

ELECTRICAL NOTES

DOCUMENT REQUIREMENTS

- Tenant's drawings are to clearly show ALL modifications to existing installation that are required to accommodate Tenant improvements.
- This document is to be used as a checklist to verify compliance with Mall Design Criteria.

TENANT CONNECTIONS

- Unless already existing and in compliance with Landlord's requirements, Tenant is required to install, upgrade and/or furnish any and all equipment, wiring, conduit etc. for Tenant's electrical and telephone service installation.
- Any modification of existing base building services or construction must receive the prior written approval from the Landlord, prior to drawing submission.
- Modifications to existing Landlord systems shall be performed by a contractor designated by the Landlord.
- Include a notation on the contract drawings requiring Tenant Contractor to employ a Contractor designated by the Landlord to complete all connections to Landlord equipment and fuse installations.
- Conduits with pullwire terminated in space for Tenant's power and communication connections at a location as determined by Landlord.
- Tenant is not a customer of the utility company. However, the design should be executed as if the Tenant were acquiring power directly from the utility company. Only one single service will be permitted.
- Temporary power will not be provided. Tenant contractor must install permanent feeder conductors from the Landlord's service distribution point immediately for use as the source of light and power during construction.

CONDUIT and WIRING

- All wiring must be in conduit. Flexible conduit shall be MC only, with a Blue identifier stripe. BX and AC cable is not permitted.
- Wire shall be copper THHN or THWN with insulation.
- Exposed conduit shall be in straight lines parallel with or at right angles to column lines or beams.
- All wiring shall be color coded as follows:
208/120 volt systems: 480/277 volt systems:
Phase A - Black Phase A - Brown
Phase B - Red Phase B - Orange
Phase C - Blue Phase C - Yellow
Neutral - White Neutral - White with tracer or gray

ELECTRICAL PANELS

- Tenant shall provide a main disconnect means within the leased space.
- Circuit breakers shall be bolt-on, not plug-in type.
- Arrange load to maintain a balance between phases of 10% or less.
- Tenant shall have breaker locks on HVAC control and timeclock circuits.
- Switching duty breakers on all devices used for turning loads on/off.

HVAC WIRING

- A 110 volt, duplex outlet shall be installed within reach of the HVAC unit.
- Tenant shall provide a main disconnecting means at each HVAC unit.
- Rooftop units and exhaust fans, if required, are to be wired through their roof curbs if so designed, or utilize factory fabricated roof piping curbs. Pitch pockets are not permitted.

FLUORESCENT LIGHTING

- Exposed fluorescent tubes or fixtures with paracube, or prismatic lenses are not permitted in public areas.
- Ballasts shall be high power factor, electronic with CBM or ETL label and have a THD of +20%.

FIRE ALARM SYSTEM

- Tenant must use Landlord's designated manufacturer for all hardware. Software modifications, including final connections to complete life safety systems and interface, to be by Landlord designated contractor.
- F.A. Horn/Strobes installed to be connected to Landlord system. Landlord has provided connection points.

TRANSFORMER

- All transformers shall be 3 phase. Single phase transformers are not permitted.
- Transformer shall be dry type (480V, delta primary, 208Y/120V secondary). 30 KVA and smaller transformer may be suspended from Landlord's roof structure.
- MOUNT TRANSFORMER ON VIBRATION ISOLATORS. Locate transformer as not to cause servicing or clearance difficulties or violations with other equipment.

GROUNDING

- Grounding must be to building steel with exothermic weld or split bolt connection. DO NOT GROUND TO COLD WATER PIPE.

TIME CLOCK

- 24-Hour/7-Day Time Clock is required to control storefront entry lights, show window lights, show window receptacles, and storefront signage.

