

**DEPARTMENT OF GENERAL SERVICES
GENERAL PERFORMANCE STANDARDS AND SPECIFICATIONS
FOR THE COMMONWEALTH OF PENNSYLVANIA
LEASED FACILITIES**

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SECTION A. GENERAL

1. PURPOSE

To provide leased real estate facilities which incorporate High Performance Green Building strategies and processes to install products, components, and systems to improve building performance by significantly reducing energy consumption, increasing facility flexibility and improving user comfort and satisfaction for Commonwealth Agencies. (High Performance Green Building Guidelines at web-site <http://www.gggc.state.pa.us/>)

2. INTENT

It is the intent of the following standards to describe the total scope of the project. This description is not intended as a substitute for a complete design/construction document or to eliminate the developer or contractor's need for independent analysis of conditions or requirements. The Commonwealth specifically disclaims any unverified accuracy of this data.

LESSOR and LESSEE agree that specification changes necessary to utilize effectively a specific facility may be made, provided that any such substitution, changes or work are agreed to in writing by the LESSOR and the LESSEE.

3. SITE AND SITE ADAPTATION

The LESSOR shall consider the rehabilitation of a brownfield site or the redevelopment of an existing site or structure prior to any proposal to utilize undisturbed land. LESSOR shall understand the environment of the site to ensure that appropriate sustainable site development is utilized for the project.

The adaptation of these requirements and specifications to a particular design and site or to a current structure is an architectural/engineering design issue which must be resolved utilizing appropriate licensed professionals at LESSOR's expense as part of this proposal. Facility design and site plans must receive LESSEE concurrence.

4. PERMITS

LESSOR shall be responsible for obtaining all permits and approvals of any kind necessary for the proper and lawful execution of the work. This shall be done at his own expense.

5. CONSTRUCTION COSTS

The Project must be assumed to include all design fees, labor, material and equipment. Design fees, labor, material and equipment not specifically shown or described but properly inferable from the documents as necessary for the finished project shall be performed and supplied by LESSOR in accordance with the best recognized standards of the trade.

6. RECYCLE CONSTRUCTION AND DEMOLITION WASTE

The LESSOR's design and construction team shall develop and utilize a construction waste management plan that identifies materials to be recycled and sources for their disposition. This plan must include new construction waste materials, packaging and associated clean-up activities and be approved by LESSEE.

LESSOR and designing construction team shall develop and utilize a demolition waste and adaptive materials reuse recycling plan which must be approved by LESSEE. Commonly recycled demolition materials include asphalt, bricks, concrete and masonry, metals, wood, cardboard, carpet, gypsum drywall, and ceiling tiles.

SECTION B. BUILDING REQUIREMENTS

1. BUILDING DESIGN AND SYSTEMS INTEGRATION

It is the obligation of the LESSOR to provide professional design services to integrate all aspects of the project with the overall approach to integrated building systems and high performance sustainable design. These services must provide at a minimum the following:

Site: Sustainable site development

Enclosure: An enclosure which provides natural ventilation and daylighting with high performance glazing and glare control device for at least 25% of the surface area and provides the interior surface temperatures as specified.

Infrastructure: The mechanical equipment shall be high efficiency and minimize the production of greenhouse gases and the depletion of ozone. For office occupancies, the supply, distribution, end units, control of conditioned air, power, voice and data shall be through a raised floor system. The users shall have individual control of their indoor environmental quality.

Interiors: The interior systems in the building shall be modular and demountable with high acoustic performance. The lighting systems shall be split task - ambient with light sensitive, dimming electronic ballasts and high efficiency T-5 or T-8 lamps.

Materials: The building shall emphasize the use of materials and furnishing that are non-toxic, low-VOC, sustainable, contain high post consumer recycled content and are recyclable.

The following performance standards must be achieved in the design and construction or rehabilitation of this project.

Energy Budget: The leased space shall consume 40,000 Btu/square foot/year or less of primary energy not including plug loads.

Lighting Budget: The leased space shall consume 0.9 watts/square foot or less of electrical energy for ambient lighting.

HVAC Chiller: HVAC chiller size should not exceed one ton per 600 square feet.

Glazing: The indoor surface temperature of glazing shall not be less than 62°F. when the outdoor temperature is 20°F.

Interior Surfaces: The indoor surface temperature of opaque wall surfaces shall not be less than 70°F. when the outdoor temperature is 20°F.

Ventilation: The ventilation system must provide air to the desk with less than 700 ppm CO₂ during hours of occupancy.

Indoor Temperatures: The indoor temperature at the workspace shall be user controlled at 73°F. +/-2°F. with building setback capability during non-operational hours.

Cooling Humidity: The indoor relative humidity shall not exceed 45% during the cooling season at established design conditions.

Heating Humidity: The indoor relative humidity shall be no less than 25% during the heating season at established design conditions.

2. BUILDING COMMISSIONING

A commissioning plan shall be adopted by the LESSOR's design team during the design phase and carried through post-occupancy evaluation to measure and verify building performance. Building commissioning will ensure, through documented verification, that all building systems within the facility perform interactively according to the documented design intent and operational needs. The systematic process shall begin in the design phase and last at least one year after occupancy, including the training of operating staff. In addition to testing, adjusting and balancing mechanical systems, functional testing shall be performed to determine how well mechanical and electrical systems work together and help identify system deficiencies. Functional testing of equipment and systems will be performed by the contractors to help determine whether the equipment meets operational goals or requires adjustment to increase efficiency and effectiveness. The primary goal of the commissioning agent is to identify system deficiencies as early in the project as possible and track their status until they are corrected. The commissioning agent is to assist the construction team by providing input regarding building systems prior to occupancy.

3. PROFESSIONAL SPACE PLANNING AND INTERIOR DESIGN SERVICES

The selected LESSOR will be required to provide detailed architectural and engineering plans to meet all requirements. It is intended that the LESSOR will provide a completed structure with fully-developed interior fittings and features. LESSOR shall furnish complete as-built drawings of the completed structure and interior design in Auto CAD version 14.0 or the most current version on a CD ROM or 3 1/2" floppy diskettes and hard copy, drawn to a minimum 1/8"=1'0" scale. Agency may request different software at the beginning of the project.

The LESSOR shall retain professional space planning/interior design services and provide them to the LESSEE as a part of this project. These services shall be performed by a licensed architectural design firm fully experienced in all aspects of sustainable design and green architecture practices, particularly in regard to the design, colors and materials, procurement and installation of systems furniture, case goods, seating and other interior materials and products. The architectural firm must have, or exhibit the willingness to learn, the fundamentals of sustainability as it relates to construction, packaging, waste management, human ergonomics, productivity and good interior air quality. The LESSEE shall have final approval of this firm and the individuals assigned to the project.

These services are to insure that the final character and configuration of the new space, furnishings, and equipment fully satisfy the functional and aesthetic requirements of the LESSEE while meeting all applicable codes and regulations.

