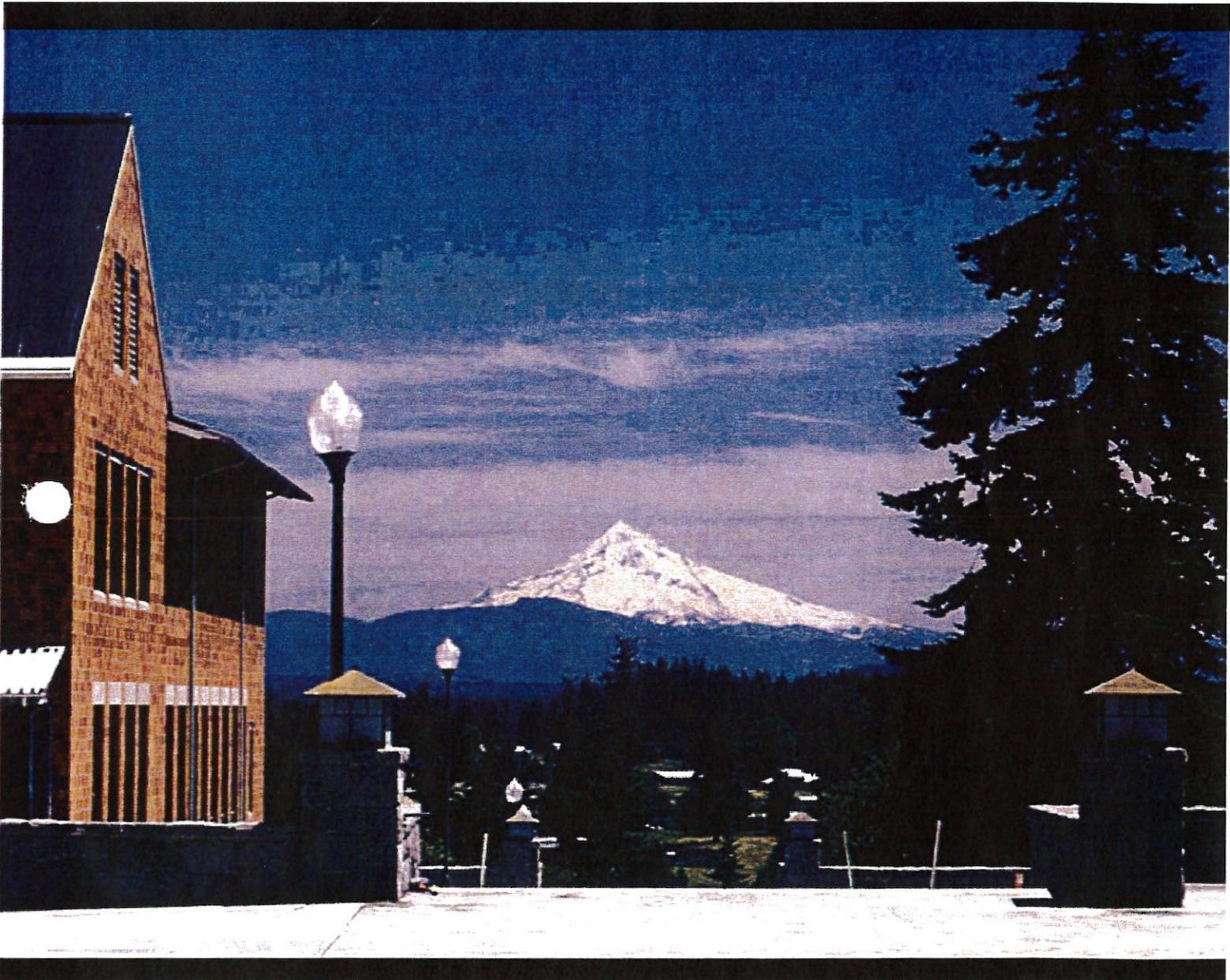


Washington State University Vancouver
SUPPLEMENTAL DESIGN STANDARDS



Washington State University Vancouver
SUPPLEMENTAL DESIGN STANDARD
May 2008, Updated April 2018 and July 2020

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Washington State University Vancouver
S U P P L E M E N T A L D E S I G N S T A N D A R D S
May 2008, Updated April 2018 and July 2020

PART ONE: OVERVIEW

INTRODUCTION

The Washington State University Uniform Design Standards (Uniform Standards) as available on the www.cpd.wsu.edu website, are intended to provide direction to the planning, design, and construction of university facilities statewide. Those standards recognize and endorse the existence of supplemental requirements unique to the regional campuses. The Washington State University Vancouver Supplemental Design Standards contained in this document are intended to complement the statewide Uniform Design Standards, while addressing specific local influences.

Where conflicts should arise as a result of these Supplemental Design Standards, established building codes as adopted by Clark County Washington shall first take precedence. As a general rule, these Supplemental Design Standards shall take precedence, where conflicts with the Uniform Standards should arise.

INSTITUTIONAL MISSION

The Vancouver campus of Washington State University has developed a unique position among higher education institutions in the area. On one level, WSU Vancouver is a vital part of a regional campus system. On the other, it is a place-dependent, local campus that relies on community partnerships. As a public, land grant and research institution of distinction, Washington State University enhances the intellectual, creative, and practical abilities of the individuals, institutions and communities it serves by fostering learning and inquiry in all forms.

Washington State University Vancouver is an engaged research university dedicated to offering premier undergraduate and graduate experiences and sees the educational endeavor as student-centered, relevant and purposeful. Faculty, students and community are partners in actively seeking connections within and across disciplines, and collaboratively engaging as lifelong learners in a technologically and culturally complex world. Since first opening the campus in 1996, WSU Vancouver has consistently addressed all three aspects of its mission. Future development of the campus must continue to anticipate and support these mission objectives.

DEVELOPMENT AUTHORITY

The Department of Capital Planning and Development has management authority over the long-range planning, budgeting, design, and construction of university facilities. This responsibility

extends to the development, updating, and consistent application of state, and university planning and construction standards, and the overall management of major capital development statewide.

At WSU Vancouver, the local office of Capital Planning and Development has first line responsibility for local development including direct interaction with campus executives and with local jurisdictions.

MASTER PLANNING



The original 1992 WSU Vancouver Campus Master Plan outlined concepts and guidelines for developing the siting, orientation, and form of campus facilities. In the years since the Master Plan was published, the campus has grown and evolved within the scope of the Plan. In addition, further study of the site and existing facilities continues to inform campus design.

The Master Plan was updated in 2001, 2007, and 2018 to provide more precise definition of the open spaces along the view corridors; development of entry and arrival points on the campus through the placement of buildings and landscaping; separation of pedestrian and vehicular circulation routes; and definition of the hierarchy of interconnected outdoor spaces.

DESIGN PHILOSOPHY

The Vancouver campus differs from the Pullman campus in many important ways. Situated north of the city of Vancouver on the edge of a rapidly developing suburban hub, the campus is designed to serve a largely urban commuter population of students who are focusing on undergraduate and graduate study. Campus facilities are heavily used during day and evening hours and there is emphasis on interaction with the local community in civic and cultural, as well as academic areas.

The campus is relatively new and physical development has a strong consistency of scale and design. Buildings can be generally described as extroverted in their architectural character; somewhat informal and designed to support an interdisciplinary learning environment. The use of red brick exteriors recalls the traditional materials of the Pullman campus, while a smaller building scale and use of pitched roofs is reflective of suburban surroundings at the Vancouver campus. Locally quarried Camas Basalt stone used as a veneer on low retaining walls and as a base on selected buildings, is another gesture towards the southwest Washington region.

Successive new buildings have been more complex than their predecessors as the need for academic spaces has become more specialized. Informal study spaces have also become an important component of new academic facilities. Flexibility in design must remain a high priority as economic realities place additional pressure on already high demands for construction and operating economy. Within this set of conditions, continued application of established design principles will be emphasized, while

encouraging further evolution and design diversity. Washington State University is proud of the high standards of design that have been employed at the Vancouver campus and expects that future development will continue to contribute towards building this important heritage, rather than compete with it.

PART TWO: PLANNING CRITERIA

REFERENCES

The following documents will govern the design of campus facilities as applicable:

1. WSU Vancouver Campus Master Plan, September 1992; WSU Vancouver Campus Master Plan Supplement, January 2001; Master Plan Update 2007.
2. Supplemental Environmental Impact Statement for Washington State University at Vancouver, WA, February 24, 1993; Updated SEIS -2007.
3. Washington State University Facilities Services Design Standards, December 2018, at <https://facilities.wsu.edu/category/design-standards/>
4. All WSU Vancouver campus existing developments, site work, and buildings project record drawings and specifications, as needed for reference.
5. Major Projects Pre-Design Manual, State of Washington Office of Financial Management, latest edition.

