seattle undertakes planning of landscape improvements to NE Campus Parkway, the University will work with the City and community to identify landscape improvements that will make NE Campus Parkway more attractive, including a significant upgrade of the environment along NE Campus Parkway.
- Transform surface parking into structured parking.
- Improve pedestrian and bicycle facilities and connections.
- Contribute to the achievement of the University Community Urban Center Plan, where appropriate.

Substantial development has occurred in the West Campus since the development of the *CMP-Seattle 2003* and the goals and objectives for this area have been largely achieved.

The *CMP-Seattle 2003* indicates the amount of new development allowed in each sector of campus and indicates that approximately 870,000 gross square feet (GSF) of new development is allowed in the West Campus sector. The *CMP-Seattle 2003* further indicates that up to an additional 20 percent of GSF of development is allowed in each sector without an amendment to the *CMP-Seattle 2003*; a total of 1,044,000 GSF of new development is permitted in the West Campus Sector. There is adequate development square footage remaining in the West Campus to accommodate the proposed West Campus Utility Plant Project.

The *CMP-Seattle 2003* identifies approximately 70 potential development sites throughout the campus, and includes guidelines and policies for development on these sites. The proposed West Campus Utility Plant Project site is identified as Development Site 41W, which is located in the southeast portion of the West Campus area and is generally bounded by Development Site 36W (future UW Police Department Building) and Gould Hall to the north, the Church of Jesus Christ of Latter-day Saints building and the University of Washington West Receiving Station to the east, the Burke Gilman Trail and NE Pacific Street to the south, and University Way NE to the west. The existing project site contains a portion of University Parking Lot W14, as well as the University-owned Gould Hall Annex (3900 University Way NE Building). The *CMP-Seattle 2003* identifies Development Site 41W as a potential site for academic and transportation use, with approximately 63,000 square

feet of potential above-grade building development and a maximum allowable building height of 65 feet (approximately five stories). Per the *CMP-Seattle 2003* definition of institutional uses, the proposed West Campus Utility Plant would be consistent with the uses identified for Academic use (including facilities supporting the plant maintenance functions of the University) and would help address the utility needs for chillers and emergency power identified in the *CMP-Seattle 2003*.

The specific *CMP-Seattle 2003* guideline that relates to Development Site 41W includes the following:

- Consider the relationship of proposed building façade and entries from the east-west walkway, University Way NE, Brooklyn Avenue NE, NE 40th Street and the Burke Gilman Trail.

Development Site 41W was selected for the proposed West Campus Utility Plant based on several factors, including: the project site's proximity to the West and South Campus areas that would be served by the facility; the site's location above two branches of the campus utility tunnel system allows for connection and distribution of the chilled water and emergency power through the existing tunnel system; and, the site's direct proximity to the University's West Receiving Station.

Other *CMP-Seattle 2003* potential development sites were not identified as the location of the West Campus Utility Plant because other sites could not accommodate the facility at a lower environmental cost and meet the objectives/goals of the proposal. For example, locating the proposed utility plant on other development sites would result in the potential for digging additional tunnel branches/connections to the campus utility tunnel; would not provide direct proximity to the West Receiving Station resulting in additional infrastructure improvements; and/or, would not provide proximity to both the South and West Campus areas.

Currently, chilled water and emergency power (as well as steam heat and compressed air) for most of the University of Washington campus is provided by the University's Central Power Plant. These utilities from the Central Power Plant are distributed across the campus through an approximately eight-mile underground tunnel network. The existing central plant is currently at capacity and has been unable to serve most of the new cooling and emergency power loads for several years. Some recently constructed buildings on the campus have had to provide their own cooling and emergency power which is less efficient and less reliable than a central plant. Chillers and appurtenances within the existing central plant are also not designed to provide year-round process cooling and only provide seasonal environmental (comfort) cooling for the buildings served (*University of Washington, 2015*). The proposed West Campus Utility Plant will provide comfort and process demand cooling year round for the South and West Campus, as well as emergency power to those areas. The proposed plant will also provide emergency power to some existing buildings that currently rely on their own emergency power generation or are served by the existing

Central Power Plant, which will free up capacity in the existing plant to serve new loads in the main campus service area.

1.2 EXISTING SITE CONDITIONS

Existing Site

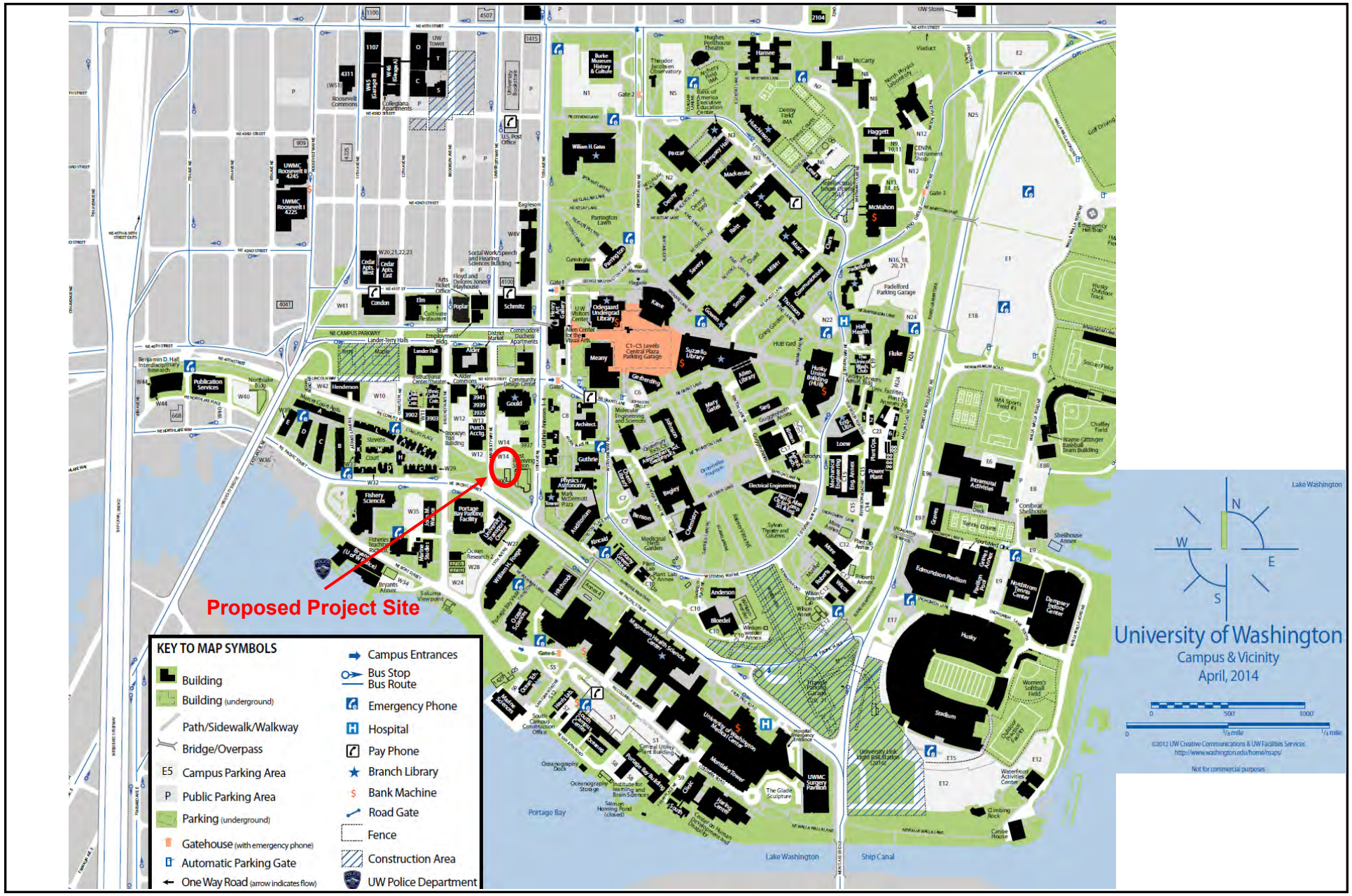
The approximately 0.5 acre (20,955 square feet) proposed West Campus Utility Plant Project site is located in the West Campus area of the University of Washington campus and is generally bounded by: an alley, Development Site 36W (future UW Police Department Building) and Gould Hall to the north; an alley, the Church of Jesus Christ of Latter-day Saints building and the University of Washington West Receiving Station to the east; the Burke Gilman Trail and NE Pacific Street to the south; and, University Way NE to the west (see **Figure 1-1** for map of the University of Washington campus).

The site has a gradual slope toward the southwest, with an approximately six-foot elevation change from north to south and an approximately five-foot elevation change from east to west. The proposed site currently contains the existing single-story, approximately 4,288-square foot 3900 University Way NE building (also referred to as the Gould Hall Annex). A portion of University Parking Area W14 is also located on the site and contains approximately 25 parking stalls. An approximately 14-foot wide access alleyway is located along the northern and eastern edge of the project site and provides vehicular access to surrounding buildings and parking areas located on the block (see **Figure 1-2** for a map of the existing site survey).

Existing trees and vegetation are primarily located on the western and southern portions of the site. A total of 14 trees are located on the project site and all of these trees are considered significant trees based on the City of Seattle's standards; none of these existing significant trees are considered Exceptional trees based on City of Seattle standards[1]. Existing tree species include Zebrina western red cedar, Variegate port orford cedar, Ponderosa pine, European birch, Cottonwood, Pin oak, Linden, and Japanese maple. Existing trees range in size from four inches in diameter to 28 inches in diameter.

On the adjacent Burke Gilman Trail area to the south of the site, there are approximately 18 significant trees located near the south boundary of the proposed West Campus Utility Plant site. Of these 18 significant trees, four would be considered Exceptional based on the City of Seattle's standards.

[1] City of Seattle Director's Rule 16-2008.



Source: University of Washington, 2014.

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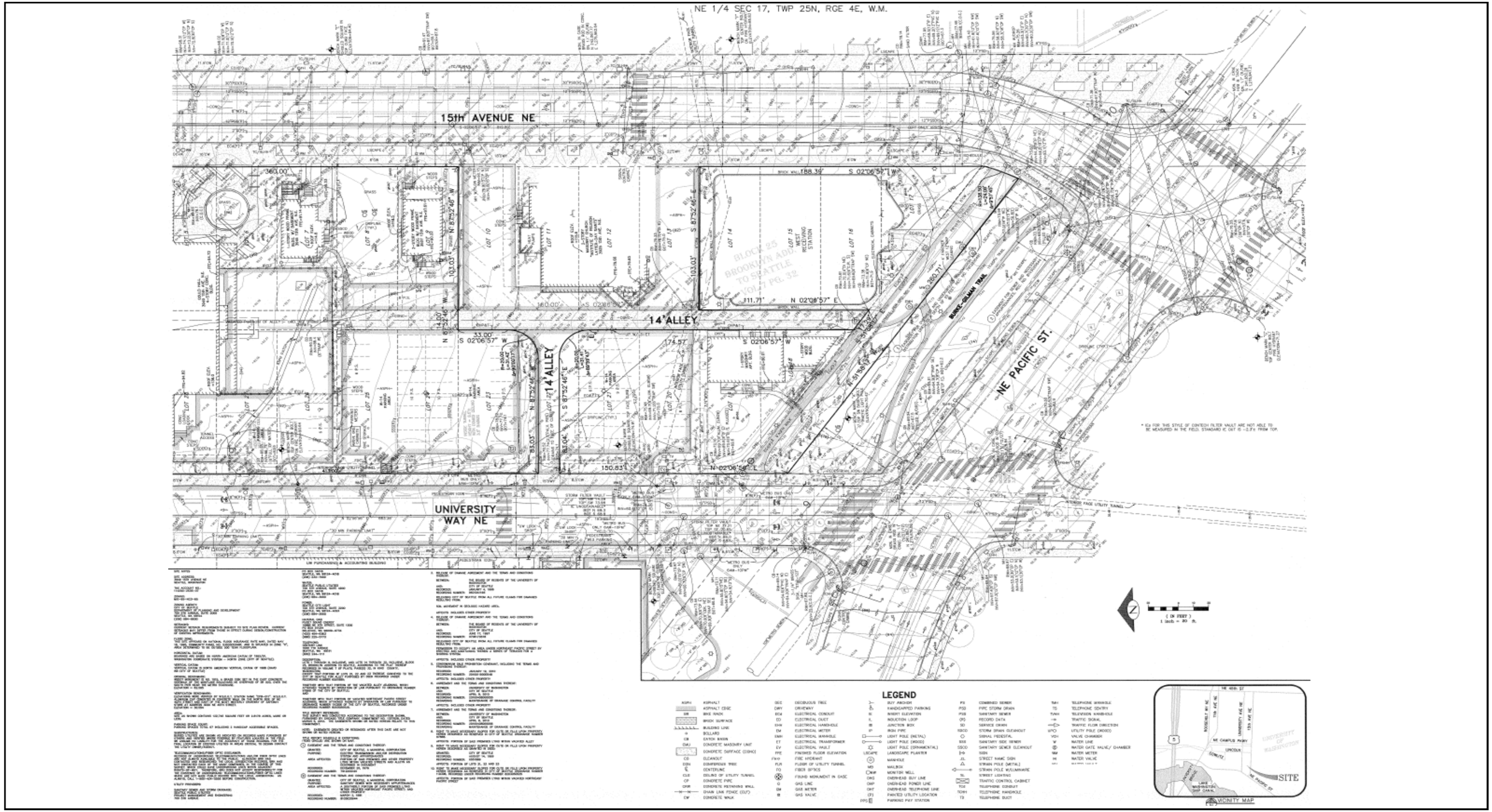
Figure 1-1
Campus Map



Source: Bush, Roed and Hitchings, Inc., 2014.

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Figure 1-2
Site Survey

In addition to existing development and landscaping on the site, there are utility systems that are located below the project site. Three branches of the existing University of Washington campus utility tunnel are located below the project site. The branches converge at Vault WT-5 which is located along the west property line of the site. One branch heads north towards Gould Hall, the second branch heads south across NE Pacific Street, and the third branch heads to the east and bisects the site. The east and south tunnel are approximately 20 feet deep, while the north tunnel is approximately 10 feet deep. An existing 10-foot by 15-foot precast electrical vault is also located below the southwest corner of the site and is located directly above the campus utility tunnel. University electrical feeders are routed from the adjacent University of Washington West Receiving Station to the west in a series of duct banks and then to an electrical vault which connects to the utility tunnel.

Surrounding Area

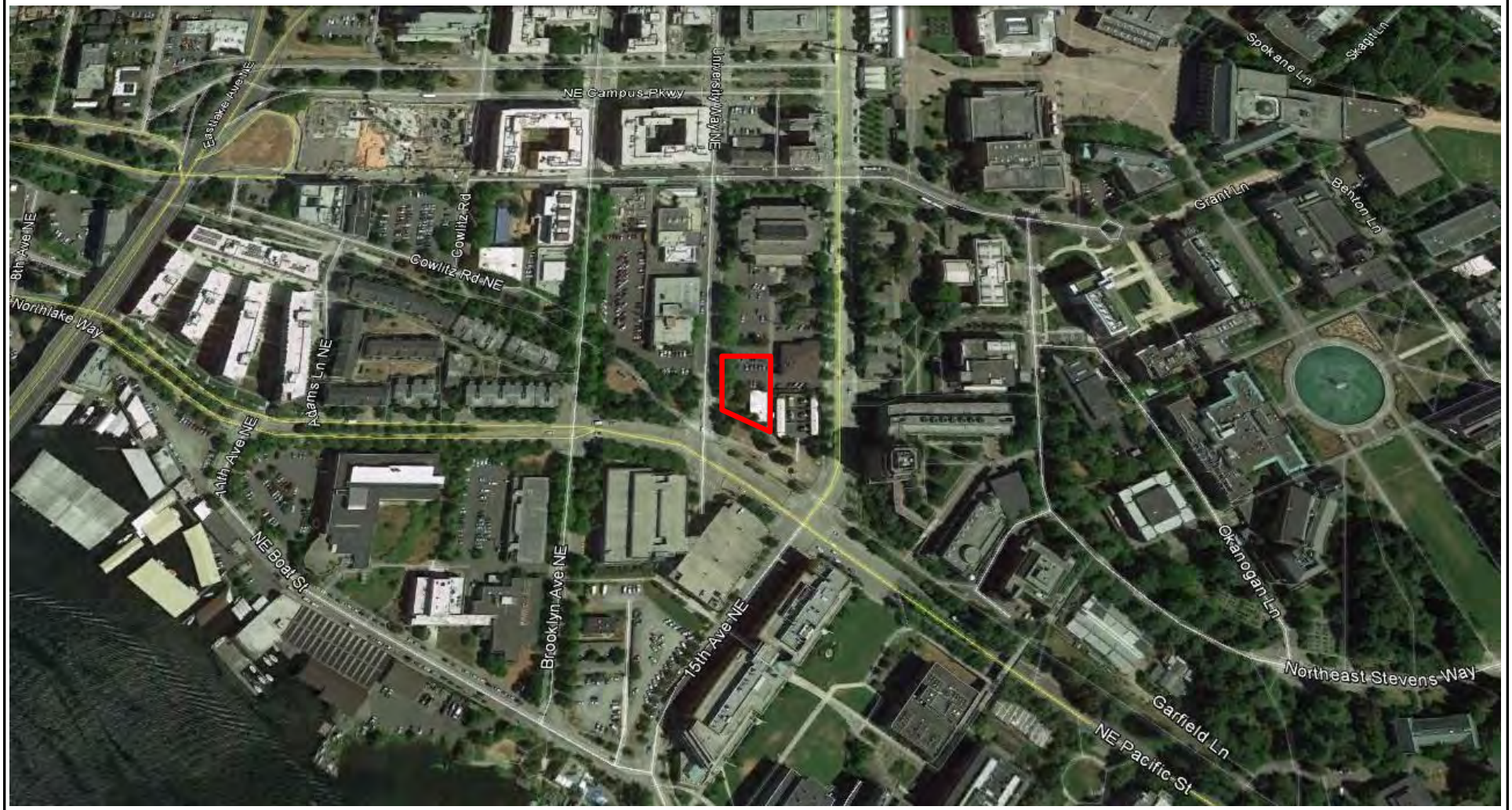
The West Campus area of the University of Washington campus is generally characterized by a variety of University uses and building types, including academic, student housing and University support uses. These existing University uses are interspersed with a variety of other commercial and residential uses within the surrounding University District neighborhood (see **Figure 1-3** for an aerial map of the proposed site and surrounding area).

The area to the immediate north of the site is comprised of an approximately 14-foot wide alley, Development Site 36W (the site of the future University of Washington Police Department Building) and Gould Hall. Gould Hall is a four-story, approximately 115,000-square foot building that primarily houses the University's College of the Built Environments (Architecture, Landscape Architecture, Urban Design and Planning, Construction Management, and Real Estate). Further to the north, beyond NE 40th Street, are the Commodore Duchess Apartments and commercial/retail uses, including the College Inn.

To the immediate west of the site is University Way NE. Beyond University Way NE is University Parking Area W12, the Purchasing and Accounting Building, and vegetated areas surrounding the Burke Gilman Trail.

To the immediate east of the site, beyond the existing 14-foot wide alley, is the Church of Jesus Christ of Latter-day Saints building and the University's West Receiving Station, which provides electrical distribution to the western portion of the campus. Further to the east are 15th Avenue NE and the Central Campus area, including Guthrie Annexes, the Physics Astronomy Building, Guthrie Hall and Architecture Hall.

The area to the south of the proposed West Campus Utility Plant Project site includes the Burke Gilman Trail (a regional multi-use trail that traverses through the campus) and NE Pacific Street. Further to the south, beyond NE Pacific Street, are the University Transportation Center, the Portage Bay Parking Garage, and William H. Foege Hall.



Source: EA Engineering and Google Earth, 2015.

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Figure 1-3
Aerial Photo

1.3 SUMMARY OF THE PROPOSAL

Introduction

The proposed West Campus Utility Plant Project is intended to provide additional capacity for chilled water and emergency power to serve existing and future development in the West Campus and South Campus areas. The proposed building would include two levels (basement and ground level) and would contain approximately 11,310 gross square feet (GSF) of building space; equipment (i.e., emergency power generators and cooling towers) would also be located on the rooftop of the building.

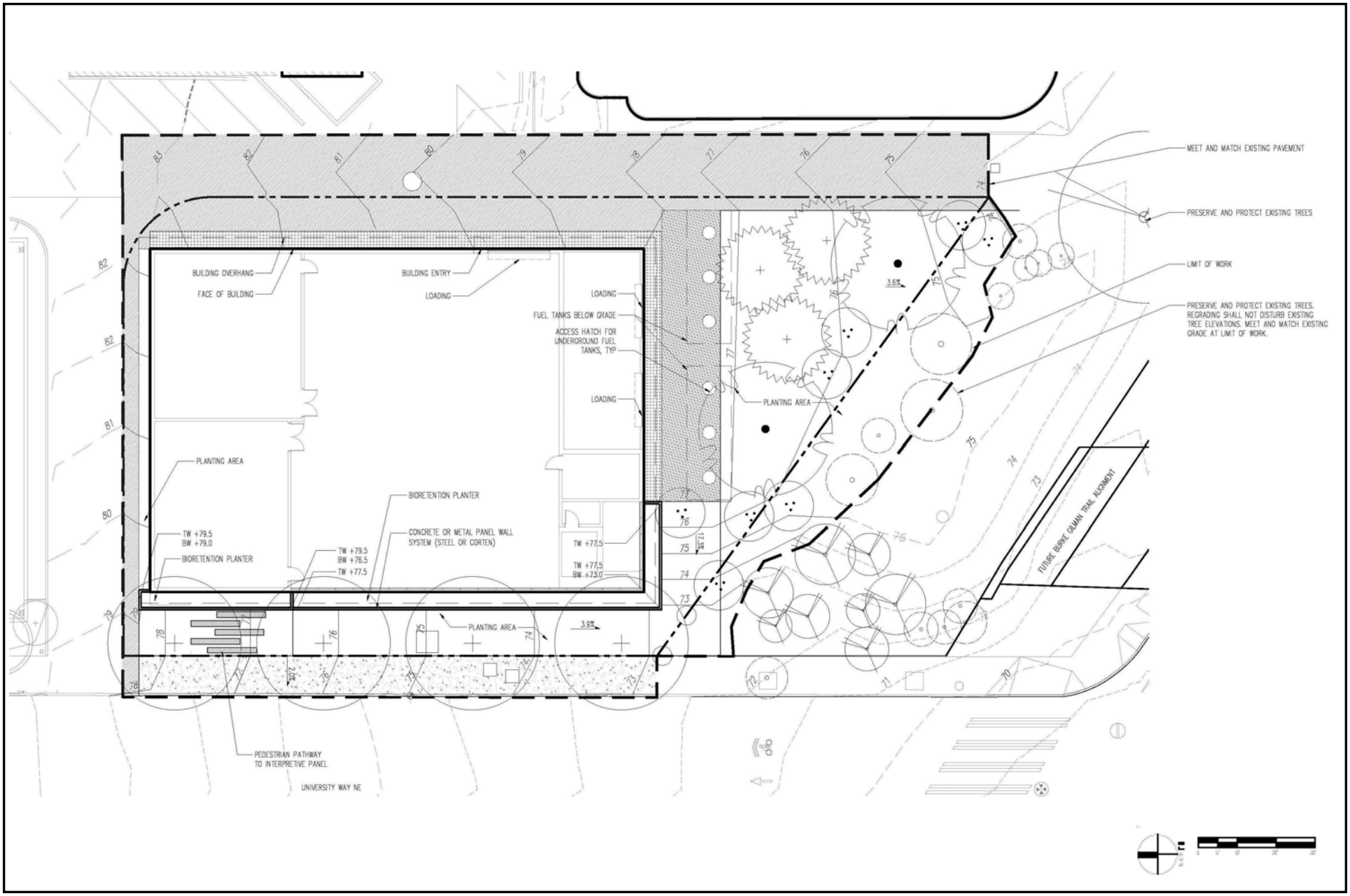
Chillers and cooling towers would be installed to support an initial capacity of 3,000 tons of chilled water, with full buildout capacity for up to a total of 10,500 tons of chilled water. Emergency power generation would also be provided as part of the project and exterior generators would be installed on the rooftop of the building. Emergency generators would provide an initial capacity of 6 megawatts with space for expanded capacity up to a total of 12 megawatts.

The proposed building would be located on the northern and central portions of the site and would include design features that are intended to create a gateway to the University of Washington visible from University Way NE, NE Pacific Street, and the Burke Gilman Trail; portions of the building could also be visible from northbound I-5. Design elements (windows, façade treatments, etc.) would be incorporated along the west and south façades to engage the public along University Way NE and the Burke Gilman Trail. A visually appealing screen wall would also be provided on the rooftop of the building to screen rooftop equipment from surrounding uses and provide a solid surface to meet the acoustical requirements for the cooling towers and generators. Landscaping and new trees would be planted on the site as part of construction to further enhance the aesthetic appeal of the site. The design would include features on the southwest corner of the site to create a visually appealing area near the intersection of the Burke Gilman Trail and University Way NE. See **Figure 1-4** for a site plan of the proposed project.

Project Goals

The University of Washington identified the following project goals as part of the proposed West Campus Utility Plant Project.

- Develop a facility that would provide chilled water and emergency power for the existing needs of the West Campus and portions of the South Campus areas.
- Allow flexibility for future expansion within the proposed building to meet the projected future needs of the West Campus and South Campus areas.
- Incorporate design elements within the building and landscape to create a gateway to the University campus.



Source: GGN, 2015.

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Figure 1-4
Site Plan

- Provide design elements to minimize the visual and acoustic impacts of rooftop equipment on the proposed building.

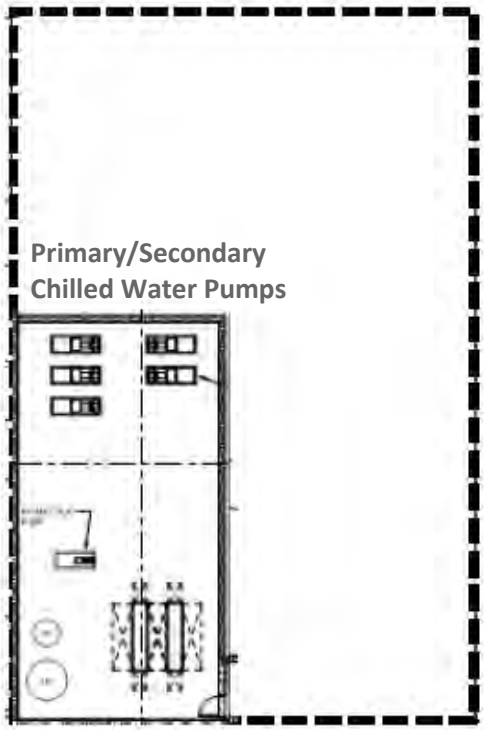
Design Concept

The proposed West Campus Utility Plant Project is designed to accommodate existing chilled water and emergency power demands for the West Campus and South Campus and allow for future expanded capacity within the building to meet the anticipated future demands for the area. The proposed design of the building would include the initial installation of two chillers and two cooling towers and three emergency power generators, with further expansion of these facilities within the proposed building and rooftop area in the future, as demand warrants.