4. CODES AND STANDARDS

The following codes and standards shall apply to the design and construction of all areas. In the event of conflicting code requirements, the most stringent code must be applied. NO GRANDFATHERING OF ANY LAWS, CODES OR STANDARDS WILL BE ALLOWED.

Act No. 166 of the 1988 Pa. Legislature (or later revisions) regarding persons with disability(ies). Applicable sections of the ANSI and ADA, Act 101-336 of 1990 shall supersede the Pa. Acts when Pa. Acts are less stringent. LESSOR shall defend any suit or proceeding brought against LESSEE on account of any alleged violation of any federal or state statute or regulation relating to accessibility to buildings by individuals with disabilities. The LESSOR shall be responsible for and agrees to indemnify and hold harmless the Commonwealth of Pennsylvania from all losses, damages, expenses, claims, demands, suits, and actions brought by any party against the Commonwealth of Pennsylvania as a result of the LESSOR's failure to comply with the provisions of this Paragraph.

BOCA National Code Series - Latest edition, including Basic Building Code; Fire Prevention Code; Mechanical Code; Plumbing Code and relevant codes and standards referenced therein.

Fire and Panic Code - Pennsylvania Department of Labor and Industry, latest edition.

Pennsylvania Act 222 - Building Energy Conservation Law.

Energy Policy Act of 1992 (P.L. 102-486), latest edition.

Local Zoning Ordinances - Latest edition with all amendments.

The latest revision of ASHRAE/IES Standards 90.1 “Energy Efficient Design of New Buildings Except Low-Rise Residential Buildings.”

OSHA - Latest edition.

ASHRAE 62-1989 or latest edition - Design guide for indoor air quality.

Act 101 of 1988 or latest edition - Recycling.

NFPA 70 - National Electric Code, latest edition.

NFPA 90.A - Installation of Air Conditioning and Ventilating Systems.

NFPA - Latest edition, with particular emphasis on Sections #1 - Fire Prevention Code; #10 - Portable Fire Extinguishers; #13 - Installation of Sprinkler “Systems; #13A - Maintenance of Sprinkler Systems; #14 - Standpipe and Hose Systems; and #20 - Fire Pump Centrifugal.

NFPA 101 - Life Safety Code, latest edition.

Brownfield Development - PA Act 2 Land Recycling Program.

Radon Gas Exposure - LESSOR must evaluate the site for radiation level and Radon/Radon Progeny concentration and deal appropriately with results. If at any time during occupancy the Radon/Radon Progeny levels exceed the EPA recommendations, the LESSOR shall take immediate necessary corrective action.

Asbestos - No asbestos insulation or asbestos-based materials may be used in construction. The LESSOR hereby agrees to abide by all applicable federal, state, and local regulations regarding the removal or abatement of asbestos. In addition, the LESSOR further agrees to protect, indemnify and save harmless LESSEE from and against any and all liabilities, losses, damages, costs, expenses, cause of action, suits, claims, demands or judgments of any nature arising from any injuries to, or the death of any person growing out of or connected with the presence of asbestos in the premises.

Zoning - The facility must be located in an appropriately zoned site and must allow operations as required by the conditions of the lease.

Flood Plain - Both site and access must be outside the 100-year flood zone as defined by the Federal Emergency Management Agency, United States Army Corps of Engineers and the Pennsylvania Department of Community Affairs.

ASNI/IESNA #RP-1-1995, latest edition, American National Standard for Office Lighting by the Illuminating Engineering Society of North America proposed use. The LESSOR and the design team should carefully consider lighting standards in concert with available day light, task/ambient considerations, the use of computer and control strategies to reduce reliance on artificial lighting.

Wastewater and Grey Water - Any proposed facility may be connected to either public or private sewer and water systems. These systems must have legal and adequate treatment systems and capabilities for the proposed use. The resulting connections and/or utilization of either public or private systems must be in compliance with local, state or federal laws, rules and regulations. The LESSEE encourages the use of bioremedial waste water treatment facilities and landscape options including grey water use.

Drinking Water - LESSOR shall provide and maintain hot and cold bottled drinking water dispenser on every floor if testing and treatment of on-site water does not meet drinking water standards.

Sound and Noise Control - The LESSOR shall maintain construction practices and materials to conform with STC ratings in accordance with ASTM E-90-83, latest edition.

5. STRUCTURAL DESIGN

The LESSOR shall design the required space such that the following minimum live loads are permissible in all areas of the structure:

Office areas	-	70 PSF
File/storage areas	-	125 PSF
High density filing system(s)	-	200 PSF

SECTION C. MECHANICAL SYSTEM CRITERIA

1. HEATING, VENTILATION & AIR CONDITIONING (HVAC)

The supply system shall minimize energy consumption via capacity reductions achieved through integrated building system design and utilize no CFC ozone-depleting refrigerants. Desiccant technology shall be installed at the air handlers for dehumidification to displace latent cooling load. Heat recovery and economizer capabilities must be included in the system.

A raised floor shall be provided utilizing an access flooring system to handle the underfloor air plenum required. The air distribution system shall incorporate an underfloor air plenum with floor mounted KRANTZ diffusers or approved equal for ventilation efficiency. Perimeter zoning of this low pressure constant air volume distribution system shall be included.

HVAC systems shall be designed, maintained and operated in a manner which maximizes energy efficiency. All equipment and systems shall be in operating order 24 hours per day and shall be serviced and maintained by LESSOR. Systems shall be inspected and serviced regularly to insure proper balancing and calibration.

Temperatures

Heating and air conditioning systems shall provide and maintain an inside automatically controlled temperature under all conditions for the following areas as noted:

Office and Public Areas	- 73°F +/-2°
Storage Areas	- 65° heated and ventilated only
Physical Plant Areas	- 68° heated and ventilated only
Enclosed Loading Dock and/or Garage Areas	- 65° heated only
Stairs	- no less than 65° heated/no more than 80° cooled

Humidity

Humidity shall not exceed 45% during the cooling season and shall be no less than 25% during the heating season in all areas that are mechanically cooled and heated. Reduction or elevation of humidity levels will not be allowed to compensate for inadequate building envelope design.

Ventilation

The ventilation system must provide indoor air quality of not more than 700 ppm CO₂ while meeting the recommendations of the American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE) Standard 62., current revision. All air intakes shall be located to preclude the introduction of exhaust air from all exhaust air sources. Use of an economizer package allowing up to 100% outside air is acceptable provided all other conditions of temperature and humidity are met.

Increased ventilation and dedicated outside make up air shall be supplied to areas with high indoor air pollution potential which shall be provided with separate air exhausts to the exterior of the building. Exhaust fans shall not exceed a 35 NC factor. These areas include rest rooms, lunch room, laboratories, copier rooms, service bays, garage areas and other special function spaces as defined by the LESSEE.

