Homework 4:

Fire Wall

Program

This problem is based on the Structures III and Designing Details academic work

1. The problem statement indicates a property line running on the south side of the building (the 62-foot-long wall)
2. Design a fire wall, as defined by 780 CMR 7, for that property line running through the building
3. The exterior finish of the fire wall will be the marazzi ventilated wall system.

Research:

Become familiar with impact of building regulations on detail design:

- Study 780 CMR 7.00 - found on the web at -:http://www.mass.gov/Eeops/docs/dps/inf/780CMR-1/780007.pdf

Questions to Answer:

1. List the general and specific requirements for construction details for a fire wall for the hypothetical building.

Drawing Work

Propose a set of details

Test your proposal with architectural details added to the structural ones already designed

Draw the following using 11" x 17" paper

1. Two fire wall section details [where wall meets the foundation and the roof] for the property line - 3/4" = 1'-0"
2. A plan detail at the northeast corner of the first floor - 3/4" = 1'-0"
3. Highlight and label fire-resistant building components in your details to explain how the proposed design meets the requirements of 780 CMR 7
4. Include all relevant building systems in the details, such as structure and enclosure elements.

Criteria for marking this homework

General Criteria

This Homework counts as 12% of your marking for the course

Homework will be marked from '4' to '0'.

Answers to questions count as 1/3 of the mark for the homework

Drawings designed count as 2/3 of the mark for the homework

Criteria for Answers to question

General: The response to this question is written, criteria are based on recommendations from 'Understanding by Design,' page 175

- Requirements for a mark of '4' - "A clear, well developed [explanation] that deals in a sophisticated fashion with [key] components of the question.
- Requirements for a mark of '3' - "Clear, developed [explanation] that deals with [key [components of the question]]."
- Requirements for a mark of '2' - General [explanation] responding to all components superficially."
- Requirements for a mark of '0' - "Little or no analysis."

Criteria for quality of drawings

General:

- Drawings are evaluated in terms of completeness, accuracy, and legibility
- Requirements for a mark of '4' -
  - Work product capable of being incorporated into a project using building information management.
- Requirements for a mark of '3' -
  - Work product could be submitted to a plans examiner. Criteria are as described by Liebling (Wiley, publisher) - BAC library reference: http://library.the-bac.edu/vwebv/holdingsInfo?bibId=5814 and in material provided in class web site.
- Requirements for a mark of '2' -
  - Work product could be used to present an idea to a job captain
- Requirements for a mark of '0' - Minimal drawing

Boston Architectural College, Fall 2010 / Spring 2011