UNIVERSITY OF SASKATCHEWAN
Planning, Design & Construction

Electrical Engineering - Capital Project Design Checklist

University Services Building
110 Maintenance Road

Project Name:		UNIVERSITY OF SASKATCHEWAN	**Project Number:**	
Design Stage:	**33% Review**		**Consultant:**	
Usask PM:			**Usask Engineer:**	

This checklist reflects the information found within the Usask Mechanical Design Guidelines, along with other pertinent design elements that must be complete at the current design stage. Usask Engineering will use this checklist to confirm all elements of the design below are included in the current package. The design package will be rejected if any applicable element in the list below is not included without adequate justification. It is the Consultant's responsibility to ensure all information is included. The Consultant is responsible for any delays in the project due to resubmissions and supplemental reviews required to satisfy USask requirements.
This checklist assumes all items included on previous design checklists have been included and are already shown on the drawings.

No.	Requirement	Consultant - Is Design Compliant? (Y/N)	Consultant - Deviations requests/comments	Usask Engineering - Is design acceptable? (Y/N)
SECTION 26 - ELECTRICAL				
1	**Single Line Diagrams clearly shown on plans.**			
1a	Buildings shall be supplied power from the University's 25kV distribution system. Heating plant is supplied via 2.4kV system.			
1b	Metering shall be provided at main distribution feed for each voltage level.			
1c	Natural gas emergency generator shown on SLD. Interface panel shown.			
1d	Voltage: 25 KV solidly grounded neutral, three wire distribution or as directed by the University of Saskatchewan.			
1e	Cables: Single conductor, cross linked polyethylene, 133% insulation			
1f	Interrupting capacity @ 25 KV: 3 phase fault symmetrical 2800A 3 phase fault asymmetrical 4200A			
2	**Site Layout Complete**			
2a	New services for buildings shall be 600V 4-wire at the main distribution only. The rest of the building distribution should be 600V 3-wire. Step down transformers for lighting and general use power would optimally be located on each floor or every other floor.			
2b	Exterior lighting is to be 120 V LED lighting.			
2c	Luminaires on buildings shall be dark sky compliant. Lights should be on separate circuits from other building services but may be on the same contactor and photocell as street lighting if they are located within the building.			
2d	Exterior lighting for roads, walks and parking is to be the standard University fixtures. Walkway lighting shall be 100 W lamps on 10' aluminum poles. Road and parking lighting are to have 250 W lamps on 20' aluminum poles. Lighting is to be controlled by a contactor and photocell on either an existing circuit or a new circuit. New circuits shall be sized for future growth and shall be obtained from an adjacent building or parking lot. Contactors shall have a hand-off-auto switch for maintenance of the lighting system.			
2e	Provide weatherproof receptacles along exterior building perimeter as required. As a minimum provide a receptacle adjacent to building entrances.			
3	**General Layout of Plugs, known equipment, motors, etc is complete**			
3a	New services for buildings shall be 600V 4-wire at the main distribution only. The rest of the building distribution should be 600V 3-wire. Step down transformers for lighting and general use power would optimally be located on each floor or every other floor.			

No.	Requirement	Consultant - Is Design Compliant? (Y/N)	Consultant - Deviations requests/comments	Usask Engineering - Is design acceptable? (Y/N)
3b	As a general rule, electrical receptacles should be spaced approximately every 3600 mm around the walls in all offices and work rooms. Receptacles should not be mounted back to back. Classrooms will normally require one receptacle at the back of the room, and one or more at the front near the lecture station.			
3c	Receptacles are needed in lobbies and corridors in sufficient numbers to require no more than a 15 m cord for power driven housekeeping machines. These receptacles should be 15/20 amp T-slot type and not be on the same circuit with receptacles in user spaces. Provide one of these			
3d	All offices should have two duplex receptacles on separate circuits adjacent to the desk location and one on the opposing wall. The receptacles should be spaced, in separate boxes, at least 150			
3e	Provide two split duplex receptacles for the kitchenette areas.			
3f	Provide power receptacles in ceiling and crawl spaces where equipment requiring maintenance is			
3g	Provide a 208V single phase 50 amp welder receptacle in mechanical rooms.			
3h	Provide a receptacle in the mechanical duct systems at filter locations.			
3i	Service outlet shall be provided with all rooftop equipment.			
4	**General Layout - Computer Networks**			