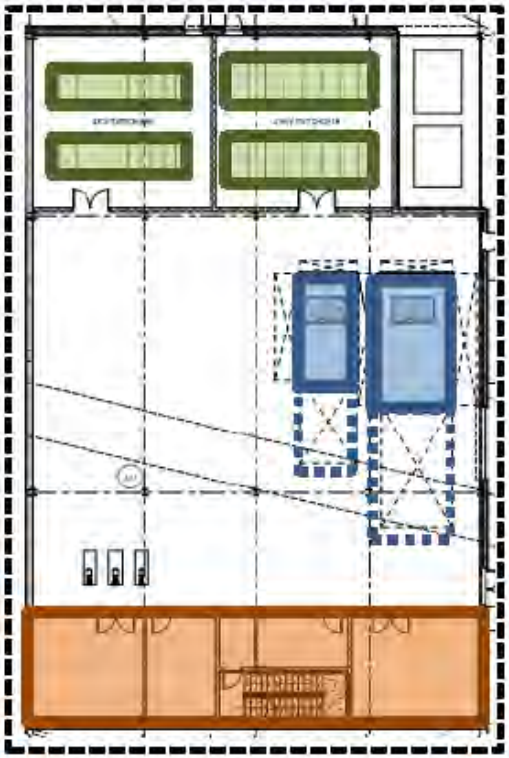
The building would be located on the northern and central portion of the site, and is intended to serve as a gateway feature to the University of Washington campus and surrounding neighborhood by providing a visual statement indicating entry to the overall campus. The ground floor of the building would include window elements along the western and/or southern façades to provide visual access to the workings of the plant, and embrace rather than hide the utility functions of the building.

The proposed building height would be approximately 63 feet at its highest point, which would be below the 65-foot height limit established for the site under the *CMP-Seattle 2003*. The design of the proposed building includes two levels (basement and ground level) and approximately 11,310 square feet of building space. Area within the building would be entirely comprised of chiller facility space, emergency generator space, mechanical and electrical space, and support space for the storage of building maintenance materials. The West Campus Utility Plant would be operated remotely from the existing University Central Plant and no personnel would be dedicated solely to the proposed plant. Existing university personnel would visit the plant periodically to perform routine maintenance, deliveries, and troubleshooting, as necessary.

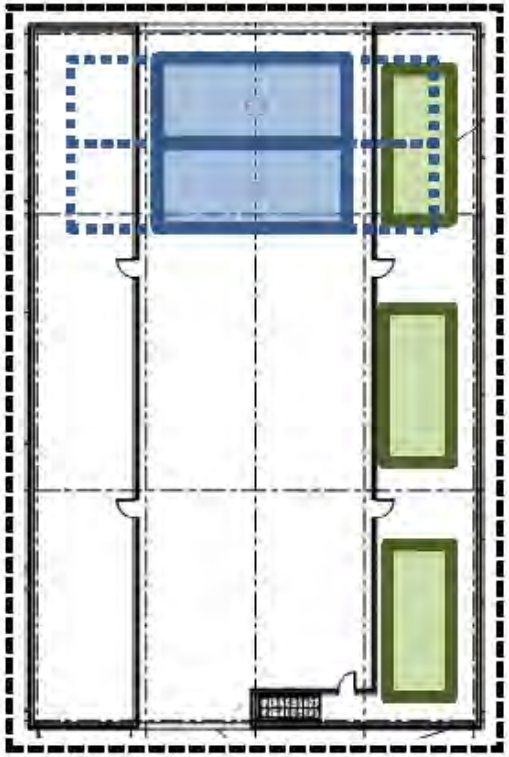
The basement level of the proposed West Campus Utility Plant would be designed as a partial basement space and include approximately 3,554 gross square feet of building area (see **Figure 1-5** for floor plans of the initial installation and **Figure 1-6** for floor plans of the full buildout of the utility plant). The basement level would primarily include space for the proposed pump room that would distribute chilled water to the surrounding West Campus and portions of the South Campus areas. A connection to the existing University campus tunnel system would be included in the building for distribution to the South Campus and West Campus areas.



PARTIAL BASEMENT PLAN



MAIN FLOOR PLAN



ROOF PLAN

Power Generation Equipment

Chilled Water Equipment

Control Room, Water Treatment, Fuel Oil Pump, Restrooms, & Stairs

Note: This figure is not to scale

North

Source: The Miller Hull Partnership, 2015.

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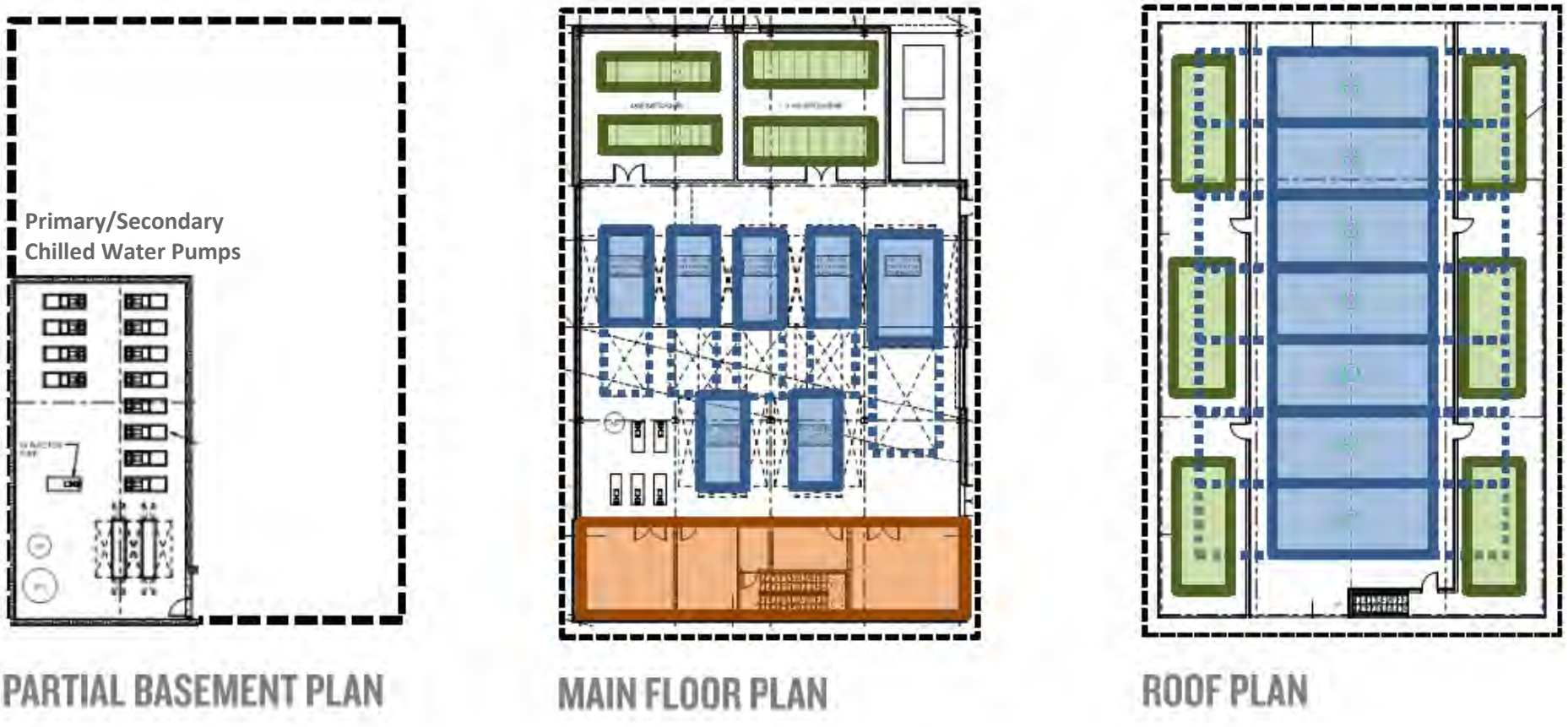
Figure 1-5
Initial Installation Floor Plans



Source: The Miller Hull Partnership, 2015.

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Figure 1-6
Full Buildout Floor Plans

The proposed plant is located near the intersection of two branches of the campus utility tunnel system. New chilled water pipelines and emergency power cables would be routed directly from the plant into the existing utility tunnel system which would provide connections to existing and future buildings in the area; initial capacity from the plant would primarily serve a portion of the South Campus area and would expand to the West Campus as capacity is added to the plant. Existing chilled water conveyance lines (10-inch and 12-inch lines) within the utility tunnel between the site and South Campus would be replaced with new 22-inch lines. Existing chilled water lines serving the West Campus would be re-plumbed to convey chilled water from either the existing Central Plant or the proposed West Campus Utility Plant. Emergency power cables would be routed from the proposed plant through the existing tunnel system. Initial emergency power capacity would serve the South Campus area and the service area would expand to the West Campus area as capacity is added to the proposed West Campus Utility Plant.

The proposed West Campus Utility Plant ground level would include approximately 7,756 gross square feet of building space for chilled water and emergency power facilities, as well as support space for maintenance and storage uses (see **Figure 1-5** and **Figure 1-6** for the floor plans). Building entrances would be provided on the east side of the proposed building. Initial installation of chilled water facilities within the building would include two 1,500 ton chillers (a total of 3,000 tons of chilled water capacity) and associated condenser pumps within the central portion of the ground level; additional space would also be provided within this area to allow for future chiller capacity with up to 10,500 tons of total chilled water capacity within the proposed building. Window elements would also be provided on the ground level to provide visual access to the inner workings of the proposed utility plant and operations.

Emergency power equipment would be located in the north end of the ground level and would include 480 volt and 4,160 volt switchgears that would initially support up to six megawatts of emergency power generation; additional space would also be provided within the proposed building and rooftop areas to allow future power generation facilities with capacity for a total of up to 12 megawatts of power. The south end of the ground level would include space for the control room, fuel oil pumps, water treatment and stairs to the basement level.

The rooftop of the proposed West Campus Utility Plant would contain the cooling towers associated with the generation of chilled water, as well as the emergency power generators. Initially, two, 1,500 ton cooling towers would be provided on the rooftop to support the chillers within the proposed building. Additional space would be available on the rooftop to allow for the future cooling towers to accommodate a total of 10,500 tons of chilling capacity. Three, two-megawatt generators would also be located on the rooftop to initially provide six megawatts of emergency power. Additional space would be provided on the rooftop to allow for additional generators to create a total future capacity of 12 megawatts of emergency power (see **Figure 1-5** and **Figure 1-6** for an illustration of the proposed rooftop plan).

Exterior Building Design

The proposed West Campus Utility Plant would be a two level structure (ground level and partial below-grade basement) with cooling towers and generators on the rooftop (rooftop screening would be provided). The base of the building from the grade to the roof level would be comprised of insulated concrete panels to provide durable surfaces at both the interior and exterior of the facility appropriate for a utility plant, as well as for security. Windows would be provided along the south and west elevations and concentrated at the southwest corner of the ground level to engage the public and provide a visually appealing and interesting pedestrian experience along University Way NE and Burke Gilman Trail. Architectural interpretive elements would also be provided along the west façade to further activate the pedestrian experience along University Way NE.

The rooftop equipment would be screened from view by an exterior screen wall that would wrap around the building from approximately 12 feet above the ground floor level and extend up to a height approximately level with the top of the cooling towers (approximately 63 feet in height and below the maximum 65-foot height limit indicated in the CMP-Seattle 2003). The exterior screen wall is intended to address both acoustical and screening requirements while providing an architectural gateway character to the facility appropriate to the prominent site location in the West Campus sector (see **Figure 1-7** for conceptual building massing of the proposed building and **Figures 1-8** and **1-9** for proposed building elevations).

Sustainable Design Features

The University of Washington has an adopted policy to require LEED certification for all new buildings. However, LEED certification measures are primarily related to academic, residential and commercial-type structures, with Envision certification measures being more applicable to infrastructure buildings. Accordingly, the University has determined that the project would be designed to meet the requirements for Envision certification. The Envision Sustainable Infrastructure Rating System is a joint collaboration between the Zofnass Program for Sustainable Infrastructure at Harvard University and the Institute for Sustainable Infrastructure (ISI).

Envision evaluates, grades and gives recognition to infrastructure projects that use transformational, collaborative approaches to assess the sustainability indicators over the course of a project's life cycle. Credits for Envision certification are given based on five categories: Quality of Life, Leadership, Resource Allocation, Natural World, and Climate. Envision award levels range from Bronze, Silver, Gold, and Platinum. The goal for the proposed project is qualify for Silver certification, at minimum.

Note: This figure illustrates the conceptual building massing for the building and does not represent specific design elements of the building.

Source: The Miller Hull Partnership, 2015.

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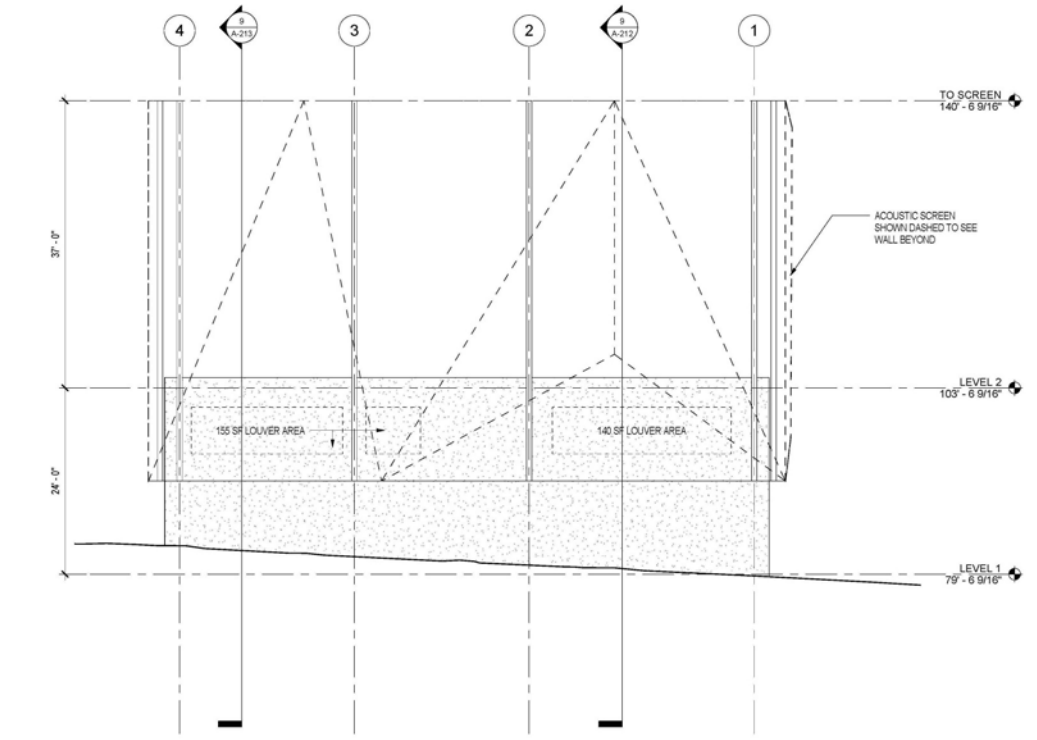
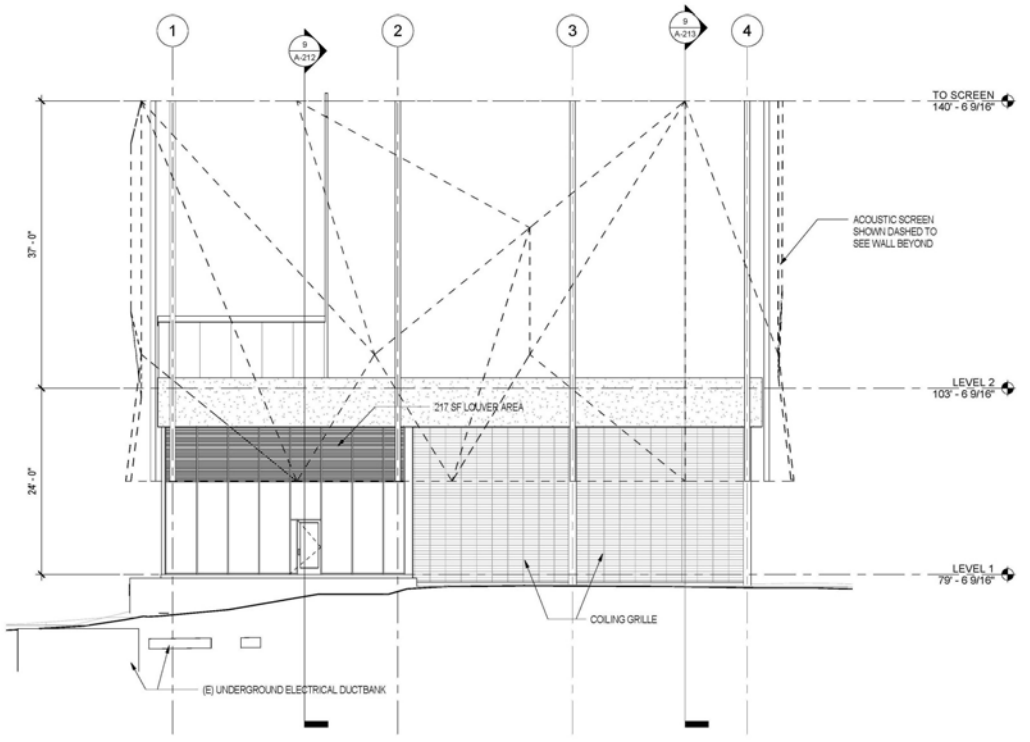
Figure 1-7
Building Massing



18 NORTH ELEVATION
1/8" = 1'-0"



6 SOUTH ELEVATION
1/8" = 1'-0"

Source: The Miller Hull Partnership, 2015.

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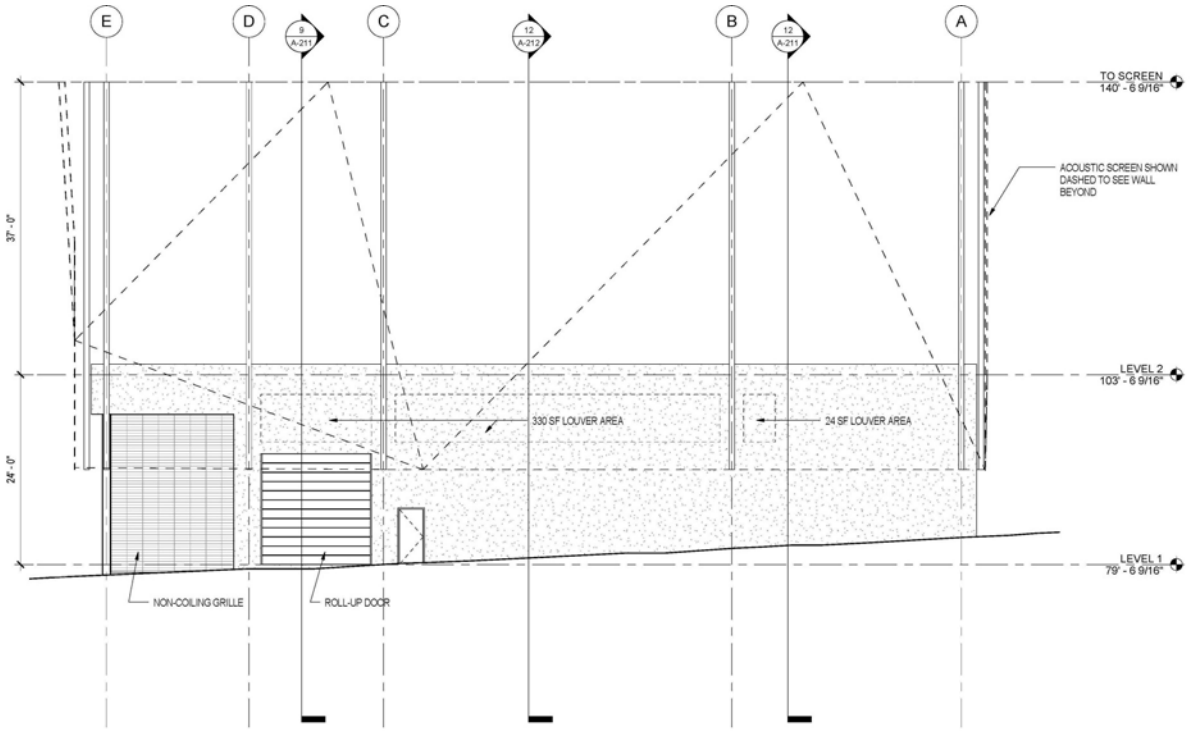
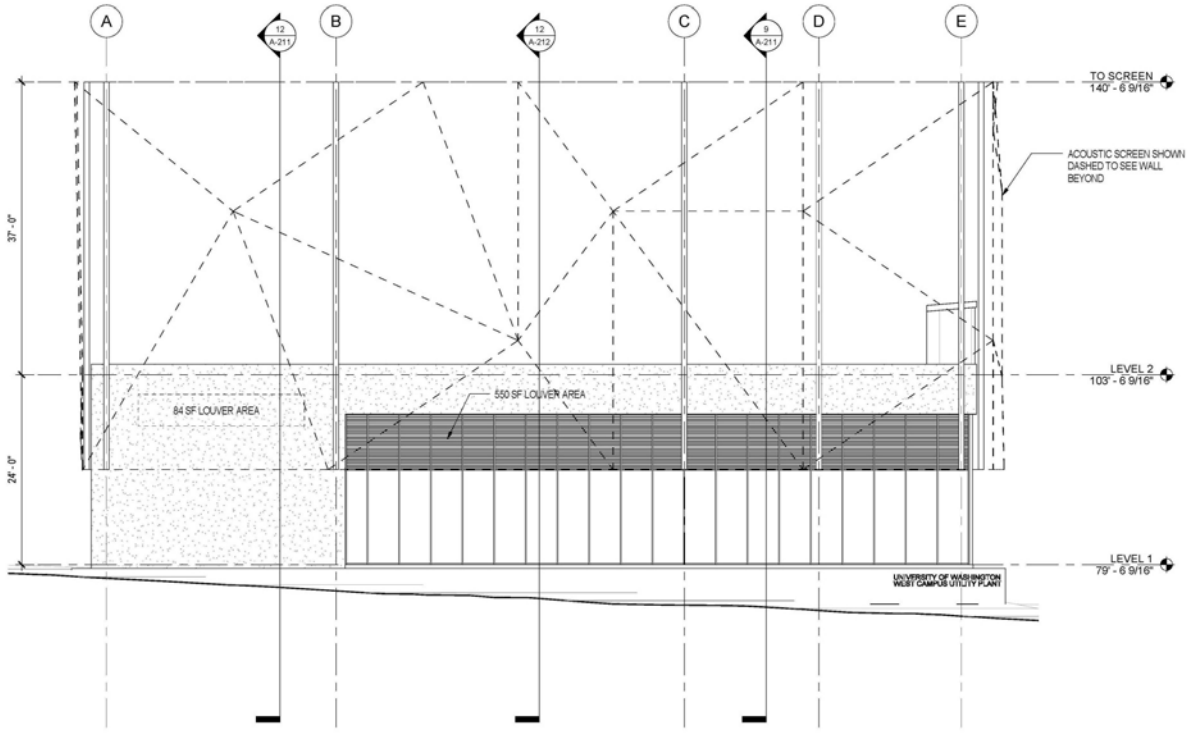
Figure 1-8
North and South Building Elevations



15 EAST ELEVATION
1/8" = 1'-0"



3 WEST ELEVATION
1/8" = 1'-0"

Source: The Miller Hull Partnership, 2015.

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Figure 1-9
East and West Building Elevations

Based on the *Envision Credit Table of Points Values*, the proposed West Campus Utility Plant would qualify for the following Envision credits that would be considered as part of the Envision certification process.

- Improve community quality of life
- Enhance public health and safety
- Minimize noise and vibration
- Preserve views and local character
- Establish a sustainability management system
- Improve infrastructure integration
- Plan for long-term monitoring and maintenance
- Reduce net embodied energy
- Reduce energy consumption
- Commission and monitor energy systems
- Monitor water systems
- Reduce greenhouse gas emissions
- Reduce air pollutant emissions
- Assess climate threat
- Prepare for short term hazards

Parking and Circulation

Approximately 25 parking stalls associated with a portion of University Parking Area W14 are located on the project site. These parking stalls would be displaced as part of the proposed West Campus Utility Plant Project. Similar to the parking procedures for many other University buildings, no new general public parking would be provided on the site, particularly due to the fact that the proposed building would be operated remotely and no permanent staff would be located within the building. It is anticipated that two parking spaces would be provided for visiting personnel to use while accessing the building. Parking would also be available within surrounding University Parking Areas (i.e. University Parking Area W12 and W13 to the east) or along the adjacent streets (University Way NE, 15th Avenue NE, etc.). A loading area would also be located on the east side of the building, adjacent to the existing alley to provide temporary vehicle access to the building.

No existing bicycle parking racks or lockers are located on the project site. Since the proposed West Campus Utility Plant would be primarily operated remotely there would be no new bicycle parking or lockers provided on the site.

Pedestrian access surrounding the site would be restored and enhanced subsequent to construction of the proposed West Campus Utility Plant. A new pathway would provide pedestrian access from University Way NE to the facility. The existing sidewalk within the University Way NE right-of-way would be replaced as part of the project in accordance with City of Seattle sidewalk standards. Approximately four new trees would be provided within the landscape area between the proposed building and University Way NE. Existing access to the Burke Gilman Trail (south of the site) would remain as part of the project and approximately 13 new trees would be planted within the onsite landscape area to the south of the building to frame the Burke Gilman Trail area and enhance the pedestrian/bicycle experience along the trail.

