ELECTRICAL SYSTEM DESIGN

Submission Requirements

Tenant shall submit complete plans and specifications for all electrical work. as per the requirements of Exhibit B of the Lease, which shall consist of, but not be limited to, the following:

- Electrical floor plan (for power).
- Reflected ceiling plan (for lighting).
- Electrical riser diagram, including type and size of feeders, fuses, disconnect switches and main breakers.
- Electrical panel schedule(s), including main and branch circuit breaker sizes and all connected load calculations.
- Lighting fixture schedule. Including type. lamps, mounting, wattage, quantities and manufacturer's catalog number and catalog cuts with photometry's.
- Electrical load summaries including all connected and demand load calculations. (Landlord Design Submittal Forms DS1,2 & 2A)
- Equipment and materials specifications.

Landlord Provisions

- Electrical service at the base building electrical metering location is 277/480 volt, 3 phase, 4 wire. Service capacity sized per Landlord's standards.
- A fusible disconnect switch and meter socket, or CT cabinet, if required, located in a base building electrical metering location.
- A designated connection point within the common area for Tenant's electrical service. All conduit and conductors shall be by the Tenant at Tenant's expense. If the Tenant Premises is not adjacent to a common area service corridor, the Landlord shall install empty conduit through any unrelated retail spaces located between the lease Premises and the Landlord's electrical metering location. The Landlord's electrician is required to make the final connection between the Tenant's electrical service and the Landlord's electrical equipment.

Allowable Electrical Service Size

The Tenant's maximum electrical service size shall comply with the following:

- Retail Tenants: Maximum 15 Watts per square foot of Leasable area.
- Full Service Restaurant Tenants: Maximum 40 Watts per square foot of Leasable area

Landlord shall size the Tenant's actual main service fuses in accordance with the actual documented electrical loads, which are approved by the Landlord.

Additional Power Requirements

Tenant electrical service sizes, which exceed the above Landlord capacity criteria, will require written approval from the Landlord. If modifications to the Landlord's distribution system and service conduit size are required, such modifications shall be completed by the Landlord's designated electrical contractor at the Tenant's sole cost and expense.

SECTION XIII
ELECTRICAL SYSTEM DESIGN

Electrical Service General Requirements

The Tenant shall design and install the following in conjunction with the Tenant's electrical service:

- Electrical service feeders and conduit from the base building disconnect switch to the Tenant's Premises.
- Tenant shall install meter in accordance with utility company requirements.
- Within the Tenant's space, the Tenant shall install the service transformer, the main electrical service panels and all required electrical distribution components.
- The Tenant's electrical distribution system shall be designed to withstand and safely interrupt the available short circuit current (verify in field). Tenants shall make fault calculations to insure proper ratings of equipment.

Main Service Fuse Installation

Installation of the Landlord required fuses in the disconnect switch in the Landlord's electric room and the final connection of the Tenant's service feeders shall be performed by the Landlord's designated electrical contractor at the Tenant's expense.

Material, Product and Equipment Standards

- All electrical system materials. products and equipment shall be Underwriters Laboratories Listed and shall meet requirements of ASTM, IEEE, IPCEA, NEC, NEMA, RLM, CBM, local code requirements and other recognized standards. All materials shall be commercial grade and in compliance with the requirements of the design criteria.
- Panel boards shall be 3 phase, 4 wire, and distributed phasing type, as manufactured by General Electric. Westinghouse, Square "D" or equal. Cabinets shall be constructed of code gauge steel with hinged doors having directory cords, neatly and properly inscribed and set in frames with transparent covers.
- Circuit breakers within the Tenant's distribution panels shall be bolted thermal magnetic type, molded case with 2-pole and 3-pole circuit breakers of the common trip type. One (1) spare circuit breaker of 20-ampere capacity shall be provided for every five- (5) active circuits. Lighting circuits shall be 20-ampere capacity with connected load not to exceed eighty percent (80%) of breaker trip rating.
- Disconnect switches shall be fused or non-fused standard duty NEMA type as required by Code, manufactured by Square "D" or equal, in enclosure suitable for the application.
- Conductors shall be soft-drawn annealed copper. Aluminum conductors are prohibited.
- Receptacles shall be specification grade 20 amp NEMA grounding type duplex receptacles. Waterproof receptacle shall have stainless steel device plate, with PVC gasket cover plate. Floor outlets shall be round, adjustable. watertight, complete with two (2) inch plug-in cover.
- Light Switches shall be specification grade 20 amp.
- Contactors for timer controlled lighting shall be ASCO Bulletin, 920 Series, enclosed, electrically operated, mechanically held.
- Transformers shall be dry type, floor mounted or floor supported, (480 volt, delta primary, 208Y/120volt secondary) with 220 degrees C, temperature class, 150 degrees C, maximum temperature rise, insulation.
- Motors above 1/2 horsepower and electric heaters above 3 kW shall be three- (3) phase type.
- Motor Starters shall be across-the-line magnetic type rated in accordance with NEMA standards, sizes and horsepower ratings. Starters shall be provided with melting alloy overload relays and three position (H^O-A) selector switch with pilot light. Combination starters, when used, shall contain fusible switches.

