Pierce College
Fort Steilacoom
Master Plan

September, 2016 With Minor Updates October 2019

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Pierce College Fort Steilacoom
Campus Master Plan

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Many people gave their time and creativity to creating this updated campus master plan. Faculty, staff, and administrators provided input, outcomes from several committees provided context, and the former campus master plan provided the scaffolding.

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Campus Master Plan
Letter from the President

Dear campus community,

What a difference a decade makes! As we look to planning the campus future, it is a good time to reflect on our past accomplishments. The last campus master plan was completed in 2001 and it provided a grand vision for the transformation of teaching and learning space at Fort Steilacoom. The college has proudly achieved this vision through a combination of demolition, renovation, and new construction.

The transformation in the campus began with the demolition of the portables in 2005. Over the next 10 years, the campus built the International House, the Milgard Child Development Center, the Rainier Math and Science building, and rebuilt and expanded the Health Education Center. The Cascade Building renovation occurred in phases including new student and administrative services spaces, a black box theatre and the expansion of the library from 20,000 square feet to over 60,000 square feet. Today, the campus houses 21st century learning environments that truly reflect how our students learning styles have changed. While we have come a long way, there are still many learning and support needs that have not been fulfilled.

Our next steps as we look toward a future centered on student achievement will be to continue the renovation in Cascade, with a focus on allied health programs. Our campus still has demand for expanded and new technologically enhanced spaces for our arts, theatre, film, and communication programs. Our continued efforts to integrate our curriculum with global awareness lends itself to the creation of a residence hall on campus. Lastly, as we continue to update our infrastructure, we will take to the opportunity to assess our accessibility wayfinding, lighting, and vehicular and pedestrian traffic flow. We commit to doing this in an economic and ecological sustainable manner.

Change will be slower than in the hectic, yet exciting, decade we have just experienced. However, the changes will serve to enhance the student learning experience and the ways in which we interact with our work and each other.

I look forward to continuing the path we are on and aspiring to always thinking about how our environment impacts our students' successes.

I. Executive Summary

A. Purpose and Intent

Our mission: *Pierce College creates quality educational opportunities for a diverse community of learners to thrive in an evolving world.*

In order to fulfill our mission, the Pierce College District serves its communities with two Colleges: Pierce College Puyallup, in the City of Puyallup, and Pierce College Fort Steilacoom, in the City of Lakewood. The District also supports two education centers at Joint Base Lewis McChord (JBLM), as well as an extended learning network reaching out to citizens in sites throughout our service District.

The purpose of this campus master plan is to provide a detailed description of the current and future needs, and physical development of Pierce College Fort Steilacoom through the perspective of a College in a multi-College District with close academic and operational ties with one another, such as a single accreditation and instructional deans assigned to both Colleges.

Each College's campus master plan addresses specific College needs in the context of the District's mission, vision, core themes, and long-range educational and financial plans. The previous master plans, called Facilities Master Plans, were developed in 2001 (Fort Steilacoom) and in 2002 (Puyallup), and both were intended to serve the Colleges through 2015. Due to the successful nature of the District's capital construction and renovations since 2002, much of what was envisioned in those master plans has been realized.

Pierce College implements its campus master plans in several ways: through major project planning and requests; managing local and minor works projects; entering into master plan agreements with the cities of Lakewood and Puyallup; and developing and implementing detailed functional plans for sub-elements such as campus signage and parking lot repairs.

Beginning in late 2012, Pierce initiated efforts for an early update of the Campus Master Plans. Since then, there have been a few broad-based College and District planning group meetings, as well as meetings with architectural consultants. That information, which is incorporated into this plan, is intended to serve the College through 2025.

When a major project is identified, appropriate members of the Executive Team, Facilities, along with representatives of departments and programs that will utilize the new space, and a broad range of District-wide constituent groups, come together to work on the project proposal. Within the framework of the master plan, this group further defines the purpose of the building, unique programmatic needs, and the specific types and quantities of space needed.

The planning committee also includes representation from technical support areas, including Information Technology, Media Services, Campus Safety, Purchasing, and the Access and Disability Services Office.

Campus Master Plans and individual major project requests are enhanced by the Pierce District Learning and Student Success Strategic Plan (LSSSP) (see Educational Development and Appendix A). A draft of the LSSSP was finalized in August of 2015. It was brought to the Learning Council for review and comment in fall of 2015, with subsequent comments and amendments accepted throughout the quarter. The LSSSP addresses current and future educational needs of the District and will help define the quantity and nature of facilities and equipment needed to fulfill the District's mission and core themes. For example, the LSSSP identifies programs based on demand that the College would like to begin (Robotics, 3-D Printing/Additive Manufacturing, Baccalaureate of Applied Science degrees), or expand (Engineering, Computer Network Engineering), and infrastructure needs to support programs.

Pierce College and its architectural and engineering design teams ensure new and renovated facilities are based on universal design principle. Internal departments, including Access and Disability Services and Campus Safety, participate in the process and recommend improvements and help design safety protocols. A team from the State Department of Enterprise Services, who make recommendations to ensure or improve accessibility during project design, also reviews major projects. Projects must meet or exceed jurisdictional building code and fire and life safety requirements before a building permit will be issued.

Pierce College's planning processes identifies capital project priorities. For the 2015-2017 capital budget cycle, Pierce requested a third phase renovation of the Fort Steilacoom Cascade Building in order to renovate and expand space to address the educational and facility needs of the Dental Hygiene and Veterinary Technology programs, as well as infrastructure and classroom space. This project was funded for design in the 2017-2019 Capital budget. This will provide new space for expanding programs in STEM and will provide new space to address today's education.

For the 2017-2019 biennium, Pierce College Puyallup requested a Science, Technology, Engineering, and Mathematics (STEM)-focused building. This will replace older science classrooms and labs and significantly expanded into new space (e.g., the College does not currently have an organic chemistry lab).

With the completion of a new STEM building, a future opportunity will be to renovate the existing Brouillet Library/Science Building, expand the library, and expand/co-locate needed student learning support space such as tutoring, supplemental instruction, a writing center, and a veteran's center on the Puyallup campus.

The State Board sets limits on the size of buildings requested and sets ranges within which the costs of certain types of space must fall. Pierce College ensures our project requests fall within the State Board for Community and Technical Colleges (SBCTC) guidelines (e.g., 70,000 square feet or less for new construction unless permission is granted to exceed that limit). The chancellor routinely updates the Board of Trustees on the status of all capital projects, providing information on construction schedules, impacts, progress, and other

relevant information.

Pierce College explores alternative funding to acquire needed space outside of the "typical" capital project request process. For example, the Pierce College Foundation recently purchased a building to be used as a residence hall. Puyallup is exploring the lease/purchase of additional space off campus as its STEM building request mentioned previously.

B. Background

Pierce College built its first permanent District structures at Fort Steilacoom in 1971 and developed our initial facility master plan in 1976. Since then, the Fort Steilacoom campus has experienced tremendous growth while a concurrent population explosion in eastern Pierce County prompted us to develop and build a second campus in Puyallup. In 2002, a new master plan was developed and adopted that has guided the growth at the Puyallup campus.

The process for acquiring state capital funding is highly competitive and requires a demonstration of significant educational program need in order for project requests to be successfully advanced through this funding process. Capital project requests are submitted to the SBCTC for scoring. Selected projects are then submitted to the State Legislature in a packaged funding request for the 34 community and technical Colleges in the system.

Until 1999, Pierce College was recognized as a single College even though we had begun development of a full campus in the city of Puyallup in 1990. As a single College entitled to only one major capital request each biennium, the emphasis was placed on development of the Puyallup College and no funds were available for major projects at Fort Steilacoom. In 1999, Pierce College Puyallup received full College status from the SBCTC. This recognition made the Pierce College District a two-College District instead of a two-campus District, and added the 34th College to the system.

The change in status gave both Pierce College Fort Steilacoom and Pierce College Puyallup the opportunity to request capital project funds within the same funding cycle. To better serve our students and allow them the opportunity to take courses from either institution, the Colleges are accredited by the Northwest Commission on Colleges and Universities as a single College. Although programs may differ among the two Colleges, learning outcomes for the same courses taught across the District are identical.

Subsequent to the designation of Pierce as a two-College District, each of the Colleges embarked upon a process to develop master plans that recognized the existence of each as a stand-alone campus while still recognizing their roles in supporting each other within a District model.

The previous master plan for Pierce College Fort Steilacoom was completed in 2001. Pierce College Fort Steilacoom has been successful in acquiring funding for new and renovated facilities and in the ensuing 15 years, a majority of the master planning goals in that document have been accomplished. As of 2016,

the campus comprises a total of 476,789 square feet of building space. There are 6 main buildings accounting for 459,373 gross square feet and 6 smaller buildings totaling 27,416 square feet. Of this space, 316,693 square feet were constructed prior to 1999, and 161,096 square feet have been constructed since 2000. Modifications have been made in three of our main buildings. The Health Education Center was renovated and expanded in 2006-2007 to include the addition of a gymnasium and closing of the pool that suffered irreparable damage in the Nisqually earthquake of 2001. A third floor was added to the Olympic South building in 2004 to accommodate more classrooms and provide offices and instructional space for our 4-year university partner, Central Washington University. The lower floor of the Olympic South Building was remodeled in 2006 to provide improved space for Early Childhood Education and the Art program. The Pierce College Foundation supported the building of the 9900 square foot Milgard Child Development Center which houses toddler and preschool age classrooms and development space. We have been conducting a series of renovations in the Cascade Building since 2008 for needed infrastructure upgrades and to improve instructional, student services, and administrative spaces. The 80,645 square foot LEED Gold Certified Rainier Math and Science Building, completed in 2010, replaced older lab and classroom space in the Cascade Building. Rainier includes 11 labs and 12 classrooms, two winter garden areas and a 1,600 square foot, 58 seat Science Dome (planetarium) that has greatly enhanced instruction in a variety of teaching disciplines and has extended our community outreach program.

The current master plan acknowledges these successes and identifies new priorities for the Fort Steilacoom campus until 2025.

C. Planning Process

Master plan stakeholder meetings were conducted with the Fort Steilacoom Facilities Planning group during the winter and spring of 2013. These meetings included faculty, staff, student leaders, and the Fort Steilacoom College president, District administration, and consultants. The focus of the meetings was to identify what programs and facilities were working well at Fort Steilacoom, and where improvements in programs and facilities were needed to better accomplish the District's strategic outcomes. The input from the stakeholder meetings, including recommendations for the development of new, expanded, and renovated facilities, formed the basis for the updates to the College's campus master plan. The campus master plan includes physical structures, infrastructure and technology needs, pedestrian and vehicular circulation plans (Figure E), and land management practices.

The master planning process is not a static one-time effort, but rather an on-going analysis of strategic needs coupled with an aggressive and proactive approach to ensuring those needs are met. The campus master plan will remain a dynamic document that will be revised and expanded as needed. As in this current master plan, all review processes utilize enrollment projections, educational program outcomes, instructional delivery modes, and facility usage demands to help guide these efforts and to determine resource acquisition strategies. Additionally, the work of the District's Institutional Effectiveness Team

generates feedback to the entire College, through the biennial IE Report, to assure that the mission of Pierce College and the College's core themes are being fulfilled. While not all issues will be addressed completely with the current update, these efforts will continue to carry the process forward. The conceptual framework offers opportunities for expressing new ideas and for meeting the continual challenge of change.

D. Guiding Principles

The Pierce College District has well-vetted Mission and Vision statements, Core Themes, and Values that guide all aspects of our strategic planning and that help us define our roles and responsibilities as a student-centered community of learners. These provide the foundation for determining goals and priorities for the physical development of our campuses. This foundation is defined as follows:

Mission

Pierce College creates quality educational opportunities for a diverse community of learners to thrive in an evolving world.

Vision

Possibilities realized: Innovative and engaged learners enriching our local and global communities.

Core Themes and Objectives

- *Access: The community Pierce College serves will have access to comprehensive educational offerings and support services.*
    1. *Learning opportunities will align with students' educational and career goals, and will be consistent with workforce needs.*
    2. *Students will have timely access to the support services they need to accomplish their educational and career goals.*
    3. *We will engage with, and equitably serve, our diverse communities.*

- *Excellence: Pierce College will assure quality and continuous improvement in all endeavors.*
    1. *Departments and programs will meet or exceed their stated outcomes.*
    2. *We will meet the requirements for accreditations, fiscal viability, compliance measures, and other elements necessary to sustain our work.*
    3. *We will provide, and employees will engage in, learning and development opportunities that contribute to mission fulfillment.*

- *Contribution to the Community: Pierce College will be a recognized leader in building and sustaining academic, industry and broad-based community partnerships to advance educational opportunities and align with economic development.*
    1. *We will initiate, lead, and sustain mission-driven partnerships and collaborations within our community.*
    2. *Our community will recognize Pierce College's value and impact.*

3. *We will foster economic equity and development within our community.*

- *Equity, Diversity and Inclusion: Pierce College will promote an equitable, diverse environment for teaching, learning, and working, with collaborative decision-making and mutual respect.*
    1. *Our infrastructure will foster positive teaching, learning, and working opportunities*
    2. *Employees and students will be engaged in, and support, shared governance.*
    3. *We will engage students, employees, and community members in ways that respect human dignity and lead to equitable, inclusive experiences.*

- *Student Learning and Success: Pierce College students will experience quality, relevant learning that maximizes their potential for success.*
    1. *Students will make timely progress toward their educational and career goals.*
    2. *Students will achieve institutional and programmatic learning outcomes.*
    3. *Students will be successful when they transfer for further education or move directly into the workforces.*

Values

- *Learning*
- *Integrity*
- *Respect*
- *Accountability*
- *Sustainability*

E. Adherence to the Learning and Student Success Strategic Plan

The Campus Master Plan has little relevance if it is not in direct alignment with the District Learning and Student Success Strategic Plan (see Appendix A). The District Learning and Student Success Strategic Plan provides the basis for strategic instructional planning which, in turn, directs the College's strategic plan for campus development. The District Learning and Student Success Strategic Plan was finalized fall 2015 and was incorporated into this campus master plan.

F. Commitment to Institutional Effectiveness

Pierce College has developed an assessment tool designed to evaluate the Core Themes and mission fulfillment as established by the District's Board of Trustees. This document, the *Pierce College District Institutional Effectiveness Report*, which was last generated in 2014, describes the assessment process and measures the success of the District's efforts to meet stated outcomes through Indicators of Achievement (see Appendix C for the Institutional Effectiveness Report). This Campus Master Plan is intended to ensure that the College's physical environment is designed and constructed to fully and successfully support the District's Institutional Core Themes and contribute to mission fulfillment.

One measure of success included in the Institutional Effectiveness Biennium Report is the degree to which employees and students believe that the College's buildings and grounds support quality teaching and learning. The measure used to indicate success is that satisfaction meets or exceeds 70% on Student Satisfaction Surveys and Employee Climate Surveys. In the last student Community College Survey of Student Engagement (CCSSE), conducted in 2014, 94.1% of respondents shared that they were very or somewhat satisfied with the buildings and grounds at Pierce College.

The 2013 Employee Climate Survey, indicated that more than 80% of the respondents indicated that the buildings were well maintained and cleaned. Of the six indicators used, the highest rating was for "Grounds are well maintained and present an inviting environment," of which 89.4% of the respondents agreed. Two indicators were tied for the lowest positive rating (i.e., 74%) were "Buildings are accessible to those with mobility and other physical challenges," and "I am well informed regarding repair and construction projects."

II. Campus Master Plan Goals

The Pierce College Fort Steilacoom Campus Master Plan enables strategic College growth and development over the next 10 years. Pierce College evaluated its mission, vision, core themes, values, and institutional outcomes and established the following eight major campus master plan-related goals:

A. Establish a dynamic framework for continued growth and decision-making
Facility planning at Pierce College Fort Steilacoom is an ongoing activity involving all constituents of the College and District-- faculty, staff, students, and administration – along with City of Lakewood Development Services staff and members of our neighboring communities. As the physical and instructional environment on the College campus grows, we continually need to assess and make decisions about modifying our original buildings to support the College's academic mission and planned campus expansion. Renovations to improve existing physical facilities allow the College to add program space in all categories to accommodate projected enrollment growth, program expansion, and to modify existing space to better suit current instructional needs (e.g., original building designs no longer fit a larger campus).

The incremental nature of the legislative funding process requires the College to verify that capital requests build value over time. For both budgetary and utilitarian reasons, we review and amend the Campus Master Plan each planning cycle to determine which priorities should be carried into the future, which goals have been accomplished, and which may no longer be relevant. This process is important not just for capital funding reasons, but also for ensuring total College success by meeting its performance indicators of the Institutional Biennium Effectiveness Report.

Beginning in July 2014, a new District wide governance council system took effect. This shared governance system supports the College's mission, vision, and values by allowing for many opportunities for participation and leadership in College governance by all employees and their representative groups, in a transparent and open process (see Appendix D for Pierce College District Governance Executive Summary).

One of the four councils in the new system is the Facilities and Safety Council. Moving forward to fulfilling this campus master plan, and creating the next one, it is anticipated that the Facilities and Safety Council will take a leadership role in the review and discussion of the Campus Master Plan, as well as the dissemination and collection of information as it relates to the Campus Master Plan.

B. Reinforce Pierce College as a "learning-centered community" with quality comprehensive programs focused on educational programs and support leading to student success
The College acknowledges and supports that facility design needs to adjust to new pedagogical approaches emphasizing student learning and success. As a learning-centered institution, Pierce College Fort Steilacoom must offer new

classroom environments flexible enough to accommodate a variety of innovative teaching methods, as well as meet the needs of the overall College.

As the campus grows, spaces originally designed for one purpose are no longer suitable to meet current needs. For example, the library has grown to be a focal point of the College with a demand for multi-use spaces that allow for meeting space for students, rooms where students can practice talks and presentations, quiet space, group study areas, and areas for supplemental instruction (i.e., facilitated learning). The library has been renovated and expanded from 20,000 to 60,000 square feet to meet these needs. The Dental Hygiene program has continued to upgrade their equipment, however, a lack of sufficient space in the clinical lab space has been an issue in recent accreditation visits. Similarly, the Veterinary Technology space has been deemed inadequate during the past two accreditation cycles. Recently we have moved the Emergency Medical Services (EMS) program from Joint Base Lewis McChord (JBLM) to the Fort Steilacoom campus due to loss of program space at JBLM. This move has resulted in both the Dental Hygiene and Veterinary Technology programs having to forgo student gathering and study space and additional storage space. These concerns will be addressed in the third phase of the Cascade renovation.

The College has always been committed to staying current in technology in both the classroom and in the workplace. With a major shift toward wireless and individualized handheld devices, the College is increasing access to technology networks, expanding existing distance learning resources, and creating technology- and study-friendly places. There is also a need to continually upgrade classroom and laboratory technology to improve real and virtual communication. The College is committed to creating the spaces and the atmosphere necessary to maximize its learning-centered community. One major driver of the Campus Master Plan will be the 2015-2020 Learning and Student Success Strategic Plan.

There have been four major drivers in the area of educational development over the last few years: I) the Learning and Student Success Strategic Plan; II) Achieving the Dream; III) Pathways; IV) the Student Achievement Initiative. All are focusing on making more students more successful, closing achievement gaps, and increasing retention, completion, and overall student success.

C. <u>2015-20 Learning and Student Success Strategic Plan</u>
In Fall 2016, Pierce College finalized its Learning and Student Success Strategic Plan. This plan, which extends from 2015-2020, will certainly impact the configuration of spaces (See Appendix B for the full plan).

The Learning and Student Success Strategic Plan is a set of institutional goals and actions that have been identified in order to guide the educational direction of the institution both intentionally and strategically in its mission of *providing quality educational opportunities for a diverse community of learners to thrive in an evolving world*. At its core, the Strategic Plan exists to advance the educational goals of our community as student's transition into, move through, and follow their pathway beyond Pierce College. The Strategic Plan includes

goals, the specific *strategic actions* that support those goals, and the *measures* by which we can determine the effectiveness of each action. In addition, primary *accountabilities* and *timelines* are assigned to assure continuous progress, assessment, and refinement.

The Strategic Plan has been realized through an iterative and collaborative process of data collection, information analysis, and concept application. Goals and strategic actions were developed under the umbrella of the institution's Core Themes: *Access*, Excellence, Contribution to the Community, Equity, Diversity and Inclusion and Student Learning & Success. Thus, the Strategic Plan maps back to the Institutional Effectiveness Report and Scorecard, linking the Strategic Plan directly to fulfillment of the institutional mission.

The Strategic Plan represents the work and input of faculty, staff, and students over a two-year period, culminating in an intentional set of strategic actions that attempt to respond to the needs of current and future students, engaged and reflective faculty, and an expanding and diversifying community.

Goals
Four core goals have been identified within the Education Plan. These include the following:

i. Develop and Advance Program Pathways and Learning Strategies to Support Enrollment, Success, and Completion
ii. Increase Retention & Completion Rates and Eliminate Achievement Gaps by 2020 (Year Five)
iii. Increase College Readiness and Transition (Year Three)
iv. Eliminate Racism and Advance Equity in the Learning Environment (Ongoing)

I. Achieving the Dream
The Pierce District has been an active participant in the national Achieving the Dream initiative for three-plus years. This initiative aims to close achievement gaps by closely examining disaggregated data and institutionalizing interventions to close these gaps. The College has made substantial progress in identifying and closing specific achievement gaps (Appendix E), as well as increasing retention and progress toward degree, in the last few years. Over $2,000,000 has been moved to a variety of activities and projects that are Achieving the Dream focused. Some of the work in this area influences the Campus Master Plan. For example, mandatory advising for all students was implemented fall 2015. With more students coming to the Student Success area, the room is no longer adequate to meet the demand.

II. Pathways
Beginning fall 2014, Pierce College formed a Pathways Team to examine how students enter the College, traverse through it, and exit the College with degree or certificate in hand. Some of the outcomes of this work identified needs for an annual schedule, block scheduling, and enrollment of cohorts.

Professional technical programs offered in an enlarged enrollment cohort format may require different or remodeled facilities. In addition, students support services may need additional space or remodels to support national best practices (e.g., mandatory advising, private space for student consultation). In fall of 2015, Pierce College was informed it was chosen as one of the 30 Colleges nationwide to participate in the Pathways Project. This two-year project, aimed at producing guided pathways leading to graduation, may also result in facility's needs.

III. Student Achievement Initiative

The statewide Student Achievement Initiative is predicated on moving more students through various milestones of their program, ultimately resulting in increased graduation. With the statewide operating budget allocation model that went into effect summer 2016, 10% of the College's budget is based on our ability to successfully move students through the milestones (e.g., moving students from pre-College to College-level classes). There may be pedagogy changes that come with this initiative that will affect facilities.

As we continue to focus our energy on closing achievement gaps and equity, the need for facilities to accommodate the adopted national best practices for student success (e.g., mandatory advising means more space for additional advisors; cohort study space; increased tutoring space) will continue to grow.

D. <u>Create facilities that enhance interaction with other organizations and strengthen community connections</u>

Our mission statement describes Pierce College as "a diverse community of learners… (who) thrive in an evolving world." At Pierce College, "community" is a cornerstone of our basic beliefs. Many of the College's events, such as plays, lectures, art exhibits, science dome programs and athletic events often feature our internal community (i.e., students and faculty) and special guests. Our events are advertised to the external community with the desire that they will attend and become more involved with the College. The recent completion of the Rainier Math and Science building provides an amazing Science Dome planetarium experience to the surrounding community and K-12 educational entities.

We offer a great resource to the community through short-term events, as well as long-term events through continuing education, formal classes, and reduced-tuition classes for seniors. In addition, campus rooms and other spaces are available for rent for private or community events on a space-available basis. For example, conference rooms have been rented for meetings, the performance lounge has been rented by local organizations supporting performing groups or art festivals, the Health Education Center gymnasium has been rented by Washington State High School Athletics Association for Volleyball Championships, and outdoor space has been rented for Motorcycle Drivers' Training programs.

E. Facilitate community access to the campus through public and alternative transportation means

Pierce College has been engaged in a long-standing program to encourage commuting reduction strategies for employees, as well as facilitate better use of public transit and carpooling by both students and employees. We periodically coordinate with Pierce Transit to review bus routing and access through the campus. We provide annual reports to the state Department of Ecology regarding greenhouse gas emissions reduction and this influences our efforts to reduce the impact of traditional automobile travel to and from the campus. We incorporate mitigation planning for environmental impacts due to motorized transportation modes into the efforts of a campus sustainability committee comprised of faculty, staff, students, and administration. This group is also facilitating the use of alternative means of transportation such as bicycles and alternatively fueled vehicles. Our district participates in the state agency commute trip reduction program and recently received The Summit Award (Silver) for leadership, innovation, and dedication in employee transportation programs.

F. Use architecture, design, and prioritization to express and reinforce the College's mission and values in order to support a successful student-learning environment

The Pierce College Fort Steilacoom Campus Master Plan represents the creativity and energy we have invested in designing facilities that truly reflect and serve our internal and external College community. This process of phased campus and facility development provides the most effective use of existing facilities and methodically introduces new spaces over time that meet the emerging needs of the College.

Additionally, major shifts in design that reflect the evolution of teaching methods beyond the traditional College classroom, the integration of informal learning spaces, the importance of space for tutoring and supplemental instruction, the proximity of faculty offices to students and the increasing use of technology in the learning environment and in students' lives needs to be recognized and incorporated into new and remodeled facilities.

The Campus Master Plan applies design concepts that develop positive and healthy structural environments while improving access, upgrading the image of the campus, and enhancing the College's community relationships. The Campus Master Plan identifies the following **design guidelines**:

Consistency

- Of the three categories of development listed here, we will rely on architectural design to establish consistent patterns including architectural style, material use, orientation, and unity in color and lighting.

- New construction and existing structure modifications shall always be designed to take into consideration four distinct physical elements: buildings, landscapes, pedestrian circulation, and vehicular traffic patterns.
- Architectural elements, such as roofs and parapets, materials, colors, and details shall relate to nearby and adjacent campus structures

Institutional Identity

- New construction and existing-structure modifications shall always be designed to strengthen the College's role and image as a center for academic growth and social interaction, serving students and the community.
- Interior signage, art, and media will stress the five core themes of access, excellence, contribution to the community, equity, diversity and inclusion, and student learning and success.

Safety and Convenience

- Externally, buildings will be clearly identifiable for way-finding purposes with primary entrances prominently expressed in the design of the building.
- Internal circulation patterns shall be straightforward and relate to the building site, adjacent structures, and user arrival sequence.
- Safety considerations for students, employees, and visitors shall remain a dominant theme.

G. Maximize operational and maintenance efficiencies to preserve the campus environment and to effectively manage long-term operational costs

As we examine alternative ways to optimize space and resources, we typically explore the feasibility of modifying traditional academic building usage patterns, which tend to favor heavy morning and early afternoon facility occupancy.

This modification typically includes increasing classroom occupancy into the late afternoon, evenings, and further into the weekends, depending on the program. Beginning in summer 2014, a new block-style classroom scheduling was piloted to see if this pattern results in both increased room use efficiencies and increased enrollment (i.e., the block scheduling reduces the number of days a student would be on campus). The use of block scheduling was expanded in 2015, but more work needs to be done in optimizing classroom scheduling.

The College utilizes a computerized maintenance management system (CMMS) to assist us in managing our facilities. This system is particularly useful in tracking our preventive maintenance program covering hundreds of pieces of equipment. The system generates work orders on a scheduled basis for servicing and inspections of equipment, which enables the College to establish a methodical means by which we can maintain the considerable array of equipment in our inventory. This, in turn, allows us to better manage long-term costs.

Participation in grant programs creates an opportunity to refit and replace older pieces of equipment with newer, more energy efficient devices, thus contributing to managing costs over time. We have successfully obtained grant funding for this purpose and, in combination with local College funds, have been able to substantially increase our energy efficiency.

H. Value open spaces and strengthen stewardship of the environment

Pierce College Fort Steilacoom exists in a setting that provides a sense of tranquility, openness, and sense of place that is unique in the City of Lakewood. The site offers unobstructed views of the Cascade and Olympic Mountain Ranges, Mount Rainier, and Puget Sound. The campus extends to the border of the 340 acre Fort Steilacoom Park and Waughop Lake, linking the campus with the City of Lakewood's public park and sports fields.

A comprehensive land development plan will help the College protect its land resources and shape the surrounding development's type and tempo. When we responsibly steward the community's investment in our campus, we preserve the site's natural assets and existing facilities. With careful expansion, we will meet the demands of a community undergoing growth and cultural transformation.

To make the most of our unique physical setting and preserve the natural beauty, we will commit to the following:

- Develop sustainable campus design concepts that balance environmental and economic benefits while enhancing the campus as a natural resource.
- Strengthen connections between programs and campus areas by improving pedestrian environments and pathways within the campus.
- Enhance campus pedestrian connections to the neighboring park.
- Enhance public and alternative transportation options serving the College.
- Explore land trades and acquisitions in order to expand future growth opportunities for the College and, at the same time, ensure preservation of the area's natural beauty.
- Create programming that integrates the learning environment with values that encourage sustainability and environmental stewardship.

These goals provide the primary focus of our planning efforts and are used as a tool for measuring the success of those efforts. The purpose of this planning process is to successfully support student learning both in the classroom and, more holistically, throughout the College's entire physical environment. The intended outcome of these efforts is to ensure the physical environment supports learning and student success. During the addition of the Rainier Math & Science Building, the surrounding physical environment was carefully planned as part of the learning space. A geology lab is featured in the outdoor space in front of the Rainier building. This unique space features rocks from the local region placed so that students can physically see and touch the different types of rock that have been formed over time. Additionally, the winter garden spaces that connect

the Rainier Building pods are being used as part of the biology curriculum to grow plants that are native to our region.

Balancing open space with well-planned facilities development requires thoughtful strategic planning. The College's master plan is intended to ensure that the College considers the long-term impacts of development from a border-to-border land management perspective. An example of this strategic planning is a well-planned and executed native oak-prairie restoration project that has been established at Pierce College Fort Steilacoom as a collaborative effort between the College and the University of Washington. This project illustrates the commitment of the College to its stated planning goal of strengthening environmental stewardship.

III. Program, Learning, and Student Success Needs: Campus Master Plan Strategic Outcomes

The Campus Master Plan for Pierce College Fort Steilacoom establishes the foundation for continuity in physical planning by allowing the College to develop a cohesive campus aesthetic, meet required space needs for future growth, plan for facility upgrades, and improve site conditions in a coherent and unified way. This will ensure that each future project fits appropriately within the larger intended character and limits of the campus. The Campus Master Plan presents a physical expression of the current and future development of the campus, the outcome of which is to ensure that planned growth is consistent with the College's vision, mission, and values.

A. Current Campus Development

The Pierce College Fort Steilacoom campus sits on 146 acres of land. Of this, approximately 70 acres is developed. Buildings total 476,780 square feet -- six main buildings accounting for 449,373 gross square feet and six smaller buildings totaling 27,416 square feet (Figure C).

B. Ongoing Long-Term Developmental Needs

i. General space and program needs and deficiencies

The College faces ongoing needs for space improvements as instructional methodologies, student-learning styles, and service support requirements change. Existing space needs periodic updating and renovation to remain current.

Expected Outcomes:

- General classrooms and computer labs are sufficient in number with current technology to support instructional needs
- Sufficient office space is provided for full- and part-time faculty and staff
- Relocation of faculty offices are undertaken as needed
- Social and informal learning spaces are expanded
- Central "commons" spaces are provided to promote shared participation and responsibility
- Student Life space is maintained and expanded as needed
- The Food Services facility is remodeled and upgraded
- District administrative and support offices are appropriately located and are sufficient to support the District's mission, values and goals
- Sufficient swing space for new program development is developed
- Cascade Core renovation of allied health area is finished.
- Accessible pedestrian pathways and parking areas are provided

ii. Technology and equipment

Technology and equipment needs continuously change. The College strives to offer technology and equipment that is representative of the same technology and equipment students will see either in the workplace or at universities upon transfer.

Expected Outcomes:

- All general classrooms and computer labs are equipped with current software technology and equipment to support current instruction
- eLearning has access to and is utilizing sufficient technology to support its mission fully and remain compliant with accreditation requirements
- Instructional equipment is replaced and upgraded on a scheduled basis
- The College has enough bandwidth to support future use as we expand into Open Educational Resources and new pedagogy that requires live connections to the internet

iii. Infrastructure improvements

In conjunction with more recently added capital inventory, we continue to support older facilities. Building infrastructure systems need to be upgraded and replaced at intervals throughout the life cycles of our campus structures.

Expected Outcomes:

- Roofs and other building envelope systems are sufficient in quality to protect structures from weather related damage
- Building mechanical systems are sufficient to maintain adequate temperatures and environmental conditions to support the learning environment
- Building electrical systems are updated and in good repair
- Parking lots and driveways are in good repair and are maintained on a planned schedule
- Elevators have been upgraded and are fully code compliant

iv. Minor improvements

The College is continually in the process of identifying and responding to the changing needs of the institution. This includes space modifications that better address current programmatic need, the continued development of interior wayfinding signage, and the refinement of design standards for colors, materials, furnishings, and equipment.

Expected Outcomes:

- Interior spaces are configured in a way that best meets the needs of the College and its programs and services
- Space improvements are planned strategically and are implemented on a scheduled basis that allows adequate time for completion and within reasonable cost
- Interior signage is improved and standardized
- Wayfinding signage is adequately located and provides sufficient information to adequately direct first-time visitors to their destination
- Standards have been developed for colors and materials used throughout the College environment

- Furnishings in offices, classrooms and common areas are in good repair and are replaced on as as-needed basis
- Carpeting is in good repair and is replaced on a planned schedule
- Interior surfaces are in good repair and painted on a planned schedule

v. Safety and Security

Pierce College is committed to providing a safe and secure environment for our students, employees, guests, and visitors. Interior and exterior improvements are designed and implemented in such a way as to promote a safe personal and learning environment for each of our students, a comfortable and secure environment for our employees and a welcoming environment for guests and visitors. The physical environment reflects and honors this commitment.

Starting in 2015, Facilities and Grounds employees have worked together to improve sight lines along sidewalks and near buildings. Branches were raised on many trees, and bushes cut back in order to provide clear sight lines. This has now become part of the seasonal landscape maintenance protocol.

Future work may include the removal of select trees along the Milgard Child Development Center and the International House sidewalks, and as needed to improve safety and accessibility in the pedestrian approach from parking lots to campus buildings.

Emergency preparedness measures also impact our master planning efforts. Infrastructure improvements that may enable us to better withstand or recover from various emergency situations need to be factored into our master planning. The College may also be placed in the position of providing sheltering or staging for outside groups or agencies during area-wide emergencies and this will have an impact on infrastructure needs.

Expected Outcomes:

- Access control systems for buildings and interior spaces are expanded
- Emergency notification and egress systems are sufficient to ensure the immediate and safe evacuation of personnel from buildings and the campus in the event of an emergency
- Infrastructure systems are capable of supporting continued operations of key facilities for extended periods during and following emergencies
- Emergency communication infrastructure systems and devices, including standard call boxes, as well as call boxes with captioned telephone service (i.e., TTY) for the Deaf and Hard of Hearing community, are improved and expanded

vi. Maintenance efficiencies and sustainability

The management of long-term operational costs of buildings and systems continues to be a major focus of the College's efforts. This includes the development of improved processes and the refinement of design standards for building systems and components to achieve better consistency of maintenance and function. Sustainable systems and practices are included in all design and implementation projects.

Expected Outcomes:

- Energy conservation measures are implemented and existing measures improved to include metering of energy consumption in all buildings
- Design standards have been developed for all building systems and components
- Serviceability of systems and equipment is sufficient to enable ease of servicing, repair and replacement
- Sustainable practices have been implemented and are in use in maintenance, grounds, and custodial operations
- Maintenance practices are streamlined and can be supported with existing personnel resources
- Maintenance, grounds and custodial personnel are receiving regular skills development training

vii. Vehicular and pedestrian circulation

There is a need to provide accessibility to all facilities and weave together a clear pathway system that unifies the campus, strengthens the pedestrian environment, and reinforces the campus open spaces. A series of entry points around the perimeter of the campus lead pedestrians both to the central open spaces and to building entries. Paths are organized to create simple and clear access to building entries and through the buildings to connect one building to the next. The term "accessibility" also refers specifically to the development of a physical environment that is conducive to the concept of universal design and in which students, employees, and visitors, including those with physical limitations, experience no physical barriers to their access to and use of the College's physical environment.

The vehicular plan includes roadways that enable the passage of motorized vehicles through the campus and ready access to parking areas. Parking areas are situated to allow reasonable access to buildings and to campus entry and exit points. The master plan recognizes the need to provide efficient access and circulation for public transit as well as the promotion of alternative means of transportation.

Expected Outcomes:

- Persons with disabilities or physical limitations do not encounter physical barriers that impede access to buildings or services

- The pedestrian environment is sufficiently developed to allow convenient and easy access to and through the campus
- Motor vehicle circulation and access is clear and promotes safe and convenient entry and exits to the campus and its buildings
- Alternative modes of transportation are encouraged and resources are provided for ease of adoption and use
- Parking is sufficient in quantity to meet demand

viii. Exterior lighting and signage

Closely aligned with creating and maintaining a safe and secure environment, exterior lighting is a critical component of our overall master planning process. A comprehensive lighting plan is essential for the well-being of our campus community and is also a major factor in the overall appearance and appeal of the College to our community. Exterior lighting improvements, in many cases, represent a significant financial expense and must be undertaken over time as funding and opportunities present themselves. Developed with Hargis Engineers in 2016, the college now has a lighting master plan to guide this effort.

Clear wayfinding and informational signage is critical to the welcoming and supportive environment that Pierce College Fort Steilacoom strives to support. To this end, the College has developed an exterior signage master plan. This plan is intended to employ a methodical approach to guiding people to and through the campus. To date, the plan is partially implemented and will be completed in phases.

Expected Outcomes:

- Sufficient exterior signage is in place to clearly guide vehicular and pedestrian traffic into and through the campus
- Exterior lighting has been expanded and improved and provides a safe, well-lit environment for parking, driveways and pedestrian pathways
- A “gateway” entrance sign to the college, in partnership with the City of Lakewood, has been installed at the corner of Steilacoom Boulevard and Farwest Drive

ix. Site management

Jurisdictional requirements for management of storm water runoff are becoming increasingly stringent. Having good management practices in place will be a requirement for the permitting of future campus development. The college has recently completed mapping all storm water piping and filtration facilities located on the campus and will continue to work with the City of Lakewood and other agencies to ensure compliance with current or anticipated ordinances and regulations.

In 2016 the college worked with Berger Partnership to develop a landscape master plan. The landscape master plan recognizes the need for well-developed strategies for the management of the College’s land

from border-to-border in order to comply with the College's goal of strong environmental stewardship. This includes a landscaping plan for those areas that are highly maintained on a regular basis and those that are less intensely managed but contribute to the overall campus environment. This also includes preservation of natural habitat and native vegetation.

Expected Outcomes:

- The College has developed a comprehensive landscaping and land management plan that recognizes the desire for an attractive and safe campus and also recognizes our commitment to environmental stewardship
- The College has developed a comprehensive storm water management plan that complies with jurisdictional mandates and supports environmental stewardship
- The College collaborates with the City of Lakewood on water quality management for Lake Waughop
- The College collaborates with the City of Lakewood and the Department of Social and Health Services on land protection and preservation issues
- The College supports the continued expansion of a native oak-prairie habitat program on the campus and, in collaboration with the City of Lakewood, expansion of the program into Fort Steilacoom Park

C. Near-Term Development Needs (1-10 Years)

Through the process already described, the College identifies near-term and long-term development needs (see Figure D). This is augmented by environmental scans, and external and internal community surveys.

The projects listed in this section were prioritized based on the following criteria:

- Perceived community/industry need (e.g., Emergency Medical Services)
- A need identified in the District Learning and Student Success Strategic Plan
- Current enrollment information and future enrollment projections
- Funding opportunities
- Potential for capital funding

Cascade Building renovation and expansion

Although we have conducted extensive renovation in the Cascade Building since 2008, the size of the building has required renovations to be conducted in a phased manner. In order to renovate the building sufficiently to support current and anticipated need over approximately the next 20 years, it will be necessary to conduct one additional major renovation phase. Critical needs associated with this phase include renovation of the Dental Hygiene and Veterinary Technology programs, lecture hall improvements, enclosure of the Bookstore plaza area, replacement of the skybridge between Cascade and Olympic South, enclosure of the service tunnel underneath Cascade and various infrastructure upgrades.

Future Academic Buildings

We show a Classroom building south-east of the Cascade Building in our near-term plans. This building is associated with the Cascade Building renovation and expansion to accommodate program space that will be moved out of Cascade Level 1. This will open up space for additional classrooms, study and program areas across the entire Cascade Level 1 floor plate.

We anticipate that we will continue to identify needs of the college over the next 10 or more years that will require additional building space. We will continue to assess facility needs over the next several years and are leaving options open for the placement of a new facility on the campus to support future program growth.

Residence Hall

Demand for residence facilities to, primarily, support International Education has increased exponentially in recent years. Pierce College is committed to ensuring the continued success of its international programs and, in recognizing this demand, is seeking opportunities to develop such facilities. To support this effort, the Pierce College Foundation purchased and renovated an off-campus facility, the Center for Global Scholars (CGS). The CGS houses 63 students who are interested in global issues. This is a partnership that will serve our integration of international and domestic students and continue to expand our curriculum by incorporating global studies. While this will aid in the recruitment, retention, and integration of our international students, the college will soon outgrow the demand for resident housing and as such, an on campus facility will be needed in the future.

Parking Expansion

Parking will need to be expanded in the event that residence facilities are constructed on campus. This expansion will be scaled to meet the needs of those facilities. Further parking expansion will be evaluated on a project by project basis to determine if additional parking is needed.

Greenhouse

The college has not yet constructed a planned greenhouse that will support our science programs. This facility will be placed adjacent to the Rainier Science Building and is sized at approximately 300-400 square feet.

Observatory

The college's master plan includes the construction of an observatory that will support our astronomy program and will complement the existing Science Dome. This approximately 1,400 square foot facility will be located near the Rainier Science Building and infrastructure is already in place to support its operation.

Maintenance shop relocation

The existing maintenance shop will need to be relocated in order to open up the area around the Health Education Center as open space or as a potential

future building site. This would also provide potential opportunities for siting a residence facility in this approximate location. The maintenance shop and associated yard area also need to be enlarged to better support the college's operations.

Gender neutral restrooms

Currently, there are seven gender neutral bathrooms on campus. There are two on the third floor of the Cascade Building and two on the first floor of the Health Education Center, one on the first floor of the Olympic building, one the first floor of the Rainier building, and one in the Milgard Child Development Center. If additional gender-neutral restrooms cannot be identified out of existing restrooms, then the College either needs to add them when new buildings come on line, or it needs to identify one or more restrooms for a remodel. Our Facilities Department is currently exploring this need and our potential options to remedy the deficiencies.

Storage facility

The College has insufficient storage space to support instructional program needs and needs for furnishings and equipment to support college and community events, particularly in direct support of the Health Education Center. The HEC supports many of the all district events as well as many rental events for the community. We are currently storing tables and chairs in the hallways and under stairwells. We will be increasing the number of tables and chairs needed in the future and as such our needs for storage will increase.

D. Long-term Development Needs (11-15 Years)

Arts & Communication Building

Pierce College Fort Steilacoom's facilities for the support of Arts and Communication are aging and inadequate. We do not have the appropriate space or technology applications to adequately support current and anticipated instructional methodology in Art, Film, Music, and Theatre. A new facility would replace older instructional environments with more student learning centered space and would ensure program viability for the next generations of students.

Olympic South level two remodel

The Olympic South Building was first constructed as a two story structure in 1976. In 2004 a third floor was added as part of a replacement project for portable classrooms that had been in use since the early 1970s. In 2006, the first floor was remodeled to provide better support to the Early Childhood Education program and to reduce space deficiencies in the Art programs. The second floor, heavily committed to the Music program and with some support for Arts, has not been substantially updated since original construction. When the Arts and Communication Building is constructed, this space will need to be reconfigured to support other program need. In the absence of a new building, this area will need to be reconfigured to provide appropriate and well-supported space for Music and Arts.

Sunrise renovation and expansion

The Sunrise Building was completed in 1998 and was intended as a means of off-setting the dramatic backlog in instructional space needs facing the college during a time when capital funding was extremely difficult to obtain. The building, although having served a valuable purpose, is not adequately sized or configured to meet the long-term needs of the college. Sunrise is centrally located on the campus and takes up an important footprint. Due to funding constraints at the time Sunrise was constructed, the footprint could not be optimized to provide the maximum amount of square footage. The Sunrise building could be demolished and a multi-story building could be erected on this footprint. If demolition and new construction is not feasible, updating of the instructional space will be necessary. Additionally, gender neutral bathrooms are needed in this facility.

Softball field

Although the current intent is to largely support athletic field sports at Pierce College Puyallup, we continue to show and hold space for a softball-sized field at Fort Steilacoom. This will ensure the capability to support some level of both field sports and court sports at the campus.

Parking Expansion

Future construction may require additional parking expansion and this is reflected in the master plan. The majority of this expansion will occur in conjunction with the construction of the Arts and Communication Building as well as the additional academic building currently shown in our long-range plans.

IV. Implementation Strategies

In the years to come, Pierce College Fort Steilacoom will go through cycles of growth and change. The Campus Master Plan is designed to be a dynamic tool that can be refined and updated over time to reflect these changes. Its principals and guidelines articulate an enduring and timeless vision for the campus.

Although capital funding appropriations for the community and technical College system have enabled considerable growth over the past several years, anticipated enrollment demand, need for program enhancements, changes in learning and teaching pedagogy, and the ongoing challenges of design, construction, renovation and replacement of outdated and inadequate facilities will require a continued emphasis on future funding strategies to support these needs. We will need to develop a multidimensional approach to resource acquisition. Incremental funding, phasing strategies, and alternative funding sources will be key components in our planned development.

A. Prioritization of Needs

A number of the most immediate needs identified in the 2002 master plan have been addressed. However, we still have some critical near-term needs that have not yet been met. The planned Cascade Phase Three renovation of the first floor allied health programs remains the first priority for capital funding. This project was approved for design in the State Board for Community and Technical Colleges capital budget process in the 2017-2019 biennium. It is anticipated that construction funding will be approved in the 2019-2021 capital budget. We will continue to work on the Dental Hygiene and Veterinary Technology accreditation issues involving facilities by using minor improvement money as prudent. Other near-term needs will require a combination of state, local and alternative funding sources. Longer-term needs will have to be prioritized as we move into the future.

B. Funding Options

For us to meet all strategic outcomes, we will need to develop a plan for requests for state funds, public and private partnerships, entrepreneurial contracts, the state's Certificate of Participation program, and the Pierce College Foundation. A number of both our near-term and long-term project needs could be designed and built at any time if funding sources can be identified and sufficient funds acquired.

C. Opportunities for Success

The Pierce College District has established institutional goals and strategic directions to guide the District’s operations, processes, and priorities. Those measurable outcomes will assist planners at Pierce College Fort Steilacoom to create realistic long-range goals for the College and the means for achieving those goals. Successful strategies will require a comprehensive assessment of needs matched with potential funding sources.

D. Funding Acquisition Strategies

The first priority of the college, the Cascade Renovation was approved through the SBCTC budget process and was funded for design in the 2017-2019 capital

budget. The start of the pre-design process was delayed due to the late appropriation of the capital budget, but will be complete late 2018, with intensive and compressed schematic design/design development starting 1st quarter 2019. The current plan is to commence construction mid-year 2020 with completion of the new building in 2021, and the renovation portion in 2022.

Other identified near-term facility needs will require innovative funding strategies. It is unlikely that we can expect to acquire state capital funding to fund these projects. We will need to explore potential partnerships, perhaps in conjunction with the Pierce College Foundation and other groups or entities. Local funding options might include use of College reserves or participation by our students.

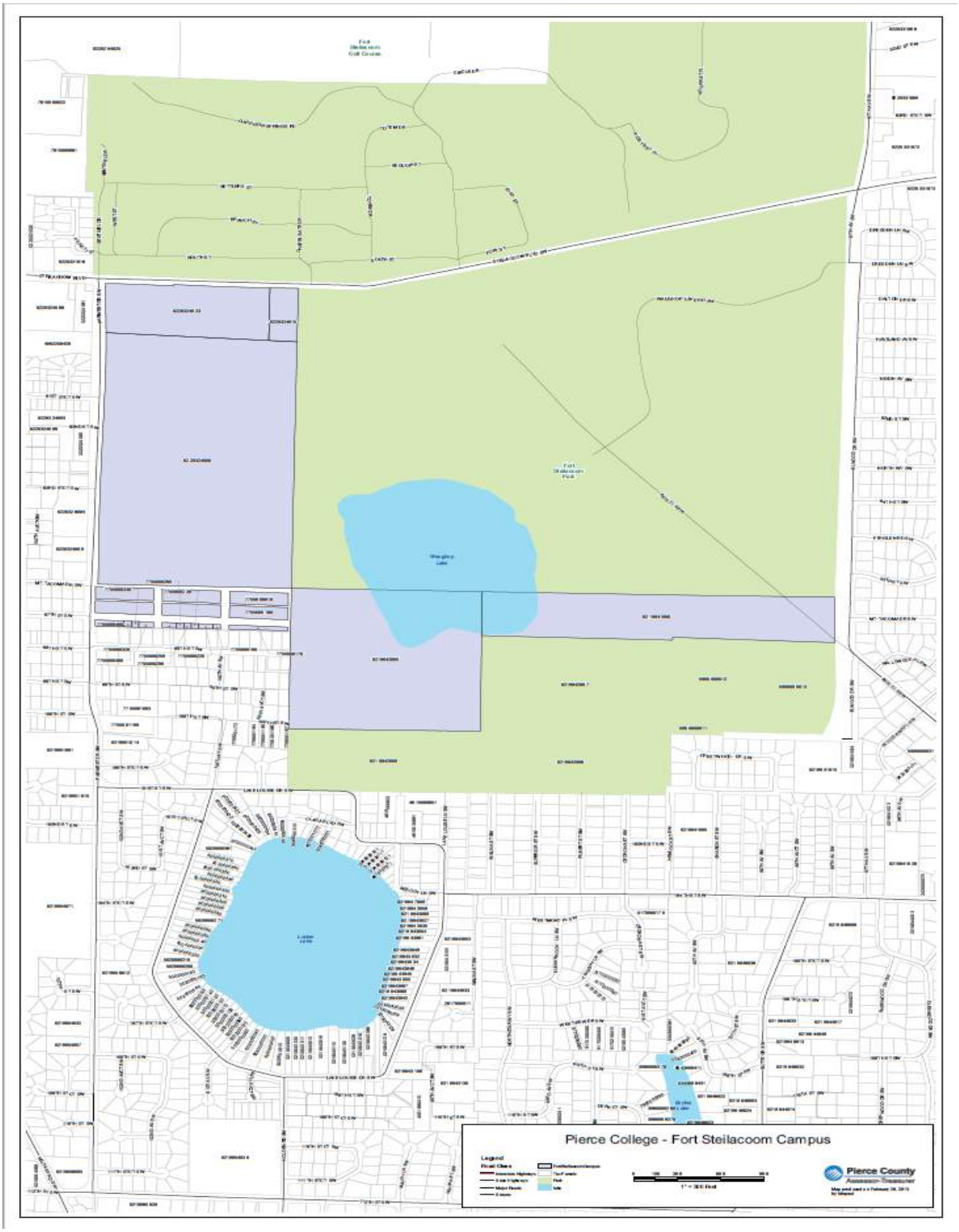
Infrastructure improvements will primarily rely on state capital funding, either in conjunction with larger capital projects or as dedicated repair projects. Repair funding will be aggressively pursued through an existing process linked to the biennial Facility Condition Survey conducted by the SBCTC.

Instructional program improvements such as in technology applications or in equipment upgrades will be requested through the College's normal operating budget process.

