ENCLOSURE "C" TO LEASE #11859-2016 BY AND BETWEEN TBD, as Lessor, and THE STATE OF MICHIGAN FOR THE DEPARTMENT OF STATE, as Lessee

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DIVISION O – INTRODUCTORY INFORMATION

O.1 **Scope:** It is the purpose of these outline specifications to set forth the minimum general requirements for the completed facility as well as to clarify points of particular interest to the Michigan Department of State.

Actual design, construction and performance of the building, building systems, site and ground utilization, etc. are the responsibility of the Owner/Lessor. The Owner/Lessor shall obtain the services of an independent architect/engineer to provide the construction drawings and specifications pursuant to the Michigan Department of State requirements. The architect/engineer shall be responsible for presiding over and generating periodic progress meetings, minutes of meetings and periodic on-site construction inspections to verify the provisions of the drawings and specifications.

O.2 **Construction Documents:** The Owner/Lessor shall submit to the Michigan Department of State three (3) sets of complete construction drawings, for review and approval. While the approved drawings and specifications will become a part of the Lease, in the event there is a discrepancy between these outline specifications in the Lease, and the approved construction drawings, these outline specifications in the written lease document shall prevail. The construction documents shall be approved by the Michigan Department of State before remodeling or new construction is started. Approval of these documents does not waive the Owner/Lessor's responsibility to comply with the provisions of the Lease and outline specifications. Construction specifications shall follow the AIA/CSI format and shall provide details and data not provided in the outline specifications.

DESIGN PHILOSOPHY: All design considerations shall be based on the Owner/Lessor's knowledge of the intended use of the Leased premises. The Michigan Department of State's process of plans and specifications review and subsequent approval does not relieve the Lessor from any responsibility to provide an end product that is safe, comfortable and functionally satisfactory to serve as an office facility for the Michigan Department of State, Secretary of State.

The Leased premises shall be designed in such a manner as to insure an economical and efficient use of space, adequate natural light, ventilation, circulation patterns and code compliance. The concept drawing attached to the lease is only one acceptable schematic design solution.

The design philosophy shall provide a facility of not less than _____ usable square feet on the ground floor. The Leased premises square footage shall be all adjacent, with no other tenants interspersed or separating the Lessee's space.

The restroom design shall incorporate consideration of sight lines that do not compromise privacy, including the placement of mirrors, when the entry door to the restroom is in the open position.

If the Leased premises is accessed directly from the outdoors (uncontrolled air environment), the main entry to the Leased premises shall be provided with a heated airlock vestibule, per division 15.

O.3 DEFINITIONS

The terms "approved", "required" and "as directed" refer to and indicate the work or materials that may be approved, required, or directed by the Michigan Department of Management and Budget, Real Estate Division, the DMB, Office of Design and Construction or the Michigan Department of State.

The term "building code" and the term "code" refer to regulations of building code enforcement agencies having jurisdiction in compliance with Act Number 230 of the Public Acts of 1972, as amended, being M.C.L. §125.1501 et seq. (State Construction Code Act of 1972).

The term "DMB" shall refer to the Michigan Department of Management and Budget's Office of Design and Construction, and the Real Estate Division, which acts as agent on behalf of the Lessee.

The term "Lessee" shall refer to the Michigan Department of State, Secretary of State.

The term "product" includes materials, systems and equipment.

The term "provide" includes furnishing and installing in a professional manner, a product complete in place, tested and approved.

The terms "shown", "indicated", "detailed", "noted", "scheduled" and terms of similar import refer to requirements contained in these specifications for the building or space being offered for lease. The term "similar" means in its general sense and not necessarily identical.

The term "systems furnishings" means interlocking components of portable and moveable wall panels, writing surfaces, shelves, tackboards, drawers, power poles, etc. of varying sizes which are assembled to create separate work stations for each employee or each work function, that are owned by the Lessee, and are not normally attached to the Leased premises, except for electrical connection attachment. Systems furnishings shall not include floor-to-ceiling wall partitions.

Acronyms:
AC (alternating electrical current)
ADA (Americans with Disabilities Act)
AFF (above finished floor)
AFFF (aqueous film forming foam)
ANSI (American National Standards Institute)
ASHRAE (American Society of Heating, Refrigerating and Air Conditioning Engineers)
ASME (American Society of Mechanical Engineers)
ASTM (American Society for Testing and Materials)
AWI (Architectural Woodwork Institute)
BFD (Michigan Barrier Free Design Law)
BOCA (Building Officials and Code Administrators International)
BTU (British Thermal Unit);
CFM (Cubic Feet per Minute);
CPU (Computer Central Processing Unit);
CRI (Color Rendering Index);
DDC (Direct Digital Control);

DMB (Michigan Department of Management and Budget, Real Estate Division, or Office of Design and Construction);
DOS (Michigan Department of State)
DX (Direct Expansion);
FC (Footcandles);
GFI (Ground Fault Circuit Interrupter);
HVAC (Heating Ventilating and Air Conditioning);
ID (Inside Diameter);
IEEE (International Electrical and Electronics Engineers);
ES (Society of Illuminating Engineers);
LBS (Pounds);
LR (Light Reflectance);
MB (Megabyte);
MDOT (Michigan Department of Transportation);
MIOSHA (Michigan Occupational Safety and Health Act);
NEC (National Electrical Code);
NEMA (National Electrical Manufacturers Association);
NFPA (National Fire Protection Association);
NIC (Not In Contract);
NIST (National Institute of Standards and Technology);
NRC (Noise Reduction Coefficient);
ON (On Center);
PSI (Pounds per Square Inch);
PVC (Polyvinyl Chloride);
RFQ (Request for Quotation);
SMACNA (Sheet Metal and Air Conditioning Contractor's National Association); STC (Sound Transmission Coefficient);
TX (Telecommunications);
UBC (Uniform Building Code);
UL (Underwriter's Laboratories);
VAV (Variable Air Volume);
VCP (Visual Comfort Probability).

DIVISION 1 – GENERAL REQUIREMENTS

1.1 Regulatory Requirements: Construct this Leased premise in accordance with all Federal, State and Local Building Codes pursuant to the State Construction Code Act, BFD, MIOSHA, Life Safety Codes, "Michigan Energy Code," and provisions for Public

Law 93-112, Section 504. Completed building and site must also comply with the Americans with Disabilities Act, Accessibility Guidelines (ADAAG).

1.2 **Permits:** The Owner/Lessor shall obtain all necessary building, zoning and other permits as required for the complete construction of the Leased premises.

1.3 **Temporary Facilities and Controls:** The Owner/Lessor shall provide temporary facilities and controls for water, electricity, toilets, heating and telephone.

1.4 **Project Directory:** The Owner/Lessor shall provide a Leased premises directory listing the following as applicable to the Leased premises, add other pertinent information if necessary. List by firm name, person in charge, address and telephone number: project name, owner (if different from Owner/Lessor), architect/engineer, etc.

1.5 **Final Construction Documents:** Prior to start of construction, the State shall be furnished free of charge, 3 copies of prints of the final approved drawings and specifications. <u>One (1) electronic copy of the final approved floor plans on CD or as an e-mail attachment, compatible with Autodesk's® Autocad2008 for Windows 2000® software</u>

The State may secure additional copies of drawings and specifications from the Owner/Lessor at the usual charge for reproduction and handling.