Filtration

All heating, ventilation and air conditioning systems shall be a polyester pre-filter of a minimum 2-inch thickness and 30% efficiency installed in the system. The pre-filter shall be installed in the system in a location that all air handled by the system will pass through the pre-filter prior to distribution into the work areas and public areas. All filters shall be replaced by the LESSOR on a monthly schedule or more often as dictated by the operating conditions. During replacement operations, the HVAC system shall be completely shut off to avoid the distribution of unwanted particulate through the system.

Pressure Differentials

Sample preparation and garage areas shall maintain a negative pressure differential relative to adjacent areas to control the migration of fumes or odors. The pressure maintained in the building shall be positive relative to the outside to prevent the infiltration of air. Dedicated outside make up air shall be supplied to these spaces in order to insure full rated ventilation flow of all exhaust fans and fume hoods.

HVAC Controls

The building shall have a building automation/energy conservation system. HVAC controls shall recognize logical zoning and use patterns to maximize energy efficiency through thermal zoning and the ability to efficiently space condition when the facility is partially occupied. The system must be able to support the building use dates and times as dictated by the agency and shall have a manual, auto-resetting override for use by employees if needed for overtime work, Saturday, Sunday or holiday work. In general but subject to change at the sole discretion of the agency, the building will need to be at designated operating conditions five (5) days per week from 7:00 AM to 5:30 PM. A setback will be allowed during non-occupied periods subject to the above override conditions.

2. ELEVATORS

One elevator must have inside dimensions of not less than 6'8" by 5'5" with not less than 36" door opening, if elevators are required by code unless otherwise approved by LESSEE. If elevator exists, they are to be modernized to provide automatic operation and to bring equipment into compliance with the Americans with Disabilities Act. The Elevator Contractor must be an elevator manufacturer or manufacturer's approved installer. Acceptable manufacturers are Otis Elevator Company, Cemcolift, Minnesota Elevator, or LESSEE approved equal.

Licenses and permits shall be provided and the required inspections and tests shall be performed. Elevators shall comply with applicable building and elevator codes, included but not limited to the following:

- ANSI A17.3
- ANSI A17.1
- National Electrical Code
- PA Department of Labor and Industry Elevator Regulations
- Americans with Disabilities Act
- Uniform Federal Accessibility Standards

Existing elevators are to be modernized with the following standards as approved by the Lessee:

- A minimum standard speed of 100 FPM.

- All In-Ground Hydraulic cylinders shall be incased in sealed PVC liners. If the owner can not prove the cylinder is encased, it shall be removed and replaced with a sealed unit or an above ground system.
- All elevators over two stories shall be equipped with overspeed governor and safety mechanisms capable of stopping a fully loaded car an overspeed condition.
- If elevator does not meet handicap guidelines, it shall be modernized with the following criteria in mind:

Controller shall be relay-logic or non-proprietary microprocessor based controller. Complete electrical diagrams shall be provided to LESSOR including all straight line prints, electronic circuitry and microprocessor logic diagrams. If a programming tool and software is needed to troubleshoot or adjust elevator, it shall be provided with the control system at no extra charge. Microprocessor shall be an “off the shelf” industrial type controller, readily available on the open market.

Components such as door operator, selector, buttons etc. shall be able to be replaced and upgraded independent of the elevator controller.

LESSOR must demonstrate that all components are the most energy efficient available. When full elevator replacement or new construction is needed, buildings over four floors in height should view traction elevators as the most desired type of equipment.

The modernization shall include complete operational and control systems, new door operators, car operating stations, hall button fixtures, new cab and hoistway doors, complete cab modernization and various adjustments, safety tests and related repairs.

3. PLUMBING/UTILITIES

All plumbing and utilities shall meet the current plumbing and building codes of the municipality within which the facility is located. In no instance will grandfathering of nonconforming plumbing or utilities be allowed. ALL PLUMBING AND UTILITIES SHALL MEET CODES AS DESIGNATED FOR NEW CONSTRUCTION.

All domestic hot water systems shall be located not more than 35 feet from furthest point of use, shall have an energy factor of at least 0.95, and shall be equipped with an external or internal heat trap on all inlets and outlets. All water heaters shall initially be set at 110°F.

In addition to the hot, cold and waste water systems required by code, the LESSOR shall provide floor drains in specific areas as approved by the LESSEE.

Restroom Fixtures

Restrooms shall be provided within the leased space for employees and sized in accordance with the Restroom Fixture Schedule within. The toilet fixture schedule specified below shall be determined by the architect by calculating the approximate percentage breakdown of men and women for each floor occupied by the agency, for each gender.

FIXTURE PER FLOOR

Number of Men*/Women	Water Closets	Lavatories
1-15	3	1
16-35	4	2
35-55	5	3
56-60	6	3
61-80	6	4
81-90	7	4
91-110	8	5
111-125	9	6
126-150	10	**
Over 150	***	

*In Men's facilities, urinals may be substituted for one-third of the water closet specified. If urinals are installed, courtesy panel(s) must be installed between urinals and the urinal and lavatory.

**Add one lavatory for each 40 additional employees over 125.

***Add one water closet for each 40 additional employees over 150.

All water closets and urinals must be wall mounted unless otherwise designated by LESSEE.

All fixtures and accessories must be as energy and resource efficient as possible. The following is a general criteria and should be used as appropriate:

- Limit flow rates to two gpm for lavatory and multipurpose faucets and 2.5 gpm for kitchen faucets (at 80 pound per square inch, or psi.)
- Limit flow rates to 2.4 gpm for showerheads (at 80 psi).
- Limit maximum flush volume to 1.6 gallons for toilets.

Public restroom facilities shall be provided as designated by LESSEE.

SECTION D. ELECTRICAL SYSTEM CRITERIA AND COMPONENTS

1. ELECTRICAL POWER DISTRIBUTION

Characteristics to be provided to the LESSEE include:

208Y/120 Volt, Three-phase, Four-Wire

All materials and components in this installation shall be new and shall be installed in conformance with the requirements of NFPA 70, the National Electrical Code, the National Board of Fire Underwriters, the Pennsylvania Department of Labor and Industry and any local authority having jurisdiction. All electrical services and installation shall meet the current codes for new construction within the regulating jurisdictions. In no event shall Grandfathering of existing electrical services or installations be allowed under the lease agreement.

The electrical design plans shall be provided by the LESSOR and approved by the LESSEE.

Access floor modules shall be provided to consolidate electrical outlets and telecommunications work area outlets in a single tilt-up box. These modules shall be located in all workstation locations, offices and rooms located on the access flooring system. The access floor workstation modules shall be the five-gang module type manufactured with quick release power cabling to under-floor power distribution units. The modular distribution system shall be an eight-wire power distribution system with either a four or six port power distribution module as manufactured by AMP, Inc. or LESSEE approved equal.

All isolated ground circuits shall be established by connection of a fully insulated ground wire from the isolated ground receptacle to the isolated ground bus within the branch circuit panelboard serving that circuit. The isolated ground bus shall be bonded to the building grounding electrode at the main distribution panelboard.

