Leased Space Requirements

Revised July 2005

This document comprises the basic requirements and the minimum quality standards and performance criteria required for all State leased projects administered by the Department of Enterprise Services, Real Estate Services (RES).

Revisions to this document will be approved and issued by RES in the form of Addenda.

Department of Enterprise Services
Real Estate Services

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PART A GENERAL INFORMATION

A0 PURPOSE AND GENERAL OVERVIEW

The purpose of Leased Space Requirements, along with any RES-approved addenda, is to provide basic requirements and performance criteria to Lessors and their consultants who are providing new and renovated facilities leased by the State of Washington through the Department of Enterprise Services, Real Estate Services (RES). This document may be accessed electronically at the following website: http://www.des.wa.gov/RES/LSR2005.doc

The information contained in Sections A2, A3, A4 and A5 are the minimum basic requirements for all spaces leased by the State of Washington, including the site, and shall be included in the Lessor's proposal at the Lessor's sole cost and expense. Divisions 1-16 are the minimum performance and quality specifications for all State-leased projects. Requests for exceptions to these requirements must be submitted in writing to the RES Architect for approval prior to submittal of the construction bid (see Section A2.4).

A1 DEFINITIONS

A1.1 ADDENDUM

AGENCY ADDENDUM: a tenant-generated, RES-approved document describing items or conditions in addition to or exceeding the Basic Requirements delineated in Leased Space Requirements. This document is an integral part of the Advertisement for Space, and all costs associated with its directives shall be the Lessor's responsibility.

RES ADDENDUM: a RES-generated document describing items or conditions in addition to or exceeding the Basic Requirements delineated in Leased Space Requirements. This document is an integral part of the project bid package with the RES-approved plans and specs, and all additional costs associated with its directives shall be itemized on the Construction Bid Cost Breakdown Form submittal.

A1.2 ADDITIONAL TENANT IMPROVEMENTS

Specific project requirements that exceed the Basic Requirements delineated in Parts A4 and A5. Lessor shall itemize these costs on the Construction Bid Cost Breakdown Form (see Part B for instructions and a copy of the form).

A1.3 APPROVAL

Reviewed by the Project Team and authorized by the RES Architect.

A1.4 BASIC REQUIREMENTS

Tenant improvements for a leased facility as described in Parts A4 and A5. All costs associated with Parts A4 and A5 are the Lessor's responsibility and are included within the base lease rate.

A1.5 CHANGE ORDERS

RES-approved modifications (additions or subtractions/deletions) to the project's scope of work after signing of the Construction Bid Cost Breakdown Form and execution of the Lease.

A1.6 EXISTING CONDITIONS

Where existing conditions are indicated on RES-approved plans, they represent work to remain unchanged in the project.

A1.7 PLANS & DRAWINGS

Where plans and drawings are referenced or noted, they refer to RES-approved plans and drawings. The RES-approved drawings will include RES and Tenant Agency approval signatures.

A1.8 PROJECT TEAM

The State's Project Team consists of the RES Lease Agent, the RES Architect, the Agency Facility Planner and one local representative of the Tenant Agency. The team's responsibility is to implement, approve, and carry out all facets of the project, from lease negotiations to final acceptance of the built facility. The approval of any directives for any phase of the project must originate with this group. The Project Team works directly with the Lessor or Lessor's designee to implement all phases of the project. Only the RES Lease Agent may authorize Notice to Proceed with Construction for new leases. Only the RES Architect may authorize Change Orders, approve tenant improvements, issue the Letter of Substantial Completion, and release the Authority to Pay to the Tenant Agency for TI construction costs and Change Orders.

A1.9 PUNCHLIST

An itemized listing of incomplete work and/or deficiencies which the Lessor is obligated to resolve based on the project's scope of work, as observed and documented by the RES Architect. Punchlist work must be completed and approved before the final Authority to Pay is issued.

A1.10 REVIEW

Examination by the RES Architect to determine if submittal or construction is consistent with project requirements.

A1.11 SUBSTANTIAL COMPLETION

A determination made by the RES Architect subsequent to the punchlist inspection that the Lessor has sufficiently completed the project requirements so that the agency can safely occupy the facility. Receipt of the Certificate of Occupancy or the final signed-off building permit is required to achieve Substantial Completion.

A2 LESSOR'S PROPOSAL INFORMATION

A2.1 CODE COMPLIANCE

All spaces leased to the State of Washington shall meet or exceed the requirements of all applicable local governing codes. These include, but are not necessarily limited to, the most current edition of the State Building Code (including WAC Chapter 51, containing the Washington State Regulations for Accessibility), International Building Code (IBC), all Accessibility regulations (ANSI) in force at the time of the approved lease agreement, the Washington State Energy Code, and the Ventilation and Indoor Air Quality Code. Comply with all regulations pertaining to Prevailing Wages on Public Works Projects. All improvements required to meet these codes and regulations are the financial responsibility of the Lessor.

A2.2 DRAWING SUBMITTALS

Lessor shall provide to the RES Architect accurate drawings of existing or proposed buildings and site prior to the commencement of the State's space plan design phase. These drawings shall delineate the most current building information and physical configuration (including mechanical and electrical), and be submitted either on a computer disk or via e-mail in a format compatible with the AutoCAD version currently in use by RES. Lease exhibit plans, along with performance specifications, will be subsequently generated by RES based on these submittals. Any revisions required during the course of the project based on the submission of inaccurate or incomplete information to the State shall be resolved through the review and approval process and at the direction of the RES Architect, and accomplished at the sole cost of the Lessor.

A2.3 PREPARATION OF PLANS AND SPECIFICATIONS

Lease exhibit plans, along with Leased Space Requirements and any Addenda will be approved and released by RES for each State-leased facility requiring buildout. Changes to these documents are not permitted without written approval from the RES Architect.

The Lessor, at his sole cost and expense, is responsible for all construction documents required by the governing building department for permits and construction, which may include plans and specifications prepared by a licensed architect and/or engineer. Obtaining the building permit is the financial responsibility of the Lessor.

A2.4 DECLARATION OF NON-CONFORMANCE WITH LEASED SPACE REQUIREMENTS

For existing facilities which do not meet 100% of a project's governing Leased Space Requirements at the time of lease inception or renewal, in order to qualify for consideration as a potential State-leased facility in response to a RES Advertisement for Space, the Lessor shall provide RES with an itemized summary of all such building deficiencies. As part of this summary, estimate the monetary impact to bring each deficiency into compliance. RES will then determine if the deficiency is of a magnitude that will prevent a State tenant from occupying the proposed facility. Non-negotiable compliance items include life-safety, indoor air quality, and accessibility.

Any issue or item that has not been specifically identified as being Non-Compliant as stated above will be assumed to be in compliance with Leased Space Requirements. Subsequent discovery of previously undisclosed non-compliant issues and their resulting impact on the project will be addressed and resolved at the sole cost and expense of the Lessor.

A2.5 SUSTAINABILITY

This document specifies current sustainable products, practices and elements; however, further efforts toward sustainability are encouraged. Additionally, projects requiring compliance with specific LEED™ (US Green Building Council's Leadership in Energy and Environmental Design) sustainability criteria shall be identified in the project Request for Proposal advertisement and will include a project-specific RES Addendum that will define requirements for complying with LEED™ or equivalent sustainability elements.

A3 BUILDING MEASUREMENTS

The current edition of the Building Owners and Managers Association (BOMA) "Standard Method for Measuring Floor Area in Office Buildings" shall be the criteria for determining the leased square footage for all office and warehouse space leased to the State of Washington.

When the State leases one hundred percent (100%) of the building, the State will use square footage calculations of the "GROSS BUILDING AREA" of the building. When the State leases less than one hundred percent (100%) of the building, itemized square footage calculations of the "USABLE AREA" will be used unless specified otherwise in the Request For Proposal advertisement.

A4 BASIC SITE REQUIREMENTS

A4.1 PARKING, SIDEWALKS, CURBS, CURB CUTS, AND WHEELSTOPS

The number of required parking spaces and the layout for sidewalks, curbs and cuts shall be determined by the regulations of the local zoning ordinance, RCW 43.01.240(3) – "Employee Parking Limitations" (Commute Trip Reduction), and others as specified in the Request For Proposal. Provide marked truck and passenger loading areas, and marked parking stalls with barrier-free access. All required parking and loading spaces shall be asphalt or concrete, striped, and with required signage (see Section 02500). Submit drawings showing the parking and signage configuration to the RES Architect for approval.

A4.2 SITE ILLUMINATION AND SECURITY LIGHTING

Provide full-coverage site illumination, including all parking areas and pedestrian pathways, as described in Section 16520. Submit drawings showing the site lighting configuration to the RES Architect for approval.

A4.3 REFUSE RECEPTACLE

Provide covered refuse receptacle(s) and screened enclosure as described in Section 11170.

A4.4 FLAGPOLES

Provide aluminum flagpoles and illumination devices as described in Section 10350, where tenant agencies lease 100% of the building.

A4.5 LANDSCAPING

For new construction and change-of-use facilities, provide landscaping and underground irrigation system to all landscaped areas as described in Section 02900.

A4.6 UTILITIES TO THE SITE

See requirements in Part A5.30.

A4.7 PROJECT COMPLETION

Perform final cleaning services as directed in Section 01010, 1.8.

A5 BASIC BUILDING REQUIREMENTS

A5.1 BUILDING EXTERIORS

All new work on building exteriors shall comply with Washington State Energy Code and all other applicable codes and requirements. Existing buildings with a change of use or occupancy may require added insulation and/or glazing for the new use or occupancy. Provide a roof assembly that is free from leaks and complies with all provisions of Section 07500. Promptly and properly repair any leak damage. Lessor guarantees that the structure is constructed and maintained to resist weather infiltration.

A5.2 BUILDING INTERIORS

All interior spaces shall be finished per the Basic Minimum Finish Schedule in Section 09000, unless otherwise noted. The main entrance(s) into the building shall be accessed through an enclosed vestibule.

A5.3 SUBMITTALS & CERTIFICATIONS

Provide project submittals and certifications as described in Section 01700, 1.1.

A5.4 FLOOR CONSTRUCTION

Floors shall be smooth and level, with no more than 1/8" variation in 8' horizontal. Substrate shall meet the finished flooring manufacturer's requirements for installation.

A5.5 FLOOR LOADING

In all general office occupancies, provide a minimum floor structure loading design of 85 pounds per square foot uniform live load, plus all applicable additional dead load requirements including 20 pounds per square foot uniformly-distributed dead load for partitions. For new construction, live load deflection of the floor system shall not exceed L/480 for spans up to 15 feet and L/600 for spans 15 feet and over when member is fully loaded. For existing construction, deflection shall not exceed L/360 when member is fully loaded.

A5.6 DEMOLITION & RECYCLING

For new leases, Lessor must demolish all existing walls that do not meet current Leased Space Requirements. Lessor may also be required to demolish some existing walls which do meet current Leased Space Requirements and codes (up to 10 lineal feet per 1,000 square feet of leased space) in order to carry out the approved space design. This includes the removal of doors, relights, casework, electrical receptacles, telephone and communication (data) outlets, etc., within these walls. Demolition may also include items within the leased space not attached to existing walls, such as floor monuments, casework, etc. at the direction of the RES Architect.

The Lessor's design and construction team shall develop and utilize a demolition and construction waste management plan that identifies materials to be recycled (asphalt, bricks, concrete and masonry, metals, wood, cardboard, carpet, gypsum drywall and ceiling tiles, for example) and the sources for their disposition. This plan shall include construction waste materials, packaging, and associated clean-up activities. The plan shall be submitted to the RES Architect, and shall be implemented at no additional cost to the State.

A5.7 COFFEE BARS AND LUNCHROOM COUNTERS

Provide one accessible coffee bar or lunchroom counter per floor for each leased space. Provide second accessible coffee bar for leased spaces over 10,000 square feet per floor. Each coffee bar and lunchroom counter shall consist of upper and lower cabinets 96" long, including self-rimming stainless steel sink with hot and cold water supply, instant hot water dispenser, and towel and soap dispensers. Provide as described in Sections 06400, 10800, 15440 and 15450.

A5.8 CHAIR RAILS AND CORNER GUARDS

Provide chair rails on all walls in all conference/training rooms and public reception/waiting areas (see Section 06200, 1.4). Provide corner guards on the "outside" corners of all walls in high-traffic areas (hallways, major circulation paths, public reception/waiting areas) (see Section 10260).

A5.9 DOORS AND HARDWARE

Provide all entrance and exit doors complete with hardware, weatherstripping and cold weather fluid in the closers. Provide doors and basic hardware for stairways, restrooms, janitor and voice/data distribution rooms. In addition, provide 1 new door, including basic hardware, for each 400 square feet of leased space (basic hardware for all doors is specified in Section 08000, 1.2). Provide locking hardware for security and utility doors, and up to 25% of the additional doors. In addition, for remodels of existing spaces, provide lever hardware at all doors. (See also A5.28)

A5.10 RELIGHTS

Provide 20 square feet of new relights per 1,000 square feet of leased space. Unless otherwise noted on the plans, the size of each wall relight shall be 3'-0" x 4'-0". The size of each door relight shall be 2'-0" x 3'-0", unless code restricts the size or as noted otherwise on the plans. (See Section 08900)

A5.11 EXTERIOR GLAZING

Provide window and/or skylight glazing amounting to a minimum of 6% of the floor area (see Section 08900). Provide blinds on all exterior windows (see Section 12500). Provide moisture resistant sills at all new construction, as specified in Sections 06600 and 08900, 1.1.

A5.12 WALLS

Provide walls enclosing all restrooms, stairs, elevator and elevator machine rooms, mechanical shafts, and voice/data distribution rooms. Provide all demising walls between the State-leased facility and any adjacent interior spaces (used or unused). Demising walls shall extend from the floor to the underside of the structure above and be fully sound-attenuated as described in Section 07200, 1.2. In addition, provide 75 lineal feet of new full-height sound-attenuated interior walls for each 1,000 square feet of leased space (see Section 09250). All new walls shall be fully sound-attenuated, as specified in Section 07200, 1.2.

A5.13 FLOOR COVERING

In all general office occupancies, provide carpet tile as specified in Section 09680, and base as specified in Section 09650, 1.5. Provide ceramic tile flooring and wainscoting in all restrooms as specified in Sections 09000 and 09300 (for leased spaces under 5,000 square feet, sheet vinyl flooring and plastic laminate wainscot may be substituted). Provide vinyl composition tile in front of coffee bars, lunchroom counters and at vending machine locations, and sheet vinyl flooring in utility areas as specified in Section 09650. Provide project-approved slip-resistant flooring at all entrances and vestibules as specified in Section 09000, 1.1 or as shown on the plans.

A5.14 CEILINGS

Provide complete ceiling system, including suspended grid and ceiling tile as specified in Sections 09000, 1.3 and 09500.

A5.15 SIGNS

Provide tenant-identifying exterior signs and all code-required interior signs or identification devices. The location, application, construction, operation, and appearance of all signs shall be as described in Section 10400.

A5.16 ELEVATORS

If elevators are existing, they shall be upgraded to provide controls and signaling devices complying with current accessibility requirements.