1.6 **Compliance:** Construction shall be done in strict accordance with approved plans and specifications. The State reserves the right to make periodic inspections of the construction to ascertain whether construction and workmanship are as represented by approved drawings, and that the Leased premises is also representative of practices of construction that are reasonable and customary in the industry. All existing buildings shall be structurally sound (certified by licensed engineer, if required by the State), and meet all minimum design standards of this outline specification. The Leased premises shall meet all the requirements for new construction for 2004 with respect to floor load bearing capacity. Build into the floor plan layout all pipe chases and duct chases required to meet the mechanical design criteria, including vertical duct chases where low ceiling heights in existing buildings do not allow ventilation ducts above the ceiling.

To facilitate inspections of critical items, a certain reasonable number of "**Stop Points**" will be identified as required at a Pre-construction Meeting, to be chaired by the State. Construction of the item(s) to be inspected will not proceed until the State has inspected and approved the work to that point. The State must be given at least **two (2)** work days notice of when "**Stop Points**" will occur and inspection will be made within **one (1)** day after "**Stop Points**" are reached, otherwise construction can proceed as planned.

Periodic site inspections will be made by the State. This does not relieve the Owner/Lessor from providing architect/engineer inspections during the construction phase.

If any materials or workmanship provided are other than as indicated on drawings, or specified, the Lessee may direct that the portion of the work that is not satisfactory be removed and replaced or otherwise corrected, at no additional cost to the State.

Any reference to a specific brand and/or model is intended to establish quality, operating characteristics, size or type. Products of equal or better quality, operating characteristics or type are acceptable. The entire burden of establishing equality of alternate brands,

types, sizes, etc., shall rest with the Owner/Lessor and the Owner/Lessor shall provide proof of "equal or better" upon request by the State.

1.7 Progress Schedule and Subcontractors: Within 10 days after the Pre-construction Meeting, the Owner/Lessor shall submit to the State a bar chart construction progress schedule, a list of all subcontractors and shop drawings and catalogues specified below. The construction progress schedule shall include the following:

a) The anticipated date of commencement and completion of the various operations to be performed under the Lease, including submission of samples and other information requiring prior approval of the State, which directly control the key operation.

b) The estimated time required for fabrication or delivery, or both, of controlling materials and equipment required for the work.

The construction progress "schedule" shall be predicated on the completion of all the work on or before the date specified.

After being accepted by the State as satisfactory, the construction progress schedule shall be strictly adhered to by the Owner/Lessor, subject to approved change order(s) to the Lease.

1.8 Project Meetings: Regularly scheduled remodeling or construction progress meetings shall be held at the job site. The Owner/Lessor shall include general contractors and sub-contractors as necessary. A first meeting shall be held prior to commencement of actual remodeling or construction (a Pre-construction Meeting referenced above) and held monthly thereafter until the construction or remodeling of the leased premises is completed. The meeting schedule may be altered when mutually agreeable between the Owner/Lessor and State.

1.9 Required Submittals: Prior to commencement of construction, the Owner/Lessor shall submit two (2) copies of all shop drawings and manufacturers' catalogue information for all construction items proposed to the State. These drawings shall include complete schedules for finishes, doors, floors, ceilings, hardware, plumbing fixtures and accessories, HVAC equipment and accessories, etc. Shop drawings and manufacturer's catalogue information shall be checked and approved by the State.

Monthly written construction progress reports and site inspection approvals shall be prepared by the Owner/Lessor and copies submitted to the State.

Upon substantial completion of construction and within 30 days of final acceptance, the Owner/Lessor shall submit to the State the following:

Two (2) complete sets of reproducible (mylar) as-built drawings corresponding to the approved construction drawings.

One (1) electronic copy of the final approved floor plans on CD or as an e-mail attachment, compatible with Autodesk's® Autocad2009 for Windows 2003® software.

Testing and Balancing Mechanical Systems: Independent air and hydronic system balancing tests shall be performed by certified testing firms. Results of these tests shall be submitted to the Lessee as a condition of final acceptance of the Leased premises. Random testing may be required during acceptance inspection see 15.9.

1.10 Change Order and Field Bulletin Procedures: Any changes in construction requirements that occur after the final approval of design and construction documents

shall be initiated by a bulletin from the Owner/Lessor requesting prices for changes proposed. Either the Owner/Lessor or the State may make requests for changes consistent with Article III of the Lease.
Requests for a field bulletin change shall be complete with drawings and/or other supporting documentation.

The Owner/Lessor shall submit a detailed breakdown of costs to State, after review and approval by the Owner/Lessor.

The State will advise the Owner/Lessor in writing: (1) if it wants the changes made, and (2) that it has the funds to pay for the proposed changes.

All changes are to be included in the as-built drawings regardless of whether the request is initiated by the Owner/Lessor or by the State and regardless of whether a cost is associated with the change.

All changes or deletions, which result in a change of construction expense, shall be provided on the basis of an itemized breakdown of the actual cost plus 15% for overhead and profit for work done by the Lessor. On work performed by a subcontractor, the Lessor is allowed a 5% handling charge. The subcontractor will then receive the 10% addition for overhead and profit.

Payment for such changes, additions or deletions shall be made as a lump-sum adjustment with the first monthly rental payment.
All change orders shall be issued in writing by the State DMB, on a construction change order notice all as required by Article III of the Lease. **The Lessor will be responsible for the cost of any unauthorized changes.**

1.11 Contract Close Out:

Substantial Completion: The Owner/Lessor shall notify the State when the work will be substantially complete and ready for inspection and preparation of a list of minor replacement, correction, adjustment and touch-up items. All concerned parties shall attend the substantial completion inspection. The Owner/Lessor shall complete all work required by the date set for final acceptance by the State. Provide a pest control application for the elimination and/or control of insects and rodents 1 week before State move-in.

Final Cleaning: The Owner/Lessor shall remove from the Leased premises all surplus building material and rubbish; clean or re-clean entire work to normal level for "first class" maintenance/cleaning of building projects of a similar nature; and remove non-permanent protection and labels, polish glass, clean exposed finishes, touch up minor finish damage, clean or replace filters for mechanical systems, sanitize plumbing/food service facilities, clean light fixtures and replace burned out/dimmed lamps, sweep and wash new paved areas, remove all debris from yards and grounds, and perform similar cleanup operations needed to produce a "clean" condition for the facility and grounds. No payments will be authorized until final cleanup is accomplished and inspection is made by the State.

1.12 Coordination with between and among subcontractors. Prior to State occupancy, the State may hire subcontractors to install systems furnishings, closed circuit television systems, telecommunications, computer networking, and audio-visual. The

Owner/Lessor shall assure no conflicts in working rules between the Owner/Lessor-contracted subcontractors and State-contracted subcontractors.

DIVISION 2 – SITE WORK

2.1 General: Where setback requirements allow, sites shall be attractively landscaped. Provide sufficient concrete sidewalks (5' wide, 4" minimum thickness with wire mesh or fiber reinforcement on compacted sub-base) from parking area, for easy access to building.

Provide a reinforced concrete trash container pad on a compacted sub-base (concrete as described in Division 3) on site for accommodation of trash pickup.

Exterior building street numbers and signs: Building street numbers shall be not less than 12" high with a minimum 2" stroke shall be provided and installed. Department of State will provide signs as required to be installed by the Owner/Lessor that will direct the public to this building from 2 directions on main thoroughfares.

"Handicapped Parking", "Van Accessible", and "No Parking" signs shall be provided and installed prior to occupancy. Locations shall be confirmed by the State on a site plan as provided by the Owner/Lessor. Signs and installation shall be in compliance with BFD and ADA standards.

Provide accessibility to all entrances/exits in compliance with act N° 1 of the public acts of 1966, as amended, being M.C.L. § 125.1351 et seq. (Utilization of public facilities by the handicapped act).