Provide a Surge Protection Device (SPD) system capable of intercepting and limiting transient voltage spikes caused by natural events such as lightning strikes or other disturbances on the electrical distribution lines. The SPD devices shall be UL 1449 listed. All main distribution panelboards and branch circuit panelboards shall each have an SPD device connected to or integral to the panelboard.

For every group of five (5) open office workstations, the LESSOR shall supply one dedicated 120 volt, 20 amp, isolated ground circuit and two (2) standard grounded 120 volt, 20 amp circuits. Coordinate all power distribution modules with the number of circuits per workstation described above. In the event that all power circuits are isolated ground type, provide three (3) dedicated 120 volt, 20 amp circuits for every group of five (5) open office workstations. All open office workstations shall include a minimum of three (3) duplex receptacles mounted within the access floor workstation module. All isolated ground receptacles shall be clearly designated within the access floor workstation modules at all locations. One isolated ground duplex receptacle shall be provided adjacent to each wall mounted telecommunications outlet.

Special purpose, dedicated circuit (i.e. 208 volt, 30 amp) utility outlets with isolated ground shall be installed up to _____ places as designated by the LESSEE. Additional non-dedicated electrical outlets shall be provided and installed up to _____ places as designated by the LESSEE.

The following electrical requirements shall be provided within the telecommunication room(s):

- At least one (1) dedicated 120 volt 20 amp circuit with duplex receptacle shall be mounted within 30” of each equipment cabinet or rack. (Example: five racks - five dedicated circuits)
- At least five (5) dedicated 120 volt, 20 amp circuits each with a duplex receptacle shall be mounted on the plywood mounting boards spaced evenly around the perimeter of the room.

A separate electrical meter for the LESSEE’s tenancy space shall be provided and installed. All metering equipment shall be UL approved.

2. LIGHTING

Except where otherwise provided in this specification, lighting shall be designed in accordance with the American Standard Practice of the Illuminating Engineering Society of North America, ASNI/IESNA #RP-1-1995 or later revision.

Office areas shall provide ambient lighting at the levels stated below under minimum lighting levels with combined indirect and direct pendent mounted luminaries unless otherwise designated by LESSEE. The lighting system shall consist of a split ambient and task lighting system with the use of high-efficiency lamps and fluorescent lighting fixtures for auxiliary spaces as designated by the LESSEE. All fluorescent lighting fixtures shall be energy-efficient, dual electronic ballast type capable of split switching and suited to the application. Instant start ballasts shall be used where the fixtures are turned on and left on all day. Rapid start ballasts shall be used in auxiliary spaces where the fixtures will be turned on and off by occupancy or motion controls.

Recessed fluorescent fixtures shall be three (3) lamp, twenty-four (24) cell or four (4) lamp, thirty-two (32) cell parabolic diffuser type fixtures suitable for split switching. Split switching of the 2’ x 4’ fluorescent lighting fixtures shall be standard where utilized in conference rooms, and special use areas. Conference rooms and other special rooms shall include recessed-can type dimmable incandescent fixtures utilizing tungsten halogen lamps.

In general, the lighting schemes should avoid high contrast, scalloped patterns, or other visually distracting results. Lighting control technologies shall be installed to effectively combine the use of daylight and fluorescent lighting with daylight sensors and dimmable fluorescent ballasts in open office areas and lobbies. Occupancy sensors shall be installed to reduce energy consumption by switching off fixtures in unoccupied areas. Coordinate all spaces for occupancy sensor control with the LESSEE.

Ambient lighting shall consume no more than 0.9 watts/square foot with a measured minimum ambient lighting level of 30 foot-candles at the work surface. T-8 or T-5 fluorescent lamps shall be provided with a color rendering index (CRI) of 85 and a color temperature of 3500°K, similar to Osram Sylvania Inc., Phillips Lighting, GE or approved equal.

LESSOR shall provide, install and replace all light bulbs, lamps, ballasts and starters required throughout the term and any available option periods during the lease. All replacement lamps shall meet the above specification.

Minimum Lighting Levels

Work Surfaces (includes task lighting)	- 50 ft-candles
Work Area Ambient Lighting	- 30 ft-candles
Telecommunications Room(s)/Closet(s)	- 50 ft-candles (to be controlled by occupancy sensor)
Special Purpose Area(s)	- 75 ft-candles (to be controlled by occupancy sensor)
Garage Areas	- 50 ft-candles (to be controlled by occupancy sensor)
Hallways/Corridors	- 25 ft-candles
Conference/Meeting Rooms	
Fluorescent Lighting	- 30 - 70 ft-candles (using dimmable fluorescent ballasts or split switching)
Incandescent Lighting	- 10 - 30 ft-candles (using split switching, or dimmable incandescent lighting)
Drafting Areas	- 50 ft-candles (to be controlled by occupancy sensor)
High Density Filing Areas	- 50 ft-candles
Office Automation and Document Processing Center	- 30 ft-candles
Restrooms	- 40 ft-candles (to be controlled by occupancy sensor)
Parking Lot Areas	- 1 ft-candle (parking lot and exterior lighting shall be controlled by a programmable timer with an integrated photocell control device)
Exit Lighting	- LED type fixtures consuming no more than 2 watts per fixture
Flagpole Lighting	- shall be in accordance with flag display protocol

3. TELECOMMUNICATIONS STRUCTURED CABLING SYSTEM

Telecommunications Cabling Requirements

The LESSOR shall be responsible for providing a turnkey type total telecommunications structured cabling system as detailed in this specification. The telephone company shall be

responsible for installing the facility (cable and/or fiber) from their central office to the facility where they will terminate at the Demarcation Point (DEMARC). From the DEMARC the LESSOR shall be responsible for all telecommunications cabling, materials and facilities within the building, except for the telephone terminals and data and video system electronics hardware. This includes the service entrance conduit for the telephone service into the building and any required riser conduit to extend the DEMARC to the designated telecommunications room. The system includes, but is not limited to the following: the Voice and Data Main Cross-Connects, Enhanced Category5 - telecommunications cabling and hardware, fiber optic cabling and hardware, and the modular Work Area Outlets (WAO).

The LESSOR shall provide one WAO for each open office workstation and private office and two WAO's for each conference room and training room. The standard WAO shall consist of one voice cable and one data cable terminated on separate modular jacks in a common telecommunications outlet.

The LESSOR shall provide _____ additional drops at locations designated by the LESSEE.

The LESSOR shall coordinate the exact number of telecommunications outlets and the system requirements with the LESSEE.