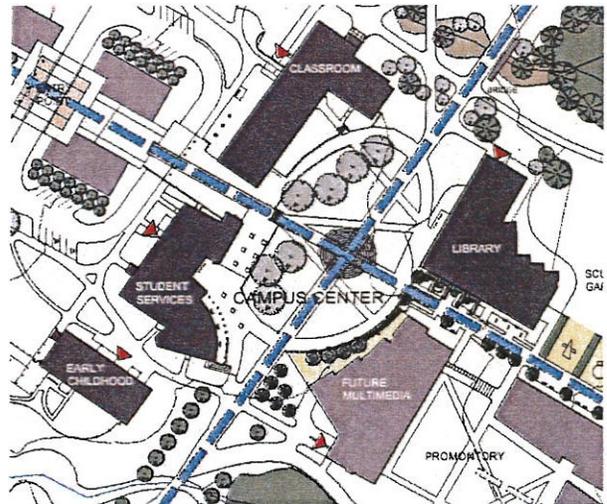
LOCAL JURISDICTIONS

1. Clark County Community Development:
 - a. Comprehensive Plan
 - b. Zoning Ordinances
 - c. Growth Management Plan
 - d. Building Codes
 - e. Emergency Services
 1. Fire
 2. Police
 3. Ambulance
 - f. Storm Drainage
 - g. Site Plan Review
 - h. Building Plan Review and Permitting
 1. State Environmental Policy Act (SEPA) Procedures
 - J. Approved Vancouver Campus Master Plan
 - k. Washington State University -Clark County Development
2. Clark Public Utilities (CPU)
 - a. Domestic water
 - b. Electrical power

3. Northwest Natural
 - a. Natural gas
4. WSU Information Technology (IT):
 - a. Telecommunications; voice, data, video services, audio visual
 - b. Coordinate with WSU Vancouver Campus CIO at 360-546-9172.
5. Clark Regional Wastewater District (CRWD):
 - a. Sanitary sewer
6. Washington State Energy Office (WSEO)
7. Washington State Department of Ecology (DOE)
8. Washington State Department of Labor & Industries (L & I):
 - a. Electrical Plan Review
 - b. Permit
9. Southwest Washington Clean Air Agency (SWCAA)
 - a. Permits for gas fired equipment
 - b. Coordinate contact through Vancouver EH&S office at 360-549-9706
 - c. <http://www.swcleanair.org/>
10. Clark County Health Department
11. Others as determined during the course of planning

MASTER PLAN CONFORMANCE

1. See Washington State University Vancouver Campus Master Plan, September 1992; approved by Clark County as the Master Development Plan in accordance with University District zoning. See also WSU Vancouver Campus Master Plan Updates to the provisions therein as applicable to building specific circumstances, related site work, circulation, and other development characteristics.
2. Goals, in general:
 - a. Complete the exterior spaces created by, and adjacent to, building sites.



- b. Complement established adjacent activities.
 - c. Strengthen the organization of campus facilities as described in the Master Plan updates.
 - d. Respect existing natural resources and reinforce the open space concept.
3. Considerations, in particular:
- a. Complete the exterior spaces:
 - 1. Continue the development of the Mount Saint Helens and Mount Hood axis compliance with the Master Plan.
 - 2. Coordinate the location of building entries with the campus exterior pedestrian circulation system and adjacent buildings.
 - 3. Consider the relationship of each new building's location, footprint, and massing existing and future buildings, parking areas, site amenities, and adjacent open spaces.
 - 4. Create building massing that is consistent with that of the existing buildings.
 - b. Complement the activities:
 - 1. Support occupants' activities with interior and exterior amenities such as seating, lighting, trash and recycling receptacles, electrical power, and computer network connections.
 - 2. Condition outdoor use spaces according to microclimatic conditions. Provide protection from weather to exterior walkways, entrances, and portions of the bicycle parking.
 - 3. Use building forms and materials that blend with aesthetics established in the original development and advance the architectural quality of the campus.
 - 4. Locate building program areas that support social gathering activities so that they strengthen interior and exterior pedestrian corridors.
 - c. Strengthen the core of the campus:
 - 1. Respect the Mount Saint Helens and Mount Hood view corridors.
 - 2. Reinforce the Campus Center with hardscape materials and lighting.
 - 3. Connect the Grove, Square, View, Climb, and Meadow to the walkway system with appropriate pedestrian access points.
 - 4. Develop the Grove and Square open spaces and associated transition spaces in their entirety and with consideration for the future spaces to be developed.
 - d. Reinforce existing natural resources and the established open space concept:
 - 1. Provide wind breaks and maximize solar exposure for exterior seating and casual assembly areas.
 - 2. Capitalize on interior-exterior visual relationships.
 - 3. Employ effective storm water and erosion control during and after construction of buildings, hardscape and drainage systems.

SUPPLEMENTAL PROVISIONS

The following items supplement and elaborate on the provisions in preceding references to WSU Vancouver Campus Master Plan:

1. General:

- a. Minimize disruption of existing activities and landscape. Make transition from new work to existing conditions compatible in grades, materials, and finishes.
- b. Include safety and security provisions in all aspects of the work including design, construction and operations.
- c. Comply with Clark County ordinances and regulations and the requirements of other agencies with jurisdiction and those that provide services.
- d. Conform to WSU Construction Standards and “Space Guidelines“, revised 7/31/98, and as they may be subsequently revised.
- f. Adhere to relevant energy guidelines adopted by WSU, and exceed standards wherever possible.
- g. Consider and evaluate alternative solutions to siting, layout, and related planning issues.

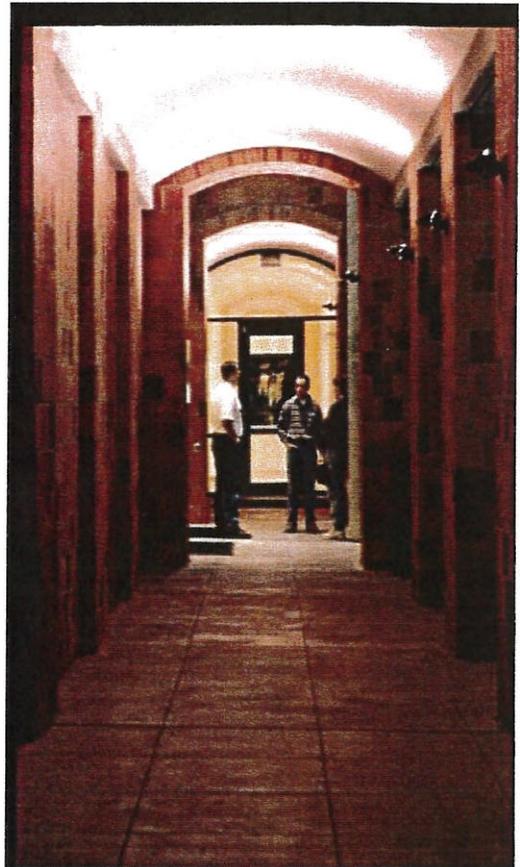
2. Infrastructure coordination: Plan for appropriate interface with existing infrastructure elements and the buildings, surrounding site work, and utilities.

3. Circulation:

a. Pedestrian exterior:

1. Accommodate interior and exterior routes
2. Arrange the buildings to encourage pedestrian traffic flow and access. Avoid making the buildings circulation barriers.
3. Provide paved walkways and courtyards to building entrances along the most direct routes from adjacent buildings and parking lots. Avoid footpaths across green areas or the necessity for landscape barriers.
4. Use building overhangs, throughways and canopies to facilitate outdoor movement and provide weather protection.
5. Provide adequate lighting for safety and security at entrances and along circulation routes. Design pedestrian lighting to enable personal recognition rather than illuminating paving.
6. Provide barrier-free access to all walkways and exterior areas.
7. Provide adequate grading and drainage for all exterior pedestrian pathways

b. Pedestrian interior:



1. Plan lobbies, public space, classrooms, toilet facilities and similar areas so that they can remain open for after-hours use when the remainder of the building is closed.
 2. Design corridors to be easily cleaned, appropriately lit (preferably day- lighted) and open.
 3. Vary the width of major circulation corridors to accommodate surge use, add interest, and create spaces for displays, observations, study alcoves, and seating.
 4. Locate high use facilities near building entrances, along major circulation corridors and ground floor access levels.
 5. Locate offices to allow privacy and acoustic isolation without discouraging access.
- c. Vehicular movement:
1. Provide service and delivery access to building, with related parking. Locate service facilities so that noise will not affect building functions.
 2. Coordinate location of emergency vehicle access, fire department connections, post indicator valve, and fire hydrants, with local fire code authority.
 3. Provide for bicycle parking near building entrances, preferably with shelter from precipitation.
 4. Provide adequate (based on planned occupancy) number of ADA spaces near building for occupant access – even if not mandated.
 5. Provide infrastructure for two dual car charging stations (four parking stalls). Chargepoint CT 4000 or owner approved equivalent if parking is provided <https://www.chargepoint.com/products/guides/>
- d. Vertical movement:
1. Provide direct, easily found routes for entering buildings and using the stairs or elevators to go from floor to floor.
 2. Provide a minimum of 2 elevators per building, with one near the entrance close to ADA parking.
4. Assignable to gross square footage conversion:
- a. Assignable to gross square footage ratio: meet and exceed applicable standards of the American Institute of Architects (AIA) document D-101, per Office of Financial Management (OFM) Predesign Manual.
 - b. Monitor the planning process for budget control throughout.
5. Architecture:
- a. Refer to Design Guidelines in the WSU Vancouver Campus Master Plan and Supplement, as applicable.
 - b. Respect and enhance existing buildings, central plaza, view corridors, and other important open spaces. Use materials, colors, scale and massing to complement adjacent buildings and the campus as a whole. Prominent locations require careful consideration of the established character of the campus core.
 - c. Fenestration: Include thermal glass. Use sun control provisions on south, east, and west elevations to minimize solar heating in summer and capitalize on solar gain in winter. Conform to current exterior wall thermal factors, per Washington State Energy Code, and exceed these where practicable.
 - d. Plan buildings that look complete when finished, with no obvious surfaces awaiting future expansion.
 - e. Design the elements of the buildings, including envelope and mechanical and

- electrical systems that give maximum consideration to energy conservation.
- f. Emphasize building entrances, but avoid “front” and “back” connotations. Buildings should be multi-directional wherever conditions allow.
 - g. Establish entrances, surrounding paved areas, and site furniture of appropriate human scale.
 - h. Roofscape:
 1. Design roofs with concern for aesthetic appearance as viewed from neighborhoods at higher elevations.
 2. No mechanical equipment may be exposed on roof surfaces, except for boiler stacks and plumbing vents.
 3. Include support provisions for installation of communication antennae and other equipment as applicable.
 4. Provide fall protection systems for proper tie-off.
 5. Design roof to minimize risk at entrances from falling ice and snow.
 6. Design to minimize insect infiltration.
6. Layout and design:
- a. Provide building footprint sizes, spacing, and massing similar in scale to the existing campus buildings.
 - b. Maintain the integrity of building functions by separating “noisy” and “quiet” areas.
 - c. Provide flexible space planning design to accommodate evolving needs. Consider modular concepts for flexibility, economy, and expansion purposes.
 - d. Include partitions, ceiling systems, and utility arrangements that are easily accessible and adaptable to change. System components should be standardized and easily replaced, if necessary.
 - e. Incorporate disabled access provisions in accordance with state and federal requirements. Provide power assisted devices on all major restroom and entrance doors. Where possible, design access to bathrooms without doors.
 - f. Provide one gender neutral bathroom with baby changing equipment for each building with power operated door opener on ground floor or floor of primary entrance.
 - g. Provide elevator access to all floors and mechanical levels.
 - h. Provide 2 elevators per building with one close to entrance near accessible parking.
 - i. Provide a receiving room, central custodial and custodial closet spaces in each building as required by WSU Construction Standards.
 - j. Service access to building loading docks:
 1. Provide suitable architectural screening and landscaping to obscure service areas from public spaces, entrances, circulation corridors, and open space circulation corridors, and open space circulation.
 2. Allow space for trash containers. Number, size, and type of containers to be determined as appropriate for building needs.
 3. Allow a minimum 16' overhead clearance, maneuvering room, and level space for delivery truck use.
 4. Allow space for two parked service vehicles at a minimum at each building.
 5. Locate air supply away from the loading area to avoid fumes.
 - k. Provide mechanical rooms and utility areas with adequate space for equipment and access for maintenance and replacement.

1. Separate air supply and exhaust by appropriate distances horizontally and orient properly in terms of wind direction to prevent recirculation of exhaust air, both within the building and in surrounding buildings.
 - m. Provide telecommunication provisions in accordance with current standards:
 1. Provide for voice, data, video, security, and control signal systems.
 2. Include entrance facility, equipment rooms, and closets on all floors (stacked vertically). Closets and equipment rooms shall be of appropriate sizes for future expansion, centrally located, with immediate access to hallways.
 3. Provide easily accessible horizontal cable trays below the ceilings through-out the building.
 4. Isolate all voice, data, video & control system spaces from mechanical systems, and especially from water and steam lines.
 - n. In each building, provide electrical power and voice & data outlets for "card" charging for two vending machines, to be located in a public area, easily accessible to building occupants and convenient for deliveries. Provide recycle and trash receptacles immediately adjacent to vending machine.
 - o. Provide building-wide fire alarm and fire protection systems.
 - p. Provide compatible keyless access system at major entrances and service areas
7. Campus criteria:
- a. Orient windows and doorways towards panoramic views and short-range views.
 - b. Establish a safe dark hours environment. Light entries and exposed pathways and avoid sharp contrasts in lighting levels.
 - c. Provide benches, bike racks, trash and recycling containers, and light poles; achieve an orderly appearance of the spaces around buildings.
 - d. Improve the space around new buildings to interface and integrate with work that was accomplished under previous construction and infrastructure improvements.
 - e. Provide recessed walk-off flooring as per the WSU Design Guidelines Section 4. Seek to reduce slips, trips and falls.
8. Landscaping:
- a. Plant areas disrupted by the construction; in a manner consistent with existing landscape.
 - b. Include rough and fine grading, soil preparation, improved topsoil, automatic irrigation and planting.
 - c. Provide a 2" communication conduit from any new irrigation panel to the telecom room or cable tray.
 - d. Provide simple groups and masses of reliable plants, shrubs, and trees suitable for the climate, topography, locally wet, heavy soil conditions, etc. Preference should be given to native species where possible.
 - e. Consider low maintenance landscaping to the extent possible without adversely impacting the quality of the campus setting.
 - f. Favor convenient pedestrian circulation through design of open spaces between buildings, courtyards and entrance approaches.
 - g. Plan for plantings along pathways and other circulation routes that will not interfere with lighting for safe passage.
9. Construction and environmental requirements:

- a. Meet current state and local requirements and policies with respect to project design. Where state or local codes and ordinances differ, the most severe standard must be met by the design. Design documents shall confirm and comply with all applicable codes and ordinances.
 - b. Prepare construction contract documents as necessary to meet requirements for Clark County Building Permits, SWCCA permits, and regulations of other agencies with approval jurisdiction. Provide early and ongoing close coordination with county building officials and other agency representatives for proper reviews and timely approvals during design and construction document preparation. Permits will be required and the fees shall be included in the project budget.
 - c. Although most design standards and environmental requirements will be met through compliance with published rules, regulations, codes and ordinances, the architects will also apply subjective judgment in the best interests of WSU Vancouver.
 - d. Coordinate the following:
 1. Storm drainage:
 - a. Drainage Design Report
 - b. Revise Phase I Storm Water Pollution Prevention Plan (SWPPP), if required.
 - c. On-site retention and detention facilities.
 - d. Construction phase erosion control.
 2. Sanitary sewer connections
 3. Water service, with backflow prevention as required
 4. Electrical power protection
 5. Natural gas safeguards
 6. Point and area air pollution sources
 7. Solid and hazardous waste storage and disposal
 8. Exhaust and supply air contamination
 9. Light, air, odor and noise
 10. Fire hydrants
10. Expansion possibilities: Locate and construct buildings to allow for horizontal expansion, if required. Vertical expansion is not desirable.
11. Energy conservation: Adhere to relevant energy guidelines adopted by WSU and exceed standards wherever possible. Emphasize energy conservation measures and incorporate provisions, as appropriate. Participate in all available rebate incentive programs. WSU Vancouver is seeking to develop water rights that are available on campus and may be utilized as a non-potable source for gray water, irrigation, and geo-thermal cooling. Seek to incorporate into design where cost effective. Provide estimated return on investment.
12. Graphics:
- a. Provide building name signs at entrances to match existing system.
 - b. Provide interior and exterior signage to match the existing campus system in typeface, materials, colors, letter and number styles, locations, and mounting.
 - c. Provide faculty office, conference room, and faculty support signage to identify number, function, and occupant using both text and Braille. Locate signs door using a system that is easily replaceable without marring walls or finished

surfaces.