The Lessor shall remove from the premises all surplus building material and rubbish, and dispose of it in a legal manner. Burning on site is prohibited.

2.2 Paving and Surfacing: Provide asphaltic concrete paving or Portland cement concrete paving for motor vehicle parking for **new construction** in accordance with referenced portions of "Standard Specifications for Construction 1990 Edition" of the MDOT. Existing paving shall be in a "like new" condition. Areas deemed not acceptable by the State will be repaired in the "like new" condition.

Asphaltic Concrete Paving shall consist of:

a)	Minimum 6" sand-gravel sub-base:	MDOT 22A
b)	Bond or tack coat asphalt emulsion:	MDOT SS-1h or MDOT MS-2a.
c)	Bituminous leveling course:	MDOT Mixture 1100L
	Coarse aggregate:	20A
	Minimum thickness of leveling course:	3" (75mm)
d)	Bituminous top course:	MDOT Mixture 1300T
	Coarse aggregate:	20-AAA
	Minimum thickness of top course:	1-1/2" (38 mm)

e) New bituminous pavement and existing bituminous pavement shall be prepared and sealed with a coal tar emulsion sealer. Application of sealant shall be as recommended by the manufacturer, and performed upon initial delivery of the leased premises and 2 years after possession.

Portland Cement Concrete Paving shall consist of:

a)	Minimum 6" sand-gravel sub-base:	MDOT22A
b)	Reinforcement:	6" x 6" (W1.4) wire mesh
c)	Minimum compressive strength:	4000 PSI in 28 days.

d)	Minimum cement content:	6 bags
e)	Minimum air-entrainment:	5%
f)	Maximum slump:	4”
g)	Minimum thickness:	5” depth.

The motor vehicle parking lot shall be striped to designate “No Parking” areas and to accommodate the minimum number of motor vehicle parking spaces referenced in paragraph 3.9 of the lease. 1 of the handicapper spaces shall be “van accessible” as described in the ADA rules. Paint all lines and stripes using 1 coat yellow or white Sherwin Williams “Pro-Mar Traffic Paint” as appropriate at a rate of 1 gallon for every 350 lineal feet of 4” wide stripe following the State’s approval of the parking layout as provided by the Owner/Lessor.
Provide curbs, guardrails, curb cuts and wheels stops to meet BFD requirements, and ADA rules at reasonable access points to the sidewalks and building.

DIVISION 3 – CONCRETE

3.1 All foundation walls below grade shall be poured reinforced concrete or concrete block with reinforcing.

3.2 All concrete shall have a minimum compressive strength of 3,000 PSI in 28 days.

3.3 Concrete slabs on grade shall be four (4) inches thick with wire mesh reinforcing. Pour slab on four (4) inch sand bed, firmly tamped by mechanical means to insure a solid base with no voids or hollows.

DIVISION 4 – MASONRY

4.1 **Storm Shelter Area/Tornado Protection:** In new building construction, provide lateral and vertical bracing in the walls around the employee toilet rooms.

DIVISION 5 – METALS

5.1 **Miscellaneous Metals:** Items shall use the best commercial quality for the purpose of items specified, free of defects impairing strength, durability, finish or appearance. Materials shall be formed truly and uniformly to required shape, size, sharp lines, and smooth surfaces. Separate dissimilar materials with caulking, bituminous paint or gasket as approved.

DIVISION 6 WOOD AND PLASTICS

6.1 **Material Standards (General):**

1) Sills: Foundation grade, pressure-treated southern pine or Douglas fir.
2) Wood studs: Stud grade southern pine or Douglas fir.
3) Steel studs: 20 gauge galvanized screw studs with 20 gauge track top and bottom.
4) Posts and beams: Southern pine N° 1 dense KD 2050 Douglas fir select structural 1900f.

5) Concealed sheathing: Standard exterior grade with exterior glue APA CDX, plywood or OSB.
6) Exterior wood trim: Redwood or cedar, select heart grade, rough-sawn.
7) Wood preservative: Ammonical copper arsenite (ACA) for Douglas fir or chromated copper arsenite (CCA) for southern pine.

6.2 Cabinet Work: All millwork and installation shall conform to the performance standards of the Architectural Millwork Institute. Finish wood materials to receive stain or transparent finish shall be "Custom" grade. Laminated plastic shall be high pressure plastic laminate complying with NEMA Standards Specifications for General Purpose Grade (HGS/Grade-10 .050") with selection from solid colors or wood grains. Casework hardware shall be equal to Knape & Vogt Manufacturing Company products.
Counter tops and back splash shall be finished in plastic laminate. All other surfaces shall be oak or oak veneer stained and varnished to match doors and other woodwork. The counter face shall be finished at the floor with a suitable heavy-duty vinyl or wood baseboard. Minimum length of the counter top in the Lunchroom is: **6' - 0"**.
Cabinets shall be complete with hardware, drawers, dividers, and adjustable shelves. Drawers shall be suspended on steel slides with ball bearing type nylon rollers for ease of operation. Drawer slides shall have a 100 lb. Load rating.

6.3 Shelving: Provide shelving in the janitor closet for storage of cleaning and paper supplies. Wood shelving shall be 25/32" No. 2 common kiln dried ponderosa pine as per grading rules of the Western Pine Association. Shelving shall be supported on cleats of the same material.

Provide a surface mounted medicine cabinet in each employee's toilet room mounted above the toilet tank Model: American Classics: TTS-OA, 23" x 6.5" x 28" in golden oak sold at Home Depot as SKU 997504 or approved equal.

6.4 Chair Rail: Provide 1" x 4" chair rail made from King Starboard, Dolphin Gray – Product can be found at www.kingstarboard.com or approved equal this should be mounted on center 32" above the finished floor in all areas except those deleted by MDOS to include but not limited to the lobby, break room, offices, and all public spaces. Exact locations for the chair rail will be identified by the State on preliminary drawings provided by the Owner/Lessor. Further this chair rail shall be appropriately routed on the top and bottom edge to provide a finished appearance.

6.5 Interior Window Sills: Provide a 6" wide window sill for all sliding windows, there are two primary locations: 1. Manager's office and 2. Dealer area.

6.6 Plywood Backboards and Wall Blocking: Provide one 4' x 8' x ¾" telephone equipment backboard mounted to wall in the telephone closet. Plywood backboard will be finished with 2 coats of white enamel paint.
Wood blocking: Provide 2" x 10" wood blocking in wall cavities where door swing motion could cause door lever hardware to pierce gypsum drywall board, for the installation of wall-mounted door stops. Provide 2" x 6" wood blocking in wall cavities to support handrails in BFD restroom stalls.

6.7 **Rough Hardware:** Furnish all necessary nails and screws and all items generally classed as "rough hardware" including bolts, washers, anchors, straps, etc. that are required for proper assembly.

DIVISION 7- THERMAL AND MOISTURE CONTROL

7.1 **Performance and Submittals (Existing facility will be evaluated on an individual basis):** Exterior wall from floor to roof deck shall have an R-factor of 19 or greater. Roof system shall have an R-factor of 30 or greater. The rest of the building envelope shall meet or exceed the requirements of ASHRAE 90-81. An analysis of the exterior building envelope showing construction materials and methods of assembly and coefficients of transmission (U/BTU/h ft. F) demonstrating compliance with this specification shall be submitted to the Lessee prior to construction.

"Stop Point": State shall be given notification to conduct an on-site inspection after insulation is installed and before wall finish process is started. This inspection will be made by the State within 2 business days of receipt of notification.