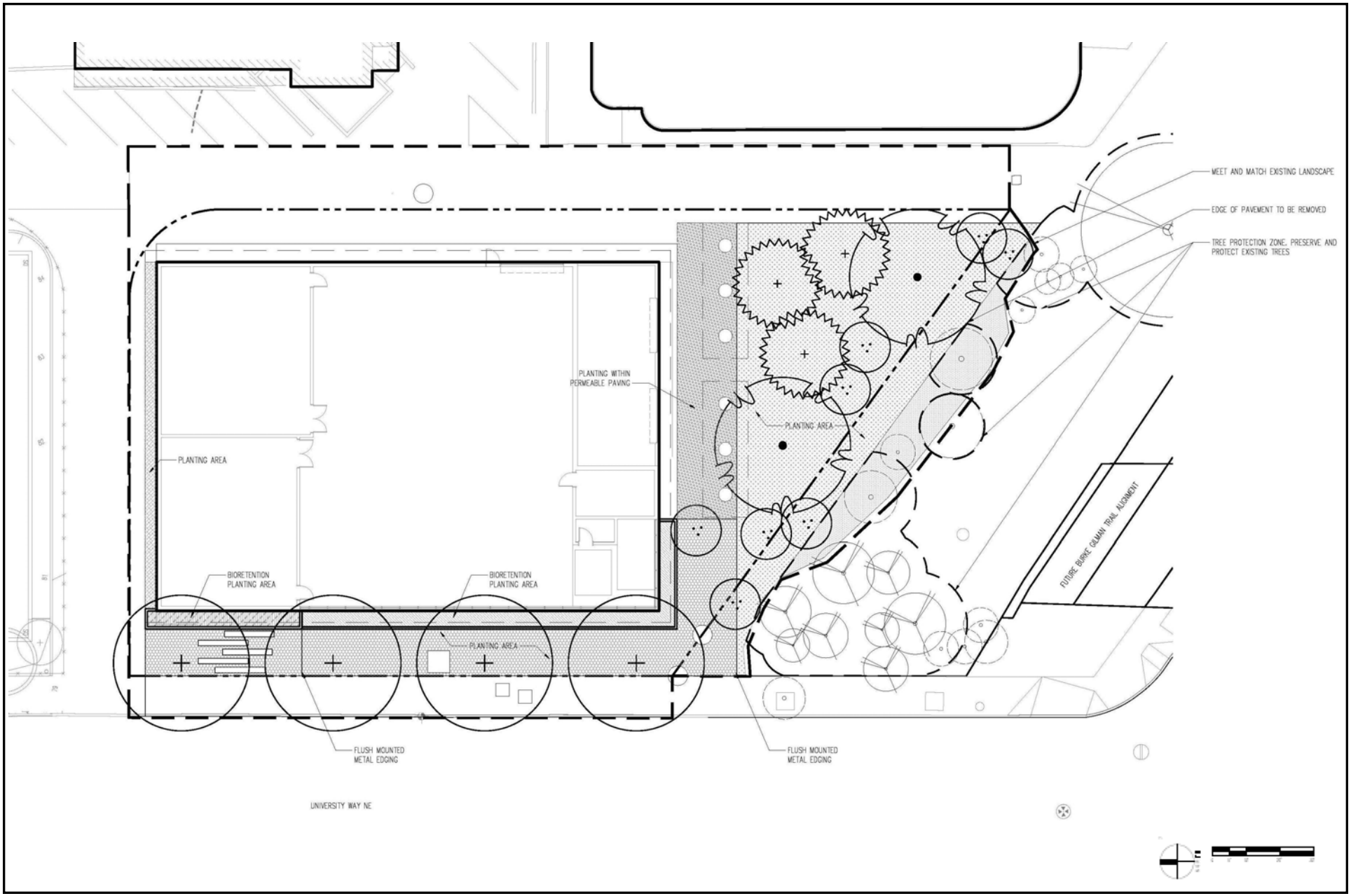
Landscaping

It is anticipated that 10 of the 14 existing trees[2] on the site would be removed as part of the construction of the West Campus Utility Plant. As described below, 17 new trees would be planted to the west of the building near the sidewalk along University Way NE and to the south of the building near the Burke Gilman Trail; with the new trees, a total of 21 trees would be located on the site compared to the existing 14 trees. Tree removal and replacement would be intended to meet or exceed the City of Seattle tree replacement requirements and would be in accordance with the University's Tree Management Plan.

The landscaping for the proposed West Campus Utility Plant will be designed to be compatible with the existing surrounding landscape character (see **Figure 1-10** for the proposed landscape plan and **Figure 1-11** for the proposed planting schedule). Landscaping along the south edge of the site will be designed to complement the existing vegetation that frames the Burke Gilman Trail and would include 13 new trees and new shrubs/groundcover within this area.

Landscaping along the western portion of the site will be designed to be complementary to the existing adjacent uses to the north of the site (Gould Hall and proposed UW Police Department Building). Due to the narrow sidewalks along University Way NE, the existing right-of-way does not include sufficient room to accommodate street trees along the curb edge of the sidewalk. Similar to the existing uses to the north, new trees and landscaping would be planted within an area between the proposed building and the sidewalk. Four new trees would be planted in this area, along with new shrubs and groundcovers.

[2] As described earlier in Chapter 1, all 14 of the existing trees on the project site are considered significant trees based on the City of Seattle's standards. None of the existing onsite trees would meet the standards for an Exceptional tree.



Source: GGN, 2015.

EA Engineering, Science, and Technology, Inc.

Figure 1-10
Landscape Plan

SITE PLANTING LEGEND

TREES –SYMBOL	QUANTITY	SPECIES	COMMON NAME	SIZE	NOTES
	4	QUERCUS PALUSTRIS OR FRAXINUS PENNSYLVANICA	PIN OAK OR CIMMARON ASH	4" CAL	BALANCED FORM; TREES WITH EQUAL FORM AND SIZE
	2	ACER MACROPHYLLUM	BIG LEAF MAPLE	3"–4" CAL	
	3	PSEUDOTSUGA MENZIESII	DOUGLAS FIR	12'–14' HEIGHT	
	8	ACER CIRCINATUM	VINE MAPLE	10'–12' HEIGHT	MULTI–STEMMED, 3–5 STEMS
		EXISTING TREE TO REMAIN			
		EXISTING TREE TO REMAIN			

SHRUBS AND GROUNDCOVER

SYMBOL	SPECIES	COMMON NAME	SIZE	SPACING	NOTES
UNIVERSITY WAY CHARACTER	COTONEASTER DAMMERI OR VINCA MINOR ALLIUM CAERULEUM	BEARBERRY COTONEASTER OR VINCA MINOR BLUE ALLIUM	2 GAL 2 GAL BULB	30" O.C. FOR COTONEASTER 18" O.C. FOR VINCA 36" O.C.	PLANT BULBS IN GROUPS OF 7–12 BULBS, VARY THROUGHOUT PLANTING BED
BURKE GILMAN TRAIL CHARACTER	ARCTOSTAPHYLOS X MEDIA SYMPHORICARPOS ALBUS GAULTHERIA SHALON POLYSTICHUM MUNITUM FRAGARIA CHILOENSIS MAHONIA NERVOSA	HYBRID MANZANITA SNOWBERRY SALAL SWORD FERN BEACH STRAWBERRY OREGON GRAPE	1 GAL 2 GAL 2 GAL 2 GAL 1 GAL 2 GAL	2' O.C. 30" O.C. 2' O.C. 2' O.C. 12" O.C. 12" O.C.	
NORTH ALLEY CHARACTER	VIBURNUM DAVOII EUPHORBIA CHARACIAS 'GLACIER BLUE' FRAGARIA CHILOENSIS RUBUS CALYCINOIDES	DAVID'S VIBURNUM GLACIER BLUE EUPHORBIA BEACH STRAWBERRY CRINKLE LEAF CREEPER	2 GAL 2 GAL 1 GAL 1 GAL	3' O.C. 2' O.C. 12" O.C. 12" O.C.	
PLANTING WITHIN PERMEABLE PAVERS	SEDUM SPP.	SEDUM	4" POTS		
EXISTING LANDSCAPE RESTORATION	TBD	TBD			LANDSCAPE TO BE RESTORED TO EXISTING CONDITIONS WHERE RE–GRADING OCCURS

BIORETENTION PLANTING

SYMBOL	SPECIES	COMMON NAME	SIZE	SPACING	NOTES
BIORETENTION TYPE 1	CORNUS SERICEA 'ARCTIC FIRE'	ARCTIC FIRE RED–TWIGGED DOGWOOD	2 GAL	2' O.C.	
BIORETENTION TYPE 2	VIBURNUM TRILOBUM	AMERICAN CRANBERRY BUSH	2 GAL	30" O.C.	

Source: GGN, 2015.

EA Engineering, Science, and Technology, Inc.

Figure 1-11
Landscape Planting Schedule

Utilities

Stormwater

Stormwater runoff from the proposed project would be collected on site and piped via gravity flow to the 15-inch public storm drain located in the University Way NE right-of-way. Since the site discharges to an exempt water body via a non-capacity constrained storm drain, flow control would not be required for the project. In addition, a permanent subsurface drainage system would be provided as part of the project to collect and dispose of subsurface water below and adjacent to the building and associated retaining walls. The subsurface drainage system would discharge to the existing 15-inch storm drain located in the University Way NE right-of-way.

Water

Domestic water and fire protection services for the proposed West Campus Utility Plant would be provided through a connection to the existing eight-inch cast iron water line located within the University Way NE right-of-way to the west of the site. A new four-inch domestic water service/meter and six-inch fire service/meter would provide water to the building. A water availability certificate was issued on October 3, 2014 by Seattle Public Utilities which indicates that sufficient water service is available to serve the proposed utility use at the site.

Sewer

An existing 15-inch combined sewer main is also located to the west of the site within the University Way NE right-of-way. The proposed project would include a new eight-inch side sanitary sewer service line that would connect the proposed building with the existing sewer main in the University Way NE right-of-way.

Electrical

The existing overhead electrical lines that are located to the east of the site (within the existing alley) would be relocated underground to the east of the site in a north-south aligned duct bank (electrical power to the Church of Jesus Christ of Latter-day Saints building would be maintained during the relocation).

A new east/west aligned duct bank would be installed below the existing alley to the east of the site which would provide an electrical service connection between the University's West Receiving Station and the proposed building. Adequate electrical capacity is available from the West Receiving Station to serve the West Campus Utility Plant Project.

The proposed West Campus Utility Plant would provide emergency power generation for the West Campus and portions of the South Campus areas. Three, two-megawatt generators would be located on the rooftop of the building and would initially provide six

megawatts of emergency power for the surrounding areas. Additional capacity would be provided on the rooftop to allow for additional generators to create a total capacity of 12 megawatts of emergency power generation to meet future demands.

Construction Activities and Schedule

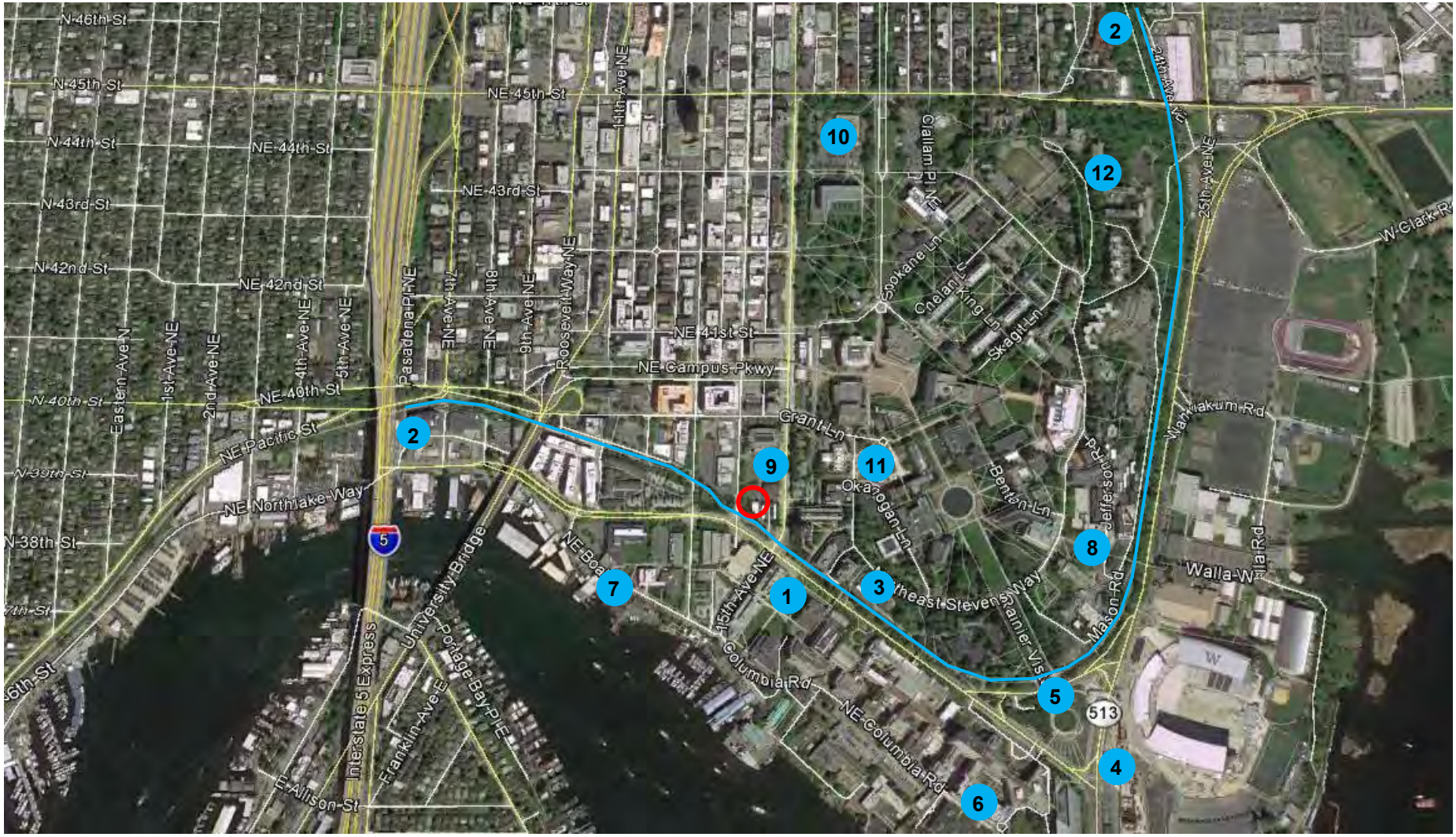
A portion of the construction staging for the proposed West Campus Utility Plant Project would be provided within the project site boundaries (approximately 21,000-square foot area). The construction office, staging areas, and limited parking for personnel would be provided off-site within existing University of Washington parking and property located approximately two blocks north of the site. Construction vehicle access to the site would be provided from University Way NE and would enter the site from the existing curb cut and access at the north end of the project site. Access to the site would be provided through a construction personnel-controlled site fence and gate. Erosion and tracking controls would be installed and maintained at the site access point per City of Seattle standards and daily site roadway cleanup would be implemented to maintain the adjacent paved roadway areas.

Construction activities would include excavation and grading to accommodate the proposed building and associated below-grade basement. Excavation and fill would be required for footing, wall, and utility construction and would include approximately 2,000 cubic yards of excavated material and 200 cubic yards of fill material. The source of fill material is unknown at this time but it is anticipated to be from an approved source.

It is anticipated that construction activities would tentatively begin in November 2015 and that substantial completion of the facility would occur in November 2016. The facility is anticipated to be fully operational by January 2017.

1.4 SEPARATE ACTIONS/PROJECTS

In addition to the proposed West Campus Utility Plant Project, there are several separate actions/projects in the site vicinity that are currently under construction or are anticipated to be under construction during the development timeframe for the proposed project. These projects include the University of Washington New Burke Museum Project, University of Washington Police Department Project, University of Washington Animal Research and Care Facility (ARCF) Project, University of Washington Burke Gilman Trail Project, the University of Washington Molecular Engineering Building Phase 2 Project, the Sound Transit University of Washington Station Project, the University of Washington Rainier Vista/Montlake Triangle Project, the University of Washington Medical Center Phase 2 Project, the Bryant Building Park Project, the University of Washington Life Sciences Building Project, the University of Washington North Campus Housing Project, and the University of Washington Computer Science and Engineering II Project (see **Figure 1-12** for a map of the separate action/project locations).



- West Campus Utility Plant Project Site
- 1 UW ARCF Project
- 2 UW Burke Gilman Trail Project
- 3 UW Life Sciences Project
- 4 Sound Transit UW Station Project
- 5 UW Rainier Vista Project
- 6 UW Medical Center Phase 2 Project
- 7 Bryant Building Park Project
- 8 UW CSE II Project
- 9 UW Police Department Project
- 10 UW New Burke Museum Project
- 11 UW Molecular Engineering Phase 2 Project
- 12 UW North Campus Housing

Source: Google Earth and EA Engineering, 2015.

EA Engineering, Science, and Technology, Inc.

Figure 1-12
Separate Actions/Projects Map

- The **University of Washington New Burke Museum Project** would be located on the site of the existing Burke Museum and would include the construction of a new, approximately 105,387-square foot museum building. Construction would occur on the western edge of the site to allow the existing museum to remain open until the new building is completed. Once the new building is complete the existing museum would be demolished to accommodate the remaining site development (i.e., Burke Yard, parking, landscaping, and open space and pedestrian pathways). Funding for this project is still being determined by the University. The construction period for this project is tentatively anticipated to be from December 2015 to March 2019, although a more defined schedule will be determined once funding is secured.

- The **University of Washington Police Department Building Project** will be located south of Gould Hall and will consist of a three-story, approximately 29,241-square foot of building. The proposed building will provide space for approximately 93 staff members and will include offices, a dispatch/communications center, records storage, identification lab, evidence storage, community multi-purpose rooms and fleet parking. Construction of the project is currently underway and anticipated to be completed by September 2016.

- The **University of Washington Animal Research and Care Facility (ARCF) Project** will be located between the William H. Foege Building and Hitchcock Hall and will consist of a two-level, below-grade building with approximately 95,700 square feet of building space for research and animal housing at the University. The proposed project will include an above-grade exhaust tower, an above-grade entry pavilion, and new landscaping and pedestrian pathways to enhance the site landscape and maintain the Portage Bay Vista. The project is currently under construction and is anticipated to be completed by December 2016.

- The **University of Washington Burke Gilman Trail Project** would include improvements to the 1.7-mile University-owned portion of the trail from Pasadena Place NE to NE 47th Street. The improvements would be designed to improve safety and accommodate existing/future traffic flows and include trail widening and consolidated intersections/connections with the trail. The initial phase of the project would occur from 15th Avenue NE to Rainier Vista. Four additional phases would occur in the future, including Pasadena Place NE to University Bridge, University Bridge to Brooklyn Avenue NE, Brooklyn Avenue NE to 15th Avenue NE, and Rainier Vista to NE 47th Street. Construction of the project is anticipated to occur once funding is available.

- The **Sound Transit University of Washington Station Project** is located adjacent to Husky Stadium and is part of the University Link Light Rail Extension which connects the University of Washington with Capitol Hill and Downtown. The University of Washington Station will consist of a single above ground entrance to connect with

the light rail tunnel and will serve approximately 25,000 riders by 2030. Construction of this project is currently underway and is anticipated to be completed by 2016

- The **University of Washington Rainier Vista/Montlake Triangle Project** will modify the pedestrian connection between the Sound Transit University of Washington Station and the University of Washington campus. The modified connection will include a pedestrian/bicycle bridge over Montlake Boulevard that will connect the University Station with the Montlake Triangle, establishment of a Rainier Vista land bridge spanning a lowered NE Pacific Place, and a modified Burke Gilman Trail. The construction of this project has begun and is anticipated to be completed by September 2016.

- The **University of Washington Medical Center Phase 2 Project** is located at the southern portion of the Medical Center and will include the internal buildout of three bed floors and the operating rooms suite within the new Montlake Tower (Phase 1) and will renovate approximately 125,000 square feet of internal building space within the existing Cascade and Pacific Towers. Construction of this project is currently underway and is anticipated to be completed by June 2017.

- The **Bryant Building Park Project** would include the development of a new park at the current Bryant Building location (adjacent to Portage Bay) to serve as a park replacement for existing park property that was converted to non-park use as part of the WSDOT SR-520 Bridge Project. Construction of this project would occur subsequent to the completion of the proposed Police Department Building Project; however, the specific timeline is unknown at this time.

- The **University of Washington Molecular Engineering Building Phase 2 Project** site is located to the north of the existing Molecular Engineering Building (east of Stevens Way and south of Grant Lane). The proposed Phase 2 building was analyzed as part of the *University of Washington Molecular Engineering Facility Supplemental EIS (2009)* and will include a six-story, approximately 78,000-square foot building with research, laboratory and faculty/staff office uses. It is anticipated that construction would begin in early 2015 and would be completed in late 2016.

- The **University of Washington Life Sciences Project** site is proposed for the southern portion of the Central Campus, adjacent to Kincaid Hall. The proposed seven level building (including two basement levels) would contain approximately 167,000 square feet of academic and research uses and approximately 20,000 square feet of green house space. The proposed building would provide space for greenhouse uses, laboratory and associated laboratory support space, classrooms, offices, conference rooms, and animal care and associated animal care support spaces. Construction is anticipated to begin in June 2016 and will be completed by June 2018.

- The **University of Washington North Campus Housing Project** site is located in the northeast corner of the Central Campus and is expected to occur over two phases. Phase A would consist of replacing McCarty Hall with two new buildings and the demolition of Haggett Hall. Phase B would entail the construction four buildings, two on the Haggett Hall site and two on the site of the existing tennis courts. Three options for McMahon hall would be analyzed. The proposed redevelopment would result in approximately 3,200 student beds, an increase of 350 beds over existing conditions. Construction is anticipated to begin in the summer of 2016.

- The **University of Washington Computer Sciences and Engineering II Project** site is proposed to include approximately 130,000 gross square feet of above and below grade space to support the Computer Science and Engineering Program. Three sites are expected to be analyzed for the project: the preferred site (existing More Hall Annex site); an alternative site (existing Physical Plant offices site); and, the No Action Alternative (potential reuse of the existing More Hall Annex building). The construction timeline for this project is not known at this time.

Temporary construction activity associated with any of these separate actions/projects would occur in compliance with applicable University of Washington, City of Seattle, and other relevant regulations. Significant cumulative construction-related impacts would not be anticipated because each project has their own separate construction schedule and haul routes that are specific for each project site. Additionally, each project would prepare a Construction Management Plan (CMP) to control and mitigate potential transportation issues during the construction process.

Chapter 2

ENVIRONMENTAL CHECKLIST

A. BACKGROUND

1. Name of proposed project, if applicable:

   University of Washington West Campus Utility Plant Project

2. Name of applicant:

   University of Washington

3. Address and phone number of applicant and contact person:

   Applicant
   University of Washington
   Capital Projects Office
   Box 352205
   Seattle WA 98111

   Contact
   Steve Harrison, PE
   Capital Projects Office
   University Facilities Building
   University of Washington
   Box 352205
   Seattle, WA 98111
   206-616-4713

4. Date checklist prepared:

   This Checklist was prepared on April 7, 2015 by the University of Washington as lead agency under the authority of *WAC 478-324*.

5. Agency requesting checklist:

   University of Washington

6. Proposed timing or schedule (including phasing, if applicable):

   Construction of the project is anticipated to begin in November 2015 and would be completed and operational at its initial capacity by January 2017. Additional capacity that is analyzed in this checklist would occur as demand is required.

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

The proposal would implement development potential identified for the Site (Potential Development Site # 41W) in the University of Washington Campus Master Plan – Seattle Campus (CMP-Seattle 2003). No additions or expansions beyond those identified in this checklist are planned.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

The following environmental review documents were prepared for the University of Washington Campus Master Plan- Seattle Campus (CMP- Seattle 2003) pursuant to the State Environmental Policy Act (SEPA):

- **University of Washington Campus Master Plan – Seattle Campus 2002-2012 Draft EIS (2001)**
- **University of Washington Campus Master Plan – Seattle Campus 2002-2012 Final EIS (2001)**

The following environmental information was prepared in support to the proposed project and this Environmental Checklist:

- **Geotechnical Report for the University of Washington West Campus Utility Plant, GeoDesign, July, 16, 2014.**
- **Limited Hazardous Materials Survey Report – West Campus Utility Plant, PBS Engineering and Environmental, October, 14, 2014.**
- **Phase 1 Environmental Site Assessment – New Police Station (3945-3902 15th Avenue) and UW Parking Lot W14 (3900-3902 University Way NE), PBS Engineering and Environmental, April 2012.**
- **Tree Inventory Report – West Campus Utility Plant, Tree Solutions, Inc., October 10, 2014.**
- **3900 University Way NE – Parkway Housing Historic Resources Addendum, BOLA Architecture and Planning, March 12, 2015.**

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

No applications are currently pending governmental approvals

10. List any government approvals or permits that will be needed for your proposal, if known.

It is preliminarily assumed that the following permits and/or approvals would be

required for the proposed University of Washington West Campus Utility Plant Project. Additional permits/approvals may be identified during the review process associated with the project.

University of Washington

- **Project approval, design approval, authorization to prepare contract documents, and authorization of the contract for Design-Build.**

Puget Sound Clean Air Agency

- **Asbestos Abatement and Demolition Notification Permit**

City of Seattle

- **Master Use Permit**
- **Demolition Permit**
- **Grading Permit**
- **Building Permit**
- **Comprehensive Drainage Control Plan and Construction Stormwater Control Plan Approval**
- **Electrical Permit**
- **Plumbing Permit**
- **Mechanical Permit**

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)

The proposed West Campus Utility Plant Project is intended to provide additional capacity for chilled water and emergency power to serve existing and future development in the West Campus and South Campus areas. The proposed building would include two levels (basement and ground level) and would contain approximately 11,310 gross square feet (GSF) of building space. Chillers and cooling towers would be installed to support an initial capacity of 3,000 tons of chilled water, with full buildout capacity for up to 10,500 tons of chilled water within the building.

Emergency power generation would also be provided as part of the project and exterior generators would be installed on the rooftop of the building. Emergency generators would provide an initial capacity of six megawatts with space for expanded total capacity up to 12 megawatts provided within the building rooftop area.

The proposed building would be located on the northern and central portions of the site and would include design features that are intended to create a gateway to the University of Washington at this site visible from University Way NE, NE Pacific Street, and the Burke Gilman Trail. Design elements (windows, façade treatments, etc.) would be incorporated along the west and south façades to activate and engage the public along University Way NE and the Burke Gilman Trail. A visually appealing screen wall would also be provided on the rooftop of the building to screen rooftop equipment and provide a solid surface to meet the acoustical requirements for the cooling towers and generators. Landscaping and new trees would be planted on the site as part of construction to further enhance the visibility and aesthetic appeal of the site. The design would include features at the southwest corner of the site to create a visually appealing area near the intersection of the Burke Gilman Trail and University Way NE. See Chapter 1 for a further description and illustrations of the proposed project.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

The approximately 0.5 acre (approximately 20,955 square feet) proposed University of Washington West Campus Utility Plant Project site is located in the southeast portion of the University of Washington's West Campus area and corresponds with CMP-Seattle 2003 Development Site #41W. The site is generally bounded by: an alley, Development Site #36W (future UW Police Department Building) and Gould Hall to the north; an alley, the Church of Jesus Christ of Latter-day Saints building, the University's West Receiving Station, and 15th Avenue NE to the east; the Burke Gilman Trail and NE Pacific Street to the south; and, University Way NE to the west (refer to Figures 1-1, 1-2 and 1-3 of Chapter 1 for details).

B. ENVIRONMENTAL ELEMENTS

1. Earth

a. General description of the site (circle one): **Flat**, rolling, hilly, steep slopes, mountainous, other _____.

The proposed University of Washington West Campus Utility Plant Project site is generally level, with a gradual northeast to southwest slope. In general, the site has an elevation change of approximately six feet in the north-south direction and an elevation change of approximately five feet in the east-west direction.

b. What is the steepest slope on the site (approximate percent slope)?

As stated above, the site contains a gradual slope to the southwest. The steepest slope on the site is located in the southwest portion of the site and is approximately five percent.

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.

Geotechnical investigations were completed for the project site and included a review of geologic maps for the area, a review of geotechnical borings near the site that were completed as part of prior projects, as well as a new geotechnical boring that was conducted on the proposed site (*GeoDesign, 2014*). Geologic maps indicate that the site is underlain by Vashon Glacial Till that is composed of silt, sand, and fine to coarse gravel, cobbles and occasional boulders that have been glacially transported and deposited under ice.

Subsurface conditions were identified based on previous borings and an on-site boring completed for the project. Pavement encountered in the borings ranged from 8 to 10 inches to the north of the site, to 4.5 inches within the project boundary. Below the pavement level, approximately 4.5 feet of undocumented fill was encountered on the site. The upper fill is dense fine to medium sand with silt.