A5.17 PLUMBING ACCESSORIES & SPECIALTY HARDWARE

Provide new restrooms in the configuration shown on the drawings, including all associated equipment, fixtures, and accessories as specified in Sections 10800 and 15440. Upgrade existing restrooms to meet the requirements of this section. Provide plumbing facilities, including total fixture count, to meet or exceed applicable code (minimum 36" wide by 60" deep stalls), as well as provide other specialty items required by code. Provide 2 accessible shower facilities (one men's and one women's) in leased spaces exceeding 20,000 square feet (see Sections 10810 and 15440,1.6). Provide 1 accessible drinking fountain per floor in tenant's leased space. In leased spaces exceeding 5,000 square feet, provide 1 additional accessible drinking fountain where shown on the RES drawing (see Section 15440,1.5). Provide one janitor closet per floor. Provide mop sink, mop holder, and shelving in each janitor closet (see Sections 15440, 1.4 and 06400, 1.1).

A5.18 BUILDING PERFORMANCE AND ENERGY SURVEY

For new space, including new leases in existing buildings, the building shell, weatherstripping, insulation (reference Section 07200), HVAC (reference Section 15500), electrical and lighting systems (reference Division 16) are required to meet or exceed these specifications and all applicable codes including current energy performance criteria.

At lease renewal, the Lessor shall conduct and submit to the RES Lease Agent a Leased Facilities Walk-Thru Survey identifying the building's energy systems and components that must be upgraded to comply with these specifications. In all cases the building must comply with all applicable codes and ordinances. Energy Survey forms are available online at http://www.des.wa.gov/RES/WalkThruSurvey.doc
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A5.19 HEATING, VENTILATING AND AIR CONDITIONING (HVAC) SYSTEMS

For all portions of the State-leased space, provide an HVAC system(s) complying with all applicable provisions of Section 15500. Provide the most economically-operated type of HVAC system. HVAC systems for all new office space and major remodeled office space shall have design work accomplished under the supervision of a licensed mechanical engineer. Provide certification as described in Section 01700, 1.1, A, and all performance documents as described in Section 01700, 1.2. (See also Section 15500 1.1.)

For new State-leased space in existing buildings, return air plenums, ductwork and air-handling equipment shall be inspected by a licensed engineer and certified as clean. For all State-leased space, cleaning and/or certification shall be performed at lease inception and lease renewal, but not longer than five-year intervals.

Submit a copy of the written maintenance agreement with a qualified vendor for the term of the lease, including filter change schedule (minimum of 4 times per year). Provide a copy to the Agency of vendor's work order or invoice for filter change and maintenance after each service by the vendor.

A5.20 ENERGY MANAGEMENT SYSTEM (E.M.S.)

Provide a Direct Digital Control (DDC) E.M.S. on all new leased space over 25,000 square feet. The E.M.S. shall control lighting and all HVAC equipment including exhaust fans. For the purposes of responding to an RFP where specific design information is not provided, at a minimum there shall be one lighting zone per floor. Parking lighting is exempt from this requirement. Projects that require an EMS/DDC system shall have a computer-based front end with graphical interface.

A5.21 ELECTRICAL SERVICE TO BUILDING

Provide building electrical service and distribution system, including panels and subpanels, based on 3.5 watts per square foot for duplex receptacles, plus all other electrical loads. Do not locate transformers within 15'-0" of a voice/data distribution room. Do not locate microwave ovens, electric panels, or wiring in non-metallic conduit closer than 3'-0" from a voice/data distribution room. (See Division 16).

A5.22 ELECTRICAL RECEPTACLES

Provide circuitry and 1 new standard-power duplex receptacle for each 75 square feet of leased space, exclusive of general housekeeping 20-amp duplex receptacles which shall be provided at the lessor's sole cost and expense, located to serve a maximum 25' equipment cord length. All circuits and receptacles shall have a minimum capacity of 20 amps each, and be configured and identified per Section 16400, 1.1. Up to 10% of all allowable receptacles may be dedicated 20-amp receptacles. Provide a maximum of 6 duplex receptacles on each non-dedicated circuit; a fourplex receptacle will be calculated as 1.5 duplex receptacles. Additional circuits, isolated-ground circuits and receptacles, and special receptacles (30-amp and above) are Additional Tenant Improvements when shown on RES-approved drawings or change orders (see additional requirements in Division 16). Provide certification as described in Section 01700, 1.1, B.

A5.23 LIGHT FIXTURES

Provide lighting as specified in Sections 16500, 16510, 16520 and 16530.

A5.24 SERVICE POLES

Service Poles (power duct posts) are acceptable only in open office areas or when shown on the RES-approved drawing or pre-approved in writing by the RES Architect. Where Tenant Agency is providing electrified systems furniture, provide "hot" junction boxes at ceiling, walls, or floor as indicated on drawings, and connect the systems furniture wiring (supplied by State vendor) to the "hot" boxes after the systems furniture has been moved in and installed by the State's vendor. Provide a maximum of 6 standard-power duplex receptacles on each non-dedicated circuit. (See A5.22 above and Section 16610, 1.2).

A5.25 VOICE/DATA SERVICE DROP (DEMARCATION)

Lessor shall provide a minimum of 4 – 4"Ø conduits from points of service in the street or right-of-way to the demarcation points in the building. Provide separate access (pull) boxes located at point of service, changes in direction, and at regular intervals. Provide pull strings in each conduit.

A5.26 TENANT'S VOICE/DATA DISTRIBUTION ROOM(S)

Lessor shall provide voice/data room(s) as described in Section 16700, with the location(s) as approved by RES Architect or as shown on the drawing. The room(s) shall have a separate HVAC system (except as noted in 15500, 1.3), and shall be maintained at a temperature range of 65° - 70° F. Also provide plywood equipment boards for Tenant Agency's use in each voice/data distribution room (see Section 06200, 1.3).

A5.27 VOICE/DATA CABLES AND RECEPTACLES (TELEPHONES AND COMPUTERS)

Lessor shall provide 1 new combined-use rough-in outlet with conduit (see Section 16700, 1.2) for each 150 square feet of leased space. Cable, installation, and trim-out to be by State Agency's vendor, or as an Additional Tenant Improvement. Provide a cable management system as described in Section 16000, 1.2.

A5.28 SECURITY ACCESS SYSTEMS

Lessor shall provide 1 single-gang rough-in box with conduit (see Section 16700, 1.2) at each of the locations described below for housing the State Agency's vendor-provided security access system card reader. All such boxes shall be co-located or grouped with any automatic door opener activators or similar devices, and be mounted on the strike side of each door so as to comply with accessibility requirements. Each door served by a card reader-activated access system shall be equipped with an electric/electronic strike or lockset (including appropriate electrical provisions) with emergency key override. See Section 08700, 1.4.

Required locations for rough-in boxes:

- Adjacent to exterior door(s) serving as a pathway (either public or private) directly accessing the building's common interior public areas (verify door locations with RES Architect)
- Adjacent to each door directly accessing the agency's space from common interior public areas (corridors, lobbies, stairwells, etc.) at each floor
- Adjacent to each door within the agency's space that accesses each LAN/WAN room, human resources file room, and the equipment room housing the security access system controls

A5.29 SECURITY SURVEILLANCE SYSTEMS

Lessor shall provide 1 rough-in box (including 2 parallel integral 1" conduits, see Section 16700, 1.2) at each of the locations described below for housing the State Agency's vendor-provided security surveillance (CCTV) system. All such boxes shall be located so as to allow a clear, uninterrupted view of the intended door, and shall be mounted so as to be resistant to vandalism.

Required locations for rough-in boxes:

- Serving each primary and secondary building entrance
- Serving each door directly accessing the agency's space from common public areas (corridors, lobbies, stairwells, etc.) at each floor

A5.30 UTILITIES WITHIN THE BUILDING

Provide pathways, vaults, and demarcation points and all utilities required by the Tenant Agency from the site and throughout the building to the Tenant Agency's termination room(s). Installation of pathways and equipment shall be coordinated by the Lessor to insure that they are available and that they will meet the move-in schedule of the Tenant Agency. Reference Part A5.25.

A5.31 PROJECT COMPLETION

Perform final cleaning and initial tenant occupancy preparation services as directed in Section 01010, 1.8.

End of Part A

PART B ITEMIZED COST CALCULATIONS

B1 CONSTRUCTION BID COST BREAKDOWN FORM

Refer to Part A for basic requirements of the site and building.

The Lessor shall submit a signed itemized construction bid, detailing costs for work to accomplish the RES-approved plans and specifications. Those costs shall be submitted on the Construction Bid Cost Breakdown Form or other format approved by the RES Architect. RES will approve or reject all Additional Tenant Improvement costs. Additionally, RES reserves the right to request alternate bids. If agreement between the Lessor and the State cannot be reached, the State reserves the right to reject the proposal.

There is a completed example of the standard Construction Bid Cost Breakdown Form on the next page, followed by a blank form that may be copied for use. An electronic version of this form is also available online at http://www.des.wa.gov/res/cbcbf.xls. The following is an explanation of some of the items on the example form:

1) Interior Walls--Part **A5.12 WALLS** states:
"Provide 75 lineal feet of interior walls for each 1,000 square feet of leased space."

   Thus, 12,592 sq. ft. ÷ 1000 = 12.59 x 75 = 944 lineal feet of wall allowance.

   The approved plan has 980 lineal feet of new walls. 980 lf - 944 lf = 36 lf at Agency cost. 36 x $45 per lf = $1,620. (Agency cost for walls found in the "Additional T.I." column)

2) Interior Doors--Part **A5.9 DOORS AND HARDWARE** states:
"Provide one door for each 400 square feet of leased space."

   Thus, 12,592 sq. ft. ÷ 400 = 31 doors allowed.

   The approved plan has 35 doors. 35 - 31 = 4 at Agency cost. 4 x $525 per door = $2,100 (Agency cost for doors found in the "Additional T.I." column).

3) Dedicated Power Receptacles--Part **A5.22 ELECTRICAL RECEPTACLES** states:
"Provide one standard-power receptacle for each 75 square feet of leased space", and "10% of all allowable receptacles may be dedicated 20-amp receptacles."

   Thus, 12,592 sq. ft. ÷ 75 = 168 standard-power duplex receptacles allowed.
   168 x 10% = 17 dedicated-power receptacles allowed.

   The approved plan has 12 dedicated-power receptacles. Therefore, there is no additional Agency cost for these items.

The subtotal reflects the additional tenant improvement base costs. The project mark-up and sales tax is added and the total cost to the Agency is written on the "Total Project Cost" line (see Section 01010, 1.3). Sign and date the form in the "Lessor" box near the bottom of the page, and return the completed form to the RES Architect.

Call the RES Architect if you have any questions regarding completion of the form.

End of Part B

Construction Bid Cost Breakdown Form

Project #	143-02-04	Address	12345 Hogart Rd	RES Architect	F.L. Wright
SRL#	04-0092	City	Whereville	RES Lease Agent	J. Walker
Agency	DPA	Square Feet Leased Area	12,592 *BOMA Usable*	Agency Facility Planner	G. Whisz
Lessor & Phone #	D. Trump (360) 777-5516			Date	April 17, 2005
Contractor & Phone #	U. S. Stiehl (360) 886-2255			Revised Date	May 4, 2005

Item	Total Units	Unit Cost	Total Cost	Basic Requirements # or %	Basic Requirements $ Cost	Additional T.I. # or %	Additional T.I. $ Cost
Interior Walls	980 LF	$45	$44,100	944	42,480.00	36	1,620.00
Interior Doors	35	525	18,375	31	16,275.00	4	2,100.00
Electrical							
Standard-Power Receptacles	140	65	9,100	100	9,100.00		
Isolated-Ground Receptacles	58	90	5,220			100	5,220.00
Dedicated-Power Receptacle	12	75	900	17	900.00		
Phone/Data Rough-ins	60	45	2,700	100	2,700.00		
Reception Counter	1		2,250			100	2,250.00
Coffee Bars	3	4000	12,000	2	8,000.00	1	4,000.00
Relights	316	20	6,320	252	5,040.00	64	1,280.00
Cleaning			250		250.00		
Project Cost Subtotal			$101,215.00		$84,745.00		$16,470.00
Total Project Mark-Up (15% max)			$10,121.50		8,474.50		1,647.00
(8.0%) Sales Tax			$8,906.92		7,457.56		1,449.36
Total Project Cost			$120,243.42		$100,677.06		$19,566.36

EXAMPLE

Method of Payment: Cash upon project completion, unless agreed otherwise. Up to 80% payable at substantial completion.

Note: Lessor shall sign and date this form prior to submitting it to the RES Architect.

Approvals

Lessor	Agency Facility Planner	RES Lease Agent	RES Architect
Date Donaldo Q. Trump	Date	Date	Date

Construction Bid Cost Breakdown Form

Project #	Address	RES Architect
SRL#	City	RES Lease Agent
Agency	Square Feet Leased Area	Agency Facility Planner
Lessor & Phone #		Date
Contractor & Phone #		Revised Date

Item	Total Units	Unit Cost	Total Cost	Basic Requirements # or %	Basic Requirements $ Cost	Additional T.I. # or %	Additional T.I. $ Cost
Project Cost Subtotal							
Total Project Mark-Up (15% max)							
( ) Sales Tax							
Total Project Cost							

Method of Payment: Cash upon project completion, unless agreed otherwise. Up to 80% payable at substantial completion.

Notes: Lessor shall sign and date this form prior to submitting it to the RES Architect.

Approvals

Lessor	Agency Facility Planner	RES Lease Agent	RES Architect
Date	Date	Date	Date

PART C SPECIFICATIONS

DIVISION 1 GENERAL REQUIREMENTS

SECTION 01010 - SUMMARY OF WORK AND PROCEDURES

1.1 GENERAL

The following are the State's minimum quality standards for construction materials, assemblies and equipment. The Department of Enterprise Services, Real Estate Services (RES) will release to the Lessor final approved plans and performance specifications reflecting each project's requirements. All items required to provide a complete, operational and fully-functional facility meeting all approved codes shall be included as part of this project unless stated otherwise. These specifications are generic and apply to a broad range of projects. Some items may not be required on all projects (such as plumbing fixtures when the project involves only minor interior alterations). Provide all materials and accessories for complete, proper installation and operation of products described in the contract documents, even if not specified in this document. Final determination of applicable requirements is the sole responsibility of the RES Architect.

1.2 CONTRACT DOCUMENTS

These specifications, including any addenda, along with RES-approved drawings, summarize the project requirements. Any changes to these documents may only be made in writing by the RES Architect. Omissions and discrepancies between drawings, specifications, site conditions, and code requirements shall be brought to the attention of RES. The RES Architect will clarify the intent of the drawings and program requirements and assist in resolving conflicting issues.

The RES-approved drawings will include RES and Tenant Agency approval signatures, and BOMA square footage area(s) will be indicated in the lower right hand corner of the sheet.

1.3 COST SUBMITTALS; CHANGES AND REVISIONS; CHANGE ORDERS

Submission of bids by the Lessor, and their subsequent acceptance and approval by RES, constitute an obligation by the Lessor to provide all materials and perform all work required to complete the buildout of the proposed leased facility according to the RES-approved drawings and specifications in their entirety, whether or not specific items have been called out on the Construction Bid Cost Breakdown Form. The Lessor's submitted bid will be accepted and approved as all-inclusive for all issues delineated or referenced on the RES-approved documents. Items not included by the Lessor on the Construction Bid Cost Breakdown Form are not subject to subsequent payment from the State.