Provide "Sound Transmission Coefficient" of not less than 45 in all floor to ceiling interior wall. **"Stop Point":** The State shall be given at least 48 hour notification to conduct an on-site inspection after acoustic insulation is installed and before wall finish process is started. This inspection will be made by the State within 2 business days of receipt of notification.

Prior to the start of construction on a **new** building, submit architectural and construction documents to the State showing details for proposed roof construction, weatherproofing and waterproofing with proposed method of sealing all roof penetrations. All roof cuts or penetrations shall be made and sealed by the roofing subcontractor on both new and existing buildings. Existing buildings may require a tear off and similar roof details.

7.2 **Wall Insulation:** Batt thermal Insulation for *exterior* walls of the building shall be mineral or glass fiber conforming to federal specifications HH-I-S21 and ASTM C665. Flame spread shall not exceed 25, ASTM E84. Batts shall be rated at R-19 or better. Sound attenuation batt insulation for ***interior* walls** shall be 3" thick, USG Thermafiber conforming to ASTM C655, and federal specification HH-1-521E, type I or II. Please see note in 7.1 above regarding sound transmission coefficient.

7.3 **Deck Insulation:** For **new** construction and **re-roofing**, all deck insulation shall be isocyanurate rigid foam insulation with aluminum foil or fiberglass facers, which meet federal specification HH-I- 1972/1 and Factory Mutual, report serial N^{o} J.I. OG4A7.AM. Tapered isocyanurate rigid foam insulation board shall provide a minimum slope of 1/8" per foot. All insulation board shall be installed in compliance with the latest manufacturer's written instruction.

7.4 **Caulking:** Butyl rubber caulking compound for exterior use shall be 1-part polymerized rubber compound, gun consistency, conforming to federal specification TT-C 598 grade one.
Acrylic caulking compound for *interior* use shall be a 1-part, 100% liquid polymer, acrylic base compound, and non-sagging, non-staining, gun consistency.

Polysulfide base compound for *exterior* use shall be a 1-component sealing compound complying with the requirements of USIA A116.1, Class B (non-sagging) and federal specification TT-S227B, Types I and II. Containers shall bear the Thiokol Chemical Corp. "Tested and Approved" seal or shall be accompanied by a manufacturer's certificate stating that the compound complies with this standard.

DIVISION 8 – DOORS AND WINDOWS

8.1 Exterior Doors and Frames: Doors and frames at **new** main entrances shall be aluminum entrances or storefront material equal to systems designed and engineered by Kawneer Company, Inc. or Tubelite Division, Indal, Inc. Finish is to be dark bronze (M10-C22-A44). Exterior pedestrian door frames (that open directly into the Leased premises) and those doorframes of adjacent airlock vestibules shall be constructed to accept electric strike hardware for buzzer access, and prepped for intrusion alarm system contacts. All *exterior* doors and frames, except at main entrance, shall be custom hollow metal construction provided with heavy-duty commercial grade hardware. Door face sheets shall be commercial quality, roller leveled, cold rolled, 16 gauge steel with 18 gauge stiffeners at 6" on center. Provide polystyrene or urethane insulation core filler. All exposed steel surfaces shall be cleaned, bonded and coated with a baked on zinc chromate based prime paint. Frames shall be prefabricated combination buck, frame, and trim type. Mitered joints shall have locking tabs at frame rabbets and backboards. All interior door frames shall be furnished with rubber bumpers.
All *exterior* doors shall be weather-stripped, have commercial quality aluminum threshold of low profile (beveled) design to meet ADA and BFD specifications. Bevel angle shall not exceed 30^0. Exterior doors shall be protected from water by metal flashing over the door heads.

Interior vestibule exit doors shall be equipped with the Adam Rite door locking hardware: #4590 or # 4591 Latch Paddle or approved equal.

8.2 Interior Doors: All interior doors shall be 1-3/4" thick, commercial grade, solid core, wood construction, stained and varnished. Face veneer shall be selected grade red oak of standard commercial thickness not less than 1/28" before sanding. Doors and frames shall bear UL labels as required by code. Similar commercial plastic laminate faced or hollow metal may also be provided if approved by the State. Interior doors shall be furnished with 6" wide x 24" high window openings and glazing (wired glazing if required by building code) on the storage room, break room and all pass through doors. The window is not required on the manager's office and security room. Provide an allowance of one 3'-0" x 6'-8" door for each 25 lineal feet of gypsum board drywall partitioning. Interior doors on all Legal and Regulatory Administration doors i.e. Hearing Offices and Regulation Agents shall have a solid door but a door height side lite on the latch side of the door.

8.3 Windows: Provide window openings around at least two sides of the perimeter of the Leased premises, on each floor at grade level. At least 15% of the wall surface on each level of the 3 sides shall be glazing to admit natural light. Wherever and whenever possible windows should be able to open to admit fresh air, and equipped with storm windows and screens.

8.4 **Glazing:** All new and replacement exterior windows shall have sealed, low emmissivity, insulating glass units which are manufactured by members of SIGMA and IGCC. Sealed insulating glass shall meet ASTM E774, class B. Glass shall be hermetically dual sealed, inert gas filled, double pane units with exterior 3/16" bronze float glass (IoE second surface), ½" air space, and interior 3/16" clear float glass. Insulated panels, if used, shall be 1" laminated panels equal to Mapes Industries architectural panels with a porcelain fused-on finish.

Wired or clear fire-rated glass shall be UL approved. Safety glass shall be tempered or laminated, and shall meet ANSI 297.1 standard.

8.5 **Hardware:** Hardware shall conform to applicable requirements of the BOCA building code, and for fire rated doors and frames, with appropriate sections of Chapter 5 of ANSI/NFPA 101. Hardware shall be made to blueprint template and be furnished to door and frame manufacturer. Hardware shall be supplied through an architectural hardware consultant to properly handle, detail, and service hardware in a satisfactory manner. Hinges shall be provided with stainless steel pins, oil impregnated bronze bushings, or concealed ball bearing units. Swing out doors shall have non-removable pins.

Suite entry locks shall be keyed alike with brass keys, interchangeable cores and weatherproof if exterior environment. Exterior locksets shall be heavy-duty cylindrical type with a minimum 2-3/4" back set and 9/16" throw latchbolt. All lock cylinders shall be Schlage, "EXT D53PD RHO 626", and must be designed or protected so they cannot be grasped by any wrenching device. All door handles shall be of heavy duty level type, except to hazardous areas. Cylinder cores and keys shall be provided by the Owner/ Lessor.

Door stops shall be wall mounted with wood blocking, per division 6.

Exit devices shall be steel (dull chrome US26D finish), and be UL approved. Devices required on fire-rated doors shall be UL listed as fire exit hardware. Outside trim shall be fastened by means of concealed lugs and through-bolts to the active case.

All exterior doors shall be equipped with closers. Door closers shall have key valves for back check, speed, and latching. Degree of opening shall be maximum possible without causing interference or damage to door or trim. Exterior closers shall be lockable in the full-open position. Closers shall be fastened to doors with sex bolts.

Hinged exterior doors, except fire doors, shall require no more than 8-½" lbs. of force for opening or closing. Fire doors shall have the minimum opening force required by the fire marshal.

All lockable interior doors shall have lever action Schlage AL Series or Best hardware. A keying plan for interior door locks will be furnished by the State with the systems furnishings block plan. The Owner/Lessor shall supply 2 keys per lock, and 4 master keys. Individual offices, storage rooms, individual restrooms, conference and hearings rooms shall be lockable by a twist button on room side, and unlockable by key on corridor side or untwist of room side locking button.