General Requirements

All telecommunications cabling included in this specification shall be installed and maintained in accordance with prevailing codes, ordinances and regulations and meet or exceed guidelines sponsored or endorsed by the National Fire Protection Agency (NFPA) and the National Electrical Code (NEC). Specifically, the telecommunications structured cabling system shall be in strict accordance with and reflect the standards presented in the following:

- ANSI/TIA/EIA-568-A Commercial Building Telecommunications Cabling Standards
- ANSI/TIA/EIA-569-A Commercial Building Standards for Telecommunications Pathways and Spaces
- ANSI/TIA/EIA-606 Administration Standard for the Telecommunications Infrastructure of Commercial Buildings
- ANSI/TIA/EIA-607 Commercial Building Grounding and Bonding Requirements for Telecommunications
- ANSI/TIA/EIA-TSB67 Transmission Performance Specifications for Field Testing of Unshielded Twisted-Pair Cabling Systems

The location of all voice, data and video cabling outlets for the Access Floor Workstation Modules and wall mounted locations shall be identified on the telecommunications system plan. This plan shall be provided to the LESSEE prior to rough-in to allow for coordination with system hardware locations and the proposed office furniture locations.

All telecommunications cabling shall consist of four individually twisted pair, 24 AWG solid insulated conductors, enclosed by jacket. Voice and Data cabling shall be easily identifiable by using two different jacket colors (i.e. Voice cabling - gray, Data cabling - white). All four pairs of every station cable for voice and data shall be terminated on eight-pin modular connectors at the patch panel and the WAO in accordance with T568B specifications. Each cable shall be logically labeled at both ends, in addition to the WAO faceplate labeling, using a wrap around label. All terminations shall be separate and distinctly identifiable and clearly designated with logical identifiers at both ends. All horizontal cabling shall be type CMP communications plenum cable, low smoke, heat resistant Halar type insulation and that has been manufactured and tested after January 1, 1997.

All telecommunication cabling under the access flooring system shall be supported on J-hooks or other appropriate cable support mechanism attached to the floor supports. In no case shall telecommunications cabling lay directly on the sub-floor or any portion of the building infrastructure.

The modular patch panels shall be mounted in either freestanding racks or cabinets of sufficient size and located in the telecommunications room in such a way to provide a minimum of 36" front and rear clearance to the walls. The modular patch panels shall be sized to terminate all horizontal voice and data cabling and sized to accommodate 20% future growth. Each rack, cabinet and patch panel shall be provided with adequate vertical and horizontal wire management devices.

All fiber optic cable installed shall be 62.5/125 μm multi-mode duplex cable.

Provide a 1" x 12" x 3/8" copper busbar designated Telecommunications Main Ground Bus (TMGB), mount on the plywood backboard in the vicinity of the Voice Main Cross-Connect. Run one #6 AWG copper ground conductor, in conduit, from this busbar back to the building ground at the Main Distribution Panelboard. All racks, frames, patch panels and cabinets in the telecommunications room shall be individually connected to the TMGB using a #10 AWG green ground wire.

Voice Main Cross-Connect (MC)

The Voice MC shall consist of the telephone system DEMARC and the stacked, modular patch panels. The Voice MC shall be mounted on either a freestanding cabinet or rack located in the telecommunications room. The Voice MC shall consist of one set of stacked, modular patch panels wired in accordance with T568B specifications. This set of modular patch panels shall be designated as the advice side and shall terminate the home-runs of Enhanced Category 5 cable from each voice jack at the WAO. The telephone company Network Interface Devices shall have each port labeled with the telephone company designated telephone number, and the device side modular patch panels shall have each port labeled with the voice jack logical identifier. Cross-connects/patch cords shall be provided from the Network Interface Devices to the device side patch panels. The WAO voice jacks shall be labeled by floor and jack sequentially (i.e. 2V-X and 3V-XX) using a stick-on identifier.

Data MC

The Data MC shall be mounted on either freestanding cabinets or racks located in the telecommunications room. The Data MC shall be separate from but located adjacent to the Voice MC. The Data MC shall consist of one set of stacked, modular patch panels, with wire management, wired in accordance with T568B specifications. The Data MC shall terminate the home-runs of Enhanced Category 5 cable from each data jack at the WAO. The modular patch panels shall have each port labeled with the data WAO logical identifier. The WAO data jacks shall be labeled by floor and jack sequentially (i.e.: 2D-XX and 3D-XX) using a stick-on identifier.

Cross-Connect/Patch Cables

Provide an adequate number of cross-connect/patch cables for each port on the patch panels to complete the system. The cables shall consist of pre-manufactured, pre-tested, Enhanced Category 5 cables with eight-pin modular jacks at either end for use at the Voice MC, the Data MC, and from the WAO to each computer. Provide patch cords of various lengths based on the layout of the telecommunications room to allow proper interconnection of devices while neatly dressing the cables through the wire management harnesses. Provide pre-manufactured ten-foot length patch cords for each data outlet at the WAO.

Jacks

All voice and data cabling shall be terminated on compliant eight-pin modular jacks wired according to T568B specifications. The typical WAO shall consist of one voice cable and one data cable terminated in the same box or Access Floor Workstation Module with faceplate and appropriate labeling. Voice jacks shall be white or neutral; Data jacks shall be blue.

System Testing

All terminations and telecommunications cabling shall be tested in accordance with ANSI/TIA/EIA-TSB 67 Transmission Performance Specifications for Field Testing of Unshielded Twisted-Pair Cabling Systems using a Microtest® PentaScanner or equivalent device capable of recording, storing and transferring test data to a PC for documentation purposes. The pass/fail test parameters shall include at a minimum for each cable from the patch panel to the WAO's: WAO designation, cable length, wire map, attenuation, and near-end crosstalk (NEXT). Telecommunications cabling that fails any test shall be corrected or replaced and re-tested.

Provide the LESSEE with a copy of the test data in both hardcopy and on diskette using Microsoft Word format.

4. SECURITY AND LOCKING SYSTEM

The building(s) shall be secured with an automated perimeter-type security system that incorporates intrusion alarm capabilities through all perimeter doors and windows and allows for motion detection in designated sensitive areas. Access shall be through designated doors utilizing

a proximity card-reading sensor system. All activity of the system shall be programmable through a central controller, extended keyboard and printer. The system shall be capable of identifying and controlling use through unique card codes. The system shall be able to be monitored and controlled by a remote computer system if desired at a later time. The capabilities for remote control is NOT to be provided by the LESSOR. The system shall include 24-hour monitoring by a manned central station capable of alerting appropriate individuals or organizations based upon the time and type of alarm. Prior to installation, all equipment must be approved by the agency and any applicable federal, state or municipal jurisdictions regulating such installations.

The Commonwealth may request and receive a new locking system and/or associated hardware after a break-in or a series of thefts or other similar, unusual occurrences.

5. FIRE ALARM SYSTEM

The lease space and building in which the LESSEE is housed shall be protected by a centrally controlled and annunciated, non-coded, ADA compliant fire alarm system including audible and visual alert devices, manual pull stations, automatic heat/smoke detectors, remote annunciation and automatic communication to a central station monitoring agency. The LESSOR shall 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, whichever is more stringent.

Provide detectors in electrical rooms, mechanical rooms, telecommunication rooms and storage areas.

