

# PASSIVE FIRE PROTECTION

## – FIRE WALL



**P**assive fire protection (PFP) is one of method that used as fire protection in a building and between electrical equipment such as transformer. PFP can be preventing of fire spreading using fire walls, fire stop and fire door. Fire wall is one of method of PFP.

### Fire wall

A wall that separate buildings or subdividing a building to prevent the spread of fire and having a fire resistance rating and structural stability. Firewalls can be used to separate a building and fire areas and are constructed in accordance with the locally applicable building codes. Firewalls are a portion of a building's passive fire protection systems. Fire wall itself has classification, such as fire wall and fire barrier wall

- Fire wall is an assembly of materials used to separate transformers, structures, or large buildings to prevent the spread of fire by constructing a wall which extends from the foundation through the roof with a prescribed fire resistance duration and independent structural stability.

This allows a building to be subdivided into smaller sections. If a section becomes structurally unstable due to fire or other causes, that section can break or fall away from the other sections in the building.

- A *fire barrier wall*, or a *fire partition*, is a fire-rated wall assembly that provides lower levels of protection than typically provided by a fire wall. The main differences are that these fire resistant walls are not structurally self-sufficient

### Structural liability

Fire walls shall be designed and constructed to remain stable after collapse of the structure due to fire on either side of the wall.

Fire walls shall be permitted to terminate at the underside of roof sheathing or deck provided that all of the following criteria are met:

- (1) The roof assembly within 48 in. (1220 mm) of each side of the fire wall is of fire retardant-treated wood.
- (2) The roof is provided with not less than a Class B roof covering.
- (3) Openings in the roof are not located within 48 in. (1220 mm) of the fire wall.

### Reference:

NFPA 221, *Standard for High Challenge Fire Walls, Fire Walls, and Fire Barrier Walls*, 2006 and 2009

### Disclaimer

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