All toilet room doors shall be provided with door closers and ball bearing type hinges. All mechanical door closers on interior doors shall be operated by a maximum lateral force of 5 lbs. pressure as measured at the door handle or push plate.

All entry doors shall be equipped with Gyro Tech System 500 electric push button operators for the handicapped. Operator push switch plates shall be of 6-1/4" diameter with embossed wheelchair symbol.
All double doors at entrances shall be equipped with a tamper-proof astragal, and have vertical deadbolts at the top and bottom of each door (verify with local fire marshal requirements).
Security room door and frame shall be steel with heavy-duty hardware to include interior hinges, or hinges with non-removable pins, and be separately keyed with no master key control. Owner/Lessor to supply two (2) keys.
Provide and install construction locks in cylinder cores on all exterior doors. Convert to cores for State use within 1 day after building control has been turned over to the State.

DIVISION 9 – FINISHES

9.1 Ceiling System: Ceiling systems must conform to fire, acoustics, maintenance and light reflection requirements. Gypsum board ceiling suspension systems shall have 16 gauge, 1 – ½" main channels with 25 gauge 7/8" furring channels. Acoustic panel ceilings shall comply with ASTM E1374 classifications and metal suspension systems with applicable ASTM C635 requirements. Suspend lighting fixtures independent of ceiling. Provide edge moldings, trim and acoustical sealant as required. Exposed face shall be white enamel. Grid spacing shall be 24" x 48".
Lay in panels shall have an NRC range of .55 to .65, STC range of 35-39, LR-1, flame spread of 0-25 (ASTM E84) and nominally 5/8" thick. All lay in panels shall be identical in type and cleanliness. All lay in ceiling panels shall be new. Minimum ceiling height shall be not less than 9'-0" nominal except in small rooms or limited areas, defined as mechanical or janitorial rooms, which may be 8'-0".

Provide unfaced sound attenuation blankets over ceiling systems to meet room to room sound transmission requirements.

Provide painted, 5/8" gypsum board ceilings in airlock entry **vestibules** and for the **security room**. Provide means of access to ceiling systems for maintenance of equipment or repair of system.

9.2 Wall Systems: All interior walls, except restrooms, shall be painted or vinyl covered drywall or field applied vinyl covered 5/8" gypsum board. Vinyl fabric shall be medium weight, textured, wall covering with stain resistant surface coatings. 4" vinyl base shall be applied to all walls. Metal studs, floor and ceiling track shall be 20 gauge galvanized steel spaced at 16" O.C. (24" O.C. not acceptable). Gypsum board fasteners shall be drywall screws not less than 1 – ¼" long. Painted surfaces shall receive 1 coat of primer and 2 coats of finish. A complete room finish schedule shall be submitted for approval by the Lessee prior to construction. Colors shall be selected by the State.
Gypsum board allowance: provide 1 linear foot of gypsum drywall board partition (finished on each side) for each 25 square feet of space rented referenced in Article I of the Lease.

Exterior wall insulation is to be covered from floor to roof deck with 5/8" gypsum board as noted above. Gypsum board above the acoustic ceiling line may be unfinished.

Walls in restrooms shall be finished with glazed wall tile extending from floor to 6' – 0" AFF. Tile shall be standard grade meeting ANSI 137.1

9.3 **Flooring:** Floors shall be level to 1/8" in 10' in any horizontal direction prior to the application of floor covering materials.

Floor Systems: All **toilet room** floors shall be slip resistant ceramic mosaic tile with sanitary ceramic cove base. Provide all special shapes required for 1 piece inside and outside corners. Tile shall be applied using the "thin-set" method. Tile shall meet ANSI 137.1
Vestibule floors at main entrances, including a 10'x10' walk off area in the office waiting area adjacent to the vestibule and employee entrances shall be carpeted with Tandus US LLC, Abrasive Action style # 02578, Color: Charcoal # 19100 2' x 2' squares. Adhesive is as specified below.

Carpeting is to be used throughout except as otherwise identified (walk off area, vestibules, restrooms, break room, mechanical and janitor rooms etc.). All carpet must be: Tandus US LLC, Collins and Aikman, Runaway #03164, Color: Blue Velvet # 18209 with a tile size of 2' x 2'. Adhesive shall be C-EX as supplied by Tandus US LLC, floor must be checked for moisture content before carpet is installed and if need the floor shall be primed and sealed with C-46E or C-36 primer/sealer as manufactured by Tandus US LLC. The Account executive is Ms. Elyse Gardner, 32720 West Haverford, Franklin, MI 48025. Email: egardner@tandus.com cell phone 248-346-8733.

Carpeting and base shall be furnished and installed by the Owner/Lessor. No substitutes are allowed.

Break rooms, mechanical and janitorial rooms, shall have vinyl floor tile and 4" vinyl base. Color shall be submitted for approval before installation.

9.4 **Painting:** All exterior surfaces and materials requiring paint shall be prime coated plus 2 coats of Sherwin Williams Pro-Mar alkyd flat exterior finish, or Sherwin-Williams SWP exterior gloss paint.
All porous exterior surfaces (e.g. unpainted wood) shall be sealed with 2 coats of Thompson's Water Seal following the manufacturers application instructions.

Interior surfaces requiring paint shall be prime coated plus 2 coats of Sherwin Williams Pro-Mar Latex Eg-Shel enamel. Concrete block walls shall receive 1 coat of Sherwin Williams Pro-Mar Block Filler and 2 coats of Sherwin Williams Pro-Mar latex Eg-Shel enamel.
Interior finishes and color selections shall be approved by the State. A schedule of colors and finishes shall be prepared by the Owner/Lessor and approved by the State.

DIVISION 10 – SPECIALTIES

10.1 **Wall Corner Guards:** Provide clear plastic guards up to 60" AFF on all outside corners to protect vinyl wall covering.

10.2 **Interior Signs:** If the State is the sole tenant and occupies 100% of the building, provide a building directory at the main entry point. The directory shall be metal or wood framed consistent with the décor of the building, glass enclosed and lockable, sized not less than 36" high x 24" wide. If the Lessee is part of a multi-tenant building, provide space within the existing building directory of not less than 3 lines.

10.3 **Toilet Accessories:** Provide the following restroom accessories. Model Numbers are taken from the Bobrick Washroom Equipment, Inc. Catalog:

a. Toilet Tissue Dispenser No. B-288
   Provide one for each privacy stall.

b. Napkin-Tampon Vendor No. B2802X250, surface mounted. Provide one in each women's restroom.

c. Napkin Disposal No. B-354, partition mounted.
   Provide one in each women's privacy stall.

d. Soap Dispenser No. B-2112, surface mounted.
   Provide one for each lavatory.

e. Paper Towel Dispenser No. B-262, surface mounted.
   Provide one for each staff restroom and lunchroom. (public restrooms will have electric hand dryers.)

f. Grab Bars No. B-6206.99X52, concealed mounting.
   Provide as required for each handicapper accessible privacy stall.

g. Touch Button Hand Dryers No. B7017, platinum finish, surface mounted.
   Provide one for each public restroom.

h. Tilt Mirror No. B-293, 16" x 30"
   Provide one on wall in each restroom suitably mounted for handicapper use above lavatory.

i. Framed Mirror No. B-290, wall mounted on concealed hangers, 24" x 36".
   Provide one over each lavatory.

j. Restroom medicine cabinet in employee restrooms: refer to 6.3 shelving.

k. Hand Dryers: Men's and women's public restrooms shall have electric hand dryers please see 16.9 below.