Hand-held multi-purpose dry chemical or CO₂ type fire extinguishers shall be provided by the LESSOR in areas of concentrated electrical equipment and telecommunications equipment as designed by the LESSEE. Hand-held ABC type fire extinguishers shall be provided by the LESSOR as required by the NFPA codes.

All fire alarm systems shall be maintained, upgraded and tested by the LESSOR as required by the NFPA.

6. ELECTRICAL POWER MONITORING SYSTEM

The LESSOR shall provide an electrical power use monitoring system to monitor all electrical power consumed by Mechanical Equipment, Lighting, Plug loads, Accessory, and Total loads. Four of these parameters need to be measured directly and the fifth can be ascertained by addition or subtraction. Monitoring equipment shall be manufactured by Square-D Corporation and shall be at least the Power Logic 1500 System or better. See [http://www.squared.com/us/products/powerlog.nsf/0/0d1c16f4e64e595d852565ae00615197/\\$FILE/Plcat.pdf](http://www.squared.com/us/products/powerlog.nsf/0/0d1c16f4e64e595d852565ae00615197/$FILE/Plcat.pdf) website for complete description and specifications for the Square-D PowerLogic System. The system (transducers, power monitors, processors, and accompanying software) shall be installed and the programming set up to collect data every 15 minutes in a Microsoft Access or Microsoft Excel database or spreadsheet. A computer will be provided for installation of the software needed to manipulate the data and transmit it through the DEP Data Network. The

computer shall have a Windows NT Workstation or Windows 2000 Operating System and the current version of Microsoft Office Professional or successive Microsoft Products. The LESSOR shall be responsible to get the data on the hard drive of the furnished computer. Further manipulation/transmission of the data shall be the responsibility of the LESSEE.

All equipment shall be installed and calibrated, if necessary, and shall be collected by the provided computer which shall be located in the telecommunications room. The following systems shall be monitored: Total Load representing the total electrical power consumed by the facility; the Mechanical Equipment load representing the total mechanical load; the Lighting Load representing the total overhead, exit, façade lighting, and parking lot lighting loads; the Plug Loads representing the total power consumed by the plug loads in the building including the task lighting provided in the workspaces; and the Accessory Loads representing the elevator and other such loads. In addition, any renewal energy systems shall also be included in this monitoring system.

Before acceptance of the system, the contractor shall train an individual at the facility in the proper setup and operation of the software. Technical assistance shall be provided for one year to assist in operating or resetting the system software.

7. INDOOR AIR QUALITY MONITORING SYSTEM

The LESSOR shall provide an indoor air quality monitoring system to monitor temperature, relative humidity, and carbon dioxide. Monitoring equipment shall be manufactured by Vaisala and/or MSA as sold by Campbell Scientifics or Davis Instruments or LESSEE approved equal. The system shall include a minimum of 20 duct and wall mounted sensors to be located as directed by LESSEE. The system (data logger, software, serial interface, multiplexer, sensors, and storage modules) shall be installed and the programming set up to collect data every 15 minutes in a Microsoft Access or Microsoft Excel database or spreadsheet. A computer will be provided for installation of the software needed to manipulate the data and transmit it through the DEP Data Network. The computer shall have a Windows NT Workstation or Windows 2000 Operating System and the current version of Microsoft Office Professional or successive Microsoft Products. The LESSOR shall be responsible to get the data on the hard drive of the furnished computer. Further manipulation/transmission of the data shall be the responsibility of the LESSEE.

All equipment shall be installed and calibrated, if necessary, and shall be collected by the provided computer which shall be located in the telecommunications room.

Before acceptance of the system, the contractor shall train an individual at the facility in the proper setup and operation of the software. Technical assistance shall be provided for one year to assist in operating or resetting the system software.

SECTION E. INTERIOR CONSTRUCTION AND FINISHES

All building materials, systems, components, products and assembly techniques and methods shall adhere to the LESSEE'S goal of sustainable design and high performance green architecture.

The LESSOR and design team shall institute a program of construction waste management and recycling that will minimize construction and furnishings waste material going to landfills. All construction material, finishes, furnishings and accessories shall be environmentally responsible and appropriate for use in spaces that are designed for maximum occupant performance. These items shall emphasize low embodied energy, sustainable production, high post consumer material content, be free of deleterious chemicals and compounds, and shall be manufactured and available locally whenever possible.

1. ACCESS FLOORING SYSTEM

An access flooring system shall be provided to utilize an underfloor air plenum system. Installation of the access flooring system shall use the latest techniques and procedures to design and install the access flooring system as recommended by the manufacturer. The flooring system shall be provided in the entire facility with the exception of the center core and the garage area. The access flooring system shall consist of 24" steel filled or bonded cementitious core panels fastened to adjustable, galvanized steel pedestals as manufactured by Interface or Atlantic Access Flooring of Elkridge, Maryland or LESSEE approved equal. Pedestal base is to be secured with the use of pedestal adhesive as manufactured by the Gibson-Homans Company or LESSEE approved equal. Modular panels shall be factory cut to accommodate the installation of diffusers and floor modules.

2. FLOOR DIFFUSERS

The appropriate number of relocatable Krantz underfloor-mounted diffusers shall be provided in the raised flooring system to allow for more direct supply of fresh air to the work locations as manufactured by Euro-Technical Products, Inc. of Cornelius, North Carolina or LESSEE approved equal.

3. CARPETING

The LESSOR shall install new carpeting in all rooms except in rest rooms, central duplicating rooms, stairs, designated storage rooms, lunchroom, and other areas excepted by LESSEE. All carpeting materials shall be new and installation shall be wall-to-wall and completed prior to installation of all interior demountable walls.

Carpet material shall be 100% commercial grade nylon fiber 6 or 6.6 which is solution dyed with EPA approved antimicrobial protection and be 100% recyclable to an equal or higher use. Carpet tiles shall be provided and be cut by the die cut method only. Carpet material shall have a face weight of 20 ozs. with a 1/13 tufted multi-level loop, 9.0-9.5 stitches per inch, static resistant of 1.0 KVS, and a minimum denier of 6000. The carpet must have a minimum 15 year wear warranty such as ETA series as manufactured by Interface Inc. or ER³™ as manufactured by Collins and Aikman or LESSEE approved equal which has Green Seal's recommendation or certification. Color of carpeting shall be subject to approval of LESSEE.

All doors in carpeted areas shall be undercut sufficiently to permit free swinging. The grade and color of carpeting shall be subject to approval of LESSEE. Carpeting must conform to Federal Occupation Safety and Health Regulations concerning fire proofing.

Carpet shall be replaced during the term and option period(s) as needed and as requested by the LESSEE where normal wear and tear so requires.