GENERAL CONSIDERATIONS

1. Architectural:

- a. Provide a welcoming and comfortable atmosphere in lobby areas, with appropriate seating, directional signage and displays.
- b. Provide adequate building storage for supplies, maintenance, and extra stock building materials, located conveniently and easily accessible.
- c. Provide opportunities for the use of plants, banners, and artwork to enliven spaces.
- d. Provide acoustical room treatments appropriate to the primary use of each building space. Sensitive and noisy areas should have additional acoustical isolations (e.g. offices, classrooms).
- e. Wherever practicable, provide a limited number of lockable operable windows in offices, for building environment, maintenance, and window washing reasons.
- f. Furnish appropriate interior window coverings of either vertical blinds to match other buildings on campus or roller shades such as heavy duty Mecho Roller Shades. Consult with WSU Vancouver Facilities.
- g. Provide institutional quality carpeting, wherever carpeting is approved and specified.
- h. Provide appropriate space and support for public art (0.5% of construction cost, designated by state law, procured outside of the construction contract).
- i. Provide an engineered 100% fall protection system for all roof areas.



2. Mechanical

- a. General:
 1. WSU standards have priority over industry standards.
 2. Metering provisions are to conform to utility provider and WSU requirements.
 3. Where desirable, consider standardization and continuity in the use of mechanical and electrical equipment items that were provided through product approval in existing construction.

4. Connect the building's utilities to the existing underground utility corridor and other pathways including central chilled water, electrical power, telecommunications, domestic water, irrigation water, natural gas, and sanitary sewer services.
5. Provide extra capacity to mechanical and electrical systems for future flexibility.
- b. Plumbing:
 1. Comply with UPC guidelines to provide the appropriate number and distribution of public restrooms and fixtures; provide accessibility by person with disabilities.
 2. Provide refrigerated drinking fountains in building hallways with bottle filling feature, one fountain at standard height the other with bottle filler at ADA compliant height.
 3. Provide self-priming floor drains in toilet rooms, janitor closets, mechanical rooms, and similar spaces.
- c. HVAC:
 1. Building to have at least two individual gas fired boilers for heating with multi-boiler controller.
 2. Consider similar functions, exposures, and hours when grouping building spaces on individual HVAV systems.
 3. Provide year-round humidity control as required per ASHRAE Standard S S-74
 4. Provide options for economical expansion of air supply and exhaust capacities for future conditions.
 5. Provide after-hours cooling for rooms with excessive heat loads and sensitive temperature requirements, including but not limited to elevator control room, telecommunication and rooms with electrical transformers.
 6. Adjust HVAC and operational systems' components to eliminate excessive vibration, noise, air movement, odors, and maintain safety:
 - a. Vibration: All major service equipment (compressors, air handling systems, duct work, etc.) must be mounted on isolation pads or hangers in such a manner that there is minimum transmission of vibration to the building.
 - b. Noise: Acoustical specifications of equipment should not exceed 75-80 db at the source.
 - c. Provide seismic bracing for suspended equipment.
 7. Hours of operation:
 - a. Provide general building systems that operate approximately 7am-11 pm Monday through Friday, and 8am-5pm on the weekends (and as otherwise required for special occasions).
 - b. Normal utilization during the evening hours (i.e. 4-10 pm) is anticipated.
 8. Provide a minimum of 15-20 cfm per person fresh air, with volume requirements based on buildings' occupant load.
 9. Controls:
 - a. Building environmental control systems and equipment will be controlled and monitored by Siemens, or Alerton through an on-site computer, printer and data link to WSU host computer.
 - b. In addition, direct digital control MBC's, as required by WSU Construction Standards, Section 15950, should provide peak demand

- limiting, start-stop optimization and duty cycling of these systems.
- c. The offices and classrooms will have irregular hours of operation and will require individual temperature controls.
- d. All DOC controlled system equipment to be capable of "Bac Net" operation.

3. Electrical:

- a. Power:
 - 1. Lighting: Provide light levels consistent with industry guidelines and Washington State Energy Code. Accommodate basic lighting needs for gray overcast days; consider psychological impacts of different types of artificial illumination. In order to minimize re-lamping stock requirements, specify similar lamps as in existing construction. Provide energy control sweeps and electronic control of building lighting during normal operating hours.
 - 2. Emergency power: Include circuits and wiring for lighting and other systems that are essential for safety, security, and critical operations. Connect these to power service from the central emergency generator.
- b. Low-Voltage:
 - 1. Provide adequately-sized and easily-accessible pathways, conduits, cable trays, chase space, and access to allow fiber optic and other cabling for voice, data, video, audio, controls, and other low voltage systems per WSU standards for current and future needs.
 - 2. Provide maximum electrical and telecommunications provisions for audio-visual equipment throughout the building. Provide connections to central campus system.
 - 3. Provide rough-in conduits for electronic card key access on selected doors to allow for future security control based on using standard faculty, staff, and student identification cards.
 - 4. Provide Simplex wall-mounted clocks on central system in all public areas. Clocks in classrooms to be mounted on the back wall of the room.
 - 5. Public telephones: no longer provided as per Pullman standards
- 4. Provide building-wide fire alarm and fire protection system installed in accordance with applicable codes, Clark County Fire Marshal, and WSU Standards:
 - a. Fire sprinkler system installed throughout the building in accordance with NFPA standards.
- 5. Fire alarm system installed with heat and smoke detection devices:
 - a. Alarm system to be addressable, with alarm verification capability to monitor fire sprinkler system.
 - b. Fire department panels connections, specifications, and locations subject to approval by local fire code authority.
 - c. Fire alarm to be by Simplex to match existing system.
 - d. Integrate emergency public address system with Fire Alarm.
- 6. Provide outdoor light poles and lamps to match existing lights. Manage exterior lighting through a combination of light sensitive photocell and time managed controllers.
 - a. Valmont poles with Cyclone fixtures with WSU Standard green color.
 - b. 12 ft. tall at campus pathways, LED equivalent of 100-watt lamp.
 - c. 14 ft. tall at roadways and parking areas, LED equivalent of 150-watt lamp.

7. Provide electrical receptacle in all handicapped stalls in women's restrooms.

PART THREE: SPECIFIC REQUIREMENTS

INTRODUCTION

Provisions contained within this section are intended to identify technical requirements specific to WSU Vancouver. Although these Supplemental requirements appear in a CSI index format, they are not a substitute for comprehensive technical specifications required for individual projects.

PROPRIETARY REQUIREMENTS

Technical requirements within this section are not intended to be unduly proprietary. Except in specifically noted circumstances where propriety is indicated to maintain overall continuity of campus systems, the use of manufacturer names and product numbers are intended to establish minimum requirements for type, quality, appearance, and overall performance.

TECHNICAL REQUIREMENTS

DIVISION ONE: GENERAL REQUIREMENTS

See Washington State University Division One Uniform Specifications and the following WSU Vancouver Supplemental specification sections for general requirements as applicable:

01 50 00: CONSTRUCTION FACILITIES & TEMPORARY CONTROLS

No construction deliveries are to be allowed via the main campus entry on Salmon Creek Avenue.

01 58 00: PROJECT IDENTIFICATION

Project identification signs shall be 4' wide x 8' high professionally painted sign panel on painted 4x4 posts set into ground. Sign to include graphic of the project and approved text and layout. Construction directional signs (when required) shall be 2'x10"H professionally painted sign panel on painted 2x4 posts set into ground.

DIVISION 3: CONCRETE

No Supplemental Requirements

DIVISION 4: MASONRY

04 21 00 BRICK MASONRY

The use of brick masonry as an exterior building material symbolizes the historical connection

to the Pullman Campus and provides a suitable contrast to the residential construction that borders the Vancouver Campus. Skillful placement of textured units among smooth faced units, can create subtle accents that emerge and recede with changing light conditions.

Brick Units - 7 1/2x 3 1/2 x 7 1/2 wire cut, "Lightly Flashed Wheat" color; Mutual Materials or Pumalite. Rugfaced units of same size and color.

04 40 00 STONE MASONRY

The use of native basalt stone is encouraged as a unifying landscape element.

Stone - Coursed and roughly squared, Camas Grey andecite or a kind that previous use has proven to be satisfactory for the purpose indicated.
 Stone to match walls on central quad of the WSU Vancouver Campus.

Face Sizes: 40 percent of stones between 150 and 240 sq. in, 25 percent of stones between 100 and 150 sq. in, 22 percent of stones between 72 and 100 sq. in., and the balance of at least 9 sq. in.

Nominal Thickness: Four inches

DIVISION 5: METALS

Roof structures shall be framed with metal or steel support systems. No wood trusses are allowed.

DIVISION 6: WOOD, PLASTICS, AND COMPOSITES

06 20 00 FINISH CARPENTRY AND MILLWORK

Hardwoods used for naturally finished interior millwork, casework, and wood doors shall be vertical grain, plain sliced select white maple from a certified renewable source; clear, transparent wood finish, USZGD satin chrome hardware finish. Provide chair rail in conference rooms.

DIVISION 7: THERMAL AND MOISTURE PROTECTION

07 61 00 PREFORMED METAL ROOFING SYSTEMS

Simple sloped roof shapes with a predominant pitch of approximately 6:12 provide a strong unifying element to campus buildings while relating well to the residential character of developments that border the campus. As a general rule, major campus buildings should follow this profile.