Any cost submittal, change, interpretation of requirements, or revision to the work must be authorized by the RES Architect. Any proposed change or revision to the work that would result in additional cost to the State must be submitted in writing to RES. The RES Architect will issue written approval to the Lessor for the work to proceed if the proposal is accepted. Tenant agencies have no authority to make changes to the work, nor may they make payments for unauthorized work. All cost submittals shall be itemized by the Lessor as listed below:

Itemized summary of the work (labor and materials only) with associated costs
Total of Subcontractor's and General Contractor's prices ("Project Cost Subtotal")
Total Project Mark-Up*
State sales tax
Lessor's total ("Total Project Cost")

** Total Project Mark-up shall include overhead and profit, Lessor's management fee, B&O, Builders Risk, Prevailing Wage documentation, General Conditions, etc., and shall not exceed 15%. General Conditions shall not be allowed in the Lessor's cost response for Change Orders.*

Upon satisfactory completion of the project, as delineated in Section 01700, the RES Architect will issue to the Tenant Agency an Authority to Pay for all RES-approved non-amortized costs.

1.4 PERMITS

Lessor shall provide and pay for all permits, fees, city and/or county requirements as required for completion of the project. Provide copies of the final signed-off building permit and/or the final Certificate of Occupancy to the RES Architect at closeout.

1.5 CODE COMPLIANCE AND WORK QUALITY

If access, fire, life-safety, health hazards, or structural deficiencies are detected either before or after occupancy, they shall be corrected by the Lessor at his sole cost and expense. All project work shall be completed in accordance with sound engineering practices, good trade workmanship, and utilizing new or quality used materials, clean and free from blemishes. Lessor is responsible for all new construction meeting applicable code requirements.

1.6 ALTERNATE METHODS/SUBSTITUTIONS AND MATERIALS

The State will consider formal requests from the Lessor for substitution of products or methods in place of those specified. In general, the contract documents describe minimum standards of construction. Construction methods or materials other than those mentioned herein may be acceptable if, with the RES Architect's written approval, they provide equal or better quality, appearance, safety and function.

Lessor will provide a written statement to RES that they have investigated the proposed product and method and determined that it is equal or superior to that specified. Submit to RES Architect a copy of the manufacturer's literature indicating product description, performance and test data, reference standards and samples (if requested). Provide a complete, detailed description of proposed alternate construction methods. Provide a minimum of 10 working days for all substitutions to be reviewed for approval by the RES Architect. Approval of the proposed substitution must be in writing from the RES Architect (see Section 01300 for submittal requirements).

Lessor shall coordinate installation of accepted substitution into work, making such changes as may be required for work to be complete in all respects. Lessor is responsible for coordinating all work resulting from substitutions and is not relieved of any responsibilities for the project under the contract.

1.7 ENVIRONMENTAL CONTROLS

Maintain acceptable indoor air quality in occupied portions of State-leased buildings undergoing renovation projects, by observing the following:

A. When possible, schedule renovation work to occur only during the Tenant Agency's non-operating or "off" hours (for example, on weekends and/or evenings), as mutually approved and scheduled with Tenant Agency.

B. The size of the area in which renovation is to occur and the scope of the project may necessitate the temporary relocation of the tenants during the construction period. This will be mutually agreed upon and arranged by RES staff and the Tenant Agency.

C. To prevent construction dust and fumes from infiltrating the building's mechanical system and thereby affecting indoor air quality, the area where renovation is to be performed shall be separated and sectioned off from the remaining space by means of an installed plastic shield or curtain. Provide filtration at return air intake grilles in the affected areas during construction.

D. The mechanical system serving the entire space where renovation occurs may need to be turned off during renovation; if so, outside air shall be introduced to this space by means of auxiliary fans. Maintain a slight negative pressure in the construction area. Heating units shall be utilized as required.

E. All building materials, including preparatory and finished materials and products, shall be non-VOC (volatile organic compound) type products. (See Section 01300, 1.2)

1.8 FINAL CLEANING OF FACILITY

Prior to the RES Architect's punchlist inspection, perform the following cleaning services throughout the leased facility and in areas directly serving the facility. All finishes are to be cleaned according to manufacturer's recommendations. Maintain the facility in a properly cleaned condition until commencement of rent or tenants begin their move-in process, whichever occurs first, except for items specifically noted in the RES Architect's punchlist letter.

A. Clean and sweep all parking areas, driveways, and sidewalks. Remove all construction debris and equipment.
B. Wash all interior and exterior glazing; clean window and relight frames of all debris.
C. Repair, patch, touch up, and/or replace marred surfaces, restoring to a like-new condition. Provide touch-up painting of all walls, corners, columns, soffits, and other paintable surfaces, achieving a blemish-free condition.
D. Vacuum, prepare and clean all finished floor materials and surfaces per manufacturer's recommendations.
E. Remove grease, dust, dirt, stains, labels, fingerprints, etc. from exposed surfaces.
F. Clean all HVAC supply and return air diffusers and grilles, ducts, blowers, coils, fixtures, equipment and piping. Replace disposable air filters and clean permanent filters.
G. Flush water systems (see Section 15440, 1.1).

SECTION 01060 - REGULATORY REQUIREMENTS

1.1 PREVAILING WAGES

Lessor agrees to pay the prevailing rate of wage to all workers, laborers, or mechanics employed in the performance of any part of this agreement unless specifically exempted by the Department of Labor and Industries (L&I). Lessor agrees to comply with the provisions of RCW 39.12 when required to do so under RCW 39.04.260 and the rules and regulations of L&I. Submit all compliance paperwork directly to L&I, who makes all determinations regarding the applicability of Prevailing Wage. When prevailing wage is applicable, the Lessor shall provide to the RES Architect at the conclusion of the project certification of full compliance with L&I's prevailing wage regulations in order to receive the final project payment. For additional information, visit L&I's website at http://www.lni.wa.gov/TradesLicensing/PrevailingWage/default.asp.

1.2 LIFE CYCLE COST ANALYSIS

RCW 39.35 and 39.35B require a Life Cycle Cost Analysis as part of renovation or construction of publicly-owned or leased buildings having 25,000 square feet or more of usable space. The Life Cycle Cost Analysis shall be completed by the Lessor and submitted to RES prior to completion of the preliminary drawing phase, and shall be used to help select building systems that will both conserve energy and reduce operating costs. Refer to the Department of Enterprise Services Division of Engineering & Architectural Services' publication: *Energy Life Cycle Cost Analysis, Guidelines for Public Agencies* for information and format (website: http://www.des.wa.gov/EAS/elcca/home.html).

SECTION 01200 - PROJECT MEETINGS & INSPECTIONS

1.1 General Communications

All instructions to the Lessor will be given by the RES Architect. RES Architect's verbal instructions must be confirmed in writing. Minor clarification may be confirmed in meeting minutes or site visit reports. Promptly inform the RES Architect of deviations from the established schedule, dimensional irregularities, code concerns, etc. Contractor/superintendent shall be available by pager, cell phone and/or project site phone during normal business hours. Provide telephone number(s) to the RES Architect.

1.2 Pre-Construction Meeting (Agenda):

A. Establish construction schedule, including milestone/action items
B. Establish progress meeting schedule
C. Schedule RES Architect inspections, including cover and punchlist
D. Establish lines of communication/authority

E. Establish Change Order process
F. Establish submittals process
G. Coordinate State vendors and general contractor
H. Establish type of furniture partitions
I. Establish as-built record keeping
J. Establish payment schedule

SECTION 01300 - SUBMITTALS

1.1 PRODUCT SUBMITTALS

Submit complete product specifications, literature, and all material, color and finish samples to RES Architect for approval and/or selection. Allow 10 working days for submittals to be reviewed by RES Architect. Provide a minimum of 2 submittal packages for review. Submit together all colors and materials that occur in the same room or rooms. Provide full range of manufacturer's color samples for each material color selection. Provide shop drawings where appropriate. Coordinate with Tenant Agency's pre-approved color board, if applicable.

Mechanical equipment submittals shall include, but not be limited to, HVAC equipment, fans, air conditioning units, duct lining, controls zoning layout and the controls. The submittals shall indicate the equipment operating point, sound data and pressure drop information.

1.2 MATERIAL SAFETY DATA SHEETS (MSDS)

Provide Material Safety Data Sheets for the following building materials if utilized in preparation of the leased space: insulation, PVA sealer, gypsum wallboard, paint, ceiling tile, carpet, base, carpet/base adhesive, floor patching compounds and sealers, and casework. Submit copies to the RES Architect.

SECTION 01500 - CONSTRUCTION FACILITIES

1.1 TEMPORARY FACILITIES AND UTILITIES

Lessor shall provide and pay for all temporary construction facilities and utilities.

SECTION 01700 - PROJECT CLOSE-OUT

1.1 CERTIFICATIONS, WARRANTIES AND SUBMITTALS

Subsequent to the RES Architect's determination of Substantial Completion and their approval of initial occupancy by the Tenant Agency, and prior to final inspection or acceptance of the facility by RES, provide the following to the RES Architect:

1) Permanent Certificate of Occupancy or final signed-off building permit
2) Certification of compliance with prevailing wage regulations (see Section 01060, 1.1)
3) As-built drawings (see Section 01700, 1.3)
4) Operations & Maintenance manuals (see Section 01700, 1.2)
5) HVAC certification (see below)
6) Electrical certification (see below)
7) Illumination certification (see below)
8) Carpet certification (see below)
9) Domestic water potability certification (see Section 15440, 1.1)
10) Material Safety Data Sheets (MSDS) (see Section 01300, 1.2)

Submit written certifications to the RES Architect on the respective subcontractor's or consultant's letterhead, signed by the licensed designer/engineer for this project, addressing and specifically stating compliance with the following issues:

A. The HVAC (mechanical) system serving this leased facility has been installed and is operating in accordance with the RES-approved plans and specifications, is clean (all filters have been changed just prior to tenant occupancy), properly balanced, fully operational, and will perform satisfactorily to meet the State's requirements, including the Washington State Energy Code and the Ventilation and Indoor Air Quality Code.

B. The electrical system (receptacles, equipment connections, etc.) has been installed and is operating in accordance with the RES-approved plans and specifications, and all circuitry and receptacles are configured and functioning as intended by their design.

C. The lighting levels stipulated in Section 16520 are being achieved.

D. The carpet material and installation procedure has been provided according to the requirements of Section 09680, including documentation (such as manufacturer's invoices or bills of lading) verifying that the product supplied is the same as the product approved by the Project Team.

1.2 OPERATING INSTRUCTIONS / MAINTENANCE MANUALS

Provide Operations & Maintenance manuals for all facility systems, equipment, hardware, finish materials, and so forth for which the tenants have the responsibility to clean (example: carpet, resilient flooring) or the ability to control, revise, or alter settings or the like at their discretion (example: cypher locks, electronic access systems, thermostats, special HVAC units, special lighting controls). All information contained in these manuals shall be neat, clean, readable, and orderly.

Specific information to be contained in these manuals include:

A. Names and phone numbers of repair/maintenance contacts.
B. Simplified operating instructions, and complete emergency instructions in case of system failure or natural disaster.
C. All warranties/guarantees.
D. Manufacturer's recommendations for continued care, including method and frequency of cleaning and maintenance.
E. Reduced-scale zone map for the completed HVAC system and its controls.
F. HVAC system balance report that indicates conformance with the designed system.

Provide walk-thru training (conducted by the appropriate personnel of the respective disciplines) for the designated Tenant Agency facility manager covering the HVAC controls and all other major building systems/ equipment/ hardware.

1.3 PROJECT RECORD / AS-BUILT DRAWINGS

As the job progresses, the Lessor shall keep at the project site an accurately marked-up set of Contract Documents showing all changes and deviations from the original RES-approved drawings. Upon completion of project, the Lessor shall transfer all changes and deviations indicated on their project sets to a permanent as-built drawing set. All such information shall be neatly and clearly drawn and described with technical accuracy. Lessor shall provide 2 sets of as-built drawings to the RES Architect, one "red-lined" paper set on the State-approved plans and one as an updated version on a computer disk or via e-mail in a format compatible with the AutoCAD version currently in use by RES.

1.4 AUTHORIZATION OF PROJECT PAYMENTS

The Lessor shall submit to the RES Architect (not the Tenant Agency) invoices reflecting all project costs incurred by the State. The RES Architect will then issue an Authority to Pay (ATP) to the Tenant Agency for their direct payment to the Lessor. The release of any ATP is at the discretion of the RES Architect.

Up to 80% of all RES-approved additional tenant improvement costs or change order costs may be payable to the Lessor subsequent to the RES Architect's determination of Substantial Completion. The balance of all RES-approved costs is payable to the Lessor upon the RES Architect's determination that the Lessor has satisfactorily resolved <u>all</u> punchlist items.

End of Division 1

DIVISION 2 SITEWORK

SECTION 02200 - EARTHWORK

1.1 SITE CONDITIONS

The Lessor is responsible for investigation and determination of all existing site conditions and requirements. Provide right-of-way construction and site drainage as required by local building officials. All new utilities required for this project shall be underground and meet all local regulations. Existing above-ground utilities may be retained.

SECTION 02500 - PAVING AND SURFACING

1.1 PAVING

Asphalt paving and sub-base shall be of sufficient thickness to support vehicular and truck traffic without permanent deformations and deterioration. Provide complete weed kill under new asphalt paving as required by the site conditions and as required in landscaping areas.

Place catch basins and slope asphalt paving to prevent standing water and keep draining water away from pedestrian crosswalks. Provide minimum 2% - 3% cross slope to stormwater catch basins. Curb radius to be minimum of 12' at parking intersections, unless otherwise required by local ordinances. Comply with all applicable accessibility requirements.

1.2 PARKING LAYOUT, STRIPING AND SIGNAGE

Standard parking stalls shall be 9' x 20' minimum. Provide code-required accessible parking stalls. Striping shall be 4" wide. Paint international symbol on the paving surface of each accessible stall and provide required accessible sign at the head of each stall(s).

1.3 CONCRETE SIDEWALKS

New sidewalks shall be screeded, floated, and steel-troweled with a light broom finish, or to match adjacent work. Concrete shall be a minimum of a 5½ sack mix, with a minimum compressive strength of 3,000 psi.

1.4 WHEELSTOPS

Wheelstops shall be reinforced precast concrete, steel dowel-anchored. Position 3'-0" from curbing. (NOTE: in locations of high annual snowfall, steel dowels may be omitted, except where wheelstops are required to protect structures or other hazards.) Integral sidewalk/wheelstop curbs are allowed as long as the remaining clear width of sidewalk meets or exceeds the minimum width for access as required by code. In such instances, allow 3'-0" for vehicle bumper overhang.

1.5 BOLLARDS

Bollards shall be 6”ø concrete-filled galvanized steel pipe. Embed minimum of 4’ into ground and extend 4’ above ground level. Paint exposed surface international yellow.

SECTION 02900 - LANDSCAPING

1.1 PLANTINGS

Landscaping should include trees, shrubs, groundcover and grass in all locations on the site intended or allowed for such purpose. Show the location of all existing trees on the pre-design as-built submittal drawing, and appropriately protect all retained trees and shrubs during construction. Submit plans for review by RES Architect.

