APPENDIX B – WORKING SPACE AROUND ELECTRICAL EQUIPMENT

The following information is provided as general guidance regarding the required working space around electrical equipment, and does not replace or supersede applicable electrical code requirements**.**

1. *Depth of Working Space.* The depth of the working space, which is measured from the enclosure front, must not be less than the distances contained in Appendix B, Table 1.

Table 1. Working Space

Voltage (Nominal)	Minimum Clear Distance		
	Condition 1	Condition 2	Condition 3
0-150	900mm(3 ft)	900 mm(3 ft)	900mm(3 ft)
151-600	900mm(3 ft)	1m(3-1/2 ft)	1.2 m (4 ft)

Reference: National Electrical Code (NEC) Table 110.26(A)(1)).

Condition 1—Exposed live parts on one side of the working space and no live or grounded parts, including concrete, brick, or tile walls are on the other side of the working space.

Condition 2—Exposed live parts on one side of the working space and grounded parts, including concrete, brick, or tile walls are on the other side of the working space (Preferred).

Condition 3—Exposed live parts on both sides of the working space.

2. *Width of Working Space.* The width of the working space in front of the electrical equipment shall be the width of the equipment or 750mm (30 in.), whichever is greater. In all cases, the work space shall permit at least a 90 degree opening of equipment doors or hinged panels.

3. *Height of Working Space.* The workspace shall be clear and extend from the grade, floor, or platform to a height of 2m (6½ ft.) or the height of the equipment whichever is greater. Within the height requirements of this section, other equipment that is associated with the electrical installation and is located above or below the electrical equipment shall be permitted to extend not more than 150mm (6 in.) beyond the front of the electrical equipment.

4. *Dead-Front Assemblies.* Working space shall not be required in the back or sides of assemblies, such as dead-front switchboards or motor control centers, where all connections and all renewable or adjustable parts, such as fuses or switches, are accessible from locations other than the back or sides. Where rear access is required to work on non-electrical parts on the back of enclosed equipment, a minimum horizontal working space of 762mm (30 in.) shall be provided.

5. *Low Voltage Work Spaces.* Smaller working spaces can be permitted where all un-insulated parts operated are not greater than 30 volts rms, 42 volts peak, or 60 volts dc.

6. *Existing Installations.* In existing buildings where electric equipment is being replaced, the working clearance as specified by Condition 2 in Appendix B, Table 1, shall be permitted between dead-front switch boards, panel boards, or motor control centers located across the aisle from each other where conditions of maintenance and supervision ensure that written procedures have been adopted to prohibit equipment on both sides of the aisle from being opened at the same time. Qualified electrical workers who are authorized shall service the installation.

7. *Clear Working Spaces.* Working space shall not be used for storage. When normally enclosed live parts operating at 50 volts or more are exposed for inspection or service, the working space, if in a passageway or general open space shall be suitably guarded.

8. *Minimum Required Entrances.* At least one entrance of sufficient area shall be provided to give access to the working space around electric equipment.

9. *Large Equipment Entrances.* For equipment rated 1200 amperes or more and over 1.8m (6 ft.) wide that contains over current devices, switching devices, or control devices, there shall be one entrance to an egress from the required working space not less than 610mm (24 in.) wide and 2.0m (6½ ft.) high at each end of the working space.

10. *Personnel Doors***.** If equipment with overcurrent or switching devices rated 1,200A or more is installed, personnel door(s) for entrance to and egress from the working space located less than 7.62m (25 ft) from the nearest edge of the working space must have the door(s) open in the direction of egress and be equipped with panic hardware or other devices that open under simple pressure.

11. *Unobstructed Exits.* Where the location permits a continuous and unobstructed way of exit travel, a single entrance to the working space shall be permitted.

12. *Extra Working Space.* Only one entrance is required where the required working space depth is doubled, and the equipment is located so the edge of the entrance is no closer than the required working space distance.

13. *Illumination.* Illumination shall be provided for all working spaces about service equipment, switchboards, panel boards, or motor control centers installed indoors. Additional lighting outlets shall not be required where the work space is illuminated by an adjacent light source. In electrical equipment rooms, the illumination shall not be controlled by automatic means only.

14. *Dedicated Equipment Space.* All switchboards, panel boards, distribution boards, and motor control centers shall be located in dedicated spaces and protected from damage. Exception: control equipment that by its very nature or because of other rules of the standard must be adjacent to or within sight of the operating machinery shall be permitted in those locations. The space equal to the width and depth and extending from the floor to height of 1.8m (6 ft.) above the equipment or to the structural ceiling whichever is lower, shall be dedicated to the electrical installation. No piping, ducts, leak protection apparatus, or other equipment foreign to the electrical installation shall be located in the dedicated footprint space.