Roofing 24 ga alumi-zink alloy-coated steel with fluoropolymer coating; colors to match or compliment established dark green color with University approval

Structural Roofing 16 gauge at roof canopies

Roof Anchor system permanent horizontal monorail system; similar to ProBel Enterprises (800) 461-0575

Snow Guard polycarbonate polymer molded shapes; Sno-Gem, Inc. (888) 766-4367

DIVISION 8: DOORS AND WINDOWS

08 14 00 WOOD DOORS

Solid wood staved core. NWWDA Standard 1-A. Grade AA select white maple face veneers with matching species at exposed edges and at wood stopped lites.

08 41 00 ALUMINUM ENTRANCES AND STOREFRONTS

Systems manufactured by Kawneer are listed to establish type, quality, appearance, and performance.

| | |
|--------------------|--|
| Storefront Framing | Fa-Set SSG Thermal |
| Entrance Doors | 350 Medium Stile Entrance |
| Finish | fluorocarbon two-coat system, dark green to match typical campus installations or complimentary color with university approval |

08 44 00 ALUMINUM CURTAIN WALL

Systems manufactured by Kawneer are listed to establish type, quality, appearance, and performance, Exterior glazed, self-supporting system; Kawneer "1600 SSG Wall".

08 51 00 ALUMINUM WINDOWS

Systems manufactured by Kawneer are listed to establish type, quality, appearance, and performance.

| | |
|--------------------|--|
| Window Types | Heavy commercial casement and side-hinged, open-in windows. Series 8225, for outside glazing. Hex-key security latches per Uniform Standards |
| Storefront Systems | Multi-plane window, Trifab VG45IT |

08 70 00 FINISH HARDWARE

A. Subject to basic requirements of the Uniform Standards, the following Hardware Manufacturers are acceptable for application as scheduled.

- | | |
|---|---|
| 1. Cylinders Lock Cores and Keys----- | Schlage Primus Everest D, note Kaba Peaks Classic "Peaks KCF", P Keyway was standard in Phase I & II buildings Schlage; Corbin/Russwin; RWA Design; |
| 2. Locks, Latches, and Deadbolt--- | Flacon LM Series Locks – JG Design Rixon |
| 3. Pivots for Aluminum Doors ----- | Stanley, Hagar, McKinney, Bommer |
| 4. Butt Hinges----- | BBB50000Series |
| 5. Exit Devices----- | Von Duprin, Precision Ape Ives, Door Controls International |
| 6. Flush Bolts, Dust Proof Strikes--- and Coordinators | Builders Brass, Quality |
| 7. Kick Plates----- | LCN, Norton Door Closer |

| | |
|-------------------------------------|-------------------------------------|
| 8. Door Closers, overhead----- | Ives, Glynn-Johnson, Builders Brass |
| 9. Door Stops, wall mounted----- | Works |
| | Ives, Glynn-Johnson, Rixson |
| 10. Holders and Stops, overhead---- | Pemko, Reese |
| 11. Gaskets, Sound Seals, ----- | |
| Automatic Door Bottoms, | |
| Thresholds & Weatherstripping | LCN |
| 12. Hold Open Device----- | |

B. Lock Cylinders and Keying:

1. Keying schedule will be developed by University Facilities Operations upon receipt of final version of the hardware schedule. Review keying system with the University and provide the type required (master, grandmaster or great-grandmaster)
 - a. Provide construction cylinders and keys. Provide cylinders required to secure building and sections of the building required to be isolated during construction.
 - b. Permanent keys shall be sent directly to Key Control, Washington State University Vancouver at Plant Services, 14204 NE Salmon Creek Ave., Vancouver, Washington 98686, by registered mail. None of these keys are to be sent to the job site. Keys will be released to appropriate project personnel for installation.
2. Metals: Construct lock cylinder parts from brass/bronze, stainless steel or nickel silver.
3. Comply with University's instructions for master keying and except as otherwise indicated, provide individual change key for each lock not designated to be keyed alike with a group of related locks; 3 keys for each lock and 5 keys for each master and grandmaster system.
4. Key Blanks: One side smooth for University to stamp University Code Numbers. Mark same side of all keys "Do Not Duplicate".
5. Key Control System:
 - a. Include envelopes, labels, and tags with self-locking key clips, receipt forms, 3-way visible card index, temporary markers, permanent markers and standard metal cabinet, as recommended by system manufacturer.
 - b. Provide TelKee RWC hinged-panel type cabinet for wall mounting. Select size of cabinet as appropriate for project.

- C. Exposed Trim Finish: Except as otherwise indicated, finish exposed parts (exposed when installed) as follows:
 - 1. Interior Doors: Satin Chrome, BHMA 626, 630, 652.
 - 2. Exterior Doors: Satin stainless steel, BHMA 630; except satin chrome on bronze, BHMA 626 where BHMA 630 not available.
 - 3. Closers on Aluminum Doors: Paint finish equal to LCN Aluminum
- D. Provide Cougar Card Access system at exterior entries, labs, office suites, main mechanical room, and tele-comm rooms.

DIVISION 9: FINISHES

09 60 00 FLOORING

- A. Provide 24" x 24" carpet tile in classrooms, offices, conference rooms
- B. Provide solid flooring (sheet marmoleum, VCT, terrazzo, tile) in all corridors and labs.
- C. Provide sealed concrete in all service areas, high traffic corridors and labs.
- D. Provide ceramic tile in all restrooms, preferably with larger size than 2"x2"

09 90 00 PAINTING

- A. The following paint systems are to be considered a minimum standard:
 - 1. Exposed structural steel -Exterior metal primer and two coats silicone alkyd enamel.
 - 2. Other exteriors metalwork -Primer and two coats solvent-based enamel
 - 3. Concrete and Exterior Plaster -Exterior water or solvent based primer and two coats water based exterior flat enamel.
 - 4. Interior Gypsum Wallboard - PVA primer and two coats water-based Satin topcoat applied with fine stippling roller. Where epoxy paint is scheduled, two coats polyamide.
 - 5. Other Interior Surfaces -Water-based primer and two coats water-based semi-gloss enamel.
 - 6. Interior Metal Work -Prime and two coats solvent-based semi-gloss enamel.
 - 7. Interior Clear Finish -One coat gloss polyurethane varnish reduced 30% for penetration, minimum one intermediate coat gloss polyurethane varnish, finish coat of satin polyurethane.
 - 8. Fire Retardant Finish -Clear FHC Class A fire retardant sealer intumescent FHC Class A varnish finish coat. Use non-intumescent and two coats solvent-based enamel interior fire-retardant coating for

Painted finishes @ plywood panels in electrical and telecommunication rooms.

B. The following colors are considered a Campus Standard. Variation from these colors is subject to University approval:

- | | |
|--|---|
| P-1. Typical Exterior Paint Color, to be used, unless indicated otherwise, at all exterior painted surfaces, including but not limited to: | Dark Green Custom color to match existing Campus Standard "Dark Green" Miller Pitt Tech 90-477 M-16854 |
|--|---|
- Performed metal roofing assemblies, aluminum window and door frame assemblies and exposed metal components;
 - Interior aluminum window and door frame assemblies and exposed metal components;
 - Adjacent incident components and fasteners to match.

Light Green Custom

| | |
|--|--|
| <p>P-2 Exterior Paint Color, to be used where indicated at exterior painted surfaces including but not limited to:</p> <ul style="list-style-type: none"> • Bottom of Type A preformed metal roofing assemblies • Adjacent incidental components and fasteners to match. | <p>Color to match existing Campus Standard "Light Green" Miller Paint Pitt Tech 90-357 PPG10SC-0699</p> |
| <p>P-3 Miscellaneous Exterior Metal Black Railings.</p> | <p>Miller Paint Pitt Tech Gloss LTX Black 90-353/01</p> |
| <p>P-4 General Wall Paint To be used at interior surfaces unless designated otherwise</p> | <p>Campus Standard Miller Paint Acro-Pure Interior Satin White-5770W/WSU Interior Semigloss White-5770W/WSU</p> |
| <p>P-5 Miscellaneous Factory Finishes Street and pathway light fixtures, site furniture interior and exterior signage, and building accessories scheduled to receive factory finish</p> | <p>Colors listed in individual sections as applicable</p> |
| <p>P-6 Interior Accent Green</p> | <p>Miller Paint 0435M Big Fish</p> |
| <p>P-7 Interior Accent Red</p> | <p>Miller Paint TH49 Venetian Red match#11SC0263</p> |
| <p>P-8 Interior Accent Grey</p> | <p>Miller Paint 0541M Smokey Tone</p> |
| <p>P-9 Interior Accent Dark Grey</p> | <p>Miller Paint E0031A Lookout match#02M0298</p> |
| <p>P-10 Interior Taupe</p> | <p>Miller Paint 0218M Drifting Sand</p> |
| <p>p-11 Interior metal work</p> | <p>Devoe Devcryl 144 5770W</p> |

DIVISION 10: SPECIALTIES

Colors listed in individual sections as applicable

10 14 00 SIGNAGE

For consistency with campus-wide systems, the following requirements must be met:

A. Exterior Signage

Custom fabricated aluminum panels with painted finish, screened and cut vinyl letters and symbols, steel frames and posts; posts set in concrete.