Glacial till was encountered beneath the fill and varied in composition from gravelly sand with varying silt content to silty sand with gravel. The material is dense to very dense and is characterized by high strength and low compressibility.

There are no agricultural soils or agricultural land of long-term commercial significance on the site.

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

The campus is divided in to two distinct settings. The hill and slope west of Montlake Boulevard ("Central campus") and the flats east of Montlake Boulevard. The Central campus is approximately 250 feet above Union Bay. Soils in most of the campus are comprised of glacial till. A full discussion of soil conditions can be found in Chapter III, of the 2001 Final Environmental Impact Statement (FEIS) prepared by the University of Washington Capital Projects Office as SEPA lead agency.

e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill.

Grading and fill would be required as part of the development of the proposed West Campus Utility Plant Project and would be anticipated to occur throughout the site. Approximately 2,000 cubic yards of cut/excavation would be required and approximately 200 cubic yards of fill would be imported to the site. The source of the imported fill is unknown at this time but it is anticipated that the fill would be from an approved source.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

Some erosion can result from nearly all project actions that involve excavation and/or grading.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

Approximately 77 percent (16,064 square feet) of the proposed West Campus Utility Plant Project site is currently covered with impervious surface, including the existing building, a portion of University Parking Area W14, and other paved surfaces.

Under the proposed project, approximately 73 percent (15,237 square feet) of the site would be covered in impervious surface, including the building, paved pathways and other impervious surfaces.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

Potential impacts arising from erosion were covered in detail in the University of Washington CMP– Seattle Campus 2002-2012 Final EIS prepared by the University of Washington Capital Projects Office as lead agency. Potential Impacts from earth moving activity, excavation, grading and backfill were addressed in Section III, page 51 of the Final EIS.

Methods to address impacts to earth are addressed there as well on pages 52 and 53 of the Final EIS. These methods include a number of best management practices that may be appropriate at times such as:

- **Management of stockpiled and excavated areas;**
- **Soldier piles for slope stability;**
- **Centralized construction scheduling to avoid overlapping excavation schedules;**
- **Use of a truck wash during excavation to control fugitive dust and mud; and**
- **Temporary erosion and sedimentation control (TESC) measures.**

In addition to the above, the mitigation of erosion impacts are addressed in individual permit reviews under the *Grading and Drainage Control Codes* (*SMC 22.170*), and in critical area locations by the *Seattle Critical Areas Ordinance* (*SMC 25.09*), which prescribed best management practices for excavation and grading on critical areas.

Pursuant to the Overview Policy at *SMC 25.05.665*, no further mitigation is warranted.

2. Air

a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.

Construction could result in a temporary increase in air pollution, including emissions from construction equipment/vehicles and dust from construction activities. With adherence to applicable regulations, significant air quality impacts would not be anticipated during construction.

Operations of the proposed West Campus Utility Plant would generate emissions from the proposed power generators and steam from the proposed cooling towers. Emissions from the diesel generators would include particulates, sulfur dioxide, and nitrogen dioxide. The proposed cooling towers would discharge steam which would contain small amounts of water droplets (also known as drift) that are entrained in the airstream. Water that is in contact with the air in the cooling tower is chemically treated with corrosion inhibitor and a chlorine/bromide biocide mix and these chemicals will be present in the entrained water. Drift eliminators would be included on the cooling tower discharge areas to limit the amount of drift (water droplets in the airstream). The proposed design and operations of the West Campus Utility Plant would be in accordance will applicable air quality regulations and standards (i.e. Puget Sound Clean Air Agency).

Regarding global climate change, the scale of global change is so large that a single project's impacts cannot be identified and it is not anticipated that a single development project, or even in combination with other area projects, would cause an individually discernible impact on global climate change. In order to evaluate the emissions of the

proposed project, in lieu of its impacts on climate, a Greenhouse Gas Emissions Worksheet has been prepared to estimate the emissions footprint for the lifecycle of the development on a gross-level basis. The emissions estimate is based on the combined emissions from the following sources:

- **Embodied Emissions – extraction, processing, transportation, construction and disposal of materials and landscape disturbance;**
- **Energy-related Emissions – energy demands created by the facility after it is completed; and,**
- **Transportation-related Emissions – transportation demands created by the development after it is completed.**

The Worksheet estimate is based on project square footage. In total, the estimated lifespan emissions estimate for the project is approximately 17,804 MTCO2e. The Greenhouse Gas Emissions Worksheet used to estimate the project emissions is contained in Appendix A of this Checklist.

The proposed project has been designed to conform to the applicable regulations, standards, and guidelines of agencies regulating air quality in Seattle, including those of the Environmental Protection Agency (EPA), Washington State Department of Ecology (Ecology), and the Puget Sound Clean Air Agency (PSCAA).

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

Vehicular traffic on area roadways, including University Way NE, 15th Avenue NE, and NE Pacific Street are the primary source of air emissions in the area. Existing off-site air emissions would not affect the proposed West Campus Utility Plant Project.

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

Section III, of the University of Washington CMP– Seattle Campus 2002-2012 Final EIS contains a detailed analysis of the potential impacts to air quality arising from campus construction and increased campus capacity. The primary long term impact would be from emissions from the proposed generators and cooling towers. Drift eliminators would be included on the cooling tower discharge areas to limit the amount of drift (water droplets in the airstream). Emergency power generators would meet applicable diesel engine clean air emissions standards.

The primary short term impact would be from fugitive dust and dirt from construction operations. The long term impact from motor vehicles is extensively mitigated through the UW's U-Pass Program, a comprehensive transportation demand management program. This program is described in Section III B and O of the Final EIS and in Section VII of the CMP-Seattle 2003.

Short term impacts to air quality arising for construction, (fugitive dust and airborne particulates) are mitigated by adherence to *Puget Sound Clean Air Agency regulations PSCAA - Reg 1 - Section 9.15* (*1-9 Emission Standards*) and the *Seattle Stormwater Drainage Code 22.800*, and *Grading Code 22.170* and the best management practices for controlling erosion described above from the Seattle Municipal Code including the following potential measures.

- **Management of stockpiled and excavated areas;**
- **Centralized construction scheduling to avoid overlapping excavation schedules;**
- **Use of a truck wash during excavation to control fugitive dust and mud; and**
- **Temporary sedimentation and erosion control measures.**

Pursuant to the Overview Policy at *SMC 25.05.665*, no further mitigation is warranted.

3. **Water**

a. Surface Water:

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

No surface water bodies are located on or in the immediate vicinity of the proposed West Campus Utility Plant Project site. Portage Bay is located approximately 0.2-mile to the south of the site and Lake Washington is located approximately 0.7-mile to the east of the site.

2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

Development of the proposed West Campus Utility Plant Project would not require any work over, in or adjacent to any surface water bodies.

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

No fill or dredge material would be removed from surface waters or wetlands as part of the proposed project.

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.

Development of the proposed West Campus Utility Plant Project would not require any surface water withdrawls or diversions.

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

The proposed project site is not located within a 100-year floodplain.

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

The proposed project would not require any discharges of waste material to surface waters. During construction, Temporary Erosion and Sediment Control (TESC) measures would be implemented to prevent the discharge of waste materials to the City of Seattle stormwater system (see Earth section above for more details on potential TESC measures). Following construction, the proposed project would be connected to the sanitary sewer system and no waste materials from the project would be discharged to surface waters (refer to the Utilities discussion below for further details). Stormwater on the site would also be discharged to the existing City of Seattle stormwater system (see the Water Runoff discussion below for further details). Small amounts of vehicle runoff (oil, grease and other byproducts) could be discharged to surface water from the proposed loading area; however, it is anticipated that any amounts would be lower than the existing surface parking condition.

Diesel fuel tanks for the proposed generators would be located underground to the south of the proposed plant. The proposed tanks would be double wall tanks to minimize the potential for fuel leaks. Fuel fill for the tanks would occur through a wall-mounted fill point with a built-in spill containment system which would limit the potential for fuel spillage. Double wall piping through the facility to the generators would also be provided and the generators themselves would feature belly tanks that would be enclosed in outdoor enclosures to reduce the potential for fuel exposure. The proposed measures are intended to comply with applicable regulations, minimize the risk of fuel spill, and minimize the potential for the discharge of fuel to surface waters.

b. Ground Water:

1) Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known.

Groundwater would not be withdrawn from a well for drinking water or other purposes as part of the proposed project. Temporary dewatering measures may need to be employed during construction depending on season conditions. Impacts from these

practices are discussed in the Stormwater section above.

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial containing chemicals; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

No waste material would be discharged into the ground or groundwater from the proposed project. The new project would be served by sanitary sewers (refer to the Utility section for further discussion on the sanitary sewer system).

As described above, underground diesel fuel tanks would be provided for the proposed generators. The proposed tanks would be double wall tanks to minimize the potential for fuel leaks to groundwater. The underground fuel tanks would also be equipped with a spill bucket at the fill port to capture potential spills during fuel delivery. The additional measures described above would be implemented to minimize the potential for fuel to be discharged to ground water.

c. Water runoff (including stormwater):

1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

The proposed stormwater system would be designed in accordance with applicable *City of Seattle Stormwater Design Standards*. See the *Stormwater Management Program for UW Seattle*, *EH&S, Rev 5, May 2014* for additional details.

The proposed stormwater system would be designed in accordance with applicable City of Seattle stormwater design standards. The source of water runoff under the project would primarily be from building rooftop areas, paved pathways, and other impervious surfaces. Stormwater would be collected onsite and piped, via gravity flow to the public storm drain located in the University Way NE right-of-way. Because the site discharges to an exempt water body via a non-capacity constrained storm drain, flow control would not be required for the site.

As described above, the proposed generators would be located on the rooftop and would require diesel fuel during operations. Double wall piping would be provided through the facility to the generators and the generators themselves would feature belly tanks that would be enclosed in outdoor enclosures to minimize the potential for fuel spills or leaks on the rooftop area.

2) Could waste materials enter ground or surface waters? If so, generally describe.

The new project would be served by sanitary sewers and no waste material would be

discharged into the ground or surface water from the proposed project (refer to the Utility section for further discussion on the sanitary sewer system).

3) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.

The proposed project would not affect drainage patterns in the vicinity of the site. As described above, stormwater from the site would be collected, treated and conveyed to the City of Seattle stormwater systems located to the west of the site within the University Way NE right-of-way.

d. Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any:

The University of Washington has, for many parts of its campus, an onsite storm system. Ultimately, storm drainage on most of the campus is conveyed to the City of Seattle drainage systems. Over the years the conveyance and detention elements have undergone systematic improvement. The existing on-site system is estimated to have adequate capacity for all the projected development in the Campus Master Plan (FEIS, page 68). Additionally, the UW campus has undergone Salmon Safe Certification for instating campus wide improvements and measures to protect water quality in nearby receiving waters. The certification process is extensive and relies on existing management policies, practices and actions. The Salmon Safe process provides a comprehensive assessment of the overall management policies and planning related to habitat and water quality protection within the campus.

Additionally all existing local regulations under the *City of Seattle Stormwater and Drainage Code, SMC Title 22*, apply. Pursuant to the Overview Policy at *SMC 25.05.665*, no further mitigation is warranted.

4. **Plants**

a. Check the types of vegetation found on the site:

_**X**_ deciduous tree: alder, **maple**, aspen, **other**: **birch**, **cottonwood**, **oak**, and **linden.**
_**X**_ evergreen tree: fir, **cedar**, **pine**, other
_**X**_ shrubs
_**X**_ grass
____pasture
____crop or grain
____ Orchards, vineyards or other permanent crops, wet soil plants: cattail, buttercup, bulrush, skunk cabbage, other
____water plants: water lily, eelgrass, milfoil, other
____other types of vegetation

b. What kind and amount of vegetation will be removed or altered?

Section III of the CMP-Seattle 2003 contains policies and procedures to guide landscaping on the campus. The CMP-Seattle 2003 indicates that the "Campus Landscape Advisory Committee will review landscape plans in accordance with the University's landscape policies and all landscape plans will be prepared by a qualified landscape design professional. The landscape policies of the CMP- Seattle 2003 include policies related to campus plant collections, design form, functional role of open space, and horticultural practices. In addition, the *City of Seattle Municipal Code Section 25.11* contains requirements for the replacement of trees removed during the construction process.

The project site includes 14 trees that meet the City of Seattle's designation of significant trees; none of these significant trees are considered Exceptional based on the City's standards[1]. Existing tree species include Zebrina western red cedar, Variegate Port orford cedar, Ponderosa pine, European birch, Cottonwood, Pin oak, Linden, and Japanese maple. These trees range in size from approximately four inches to 28 inches in diameter at standard height (*Tree Solutions, 2014*).

It is anticipated that approximately 10 of the 14 existing significant trees on the site would be removed as part of the construction of the West Campus Utility Plant. Seventeen (17) new trees would be planted on the site, including four trees to the west of the building near the sidewalk along University Way NE and 13 trees to the south of the building near the site boundary with the Burke Gilman Trail. With the new trees, a total of 21 trees would be located on the site compared to the existing 14 trees. New trees would include Pin oak (or Cimmaron ash), Big leaf maple, Douglas fir, and Vine maple. Tree removal and replacement would be intended to meet or exceed the City of Seattle tree replacement requirements and would be in accordance with the University's Tree Management Plan.

New landscaping (shrubs/groundcover) would also be provided along the north, west and south sides of the proposed West Campus Utility Plant. Shrubs/groundcover would be planted between the facility and the University Way NE to enhance the site character along University Way NE; a bioretention planting area would also be located immediately adjacent to the west side of the building. Permeable paving would be provided immediately south of the building with additional landscaping (shrubs and groundcover) along the southern boundary of the site. New shrubs and groundcovers would also be provided along the north edge of the building, adjacent to the existing alley.

In addition, there are 18 significant trees that are located near the south boundary of the site along the Burke Gilman Trail. Of these 18 significant trees, four would be considered Exceptional based on the City's standards. These off-site trees near the site boundary will be protected during the construction process (*Tree Solutions, 2014*).

[1] City of Seattle Director's Rule 16-2008.

c. List threatened and endangered species known to be on or near the site.

No threatened or endangered species are known to be on or near the site.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

The proposed landscape design would be approved by the University of Washington Landscape Advisory Committee. This committee includes experts in planning, botany, landscape architecture, urban design, horticulture, art, architectural history and grounds maintenance.

Project tree replacement would be intended to meet or exceed City of Seattle tree replacement requirements and would be in accordance with the University's Tree Management Plan.

e. List all noxious weeds and invasive species known to be on or near the site.

No noxious weeds or invasive species are known to be located on the proposed project site. Himalayan blackberry is an invasive species that is known to be located in the vicinity of the site.

5. **Animals**

a. List any birds and other animals which have been observed on or near the site or are known to be on or near the site. Examples include: **Songbirds, crows, seagulls, squirrels, rats and raccoons.**

b. List any threatened and endangered species known to be on or near the site.

The nearby Lake Washington and Lake Union are known to be habitat for juvenile chinook salmon.

c. Is the site part of a migration route? If so, explain.

This area of the City of Seattle is within the Pacific Flyway for migratory birds.

d. Proposed measures to preserve or enhance wildlife, if any:

In addition to the Salmon Safe certification described above, the University of Washington's CMP-Seattle 2003 contains an extensive open space element (section 1V, p. 54) which was analyzed in the University of Washington Campus Master Plan – Seattle Campus 2002-2012 Final EIS (2001). These preserved open space areas provide mitigation for encroachment of development on campus into areas which may provide habitat for native wildlife (2001

FEIS, p. 80). Pursuant to the Overview Policy at *SMC 25.05.665*, no further mitigation is warranted.

e. List any invasive animal species known to be on or near the site.

No invasive animal species are known to be on or near the project site.

6. **Energy and natural resources**

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

A function of the proposed West Campus Utility Plant is to provide emergency power to the West and South Campus areas; however, the proposed West Campus Utility Plant would consume energy for lighting, operations of the chillers/cooling towers and emergency generators, security systems, and other energy-related uses. Energy sources would include electricity and diesel fuel. Diesel fuel would be utilized to power the emergency generators and would be stored in two approximately 12-foot by 30-foot underground fuel tanks on the south side of the building.

The design of the proposed facility would also incorporate features to meet the standards and requirements for the Envision Sustainable Infrastructure Rating System[2]. Envision is a joint collaboration between the Zofnass Program for Sustainable Infrastructure at the Harvard University Graduate School of Design and the Institute for Sustainable Infrastructure (ISI). Envision is intended to provide a holistic framework for evaluating and rating the benefits of all types and sizes of infrastructure projects. It evaluates, grades and gives recognition to infrastructure projects that use transformational, collaborative approaches to assess the sustainability indicators over the course of a project's life cycle. Credits for Envision certification are given based on five categories: Quality of Life, Leadership, Resource Allocation, Natural World, and Climate. Envision award levels range from Bronze, Silver, Gold, and Platinum. The goal for the project is qualify for at least Silver certification.

Based on the *Envision Credit Table of Points Values*, the proposed West Campus Utility Plant would qualify for the following Envision credits that would be considered as part of the Envision certification process.

- **Improve community quality of life**
- **Enhance public health and safety**

[2] The University of Washington has an adopted policy to require LEED certification for all new buildings; however, LEED certification measures are primarily related to academic, residential and commercial buildings, while Envision certification measures are specifically intended for infrastructure projects.

- **Minimize noise and vibration**
- **Preserve views and local character**
- **Establish a sustainability management system**
- **Improve infrastructure integration**
- **Plan for long-term monitoring and maintenance**
- **Reduce net embodied energy**
- **Reduce energy consumption**
- **Commission and monitor energy systems**
- **Monitor water systems**
- **Protect wetlands and surface water**
- **Restore disturbed soils.**
- **Reduce greenhouse gas emissions**
- **Reduce air pollutant emissions**
- **Assess climate threat**
- **Prepare for short term hazards**

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

The proposed West Campus Utility Plant would not significantly affect the use of solar energy by adjacent properties. The proposed building would be slightly taller than adjacent buildings (i.e., the Church of Jesus Christ of Latter-day Saints); however, no potential impacts to solar energy use in the area would be anticipated.

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

The proposed development would conform to the applicable provisions of the *State of Washington Energy Code* and the *City of the Seattle Energy Code*.

The University has an adopted a policy to require LEED certification for all new buildings; however, since the proposed project is an infrastructure facility, it would be designed to meet the requirements for Envision certification, as described above. Additionally, all projects on campus are required to adhere to the Seattle Energy Code, which is an adopted and amended version of the International Energy Conservation Code.

Pursuant to the Overview Policy at *SMC 25.05.665*, no further mitigation is warranted.

7. **Environmental health**

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste that could occur as a result of this proposal? If so, describe.

A Limited Hazardous Materials Survey Report (*PBS Engineering, 2014*) was completed for the existing building on the site. Asbestos-containing materials were identified in several areas of the building (window caulking and built-up asphaltic roofing), as well as within pipe/fitting insulation on existing piping systems. Lead-containing paint was present in the existing building exterior soffit, interior wall board, and within utility tunnels at piping supports. Silica-containing materials are assumed to be in concrete floors and exterior masonry within the existing building. Arsenic, Barium, and Lead were also detected in low concentrations in masonry mortar in the building. In addition, compact fluorescent light tubes are utilized within the building and assumed to contain mercury vapors in small concentrations.

A Phase 1 Environmental Site Assessment (PBS Engineering, 2012) was also completed for the site and found that a vent pipe was observed to the south of the existing 3900 University Way NE building which indicates that a potential heating oil underground tank could be located on the site. If the presence of a heating oil underground tank is confirmed on the site, the tank (and associated petroleum-impacted soils, if applicable) would be removed as part of the construction process in accordance with applicable regulations and standards.

1) Describe any known or possible contamination at the site from present or past uses.

As described above, a Phase 1 Environmental Site Assessment (PBS Engineering, 2012) was completed for the site and indicated that a potential heating oil underground tank could be located to the south of the existing building. If the presence of a heating oil underground tank is confirmed on the site, the tank (and associated petroleum-impacted soils, if applicable) would be removed as part of the construction process in accordance with applicable regulations and standards.

2) Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.

Hazardous materials within the existing building (identified above) would be removed during the demolition process. Asbestos-containing materials would be removed prior to demolition and work adjacent to asbestos-containing materials would be completed by properly trained and protected personnel in accordance with all applicable local, state and federal regulations. All demolition, disposal and related construction activities would be performed according to Washington Labor and Industries regulations for Lead in Construction (WAC 296-155-176). Workers impacting lead-containing paint will be

provided with proper personal protective equipment and would use proper work methods to limit occupational and environmental exposure to lead.

Construction activities, including but not limited to, chipping, sawing, and jack hammering would require the control of potentially airborne silica dust. Work would be performed according to Washington Labor and Industries regulations for silica in construction (WAC 296-841 – Airborne Contaminants). Workers impacting these areas would be provided with proper personal protective equipment and use proper work methods and engineering controls to limit occupational and environmental exposure to silica.

Arsenic, Barium, and Lead materials within the building would be impacted by demolition activities and such activities would comply with applicable regulations, including development and implementation of a metals-compliance plan, exposure assessments, control of wastewater discharge/capture, and waste stream characterization for proper disposal. Compact fluorescent light tubes within the building would also require special handling and proper disposal during the demolition process.

3) Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.

The proposed West Campus Utility Plant would utilize chemicals to treat the cooling tower water as a matter of normal operations. It would also utilize refrigerants, lubricants, and other fluids as part of the normal operation of the chillers and other cooling equipment. All of these chemicals and fluids would be used, stored and disposed of in a manner consistent with current University of Washington practices and standards that are implemented with the existing Central Power Plant.

The emergency generators would use diesel fuel, motor oil, and other associated fluids. Diesel fuel would be stored in two approximately 12-foot by 30-foot underground fuel tanks on the south side of the building. Proposed fuel tanks would comply with the Washington State Department of Ecology Regulations for Underground Storage Tanks and other applicable regulations.

4) Describe special emergency services that might be required.

No special emergency services would be required. Typical emergency services would be provided by the City of Seattle Fire Department. Security services would be provided by the University of Washington Police Department (UWPD).

5) Proposed measures to reduce or control environmental health hazards, if any:

Washington State occupational health and safety standards and local fire code requirements ensuring the use of toxic or flammable materials is adequately addressed in the campus setting. Pursuant to the Overview Policy at *SMC 25.05.665*,

no further mitigation is warranted.

b. **Noise**

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

The predominant source of noise surrounding the site is vehicular traffic on area roadways such as University Way NE, 15th Avenue NE, and NE Pacific Street. Existing noise in the area is typical of an urban area. These noise sources/levels and are not anticipated to significantly affect the proposed West Campus Utility Plant Project.

2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

Building demolition and construction activities on the site would result in short term noise impacts to adjacent properties and uses including the Church of Jesus Christ of Latter-day Saints building to the east, the future UWPD building and Gould Hall to the north, and the Purchasing and Accounting building to the west. Construction activities would comply with all applicable construction regulations, including construction noise regulations which would minimize temporary noise impacts to surrounding uses.

Rooftop equipment associated with the proposed West Campus Utility Plant would include cooling towers that would run 24 hours a day and emergency power generators that would operate during times of power outages and for testing. Generators would be tested once per month, with a one-hour test duration for 11 of the 12 months, and one four-hour test conducted per year. Noise associated with generator testing would be temporary and the noise level and duration of emergency generator testing would be similar to that associated with other emergency generators on campus and would not be incompatible with surrounding uses. The proposed plant would be designed to meet the intent and requirements of the *City of Seattle Noise Code (SMC 25.08)*. In addition, a screen wall would be provided to the top of the cooling towers and would create a solid surface to reflect noise upwards and away from surrounding uses, comply with applicable regulations of the *City of Seattle Noise Code*, and minimize noise impacts. Mufflers would also be installed with each generator to minimize noise during operation and testing.

3) Proposed measures to reduce or control noise impacts, if any:

Short term noise impacts deriving from construction projects are mitigated primarily through the adoption of construction noise control best practices, including limiting hours of construction. Measures such as the following are considered appropriate mitigation for this project:

- **In accordance with City of Seattle regulations, construction activities would be limited to applicable noise levels per the City's noise regulations covering construction noise (*Seattle Municipal Code 25.08.425*).**

- **Given the level of existing environmental noise in the vicinity and the anticipated level of post-construction noise, no additional measures would be necessary to reduce or control post-construction noise impacts from the proposed West Campus Utility Plant Project.**

Permanent onsite operations at the UW Campus are regulated by *Seattle Municipal Code Chapter 25.08* regarding maximum noise levels. A screen wall would be provided on the rooftop of the facility to create a solid surface to reflect noise upwards and away from surrounding uses, comply with applicable regulations of the *City of Seattle Noise Code*, and minimize noise impacts. Mufflers would also be installed with each generator to minimize noise during operation and testing. Pursuant to the Overview Policy at *SMC 25.05.665*, no further mitigation is warranted.

8. **Land and shoreline use**

a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe.

The site is located within the Major Institution Overlay zone described in the CMP-Seattle 2003. The CMP-Seattle 2003 is the result of a multi-year process pursuant to the 1998 City and University Agreement. Contained within the plan is the comprehensive plan framework and specific development regulations that help to integrate the UW campus into the surrounding neighborhood. Impacts from this process were analyzed at length in the University of Washington Campus Master Plan – Seattle Campus 2002-2012 Final EIS (2001) in chapter III, HA pg. 110. Adherence to the CMP-Seattle 2003 is de facto consistency with the Seattle Comprehensive Plan policies and Map. Pursuant to the Overview Policy at *SMC 25.05.665*, no further mitigation is warranted.

The proposed West Campus Utility Plant site currently contains the existing single-story, approximately 4,288-square foot 3900 University Way NE building (also referred to as the Gould Hall Annex), which provides additional auxiliary space for the University's College of the Built Environment programs. A portion of University Parking Area W14 is located on the site and contains approximately 25 parking stalls. An approximately 14-foot wide access alleyway is also located along the northern and eastern edge of the project site and provides secondary vehicular access to surrounding buildings and parking areas located on the block.

The area to the immediate north of the site is comprised of an approximately 14-foot wide access alley, Development Site 36W (site of the future University of Washington Police Department Building), and Gould Hall. Gould Hall is a four-story, approximately 115,000-square foot building that primarily houses the University's College of the Built

Environments (Architecture, Landscape Architecture, Urban Design and Planning, Construction Management, and Real Estate). Further to the north, beyond NE 40th Street, are the Commodore Duchess Apartments and commercial/retail uses, including the College Inn.

To the immediate east of the site, beyond the existing alley, is the Church of Jesus Christ of Latter-day Saints building and the University's West Receiving Station. Further to the east are 15th Avenue NE and the Central Campus area, including Guthrie Annexes, the Physics Astronomy Building, Guthrie Hall and Architecture Hall.

The area to the south of the proposed West Campus Utility Plant Project includes the Burke Gilman Trail (a regional multi-use trail that traverses through the campus) and NE Pacific Street. Further to the south (beyond NE Pacific Street) are the University Transportation Center offices, the Portage Bay Parking Garage, and William H. Foege Hall.

To the immediate west of the site is University Way NE. Further to the west (beyond University Way NE) is University Parking Area W12, the Purchasing and Accounting Building, and vegetated areas surrounding the Burke Gilman Trail.

b. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or non-forest use?

No agricultural uses have been conducted on the site.

1) Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how:

No agricultural uses are located in the vicinity of the site and the project would not affect or be affected by surrounding working farms or forest land operations.

c. Describe any structures on the site.

The site currently contains the existing single-story, approximately 4,288-square foot 3900 University Way NE building (also referred to as the Gould Hall Annex). The building is currently unoccupied.

d. Will any structures be demolished? If so, what?

The existing 3900 University Way NE building would be demolished as part of the proposed project.

e. What is the current zoning classification of the site?

The current zoning classification for the site is Major Institution Overlay with a 65-foot height limit established pursuant to the CMP-Seattle 2003.

f. What is the current comprehensive plan designation of the site?

The current Comprehensive Plan designation for the site is Major Institution.

g. If applicable, what is the current shoreline master program designation of the site?

The site is not located within the Shoreline Master Program jurisdictional area.

h. Has any part of the site been classified as a critical area by the city or county? If so, specify.

No critical areas are located on the proposed West Campus Utility Plant site.

i. Approximately how many people would reside or work in the completed project?

The proposed West Campus Utility Plant would not include any permanent onsite staff members. Existing personnel from the Central Utility Plant would provide routine maintenance, deliveries, and troubleshooting, as necessary.

j. Approximately how many people would the completed project displace?

The existing 3900 University Way NE building is currently unoccupied and as a result, no staff members would be displaced.

k. Proposed measures to avoid or reduce displacement impacts, if any:

No measures to avoid or reduce displacement impacts are necessary.

L. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

The site is designated as "Major Institution" under the City of Seattle Comprehensive Plan. Under the 1998 City-University Agreement, the City of Seattle required the University of Washington to develop a conceptual Master Plan for its Seattle campus. The CMP-Seattle 2003, developed pursuant to the Agreement and adopted by the University and the Seattle City Council, governs future development within the Major Institution Overlay zone.

m. Proposed measures to ensure the proposal is compatible with nearby agricultural and forest lands of long-term commercial significance, if any:

There are no agricultural or forest lands in the vicinity of this project.

9. **Housing**

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

No housing units would be provided as part of the proposed project.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

No housing units would be eliminated by the development of the proposed project.

c. Proposed measures to reduce or control housing impacts, if any:

As noted above, the site is located with the Major Institution Overlay zone under the CMP-Seattle 2003. Adherence to the CMP-Seattle 2003 is de facto compliance with the Seattle Comprehensive Plan policies and Map. Any housing demolished within the Campus Master Plan areas has been accounted for in the CMP-Seattle 2003 planning and adoption process. Pursuant to the Overview Policy at *SMC* 25.05.665, no further mitigation is warranted.

10. **Aesthetics**

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

The proposed West Campus Utility Plant would be approximately 63 feet in height, including the roof top screen wall. The ground level exterior walls of the building would be constructed of a durable material (insulated concrete panels) appropriate for a utility plant. The ground floor would include windows along the west and south elevations.

The rooftop equipment would be screened from view by an exterior screen wall that would wrap around the building from approximately 12 feet above the ground floor level and extend up to a height approximately level with the top of the cooling towers (approximately 63 feet in height and below the maximum 65-foot height limit indicated in the CMP-Seattle 2003). The exterior screen wall is intended to address both acoustical and screening requirements while providing an architectural gateway character to the facility appropriate to the prominent site location in the West Campus (refer to Chapter 1 of this document for a further description of the project design).

See Figure 1-7 and Figure 1-8 for illustrations of the proposed West Campus Utility Plant.

b. What views in the immediate vicinity would be altered or obstructed?

Views from the west of the site would include the proposed West Campus Utility Plant in a prominent location along University Way NE. Windows provided along the ground floor of the west façade are intended to create an engaging visual experience along University Way NE. New trees and landscaping would also be provided along the western edge of the site (with a particular emphasis at the southwest corner of the site), and immediately south of the proposed building near the Burke Gilman Trail. The proposed facility and site landscaping would be intended to serve as a gateway feature to the University of Washington campus and surrounding neighborhood by providing a statement indicating entry to the overall campus.

Views from the south of the site would primarily include existing trees and vegetation along the Burke Gilman Trail; new trees and landscaping planted on the south portion of the site would also be visible and would serve as a screen/buffer for the proposed West Campus Utility Plant.

Views from the east of the site would include views of the east façade of the proposed West Campus Utility Plant with a visual corridor to the west provided by the existing 14-foot wide alley to the north of the site.

Views from the north of the site would include views of the north façade of the proposed plant, as well as new landscaping along the north boundary of the site. A visual corridor to the south would continue to be provided by University Way NE right-of-way to the west.

c. Proposed measures to reduce or control aesthetic impacts, if any:

Section V of the CMP-Seattle 2003 contains adopted policies and development standards for the whole of the Campus. Additionally, typical development scale and pattern were adopted by City Council and the University as part of the CMP in the development program in Chapter IV. See page 41 of the CMP-Seattle 2003. Pursuant to the Overview Policy at *SMC 25.05.665*, no further mitigation is warranted.

11. **Light and glare**

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

The proposed West Campus Utility Plant would generate light and glare that would be similar to or less than typical University buildings, including interior and exterior building lighting and pedestrian pathway lighting. Lighting levels would be designed in accordance with Illuminating Engineering Society (IES) recommendations. Egress lighting would be designed to meet the *2012 City of Seattle Building Code* requirements, and the lighting power density and the lighting control strategy would be designed to meet the *2012 City of Seattle Energy Code* requirements.

b. Could light or glare from the finished project be a safety hazard or interfere with views?

Light and glare from the proposed project is not anticipated to be a safety hazard or interfere with views in the site vicinity.

c. What existing off-site sources of light or glare may affect your proposal?

Existing off-site sources of light and glare include adjacent building lighting, parking lot lighting, street lighting, and vehicle lights on adjacent roadways. These light sources are not anticipated to affect the proposed West Campus Utility Plant Project.

d. Proposed measures to reduce or control light and glare impacts, if any:

An extensive light and glare analysis was performed as part of the University of Washington Campus Master Plan – Seattle Campus 2002-2012 Final EIS (2001), Section K., p. 169. CMP-Seattle 2003 at page 130 and the University's existing internal design review process which considers the effect of architectural glazing, lighting, landscape designs to ensure that impacts from light and glare are adequately mitigated. Pursuant to the Overview Policy at *SMC* 25.05.665, no further mitigation is warranted.

12. **Recreation**

a. What designated and informal recreational opportunities are in the immediate vicinity?

Recreation facilities in the vicinity of the site include the Burke Gilman Trail (located immediately adjacent to the south boundary of the site), open spaces within the University of Washington campus (Archery Field, Denny Field, etc.), outdoor athletic facilities associated with the University campus (Husky Stadium, soccer/baseball fields, tennis courts, etc.), the University of Washington Waterfront Activities Center, and indoor athletic facilities on the University campus (Intermural Activities Building, Hec Edmundson Pavilion, etc.). Gasworks Park (a City of Seattle Park) is located approximately one mile southwest of the site and the University Playground (City of Seattle Park) is located approximately 0.75-mile to the northwest of the site.

b. Would the proposed project displace any existing recreational uses? If so, describe.

The proposed project would not displace any existing recreational uses on the site.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

The University Campus is open to the public during normal daylight hours and provides an extensive network of public trails and open space. The City of Seattle Comprehensive Plan relies upon the UW campus as an element of the City's public open space inventory,

Chapter III, major recreational open space. Chapters IV and V of the adopted CMP provide an inventory of public recreational spaces. Pursuant to the Overview Policy at *SMC 25.05.665*, no further mitigation is warranted.

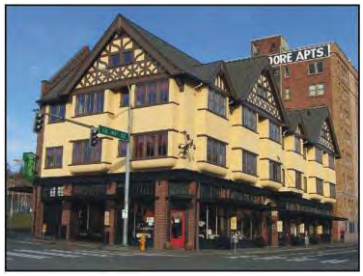
13. **Historic and cultural preservation**

a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers located on or near the site? If so, specifically describe.

Pursuant to historic preservation policies in the CMP-Seattle 2003, a Historic Resources Addendum (HRA) was prepared for the existing onsite building (3900 University Way NE) since the building is over 50 years old (see Appendix B). The 3900 University Way NE building was designed by Smith, Carrol, and Johanson Architects and constructed in 1952. The building was originally constructed as a four-unit apartment building and while the University did not own the building at the time, it appears that the building was constructed with the intention of housing students. Once the property was acquired by the University, the building became a part of the University of Washington Parkway Housing (along with several other buildings) until 1993. In 2003, the building was renovated by the University Architecture Department to serve as studio space for students. Currently, building is vacant.

The building was constructed with a concrete foundation, wood framing and no basement, and is capped by a flat roof. The exterior walls are finished with a Roman brick veneer, with vertical grain cedar siding along the top edge of the western wall only. The building appears to be a straight forward, expeditious design for a utilitarian purpose. The architects had experience designing wartime housing, as well as modest speculative housing. The building has been changed over time, including a gut remodel in 2003. Additionally, the context in which the building was constructed in 1952 has significantly changed. As a result, the 3900 University Way NE building does not have significant architectural or historical significance and is not considered eligible for listing.

Although no structures on or immediately adjacent to the site are listed on historic registers, there are three buildings in the vicinity of the site that are listed or are eligible for national, state, and/or local historic registers. The College Inn, located one block to the north of the site, was constructed in 1909 in conjunction with the Alaska-Yukon Pacific Exposition. The Tudor-style hotel building is one of the most significant structures of its time. The building was listed on the National Register of Historic Places (NRHP) and the Washington Heritage Register (WHR) in 1982.



The College Inn

The Commodore and Duchess Apartments, also located one block to the north of the site, were constructed in the mid-1920s and are two of the most prominent multi-family buildings constructed during the University District's boom decade of the 1920s. Based on previous historic property inventory (HPI) forms that are on-file with the Washington State Department of Archaeology and Historic Preservation (DAHP), both buildings have been determined to be eligible for listing on the NRHP and the WHR due to their age, architecture, and status as two of the most prominent apartment buildings in the area during its time.

Commodore and Duchess Apartments

The Columbia Lumber Company Office (currently University of Washington offices) is located to the west of the site, beyond University Way NE. The building was constructed in 1930 and is reflective of the commercial and industrial uses that occurred in the area during its time. Based on previous historic property inventory (HPI) forms that are on-file with the Washington State Department of Archaeology and Historic Preservation (DAHP), this building is also eligible for listing on the NRHP and WHR based on its age, architecture, and its significance as one of the few remaining buildings that relate to the areas former residential, commercial and industrial uses.

Columbia Lumber Company Office

b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources.

No previously recorded archaeological, scientific, or cultural resources have been identified on the site or in the site vicinity. Historic development of buildings, roadways and other infrastructure in the area have likely disturbed and/or removed any potential archaeological or scientific resources that may have been located in the area.

c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc.

In order to assess the potential historic significance of the existing onsite buildings an HRA was prepared for the existing 3900 University Way NE building consistent with the historic preservation policies in the CMP-Seattle 2003 (see Appendix B for the HRA). The DAHP website, as well as the Washington Information System for Architectural and Archaeological Records Data (WISAARD) was also consulted during the preparation of this Environmental Checklist.

d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required.

The potential impacts to cultural and historic resources were studied extensively in the University of Washington Campus Master Plan – Seattle Campus 2002-2012 Final EIS (2001). Mitigation was proposed in that FEIS and incorporated into the CMP. Those measures include:

- **Utilize the UW's internal design review process to review and authorize all major projects.**

- **UW also follows the Architectural Opportunities Assessment report process in Chapter III of the CMP and where applicable prepares a Historic Resources Addendum (HRA) as an attachment to all project documentation (see Appendix B for the HRA) .**

Pursuant to the Overview Policy at *SMC 25.05.665*, no further mitigation is warranted.

14. **Transportation**

a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any.

The proposed West Campus Utility Plant site is served by University Way NE to the immediate west. Two 14-foot wide alleys are located to the north and east of the site. The existing alley to the east extends in a north/south direction along the eastern edge of the project site and provides a connection to 15th Avenue NE near the intersection with NE Pacific Street. The existing alley to the north provides a connection with University Way NE and the eastern alley. NE 40th Street is located to the north of the site (beyond Gould Hall) and NE Pacific Street is located approximately 125 feet to the south of the project site. The Burke Gilman Trail, a major multi-use trail within the campus and the City of Seattle, is also located immediately to the south of the project site.

b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop?

The University of Washington receives a high level of transit service and subsequently has a high level of transit patronage by students, faculty, and staff. Numerous transit routes are available in the vicinity of the project site, including along University Way NE (to the west of the site) and along NE Campus Parkway (two blocks north of the site). Both streets are classified as Major Transit Streets according to the University Community Urban Center Plan (UCUCP). Transit stops are also located along 15th Avenue NE to the west of the site.

c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate?

The proposed project would not provide any new public or general purpose parking on the site, due to the fact that the proposed West Campus Utility Plant would not house any permanent staff. Two parking/loading stalls would be located on the south side of the facility to provide vehicle parking for staff/plant operators that visit the facility.

The total number of parking spaces on campus is set by the CMP-Seattle 2003, Section V. No individual project provides parking for itself. Pursuant to the Council Adopted CMP-Seattle 2003, parking is provided on a campus-wide basis. Pursuant to the Overview Policy at *SMC* *25.05.665*, no further mitigation is warranted.

d. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private).

No new roads would be required as part of the proposed project. Pedestrian streetscape improvements would be provided along University Way NE, including approximately four new street trees and new landscaping planted within the 17-foot wide buffer between the building and sidewalk adjacent to University Way NE. Sidewalk paving would be replaced

during the construction process in accordance with City of Seattle sidewalk paving standards.

A paved pathway is located near the south boundary of the site and would be eliminated as part of the proposed project. This area would be replanted with new landscaping and approximately 13 new trees to enhance the landscape adjacent to the trail. No changes are proposed to the access of the adjacent Burke Gilman Trail.

e. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

The proposed project is not anticipated to create any additional demand for transit in the area and would not use water, rail or air transportation.

f. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and nonpassenger vehicles). What data or transportation models were used to make these estimates?

Construction of the proposed West Campus Utility Plant would temporarily generate some additional vehicle trips associated with construction workers and equipment/vehicles travelling to and from the site during the construction process. Construction activities would be in compliance with applicable University of Washington and City of Seattle regulations, which would include the preparation of a Construction Management Plan to minimize potential construction-related transportation issues. It is anticipated that construction traffic would enter the site from the existing curbcut along University Way NE. Erosion and tracking control[3] means would be provided at the site access point per City of Seattle standards. Daily site roadway cleanup would also be implemented to maintain the adjacent roadway areas. During the construction process, pedestrian and bicycle traffic that utilize University Way NE would also be temporarily rerouted to the west side of University Way NE.

Once operational, the proposed West Campus Utility Plant would not be anticipated to generate a significant amount of vehicle traffic due to the fact that the proposed facility would not contain any permanent staff. The proposed facility would be operated remotely from the existing University Central Power Plant and existing Central Power Plant personnel would visit the facility periodically for routine maintenance, deliveries, and troubleshooting. As a result, the proposed West Campus Utility Plant is not anticipated to result in a significant increase in vehicle trips to the site.

No transportation model was utilized to make these estimates since the site would contain no dedicated full-time staff members.

[3] Measures to limit trucks and equipment from tracking soil/material from the construction site to public streets.

g. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe.

The proposed project would not interfere with, affect, or be affected by the movement of agricultural or forest products.

h. Proposed measures to reduce or control transportation impacts, if any:

Pursuant to the CMP-Seattle 2003, the UW operates the U-Pass program which is a comprehensive regional transportation mitigation and monitoring program with a goal of reducing SOV use. This program is outlined in Chapter VII of the CMP-Seattle 2003 and serves as mitigation for traffic generated by the UW.

Construction activities would occur in compliance with applicable University of Washington and City of Seattle regulations, and would include the preparation of a Construction Management Plan to control and minimize potential construction-related transportation issues.

This project would also fall under the University's Transportation Management Plan (TMP), including elements such as parking pricing and the U-Pass Program to help discourage single-occupancy vehicle trips and encourage transit use, carpooling and other alternative modes of transportation.

Pursuant to the Overview Policy at *SMC 25.05.665*, no further mitigation is warranted.

15. **Public services**

a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe.

The proposed West Campus Utility Plant Project would not result in a substantial increased need for public services such as fire protection, emergency medical services, or police services. The University of Washington Police Department (UWPD) would continue to provide police services for the site. Backup services for major emergencies would also to be provided by the City of Seattle Police Department (SPD).

Fire and emergency medical services for the site would continue to be provided by the City of Seattle Fire Department (SFD). A fire alarm and fire sprinkler protection system would be provided within the new building.

No need for schools would be generated by the proposed project.

b. Proposed measures to reduce or control direct impacts on public services, if any.

The UW campus's impact on public services is covered in section O of the University of Washington Campus Master Plan – Seattle Campus 2002-2012 Final EIS (2001), Page 225 of the same document provides a list of Public safety and service mitigation measures which have been instituted to reduce the impact on fire various public services such as fire and police. These measures included provision of a dedicated UW Police department, upgrades to the central alarm system to help alert in case of an emergency, review on a project by project basis for consistency with Crime Prevention through Environmental Design principles. Pursuant to the Overview Policy at *SMC 25.05.665*, no further mitigation is warranted.

16. **Utilities**

a. Circle utilities currently available at the site: **electricity**, **natural gas**, **water**, **refuse service**, **telephone**, **sanitary sewer**, septic system, other _____

Electricity, natural gas, water, telephone, sanitary sewer, and stormdrain lines are primarily located adjacent to the site. Water, sanitary sewer, and natural gas are located within the University Way NE right-of-way and telephone and electrical lines are located within the University Campus Utility Tunnel. Overhead electrical lines are also located within the alley to the east of the site.

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

Stormwater runoff from the proposed project would be collected on site and piped via gravity flow to the 15-inch public storm drain located in the University Way NE right-of-way. Because the site discharges to an exempt water body via a non-capacity constrained storm drain, flow control would not be required for the project. In addition, a permanent subsurface drainage system would be provided as part of the project to collect and dispose of subsurface water below and adjacent to the building and associated retaining walls. The subsurface drainage system would discharge to the existing 15-inch storm drain located in the University Way NE right-of-way.

Domestic water and fire protection services for the proposed West Campus Utility Plant would be provided through a connection to the existing eight-inch cast iron water line located within the University Way NE right-of-way to the west of the site. A new four-inch domestic water service/meter and six-inch fire service/meter would provide water to the building. A water availability certificate was issued on October 3, 2014 by Seattle Public Utilities which indicates that sufficient water service is available to serve the proposed site.

An existing 15-inch combined sewer main is also located to the west of the site within the University Way NE right-of-way. The proposed project would include a new eight-inch side sanitary sewer service line that would connect the proposed building with the existing sewer main in the University Way NE right-of-way.

The existing overhead electrical lines that are located to the east of the site (within the existing alley) would be relocated underground as part of the project. The existing overhead lines (that serve the Church of Jesus Christ of Latter-day Saints building) would be relocated underground to the east of the site in a north-south aligned duct bank; no disruption in electrical power is anticipated during the relocation process. A new east/west aligned duct bank would be installed below the existing alley to the east of the site which would provide an electrical service connection between the University's West Receiving Station and the proposed building. Adequate electrical capacity is available from the West Receiving Station to serve the West Campus Utility Plant Project.

As part of the project, the proposed West Campus Utility Plant would provide emergency power generation for the West Campus and South Campus areas. Three, two-megawatt generators would be located on the rooftop of the building and would initially provide six megawatts of emergency power for the surrounding areas. Additional capacity would be provided on the rooftop to allow for additional generators to create a total capacity up to 12 megawatts of emergency power generation to meet future demands.

C. SIGNATURE

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: _____

Name of signee STEVEN R. HARRISON

Position and Agency/Organization PROJECT MANAGER, U.W. CPO

Date Submitted: 4/7/15

SUMMARY OF IDENTIFIED MITIGATION MEASURES

Earth

Potential impacts arising from erosion were covered in detail in the University of Washington CMP– Seattle Campus 2002-2012 Final EIS prepared by the University of Washington Capital Projects Office as lead agency. Potential Impacts from earth moving activity, excavation, grading and backfill were addressed in Section III, page 51 of the Final EIS.

Methods to address impacts to earth are addressed there as well on pages 52 and 53 of the Final EIS. These methods include a number of best management practices that may be appropriate at times such as:

- **Management of stockpiled and excavated areas;**
- **Soldier piles for slope stability;**
- **Centralized construction scheduling to avoid overlapping excavation schedules;**
- **Use of a truck wash during excavation to control fugitive dust and mud; and**
- **Temporary erosion and sedimentation control (TESC) measures.**

In addition to the above, the mitigation of erosion impacts are addressed in individual permit reviews under the *Grading and Drainage Control Codes* (*SMC 22.170*), and in critical area locations by the *Seattle Critical Areas Ordinance* (*SMC 25.09*), which prescribed best management practices for excavation and grading on critical areas.

Pursuant to the Overview Policy at *SMC 25.05.665*, no further mitigation is warranted.

Air

Section III, of the University of Washington CMP– Seattle Campus 2002-2012 Final EIS contains a detailed analysis of the potential impacts to air quality arising from campus construction and increased campus capacity. The primary long term impact would be from motor vehicle emissions and emissions from the proposed generators and cooling towers. Drift eliminators would be included on the cooling tower discharge areas to limit the amount of drift/water re-entrainment. Emergency power generators would meet applicable diesel engine clean air emission standards.

The primary short term impact would be from fugitive dust and dirt from construction operations. The long term impact from motor vehicles is extensively mitigated through the UW's U-Pass Program, a comprehensive transportation demand management program. This program is described in Section III B and O of the Final EIS and in Section VII of the CMP-Seattle 2003.

Short term impacts to air quality arising for construction, (fugitive dust and airborne particulates) are mitigated by adherence to *Puget Sound Clean Air Agency regulations PSCAA - Reg 1 - Section 9.15* (*1-9 Emission Standards*) and the *Seattle Stormwater Drainage Code 22.800*, and *Grading Code 22.170* and the best management practices for controlling erosion described above from the Seattle Municipal Code including the following potential measures.

- **Management of stockpiled and excavated areas;**
- **Centralized construction scheduling to avoid overlapping excavation schedules;**
- **Use of a truck wash during excavation to control fugitive dust and mud; and**
- **Temporary sedimentation and erosion control measures.**

Pursuant to the Overview Policy at *SMC 25.05.665*, no further mitigation is warranted.

Water

The University of Washington has, for many parts of its campus, an onsite storm system. Ultimately, storm drainage on most of the campus is conveyed to the City of Seattle drainage systems. Over the years the conveyance and detention elements have undergone systematic improvement. The existing on-site system is estimated to have adequate capacity for all the projected development in the Campus Master Plan (FEIS, page 68). Additionally, the UW campus has undergone Salmon Safe Certification for instating campus wide improvements and measures to protect water quality in nearby receiving waters. The certification process is extensive and relies on existing management policies, practices and actions. The Salmon Safe process provides a comprehensive assessment of the overall management policies and planning related to habitat and water quality protection within the campus.

Additionally all existing local regulations under the *City of Seattle Stormwater and Drainage Code, SMC Title 22*, apply. Pursuant to the Overview Policy at *SMC 25.05.665*, no further mitigation is warranted.

Plants

The proposed landscape design would be approved by the University of Washington Landscape Advisory Committee. This committee includes experts in planning, botany, landscape architecture, urban design, horticulture, art, architectural history and grounds maintenance.

Project tree replacement would be intended to meet or exceed City of Seattle tree replacement requirements and would be in accordance with the University's Tree Management Plan.

Animals

In addition to the Salmon Safe certification described above, the University of Washington's CMP-Seattle 2003 contains an extensive open space element (section 1V, p. 54) which was analyzed in the University of Washington Campus Master Plan – Seattle Campus 2002-2012 Final EIS (2001). These preserved open space areas provide mitigation for encroachment of development on campus into areas which may provide habitat for native wildlife (2001 FEIS, p. 80). Pursuant to the Overview Policy at *SMC 25.05.665*, no further mitigation is warranted.

Energy and Natural Resources

The proposed development would conform to the applicable provisions of the *State of Washington Energy Code* and the *City of the Seattle Energy Code*.

The University has an adopted a policy to require LEED certification for all new buildings; however, since the proposed project is an infrastructure facility, it would be designed to meet the requirements for Envision certification, as described above. Additionally, all projects on campus are required to adhere to the Seattle Energy Code, which is an adopted and amended version of the International Energy Conservation Code.

Pursuant to the Overview Policy at *SMC 25.05.665*, no further mitigation is warranted.

Environmental Health

Washington State occupational health and safety standards and local fire code requirements ensuring the use of toxic or flammable materials is adequately addressed in the campus setting. Pursuant to the Overview Policy at *SMC 25.05.665*, no further mitigation is warranted.

Noise

Short term noise impacts deriving from construction projects are mitigated primarily through the adoption of construction noise control best practices, typically including limiting hours of construction. Measures such as the following are considered appropriate mitigation for this project:

- **In accordance with City of Seattle regulations, construction activities would be limited to applicable noise levels per the City's noise regulations covering construction noise (*Seattle Municipal Code 25.08.425*).**

- **Given the level of existing environmental noise in the vicinity and the anticipated level of post-construction noise, no additional measures would be necessary to reduce or control post-construction noise impacts from the proposed West Campus Utility Plant Project.**

Permanent onsite operations at the UW Campus are regulated by *Seattle Municipal Code Chapter 25.08* regarding maximum noise levels. A screen wall would be provided on the rooftop of the facility to create a solid surface to reflect noise upwards and away from surrounding uses, comply with applicable regulations of the *City of Seattle Noise Code*, and minimize noise impacts. Mufflers would also be installed with each generator to minimize noise during operation and testing. Pursuant to the Overview Policy at *SMC 25.05.665*, no further mitigation is warranted.

Land Use

The site is designated as "Major Institution" under the City of Seattle Comprehensive Plan. Under the 1998 City-University Agreement, the City of Seattle required the University of Washington to develop a 10- year conceptual Master Plan for its Seattle campus. The CMP-Seattle 2003, developed pursuant to the Agreement and adopted by the University and the Seattle City Council, governs future development within the Major Institution Overlay zone.

Housing

As noted above, the site is located with the Major Institution Overlay zone under the CMP-Seattle 2003. Adherence to the CMP-Seattle 2003 is de facto compliance with the Seattle Comprehensive Plan policies and Map. Any housing demolished within the Campus Master Plan areas has been accounted for in the CMP-Seattle 2003 planning and adoption process. Pursuant to the Overview Policy at *SMC 25.05.665*, no further mitigation is warranted.

Aesthetics

Section V of the CMP-Seattle 2003 contains adopted policies and development standards for the whole of the Campus. Additionally, typical development scale and pattern were adopted by City Council and the University as part of the CMP in the development program in Chapter IV. See page 41 of the CMP-Seattle 2003. Pursuant to the Overview Policy at *SMC 25.05.665*, no further mitigation is warranted.

Light and Glare

An extensive light and glare analysis was performed as part of the University of Washington Campus Master Plan – Seattle Campus 2002-2012 Final EIS (2001), Section K., p. 169. CMP-Seattle 2003 at page 130 and the University's existing internal design review process which considers the effect of architectural glazing, lighting, landscape designs to ensure that impacts from light and glare are adequately mitigated. Pursuant to the Overview Policy at *SMC 25.05.665*, no further mitigation is warranted.