EQUIPMENT INSTALLATION

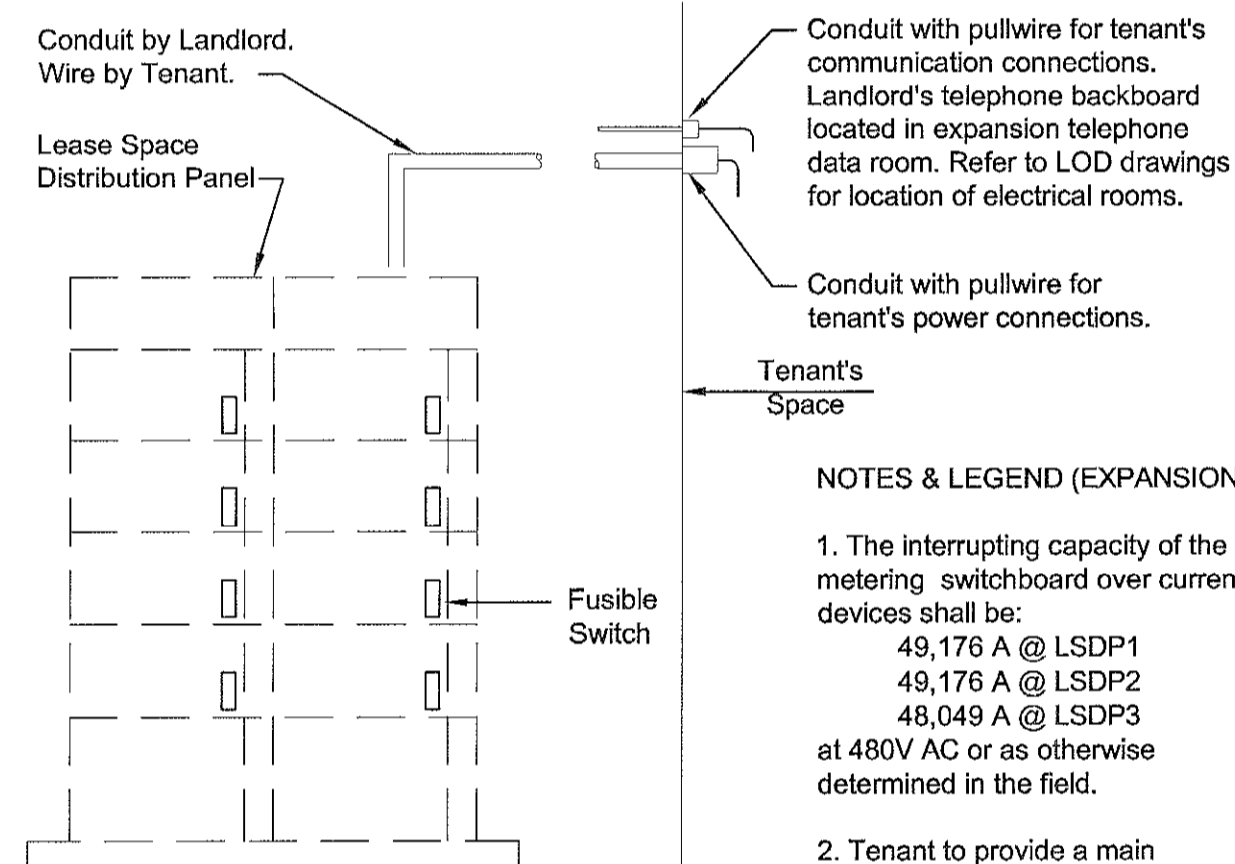
- Electrical devices, time-clocks, panels, cabinets, etc. shall be mounted on a plywood backer-board.

ELECTRICAL LOAD SUMMARY

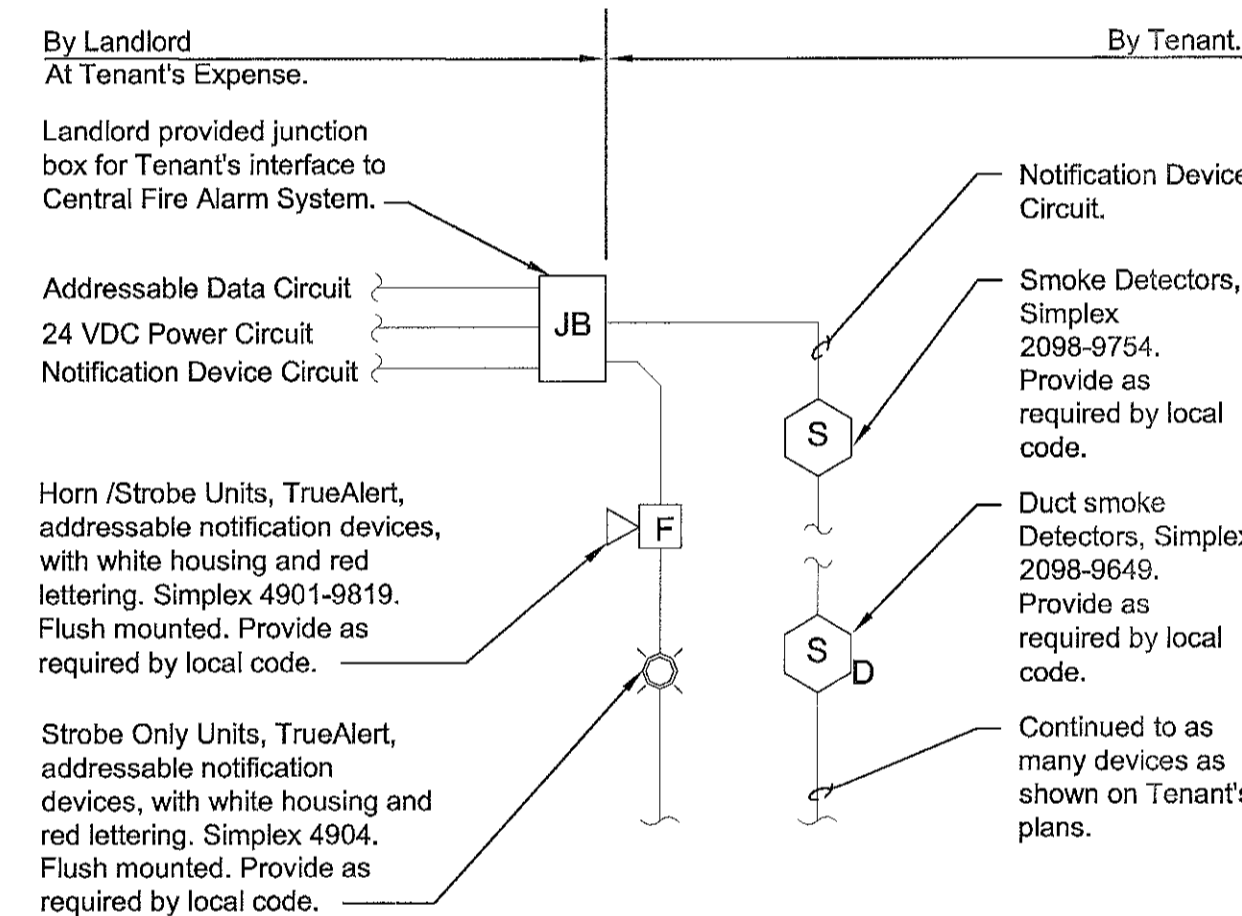
Description	NEC Connected		NEC DEMAND		NOTES
	KVA	AMPS	MULTIPLIER	KVA	
Lighting					
Recessed				1.25	
Surface				1.25	
Track				150 VA/2FT	
Sign				1.25	
Receptacles				1.00 (1ST 10KW)	
Water Heater				1.00	
Air Handling Unit					
Fan Motor				1.00	
Electric Heat				*	
Equipment				1.00	
Misc. Equip. (fans, etc.)				1.00	
25% of Largest Motor				1.00	
TOTAL					