V. Figures

Figure A
Campus Aerial Photos

Figure B
Property Map



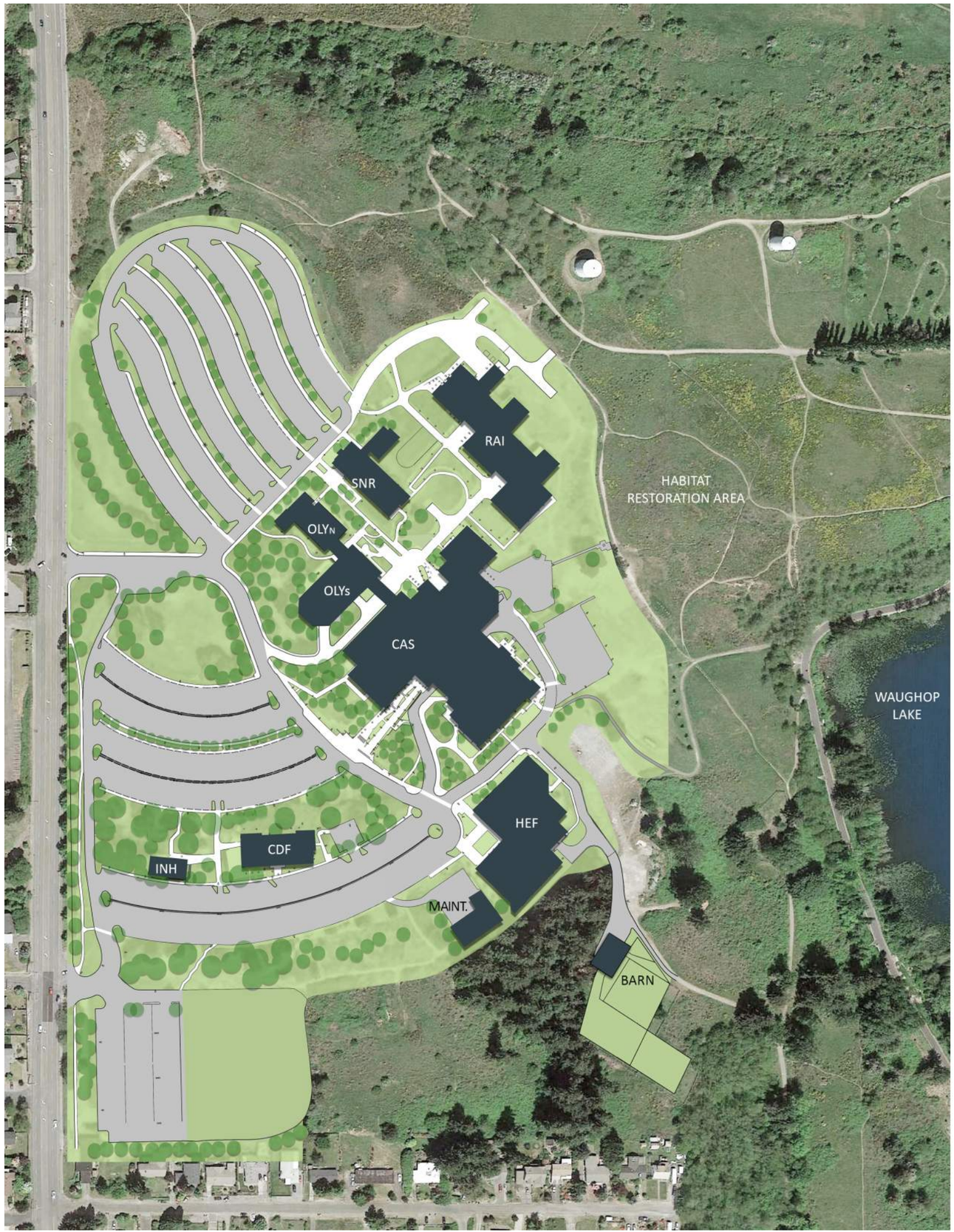


Figure C

PIERCE COLLEGE FORT STEILACOOM CAMPUS MASTER PLAN

Existing Development Plan

EXISTING FACILITIES

BARN	Large Animal Barn
CAS	Cascade Bulding
CDF	Childhood Development Center
INH	International House
HEF	Health Education Center
MAINT	Maintenance Building
OLYN	Olympic North Building
OLYS	Olympic South Building
RAI	Rainier Building
SNR	Sunrise Building

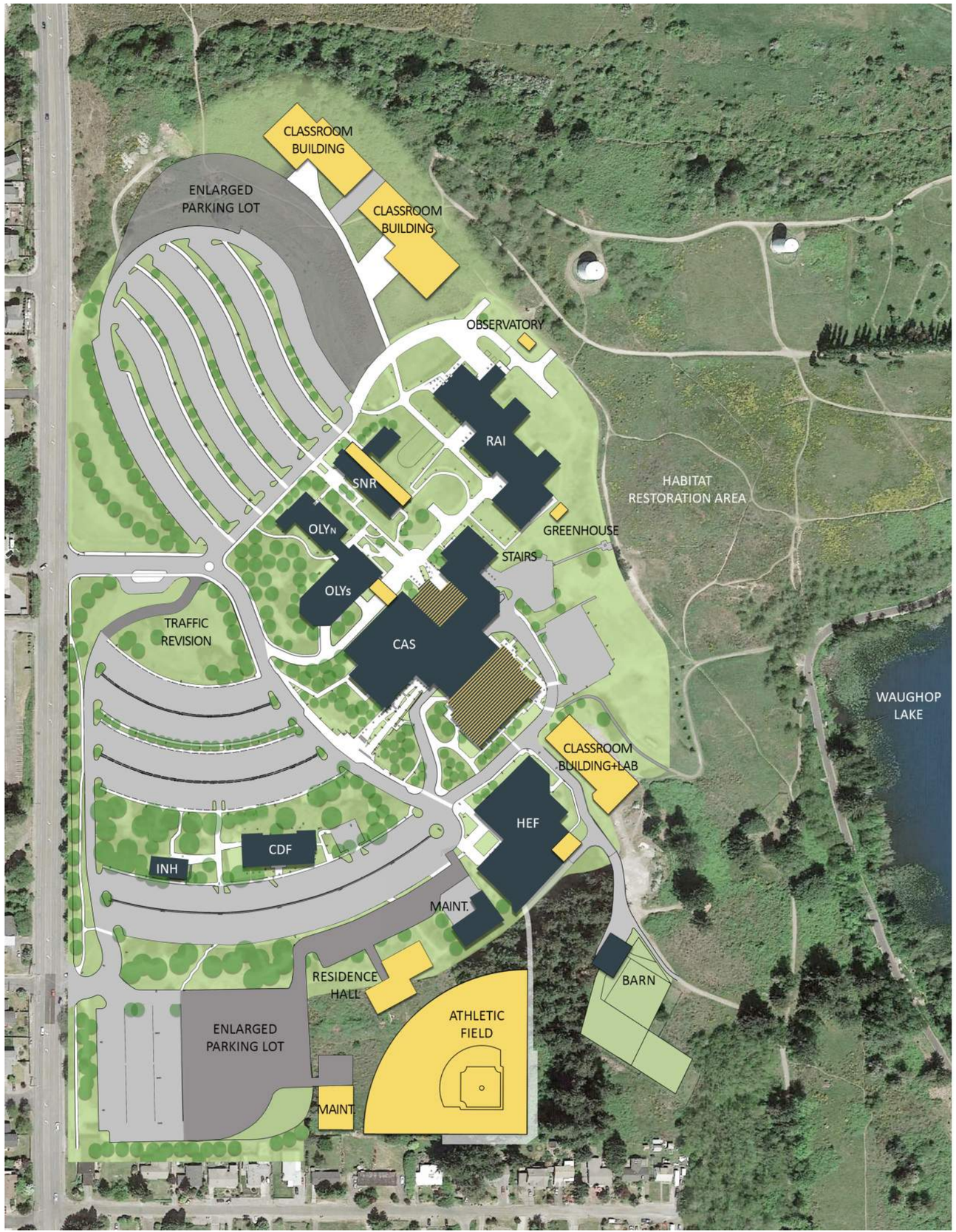


Figure D

PIERCE COLLEGE FORT STEILACOOM CAMPUS MASTER PLAN

Development Plan

LEGEND

- Existing Facility
- Future Additional Parking
- Future New Facility
- Future Renovated Facility

EXISTING FACILITIES

BARN	Large Animal Barn
CAS	Cascade Bulding
CDF	Childhood Development Center
INH	International House
HEF	Health Education Center
MAINT	Maintenance Building
OLYN	Olympic North Building
OLYs	Olympic South Building
RAI	Rainier Building
SNR	Sunrise Building

FUTURE PROJECTS

ATHLETIC FIELD	New Fields For Baseball, Soft Ball, Soccer
CAS	Cascade Bulding Renovation
CLASSROOM BUILDING	New Classroom Building
ENLARGED PARKING LOT	Reconfigured Parking For Additional Capacity
GREENHOUSE	New Greenhouse Building
OBSERVATORY	New Observatory Building
OLYs	Olympic South and Skybridge Connection
RESIDENCE HALL	New On-Campus Student Housing
STAIRS	New Stairs Connecting Lower and Upper Campus
TRAFFIC REVISION	New Access Road And Traffic Circle
HEF ADDITION	Addition of Team and Storage Rooms

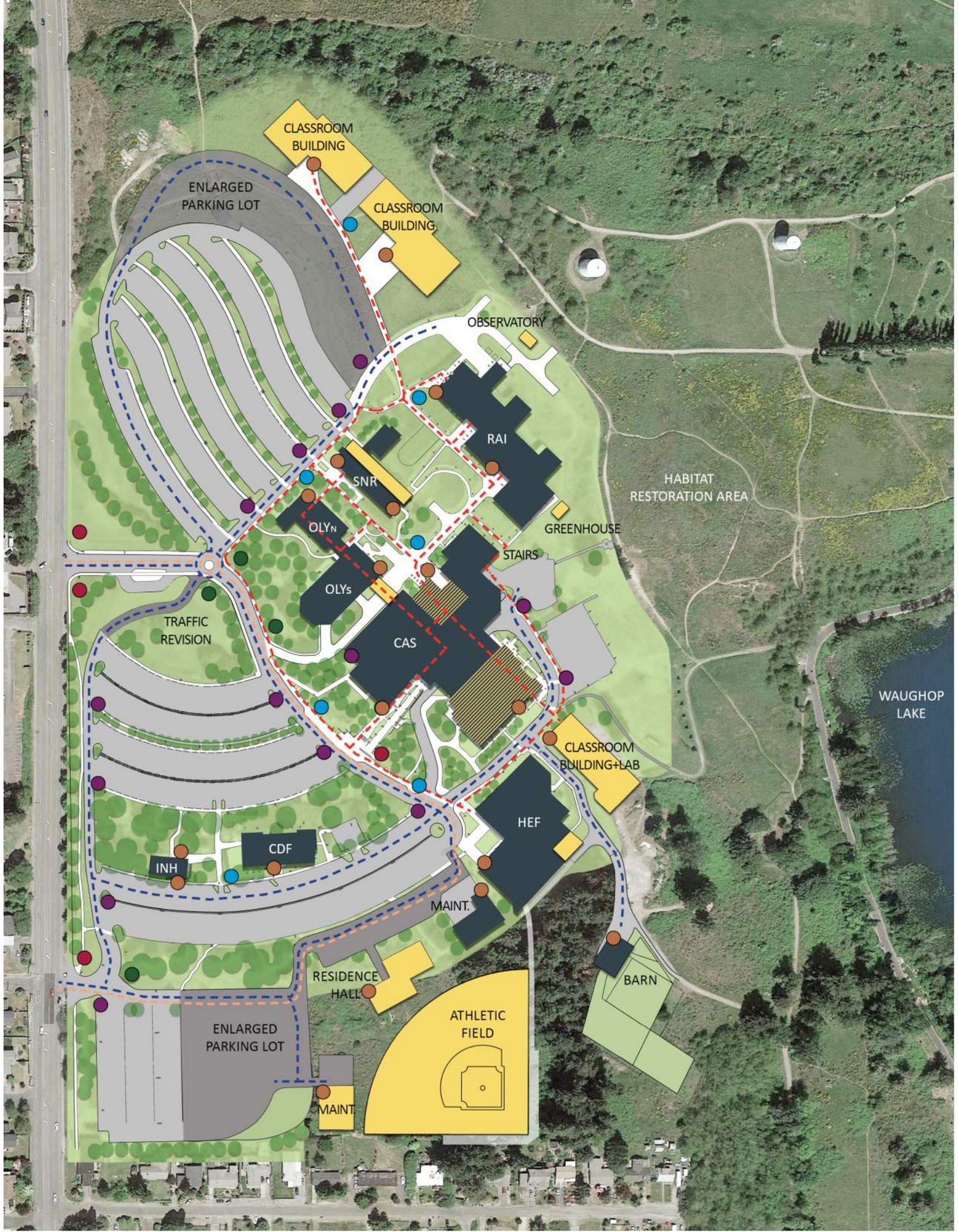


Figure E

PIERCE COLLEGE FORT STEILACOOM CAMPUS MASTER PLAN

Circulation, Security and Wayfinding Plan

LEGEND

- Vehicular Wayfinding Sign
- Pedestrian Wayfinding Sign
- Building Identification Sign
- Gateway Sign / Reader Board
- Parking Identification Sign
- Major Vehicular Circulation Route
- Major Pedestrian Circulation Route
- Transit Route

EXISTING FACILITIES

BARN	Large Animal Barn
CAS	Cascade Bulding
CDF	Childhood Development Center
INH	International House
HEF	Health Education Center
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GREENHOUSE	New Greenhouse Building
OBSERVATORY	New Observatory Building
OLYs	Olympic South and Skybridge Connection
RESIDENCE HALL	New On-Campus Student Housing
STAIRS	New Stairs Connecting Lower and Upper Campus
TRAFFIC REVISION	New Access Road And Traffic Circle

APPENDICES

Appendix A

Pierce College Learning & Student Success Strategic Plan 2015-2020: Core Goals & Strategic Actions

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1. Advance Program Pathways and Learning Strategies to Support Enrollment, Success, and Completion

Strategic Actions

- Develop clear guided pathways and support advisor and student use of pathways
- Expand program development and implementation driven by community need
- Continue to expand the adoption and pedagogical adaptations to Open Educational Resources (OER)
- Foster Global/Cultural Learning Opportunities

2. Eliminate Achievement Gaps by 2020 (Year Five)

Sub-Goal
Increase fall to winter cohort retention rates by 5 percentage points
From Fall to Winter 2014/15 = 85% to Fall to Winter 2019/20 = 90%

Sub-Goal
Increase fall to fall cohort retention rates by 10 percentage points
From Fall 2013 to Fall 2014 = 59% to Fall 2019 to Fall 2020 = 69%

Sub-Goal
Increase college-level course completion rates by 5 percentage points
From 2013/14 = 79% to 2019/20 to 84%

Sub-Goal
Increase three-year cohort graduation rates by 20 percentage points
From Fall 2011-Spring 2014 = 24.6% to Fall 2017-Spring 2020 = 44.6%

Strategic Actions

- Fully implement revised Start-to-Finish model and engage in assessment of each of its components to assure impact and adjust when/where necessary.
- **Strengthen student connection to learning structures beyond the classroom – library, tutoring, Writing Center, computer labs, etc.**
- Implement Enrollment Pipeline Outreach & Engagement Plan incorporating the use of data analytics and responsive advising networks to drive instruction and service innovations.

- **Invest in professional development around cultural competency that fosters an inclusive and affirming student experience**
- **Increase use of evidence/reflection/improvement at the individual level in Professional Growth & Development Plan (PDGP), Tenure process, and Post-Tenure Review (PTR)**

Sub-Goal
Increase online course completion rates by 5 percentage points
From 2013/14 = 73.86% to 2019/20 =82.86%
Strategic Actions

- **Develop online courses that meet Quality Matters (QM) standards, Establish baseline and develop process in 2015-16** ***(complete)***
- **Implement elements of three-column model for online success, focused on course development, faculty development, and student readiness**

Sub-Goal
Increase course completion rates in pre-college English by 10 percentage points
From 2013/14 = 69% to 2019/20 = 79%

Increase English gateway course completion by 5 percentage points
(as measured by ENGL 101 course completion in the first year)
From 2013/14 = 51.3% to 2019/20 = 56.3%

Strategic Actions

- Design and implement a Guided Self-Placement assessment model for incoming students
- Continue to implement and assess ALP English interventions
- Continue to implement and assess English bucket courses
- **Integrate SI equivalent into English**
- **Strengthen English Department- Writing Center collaboration**

Sub-Goal
Increase course completion rates in pre-college Mathematics by 10 percentage points
From 2013/14 = 64% to 2019/20 = 74%

Strategic Actions

- Complete alignment of basic skills math with DevEd math
- Fully implement developmental math labs (Aleks)
- Re-design and fully implement Math 096 curriculum
- Fully implement I-Trans

3. Increase College Readiness and Transition (Year Three)

Sub-Goals
Increase transition to college-level by 10 percentage points

From 12% in 2013/2014 to 22% in 2019-2020

Increase transfer/enrollment in baccalaureate programs by 10 percentage points each year after the initial year.

Increase enrollment in 25-34 age demographic by 10% from 2368 students in 2014 to 2605 students in fall 2020.

Strategic Actions

- Use multiple placement indicators to place students more effectively and provide appropriate advising regarding placement
- Provide coordinated outreach to high schools to assure accurate placement and support options for those placing below college level
- Implement pre-test support for students
- Fully implement new HS21 curriculum with support for ESL/ABE transition

4. Eliminate Racism and Advance Equity in the Learning Environment (Ongoing)

Strategic Actions

- In concert with the college-wide initiative, provide ongoing professional development around issues of race, equity, and cultural competence of faculty related to curriculum, classroom environment, and language
- Increase cultural competency and responsiveness of “front line” student services teams, instructional support, and other staff through integrated professional development
- Provide ongoing professional development for deans and administrative teams to aid in facilitating open and responsive dialogue
- Increase faculty and staff diversity through intentional and supported recruitment, hiring, and retention practices

Appendix B

Description of Existing Structures at Pierce College Fort Steilacoom

Current Campus Development

The Pierce College Fort Steilacoom campus sits on 146 acres of land. Of this, approximately 70 acres is developed. Buildings total 476,780 square feet -- six main buildings accounting for 449,373 gross square feet and six smaller buildings totaling 27,416 square feet.

Cascade Building

The Cascade Building is the largest and one of the oldest structures on the campus. The building houses a wide variety of services and functions.

- Constructed: 1973
- FAE Designation: S1
- Size: 247,529 square feet
- Floors: 5
- Renovations/expansion: 1976, 2004, 2008-14
- Major functions and programs: general instruction, Welcome Center, college and district administration, Library, Bookstore, cafeteria, Veterinary Technology, Dental Hygiene, Criminal Justice, Extended Learning, eLearning, Central Receiving, Printshop, student newspaper, tutoring, writers center
- General classrooms: 13
- Computer labs: 1
- Other: 1 Vet Tech Lab (CAS 110), 4 Dental Hygiene classrooms (CAS 125, 127, 128, 129), 1 Theatre (CAS 320), 1 English Lab (CAS 506), 1 Reading Lab (CAS 520), 1 American Honors Lounge (CAS 532)

Health Education Center

The original Physical Education Building/Fitness Center contained a swimming pool, exercise room and locker rooms and totaled 16,500 square feet. A renovation and expansion project eliminated the swimming pool, added a gymnasium as well as new classrooms and offices and significantly expanded the exercise area. The building was also renamed the Health Education Center.

- Constructed: 1973
- FAE Designation: S3
- Size: 45,539
- Floors: 3
- Renovations/expansion: 2007
- Major functions and programs: Athletics, Physical Education, Diagnostic Health & Fitness
- General classroom
- Multi-purpose room

- Gymnasium
- Exercise room
- Testing lab
- Locker rooms: 4

Olympic South Building

The building was originally constructed as a two-story structure totaling approximately 24,000 square feet. A third floor was added in 2004 providing space additional classrooms and offices for Central Washington University. The first floor was remodeled in 2006 to provide enhanced space for Early Childhood Education.

- Constructed: 1976
- FAE Designation: S2
- Size: 38,800 square feet
- Floors: 3
- Renovations/expansion: 2004, 2006
- Major functions and programs: Early Childhood Education, Music, and Art. Pierce County Center for Central Washington University
- General classrooms: 6
- Art classrooms: 4
- Art Gallery
- Photo lab
- ECE classrooms: 2
- ECE toddler/preschool classroom
- Music classroom
- MIDI Lab
- Music rehearsal rooms: 2
- Music practice rooms: 10
- Conference room

Sunrise Building

This building was constructed under a Certificate of Participation Program through the State Treasurer's Office during a period of significant growth in which capital construction funds were unavailable.

- Constructed: 1998
- FAE Designation: S6
- Size: 11,700 square feet
- Floors: 1
- Renovations/expansion: None
- Major functions and programs: general instruction, computer classrooms
- General classrooms: 6
- Computer classrooms: 4

Olympic North Building

This facility was constructed as a classroom and technology building to replace a number of existing portables that had been in service for many years.

- Constructed: 2003
- FAE Designation: S7
- Size: 25,160 square feet
- Floors: 3
- Renovations/expansion: None
- Major functions and programs: Business Technology, Digital Design, general instruction
- General classrooms: 8
- Computer lab
- Business labs: 2
- Digital Design lab/classroom

Rainier Science and Technology Building

The Rainier Building replaced 35-year old lab and classroom space located in the Cascade Building. The building is a LEED Gold certified building and incorporates many energy efficient systems. Additionally, the building contains a 1,600 square foot planetarium (Science Dome) that can accommodate 58 students.

- Constructed: 2010
- FAE Designation: S9
- Size: 80,645 square feet
- Floors: 4
- Renovations/expansion: None
- Major functions and programs: Biology, Microbiology, Anatomy & Physiology, Geology, Oceanography, Environmental Science, Astronomy, Chemistry, Physics.
- General classrooms: 11
- Computer labs: 2
- Science labs: 6
- Planetarium (Science Dome)

International House

This facility was constructed by the Pierce College Foundation and was transferred to college ownership in 2010 (transferred end of 2009). It was originally used to house visiting international faculty and as a meeting facility.

- Constructed: 2000
- FAE Designation: S10
- Size: 2,652 square feet
- Floors: 1
- Renovations/expansion: None

- Major functions and programs: International Education, Center for Homeland Security,
- Meeting/Conference room

Milgard Child Development Center

This facility provides childcare for students, employees and, to a more limited degree, community members.

- Constructed: 2005
- FAE Designation: S8
- Size: 9,900
- Floors: 1
- Renovations/expansion: None
- Major functions and programs: Child development

Large Animal Facility

This facility supports the Veterinary Technology program.

- Constructed: 1992
- FAE Designation: S4
- Size: 4,800 square feet
- Floors: 1
- Renovations/expansion: None
- Major functions and programs: Stabling for large animals

Maintenance Shop

- Constructed: 1992
- FAE Designation: S5
- Size: 5,900 square feet
- Floors: 1
- Renovations/expansion: 2001
- Major functions and programs: Maintenance and Grounds support

Maintenance & Storage Building

- Constructed: 1974
- FAE Designation: P12
- Size: 900 square feet
- Floors: 1
- Renovations/expansion: None
- Major functions and programs: Grounds equipment storage

Maintenance and Storage Building

- Constructed: 1957
- FAE Designation: P15
- Size: 3,264 square feet
- Floors: 1
- Renovations/expansion: None
- Major functions and programs: Maintenance, Grounds and general storage

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2014 Institutional Effectiveness Report

Prepared By:
The Office of Institutional Research
August 2014

INTRODUCTION

Purpose

The purpose of Pierce College District's Institutional Effectiveness (IE) Report is to serve as one of many resources for planning and decision-making, with particular attention to meeting mission. The IE Report is a comprehensive assessment of the college's Core Themes and related objectives as established by the District's Board of Trustees. The Board has defined that Pierce College's mission is achieved if the college's meets a ***minimum*** of 70% of the performance metrics across the five core themes.

Conceptual Framework
For Mission Fulfillment

Summary

The College has met or exceeded 83% of the objectives identified, surpassing the Board-designated threshold of 70% that signifies mission fulfillment.

The institution is fiscally healthy, updates and utilizes key planning documents, and is compliant with accreditation standards. Feedback indicated that the college provides employees with a tolerant and friendly work environment, and demonstrates cooperation and respect. Moreover, both students and employees are satisfied with buildings and grounds as well as campus safety. There is a general perception that the college reflects its mission and goals. A new system of Council Governance is in place, replacing/enhancing some committees and formalizing others, with strong representation from across the college.

Other highlights:

- 94% of students surveyed agreed that they were meeting their educational objectives at Pierce College. This is an increase from 2011 and 2009, when respondents expressed agreement at 91% and 85%, respectively.

- For the first time, Pierce College exceeded all five of the CCSSE cohort benchmarks for student satisfaction with support services. Student feedback indicates that Pierce College District continues to offer students a welcoming, respectful and comfortable environment.

- Course completion rates improved across the board for state-supported and military students.

- Student Achievement points (SAI) improved at both campuses; Pierce had more points than the state system as well as benchmark college averages. This reflects improvements in completion and retention.

- Pierce College District offers a mix of educational programs consistent with the occupation subcategories expected to grow between 2017-2022.

- Pierce College student demographics reflect a higher representation of females and persons of color than its service area.

- Graduate feedback indicates that graduates are working in fields related to their degree or certificate, feel prepared for their position, and would choose both Pierce College and their program of study again.

- Professional/Technical advisory committees are active, and members are generally satisfied with their experiences.

- A community survey showed that community awareness and perception of the district significantly increased since the last time a survey was conducted, in 2007. Eighty-one percent of respondents held a favorable view of the college, with only 15% not familiar enough to have an opinion. In 2007, 33% were not familiar with the college.

Areas for attention include:

- Military enrollments, which declined 17% in 2012-13 and continue to decline, in large part due to downsizing of the military population.
- The ease of transfer from Pierce to a four-year college is not well understood in the community.
- While development outcomes have improved across all categories, persons of color and families with children still lag behind.

In the coming year, the IE committee will be spending time reviewing each metric to make sure each is still a sound measure for the desired outcomes. In addition, the District will be assigning objectives and metrics to specific sponsors for oversight, with a focus on moving from benchmarks to goal-setting.

PIERCE COLLEGE DISTRICT'S 2014 INSTITUTIONAL EFFECTIVENESS SCORECARD

MISSION

Create quality educational opportunities for a diverse community of learners to thrive in an evolving world.

CORE THEMES	OBJECTIVES	OVERALL OBJECTIVE RATING	INDICATORS OF ACHIEVEMENT				
ACCESS	Learning Opportunities	Low Attention Area	Educational Goals	Business and Industry			
	Support Services	Attention Area	Student Feedback				
	Enrollment	Standards Met	Student and Service Area Demographics				
EXCELLENCE	Department and Program Outcomes	Low Attention Area	Grade Distribution				
	Professional Development	Low Attention Area	Professional Development Plans	Employee Feedback			
	Institutional Viability	Standards Met	Fiscal Health	Planning	NWCCU		
CONTRIBUTION TO COMMUNITY	Partnerships	Standards Met	Educational Pathways	Contracts	Advisory Committees		
	Visibility	Attention Area	External Feedback				
	Economic Impact	Attention Area	Basic Skills Education Impact	Workforce Education	Transfer Education Impact		
POSITIVE AND DIVERSE COLLEGE ENVIRONMENT	Facilities and Safety	Standards Met	Buildings and Grounds	Classroom Technology	Campus Safety		
	Decision Making	Attention Area	Decision-Making				
	Climate and Commitment	Attention Area	Climate	Commitment	Employee Diversity		
STUDENT LEARNING AND SUCCESS	Retention and Persistence	Attention Area	Student Achievement Initiative	Retention and Persistence	Course Completion	Graduation Rates	
	Learning Outcomes	Attention Area	Student Feedback	Core Abilities	Outcomes for Academic Transfer/FAKs	Outcomes For Transitional Education	Outcomes for ABE and ESL
	Transfer and Work Readiness	Low Attention Area	Transfer Rates and Success	Professional/ Technical Completers Employed			

Multiple metrics inform the indicators of achievement measuring Access, Excellence, Contribution to Community, Positive and Diverse College Environment, and Student Learning and Success.

MISSION FULFILLMENT RATING KEY:

The Pierce College Board of Trustees' Policy on Mission Fulfillment establishes that mission is achieved by satisfying a minimum of 70% of the performance indicators across all of the core themes measures.

Appendix D

Pierce College District Governance
Executive Summary

History

The Pierce College District (herein referred to as College) underwent reorganization in 2011-2012, including our Executive Team, Instructional and Student Services Administration, and many ideas about College Governance were expressed. Since administrative structure and College governance structures are not the same, it was decided that the College community would begin exploration of a new Council based Governance system in the 2013 academic year.

The Governance Council Task Force began meeting in November, 2012. The task force utilized the definition of shared governance that was recommended by the Cabinet and approved by the Board of Trustees in September 2008. Our definition states:

> Participation in shared governance is inclusive wherein all members of the College community have opportunity for their voices to be heard and given proper weight in decisions that affect the mission and operation of the College.

Committee Charge
Develop a framework for District wide meaningful input that will result in a recommendation for a Council Governance System for Pierce College District ready for implementation beginning July 2013.

Principles that Drive the Governance System

- The shared governance system embodies and supports the College's mission, vision and values, through its core themes, core abilities, and strategic initiatives.
- The governance system draws on the collective wisdom found in the College by promoting, encouraging and supporting a wide range of opportunities for participation and leadership by all employees and their representative groups regardless of their formal positions at the College.
- The governance system strives to be efficient and effective, balancing the need for timely, informed decisions with the need to provide adequate opportunity for meaningful participation in the decision-making processes by providing multiple avenues to participate at the earliest possible opportunity.
- The governance system is open, transparent and provides for consistent and accessible records of council and committee work and facilitates clear, frequent and timely communication within the governance structure, between all groups and the College community as a whole so all have what is necessary to fulfill their roles.
- The College governance system provides for clear decision processes with clearly defined authorities, responsibilities and relationships among all participants, groups, class of employee and their representative organizations.

Roles and Responsibilities within the Governance System

The system clarifies the roles of faculty, classified staff, students, administrators, and the Board of Trustees by implementing a structure that maximizes participation and the best thinking of all and placing authority at the appropriate level. It must be recognized that ultimately the board holds the chancellor and the administration accountable and responsible for decisions made. Within this framework, the goal is to produce a process in which timely decisions and the reasons for them are guided by involvement and action from, and are transparent to, the rest of the community.

Structure

District Policy and Governance Council

- The Cabinet serves as a major planning and policy body of the College and is responsible for strategic planning, policy development, institutional effectiveness, budget oversight and coordinating the governance system and the councils that are part of the system:
    - Facilities and Safety Council
    - Learning Council
    - Student Advancement Council
    - Technology Council

Responsibilities of Councils

Within the scope of their charters, governance councils are responsible for planning, policy and evaluating effectiveness. The councils will function at a strategic level. While stakeholders will be supported to participate in governance work, it is recognized that they cannot devote substantial parts of their work week to governance activities. Therefore, the nature of the governance work must be at a planning and policy level, not an operational or implementation level. Operations and implementation will continue to be the responsibility of managers and administrators.

Policy and Procedure Definitions

Policies are formal statements of principles or rules that members of Pierce College are expected to follow.

Procedures tell members how to carry out or implement a policy. They are the normal methods for following policies.

Comparison of Policies and Procedures

- Policies indicate the general course of action that should be taken in response to a particular event or situation. Procedures indicate the specific steps that should be taken in response to a particular event
- Policy is the "what" and the procedure is the "how to."

Council Relations to Policies and Procedures

- "Policy decisions that are the responsibility of governance councils are indicated by the scope section of the councils' charters and their decision matrices." (Governance Charter)
- College procedures may be reviewed by councils on a consultative basis, which may result in their modification.

Decision Making Model

- Councils will strive to reach consensus. In the event that consensus cannot be achieved within timelines identified for council decisions, councils will present majority and minority positions to the Cabinet or responsible administrator as identified in the council's decision matrix. Recipients of majority and minority positions will consider them, and either returns the deliberations to the council with advice on resolving the issues, or, as called for in the governance system charters and decision matrices resolve the issue and provide the rationale to the council.

- Responsible administrators not serving as members of a council, but with override authority for council work identified in the decision matrix, will communicate with the council about upcoming work early in the decision making process, so the council has time to address the work. Such communication should be direct, when feasible, and via other administration representatives serving on the council, when direct communication is not possible.

Implementation

Implementation of the new Council Governance system is scheduled to begin upon approval by the Board of Trustees. Councils will be formed by April 18 with the initial meetings to be scheduled for the first week in May. Councils will elect a co-chair, agree to a consensus model, draft a preliminary work plan for the 2014-15 academic year, meet with other council co-chairs and cabinet chair, and report back to the Cabinet at the June 5, 2014 meeting.

Appendix E

Closing the Achievement Gap Summary

CLOSE THE GAP 2020

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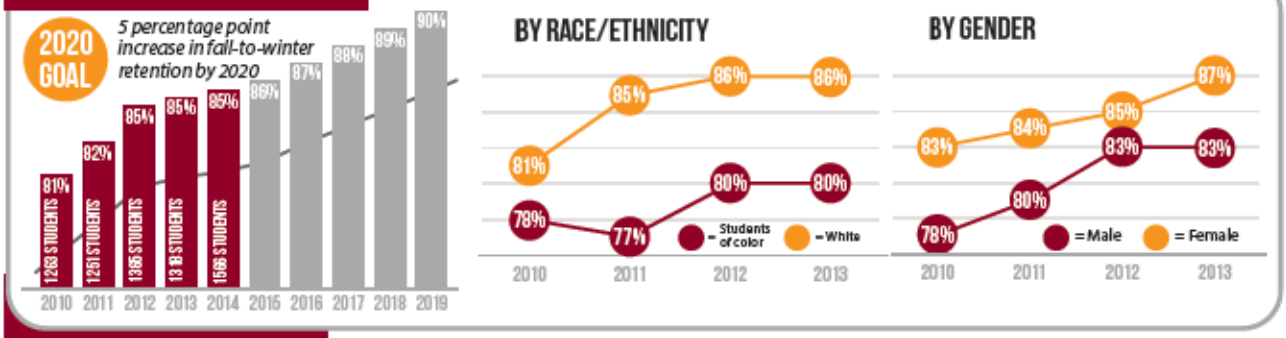
possibilities. realized.

Pierce is laser-focused on student success, with a sense of urgency around eliminating barriers.

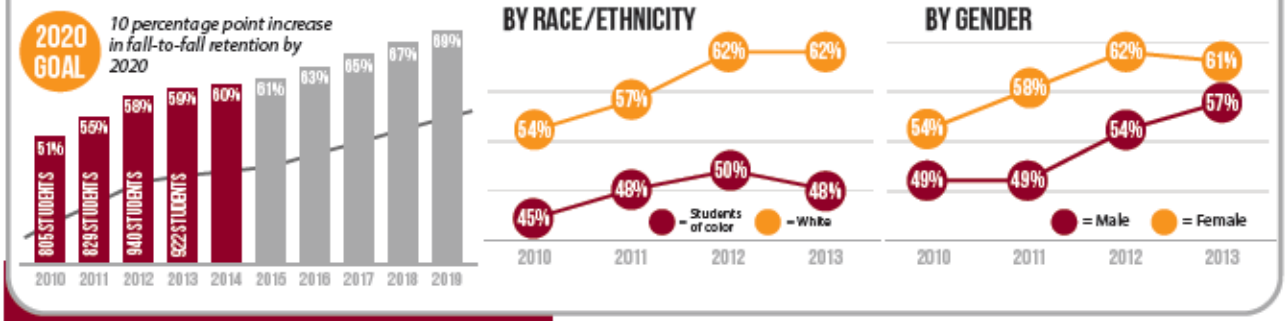
Our goal is to close achievement gaps between students while raising overall success rates, by 2020.

- Increase fall to winter cohort retention rates by 5 percentage points
- Increase fall to fall cohort retention rates by 10 percentage points
- Increase college-level course completion rates by 5 percentage points
- Increase online course completion rates by 5 percentage points
- Increase course completion rates in pre-college English by 10 percentage points
- Increase English sequence completion by 5 percentage points
- Increase course completion rates in pre-college Mathematics by 10 percentage points
- Increase three-year cohort graduation rates by 20 percentage points

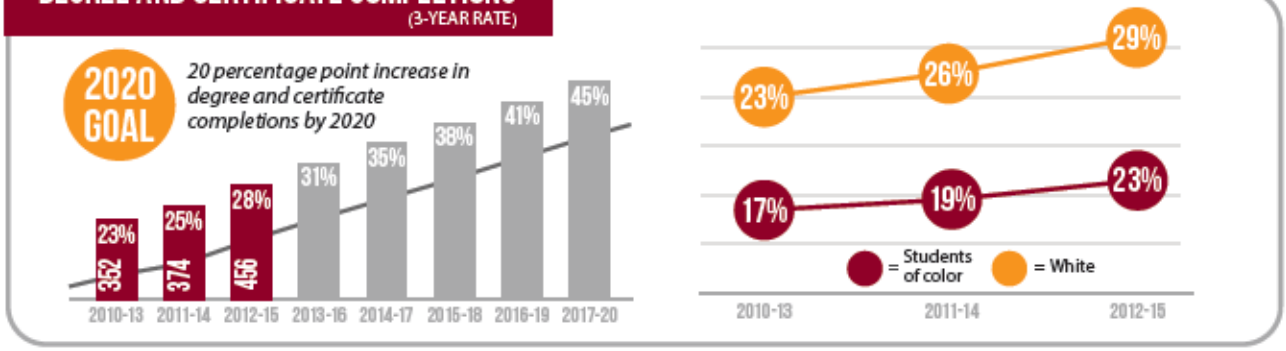
FALL TO WINTER RETENTION



FALL TO FALL RETENTION

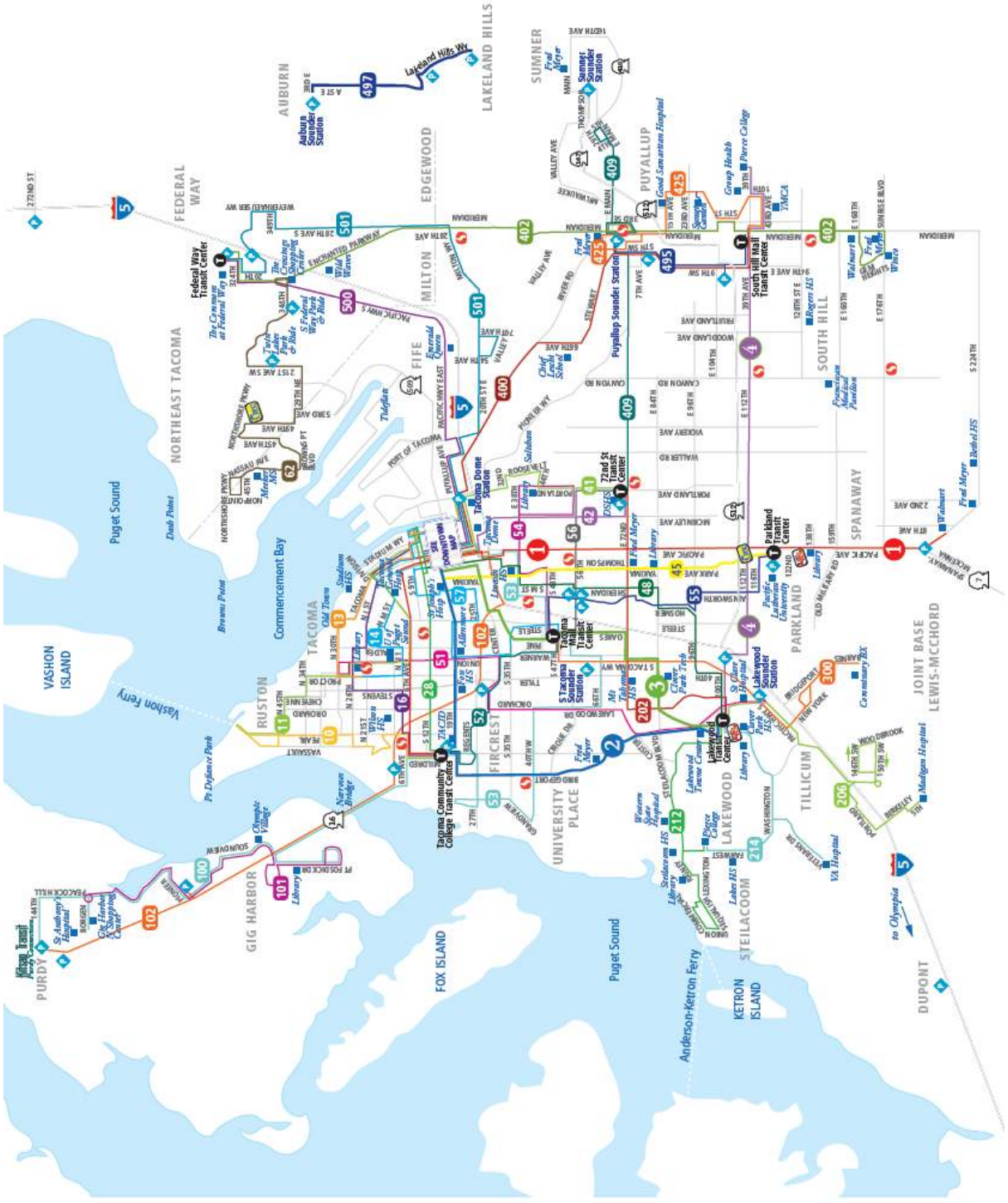


DEGREE AND CERTIFICATE COMPLETIONS (3-YEAR RATE)



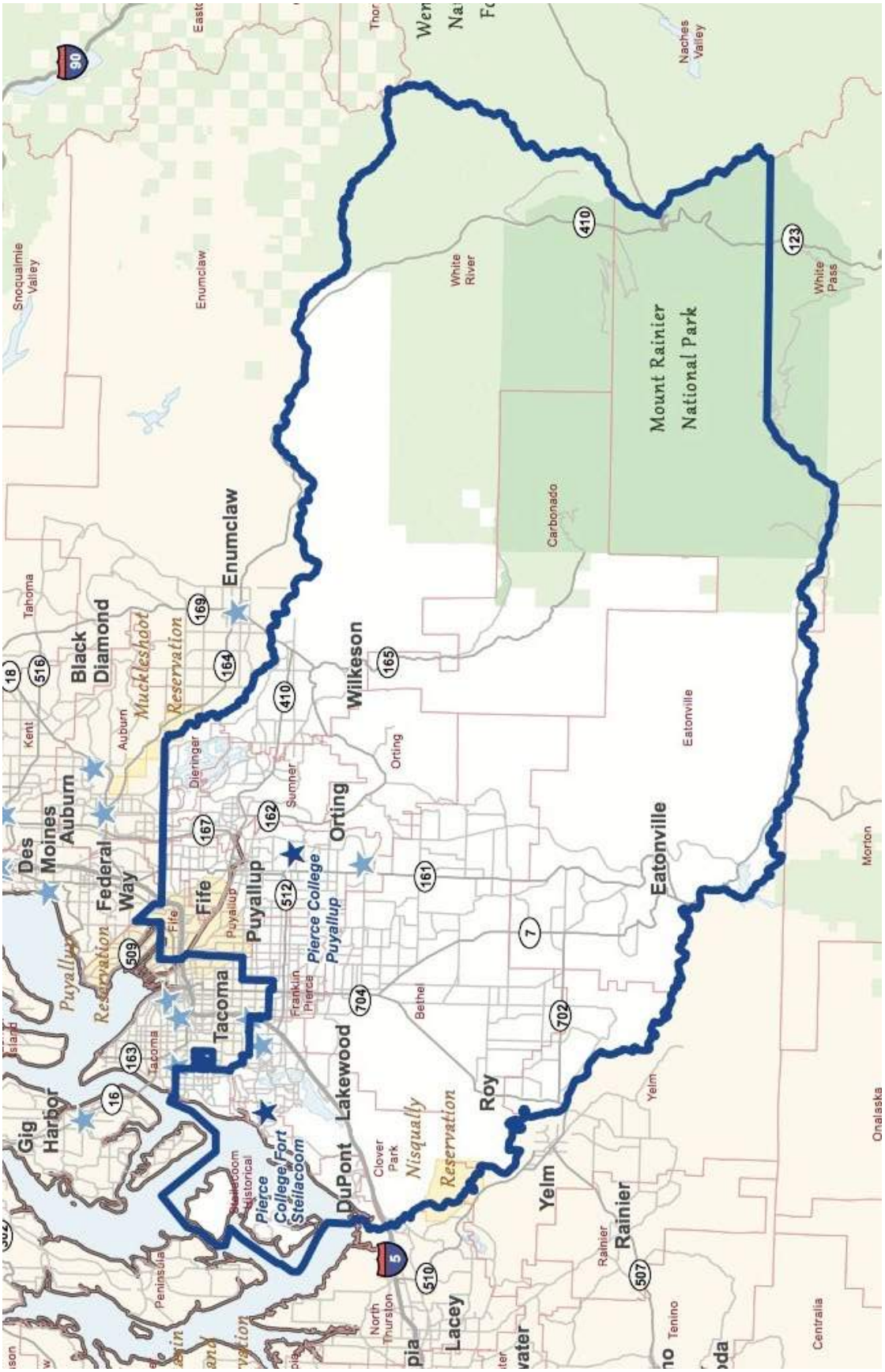
Appendix F

Pierce County Transit Map



Appendix G

Pierce College District Map



Appendix H

PIERCE COLLEGE
Fort Steilacoom

Exterior Sign Masterplan

Planning, Analysis & Design Concepts

May 2009

McGRANAHAN architects

ANDERSON KRYGIER, INC.

Introduction

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"...Pierce College is committed to providing an accessible, safe, healthful, and comfortable learning and working environment..."

— from Pierce College Values & Vision

BACKGROUND

It is not surprising that wayfinding has been identified as an important issue for the Pierce College campuses. Clear wayfinding and ease of access contribute to a welcoming and supportive environment where educational excellence may thrive. With this report, Anderson Krygier is continuing the exploration of wayfinding issues originally begun on the Pierce College Puyallup campus in the spring of 2007. This summary of findings and recommendations, together with preliminary design concepts for the Fort Steilacoom campus will lead to an Exterior Sign Masterplan.

WAYFINDING APPROACH

Wayfinding begins long before the first sign is sighted. It begins with a visitor's first contact with Pierce College and is supported by consistent information from many sources. It is important to develop a vision for how visitors approach the campus, how parking areas are identified, what buildings are accessed from each parking lot, and how much information is needed at each decision point — for both vehicles and pedestrians. This philosophy of wayfinding should be coordinated through key administrative departments — such as admissions and public relations — so that it touches all forms of college communications.

Communications may be in the form of an admissions brochure, announcements of college events, website driving instructions and/or telephone directions. It might also be a sign with directional arrows or a campus wayfinding map.

Once on site, people find their way using multiple positioning cues. In addition to signs and symbols, meaningful environmental cues are provided by neighborhood landmarks, landscape elements and existing view corridors. This multi-dimensional approach to consistent wayfinding results in a strategy that serves the institutional big picture by taking care of all the details that lead to a successful arrival.

PROCESS

Arriving at successful wayfinding is a process of joint discovery. Together, we explore the environment, collaborate to discover a common destination and pay attention to the path. We know that, in order for the College's Exterior Sign Masterplan to be successful, it must include participation from the College's Masterplan architects as well as major stakeholders and key decision makers on campus.

During the Planning & Analysis phase, our process was as follows:

1. Research vehicular access to the campus and both vehicular and pedestrian movement through it.
2. Develop a preliminary plan illustrating research findings, including freeways and major arterials leading to the campus.
3. Develop preliminary recommendations regarding natural decision points and logical routes to major campus destinations.
4. Prepare a preliminary report for review and discussion with the Project Review Team. Incorporate group input and feedback into the final Planning & Analysis Report.
5. Present final Planning & Analysis Report to Project Review Team for ratification and approval to proceed with the Exterior Sign Masterplan.

Pierce College Fort Steilacoom — Online Map & Directions from Pierce College website

From I-5 - Gravelly Lake exit

Follow I-5 to Gravelly Lake Exit 124.
(Note: There are directional signs to the college)

From north-bound I-5: turn left and go over the freeway. From south-bound I-5: turn right.

At the second light (island with large "Welcome to Lakewood" sign), go left onto Gravelly Lake Drive.

At the second light, turn left on Washington Blvd.
(Note: Washington Blvd. will turn into Military Road).

At the third light, turn right on 112th St. SW.

Take the first left (one-half block) onto Farwest Drive.

Continue on Farwest Drive until you see Pierce College on the right.

From I-5 - 72nd St exit

Follow I-5 to 72nd Street Exit 129.

Turn right onto 74th; proceed on 74th, crossing South Tacoma Way and Lakewood Drive.

74th turns into Custer Road and crosses Bridgeport Way; stay in the right lane.

Turn right on 88th St. SW which after two or three blocks becomes Steilacoom Blvd.

Proceed on Steilacoom past the Oakbrook shopping malls, the light at 83rd Avenue and the Western State Hospital complex.

Turn left at the light on Farwest Drive (the street is called Farwest on the left, Sentinel on the right).

Drive up the hill and enter the campus on your left at the main entrance by the reader board sign.

VEHICULAR ACCESS TO CAMPUS - Maps & Directions

MapQuest route - Northbound I-5

Google Maps route - Northbound I-5
(redrawn onto MapQuest map)

The Pierce College web site provides helpful maps to both campuses, accompanied by comprehensive directions. Directions include encouraging tips such as to look for specific landmarks, how far to go before the next turn: how many blocks or how many lights. The directions are clear and clearly written.

Google Maps recommends the same route, taking Exit 124 from northbound I-5 and Exit 129 from southbound I-5.

MapQuest disagrees. From northbound I-5, they recommend taking Exit 119 onto Steilacoom-Dupont Road. This route is not intuitive, seems out of the way and has more turns. However it is about 3 miles shorter and this is probably why it is recommended by the MapQuest algorithms. MapQuest's southbound I-5 directions are in line with the directions given by both Pierce College and by Google Maps.

Recommendations

1. Continue to provide proprietary maps and directions to campus.
2. Continue to offer MapQuest or Google alternatives.

Approaching I-5 SB at Exit 124

Approaching Farwest Drive SW from Steilacoom Blvd. SW

Approaching Farwest Drive SW from 112th St. SW
(from SW Military Road)

VEHICULAR ACCESS TO CAMPUS - MUTCD Road Signs

The Manual of Uniform Traffic Control Devices mandates signage standards for traffic in all government jurisdictions. Anderson Krygier conducted a survey of existing directionals that fall under MUTCD guidelines.

Pierce College Fort Steilacoom campus is well-signed from I-5 at Exit 124, both northbound and southbound.

There is no campus signage at Exit 129. This route is considerably shorter and more direct route than Exit 124 when traveling southbound. This route is referenced in Piece College's maps and directions.

City directionals were found at both ends of Farwest Drive, north and south: at Steilacoom Blvd. SW and at Military Road (112th St. SW) respectively.

Recommendations

1. Coordinate with city and state to place directional signs to Pierce College on I-5 at Exit 129.

CAMPUS GATEWAYS & PERIMETER MARKERS

A campus gateway is the threshold through which one passes to enter the campus. The main campus entry off Farwest Drive is marked by a modest gateway sign that tends to get lost in its expansive landscaped environment, as shown in the photo at right. It is flanked by a combination reader board / identification sign that is more visible than the gateway sign.

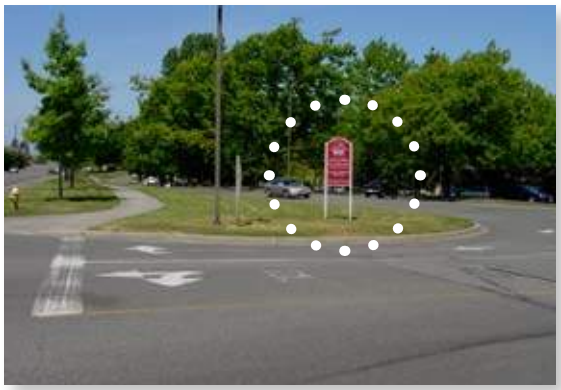
There is no gateway marker at the secondary campus entry. As the Fort Steilacoom campus grows, the importance of this secondary entry will increase as it becomes a more direct route to new buildings.

Recommendations

1. Design gateway signage that is architectural in scale and materials, contrasting in value to the surrounding landscape.
2. Update and redesign flanking reader board to be harmonious with new gateway ID.
3. Upgrade level of signage to mark secondary entrance in light of new buildings coming on line.
4. Apply the updated Pierce College logo and typography to redesigned gateway markers.
5. Consider banners along Farwest Drive between the two campus entries for a lively demarcation of the campus perimeter and to establish a more cohesive presence.
6. Support gateway and perimeter markers with wayfinding signage.

Gateway marker at primary entry

Gateway identification / reader board combination



Secondary entry

The Arrival Experience

VEHICULAR WAYFINDING

Wayfinding signs on vehicular thoroughfares guide auto traffic. They need to be simple, clear, and legible. More than six destinations per sign are difficult to read at a glance.