Recreation

The University Campus is open to the public during normal daylight hours and provides an extensive network of public trails and open space. The City of Seattle Comprehensive Plan relies upon the UW campus as an element of the City's public open space inventory, Chapter III, major recreational open space. Chapters IV and V of the adopted CMP provide an inventory of public recreational spaces.

Pursuant to the Overview Policy at *SMC 25.05.665*, no further mitigation is warranted.

Historic and Cultural Preservation

The potential impacts to cultural and historic resources were studied extensively in the University of Washington Campus Master Plan – Seattle Campus 2002-2012 Final EIS (2001). Mitigation was proposed in that FEIS and incorporated into the CMP. Those measures include:

- **Utilize the UW's internal design review process to review and authorize all major projects.**

- **UW also follows the Architectural Opportunities Assessment report process in Chapter III of the CMP and where applicable prepares a Historic Resources Addendum (HRA) as an attachment to all project documentation (see Appendix B for the HRA).**

Pursuant to the Overview Policy at *SMC 25.05.665*, no further mitigation is warranted.

Transportation

Pursuant to the CMP-Seattle 2003, the UW operates the U-Pass program which is a comprehensive regional transportation mitigation and monitoring program with a goal of reducing SOV use. This program is outlined in Chapter VII of the CMP-Seattle 2003 and serves as mitigation for traffic generated by the UW.

Construction activities would occur in compliance with applicable University of Washington and City of Seattle regulations, and would include the preparation of a Construction Management Plan to control and minimize potential construction-related transportation issues.

This project would also fall under the University's Transportation Management Plan (TMP), including elements such as parking pricing and the U-Pass Program to help discourage single-occupancy vehicle trips and encourage transit use, carpooling and other alternative modes of transportation.

Pursuant to the Overview Policy at *SMC 25.05.665*, no further mitigation is warranted.

Public Services

The UW campus's impact on public services is covered in section O of the University of Washington Campus Master Plan – Seattle Campus 2002-2012 Final EIS (2001), Page 225 of the same document provides a list of Public safety and service mitigation measures which have been instituted to reduce the impact on fire various public services such as fire and police. These measures included provision of a dedicated UW Police department, upgrades to the central alarm system to help alert in case of an emergency, review on a project by project basis for consistency with Crime Prevention through Environmental Design principles. Pursuant to the Overview Policy at *SMC 25.05.665*, no further mitigation is warranted.

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Appendix A

GREENHOUSE GAS EMISSIONS WORKSHEET

City of Seattle Department of Planning and Development
SEPA GHG Emissions Worksheet
Version 1.7 12/26/07

Introduction

The Washington State Environmental Policy Act (SEPA) requires environmental review of development proposals that may have a significant adverse impact on the environment. If a proposed development is subject to SEPA, the project proponent is required to complete the SEPA Checklist. The Checklist includes questions relating to the development's air emissions. The emissions that have traditionally been considered cover smoke, dust, and industrial and automobile emissions. With our understanding of the climate change impacts of GHG emissions, the City of Seattle requires the applicant to also estimate these emissions.

Emissions created by Development

GHG emissions associated with development come from multiple sources:

- The extraction, processing, transportation, construction and disposal of materials and landscape disturbance (Embodied Emissions)
- Energy demands created by the development after it is completed (Energy Emissions)
- Transportation demands created by the development after it is completed (Transportation Emissions)

GHG Emissions Worksheet

This GHG Emissions Worksheet has been developed to assist applicants in answering the SEPA Checklist question relating to GHG emissions. The worksheet was originally developed by King County, but the City of Seattle and King County are working together on future updates to maintain consistency of methodologies across jurisdictions.

The SEPA GHG Emissions worksheet estimates all GHG emissions that will be created over the life span of a project. This includes emissions associated with obtaining construction materials, fuel used during construction, energy consumed during a buildings operation, and transportation by building occupants.

Using the Worksheet

1. Descriptions of the different residential and commercial building types can be found on the second tabbed worksheet ("Definition of Building Types"). If a development proposal consists of multiple projects, e.g. both single family and multi-family residential structures or a commercial development that consists of more than on type of commercial activity, the appropriate information should be estimated for each type of building or activity.

2. For paving, estimate the total amount of paving (in thousands of square feet) of the project.

3. The Worksheet will calculate the amount of GHG emissions associated with the project and display the amount in the "Total Emissions" column on the worksheet. The applicant should use this information when completing the SEPA checklist.

4. The last three worksheets in the Excel file provide the background information that is used to calculate the total GHG emissions.

5. The methodology of creating the estimates is transparent; if there is reason to believe that a better estimate can be obtained by changing specific values, this can and should be done. Changes to the values should be documented with an explanation of why and the sources relied upon.

6. Print out the “Total Emissions” worksheet and attach it to the SEPA checklist. If the applicant has made changes to the calculations or the values, the documentation supporting those changes should also be attached to the SEPA checklist.

University of Washington West Campus Utility Plant Project

Section I: Buildings

Type (Residential) or Principal Activity (Commercial)	# Units	Square Feet (in thousands of square feet)	Emissions Per Unit or Per Thousand Square Feet (MTCO2e)			**Lifespan Emissions (MTCO2e)**
			Embodied	Energy	Transportation	
Single-Family Home	0		98	672	792	**0**
Multi-Family Unit in Large Building	0		33	357	766	**0**
Multi-Family Unit in Small Building	0		54	681	766	**0**
Mobile Home	0		41	475	709	**0**
Education		0.0	39	646	361	**0**
Food Sales		0.0	39	1,541	282	**0**
Food Service		0.0	39	1,994	561	**0**
Health Care Inpatient		0.0	39	1,938	582	**0**
Health Care Outpatient		0.0	39	737	571	**0**
Lodging		0.0	39	777	117	**0**
Retail (Other Than Mall)		0.0	39	577	247	**0**
Office		0.0	39	723	588	**0**
Public Assembly		0.0	39	733	150	**0**
Public Order and Safety		0.0	39	899	374	**0**
Religious Worship		0.0	39	339	129	**0**
Service		0.0	39	599	266	**0**
Warehouse and Storage		0.0	39	352	181	**0**
Other		11.3	39	1,278	257	**17804**
Vacant		0.0	39	162	47	**0**

Section II: Pavement

Pavement		0.00				**0**

Total Project Emissions: **17804**

Definition of Building Types

Type (Residential) or Principal Activity (Commercial)	Description
Single-Family Home	Unless otherwise specified, this includes both attached and detached buildings
Multi-Family Unit in Large Building	Apartments in buildings with more than 5 units
Multi-Family Unit in Small Building	Apartments in building with 2-4 units
Mobile Home	
Education	Buildings used for academic or technical classroom instruction, such as elementary, middle, or high schools, and classroom buildings on college or university campuses. Buildings on education campuses for which the main use is not classroom are included in the category relating to their use. For example, administration buildings are part of "Office," dormitories are "Lodging," and libraries are "Public Assembly."
Food Sales	Buildings used for retail or wholesale of food.
Food Service	Buildings used for preparation and sale of food and beverages for consumption.
Health Care Inpatient	Buildings used as diagnostic and treatment facilities for inpatient care.
Health Care Outpatient	Buildings used as diagnostic and treatment facilities for outpatient care. Doctor's or dentist's office are included here if they use any type of diagnostic medical equipment (if they do not, they are categorized as an office building).
Lodging	Buildings used to offer multiple accommodations for short-term or long-term residents, including skilled nursing and other residential care buildings.
Retail (Other Than Mall)	Buildings used for the sale and display of goods other than food.
Office	Buildings used for general office space, professional office, or administrative offices. Doctor's or dentist's office are included here if they do not use any type of diagnostic medical equipment (if they do, they are categorized as an outpatient health care building).
Public Assembly	Buildings in which people gather for social or recreational activities, whether in private or non-private meeting halls.
Public Order and Safety	Buildings used for the preservation of law and order or public safety.
Religious Worship	Buildings in which people gather for religious activities, (such as chapels, churches, mosques, synagogues, and temples).
Service	Buildings in which some type of service is provided, other than food service or retail sales of goods
Warehouse and Storage	Buildings used to store goods, manufactured products, merchandise, raw materials, or personal belongings (such as self-storage).
Other	Buildings that are industrial or agricultural with some retail space; buildings having several different commercial activities that, together, comprise 50 percent or more of the floorspace, but whose largest single activity is agricultural, industrial/ manufacturing, or residential; and all other miscellaneous buildings that do not fit into any other category.
Vacant	Buildings in which more floorspace was vacant than was used for any single commercial activity at the time of interview. Therefore, a vacant building may have some occupied floorspace.

Sources: .....

Residential 2001 Residential Energy Consumption Survey
Square footage measurements and comparisons
http://www.eia.doe.gov/emeu/recs/sqft-measure.html

Commercial Commercial Buildings Energy Consumption Survey (CBECS),
Description of CBECS Building Types
http://www.eia.doe.gov/emeu/cbecs/pba99/bldgtypes.html

Embodied Emissions Worksheet

Section I: Buildings

Type (Residential) or Principal Activity (Commercial)	# thousand sq feet/ unit or building	Life span related embodied GHG missions (MTCO2e/ unit)	Life span related embodied GHG missions (MTCO2e/ thousand square feet) - See calculations in table below
Single-Family Home	2.53	98	39
Multi-Family Unit in Large Building	0.85	33	39
Multi-Family Unit in Small Building	1.39	54	39
Mobile Home	1.06	41	39
Education	25.6	991	39
Food Sales	5.6	217	39
Food Service	5.6	217	39
Health Care Inpatient	241.4	9,346	39
Health Care Outpatient	10.4	403	39
Lodging	35.8	1,386	39
Retail (Other Than Mall)	9.7	376	39
Office	14.8	573	39
Public Assembly	14.2	550	39
Public Order and Safety	15.5	600	39
Religious Worship	10.1	391	39
Service	6.5	252	39
Warehouse and Storage	16.9	654	39
Other	21.9	848	39
Vacant	14.1	546	39

Section II: Pavement

All Types of Pavement			50

	Columns and Beams	Intermediate Floors	Exterior Walls	Windows	Interior Walls	Roofs		
Average GWP (lbs CO2e/sq ft): Vancouver, Low Rise Building	5.3	7.8	19.1	51.2	5.7	21.3		
Average Materials in a 2,272-square foot single family home	0.0	2269.0	3206.0	285.0	6050.0	3103.0	Total Embodied Emissions (MTCO2e)	Total Embodied Emissions (MTCO2e/ thousand sq feet)
MTCO2e	0.0	8.0	27.8	6.6	15.6	30.0	88.0	38.7

Sources

All data in black text — King County, DNRP. Contact: Matt Kuharic, matt.kuharic@kingcounty.gov

Residential floorspace per unit
2001 Residential Energy Consumption Survey (National Average, 2001)
Square footage measurements and comparisons
http://www.eia.doe.gov/emeu/recs/sqft-measure.html

Floorspace per building
EIA, 2003 Commercial Buildings Energy Consumption Survey (National Average, 2003)
Table C3. Consumption and Gross Energy Intensity for Sum of Major Fuels for Non-Mall Buildings, 2003
http://www.eia.doe.gov/emeu/cbecs/cbecs2003/detailed_tables_2003/2003set9/2003excel/c3.xls

Average GWP (lbs CO2e/sq ft): Vancouver, Low Rise Building
Athena EcoCalculator
Athena Assembly Evaluation Tool v2.3- Vancouver Low Rise Building
Assembly Average GWP (kg) per square meter
http://www.athenasmi.ca/tools/ecoCalculator/index.html
Lbs per kg 2.20
Square feet per square meter 10.76

Average Materials in a 2,272-square foot single family home
Buildings Energy Data Book: 7.3 Typical/Average Household
Materials Used in the Construction of a 2,272-Square-Foot Single-Family Home, 2000
http://buildingsdatabook.eren.doe.gov/?id=view_book_table&TableID=2036&t=xls
See also: NAHB, 2004 Housing Facts, Figures and Trends, Feb. 2004, p. 7.

Average window size
Energy Information Administration/Housing Characteristics 1993
Appendix B, Quality of the Data. Pg. 5.
ftp://ftp.eia.doe.gov/pub/consumption/residential/rx93hcf.pdf

Pavement Emissions Factors
MTCO2e/thousand square feet of asphalt
or concrete pavement

50 (see below)

Embodied GHG Emissions……Worksheet Background Information

Buildings
Embodied GHG emissions are emissions that are created through the extraction, processing, transportation, construction and disposal of building materials as well as emissions created through landscape disturbance (by both soil disturbance and changes in above ground biomass).

Estimating embodied GHG emissions is new field of analysis; the estimates are rapidly improving and becoming more inclusive of all elements of construction and development.

The estimate included in this worksheet is calculated using average values for the main construction materials that are used to create a typical family home. In 2004, the National Association of Home Builders calculated the average materials that are used in a typical 2,272 square foot single-family household. The quantity of materials used is then multiplied by the average GHG emissions associated with the life-cycle GHG emissions for each material.

This estimate is a rough and conservative estimate; the actual embodied emissions for a project are likely to be higher. For example, at this stage, due to a lack of comprehensive data, the estimate does not include important factors such as landscape disturbance or the emissions associated with the interior components of a building (such as furniture).

King County realizes that the calculations for embodied emissions in this worksheet are rough. For example, the emissions associated with building 1,000 square feet of a residential building will not be the same as 1,000 square feet of a commercial building. However, discussions with the construction community indicate that while there are significant differences between the different types of structures, this method of estimation is reasonable; it will be improved as more data become available.

Additionally, if more specific information about the project is known, King County recommends two online embodied emissions calculators that can be used to obtain a more tailored estimate for embodied emissions: www.buildcarbonneutral.org and www.athenasmi.ca/tools/ecoCalculator/.

Pavement
Four recent life cycle assessments of the environmental impacts of roads form the basis for the per unit embodied emissions of pavement. Each study is constructed in slightly different ways; however, the aggregate results of the reports represent a reasonable estimate of the GHG emissions that are created from the manufacture of paving materials, construction related emissions, and maintenance of the pavement over its expected life cycle. For specifics, see the worksheet.

Special Section: Estimating the Embodied Emissions for Pavement

Four recent life cycle assessments of the environmental impacts of roads form the basis for the per unit embodied emissions of pavement. Each study is constructed in slightly different ways; however, the aggregate results of the reports represent a reasonable estimate of the GHG emissions that are created from the manufacture of paving materials, construction related emissions, and maintenance of the pavement over its expected life cycle.

The results of the studies are presented in different units and measures; considerable effort was undertaken to be able to compare the results of the studies in a reasonable way. For more details about the below methodology, contact matt.kuharic@kingcounty.gov.

The four studies, Meil (2001), Park (2003), Stripple (2001) and Treolar (2001) produced total GHG emissions of 4-34 MTCO2e per thousand square feet of finished paving (for similar asphalt and concrete based pavements). This estimate does not including downstream maintenance and repair of the highway. The average (for all concrete and asphalt pavements in the studies, assuming each study gets one data point) is ~17 MTCO2e/thousand square feet.

Three of the studies attempted to thoroughly account for the emissions associated with long term maintenance (40 years) of the roads. Stripple (2001), Park et al. (2003) and Treolar (2001) report 17, 81, and 68 MTCO2e/thousand square feet, respectively, after accounting for maintenance of the roads.

Based on the above discussion, King County makes the conservative estimate that 50 MTCO2e/thousand square feet of pavement (over the development's life cycle) will be used as the embodied emission factor for pavement until better estimates can be obtained. This is roughly equivalent to 3,500 MTCO2e per lane mile of road (assuming the lane is 13 feet wide).

It is important to note that these studies estimate the embodied emissions for roads. Paving that does not need to stand up to the rigors of heavy use (such as parking lots or driveways) would likely use less materials and hence have lower embodied emissions.

Sources:

Meil, J. A Life Cycle Perspective on Concrete and Asphalt Roadways: Embodied Primary Energy and Global Warming Potential. 2006. Available: http://www.cement.ca/cement.nsf/eee9ec7bbd630126852566c40052107b/6ec79dc8ae03a782852572b90061b914/$FILE/ATTK0WE3/athena%20report%20Feb.%202%202007.pdf

Park, K, Hwang, Y., Seo, S., M.ASCE, and Seo, H. , "Quantitative Assessment of Environmental Impacts on Life Cycle of Highways," Journal of Construction Engineering and Management , Vol 129, January/February 2003, pp 25-31, (DOI: 10.1061/(ASCE)0733-9364(2003)129:1(25)).

Stripple, H. Life Cycle Assessment of Road. A Pilot Study for Inventory Analysis. Second Revised Edition. IVL Swedish Environmental Research Institute Ltd. 2001. Available: http://www.ivl.se/rapporter/pdf/B1210E.pdf

Treloar, G., Love, P.E.D., and Crawford, R.H. Hybrid Life-Cycle Inventory for Road Construction and Use. Journal of Construction Engineering and Management. P. 43-49. January/February 2004.

Energy Emissions Worksheet

Type (Residential) or Principal Activity (Commercial)	Energy consumption per building per year (million Btu)	Carbon Coefficient for Buildings	MTCO2e per building per year	Floorspace per Building (thousand square feet)	MTCE per thousand square feet per year	MTCO2e per thousand square feet per year	Average Building Life Span	Lifespan Energy Related MTCO2e emissions per unit	Lifespan Energy Related MTCO2e emissions per thousand square feet
Single-Family Home	107.3	0.108	11.61	2.53	4.6	16.8	57.9	672	266
Multi-Family Unit in Large Building	41.0	0.108	4.44	0.85	5.2	19.2	80.5	357	422
Multi-Family Unit in Small Building	78.1	0.108	8.45	1.39	6.1	22.2	80.5	681	489
Mobile Home	75.9	0.108	8.21	1.06	7.7	28.4	57.9	475	448
Education	2,125.0	0.124	264.2	25.6	10.3	37.8	62.5	16,526	646
Food Sales	1,110.0	0.124	138.0	5.6	24.6	90.4	62.5	8,632	1,541
Food Service	1,436.0	0.124	178.5	5.6	31.9	116.9	62.5	11,168	1,994
Health Care Inpatient	60,152.0	0.124	7,479.1	241.4	31.0	113.6	62.5	467,794	1,938
Health Care Outpatient	985.0	0.124	122.5	10.4	11.8	43.2	62.5	7,660	737
Lodging	3,578.0	0.124	444.9	35.8	12.4	45.6	62.5	27,826	777
Retail (Other Than Mall)	720.0	0.124	89.5	9.7	9.2	33.8	62.5	5,599	577
Office	1,376.0	0.124	171.1	14.8	11.6	42.4	62.5	10,701	723
Public Assembly	1,338.0	0.124	166.4	14.2	11.7	43.0	62.5	10,405	733
Public Order and Safety	1,791.0	0.124	222.7	15.5	14.4	52.7	62.5	13,928	899
Religious Worship	440.0	0.124	54.7	10.1	5.4	19.9	62.5	3,422	339
Service	501.0	0.124	62.3	6.5	9.6	35.1	62.5	3,896	599
Warehouse and Storage	764.0	0.124	95.0	16.9	5.6	20.6	62.5	5,942	352
Other	3,600.0	0.124	447.6	21.9	20.4	74.9	62.5	27,997	1,278
Vacant	294.0	0.124	36.6	14.1	2.6	9.5	62.5	2,286	162

Sources

All data in black text — King County, DNRP. Contact: Matt Kuharic, matt.kuharic@kingcounty.gov

Energy consumption for residential buildings
- 2007 Buildings Energy Data Book: 6.1 Quad Definitions and Comparisons (National Average, 2001)
- Table 6.1.4: Average Annual Carbon Dioxide Emissions for Various Functions
- http://buildingsdatabook.eren.doe.gov/
- Data also at: http://www.eia.doe.gov/emeu/recs/recs2001_ce/ce1-4c_housingunits2001.html

Energy consumption for commercial buildings and Floorspace per building
- EIA, 2003 Commercial Buildings Energy Consumption Survey (National Average, 2003)
- Table C3. Consumption and Gross Energy Intensity for Sum of Major Fuels for Non-Mall Buildings, 2003
- http://www.eia.doe.gov/emeu/cbecs/cbecs2003/detailed_tables_2003/2003set9/2003excel/c3.xls

Note: Data in plum color is found in both of the above sources (buildings energy data book and commercial buildings energy consumption survey).

Carbon Coefficient for Buildings
- Buildings Energy Data Book (National average, 2005)
- Table 3.1.7. 2005 Carbon Dioxide Emission Coefficients for Buildings (MMTCE per Quadrillion Btu)
- http://buildingsdatabook.eere.energy.gov/?id=view_book_table&TableID=2057
- Note: Carbon coefficient in the Energy Data book is in MTCE per Quadrillion Btu.
- To convert to MTCO2e per million Btu, this factor was divided by 1000 and multiplied by 44/12.

Residential floorspace per unit
- 2001 Residential Energy Consumption Survey (National Average, 2001)
- Square footage measurements and comparisons
- http://www.eia.doe.gov/emeu/recs/sqft-measure.html

average lief span of buildings,
estimated by replacement time method

	Single Family Homes	Multi-Family Units in Large and Small Buildings	All Residential Buildings	
New Housing Construction, 2001	1,273,000	329,000	1,602,000	
Existing Housing Stock, 2001	73,700,000	26,500,000	100,200,000	
Replacement time:	57.9	80.5	62.5	(national average, 2001)

Note: Single family homes calculation is used for mobile homes as a best estimate life span.
Note: At this time, KC staff could find no reliable data for the average life span of commercial buildings.
Therefore, the average life span of residential buildings is being used until a better approximation can be ascertained.

Sources:

New Housing Construction, 2001
Quarterly Starts and Completions by Purpose and Design - US and Regions (Excel)
http://www.census.gov/const/quarterly_starts_completions_cust.xls
See also: http://www.census.gov/const/www/newresconstindex.html

Existing Housing Stock, 2001
Residential Energy Consumption Survey (RECS) 2001
Tables HC1:Housing Unit Characteristics, Million U.S. Households 2001
Table HC1-4a. Housing Unit Characteristics by Type of Housing Unit, Million U.S. Households, 2001
Million U.S. Households, 2001
http://www.eia.doe.gov/emeu/recs/recs2001/hc_pdf/housunits/hc1-4a_housingunits2001.pdf

Transportation Emissions Worksheet

Type (Residential) or Principal Activity (Commercial)	# people/ unit or building	# thousand sq feet/ unit or building	# people or employees/ thousand square feet	vehicle related GHG emissions (metric tonnes CO2e per person per year)	MTCO2e/ year/ unit	MTCO2e/ year/ thousand square feet	Average Building Life Span	Life span transportation related GHG emissions (MTCO2e/ per unit)	Life span transportation related GHG emissions (MTCO2e/ thousand sq feet)
Single-Family Home	2.8	2.53	1.1	4.9	13.7	5.4	57.9	792	313
Multi-Family Unit in Large Building	1.9	0.85	2.3	4.9	9.5	11.2	80.5	766	904
Multi-Family Unit in Small Building	1.9	1.39	1.4	4.9	9.5	6.8	80.5	766	550
Mobile Home	2.5	1.06	2.3	4.9	12.2	11.5	57.9	709	668
Education	30.0	25.6	1.2	4.9	147.8	5.8	62.5	9247	361
Food Sales	5.1	5.6	0.9	4.9	25.2	4.5	62.5	1579	282
Food Service	10.2	5.6	1.8	4.9	50.2	9.0	62.5	3141	561
Health Care Inpatient	455.5	241.4	1.9	4.9	2246.4	9.3	62.5	140506	582
Health Care Outpatient	19.3	10.4	1.9	4.9	95.0	9.1	62.5	5941	571
Lodging	13.6	35.8	0.4	4.9	67.1	1.9	62.5	4194	117
Retail (Other Than Mall)	7.8	9.7	0.8	4.9	38.3	3.9	62.5	2394	247
Office	28.2	14.8	1.9	4.9	139.0	9.4	62.5	8696	588
Public Assembly	6.9	14.2	0.5	4.9	34.2	2.4	62.5	2137	150
Public Order and Safety	18.8	15.5	1.2	4.9	92.7	6.0	62.5	5796	374
Religious Worship	4.2	10.1	0.4	4.9	20.8	2.1	62.5	1298	129
Service	5.6	6.5	0.9	4.9	27.6	4.3	62.5	1729	266
Warehouse and Storage	9.9	16.9	0.6	4.9	49.0	2.9	62.5	3067	181
Other	18.3	21.9	0.8	4.9	90.0	4.1	62.5	5630	257
Vacant	2.1	14.1	0.2	4.9	10.5	0.7	62.5	657	47

Sources

All data in black text — King County, DNRP. Contact: Matt Kuharic, matt.kuharic@kingcounty.gov

people/ unit — Estimating Household Size for Use in Population Estimates (WA state, 2000 average)
Washington State Office of Financial Management
Kimpel, T. and Lowe, T. Research Brief No. 47. August 2007
http://www.ofm.wa.gov/researchbriefs/brief047.pdf
Note: This analysis combines Multi Unit Structures in both large and small units into one category; the average is used in this case although there is likely a difference

Residential floorspace per unit — 2001 Residential Energy Consumption Survey (National Average, 2001)
Square footage measurements and comparisons
http://www.eia.doe.gov/emeu/recs/sqft-measure.html

employees/thousand square feet — Commercial Buildings Energy Consumption Survey commercial energy uses and costs (National Median, 2003)
Table B2 Totals and Medians of Floorspace, Number of Workers, and Hours of Operation for Non-Mall Buildings, 2003
http://www.eia.doe.gov/emeu/cbecs/cbecs2003/detailed_tables_2003/2003set1/2003excel/b2.xls

Note: Data for # employees/thousand square feet is presented by CBECS as square feet/employee.
In this analysis employees/thousand square feet is calculated by taking the inverse of the CBECS number and multiplying by 1000.

vehicle related GHG emissions

Estimate calculated as follows (Washington state, 2006)_

56,531,930,000	2006 Annual WA State Vehicle Miles Traveled Data was daily VMT. Annual VMT was 365*daily VMT. http://www.wsdot.wa.gov/mapsdata/tdo/annualmileage.htm
6,395,798	2006 WA state population http://quickfacts.census.gov/qfd/states/53000.html
8839	vehicle miles per person per year
0.0506	gallon gasoline/mile This is the weighted national average fuel efficiency for all cars and 2 axle, 4 wheel light trucks in 2005. This includes pickup trucks, vans and SUVs. The 0.051 gallons/mile used here is the inverse of the more commonly known term “miles/per gallon” (which is 19.75 for these cars and light trucks). Transportation Energy Data Book. 26th Edition. 2006. Chapter 4: Light Vehicles and Characteristics. Calculations based on weighted average MPG efficiency of cars and light trucks. http://cta.ornl.gov/data/tedb26/Edition26_Chapter04.pdf Note: This report states that in 2005, 92.3% of all highway VMT were driven by the above described vehicles. http://cta.ornl.gov/data/tedb26/Spreadsheets/Table3_04.xls
24.3	lbs CO2e/gallon gasoline The CO2 emissions estimates for gasoline and diesel include the extraction, transport, and refinement of petroleum as well as their combustion. Life-Cycle CO2 Emissions for Various New Vehicles. RENew Northfield. Available: http://renewnorthfield.org/wpcontent/uploads/2006/04/CO2%20emissions.pdf Note: This is a conservative estimate of emissions by fuel consumption because diesel fuel,
2205	with a emissions factor of 26.55 lbs CO2e/gallon was not estimated.
4.93	lbs/metric tonne
	vehicle related GHG emissions (metric tonnes CO2e per person per year)

average lief span of buildings, estimated by replacement time method — See Energy Emissions Worksheet for Calculations

Commercial floorspace per unit — EIA, 2003 Commercial Buildings Energy Consumption Survey (National Average, 2003)
Table C3. Consumption and Gross Energy Intensity for Sum of Major Fuels for Non-Mall Buildings, 2003
http://www.eia.doe.gov/emeu/cbecs/cbecs2003/detailed_tables_2003/2003set9/2003excel/c3.xls

Appendix B

HISTORIC RESOURCES ADDENDUM

3900 University Way NE, Parkway Housing
Historic Resources Addendum

BOLA Architecture + Planning
March 13, 2015

1. INTRODUCTION

Background

This report provides historical and architectural information about the former four-unit apartment building at 3900 University Way NE, which is proposed for demolition as part of the University's West Campus Utilities Plant. The subject building is located on University Way NE, near NE Pacific Street and on the north side of the Burke-Gilman Trail.