ALL VALUES ON THIS CALCULATION FORM ARE PER N.E.C. THE ACTUAL OCCUPIED AREA, NOT INCLUDING UNOCCUPIED ACCESSORY AREAS OR THICKNESS OF WALLS.

LIGHTING DEMAND K.W. FROM LOAD SUMMARY TO BE USED IN H.V.A.C. CALCULATIONS. * see N.E.C.



Partial Riser Diagram 480 / 277V. 3Ø 4W



Typical Wiring Diagram for Tenant Fire Alarm Interface

PLUMBING NOTES

GENERAL NOTES

- Any and all piping not reused, serving the demised premises must be removed.
- Unless already existing and in compliance with Landlord's requirements, Tenant is required to install, upgrade and/or furnish any and all equipment, piping, etc. for Tenant's plumbing service installation.
- Any modification of existing base building services or construction must receive the prior written approval of the Landlord, prior to drawing submission.
- Modifications to existing Landlord systems shall be performed by a contractor designated by the Landlord.
- Include a notation on the contract drawings requiring Tenant Contractor to employ Contractor designated by the Landlord to complete all connections to Landlord equipment and bulk main.
- All above grade sanitary piping shall be cast iron.

PIPING COMPONENTS

- All branch piping shall have accessible service valves.
- Dielectric isolation is required at all dissimilar piping connections.
- Insulate all hot water and condensate drain piping with plenum rated materials.

WATER HEATER

- Storage type water heaters shall be installed with relief valves and drain pans.
- Instantaneous water heaters are only acceptable if they do not substantially impact the Tenant's electrical service.
- All water heaters 3KW and larger shall be 3 phase.
- Shock absorbers, thermal expansion tanks, and vacuum breakers shall be provided in accordance with good engineering practices.
- Natural gas water heaters are not permitted except for food service tenants.

WATERPROOFING

- All toilet rooms not on grade, require a waterproofing membrane and flashing. All floor pipe penetrations, cleanouts, and floor drains must be sealed watertight, with membrane and flashing extended into clamping collar, per manufacturer's specifications.

FLOOR DRAINS and CLEANOUTS

- Tenants shall provide at least one, full size, cleanout in toilet and kitchen areas. Cleanout may be wall or floor type, but must be accessible from within the Tenant's space.
- Floor drains must be installed in toilet rooms and other locations that may be exposed to liquids.
- All floor drains must have trap primers.

VENT PIPING

- Tenants shall connect to existing header if existing, or extend vents thru roof. All roofing work must be by Landlord's roofer at Tenant's expense.