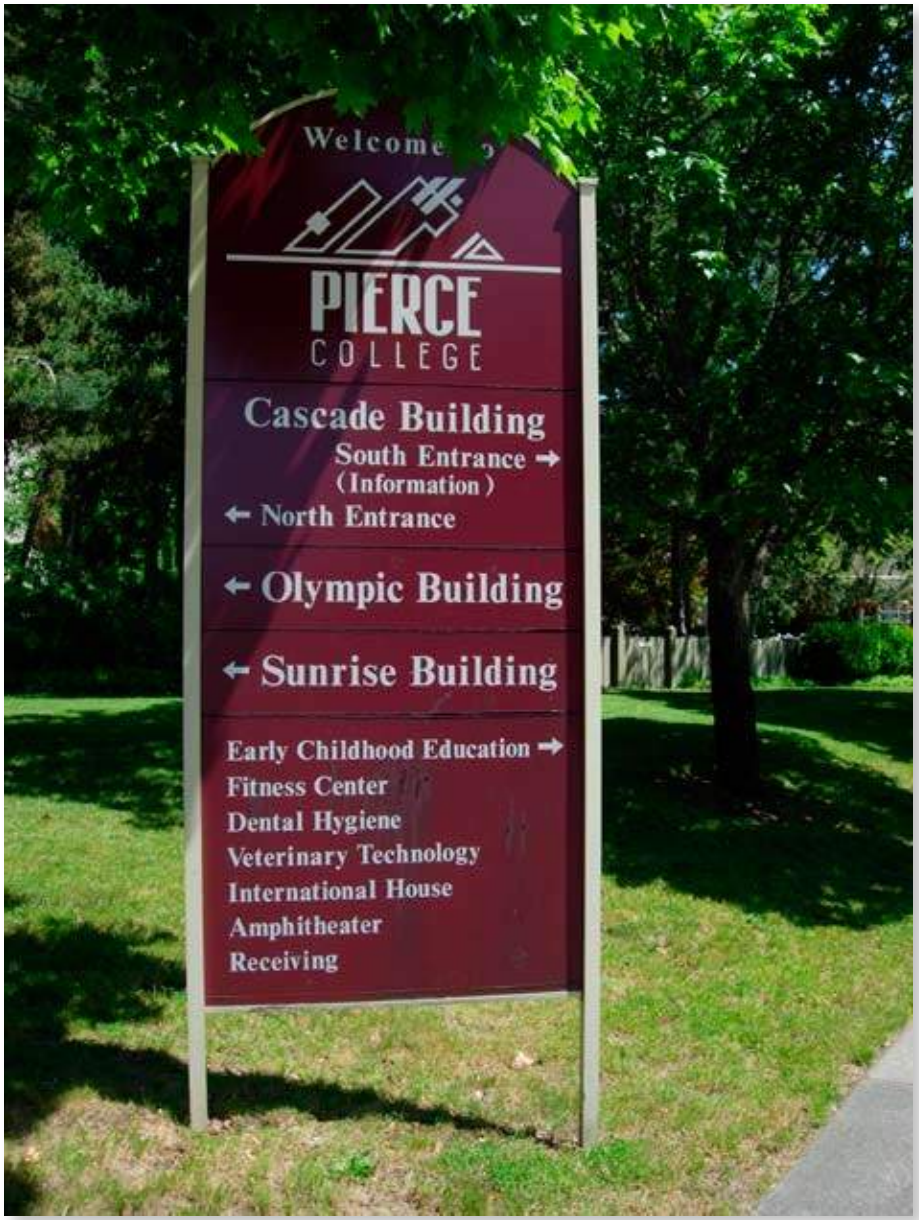
Vehicular wayfinding signs are currently located at the upper and lower end of the campus and underneath the Olympic Building leading to Early Childhood Education. At the first two locations, many destinations are included, several of which are in a small type, making them difficult to grasp quickly.

The sign's dark background color makes them easily lost under the shade of surrounding trees.

Recommendations

1. Develop a hierarchy of wayfinding signage that clearly identifies Pierce College, its parking areas and destinations. Develop a message stategy that limits and simplifies sign content.
2. Delete the word "Welcome" from directional signs.
3. Minimize the use of the logo. Consider displaying the "mark" without typography.
4. Add vehicular wayfinding near secondary entry.
5. Cross-reference listings with other ways visitors receive information (web, viewbook, catalogs, announcements of college events and telephone directions by all campus departments and services.)
6. Identify buildings only, not departments or services, on directional signs.
7. Develop a color scheme that provides a strong contrast in the environment.

Reducing the size of the logo and eliminating the welcome message will improve readability as will a more streamlined type treatment. A new approach to identifying destination departments within buildings is also needed.



This vehicular wayfinding sign gets lost in the shade of nearby trees. A light background color would make the wayfinding message visible in this heavily landscaped campus.

New buildings, including Communication Arts Building, Rainier Building and the Health Education Center, will add to the number of destinations on wayfinding signs.

PARKING ID

Parking entries continue the arrival experience for a majority of campus visitors. They provide opportunities for campus identification, parking area ID and orientation signage.

On the Pierce Fort Steilacoom campus, the first parking message encountered is an "Authorized Parking Only" sign. It does not specify how to become authorized or where to park if you're not. Beyond this lies a sea of undifferentiated parking lots with unmarked entries, with an occasional Permit or Employee Parking area. There is no indication of where to park for visitors or for specific campus destinations.

Recommendations

1. Consider identifying parking lots with icons and colors.
2. Develop a hierarchy of parking signage that includes parking entry ID, parking section ID and information / regulatory messages.
3. Identify sections within each parking lot to reinforce identity.
4. Reconsider "Authorized Parking Only" message at entries.

Limited parking designations.

This warning is disconcerting for visitors.

Coordinating permit stickers with color scheme helps promote campus identity.

BUILDING NOMENCLATURE

Building naming at Pierce College Fort Steilacoom seems clear and consistent with the exception of the International House which is called out on the online map as Criminal Justice. However destination departments located inside some buildings can create confusion for both building ID and vehicular wayfinding. For example, several different departments are located within the Cascade Building, many of them destination departments such as the Oppelt Student Center, Dental Hygiene and Veterinary Technology. In addition, the Olympic Building houses the Children's Center.

Pierce College has recently developed a system-wide list of acronyms to identify buildings and reduce confusion between similar building types on the two campuses. The acronyms will appear on building ID signs and be cross-referenced with class schedules and other administrative functions.

Recommendations

1. Determine a system-wide approach to identifying destination departments within larger buildings on wayfinding signage and support it with print and web communications.

Opportunities for You Are Here maps

At upper entry, between Olympic and Sunrise Buildings.

At "campus crossroads" in front of Cascade Building.

At base of South Lot near HEC.

At Cascade Building, south entrance.

Opportunities for Pedestrian Wayfinding

En route to Cascade Building from North Lot.

PEDESTRIAN WAYFINDING

The arrival experience continues between the car and the destination. Welcome and orientation signage in the form of a "You Are Here" map with directional information is the next step in campus wayfinding. Currently there are no You Are Maps on campus.

Because the Fort Steilacoom campus is compact and pedestrian oriented, a combination of You Are Maps together with more visible building identification would reduce the need for more extensive pedestrian wayfinding.

Pedestrian paths intersect just west of Cascade Building. This is an ideal spot to develop a pedestrian "campus crossroads"that could combine a You Are Here map with an informational kiosk containing news of campus events, together with an outdoor coffee cart.

Recommendations

1. Develop a hierarchy of pedestrian scale directional signs to be placed at decision points (crossroads) within the campus interior.
2. Place You Are Here maps at pedestrian crossroads.
3. Design wayfinding maps that are "heads up," (map is oriented in the direction a viewer is facing). Maps must be large enough for legibility and flexible enough to accommodate campus changes.

BUILDING ID

Buildings at Pierce College Fort Steillacoom are inconsistently identified. Building ID includes freestanding and building-mounted ID, the college logo only or no ID at all.

Some existing freestanding building ID signs are more properly building directories. Most of this information belongs inside the building.

Recommendations

1. Continue the precedent set at the Puyallup campus of wall-mounted building ID featuring a dimensional solid logo and building name plus acronym in clear anodized aluminum.
2. Place freestanding building ID signs as needed. Include a small logo, the building name and its acronym.
3. Omit the listing of departments and services on building ID signs (place instead on an interior directory.)
4. Ensure that landscaping does not obscure building ID signs.

ACCESSIBLE SIGNAGE

To accommodate students with hearing and vision disabilities, exterior campus signage needs to conform with the Americans with Disabilities Act passed in 1991. While accessible routes are available, they may be difficult to find due to lack of signage. In general, signs describing ADA access on campus are not in place or not up to current standards.

Recommendations

1. Develop a system of campus wayfinding signage that addresses the guidelines of the Americans with Disabilities Act, including signing accessible routes through campus.

INFORMATIONAL & REGULATORY SIGNAGE

Informational and regulatory signs convey critical messages, including fire life safety, disabled access and regulatory information concerning deliveries, loading / unloading and service access. They need to be functionally located, visible, legible and consistent in style and tone. Currently, all messages are in English.

Recommendations

1. Ensure that regulatory signage is visible, legible, and consistent in style and tone.

SUMMARY OF RECOMMENDATIONS

1. Continue to provide proprietary maps and directions to campus.
2. Continue to offer a MapQuest or Google alternative.
3. Coordinate with city and state to place directional signs to Pierce College on I-5 at Exit 129.
4. Design gateway signage that is architectural in scale and materials, contrasting in value to the surrounding landscape.
5. Update and redesign flanking reader board to be harmonious with new gateway ID.
6. Upgrade level of signage to mark secondary entrance in light of new buildings coming on line.
7. Apply the updated Pierce College logo and typography to redesigned gateway markers.
8. Consider banners along Farwest Drive between the two campus entries for a lively demarcation of the campus perimeter and to establish a more cohesive presence.
9. Support gateway and perimeter markers with wayfinding signage.
10. Develop a hierarchy of wayfinding signage that clearly identifies Pierce College, its parking areas and destinations. Develop a message stategy that limits and simplifies sign content.
11. Delete the word "Welcome" from directional signs.
12. Minimize the use of the logo. Consider displaying the "mark" without typography.
13. Add vehicular wayfinding near secondary entry.
14. Cross-reference listings with other ways visitors receive information (web, viewbook, catalogs, announcements of college events and telephone directions by all campus departments and services.)
15. Identify buildings only, not departments or services, on directional signs.
16. Develop a color scheme that provides a strong contrast in the environment.

17. Consider identifying parking lots with icons and colors.
18. Develop a hierarchy of parking signage that includes parking entry ID, parking section ID and information / regulatory messages.
19. Identify sections within each parking lot to reinforce identity.
20. Reconsider "Authorized Parking Only" message at entries.
21. Determine a system-wide approach to identifying destination departments within larger buildings on wayfinding signage and support it with print and web communications.
22. Develop a hierarchy of pedestrian scale directional signs to be placed at decision points (crossroads) within the campus interior.
23. Place You Are Here maps at pedestrian crossroads.
24. Design wayfinding maps that are "heads up," (map is oriented in the direction a viewer is facing). Maps must be large enough for legibility and flexible enough to accommodate campus changes.
25. Continue the precedent set at the Puyallup campus of wall-mounted building ID featuring a dimensional logo and building name plus acronum in clear anodized aluminum.
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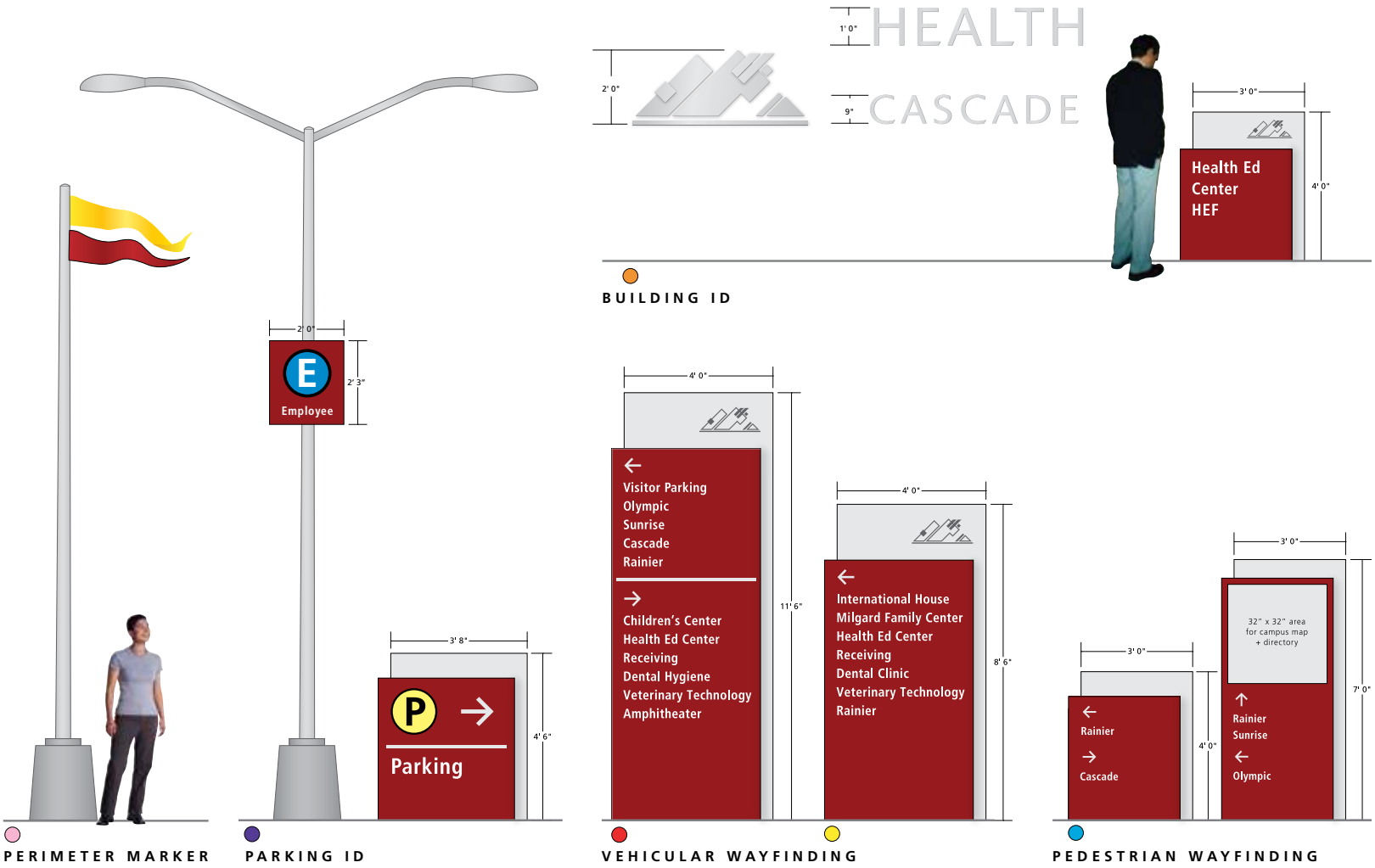
27. Omit the listing of departments and services on building ID signs. (Place instead on an interior directory.)
28. Ensure that landscaping does not obscure building ID signs.
29. Ensure that regulatory signage is visible, legible, and consistent in style and tone.

OVERVIEW

The concepts on the following pages build upon and refine the design direction approved in 2007 by a joint committee representing both the Puyallup and Fort Steilacoom campuses of Pierce College. Since that time, the college has decided to unify the two campuses with a single color palette for exterior signage. While the red palette gives a nod to Pierce College school colors, the exterior red is warmer and earthier to promote sign visibility in the midst of lush campus foliage.

While similar in design to the gateway for the Puyallup campus, the Fort Steilacoom gateway is sited quite differently in terms of grade and landscape. The r eaderboard is designed specifically for the Fort Steilacoom campus.

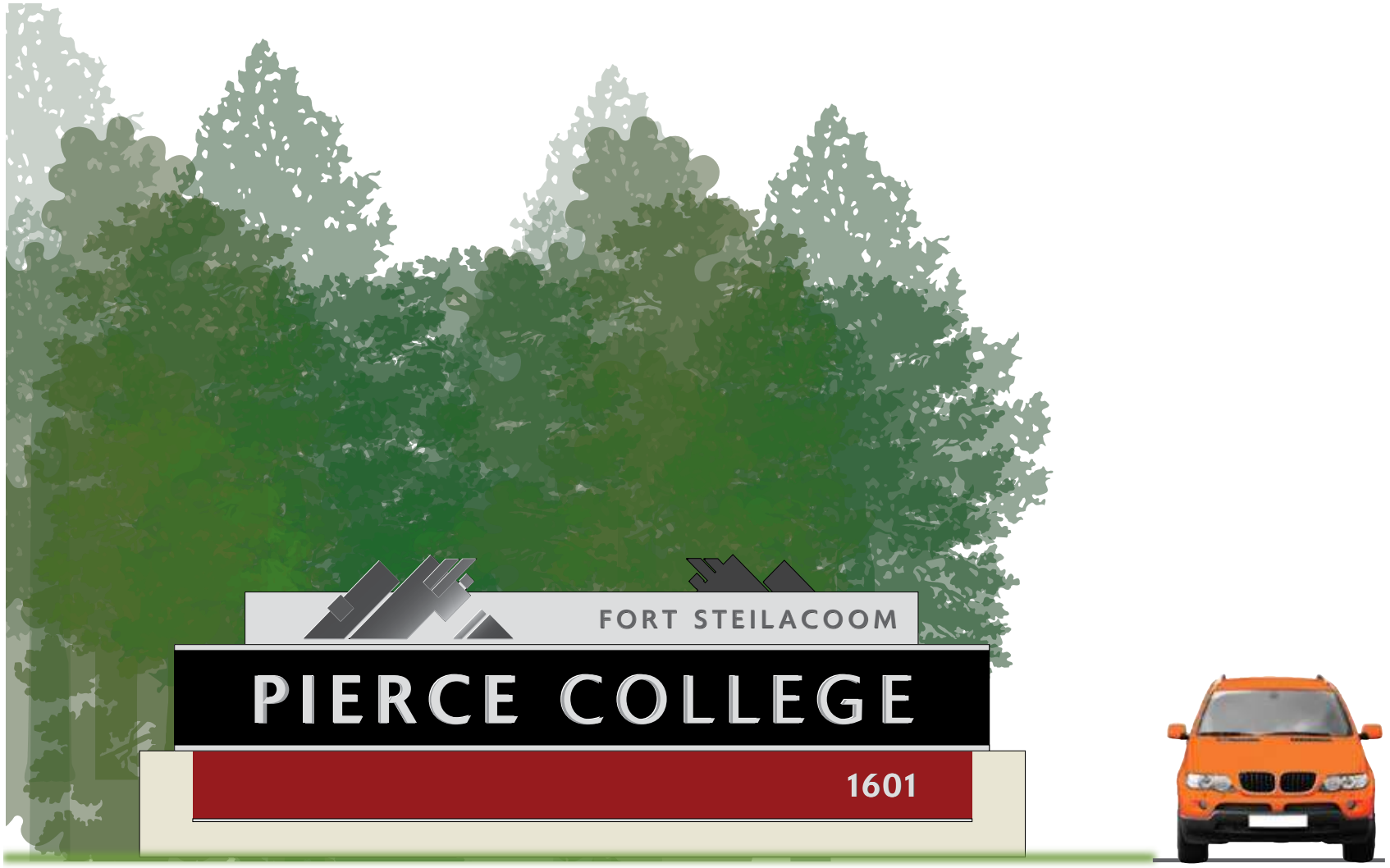
This report provides a roadmap for implementation and final documentation of the Exterior Sign Masterplan for the Fort Steilacoom campus - as budgets allow.



Sign Overview

Color Key
gateway
readerboard
vehicular WF-lg
vehicular WF-sm
pedestrian WF
parking ID
building ID
RAINIER BUILDING
FUTURE COMMUNICATION ARTS BUILDING
Guest Pkg.
Dental Clinic
HEALTH EDUCATION CENTER
Oppelt Student Center
CASCADE BUILDING
Animal Barn
Maintenance Yard
SUNRISE BUILDING
CASCADE BUILDING
OLYMPIC BUILDING
Childen's Center
Child Care Parking
MILGARD Family Child Dev. Center
SOUTH LOT
Employee
NORTH LOT
SOUTH LOT
Employee
Employee
CRIMINAL JUSTICE
SOUTH OVERFLOW LOT
FARWEST DRIVE SW
North Entry
FARWEST DRIVE SW
South Entry
FARWE

Site Plan



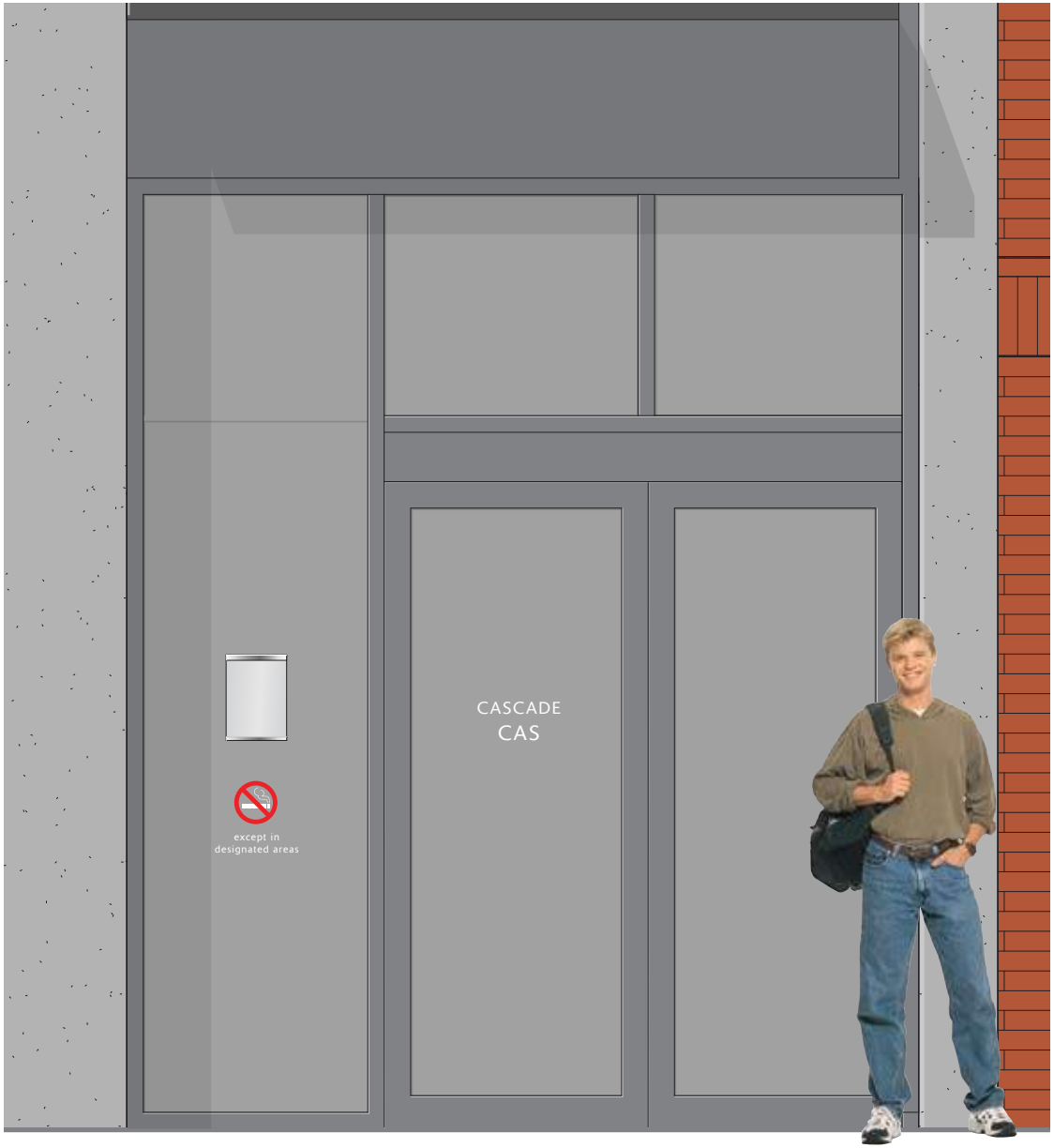
Gateway Marker — North Entry

Reader Board — North Entry

Gateway Marker — North Entry

Reader Board & Gateway Marker — North Entry

COLLEGE CENTER



Glass-mounted Building ID

BUILDING IDENTITY

Whether building-mounted or freestanding, building identification should be as simple as possible and incorporate logical abbreviations as appropriate. Sign materials and colors are carefully considered so that all signs reflect a unified concept and provide consistent identity for the College.

The Olympic Building was the first example of a wall-mounted "mountain" logo fabricated as a solid shape. At College Center on the Puyallup campus, the solid logo is combined with dimensional letters in Delta Jaeger Light. When placed on a dark background, the letters and logo are fabricated from clear anodized aluminum. When placed on a lighter background, they are painted a metallic charcoal to improve contrast.

On entry doors, the building name and acronym are rendered in silver vinyl.

Freestanding building ID signs feature the outline logo in metallic charcoal vinyl.

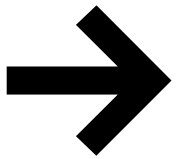
A B C D E F G H I J K L M N O P Q R
S T U V W X Y Z & 1 2 3 4 5 6 7 8 9 0
a b c d e f g h i j k l m n o p q r s t u v w x y z

Delta Jaeger Book

A B C D E F G H I J K L M N O P Q R
S T U V W X Y Z & 1 2 3 4 5 6 7 8 9 0
a b c d e f g h i j k l m n o p q r s t u v w x y z

Delta Jaeger Light

Access-ability Icon



Directional Arrow

TYPE & SYMBOLS

Delta Jaegar Light is the primary typeface for exterior applications. Delta Jaegar Book is used for emphasis in displaying the word P I E R C E when combined with C O L L E G E.

The typeface is classic in proportion with a clean, open, contemporary feel. The angled terminus of each horizontal stroke promotes a casual, almost crafted appearance. It is shown in combination with a dimensional Pierce College logo in the photographs on page 32.

Consistent arrow usage is recommended for all exterior wayfinding signs. The arrow at left is simple, clear and combines well with Delta Jaegar. In addition, the access-abililty icon is the preferred symbol to denote accessible routes through campus. The wheelchair figure is in an active pose, conveying ability and access, leaving behind any reference to "handicapped" or "disabled."

Solid logo

Outline logo

PIERCE
COLLEGE

Delta Jaegar Book + Light

CASCADE BUILDING

Wall-mounted Building ID

FORT STEILACOOM
PIERCE COLLEGE

Gateway Markers

Freestanding Directionals & Building ID

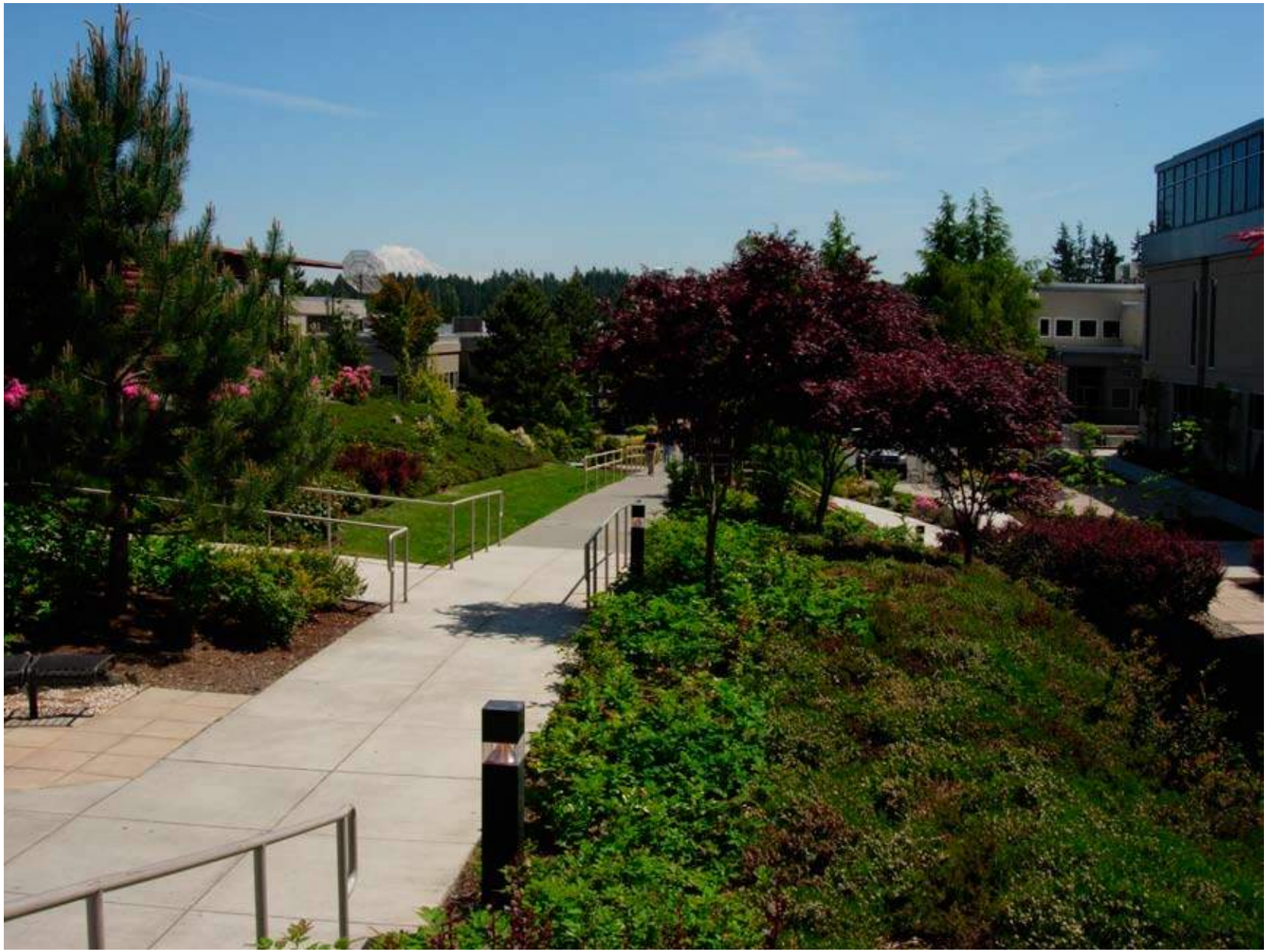
LOGO USAGE

Based on Native American "mountain" and "cloud" motifs, the Pierce College logo has recently evolved to include both an outline and a solid image for different exterior sign applications. The logo "kit of parts" as shown in the top row at left illustrates both logo versions and the words PIERCE COLLEGE, which may be used alone or combined with the logo. "Pierce" is always Delta Jaegar Book while "College" is Delta Jaegar Light.

For wall-mounted building identification, the solid logo is made of clear anodized aluminum and combined with dimensional letters of the same material. For entry doors, the building name and acronym are rendered in silver vinyl.

Campus gateway markers and the readerboard feature the solid logo in dark metallic "charcoal" combined with dimensional letters displaying the college name and location in a unique format.

Freestanding directional signs feature the outline logo in metallic charcoal vinyl on a silver background.



NEXT STEPS

This report provides a roadmap for implementation and final documentation of the Exterior Sign Masterplan for the Fort Steilacoom campus - as budgets allow. The first step is implementation of the readerboard at the campus entry.

Additional steps include implementation of prioritized projects to serve as "case studies" before finalizing the Exterior Sign Masterplan document.

Appendix I

Pierce College
Fort Steilacoom
LANDSCAPE MASTER PLAN

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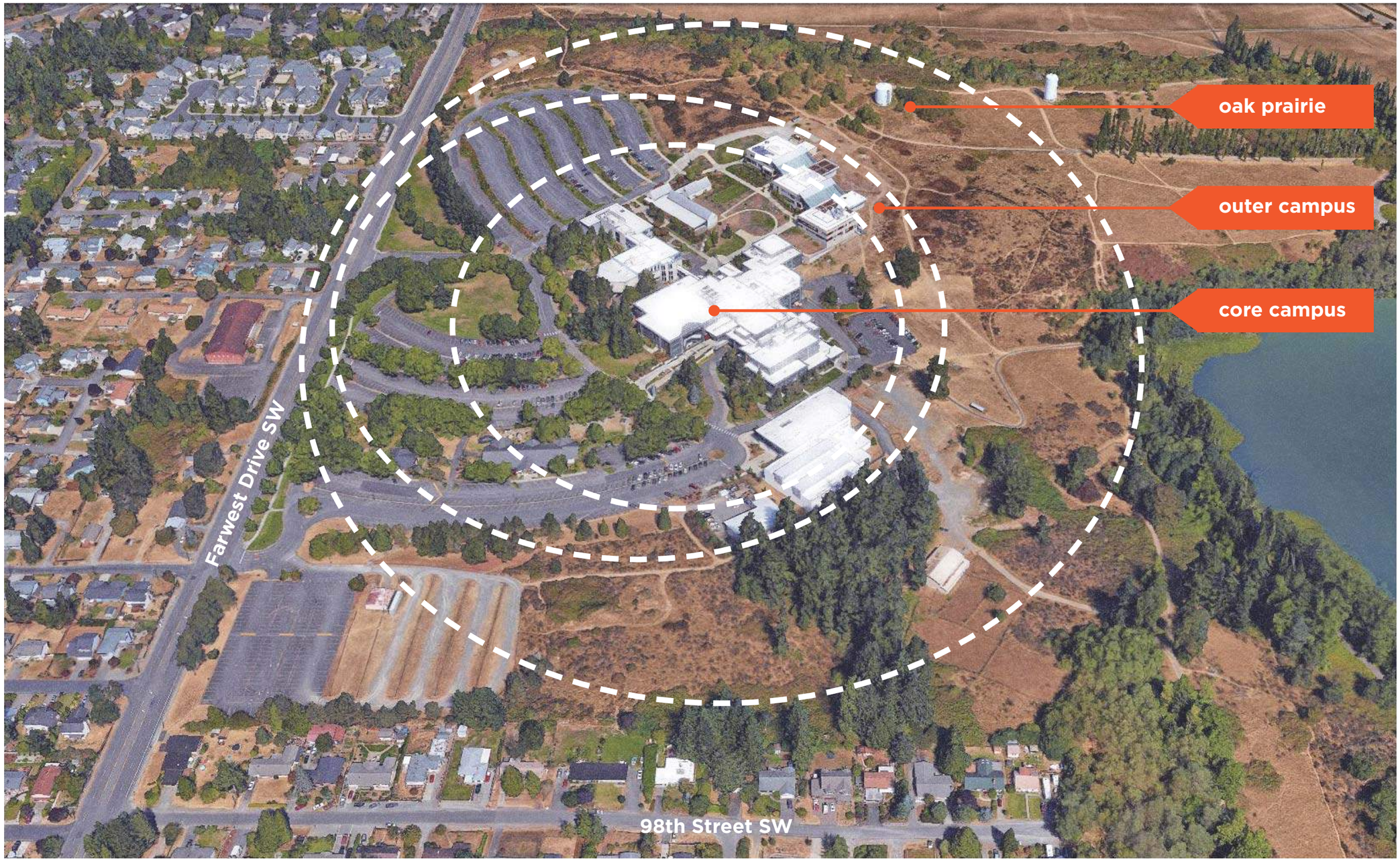
1.0 SUMMARY OBSERVATIONS AND RECOMMENDATIONS

1.1 CAMPUS DIAGRAM
1.2 CIRCULATION
1.3 PARKING
1.4 WAYFINDING AND SIGNAGE
1.5 ECOLOGY
1.6 HORTICULTURE PRACTICES
1.7 LANDSCAPE EXPERIENCE

1.1 Fort Steilacoom Campus



140 acres, 76 acres studied

Coverage of studied site

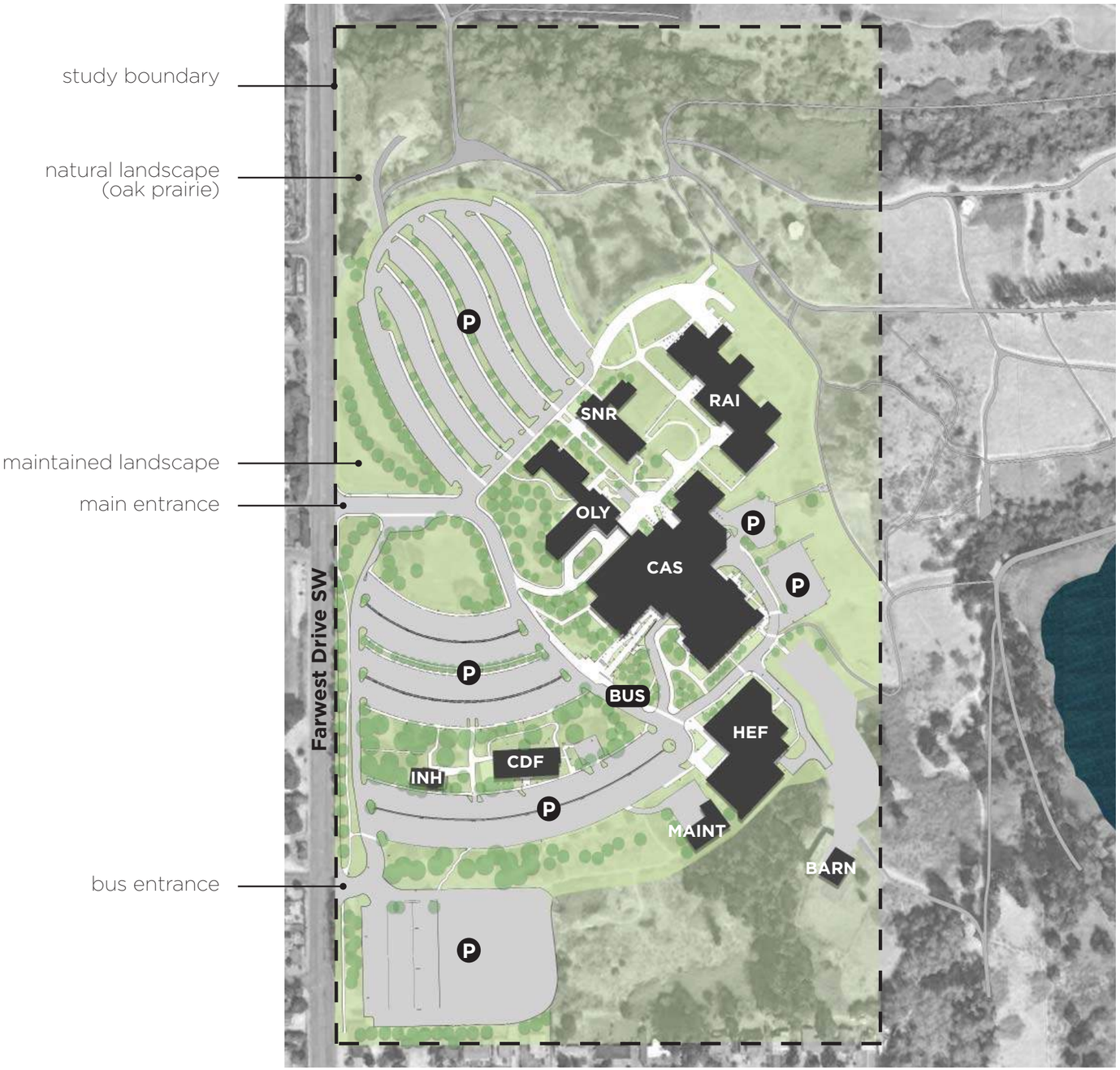
Maintained landscape = ~20 acres, 26% of site studied

Natural landscape = ~30 acres, 39% of site studied

Hardscape = ~21 acres, 28% of site studied

Buildings = ~5 acres, 7% of site studied

Tree Canopy = ~16 acres, 21% of site studied



Existing Campus

1" = 300'

1.2 Circulation

Observations

1. Circulation and parking are integrally linked. Destinations are unclear as you enter the campus and people are led to key points based on where they park rather than where they are going. Start the arrival sequence earlier to help people navigate sooner.
2. Missing any sense of ceremonial arrival from the street.
3. ADA routes are not marked and with some of the grade changes may be challenging to navigate. Some of this might be addressed through better initial directional signage.
4. The perimeter of the campus is primarily for vehicles while the core campus is primarily for pedestrians.

Recommendations

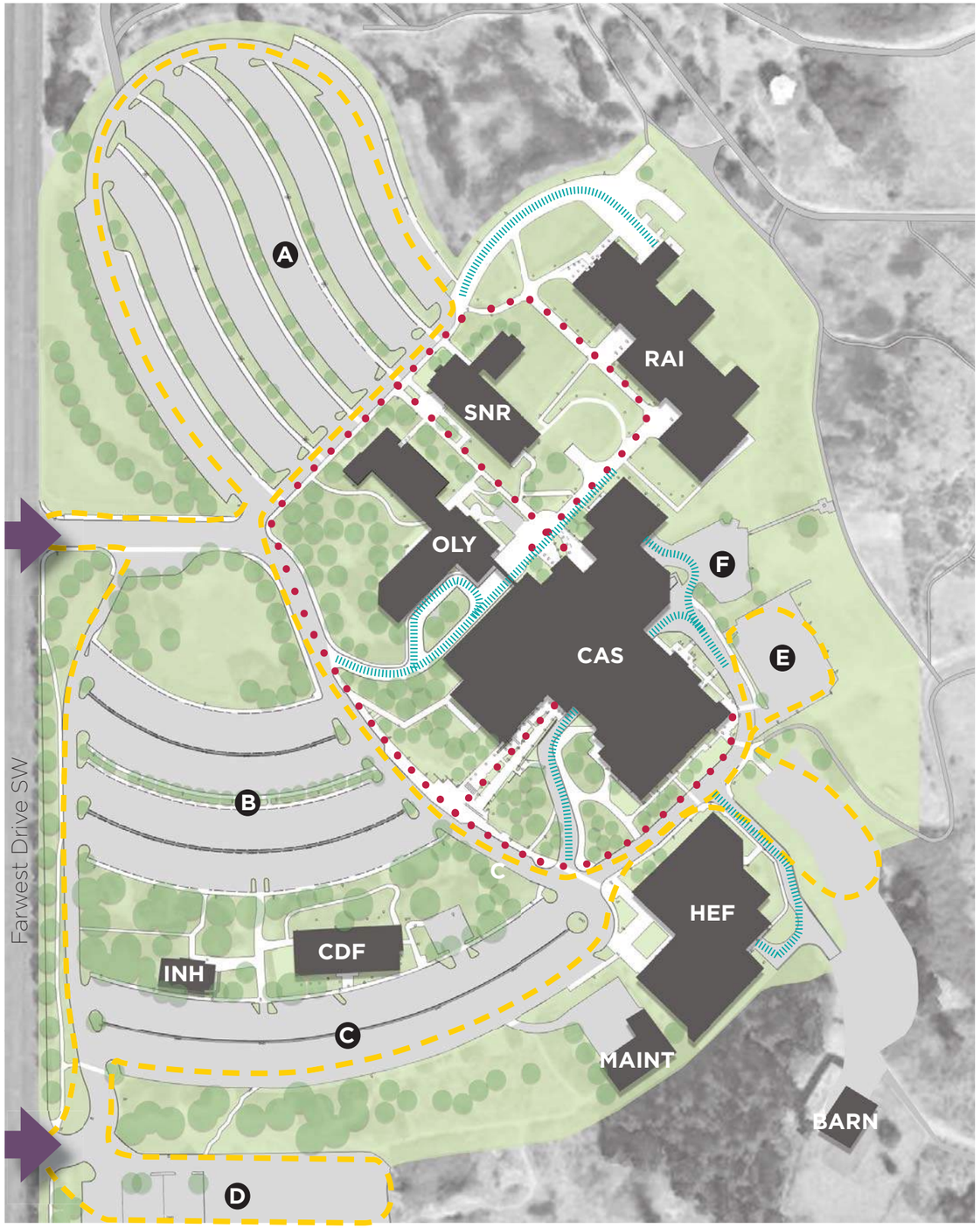
1. Start the arrival sequence sooner. Extend improvements along Farwest Drive. Potentially take advantage of locating a new building on top of the hill to serve as a gateway or marker to the campus
2. Improve ADA routes and pedestrian network, initial wayfinding, and ADA stall placement.
3. Connect pedestrian routes within the core campus.
4. Establish pedestrian hierachy in areas used by maintenance, delivery, and emergency vehicles.

existing pedestrian route

existing vehicular route

mainentance, delivery, emergency vehicle route

campus entries



Existing Circulation

1" = 200'

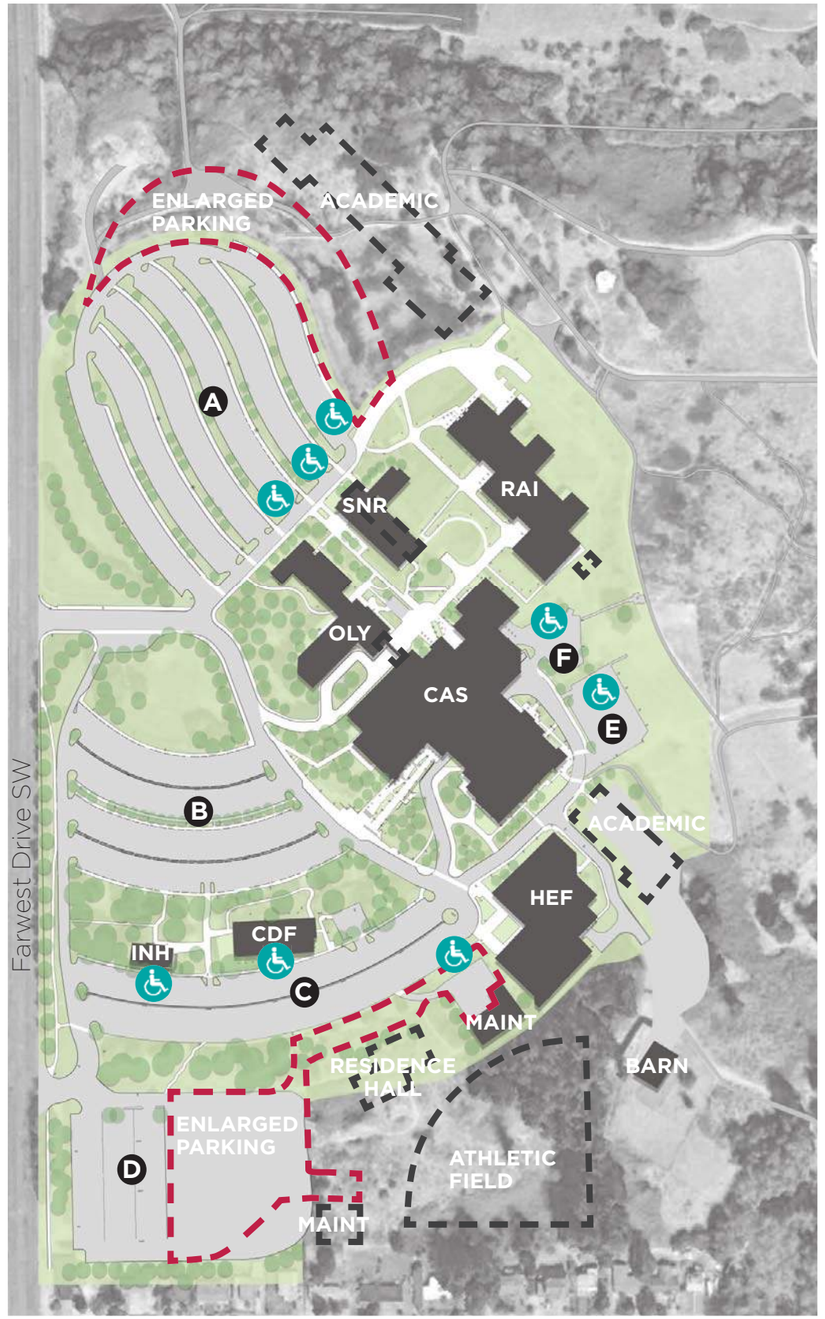
1.3 Parking

Observations

1. Sidewalks adjacent to most rows of parking encourage pedestrian safety.
2. Future building expansion is likely. Potential future expansion of parking is also likely, if and, when the campus expands.

Recommendations

1. Reinforce pedestrian hierarchy using different paving types for pedestrians and vehicles, including crosswalks.
2. Improve pedestrian and ADA access to parking lots.
3. Retain parking outside the core campus.



Parking - Existing & Future

1" = 300'

1.4 Wayfinding and Signage

Observations

1. Lack of wayfinding signage upon entering the campus.
2. ADA circulation is challenging.
3. Areas without hierachy fail to differentiate between vehicle and pedestrian zones.
4. Asphalt paving with painted curb and gutter gives the appearance of a vehicle dominated environment. Within the core campus is where we want pedestrians to feel they have the right-of-way.

Recommendations

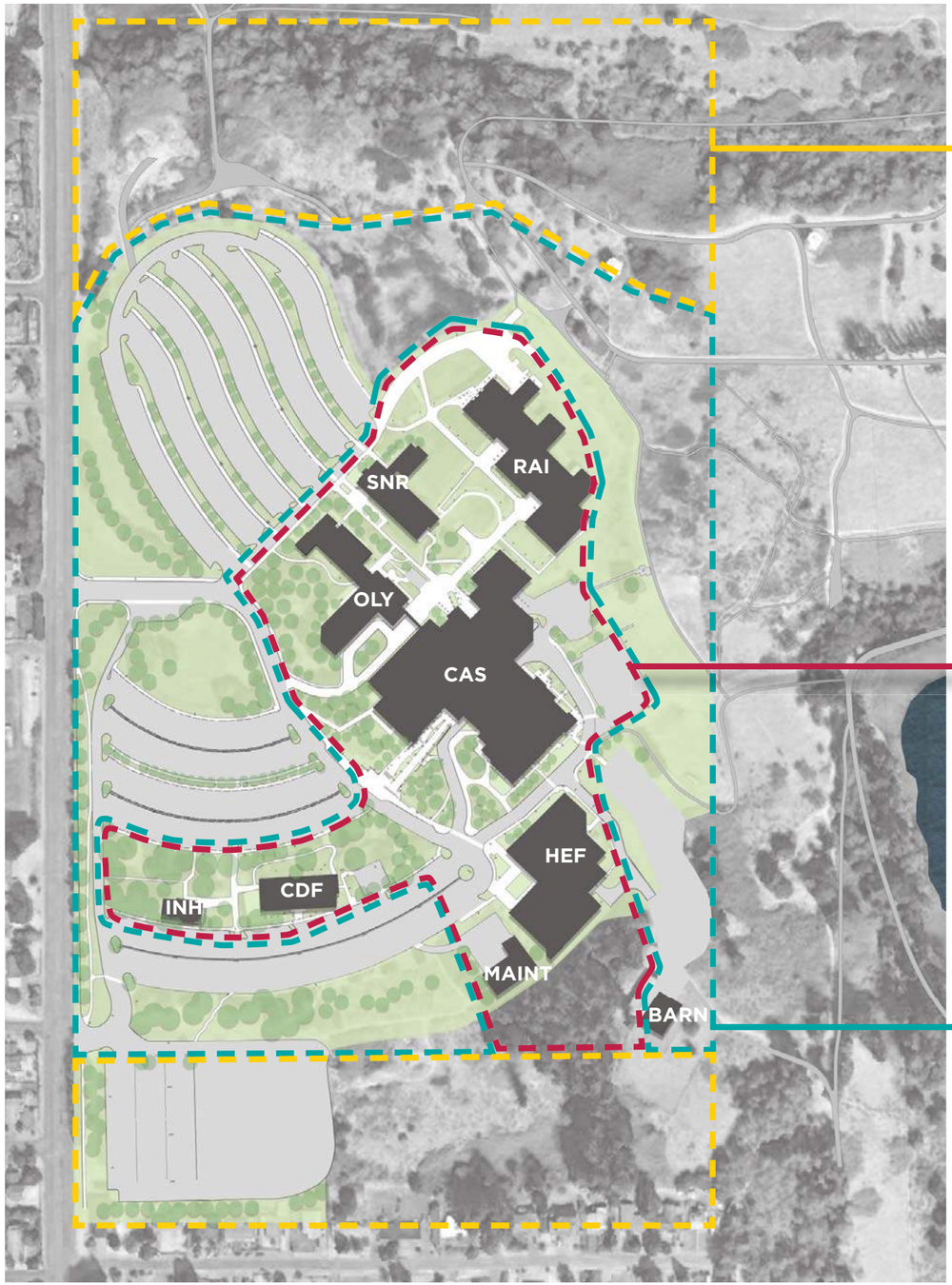
1. Improve the overall campus experience and branding through improved signage and graphics.
2. Acknowledge and improve the thresholds created at the edge of the parking areas.
3. Increase the number of campus maps.
4. Building labeling should be improved.
5. Mark ADA circulation routes.
6. Use paving hierarchy, planting, and lighting to promote intuitive wayfinding.