Consistent with its historic preservation policies as outlined in its "University of Washington Master Plan—Seattle Campus" of January 2003 (2003 Seattle Campus Master Plan), the University of Washington has sought historic and architectural information about 3900 University Way NE in a Historic Resources Addendum (HRA). This type of document is provided for any University project that makes exterior alterations to a building over 50 years old, or is adjacent to a building or a significant campus feature older than 50 years, and for public spaces as identified in Fig. III-2 of the 2003 Seattle Campus Master Plan. The subject property is owned by the University and the building dates from 1952, making it 63 years old.

This HRA was developed by Preservation Planner Sonja Molchany with research assistance from Meagan Scott and review by Principal Susan Boyle, AIA, of BOLA Architecture + Planning. The research was undertaken and the report prepared in March 2015.

Research Sources

BOLA undertook research to provide historical context and other information about the development of the west campus area and the building history and design. Research sources included drawings and maps available from the University of Washington's Facilities Records. Research also included a review of King County Assessor's archival property record cards from the Puget Sound Regional Archives, as well as the digital historic photo collections of the Seattle Municipal Archives, UW Libraries Special Collections, and the Museum of History and Industry. Information about the proposed project came from a February 17, 2015, Architectural Commission project memo (available online, http://opb.washington.edu/sites/default/files/opb/Architecture/AC/UWAC%202015-02-17%20W%20CUP%20Interim%20Design%20Review.pdf).

2. HISTORIC PRESERVATION FRAMEWORK

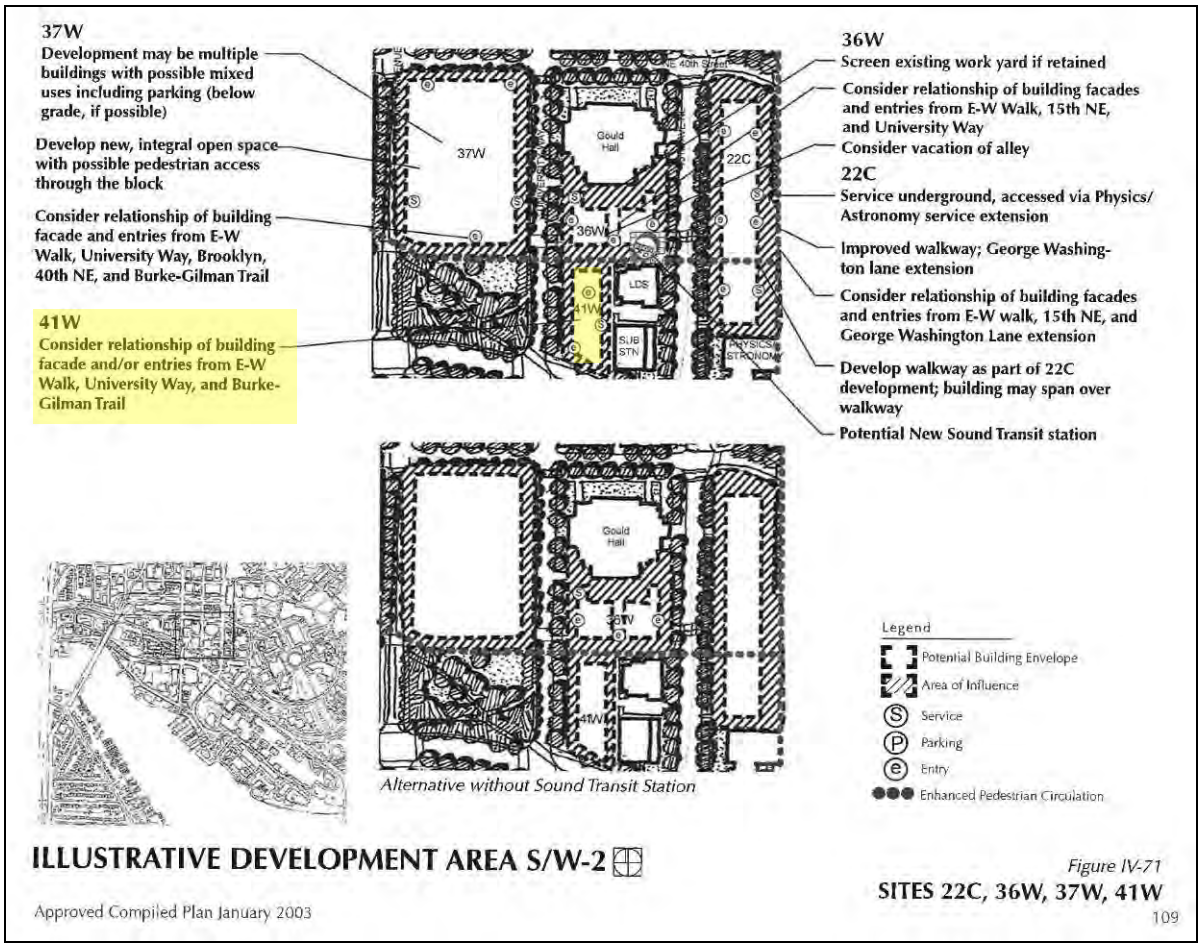
The University Stewardship and Historic Preservation Policies

As noted in the 2003 Seattle Campus Master Plan, the Regents provide stewardship for historic university properties. As part of its development, the University assures that preservation of historic resources is considered through provision of an HRA. According to the Master Plan, the intent of the HRA is to "provide a context to insure that important elements of the campus, its historical character and value, environmental conditions and landscape context are preserved, enhanced, and valued. [It] further insures

that improvements, changes and modifications to the physical environment are analyzed and documented."

Based on historic campus planning documents, the 2003 Seattle Campus Master Plan identified well-known buildings that are associated with the early development of the campus and early campus master plans—the 1898 Oval Plan, the 1909 Alaska Yukon Pacific Exposition Plan, and the 1915 Regents Plan. The Master Plan also identified significant and unique landscapes on the campus.

The subject property was acquired by the University in the 1970s, and thus it is not associated with the early development of campus. The 2003 Seattle Campus Master Plan cites it as a potential development area, identified in Illustrative Development Area S/W-2 as Site 41W (Fig. IV-71, p. 109), shown below.



3. HISTORICAL CONTEXT

Development of Lake Union's Portage Bay and the University District

What became the University District began as a forested area quite far north of the initial Euro-American settlement in the area. It was crossed by Native American trails and used by the Duwamish Indians for hunting and berry growing. In 1855, the area was surveyed and divided into townships by the federal government. As part of the Oregon Territory, the land was governed by that Territory's Organic Act,

which reserved Sections 16 and 36 of each township for the maintenance of public schools. Section 16 was therefore not available for settlement.

In 1867, Christian and Harriet Brownfield became the first homesteaders in the area, filing a claim for 174 acres adjacent to Section 16. Additional settlers arrived, and in 1887 the line of the Seattle, Lake Shore, and Eastern Railway was laid from the early town of Fremont to Union Bay on Lake Washington. Development of nearby properties along the rail route commenced. Plans for a ship canal to link Puget Sound and Salmon Bay with Lake Union and Lake Washington also increased land values. The Brownfields' property was repeatedly sold and platted, and finally acquired in 1890 by developer James A. Moore, who re-platted it as the Brooklyn Addition. A year later in 1891, the communities of Brooklyn, Fremont, Wallingford, Latona, and Green Lake were annexed by the City of Seattle.

The year 1891 was a formative one for the University District. The Latona Bridge was constructed across Lake Union to the north end of Capitol Hill, providing passage for David Denny's streetcar, which continued on a route along present-day University Way NE. The streetcar route gradually stimulated a linear corridor of commercial development. The same year, the State Legislature voted to move the University from its downtown location to its current campus. The move occurred in 1895, prompting a renaming of the area from Brooklyn to University Station. Neighborhoods around the campus were almost entirely platted by 1910.

The decision to site the Alaska Yukon Pacific Exposition (AYPE) of 1909 on the grounds of the University was a critical step in the expansion of the campus and its surroundings. The fairgrounds were designed by John Charles Olmsted of the renowned Olmsted Brothers firm from Brookline, Massachusetts. A number of its buildings were constructed as permanent structures for the University's subsequent use. In addition, hotels and commercial structures were built nearby to serve fair visitors. After the AYPE, the University District saw increased residential development.

Growth was further stimulated in the area by transportation and infrastructure improvements. This included completion of the ship canal in 1917, the replacement of the earlier Latona Bridge with the University Bridge at the foot of 10th Avenue NE (later Roosevelt Way NE) in 1919, and construction of the Montlake Bridge in 1925. The ensuing construction boom extended into the 1920s. In 1928 a streetcar loop connected the Montlake, Wallingford, and University District neighborhoods.

Industrial use of Lake Union began early in its history, with resource-extraction industries positioned along its shoreline beginning in the 1880s. Prior to construction of the Ship Canal in 1917, logs and coal were brought by ship via Lake Washington and Portage Bay to Lake Union and from there by railroad lines that ran from the city's central harbor along Elliott Bay to Ballard, Fremont, and Latona. In ca. 1910 another rail line was constructed along Westlake Avenue North to link with the south shore of Lake Union.

Early maps and photographs of Portage Bay suggest that initial industrial uses on the north shore included mills, shipping facilities, and a cooperage, as well as shipbuilding and repair facilities along with marinas and moorages for fishing boats and other vessels. The south shore of the bay was the site of residential development. Historic Sanborn maps of 1905 and the Kroll map of 1912-20 show the presence of two public waterways: No. 12 near the foot of 13th (Brooklyn) Avenue NE and No. 13 at the foot of 10th (Roosevelt) Avenue NE. The platted street grid included north-south streets from 5th to 15th Avenues NE terminating at North Lake Avenue, as well as east-west streets of East 38th and 40th Streets and the Washington Lake Shore rail line along the current route of the Burke-Gilman Trail and NE Pacific Street.

Campus and neighborhood growth also led to traffic congestion. Partly in response to this development, University President Henry Suzzallo proposed a formal and functional western approach to the campus. A broad boulevard was initially indicated in a 1923 Bebb and Gould campus plan, although the location of the current Campus Parkway would not be realized for many years. Development in the University District and the campus halted during the Great Depression, but some infrastructure improvements were made under the federal government's Public Works Administration and Works Progress Administration programs, such as street expansions and bridge upgrading. Despite these plans, the southern portion of the University District continued to serve as an area of older industry and low-rise residences.

Fig. 1 Above, a 1932 aerial view looking northeast over the University Bridge and toward the University District shows the largely low-scale residential character of the area that would be come the southwest extension of campus. (Seattle Municipal Archives, image no. 77297)

During World War II many lake front industries were transformed to serve the war effort, including shipbuilding and repairs, along with continued transportation use. However, the regional and local economy changed after the end of World War II, with dramatic development in the aerospace industry, airplane construction and trade, and steep declines in resource-based industrial activity. "From 1946 to the present Lake Union [saw] a decline in industrial and increased mixed-commercial and recreational use of the lakeshore" (Tobin & Sodt).

After World War II, returning soldiers flooded the University seeking college degrees under the provisions of the GI Bill. Existing residential buildings as well as academic ones were inadequate as enrollment

rapidly increased. The University began to extend beyond its original campus, and the establishment in 1946 of the medical program prompted further enlargement. The University's 1948 Plan recommended acquisition of the Northlake area, to the southwest of the traditional campus. During this period, the University also made plans for additional campus housing, including dormitories and married student housing, to address the growing needs of its expanding enrollment.

Despite neighborhood opposition, the University carried out its plans to expand to the south and west. Construction of NE Campus Parkway was completed and two new dormitories, Terry and Lander Halls, were located along it in the 1950s. Other post-war construction in the Northlake area included the construction of the Applied Physics Laboratory, and a number of Northwest Modern-style low-rise wood-frame dwellings for married students in a complex along Brooklyn Avenue North, to the south of NE Pacific Street (Bassetti and Morse, 1947-48, demolished ca. 1980). Aerial photographs from the late 1950s and early 1960s show the persistence of older residences and commercial structures in addition to industries along the lakeshore.

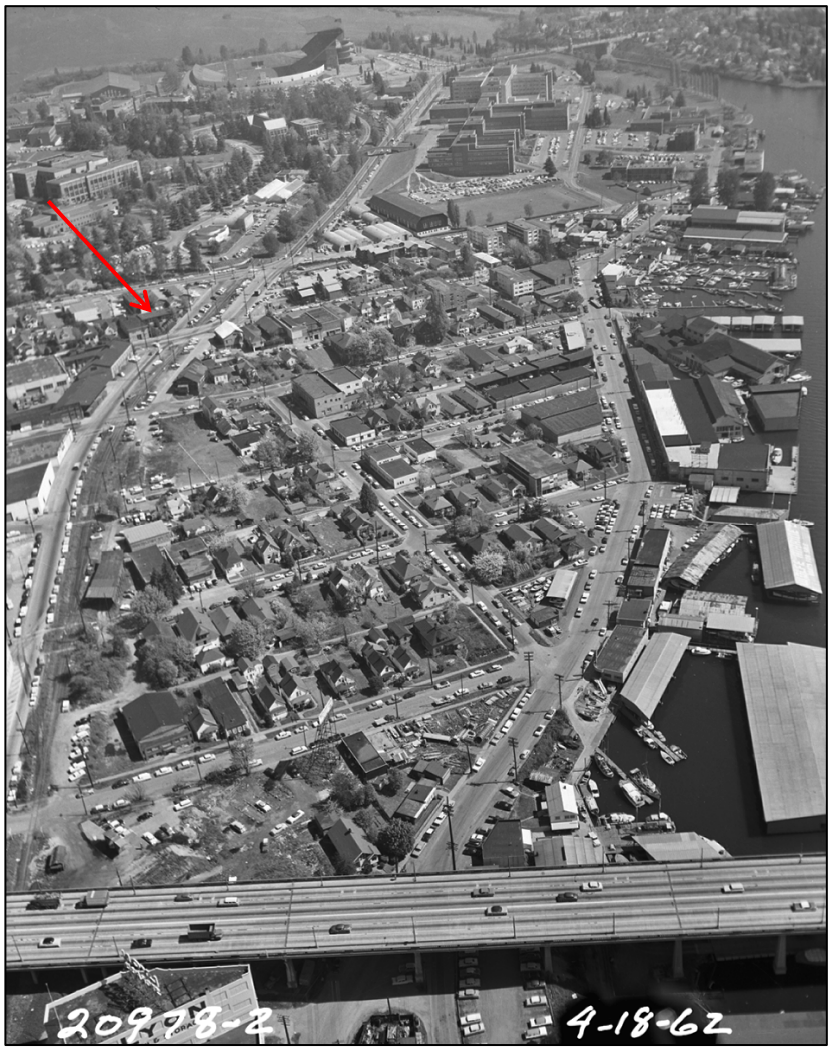


Fig. 2 A 1962 aerial view looking southeast over the University Bridge, showing the area between NE Pacific Street (near the left) and Northlake Way (along the shoreline, on the right). The subject property is in the background, marked with a red arrow. (Seattle Municipal Archives, image no. 71036)

Construction of Interstate 5 and the long ramp to the 520 Bridge in the early 1960s impacted both the University District and the nearby neighborhoods of North Capitol Hill, Montlake, and Wallingford. The highway bridge was set far above the neighborhood streets immediately on the north and south sides of Portage Bay, but it separated the balance of the Wallingford/University District and the North Capitol Hill/Eastlake neighborhoods. Completion of the 520 Bridge also isolated the residential blocks along the south side of the Montlake Cut. Within these neighborhoods along the north shore of Portage Bay, traffic was funneled along several arterials, including NE Pacific Street.

Increased urbanization and commercial and residential development near the shorelines impacted traditional industrial development along Portage
Bay and Lake Union. With the closure of the Lake Union Steam Plant at the south end,

and the Seattle Gas Company at the north end of Lake Union in the early 1970s, the former blue collar single-family residential neighborhoods of Eastlake and Wallingford became increasingly popular for middle and upper-class residents and student groups. Transformation of the lakeshore continued in the 1980s with the creation of many street-end parks, including one at the foot of Brooklyn Avenue NE and Gas Works Park. Meanwhile, zoning in the areas around the campus was changed, allowing for increased density and taller, larger apartment buildings.

In the 1960s and 70s, the University acquired the area west of 15th Avenue NE and south of North 40th Street, which includes the subject property. Most of this was part of the Northlake Urban Renewal Project designed to eliminate "blighted areas" (Guide to the Seattle Northlake Urban Renewal Project Records, n.p.). The first 12 miles of the Burke-Gilman Trail was opened in 1978 along the former right-of-way for the Seattle, Lake Shore & Eastern Railway, running from Gas Works Park along the northern shore of Lake Union and through the University's campus. From there the trail continued northeast along the northwestern shore of Lake Washington to Kenmore. This pedestrian and bike path provides a strong link to and through neighborhoods, as well as a reprieve from the heavy vehicle traffic on streets.

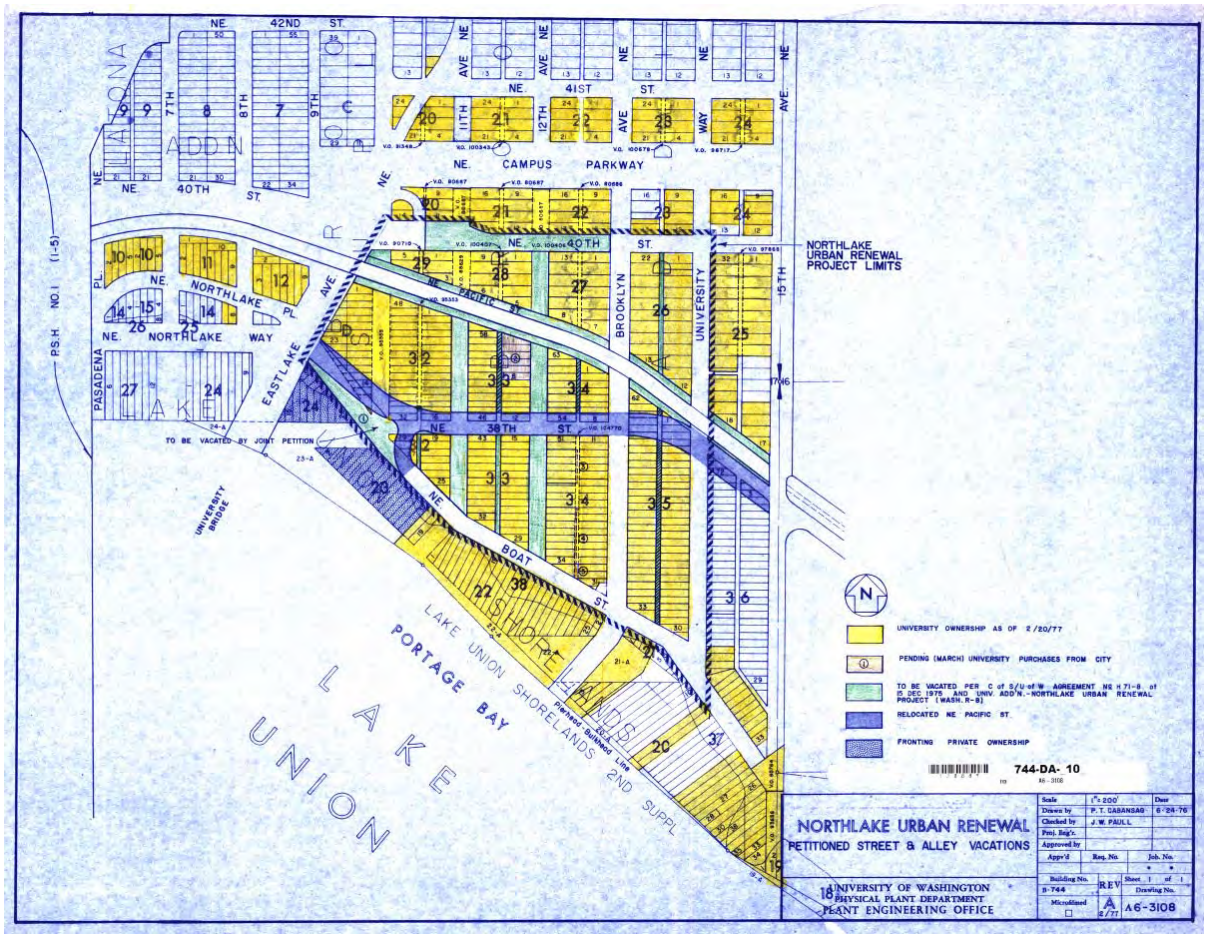


Fig. 3 Above, a 1977 map identifies the Northlake Urban Renewal Project area, which extended to the east edge of University Way NE but did not include the subject property. The yellow color on the map, which includes the subject property, indicated University ownership as of 2/20/77. The dark blue color shows the proposed rerouting of NE Pacific Street from the railroad right-of-way to a path along the former North 38th Street. (University of Washington Facilities Records)

The University continued to grow, undertaking 80 major construction projects between 1962 and 1994 (Johnston, p. 66). Near the subject property, projects included Gould Hall, the Mercer Hall dormitories, the Ethnic Cultural Center, and expansion of the Oceanography and Fisheries buildings. In the last two decades, expansion has continued in the Northlake area, with recent construction including the Mercer Court and Stevens Court dormitory complexes (replacing the original Mercer Hall and Stevens Court buildings, which dated from 1970 and 1969 respectively) as well as a number of new dormitory buildings along NE Campus Parkway.

History and Use of the Property

A City of Seattle building permit was issued February 29, 1952, and cites property and project information. The owner was Johnson & Lindsay, who also served as the contractor, and the architect was Smith Carroll Johanson. The permit, for construction of a four-unit apartment building, indicates that it was to be built as an addition to an existing building of 20'-6" by 40'(?). One original drawing is on file in the University's Facilities Records, but the title block details are illegible.

The property is located southwest of the original campus, in an area that was largely acquired by the University in the 1960s and 70s. The area is bounded by North 40th Street on the north, 15th Avenue NE on the east, Northlake Way on the south, and the University Bridge/Eastlake Ave on the west.

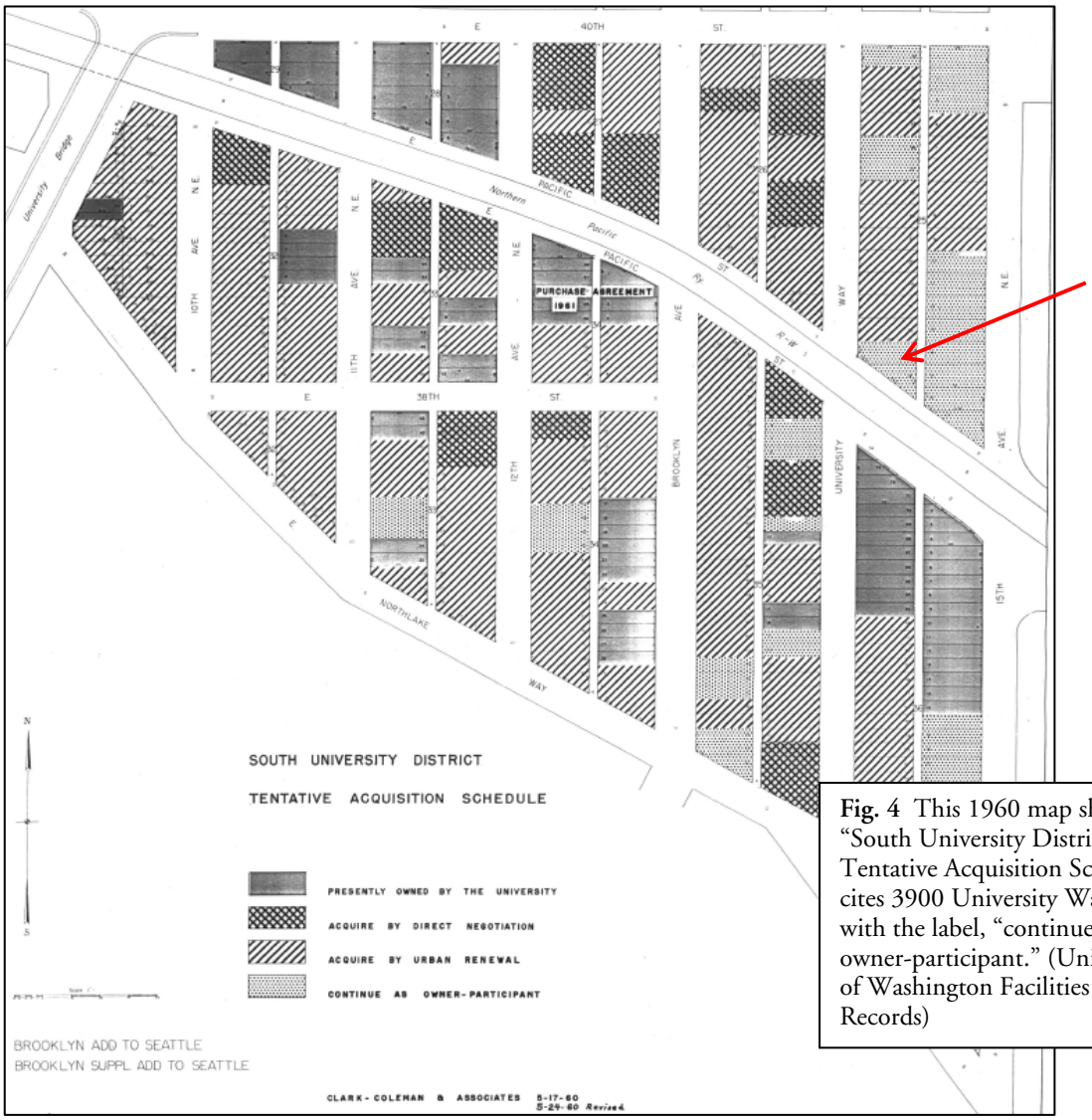


Fig. 4 This 1960 map showing "South University District Tentative Acquisition Schedule" cites 3900 University Way NE with the label, "continue as owner-participant." (University of Washington Facilities Records)

The University did not own the property when the subject building was constructed in 1952, but it appears to have been built with the intention of housing students. It dates from the post-WWII boom in student enrollment and in an area largely populated by students. As described, the University began acquiring the Northlake neighborhood soon after, building some married student housing in close proximity.