1.2 IRRIGATION

Underground irrigation system shall include integrated time clock control, with moisture sensor, metered separately from main water meter. Provide automatic drainage system to protect system against freezing, including air blowout connections and anti-siphon valve(s). Provide low-volume drip system and/or heads.

End of Division 2

DIVISION 6 WOOD & PLASTICS

SECTION 06100 - ROUGH CARPENTRY

1.1 DESCRIPTION OF THE WORK

Provide carpentry work, all materials and items required for complete installation of products including anchors, fasteners and other necessary accessories. Anchor materials solidly in manner directed and in accordance with highest industry standards. Provide blocking as required for products specified elsewhere. (See also Section 09250)

SECTION 06200 - FINISH CARPENTRY

1.1 MATERIALS AND FINISHES

Provide all materials and items required for complete installation of products, including hardware, anchors, fasteners, and other necessary accessories. Finish wood with stain and minimum 2 coats semi-gloss finish. Provide solid hardwood, hardwood veneer, plastic laminate-surfaced plywood, or melamine-surfaced Medite II or other non-VOC material.

1.2 TRIM AT CLOSINGS

Provide soundproof 2" wide wood or metal closing trim at walls meeting window mullions or window glazing. Match depth and type of window sill material and finish wall ends. Styrofoam closures are not acceptable. Submit proposed method to RES Architect for review.

1.3 EQUIPMENT BOARDS

Provide ¾"x4'x8' fire-resistant plywood or plywood treated with flame retardant paint (if approved by the Fire Marshal) on all walls of voice/data distribution rooms or as otherwise noted on the approved plan. Mount bottom no lower than 24" above floor, top no higher than 84" above floor. Alternate design may be indicated on RES drawing or specified by RES Architect. Mount on wallboard, masonry, or concrete. Existing equipment boards may be reused if treated with flame retardant coating.

1.4 CHAIR RAILS

Provide 1x4 minimum solid wood with eased edges, or approved alternate. Finish and wood species to match other wood work in the leased space. If no other wood work, provide oak or hem/fir with stain and varnish finish. Provide solid blocking for attachment. Verify the appropriate mounting height with the Tenant Agency representative prior to installation.

SECTION 06400 - CASEWORK

1.1 GENERAL

Furnish and install casework at the locations shown on the drawings and as specified, complete with hardware. Provide shop drawings for service/reception counters and/or other specialty casework to RES Architect for review and approval. Provide adequate blocking and bracing. Secure to wall framing with screws. Shelves shall support minimum 25 pounds per lineal foot without sagging. Provide minimum 5 rows of shelves, adjustable in 1" increments with metal adjustable end brackets.

1.2 RESTROOM CASEWORK

Provide wall-mounted countertop with recessed sinks. Finish per cabinet specifications.

1.3 COFFEE BAR AND LUNCHROOM CABINETS

See plan for sink location and special features. Design shall be accessible per local building codes. Provide 4" x 4" toe space and base to match room base. Provide plastic laminate-faced plywood countertop. Provide full-width 24" high plastic laminate back and side splashes. Provide plastic laminate-faced Medite II or other non-VOC material for cabinet faces. Provide matching edges for all exposed-to-view surfaces. Provide bronze wire pulls and bronze adjustable self-

closing hinges. Provide 5-pin locks on 1 door (provide divider) and 1 drawer at each coffee bar or lunchroom cabinet, keyed alike.

Cabinet doors and drawers shall be a maximum of 24” wide. Provide durable drawer construction, ¾" face, ½" sides, ¼" bottom with Grant #329 guides or equal. Provide high-density or similar plastic overlay over ¾" Medite II or other non-VOC material for interior shelving that is self-edged, removable, and adjustable in 1" increments.

SECTION 06600 - PLASTIC LAMINATE

1.1 DESCRIPTION OF THE WORK

Provide 1/16" thick, high-pressure plastic laminate where shown on the drawings or as specified. Provide quality materials such as Wilsonart, Formica, Nevamar, or as approved by the RES Architect. Locations include countertops, edges, splashes, windowsills, cabinet faces, wainscots, chair rails, toilet partitions and/or doors. See Sections 09000, 1.2 and 10150 for related requirements.

End of Division 6

DIVISION 7 THERMAL & MOISTURE PROTECTION

SECTION 07200 - INSULATION

1.1 THERMAL INSULATION

Provide thermal insulation for roof, walls, floor, and so forth, as required by the Washington State Energy Code. Attach insulation to permanent structure. Material laid on ceiling tile to achieve thermal insulation value is not acceptable.

1.2 SOUND INSULATION

Provide full-coverage sound attenuation batts in all walls specified to receive them. Walls must be sealed for tight fit at base, ceiling and/or structure. Seal may be sill insulation, acoustic caulk, or other approved method. Provide continuous batt insulation 2' on each side of the wall above the ceiling. The assembly rating of such systems shall achieve and maintain a value of STC 45 minimum, or as noted on drawings. Submit proposed sound wall design and technical data to the RES Architect for review.

SECTION 07500 - ROOFING

1.1 NEW CONSTRUCTION AND REPLACEMENT ROOFING

Provide complete assembly meeting all manufacturer's requirements for minimum 20-year guarantee. Use compatible materials. All low-sloped roofs shall have a reflective coating (or use a light-colored roof), which shall be kept clean and in good repair so as to maintain its effectiveness. Design with positive slope and no standing water. Control run-off with adequately-sized rainwater leaders and stormwater system. Protect all openings against water infiltration with curbs, minimum of 6" high.

1.2 EXISTING ROOFING

Provide roof assemblies in good repair, free of leaks and prolonged standing water. Control runoff away from sidewalks and entries.

SECTION 07900 – SEALANTS, ADHESIVES AND COMPOUNDS

1.1 All interior sealants, adhesives and compound products used shall be non-toxic, low-odor and solvent-free, and shall be antimicrobial with no hazardous vapors and containing no carcinogenic materials.

All exterior sealants shall be as recommended by the manufacturer for substrate compatability.

Provide all necessary items required for complete sealant installation.

End of Division 7

DIVISION 8 DOORS & WINDOWS

SECTION 08000 - DOORS AND WINDOWS

1.1 GENERAL

Provide heavy-duty commercial-grade products. Replace all warped doors. Replace any existing door that cannot be restored to like-new condition.

1.2 TYPICAL DOOR SCHEDULE

A door schedule may be included either on the drawings or in an addendum to these specifications for each project. If no project door and hardware schedule is provided, the schedule below applies. Each letter or number designation within each category indicates a specific configuration assembly for the referenced door. The designation is a 3-symbol format, with the first letter denoting the door type, the middle number referring to the type of locking operation, and the last letter indicating the hardware grouping.

Example: A "C8F" notation would indicate a solid-core wood door, with a classroom-function lock and hardware consisting of kickplates and a 24" x 36" relight.

Basic Hardware

All doors shall include frame and trim, and receive not less than 1½ pair ball-bearing hinges, lever lock or latch, 1 wall stop, 3 silencers (except if smoke seal or weatherstripping provided), and closer and smoke seals where required, in addition to any scheduled HARDWARE GROUP requirements listed below. Provide kickplates on all restroom, janitor, stair, entrance and exit/pathway doors, and where called for in the door schedule.

Door Type	Lock Type	Hardware Group
A. Storefront	1. Automatic opener -- Provide after-hours locking as required. Door opens with infrared sensors or electric push pads. Manual emergency egress.	A. Existing Hardware
B. Hollow Metal	2a. Card Key 2b. Proximity Reader 2c. Digital Keypad } Inside always unlocked; outside entry by card or digital keypad unless unlocked from outside by key.	B. Basic Hardware only
C. Wood	3. Cypher -- Inside always unlocked; outside entry by non-electronic combination keypad.	C. Closer
D. Accordion partition	4. Vestibule -- Inside always unlocked; outside entry by key unless unlocked from inside.	D. Closer, Kickplates
E. Acoustic accordion partition	5. Passage latchset -- Both sides always unlocked.	E. Closer, Relight
F. Acoustic operable panels	6. Privacy -- Inside push-button; outside entry by special key or device.	F. Kickplates, Relight
H. Wood bi-fold	7. Office -- Push-button locking from inside. Turning inside lever handle releases button and unlocks outside lever handle, unless unlocked with key from outside.	G. Closer, Kickplates, Relight
J. Roll-up security gate	8. Classroom -- Inside always unlocked; outside entry by key unless unlocked from outside by key.	K. Kickplates
K. Metal overhead sectional door	9. Storeroom -- Inside always unlocked; outside entry by key only.	R. Relight
L. Roll-up fire-rated assembly	10. Corridor -- Push-button locking from inside. Turning inside lever handle or closing door releases button. Outside lever handle locked or unlocked by key.	S. Special hardware
	11. Communicating -- Key in either lever handle locks or unlocks each lever handle independently.	W. Sound gasket weatherstripping
	12. Push/pull plates (6"x20" plate with 1" diameter x 10" long pullbar.)	

SECTION 08100 - METAL DOORS AND FRAMES

1.1 SIZE AND CONSTRUCTION (EXTERIOR)
Doors shall be 3'-0" minimum width, 7'-0" minimum height, 1-¾" thick flush, 18 gauge minimum, galvanized and insulated. Frames shall be galvanized, welded, insulated, weatherstripped, 16 gauge minimum, and reinforced for hardware.

1.2 SIZE AND CONSTRUCTION (INTERIOR)
Doors shall be 3'-0' minimum width, 7'-0" minimum height, 1-¾" thick, 18 gauge minimum. Frames shall be hollow metal, welded or knockdown, 16 gauge minimum, reinforced for hardware.

1.3 INSTALLATION
Coordinate all door installation, magnetic hold-opens and electric locking requirements with the door frame supplier and the building security and access systems vendors.

SECTION 08200 - WOOD DOORS AND FRAMES

1.1 SIZE AND CONSTRUCTION
Doors shall be 3'-0" minimum width, 7'-0" minimum height. All wood doors shall be hardwood veneer (no mahogany), 1-¾" thick solid-core. Exterior doors shall be sealed against water penetration.

1.2 FRAMES
Interior frames shall be softwood, hardwood or hollow metal (see Section 08100), Lessor's choice.

1.3 INSTALLATION
Coordinate all door installation, magnetic hold-opens and electric locking requirements with the door frame supplier and the building security and access systems vendors.

SECTION 08300 - ACOUSTIC PARTITIONS AND MISCELLANEOUS DOORS

1.1 DESCRIPTION OF THE WORK
Provide structural enhancements as required or as recommended by door manufacturer to allow proper operation and to prevent sag. Sound attenuation integrity shall extend above ceiling as required to maintain the minimum STC rating from room to room, floor to ceiling, and wall to wall.

1.2 DOOR TYPES AND CONSTRUCTION

ACOUSTIC OPERABLE PANEL WALLS
Provide STC 44 minimum. Modernfold "Acousti-Seal," "Spacesaver," or Panelfold "Series 4800," or approved equal. Provide integral access door when required by code or as shown on the approved drawing. Coordinate location with RES Architect.

ACOUSTIC ACCORDION PARTITIONS
Provide STC 39 minimum. Modernfold "Audio-Wall," or approved equal.

ROLL-UP SECURITY GATES
Provide electrically-operated gates whose operation is controlled by a switch located on the non-public side of the counter or wall/partition. Gate shall include an override mechanism to allow full manual operation in case of power outage. Locate motor, spindle, and other operating mechanisms above finished ceiling. When approved by the RES Architect, the mechanism may be mounted below the ceiling, and the Lessor shall provide a GWB/painted enclosure to match adjacent walls.

SECTION 08400 - ALUMINUM ENTRANCES AND STOREFRONTS

1.1 DESCRIPTION OF THE WORK

Provide thermally-broken anodized commercial-quality aluminum storefronts and all appropriate accessories constituting a complete assembly. Construction shall be compatible with power operators. Where applicable, modify existing storefront doors and frames as required to accommodate specific requirements for Tenant Agency's security and access systems. See Section 08900 for glazing requirements.

1.2 SIZE, COMPONENTS AND CONSTRUCTION

Doors

Doors shall be a minimum of 3'-0" wide and 7'-0" high, head and jamb stiles designed to receive insulated tempered glass and accommodate power operators as required.

Windows

Window frames shall match door frames, heads mounted at the same level as adjacent door head heights, unless specifically noted otherwise.

1.3 MANUFACTURERS

Kawneer Company, Inc., or approved equal.
Horton series #2100 sliding door, or approved equal.

SECTION 08700 - HARDWARE AND SPECIALTIES

1.1 GENERAL REQUIREMENTS

Provide a Certified Professional Locksmith (CPL) or Architectural Hardware Consultant (AHC) to work with the RES Architect to oversee the coordination of all hardware applications. Provide manufacturer's heavy-duty commercial-grade hardware per schedule. Each kind of hardware (locksets, closers, hinges, etc.) shall be obtained solely from one manufacturer.

1.2 KEYING

Key all locks for specified function, operation and security. Provide construction keying to master system. Coordinate master keying system by hardware supplier assisting the Tenant Agency. Hardware supplier shall provide construction keys to contractor and 4 sets of permanent keys to the Tenant Agency.

1.3 HARDWARE SPECIAL REQUIREMENTS

Locksets and Latchsets

All locks and passages shall be equipped with lever hardware, except at mechanical, electrical, telephone, and janitor's rooms, where knurled knobs are acceptable. Provide interchangeable core, heavy-duty commercial, cylindrical type. Corbin, Schlage Series D, or equal.

Hinges

Provide ball-bearing hinges throughout. McKinney or equal.

Closers

All closers shall be adjustable. Adjust closers to a maximum opening force of 5 pounds at interior doors and 8½ pounds at exterior doors. Spring hinge used as closer is not acceptable. Provide cold-weather fluid in exterior door closers where temperatures regularly drop below freezing. If exterior door does not remain closed in windy weather when closer is adjusted to 8½ pounds, then the Lessor shall provide automatic door openers or an enclosed entry vestibule. Provide closers where called for in the door schedule, or where required by code. LCN or equal.

Silencers
Provide silencers on each door except where smoke seal or weatherstripping is installed.

Stops
Overhead stop to be concealed, Glynn Johnson 320/330 series or equal. Wall stop to be Glynn Johnson WB50 or equal. Floor stops unacceptable unless approved in writing by RES Architect. Provide solid blocking for all wall stops. Closer used as stop is not acceptable.

Kickplates
Provide 34"x12" kickplates, stainless steel or 1/8" thick clear plastic, unless noted otherwise. Provide kickplates on both sides of door.

Weatherstripping and Thresholds
Weatherstrip all exterior doors with continuous vinyl at head and jambs, and door bottom weatherstripping so as to achieve highest protection against weather infiltration. Provide beveled, ½" maximum rise threshold meeting accessibility requirements at all public entrances and accessible routes.

1.4 ACCESS SYSTEMS

Cypher Locks
Cypher locks shall be 9-number minimum, mechanical push-button code access system. Lock shall have changeable code capacity and be capable of remaining continuously unlocked (at Tenant Agency's discretion) during business hours. Simplex or equal.

Automatic Opener Assembly
When noted in the door schedule, provide an automatic operator that is actuated by a push-button or plate, and manually operable for other pedestrian traffic. Alternately, infrared sensors may be provided if appropriate for special design applications and approved by the Tenant Agency. Provide a complete system for full operation, including field-adjustable variable time delay, opening and closing speed, control switching for security access system and locking, all appropriate connections, and complying with all accessibility requirements.

