Owner / Applicant Information

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Project Information

Purdue - ABE Building Renovation & Addition
225 South University Street

WEST LAFAYETTE IN 47907

County TIPPECANOE

Project Type New [ ] Addition [Y] Alteration [Y] Existing [ ] Change of Occupancy [ ]

Project Status [F] F=Filed U or Null=Unfiled

IDHS Issued Correction order? [No] Has Violation been Issued? [No]

Violation Issued by: NA

Local Building Official

Phone: 3174176651 Email: ddexter@dhs.in.gov

Local Fire Official

Phone: 3174176651 Email: fire@purdue.edu

Variance Details

Code Name: Other Code (Not in the list provided)

705.2, 2014 IBC

Conditions: The roof eave of the existing building which will face the proposed addition will be located within the 0 to less than 3 feet fire separation distance to the assumed property line between the existing building and the addition - a condition not permitted per the referenced Table 705.2. Additionally, the eave is required to be 1-hour rated where located in close proximity to the line used to establish fire separation distance per Sec. 705.2.3 - the existing eave is nonrated. Lastly, the existing eave has untreated wood blocking and framing to support the metal soffit panels - noncombustible construction is required per Sec. 705.2.1, for projections from buildings classified as Type IIB Construction, the designated construction type for the existing building.
The project involves renovation of and addition to the existing Purdue University Agricultural and Biological Engineering building. The existing building is 4 stories in height, including a 4th level mechanical floor. The addition will be 5 stories in height + basement and mechanical penthouse. The project will consolidate the ABE program from various locations on campus to a single location

DEMONSTRATION THAT PUBLIC HEALTH, SAFETY, AND WELFARE ARE PROTECTED:

[1] 1=Non-compliance with the rule will not be adverse to the public health, safety or w

2= Applicant will undertake alternative actions in lieu of compliance with the rule to ensure that granting of the variance will not be adverse to public health, safety, or welfare. Explain why alternative actions would be adequate (be specific).

Facts: 1. The edge of the existing eave will be located approximately 14 feet from the addition. The eave construction consists of steel roof framing, gypsum/lightweight concrete roof decking, terra cotta roof shingles, and pressed sheet metal soffit. All exposed materials are noncombustible, with the only wood being framing for the metal soffit. Exterior wall construction of the existing building is cmu with stone veneer.
2. The existing building and addition will be protected with a sprinkler system per NFPA 13, with design criteria not less than Ordinary Hazard, Group 2 design - 0.2 gpm per sq ft over a design area of 1,500 sq ft.
3. Per NFPA 80A, Protection of Buildings from Exterior Fire Exposure (see attached excerpt), where the exposing building is protected throughout with an automatic sprinkler system, the fire in the exposing building is considered to be controlled, and therefore the exposure to other buildings is also considered to be controlled. Code does not anticipate the favorable condition of mutually exposed sprinklered buildings.
4. The existing building complies with Type IIIB Construction, which permits projections containing combustible materials.

DEMONSTRATION OF UNDUE HARDSHIP OR HISTORICALLY SIGNIFICANT STRUCTURE:

[ ] Imposition of the rule would result in an undue hardship (unusual difficulty) because of physical limitations of the construction site or its utility services.

[Y] Imposition of the rule would result in an undue hardship (unusual difficulty) because of major operational problems in the use of the building or structure.

[Y] Imposition of the rule would result in an undue hardship (unusual difficulty) because of excessive costs of additional or altered construction elements.

[ ] Imposition of the rule would prevent the preservation of an architecturally or a historically significant part of the building or structure

Facts: Imposition of the rule would require retrofit and/or removal of existing eaves. Loss of the existing eaves would negatively impact existing building weather performance without adding any benefit in safety.