A sign on the current building reads "University of Washington Parkway housing." In the UW Facilities Records, "Parkway Housing" is identified as a series of buildings that "originally included 4038 12th Ave. NE, 4046 12th Ave. NE, 1310 NE Boat St., 3702 Brooklyn Ave. NE, 1104 NE Boat St. (Marina Apts.), 3715 University Way NE, 3753 15th Ave. NE, 3725 University Way NE, 1409 NE Boat St., 1400 NE Boat St., and 3900-3902-1/2 University Way NE [the subject building]. In 1995 demolished 3708, 3714, and 3720 University Way NE and 3757 15th Ave. NE. Until 1993 (when it was re-numbered 753), 3930 Brooklyn Ave. N.E. was also included under this number."

In 2003, the building was renovated by the UW Department of Architecture to serve as thesis studio space for students. The building is presently vacant.

Original Architects—Smith, Carroll & Johanson

The title block is not legible on the single original drawing that has been discovered, but the building permit cites the architect as Smith Carroll Johanson. This partnership was comprised of Francis "Frank" Marion Smith, Jr. (March 11, 1908–1981); Theodore Byrnette Carroll (October 23, 1903–?); and Perry Bertil Johanson (May 9, 1910–June 15, 1981).

Frank Smith moved to Seattle in the early 1930s, having been born in Deer Lodge, Montana, in 1908 and raised in San Diego. Theodore Carroll was born in Minneapolis in 1903 and received a B.Arch. from the University of Washington in 1927. He worked in the office of Seattle architect Andrew Willatsen from 1927-30, until Smith & Carroll formed a partnership in 1931. Perry Johanson was born in Greeley, Colorado, in 1910 and graduated from the University of Washington with a B.Arch. in 1934. He went to work for Smith & Carroll that same year, becoming a partner in 1936.

During World War II, Johanson partnered with architects Floyd Naramore and Clyde Grainger in a short-lived firm from 1945-46. Beginning in 1943, he established a new, multidisciplinary firm with Floyd Naramore; William Bain, Sr.; and Clifton Brady to pursue larger government and military contracts; by the end of the war, the partnership of NBBJ was solidified. Smith, Carroll & Johanson partnered with Harlan Thomas to design a 500-unit wartime housing project in Bremerton, and the firm apparently designed single-family residences as well. A *Seattle Times* citation from 1946 notes the firm won honorable mention in the Small Homes Prize Competition (*Seattle Times*, September 22, 1946).

The firm's name—Smith, Carroll & Johanson—was used at least until early 1952, when the subject building was permitted and constructed. However, the exact organization of the firm is unclear, as

Johanson had become a founding partner of NBBJ nearly ten years earlier, and Smith's obituary indicates that he retired from NBBJ in 1975 (*Seattle Times*, March 18, 1981). Carroll's later career is unknown.

4. ARCHITECTURAL DESCRIPTION

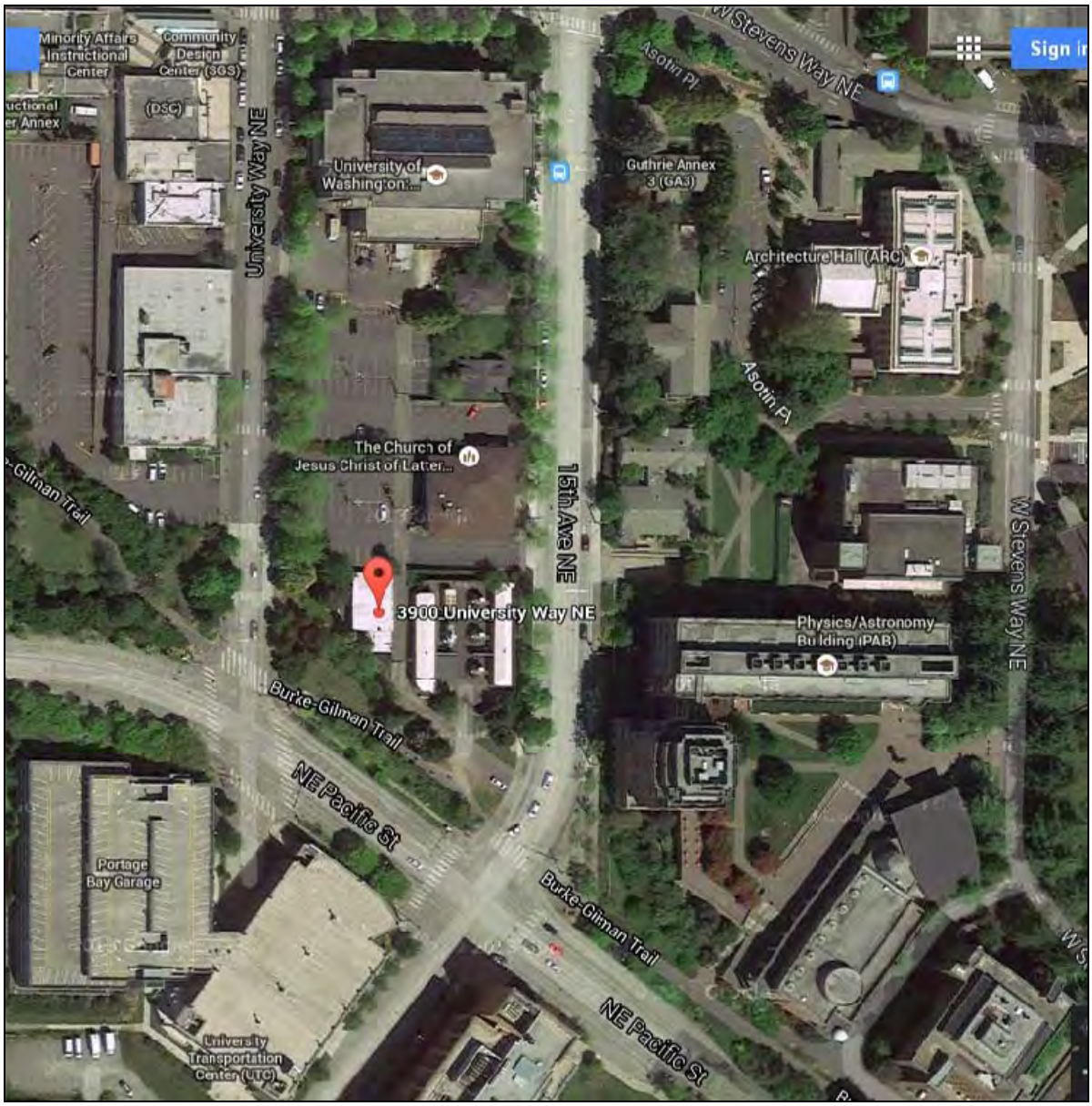


Fig. 5 A current aerial shows the subject building, marked with a red pin, and the surrounding area. North is up. (Google Maps, March 2015)

Site Features

The subject property is located near the southwest corner of a larger tax parcel that includes UW's Gould Hall at the north end of the block. The subject building is situated on the east side of University Way NE, near NE Pacific Street, and on the north side of the Burke-Gilman Trail. On the north is the

University's W14 parking lot. A 14'-wide alley runs north-south behind (east of) the building. To the east across the alley is the University's West Receiving Station, an electrical substation constructed in 1970.

While the block slopes down slightly from north to south, the subject site is more or less level because of a brick retaining wall along the southwest edge of the property, where it borders a paved trail parallel with the Burke-Gilman Trail. The 2003 renovation drawings identify the site as triangular, with a truncated west edge along University Way NE.

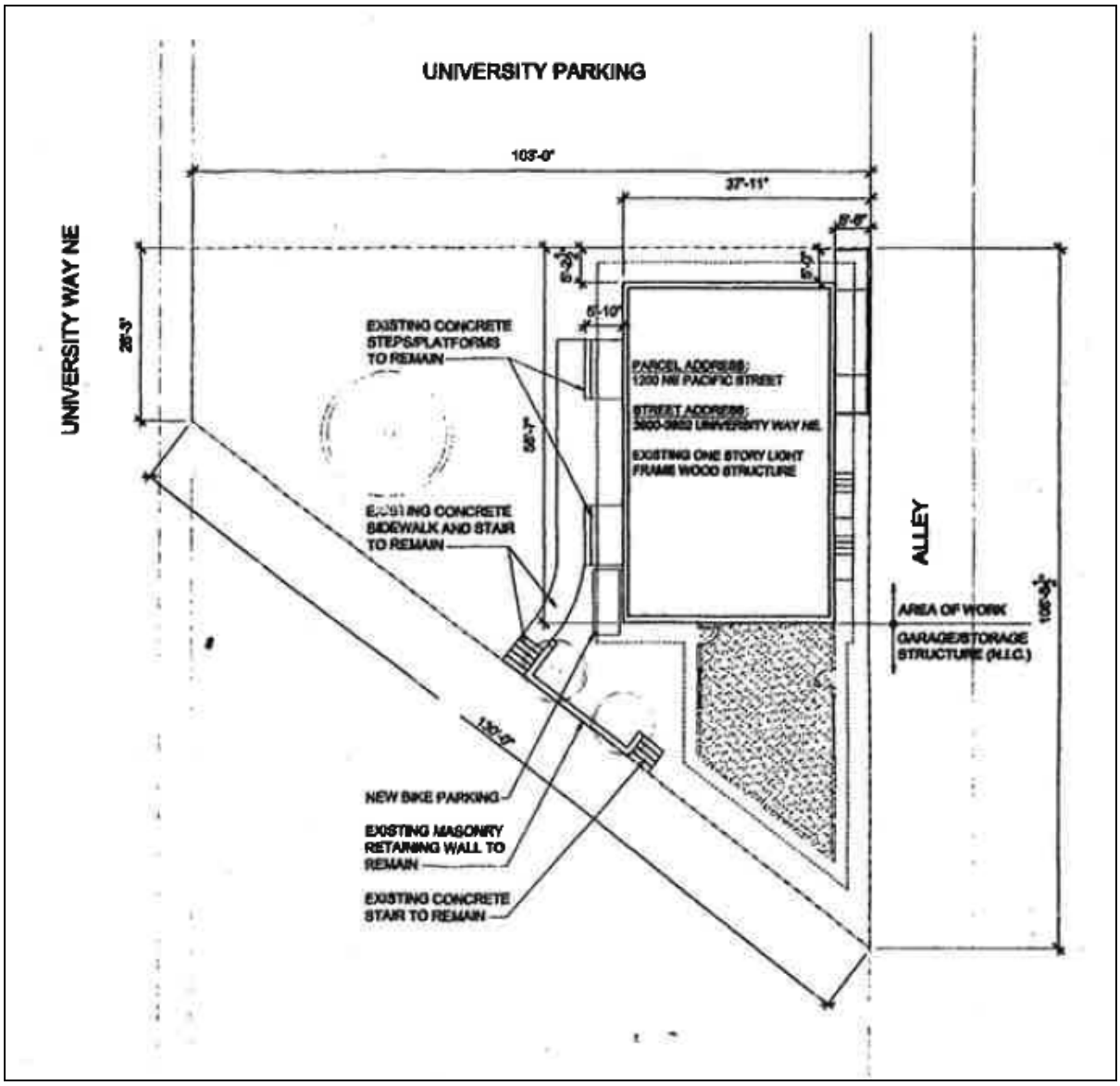


Fig. 6 Above, dimensions noted on this drawing are 103' along the north edge of the site, 106'-6 ½" along the east edge, 130' along the southwest edge, and 26'-3" along University Way NE. (Excerpt from Annex Thesis Studio Space Renovation drawing, 2003)

The building is set back approximately 65' from University Way NE and screened by large shrubs and trees. An approximately 3'-tall brick masonry retaining wall is flanked by concrete steps that provide access to the site from the paved path along its southwest edge. A concrete walk runs along the front west

façade, serving two entry porches. The front setback is grassy and includes a large conifer; two other conifers are situated by the retaining wall in the southwest setback.

The Building

The one-story building is approximately 50' (north-south) by 32' (east-west), with four front-to-back through-units. The conventional wood-frame structure has a concrete foundation and no basement, and is capped by a flat roof with deep overhanging flat eaves on the primary west façade. The exterior walls are finished with Roman brick veneer, with vertical grain cedar siding used along the top edge of the west wall only. A 20'-deep accessory building that abuts the building's south end originally contained a boiler room and garage. (Archival King County Assessor records indicate that the garage was constructed in the 1930s, predating the subject building.)

The primary west façade is symmetrical. Two pairs of entry doors were each served by a single wide concrete porch, with each unit featuring one large window opening with three windows. The lower portion of each window contained a louvered vent. The north and south façades had no fenestration. The east (alley) façade had four back stoops and back doors, and one window for each unit.

The 1952 King County Assessor's property record card notes interior finishes as painted plasterboard walls and ceilings, fir trim, hardwood and fir floors, and linoleum in the baths and kitchens. The kitchens had "few" built-ins. These were studio apartments, each an estimated 400 square feet, each with its entry and living space at the front, bathroom in the middle, and kitchen at the back (east side) with access to an individual back stoop.

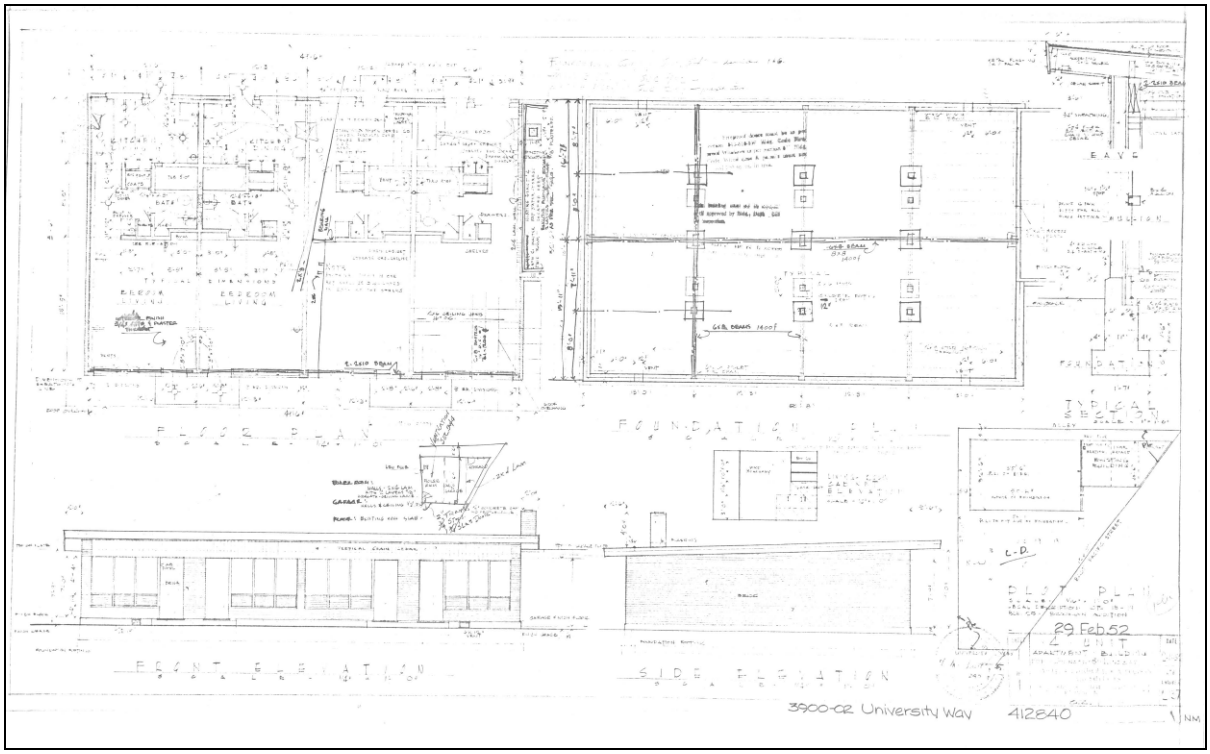


Fig. 7 The single original drawing on file includes a plot plan, foundation plan, floor plan, front elevation, side elevation, and typical section. (University of Washington Facilities Records)

Fig. 8 A 1953 tax record photo shows the building soon after its completion. View looking north along the primary west façade. (Puget Sound Regional Archives)

Changes over time include a number of alterations:

- replacement of original single-pane glazing with double glazing in the west windows
- removal of doors and infill of front door openings with inoperable panels (for security)
- replacement of original wood windows with contemporary vinyl window units on the east façade, and removal of some original louvers
- replacement of the northern two stoops with a new ramp on the east façade, accessing a new 3'-wide door
- demolition of interior non-structural walls, original kitchens, and bathrooms to create open office space
- insertion of two restrooms near the northeast corner of the building

Other changes to the building, verified by DPD permit records and Tax Assessor records, note the original construction and changes over time:

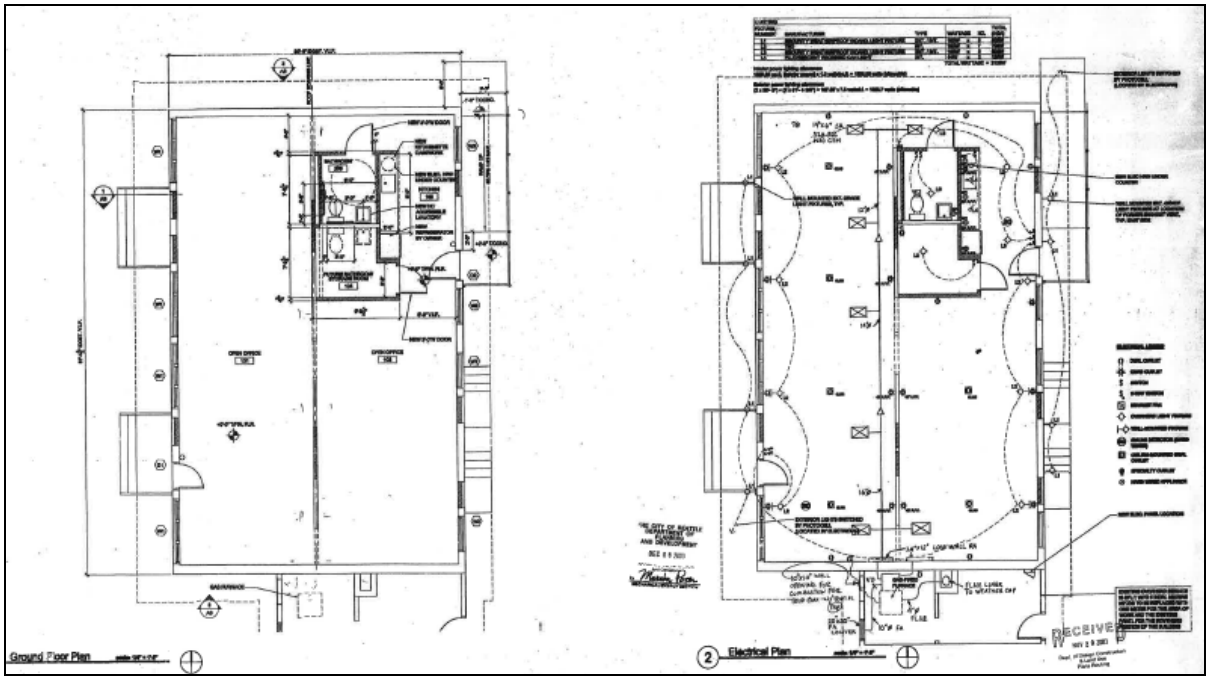
Date	Description
1952	Original construction
1975	Install new rear entry doors to the 4 living units and laundry
2003	Annex thesis studio space renovation (UW Dept. of Architecture)

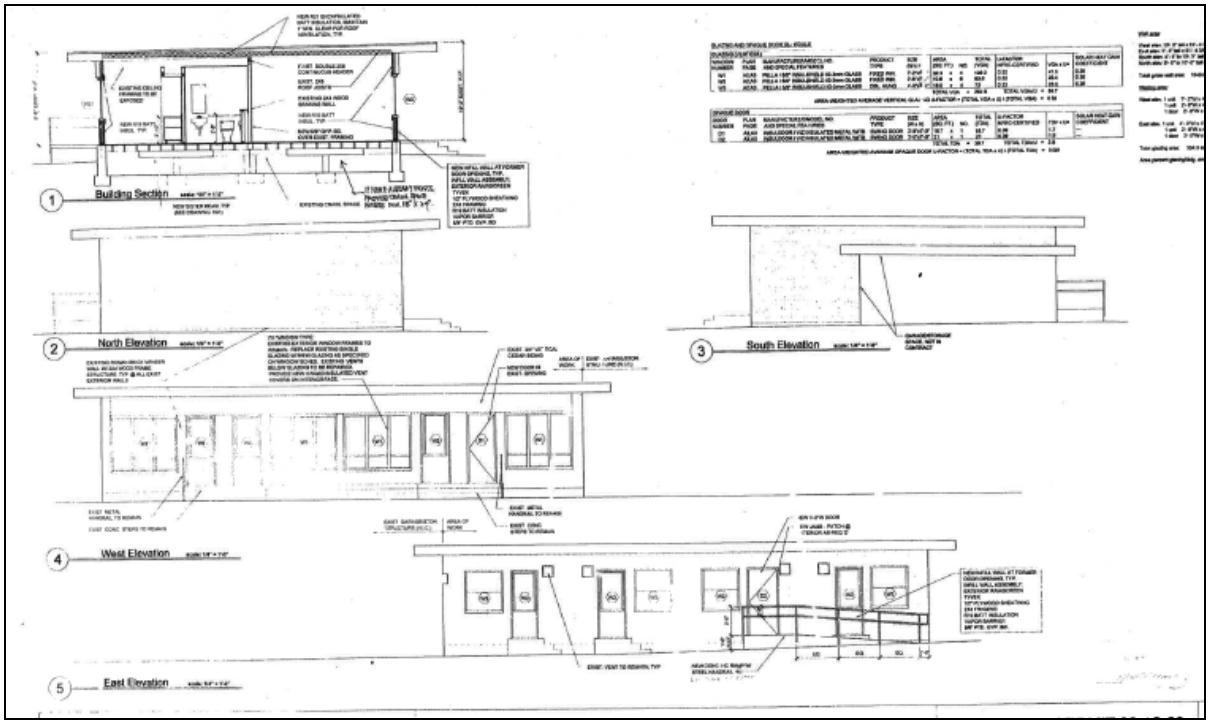
Evaluation

The building appears to have been a straightforward, expeditious Modern design. It featured a functional layout with minimal amenities for residential use. While the site was developed with an attractive retaining wall, the design provided little indoor-outdoor connection. Its architects had experience designing wartime housing as well as modest speculative housing, and it appears that they utilized this experience in their approach to the building. In contrast to other contemporary Northwest Regional residences, which were designed and built in the 1940s and 1950s, the subject building's Modern stylistic features were few, limited to the flat roof and overhang and simple façade composition. The use of brick veneer and few windows diverged from the typical wood-clad residential buildings of its era.

The building has been changed over time, including a complete interior remodel in 2003, which resulted in the removal of original partitions, bathrooms, kitchens, and original finishes, and construction of two new restrooms.

The building at 3900 University Way NE does not have significant architectural character or strong historical association with the campus or neighborhood, or the emergence of Modern-style residential design in the Seattle area. Additionally, its context has been significantly altered since its construction in 1952.





Figs. 9 & 10 Above, two excerpts from 2003 alteration drawing from the Annex Thesis Studio Space Renovation project. (DPD)

Current photos are by Sonja Molchany of BOLA Architecture + Planning and date from March 6, 2015.

Fig. 11 Above, a view looking southeast toward the primary west façade. Handrails appear original.

Fig. 12 Left, a view along the primary west façade.

Fig. 13 Above, a view looking southwest along the alley and east façade. The ramp dates from 2003. The wood railing appears to be temporary.

Fig. 14 Above, a view looking southwest toward the north and east façades.

Fig. 15 Above, a context view looking northeast across University Way NE. The subject property is obscured by mature shrubs and trees at the right side of the photo.

Fig. 16 Above, a context view looking north in the alley on the east side of the building. The back of Gould Hall is visible in the background.

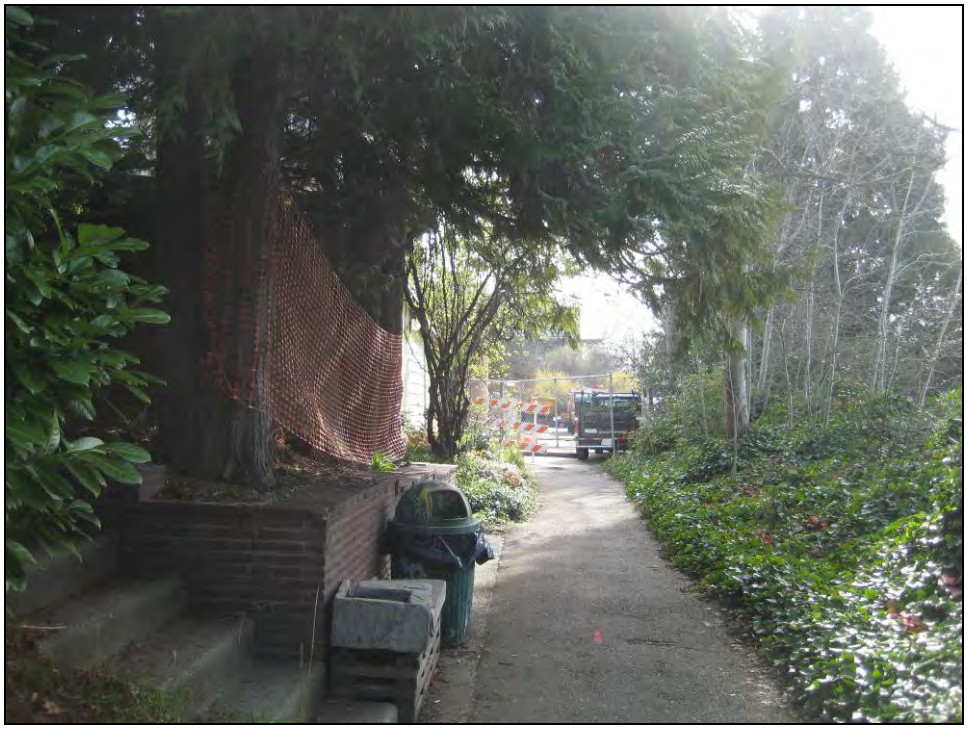


Fig. 17 Above: Context view looking southeast along the property line, showing retaining wall and trail.

Fig. 18 Left: View looking up the steps from the trail, toward the primary west façade of the building.

Fig. 19 Above, a detail view of the west façade of accessory building at south end of former apartment building.

Fig. 20 Above, view looking south down the alley along the west side, showing the southern portion of the property with the accessory building visible.

Fig. 21 Above, view north from the southeast corner of the property, showing the accessory building.

5. IMPACTS & MITIGATION

The proposed project involves demolition of the subject building. Because the building at 3900 University Way NE does not appear to have historical or architectural significance, its demolition is not an action that requires mitigation for historic preservation purposes.

Based on the project description, cited in the Architectural Commission's February 17, 2015 memo, the goals for the new project include careful attention to its prominent location within the west campus and community context, and incorporation of an interpretive element "that will enable access by students and the public to gain an understanding of the University's commitment to the environment and energy conservation." Given its location so close to the Burke-Gilman Trail, the designers should be mindful of its scale as it meets this pedestrian=oriented element.

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