1.5 Ecology

1. Great overall ecological value to the campus.
2. Eradicate invasive species.
3. Manage overall urban forest in addition to individual trees.
4. In the future plant trees with longevity in mind. There are quite a few recently planted trees that will either need to be continuously pruned to reduce conflicts with buildings or moved or removed in the future.
5. Appears to be a gap in ages around trees.

Recommendations

1. Establish ecological goals for the campus.
2. Set tree canopy coverage goals.
3. Implement an Integrated Pest Management (IPM) program.
4. Maintain perimeter for habitat and wildlife viewing.
5. Develop a tree management plan to outline management steps to identify potential trees for removal, maintain a certain percentage of canopy, and develop a tree diversity planting plan.
6. Reduce the number of current problem areas on campus.
7. Focus maintenance resources on the areas that provide the greatest benefit.



Campus Zones

1" = 300'

Campus Perimeter:

The perimeter oak prairie is infused with invasive Scotch broom and Himalayan blackberry. A possible remedy would be a controlled burn. The reduction of invasives in the perimeter areas would also reduce their spread to the inner campus.

Core Campus:

Think of the campus core as an urban forest. An arborist's inventory and assessment can determine the health and hazard potential of existing trees.

Outer Campus

1.6 Horticultural Practices

Observations

1. Multiple locations where vegetation is planted too close to entrances, walkways, lighting, and buildings.
2. Improper use of plant species increases maintenance.
3. Bare, exposed ground in multiple areas increases maintenance and eroids the soil.

Recommendations

1. Develop native plant palette for use in campus core.
2. Use native and well suited plant material to growing conditions: right plant, right place.
3. Group species by cultural requirements.
4. Incorporate time as a factor of design to allow for maturation of woody species without constant pruning.
5. Avoid creating small, intensive, and difficult to maintain areas.

Avoid planting trees and plants too close to buildings, walkways, and entries. Appropriately placed plants will require less pruning, improve sight lines, increase safety, and reduce damage to structures and pavement.

Choose plants specifically for their location. Avoid plants that will require a lot of maintenance to control their height, spread, droppings, etc.

Increase the diversity of plants with less emphasis on woody plants (trees and shrubs). Woody plants will eventually outgrow their beds or require constant pruning to maintain their size. High quanities of herbaceous plants will eliminate bare ground and provide competion for weeds.

Trees planted too close to walkways can cause pavement damage. Root barrier or rigid foam under paving can be used in the future to avoid uplift. For existing uplift, asphalt can be removed and an air spade used to excavate around tree roots. Some roots can be cut and the area around the roots can be backfilled with graded base and the asphalt replaced with concrete.

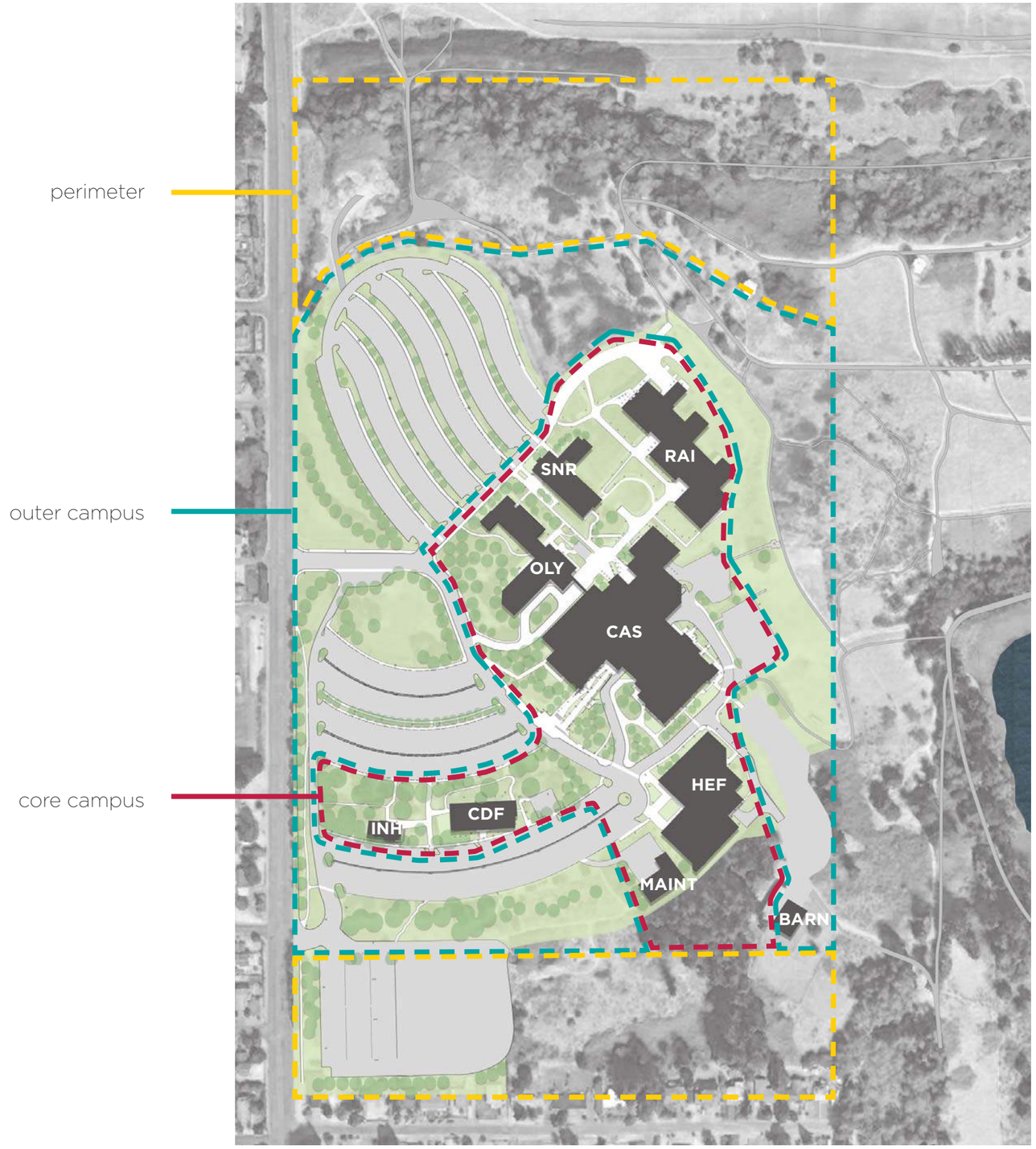
1.7 Landscape Experience

Observations

1. Landscape experience is generally very good. Lack of core open space and the landscape experience upon entry is more about the parking than the campus.
2. The campus setting and acreage is a great asset for the college providing a comfortable, welcoming, and uniquely Pacific Northwest identity.
3. The outer campus trees nicely define the campus boundary and the mix of trees and open areas provide a feeling of expansiveness.
4. The oak prairie is an asset for the campus providing open space and a learning laboratory for students. Invasives removal and a tree planting and maintenance strategy will improve this asset.

Recommendations

1. Preserve and enhance the perimeter oak prairie and open space.
2. Provide a more defined open space within the campus core.
3. Create a more cohesive campus by connecting the upper and lower campus.
4. Manage the layers of the forest within the core campus to maintain sight lines.



Campus Zones

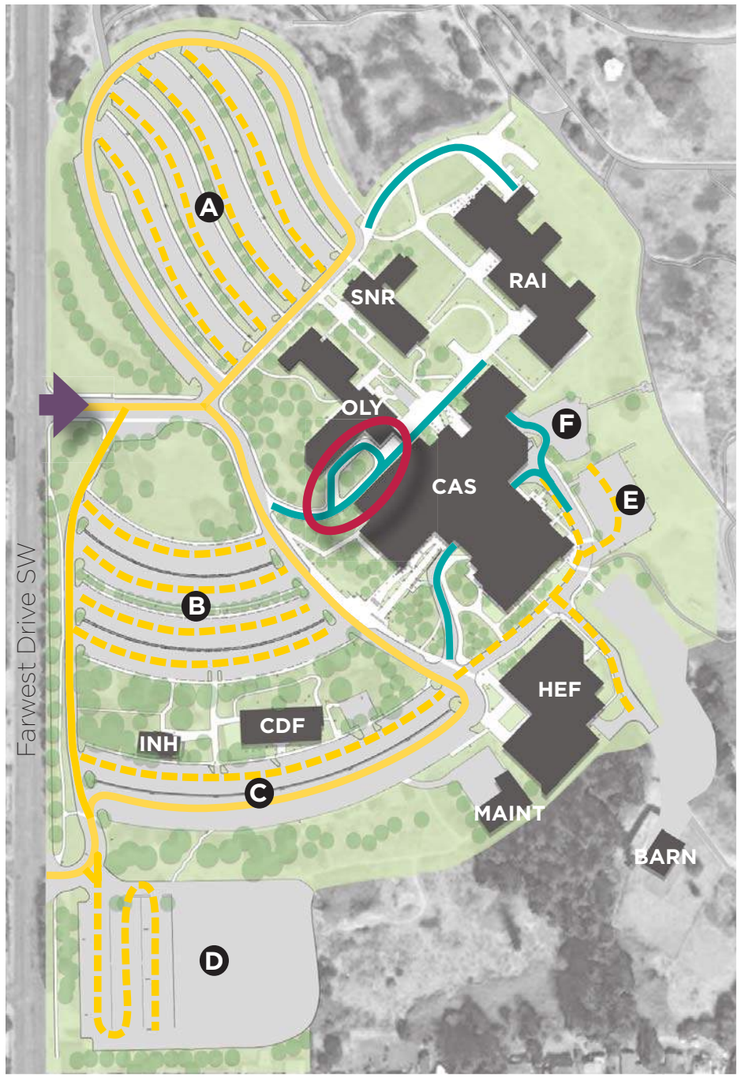
1" = 300'

2.0 CIRCULATION SYSTEMS

2.1 VEHICULAR NETWORK
2.2 PEDESTRIAN NETWORK
2.3 WAYFINDING
2.4 CAMPUS GATEWAYS

2.1 Vehicular Network

1. Vehicular Network
   a. Define the “main” campus entrance.
   b. Designate conflict area as loading/ maintenance/emergency vehicle only.



existing primary vehicular route

existing secondary vehicular route

existing maintenance, delivery, emergency vehicle route

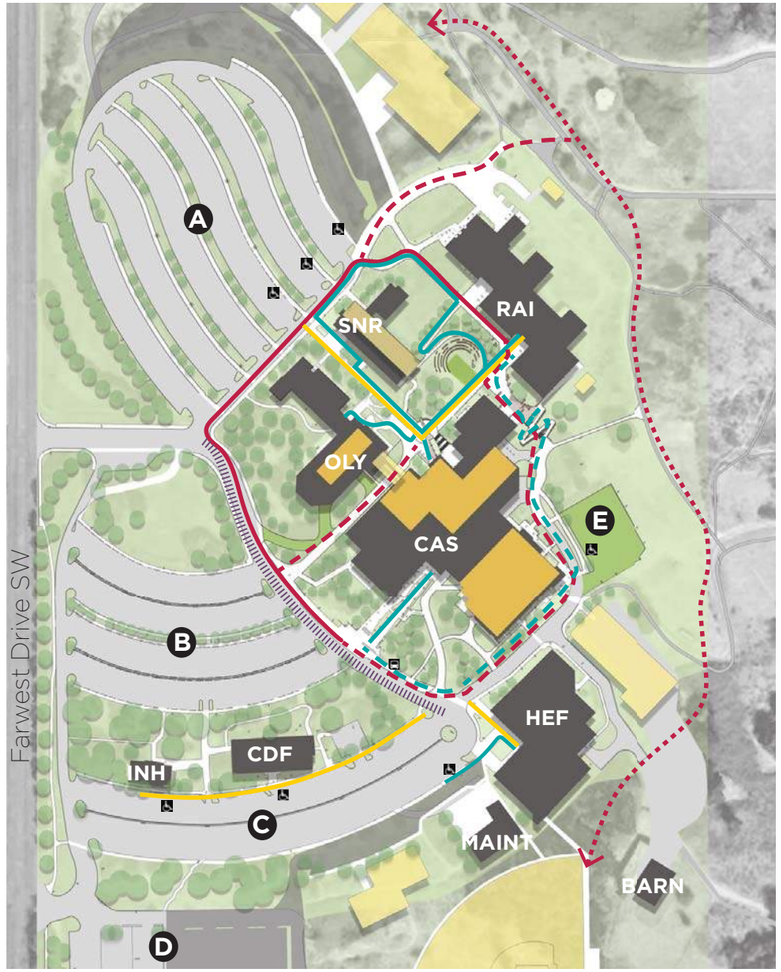
pedestrian/vehicle conflict area

main entry

Existing Vehicular Network 1” = 300’

2.2 Pedestrian Network

1. Pedestrian Network
   a. Create a hierarchy of paving types
   b. Expand ADA routes
   c. Make logical connections and routes to buildings
   d. Improve the vehicle/pedestrian edge along the main entrance to Cascade
   e. Connect existing pedestrian routes to form a campus loop path.



existing pedestrian route to remain

expanded pedestrian loop

additional pedestrian routes

existing ADA route

expanded ADA route

improved edge

future parking

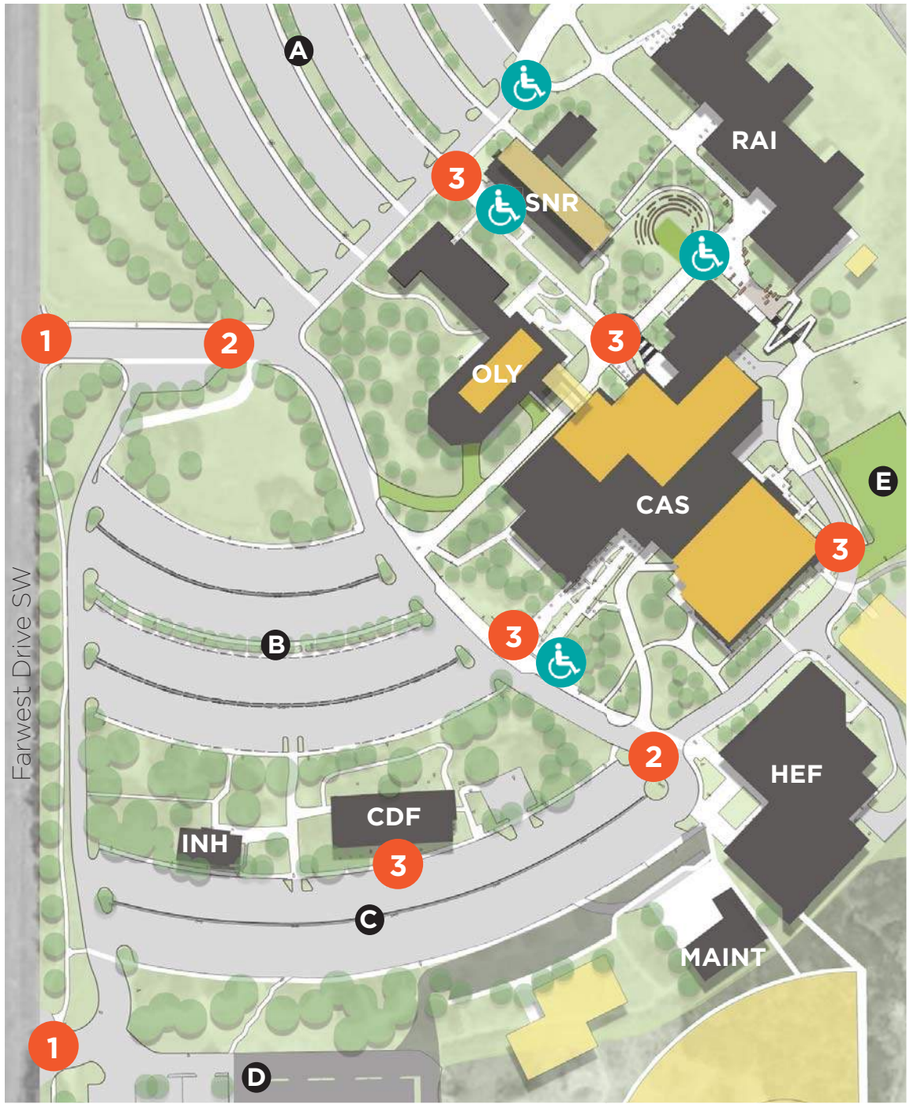
future building

future renovation

Proposed Pedestrian Circulation 1” = 300’

2.3 Wayfinding

1. Wayfinding
   a. New sign locations
   b. ADA markings
   c. Create a hierarchy of signage: identity, directional, informational



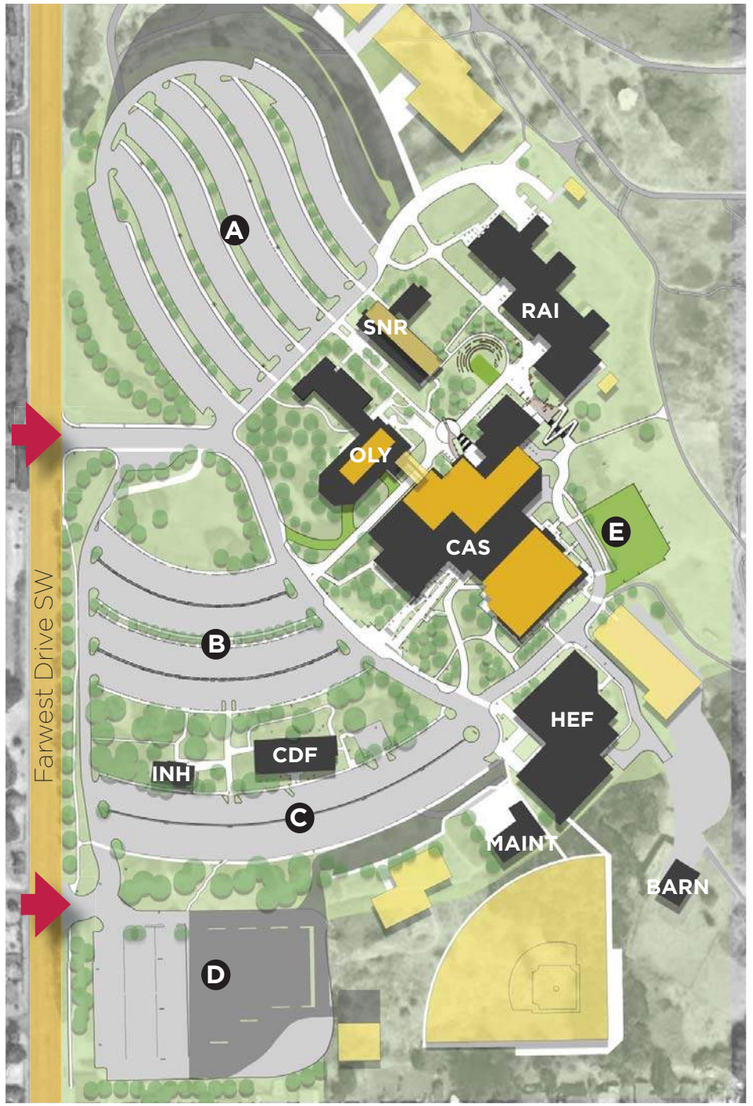
Proposed Signage

- 1 identity signage
- 2 directional signage
- 3 informational signage
- ADA route signage

Campus Wayfinding 1" = 200'

2.4 Campus Gateways

1. Campus Gateways
   a. Embellish the entry points into campus and acknowledge the campus edges facing the community.
   b. Acknowledge the outer campus edges through planting, lighting, and signage.



Campus Edge and Entries 1" = 200'

3.0 PLANTING SYSTEMS

3.1 PLANTING CONCEPTS
3.2 VEGETATION AND URBAN FOREST MANAGEMENT
3.3 MAINTENANCE

3.1 Planting Concepts

Oak Prairie

Oak prairie as inspiration: the planting on campus serves as the backdrop for learning and helps define the campus experience. One the greatest assets of the campus is the oak prairie and the lake that surrounds it. This landscape serves as an amenity to the campus and to the community at large. The surrounding oak prairie should serve as inspiration for planting palettes for the campus and any planting should carefully consider a varied selection of native species. Well adapted non-native species should be used sparingly with a specific purpose or selected for a particular characteristic that makes them especially well suited to the application. Native species often reduce the maintenance burden and provide the greatest ecological benefit.

Diversity

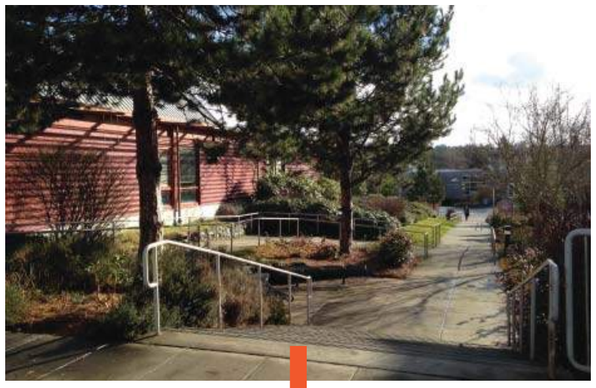
Avoid planting monocultures: all plantings should be varied in type. Monocultures are far more labor intensive to maintain, show weeds more readily, are less resilient to disease, and provide lower ecological value.

Understory

Understory: encourage development of the understory as a mix of herbaceous grasses, perennials, woody sub-shrubs, and groundcovers

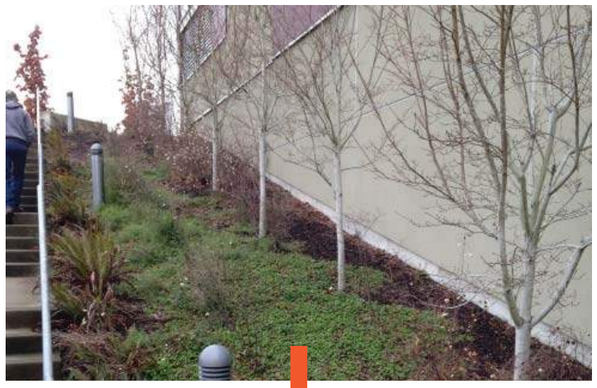
Maintain Sight Lines

Plant to maintain sight lines: ensure that planting palettes and tree locations are considered carefully to avoid obscuring sight lines particularly around the core campus.



Legacy

Plant trees for longevity: consider position of trees carefully in respect to buildings, light fixtures and adjacent walking surfaces. Utilize root barrier to avoid future root conflicts and paving upheaval. Prepare the root zone and soil volume to the greatest extent feasible when planting new trees. Plant trees as small as possible to allow for better root development and acclimation.



Eco-Lawns

Plant and manage eco-lawns: turf management is consuming a large portion of the maintenance resources. Reduce the need to irrigate, mow, and fertilize.

3.2 Vegetation and Urban Forest Management

Sight Lines

Work to reduce sight line issues and eliminate hiding places: there are a few instances on campus with a particularly full understory that offer ideal hiding spots and are well obscured from lines of sight. This is mostly attributed to large masses of woody shrubs and trees that are taller than 6' and close to walkways. Generally we would like to keep clear the zone between 3-8' clear of vegetation.

Lighting

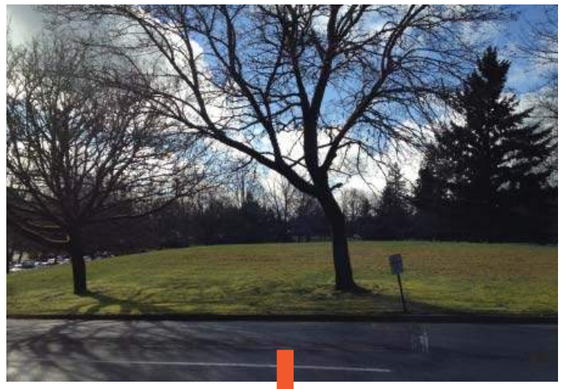
Reduce lighting conflicts: prune and/or remove trees blocking pole mounted light fixtures particularly in the parking areas.

Irrigation

Irrigate less: we do not have a good understanding of exactly how much water is currently being used on campus, but we should try to find out. It's uncertain whether the current systems are sound or not and whether we are losing water to leakage. Assuming irrigation systems are sound, would recommend installing rain sensors and or solar syncs to make the systems climate responsive. Adjust irrigation settings seasonally and taper to no irrigation on plantings where feasible.

Trees

Plant trees on an annual basis to ensure a variety of ages and resiliency in the overall forest.

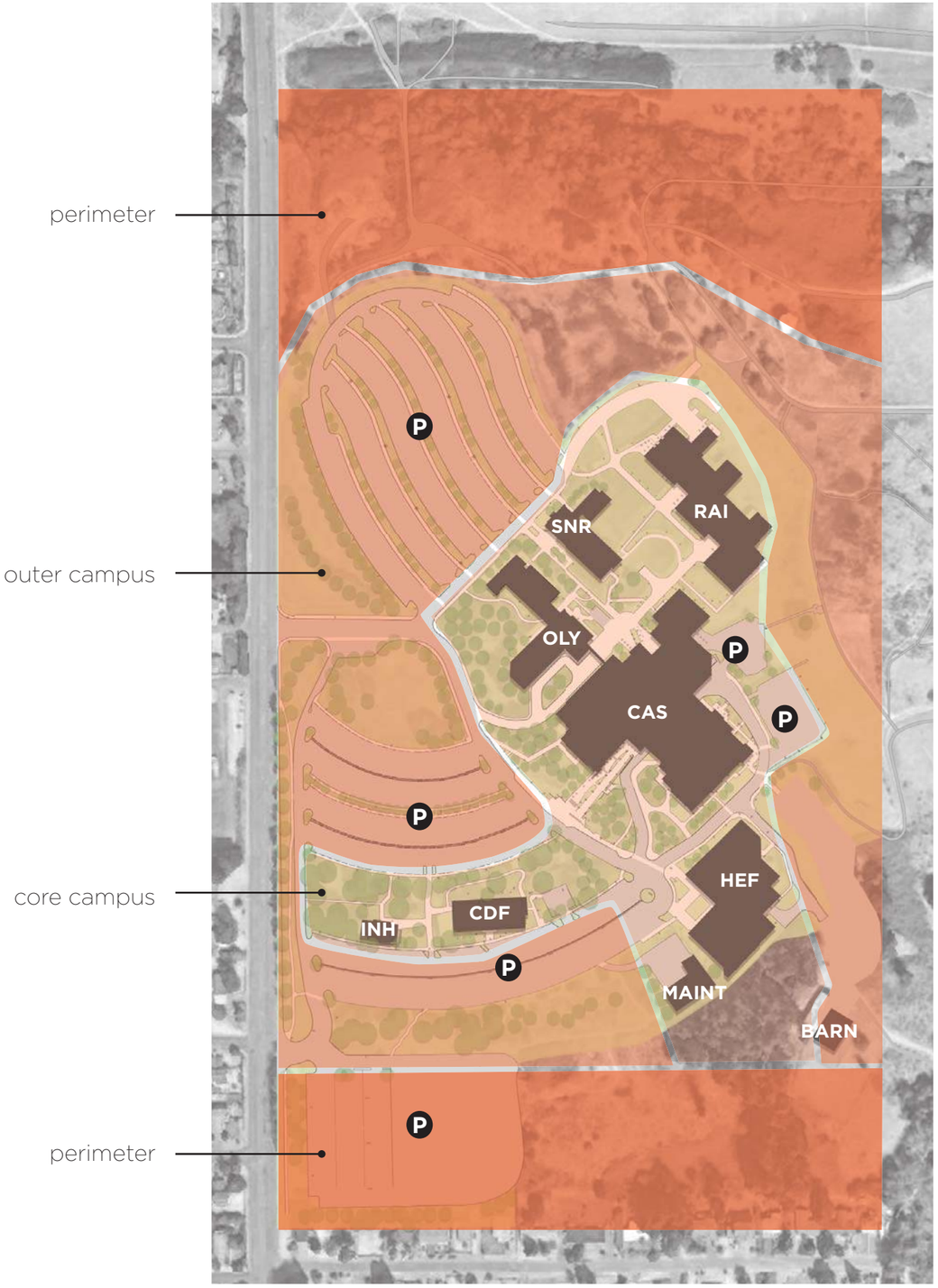


3.3 Maintenance

1. Strive to reduce the amount of mowing and edging. A high percentage of resources are dedicated to these tasks.
2. Think of the campus as zones: core campus, outer campus, and perimeter. Most maintenance should occur in the core campus area followed by the outer campus and perimeter.
3. Choose plants carefully for their location. Avoid plants that are too tall, large, or require a lot of time to maintain them for their location.

Reduce small areas of lawn such as those in parking lot islands. Replace with drought tolerant groundcover, low growing shrubs, and small trees to reduce the need for irrigation and mowing.

Mowing and edging should only occur in the core campus area.



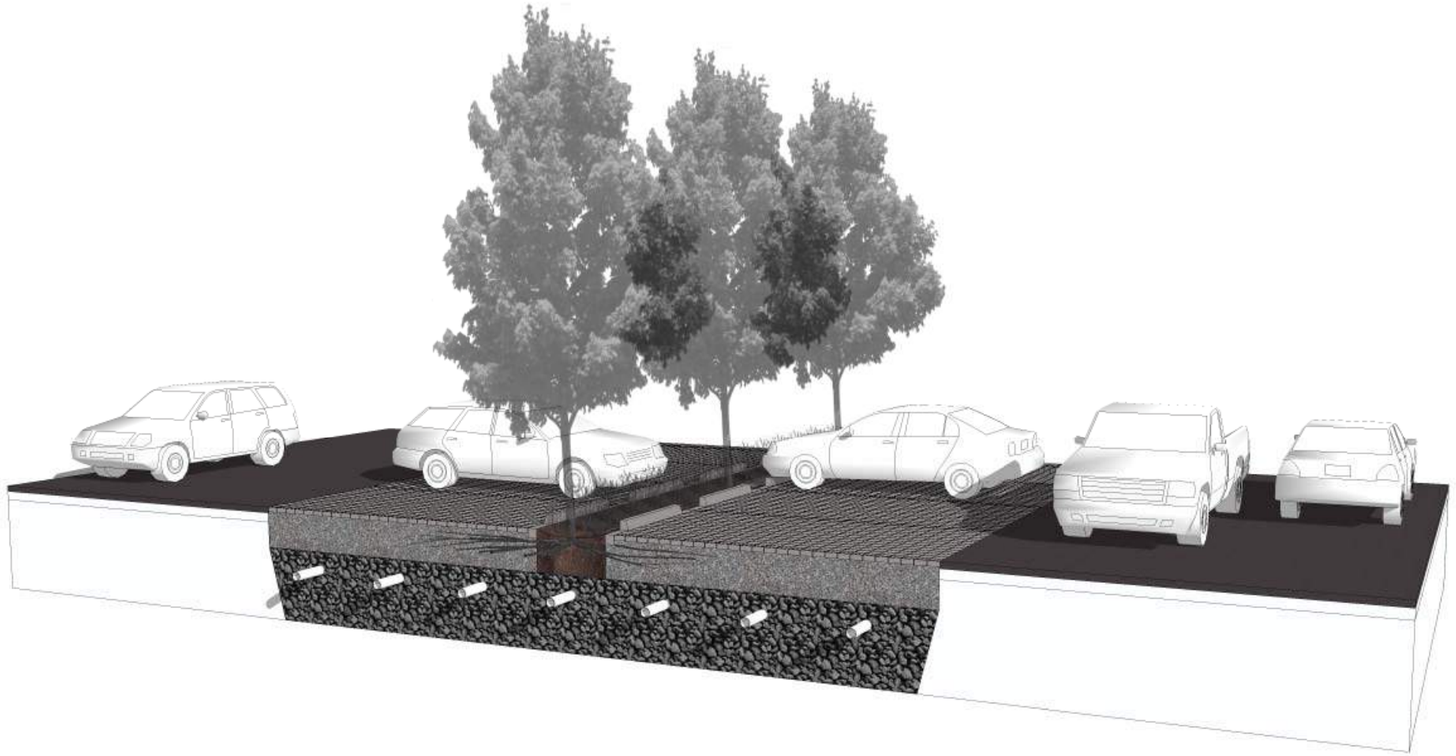
Campus Zones 1" = 300'

4.0 WATER MANAGEMENT

4.1 STORMWATER MANAGEMENT

4.1 Stormwater Management

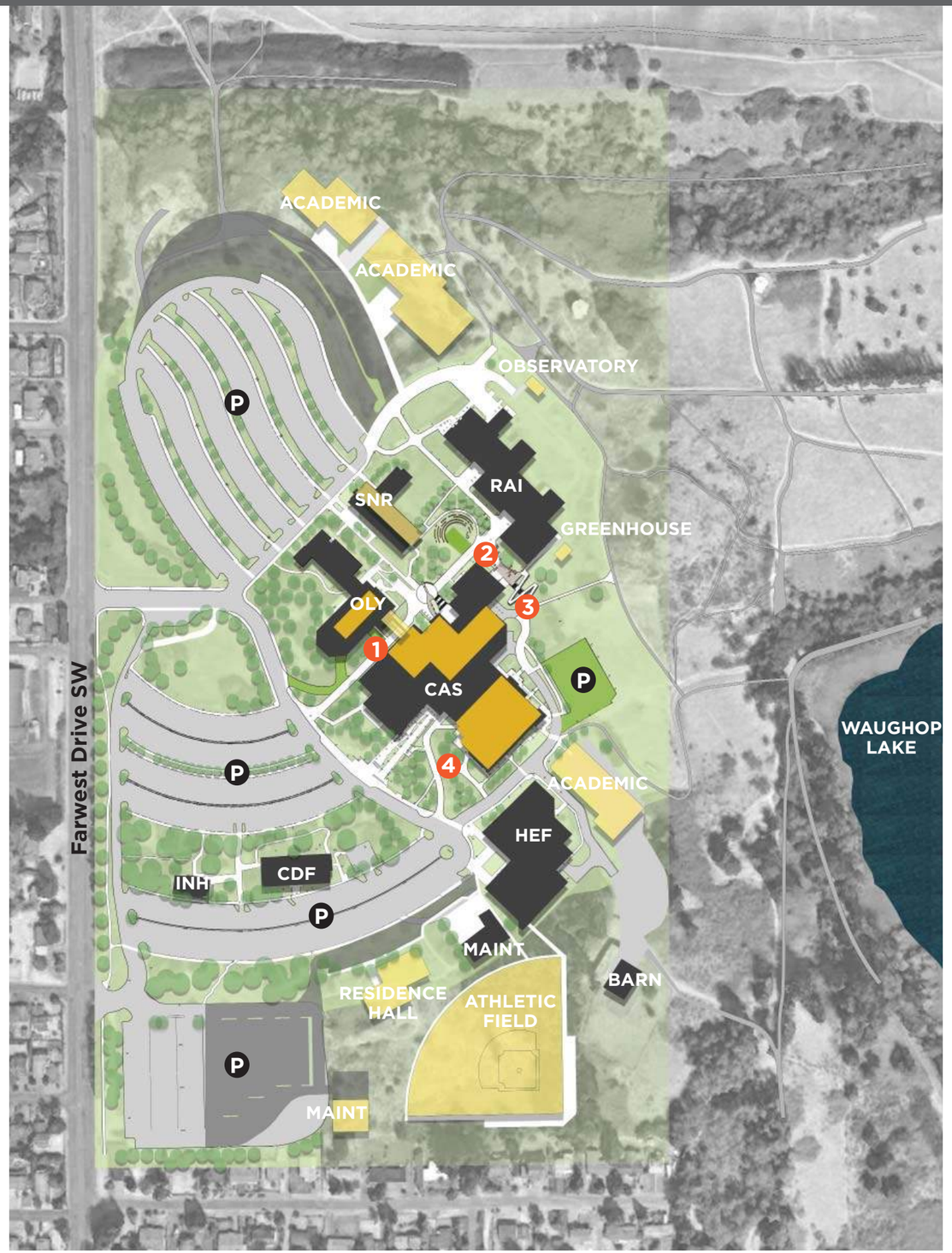
1. Parking islands provide a good location for stormwater management in the form of rain gardens.



5.0 PLAN AND ENLARGEMENTS

5.1 CAMPUS PLAN - FUTURE CONDITIONS
5.2 OLYMPIC HALL
5.3 RAINIER OVERLOOK
5.4 RAINIER PASSAGE
5.5 CASCADE FRONT

5.1 Campus Plan - Future Conditions



Future Campus

1" = 200'

Future Projects

1. Olympic Hall
2. Rainier Overlook
3. Rainier Passage
4. Cascade Front

5.2 Olympic Hall

Assign pedestrian priority to the driveway between Cascade and Olympic Hall. Concrete paving designates pedestrian space while grasscrete provides a permeable drive isle for maintenance, delivery, and emergency vehicles. Add pedestrian lighting to enhance pedestrian comfort and safety. Convert unnecessary paved areas into planting beds.

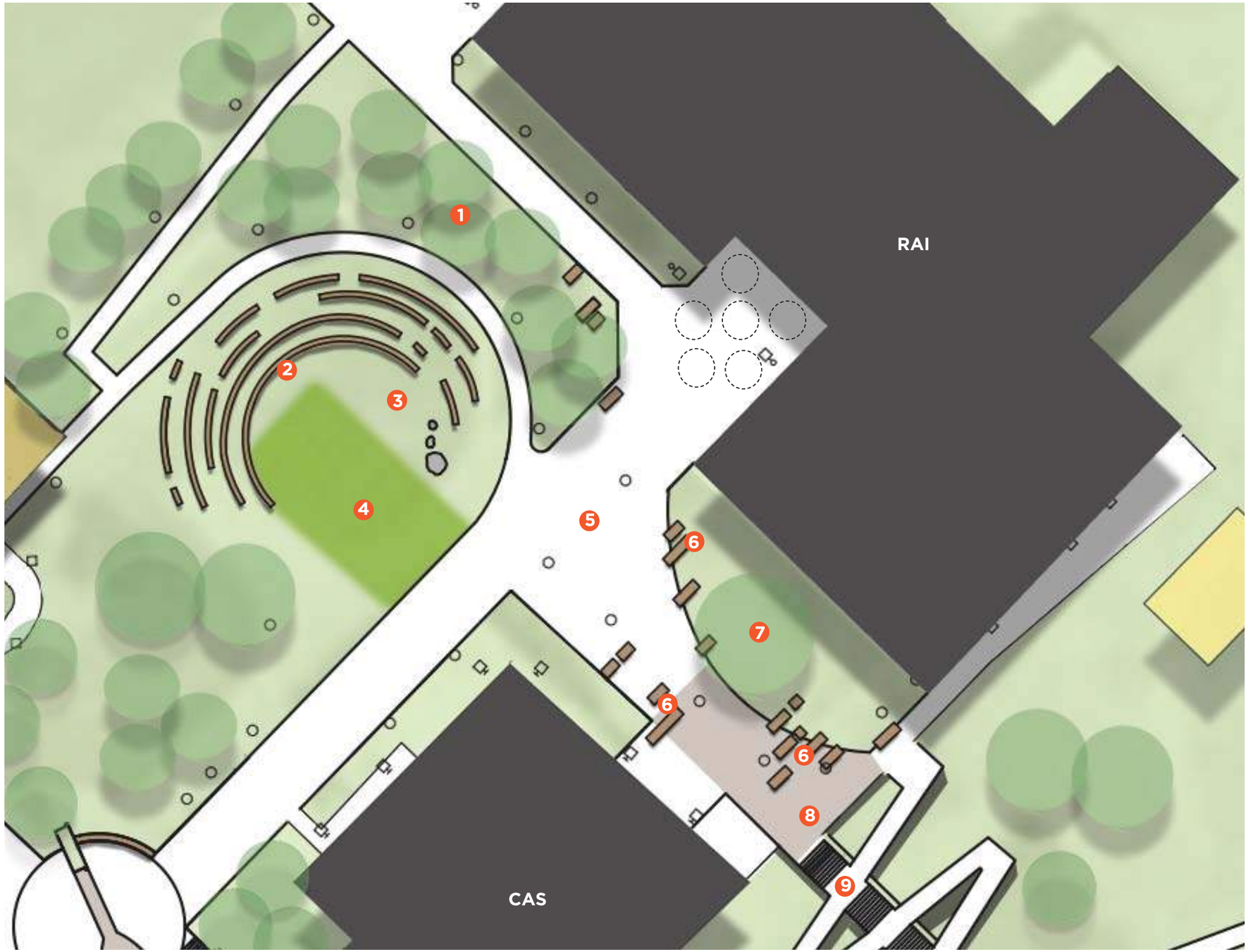
1 additional planting
2 grasscrete driveway
3 additional pedestrian lighting
4 concrete pedestrian walkway

Pedestrian Focused Drive Isle

1" = 30'

5.3 Rainier Overlook

Provide a space for students to gather. A variety of seating accommodates both individuals and larger groups. The open plaza directs views towards Mount Rainier and leads to the Rainier Passage which provides pedestrian access between the upper and lower campus. The grasscrete vehicle turnaround point maintains emergency and maintenance access while giving pedestrians priority within the inner campus. Relocating the oak trees in front of the Rainier building opens up sight lines around the building entrance.



1. relocated oak trees
2. amphitheater seating
3. flexible gathering space
4. grasscrete vehicle turnaround
5. expanded plaza space
6. stone seating
7. signature Garry Oak tree
8. overlook towards Mt. Rainier
9. stairs and ramp to Dental Clinic

Rainier Overlook

1" = 30'

5.4 Rainier Passage

Improve circulation and pedestrian hierarchy by connecting the upper and lower campus. A ramp and stairs connect the Rainier Overlook to the Dental Clinic. Pedestrians are given priority with a narrowed concrete driveway. Parking lot E is repaved with permeable grasscrete. A spur path connects to the open space paths in the surrounding oak prairie.

1 Rainier Overlook
2 combined ramp and stairs
3 concrete pedestrian priority driveway
4 grasscrete parking lot
5 spur path connects to open space trails

Rainier Passage Stairs and Ramp

1" = 40'

5.5 Cascade Front

Make the college more welcoming by giving pedestrians priority along the main front edge of campus. Narrow the maintenance and delivery driveway adjacent to Cascade and pave with concrete to signify pedestrian hierarchy. Realign spur paths for better connectivity and circulation. Add planting and develop an understory where pavement is removed.

1. concrete pedestrian priority driveway
2. enhanced planting and understory
3. connected pedestrian pathways

Pedestrian Focused Front Edge

1" = 30'

6.0 PLANT LISTS

6.1 CORE CAMPUS PLANT PALETTE
6.2 PERIMETER AND GARRY OAK PRAIRIE PLANT PALETTE

6.1 Planting - Core Campus Plant Palette

PERENNIALS

Achillea millefolium
Yarrow

Helleborus 'Grape Galaxy'
Grape Galaxy Lenten Rose

Helleborus 'Ivory Prince'
Ivory Prince Lenten Rose

Phlomis fruticosa
Jerusalem Sage

Baptisia alba
Wild Indigo

Baptisia australis
Wild Indigo

Sedum rupestre 'Angelina'
Stonecrop

Aster lateriflorus 'Prince'
Calico Aster

Salvia sylvestris
Little Night Sage

Echinacea purpurea 'Vintage Wine'
Cone Flower

Penstemon digitalis 'Husker Red'
Husker Red Penstemon

Salvia 'May Night'
May Night Sage

Anemone 'Wild Swan'
Wild Swan Windflower

Mondarda 'Petite Delight'
Dwarf Bee Balm

Heuchera 'Coco'
Coral Bells

Agastache 'Black Adder'
Giant Hyssop

Thalictrum 'Elin'
Elin Meadow Rue

Liriope muscari
Lily Turf

Liriope spicata
Spike Lily Turf

Veronica spicata
Spike Speedwell

Asclepias tuberosa
Butterfly Weed

Nepeta x 'Walker's Low'
Walker's Low Catnip

Sedum rupestre
Stonecrop

Sedum x 'Purple Emperor'
Purple Emperor Stonecrop

Achillea x 'Moonshine'
Moonshine Yarrow

Sedum spurium 'Dragon's Blood'
Dragon's Blood Stonecrop

Sedum acre
Goldmoss Stonecrop

6.1 Planting - Core Campus Plant Palette

GRASSES

Deschampsia cespitosa
Tufted Hair Grass

Festuca glauca 'Elijah Blue'
Blue Fescue

Pennisetum alopecuroides 'Hameln'
Dwarf Fountain Grass

Pennisetum alopecuroides 'Karley Rose'
Fountain Grass

Pennisetum alopecuroides 'Little Bunny'
Dwarf Fountain Grass

Sesleria autumnalis
Autumn Moor Grass

Carex testacea
New Zealand Orange Sedge

Carex morrowii 'Ice Dance'
Ice Dance Japanese Sedge

Carex elata 'Bowles Golden'
Bowles Golden Sedge

Imperata cylindrica
Blood Grass

Miscanthus sinensis 'Adagio'
Dwarf Maiden Grass

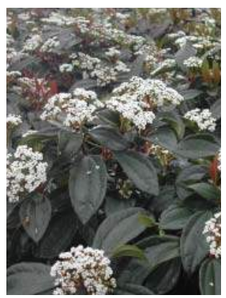
Helictotrichon sempervirens
Blue Oat Grass

Stipa tenuissima
Mexican Feather Grass

SHRUBS

Erica
Heather

Cornus sericea 'Kelseyi'
Kelsey Dwarf Red Twig Dogwood



Viburnum davidii
David Viburnum

Caryopteris incana
Common Bluebeard

Daphne x 'Summer Ice'
Summer Ice Daphne

Cornus sanguinea 'Cato'
Arctic Sun Red Twig Dogwood

Rhododendron
Rhododendron

Cornus sanguinea 'Farrow'
Artic Fire Red Twig Dogwood

Garrya elliptica
Silk Tassel

Arctostaphylos columbiana
Hairy Manzanita

6.1 Planting - Core Campus Plant Palette

SMALL TREES

Chionanthus retusus
Chinese Fringe Tree

Cornus mas
Cornelian Cherry

Enkianthus
Enkianthus

Acer palmatum
Japanese Maple

Cornus x 'Venus'
Venus Dogwood

Parrotia persica
Persian Ironwood

Prunus serrulata
'Shirotae'
Shirotae Cherry

Prunus serrulata
'Kwanzan'
Kwanzan Cherry

MEDIUM & LARGE TREES

Nyssa sylvatica
Black tupelo

Ginkgo biloba
Ginkgo

Ulmus x parvifolia
'Emer II'
Chinese Elm

Ulmus americana
'Jefferson'
American Elm

Liquidamber
styraciflua
Sweet Gum

Cercidiphyllum
japonica
'Heronswood Globe'
Heronswood Globe Katsura

Cercidiphyllum
japonica 'Red Fox'
Red Fox Katsura

Fraxus americana
White Ash

Fraxus
pennsylvania
Green Ash

6.2 Planting - Perimeter and Garry Oak Prairie Plant Palette

SHRUBS & TREES

Ribes sanguineum
Red Flowering Currant

Symphoricarpos albus
Snowberry

Mahonia aquifolium
Oregon Grape

Amelanchier alnifolia
Serviceberry

Rosa nutkana
Nootka Rose

Oemleria cerasiformis
Indian Plum

Rosa gymnocarpa
Baldhip Rose

Corylus cornuta
Beaked Hazelnut

Holodiscus discolour
Ocean Spray

Quercus garryana
Garry Oak

GRASSES

Festuca rubra
Red Fescue

Festuca roemeri
Roemer's Fescue

Bromus carinatus
California Brome

Elymus glaucus
Blue Wild Rye

Carex inops
Long-stolon Sedge

Danthonia californica
California Oat Grass

Danthonia spicata
Poverty Oat Grass

Deschampsia cespitosa
Tufted Hair Grass

Festuca idahoensis
Idaho Fescue

Festuca ovina
Sheeps Fescue

PERENNIALS & WILDFLOWERS

Dodecatheon hendersonii
Henderson's Shooting Star

Achillea millefolium
Yarrow

Castilleja
Indian Paint Brush

Lupinus polyphyllus
Large-leaved Lupin

Balsamorhiza deltoidea
Deltoid Balsamroot

Plectritis congesta
Sea Blush

Camassia quamash
Camas

Fritillaria lanceolata
Chocolate Lily

Aquilegia formosa
Red Columbine

Viola praemorsa
Yellow Montane Violet

Appendix J

Site Lighting Master Plan

State of Washington

Pierce College

Fort Steilacoom and Puyallup Campuses

Lakewood and Puyallup, Washington

FINAL REPORT

HARGIS

JUNE 24, 2016

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1. EXECUTIVE SUMMARY

1.1 INTRODUCTION

Hargis Engineers, Inc. (Hargis) was contracted to evaluate the complete existing campus site lighting at the Pierce College Fort Steilacoom and Puyallup campuses, and to develop design criteria for future landscaping and site lighting improvements.

It was conveyed that areas of both campuses may not have existing adequate site lighting, and that there have not been any standards for design of site lighting to date. Within the scope of this study and report, we reviewed the existing conditions and defined criteria and layout for future improvements to site lighting to meet those design criteria. The goals of the study are to provide uniform and consistent lighting across both campuses, with security, energy efficiency, dark sky/light pollution, and maintenance being key considerations in development of design criteria and standards.

1.2 REFERENCES

The following are referenced in design criteria and product literature associated with the findings of this study and report:

1. Illuminating Engineering Society, RP-20: Lighting for Parking Facilities
2. Illuminating Engineering Society, RP-33: Lighting for Exterior Environments
3. AGI – Lighting Modeling Software – AGI32 Lighting Software version 2.36

1.3 OBJECTIVES

Within the scope of this report, the following are our objectives:

1. Existing Conditions: Review and document existing site lighting conditions at both campuses
2. Design Criteria: Develop criteria for site parking, site pedestrian circulation, and building entry zones.
3. Master Plan for Future Improvements: Develop a specific plan, considering existing infrastructure, to meet design criteria established in report

2. EXISTING CONDITIONS ASSESSMENT

2.1 INTRODUCTION AND OVERVIEW

The existing conditions assessment and review were conducted during the evening hours on four evenings over the course of January and February of 2016. The goals of the site assessment and survey were to document all existing site lighting fixtures and associated photometric performance on both campuses, both building-mounted and mounted independently to structures on the site. Limited documentation for existing site lighting was available for both campuses, observations regarding existing lighting fixtures were

based on visual observation only – additional information would require detailed electrical survey and access to each fixture to assess condition and lamp source type/wattage.

2.2 METHODOLOGY AND INSTRUMENTATION USED

To observe existing illuminance levels, a Minolta T-1 illuminance meter was utilized. In reviewing existing site conditions, areas with similar photometric performance were grouped by zone. A general understanding of the average illuminance was developed by a rolling average of the illuminance levels throughout areas of each zone of the site, discrete measurements on specific intervals were not provided based on the extents of area included in the study. Minimum and maximum levels were observed in each area and documented by zone. Where areas of each zone contained non-operable fixtures, these areas were generally excluded from the analysis to provide a baseline equivalent to when all fixtures within the zone are operational.

2.3 GENERAL OBSERVATIONS

On both campuses, a variety of design approaches and existing illuminance levels were observed. Both campuses include a combination of fluorescent, metal halide, high pressure sodium, and LED sources. Illumination levels vary significantly across the campuses. At both campuses, it was observed there are a number of fixtures in need of repair or maintenance, with some functioning at less than optimal levels based on damage to fixture or failing lamps, and others completely non-operational based on factors beyond the scope of this study. Many of the pedestrian circulation areas are illuminated from lighted bollards. No motion or occupancy based controls were observed on either campus. In general, most building entry areas included adequate lighting relative to proposed design criteria and do not require significant improvement to meet design criteria, though replacement with fixtures consistent with master planning design criteria may be considered for energy efficiency and maintenance benefits.

2.3.1 FORT STEILACOOM CAMPUS

The primary pedestrian circulation courtyard area is northeast of the Cascade Building, between the Olympic, Sunrise, Rainier and Cascade buildings. This area is predominantly lighted by bollard-scale fixtures, and while it provides a level of pathway illumination, does not meet IES design criteria for pedestrian circulation areas. The parking areas west and south of the Cascade Building have been retrofit with LED-type parking fixtures, and those areas appear to generally be well illuminated. The parking areas of the north of campus primarily include canopy-style fixtures mounted vertically on poles, and are a negative source of light trespass. The parking areas to the east of the Cascade Building are significantly below illuminance design criteria, and the service drive which runs through the Cascade Building is also significantly under illuminated for the type of use and potential security issues within this area. The main entry drive off Farwest Drive Southwest, and the areas west of

the Olympic Building (between main entry drive and building) were also not illuminated to design criteria. The pedestrian areas adjacent to the Health Education Center and Cascade Building have newer pedestrian scale lighting that may have an aesthetic significance, similar fixtures were utilized at both buildings which appear to be of different specific vintages.