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Card Key, Digital Keypad, and Proximity Reader Systems
When noted in the door schedule, provide a fully functional system providing access security control, complete with all components including, but not limited to, panels, door strikes, locks, buttons, readers, contacts, connections, switching, control mechanisms, and operating cards (if applicable). Verify the desired operational parameters with the RES Architect and Tenant Agency, and interface all construction disciplines as appropriate. Reference Part A5.28.

1.5 FINISH
Provide hardware with matching finishes. Match new hardware finish to remaining existing hardware. For new construction, unless noted otherwise, provide either semi-gloss bronze (US-10) or semi-gloss chrome (US-26d), or as approved by the RES Architect.

SECTION 08900 – WINDOWS & GLAZING

1.1 DESCRIPTION OF WORK AND PRODUCT QUALITY
All new glazing shall meet current Energy Code for integral shading and "U" values. Maximum Solar Heat Gain Coefficient (SHGC) = 0.65 for horizontal and vertical surfaces, and the maximum “u” value for vertical glazing = .60 and for horizontal glazing (skylights) = 1.3.

Interior glazing shall be as shown on the approved plans or in accordance with applicable codes. All window sills shall be finished with plastic laminate or other approved water-resistant material.

1.2 EXTERIOR WINDOWS & SKYLIGHTS

Provide insulated glazing manufactured and installed in appropriate frames such that the assembly resists air and moisture leaks and interior condensation. For new construction, provide thermally-broken commercial frames.

1.3 WALL RELIGHTS

Frames shall match door frames, heads mounted at the same level as adjacent door head heights, unless specifically noted otherwise; non-standard sizes will be shown on the drawings. Provide fire-rated assemblies and/or safety glazing where required by code.

1.4 DOOR RELIGHTS

Frames shall complement door frames, unless specifically noted otherwise; non-standard sizes will be shown on the drawings. Provide fire-rated assemblies and/or safety glazing where required by code.

End of Division 8

DIVISION 9 FINISHES

SECTION 09000 - FINISHES

BASIC MINIMUM FINISH SCHEDULE (unless noted otherwise on plans or in Addendum)

1.1 FLOORS AND BASE

Offices (and spaces not listed below)
Carpet tile and 4" base.

Restrooms, Shower Rooms
Slip-resistant, unglazed porcelain ceramic tile. Sheet vinyl optional for leases not exceeding 5,000 square feet. All flooring material shall have matching cove base extending upward onto the adjacent wall at least 5".

Shower Stalls
Slip-resistant, unglazed porcelain ceramic tile, unless a prefabricated fiberglass pan or stall has been approved.

Break Rooms, Lunch Rooms and Coffee Bars
Vinyl composition tile or sheet vinyl. For coffee bars, install full length of counter, including adjacent space for refrigerators, and minimum 24" out from face of base cabinet, unless shown otherwise on drawings. Provide 4" base.

Mechanical, Electrical, Voice/Data Distribution, Copy, and Janitor Rooms
Vinyl composition tile and 4" base .

Stair Treads
Rubber flooring (see Section 09650, 1.7).

Vestibules and Entries
Woven polypropylene, with 4" base, unless code dictates otherwise. “Endurance” or equal.

1.2 WALLS

Offices (and spaces not otherwise indicated)
Gypsum wallboard and orange peel texture, satin or eggshell enamel paint.

Drinking Fountains
Plastic laminate on adjacent walls to 48" high above finished floor, with continuous metal or matching plastic edges. Extend 18" minimum on each side of fountain.

Restrooms, Shower Rooms
Ceramic tile wainscot to 72" AFF minimum on all walls, and gypsum wallboard with semi-gloss enamel above. For leased spaces under 5,000 square feet, plastic laminate wainscot (all walls) and sheet vinyl floors may be substituted in lieu of ceramic tile.

Shower Stalls
Full-height ceramic tile, unless prefabricated fiberglass enclosure has been approved.

Janitor Rooms and Mop Sinks
Gypsum wallboard, with plastic laminate wainscot to 48" high minimum above finished floor at mop sink. Extend 18" minimum on each side of sink.

Chair Rails & Corner Guards
Provide chair rails and corner guards in the locations directed in Part A5.8 and as specified in Sections 06200, 1.4 and Section 10260.

1.3 CEILINGS

Office Areas and Conference Rooms
Acoustical tile suspended ceiling system. Office ceiling height 9'-0" minimum in all areas unless otherwise indicated. Provide 10'-0" minimum ceiling height for large open areas where the minimum room width exceeds 30'. Provide 12'-0" minimum ceiling height for large open areas where the minimum room width exceeds 50'.

Restrooms
Provide gypsum wallboard with semi-gloss enamel. Ceiling height shall be 7'-6" minimum, 8'-0" preferred.

Shower Rooms & Stalls
Provide gypsum wallboard with epoxy coating.

Mechanical, Voice/Data Distribution, Janitor and Electrical Rooms
Ceilings may be gypsum wallboard or suspended acoustical ceiling, Lessor's option.

SECTION 09250 – GYPSUM WALLBOARD AND WALL FRAMING

1.1 STEEL OR WOOD FRAMING AND FURRING

For non-loadbearing walls and hard ceilings, provide wood or light gauge steel framing. For light gauge steel framing, comply with drywall manufacturer's recommendations.

Provide studs spaced at 16" on-center (preferred) or 24" maximum. Install supplementary framing, blocking and bracing at terminations in the work and for support of fixtures, equipment services, heavy trim, door stops, grab bars, toilet accessories, furnishings, adjustable shelves, chair rails, and similar construction, considering weight or loading to meet all requirements for items supported.

Provide finished trim or smooth appearance where top of wall meets underside of suspended ceiling. Minimize the gap and provide "J" or "L" metal trim between top of wall and ceiling. Provide bracing to the above-ceiling support structure over doors and elsewhere as per code. Frame around ducts penetrating walls to provide support for gypsum wallboard.

1.2 GYPSUM WALLBOARD

Provide 5/8" thick, type "X" for all dry areas, unless otherwise indicated. Install water-resistant 5/8" thick, type "X" for all toilet rooms, and similar wet areas (see Section 09300, 1.2 for ceramic tile applications). Screw-attach wallboard into metal studs or KD wood studs. Maintain fire-resistant rating of wall/ceiling assemblies at openings. Provide galvanized metal cornerbead and edge trim. Tape and mud joints (two coats minimum). Match existing adjacent wall texture; light orange peel texture in new construction.

Demountable Partition Systems

Ceiling-height interior demountable partitions shall be faced with vinyl film or fabric as selected by the Tenant Agency from the manufacturer's standard colors.

Place demountable partitions on carpeting and extend to the underside of the finished ceiling system. Fastening of the partitions to the floor shall not be done in any way that removal of the partition will cause spalling of the concrete subfloor. Drilling and anchoring are preferred but any other system producing the same result is acceptable. Demountable partitions shall be capable of having glass vision panels installed with micro blinds. Vision panels shall be installed where shown on the approved plans. All demountable partitions shall have a minimum STC rating of 42, and additional sound-deadening material shall be applied to walls and above the ceiling where required for conference rooms, lunch rooms, and where shown on the approved plans.

SECTION 09300 – CERAMIC TILE

1.1 DESCRIPTION OF WORK

Provide glazed ceramic tile wainscots and slip-resistant porcelain ceramic tile floors. Provide bullnosed edges at all transitions to other materials, and preformed inside/outside pieces at wall corners and base. Completely seal all ceramic tile applications after installation. Provide grouting, cleaning and sealing in accordance with the tile and grout manufacturer's recommendations.

1.2 SUBSTRATE

Provide cementitious tile backer board behind all ceramic tile applications in all wet areas, Wonderboard or equal. Install with corrosion resistant fasteners. (See also Section 10810)

SECTION 09500 – ACOUSTICAL CEILING

1.1 DESCRIPTION OF WORK

Provide all items required for complete installation of ceiling system, including wall moldings, anchors, accessories, fasteners, etc, required by conditions of installation.

1.2 SUSPENSION SYSTEM

Provide rust-resistant 2'x4' exposed grid system for lay-in acoustical tile, fire-rated where required. Installation typical in all areas except as noted. Grid shall match acoustic tile background, white color or as specified. In no case shall the grid be attached to the mechanical ductwork. Provide seismic bracing and support per governing code. Provide corrosion-resistant grid system for "wet" areas and laboratories.

For repair/restoration of existing grids that are discolored or rusted, provide GridMAX by Acoustic Ceiling Products, or approved equal, throughout the entire affected space.

1.3 ACOUSTICAL TILE PANELS

Non-fire-rated tile
Size 24"x48" by ¾" minimum thickness, Ceiling Attenuation Class (CAC, formerly STC) minimum range 35 - 39, NRC minimum range .65 - .75. Tile with lower CAC and NRC values than those specified is not acceptable. Install tile in accordance with tile manufacturer's requirements. Provide in all areas except as otherwise indicated on the drawings or specifications, or as required by code. Armstrong Fine Fissured, USG Glacier, Omni or equal. Provide moisture-resistant tiles in “wet” and exterior areas.

Fire-rated tile
Size 24"x48" by ¾" minimum thickness, CAC minimum range 35 - 39, NRC minimum range .60 - .70. Tile with lower CAC and NRC values is not acceptable. Install tile in accordance with tile manufacturer's requirements, all in the same direction. Provide in all areas as required. Armstrong Fine Fissured USG Glacier, Fissured, Omni or equal.

SECTION 09650 – RESILIENT FLOORING

1.1 DESCRIPTION OF WORK
Provide resilient flooring as shown and specified. Provide materials and items as required for complete installation of products, including fasteners, anchors, and other necessary accessories. Prepare substrate(s) per manufacturer's directions.

1.2 FINISH CONDITION
All resilient flooring areas shall be cleaned, waxed, and finished according to manufacturer's recommendations just prior to Tenant occupancy.

1.3 VINYL COMPOSITION TILE (VCT)
12" x 12" x 1/8" thick, Mannington, Armstrong, Azrock, Tarket, or approved equal.

For slip-resistant flooring use Armstrong Stepmaster or Mannington Assurance Tile (18” x 18”) or equal where slip-resistance is noted on drawings.

1.4 SHEET VINYL FLOORING
Commercial-grade, .085" thick, .050" wear surface, Mannington Magna, Armstrong Corlon or equal. Provide full backing and 5" integral cove for base. All sheet vinyl seams shall be welded in compliance with manufacturers recommendations.

1.5 RUBBER COVE BASE
All topset cove base shall be minimum 4" high from continuous rolls, rubber/vinyl mix, uniform color full thickness, Johnsonite or Roppe 700 series, or approved equal. All joints to be tight-butted and sealed. 5/8" standard toebase. Provide job-formed corners from continuous rolls.

1.6 RESILIENT EDGE STRIP
Provide vinyl or metal transition strips at floor material transitions. Finished transitions greater than 1/4" high shall be beveled or ramped per accessibility requirements.

1.7 RUBBER FLOORING
24" x 24" x 3/16" thick (or as standard by manufacturer) studded rubber tile, and/or ¼" thick full-width stair treads with matching risers and stringers. Roppe, Johnsonite, Nora, or equal.

SECTION 09680 – CARPET

1.1 DESCRIPTION OF WORK

Provide preparation, substrates, and any materials required (adhesives, floor sealers, fillers, leveling compounds, seaming tapes etc.) for complete installation of carpet. Installation and products shall be per manufacturer's recommendation.

1.2 PRODUCT QUALITY

All carpet shall be from the same dye lot. Products utilizing olefin or polyester nylons are unacceptable. All carpet products shall consist of recycled content and be 100% recyclable (reference A5.6), and shall bear the CRI Green Label Plus approval as well as a CRI Green Label Plus Indoor Air Quality Control Category & Registration Number.

1.3 PRODUCTS

CARPET TILE

TYPE:	Level or textured loop
TILE SIZES:	18"x18" or 24"x24"
YARN TYPE:	100% type 6.6 Nylon
DYE METHOD:	Minimum 70% Solution-dyed / Maximum 30% Yarn-dyed
FIBER WEAR WARRANTY:	15 years
PILE WEIGHT:	20 oz. minimum
PILE THICKNESS:	.102 minimum
GAUGE:	1/10 minimum
STITCHES:	6.33 per inch
TUFT DENSITY:	63.3 tufts per square inch minimum
DENSITY:	7,058 minimum
PRIMARY BACK:	Polypropylene
SECONDARY BACK:	Vinyl, with reinforced fiberglass scrim & integral moisture barrier
SECONDARY BACK WARRANTY:	"Non-prorated Lifetime Warranty" - delamination, expanding, shrinking, cupping, and doming
NYLON TREATMENTS:	Manufacturer-applied stain protection
DELAMINATION:	None (ASTM D-3936)
TUFT BIND:	Pass (ASTM D-1335)
AACHEN TEST:	Pass
PHILIPS ROLL CHAIR TEST:	Rating of 3 or greater
MOISTURE IMPACT TEST:	10,000 cycles
METHENAMINE PILL TEST:	Pass (ASTM D-2859)
FLAMMABILITY:	Exceeds ASTM E-648 and passes DOC FF#1-70
FLOORING RADIANT PANEL TEST:	Class I (Direct Glue) (ASTM E-648)
N.B.S. SMOKE CHAMBER TEST:	<450 or less (ASTM E-662)
ELECTROSTATIC PROPENSITY TEST:	<3.0 KV (AATCC 134)

1.4 ADHESIVES AND FLOOR PRIMERS

Provide non-VOC adhesives and floor primers as recommended by carpet manufacturer and as certified non-VOC by the CRI Indoor Air Quality Adhesive Testing Program.

1.5 PREPARATION

Areas to receive carpet shall be clean, dry and dust-free. Concrete subfloor moisture and heat requirements for subfloor / installation areas shall be in accordance with manufacturer's written instructions. Fill all depressions, cracks and irregularities with non-VOC Portland-based cement compound with latex binders (Ardex, Mapei, or equal), unless specifically prohibited by manufacturer, and grind all ridges and high spots smooth, so as to achieve a level subfloor throughout (see Part A5.13). Proceeding with carpet installation constitutes installer's acceptance of the responsibility for correction of unacceptable work due to floor conditions.

1.6 INSTALLATION

Strictly adhere to carpet manufacturer's written floor preparation and installation instructions, as well as CRI Commercial Installation Standard 104 as pertains to project scope. Manufacturer's instructions shall take precedence over CRI 104. Bind edges at floor access panels. Installation of carpet tiles should utilize the "Lift" method for work in occupied spaces.

1.7 FINISH CONDITION

During construction, protect the carpet according to manufacturer's recommendations. Just prior to Tenant occupancy, remove all debris from floors, clean carpet so as to appropriately eradicate all spots, dirt or adhesive, and make repairs so as to appropriately eliminate tears, frays, pulled tufts and stains.

1.8 WARRANTY

Provide full product and installation-labor warranty equal to the term of the Lease. Warrant against failure, including loss of adhesion, improper site preparation, and poor workmanship.

SECTION 09900 - PAINTING

1.1 DESCRIPTION OF WORK

"Paint", as herein defined, means all coating systems materials. Work includes preparation and finishing of all interior and exterior surfaces that are a part of this project. Work shall include adjacent existing surfaces that are disturbed as a result of this work. Work excluded shall be that which is normally excluded such as operating parts and code-required labels**.**

1.2 MATERIALS

Provide solvent-free, non-VOC paint products: Kelly-Moore, Glidden, Sherwin Williams or equal.