Raceways, Conduit and Cable Requirements

All conductors shall be installed in a metallic raceway or conduit. Wiring with a PVC or other type of nonmetallic covering is not allowed except for underground wiring allowed in PVC conduit. All materials used shall comply with all code requirements.

Approved conduit, cable and raceways Include the following:

- Rigid galvanized conduit
- Intermediate metal conduit
- Electrical metallic tubing (compression fittings recommended)
- Flexible metal conduit (ground wire required)
- Metallic sheathed cable in accordance with all code requirements and below listed Landlord conditions.
- Metal raceways and junction boxes, which have been designed and fabricated for electrical conductor, use. Landlord may request that cut sheets for specialized raceways be submitted for approval.
- For underground wiring Schedule 40 heavy wall PVC conduit can be used provided a ground wire is installed.

Pre-Wired Type Cable Materials

Where allowed by code. pre-wired type metallic sheathed cable, such as MC type cable, shall be allowed above the Tenant's ceiling to connect light fixtures and receptacles only.

MC Cable and similar pre-wired electrical cable are prohibited in the following use conditions:

- Home runs, which connect the first light fixture or receptacle with the electrical distribution, panel. Home runs must be in rigid conduit.
- All wiring within partition or demising wall construction. All in-wall concealed wiring must be run in rigid conduit.

Where installed above the ceiling, all cable must be installed in a neat and orderly manner, and secured as required by Code with individual cable lengths not to exceed 10'-0".

Exit and Emergency Lights

Exit and emergency lighting shall be provided per Code. Exit lights at the front of the store shall be located so that the back of the exit sign will not be visible from the exterior mall common area, or an edge lit type exit sign must be used.

Lighting Time Clock

A time clock is required to control the storefront entry, show window, and sign designated by the Landlord. The time clock shall be a seven-day, 24-hour calendar type time switch.

Lighting Fixtures

All light fixtures shall comply with the following:

- Fluorescent fixtures shall utilize either rapid start or slim-line lamps with high power factor ballast. Preheat and/or trigger start fixtures shall be used only in special applications requiring lamps less than four (4) feet in length. Within any area of the premises that is visible to the public, fluorescent fixtures shall be recessed into the finished ceiling surface. Surface mounted or hanging fluorescent fixtures will not be allowed.
- Incandescent fixtures shall be fully recessed can type or track mounted spot light type.
- Other decorative lighting fixtures, including wall sconces, chandeliers etc. must be specifically approved for use by the Landlord.
- The Landlord may require that cut sheet and product information be submitted for review for any proposed light fixture

- Refer to the General Lighting Criteria within the Architectural Design Criteria for additional lighting requirements.

Miscellaneous Electrical Requirements

- Phone and low voltage wiring shall be installed in accordance with all applicable code requirements, special plenum rated cable, or the installation of the wiring within conduit.
- Equipment shall be identified with permanent nameplates as to name and/or function (distribution panels. lighting panels, motor starters, and push button stations). Dymo tape type identification is not permitted.
- Transformers, junction boxes, disconnect switches; etc. shall be installed so as to be readily accessible for servicing.
- A weatherproof GFI type receptacle shall be provided at rooftop and condensing units.
- All electrical equipment, conduit, etc. shall be fastened to structural steel, concrete or masonry, but not to piping. Where suspended from steel joists, the connection shall be made at the top chord of the joist. All miscellaneous hangers, supports, channels, rods, etc., necessary for the installation of work shall be part of the Tenant's work.
- All conduit shall be concealed where possible. Exposed conduits shall be in straight lines parallel with or at right angles to column lines or beams and separated at least twelve (12) inches from water lines wherever they run alongside or across such lines.
- Tenant's electrical contractor shall submit electrical load summary information to the Landlord for approval to document the distribution across each of the three phases and compliance with the Landlord's criteria.

Telephone / Communication Service

The Landlord will provide a designated connection point on a distribution backboard within a Common Area for the Tenant's telephone line. If the Premises is not adjacent to a common area service corridor, the Landlord will install an empty one inch (1") conduit through any unrelated retail spaces located between the Premises and the designated telephone termination panel location.

The Tenant shall be required to install telephone service wiring and conduit for the telephone service to the space. The Tenant shall be required to coordinate the connection at the base building backboard with the Phone Company directly.