4. LINOLEUM FLOORING

Flooring in central duplicating rooms, sample preparation room(s), sample pick-up room, lunchroom, designated storage rooms, and other areas designated by LESSEE shall consist of Marmoleum and Walton floor covering. Marmoleum and Walton flooring shall be installed using tiles with either .08", 1/10" or 1/8" gauge and have jute backing as manufactured by Forbo Industries of Hazleton, Pennsylvania or LESSEE approved equal. Flooring shall be installed in a workmanlike manner in strict accordance with manufacturer's approved installation instructions using the appropriate recommended 100% solvent-free adhesive. Heat welded is to be used as recommended by manufacturer. Flooring shall be replaced during the term and option period(s) as needed and as required by the LESSEE where normal wear and tear so requires.

5. TILE FLOORING

Tile flooring provided in the lobby and reception area(s) shall be manufactured with no toxic substances or waste and consisting of 70% recycled post industrial and post consumer glass in a ceramic matrix as manufactured by Stoneware Tile Company or approved equal. Tile flooring shall be installed in a workmanlike manner in strict accordance with manufacturer's approved installation instructions, using the appropriate environmentally friendly adhesive. The color and pattern of the tile shall be subject to approval by LESSEE.

6. FLOOR MATS

Floor mats of appropriate size and material shall be provided for all exterior entrances into the facility. Floor mats shall be replaced during the term and option period(s) as needed and as required by the LESSEE where normal wear and tear so requires. The style and color of mat(s) shall be subject to approval by LESSEE.

7. INSULATION

In all its procurement documents for renovations to the premises, the LESSOR shall require that any insulation provided for the renovations must contain the minimum percentage of postconsumer paper or recovered material as shown below for the applicable product:

MATERIAL TYPE	PERCENTAGE BY WEIGHT
Cellulose Loose-fill and spray on paper	75% postconsumer
Perlite composite board paper	23% postconsumer

Plastic rigid foam, polyisocyanurate/
polyurethane:

Rigid Foam	9%	postconsumer or recovered material
Foam-in-place	5%	postconsumer or recovered material
Glass ridge foam	6%	postconsumer or recovered material
Phenolic ridge foam	5%	postconsumer or recovered material
Rock wool	75%	postconsumer or recovered material

The LESSOR shall require the contractor to provide the LESSOR with documentary evidence that the insulation provided for the renovations was produced with the required minimum percentage of post consumer paper or recovered material as appropriate.

8. FULL HEIGHT WALLS

Ceiling height interior walls are to be purchased and installed as designated by LESSEE. Partitions are to be faced with vinyl film or fabric as selected by LESSEE from the manufacturers standard colors and shall be purchased and constructed or assembled by the LESSOR. Permanent walls may be used for: public conference room, mechanical/equipment rooms, sample preparation areas, telecommunication rooms, lobby area, centralized file area(s), lunchroom, and specialty areas as designated by LESSEE. Demountable partitions shall be used in all other areas. LESSOR shall provide \$_____ in their proposal for these demountable partitions. In all cases, the full height partitions shall be placed on carpeting and shall meet but not subtend the suspended ceiling structure. Fastening of the walls to the floor shall not be done in any way that removal of the wall will cause spalling of the subfloor. Drilling and anchor systems are preferred but any other system producing the same results is acceptable. Walls shall have the capability of having glass vision panels (half glass or full glass) installed with micro blinds. Vision panels will be installed as requested by LESSEE. All wall partitions shall contain an acoustical blanket. Additional sound-deadening material shall be applied to walls and above ceiling where required by LESSEE (i.e., conference areas, lunchroom, etc.). In any event, all full height partitions shall have a minimum STC rating of 42.

9. PARTIAL HEIGHT WALLS AND COMPONENTRY

The LESSOR shall provide and install a new or reconditioned partial height panel system as designated and approved by the LESSEE. LESSOR may, with prior approval of LESSEE, substitute a new panel system for a pre-owned system. LESSOR shall provide \$_____ in their proposal for these partial height panel systems. The system is to be a current open stock item whether new or pre-owned. The system shall have panels that are 60 inches and 40 inches in height (or other as approved by LESSEE), free-standing with universal leveler posts and interlocking panels. Panels shall be acoustical where designated with a minimum N.R.C. of 0.85 and prime barrier rating of 21. Panels shall be covered with 100% polyester fabric over acoustical blanket and hard septum. Joining members shall be extruded aluminum with exposed aluminum surfaces of a color subject to approval of the LESSEE. The panels shall be manufactured by Haworth, Unigroup Systems of Holland, Michigan or The Knoll Group, Equity Systems of New York, New York or LESSEE approved equal. See typical workstations sketched at the end of the agencies specifications for detailed listing of specific componentry required.

Interior walls may also be comprised of storage systems in lieu of partitions if approved by LESSEE.

10. RESTROOM PARTITIONS

Toilet partitions installed in restrooms shall be manufactured using a minimum of 50% recycled High Density Polyethylene plastic coloring and flame retardant agents that are both recycled and recyclable such as Perma-Poly panel boards manufactured by EcoTec Toilet Partitions, a Division of N.E.W. Plastics Corporation, Luxemburg, WI or LESSEE approved equal. Hardware and installation shall be in accordance with the manufacturer's recommendations. Color selection to be approved by LESSEE.

11. INTERIOR DOORS

The interior doors shall consist of 36" wide solid core doors unless otherwise specified by LESSEE. They shall be finished using nontoxic, water based urethanes or similar environmentally sensitive products, as required by their function and location. Doors shall be provided with hardware, conformed to the requirements of the Pennsylvania Department of Labor and Industry and all other applicable codes, stops and master keyed locks as indicated by LESSEE. All door frames shall be steel.

12. EXTERIOR DOORS

All exterior doors and frames shall be constructed of steel or aluminum and foam insulated. All hardware shall conform to the requirements of the Pennsylvania Department of Labor and Industry and all other applicable codes.

13. FIRE EXIT DOORS INTO FIRE TOWERS

Exit doors into stair wells or fire towers shall be of B label construction or as required by the Pennsylvania Department of Labor and Industry and all other applicable codes.

14. CEILINGS

All ceilings shall be acoustical tile suspended by an intermediate duty suspension grid system unless the exposed interior shell and structural system comprise an acceptable interior environment that does not need a suspended ceiling system for acceptable aesthetic, acoustic and lighting requirements. Any exposed mechanical and electrical elements are acceptable if in accordance with codes and if treated in an aesthetic manner and approved by LESSEE. Acoustical tile and grid system for ceilings shall be selected to reduce energy costs and provide sustainable design. All ceilings shall be at least 9 1/2 feet in height above finish flooring. Acoustical products shall have a Class-A fire resistance per ASTM E 1264 and a flame spread of 0-25 per ASTM E 84 and must have a minimum of 50% postconsumer recycled content. Ceiling tiles shall have a 89% minimum light reflectance with a minimum NRC of .70 in compliance with ASTM C 423 and a CAC minimum of 35 in compliance with ASTM E 1414, such as the Ultima Hi-LR series as manufactured by Armstrong World Industries, Inc. or LESSEE approved equal.

Ceilings in the locker room facilities are to be moisture resistant. Ceiling(s) in the telecommunication/data room(s) must be provided with acoustical tile on a suspension grid system.

