circuit interrupters for information on the supply connection of life-support equipment to circuits providing ground-fault circuit-interrupter (GFCI) protection of personnel at outlets.

A basin and a toilet may be located within the patient room or as part of the bed assembly. Although the presence of a basin and a toilet meets the definition of a bathroom, the receptacles serving the critical care space are exempt from the GFCI requirement because of the specialized use of a critical care space that includes the need for uninterrupted power for cord-and-plug-connected life-support equipment. A separate bathroom within the patient room is required to have GFCI protection for receptacles. Receptacles in other bathrooms for patients, staff, or the public are required to be GFCI protected in accordance with 210.8(B).

N **517.22 Demand Factors.** Demand factors for receptacle loads supplied by branch circuits not exceeding 150 volts to ground and installed in Category 1, Category 2, Category 3, and Category 4 patient care spaces shall be in accordance with 220.110.

Informational Note: See Article 100 for the definitions of patient care space categories.

Part III. Essential Electrical System (EES)

517.25 Essential Electrical Systems for Health Care Facilities. Type 1 and Type 2 essential electrical systems (EES) for health care facilities shall comprise separate branches capable of supplying a limited amount of lighting and power service, which is considered essential for life safety and orderly cessation of procedures during the time normal electrical service is interrupted for any reason.

Informational Note: See NFPA 99-2021, *Health Care Facilities Code*, for information on essential electrical systems.

Δ **517.26 Application of Other Articles.** The life safety branch of the essential electrical system shall meet the requirements of Article 700, except as amended as follows:

(1) Section 700.4 shall not apply.
(2) Section 700.10(D) shall not apply.
(3) Section 700.17 shall be replaced with the following: Branch circuits that supply emergency lighting shall be installed to provide service from a source in accordance with 700.12 when normal supply for lighting is interrupted or where single circuits supply luminaires containing secondary batteries.
(4) Section 700.32 shall not apply.

Informational Note No. 1: See NFPA 110-2019, *Standard for Emergency and Standby Power Systems*, for additional information.

Informational Note No. 2: See 517.29 and NFPA 99-2021, *Health Care Facilities Code*, for additional information.

Where a requirement in Article 517 differs from a requirement in Article 700, Article 517 takes precedence. For example, 517.31(B) differs from 700.5 in smaller facilities with a maximum demand on the essential electrical system of 150 kilovolt-amperes or less. In those cases, a single transfer switch is permitted to supply the entire essential electrical system, and separation of the branches of the essential electrical system is not required. Additionally, the requirements for selective coordination in 700.32 are modified by Article 517 for all branches of the essential electrical system, and coordination of overcurrent protective devices (OCPDs) is covered in 517.31(G).

See also

517.31(C)(1) for the physical separation requirements for circuits supplied by essential electrical systems in hospitals

517.31(G) for the requirement covering coordination of OCPDs in the essential and life safety branches of hospital essential electrical systems

517.42(D) for the physical separation requirements for circuits supplied by essential electrical systems in nursing homes and limited care facilities

517.29 Type 1 Essential Electrical Systems.

Informational Note: Type 1 essential electrical systems are comprised of three separate branches capable of supplying a limited amount of lighting and power service that is considered essential for life safety and effective facility operation during the time the normal electrical service is interrupted for any reason. These three separate branches are the life safety, critical, and equipment branches. [**99:**A.6.7.2.3]

Δ **(A) Applicability.** The requirements of 517.29 through 517.35 shall apply to Type 1 essential electrical systems. Type 1 systems shall be required for Category 1 spaces. Type 1 systems shall be permitted to serve Category 2, Category 3, and Category 4 spaces.

Informational Note No. 1: See NFPA 99-2021, *Health Care Facilities Code*, for performance, maintenance, and testing requirements of essential electrical systems in hospitals. See NFPA 20-2019, *Standard for the Installation of Stationary Pumps for Fire Protection*, for installation of centrifugal fire pumps.

Informational Note No. 2: See NFPA 99-2021, *Health Care Facilities Code*, 6.7.5 and 6.7.6, for additional information on Type 1 and Type 2 essential electrical systems.

Δ **(B) Type 1 Essential Electrical Systems.** Category 1 spaces shall be served by a Type 1 essential electrical system. [**99:**6.4.1]

Category 1 spaces shall not be served by a Type 2 EES. [**99:**6.4.2]

517.30 Sources of Power.

(A) Two Independent Power Sources. Essential electrical systems (EES) shall have two or more independent sources (or sets of sources). One on-site source (or sets of sources) shall be sized to supply the entire EES. The other independent source (or sets of sources) shall be sized to supply the entire EES and shall be permitted to be located on-site or off-site. Additional sources other than the first two independent sources shall be permitted to be sized to supply the intended load.