2.3.2 PUYALLUP CAMPUS

The primary pedestrian circulation areas on campus include the courtyard area between the Gaspard Administration Building, College Center, and Brouillet Library Buildings, at these areas, there is a mix of building, planter-mounted, pole, and bollard mounted lighting of varying lamp sources and illuminance levels. At the pedestrian walkway areas north of the Brouillet Library and east/north of the Arts and Allied Health Building, these areas primarily include pole-mounted lighting with metal halide lamping, and generally appear to be well illuminated in comparison to other similar areas of campus. The parking areas on the east side of the campus include mounded landscape features high pressure sodium pole-mounted fixtures and inadequate illumination throughout most of these areas, influenced also by fixture spacing and wattage/type. The west parking areas are lit by metal halide pole-mounted fixtures, and was particularly subject to multiple lamps being out, assumed that maintenance is needed to restore operation. Drive areas on the perimeter of campus generally include high pressure sodium pole-mounted fixtures, with illumination below design criteria.

3. SITE LIGHTING MASTER PLAN

3.1 INTRODUCTION AND OVERVIEW

At all pedestrian circulation and parking areas throughout both campuses, the primary goal of the master plan is to identify a design approach to modify the existing site lighting systems to meet the selected design criteria. Consideration was given to the existing infrastructure in place, including electrical rough-in (conduit and wiring to location of fixture), and existing poles and site lighting bases to help identify an approach that would be the most cost-effective way to promote the goals of the master planning study.

3.2 METHODOLOGY

To maximize effectiveness and cost, existing poles were considered for re-use in master plan layouts, especially at parking areas, where existing poles are of sufficient height to promote effective area lighting. Within pedestrian areas, pole-mounted fixtures were utilized at a mounting height of 15’ above grade. Within parking areas, where new pole-mounted fixture were required, the mounting height was selected to match existing adjacent fixtures in same area. Fixture-mounted occupancy controls at pole-mounted fixtures could be utilized to reduce light levels to 50% (or as desired by college) during

periods when the area is unoccupied, while still providing a level of lighting to facilitate campus security operations.

For purposes of site modeling in the AGI lighting calculation platform, the following fixtures were utilized, which meet the design criteria established by the study:

1. Pole Mounted Parking Areas: Philips Gardco Ecoform, 15,000 Lumens
2. Pedestrian Circulation Areas, Pole Mounted: Philips Gardco Slenderform, 5,500 or 10,000 Lumens
3. Pedestrian Circulation Areas, Bollard Mounted: Philips Gardco School Bollard
4. Surface Mounted Canopy: Philips Gardco G3 Series, 12,000 Lumens

To simplify the modeling process, the site was modeled as flat. Project-specific enhancements to site lighting should consider changes in elevation and provide additional modeling and adjust placement of fixtures as appropriate.

3.3 DESIGN CRITERIA – LIGHTING LEVELS AND UNIFORMITY, LIGHT TRESPASS

The proposed lighting design criteria for the master plan is based on the Illumination Engineering Society (IES), Recommended Practice (RP) publications for parking and exterior lighting, and are influenced by the level of activity, type of area, and surface being illuminated. All fixtures included in analysis are based on meeting IES "full cutoff" requirements, which requires that no light is transmitted above the height of the fixture to the environment above (and limits pollution to adjacent areas).

Proposed Lighting Design Criteria*			
Area	Minimum Horizontal Illumination (Lux)**	Uniformity Ratio (Avg: Min)	Reference
Parking Lot - Asphalt***	5	4:1	IES RP-20, Table 2
Parking Lot - Concrete***	10	4:1	IES RP-20, Table 2
Building Entries - Primary	20	2:1	IES RP-33, Table 2
Building Entries - Other	10	2:1	IES RP-33, Table 2
Pedestrian Plaza/Walkway	15-30****	4:1	IEP RP-33, Table 1

* Considering site as type LZ2, default zone for light commmercial business districts
** 10.8 Lux = 1 Footcandle, Observer Age 25-65, assume light loss factor of 0.7
*** Includes associated drive aisles
****Represents target (average) illumination level, Category G-I Activity Level

3.4 DESIGN CRITERIA – LIGHTING FIXTURES AND ASSOCIATED CONTROLS

It is not the intent or goal of this study to create a specific product to be utilized in design of site lighting systems at the campuses, but rather, define a specific set of criteria which can then be applied to multiple fixture types and manufacturers, to allow flexibility for

selection and integration with design goals in specific areas of the campus. The determining criteria and impact to fixture selection criteria is noted below:

First Cost: Overall sum of construction cost associated with the described option, including contractor's material and labor costs, overhead, profit and contingency

Visual/Aesthetics: The look and appearance of the light fixtures in relationship to the existing campus

Security: Due to the nature of this facility and the increased nighttime activity it is important that the lighting systems maintain a high degree of visibility. This criterion evaluates the option compared to IES standards for illuminance levels. Pole-mounted fixtures provide an enhanced level of visibility in comparison to bollard or ground-mounted lighting, based on the transmission of light more uniformly across the vertical component of the lighting subject.

Maintenance & Operations: Energy savings and activities required to maintain the lighting system. These activities would include lamp replacement, component replacement and servicing in the event of a unit failure.

Uniformity: Evaluates the option based on the uniformity of the light and a person's ability to perceive the appearance of higher light levels.

Efficacy and Energy Efficiency: Evaluates the efficiency of the fixture and light source to efficiently convert electrical energy into light, measured by lumens per watt. Fixture mounted controls with the potential to reduce usage during unoccupied hours.

Light Pollution/Dark Sky: Evaluates the ability of a fixture to effectively communicate the light to the desired area, while minimizing the impact on the surrounding environment.

3.4.1 BASIS OF STUDY

For the purposes of photometric modeling, a sample set of light fixtures were included, to help quantify the potential improvements to the existing site lighting to bring into conformance with master planning design criteria. Those fixtures, as noted in the drawings associated with this report, are intended to be representative of potential types used, but are not intended to be used as a sole-source fixture for a campus standard. The intent is to include a flexible set of design criteria to allow for competitive bidding/quoting for future site lighting improvement projects.

3.4.2 POLE MOUNTED

Pole heights in parking areas to be 25-40' depending on existing and adjacent pole heights. Pole heights in pedestrian areas to be 10-15'. All lamp sources shall be LED, at neutral white color temperature (4500K nominal). Efficacy of all pole mounted fixtures to meet minimum 100 lumens/watt. Distribution type shall be selected based on maximizing layout towards design criteria. Fixture or pole-mounted occupancy sensors utilized to reduce light to 50% during unoccupied periods. Fixture to meet IES full cutoff criteria, and be mounted with illuminated face of fixture

parallel to grade below (oriented downwards). Fixtures to include minimum 5 year warranty for all LED array and driver components.

3.4.3 BUILDING MOUNTED

Fixtures utilized for building mounted lighting shall be selected to primarily provide lighting at building entries and at areas of the perimeter as needed to enhance site lighting levels. All lamp sources shall be LED, at neutral white color temperature (4500K nominal). Efficacy of all building mounted fixtures to meet minimum 70 lumens/watt. Fixture to meet IES full cutoff criteria, and be mounted with illuminated face of fixture parallel to grade below (oriented downwards). Fixtures to include minimum 5 year warranty for all LED array and driver components.

3.4.4 BOLLARD OR GROUND MOUNTED

Bollard mounted fixtures may be utilized to enhance the desired aesthetic within a specific area of campus, subject to review and approval of college. All lamp sources shall be LED, at neutral white color temperature (4500K nominal). Efficacy of all building mounted fixtures to meet minimum 70 lumens/watt. Design considerations shall include light trespass, as this type of fixture is less likely to be available as meeting the IES cutoff criteria. Façade lighting at buildings is discouraged, and subject to approval of the college on a project-specific basis. Fixtures to include minimum 5 year warranty for all LED array and driver components.

3.5 DESIGN CONCEPT FOR INCORPORATING BOLLARD OR OTHER SMALLER-SCALE PEDESTRIAN LIGHITNG CONCEPTS

Subject to review and approval by the college, there may be areas on campus where bollard lighting and pedestrian-scale lighting concepts may be appropriate for the desired aesthetic within an area of campus. Where these design concepts are utilized, the design criteria for lighting levels and uniformity should be maintained the extent possible and practical. It is recommended that the use of pedestrian-scale pole lighting be included within the overall scheme to help maintain the desired uniformity.

1. APPENDICES/DRAWING ATTACHMENTS

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APPENDIX 2: Fort Steilacoom, Visual Renderings of Photometric Modeling

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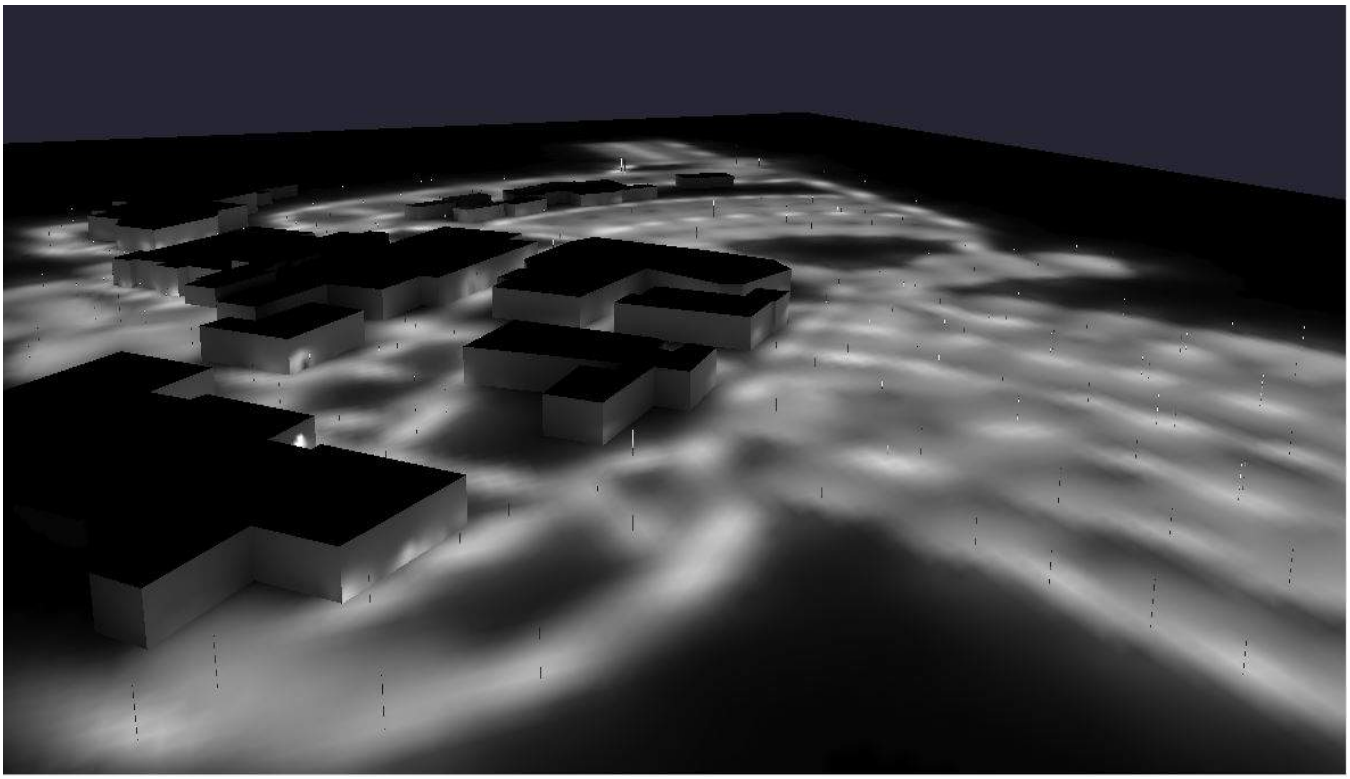
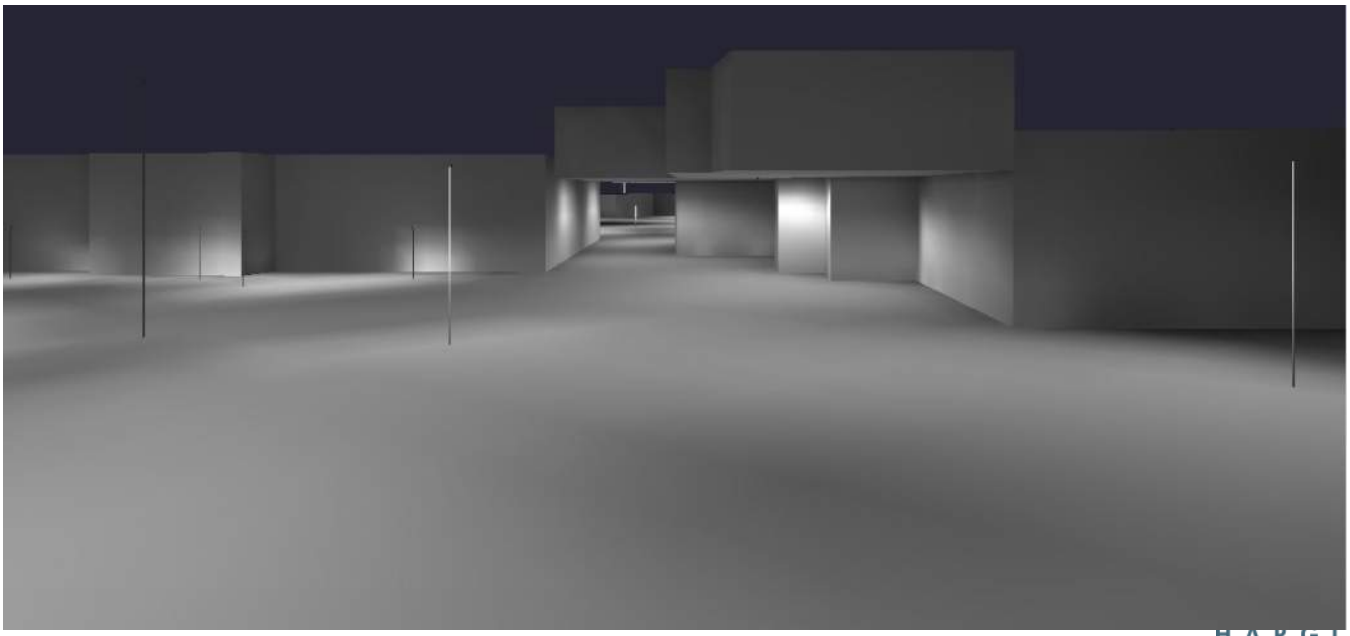
APPENDIX 1 – FORT STEILACOOM RENDERINGS



View from north of Rainier Building looking south



View from east of Cascade Building, looking west towards service drive (thru building)

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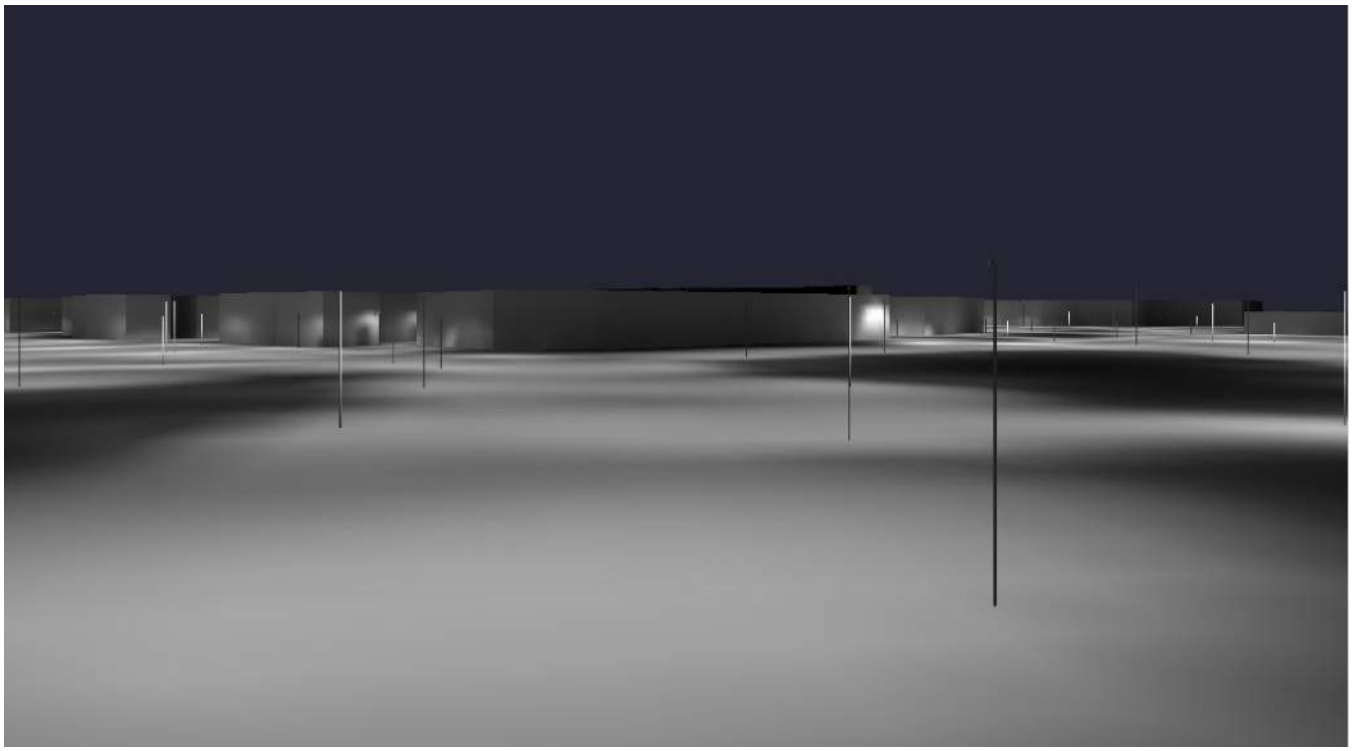
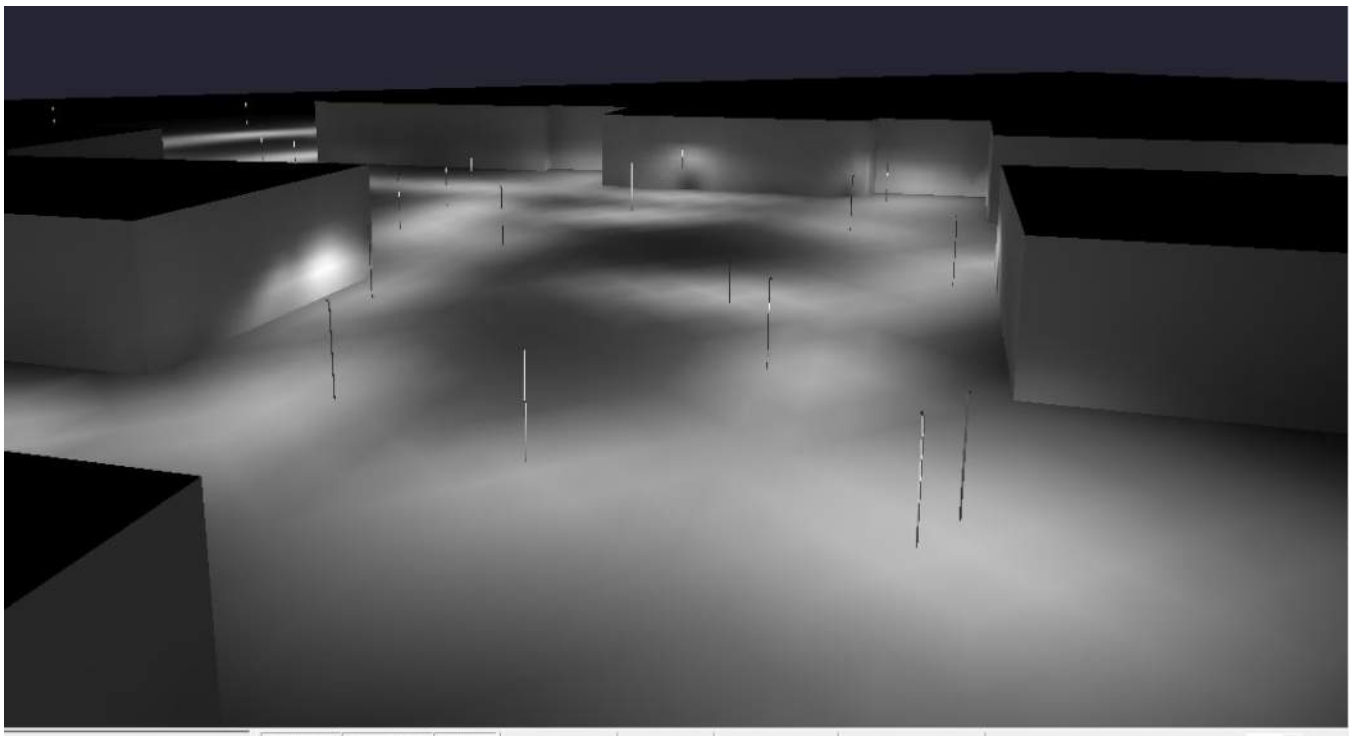
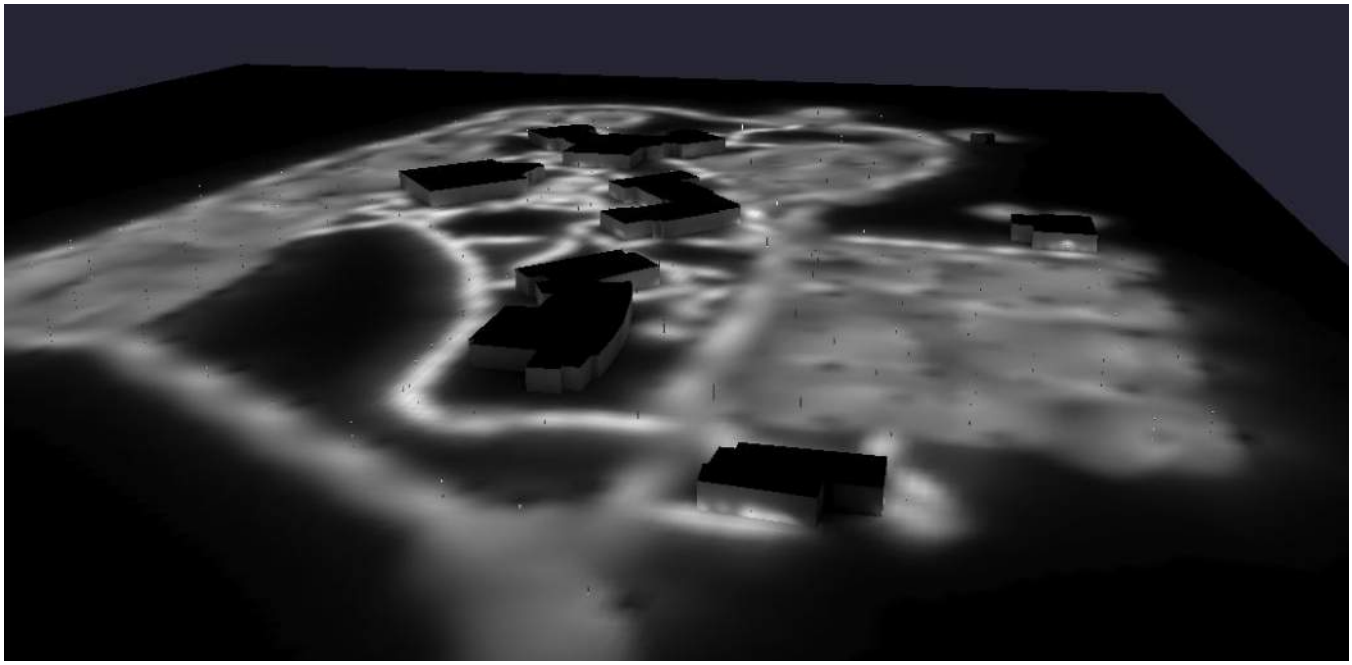


View looking east on main entry drive towards Olympic building

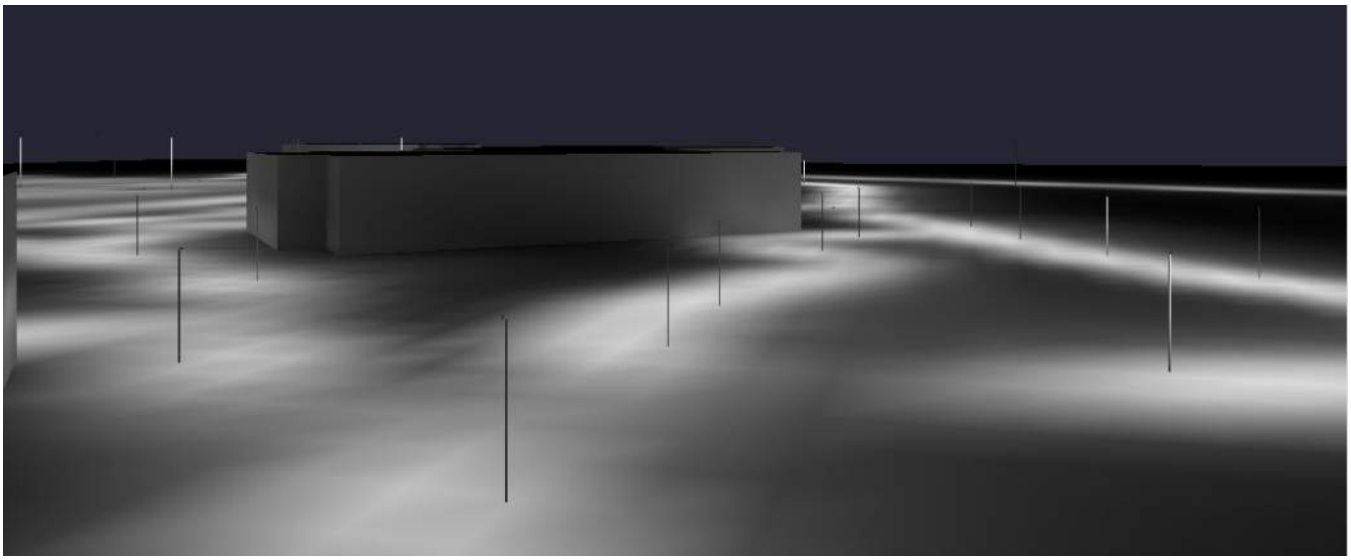


View looking east across pedestrian plaza between Cascade, Rainier, Olympic, Sunrise buildings

APPENDIX 2 – PUYALLUP RENDERINGS



View from north end of campus looking south



View from east of College Center building, looking north towards Arts and Allied Health building

APPENDIX 3 – SEE DRAWINGS provided under separate cover due to file size

APPENDIX 4 – CONCEPTUAL PLANS AND RENDERINGS FOR BOLLARD OR SMALL-SCALE PEDESTRIAN LIGHTING

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PIERCE COLLEGE

SITE LIGHTING STUDY

① **FORT STEILACOOM CAMPUS**
9401 FARWEST DRIVE SW
LAKEWOOD,WA 98498

② **PUYALLUP CAMPUS**
1601 39TH AVENUE SOUTHEAST
PUYALLUP, WA 98374

PROJECT DIRECTORY

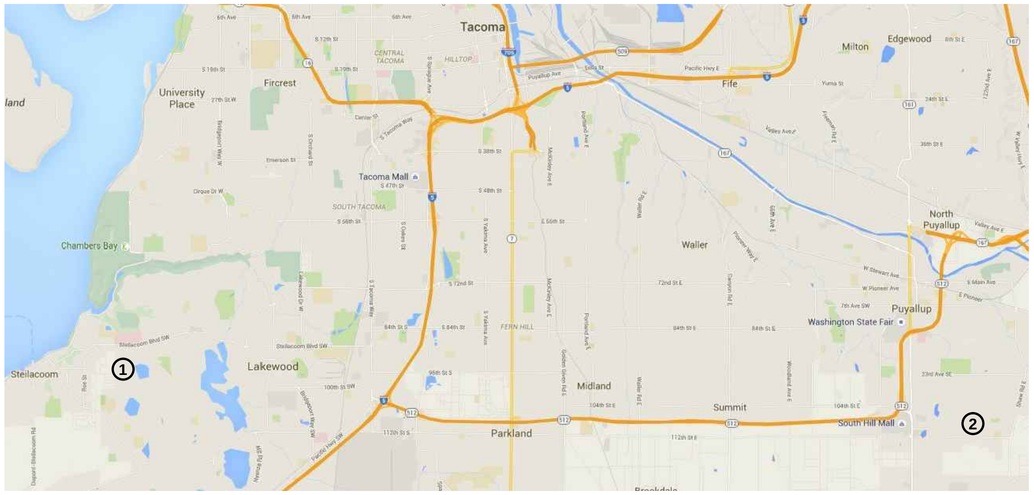
OWNER
Pierce College
9401 Farwest Drive SW
Lakewood,WA 98498

ELECTRICAL ENGINEER
Hargis Engineers, Inc.
1201 Third Avenue, Suite 600
Seattle, WA 98101
off | 206.448.3376
fax | 206.448.4450

Approved By: Brendon Inman, PE

Drawn By: Jeff Hoover, PE
Taylor VanderKley

VICINITY MAP



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1201 third avenue, suite 600
seattle, washington 98101
t. 206.448.3376 w hargis.biz
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PROFESSIONAL STAMP

PIERCE COLLEGE
SITE LIGHTING STUDY

KEY PLAN

DATE	06/24/2016
PROJECT NO.	15-026
DRAWN BY	JPH,TSV
CHECKED BY	BMI
APPROVED BY	BMI

SHEET TITLE

PROJECT TITLE SHEET
AND DRAWING INDEX

SHEET NUMBER

0-G0.1

GENERAL

EXISTING ELECTRICAL TO BE REMOVED

EXISTING ELECTRICAL TO REMAIN

NEW ELECTRICAL WORK

MATCHLINE OR PROPERTY LINE

ENLARGED PLAN BOUNDARY

1 / E1.1 — DETAIL/PLAN IDENTIFIER

A / E1.1 — SECTION IDENTIFIER

A / E1.1 — ELEVATION IDENTIFIER

REVISION DEFINITION AREA, AREA ENCIRCLED CONTAINS CHANGES MADE SUBSEQUENT TO PREVIOUS ISSUE

1 — REVISION CALLOUT

1 — FLAG NOTE TAG

1 — DEMOLITION NOTE TAG

1 — LIGHTING NOTE TAG

A1 — LIGHTING ZONE TAG

N — NORTH ARROW

1 — LOCATION WHERE PICTURE WAS TAKEN AND DIRECTION

LIGHTING

A — DEVICE SUBSCRIPTS
12ab — (LIGHT FIXTURE TYPE) (CIRCUIT NUMBER/SWITCHLEG)

LIGHTING FIXTURES
(REFER TO LIGHTING FIXTURE SCHEDULE FOR ADDITIONAL INFORMATION)

STRIP LIGHTING FIXTURE

WALL-MOUNTED LIGHTING FIXTURE

EMERGENCY LIGHTING FIXTURES
(REFER TO LIGHTING FIXTURE SCHEDULE FOR ADDITIONAL INFORMATION)

POLE MOUNTED LIGHTING FIXTURE, QUANTITY OF HEADS AS INDICATED.

DOUBLE HEAD, POLE MOUNTED, LIGHTING FIXTURE

FOUR HEAD, POLE MOUNTED, LIGHTING FIXTURE

GENERAL NOTE:

THE INFORMATION PRESENTED IN THESE DRAWINGS IS A PART OF MASTER PLANNING DEVELOPMENTS FOR SITE LIGHTING OF PIERCE COLLEGE CAMPUSES. SCOPE OF FURTHER WORK SHALL BE COORDINATED WITH THE COLLEGE BASED ON PROJECT SPECIFIC REQUIREMENTS.

SHEET SUMMARY:

E0.02-E0.03:

THESE SHEETS CONTAIN BOTH THE EXISTING AND NEW LIGHT FIXTURE SCHEDULES AS WELL AS THE ZONE REFERENCES FOR THE EXSITING LIGHT DENSITY MEASUREMENTS SHOWN IN THE E2.XX SERIES SHEETS.

E1.XX SHEETS:

THE E1.XX SERIES SHOWS THE EXISTING LOCATIONS OF SITE LIGHTING FIXTURES. FIXTURE TYPES INCLUDED CONSIST OF SITE POLES, BOLLARDS, AND EXTERIOR FIXTURES MOUNTED TO EXISTING STRUCTURES. SEE EXISTING LIGHT FIXTURE SCHEDULE FOR FIXTURE TYPES AND DESCRIPTIONS.

E2.XX SHEETS:

THE E2.XX SERIES SHOWS A MEASURED REPRESENTATION OF THE EXISTING LIGHT DENSITY LEVELS ACROSS CAMPUS. INCLUDED IN THIS SURVEY ARE MEASUREMENTS OF THE EXISTING LIGHT LEVELS AT EXISTING PARKING LOTS, DRIVES, PEDESTRIAN WALKWAYS, PLAZAS AND BUILDING ENTRIES. SEE THE LIGHT DENSITY ZONE SCHEDULE FOR ADDITIONAL INFORMATION.

E3.XX SHEETS:

THE E3.XX SERIES SHOWS A RENDERING OF THE MASTER SITE LIGHTING PLAN. THIS SERIES DEMONSTRATES QUALITATIVELY LIGHTING LEVELS IF THE MASTER PLAN IS IMPLEMENTED.

E4.XX SHEETS:

THE E4.XX SERIES SHOWS THE MASTER SITE LIGHTING PLAN FOR THE CAMPUS. THESE PLAN SHOW THE SUGGESTED SCOPE OF WORK TO ACCOMMODATE A CONSISTENT REDESIGN OF THE CAMPUS SITE LIGHTING SCHEME FOR THE CAMPUS. IDENTIFIED ON THESE DRAWINGS ARE LOCATIONS FOR POLE FIXTURE REPLACEMENT, NEW POLE LOCATIONS AT EXISTING ROUGH-IN LOCATIONS, NEW LOCATIONS, AND ABANDONED LOCATIONS.

E5.XX SHEETS:

THE E5.XX SERIES DRAWINGS INCLUDE ENLARGED PLANS OF SEVERAL AREAS ON CAMPUS. THE ENLARGED PLANS INCLUDE THE CALCULATED LIGHT LEVELS FOR DIFFERENT WALKWAYS, DRIVES, PARKING LOTS, AND PLAZAS UNDER THE MASTER PLAN.

E8.XX SHEETS:

THE E8.XX SERIES SHOWS IMAGES OF EXISTING SITE LIGHTING FIXTURE TYPES. EACH FIXTURE TYPE SHOWN IS REFERENCED IN THE EXISTING LIGHT FIXTURE SCHEDULE.

SHEET NUMBER SHEET TITLE

FS-E0.01	ELECTRICAL LEGEND AND GENERAL NOTES
FS-E0.02	FORT STEILACOOM LIGHT DENSITY ZONE SCHEDULE
FS-E0.03	FORT STEILACOOM LIGHT FIXTURE SCHEDULES
FS-E1.00	FORT STEILACOOM OVERALL SITE PLAN
FS-E1.01	FORT STEILACOOM EXISTING LIGHTING SITE PLAN
FS-E1.02	FORT STEILACOOM EXISTING LIGHTING SITE PLAN
FS-E1.03	FORT STEILACOOM EXISTING LIGHTING SITE PLAN
FS-E1.04	FORT STEILACOOM EXISTING LIGHTING SITE PLAN
FS-E1.05	FORT STEILACOOM EXISTING LIGHTING SITE PLAN
FS-E1.06	FORT STEILACOOM EXISTING LIGHTING SITE PLAN
FS-E1.07	FORT STEILACOOM EXISTING LIGHTING SITE PLAN
FS-E1.08	FORT STEILACOOM EXISTING LIGHTING SITE PLAN
FS-E1.09	FORT STEILACOOM EXISTING LIGHTING SITE PLAN
FS-E1.10	FORT STEILACOOM EXISTING LIGHTING SITE PLAN
FS-E1.11	FORT STEILACOOM EXISTING LIGHTING SITE PLAN
FS-E1.12	FORT STEILACOOM EXISTING LIGHTING SITE PLAN
FS-E1.13	FORT STEILACOOM EXISTING LIGHTING SITE PLAN
FS-E2.00	FORT STEILACOOM OVERALL SITE PLAN
FS-E2.01	FORT STEILACOOM EXISTING LIGHT DENSITY SITE PLAN
FS-E2.02	FORT STEILACOOM EXISTING LIGHT DENSITY SITE PLAN
FS-E2.03	FORT STEILACOOM EXISTING LIGHT DENSITY SITE PLAN
FS-E2.04	FORT STEILACOOM EXISTING LIGHT DENSITY SITE PLAN
FS-E3.01	FORT STEILACOOM LIGHT DENSITY SITE PLAN
FS-E3.02	FORT STEILACOOM LIGHT DENSITY SITE PLAN
FS-E3.03	FORT STEILACOOM LIGHT DENSITY SITE PLAN
FS-E3.04	FORT STEILACOOM LIGHT DENSITY SITE PLAN
FS-E4.01	FORT STEILACOOM LIGHTING SITE PLAN
FS-E4.02	FORT STEILACOOM LIGHTING SITE PLAN
FS-E4.03	FORT STEILACOOM LIGHTING SITE PLAN
FS-E4.04	FORT STEILACOOM LIGHTING SITE PLAN
FS-E4.05	FORT STEILACOOM LIGHTING SITE PLAN
FS-E4.06	FORT STEILACOOM LIGHTING SITE PLAN
FS-E4.07	FORT STEILACOOM LIGHTING SITE PLAN
FS-E4.08	FORT STEILACOOM LIGHTING SITE PLAN
FS-E4.09	FORT STEILACOOM LIGHTING SITE PLAN
FS-E4.10	FORT STEILACOOM LIGHTING SITE PLAN
FS-E4.11	FORT STEILACOOM LIGHTING SITE PLAN
FS-E4.12	FORT STEILACOOM LIGHTING SITE PLAN
FS-E4.13	FORT STEILACOOM LIGHTING SITE PLAN
FS-E5.00	FORT STEILACOOM ENLARGED SITE PLAN CALLOUTS
FS-E5.01	FORT STEILACOOM ENLARGED SITE PLANS
FS-E5.02	FORT STEILACOOM ENLARGED SITE PLANS
FS-E5.03	FORT STEILACOOM ENLARGED SITE PLANS
FS-E5.04	FORT STEILACOOM ENLARGED SITE PLANS
FS-E8.01	FORT STEILACOOM EXISTING LIGHT FIXTURE PHOTOS
FS-E8.02	FORT STEILACOOM EXISTING LIGHT FIXTURE PHOTOS
FS-E8.03	FORT STEILACOOM EXISTING LIGHT FIXTURE PHOTOS
FS-E8.04	FORT STEILACOOM EXISTING LIGHT FIXTURE PHOTOS
FS-E8.05	FORT STEILACOOM EXISTING LIGHT FIXTURE PHOTOS
FS-E8.06	FORT STEILACOOM EXISTING LIGHT FIXTURE PHOTOS
FS-E8.07	FORT STEILACOOM EXISTING LIGHT FIXTURE PHOTOS
FS-E8.08	FORT STEILACOOM EXISTING LIGHT FIXTURE PHOTOS

HARGIS
1201 third avenue, suite 600
seattle, washington 98101
t 206.448.3376 w hargis.biz
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PROFESSIONAL STAMP

PIERCE COLLEGE
SITE LIGHTING STUDY

FORT STEILACOOM

9401 Farwest Drive SW
Lakewood, WA 98498

KEY PLAN

DATE	06/24/2016
PROJECT NO.	15-026
DRAWN BY	JPH,TSV
CHECKED BY	BMI
APPROVED BY	BMI

SHEET TITLE

ELECTRICAL LEGEND AND GENERAL NOTES

SHEET NUMBER

FS-E0.01

PIERCE COLLEGE FORT STEILACOOM - SITE LIGHTING ZONE SCHEDULE

LIGHTING ZONE TAG	AREA TYPE	ILLUMENANCE (fc)		
		AVERAGE	MIN.	MAX.
AREA A				
A1	DRIVE/WALKWAY	1.0	0.5	2.5
A2	STAIR	5.0	-	-
A3	ENTRY	4.0	-	-
A4	ENTRY	3.0	-	-
A5	WALKWAY	0.2	0.1	1.5
A6	WALKWAY	1.0	0.5	2.5
A7	WALKWAY	1.0	0.5	1.0
A8	WALKWAY	0.2	0.1	1.5
A9	WALKWAY	1.3	0.7	2.0
A10	ENTRY	2.0	-	-
A11	WALKWAY	0.4	0.1	1.0
A12	ENTRY	16.0	-	-
A13	WALKWAY	NO LIGHT		
A14	STAIR	1.3	0.7	2.0
A15	ENTRY	10.0	-	-
A16	WALKWAY	1.0	0.7	2.0
A17	WALKWAY	1.0	0.7	2.0
A18	PLAZA	LIGHTS WERE OFF		
A19	WALKWAY	0.2	0.1	1.0
A20	LOT	0.5	0.1	7.0
A21	LOADING	6.0	0.5	12.0
A22	DRIVE	0.5	0.3	1.0
A23	WALKWAY	0.3	0.1	2.5
A24	DRIVE	10.0	8.0	14.0
A25	DRIVE	NO LIGHT		
AREA B				
B1	DRIVE/WALKWAY	0.5	0.3	1.0
B2	LOT/WALKWAY	0.3	0.1	2.5
B3	DRIVE	0.5	0.1	2.5
B4	ENTRY	2.5	-	-
B5	ENTRY	2.5	-	-
B6	WALKWAY	0.5	0.1	2.5
B7	WALKWAY	2.5	0.5	5.0
B8	DRIVE	0.3	0.1	0.5
B9	DRIVE	1.2	0.8	2.0
B10	WALKWAY	2.3	1.5	3.0
B11	PLAZA	4.0	1.0	6.0
B12	PLAZA	1.5	0.5	3.0
B13	ENTRY	7.5	-	-
B14	ENTRY	10.0	-	-
B15	WALKWAY	0.5	0.1	2.0
B16	WALKWAY	1.2	0.5	4.0
B17	DRIVE	1.2	0.5	4.0
B18	WALKWAY	2.0	1.0	5.0
B19	LOT	1.5	0.5	4.5
B20	ENTRY	10.0	-	-
B21	DRIVE	1.0	0.1	7.0
AREA C				
C1	LOT	3.0	2.0	7.0
C2	LOT	2.5	1.0	7.0
C3	LOT	3.0	1.0	8.0
C4	LOT	1.5	1.5	9.0
C5	LOT	2.5	1.0	5.0
C6	LOT	3.0	2.0	5.0
C7	DRIVE/WALKWAY	2.5	1.0	7.0
C8	DRIVE	1.5	0.3	5.0
C9	DRIVE	1.0	0.3	4.0
C10	DRIVE	0.2	0.1	0.3
C11	DRIVE	NO LIGHT		
C12	DRIVE	10.0	8.0	14.0
C13	WALKWAY	0.1	0.0	0.2
C14	WALKWAY	NO LIGHT		
C15	ENTRY	15	-	-
C16	WALKWAY	0.2	0.1	1.0
AREA D				
D1	LOT	2.5	1.0	7.5
D2	DRIVE	NO LIGHT		
D3	DRIVE	2.5	1.0	7.5
D4	DRIVE	2.0	1.0	7.5
D5	WALKWAY	0.5	0.1	1.0
D6	WALKWAY	1.2	0.5	4.0
D7	STAIR	0.3	0.2	0.5
D8	LOT	2.0	1.0	7.5
D9	DRIVE	1.2	0.5	4.0
D10	WALKWAY	1.0	0.3	8.0
D11	WALKWAY	2.2	1.0	12.0
D12	WALKWAY	2.0	0.5	8.0
D13	DRIVE	NO LIGHT		
D14	WALKWAY	2.0	1.0	5.0
D15	LOT	1.5	0.5	4.5
D16	STAIR	NO LIGHT		
D17	DRIVE	1.5	1.0	3.0
D18	LOT	1.8	1.0	3.0
D19	ENTRY	7.0	-	-
D20	ENTRY	6.0	-	-
D21	ENTRY	45.0	-	-
D22	ENTRY	10.0	-	-

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energy
1201 third avenue, suite 600
seattle, washington 98101
t 206.448.3376 w hargis.biz

PROFESSIONAL STAMP

PIERCE COLLEGE
SITE LIGHTING STUDY

FORT STEILACOOM

9401 Farwest Drive SW
Lakewood, WA 98498

KEY PLAN

DATE	06/24/2016
PROJECT NO.	15-026
DRAWN BY	JPH,TSV
CHECKED BY	BMI
APPROVED BY	BMI

SHEET TITLE

FORT STEILACOOM
LIGHT DENSITY
ZONE SCHEDULE

SHEET NUMBER

FS-E0.02

FORT STEILACOOM - LIGHT FIXTURE SCHEDULE

TYPE	DESCRIPTION	DELIVERED LUMENS	MANUFACTURER NAME	MANUFACTURER MODEL	LAMPS TYPE	LAMPS TEMP	BALLAST(S)	INPUT WATTS	NOTES
P1-2	ARM MOUNTED PARKING SCALE EXTERIOR POLE FIXTURE TYPE II DISTRIBUTION	15,390	PHILIPS GARDCO	ECOFORM SERIES	LED	4000K	120V LED DRIVER	139	1
P1-3	SAME AS P1-2 WITH TYPE III DISTRIBUTION	15,289	PHILIPS GARDCO	ECOFORM SERIES	LED	4000K	120V LED DRIVER	139	1
P1-4	SAME AS P1-2 WITH TYPE IV DISTRIBUTION	15,192	PHILIPS GARDCO	ECOFORM SERIES	LED	4000K	120V LED DRIVER	139	1
P1-5	SAME AS P1-2 WITH TYPE V DISTRIBUTION	14,729	PHILIPS GARDCO	ECOFORM SERIES	LED	4000K	120V LED DRIVER	139	1
P2-2	ARM MOUNTED PEDESTRIAN SCALE EXTERIOR POLE FIXTURE LOWER LUMEN PACKAGE - TYPE II DISTRIBUTION	5,587	PHILIPS GARDCO	SLENDERFORM SERIES	LED	4000K	120V LED DRIVER	52	1
P2-3	SAME AS P2-2 WITH TYPE III DISTRIBUTION	5,685	PHILIPS GARDCO	SLENDERFORM SERIES	LED	4000K	120V LED DRIVER	52	1
P2-4	SAME AS P2-2 WITH TYPE IV DISTRIBUTION	5,365	PHILIPS GARDCO	SLENDERFORM SERIES	LED	4000K	120V LED DRIVER	52	1
P2-5	SAME AS P2-2 WITH TYPE V DISTRIBUTION	5,319	PHILIPS GARDCO	SLENDERFORM SERIES	LED	4000K	120V LED DRIVER	52	1
P3-2	ARM MOUNTED PEDESTRIAN SCALE EXTERIOR POLE FIXTURE HIGHER LUMEN PACKAGE - TYPE II DISTRIBUTION	10,564	PHILIPS GARDCO	SLENDERFORM SERIES	LED	4000K	120V LED DRIVER	102	1
P3-3	SAME AS P3-2 WITH TYPE III DISTRIBUTION	11,169	PHILIPS GARDCO	SLENDERFORM SERIES	LED	4000K	120V LED DRIVER	102	1
P3-4	SAME AS P3-2 WITH TYPE IV DISTRIBUTION	10,646	PHILIPS GARDCO	SLENDERFORM SERIES	LED	4000K	120V LED DRIVER	102	1
P3-5	SAME AS P3-2 WITH TYPE V DISTRIBUTION	10,740	PHILIPS GARDCO	SLENDERFORM SERIES	LED	4000K	120V LED DRIVER	102	1
S1	14"X12"X4" EXTERIOR CANOPY SURFACE MOUNT GARAGE FIXTURE TYPE V DISTRIBUTION	12,476	PHILIPS GARDCO	G3 SERIES	LED	4000K	120V LED DRIVER	137	2

NOTES

1. WHERE FXITURE IS REPLACED AT EXISTING POLE LOCATION MATCH HEIGHT OF EXISTING FIXTURE, WHERE NEW POLE LOCATION MATCH HEIGHT OF EXISTING LIKETYPE FIXTURES IN AREA.
2. MOUNT TO EXISTING BUILDING.

FORT STEILACOOM - EXISTING LIGHT FIXTURE SCHEDULE

TYPE	DESCRIPTION	DETAIL REFERENCE
BS1	SURFACE STRIP T8 LAMP	1 FS-E8.01
BS2	LED CYLINDER FIXTURE	2 FS-E8.01
BS3	RECESSED SOFFIT FIXTURE	3 FS-E8.01
BS4	RECESSED SOFFIT FIXTURE	4 FS-E8.01
BS5	CYLINDER SOFFIT FIXTURE	5 FS-E8.01
BS6	8" RECESSED SOFFIT FIXTURE	6 FS-E8.01
BS7	LED SQUARE CANOPY FIXTURE	1 FS-E8.02
BS8	4'X4' LENSED TROFFER FIXTURE	2 FS-E8.02
BS9	SURFACE MOUNTED CANOPY FIXTURE	3 FS-E8.02
BS10	RECESSED SOFFIT LIGHT - LINEAR FLUORESCENT LAMP	4 FS-E8.02
BS11	CYLINDER SOFFIT FIXTURE WITH LINEAR FLUORESCENT LAMP	5 FS-E8.02
BS12	CANOPY SURFACE MOUNTED FIXTURE WITH METAL HALIDE LAMP	6 FS-E8.02
BS13	CANOPY HIGH PRESSURE SODIUM FIXTURE	NO PHOTO AVAILABLE
BW1	RECESSED WALL MOUNTED LOW LENS FIXTURE	1 FS-E8.03
BW2	STEP LIGHT	2 FS-E8.03
BW3	TRAPEZOIDAL WALL LIGHT WITH LINEAR FLUORESCENT LAMP	3 FS-E8.03
BW4	WALL MOUNTED LED FIXTURE	4 FS-E8.03
BW5	RECESSED STEP WALL FIXTURE	5 FS-E8.03
BW6	HIGH PRESSURE SODIUM SURFACE WALL MOUNTED FIXTURE	6 FS-E8.03
BW7	METAL HALIDE WALL PACK FIXTURE	1 FS-E8.04
BW8	SAME AS BW1	1 FS-E8.03
BW9	SAME AS BW2	2 FS-E8.03
BW10	WALL MOUNTED VERTICAL FIXTURE, LENSED	2 FS-E8.04
BW11	WALL MOUNTED DECORATIVE FIXTURE WITH LINEAR FLUORESCENT LAMP	3 FS-E8.04
BW12	WALL MOUNTED ROUND ARM HIGH PRESSURE SODIUM FIXTURE	4 FS-E8.04
BW13	HIGH PRESSURE SODIUM WALL PACK	1 FS-E8.05
G1	42" BOLLARD WITH LOUVRES - LINEAR FLUORESCENT LAMP	2 FS-E8.05
G2	42" BOLLARD	3 FS-E8.05
G3	METAL HALIDE GROUND MOUNTED LANDSCAPE FIXTURE	4 FS-E8.05
G4	42" BOLLARD WITH EDGE TOP - METAL HALIDE LAMP	5 FS-E8.05
G5	GROUND MOUNTED FLOOD LIGHT	6 FS-E8.05
P1	12' POLE WITH ARM TOWARDS PARKING AND FLOOD LIGHT TO LANDSCAPE	1 FS-E8.06
P2	10' BOLLARD WITH 4' TOP LIT LAMP	2 FS-E8.06
P3	SAME AS P2 WITH MESH ON ONE SIDE	2 FS-E8.06
P4	25' POLE POST TOP RECTANGLE - HIGH PRESSURE SODIUM	3 FS-E8.06
P5	20' POLE ARM MOUNT METAL HALIDE	4 FS-E8.06
P6	20' POLE WITH HIGH PRESSURE SODIUM SURFACE CANOPY FIXTURES (1-4 HEADS DEPENDING ON CONFIGURATION)	5 FS-E8.06
P7	20' POLE WITH HIGH PRESSURE SODIUM SHOEBOX FIXTURE	6 FS-E8.06
P8	10' POLE WITH METAL HALIDE HEAD	1 FS-E8.07
P9	20' POLE WITH CREE LED HEAD (1-4 HEADS DEPENDING ON CONFIGURATION)	2 FS-E8.07
P10	10' VERSION OF P9	3 FS-E8.07
P11	12' POST TOP PED. SCALE RECTANGULAR FIXTURE - HIGH PRESSURE SODIUM	4 FS-E8.07
P12	30' POLE WITH LED ARM (1-4 HEADS DEPENDING ON CONFIGURATION)	5 FS-E8.07
P13	20' POLE WITH METAL HALIDE ARM MOUNTED FIXTURE	6 FS-E8.07
P14	10' POLE POST TOP DECORATIVE BOLLARD FIXTURE WITH METAL HALIDE LAMP	1 FS-E8.08

GENERAL NOTES:
1. REFER TO DETAILS NOTED FOR IMAGES OF FIXTURE TYPES.