10.4 **Fire Extinguishers:** Provide UL-listed extinguishers, cabinets and accessories from a single manufacturer such as J.L. Industries or Larsen's Manufacturing Company that comply with local fire marshal approval.
Extinguishers shall be pressurized solid AFFF Type: UL-rated 3-A: 40B, 2-1/2 gallon nominal capacity, in stainless steel container with pressure indicated gauge. Provide recessed aluminum cabinets with clear anodic coating.

DIVISION 11 – EQUIPMENT (deleted)

DIVISION 12- FURNISHINGS

12.1 Systems Furnishings: Systems furnishings will be supplied and installed by the State. It will be the Lessor's responsibility to complete the electrical connections from the building electrical grid to the power connections or power poles for the system furnishings (see Division 16, Electrical).

12.2.1 Vertical Blinds: All windows shall be equipped with vertical blinds. The slats are to be 3" wide vinyl (no fabric). Blinds shall have 180^0 rotation and full retract function for the flexible adjustment of light intensity. They shall be easy to maintain and repair, and shall conform to interior office design and colors. Interior glass partition walls will require the same window treatment. Color selection by the State.
All interior windows in the manager's office and dealer area shall be equipped with horizontal mini blinds.

DIVISION 13 – SPECIAL CONSTRUCTION

13.1 Vestibules: Special mention is made regarding the construction of the vestibule entrances throughout these specifications. The vestibule entrance shall accommodate equipment the size of a standard ATM (Automatic Teller Machine). This equipment must be serviced from inside the office proper, further the machine will be available for use 24 hours a day, 7 days a week in the vestibule by the general public. Special consideration must be given to the space available for this machine to be used while the office is open and people are entering and leaving the facility to meet all applicable BFD and ADA requirements. The vestibule shall comply with 9.1 regarding the drywall ceiling, 9.3 for the Abrasive Action walk-off carpet tile, 16.11 electrical and data/phone requirements and 15.4 HVAC.

13.2 Security Room: Special mention is made regarding the security room throughout these specifications. Room requires a drywall ceiling, door without window and with locks.

13.3 Restrooms: The Department of State requires separate employee bathrooms for both men and women further depending upon local code the Department requires at minimum one unisex restroom accessible from the lobby for our customers. Again depending upon local codes a separate men's and women's restroom may be required. These restrooms must comply with all ADA and Michigan Barrier Free Design codes and also comply with the specifications noted within including 9.2, 9.3, 10.2, 15.4 and 15.7.

DIVISION 14 – CONVEYING SYSTEMS (deleted)

DIVISION 15 – MECHANICAL

15.1 Existing Systems: Will be evaluated on a case by case basis.

15.2 Heating, Ventilating and Air Conditioning: General Office Area: The building shall be equipped with a combination heating, ventilation and air conditioning system. The system shall have ducted supply and return air. The space above the ceiling shall not be used as a supply or return plenum. The systems shall be sized in accordance with the

weather conditions identified in Chapter 13, "Energy Conservation" of the 1996 BOCA Building Code and supplemented by the "Building Code Rules".

All HVAC equipment shall be commercial or light industrial grade. If new construction it shall be installed at grade or within mechanical rooms for easy access and maintenance. If existing construction, roof mounted equipment will be considered after all other options have been exhausted, including the elimination of noise and vibration transfer to the structural members.

The HVAC systems shall be zoned, with units sized and placed as required by heating and cooling loads on the building. Zoning of systems is dependent on the size, shape and orientation of the building. The HVAC system shall be divided into a minimum of 4 exterior and 1 interior temperature control zones. Return air shall be taken from the area supplied or adjacent to the area in the same temperature control zone.

The ventilation and exhaust system shall be sized to maintain a positive pressure throughout the building envelope to limit air and dust infiltration.

No HVAC ductwork shall be installed under the floor slab or underground.

15.3 Heating and Reheat System: Design Conditions: Hot water heating and reheat coils installed in the HVAC system shall be self draining type with cast iron heads, copper tubes, and aluminum fins. The number of rows and fin spacing shall be optimized to provide the maximum heat with minimum pressure drop. Face velocity across these coils shall be maintained between 500 – 600 feet per minute.

Heating coils installed in the main air handling unit shall be protected against freezing. Filters shall be installed between the air intake and the coil to keep debris from plugging the coil fins.

Duct reheat coils can be stand-alone or incorporated in the variable air volume boxes.

Temperature Controls: Discharge air temperature from the heating coils and reheat coils shall be independently controlled. Discharge air temperature sensors shall control the leaving air temperature from the HVAC unit heating coils. Zone thermostats shall control the discharge temperature from the reheat coils.

Variations in temperature within each control zone, and between zones, **shall not exceed 4^0F**, with the temperature measured from a reference point 1' inside of any exterior wall to the center of the building. The temperature variation from the floor to a height of 30" for any employee work station (either conventional desk or systems furnishings cubicle) shall not exceed 2^0F. Testing shall be made when the exterior temperature has reached a daily low of 20^0F or more for 2 days.

15.4 Ventilation and Exhaust System

General: The system shall be ducted supply and return air. The space above the ceiling shall not be used as a supply or return air plenum.

Design Conditions: Pressurization: The ventilation and exhaust system shall be designed and controlled to provide the necessary quantity of outside air to maintain indoor air quality, to satisfy the combustion air requirements, and exhaust requirements in restrooms, and lunch room areas, while maintaining a positive pressure (0.01" to 0.02" of water column) within the building.

Ventilation: Ventilation requirements shall meet the minimum specifications contained in the BOCA Mechanical Code for the occupancy areas. The following values shall be

considered a minimum acceptable levels (please note the requirement for individual exhaust fan for the waiting area):

1. General Office 20 cfm/person, or 0.2 cfm/sq. ft. of occupied floor (Whichever is greater.)
2. Lunch/Break area 30 cfm/person
3. Waiting area 35 cfm/person.

Outside Air and Recirculation: Not more than 67% of the ventilation air shall be recirculated. The remaining 33% or 5 cfm/person shall be fresh outside air.

Exhaust air from lunchroom areas and restrooms shall meet the minimum specifications contained in the BOCA Mechanical Code for the occupancy areas.

Ductwork: Fabricate ductwork from a minimum 24-gauge zinc-coated (galvanized) steel, lock forming quality sheets conforming to ASTM A527. Zinc coating thickness: "Commercial" class G90, except a minimum of 2 oz. Per sq. ft. where the metal is exposed to the weather.

Ductwork shall be constructed in accordance with SMACNA "HVAC Duct Construction Standards-Metal and Flexible", first edition 1985.

Insulate concealed ductwork with Owens Corning all service duct wrap type 100 with FRK vapor barrier facing or foil backing. Insulate exposed ductwork with rigid board insulation over mechanical fasteners. Insulation shall meet UL-181. Duct insulation shall be installed on all ductwork in unconditioned spaces, and outside air ducts between the louver and air-handling unit.

Flexible ductwork and assemblies shall meet the class 1 requirements of NFPA 90A and 90B, and labeled by UL with a flame spread of 25 or less and a smoke development rating of 50 or less, in compliance with UL-181. Flexible ducts shall be limited to a maximum length of 5' and no section over 2.5' shall be unsupported.

Duct Accessories: Fire dampers shall be installed in all locations as required by building code. Diffusers shall be of the following type and sized to meet demand:

Type #1	Key operated opposed blade dampers.
Type #2	24" x 24" egg crate return diffusers, for grid type ceiling. (Vestibule location only.)

Ventilation Controls: Minimum outside air volumes shall be maintained at all times with minimum limits on outside air dampers.

Enthalpy based economizer controls shall be included to provide free cooling during the spring and fall.

Continuous air circulation and exhaust shall be provided during occupied hours.