1. Finishes - Mathew's acrylic polyurethane low VOC

coating system for sign panels; color 1C-4D color #6 Briney Deep Green, satin finish with matte black powder coat finish for frames and post.

- 2. Lettering
 - 3 inch premium grade, precision cut vinyl with pressure-sensitive backing; "Matrix Regular" type face from Emigre, Inc. Type Library. Matte white color.
- 3. Required Signs
 - At a minimum, one free-standing exterior building sign required at each primary building entrance. Provide exterior directional signage, campus map signs (or modifications to existing maps) regulatory signs, etc. as directed by the University.

B. Interior Signage

Custom fabricated laminated acrylic panels with screened and vinyl-letters and symbols, inset Braille characters.

- 1. Sign Panels
 - Clear, non-glare, optically corrected, cast virgin acrylic sheet for face panels, with second sheet (backside application) of graphics. Sign panels engraved to accept inset acrylic text.
- 2. Colors
 - Color 1; Mathews 47A-2P "Pearly Gates" Color 2; Mathew's 78A-1A "Jet Black" Color 3; Mathew's 13B-2T "Dauphin Gray"
- 3. Lettering
 - 3-M premium grade, precision cut vinyl with pressure-sensitive backing; "Matrix Regular" type face from Emigre, Inc. Type Library. Matte white color.
- 4. Braille
 - Pre-drilled, pressure fit acrylic beads or equivalent complying with requirements for Class II Braille.
- 5. Required Signs
 - At a minimum, the following interior signs are required in each facility:
 - Type A-Room I.D. sign at each entrance to each room or space.
 - Type B-Directional/Informational signs at all public circulation routes.

C. Building Directories

Non-illuminated building directory required inside each public building entrance. Surface mounted document holder suitable for 11" by 17" paper to be printed and provided by occupants

Size for 23 inch x 19 inch high display area plus 4 inch header. Laser output directory schedule by owner.

D. Signage Details

Follow established campus graphics system details exactly. See Appendix.

10 21 00 TOILET PARTITIONS AND SCREENS

Ceiling mounted phenolic resin toilet partitions, wall hung urinal screens. Select colors from manufacturers' standard line of neutral colors.

Provide electric hand dryers in lieu of paper towel dispensers in all main restrooms.

10 28 00 TOILET ACCESSORIES

Owner furnished and contractor installed (OFCD) as follows:

Liquid Soap Dispenser

Surface Mounted Toilet Tissue Dispenser

Surface Mounted Roll Paper Towel Dispenser

Other accessories provided by contractor per Uniform Standards, including baby changing tables in handicapped stalls.

10 44 00 FIRE EXTINGUISHERS AND CABINETS

Steel cabinet of size to house 10 pound triplex dry chemical extinguisher; see-through glass panel in door, cabinet exterior color-red baked on finish.

DIVISION 11: EQUIPMENT

No Supplemental Requirements

DIVISION 12: FURNISHINGS

12 20 00 WINDOW TREATMENTS

Furnish appropriate interior window coverings of either vertical blinds or roller shades (preferred). Consult with WSU Vancouver Facilities.

12 20 00 ROLLER SHADES

Heavy duty Mecho Roller Shades.

12 20 00 LOUVER BLINDS

Use vertical 3 1/2 inch wide louver blades at exterior windows. Solid vinyl, color 4020; Louver Drape, telephone (425) 867-1645. Use horizontal mini blinds at interior relites.

12 48 13 FLOOR MATS

Recessed, adhered, solution dyed nylon with "FR" latex backing. Bonar Floors "EM, Coral Classic"; telephone (800) 852-8292. Provide at all public entries.

12 61 00 FIXED SEAT AND TABLE ASSEMBLIES

Systems manufactured by KI are listed to establish type, quality, appearance, and performance.

A. Type - University Seating Torsion Swing arm design.

B. Frame - Seam welded tubular steel.

C. Table Top -

- a) warp-resistant construction with high pressure laminate top, suitable backing, and vinyl edge.
- b) continuous surface layouts to have no longer than 8' sections.
- c) sections to be removable.

D. Seat -Torsion pedestal, polypropylene set and backrest, upholstered insets.

12 93 00 SITE FURNISHINGS

For consistency with campus-wide installations, the following components are preferred; all finishes factory powder coat "black" unless noted otherwise.

| | |
|------------------|--|
| Site Benches- | - Columbia Cascade "Timberform Renaissance 2800 Series |
| Trash Receptacle | -Columbia Cascade "Timberform Renaissance" 2811-DT |
| Cafe Tables | -Columbia Cascade "Timberform Renaissance" 2900 Series, 42" and 60" diameter |
| Cafe Chairs | -Columbia Cascade "Timberform Renaissance" 2911-20-P |
| Bike Rack | Madrax "U-Rack" #U190-1G-P |
| Bollard | -Urban Accessories #8-2C1, removable |
| Railings | -Custom fabricate |

DIVISION 13: SPECIAL CONSTRUCTION

No Supplemental Requirements

DIVISION 14: CONVEYING SYSTEMS

Supplemental Requirements being developed. Contact Capital Planning and Development Project Manager.

- Thyssen Krupp, Schindler, Otis and Kone are acceptable manufacturers.

DIVISION 22: PLUMBING

22 01 01 GENERAL PLUMBING DESIGN REQUIREMENTS:

Substitute item with the following:

- 1.02 B. Install each run with maximum necessary joints and couplings and with adequate and maintenance acceptable accessible unions for disassembly, maintenance or replacement of valves and equipment.
- 1.03 H. Plumbing Chases(s): All trap piping primers, plumbing chases, and composite grates shall be provided with a minimum of three (3) feet clear width, providing access to all piping and valves behind toilets, urinals, sinks and any other water-using devices.
 - 3. Plumbing chase shall include LED lights and a convenience receptacle.

Part 2- PRODUCTS preferred for WATER PIPING, ABOVE GRADE:

2.02 C. Soldered Type L copper, above grade

D. Wrought copper fittings

E. Solder joints

22 05 23 PLUMBING VALVES

Provide plumbing system isolation valves on each floor and at each device to facilitate serving.
Provide automatic air bleeders.

22 05 53 IDENTIFICATION FOR PLUMBING PIPING AND EQUIPMENT

Labeling required for piping and valves in each system.

22 06 10 13 PLUMBING PUMPS

1.01 DESIGN CONSIDERATIONS

A. General Requirements

1. Pumps shall be installed at basement floor level.

B. Specific Requirements

7. ABB Drives

PART 2- PRODUCTS

2.01 ACCEPTABLE PUMP MANUFACTURERS

E. Substitute Grundfos, Weinman or Bell & Gossett

22 09 00 DIRECT DIGITAL CONTROLS

All controls systems to be BacNET based. Systems are to be limited to Siemens or Alerton (prefer Siemens).

22 11 00 FACILITY WATER DISTRIBUTION

All work designed in accordance with Clark Public Utilities requirements; System disinfection in accordance with AWWA C651. Hydrant finish; 2 coats enamel, standard AWWA Gloss B yellow, special coating.

22 30 00 WATER TREATMENT

To maintain service consistency, water treatment services shall use sole sourced to the current water treatment services provider. A/E to verify current service provider.

22 45 00 EMERGENCY WASHING FACILITIES

1.02 DESIGN CRITERIA

5. Emergency eyewash capture bowls shall be directly plumbed to stainless steel drainpipe where piping is exposed.

6. Providing floor drains for emergency showers is required. Trap Primer needs to be automated electronic.

11. All facilities using non-potable water must have signs stating the water is 'non-potable'.

DIVISION 26: ELECTRICAL

General

Minimum of one convenience receptacle in each wall of an occupied space if the wall exceeds 12' in length.

Conduit no smaller than 3/4"

Stranded copper conductors, THHN insulation for interior wiring

No metal clad cable except for lighting fixtures, limited to 6' in length.