HARGIS
mechanical
electrical
telecommunications
security
energy
1201 third avenue, suite 600
seattle, washington 98101
t 206.448.3376 w hargis.biz

PROFESSIONAL STAMP

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KEY PLAN

DATE 06/24/2016
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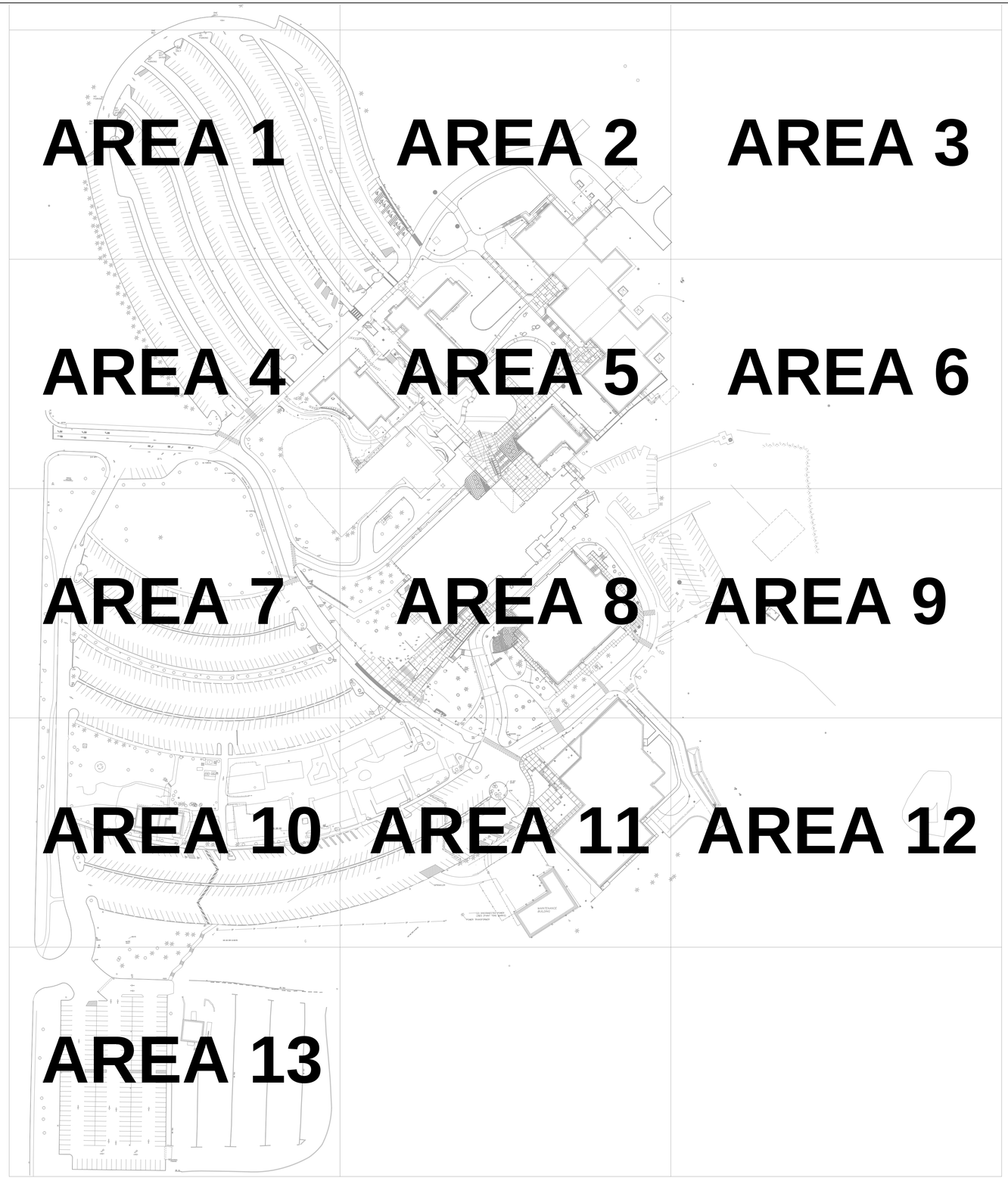
SHEET TITLE
FORT STEILACOOM LIGHT FIXTURE SCHEDULE

SHEET NUMBER
FS-E0.03



1 FS-E1.00 FORT STEILACOOM SITE PLAN OVERALL
SCALE: 1" = 100'-0"

HARGIS
mechanical
electrical
telecommunications
security
energy
1201 third avenue, suite 600
seattle, washington 98101
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PROFESSIONAL STAMP

PIERCE COLLEGE
SITE LIGHTING STUDY

FORT STEILACOOM

9401 Farwest Drive SW
Lakewood, WA 98498

KEY PLAN

DATE	06/24/2016
PROJECT NO.	15-026
DRAWN BY	JPH,TSV
CHECKED BY	BMI
APPROVED BY	BMI

SHEET TITLE

FORT STEILACOOM
OVERALL SITE
PLAN

SHEET NUMBER

FS-E1.00

1 FS-E1.01 FORT STEILACOOM EXISTING LIGHTING SITE PLAN - AREA 1

SCALE: 1" = 20'-0"

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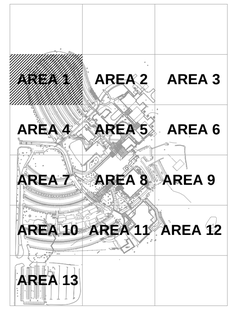
PROFESSIONAL STAMP

PIERCE COLLEGE
SITE LIGHTING STUDY

FORT STEILACOOM

9401 Farwest Drive SW
Lakewood, WA 98498

KEY PLAN



DATE	06/24/2016
PROJECT NO.	15-026
DRAWN BY	JPH,TSV
CHECKED BY	BMI
APPROVED BY	BMI

SHEET TITLE

FORT STEILACOOM
EXISTING LIGHTING
SITE PLAN

SHEET NUMBER

FS-E1.01

1 FS-E1.02 FORT STEILACOOM EXISTING LIGHTING SITE PLAN - AREA 2

SCALE: 1" = 20'-0"

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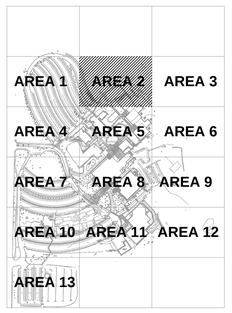
PROFESSIONAL STAMP

PIERCE COLLEGE
SITE LIGHTING STUDY

FORT STEILACOOM

9401 Farwest Drive SW
Lakewood, WA 98498

KEY PLAN



DATE	06/24/2016
PROJECT NO.	15-026
DRAWN BY	JPH,TSV
CHECKED BY	BMI
APPROVED BY	BMI

SHEET TITLE

FORT STEILACOOM
EXISTING LIGHTING
SITE PLAN

SHEET NUMBER

FS-E1.02

1
FS-E1.03

FORT STEILACOOM EXISTING LIGHTING SITE PLAN - AREA 3

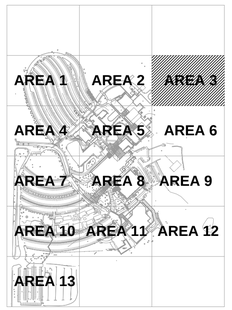
SCALE: 1" = 20'-0"

PIERCE COLLEGE
SITE LIGHTING STUDY

FORT STEILACOOM

9401 Farwest Drive SW
Lakewood, WA 98498

KEY PLAN



DATE	06/24/2016
PROJECT NO.	15-026
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APPROVED BY	BMI

SHEET TITLE

FORT STEILACOOM
EXISTING LIGHTING
SITE PLAN

SHEET NUMBER

FS-E1.03

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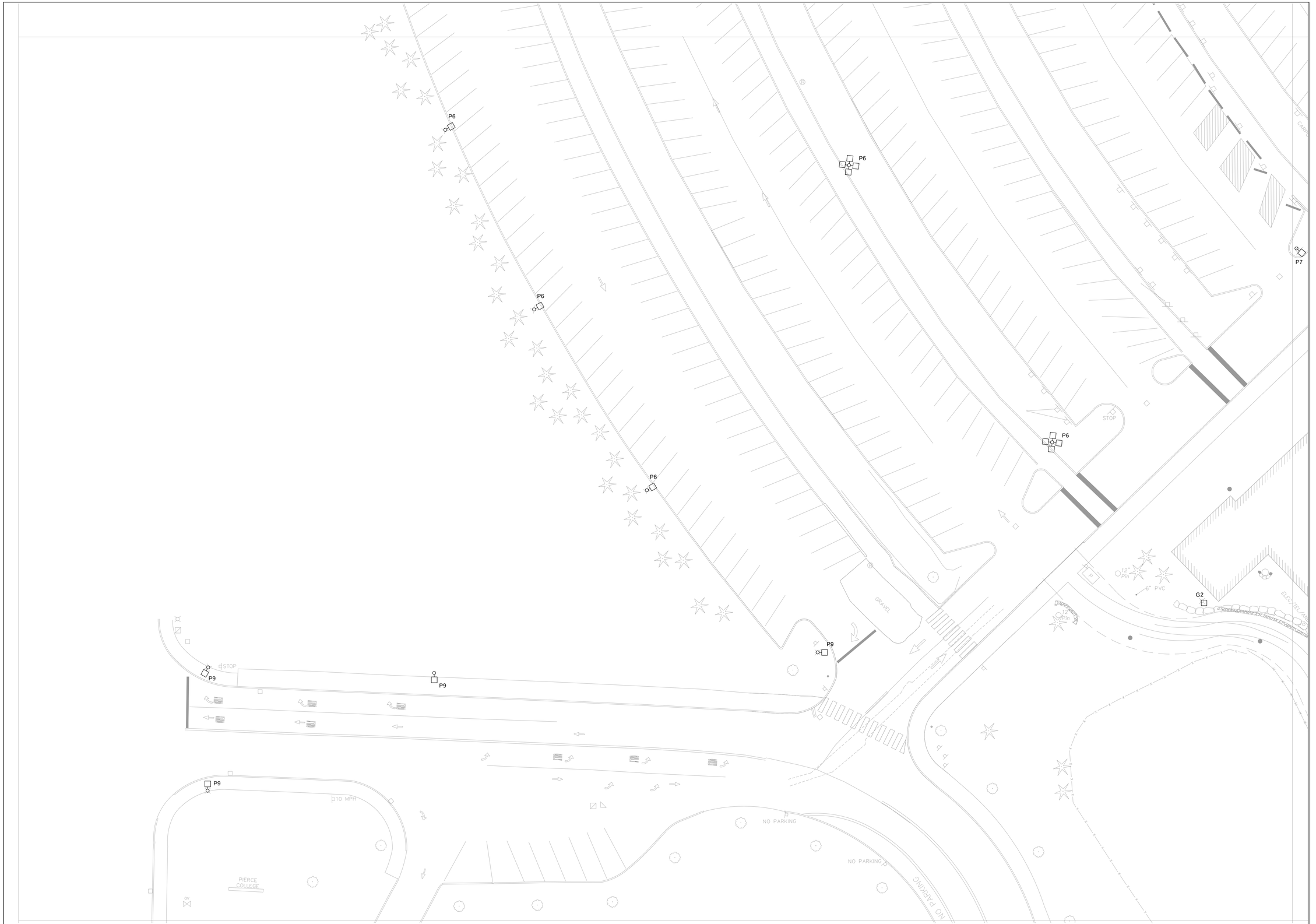
PROFESSIONAL STAMP



1 FS-E1.04

FORT STEILACOOM EXISTING LIGHTING SITE PLAN - AREA 4

SCALE: 1" = 20'-0"

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telecommunications
security
energy

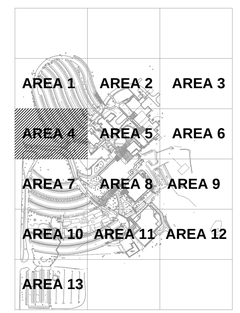
PROFESSIONAL STAMP

PIERCE COLLEGE
SITE LIGHTING STUDY

FORT STEILACOOM

9401 Farwest Drive SW
Lakewood, WA 98498

KEY PLAN



DATE	06/24/2016
PROJECT NO.	15-026
DRAWN BY	JPH,TSV
CHECKED BY	BMI
APPROVED BY	BMI

SHEET TITLE

FORT STEILACOOM
EXISTING LIGHTING
SITE PLAN

SHEET NUMBER

FS-E1.04

1 FS-E1.05 FORT STEILACOOM EXISTING LIGHTING SITE PLAN - AREA 5

SCALE: 1" = 20'-0"

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electrical
telecommunications
security
energy

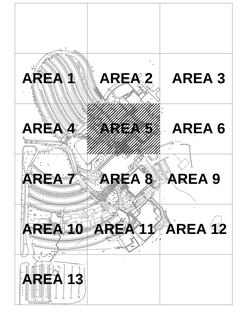
PROFESSIONAL STAMP

PIERCE COLLEGE
SITE LIGHTING STUDY

FORT STEILACOOM

9401 Farwest Drive SW
Lakewood, WA 98498

KEY PLAN



DATE	06/24/2016
PROJECT NO.	15-026
DRAWN BY	JPH,TSV
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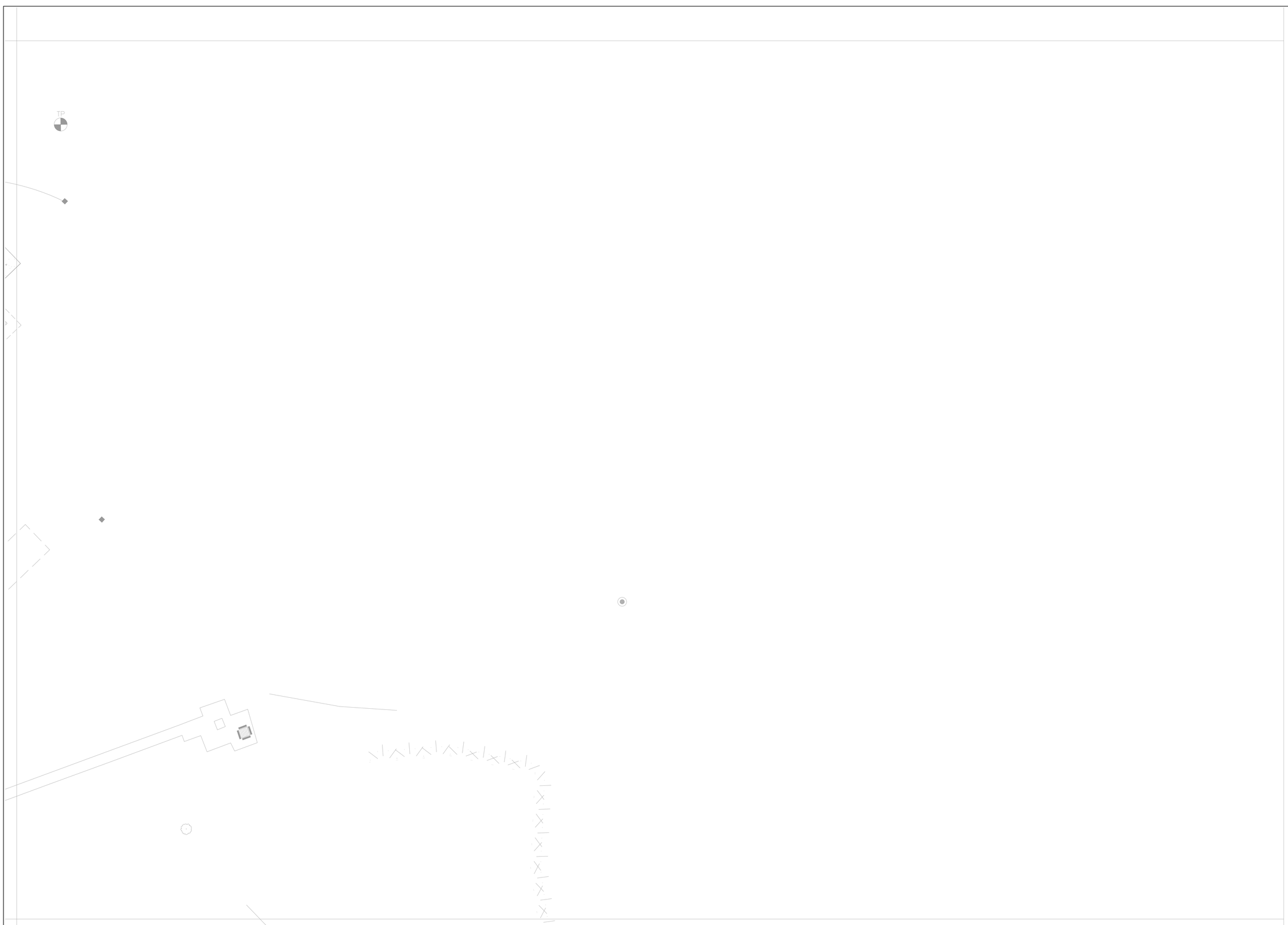
APPROVED BY	BMI

SHEET TITLE

FORT STEILACOOM
EXISTING LIGHTING
SITE PLAN

SHEET NUMBER

FS-E1.05



1 FS-E1.06 FORT STEILACOOM EXISTING LIGHTING SITE PLAN - AREA 6
SCALE: 1" = 20'-0"

PIERCE COLLEGE
SITE LIGHTING STUDY

FORT STEILACOOM

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security
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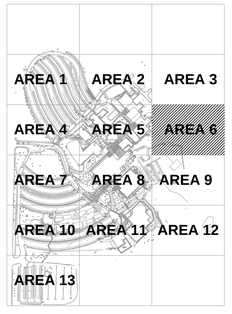
PROFESSIONAL STAMP

KEY PLAN



DATE	06/24/2016
PROJECT NO.	15-026
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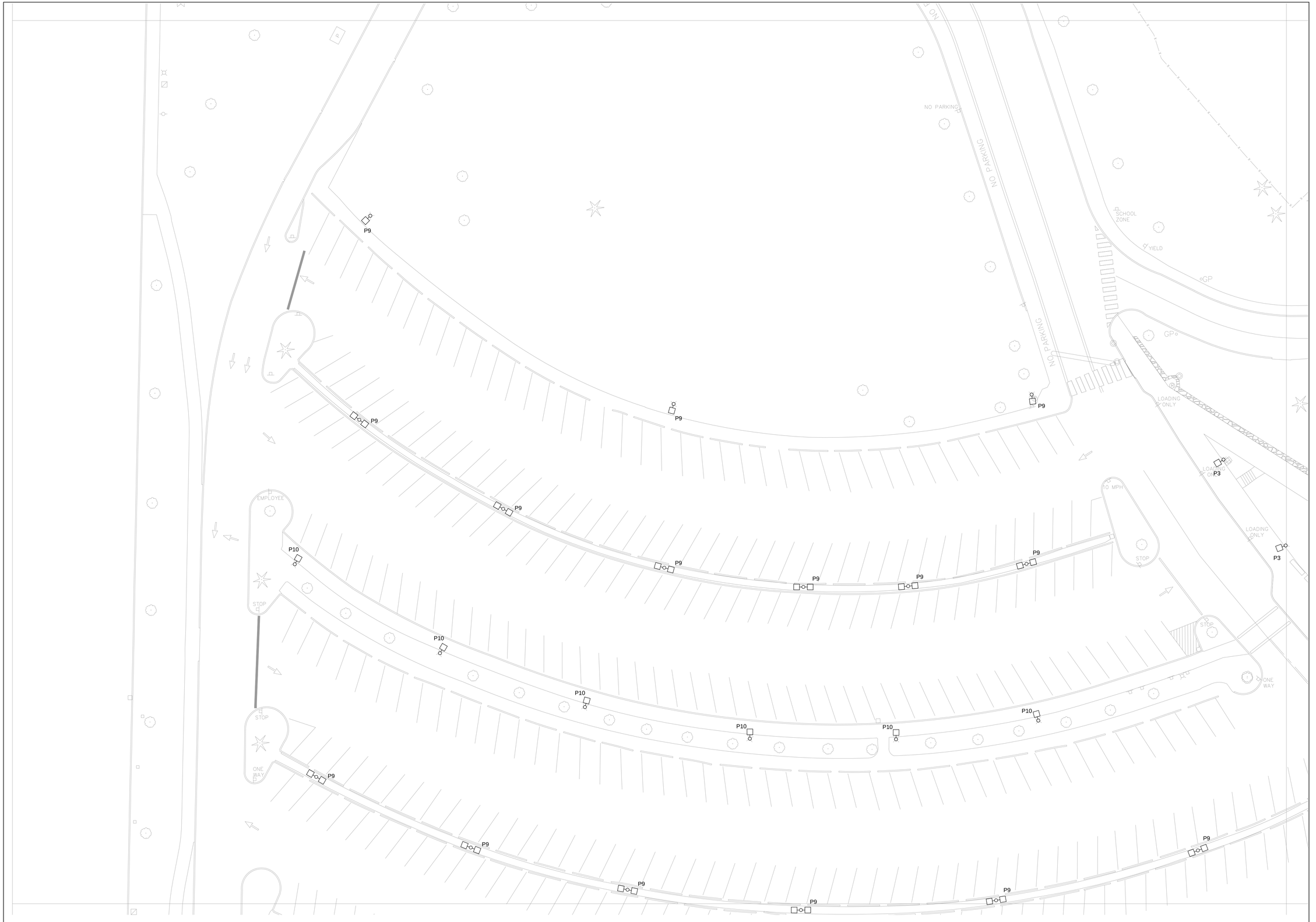
APPROVED BY	BMI

SHEET TITLE

FORT STEILACOOM
EXISTING LIGHTING
SITE PLAN

SHEET NUMBER

FS-E1.06



1 FS-E1.07 FORT STEILACOOM EXISTING LIGHTING SITE PLAN - AREA 7

SCALE: 1" = 20'-0"

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security
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PROFESSIONAL STAMP

PIERCE COLLEGE
SITE LIGHTING STUDY

FORT STEILACOOM

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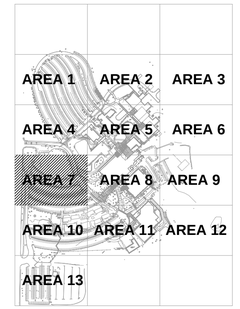
Lakewood, WA 98498

KEY PLAN



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PROJECT NO.	15-026
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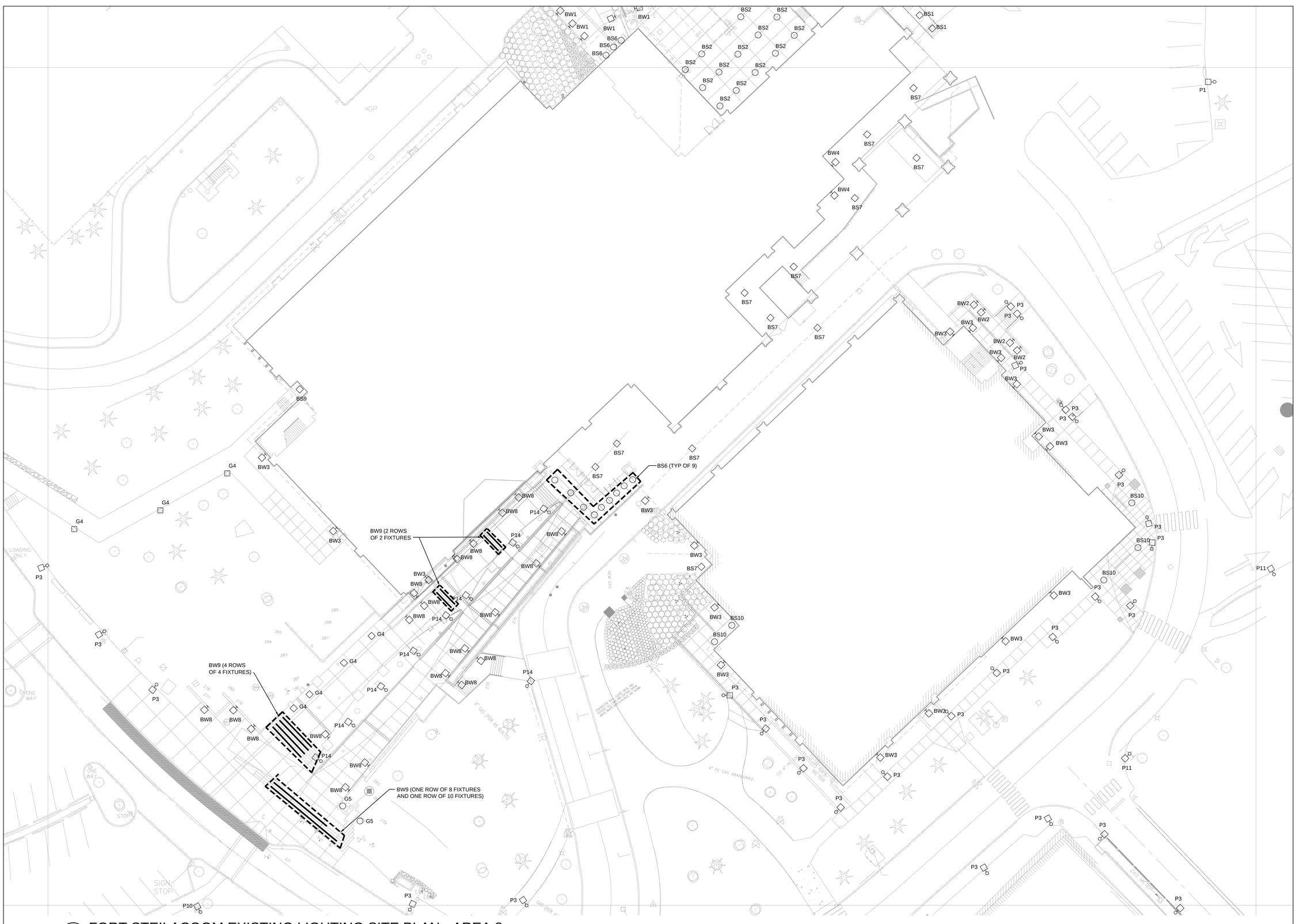
SHEET TITLE

FORT STEILACOOM
EXISTING LIGHTING
SITE PLAN

SHEET NUMBER

FS-E1.07



1 FS-E1.08 FORT STEILACOOM EXISTING LIGHTING SITE PLAN - AREA 8

SCALE: 1" = 20'-0"

HARGIS
mechanical
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security
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PROFESSIONAL STAMP

PIERCE COLLEGE
SITE LIGHTING STUDY

FORT STEILACOOM

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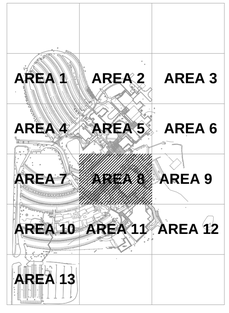
Lakewood, WA 98498

KEY PLAN



DATE	06/24/2016
PROJECT NO.	15-026
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SHEET TITLE

FORT STEILACOOM EXISTING LIGHTING SITE PLAN

SHEET NUMBER

FS-E1.08

1 FS-E1.09 FORT STEILACOOM EXISTING LIGHTING SITE PLAN - AREA 9
SCALE: 1" = 20'-0"

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telecommunications
security
energy
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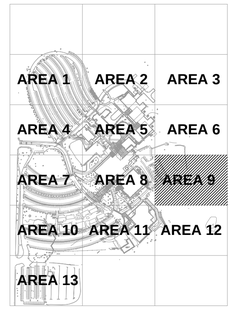
PROFESSIONAL STAMP

PIERCE COLLEGE
SITE LIGHTING STUDY

FORT STEILACOOM

9401 Farwest Drive SW
Lakewood, WA 98498

KEY PLAN



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PROJECT NO.	15-026
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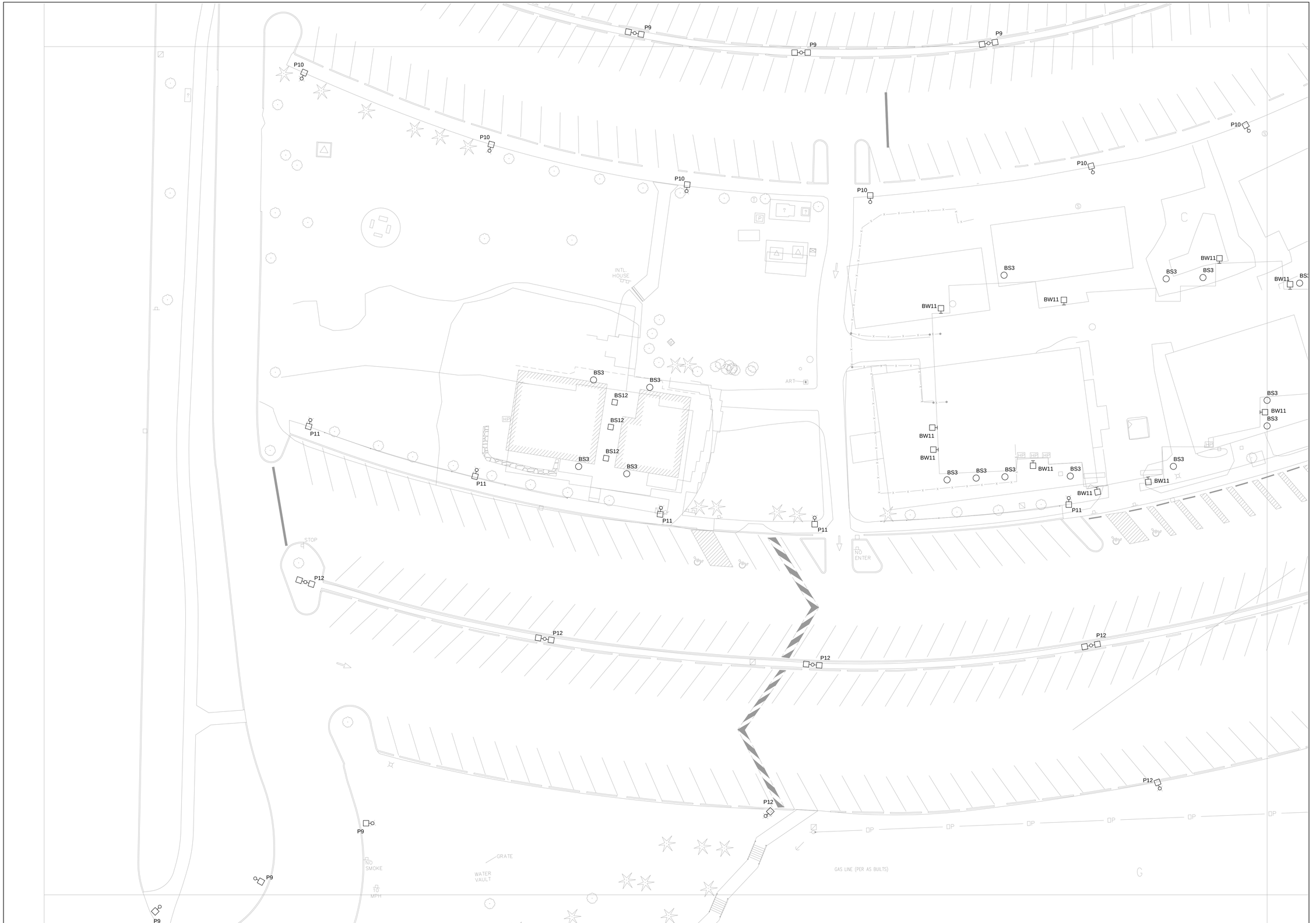
APPROVED BY	BMI

SHEET TITLE

FORT STEILACOOM
EXISTING LIGHTING
SITE PLAN

SHEET NUMBER

FS-E1.09



1 FS-E1.10 FORT STEILACOOM EXISTING LIGHTING SITE PLAN - AREA 10

SCALE: 1" = 20'-0"

HARGIS
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electrical
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security
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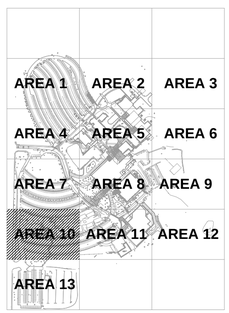
PROFESSIONAL STAMP

PIERCE COLLEGE
SITE LIGHTING STUDY

FORT STEILACOOM

9401 Farwest Drive SW
Lakewood, WA 98498

KEY PLAN



DATE	06/24/2016
PROJECT NO.	15-026
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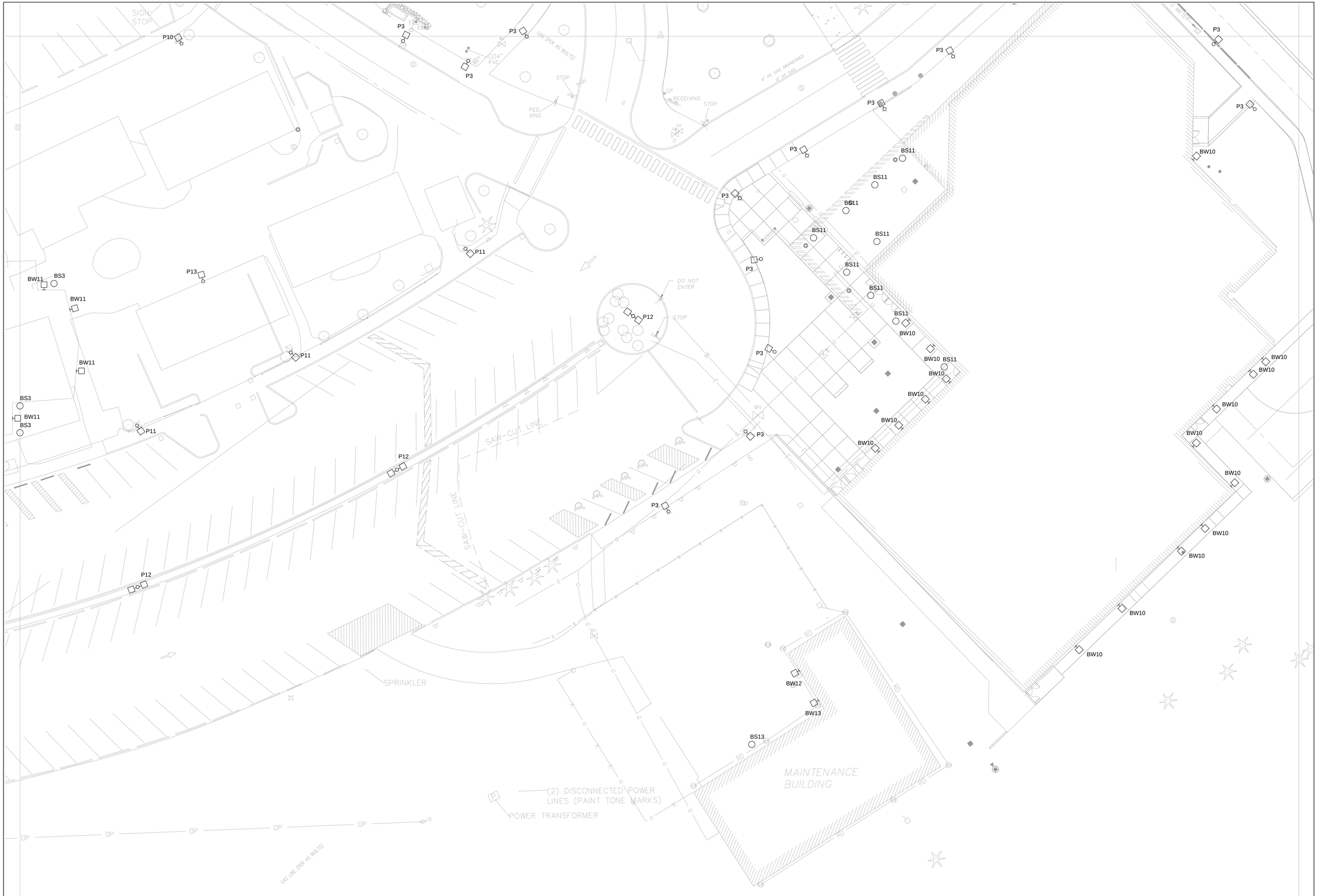
SHEET TITLE

FORT STEILACOOM
EXISTING LIGHTING
SITE PLAN

SHEET NUMBER

FS-E1.10



1 FS-E1.11 FORT STEILACOOM EXISTING LIGHTING SITE PLAN - AREA 11

SCALE: 1" = 20'-0"

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security
energy

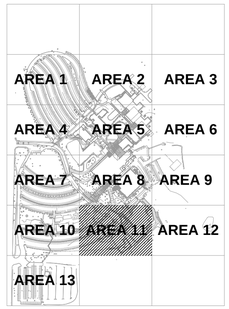
PROFESSIONAL STAMP

PIERCE COLLEGE
SITE LIGHTING STUDY

FORT STEILACOOM

9401 Farwest Drive SW
Lakewood, WA 98498

KEY PLAN



DATE	06/24/2016
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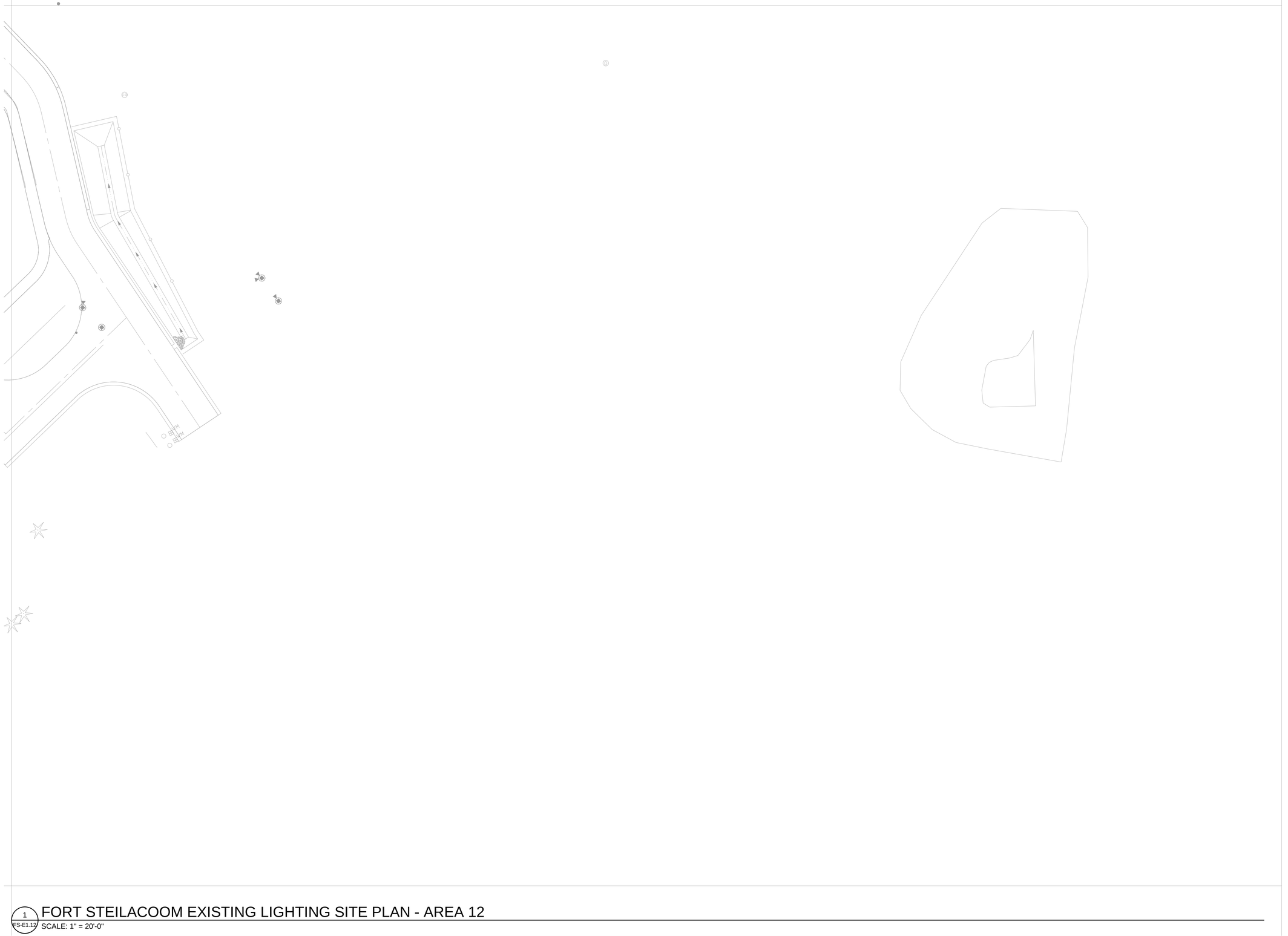
APPROVED BY	BMI

SHEET TITLE

FORT STEILACOOM EXISTING LIGHTING SITE PLAN

SHEET NUMBER

FS-E1.11



1 FS-E1.12 FORT STEILACOOM EXISTING LIGHTING SITE PLAN - AREA 12
SCALE: 1" = 20'-0"

PIERCE COLLEGE
SITE LIGHTING STUDY

FORT STEILACOOM

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security
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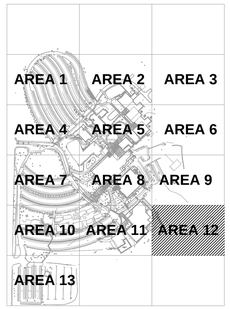
PROFESSIONAL STAMP

KEY PLAN



DATE	06/24/2016
PROJECT NO.	15-026
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SHEET TITLE

FORT STEILACOOM
EXISTING LIGHTING
SITE PLAN

SHEET NUMBER

FS-E1.12

1 FS-E1.13 FORT STEILACOOM EXISTING LIGHTING SITE PLAN - AREA 13

SCALE: 1" = 20'-0"

HARGIS
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security
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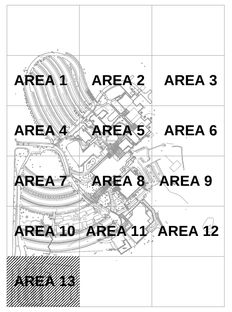
PROFESSIONAL STAMP

PIERCE COLLEGE
SITE LIGHTING STUDY

FORT STEILACOOM

9401 Farwest Drive SW
Lakewood, WA 98498

KEY PLAN



DATE	06/24/2016
PROJECT NO.	15-026
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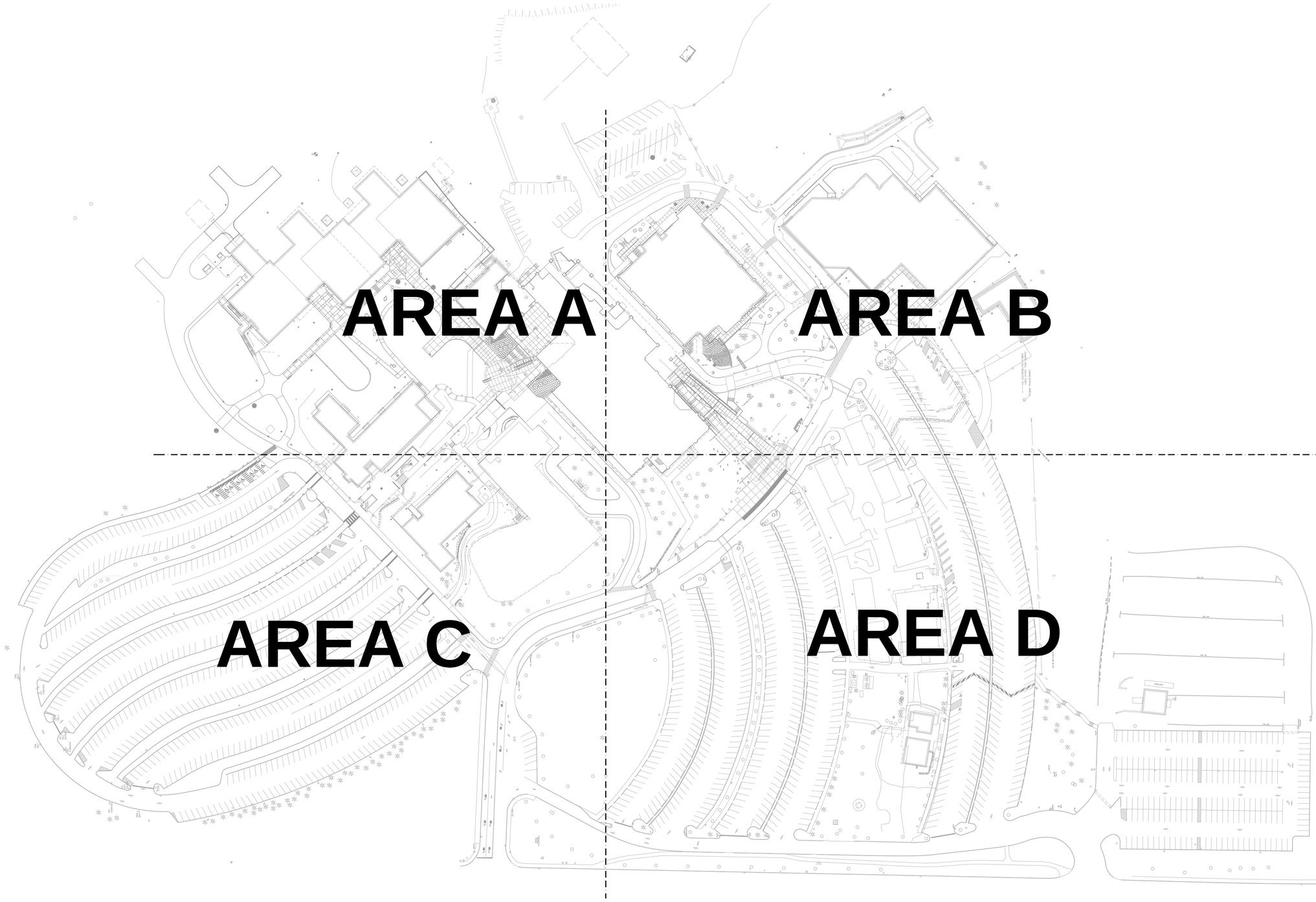
SHEET TITLE

FORT STEILACOOM
EXISTING LIGHTING
SITE PLAN

SHEET NUMBER

FS-E1.13



1 FS-E2.00 FORT STEILACOOM SITE PLAN MAP
SCALE: NOT TO SCALE

HARGIS
mechanical
electrical
telecommunications
security
energy
1201 third avenue, suite 600
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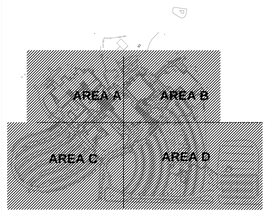
PROFESSIONAL STAMP

PIERCE COLLEGE
SITE LIGHTING STUDY

FORT STEILACOOM

9401 Farwest Drive SW
Lakewood, WA 98498

KEY PLAN



DATE	06/24/2016
PROJECT NO.	15-026
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APPROVED BY	BMI

SHEET TITLE

FORT STEILACOOM
OVERALL SITE
PLAN

SHEET NUMBER

FS-E2.00

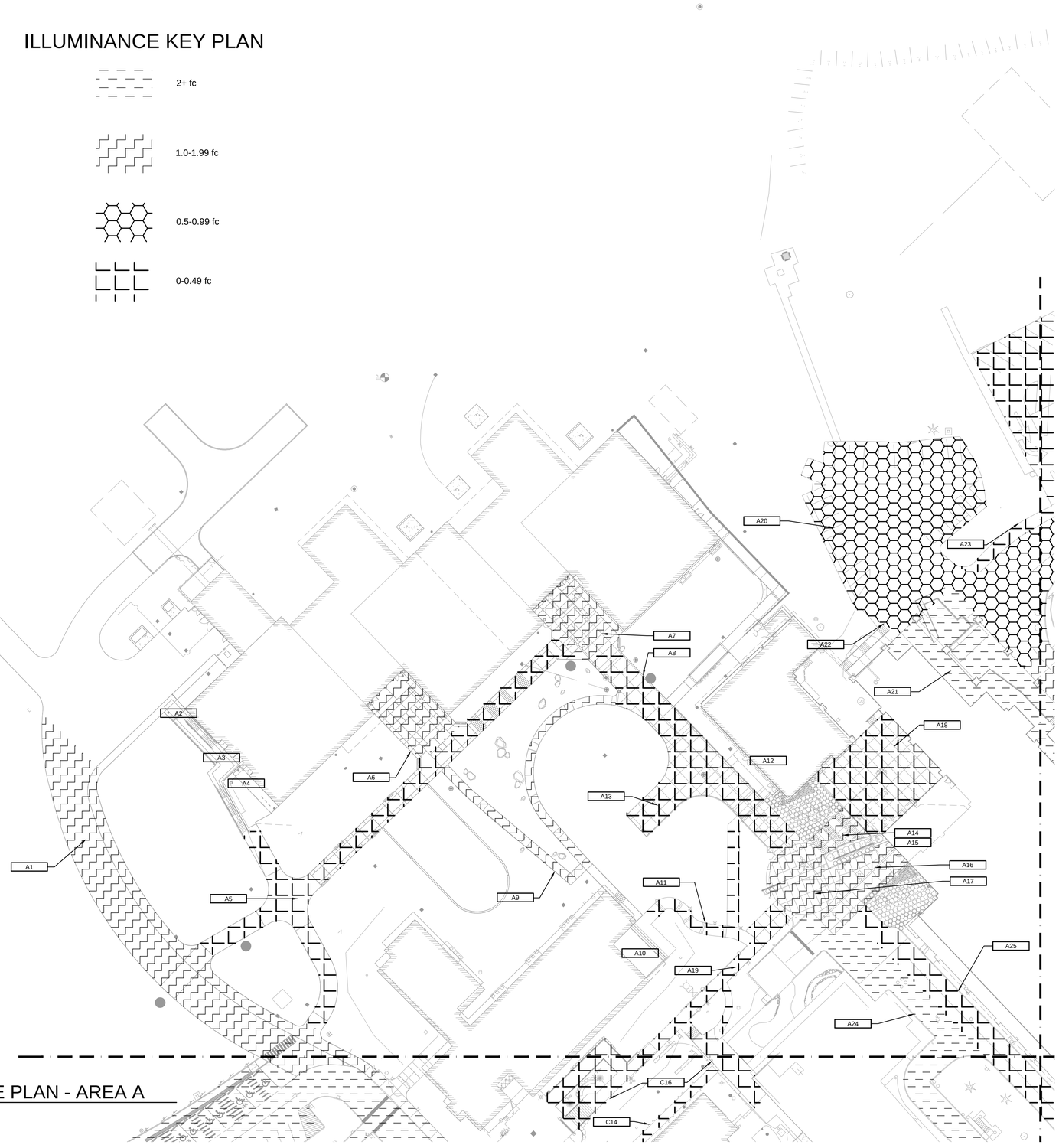
ILLUMINANCE KEY PLAN

2+ fc

1.0-1.99 fc

0.5-0.99 fc

0-0.49 fc



1 FS-E2.01 FORT STEILACOOM EXISTING LIGHT DENSITY SITE PLAN - AREA A

SCALE: 1" = 40'-0"

HARGIS

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electrical
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security
energy

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PROFESSIONAL STAMP

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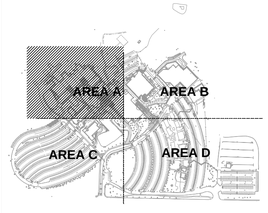
SITE LIGHTING STUDY