1.3 PAINTING SCHEDULE

Gypsum Wallboard Finish System

Typical: 1 coat primer/sealer, 2 coats eggshell or satin enamel.
Toilet rooms: 1 coat primer/sealer, 2 coats semi-gloss enamel paint.
Shower rooms: 1 coat primer/sealer, 2 coats semi-gloss epoxy paint.

Clear Finishes

Finish hardwood veneer doors and wood frames with 1 coat of stain, 2 coats of semi-gloss finish on all surfaces.

Painted Metal

Paint primed hollow metal doors, frames and other prefinished ferrous metals with 2 coats of semi-gloss enamel.

Unpainted Ferrous Metal

Prime with one coat rust-inhibiting primer and finish with 2 coats of semi-gloss enamel.

End of Division 9

DIVISION 10 - SPECIALTIES

SECTION 10150 - COMPARTMENTS AND CUBICLES

1.1 TOILET PARTITIONS AND URINAL SCREENS

Provide ceiling-mounted toilet partitions and wall-mounted urinal screens in all restrooms in the configuration shown on the approved drawing. Comply with all accessibility requirements for accessible stalls. Partitions and screens shall be finished with plastic laminate or painted steel, with steel core pilasters, stainless steel fittings, and door returns to preset positions. All brackets to have solid blocking for anchorage. Manufacturers: Bobrick, AAMCO, METPAR or equal.

In multi-stall configurations, provide a continuous stiffener bar or brace mounted at approximately 6'-6" AFF on the back side of each of the toilet partition ceiling-mounted support pilasters (on the stall side) and extending the full length of the stalls.

SECTION 10260 – CORNER GUARDS

1.1 DESCRIPTION OF WORK

Provide screw-mounted clear plastic corner guards, minimum of 1" legs, mounted from the top of the rubber base to approximately 48" AFF.

SECTION 10350 - FLAGPOLES

1.1 DESCRIPTION OF WORK

Provide 30' aluminum flagpole, complete with fittings and lockable halyard control, Concord Industries, Inc. or equal. Illuminate flagpole with photocell switch-controlled light fixture. Locate flagpole and light fixture as shown on the drawings, or as approved on-site by RES Architect and the Tenant Agency. Provide all appropriate support and foundation as recommended by the flagpole manufacturer.

SECTION 10400 - IDENTIFYING DEVICES

1.1 SITE / BUILDING / TENANT IDENTIFICATION SIGN

If the State agency occupies a multi-tenanted building, and the building's site sign accommodates individual tenant identification, provide agency identification on the site sign (unless waived by tenant). If the State agency occupies 100% of a building, provide agency identification on the site sign (unless waived by tenant).

If the building does not have a site sign, then provide agency identification on a building-mounted sign either on the exterior wall or on the windows nearest the main entry, with the design consistent with other tenant signs.

1.2 ENTRANCE DOOR SIGN

Provide a tenant identification sign located either on the glazing nearest the main entry door, on the wall nearest the main entry, or as otherwise approved by the Tenant Agency. Provide white vinyl, Helvetica, medium style letters, unless approved otherwise by the Tenant Agency.

1.3 BUILDING DIRECTORIES

If the building is occupied by multiple tenants or by more than one State agency, the Lessor shall provide a building directory located prominently in the building's main entry lobby or where most appropriate for high public visibility.

1.4 ACCESSIBILITY SIGNAGE

Provide visible and tactile international symbol of access signs, including Braille, as required by code. One sign that includes both "Men" and "Women" may be provided at unisex rooms.

1.5 ROOM SIGNS

Provide 1/8”-thick plastic sign at each room requiring identification. At all assembly occupancies (conference, training, interview and hearing rooms, etc.), as part of the room identification sign, provide a slide frame designating either “vacant” or “occupied” at the Tenant’s discretion. Provide similar slide frame at all private offices to accommodate tenant-provided insert. Mount frames using double-backed foam tape. Coordinate signage location and appropriate room identification system with the Tenant Agency and the RES Architect prior to fabrication. Verify with the Tenant Agency the exact wording to be used on all signs.

SECTION 10800 - TOILET AND BATH ACCESSORIES

1.1 DESCRIPTION OF WORK

Provide vandal-resistant, commercial-grade toilet room accessories, Bobrick or approved equal. Basic Requirements include: all toilet fixtures (see Section 15440, 1.1), privacy partitions and screens (see Section 10150), sinks in counters, toilet paper dispensers, toilet seat cover dispensers, sanitary napkin disposal units, utility shelf, soap dispensers, towel dispensers (or hand dryers), grab bars, waste receptacles, mirrors, and 1 coat hook in each stall. Coordinate project requirements with vendor-supplied accessories.

1.2 TOILET PAPER DISPENSERS

Provide 1 for each stall, 2-roll type.

1.3 TOILET SEAT COVER DISPENSERS

Provide 1 for each toilet stall. Wall-mount above or adjacent to toilet.

1.4 SANITARY NAPKIN DISPOSALS

Provide 1 for each Women's restroom stall.

1.5 UTILITY SHELF

Provide 1 for each restroom stall, minimum 8” wide spring-operated pull-down shelf.

1.6 SOAP DISPENSERS

Provide 1 for each lavatory, 1 for each shower, and 1 for each coffee bar and lunchroom counter.

1.7 PAPER TOWEL DISPENSERS

Provide 1 for each 2 lavatories, and 1 for each coffee bar and lunchroom counter.
Electric hand dryers are an acceptable substitute in restrooms.

1.8 WASTE RECEPTACLES

Provide minimum of 1 receptacle for each restroom.

1.9 MIRRORS

Provide 1 for each lavatory, or a full-width mirror to accommodate all lavatories. Plate glass with stainless steel trim, 24" x 36" minimum individual size, with stainless steel shelf.

1.10 GRAB BARS

Provide 1 for each accessible toilet stall and at all shower enclosures; stainless steel, 1½" diameter.

1.11 BABY CHANGING STATION

Provide 1 in each public restroom, located where shown on the drawings. Koala Bear Kare Baby Changing Station, as manufactured by JBJ Industries, Inc., or approved equal.

SECTION 10810 - SHOWER ENCLOSURE

1.1 GENERAL

Where indicated on the drawings, provide either a fiberglass shower stall or a ceramic tile-lined shower enclosure, complete with all fixtures including fold-down seat and grab bars. Provide shower curtain rod and 2 clothes hooks for each shower. See also Sections 09300 & 15440.

End of Division 10

DIVISION 11 - EQUIPMENT

SECTION 11000 - EQUIPMENT

1.1 GENERAL

Lessor shall provide the complete installation and maintenance of all code-required and project-specific equipment and systems, including central monitoring service, whether noted on the approved drawings or not, and ensure their proper operation.

SECTION 11170 - SOLID WASTE HANDLING EQUIPMENT

1.1 GENERAL

Provide a refuse receptacle, location and size as recommended by local governing utility. Provide a level, concrete-paved surface with unrestricted access for garbage trucks, and locate on-site so as to be efficiently and safely accessible to the building tenants. Provide a 6'-0" high screened enclosure or similar visual barrier surrounding the refuse receptacle pad .

End of Division 11

DIVISION 12 - FURNISHINGS

SECTION 12500 - WINDOW TREATMENT

1.1 SUMMARY OF WORK

All new window coverings shall be vertical blinds as a basic requirement, unless building standard or existing window treatments are accepted by the RES Architect, or other treatments are specified by the Tenant Agency.

1.2 VERTICAL BLINDS

Provide vertical, 180° swivel, adjustable, traversing, rigid, vinyl louvers, manufactured by Levolor or equal. Provide perforated and/or solid per direction from the RES Architect. Mount so as to provide coverage the full width and height of the affected window, and securely anchor the assembly at the window head. Perforated blinds shall be 13% open.

End of Division 12

DIVISION 15 - MECHANICAL

SECTION 15410 - PLUMBING PIPING

1.1 SUMMARY OF WORK

All valves and piping shall be recessed, except clean-outs and flush valves. Provide access panels for individual valves as required for service and maintenance. Clean-outs shall be flush with adjacent wall or floor surfaces. Installation shall include stop valves on water supply lines to permit repair without shutting off main building supply lines. Building and tenant water supply shut-off valve shall be easily accessible and well-marked.

SECTION 15440 - PLUMBING FIXTURES

1.1 SUMMARY OF WORK & PRODUCT QUALITY

Provide top-quality commercial-grade plumbing fixtures, including all associated trim and accessories, American Standard, Kohler, or equal. Provide low-flow water closets, urinals (or waterless urinals), and lavatories using commercial-grade carriers and flush valves. Provide floor-mounted water closets in all accessible stalls. Tank-type water closets may be acceptable at leased spaces less than 3000 square feet, or as approved in writing for the project by the RES Architect. Flush valves for toilets and urinals in new construction shall be infrared-activated valves. Lavatories shall also have infrared-activated or single pushbutton (with automatic shutoff) faucets, and shall be provided with tempered water.

Flush water systems just prior to tenant occupancy and provide a letter of certification that the domestic water lines are clean, disinfected, and that the drinking water is potable and free of objectionable odor and taste. Lessor shall provide and maintain hot and cold bottled drinking water dispensers on every floor if testing and treatment of on-site water does not meet potable drinking water standards.

1.2 FLOOR DRAINS

Provide self-priming floor drains with traps, 1 minimum in each restroom. Install flush with finished floor. Slope the floor within a 2' radius of the drain so as to effect positive drainage into the drain. Provide adjustable brass cover grille.

1.3 COFFEE BAR SINKS

Provide 1 self-rimming stainless steel sink, measuring 15" x 17" x 7" with swivel gooseneck fitting, as well as an instant hot water dispenser at each coffee bar (see Section 15450).

1.3A LUNCHROOM SINKS

Provide 1 self-rimming stainless steel sink, measuring 20” x 31” x 8½” with swivel gooseneck fitting, as well as an instant hot water dispenser at each lunchroom counter (see Section 15450).

1.4 MOP SINKS

Provide 24” x 36” one-piece molded construction, floor-type mop sink, Fiat or equal. Locate where shown on the drawings.

1.5 DRINKING FOUNTAINS

Provide accessible, high-low, wall-mounted, refrigerated drinking fountain, Elkay ERHP2-8, Haws HT-ESR, or equal. Locate where shown on the drawings.

1.6 SHOWERS

Provide showers where shown on drawings, and as specified in Section 10810. Provide an adequate supply of tempered water (see Section 15450, 1.2), and a floor drain at the drying area. Showers shall be equipped with low-flow heads.

SECTION 15450 - HOT WATER EQUIPMENT

1.1 INSTANT HOT WATER DISPENSER

Provide a wristblade-handle instant hot water dispenser, Waste King QHD-780, Insinkerator H-990, Insinkerator HC-1100, or equal.

1.2 WATER HEATER

Provide an energy efficient water heater (or an "on-demand" unit), quick-recovery type, with an energy factor of at least 0.95, located where appropriate so as to provide the most efficient service, sized in accordance with area use and/or as required to service the building. Provide a circulation pump with 7-day programmable electronic timer with battery back-up, or additional water heaters where hot water delivery to fixtures exceeds 10 seconds. Provide 120° temperature water, except where tempered water (92°) is specified.

Plumb the relief valve as directed by the heater manufacturer and to meet code.

1.3 PIPE INSULATION

Piping shall be thermally insulated in accordance with Energy Code.

SECTION 15500 - HEATING, VENTILATING AND AIR CONDITIONING (HVAC)

1.1 SYSTEM DESIGN, SUPERVISION AND CERTIFICATION

HVAC systems for all new office space, and remodels affecting over 3,000 square feet of State-leased space, shall have design work accomplished under the supervision of a licensed mechanical engineer. The Lessor's engineer shall be responsible for system design, construction observation, and certification of the completed system. All projects shall meet or exceed State requirements. The State reserves the right to hire an independent mechanical consultant to review the design and installation of the HVAC system. Modifications or changes resulting from that review required to achieve compliance with Leased Space Requirements shall be accomplished at no additional cost to the State.

For projects 5,000 SF or greater, provide a general narrative of the proposed mechanical system immediately following receipt of a letter of intent to lease. Include the following information:

1) **Air Flow Delivery Concept.** (constant volume, VAV, VVT, etc).

   a. For VAV systems, series fan-powered, pressure-independent terminal units shall be used. Deviations must be approved in writing. Indicate if they will use PSC or ECM motors. Indicate if/which terminal units will receive re-heat, and what the re-heat source will be (electric, hot water, etc). Indicate if plenum or ducted return is proposed.
   b. For VVT systems, where practical and where structure and ceiling space allow, avoid combining different exposures (north, south, east, west) on the same unit, and avoid combining interior spaces with exterior exposures on the same unit. Avoid using VVT air handlers above 20.0 tons. All units 5.0 tons and greater must have motorized bypass. All packaged VVT air handlers with economizers must include power exhaust.

2) **Zoning.** Provide a proposed zoning map or description. If zoning is accomplished with terminal units, Indicate which zone terminal units will be grouped with which central unit. This can be a highlighted floor plan with notes indicating which zone is served by which central unit.

3) **Equipment Type.** Indicate the HVAC equipment type (packaged, split system, air source HP, water source HP, gas-fired heat, DX cool, chiller, boiler, refrigerant types, supplemental heat source, etc) Electric heat shall not be used, except as supplemental heat.

4) **Ventilation Capacity/Sustained Capability.** Indicate outdoor air ventilation flow rates for each central unit. If any of the proposed equipment has an outdoor air percentage above 50%, discuss the equipment features that allow the unit to sustain operation/comfort at that outdoor air percentage (gas-fired stainless steel heat exchangers with modulating or multiple stage [3 or more] control, heat recovery, modulating hot water coils/valves, pre-heat of outdoor air for heat pumps, etc). Note: In determining the outdoor percentage, use the flow rate associated with the expected maximum from the VIAQ, even if a CO_2 DCV system is provided.

5) **Equipment Features.** Describe equipment features such as: tonnage, number of stages of control or modulating control – indicate for both heating and cooling, variable frequency drives, economizers, heat recovery, vibration isolation devices/techniques.

6) **Equipment Location.** Indicate the proposed location of all key HVAC equipment (roof, indoor, pad-mounted, etc).

7) **Filtration.** Indicate the proposed level of filtration on each central unit, and all fan-powered terminal units.

8) **Controls.** Indicate if the controls are to be networked or stand alone. If they are networked, state if the controls interface is to be graphical or text-based, and if there will be remote communication. Indicate if exhaust fans, pumps or other building systems will be controlled (indoor lighting, parking lights, etc). If lighting is to be controlled, provide a proposed lighting zone map. Projects that require an EMS/DDC system shall have a computer-based front end with graphical interface.

Upon agreement of the initial system concept, the design shall be completed and submitted to the State for coordination of thermostat locations, lighting control over-ride locations, etc.

Install mechanical equipment and dampers to facilitate service, maintenance, and repair or replacement of equipment components. Ductwork must be sealed per Energy Code and the duct leakage must not exceed 3%.