15. WINDOWS

The total window area for either an existing or constructed facility shall be a minimum of 25% of the total wall facade to create a pleasant environment for visitors and staff. Window selection and location should maximize day lighting potential and place occupants in close proximity of windows. All windows must meet performance specification criteria as per section B. All windows shall be professionally cleaned inside and out prior to occupancy and shall be cleaned semi-annual thereafter.

16. WINDOW COVERING

Window covering shall be provided, unless agreed upon by the LESSEE that the building configuration is such as to preclude its need. Window covering shall be provided to allow transmittal of visible light, provide higher shading coefficients, reduce glare and reduce solar heat gain in the facility. The window covering shall be provided in a polyester screencloth and shall be UV resistance with anti-bacterial and anti-fungi characteristics such as ThermoVeil Shade cloths as manufactured by MechoShade Systems, Inc., Long Island City, New York or LESSEE approved equal. Color and density of screencloth to be approved by LESSEE.

17. PAINTS, STAINS AND VARNISHES

All new or existing permanent walls shall be painted prior to occupancy. All walls shall be prepared and painted with latex Polomyx paint in at least a four-color mix or LESSEE approved equal. Paint shall be a solvent-free, water-based, and non VOC emitting paint. Preparation and application shall be completed in accordance with manufacturer's recommendations.

Paint for such items as door and window frames, steel doors, etc., shall have a minimum of two coats of paint unless stipulated otherwise. Paint for general interior and exterior applications shall be a water-based, zero- or low-VOC latex paint and primer. Water-based paints shall not be formulated with aromatic hydrocarbons, formaldehyde, halogenated solvents, mercury or mercury compounds, or tinted with pigments of lead, cadmium, chromium VI, antimony and their oxides.

If solvent-based paints are required for exterior use, the VOC levels shall not exceed 150 grams/liter. Solvent based paints shall not be formulated with more than 1% aromatic hydrocarbons by weight.

The use of water-based stains and transparent finishes for the use of wood finishes shall be provided with less than 100 grams/liter for stain or transparent finishes.

Immediately after occupancy, LESSOR will refinish marred walls during weekends or holidays. If occupancy already occurs, painting must be done on weekends or holidays. Color selection to be approved by LESSEE.

LESSOR shall repaint the premises every five (5) years during the term of this Lease and any option terms. LESSEE may waive repainting if, in its sole judgment, it determines that said repainting is not necessary.

18. SEALANTS, ADHESIVES AND COMPOUNDS

All sealants, adhesives and compound products used in this project shall be non-toxic, low odor and solvent free and shall be antimicrobial with no hazardous vapors and contain no carcinogenic materials.

19. RESTROOMS

Interior finishes of toilet facilities shall consist of ceramic tile flooring and walls at least 4 feet in height. Ceramic tile shall be installed in a workmanlike manner in strict accordance with manufacturer's approved installation instructions, using the appropriate environmentally friendly adhesive. The remaining wall area shall be prepared and painted with latex Polomyx paint in at least a four color mix as approved by LESSEE. Preparation and application shall be completed in accordance with manufacturer's recommendations. Color and material to be approved by LESSEE.

20. OPEN SHELVING

An open-shelving system shall be provided and professionally installed in areas as stipulated. The shelving units shall be a five shelf high unit, approximately 87" in height with a depth of either 18" or 24" and appropriate width as designated by LESSEE. The design of the shelving units shall have the preclipping feature for simplifying erection. All clips for all posts and shelves to be the same and shall be independently adjustable without interference from any other clip. Nuts and bolts to be included with the system. The shelving units shall be provided with end and back sway braces and shall not obstruct the full adjustability of the shelves. Base strips to be provided to close the space between the bottom of the shelf and the floor. Foot plates to be provided to protect the flooring. Sliding dividers shall provided for every 24 filing inches installed in the central storage room. The color to be designated by LESSEE. The Shelving System shall be as manufactured by Penco Company, Oaks, Pennsylvania, or LESSEE approved equal.

21. SIGNAGE

LESSOR shall provide an identification sign with a minimum dimension of 4' x 6' with 3" minimum letters, located on the exterior of the building. Reference signage from the street and other access points must be provided by the LESSOR in conformance with local zoning regulations.

Additional interior reference signage must be provided at individual office locations and auxiliary areas as designated by LESSEE. A directory board and lettering shall be provided and installed for LESSEE's exclusive use as designated by LESSEE.

Interior reference signage for individual office locations shall be provided with 9" x 9" single-faced non-ADA wall sign with window and slider. Auxiliary areas shall be provided with 9" x 9" single-faced ADA wall signs. Faceplates shall be 1/16" matte clear acrylic with the agencies logo and wedge design printed electronically and applied to the subsurface of the faceplate. The faceplate shall be custom painted with acrylic enamel, laminated to 3/16" custom painted acrylic enamel back plate with 1/16" acrylic spacer strips to produce slider section. Double-faced foam tape shall be mounted to the back of the faceplate for installation.

Individual workstations shall be provided with a 1 1/2" x 8" non-ADA faceplate. The faceplate shall be provided with a frame, 1/16" matte clear acrylic pop-in faceplate, a paper printed insert, and panel clip, attached for installation onto cubicle wall. SignWord Pro Software or LESSEE approved equal and additional paper supply shall be provided to the agency for future insert requirements.

Directory sign shall have 1/16" matte clear acrylic faceplate custom painted with an acrylic enamel, leaving matte clear windows for slider panels. Header lettering printed electronically and applied to subsurface of faceplate. Sign mounted to fabricated and painted aluminum pan sign to add dimension and stability. Slider panels printed on subsurface of matte clear lexedge vinyl and custom painted with acrylic enamel.

Signage shall be as manufactured by Ron Martin Signs, Lancaster, Pennsylvania, or LESSEE approved equal. Color and design to be approved by LESSEE.

SECTION F. LANDSCAPING

Landscaping and other site amenities must be included as part of this project and maintained by the LESSOR.

1. SITE

Retain and protect as much on-site vegetation as possible and restore degraded areas. Plant native and naturalized shrubs, ground covers, and grasses with water requirements appropriate to the regional to reduce irrigation requirements as well as water pollution from pesticides, herbicides, and fertilizers. Trees should be utilized to shade at least 60% of impermeable surfaces of the property. Plant materials should be utilized to provide food and/or cover for native wildlife species. 100% recycled mulch that is made from shredded pallets and construction waste should be utilized on this project as manufactured by Enviro Products of Dillsburg, Pennsylvania or LESSEE approved equal.

2. FLAG POLES

The LESSOR shall provide two aluminum flag poles suitable in size, in proportion to the building structure as proposed. Poles to be of appropriate gauge and to have a landyard system where free-standing or cantilevered where on the building structure. Poles shall be lit with dusk to dawn illumination. Location and style of poles to be pre-approved by LESSEE. LESSOR to provide flags for poles.