FORT STEILACOOM

9401 Farwest Drive SW
Lakewood, WA 98498

KEY PLAN



DATE	06/24/2016
PROJECT NO.	15-026
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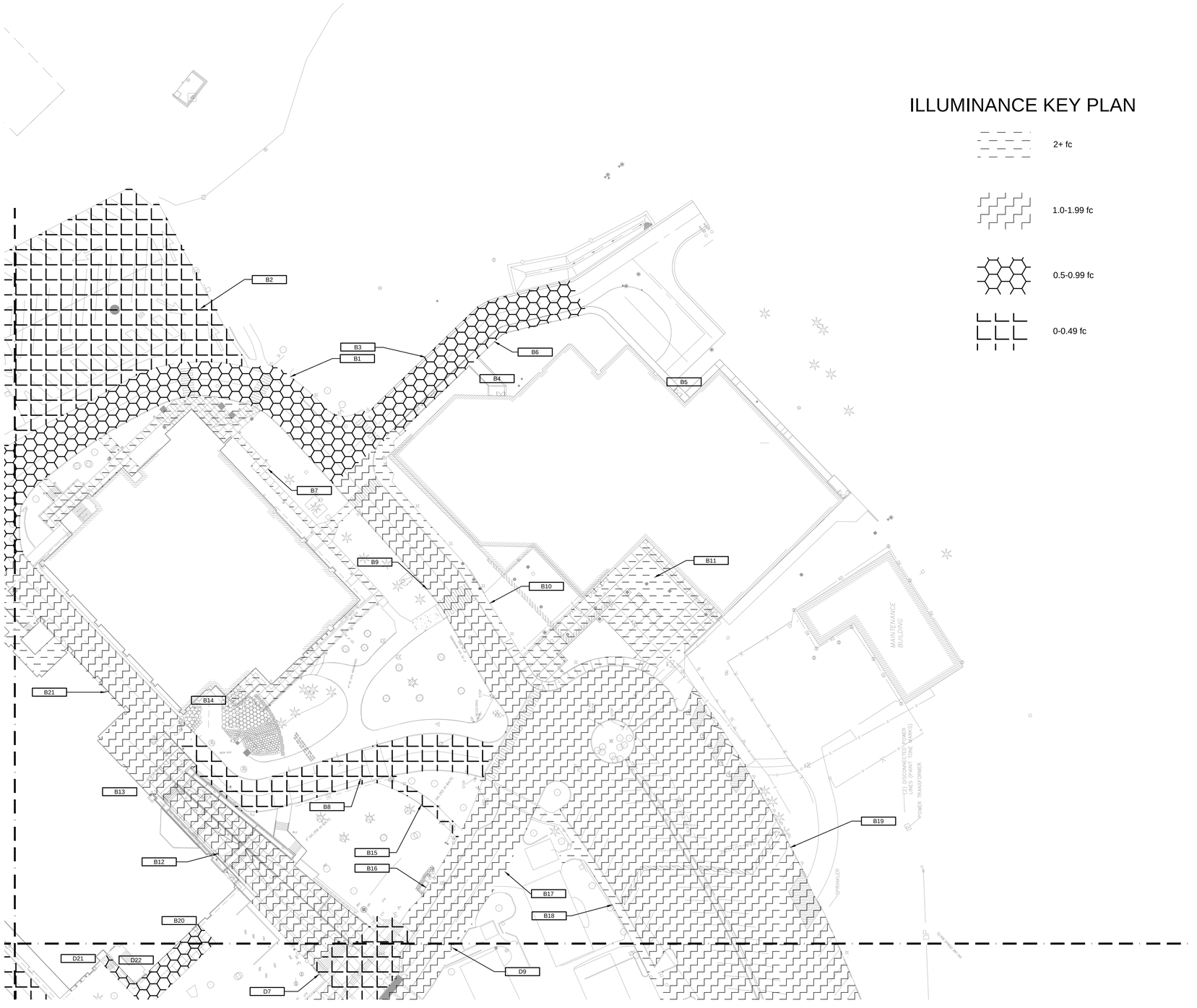
APPROVED BY	BMI

SHEET TITLE

FORT STEILACOOM
EXISTING LIGHT
DENSITY SITE PLAN

SHEET NUMBER

FS-E2.01



ILLUMINANCE KEY PLAN

- 2+ fc
- 1.0-1.99 fc
- 0.5-0.99 fc
- 0-0.49 fc

1 FS-E2.02 — FORT STEILACOOM EXISTING LIGHT DENSITY SITE PLAN - AREA B

SCALE: 1" = 40'-0"

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seattle, washington 98101
t: 206.448.3376 w: hargis.biz

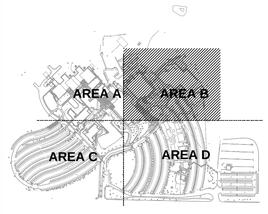
PROFESSIONAL STAMP

PIERCE COLLEGE
SITE LIGHTING STUDY

FORT STEILACOOM

9401 Farwest Drive SW
Lakewood, WA 98498

KEY PLAN



DATE	06/24/2016
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SHEET TITLE

FORT STEILACOOM EXISTING LIGHT DENSITY SITE PLAN

SHEET NUMBER

FS-E2.02

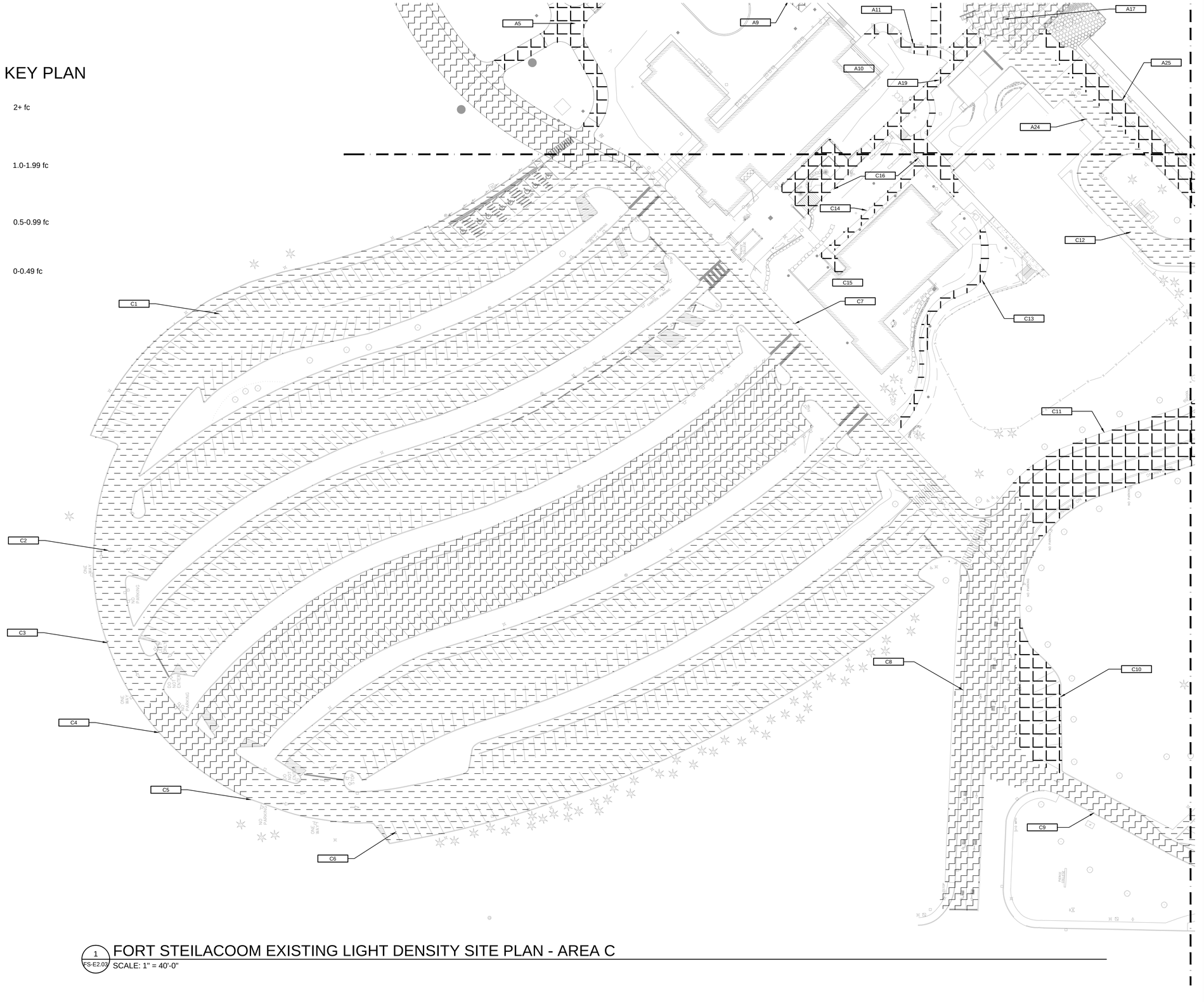
ILLUMINANCE KEY PLAN

2+ fc

1.0-1.99 fc

0.5-0.99 fc

0-0.49 fc



1 FS-E2.03 FORT STEILACOOM EXISTING LIGHT DENSITY SITE PLAN - AREA C

SCALE: 1" = 40'-0"

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PROFESSIONAL STAMP

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SITE LIGHTING STUDY

FORT STEILACOOM

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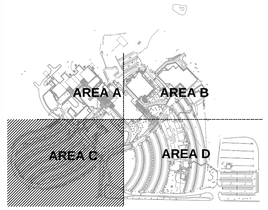
KEY PLAN



DATE	06/24/2016
PROJECT NO.	15-026
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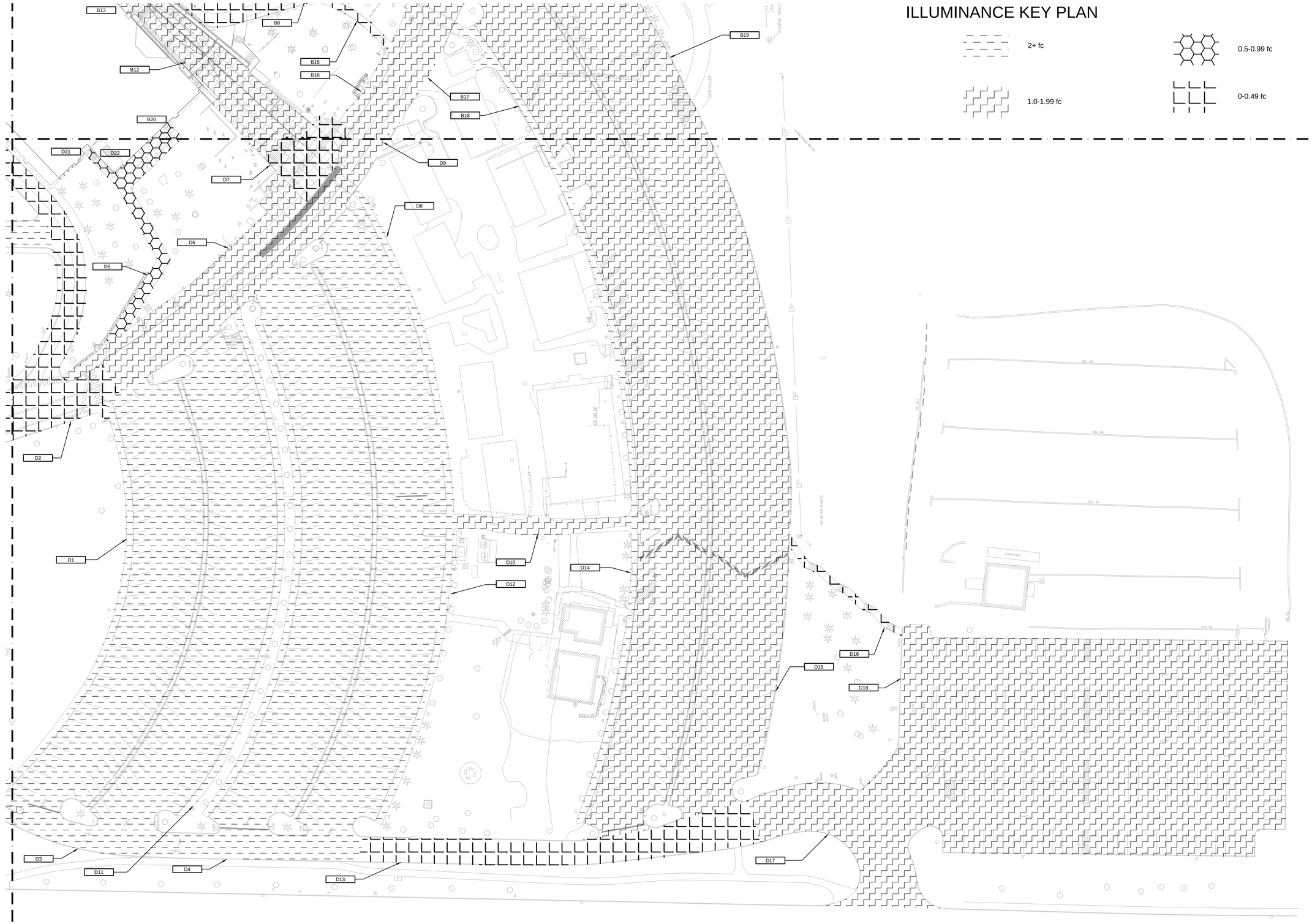
SHEET TITLE

FORT STEILACOOM EXISTING LIGHT DENSITY SITE PLAN

SHEET NUMBER

FS-E2.03



1 FS-E2.04

FORT STEILACOOM EXISTING LIGHT DENSITY SITE PLAN - AREA D

SCALE: 1" = 40'-0"

ILLUMINANCE KEY PLAN

- 2+ fc
- 1.0-1.99 fc
- 0.5-0.99 fc
- 0-0.49 fc

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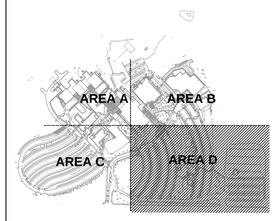
KEY PLAN



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PROJECT NO.	15-026
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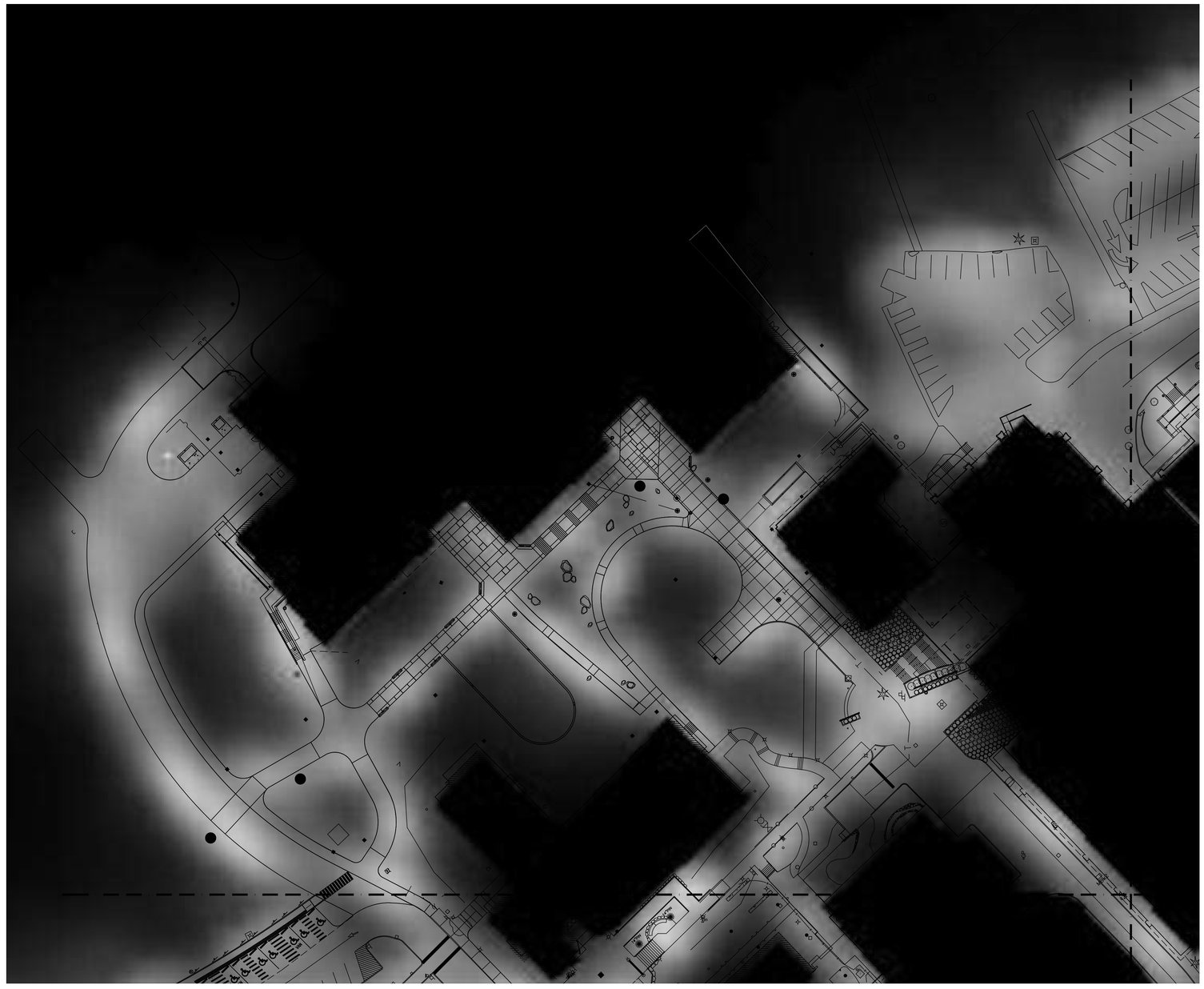
APPROVED BY	BMI

SHEET TITLE

FORT STEILACOOM EXISTING LIGHT DENSITY SITE PLAN

SHEET NUMBER

FS-E2.04



1 FS-E3.01 FORT STEILACOOM LIGHT DENSITY SITE PLAN - AREA A

SCALE: 1" = 40'-0"

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SITE LIGHTING STUDY

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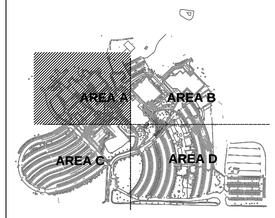
KEY PLAN



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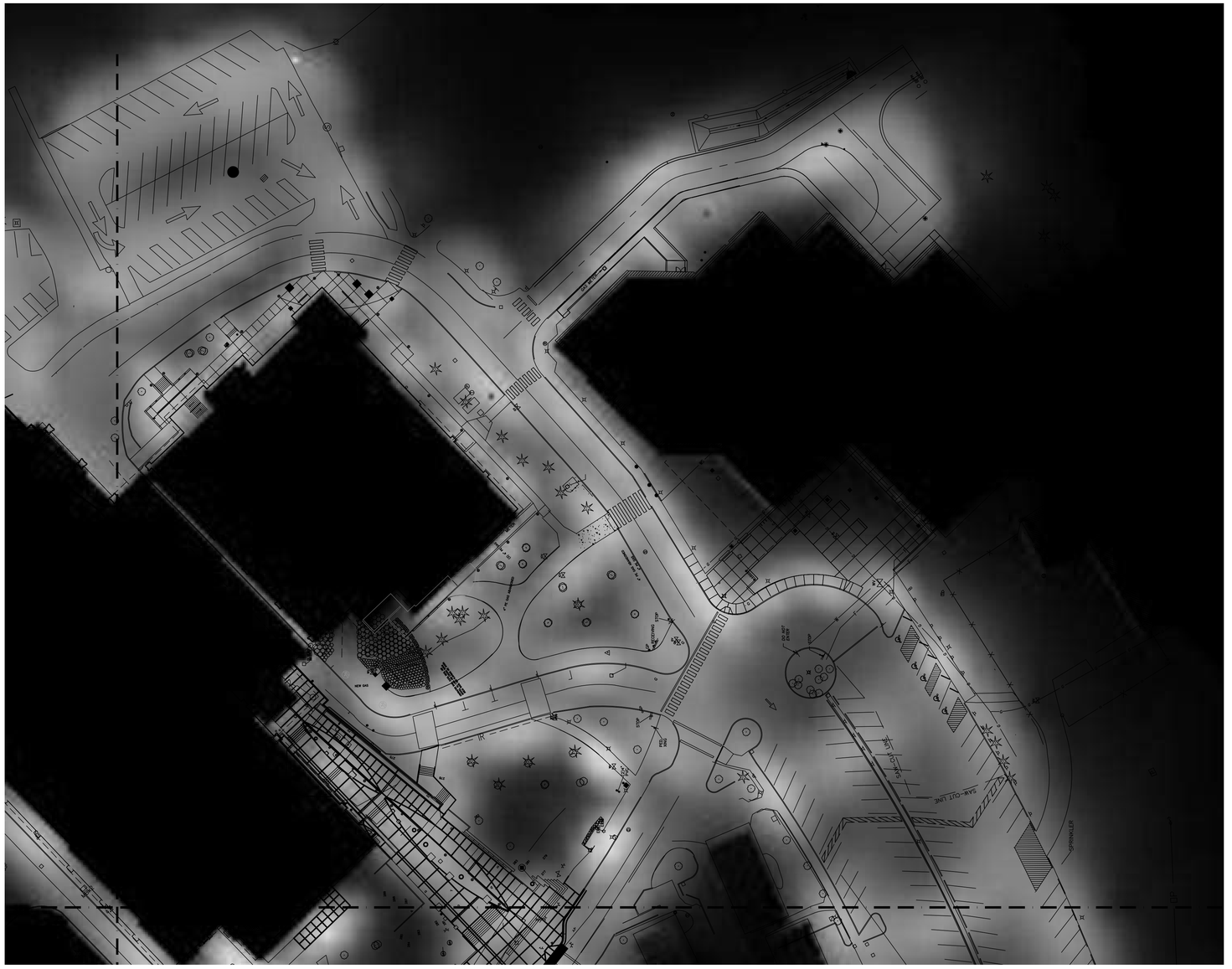
SHEET TITLE

FORT STEILACOOM
LIGHT DENSITY
SITE PLAN

SHEET NUMBER

FS-E3.01



1 FS-E3.02 FORT STEILACOOM LIGHT DENSITY SITE PLAN - AREA B

SCALE: 1" = 40'-0"

PIERCE COLLEGE
SITE LIGHTING STUDY

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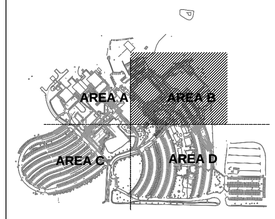
KEY PLAN



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PROJECT NO.	15-026
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SHEET TITLE

FORT STEILACOOM
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SITE PLAN

SHEET NUMBER

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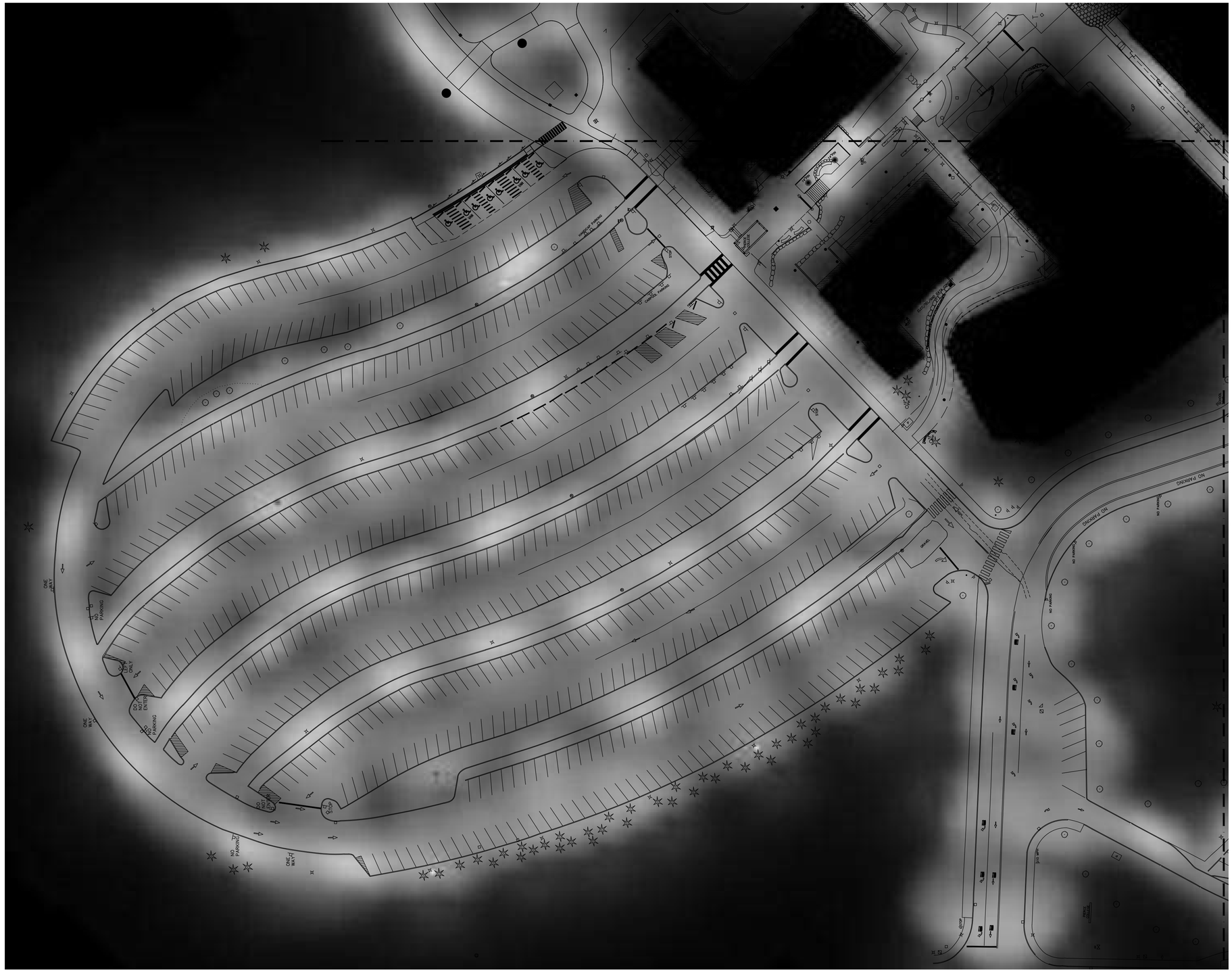
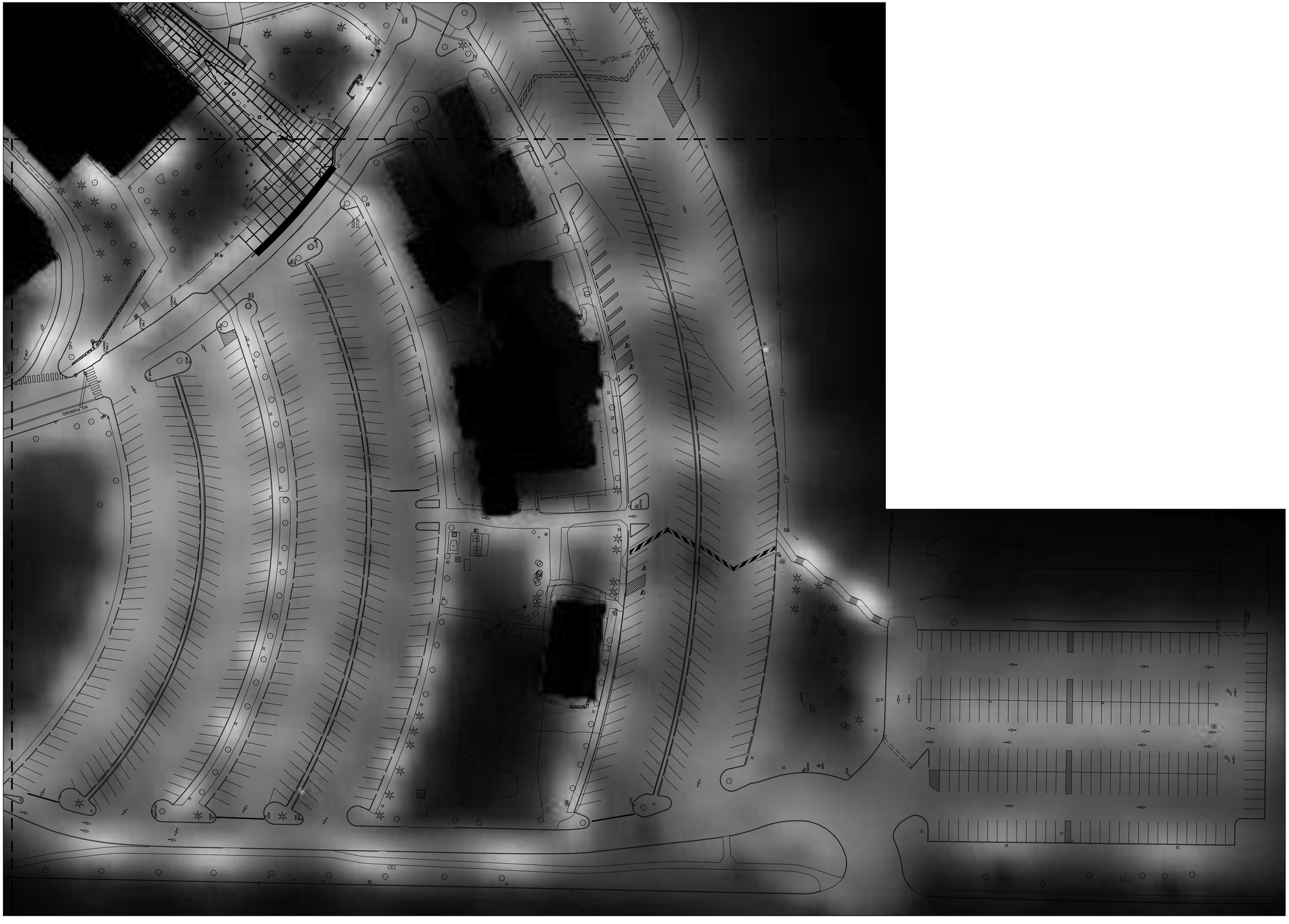

ONE WAY
NO PARKING
DO NOT ENTER
ONE WAY
NO PARKING
ONE WAY
NO PARKING
ONE WAY
NO PARKING
NO PARKING
NO PARKING



1 FS-E3.04 FORT STEILACOOM LIGHT DENSITY SITE PLAN - AREA D
SCALE: 1" = 40'-0"

PIERCE COLLEGE
SITE LIGHTING STUDY

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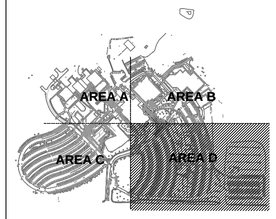
KEY PLAN



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SHEET TITLE

FORT STEILACOOM
LIGHT DENSITY
SITE PLAN

SHEET NUMBER

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PIERCE COLLEGE FORT STEILACOOM - LIGHTING TAGS & LIGHTING WORK SUMMARY		
LIGHTING TAG	WORK DESCRIPTION	COUNT
1	REPLACE POLE FIXTURE MAINTAIN (E) POLE	89
2	DEMOLISH (E) FIXTURE REUSE (E) ROUGH-IN PROVIDE POLE AND FIXTURE	63
3	NEW LOCATION PROVIDE ALL APPERTUNANCES NEW POLE, BASE, & FIXTURE	154
4	DEMOLISH (E) FIXTURE ABANDON (E) ROUGH-IN	166

1 FS-E4.01 FORT STEILACOOM LIGHTING SITE PLAN - AREA 1

SCALE: 1" = 20'-0"

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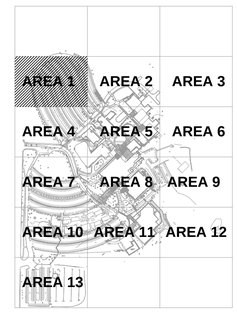
KEY PLAN



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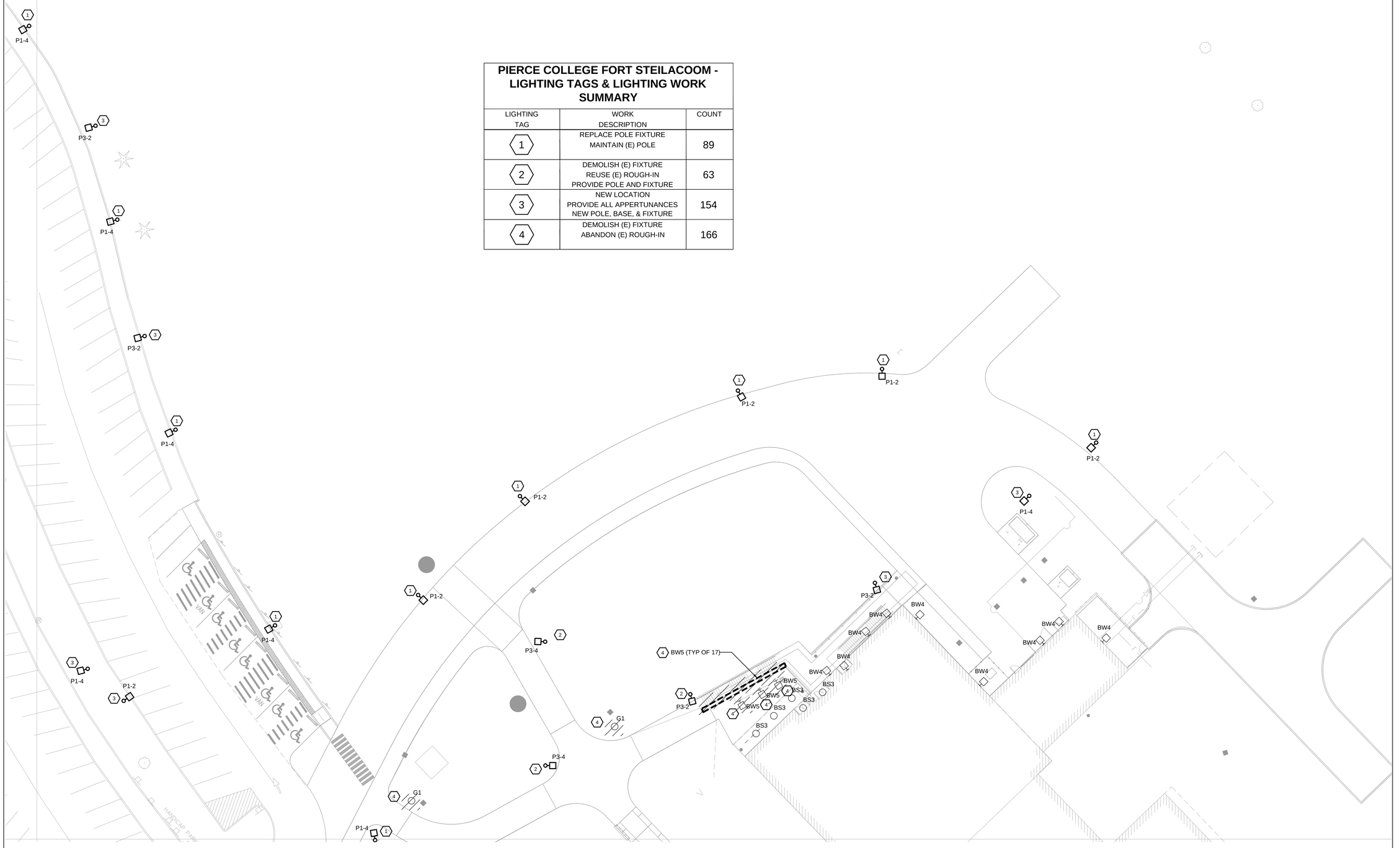
SHEET TITLE

FORT STEILACOOM
PARTIAL SITE PLAN

SHEET NUMBER

FS-E4.01

PIERCE COLLEGE FORT STEILACOOM - LIGHTING TAGS & LIGHTING WORK SUMMARY		
LIGHTING TAG	WORK DESCRIPTION	COUNT
1	REPLACE POLE FIXTURE MAINTAIN (E) POLE	89
2	DEMOLISH (E) FIXTURE REUSE (E) ROUGH-IN PROVIDE POLE AND FIXTURE	63
3	NEW LOCATION PROVIDE ALL APPERTUNANCES NEW POLE, BASE, & FIXTURE	154
4	DEMOLISH (E) FIXTURE ABANDON (E) ROUGH-IN	166



1 FS-E4.02 FORT STEILACOOM LIGHTING SITE PLAN - AREA 2

SCALE: 1" = 20'-0"

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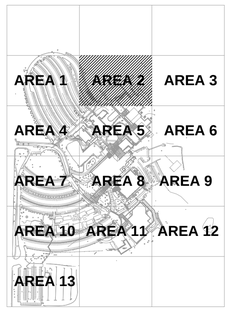
KEY PLAN



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SHEET TITLE

FORT STEILACOOM
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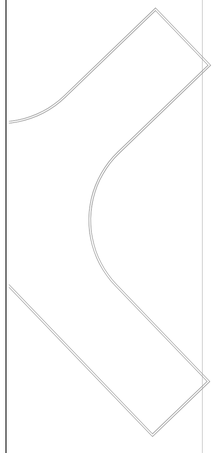
SHEET NUMBER

FS-E4.02



1 FS-E4.03 FORT STEILACOOM LIGHTING SITE PLAN - AREA 3
SCALE: 1" = 20'-0"

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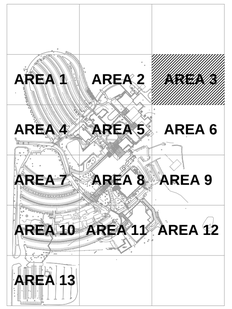
KEY PLAN



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SHEET TITLE

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PARTIAL SITE PLAN

SHEET NUMBER

FS-E4.03

PIERCE COLLEGE FORT STEILACOOM - LIGHTING TAGS & LIGHTING WORK SUMMARY

LIGHTING TAG	WORK DESCRIPTION	COUNT
1	REPLACE POLE FIXTURE MAINTAIN (E) POLE	89
2	DEMOLISH (E) FIXTURE REUSE (E) ROUGH-IN PROVIDE POLE AND FIXTURE	63
3	NEW LOCATION PROVIDE ALL APPERTUNANCES NEW POLE, BASE, & FIXTURE	154
4	DEMOLISH (E) FIXTURE ABANDON (E) ROUGH-IN	166

1 FS-E4.04 FORT STEILACOOM LIGHTING SITE PLAN - AREA 4

SCALE: 1" = 20'-0"

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PROFESSIONAL STAMP

PIERCE COLLEGE
SITE LIGHTING STUDY

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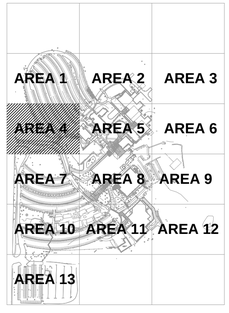
KEY PLAN



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PROJECT NO.	15-026
DRAWN BY	JPH,TSV
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SHEET TITLE

FORT STEILACOOM
PARTIAL SITE PLAN

SHEET NUMBER

FS-E4.04

PIERCE COLLEGE FORT STEILACOOM - LIGHTING TAGS & LIGHTING WORK SUMMARY		
LIGHTING TAG	WORK DESCRIPTION	COUNT
1	REPLACE POLE FIXTURE MAINTAIN (E) POLE	89
2	DEMOLISH (E) FIXTURE REUSE (E) ROUGH-IN PROVIDE POLE AND FIXTURE	63
3	NEW LOCATION PROVIDE ALL APPERTUNANCES NEW POLE, BASE, & FIXTURE	154
4	DEMOLISH (E) FIXTURE ABANDON (E) ROUGH-IN	166

1 FS-E4.05 FORT STEILACOOM LIGHTING SITE PLAN - AREA 5

SCALE: 1" = 20'-0"

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PROFESSIONAL STAMP

PIERCE COLLEGE SITE LIGHTING STUDY

FORT STEILACOOM

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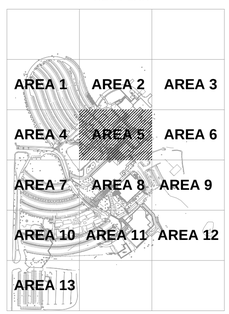
KEY PLAN



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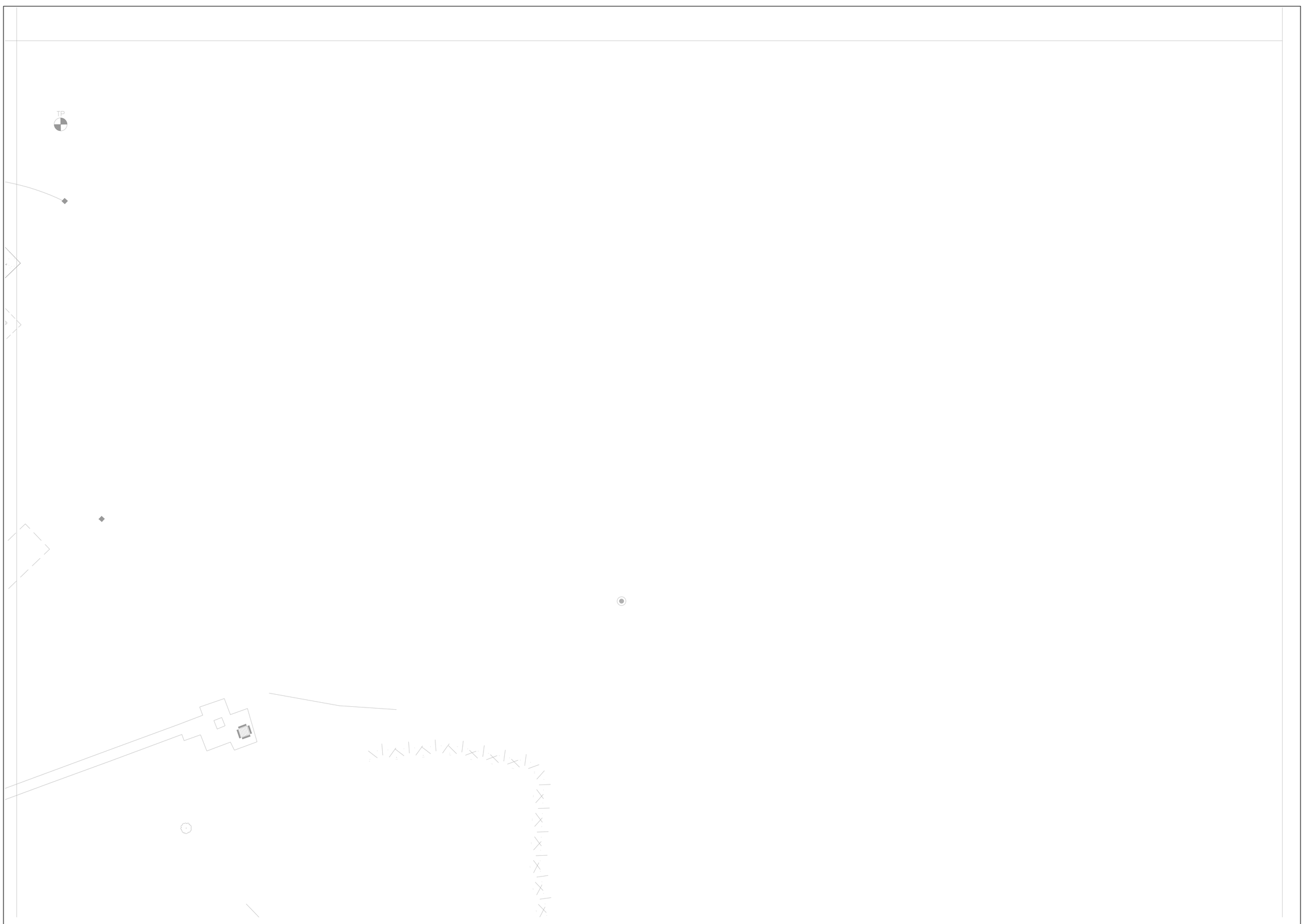
SHEET TITLE	

FORT STEILACOOM
PARTIAL SITE PLAN

SHEET NUMBER

FS-E4.05



1 FS-E4.06 FORT STEILACOOM LIGHTING SITE PLAN - AREA 6
SCALE: 1" = 20'-0"

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FORT STEILACOOM

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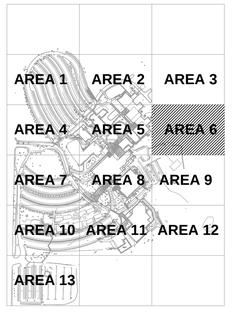
KEY PLAN



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SHEET TITLE

FORT STEILACOOM
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SHEET NUMBER

FS-E4.06

PIERCE COLLEGE FORT STEILACOOM - LIGHTING TAGS & LIGHTING WORK SUMMARY		
LIGHTING TAG	WORK DESCRIPTION	COUNT
1	REPLACE POLE FIXTURE MAINTAIN (E) POLE	89
2	DEMOLISH (E) FIXTURE REUSE (E) ROUGH-IN PROVIDE POLE AND FIXTURE	63
3	NEW LOCATION PROVIDE ALL APPERTUNANCES NEW POLE, BASE, & FIXTURE	154
4	DEMOLISH (E) FIXTURE ABANDON (E) ROUGH-IN	166

1 FS-E4.07 FORT STEILACOOM LIGHTING SITE PLAN - AREA 7

SCALE: 1" = 20'-0"

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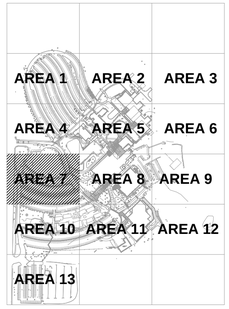
KEY PLAN



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SHEET TITLE

FORT STEILACOOM
PARTIAL SITE PLAN

SHEET NUMBER

FS-E4.07

PIERCE COLLEGE FORT STEILACOOM - LIGHTING TAGS & LIGHTING WORK SUMMARY

LIGHTING TAG	WORK DESCRIPTION	COUNT
1	REPLACE POLE FIXTURE MAINTAIN (E) POLE	89
2	DEMOLISH (E) FIXTURE REUSE (E) ROUGH-IN PROVIDE POLE AND FIXTURE	63
3	NEW LOCATION PROVIDE ALL APPERTUNANCES NEW POLE, BASE, & FIXTURE	154
4	DEMOLISH (E) FIXTURE ABANDON (E) ROUGH-IN	166

1 FS-E4.08 FORT STEILACOOM LIGHTING SITE PLAN - AREA 8
SCALE: 1" = 20'-0"

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PROFESSIONAL STAMP

PIERCE COLLEGE
SITE LIGHTING STUDY

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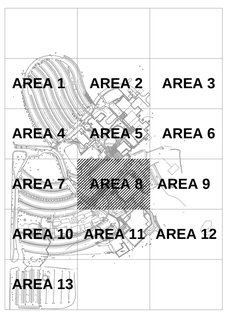
KEY PLAN



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SHEET TITLE	

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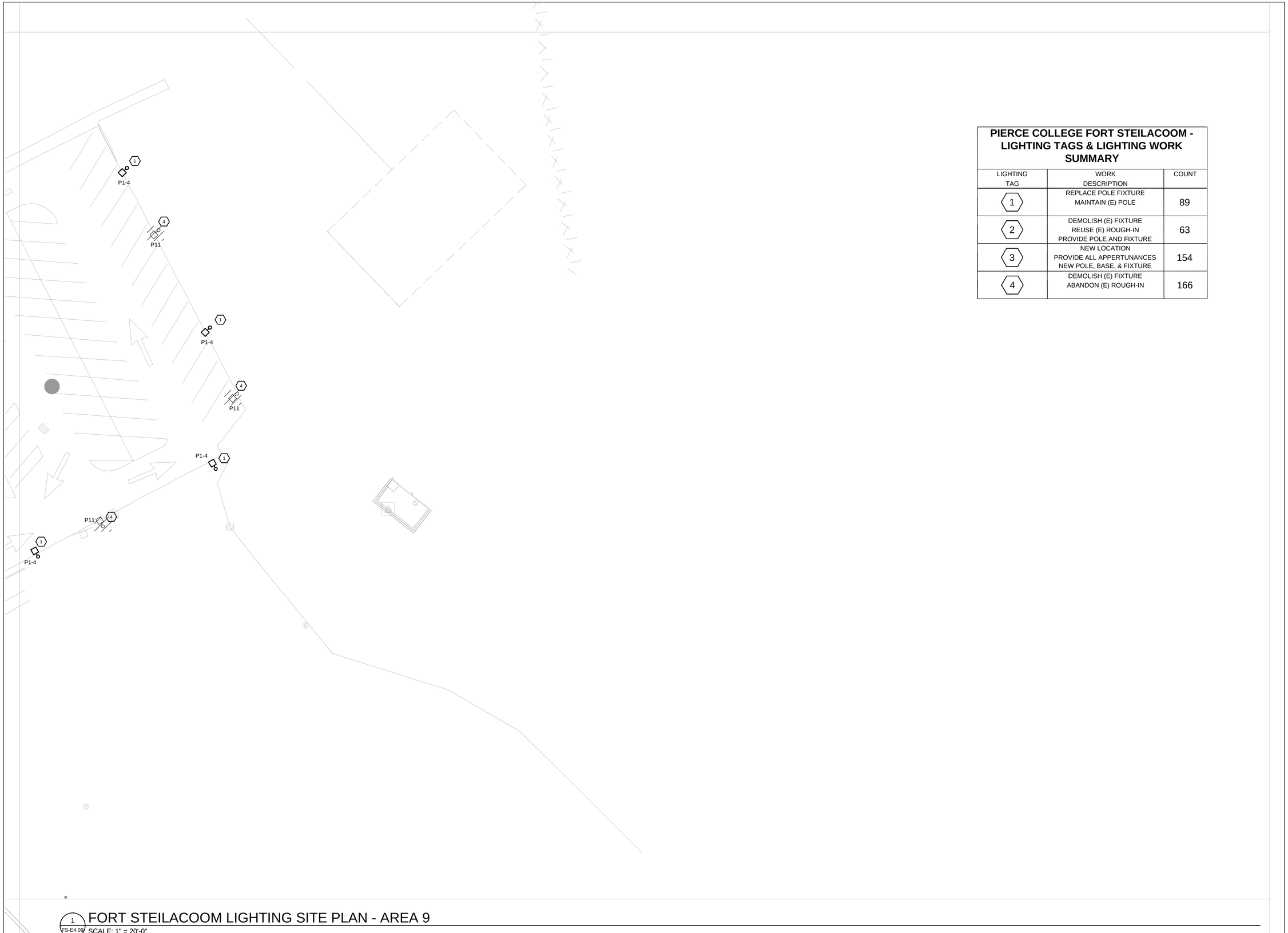
PARTIAL SITE PLAN

SHEET NUMBER
FS-E4.08



PIERCE COLLEGE FORT STEILACOOM - LIGHTING TAGS & LIGHTING WORK SUMMARY		
LIGHTING TAG	WORK DESCRIPTION	COUNT
1	REPLACE POLE FIXTURE MAINTAIN (E) POLE	89
2	DEMOLISH (E) FIXTURE REUSE (E) ROUGH-IN PROVIDE POLE AND FIXTURE	63
3	NEW LOCATION PROVIDE ALL APPERTUNANCES NEW POLE, BASE, & FIXTURE	154
4	DEMOLISH (E) FIXTURE ABANDON (E) ROUGH-IN	166

1 FS-E4.09 FORT STEILACOOM LIGHTING SITE PLAN - AREA 9

SCALE: 1" = 20'-0"

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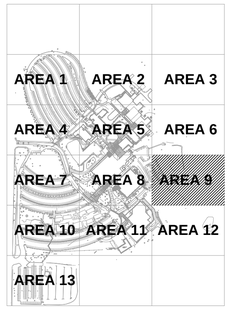
KEY PLAN



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SHEET TITLE

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SHEET NUMBER

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PIERCE COLLEGE FORT STEILACOOM - LIGHTING TAGS & LIGHTING WORK SUMMARY

LIGHTING TAG	WORK DESCRIPTION	COUNT
1	REPLACE POLE FIXTURE MAINTAIN (E) POLE	89
2	DEMOLISH (E) FIXTURE REUSE (E) ROUGH-IN PROVIDE POLE AND FIXTURE	63
3	NEW LOCATION PROVIDE ALL APPERTUNANCES NEW POLE, BASE, & FIXTURE	154
4	DEMOLISH (E) FIXTURE ABANDON (E) ROUGH-IN	166

1 FS-E4.10 FORT STEILACOOM LIGHTING SITE PLAN - AREA 10

SCALE: 1" = 20'-0"

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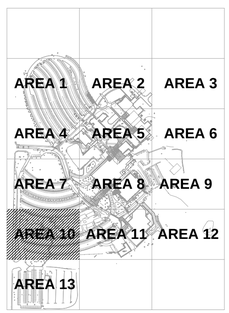
SITE LIGHTING STUDY