Exhaust systems for toilet rooms and janitor closets may be controlled by manual switches connected to individual room light switches.

15.5 Air Conditioning System: General: The system shall have ducted supply and return air. The space above the ceiling shall not be used as a supply or return plenum.

Each employee in the building will have a personal computer. There will also be peripheral equipment such as printers, photocopiers, fax machines, scanners and computer network servers. The heat generated by this equipment shall be included in the cooling system design calculation. A value of 1,500 Btu's per person shall be used in the design of the HVAC system.

Cooling system can utilize either DX or chilled water system. The condenser sections for either system shall be air cooled, and sized to reject the maximum heat load with outside air temperatures identified BOCA.

Design Conditions: The HVAC for conditioning system shall be capable of maintaining temperatures in the range of **68^0F** and **78^0F**, and dehumidify or humidify to maintain a relative humidity in a range between **15%** and **50%** depending on the season.

Ductwork: Fabricate ductwork from a minimum 24 gauge zinc-coated (galvanized) steel, lock-forming quality sheets conforming to ASTM A527. Zinc coating thickness: "Commercial" class G90, except a minimum of 2 oz. per sq. ft. where the metal is exposed to the weather.

Ductwork shall be constructed in accordance with SMACNA "HVAC Duct Construction Standards – Metal and Flexible", first edition, 1985.

Insulate concealed ductwork with Owens Corning all service duct wrap type 100 with FRK vapor barrier facing or boil backing. Insulate exposed ductwork with rigid board insulation over mechanical fasteners. Insulation shall meet UL-181. Duct insulation shall be installed on all ductwork in unconditioned spaces, and outside air ducts between the louver and air handling unit.

Flexible ductwork and assemblies shall meet the class 1 requirements of NFPA 90A and 90B, and labeled by UL with a flame spread of 25 or less and a smoke development rating of 50 or less, in compliance with UL-181. Flexible ducts shall be limited to a maximum length of 5' and no section over 2.5' shall be unsupported.

Duct Accessories: Fire dampers shall be installed in all locations required by building code. Diffusers shall be of the following type and sized to meet demand:

Type #1	Key operated opposed blade dampers.
Type #2	24" x 24" egg crate return diffusers, for grid type ceiling. (Vestibule location only.)

Diffusers should not be located directly over the customer service counters the location and layout shall be approved by the State.

Temperature Controls: Variations in temperature within each control zone, and between zones, shall not exceed **4^0F**, with the temperature measured from a reference point 1' inside of any exterior wall to the center of the building. The temperature variation from the floor to a height of 30" for any employee workstation (either conventional desk or systems furnishings) shall not exceed **2^0F**. Testing shall be made when the exterior temperature has reached a daily peak of 80^0F or more for 2 days.

15.6 Humidity Control System: Design Conditions:

Season	% relative humidity range
Winter	15% - 30% (reduce to 15% when outside temp. below 20^0 F)
Spring/Fall	30% - 50%
Summer	30% - 50%

Humidifaction: Humidifier shall be a self-contained, electric steam generating type of the size and capacity required. Separate humidifiers shall be installed within each of the HVAC temperature control zones. Each humidifier shall include a water filter cartridge, pressure regulating valve, and solenoid valves on the supply and drain lines. The humidifier shall be similar to Nortec Industries "MP" Series.

Piping: Water supply and drain piping shall be type "L" copper and insulated with "Arma-Flex" ¾" nominal wall thickness closed cell foam insulation. Supply piping to

the humidifier shall be a minimum ¾" diameter, drain pipe shall be sized in accordance with manufacturer's recommendation.

15.7 Plumbing and Drainage System: All supply pipes, fixtures, and drains shall be installed according to manufacturer recommendations and local codes. All faucets, valves and fixtures shall be of water-saving design.

Domestic water systems shall be constructed of type "L" copper with sectionalization and isolation valves installed at branch connections.

Storm and sanitary piping shall be service weight cast iron or PVC.

Domestic water and interior roof conductors shall be insulated the entire length for temperature control, prevent condensation, and for sound control.

Water Supply and Drain Connections: Provide hot and cold water line feeds and drain connections to the kitchenette.

Restroom Fixtures: Restroom sinks, toilets and urinals shall be white, commercial grade, vitreous china, and shall be installed in accordance with BFD requirements where applicable.

Toilets shall be wall mounted, elongated rims and siphon jet flush action, with top spud for flush valve similar to American Standard "Afwall EL 1.6".

Toilet seats shall be white, heavy duty, solid plastic open at the front, coverless, and shall have stainless steel hinges and built-in bumpers similar to American Standard "Royal" (0039375).

Urinals shall be mounted, vitreous china, washout flush action, with top spud for flush valve, similar to American Standard "Washbrook 0.7" (6501.010).

Toilets and urinals shall be equipped with flush valve hardware similar to Sloan "Royal Flush #110-YB".

Restroom sinks shall be self rimming, white vitreous china measuring 20" long x 17" wide x 8" deep, with 4" faucet centers, similar to American Standard "Aqualyn" (0476.028).

Restroom sinks shall be equipped with chrome plated, heavy-duty, commercial grade, single control faucets (without pop-up hole) similar to American Standard "Reliant" (2385.278). Each sink shall be equipped with a polished chrome "Grid Drain" tailpiece for vitreous china similar to American Standard (2411.015) and (7723.018) "Offset Grid Drain" for wheelchair lavatories.

ALL sinks shall be handicapped accessible.

ALL restrooms and janitor closes shall have floor drains.

Break room: Employee break room will be equipped with a stainless steel sink with commercial grade faucet and garbage disposal.

Miscellaneous: Provide a minimum of 1 electric water cooler and drinking fountain combination units located adjacent to the employee restrooms. Fountain to be similar to Halsey Taylor model BCF-7F. Housing and bowl shall be satin finish stainless steel. Each unit shall be installed to meet BFD and ADA.

15.8 Temperature Control System: Temperature control system may be either DDC or pneumatic. DDC is preferred unless the owner has other facilities in close proximity utilizing pneumatic controls.

The overall system shall provide automatic energy management including but not be limited to such features as automatic setback for nights, weekends and holidays, and automatic variable outside air ratio dampers for economizer or enthalpy control.
Thermostat controls shall be located in a locked cabinet in the mechanical room and connected to remote sensors distributed throughout the Leased premises.
Humidistats shall be located throughout the Leased premises and provided with locking covers, or located in the return air plenum of the HVAC system.

15.9 Testing and Balancing Mechanical Systems: Independent air and hydronic system balancing tests shall be performed by certified testing firms. Results of these tests shall be submitted to the Lessee as a condition of final acceptance of the Leased premises. Random testing may be required during acceptance inspection.

DIVISION 16 – ELECTRICAL

16.1 Required Submittals: Complete shop drawings and manufacturer's catalog data shall be submitted to the State and approved by the State prior to start of any construction work. Power and lighting panel configuration shall be complete with schedule of branch panels, separate disconnects, and circuit breakers, based on calculated and estimated motor, resistive and lighting loads. All circuits shall be labeled at the panel and at the outlet/power pole for future reference.
Location of all electrical receptacles and telephone outlets (including power drops for the systems furnishings) shall be designated on a block floor plan showing the systems furnishings layout provided by the State. Said block floor plan shall be furnished by the State to the Owner/Lessor no later than 4 weeks after approved construction plans are received by the State.

