



**ARCH 2431 BUILDING TECH III**

**(1A) CASE STUDY SEMESTER ASSIGNMENT**

**Semester research / case study**

The focus of this assignment is to understand how to represent a building as a set of construction documents. The subject or building chosen for this assignment must meet the criteria listed below. This is a drawing and research-based assignment.

As you draw look to investigate how the building was constructed, there are many questions to consider. What materials is it made from and how are they assembled? Where is the structure, what are the spans and how far apart are the columns? What is the exterior skin and how it is attached? Where are the mechanical components, the air intake, and the mechanical room and how is fresh air circulated? Where are the main circulation components, the stairs and elevators and how do they facilitate safe egress from the building?

**Selecting a Project**

The case study subject needs to a **steel frame building** that meets the following criteria:

- Preferably located in NYC (one of the five boroughs) so that you can visit it often
- Has public access (CUNY buildings, Museums, Libraries, Public Commercial Buildings, etc.)
- Multistory (3 or more floors – but no taller than 6 stories) so that it has stair and elevator cores.
- Interesting facades materials

**Case studies drawing set:** as a minimum the drawing set should include:

- Cover sheet – with 3D images, drawings list, abbreviations and symbols
- Architectural Floor Plans - to include walls, doors, door schedules, room and door numbers, structural columns & grid, dimensions, shaft openings, stairs & core.
- Reflected Ceiling Plans – Show all visible elements including lights, mechanical supply return, sprinklers, and exit signs. One reflected ceiling plan must be a color-coded rated wall study.
- Egress Study Plan – identifies key dimensions for egress including corridor width, size of doors for rooms. Includes calculations and may also include a building section. Rated walls identified by type and color coded on plan. Exit signs. Partitions types to be included.
- Occupancy Plan Study – Areas of rooms, determine the number of occupants. May be combined with Egress.
- Exterior Elevations & Building Sections- includes windows sheet & window schedule
- Wall Sections and Detail Studies – produce case study detail studies of chosen building.
- Specific list will be determined by the professor

**Research:**

The most critical part of the case study assignment is to conduct thorough research. This may include contacting the architect, looking for publications on the building, contacting the manufacturer, research details on the various building systems, understanding applicable building, fire and safety codes to identify how they affected the construction of the building.

**The Team & the Individual:**

At the discretion of the professor, some portions of this assignment may be designated as team-based on others as individual. In all cases each individual student will be responsible for drawing and producing their own set of construction documents.

**Reviews:**

There will be a series of graded reviews throughout the semester that will contribute to a cumulative grade.

**Grading:**

The case study project represents 30% of your semester grade.