During construction, store all mechanical equipment, ductwork, piping and insulation in a dry location on elevated dunnage. Remove dust from the inside of metal duct sections as they are erected. Cover all duct openings at the end of each workday to prevent dust migration into ducts. If a duct liner does get wet, dry duct liner within 48 hours using a forced air heater. Ducts detected with moist liner will be required to be replaced at no additional cost to the State.

1.2 CALCULATIONS AND LOADS

The heating and air conditioning load calculations shall be based on the directives of this section.

Ventilation

New installations must comply with local code requirements, the Washington State Ventilation and Indoor Air Quality Code (VIAQ) and the Non-Residential Energy Code (NREC). The table below reflects the values given in the 2004 VIAQ converted to units of CFM per square foot for occupancies typical of State facilities. Multiply the appropriate value by the useable room square footage to get the outside air volume for each zone. Unless indicated otherwise, "exhaust or transfer air" vent rates refer to outside air via the zone air handler.

Table 15 C-1
Ventilation Rates

Space Type	Ventilation Rate (9 ft ceiling assumed)	VIAQ Table 3-4 Reference
Conference Rooms, Hearing Rooms, Public Service Areas, [1, 4]	1.0 cfm/sq.ft.	"Office, Conference Rooms"
Office Reception Areas [4]	0.9 cfm/sq.ft.	"Office, Reception Areas"
Training Rooms [4]	0.75 cfm/sq.ft.	"Education, Classroom"
Computer Rooms	0.14 cfm/sq.ft.	"Office, Office Space"
Corridors	0.05 cfm/sq.ft.	"Public Spaces, Corridors and Utilities"
Elevator Switch Rooms, Voice/Data Distribution Rooms, Janitor's Closets	0.05 cfm/sq.ft. [2]	"Public Spaces, Corridors and Utilities"
Elevators	1.0 cfm/sq.ft. [2]	"Public Spaces, Elevators"
Laboratories	0.6 cfm/sq.ft. [3.]	"Education, Laboratories"
Libraries	0.3 cfm/sq.ft.	"Education, Libraries"
Lunch Rooms	0.3 cfm/sq.ft. [2]	"Food and Beverage Service, Kitchens (Cooking)"
Offices	0.14 cfm/sq.ft.	"Office, Office Space"
Restrooms	50 cfm/fixture [2]	"Public Spaces, Public Restroom"

Footnotes

1. Public Service Areas are high-density office reception areas such as food stamp, licensing, and unemployment compensation waiting areas
2. Exhaust or "transfer air"
3. Consider fume hoods
4. Consider using the exception to Section 3.4 of the Ventilation and Indoor Air Quality Code (52% clause).

Load Calculations

HVAC systems shall be sized in accordance with the following table values, and the ventilation rates shown above. The designer shall utilize either a commercially-available computer program designed for this purpose, a spreadsheet, or hand calculations to assist in sizing all heating and cooling equipment. Methods shall be as described in ASHRAE Fundamentals. Load calculations for each zone or piece of HVAC equipment shall be submitted to the RES Architect with drawings indicating the zoning layout for review and approval. Documents shall provide sufficient detail to accurately describe the intended system and shall include, but not be limited to, glazing areas, glazing orientation, zoning map, number of people, miscellaneous equipment loads, and lighting values. When adding a load to existing systems, calculations will show the existing equipment adequate to supply this load without compromising conditions in other areas.

Table 15 C-2
Heating and Cooling Load Requirements Summary

Item	Heating Load	Cooling Load
General Calculation Method	ASHRAE Fundamentals or approved program	ASHRAE Fundamentals or approved program
Indoor Design Temperature	70° F	74° F
Outdoor Design Conditions	See Table 15 C-4	See Table 15 C-4
Equipment, People, Lights, Solar Heat Gains	**Not included** in load	Include in load
Infiltration Rates, CFM/SF Wall		
Tight	0.1	0.1
Average	0.3	0.3
Leaky	0.6	0.6
Safety Factor	**add 20%**	**add 20%**

Table 15 C-3
Miscellaneous HVAC Loads (Watts/SF)

Space Type	Lighting	Equipment
Office	1.2	0.75
Classroom, Day Care, Conference	1.35	0.5
Classroom w/ Computers	1.0	2
Voice/Data Distribution (LAN) Rooms	1.0	varies
Retail	5	0.5
Assembly, Theater, Gym	1	0
Corridor	0.8	0
Laboratory	2.0	2.0

Table 15 C-4 Outdoor Design Conditions			
	Winter (See Note)	**Summer (See Note) (measurements taken simultaneously)**	
Vicinity	**Dry Bulb (°F)**	**Dry Bulb (°F)**	**Wet Bulb (°F)**
Aberdeen	25	80	65
Bellingham	15	81	67
Bremerton	21	82	65
Colville	-8	93	64
Ellensburg	2	94	65
Everett	21	80	65
Kennewick	13	99	68
Longview	19	88	68
Moses Lake	1	97	66
Olympia	16	87	66
Port Angeles	24	72	62
Republic	-10	93	64
Seattle	22	85	68
Spokane	-6	93	64
Tacoma	19	86	66
Vancouver	17	89	68
Walla Walla	0	97	67
Wenatchee	7	99	67
Yakima	11	96	65

Note: Table values are from the 1993 ASHRAE Fundamentals, Chapter 24, Table 1, Winter 99% and Summer 1% columns.

1.3 SYSTEM DESIGN

The HVAC supply air system shall be fully ducted. System shall provide outside air ducted directly to the air handling units at all times during occupancy. All plenum return systems must utilize plenum-rated materials as required by codes. Ductwork shall be constructed of galvanized steel installed per Sheet Metal and Air Conditioning Contractor's National Association (SMACNA) Standards. The need for fiberglass duct linings shall be minimized by design of ductwork for low velocities. Where used, fiberglass duct liner shall have a coated surface on the airstream side which prevents fiber release. Cut edges of liner materials shall be sealed in accordance with manufacturer's recommendations. Acceptable manufacturers are Owens-Corning, Schuller, Knauf, Certain-Teed, or approved equal. Flexible duct shall be factory-insulated type with vapor barrier jacket, one-inch fiber glass insulation, zinc-coated steel-spring helix reinforcement, bonded to polyester or mylar liner. The use of flexible ductwork shall be limited to runs of 8 feet. All materials shall comply with UL 181 listed with flame-spread rating not over 25, smoke-developed rating not over 50.

The use of transfer grilles is permitted to return air from rooms under 170 square feet in area, provided they consist of a pair of grilles connected with ductwork with a minimum of two bends, designed and installed to prevent sound transfer from room to room. Multiple transfers in series are not permitted.

The ratio of supply and exhaust air shall be such that the building shall be under slight positive pressure at all times. When economizers are used, controls shall be provided so that outside air is used for the first stage of cooling, supplying a maximum of 100% outside air when outdoor temperatures are sufficiently low to provide the necessary cooling.

Provide separate perimeter zones at a minimum of one zone for each exterior exposure per floor, with an additional zone for the interior. Perimeter zones shall be within 10 to 14 feet of an exterior wall or glazing. In addition, provide separate zones for all corner offices larger than 200 SF (ie. rooms having multiple exterior exposures). HVAC serving interior zones may not also serve exterior zones unless approved by the RES Architect. Provide each zone with separate temperature controls and temperature sensors. Provide separate zones for special purpose assembly rooms such as conference rooms and training rooms. The system designer shall verify cooling loads with the Project Team prior to completing design, then submit drawings showing zone and thermostat locations to RES for review and approval prior to commencement of construction.

Provide separate ventilation and cooling equipment with 24-hour air conditioning and separate controls for all voice/data distribution rooms and computer (LAN) rooms. Exception: A thermostatically-controlled exhaust fan system will be considered for rooms generating less than 800 BTUs.

Designs, including hydronic systems, shall include balance drawings and schedules which clearly depict air volumes and flow rates for both air and water required at each register, inlet, exhaust, or tap point. Should the designs involve modifications or additions to existing systems, the designs will include such balance drawings for the entire system, not just the portion included in the rework.

1.4 SYSTEM PERFORMANCE

The following pertains to operation of HVAC systems, and should not be used as design criteria. Design conditions are covered in preceding sections on loads and design. HVAC systems shall be considered to be performing in an acceptable manner if they maintain a normal daily operating temperature of 70° F ± 2° F throughout the year, with a maximum allowable variation of ± 4° F under extreme outdoor design conditions as listed in Table 15 C-4. In addition, during the heating season on a design day, systems shall be capable of attaining a temperature within this acceptable range within 3 hours of switching from a 10° F setback.

1.5 CONTROLS

Adequate controls shall be provided within the leased space to ensure satisfactory temperature control under the varying load conditions in each zone. The controls shall not be located above office equipment such as photocopiers, printers, kitchen appliances, etc. The automatic controls shall efficiently control the air temperature in all parts of the leased space and in each zone. The controls shall be completely automatic, 24-hour, 7-day programmable with override switch for easy off-hours operation. Provide commercial electronic, programmable, lock-out thermostats, or monitored Energy Management System within the leased space (see Part A5.20). Provide CO_2 sensors in the main returns of the air handlers to monitor and control the CO_2 levels and interface with the projects DDC/EMS system (if applicable).

On VAV systems, Variable Frequency Drive controlled supply fans shall be used. Provide logic and programming to reset the duct static setpoint such that the maximum VAV terminal unit damper is open between 85-90%.

1.6 FILTRATION

Air filters shall be rated at 25-30% average atmospheric dust spot efficiency with an average arrestence rating of 90-95% when tested in accordance with ASHRAE 52-76 Standard. Return air in a plenum system shall be filtered at the terminal box before entering system.

1.7 NOISE

Allowable system noise levels shall be as per Room Criteria (RC) curves in ASHRAE Systems Chapter 43. As maximums, private offices and conference rooms shall be RC 35, with open offices RC 40, and circulation, public areas, and computer rooms RC 45. Plenum return systems must restrict noise transfer to adjacent occupied areas. See Section 07200, 1.2.

1.8 BUILDING EXHAUST SYSTEM

Restrooms, showers, mechanical, electrical, janitor rooms, and enclosed copy/workrooms shall receive supply or "transfer" air only and be exhausted directly* to the exterior of the building to prevent air from being recirculated to other rooms**.** Provide separate exhaust system for venting hazardous gasses from laboratories and similar spaces**.** Exhaust fans shall be installed on roof or in mechanical equipment rooms, or shall be readily accessible in-line fans (maximum sound level classification of 9.0 Sones at 0.125 inches static pressure). System/fans shall be controlled by automatic 7-day timer or local timer switch, depending on application (see Table 15 C-1). All exhaust shall be ducted to outside of building away from air intakes. Exhaust systems shall be interlocked with the building HVAC system controls, and operate during the same time that the building is occupied, including manual override unless RES-approved otherwise. Intermittent or source-specific exhaust systems which do not operate continuously during the occupied mode shall be interlocked with the building HVAC system controls to provide necessary makeup air required during operation. See 15500, 1.3 for voice/data distribution and computer (LAN) rooms.

**A common exhaust system may be used to exhaust from several of these rooms provided each room is operated on the same time schedule.*

1.9 AIR DISTRIBUTION

The quantity of supply diffusers and return air grilles shall be sufficient to provide even-air distribution throughout the zone. They shall be located in response to the final space plan/work station layout to minimize air blowing directly on individual work stations; but in all cases each supply diffuser shall have a serving area not exceeding 250 square feet and each return air grille shall have a serving area not exceeding 1,000 square feet. Diffusers shall be appropriately sized so as to provide controlled multi-directional/modular core air distribution with vanes, and shall have a balancing damper minimum of 4' upstream of the grille. Diffusers shall have sound ratings at design air flows of below NC 27. Each diffuser shall have a dedicated and accessible duct-mounted volume damper. Perforated grilles on supply diffusers are not acceptable. Floor registers/diffusers are not allowed, unless part of a raised access floor system serving computer (LAN) rooms.

1.10 AIR INTAKE

Locate air intake away from exhaust outlets and from sources of odors or degraded air quality such as designated smoker areas, chimneys, plumbing vents, and the like. Locate all outside air intakes on the roof or in protected areas so as to prevent tampering.

1.11 HUMIDIFICATION

Where specifically required by Tenant Agency addendum, humidification systems shall be provided to maintain system air at a minimum of 35% relative humidity under outdoor conditions of 20° F Dry Bulb and 70% relative humidity.

End of Division 15

DIVISION 16 - ELECTRICAL

SECTION 16000 - ELECTRICAL

1.1 GENERAL

Provide complete distribution system as required for mechanical and electrical equipment, standard power, isolated power, lighting system, and other equipment as indicated on the drawings and/or specified herein (see Parts A5.21, A5.22, A5.23 & A5.24).

1.2 PRODUCTS AND APPLICATIONS

Provide spec-grade devices. Wires shall be attached to receptacles, switches, and fixtures by a positive clamping method that can be tightened and secured by a screw. "Stab Lock" attachment method is not acceptable.

No electrical conduit shall be more than 40% filled.

Cable management system shall consist of trays or stirrups, and shall be used along the spine of the building, turning at 90 degrees to connect any cable rings or hangers used to secure cables from trays or stirrups to point of use. Coordinate the location with the Tenant Agency.

SECTION 16400 - POWER CIRCUITS (DEFINITIONS)

1.1 SUMMARY OF THE WORK

Separate the mechanical power and resistance circuits from receptacle circuits, and locate in separate panels when more than one panel is used. Circuit breaker boxes located in areas accessible to the general public shall have key-controlled locking covers. Identify all circuits on panel box and mark each receptacle with its appropriate circuit number with a visible, indelible marking.

1.2 DEFINITIONS

The following definitions shall be utilized for the explanation of electrical symbols delineated on the drawings. The examples of use are typical, but can vary for different tenant agencies. Equipment should be powered as recommended by the manufacturer.

Dedicated Receptacle

The sole receptacle served by a dedicated powered circuit. Connect to common ground. Only one simplex, duplex or fourplex receptacle allowed per circuit (usually 20-amp). Identify each receptacle with a red dot. Typically used for equipment and appliances: refrigerators, microwaves, vending machines, photocopiers, laser printers (verify), etc.

Isolated Dedicated Receptacle

The sole receptacle with “clean” power served by a dedicated powered circuit. See IG Receptacle definition below for information about circuit breakers. Run separate isolated, insulated ground wire from receptacle to the IG floating grounding bus in panel, with the IG bus connected to common ground at service entrance. Only one simplex, duplex or fourplex receptacle allowed per circuit (usually 20-amp). Receptacle shall be color-designated with an additional red dot. Typically used for: computer mainframes, LANs, file servers, PCs and other microprocessor-based equipment.

Isolated-Ground (IG) Receptacles

Receptacles with “clean” power from a 120v, 60Hz, single-phase, 20-amp branch circuit with a separate insulated ground wire that runs from each isolated-ground receptacle to the panel box. IG circuit breakers shall serve only IG receptacles. Group IG circuit breakers together in the main panel (or subpanel) or into a separate subpanel exclusively for IG circuits. If in a branch circuit panel box, run the isolated ground wires to a special insulated separate IG ground bus. Run an

insulated ground wire from the IG bus to the service entrance. This grounding conductor may pass through one or more panel boxes without any connection to the panel box grounding terminal. Connect the IG ground, neutral, and standard ground at the service entrance only. Up to four duplex receptacles may be served from a single 20-amp circuit. IG receptacles shall be color-designated. Typically used for desktop computers.