16.2 Electrical Service: Electrical service for new construction or a renovated existing building shall be 480/277-volt, 3-phase, 4-wire or approved equal. Service shall be sized for HVAC and other mechanical system(s) loads, lighting, general building services, and dedicated computer based office equipment loads. 5 watts per square foot shall be provided for lighting and general service receptacles. Size of neutral conductor of 3-phase circuits shall be twice that of phase conductor to accommodate potential harmonic currents associated with computer system electronic power supplies and fluorescent lighting fixtures electronic ballasts.
An adequately sized 3 phase "wye" wound step down transformer shall be provided to supply 208/120-volt, 3 phase power, for lighting, general service receptacles and dedicated computer based office equipment.

Dedicated, isolated ground circuits shall be supplied from separate isolated ground power distribution panel(s). Lighting circuits shall be supplied from separate lighting panel(s). Panels shall have 20% spare capacity and be complete with 10% spare breakers of each size, but no less than 1 spare.

No more than 4 duplex receptacles shall be connected to any single 20-amp dedicated isolated ground circuit or general service circuit.

16.3 Workstations: Each individual employee office of gypsum board construction shall be equipped with a minimum of 4 standard 120-volt 20-amp duplex receptacles supplied by a 20-amp general service circuit. The conference room shall be equipped with a minimum of 4 120-volt 20-amp duplex receptacles. All other walls shall have duplex

receptacles at 8'-0" O.C. any overhead electrical grid power drops shall not be used to satisfy this requirement. The overhead power drops are for the systems furnishings only. Each grouping of 4 (or less) employee cubicles constructed with systems furnishings (supplied and installed by the State) shall receive electrical power by either: a) State-supplied power poles (containing 8 12-AWG conductors), which shall be connected by the Owner/Lessor to the 12' greenfield drops above the acoustic drop ceiling, as in specification 16.6 below; or b) by State-supplied base-feed power conduits (by Electri-Flex Co., a liquid-tight conduit II-18858, type 1a, sized ½" ID, containing 8 12-AWG conductors), connected by the Owner/Lessor, between the bottom of the systems furnishings wall panel and the wall junction box. This wiring assembly shall be 8 conductors back to the circuit breaker panel, to yield at the systems furnishings 3 hot, 3 neutral, 1 common ground, and 1 isolated ground (either three 15-amp or three 20-amp breakers). The Owner/Lessor shall furnish all connecting hardware (wire nuts, boxes, etc.) to complete the connection and set or reset the acoustic ceiling pad.

16.4 **Counter Work stations**: Each counter "T" consisting of 2 - 4' and one 2' section of counter shall be equipped with an individual 20A isolated ground circuit that has a minimum of 6 duplex receptacles installed at each 2' section of counter. Further each "T" shall have one general purpose 20A circuit installed with two duplex receptacles installed on each 4' section of counter.

16.5 **Photocopy Machines:** The 1 copy machine will require 1 isolated ground 20-amp duplex receptacle (orange) supplied by a dedicated 20-amp circuit isolated ground circuit. No more than 1 isolated ground 20-amp duplex receptacle (orange) designated for a copy machine is to be supplied by a dedicated 20-amp isolated ground circuit.

16.6 **Electrical Distribution:** Electrical distribution for systems furnishings office areas shall be through covered wireway(s) above the acoustic ceiling or through the perimeter walls of the space. Electrical wiring shall be enclosed in metallic raceways with junction boxes. Each junction box is to contain the 8 wires to be compatible with the State's systems furnishings. The grid is to include a 12' Greenfield drop at each junction box..

A raceway shall be provided for telephone/data cabling of sufficient size to accommodate three 4-pair, category 5, twisted pair cable to each office, conference room and systems furnishings workstation. This raceway shall originate in the Tele/Data room and shall run parallel to the electrical distribution raceway.

16.7 **Power Drops** will be supplied by the State and installed into the systems furnishings by the State. Connection of house electrical power to the power drops (direct and complete connection to the systems furnishing), and fitting of the acoustic pads around the power drops (or fishtaping in wall cavities) shall be the responsibility of the Owner/Lessor. All units shall be coordinated with the electrical contractor.

16.8 **Interior Lighting Requirements:** Office space lighting levels shall be in accordance with the latest recommendations of the IES, or a minimum maintained lighting intensity of **70** foot candles at desktop level, whichever is greater. Task lighting from the systems furnishings shall not be used to satisfy specified levels for general lighting. Unless otherwise identified, all interior lighting fixtures shall be 2' x 4' Metalux fluorescent troffers, or approved equal, installed in a staggered pattern. Each troffer shall be

equipped with 4 General Electric F32T8/SPX35/RS light tubes. Each 2 troffers shall be equipped with 1 electronic ballast. Ballasts shall be parallel wired to prevent loss of light from both fixtures when 1 tube fails. Troffers shall be equipped with parabolic diffusers have a minimum depth of 3".

Permanently designed corridors and unused space with floor to ceiling walls shall be lighted in accordance with the recommendation of the IES Standard.

Provide exit lighting as required by code. Exit signs shall be LED type.

Provide battery operated rechargeable automatic emergency egress lighting in interior of building to adequately light all exist areas, stairs, hazardous areas, or other occupied areas.

Task-lighting will be incorporated into the systems furnishings components. Task-lighting fixtures will be provided by the State.

Lighting for each room and office shall be switched individually at the room entrance.

Light switching in open areas shall be zoned such that no zone exceeds 1,000 square feet.

Lighting minimum of 50 FC's shall be provided over all lavatory and vanity counters. Restroom lighting shall be turned on and off by switches located at the restroom entrance.

16.9 Restroom power: Restrooms shall have 1 120-volt 20-amp GFI duplex outlet near the lavatory counter/sink.

Hand Dryers: Men's and women's public restrooms shall have electric hand dryers.

16.10 Exterior Lighting Requirements: Provide security flood light above or near the back employee entrance door and around perimeter of building. The motor vehicle parking lot shall be illuminated to 4 FC at the parking surface. All exterior lighting shall be vandal resistant.

All exterior lighting shall be controlled by photoelectric light sensing devices.

Separate circuits, special receptacles, outlet boxes or covers shall be provided for exterior lighting.

16.11 Vestibule Electrical Requirement: Each vestibule shall have installed two dedicated 20A circuits with two duplex receptacles installed that will provide power to the Department's Self Service Terminal.

16.12 Electrical Requirements for Communications Board: The Lessor shall provide power for burglar intrusion and/or fire alarm equipment, public address system equipment, computer networking equipment (server room), and telephone equipment with necessary receptacles. Equipment will be supplied by the State. Installation of any of this equipment shall be the responsibility of the State, and may be made during construction in conjunction with other work being performed by the Owner/Lessor.

The Owner/Lessor shall provide waterproof street access conduits, sized a minimum 4" inside diameter for telephone communications and/or data circuits, UL rated 4' x 8' x ¾" fire retardant plywood equipment mounting boards, conduits and/or wireways internal to the building, and dedicated 120-volt 20-amp circuit(s) isolated ground receptacles) served from the isolated ground power distribution panel. Provide 4 standard 20-amp duplex receptacles supplied from the general service power panel. All associated costs shall be

borne by the Owner/Lessor. Mounting boards on end wall shall be marked "Data Equipment Only" when installed. Mounting boards shall be painted with 2 coats of white enamel paint on 1 side and all edges.

Telephone outlets in masonry walls and fixed partitions shall have ¾" conduit bushed at the top and terminated in a 4" square box with a single gang plaster ring. Supply and install suitable cover plates. Power poles may not be substituted to meet this requirement. Additionally one data conduit must be supplied for the vestibule near the dedicated 20 A duplex receptacles.

16.13 Employee Entrance Doorbell: Low voltage, hard wired doorbell required at the employee entrance for deliveries.