LOCATION of PIPING

- All plumbing equipment shall be properly suspended from Landlord's structure. All floor mounted equipment (water heaters, etc.) shall impose a floor load no greater than 75 psf.
- No sanitary, vent, water or gas piping will be permitted within the Demising Walls.
- All tenant equipment must be located within the Tenant's space. Equipment shall be installed such that general maintenance and replacement of unit is fully and easily performed.
- Hinged access doors must be installed to provide access to all Plumbing equipment including but not limited to; valves, cleanouts, meters, and indirectly connected piping or as designated by the Landlord.

PIPING MATERIALS

- Above ground waste shall be service weight cast iron. Above ground vent shall be cast iron. Above ground water shall be type "L" or "K" copper.
- Below ground waste and vent shall be service-weight cast iron hub and spigot. "NO HUB" PIPING IS NOT PERMITTED BELOW GROUND.
- Below ground water shall be type "K" copper.

COLD WATER

- Cold Water tap w/ shut-off valve shall be provided for Tenant's connection at a location as determined by Landlord. Only one connection to the Landlord's main is provided and permitted.
- Domestic water is supplied at the pressure available from the utility minus piping pressure losses to the point of connection. Tenants requiring specific pressures should test the available pressure and install regulators or booster pump systems to meet their needs.

SANITARY

- 4" Sanitary tap shall be provided for Tenant's connection at a location as determined by Landlord. Only one connection to the Landlord's main is provided and permitted.

AIR HANDLER CONDENSATE

- Primary condensate drain shall be indirectly connected to a code approved waste system.
- Secondary drain pipe shall terminate through ceiling, piped into mop sink or to floor drain.

SPRINKLER PIPING

- All sprinkler work within the lease space shall be designed and installed by Simplex/Grinnell.
- Contact for fire protection is:
Lanny Ray
Project Engineer
Tyco Fire & Security
Simplex Grinnell
1(702) 739-1921 ext. 872
- 5 sets of shop drawings, hydraulic calculations and material brochures for all sprinkler designs shall be submitted to Global Risk Consultants for approval. Sprinkler shop drawings will not be considered final until all requirements of GRC, SPG and all Codes have been met.
- Unless local authority is more stringent, sprinkler design shall meet existing Mall design density. If the Mall was not originally designed hydraulically, then the design shall be .15 gpm per sq.ft. over the most hydraulically remote 2500 sq.ft. In no case will a design be less than Ordinary Hazard Group 2 as defined by NFPA 13.
- All sprinkler materials and designs shall comply with FM Global standards and approvals.
- Hydraulic calculations must be performed for all tenant sprinkler work.
- All shut-downs must be scheduled with Landlord Representative.
- Fire protection system shall be charged and operable when contractor is not on site.
- Provide valve with tamper switch at connection to Landlord system. Sprinkler heads to be quick response type 165° F rated.
- Contact Simon Property Group Tenant Coordination Department for additional design requirements if not available at the property.

GAS SERVICE

- Gas service is available for pre-approved process loads at designated locations. Gas is not available for individual retail spaces. Gas water heaters are not permitted.
- Tenant shall be responsible for coordinating available capacity, pressure, service connection, meter installation, etc. with the Landlord Field Representative and the local utility.
- All high pressure and medium pressure piping shall utilize all welded fittings.
- Roof-mounted gas piping shall be installed on free floating prefabricated supports or equipment supports with roller assemblies.
- All piping shall be finished with a rust inhibitive primer, color coded finish, and identification labels.
- Provide dirt legs at every change in elevation. valves and unions are not permitted in plenums.
- Gas meter by tenant at tenant's expense, install per utility company requirements.
- Identify gas line emergency shut-offs on all cooking appliances under hoods.
- Coordinate all roof work, penetrations, and repair with Landlord's approved roofer.
- Tenant Contractor is responsible to provide gas line supports for all gas lines including Tenants pipe sleeve and clip. Support is required every 10'-0" O.C. and at changes in direction.

"EXPANSION AREA ONLY" (PHASE III)

SIMON
PROPERTY GROUP

NATIONAL CITY CENTER P.O. BOX 7033
INDIANAPOLIS, IN 46207
(317) 636-1600

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DATE ISSUED: 12/11/03



ELECTRICAL/PLUMBING CRITERIA

STANDARD CHECKLIST

These criteria provide general design information and construction requirements. However, for specific information regarding the division of responsibilities of the Landlord and Tenant with respect to the Premises' construction, refer to the actual Tenant Lease or contact the Tenant Coordinator.

CONTACT INFORMATION

For questions regarding site access, storefront & architectural criteria, engineering design, delivery dates, construction rules & regulations, the scope of Landlord's and Tenant's work and store opening requirements, please contact your Tenant Coordinator or call 317-636-1600 for assistance.

MEP-2

08/22/03

ELECTRICAL/
PLUMBING
CRITERIA
DRAWING