FORT STEILACOOM

9401 Farwest Drive SW
Lakewood, WA 98498

KEY PLAN



DATE	06/24/2016
PROJECT NO.	15-026
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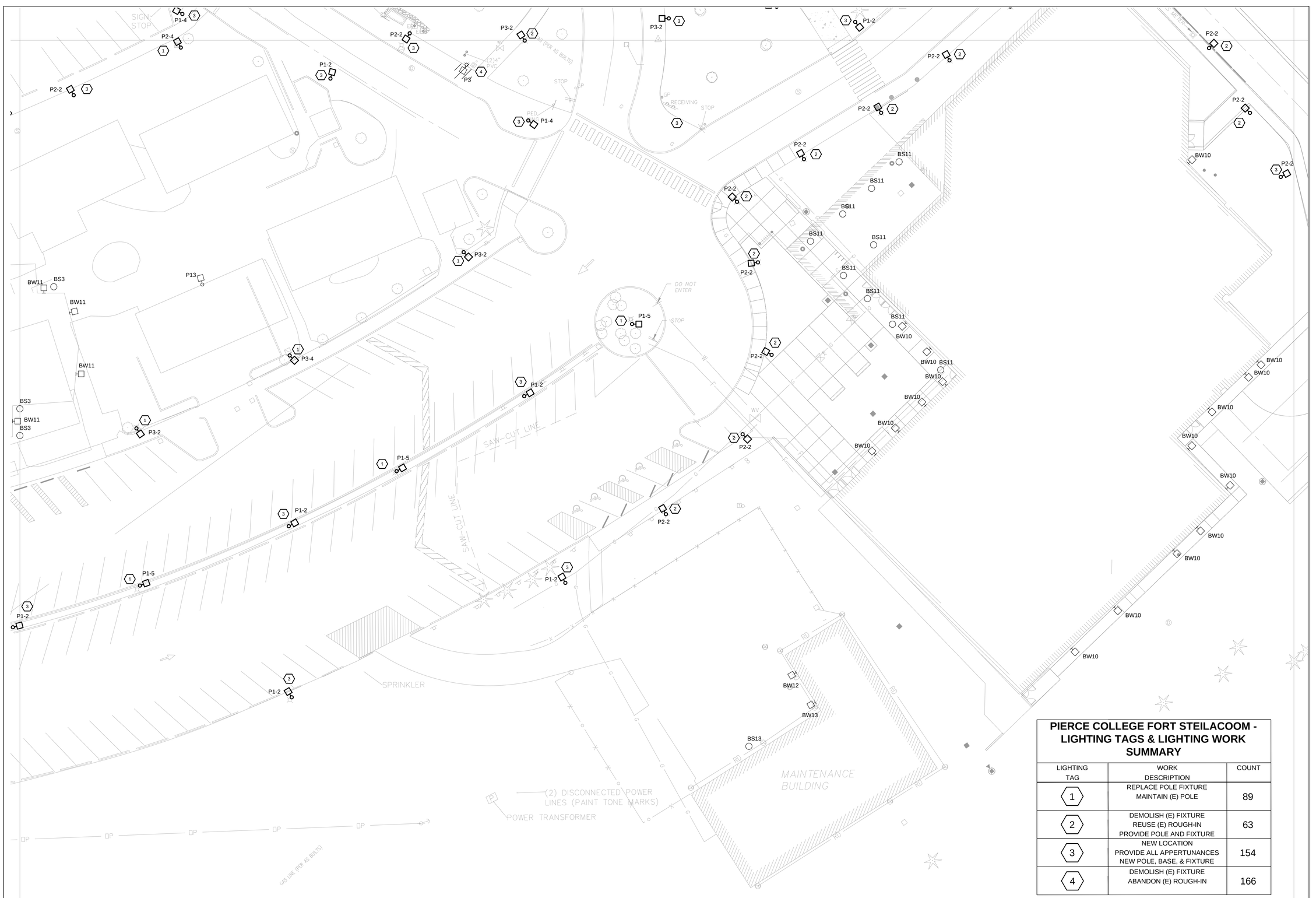
SHEET TITLE	

FORT STEILACOOM
PARTIAL SITE PLAN

SHEET NUMBER

FS-E4.10



PIERCE COLLEGE FORT STEILACOOM - LIGHTING TAGS & LIGHTING WORK SUMMARY

LIGHTING TAG	WORK DESCRIPTION	COUNT
1	REPLACE POLE FIXTURE MAINTAIN (E) POLE	89
2	DEMOLISH (E) FIXTURE REUSE (E) ROUGH-IN PROVIDE POLE AND FIXTURE	63
3	NEW LOCATION PROVIDE ALL APPERTUNANCES NEW POLE, BASE, & FIXTURE	154
4	DEMOLISH (E) FIXTURE ABANDON (E) ROUGH-IN	166

1 FS-E4.11 FORT STEILACOOM LIGHTING SITE PLAN - AREA 11

SCALE: 1" = 20'-0"

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PIERCE COLLEGE
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FORT STEILACOOM

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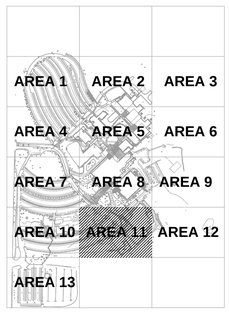
KEY PLAN



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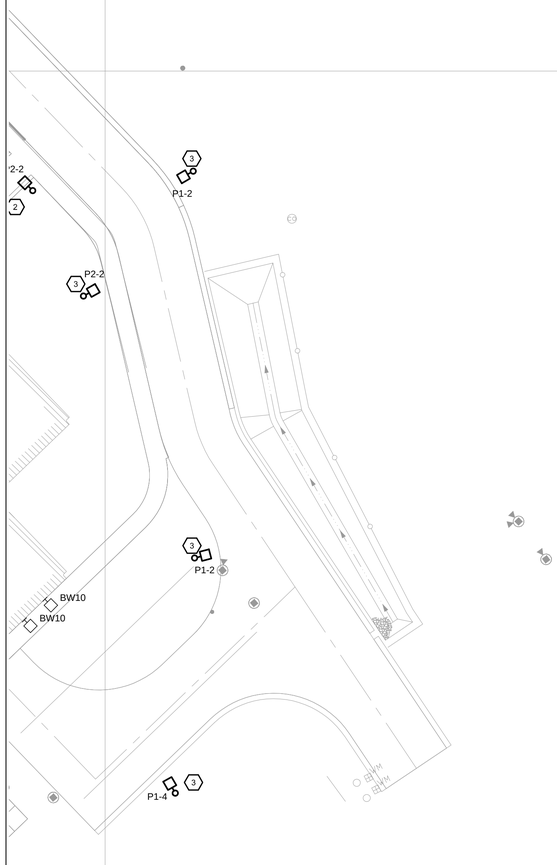
SHEET TITLE

FORT STEILACOOM
PARTIAL SITE PLAN

SHEET NUMBER

FS-E4.11



PIERCE COLLEGE FORT STEILACOOM - LIGHTING TAGS & LIGHTING WORK SUMMARY		
LIGHTING TAG	WORK DESCRIPTION	COUNT
1	REPLACE POLE FIXTURE MAINTAIN (E) POLE	89
2	DEMOLISH (E) FIXTURE REUSE (E) ROUGH-IN PROVIDE POLE AND FIXTURE	63
3	NEW LOCATION PROVIDE ALL APPERTUNANCES NEW POLE, BASE, & FIXTURE	154
4	DEMOLISH (E) FIXTURE ABANDON (E) ROUGH-IN	166

1 FS-E4.12 FORT STEILACOOM LIGHTING SITE PLAN - AREA 12

SCALE: 1" = 20'-0"

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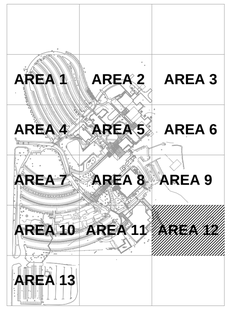

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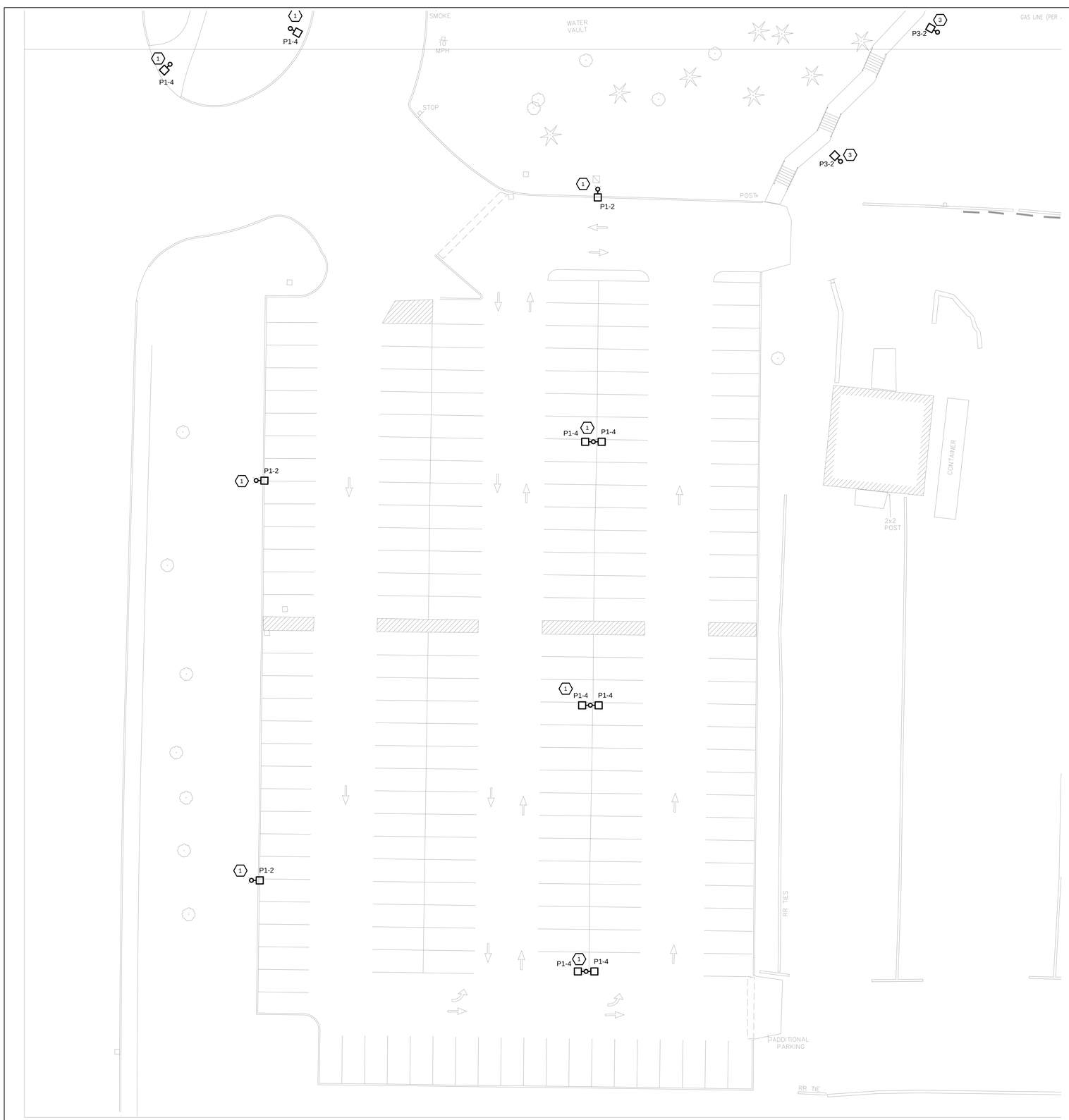
SHEET TITLE

FORT STEILACOOM
PARTIAL SITE PLAN

SHEET NUMBER

FS-E4.12



1 FS-E4.13 FORT STEILACOOM LIGHTING SITE PLAN - AREA 13

SCALE: 1" = 20'-0"

PIERCE COLLEGE FORT STEILACOOM - LIGHTING TAGS & LIGHTING WORK SUMMARY

LIGHTING TAG	WORK DESCRIPTION	COUNT
1	REPLACE POLE FIXTURE MAINTAIN (E) POLE	89
2	DEMOLISH (E) FIXTURE REUSE (E) ROUGH-IN PROVIDE POLE AND FIXTURE	63
3	NEW LOCATION PROVIDE ALL APPERTUNANCES NEW POLE, BASE, & FIXTURE	154
4	DEMOLISH (E) FIXTURE ABANDON (E) ROUGH-IN	166

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PIERCE COLLEGE
SITE LIGHTING STUDY

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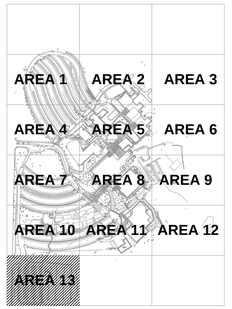
KEY PLAN



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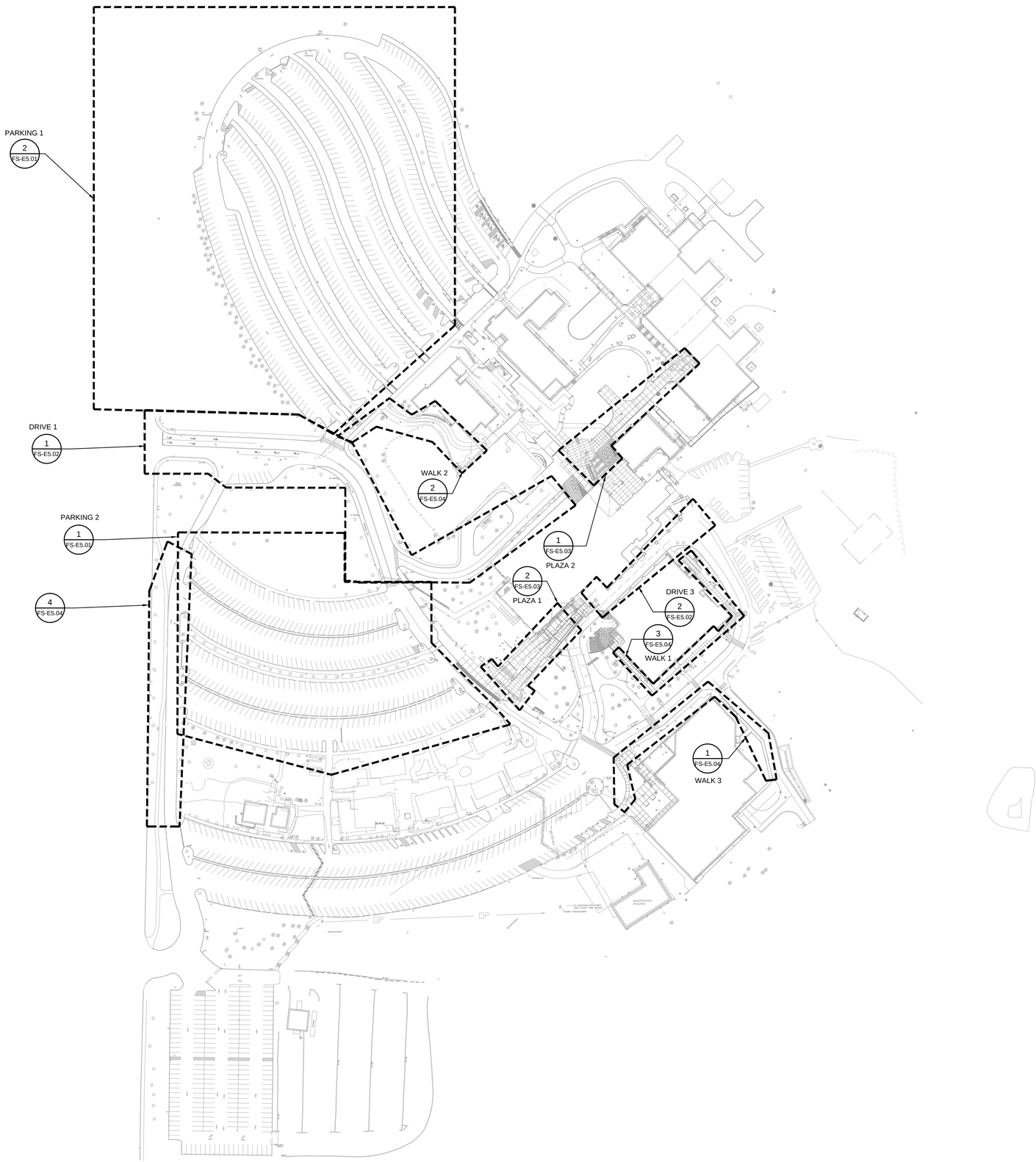
SHEET TITLE

FORT STEILACOOM
PARTIAL SITE PLAN

SHEET NUMBER

FS-E4.13

LIGHT DENSITY CALCULATION TABLE				
LABEL	AVG (fc)	MIN (fc)	MAX (fc)	AVG/MIN
PARKING 1	2.88	0.73	10.25	3.95
PARKING 2	2.53	0.70	11.10	3.61
DRIVE 1	3.10	0.80	15.55	3.88
DRIVE 2	2.36	0.64	7.85	3.69
DRIVE 3	3.06	1.20	4.90	2.55
PLAZA 1	3.67	1.64	6.43	2.24
PLAZA 2	4.04	1.57	9.56	2.57
WALK 1	5.07	1.93	9.56	2.63
WALK 2	3.28	1.53	5.11	2.14
WALK 3	6.35	1.75	11.88	3.63



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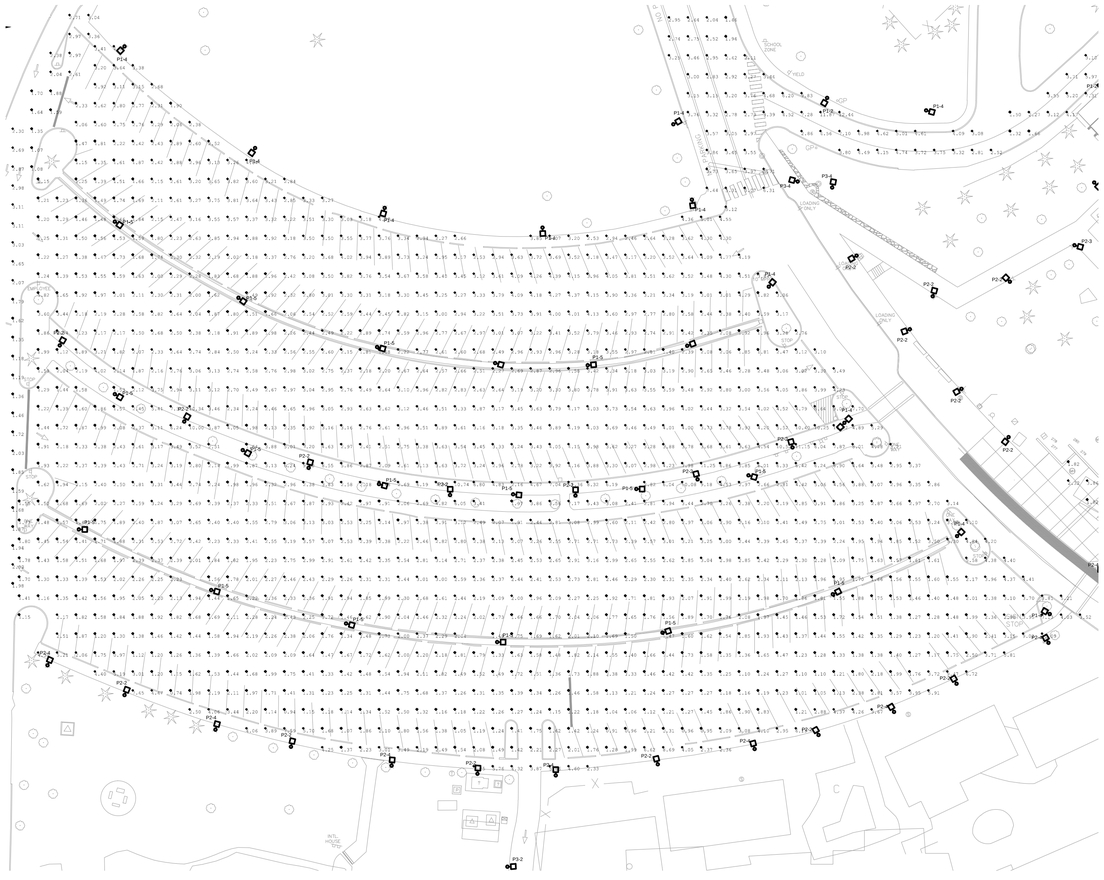
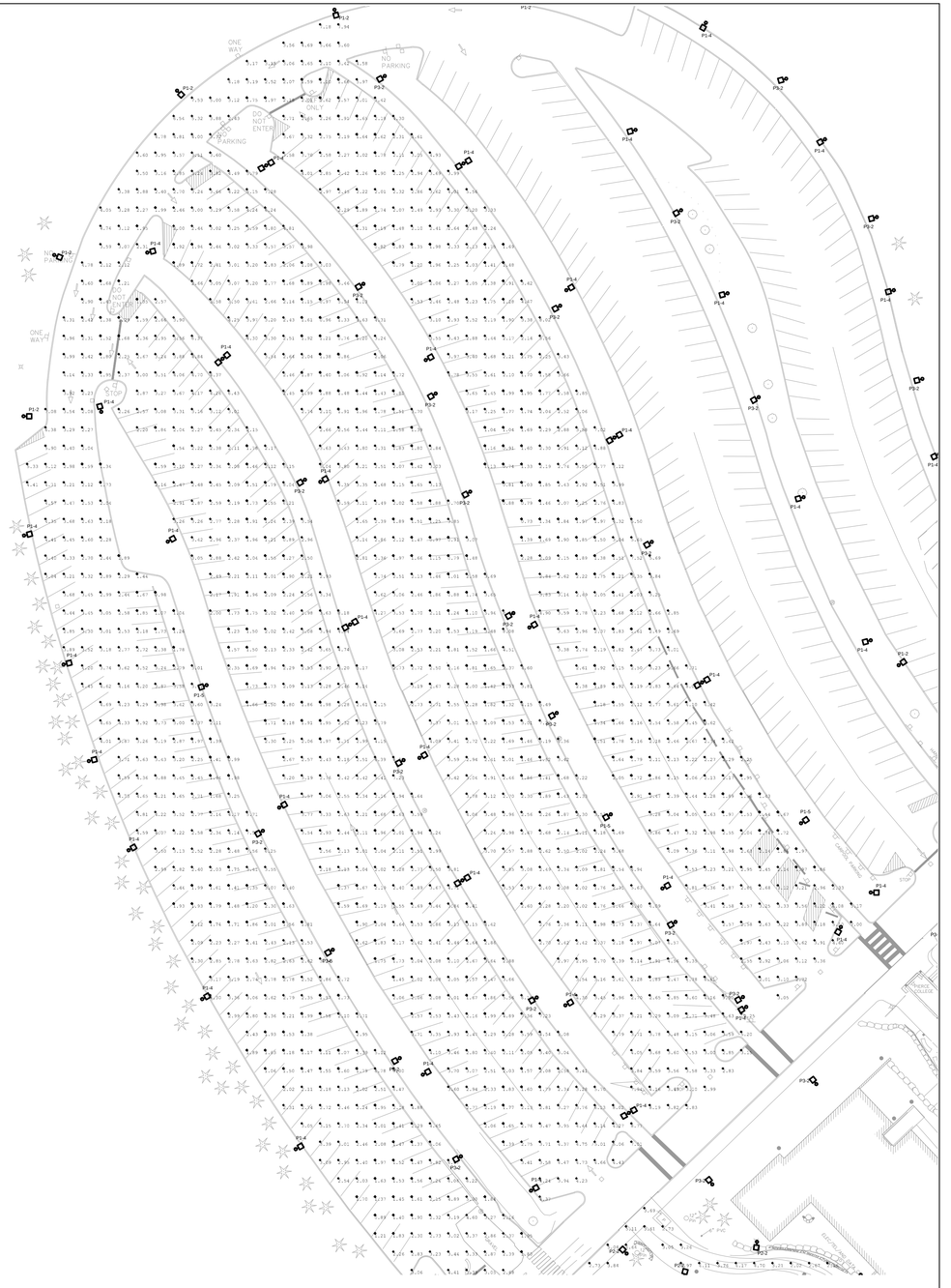
FORT STEILACOOM
ENLARGED SITE
PLAN CALLOUTS

SHEET NUMBER

FS-E5.00



1 FS-E5.01 PARKING 2
SCALE: 1'-0" = 40'-0"



2 FS-E5.01 PARKING 1
SCALE: 1'-0" = 40'-0"

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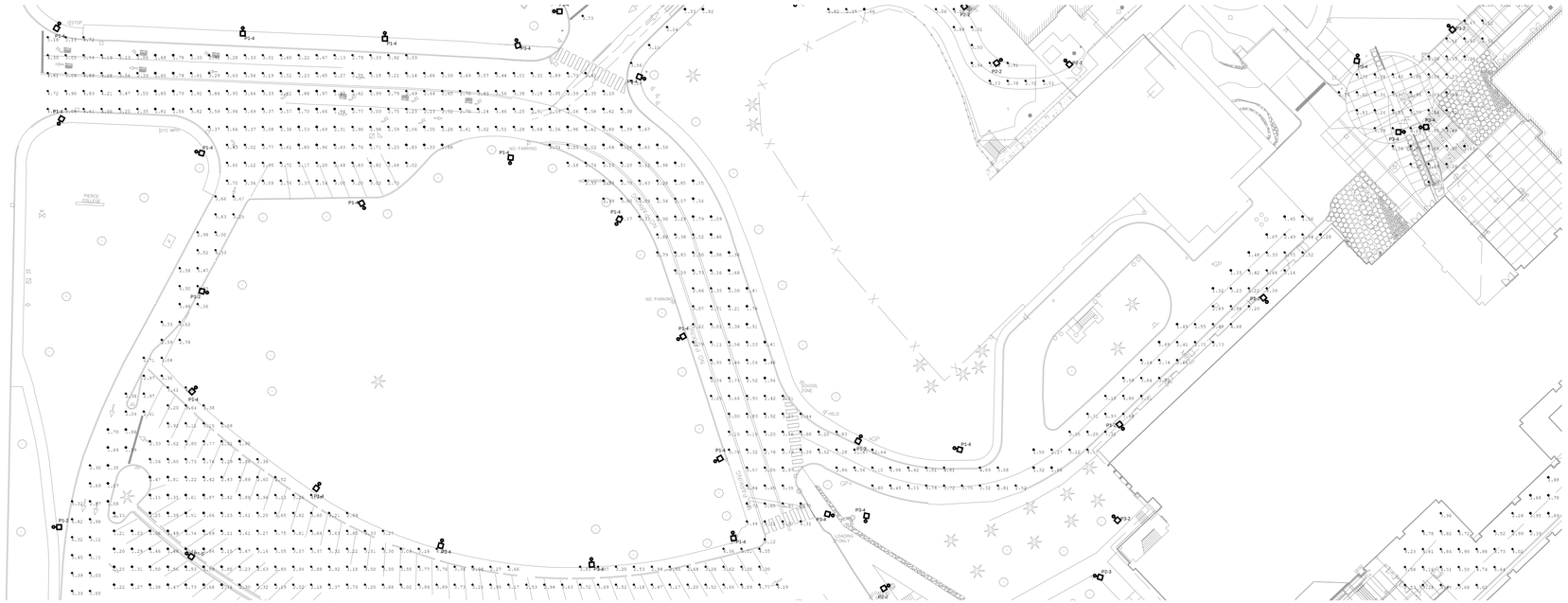
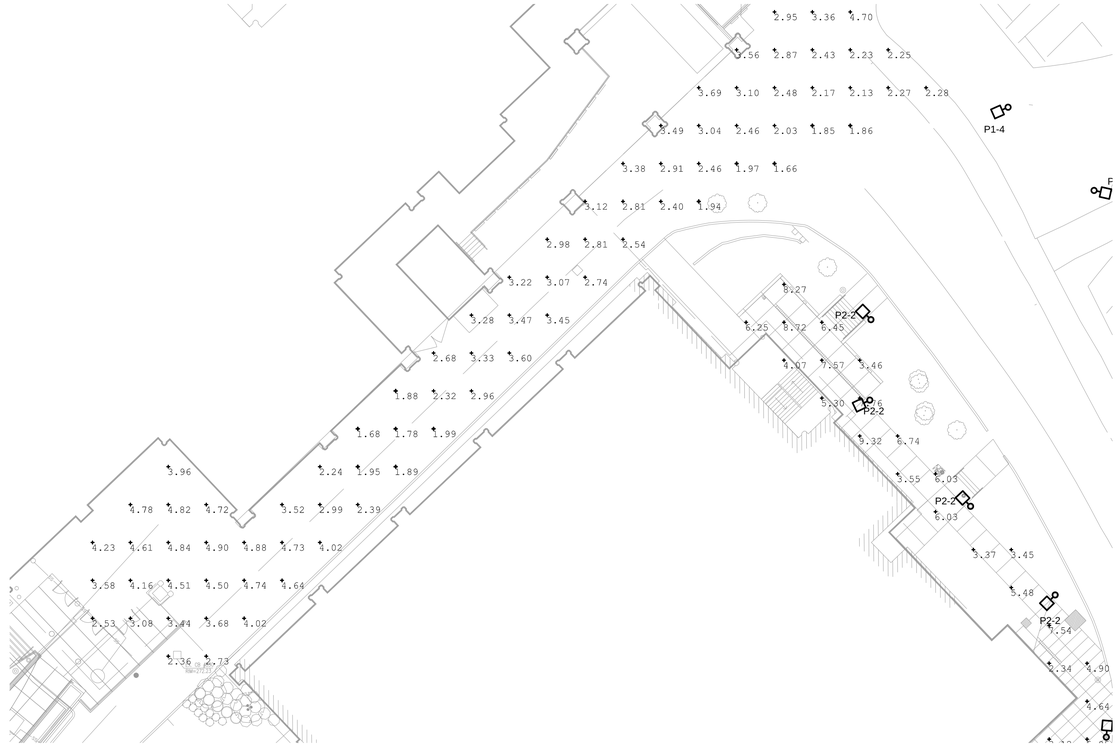
FORT STEILACOOM
ENLARGED SITE
PLANS

SHEET NUMBER

FS-E5.01



1 FS-E5.02 DRIVE 1
SCALE: 1'-0" = 40'-0"



2 FS-E5.02 DRIVE 3
SCALE: 1'-0" = 20'-0"

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FORT STEILACOOM
ENLARGED SITE
PLANS

SHEET NUMBER

FS-E5.02

1 FS-E5.03 **PLAZA 2**

SCALE: 1'-0" = 20'-0"

2 FS-E5.03 **PLAZA 1**

SCALE: 1'-0" = 20'-0"

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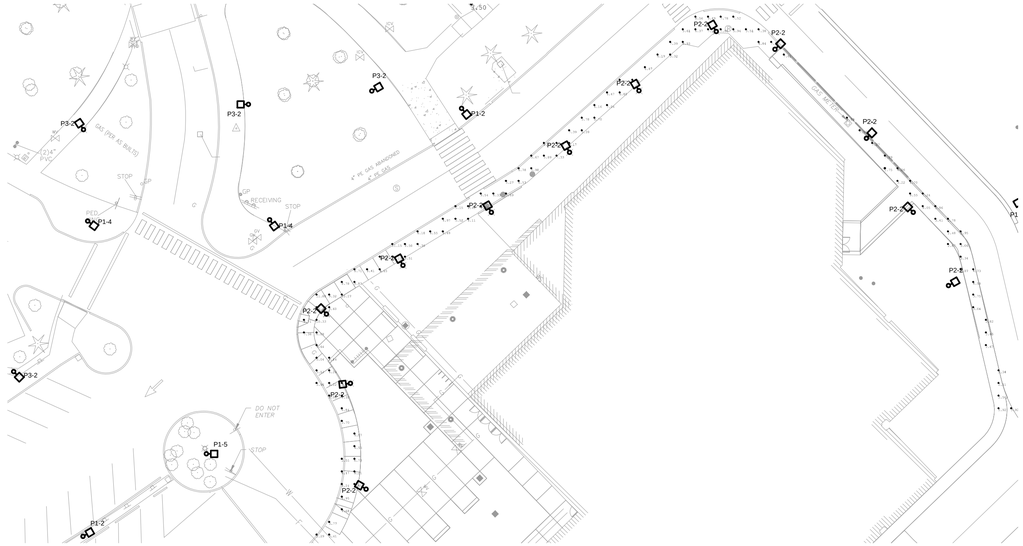
PLANS

SHEET NUMBER

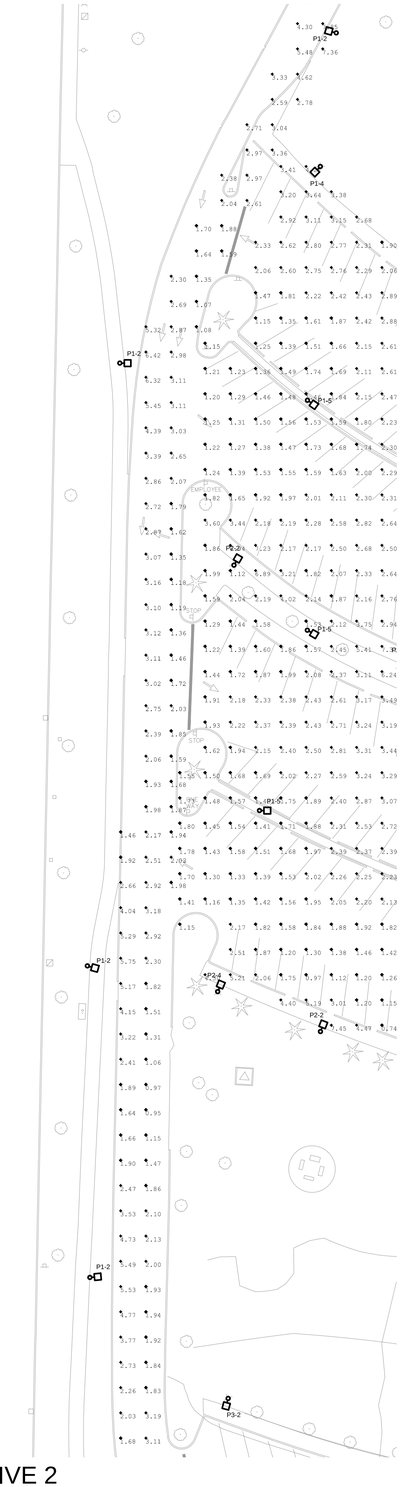
FS-E5.03



1 FS-E5.04 **WALK 3**
SCALE: 1'-0" = 30'-0"

2 FS-E5.04 **WALK 2**
SCALE: 1'-0" = 30'-0"

3 FS-E5.04 **WALK 1**
SCALE: 1'-0" = 30'-0"



4 FS-E5.04 **DRIVE 2**
SCALE: 1'-0" = 30'-0"

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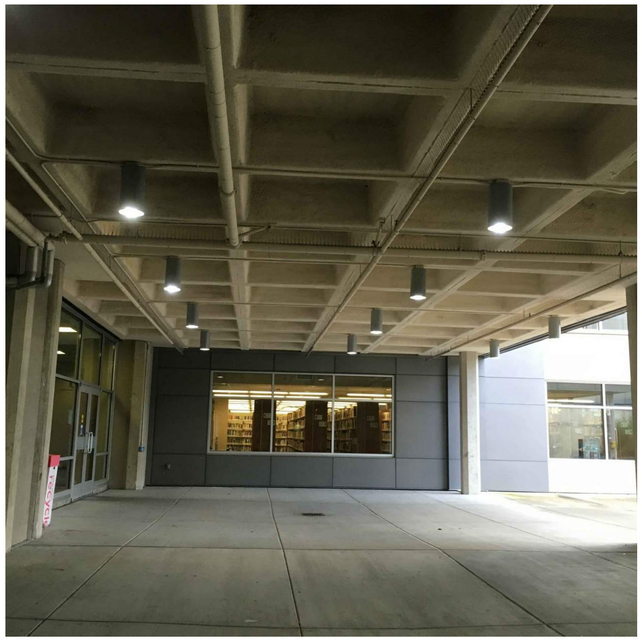
PLANS

SHEET NUMBER

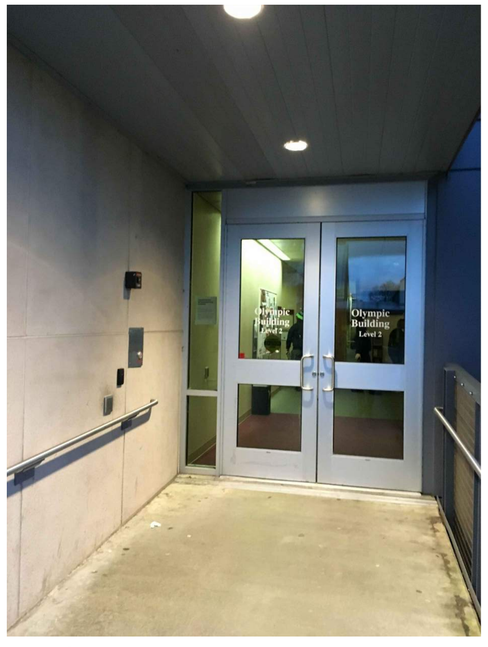
FS-E5.04

1 FS-E8.01 FIXTURE BS1
SCALE: NONE

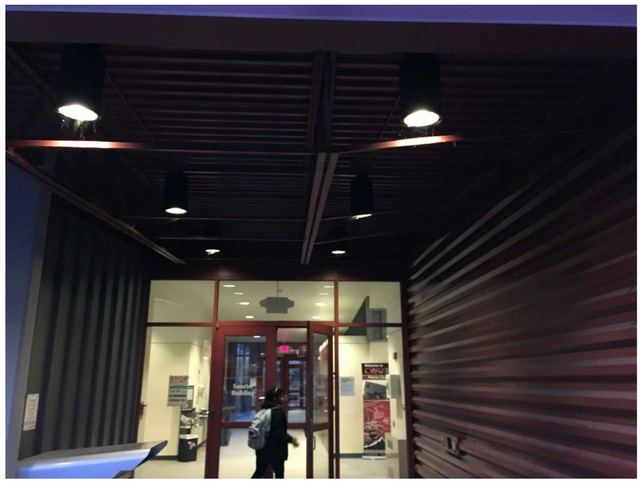


2 FS-E8.01 FIXTURE BS2
SCALE: NONE

3 FS-E8.01 FIXTURE BS3
SCALE: NONE



4 FS-E8.01 FIXTURE BS4
SCALE: NONE



5 FS-E8.01 FIXTURE BS5
SCALE: NONE

6 FS-E8.01 FIXTURE BS6
SCALE: NONE

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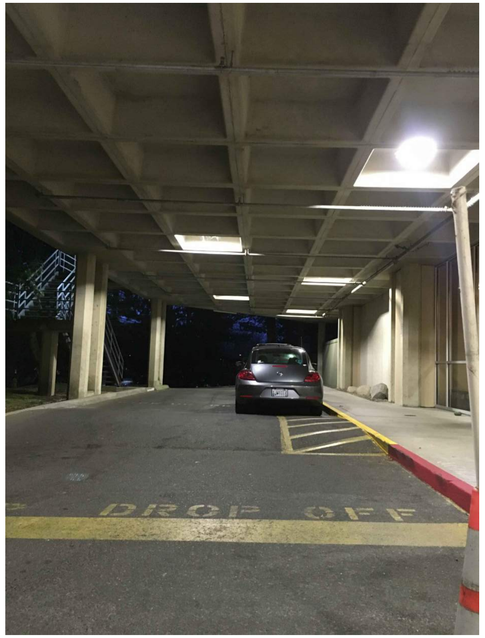
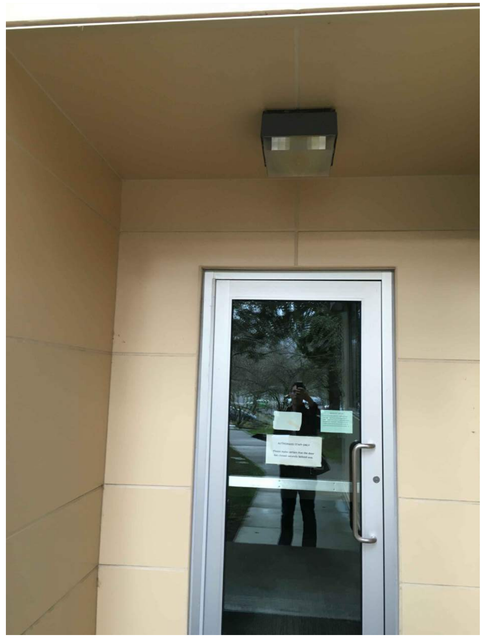
SHEET TITLE
FORT STEILACOOM
EXISTING LIGHT
FIXTURE PHOTOS

SHEET NUMBER
FS-E8.01

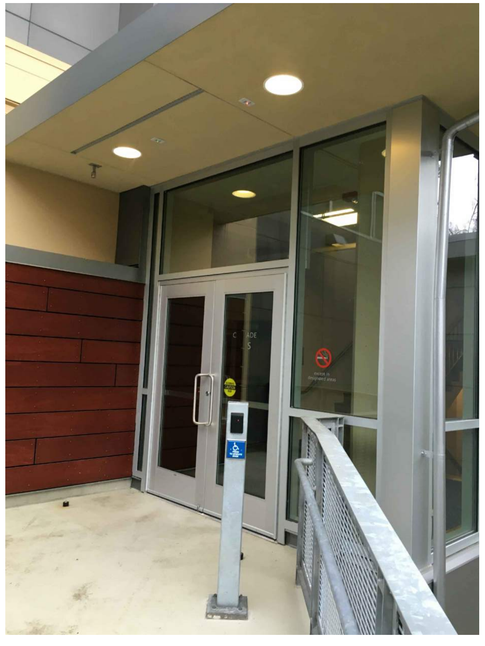


1 FS-E8.02 FIXTURE BS7
SCALE: NONE

2 FS-E8.02 FIXTURE BS8
SCALE: NONE



3 FS-E8.02 FIXTURE BS9
SCALE: NONE



4 FS-E8.02 FIXTURE BS10
SCALE: NONE

5 FS-E8.02 FIXTURE BS11
SCALE: NONE

6 FS-E8.02 FIXTURE BS12
SCALE: NONE

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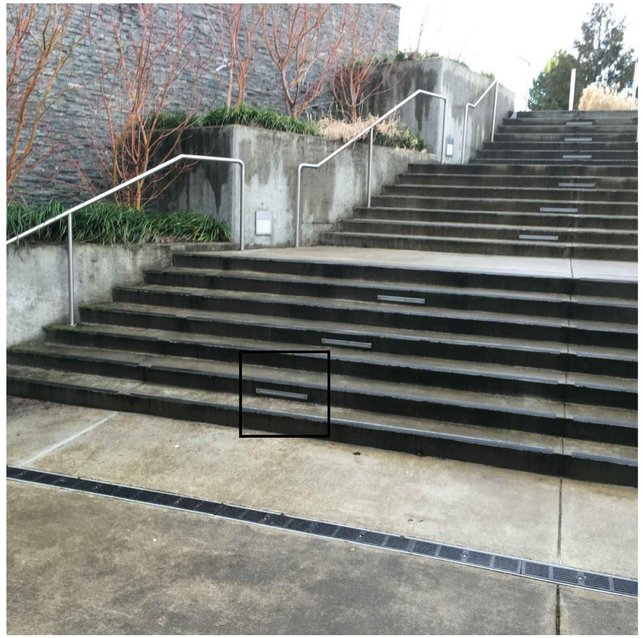
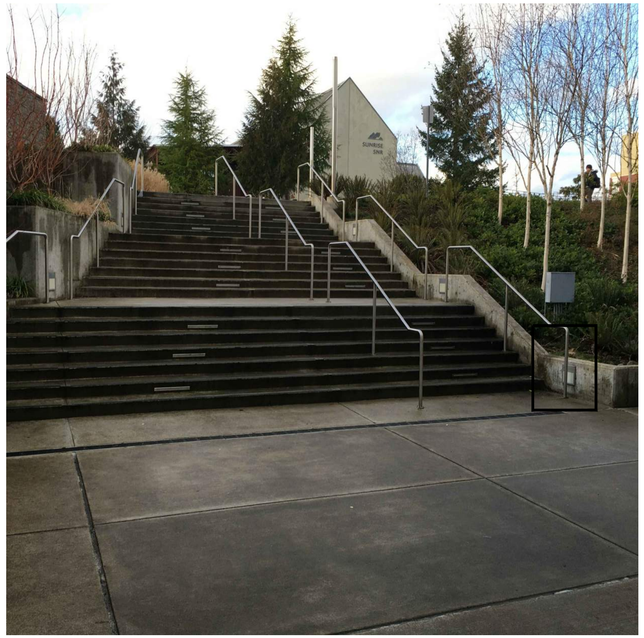
FORT STEILACOOM
EXISTING LIGHT
FIXTURE PHOTOS

SHEET NUMBER
FS-E8.02



1 FS-E8.03 FIXTURE BW1 & BW8
SCALE: NONE

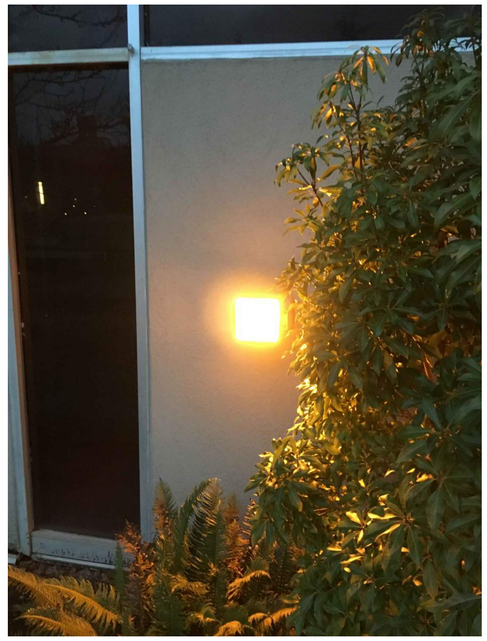


2 FS-E8.03 FIXTURE BW2 & BW9
SCALE: NONE

3 FS-E8.03 FIXTURE BW3
SCALE: NONE

4 FS-E8.03 FIXTURE BW4
SCALE: NONE

5 FS-E8.03 FIXTURE BW5
SCALE: NONE



6 FS-E8.03 FIXTURE BW6
SCALE: NONE

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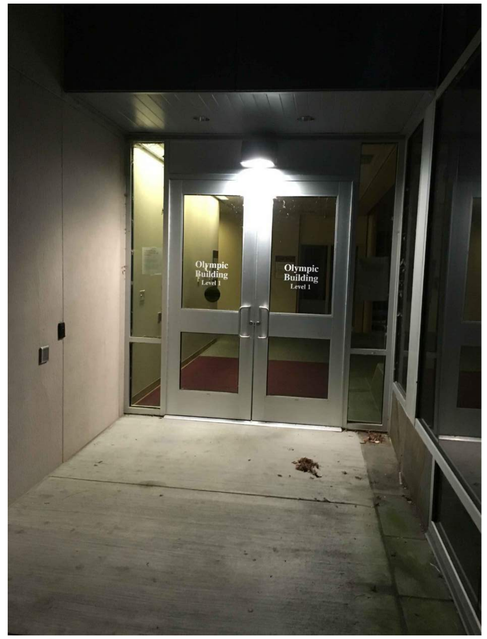
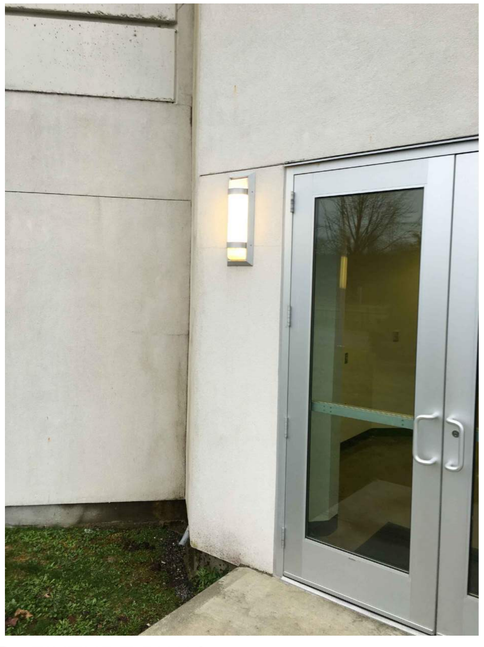
EXISTING LIGHT
FIXTURE PHOTOS

SHEET NUMBER
FS-E8.03



1 FS-E8.04 FIXTURE BW7
SCALE: NONE



2 FS-E8.04 FIXTURE BW10
SCALE: NONE

3 FS-E8.04 FIXTURE BW11
SCALE: NONE

4 FS-E8.04 FIXTURE BW12
SCALE: NONE

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FORT STEILACOOM
EXISTING LIGHT
FIXTURE PHOTOS

SHEET NUMBER
FS-E8.04

1 FS-E8.05 FIXTURE BW13
SCALE: NONE

2 FS-E8.05 FIXTURE G1
SCALE: NONE

3 FS-E8.05 FIXTURE G2
SCALE: NONE

4 FS-E8.05 FIXTURE G3
SCALE: NONE

5 FS-E8.05 FIXTURE G4
SCALE: NONE

6 FS-E8.05 FIXTURE G5
SCALE: NONE

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FIXTURE PHOTOS

SHEET NUMBER
FS-E8.05

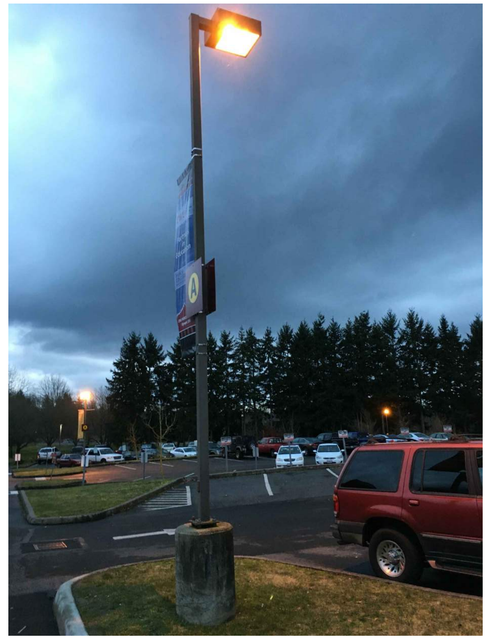
1 FS-E8.06 FIXTURE P1
SCALE: NONE

2 FS-E8.06 FIXTURE P2 & P3
SCALE: NONE

3 FS-E8.06 FIXTURE P4
SCALE: NONE

4 FS-E8.06 FIXTURE P5
SCALE: NONE

5 FS-E8.06 FIXTURE P6
SCALE: NONE



6 FS-E8.06 FIXTURE P7
SCALE: NONE

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t: 206.448.3376 w: hargis.biz
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PROFESSIONAL STAMP

PIERCE COLLEGE
SITE LIGHTING STUDY

FORT STEILACOOM

9401 Farwest Drive SW
Lakewood, WA 98498

KEY PLAN

DATE	06/24/2016
PROJECT NO.	15-026
DRAWN BY	JPH,TSV
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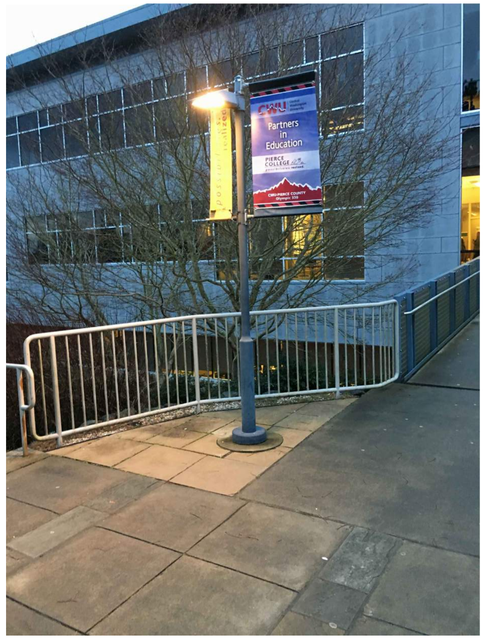
SHEET TITLE
FORT STEILACOOM
EXISTING LIGHT
FIXTURE PHOTOS

SHEET NUMBER
FS-E8.06



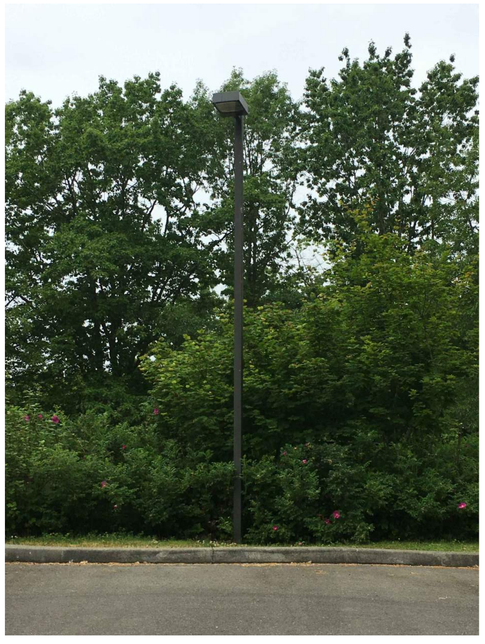
1 FS-E8.07 FIXTURE P8
SCALE: NONE

2 FS-E8.07 FIXTURE P9
SCALE: NONE

3 FS-E8.07 FIXTURE P10
SCALE: NONE

4 FS-E8.07 FIXTURE P11
SCALE: NONE

5 FS-E8.07 FIXTURE P12
SCALE: NONE



6 FS-E8.07 FIXTURE P13
SCALE: NONE

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t: 206.448.3376 w: hargis.biz

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FIXTURE PHOTOS

SHEET NUMBER
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1 FS-E8.08 FIXTURE P14
SCALE: NONE

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seattle, washington 98101
t 206.448.3376 w hargis.biz

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SHEET NUMBER
FS-E8.08