As an alternative approach for computer management, if requested by the Tenant Agency and approved by the RES Architect, provide a separate dedicated subpanel, standard 20-amp circuits, gray-colored receptacles, maximum of 4 receptacles per circuit.

Standard Receptacle
A 120v, 60Hz, single-phase, 20-amp power receptacle served from a standard branch circuit. Connect to common ground. Up to six duplex receptacles may be served from a single 20-amp circuit. Used for task lights, desktop appliances, and general convenience.

SECTION 16500 – LIGHTING

1.1 SUMMARY OF THE WORK

Provide electric lighting serving all spaces shown or referenced on the RES-approved drawings so as to achieve the lighting levels specified in Section 16520, utilizing the fixtures specified in Section 16510, and incorporating switch controls as specified in Section 16530.

1.2 INSTALLATION

Fixtures shall be connected with 6'-0" minimum of flex conduit so as to allow repositioning to provide required illumination. Locate fixtures as required for individual desk locations.

SECTION 16510 – FIXTURE TYPES

1.1 FIXTURES, BALLASTS AND LAMPS

Provide, high-efficiency, energy-saving fluorescent fixtures with rapid or programmed-start ballasts, except where noted otherwise below.

Fluorescent ballasts shall be class P thermally-protected, low energy, high-frequency, electronic ballasts meeting ANSI requirements and the following ratings:
1. Minimum Power Factor (PF): 95% at nominal line voltage
2. Maximum Total Harmonic Distortion (THD): 10%
3. Sound Rating: A.

Lamps:
1. For general office spaces: T-5HO or high-efficiency T-8 tri-phosphorous lamps with 3500º K.(+) temperature rating and a minimum color rendering index (CRI) of 80.

2. For specialty fixtures: T-5HO, compact fluorescents, ceramic metal halide, or halogen IR, as appropriate.

3. For exit lights: Light-Emitting Diode (LED) light source with battery back-up. Exit signs must meet Energy Star requirements.

1.2 FIXTURE REQUIREMENTS FOR SPECIFIC AREAS

For general office space: provide direct/indirect lighting fixtures, either pendant or recessed (Ledalite “Achieva”, Lithonia “RT5”, Lithonia “Peerless” or “Peerlite”, or approved equal).

For restrooms, utility rooms, lunchrooms, storage rooms, LAN rooms, and the like: provide standard recessed prismatic-lensed fluorescent fixtures.

For conference rooms, training rooms, waiting rooms, hallways and other intensive-use or high profile rooms: provide a combination of fixtures utilizing at least two of the following in each application: pendant or recessed direct/indirect, can lights, wall sconces and wall washers.

In warehouse and high-bay applications: provide high-bay lamp and ballast light fixtures that use multiple T-5HO fluorescent lamps. Lamp and ballast shall have an average rated life of 100,000 hours. Lamps shall be T-5HO lamps with 3500º K.(+) temperature rating and a minimum color rendering index (CRI) of 80.

All fixtures shall be approved by the lamp manufacturer up to a specific ambient operating temperature of 113º F. at 240V (with the ballast inside fixture) or 122º F. at 240V (with the ballast outside fixture).

SECTION 16520 - LIGHTING LEVELS

1.1 WAITING, STORAGE, RESTROOMS AND HALL AREAS

Provide a minimum of 10 average maintained foot-candles illumination in waiting, storage areas and restrooms. Hallways shall have a minimum of 5 average maintained foot-candles illumination.

1.2 OFFICES, OPEN OFFICE AREAS, ASSEMBLY AREAS

Provide a minimum of 45 average maintained foot-candles illumination at all work surface desk-level locations. Coordinate light fixture locations with workstation layout in open office areas.

1.3 WAREHOUSES

Provide a minimum of 25 average maintained foot-candles illumination measured at 36” AFF at all warehouse locations. Coordinate light fixture locations with warehouse layout.

1.4 PARKING AREAS AND PEDESTRIAN PATHWAYS

Provide 2 minimum maintained horizontal and 1 maintained vertical footcandles in parking areas and 1 minimum maintained horizontal and vertical footcandles illumination in all walking areas for pedestrian security, with complete illumination of exterior areas leading from facility/structure to parking areas.

SECTION 16530 - SWITCHING

1.1 SUMMARY OF THE WORK

Switch each space enclosed by walls or ceiling-height partitions with lighting controls within that space. The controls shall be readily accessible at the point of entry/exit to personnel using the space.

Exceptions: The following lighting controls may be centralized in remote locations:

1. Lighting controls for spaces which must be used as a whole (such as open office areas).
2. Automatic controls, when provided in addition to manual controls, need not be accessible to the users.
3. Controls requiring trained operators.
4. Controls for safety hazards and security.

1.2 AREA CONTROLS

The maximum lighting area that may be controlled from a single switch or automatic control shall not exceed 1,000 sq.ft. A master control may be installed provided the individual switches retain their capability to function independently. Circuit breakers used as switches are not acceptable.

Exceptions:

1. Warehouse areas.
2. Areas less than 5% of the building footprint for footprints over 100,000 sq ft.

1.3 DAYLIGHT ZONE CONTROL

All daylighted zones, from either skylights or windows, shall be provided with controls which:

1. Control the lights independent of general area lighting, and
2. Automatically reduce lighting power in response to available daylight by either:
   a. A combination of multi-level switching and daylight-sensing automatic controls, which are capable of reducing the light level automatically and turning the lights off, or
   b. A combination of dimming ballasts and daylight-sensing automatic controls, which are capable of dimming the lights continuously.

Exceptions:
Display, Exhibition and Specialty Lighting Controls shall be controlled independently of general area lighting.

1.4 AUTOMATIC SHUT-OFF CONTROLS, EXTERIOR

Exterior lighting, including signs, shall be capable of being automatically switched off during daylight hours and non-use nighttime hours by either a combination of timer and photocell, or a timer with astronomic control. Automatic time switches shall also have a program back-up capability, which prevents the loss of program and time settings for at least 10 hours if power is interrupted.

1.5 AUTOMATIC SHUT-OFF CONTROLS, INTERIOR

Leased spaces greater than 5,000 sq ft shall be equipped with separate automatic controls to shut-off the lighting during unoccupied periods. Within these spaces, all office areas enclosed by walls or ceiling-height partitions, and all meeting and conference rooms, shall be equipped with occupancy sensors.

Exceptions:
1. Areas that must be continuously illuminated or illuminated in a manner requiring manual operation of the lighting.
2. Emergency lighting systems.
3. Areas in which health care tasks are performed.

Provide two-level, dual technology, manual-on/manual-off automatic sensors. Mount sensors on the wall or ceiling of the space to be switched.

1.6 OCCUPANCY SENSORS

Occupancy sensors shall be capable of automatically turning off all the lights in an area no more than 30 minutes after the area has been vacated. Lighting fixtures controlled by occupancy sensors shall have a wall-mounted, manual switch capable of turning off lights when the space is occupied.

1.7 AUTOMATIC TIMED SWITCHES

Automatic timed switches shall have a minimum 7-day clock and be capable of being set for 7 different day types per week and incorporate an automatic “shut-off” feature, which turns off all loads for at least 24 hours and then resumes normally scheduled operations. Automatic time switches shall also have program back-up capabilities which prevent the loss of program and time settings for at least 10 hours if power is interrupted.

Automatic timed switches shall incorporate a manual over-ride switching device which is readily accessible and located so that a person using the device can see the lights or areas controlled by the switch. The manual over-ride switch shall allow the lighting to remain on for no more than 2 hours and control an area not exceeding 5,000 sq.ft.

1.8 COMMISSIONING REQUIREMENTS

For lighting controls which include daylight or occupant sensing controls, automatic shut-off controls, occupancy sensors, or automatic time switches, the lighting controls shall be tested to ensure that control devices, components, equipment and systems are calibrated, adjusted and operate in accordance with approved plans and specifications. Sequences of operation shall be functionally tested to ensure they operate in accordance with approved plans and specifications. The Lessor shall provide a complete report of test procedures and results, and submit to the RES Architect.

SECTION 16600 - COMPUTER ISOLATED POWER SYSTEM

1.1 SUMMARY OF THE WORK

Where required as a tenant improvement and shown on the drawings, provide isolated 120-volt power circuits with separate insulated ground wire throughout to separate ground bus in main panel. Identify with color-designated receptacle and identify in panel box. Group isolated power circuits together or provide separate panel box. Provide 1 circuit for 4 isolated-ground duplex receptacles maximum.

1.2 CALCULATIONS

NOTE: Provide proper power to all computer equipment; do not overload circuits. Calculations for the number of workstations are based on the following:

Typical	
1 personal computer (CPU)	2.70 amps
1 monitor	.95 amps
Total	3.65 amps

A 20-amp circuit design load is 80 percent (80%), or 16 amps.

$16A \div 3.65A = 4.38\pm \approx 4$ computers

Dot matrix printers should be plugged into standard-power receptacles. Laser printers should be plugged into isolated-ground receptacles. Laser printers should have circuits verified for electrical load. It is recommended that they have their own isolated-dedicated ground. The loads are:

Dot matrix	1.00 amps
Laser	7.60 amps

These loads shall be verified by the electrical information plate on the computer or by referencing its manual. A 20-amp circuit is needed for one PC, monitor, and laser printer.

SECTION 16610 - POWER EQUIPMENT

1.1 FLOOR BOX SERVICE FITTINGS

Provide recessed boxes and durable flush-floor metal covers for service fittings at open office locations. Walker, Hubbell, or RES-approved equal. The covers shall accommodate carpet application for the finished appearance.

1.2 SERVICE POLES (Power Duct Posts)

When service poles are shown on RES drawings, provide 6'-0" minimum flex electrical connection in ceiling space to allow repositioning for accommodating workstation furniture. Install above-ceiling J-box in locations concurrent with the service poles shown on RES drawings. Exact service pole locations and pole installation shall be determined by furniture placement at the time of move-in by the State Tenant Agency. Connect the systems furniture wiring (provided by the State's vendor) to the "hot boxes" after the system furniture has been installed.

SECTION 16700 - VOICE/DATA DISTRIBUTION ROOMS

1.1 GENERAL

Contractor shall coordinate with, and provide site access to, the State Department of Information Services and with the telephone/data vendors and/or contractors. Coordinate the placement of all rough-in requirements and all State-supplied equipment that is required for a proper functioning telephone system.

1.2 INSTALLATION/FITTINGS

Provide rough-in system as required for complete standard installation of equipment, cable, and accessories. Provide J-box, mud ring, and 1" conduit with bushings to ceiling access where required for wall outlets.

NOTE: J-box and conduit required only where location is in walls or partitions. Provide standard flush-floor box service fittings for open office locations except at existing slab-on-grade.

1.3 VOICE/DATA DISTRIBUTION ROOMS

Do not locate the building electrical panels in, adjacent to, or on a common wall with any voice/data distribution room. Provide 2 - 120V dedicated outlets on one dedicated 20-amp circuit for telephone equipment, location as required by the State Department of Information Services. In addition, provide 4 - 4” diameter conduit sleeves through floors from distribution room and through floors and ceiling into the voice/data distribution rooms. (See Section 06200, 1.3 for wall-mounted equipment board requirements).

SECTION 16720 – FIRE ALARMS

1.1 SUMMARY OF THE WORK

Where required by code or the Tenant Agency, provide a centrally-controlled and annunciated, non-coded, fire alarm system including audible and visual alert devices, manual pull stations, automatic heat/smoke detectors, and automatic communication to a central monitoring provider. Provide a fire alarm system designed, installed and tested in accordance with the NFPA 72 National Fire Alarm Code and federal, state and local codes. Provide and maintain central monitoring provider service including continuing communications systems.

End of Division 16

END OF REQUIREMENTS

R.E.S. ACCESSIBILITY ADDENDUM

Issued June 2007

The following addenda items are supplementary requirements to the July 2005 edition of Leased Space Requirements that apply to all State-leased facilities. The Lessor is required to comply with all requirements and directives delineated in its content. All issues and directives contained in this Addendum are considered basic requirements as defined in Parts A4 & A5 and therefore shall be accomplished at the sole cost and expense of the Lessor. (The original code references that are superseded or revised by this addendum are shown in parentheses.)

1) **On all as-built drawings or proposal drawing submittals, the Lessor shall clearly delineate the location of existing and proposed accessible parking, public transportation stop(s), and the accessible routes of travel from each to the main entrance of the proposed leased space. On multi-building sites, accessible routes of travel between buildings shall also be shown. (Part A2.2 in Leased Space Requirements)**

2) **All accessible pedestrian curb cuts shall be located and constructed perpendicular to each street served, eliminating diagonal curb cuts (those which direct people towards the center of street intersections).**

3) **All accessible entries shall be as close as practical to the adjacent finished grade and accessible parking.**

4) **The accessible route of travel shall be in front of or to the side of the parking spaces. (ICC/ANSI A117.1-2003, Section 502 and IBC 1106.6).**

5) **All exterior on-site accessible routes shall be a minimum of 60" wide and shall have visual and textural cues at transition areas. (ICC/ANSI A117.1-2003, Sections 402, 403.5, 703 & 705)**

6) **On single-owner multi-building sites, there shall be accessible routes of travel to and between all buildings.**

7) **All interior and exterior accessible pathways, including ramps, shall have a slope no steeper than 1' of rise in 20' of run, excluding curb ramps/cuts, equipment distribution ramps, loading docks and data centers. (ICC/ANSI A117.1-2003, Sections 405)**

8) **Where benches are provided, at least one shall have a back, a support arm, and a level wheelchair space immediately adjacent to the bench end. (ICC/ANSI A117.1-2003, Section 305)**

9) **For buildings housing a minimum of 10,000 sf of State-leased space, at least one set of the primary entry doors, as well as the primary interior entrance to all State-leased spaces within such buildings, shall be equipped with power-operated doors (controlled by either motion sensors or remote activators, and configured so as to be compatible with any building access security systems). (ICC/ANSI A117.1-2003, Section 404.3)**

10) **Accessible stations at reception and service counters shall be integrated within the main service counter.**

11) Public interior corridors leading to tenant-leased spaces shall be a minimum of 72" wide. Primary circulation hallways within tenant-leased spaces shall be a minimum of 60" wide.

12) Where public telephones are provided, at least one in each group of telephones shall be equipped for TTY. (ICC/ANSI A117.1-2003, Section 704)

13) Areas of refuge shall be provided on each story above ground level. Where feasible, locate areas of refuge in a stairwell on an exterior wall. (IBC 1007.6)

14) All floors served by elevators shall have at least one cab sized to accommodate an ambulance stretcher. (IBC 3002.4)

15) When a sound system is installed in assembly occupancies, it shall include an assistive listening system. (ICC/ANSI A117.1-2003, Section 706)

16) The HVAC serving all offices, open office areas, conference/meeting rooms, and auditoria shall conform to noise criteria specified in the 2003 ASHRAE Handbook, Chapter 47, Table 34, "Design Guidelines for HVAC-related Background Sound in Rooms."

EXCEPTIONS

The RES Architect may approve exceptions to any of the above requirements for good and reasonable cause. These might include unusual terrain, prohibitive cost, compliance with local jurisdiction design standards, or where the building design cannot be realized and still meet applicable requirements. All requests for exceptions shall be submitted in writing.

END OF R.E.S. ACCESSIBILITY ADDENDUM