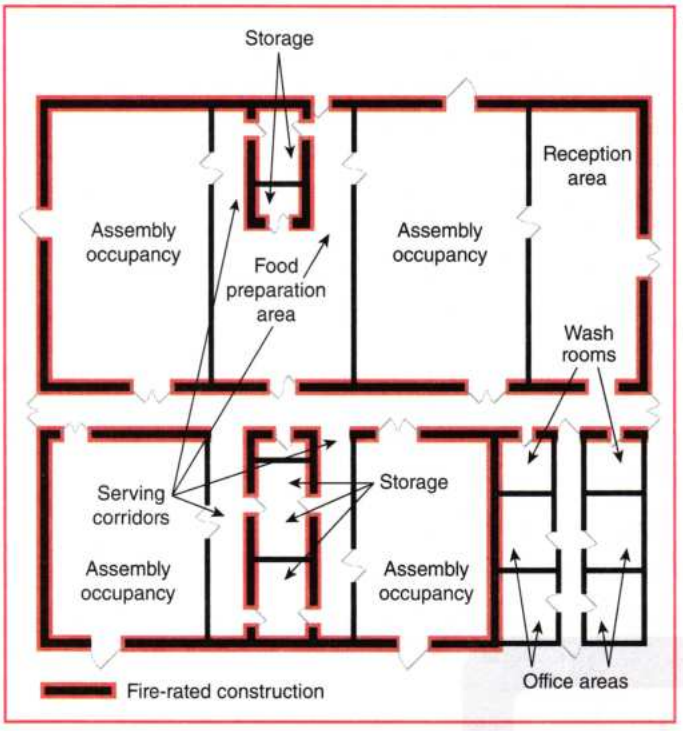

EXHIBIT 518.2 Floor plan of a single-story facility. The walls required by the local building code to be of fire-rated construction are represented by the red highlighted lines; the thin black lines represent walls not required by the local building code to be of fire-rated construction.

Exhibit 518.2 illustrates a single-story facility in which the washrooms and office area are not assembly occupancies, as defined in 518.2, and therefore require no special wiring methods. Ordinary wiring methods may be used on the inside surface of the storage area walls and on or in the partitions between storage areas, because those areas are not assembly occupancies. However, the main requirements of 518.4 apply inside any hollow spaces of the fire-rated storage area walls, because the serving corridors are part of the assembly occupancies as a result of the particular building design. If the hollow spaces of fire-rated walls or ceiling also provide a 15-minute finish rating and are not "other spaces used for environmental air" as described in 300.22(C), electrical nonmetallic tubing as well as rigid nonmetallic conduit is permitted for specifically described occupancies, as specified in 362.10. Also, wiring in ceilings or floors that are required to be of fire-rated construction in the assembly occupancy must also comply with 518.4.

Assembly occupancies frequently require emergency wiring, particularly for emergency illumination and exit lighting.

See also

700.10(D) for special fire protection requirements for emergency circuits in assembly occupancies with an occupant capacity of 1000 or more

Δ **518.5 Supply.** Portable switchboards, portable power distribution equipment, and commercial appliance outlet centers shall be installed in accordance with 518.5(A) through (C).

N **(A) Power Outlets and Commercial Appliance Outlet Centers.**

N **(1) Overcurrent Protection.** Power outlets and commercial appliance outlet centers shall provide overcurrent protection or shall be protected by overcurrent devices.

N **(2) Accessibility.** Overcurrent devices, power outlets, and commercial appliance outlet centers shall not be accessible to the general public.

N **(3) Equipment Grounding Conductor Connections.** Connecting means for an equipment grounding conductor shall be provided.

N **(4) Markings.** Power outlets and commercial appliance outlet centers shall be marked as follows:

FOR USE BY QUALIFIED PERSONS ONLY.
RISK OF ELECTRIC SHOCK.
Disconnect all power before servicing.
Disconnecting means location:

N **(5) Panelboard Orientation.** A panelboard installed in a listed commercial appliance outlet center designed for in-floor mounting shall be permitted to be orientated in the face-up position, if such orientation is part of the listing, and 408.43 shall not apply.

N **(B) Portable Switchboards and Portable Power Distribution Equipment.** Portable switchboards and portable power distribution equipment shall be supplied only from listed power outlets or listed commercial appliance outlet centers, each having sufficient voltage and ampere ratings.

N **(C) Neutral Conductor of Feeders Supplying Solid State Dimmer Systems.** The neutral conductor of feeders supplying solid-state phase control, 3-phase, 4-wire dimmer systems shall be considered a current-carrying conductor for purposes of ampacity adjustment.

The neutral conductor of feeders supplying solid-state sine wave, 3-phase, 4-wire dimming systems shall not be considered a current-carrying conductor for purposes of ampacity adjustment.

Exception: The neutral conductor of feeders supplying systems that use or are capable of using both phase-control and sine-wave dimmers shall be considered as current-carrying for purposes of ampacity adjustment.

Informational Note: See Article 100 for definitions of solid-state dimmer types.

Portable switchboards and portable power distribution equipment must be supplied from listed power outlets, such as the one shown in Exhibit 518.3, or from listed commercial appliance outlet centers. This equipment must be rated for the voltage and current for which they are used. Power outlets, commercial appliance outlet centers, and their associated overcurrent protective devices must not be accessible to the general public.

Some professional performance lighting systems use solid-state, sine wave, 3-phase, 4-wire dimming systems. These dimmers