26 01 00 POWER MONITORING SYSTEM

- A. Provide Square D Power Logic or equivalent integratable microprocessor-based system to monitor electrical power distribution system in a real time mode. The system will consist of a circuit monitor which will input display data to the existing campus monitoring system.
- B. Extend system wiring from the existing power logic system at the Physical Plant Building and connect the new devices. Or upgrade existing system to provide for network IP based access.
- C. Provide all required latest hardware and software revisions as required to incorporate the new circuit monitor and power metering units.
- D. The monitoring system to consist of an electronic Power Monitor installed to monitor the electrical distribution system as shown on the drawings and as described below:
 1. Circuit Monitor: Main circuit breaker in MDP.
 2. Powermeter: All downstream breakers in MDP. Same functions as circuit monitor except waveform capture capability. Power quality reading, min/max readings, alarm/relay functions, event/data logging and LCD display at power meter unit are required.
- E. System to provide continuous current, voltage, power factor and total demand in 5 minute increments for the secondary distribution system.
- F. Provide factory training of hardware installation and troubleshooting for one participant, 4-day course focusing on installation and setup of PowerLogic and ION metering. E.g. <http://www.pmutraining.com/training.cfm>

26 51 00 INTERIOR LIGHTING

1.01 A. LED Luminaires: Lithonia Lighting 2BLI Series, dimmable in classrooms and offices, hallways not required to be dimmable.

2.02 LIGHTING CONTROLS Pre-Approved Manufacturers

1. Acuity Brands Control systems such as Nlight, Sensor Switch, Atrius, LC&D

DIVISION 27: TELECOMMUNICATIONS (Communications)

27 00 00 TELECOMMUNICATIONS

Telecommunications raceways, wiring and devices to be designed and installed in strict

conformance with current WSU Pullman standards.

WSU Vancouver specific input is: Seek to avoid single points of failure for the network connections. Ideally, we will require direct single-mode fiber connections (with multiple strands) between VCLS and VUCB to the new building. There may be additional requirements to connect the new building to other buildings like VSCI or VECS which may also warrant direct fiber connections between those locations. Contact WSU Vancouver Campus CIO at 360-546-9172. for more specific information.

DIVISION 31: EARTHWORK

31 10 00 EARTHWORK

Native subsoils excavated within the project site may be used as backfill only upon project geotechnical engineer's written recommendation and subsequent approval of Washington State University. All excess material be removed from University property.

1.03 Dumpsite and Hauling Considerations

B.2. On Vancouver campus, haul route to be coordinated with Facilities Operations for logistical awareness.

C.1. Submit proposal for imported top soil through Facilities Operations for landscape engineering review and approval.

i. Referenced WSU Topsoil Storage Yard is considered any WSU property on Vancouver campus.

DIVISION 32: EXTERIOR IMPROVEMENTS

32 11 00 PAVEMENT SYSTEMS

Asphaltic concrete paving surfaces for roadways, parking lots, service access, secondary walkways and bike paths. Provide raised asphalt traffic calming humps at crosswalks. Traffic striping to be 2 heavy coats traffic paint; traffic yellow for roadway centerlines, white elsewhere. Heat-applied reflectorized sheet material for crosswalk markings.

Primary walkways, view corridors, and campus arrival points paved with cast in place Portland cement concrete, unit pavers, basalt stone borders, and granite edge treatment consistent with existing installations and Campus Master Plan. Unit pavers of 7.8" square modular size, Double Holland/Smooth, 6cm thickness; Mutual Materials Co. Interlocking (grassroad) pavers; Tufftrack Grass Pavers, Model #TT- 24, by NDS, Inc. Provide concrete mow strips at all vertical surfaces in lawn areas and at all appurtenances.

32 80 00 IRRIGATION SYSTEMS

For consistency with campus-wide installations, the following components are preferred:

| | |
|-------------------------|--|
| Irrigation Heads | - |
| Rotors | -Hunter I-20, 4" pop-up |
| Spray | -Rainbird 1806-SAM-PRS, 6" pop-up |
| Tree Bubblers | -Rainbird 1400 on fixed riser with Rainbird P-85 shrub adapter |
| Remote Valves | -Weathermatic 11024FCR |
| Gate Valves | -min 150 psi-300 WOO, square activator Kennedy, Mueller or Hammond |
| Ball Valves | -Cambraco Stand. Port Bronze, 600 WOG |
| Quick-Couplers | -Rainbird 44 RC, brass 2-piece, 1" size |
| Master Controller Valve | -Bermad Ram 410, 3" globe valve |
| Backflow Preventer | -F e b c o |
| Automatic Controller | -Rainmaster DX48 –PS -03 –PH |

32 90 00 LANDSCAPING

| | |
|-------------|---|
| Drainage | -Native soils typically drain poorly and can support perched water. Effective drainage must be an integral part of any campus landscape design. -Drain piping of all turf, tree, and shrub areas should be considered. |
| Topsoil | -Import from an approved commercial source. |
| Lawn Seed | -Champion GQ Grass Seed Mix |
| Meadowgrass | -Tradition Grass Seed Mix |
| Plantings | -From "Climate Friendly Plants" list published jointly by the City of Vancouver, Clark Public Utilities, and the WSU Master Gardeners of Clark County; see Appendix. -Avoid trees that hold their leaves through the dormant season. |

DIVISION 33: UTILITIES

33 30 00 SANITARY SEWERAGE UTILITIES

All work designed in accordance with Clark Regional Sewer District requirements. Manholes to be of reinforced precast concrete made water tight with cast in rubber sleeves, concentric shaft construction with acentric cone top section, ASTM A48, Class 30 B cast iron lid and frame. Catch basins to be standard trap type with cast iron frame and linear grille grate; Lynch Company or accepted equivalent.

33 46 00 SUBDRAINAGE: UNDERSLAB DRAINAGE

All interior slab on grade that could be subject to hydrostatic exposure to be provided with a drainage system in conjunction with the foundation drainage system.

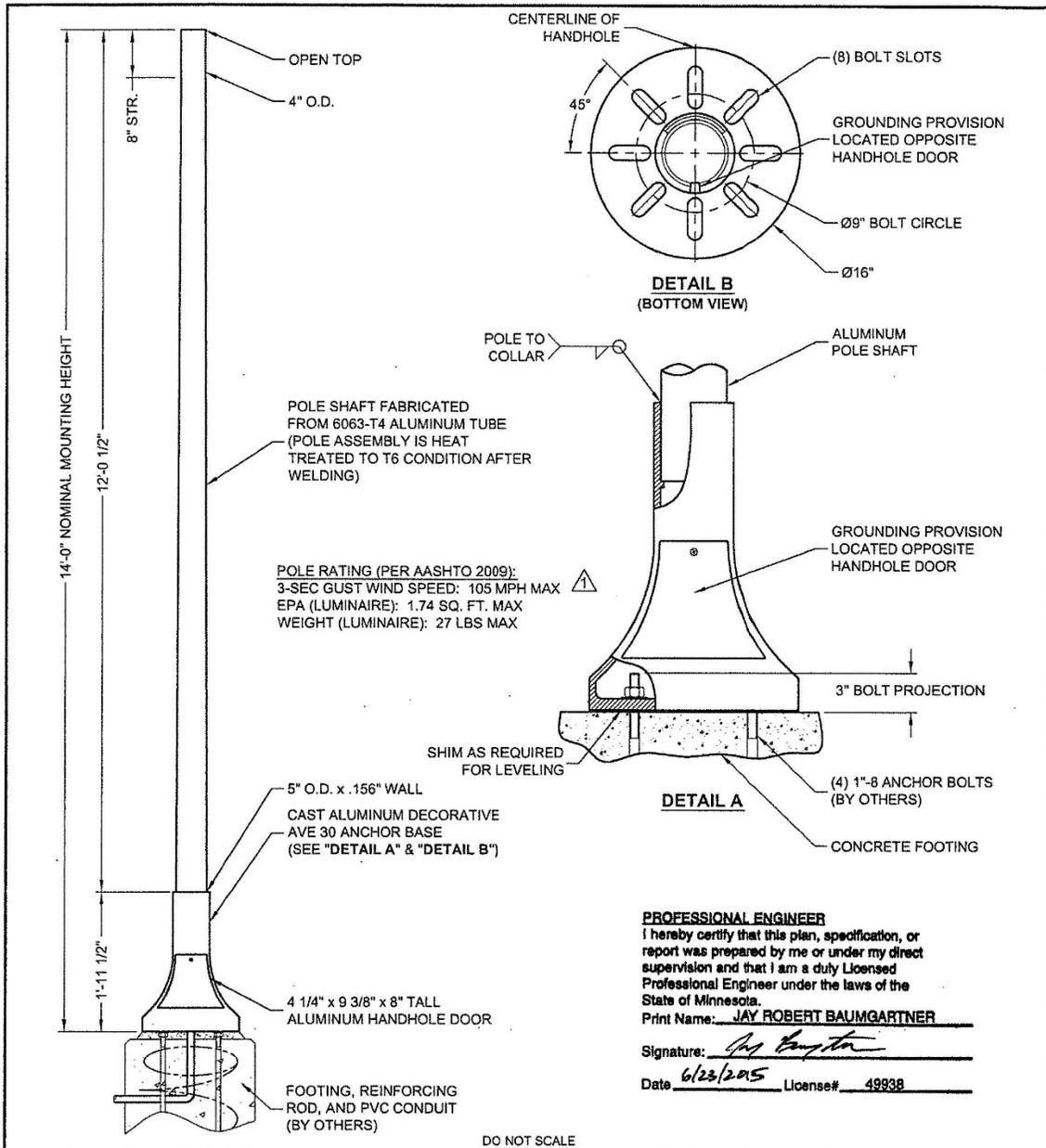
PART FOUR: APPENDIX

1. Color standards.
2. Standard exterior light pole.

End of Supplemental Standards

**WSU VANCOUVER
Color Standards**

| | |
|---|---|
| <p>Street Lights</p> <p>Site and Street Furnishings –</p> <p>Finish Carpentry -</p> <p>Metal Roofing I Flashing –</p> <p>Selected Roofing Area –</p> <p>Windows /Exterior Doors –</p> <p>Finish Hardware -</p> <p>Wood Doors –</p> <p>Painting -</p> <p>P-1 - Typical Exterior Paint Color, to be used, unless indicated otherwise, at all exterior painted surfaces, including but not limited to:</p> <ul style="list-style-type: none"> - Site lighting and bollards, preformed metal roofing assemblies, aluminum window and door frame assemblies and exposed metal components; - Interior aluminum window and door frame assemblies and exposed metal component; - Adjacent incidental components and fasteners to match. <p>P-2 - Exterior Paint Color, to be used where indicated at exterior painted surfaces including but not limited to: Bottom of Type A preformed metal roofing assemblies</p> <ul style="list-style-type: none"> - Adjacent incidental components and fasteners to match. <p>P-3-Interior Wall Paint</p> <p>Corner Guards –</p> <p>Signage -</p> <p>Floor Mats -</p> <p>Vertical Louver Blinds –</p> <p>Horizontal Louver Blinds -</p> | <p>Dark Green SW# F63JXG5493-S 160</p> <p>Black</p> <p>Clear Maple Finish</p> <p>Dark Green</p> <p>Light Green</p> <p>Dark Green</p> <p>Brushed Chrome Satin</p> <p>Clear Maple Finish</p> <p>Dark Green</p> <p>Custom color to match existing Campus Standard "Dark Green"</p> <p>Light Green Custom Color to match existing Campus Standard "Light Green"</p> <p>Miller S770W</p> <p>3 1/2" x 3 1/2" x 48" - brushed stainless steel.</p> <p>Match Existing</p> <p>Coral Classic by Bonar Floors.</p> <p>Off white, color to be confirmed by Owner from manufacturers' standard colors.</p> <p>Aluminum, off white, color to be confirmed</p> |
|---|---|



| | | |
|--|---|--|
| <p>Valmont Industries, Inc. Structures Division 20805 Eaton Ave Farmington, Minnesota 55024-7932 Phone: (651) 463-8990 (800) 899-7577 Fax: (651) 463-3349</p> | TITLE: S AVE SERIES 30 ALUMINUM POLE | QTY: 36 |
| | MODEL NO.: MATERIAL: ALUMINUM ALLOY FINISH: POWDER PAINT - RAL6012 HUNTER GREEN PROJECT: WSU VANCOUVER PARKING LOT IMPROVEMENTS SOLD TO: MILL PLAIN ELECTRIC SHIP TO: P.O. NO.: S500633381 REP: COLUMBIA PACIFIC SALES | OWN BY: PVB CHK'D BY: APPR BY: JRB DATE: 06-10-15 |
| **CONFIDENTIAL** The information contained in this drawing is privileged and confidential, and may be protected from disclosure. Please be aware that any use or dissemination of this drawing may be subject to legal restriction or sanction. | DWG NO: LS70309 REV 06-23-15 REVD FROM QT12233, FIN. QTY, ADDED EPA REV DATE REVISION DESCRIPTION BY | PAGE: 1/1 |



APPROVAL – SPECIFICATION

Revision #1

Project : WSU Vancouver Campus

Order:SQ_016625

Type: A-3 Luminaire : CY11T4-VS3AP-SKY-3-68W-4K-120-EB1-F3AP-PC-DG/TX

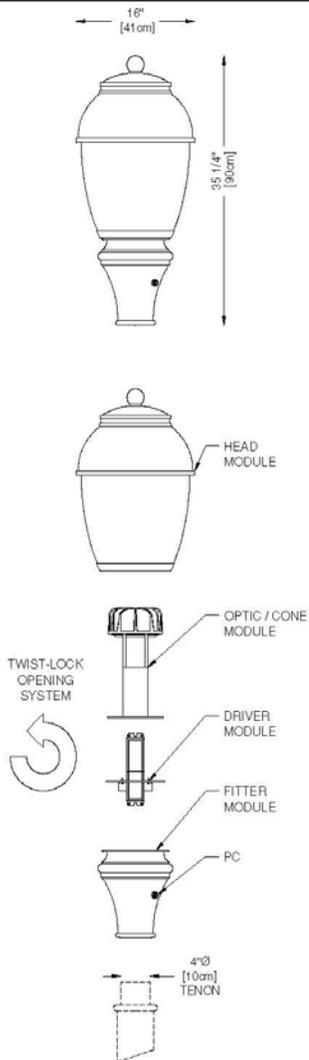
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Type: A-5 Luminaire : CY11T4-VS3AP-SKY-5-68W-4K-120-EB1-F3AP-PC-DG/TX

Qty:1

Type: HS Option : House Side shield (HS)

Qty:1



Luminaire components

Head module: Round shape. A heavy spun aluminum hood, with an aluminum finial and aluminum decorative cupola, tops an injection-molded acrylic, POND finish 75% diffusing (VS3AP) globe. UV polymer resistant. The vessel is mechanically assembled with an aluminum die-cast ring on the locking system.

Opening system: A quarter-turn locking mechanism with constant pressure points. Allows a tool-free access inside the luminaire, to the lamp and ballast tray. Made with cast aluminum parts and sealed with a gasket compression system. The luminaire offers an IP66 weatherproof protection.

Cone module: Driver housing made of an aluminum extrusion. Tool-free installation with a stainless steel captive retaining latch. Certification, maintenance and luminaire codification labels are located on the cone.

Fitter module: Round shape, cast aluminum fitter, secured to the pole with 5/16-18 UNC set screws. Slip-fits on a 4" (10cm) outside diameter x 3" (7cm) long tenon.

Optical/electrical components

LED: 68 watts, 4000K (White), Super high flux output and high luminance, design for high current operation. LED board is mechanically mounted on heatsink for easy replacement.

Optic: IES type III (SKY-3) & IES type V (SKY-5). The optic's reflector is made of pre-anodized aluminum reflecting sheets (86% min. reflection), segmented in multiple facets with heat sink radiator to keep the LED temperature down and increase their longevity.

Heatsink: Die cast aluminium alloy has been thermally tested for maximum efficacy.

Driver module: Auto-adjustable 120-277VAC Class I driver. Primary voltage at 120 volts, 50/60 Hz. THD max 20%. ROHS compliant. Assembled with quick-disconnect connectors resisting up to 221°F (105°C). High power factor of 90%. Minimum starting temperature: -40°F (-40°C). Maximum operating temperature: 130°F (55°C). Overheat protection: Output current is reduced to 150mA if internal driver temperature (Tcase) exceeds 185°F (85°C). Complete with a 3-Pole 10KV surge protector for Line-Ground, Line-Neutral and Neutral-Ground according to IEEE/ANSI C62.41.2 C High. Certification, maintenance and luminaire codification labels are located inside the fitter.

Generals/Options

Wiring/hardware: Type TEW 14-7. 12" (30cm) minimum exceeding from luminaire. All electrical connections between modules are made with quick-disconnect connectors for easy maintenance. All exposed hardware is stainless steel. Silicone gaskets are used for a weather seal.

Color: RAL6012 (Black green) / **Finish:** textured (TX) or smooth (SM) . Application of a polyester powder coat of paint. (5 mils /127 microns). The finish meets the ASTM G7, B117 and D1654 requirements relative to salt spray and humidity resistance. **Cyclone recommends the textured finish for this product.**

Photocell (PC): Photocell button type, 120 volts. Installed inside the fitter.

*** **Optional:** Complete with house side shield (HS).

EPA : 1.74 ft² Weight: 27 lbs / 12 kg

Stamp/Approval
Name : _____ Date : _____

File : CY11T4 - SQ_016625 - WSU VANCOUVER CAMPUS REV1.DOC
Date : 18/06/2015 Page : 1/1
Designer : **viacampo**